MaineDOT TIM Strategic Plan - Final

Version 1.0

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Executive Summary

The MaineDOT TIM Strategic Plan has been developed to establish overarching goals for the program and identify pathways for achieving them.

The purpose of this project is to assist Maine Department of Transportation (MaineDOT) and the state's four Metropolitan Planning Organizations (MPOs) in the development of a Statewide Strategic Traffic Incident Management (TIM) Plan, and an outreach strategy for TIM training.

Vision and Mission Statements

The TIM team has defined the following vision statement:

> ***Safe and efficient incident management on the state's roadways.***

The TIM team has defined the following mission statement:

> ***Improve safety and reliability of the transportation network by developing and sustaining an effective, multi-disciplinary statewide TIM Program.***

Goals, Objectives, and Performance Metrics

The TIM team has defined goals and supporting objectives outlined in this plan in the areas of:

- Responder Safety
- Safe, Quick Clearance
- Prompt, Reliable, Interoperable Communication
- TIM Technology
- Stakeholder Engagement

As part of documenting the TIM Program, the TIM team has defined collecting the following performance metrics:

- Reduce severe and fatal crashes by 5 percent within 5 years.
- Reduce mean time for incident detection by 5 percent over 5 years.
- Reduce mean incident clearance time per incident by 5 percent over 5 years.
- Increase percentage of agencies that participate in a regional coordinated incident response team by 10 percent within 5 years.
- Increase the number of responders trained by discipline 20 percent over 5 years.
- Track the number of trained TIM first responders by discipline
- Track metrics from the FHWA SA.

TIM Recommendations addressed in this plan include:

- Identify a TIM champion for Maine.
- Engage in TIM training and outreach.
- Expand programs related to TIM.
- Collect TIM performance data.
- Define formal policies and guidelines.
- Complete after-action reviews.
- New TIM Technologies

1 Introduction

The purpose of this project is to assist Maine Department of Transportation (MaineDOT) and three of the state's Metropolitan Planning Organizations (MPOs) in the development of a Statewide Strategic Traffic Incident Management (TIM) Plan, an outreach plan outline for the training program to help increase the number of first responders trained throughout the state and provide technical assistance as needed throughout the duration of the contract.

The Federal Highway Administration (FHWA) TIM Handbook (2010) defines TIM as the systematic, planned and coordinated use of human, institutional, mechanical and technical resources to reduce the duration and impact of incidents and improve the safety of motorists, crash victims and incident responders. Concern for the safety of responders and travelers in the back up congestion has increased the level of coordination and cooperation required for the various stakeholders to effectively conduct TIM. Buy-in from multi-agency stakeholders ensures a coordinated field response.

TIM consists of a planned and coordinated multi-disciplinary process to detect, respond to, and clear traffic incidents so that traffic flow may be restored as safely and quickly as possible. An effective TIM Program cannot be planned or executed by any single agency or discipline alone.

1.1 Program Background

1.2 Scope

This TIM Strategic Plan is the third and final deliverable in the scope of work for MaineDOT under project 013383.10. The TIM Strategic Plan describes both the statewide and MPO/Regional TIM Programs. The plan identifies actions to sustain the commitment to a TIM Program and expand the program to better meet the needs identified by the stakeholders. This plan identifies strategic objectives for the TIM Program goals and lays out the roadmap for achieving the identified objectives.

The TIM Strategic Plan team has been meeting over the last six months to establish goals and objectives for the state TIM Program, as well as for each of the regional TIM committees.

1.3 Acronyms

Table 1 below describes the acronyms that are referenced throughout this document.

Table 1: Acronyms

ACRONYM	DESCRIPTION
AAA	American Automobile Association
AAR	After Action Review
AASHTO	American Association of State Highway Transportation Officials

ACRONYM	DESCRIPTION
ANSI	American National Standards Institute
ATMS	Advanced Transportation Management System
BACTS	Bangor Area Comprehensive Transportation System
CAD 911	Computer Aided Dispatch 911
CCTV	Closed-Circuit Television
CMS	Changeable Message Sign
DEP	Department of Environmental Protection
EMS	Emergency Medical Services
EMT	Emergency Medical Technicians
ERG	Emergency Response Guidebook
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTE	Full-Time Equivalent
GPCOG	Greater Portland Council of Governments
HSIP	Highway Safety Improvement Program
HVSA	High-Visibility Safety Apparel
ICS	Incident Command System
ICT	Incident Clearance Time
ITS	Intelligent Transportation System
MaineDOT	Maine Department of Transportation
ME	Maine
MPO	Metropolitan Planning Organization
NIMS	National Incident Management System
NFPA	National Fire Protection Association
NH	New Hampshire
NTIMC	National Traffic Incident Management Coalition
NUG	National Unified Goal
PPE	Personal Protective Equipment
RCT	Roadway Clearance Time
RRT	Regional Response Team
SA	Self-Assessment
SHRP2	2nd Strategic Highway Research Program
SHSP	Strategic Highway Safety Plan
SMPDC	Southern Maine Planning and Development Commission

ACRONYM	DESCRIPTION
TIM	Traffic Incident Management
TIM CM SA	Traffic Incident Management Capability Maturity Self-Assessment
TIP	Transportation Improvement Plan
TMC	Transportation Management Center
UC	Unified Command
VILT	Virtual Instructor-Led Training

2   Existing TIM Practices

2.1   Stakeholders

MaineDOT and three of the state's Municipal Planning Organizations (MPOs) are working together to facilitate the Maine TIM Program, each of the regional TIM meetings and training. They include:

- MaineDOT
- Southern Maine Planning and Development Commission (SMPDC)
- Bangor Area Comprehensive Transportation System (BACTS)
- Greater Portland Council of Governments (GPCOG)

The typical TIM stakeholders meeting attendees in Maine include:

- Federal Highway Administration Division Office
- MaineDOT
- Maine Turnpike Authority
- Maine State Law Enforcement
- Local police departments
- Sheriff departments
- Local Fire departments
- Emergency Management Agencies
- Towing Industry

2.1.1   Roles and Responsibilities

TIM stakeholders consisting of law enforcement, fire and rescue, towing and recovery, and transportation agencies interested in enhancing traffic incident management come together for quarterly meeting. These meetings are important for their content as well as for the purpose of building relationships between different agencies.

MaineDOT does not have any dedicated staff for the TIM Program. The TIM Program is one of many responsibilities assigned to the state traffic engineer. Each of the MaineDOT districts has maintenance staff that is responsible for field response at incidents. This staff attends the TIM committees in their regions.

The roles and responsibilities described below are intended to be recommendations and illustrate how these agencies and emergency service providers are typically involved in the incident management process. It is understood that roles change and evolve based on the type and severity of the incident.

All agencies responding to incidents follow the Incident Command System.

