-- STATE OF NORTH CAROLINA--
DEPARTMENT OF TRANSPORTATION
RALEIGH, N.C.

FINAL REQUEST FOR PROPOSALS

DESIGN-BUILD PROJECT
Safety Service Patrol

HO-0010B

October 24, 2023
Including Addendum No. 1 November 7, 2023

VOID FOR BIDDING

DATE AND TIME OF TECHNICAL PROPOSAL SUBMISSION: **NOVEMBER 14, 2023 BY 3:00 PM**

DATE AND TIME OF PRICE PROPOSAL SUBMISSION: **NOVEMBER 21, 2023 BY 3:00 PM**

DATE AND TIME OF PRICE PROPOSAL OPENING: **DECEMBER 6, 2023 AT 2:00 PM**

CONTRACT ID: TBD

WBS ELEMENT NO.: 50631.4.2

FEDERAL-AID NO.: N/A

COUNTIES: STATEWIDE

ROUTE NOS.:   VARIOUS

LOCATION: STATEWIDE

TYPE OF WORK: SUPPORT THE CONTINUED DEVELOPMENT AND IMPLEMENTATION OF THE PROCESSES THAT PROCEDURES TO OPTIMIZE THE DEPARTMENT'S INCIDENT MANAGEMENT ASSITANCE PATROL (IMAP) SERVICES

NOTICE:

ALL PROPOSERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE PROPOSER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS $30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. PROPOSERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOT WITHSTANDING THESE LIMITATIONS ON BIDDING, THE PROPOSER WHO IS AWARDED ANY PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF PREFERRED PROCUREMENT TRACK AND PREFERRED PROPOSER ANNOUNCEMENT, REGARDLESS OF FUNDING SOURCES.

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Glossary

The Glossary below provides the meaning of each of the acronyms in this document.

API	Application Programming Interface
AVL	Automatic Vehicle Locator
CMS	Changeable Message Sign
ETC	Emergency Traffic Control
IMAP	Incident Management Assistance Patrol
IME	Incident Management Engineer
MOU	Memorandum of Understanding
MUTCD	Manual of Uniform Traffic Control Devices
NCDOT	North Carolina Department of Transportation
NCSHP	North Carolina State Highway Patrol
NIMS	National Incident Management System
PMP	Project Management Plan
RFP	Request for Proposal
RFQ	Request for Qualifications
RTMC	Regional Traffic Management Center
SHP	State Highway Patrol
SOP	Standard Operating Procedures
SOW	Statement of Work
SSP	Safety Service Patrol
STOC	Statewide Transportation Operations Center
TIM	Traffic Incident Management
VIP	Valuing Individual Performance
VIPER	Voice Interoperability Plan for Emergency Responders

1 Anticipated Procurement Schedule

The Department reserves the right to make changes or alterations to this schedule.

The Department is committed to procuring the Safety Service Patrol (SSP) Services scope of work, as described in this RFP. The Department is also committed to the contract timeframe communicated with Proposers to date.

Action	Responsibility	Date
Short-listed Teams Announced	Agency	October 3, 2023
Industry Draft RFP Issued	Agency	October 3, 2023
RFP Meeting with Short-listed Teams	Agency / Potential Offerors	October 13, 2023
Final RFP Issued	Agency	October 24, 2023
Optional Q&A Meeting with Short-listed Teams	Agency / Potential Offerors	November 2, 2023
Technical Proposals Due	Potential Offerors	November 14, 2023
Sealed Price Proposals Due	Potential Offerors	November 21, 2023
Technical Presentations by Finalists	Selected Offerors	November 30, 2023
Open Price Proposal	Agency	December 6, 2023
Contract Award	Agency	January 2024
Effective Date	Agency	February 2024
Fully Outsourced Date (Initial Routes)	Selected Vendor	August 2024

All events and dates set forth in the Procurement Schedule and elsewhere in the RFP are subject to change at NCDOT's sole discretion, and the Proposer shall be solely responsibility for monitoring the Procurement Schedule for any such changes.

connect.ncdot.gov/letting/Pages/Design-Build-Letting-Details.aspx?let_id=Safety Service Patrol

All times listed in the Procurement Schedule and elsewhere in the RFP are for local, Eastern Time in Raleigh, North Carolina for the applicable date. If any of the time periods set forth in the Procurement Schedule or this RFP fall on a non-Business Day, then such period shall automatically be extended to the next Business Day.

2   Purpose and Background

This Request for Proposal (RFP) is issued in accordance with the provisions of Section 136-18(39) and 136-18(46) of the North Carolina General Statutes (the "North Carolina Statutes") and other applicable provisions of law. The purpose of this RFP is to solicit responses from experienced firms interested in providing services outlined in the Project Scope Overview. Throughout this RFP, the terms Contractor, Proposer, Bidder, Team, Firm and Company are synonymous and may include consortia, partnerships, joint ventures and others. Furthermore, throughout this RFP, the terms NCDOT, Department, Engineer and State are synonymous. Safety Service Patrol (SSP) Services hereinafter referred to collectively as IMAP Services.

2.1 Project Scope Overview

The North Carolina Department of Transportation (NCDOT) is one of the largest government agencies in the state. NCDOT manages and supports multi-modal transportation infrastructure and roadway traffic operations across the state. NCDOT receives both state and federal funding for its wide variety of projects and services. The agency is led by several governing entities: the Secretary of Transportation, the NCDOT Board of Transportation, and NCDOT Executive Leadership, which includes 14 Divisions who manage various major areas of NCDOT's traffic operations. Refer to **Figure 1** for NCDOT Divisional breakdown.

Figure 1. NCDOT Division Map

The Transportation Systems Management and Operations (TSMO) Unit - Traffic Systems Operations (TSO) group will play an active role in the facilitation of the NCDOT Safety Service Patrol (SSP) Services contract. The TSO, otherwise referred to as Statewide, is responsible for the Statewide Transportation Operations Center (STOC) / Regional Traffic Management Center (RTMC) program, Intelligent Transportation Systems (ITS) Operations program, Traveler Information Program, Signal System Timing and Operations (SSTO) program, TSMO planning, and the Traffic Incident Management (TIM) program for the State, of which the Incident Management Assistance Patrol (IMAP) program resides.

The NCDOT TIM and STOC / RTMC programs have a presence across five regions to include Statewide coverage. The STOC is 24/7/365 whereas the Regional TMCs operate 5 days / week across 2 shifts per day. The Triangle Region in Raleigh, NC has the Triangle TMC that is strategically co-located within the STOC to operate cooperatively and covers Division 5 IMAP and Divisional IMAP (Division 3, 4, and 6) not covered by another RTMC. The Triad Region has a TMC (TRTMC) in Greensboro that covers Division 7 and 9 IMAP (and soon Division 11 expansion). The Metrolina Region has a TMC (MRTMC) in Charlotte that covers Divisions 10 and 12 IMAP. The Mountain Region has a TMC (MTMC) in Asheville that covers Division 13 and 14 IMAP. The Eastern Region will have a TMC in the Benson area soon that will cover Divisions 4, 6 and 3 IMAP. Currently, the STOC manages this region. The Regions operate independently but are tied together through Statewide standard operating procedures and a centrally managed budget.