**Law Enforcement (Maine State Police, Municipal Police Departments, County
Sheriff's Departments)**

- Serves as part of Unified Command
- Secures incident scene
- Protects incident scene
- Performs first responder duties
- Assists responders in accessing the incident scene
- Establishes emergency access routes
- Controls the arrival and departure of incident responders
- Polices perimeter of incident scene and impact area
- Conducts crash investigation
- Performs traffic control
- Use drones to expedite crash investigation

Municipal Fire Departments

- Serves as part of Unified Command
- Protects the incident scene
- Rescues/extricates patients
- Extinguishes Fires
- Responds to and assesses incidents involving a hazardous materials release/spill
- Contains or mitigates a hazardous materials release in cooperation with Maine DEP or private companies as dictated by the situation
- Assumes role of Incident Commander if appropriate

Maine Turnpike Authority

- Serves as part of Unified Command
- Assists police and fire as needed
- Provides vehicles and traffic control equipment, such as sign boards, cones, barrels, etc.
- Implements traffic control strategies and provides supporting resources
- Monitors traffic operations
- Disseminates motorist information
- Coordinates with Incident Commander and activates ITS devices
- Provides assistance during the response

MaineDOT

- Serves as part of Unified Command
- Assists police and fire as needed
- Provides vehicles and traffic control equipment, such as sign boards, cones, barrels, etc.
- Implements traffic control strategies and provides supporting resources
- Monitors traffic operations
- Disseminates motorist information
- Coordinates with Incident Commander and activates ITS devices
- Assist with setting up traffic control and alternate routes
- Assist with clean-up activities

Maine Department of Environmental Protection (DEP)

- Responds to oil and hazardous materials incidents, releases or potential releases.

- Works with Regional Response Teams (RRTs) and local fire departments to control and mitigate oil and hazardous materials incidents, including removing un-spilled product.
- Serves and part of Unified Command.
- Assesses impacts to the environment from oil and hazardous materials incidents.
- Has the authority to hire contractors to cleanup oil and hazardous materials spills.

Emergency Management Agency

- Supports Unified Command if requested by initial responding units
- Assists police and fire as needed
- Provides personnel or Incident Management Assistance Team if needed
- Provides technical expertise
- Facilitates communication and coordination across jurisdictions
- Coordinates response from other State and Federal agencies if needed

MaineDOT TMC Dispatch

- Gathers information from callers regarding highway incidents, transfers calls as appropriate, Requests resources and relays information to other responding agencies as necessary. Dispatches departments and agencies to traffic incidents as appropriate. Creates an event in the Advanced Transportation Management System (ATMS) and tracks the event through to clearance.
- Maintains information regarding the location and nature of the incident and keeps responding departments/agencies informed of any new information or changes
- Provides assistance during the response

Towing and Recovery

- Checks in with Unified Command upon arriving on scene and supports as necessary
- Recovers vehicles and cargo
- Removes disabled or wrecked vehicles & debris from the scene
- Mitigates non-hazardous material (cargo) spills

2.1.2   Interagency Relationships

This section explores the interagency relationships in Maine. This includes partnerships with organizations representing responder partners such as towers, Emergency Medical Service (EMS) providers, and hazardous material remediation contractors.

All the agencies detailed in the section above work cooperatively through the regional TIM committees working together to meet the objectives of the TIM Program. Some agencies participate more than others depending on the region. The purpose of the quarterly TIM meetings in each region are to bring the different agencies together to build relationships, for cooperative responses to incidents. The TIM committees help to build these relationships which results in better field response Interagency relationships are an important component of any TIM Program.

MaineDOT IT group is working with the communications group to get a mobile phone application on cell phones to be able to talk on radio frequency through cell phones. This would use a shared channel for incidents. The current issue is that MaineDOT issued radios are hard wired in each MaineDOT vehicle, but do not include handheld radios, so once the MaineDOT field responder gets out of his car, he cannot communicate via radio. A cell phone application would solve this issue.

2.1.3   Safety Patrols

 MaineDOT provides a Safety Patrol Service on I-295 between Scarborough and Freeport. Service times vary by day and season:

From Memorial Day to Indigenous Peoples' Day:

- Monday – Thursday, 11AM – 7PM
- Friday 11AM – 8PM
- Saturday 10AM – 8PM
- Sunday 12PM – 6PM

From Indigenous Peoples' Day to Memorial Day:

- Monday – Friday 11AM – 7PM

The patrol enhances the safety of motorists and minimizes traffic congestion by offering specific services when vehicles are in insignificant crashes or suffer minor mechanical difficulties. The patrol can quickly remove a disabled vehicle from the highway and offer services such as changing flat tires, providing a gallon of fuel, clearing debris, or towing the vehicle from the travel lanes. This service is paid for by MaineDOT.

The Maine Turnpike (I-95 from Kittery to Augusta) State Farm Safety Patrol is a free service that provides assistance to stranded motorists on the Maine Turnpike. The Safety Patrol also clears the Turnpike of debris and other hazards and provides temporary traffic control at minor accident scenes to help keep Maine Turnpike customers safe and traffic flowing smoothly. This service is paid for by the Maine Turnpike Authority.

The Safety Patrol operates on the Turnpike, between Exit 42 in Scarborough and Mile 57 in Cumberland, Monday through Friday from 7:00 to 10:30 am and between Exit 48 in Portland and Exit 32 in Biddeford, from 3:30 to 7:00 pm.

Additionally, from April to December, the Safety Patrol operates on the Turnpike from the Piscataqua River Bridge in Kittery to Exit 19 in Wells. This seasonal patrol operates from 11 am to 7pm on Fridays, Saturdays, Sundays, and holidays.

2.2   TIM Coverage Areas

The TIM Groups are a body of TIM stakeholders consisting of law enforcement, fire and rescue, and transportation agencies interested in enhancing TIM. The groups are set up by region.

Existing TIM Program Groups are as follows:

- Augusta TIM Group
- Greater Portland TIM Group
- Hancock County TIM Group
- ME/NH TIM Group
- Midcoast TIM Group
- Penobscot County TIM Group
- Statewide TIM Group

Table 2: Town Listing for Regional TIM Groups

REGIONAL TIM GROUP	TOWNS INCLUDED
Augusta	Topsham, Bowdoinham, Richmond, Gardiner, Hallowell, Farmingdale, Augusta, Sidney, Oakland, Waterville, Fairfield, Benton, Clinton, Pittsfield
Greater Portland	Brunswick, Cumberland, Falmouth, Freeport, Portland, Raymond, Saco, Scarborough, South Portland, Topsham, Westbrook, Windham, Yarmouth
Hancock County	Amherst, Aurora, Bar Harbor, Blue Hill, Brooklin, Brooksville, Bucksport, Castine, Cranberry Isles, Dedham, Deer Isle, Eastbrook, Ellsworth, Franklin, Frenchboro, Gouldsboro, Great Pond, Hancock, Lamoine, Mariaville, Mount Desert, Orland, Osborn, Otis, Penobscot, Sedgwick, Sorrento, Southwest Harbor, Stonington, Sullivan, Surry, Swans Island, Tremont, Trenton, Verona Island, Waltham, Winter Harbor
ME/NH	Arundel, Berwick, Biddeford, Dover, Kennebunk, Kittery, Ogunquit, Portsmouth, Sanford, Saco, Scarborough, Seabrook, Strafford, Wells, York
Midcoast	Bath, Belfast, Boothbay Harbor, Brunswick, Camden, Northport, Rockland, Topsham, Waldoboro, Westport, Wiscasset
Penobscot	Alton, Bangor, Brewer, Bradford, Bradley, Burlington, Carmel, Charleston, Chester, Clifton, Corinna, Corinth, Dexter, Dixmont, East Millinocket, Eddington, Edinburg, Enfield, Etna, Exeter, Garland, Glenburn, Greenbush, Hampden, Hermon, Holden, Howland, Hudson, Kenduskeag, Lagrange, Lakeville, Lee, Levant, Lincoln, Lowell, Mattawamkeag, Maxfield, Medway, Milford, Millinocket, Mount Chase, Newburgh, Newport, Old Town, Orono, Orrington, Passadumkeag, Patten, Plymouth, Springfield, Stacyville, Stetson, Veazie, Winn, Woodville

Figure 1 below shows the combined coverage of the 6 regional TIM groups in Maine.

Maine TIM Coverage Map

Maine/New Hampshire TIM Group
  All items

Greater Portland TIM Group
  All items

Midcoast TIM Group
  All items

Hancock County
  All items

Penobscot County
  All items

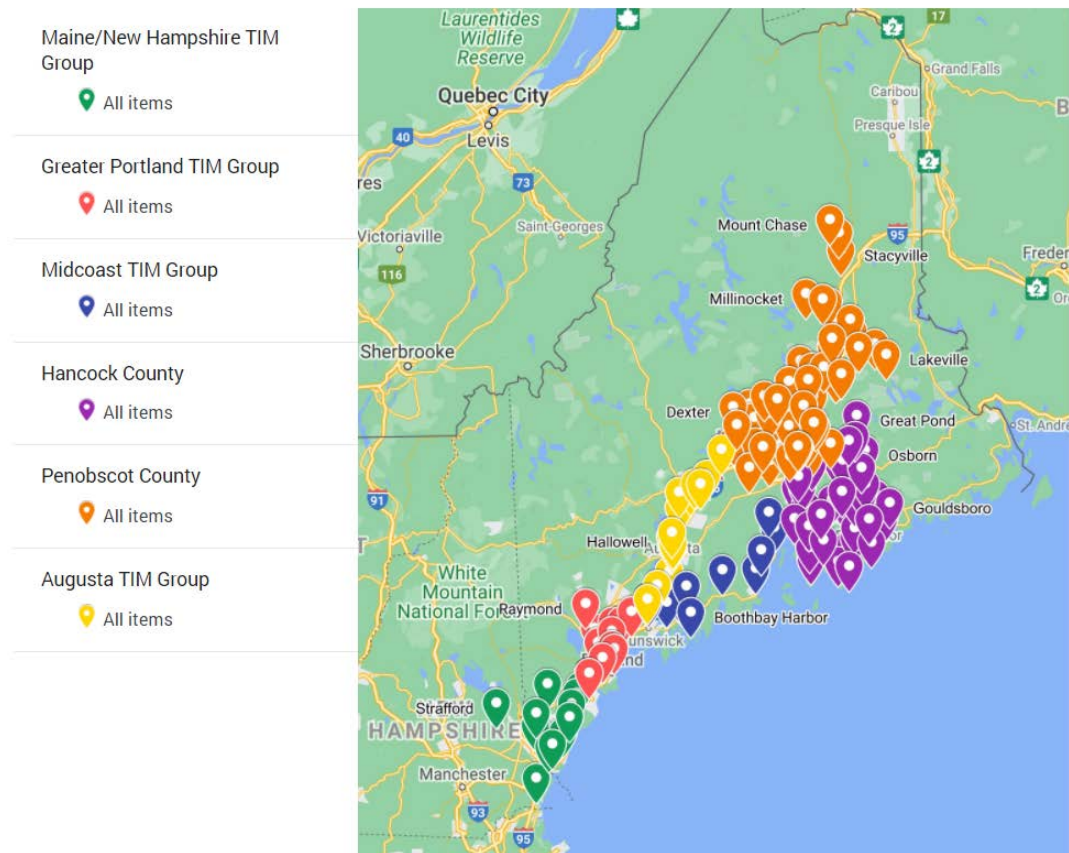Augusta TIM Group
  All items

Figure 1: TIM Coverage Map

2.3   National Best Practices of TIM Programs

Successful application of TIM strategies offers direct and indirect benefits for travelers and responders. Reduced congestion due to timely incident clearance lowers fuel consumption, emissions, and traveler delay, while also improving travel time reliability. Improved efficiency of local responding agencies improves community satisfaction towards those agencies. Increased safety for the people involved in incidents lowers fatality rates and the opportunity for secondary incidents. These benefits together result in improved safety, health, and productivity for the region.

The success of TIM practice at any of the State/local level programs depends primarily on the active involvement and coordination between the different TIM partners. Examples of the State/local level TIM activities include conducting regularly scheduled TIM committee meetings, multidisciplinary training programs, tracking of targeted performance goals, developing and promoting TIM procedures and policies, coordinating the available TIM resources including equipment and data, and successful incident scene interagency collaboration. In addition, inclusion of TIM into the State's Strategic Highway

Safety Plan (SHSP) is essential in order to ensure the full funding opportunity under the Highway Safety Improvement Program (HSIP).[1]

The Emergency Service/Incident Management challenges section of the Maine SHSP from 2017 was reviewed. The challenges identified in this section of the document are mostly related to emergency services and most of the recommendations are being led by EMS. The only TIM related recommendation is for the regional TIM committees to continue to bring stakeholders together for regular meetings. The TIM committees should review the use of screening off crash scenes, improving traffic notification through Changeable Message Signs (CMS), and improving signage for detours. When the SHSP is next updated, the TIM section of the document should be enhanced to include more TIM recommendations.

A mission statement defines the program's tangible objectives and generally how it may achieve those objectives. A vision statement describes the program's desired future goals. Together, the mission and vision statement provide insight into the program's overall purpose, goals, and values.

As part of this Strategic Plan, MaineDOT is adopting a TIM Program vision and mission statement. These statements explain the purpose of the program and provide a clear direction.

2.3.1   TIM Challenges and Strategies

TIM activities are typically categorized into five overlapping functional areas:

- Detection and Verification
- Traveler Information
- Response
- Scene Management and Traffic Control
- Quick Clearance and Recovery

2.3.1.1   Detection and Verification

Detection is the first identification that an incident has occurred. An incident may be detected by travelers or responders in person, or remotely by detectors and sensors along the roadway. Verification is the determination of the location and nature of the incident. The more information provided will ensure that the appropriate responders are dispatched to the scene. Verification can be performed by first responders to the incident or remotely with Closed-Circuit Television (CCTV).

Common challenges to incident detection and verification include:

- Inconsistent notification of incident responders.
- Inaccurate incident reports.
- Dispatcher overload.
- Slow detection.

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[1] FHWA-HOP-15-007,Traffic Incident Management Gap Analysis Primer, March 2015

Table 3: Detection and Verification strategies with applications (Source: FHWA Best Practices in TIM)

DETECTION AND VERIFICATION STRATEGIES	Inconsistent Notification	Inaccurate Incident Reports	Dispatcher Overload	Slow Detection	EXAMPLE APPLICATIONS
Field Verification by On-Site Responders		●			NY (Hudson Valley Region)
Closed-Circuit Television Cameras		●			76+ U.S. Metropolitan Areas, MD
Frequent/Enhanced Roadway Reference Markers		●			FL, NJ/PA (Delaware Valley Region), OH, TN
Enhanced 9-1-1/Automated Positioning Systems		●	●		TX (San Antonio)
Motorist Aid Call Boxes				●	27+ U.S. Metropolitan Areas, GA
Automated Collision Notification Systems				●	16+ U.S. Metropolitan Areas, NY (Erie Co.)