NCDOT is expanding the IMAP program and is soliciting vendors to support the augmentation of the SSP patrols across the state with a focus on the urban areas around Raleigh, Greensboro, Winston-Salem, and Charlotte. Because of limitations in expanding with permanent NCDOT positions, the Vendor will assist the NCDOT in growing and maturing the program by providing embedded staff for IMAP patrols. The NCDOT is looking to have a Vendor provide drivers and supervisors with NCDOT-like IMAP vehicles, equipment, and uniforms, provide full-time Project Management and Training to support their operations and integrate into the NCDOT's existing program, provide facilities for their project, and establish a fleet management program to ensure a healthy fleet across the life of the contract. These services will be expected to be in-line with the NCDOT's current performance, safety, and quality standards; participate in and follow the NCDOT's training paradigm; and ensure continuity of operations so that routes are always covered once assigned. The services are to be scalable, flexible, and expandable to meet the needs and support the Department.

The Vendor will be a member of the NCDOT TSO team, joining other embedded consultants and vendors providing staffing and services for the STOC / RTMC, the TIM Team providing IMAP training and statewide / regional TIM coordination, and operations and maintenance for Intelligent Transportation Systems (ITS) devices. Collaboration and teamwork are essential among all the partners, including establishing and fostering positive and strong relationships with other emergency responders and law enforcement.

The following graphic (**Figure 2**) provides the footprint of the IMAP Program and location of the STOC / RTMCs. Initially, the vendor will be expected to staff routes in the Triad region, specifically in the Winston-Salem (Division 9) area and expansion routes in Division 11. See **Section 2.3** for additional information.
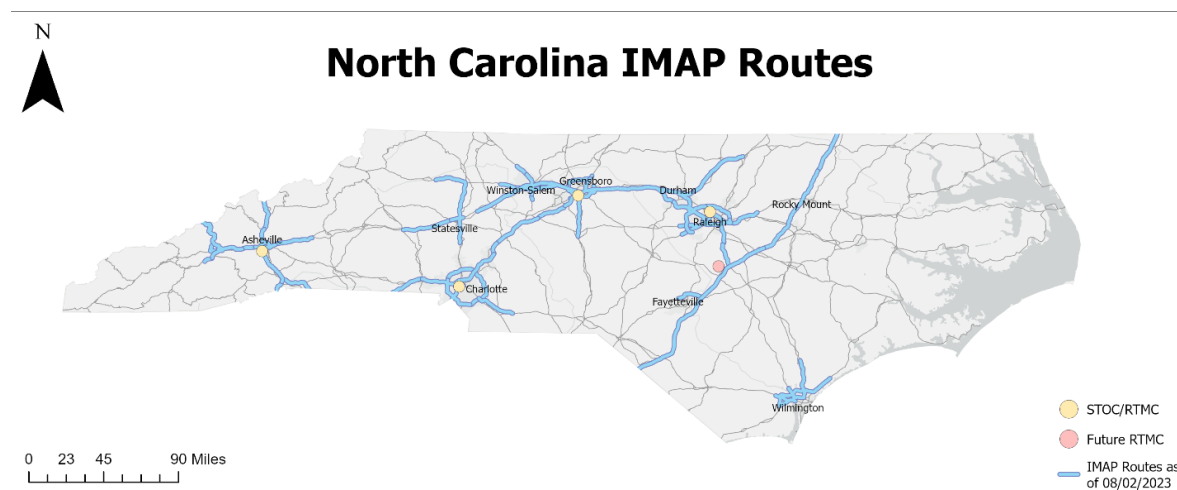
Figure 2. IMAP Routes and STOC/RTMC Locations

A critical component of NCDOT's transportation management is providing for large planned and unplanned events, such as major construction projects, special events or state mandated evacuations. The Vendor will be expected to have the capability to support these events by "surging" staff or redeploying staff to affected areas of the state to assist within their capabilities. For example, during a hurricane evacuation in the eastern region, Statewide would develop an overall response plan to best assist in the evacuation, and the Vendor, in coordination with other IMAP staff, may shift their routes to cover those evacuation routes to best maintain mobility along the routes. See **Section 2.3.4** and **2.3.5** on additional details on Surges.

2.2 TIM Program Overview

NCDOT defines Traffic Incident Management (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. TIM resources focus on increasing the operating efficiency, safety, and mobility of the roadway network by decreasing the time required to detect, verify, and respond to an incident. This includes the implementation of strategies such as quick clearance, advanced on-scene management, and improved relationships with all incident responders.

A critical component of NCDOT's active traffic management is providing a statewide and regional Traffic Incident Management (TIM) Program. NCDOT TIM Program partners with other traffic management and first responder stakeholders to quickly resolve incidents and increase safety for first responders and the traveling public. The TIM program focuses on equipping agencies to be well trained, properly resourced and managed, and acting in a professional and consistent manner.

The TIM Program is delivered through multiple key positions staffed in key roles across the state. These positions fulfill multiple responsibilities including overseeing, supporting, and coordinating resources for IMAP. The TIM Program is delivered by contracted staff that provide resources and guidance to the NCDOT Statewide and Regional staff. The following **Figure 3** shows the structure of the TIM Program Management team.
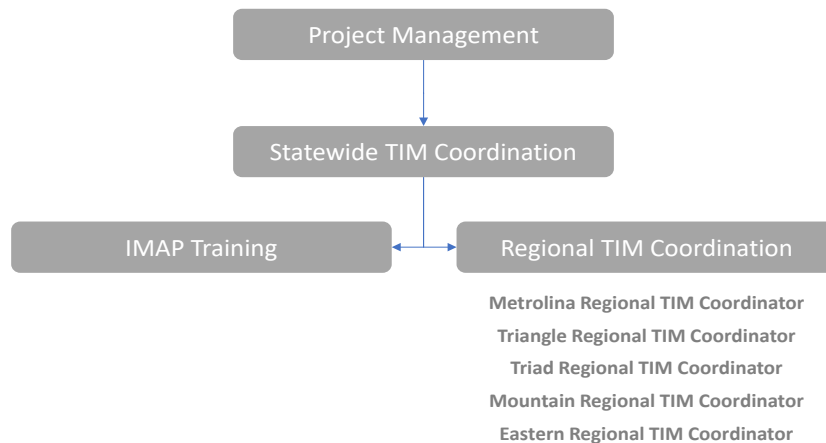
Figure 3. TIM Program Management Team Structure

The TIM Team works closely with NCDOT staff. The following **Figure 4** provides a high-level view of the relationship between the TIM Program Management Team and the Reginal TIM Staff within NCDOT.