2.3.1.2   Traveler Information

Traveler information involves the dissemination of incident-related information to travelers at the scene, approaching the scene, or not yet traveling. Informing travelers of the incident is intended to reduce traffic demand and the potential for secondary incidents, and to improve safety for the responders at the scene. Timely information will also help travelers change their travel plans based on traffic conditions. Traveler information strategies should:

- Advise travelers of the nature and extent of the incident to best inform their choices for alternate routes or later travel.
- Provide information on potential alternate routes.
- If travelers must follow specific actions (lane changes, reduced speed, detours), describe those actions clearly.

Traveler information should be disseminated as early as possible and should continue until the incident and traffic delay has cleared.

Common traveler information challenges include:

- Inaccurate traveler information.
- Inconsistent dynamic message sign use.

Table 4: Traveler Information Strategies and Applications (Source: FHWA Best Practices in TIM)

TRAVELER INFORMATION STRATEGIES	Inaccurate Traveler Information	Inconsistent DMS Use	EXAMPLE APPLICATIONS
5-1-1 Systems	●		33+ States
Traveler Information Websites	●		39+ States
Media Partnerships	●		53+ U.S. Metropolitan Areas
Dynamic Message Signs	●		81+ U.S. Metropolitan Areas, CA (Stockton)
Standardized DMS Message Sets/Use Protocol		●	73+ U.S. Metropolitan Areas, TX (Austin, San Antonio)

2.3.1.3   Response

Incident response is a prepared strategy for the deployment of the appropriate responders to the incident. Ensuring the responders have the necessary and accurate information is important for rapid and safe response. Pertinent information like the incident's location, traffic impacts, involved vehicle types, presence of any injuries or fatalities, and other unique conditions (hazardous material) is crucial for determining the best response. The required response level is typically determined by a responder on-scene or by a dispatcher at the traffic management center.

Improved response times help save lives through faster EMS response, ensuring responders can reach the scene before greater traffic backup, improving efficient and appropriate responder use, and achieving a state of consistent preparedness to deploy responders to an incident's scene.

Common response challenges include:

- Achieving optimum response.
- Difficult scene access.

Table 5: Response Strategies and Applications (Source: FHWA Best Practices in TIM)

RESPONSE STRATEGIES	Achieving Optimum Response	Difficult Scene Access	EXAMPLE APPLICATIONS
Personnel/Equipment Resource Lists	●		75+ U.S. Metropolitan Areas
Towing and Recovery *Vehicle Identification Guide*	●		NJ/PA (Delaware Valley Region), TX (Austin)
Instant Tow Dispatch Procedures		●	WA (Seattle)
Towing and Recovery Zone-Based Contracts		●	TX (Houston)
Enhanced Computer-Aided Dispatch		●	43+ Agencies in U.S. Metropolitan Areas, CA (Los Angeles), NM (Albuquerque), TN (Sequatchie Co.)
Dual/Optimized Dispatch Procedures		●	NJ
Motorcycle Patrols		●	All or Nearly U.S. Metropolitan Areas
Equipment Staging Areas/Pre-positioned Equipment		●	TN, WI

2.3.1.4 Scene Management and Traffic Control

Scene Management requires coordinating and managing the resources at or near the incident, including personnel, equipment, and communication. This phase occurs after responders have arrived at the scene. Injured persons should be immediately attended to while the incident site is protected, and plans are made for scene documentation and the clearance of wreckage or debris. Successful scene management relies on interagency cooperation and thorough traffic control strategies.

The National Incident Management System (NIMS) Incident Command System (ICS) is the national standard for managing incidents. ICS establishes a unified organizational structure to coordinate interagency response efforts that is consistent with the NIMS. ICS is scalable and adaptable to manage incidents of different nature and size. Incident command is responsible for the overall management of the incident. A single Incident Commander or Unified Command conducts the command function on an incident. When an incident occurs within a single jurisdiction and without jurisdictional or functional agency overlap a single Incident Commander who has overall incident management responsibility is designated based on qualifications and experience.

In incidents involving multiple jurisdictions or multi-agency involvement, Unified Command (UC), an application of ICS, is used to allow for a single, collaborative management approach. Unified Command is based on shared authority that changes commanders as an incident progresses through different phases. Under a Unified Command each participating partner maintains authority, responsibility, and accountability for its personnel and other resources, and each member of Unified Command is responsible for keeping other members of Unified Command informed.

In some cases where incident management crosses jurisdictional and/or functional agency boundaries, the various jurisdictions and organizations may still agree to designate a single Incident Commander. Regardless of the command structure used, the principal of Unity of Command is maintained. Unity of command establishes that everyone within the response structure reports to only one person.

For minor incidents, scene management can be simple and may only require a single agency involvement (transportation) or a single agency and a company (police and tow). As the severity of an incident increases, scene management becomes much more complex due to the increased number of responding agencies.

Improved scene management and traffic control requires coordinating the activities of multiple agencies, improving inter- and intra-agency communications, maximizing the use of resources, and improving traveler and responder safety through traffic control. Much of scene management includes personnel coordination, so measured benefits of these efforts are difficult to quantify.

Common scene management and traffic control challenges include:

- Confusion over authority/roles.
- Difficult on-scene maneuverability.
- Responder safety.
- Secondary incidents.
- Excess delay.

Table 6: Scene Management Strategies and Applications (Source: FHWA Best Practices in TIM)

SCENE MANAGEMENT AND TRAFFIC CONTROL STRATEGIES	Confusion over Authority/Roles	Difficult On-Scene Maneuverability	Responder Safety	Secondary Incidents	Excess Delay	EXAMPLE APPLICATIONS
Incident Command System	●					58+ U.S. Metropolitan Areas, WA
Response Vehicle Parking Plans		●				AZ (Phoenix), CO (Lakewood), IA, MI (Farmington), TX (Lancaster)
High-Visibility Safety Apparel/Vehicle Markings			●			CO (Eagle)
On-scene Emergency Lighting Procedures			●			TX (Austin, San Antonio)
Safe, Quick Clearance Laws—*Move Over*			●			47 States, including CA, FL, GA, IN, TN
Effective Traffic Control Through On-Site Traffic Management Teams			●	●		CA (Stockton), FL (Southeast), NJ
End-of-Queue Advance Warning Systems				●		CA (Bishop, Los Angeles, Redding, Stockton), NJ (Camden), TN (Chattanooga), UT (Salt Lake City)
Alternate Route Plans					●	62+ U.S. Metropolitan Areas, CA (Anaheim), FL (Northeast), ME/NH, NJ/PA (Delaware Valley Region), WI

2.3.1.5   *Quick Clearance and Recovery*

Clearance is the safe and efficient removal of wreckage, debris, or spilled materials from the roadway. Recovery is the restoration of the roadway to its normal capacity. When communicating information to travelers, they are most interested in the potential for travel time delays. An incident should never be reported as "cleared" to the public until the traffic delay has fully cleared. An agency may lose credibility and the public's trust if an incident is reported cleared but significant delays from traffic backup are still present.

Improved incident clearance and recovery help restore full roadway capacity and safely and efficiently as possible, improves traveler and responder safety, helps to efficiently

use agency resources, and minimize travel time delay. Effective incident clearance requires efficient use of equipment.

Common clearance and recovery challenges include:

- Abandoned vehicle hazards.
- Lengthy minor incident clearance.
- Lengthy major incident clearance.
- Liability concerns.

Table 7: Quick Clearance and Recovery Strategies and Applications (Source: FHWA Best Practices in TIM)

QUICK CLEARANCE AND RECOVERY STRATEGIES	Abandoned Vehicle Hazards	Lengthy Minor Incident Clearance	Lengthy Major Incident Clearance	Liability Concerns	EXAMPLE APPLICATIONS
Abandoned Vehicle Legislation/Policy	●				21+ U.S. Metropolitan Areas, IN, NC
Safe, Quick Clearance Laws—*Driver Removal*		●			~25 States, including FL, GA, MD, NC, OH, SC, TN, TX, VA, WI
Service Patrols		●			130+ U.S. Metropolitan Areas, AZ (Phoenix), CA, FL, GA (Atlanta), IN, MD, MN, NM (Albuquerque), OR, TN, UT (Salt Lake City)
Vehicle-Mounted Push Bumpers		●			CA (Redding, Stockton), MD (Baltimore), NJ/PA (Delaware Valley Region), OH (Cincinnati), TN (Chattanooga), TX (Austin), UT (Salt Lake City)
Incident Investigation Sites		●			16+ U.S. Metropolitan Areas, TX (Houston)
Safe, Quick Clearance Laws—*Authority Removal*		●	●	●	AZ, CA, CO, FL, GA, IL, IN, KY, MO, NM, NC, OH, OR, SC, TN, TX, VA, WA
Quick Clearance/Open Roads Policy		●	●		35+ U.S. Metropolitan Areas, CA, FL, GA, ID, IN, LA, MD, NV, NH, TN, UT, WA, WI
Non-cargo Vehicle Fluid Discharge Policy		●	●		FL, MN
Fatality Certification/Removal Policy			●		PA, TN, TX (Austin), WA
Expedited Crash Investigation			●		93+ U.S. Metropolitan Areas, FL, IN, TX (North Central Region), UT
Quick Clearance Using Fire Apparatus			●		TX (Austin)
Towing and Recovery Quick Clearance Incentives			●		FL, GA, WA
Major Incident Response Teams			●		DE, FL, IL (Chicago), LA, MD, NJ, OH (Cincinnati, Columbus), NY, TX (Dallas Co.), WA

3 Vision and Mission Statement

It is important to establish guiding principles for the Maine TIM Program. These principles take the form of a vision and mission statement, backed up by goals and objectives, which are based on the identified problems. Creating a vision and a mission statement helps to focus the TIM Program on what is important to all stakeholders. Dealing with day to day events, it is easy to lose sight of what the TIM Program is trying to accomplish. These statements remind stakeholders about what is important.

The vision and mission statements give the other bureaus and offices within MaineDOT, outside organizations, and the public an understanding of the TIM Program and what it plans to accomplish. Knowing these statements gives the TIM Program a better understanding to others. These statements create a common purpose for the stakeholders.

The vision statement is brief statement that provides the purpose, conveys the aim, and states what the TIM Program wants to achieve. By developing this vision statement, the TIM Program beliefs and governing principals are defined and accepted by the stakeholders.

The vision statement is:

- Understood by all TIM stakeholders
- Broad enough to include all stakeholders' perspectives
- Easy to communicate

In keeping these principals in mind, the TIM team has defined the following vision statement:

Safe and efficient traffic incident management on the state's roadways.

Once the vision has been defined, the next step is to ground the vision in practical terms by developing a mission statement. The TIM Program mission statement describes what the stakeholders are going to do and why they are taking these specific actions. The mission statement is more concrete and is action oriented.

The mission statement is:

- Concise, making a point in one sentence.
- Outcome oriented, explaining the what the TIM Program is working to achieve.
- Inclusive, a broad statement that is not limiting in the TIM strategies that can be undertaken by the stakeholders.

In keeping these principals in mind, the TIM team has defined the following mission statement:

Improve safety and reliability of the transportation network by developing and sustaining an effective, multi-disciplinary statewide TIM Program.

4 Goals, Objectives, and Performance Metrics

Simply stated, goals and objectives describe what the program is designed to accomplish. It is important that the TIM Program goals and objectives are multi-disciplinary in scope. The TIM Program goals establish overarching principles that guide decision making, while the objectives are specific steps to achieve each goal.

Where possible agency goals and objectives are measurable. Some objectives are qualitative, but most are quantitative. In general, the goals are general guidelines that explain what the TIM team wants the program to achieve. The objectives define strategies or implementation steps to attain the identified goals.

This section of the documents revisits the previously established objectives of the Greater Portland and ME/NH regional TIM committees. Keeping these objectives, the team defined goals, which map to the objectives and developed performance metrics that can be collected and reported on for each of the regions or statewide.

The Maine TIM Program focuses on the following objectives which have been defined and adopted by the regional TIM Committees:

- Increase responder safety by eliminating struck-by incidents, injuries, and fatalities.
- Minimize impacts to the free flow of traffic
- Decrease incident clearance time
- Decrease secondary incident occurrences
- Improve inter-agency communication during incidents.

MaineDOT's Statewide Safety Performance Targets are shown in the table below. It is important to collect safety metrics as this data has an impact on the overall system and are tangible numbers that can assist with identifying and receiving funding for the TIM Program.

Figure 2: Maine TIM Emblem

Table 8: Maine 2021 Safety Performance Targets

Maine 2021 Safety Performance Targets	Five-Year Averages	
	2019 Baseline	2021 Target
Number of Fatalities	156.4	158
Rate of Fatalities	1.04	1.12
Number of Serious Injuries	721.2	725
Rate of Serious Injuries	4.82	5.02
Number of Non-Motorized Fatalities and Serious Injuries	86.6	89

The National Unified Goal (NUG) was developed by FHWA, American Association of State Highway and Transportation Officials (AASHTO), the National Traffic Incident Management Coalition (NTIMC), and other government and industry representatives in 2004.

TIM Program goals as defined in the NUG include three main goals:

- Responder safety
- Safe, quick clearance
- Prompt, reliable, interoperable communication

Building on the NUG and the regional TIM committee objectives, the following goals and objectives have been laid out for MaineDOT.

Table 9: TIM Program Goals and Objectives

GOAL	OBJECTIVE
Responder Safety	Achieve zero responder fatalities
	Reduce responder stuck-by injuries and fatalities
	Increase the number of responders across all disciplines trained in the national best practices and standards of incident scene management
	Better information to motorists about congestion and incidents.
Safe, quick clearance	Reduce secondary incident occurrences
	Increase the frequency of incident responder's on-scene communication of incident information to MaineDOT Transportation Management Center (TMC) and Maine Turnpike Authority TMC
	Reduce the duration of lane closures, roadway clearance, and incident clearance
Prompt, reliable, interoperable communication	Improve the communication between incident responders before, during and following incidents
	Sustain regional TIM teams throughout the state
	Share TIM data with all response partners
	Improve the collection of TIM data
TIM Technology	Accelerate deployment of new technologies to improve TIM
	Assist agencies in the purchase of new technologies (e.g. drones for state police)
Stakeholder engagement	Support TIM in urban and rural areas
	Increase TIM outreach and education to agency leadership
	Improve public awareness about the benefits of maintaining an active TIM Program
	Continue to complete the FHWA TIM Self-Assessment (SA) yearly
	Conduct After Action Reviews (AARs) of all incidents that involve fatalities and/or full road closures

It is intuitively understood that TIM is important. However, the best way to show its value is to measure the benefits of TIM. Due to competing interests for limited public resources, it is critical to quantify and track the benefits of TIM to ensure program continuation. By identifying appropriate performance metrics for TIM, the various stakeholders all assume responsibility for improved performance and accountability. Performance measurement enables the assessment of coordinated, multi-agency TIM to identify benefits and impacts. The result is the allocation of technical and budget resources to support the program.