NCDOT				
Statewide			**Division**	
TIM Coordinators	*Regional resource to foster relationships among IMAP and first responders*		**Regional Management Team**	*Manages performance and resource allocation for IMAP; Collaborates with the RTMC in response to incidents*
IMAP Trainers	*Trains all IMAP personnel across the state*		**IMAP Supervisors & Responders**	*Oversee day-to-day responsibilities of IMAP*

Figure 4. High-Level Relationship between TIM Program and Regional IM Staff

2.3 IMAP Program Overview

IMAP is a safety service patrol that serves as a significant component of the TIM program and is the front-line support to provide effective congestion management on North Carolina's freeways. The primary focus of the IMAP program is to provide emergency traffic control to protect emergency responders and direct the public, monitoring and managing traffic impact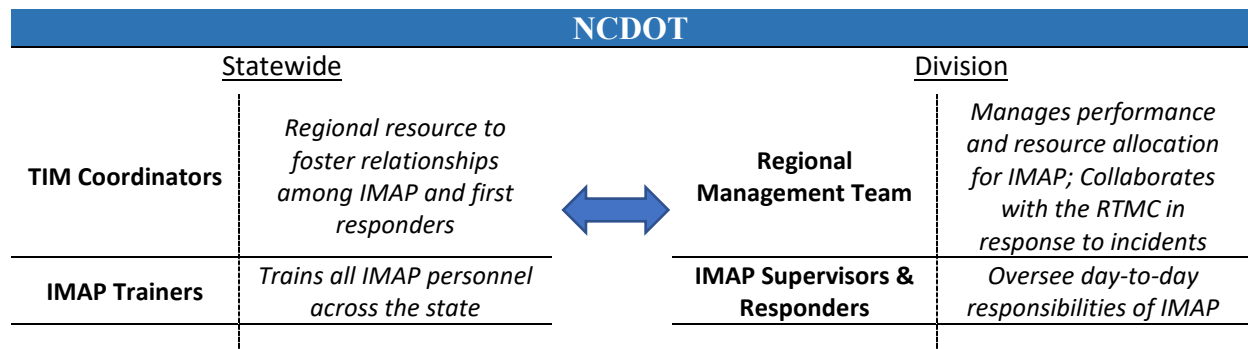s, and supporting scene management at the incident. IMAP's ability to reduce the incident duration minimizes traffic congestion at, or near, incident scenes.

IMAP currently covers more than 1,100 centerline miles through both patrol and response across five distinct regions. IMAP Responders and supervisors work for and are supported by their respective Divisions. IMAP patrol areas include urban (Triangle, Triad, Metrolina) and rural (Eastern and Mountain Regions) across 9 Divisions. The Divisions or Regions manage the routes, which are determined based on regional factors.

IMAP personnel represent NCDOT and as such must always uphold the highest standard of professionalism and customer service. To support a cohesive look and feel of IMAP across the state, IMAP Responders and Supervisors wear a standard uniform. Uniform specifications are in Exhibit A.

The Department equips and trains IMAP Responders to clear minor incidents (push/pull/drag), provide emergency traffic control, and offer traveler assistance (refueling with gas or diesel, changing tires, jump-starting batteries). The program is committed to providing professional, well-trained, and courteous responders focused on the following Core Services and Secondary Disabled Motorist Assist Services:

Core Services

- Quick clearance of minor incidents
- Application of emergency traffic control
- Scene assessment
- Clearing obstructions and debris from the roadway
- Other agency coordination
- Other emergency conditions

Secondary Disabled Motorist Assist Service

- Tire change assistance
- Fuel to get to the nearest gas station
- Minor vehicle maintenance
- Phone access to call local tow/recovery services

NCDOT assigns patrolled routes to a specific responder during a designated shift. This level of coverage can reduce the incident detection and incident clearance times.

IMAP coverage can be repositioned for major weather events to provide coverage where needed. Statewide is more actively involved and supports the resource balancing by facilitating lodging, designating teams, and assigning patrol routes.

2.3.1 IMAP Shifts

Typically, a responder patrols a route for one continuous shift. The standard shift duration can last between 8 to 12 hours. Supervisors or managers can extend a standard shift beyond the typical hours to accommodate:

- Responders remaining on scene until an incident has cleared and all responders have left the scene.
- Special events, weather events, or weekend hours
- Construction activity

- Shifting to a different geographic location within the state to support the additional needs in that Division/Region (typically due to a weather event)

Urban area patrols are typically weekdays prior to the AM peak and extend past the PM peak and include two shifts. A typical staffing level for an urban area is shown in **Figure 5** . It includes 8 responders that report to an IMAP Supervisor. Each Region includes the responsibilities of an Incident Management Engineer (IME) to manage the Supervisors and align the program to accomplish the defined goals.
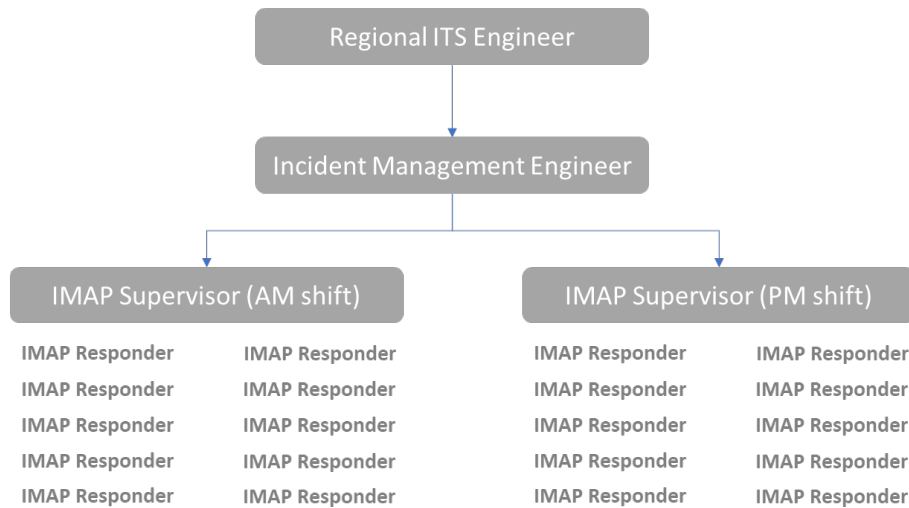
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                    Regional ITS Engineer
                            │
                            ▼
               Incident Management Engineer
                            │
          ┌─────────────────┴─────────────────┐
          ▼                                   ▼
  IMAP Supervisor (AM shift)         IMAP Supervisor (PM shift)

IMAP Responder   IMAP Responder      IMAP Responder   IMAP Responder
IMAP Responder   IMAP Responder      IMAP Responder   IMAP Responder
IMAP Responder   IMAP Responder      IMAP Responder   IMAP Responder
IMAP Responder   IMAP Responder      IMAP Responder   IMAP Responder
IMAP Responder   IMAP Responder      IMAP Responder   IMAP Responder
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Figure 5. Typical IMAP Structure

2.3.2   IMAP Positions

IMAP Responders and Supervisors require a substantial and unique combination of skills. Staff often work independently to conduct scene assessments, support quick clearance, and implement emergency traffic control (ETC). Job requirements define that Responders and Supervisors must use critical thinking to navigate high-pressure situations and quickly implement solutions that can protect motorists, themselves, and other first responders. Current job descriptions are in Exhibit B.

There are multiple levels of IMAP operators described in Exhibit B. The NCDOT classifies IMAP Responder positions into a Transportation Worker category. A Transportation Worker II (TWII) is an entry level IMAP Responder, a Transportation Worker IV (TWIV) is senior level IMAP Responder, and an IMAP Supervisor. Exact routes are subject to change based on the needs of the Region. **Table 1** shows how the NCDOT would staff the associated position levels in Division 9 and 11.

Table 1. Example IMAP Staffing in Division 9 and 11

Route	MM-MM	IMAP Structure	
		IMAP Supervisor (AM)	IMAP Supervisor (PM)
1	**I-85 / I-285**: 84-87 / **US 52**: 85-103	TW II	TW II
2	**I-285 / US 52**: 103-129	TW IV	TW II
3	**I-40**: 162-182	TW II	TW IV
4	**I-40**: 189-208 / **I-74**: 55-63	TW IV	TW II
5	**I-40**: 208-209 / **US 421**: to 227 / **I-74**: 53-42	TW II	TW II
6	**US 421**: 224-249	TW II	TW IV
7	**I-85**: 63-88	TW II	TW II
8	**I-85**: 86-111	TW II	TW II
9	**I-77**: 51-73 / **US 421**: 265-281	TW II	TW II

2.3.3 NC Laws for IMAP Operations

2.3.3.1 Quick Clearance Law

NC's Quick Clearance Legislation, NCGS 20-161(f), provides indemnification to NCDOT, North Carolina State Highway Patrol (NCSHP), and contractors representing NCDOT from liability for any damage or economic injury related to assisting in the removal of vehicles interfering with the regular flow of traffic, or if the vehicle constitutes a hazard to the operation of the roadway. The Quick Clearance Legislation pertains to Property Damage only crashes. IMAP shall not remove a vehicle crash involving serious personal injury or death until the investigating law enforcement officer has completed the crash investigation. Per the Memorandum of Understanding (MOU), contractors working on behalf the NCDOT can be protected under the Quick Clearance Law and MOU. Refer to Exhibit C for more information about the Quick Clearance Legislation and MOU.

2.3.3.2 NC Good Samaritan Law

NC has a Good Samaritan Law, NCGS 20-166, which provides protection to any person who renders first aid or emergency assistance at the scene of a motor vehicle crash on any street or highway to any person injured as a result of the accident. The person shall not be liable in civil damages for any acts or omissions relating to the services rendered, unless the acts or omissions amount to wanton conduct or intentional wrongdoing.

2.3.4 IMAP Surge Events

IMAP resources can be reallocated to better support specific scenarios based on real time needs. NCDOT balances or adjusts available IMAP resources to accommodate specific types of services presented in **Table 2**. IMAP service modifications include extending their hours and/or extending their coverage routes in response to the identified areas of need. The extension will continue until:

- The event has concluded.
- Additional resources are allocated.
- The event has lessened enough where IMAP resources are not needed.

Table 2. Additional Types of IMAP Services

Type of Service	Identified Areas of Need
Adverse Weather	Supports pre, during, and post response to adverse weather such as hurricanes, snow, flooding
Special Events	Support special events beyond standard hours of operation. (e.g., sporting events, large concerts, presidential visits)
Public Outreach	Represent the program in a non-patrol environment (e.g., expositions, school events, public awareness, meet-and-greets, safety events, multi-agency meetings)
State of Emergency	Support pre-, during, and post-event response Major incidents or law enforcements requests after receipt of approval from the Department or designee

2.3.4.1 IMAP During Adverse Weather

Under normal conditions, IMAP and NCSHP work in tandem to tag and tow vehicles in support of GS 20-161, where disabled vehicles can be removed in 24 hours.

In preparation for a storm or major special event, NCDOT and NCSHP will assess and if warranted can issue an Immediate Tow action to clear shoulders, and lanes if blocked, on specific highways. These vehicles can be legally removed even if they are not deemed as a hazard. Once issued, IMAP resources support the immediate tow actions and focus efforts to clear all vehicles on the identified highways.

IMAP also prepares for adverse weather by ensuring that they have extra consumables, fuels, oils, etc. on their vehicles. They need to be ready to operate for extended periods with the potential of limited resupply, which could include changes of uniform, weather appropriate outerwear, etc.

The Statewide TIM program coordinates for logistics to ensure the continual support to the re-positioned IMAP responders with regard to lodging, food, maintenance facilities, etc.

During adverse weather conditions, IMAP operates within the standard NCDOT safety protocols and guidelines with regard to weather constraints like winds, etc.

2.3.5   IMAP Performance

Every IMAP Responder and Supervisor has an annual assessment based on the clearly defined Valuing Individual Performance (VIP) Goals outlined in the job descriptions. The VIP goals measure of success is based on the data documented in the IMAP logs as Responders communicate to the STOC/RTMC. Each year, IMAP personnel meet with their supervisors to discuss their performance and next year's goals. VIP goals are consistent throughout the state and align directly with the Department's strategic direction. The Department reviews the goals each performance cycle at the statewide level for consistency. Statewide provides the Regions with periodic updates on their individual VIP performance metrics for use in counseling the Responders and Supervisors.

2.3.6   IMAP Training

NCDOT has a mature *standardized IMAP training program*. Refer to Exhibit D for the curriculum and manuals. The IMAP Training and Certification Program provides consistency in incident management training for IMAP employees across the state. This single curriculum provides training for all roles and responsibilities of the IMAP Responders and Supervisors. The curriculum model for IMAP Responders and Supervisors follows a **learn** (in a classroom), **observe** (at the STOC), **practice** (at the training track), and **demonstrate** (on the road) methodology.

IMAP Responders initial training entails four (4) weeks of training to include an assessment to ensure that they can operate in the field. The IMAP Supervisors receive two (2) weeks of training to include an assessment at the conclusion of training. The Supervisors must be Operator trained prior to being Supervisor trained.

IMAP Responders and Supervisors must complete a final assessment in the field to obtain their certification, completing the standardized training curriculum. IMAP Responders are able to patrol independently after receiving their certification. Either supervisors, regional TIM coordinators, or Statewide trainers can conduct the field assessment, typically three months following initial training.

NCDOT has two additional courses that will support continuing education for IMAP personnel.