In order to expand the number of TIM Programs participating in the annual Traffic Incident Management Capability Maturity Self-Assessment (TIM CM SA), FHWA has now created an abbreviated assessment designed specifically for rural and/or emerging TIM Programs. This new TIM CM SA was designed to assist programs in the non-Top 75 metropolitan areas to evaluate their program's progress while recognizing that those programs may not have the resources available to have an expansive TIM Program like their counterparts in major metropolitan areas.

The collection and analysis of performance measure is critical to understanding impact of TIM activities and needs to be considered as part of a TIM Program. ME/NH TIM sub-group collects Roadway Clearance Time (RCT) and Incident Clearance Time (ICT) performance measures and secondary crash data. However, further enhancements to data collection and analysis, and using performance data to influence TIM operations needs to be investigated and specific performance targets needs to be established.

Short term, the TIM stakeholders need to document the what and where do we want to get to with the TIM Program. As part of documenting the TIM Program, the following performance metrics should be collected:

- Reduce severe and fatal crashes by 5 percent within 5 years.
- Reduce mean time for incident detection by 5 percent over 5 years.
- Reduce mean incident clearance time per incident by 5 percent over 5 years.
- Increase percentage of agencies that participate in a regional coordinated incident response team by 10 percent within 5 years.
- Increase the number of responders trained by discipline 20 percent over 5 years.
- Track the number of trained TIM first responders by discipline
- Track metrics from the FHWA SA.

As data is collected a gap analysis should be performed to identify activities and actions to bridge the gaps. This will lead to a common structure for the TIM Program.

In order to track the performance metrics, MaineDOT and other participating stakeholders need to collect and store the data necessary to perform these calculations. The collection of performance data is included in the recommendations section of this report.

5 Actions

The TIM actions identified in this section are informed by comparisons to existing national best practices, other states' TIM programs, and feedback collected from Maine stakeholders. They are grouped based their high-level TIM applications, then within each group the recommendations are explained in more tangible actions to be performed as ongoing, short-term, or mid-term.

The actions are shown in as a timeline in table format in section 6.

5.1 Identify a TIM Champion for Maine

Identifying a TIM champion for Maine is important for the success of the TIM Program. This does not have to be a MaineDOT employee. This person can be from any of the stakeholder groups. A champion for the program will help in sustaining the program, keeping it in the forefront, and mainstream TIM as an integral part of MaineDOT's business practice. A TIM champion encourages the institutionalization of TIM throughout the various disciplines.

- Assign dedicated MaineDOT staff and MPO staff to assist with the TIM Program to enhance TIM activities and increase accountability towards completion of action items.
- Continue to identify and fund technology solutions that can improve TIM field response times and effectiveness.
- Continue to work with FHWA and MaineDOT TIP programming (planning office) to identify funding for the TIM Program. Consistent funding source and program plan will allow the TIM Program to move ahead, expand and become an institutionalized program within MaineDOT.

5.2   TIM Training and Outreach

The actions related to training and outreach are highlighted below:

- Update content and format of the standard TIM 4-hour responder presentation materials for use during in-person and virtual instructor led (VILT) training.
- Develop "Rural" version of TIM 4-hour responder presentation for use during in-person and VILT training.
- Produce participant handouts for standard and rural versions of the TIM 4-hour responder training
- Develop instructor training support materials.
- Develop the capability to deliver the TIM 4- hour responder through self-paced online modules.
- Complete a TIM multi-disciplinary training outreach plan to improve communication with existing participating stakeholders and underrepresented organizations and geographic regions.
- Seek opportunities to incorporate TIM training in local and state academies and technical colleges that offer courses to TIM stakeholders and incorporate TIM responder training or equivalent training.
- Develop incentives for private sector organizations, such as the towing industry, environmental response, and EMS to regularly participate in regional or statewide TIM meetings and training.
- Establish a centralized public website for TIM training scheduling, program information, and resources.
- Establish an Instructor website or portal for training presentations and support materials, program updates, and additional instructor resources.

5.3   Expand Programs Related to TIM

One of the ways to strengthen a states TIM Program is to fund and support TMC operations that assist with incident clearance and traffic congestion. Safety patrol programs and traveler information (511) systems are key functions within a TIM Program that assist with incident clearance and notifying the public regarding congestion and incidents.

Responding to incidents and clearing incidents in the quickest and safest manor possible helps reduce congestion and secondary crashes. Having a strong relationship with the state police and their dispatch center(s) leads to faster incident response and TMC support.

The recommendations for expanded programs related to TIM include:

- Expand the safety patrol program to incorporate longer hours and additional vehicles.

- Expand the technology used to assist with accident recovery, such as police drones.
- Strengthen public outreach and traveler information systems related to incidents.
- Establish a CAD 911 interconnect with the TMC.

5.4   Collection of TIM Performance Data

The collection of TIM performance data is important to track and report on at regular intervals. It is key to develops a systematic approach for measuring TIM Program performance.

- Develop a statewide dashboard focused on TIM performance metrics. See Section 3 for the performance metrics that are recommended for collection.
- Create standards and guidelines for collecting performance data. As data is collected a gap analysis should be performed to identify activities and actions to bridge the gaps. Based on the gap analysis, review and change TMC incident collection policies to include TIM performance metrics recommended for collection.
- Create a single repository for all TIM information and documents, including an instructor portal.
- Centralize a place for stakeholders to get more information on resources and TIM related initiatives.
- Continue to complete the FHWA SA yearly.

5.5   Formal Policies and Guidelines

There are few formal policy and guideline documentation for the TIM Program. The following are recommendations for formal policies and guidelines for the TIM Program:

- Update the TIM operating guidelines from ME-NH and Penobscot County into statewide guidelines.
- Develop a statewide Unified Response Manual or other policy documents.
- Develop a policy for interoperable radio communication at incident scenes.
- Research current TIM related laws in ME and consider amending existing legislation related to the authority to tow vehicles and bringing new legislation forward such as 'Steer It Clear It' regulations.

5.6   After Action Reviews

The following recommendations related to AARs are highlighted below:

- Document the value of conducting AARs and obtain TIM partner buy-in.
- Establish criteria or thresholds for when to conduct AARs.
- Conduct AARs on a routine basis for incidents that meet the established criteria.
- Develop a standard form for documenting the results of AARs and track lessons learned.

5.7   New TIM Technologies

MaineDOT has begun efforts to implement new TIM technologies with the purchase of drones for accident reconstruction and foldable portable message signs that can be carried in the trunk of a police vehicle. The following recommendations related to new TIM technologies are highlighted below:

- Create a subgroup to discuss needed TIM technology.
- Accelerate deployment of new technologies to improve TIM.
- Assist agencies in the purchase of new technologies (e.g. drones for state police)

6   TIM Roadmap

6.1   Ongoing (No defined time length)

Identify a TIM Champion for Maine

- Assign dedicated MaineDOT staff and MPO staff to assist with the TIM Program to enhance TIM activities and increase accountability towards completion of action items. This will lead to an institutionalized TIM Program.
- Continue to work with FHWA and MaineDOT TIP programming (planning office) to identify funding for the TIM Program. Consistent funding source and program plan will allow the TIM Program to move ahead, expand and become an institutionalized program within MaineDOT.