- In-Service Training – modules identified and conducted to refresh knowledge of critical areas of operation and provide updates to best practices in procedures or new safety information and protocols. In-service training typically happens once or twice per year.
- Rehire Process – specific training and assessments required when an IMAP Responder is rehired after leaving the position for a specified period of time.

IMAP Responders and Supervisors are required to attend In-Service training to maintain their certification.

The IMAP Certification Program goals focus on:

- Risk Mitigation
- Interoperability
- Stronger Partnerships
- Enhanced Abilities
- Safety

- Consistency
- Program Maturation

Training takes place at the TIM Training and Development track, co-located at the NCSHP Training and Driving Facility, located at 380 East Tryon Road, Raleigh, NC 27610, refer **Figure 6**.

Figure 6. Overview Picture of the TIM Training and Development Track

The track is available for IMAP and NCSHP personnel to practice various incident management response maneuvers in a controlled environment. Through coordination with NCSHP, the facility also supports the ability to host multi-agency TIM training exercises. The dedicated IMAP training facility provides an environment to safely conduct field training within a simulated real-world experience and designed to meet the following three goals:

- Safe and controlled environment
- Sufficient size for full demonstrations
- Road geometrics simulating a real-world environment

2.3.7 Incidents Involving IMAP

The Department uses a Crash Review Board to review and evaluate all incidents involving IMAP personnel while on duty. The board does not provide any disciplinary actions, rather identifies areas of improvement through training and incident trends.

If an IMAP Responder is involved in an incident, the IMAP Supervisor completes an investigation of the incident immediately following the incident. If the IMAP Supervisor is involved in an incident, his supervisor completes the investigation. The IMAP Supervisor submits the incident report to the Incident Management Engineer (IME) and the Division/Region's safety coordinator for their review and signature. The IMAP Supervisor sends the report to the Statewide TIM Coordinator.

The Crash Review Board reviews the information and provides any training recommendations monthly or as needed.

2.3.8 IMAP Fleet Equipment (Vehicles, Radios, etc.)

The fleet currently consists of approximately 85 vehicles (Ford F350 and F450) with typical safety service patrol equipment like changeable message signs (CMS), cameras, air compressors, winches, toolboxes, and emergency supplies. In future years, NCDOT will transition to F450s. Exhibit E includes the current truck specifications, equipment list, standard CMS messages and CMS specifications.

IMAP Responders communicate with their associated STOC/RTMCs using a two-way radio system, Voice Interoperability Plan for Emergency Responder (VIPER), for communication system.

Divisions assign IMAP personnel a call sign (or P-code, reference Figure 7 for examples) for identification on the VIPER radios when

P-Number Format		Regional Designation	Numerical Assignment	
	P-	0#: Statewide ##: Regional 1##: Metrolina 2##: Triangle 3##: Triad 4##: Mountain 5##: Division 3/Coastal 6##: Division 6/I-95	01-09: Statewide Operations 10-19: Regional TIM #00: Regional ITS Engineer #01: Incident Management Engineer #02: Operations Engineer #03: Placeholder/Not Defined #04 - #09: Supervisors #10 - #99: Responders	
EXAMPLES	P-	Statewide 0	State Traffic Operations Engineer 02	P-002
	P-	Regional 0	Western TIM Coordinator 11	P-011
	P-	Mountain 4	Regional ITS Engineer 00	P-400
	P-	Triad 3	IME 01	P-301
	P-	Metrolina 1	Supervisor 04	P-104
	P-	Triangle 2	Responder 10	P-210

Figure 7. Example of P-Code Format

communicating with the STOC/RTMCs. The call sign is a short numeric value used during radio communications to identify individuals that are involved in the incident response.

NCDOT has designed the IMAP vehicle to support patrolling, storage of essential tools and resources, and provide high visibility. The graphics on the IMAP truck are retroreflective material that is visible to approaching traffic. Current IMAP vehicles include wraps that denote the current IMAP Program sponsor, the NCDOT, and safety decals in support of increased visibility for safety.

The IMAP Field Training Manual for IMAP Responders (Chapter VE 101) in Exhibit D includes vehicle components, equipment lists, and a pre-start and shutdown procedures. IMAP may increase the volume of fuel and types of equipment (i.e., cones,) or resources during certain events, such as a hurricane evacuation.

IMAP personnel are responsible for the appearance of their vehicle so that it positively represents the IMAP program and NCDOT. To ensure safety and consistency across the fleet, Statewide must approve any truck modifications.

NCDOT manages the IMAP fleet at the statewide level to ensure consistency across the fleet. They balance distribution across the regions based on needs and vehicle conditions. Statewide prioritizes new vehicle distribution and current vehicle re-distribution to keep the fleet as ready as possible. Statewide coordinates with regions, to include the appropriate division vehicle superintendent and statewide fleet management, to understand the specifics about vehicle conditions and overall needs, and potential solutions to address fleet issues.

The NCDOT has a sponsor that receives vehicle and signage acknowledgements. The sponsor generates revenue payable to the Department in exchange for signs posted along IMAP routes acknowledging the sponsor, as well as branding on the IMAP vehicles and through other promotional materials. NCDOT manages all sponsorship opportunities about IMAP.

At the time of this RFP, the NCDOT does not have an existing AVL system for their IMAP fleet.

The Department strives to identify resources that support IMAP personnel in performing their core service, and this may include piloting technologies. More recently, NCDOT has piloted emergency vehicle alerts (EVA), tethered unmanned aerial vehicles (UAV), and debris removal devices.

2.4 STOC / RTMC Overview

The NCDOT's STOC is a traffic and incident management facility that operates 24 hours a day, 7 days a week, and 365 days a year (24/7/365). The STOC's primary statewide function is to serve as a coordination hub for transportation officials and emergency responders when major incidents and/or events impact travel in multiple regions or across state lines. When these incidents occur, personnel in each affected region initiate response measures focused primarily on local impacts. The STOC engages personnel from each region and facilitates the exchange of information between all involved so that their responses are consistent and fully address the incident's multi-regional impact.

The STOC plays a critical role in the continuity of the Department's operations by serving as one of the major region's (Triangle) primary TMC; by augmenting the response capabilities of regions without a RTMC; by supporting those that do have a RTMC by serving as the command center when those TMCs are offline, not staffed, or unexpected events exceed their current manpower.

In the STOC facility, NCDOT's traffic management staff are co-located with the operations/communications centers of other partners including NCSHP, NC Emergency Management, the North Carolina Turnpike Authority (NCTA), and NC National Guard Joint Force Headquarters (JFHQ).

The RTMCs are linked to various transportation and incident management partners including local municipal transportation operations centers (TOC), emergency responders, and media partners for more efficient incident

management and communication of real-time information to motorists via ITS infrastructure, IMAP, and advanced traveler information system (ATIS). RTMCs could be the staging area for the response and mobilization of various stakeholders during a large special event or major emergency. Consistency in deployment, operational, and management methodologies are critical to successful and seamless traffic operations during an emergency, staff shortage, or system outages. Refer to Exhibit I for TMC Standard Operating Procedures (SOPs).

Triangle TMC

- Managed from the same control room as the STOC at JFHQ

- Located: 1636 Gold Star Drive, Raleigh

- Manages operations for the Greater Raleigh, Wake, Durham, Franklin, and Chatham counties

- The North Carolina Turnpike Authority (NCTA) is co-located in the TMC/STOC to manage traffic for the Triangle Expressway in Wake County

- Division 5 IMAP Operates from the JFHQ compound at the Claude T. Bowers Building

Triad TMC

- Provides back up support for the STOC or a RTMC

- Located at 201 S. Chimney Rock Road in Greensboro

- Manages traffic operations for the Greensboro / Winston-Salem area, including Orange, Alamance, Guilford, Forsyth, Davidson, Rowan, and Davie Counties

- Only Division 7 IMAP operates from this facility. Division 9 IMAP uses NCDOT Maintenance Yards at 311 Craft Dr, Winston Salem and 25 Camp Rd, Salisbury depending on their route proximity

Metrolina TMC

- Primary back-up support for the STOC or may be the center for a major special event such as the Republican National Convention; therefore, consistency in deployment, operational, and management methodologies are critical to successful and seamless traffic operations during an emergency, staff shortage, or system outages

- Located at 2327 Tipton Drive in Charlotte

- Manages traffic operations for the greater Charlotte area, including Mecklenburg, Cabarrus, Stanly, Union, Anson, Alexander, Iredell, Catawba, Lincoln, Cleveland, and Gaston Counties

- NCTA is co-located in the TMC to manage traffic for the Monroe Expressway in Mecklenburg County

- MRTMC and the STOC also coordinate with the I-77 Mobility Partners on managing traffic along the 26 miles of I-77 Express Lanes

- Division 10/12 IMAP operate from this facility

Mountain TMC

- Important role in managing 'hot spots' along the interstates where winter weather can cause significant affects.

- Located at 11 Old Charlotte Highway in Asheville, temporary location

- Manages traffic for Yancy, Madison, Buncombe, Polk, Henderson, Transylvania, Haywood, Jackson, Swain, Macon, Graham, Clay, and Cherokee Counties.

- Division 12 IMAP operates from this facility. Division 14 IMAP operates from the Mountain TMC and the Clyde Maintenance Yard, 619 Paragon Parkway, Clyde

Eastern TMC

- Expected to be built in Benson, Division 4 2024

- Anticipated to manage traffic for counties in Division 1, 2, 3, 4, and 6

- Division 4 IMAP will operate from this facility. Division 6 IMAP operates from the Division office in Fayetteville. Division 3 IMAP operates from the Division office in Castle Hayne.

3 Contract Requirements and Scope of Work

3.1 Contract Term and Dates

The awarded proposer shall receive a contract awarded for a term of five (5) year(s) with an optional extension of one (1) term for two (2) years. The proposer will receive a "contract award" date and a "date of availability" date. A contract award date will indicate the date in which the NCDOT awarded the contract and will not be tied to the term length. The date of availability will indicate the date on which the five (5) years contract term begins and is intended to allow enough time to process the administrative needs to execute the contract. SSP Operations will not begin until approval/notification by NCDOT. Any payments incurred by the awarded proposer cannot be submitted until after the date of availability.   The State reserves the right to terminate the contract prior to the end of the contract term. At the option of the Department and upon agreement by the Contractor, this contract may be extended for one (1) two (2) year term.

The Contractor will have six (6) months to transition and completely staff the initial 9 (nine) IMAP routes identified in Section 3.8.2. The date will be known as the "fully outsourced date." The remainder of the patrol routes will be transitioned on a case-by-case basis later, and not all routes are guaranteed to be transitioned.

Changes to the terms, conditions, etc. of this contract will not be made when an extension of the contract is implemented. NCDOT will notify the Contractor in writing prior to renewal of the contract. The Contractor must notify the NCDOT in writing within thirty (30) days of notification by the NCDOT of his acceptance or rejection of this offer. Failure on the part of the Vendor to reply will be viewed as a rejection of the contract extension.

This solicitation, including any Exhibits, or any resulting contract or amendment shall not become effective nor bind the State until the appropriate State purchasing authority/official, or Agency official has signed the document(s), contract, or amendment; the contract award date has been completed on the document(s), by the State purchasing official, and that date has arrived or passed. The State shall not be responsible for reimbursing

the Vendor for goods provided nor Services rendered prior to the appropriate signatures and the arrival of the contract date of the Agreement. No contract shall be binding on the State until an encumbrance of funds has been made for payment of the sums due under the Agreement.

3.2 Emergency Events

Due to the unpredictable nature of emergency events with respect to frequency and the area that they will affect, it will be difficult to assess the breadth and depth of the requirement for the Vendor. It will be expected that the Vendor shall require their personnel assigned to the project to be available when appropriate by the NCDOT. See Sections 2.3.4 and 2.3.5 for details on surge events and adverse weather.

3.3 General Statutes and NCSHP MOU applicability to Vendor

The Vendor shall fall under the General Statute and NCSHP MOU provisions outlined in Section 2.3.3 NC Laws for IMAP Operations.

3.4 Insurance Requirements

Liability Insurance is required in accordance with Article 107-15 of the *2024 Standard Specifications for Roads and Structures*.

"The Contractor shall at its sole cost and expense obtain and furnish to the Department an original standard Association for Cooperative Operations Research and Development (ACORD) certificate of liability insurance evidencing commercial general liability with a limit for bodily injury and property damage in the amount of $5,000,000 per occurrence and $5,000,000 general aggregate, covering the Contractor from claims or damages for bodily injury, personal injury, or for property damages that may arise from operating under the contract by the employees and agents of the Contractor. The required limit of insurance may be obtained by a single general liability policy or the combination of a general liability and excess liability or umbrella policy. The State of North Carolina shall be named as an additional insured on this commercial general liability policy. The policy may contain the following language as relates to the State as an additional insured: "This insurance with respect to the additional insured applies only to the extent that the additional insured is held liable for your or your agent's acts or omissions arising out of and in the course of operations performed for the additional insured."

The Contractor shall maintain all legally required insurance coverage, including without limitation, worker's compensation and vehicle liability, in the amounts required by law. Prior to beginning services, all contractors shall provide proof of coverage issued by a workers' compensation insurance carrier, or a certificate of compliance issued by the Department of Insurance for self-insured subcontractors, irrespective of whether having regularly in service fewer than three employees. Providing and maintaining adequate insurance coverage is a material obligation of the contractor and is of the essence of this contract. All such insurance shall meet all laws of the State of North Carolina. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Commissioner of Insurance to do business in North Carolina. The Contractor shall at all times comply with the terms of such insurance policies.