TIM Training and Outreach

- Identify underrepresented responder groups and geographic regions to establish communication and develop methods to meet their training needs.

Collection of TIM Performance Data

- Continue to complete the FHWA SA yearly.

After Action Reviews

- Conduct AARs on a routine basis for incidents that meet the established criteria.

New TIM Technologies

- Accelerate deployment of new technologies to improve TIM.
- Assist agencies in the purchase of new technologies (e.g. drones for state police).
- Create a subgroup and meet quarterly to discuss needed TIM technology.

6.2   Near Term (1-3 years)

TIM Training and Outreach

- Complete a TIM multi-disciplinary training outreach plan.

- Update content and format of the standard TIM 4-hour responder presentation materials for use during in-person and Virtual Instructor-Led Training (VILT).
- Develop "Rural" version of TIM 4-hour responder presentation for use during in-person and VILT training.
- Produce participant handouts for standard and rural versions of the TIM 4-hour responder training
- Develop instructor training support materials.
- Establish a centralized public website for TIM training scheduling, program information, and resources.
- Establish an instructor website or portal for training presentations and support materials, program updates, and additional instructor resources.

Expand Programs Related to TIM

- Expand the safety patrol program to incorporate longer hours and additional vehicles.
- Strengthen public outreach and traveler information systems related to incidents.
- Establish a CAD 911 interconnect with the TMC

Collection of TIM Performance Data

- Develop a statewide dashboard focused on TIM performance metrics.
- Create standards and guidelines for collecting performance data. As data is collected a gap analysis should be performed to identify activities and actions to bridge the gaps. Based on the gap analysis, review and change TMC incident collection policies to include TIM performance metrics recommended for collection.

Formal Policies and Guidelines

- Update the TIM operating guidelines from ME-NH and Penobscot County into statewide guidelines.
- Develop a policy for interoperable radio communication at incident scenes.

After Action Reviews

- Document the value of conducting AARs and obtain TIM partner buy-in.
- Establish criteria or thresholds for when to conduct AARs.
- Adopt a standard form for documenting AARs

6.3   Mid Term (3-5 years)

TIM Training and Outreach

- Develop the capability to deliver the TIM 4- hour responder through self-paced online modules.
- Seek opportunities to incorporate TIM training in local and state academies and technical colleges that offer courses to TIM stakeholders and incorporate TIM responder training or equivalent training.
- Develop incentives for private sector organizations, such as the towing industry, environmental response, and EMS to regularly participate in regional or statewide TIM meetings and training.

Formal Policies and Guidelines

- Develop a statewide Unified Response Manual (URM) or other policy documents.
- Research current TIM related laws in ME and consider amending existing legislation related to the authority to tow vehicles and bringing new legislation forward such as 'Steer It Clear It' regulations.

6.4   Map/Schedule

The below table

Table 10: TIM Roadmap

Project	Ongoing	Near Term (1-3 years)	Mid Term (3-5 years)	Estimated Cost	Priority Level (H/M/L)*
Dedicated TIM Staff	▓			½ FTE or regional planning agency staff or consultant	H
TIM Program Funding (for staff hours and TIM related projects)	▓			$400,000 over 3 years	H
Draft a training outreach plan		▓		$25,000 for a consultant	H
Update materials for in-person and virtual instructor-led TIM training		▓		$8,000 for a consultant	H
Produce materials for "Rural" version of in-person and virtual instructor-led TIM training		▓		$ 20,000 for a consultant	H
Produce online self-paced 4-hour training modules			▓	$25,000 for a consultant	H
Identify academies/colleges that offer TIM courses			▓	No cost but involves staff time	L
Provide incentives for private sector organizations to participate in TIM training and TIM regional meetings (incentives: safety equipment or PPE)			▓	$6,000 over 3 years	M

Action				Cost	Priority
Find ways to reach and train more responders	▓			No cost but involves staff time	H
Expand Safety Patrol Program		▓		$60,000 per vehicle per year	H
Accelerate deployment of new technologies to improve TIM	▓			Dedicated funding over each 3-year period	H
Assist agencies in the purchase of new technologies (e.g. drones and fold up VMS boards)	▓			$28,000 per drone; $11,000 per board	H
Strengthen public outreach and traveler information related to incidents		▓		$200,000 per year for ME/NHVT 511 website	M
Establish CAD911 interconnect with the TMC		▓		Already funded. Involves staff time	H
Develop a statewide dashboard for TIM performance metrics		▓		$30,000 for a consultant	M
Create standards and guidelines for collecting performance data		▓		No cost but involves staff time	M
Create a single repository for all TIM information and documents, including an instructor portal.		▓		No cost but involves staff time	M
Create a centralized website for stakeholder TIM resources, include a public facing component.		▓		$10,000 for a website consultant	H
Complete the FHWA SA yearly	▓			No cost but involves staff time	H
Update TIM operating guidelines from ME-NH and Penobscot County into statewide guidelines.		▓		No cost but involves staff time	L
Develop a statewide URM			▓	$75,000 for a consultant	L
Develop a policy for interoperable radio communication		▓		No cost but involves staff time	H

Amend existing legislation and introduce new legislation related to TIM (towing and steer it clear it regulations/laws)				No cost but involves staff time	L
Document the value of AARs and discuss at regional TIM meetings				No cost but involves staff time	M
Establish criteria for conducting AARs				No cost but involves staff time	H
Adopt a standard form for documenting AARs				No cost but involves staff time	H
Conduct AARs when established criteria is met				No cost but involves staff time	H
Create a subgroup for TIM technology needs and meet quarterly				No cost but involves staff time	H

*H=High; M=Medium; L=Low

7   References

- I-95 Corridor Coalition TIM Teams Best Practice Report, March 2010
- FHWA, TIM Handbook, Jan 2010
- Penobscot County TIM Group, TIM Operating Guidelines for Incidents Occurring on I-95 and I-395, March 2015
- Maine-NH Incident Management Committee, Traffic Incident Operating Guidelines for Incidents Occurring on I-95 and the Maine Turnpike, July 2016
- Greater Portland Region TIM Committee, TIM Operating Guidelines for Incidents Occurring on I-295 and the Maine Turnpike, April 2019
- FHWA, Best Practices in Traffic Incident Management, Sep 2010
- FHWA, Traffic Incident Management, Gap Analysis Primer, Mar 2015
- FHWA, Technical Report Documentation, Making the Business Case for Traffic Incident Management, Dec 2016

Appendix A – NH Incident Responder Checklist

Responder Checklist

Thank you for accepting the invitation to participate in the Post Incident Review. By filling out the form below, you will be able to jog your memory regarding various aspects of the event. Filling the form out is strictly voluntary and you need to only fill out the parts that apply.

Agency:
_____

Name: _____

Date of Incident:
_____

Name of Incident Commander: _____

Agency of Incident Commander: _____

Who notified you of the incident, when and how?
_____
_____

_____
_____

When did you arrive on the scene? _____

What time did you leave the scene?_____

What resources or services did you provide?
_____
_____
_____
_____
_____
_____

Was the Unified Incident Command established? ☐☐Yes   ☐☐No

Was the media notified of the incident? ☐☐Yes   ☐☐No

Were you made aware of detours or other traffic changes regarding the incident?

☐☐Yes   ☐☐No

What part(s) of the incident response went particularly well?