Upon execution of the contract, provide evidence of the above insurance requirements to the Engineer. When required by the contract, the Contractor shall carry insurance of the kinds and in the amounts specified therein in addition to any other forms of insurance or bonds required under the terms of the contract, or any other insurance carried by the Contractor. "

3.5 Bonds

The proposed bid bond, payment bond and performance bond requirements are set out below. Each of the bid bond, payment bond and performance bond must be substantially in the form described in the subsections further below.

Bond/Security Requirements

- Bid bond: $2 million
- Beginning on the Fully Outsourced Date and continuing each year the Term thereafter, the Contractor will furnish and maintain an annual payment and performance bonds each in the amount equal to the first year's annual Contract amount under the Contract. Annually thereafter, between thirty and forty-five days prior to the anniversary of the Fully Outsourced Date, provide to the Department a Payment and Performance Bond in a penal sum equal to the upcoming year's annual Contract amount. Regardless of the number of separate bonds or bond continuations provided by the Surety hereunder, the Surety's liability for each bond or bond continuation will be limited to the contract amount for the twelve-month period for which the bond or bond continuation is provided.

Obtain the payment and performance bond from a Surety authorized to conduct business in the State of North Carolina. Failure to provide any of the required payment and performance bonds to the Department within the aforementioned time frames will entitle the Department to annul the award, declare the Contractor in default, terminate the Contract, or decline to renew the Contract, all in the Department's sole discretion.

Form of Bid Bond and Payment and Performance Bond

Proposers can access the form of Bid Bond and Payment and Performance Bonds here: *https://connect.ncdot.gov/letting/Pages/Central-Letting-Forms.aspx*

3.6 Direct Costs

Direct Costs and Rates: In-state travel not associated with the patrol of IMAP routes (e.g., supervisor auditing incident scene, safety personnel conducting inspections, project management team performing quality checks) may be required in order to meet the defined requirements. Out-of-state travel may be required and will be approved on a case-by-case basis. All travel requires NCDOT's prior approval and will be reimbursed to the Vendor at the in-state and out-of-state rates found using the web address below:

https://connect.ncdot.gov/business/consultants/Roadway/Maximum%20Allowable%20Non-Salary%20Direct%20Costs.pdf

Direct costs will only apply towards expenses incurred during required travel. Direct costs incurred by IMAP Responder and Supervisors caused by NCDOT training requirements or surge deployments are reimbursable at the direct cost rates and are handled on a case-by-case basis.

3.7 Invoicing

To ensure that invoices are paid timely and accurately, the Vendor must ensure they have the correct information on the invoice before making payment. This information includes the Vendor's name, vendor remit to address, invoice date, and invoice/reference numbers. If the invoice is missing any information, there may be a delay in payment.

NCDOT Accounts Payable (AP) requires an original (Accounting Software generated) prime vendor invoice to be submitted with any other documentation required by the NCDOT to make payment for services. The Standard NCDOT Invoice Cover Sheet is not a substitution for an original prime vendor invoice but is also required documentation by NCDOT as backup documentation. Original (Accounting Software generated) prime vendor invoices are a requirement to ensure proper validations of invoice information entered in NCDOT's accounting system, eliminate duplicate payments, and assist vendor Accounts Receivable departments to apply payments appropriately. The following components must be on the original (Accounting Software generated) prime vendor invoice:

- Vendor name– the name on the invoice must match what is listed in the NCDOT Directory of Firms
- Remittance address – must match what is listed in the NCDOT Directory of Firms

- Invoice number
    o Must be a unique invoice number for each invoice submitted (repeating the same invoice number on individual or other PO's or contracts may cause errors and delays payment processing)
    o Invoice numbers must not have more than 16 characters (alpha and numeric values only)
    o When submitting a revised invoice, ensure it states revised
    o Invoice date
    o Itemized or brief description of services

The Monthly Operations Report listed in Section 3.8.2.1 must be included as backup documentation for the invoice. The Vendor is recommended to use a NCDOT approved invoice template to avoid any payment delays. The NCDOT will work with the Vendor to develop a mutually beneficial invoice coversheet.

Invoices will be submitted monthly. Prior to submitting an invoice, the Vendor and NCDOT TSO will hold an Invoice Review meeting to validate and deconflict the charges over the course of the invoiced month. Upon agreement of the invoice, the Vendor shall submit the Vendor's invoice, and filled-out invoice template along with the backup documentation to mobilityandsafetycontractadmin@ncdot.gov for prompt process. Submitting the invoice without reviewing with TSO may result in delay of payment.

3.8 Contract Scope of Work

All plans identified in the contract scope of work shall be submitted on the day identified in each section. The department has ten (10) working days to provide comments back to the Vendor. The final plans shall be submitted no later than fifteen (15) working days after the final comments are resolved between the Vendor and NCDOT.

The Vendor is expected to receive nine (9) routes in Division 9 and 11 (Section 3.8.2) to transition and patrol within the first four months of the contract. Fifteen (15) additional routes may be transitioned over the course of the contract based on attrition of the permanent NCDOT employees or expansion. The routes will focus on the urban areas centered around the Triangle, Triad, and Metrolina and may include weekend shifts or different shift times. It is the intent of the NCDOT to transition vacant shifts to the Vendor, but each case may require different approaches to ensure supervisor coverage and facility availability. The Vendor and NCDOT will need to agree on the best approach to ensure each route's continuity of operations.

3.8.1 Project Management

3.8.1.1 Requirement 1: Project Management

The vendor shall provide a **Project Management Plan (PMP)** in coordination with the Department and delivered to the Department for review and comment within 30 days from the date of availability.

The PMP shall include detailed:

- Overall Project Management
- Project Administration
- Communication strategy
- Quality Control
- Conflict Resolution and Escalation Plan

The Project Management Plan shall provide a level of coordination and collaboration throughout the life of the contract. The PMP shall also address how the Vendor shall maintain their prequalification status based on the work codes provided during the RFQ process.

The PMP should address the following topics at a minimum:

Overall Project Management

The Department requires a full-time dedicated Project Manager located in North Carolina that will be responsible for the day-to-day administration of the contract and management of the contract staff. The Project Manager shall:

- Champion the project and help mature the IMAP program.
- Take ownership of the project, actively anticipating and responding to problems and formulating innovative solutions.
- Provide strong and ethical leadership, agility, flexibility, and initiative, partnering with NCDOT and stakeholders.
- Team with the NCDOT and the other embedded contractors and consultants to achieve common goals.