_____
_____
_____
_____
_____

Were there opportunities for improvement in the response?

_____
_____
_____
_____
_____

What suggestions can you offer to assist in improving operations?

_____
_____
_____
_____
_____

Appendix B – NH Incident Commander Input Form

Incident Commander Input Form

Note: This report should only be completed by the Incident Commander or by each position in a Unified Command.

Incident Date:
_____

Name:
_____

Agency:
_____

Notification Time:
_____

Describe the situation upon your arrival to the scene:
_____
_____
_____
_____
_____
_____
_____

What plan of action did you use to combat the situation when you took command?
_____
_____
_____
_____
_____
_____
_____

Describe any changes made during the process
_____
_____
_____
_____
_____

Describe any assignments made to achieve the Plan of Action: _____

_____
_____

List any orders given: _____

Briefly explain any problems encountered, including type and how resolved:

Recommendations for improvement:

_____
_

_____
_

_____
_

_____
_

_____
_

Appendix C –4-Hour TIM Responder Training Course Overview

	LESSON	DURATION	OBJECTIVES
1	Introduction	25 minutes	1. Describe the purpose of the Strategic Highway Research Program 2 (SHRP 2) National TIM Responder Training Program 2. Recognize the dangers encountered by emergency responders working in or near traffic 3. Define traffic incident management (TIM)
2	TIM Fundamentals and Terminology	20 minutes	1. Define safe, quick clearance 2. List the principal laws that relate to responder safety and safe, quick clearance 3. Describe how the Manual on Uniform Traffic Control Devices (MUTCD) relates to TIM 4. Recall common response terminology, lane designations, and incident scene terminology
3	Notification and Scene Size-Up	15 minutes	1. Recognize the important role public safety communications centers play in incident response 2. Describe the notification and verification process 3. Recall the typical responsibilities of a Transportation Management Center (TMC) 4. List the key information that should be included in a scene size-up report
4	Safe Vehicle Positioning	40 minutes	1. Differentiate between Move It and Work It incidents 2. State the MUTCD definition of safe-positioned and describe blocking 3. Define Lane +1 blocking and describe the need for it 4. Describe safe practices for working around or avoiding the zero buffer
5	Scene Safety	25 minutes	1. Describe how emergency vehicle markings can improve scene safety 2. Describe recommendations for emergency- vehicle lighting as set forth in the MUTCD 3. Describe high-visibility safety apparel requirements for incident responders
6	Command Responsibilities	15 minutes	1. Describe both the need and the requirements for establishing and participating in the Incident Command System (ICS)

7			2.	Describe when it is appropriate to implement Unified Command
			3.	Identify the need for and use of Staging Areas
7	Traffic Management	30 minutes	1.	Describe the four main components of a traffic incident management area
			2.	Identify conditions at an incident scene that would require the Advance Warning Area be extended
			3.	Describe the need for, and how to set up, a taper
			4.	Identify and describe the two types of buffers that may be established at an incident scene
8	Special Circumstances	25 minutes	1.	Identify the safety concerns related to responding to an incident involving a vehicle fire
			2.	Describe how to identify what hazardous material is being transported
			3.	Recount good practices for responding to an incident involving a vehicle fluid spill
			4.	Describe the primary goal of a crash investigation and the importance of preserving short-lived evidence
			5.	Describe the importance of performing response tasks concurrently as it relates to safe, quick clearance
9	Clearance and Termination	25 minutes	1.	Describe quick clearance strategies for both minor incidents and incidents that involve tractor trailers and/or spilled cargo
			2.	List the type of information that needs to be provided to towing and recovery to facilitate their response
			3.	Describe the major activities that take place during termination and identify safety related considerations for scene breakdown

Appendix D – Two 2-Hour Sessions TIM Responder Training Course Overview

The FHWA TIM Responder Course Overview consists of 3 hours and 40 minutes of presentation time and two 10-minute breaks for a total of 4 hours. To facilitate a smooth transition between sessions, dividing the 4-hour TIM Responder Training Course into two 2-hour sessions necessitates the addition of a 10-minute review/wrap-up at the conclusion of Session 1, and a 10-minute review and introduction at the beginning of Session 2.

Following the lesson durations in the course overview places the end of Lesson 4 at 1-hour and 40 minutes. Including one 10-minute break and a 10-minute recap brings the total time of Session 1 to 2-hours. The course overview durations for lessons 5 through 9 is 2-hours. With the inclusion of a 10-minute introduction and a 10-minute break, the total time of Session 2 is 2-hours and 20 minutes.

LESSON		DURATION	OBJECTIVES
1	Introduction	25 minutes	1. Describe the purpose of the Strategic Highway Research Program 2 (SHRP 2) National TIM Responder Training Program
			2. Recognize the dangers encountered by emergency responders working in or near traffic
			3. Define traffic incident management (TIM)
2	TIM Fundamentals and Terminology	20 minutes	1. Define safe, quick clearance
			2. List the principal laws that relate to responder safety and safe, quick clearance
			3. Describe how the Manual on Uniform Traffic Control Devices (MUTCD) relates to TIM
			4. Recall common response terminology, lane designations, and incident scene terminology
3	Notification and Scene Size-Up	15 minutes	1. Recognize the important role public safety communications centers play in incident response
			2. Describe the notification and verification process
			3. Recall the typical responsibilities of a Transportation Management Center (TMC)
			4. List the key information that should be included in a scene size-up report
4	Safe Vehicle Positioning	40 minutes	1. Differentiate between Move It and Work It incidents
			2. State the MUTCD definition of safe-positioned and describe blocking
			3. Define Lane +1 blocking and describe the need for it
			4. Describe safe practices for working around or avoiding the zero buffer
	Review/Wrap-up	10 Minutes	Review material covered in Session 1 and Lessons that will be covered in Session 2

	Introduction	10 Minutes	Review material covered in Session 1 and Lessons that will be covered in Session 2
5	Scene Safety	25 minutes	1. Describe how emergency vehicle markings can improve scene safety
			2. Describe recommendations for emergency- vehicle lighting as set forth in the MUTCD
			3. Describe high-visibility safety apparel requirements for incident responders
6	Command Responsibilities	15 minutes	1. Describe both the need and the requirements for establishing and participating in the Incident Command System (ICS)
			2. Describe when it is appropriate to implement Unified Command
			3. Identify the need for and use of Staging Areas
7	Traffic Management	30 minutes	1. Describe the four main components of a Traffic Incident Management Area
			2. Identify conditions at an incident scene that would require the Advance Warning Area be extended
			3. Describe the need for, and how to set up, a taper
			4. Identify and describe the two types of buffers that may be established at an incident scene
8	Special Circumstances	25 minutes	1. Identify the safety concerns related to responding to an incident involving a vehicle fire
			2. Describe how to identify what hazardous material is being transported
			3. Recount good practices for responding to an incident involving a vehicle fluid spill
			4. Describe the primary goal of a crash investigation and the importance of preserving short-lived evidence
			5. Describe the importance of performing response tasks concurrently as it relates to safe, quick clearance
9	Clearance and Termination	25 minutes	1. Describe quick clearance strategies for both minor incidents and incidents that involve tractor trailers and/or spilled cargo
			2. List the type of information that needs to be provided to towing and recovery to facilitate their response
			3. Describe the major activities that take place during termination and identify safety related considerations for scene breakdown

Appendix E – Sample Recap and Review Slides