The Project Manager is also responsible for providing a systematic approach that ties together actions and tasks accomplished within the project to an auditable monthly update. The Project Manager shall conduct monthly meetings, or as needed, with the NCDOT to review how the project accomplishments are being invoiced. NCDOT expects the contractor to staff the routes that they assume from the NCDOT 100% of the time for the shifts, personnel and equipment required, and anything less than 100% must be accounted for and appropriately credited back to the department. The Project Manager should make all efforts to overcome personnel or equipment limitations, and any approvals for not staffing a shift must be communicated to and approved by NCDOT.

It is imperative that the proposer can work in a collaborative environment and able to foster a sense of teamwork with both the NCDOT as well as with other firms and contractors supporting the overall program. There are embedded consultants and contractors supporting ITS device operations and maintenance, management and staffing of the STOC / RTMCs, and the TIM program management including statewide and regional coordination and IMAP functions. The IMAP program is a reflection on the Department, and the consultants and contractors working for the Department are expected to uphold a positive and ethical environment and act in accordance with published NC General Statutes, MOUs, and NCDOT policies and procedures.

Project Administration

Project Administration: NCDOT intends to select a partner who will be independent and provide leadership, innovation, and quality. The project will need to balance day-to-day management by the Vendor, work closely with the assigned Division/Region, and receive high-level guidance and direction from TSO. Administration responsibilities are to be accomplished as the Vendor deems appropriate and as approved by NCDOT. It is understood that staff may be able to accomplish their administrative responsibilities without being fully dedicated to working on-site.

Communication Strategy

The Department requires the Vendor to communicate effectively with stakeholders at all levels within NCDOT and external agencies including: NCDOT Statewide and division/regional staff, TMC and TIM contract staff, emergency responder agencies, and internal project team members. The Vendor must have a thorough understanding of the key partners that are required to deliver effective IMAP services.

The Vendor must also work in concert with other firms working on similar contracts for the NCDOT and NCDOT IMAP /incident management personnel. Close coordination and collaboration between the STOC/RTMC, Regional TIM Coordinators, Divisional and Regional staff is imperative to the success of the program.

The Vendor should provide a communications management plan as part of the PMP that clearly defines the appropriate method of correspondence and communication for this project and how information will be disseminated. The plan should include communication between NCDOT (both statewide and Divisional) and the Vendor project team members; other NCDOT contracted staff and the Vendor.

Quality Control

The Department requires the Vendor to maintain a high level of quality throughout the life of the project.

The Vendor shall describe the anticipated policies and procedures that will be followed throughout the project to ensure precise, accurate, and complete work. The Vendor will be empowered to proactively recommend and implement quality control improvements throughout the life of the contract. The Vendor shall be held accountable for adherence to the plan.

Conflict Resolution and Escalation

The Department requires that the Vendor:

- Resolve conflicts at the project management level (i.e., inadequate level of staff for patrol) all the way down to the personnel (i.e., IMAP certification maintenance or performance).
- Address safety or performance concerns.
- Develop a plan outlined for conflict resolution and escalation of issues that considers all the stakeholders.
- Develop a communication strategy for informing the Department of the various issues that arise that require conflict resolution and/or escalation.

The Vendor should provide a statement that outlines how the Vendor plans to escalate issues or concerns; how they will communicate to the NCDOT if _IMAP patrols are not being filled_; if _IMAP is not meeting their performance goals_; if IMAP is performing in an unsafe manner to themselves and the public; and how any other changes will be managed.

The Department requires a recurring meeting schedule with the Vendor and NCDOT Program Management team (Statewide and Regional) to discuss communications, performance review, conflicts, identified issues, and other topics.

3.8.1.2   Requirement 2: Mobilization Transition, and Demobilization
The Vendor shall provide a **Mobilization & Transition Plan** within 30 days of the date of availability and a **Demobilization Plan** within 6 months of the end of the contract.

The Mobilization & Transition Plan shall address the following topics:

Mobilization

The Department recognizes that the Vendor will be required to purchase vehicles and train operators prior to taking over services. Based on the Vendor's bid, the Department could provide an initial one-time reimbursement for mobilization of up to $1.5M, if requested. The Vendor shall propose a Mobilization & Transition Plan that includes the number of vehicles, responders, supervisors, and facilities for the base scope to be delivered within 6 months from the Date of Availability. The responders and supervisors shall be aligned with the preferred staffing model with a minimum of twenty-one (21) vehicles outlined in **Section 3.8.2**.

Transition

The initial transition period is defined as the period between the Date of Availability and the Fully Outsourced Date. The initial transition period shall be no longer than 6 months.

Continuity of IMAP operations is critical during the transition period. The Department expects that the Vendor may be interested in hiring existing certified IMAP drivers and will provide an opportunity for the Vendor to meet with existing staff. The Department and Vendor will need to coordinate transition of existing drivers from NCDOT to Vendor to ensure that route coverage is not impacted during this transition period. The Department is open to an accelerated transition schedule during this initial transition period.

Subsequent transitions will occur as the Department expands outsourcing capabilities. For each transition, the Vendor is required to provide to the Department for approval, a Transition Plan that includes:

- List of main tasks to be completed
- List of resources needed, including vehicles, equipment on the vehicles, facilities, etc.
- List of key contacts
- A schedule to complete the transition of an IMAP fleet from NCDOT to the Vendor

Demobilization

The Vendor shall develop a ***Demobilization Plan*** that details the close-out or transition of ownership of all open action items, the transfer of assets to the Department or Vendor assuming responsibility upon the end of the contract, and all other logistical responsibilities managed by the Vendors. This Demobilization Plan shall be approved by the NCDOT Contract Administrator six months before the end of the contract term.

The Demobilization Plan shall include, but not limited to:

- Identification of risks associated with the transition and potential mitigations to minimize the risks
- Remaining outstanding items or tasks
- A schedule to complete a transition of SSP services from the contractor to NCDOT or another contractor
- Continuity of IMAP operations during the Demobilization Period

3.8.1.3   Requirement 3: Personnel and Staffing

The Department requires the Vendor to provide qualified personnel to support Project Management, Training, and SSP Operations. To maintain consistent and stable program transition and project delivery, the Department requires the Project Manager position be identified in the proposal and consistent throughout the life of the project. The Department must approve any new project management staff. Responsibilities for each of the staff include:

The Project Manager responsibilities:

- Champion the project, taking ownership of the project, anticipating and responding to issues and providing solutions.
- Primary liaison between NCDOT and the team.
- Day-to-day administration of the project and management staff.
- Responsible for ensuring that adequate personnel and other resources are made available for the Project.
- Strong leadership, agility, flexibility, and initiative, partnering with NCDOT and partners.
- Be able to communicate effectively and bring a depth of knowledge that shall guide NCDOT to not only maintain, but also to improve current practices and systems.
- Handle contractual matters.
- Responsible for the quality and timeliness of the Team.

Trainer responsibilities:

- Responsible for supporting the Department's training and certification program.
- Align training needs with those identified and required by the Department.
- Ensure all staff successfully complete the required training and certification based on the define timeline.
- Responsible for certification maintenance, including any additional training throughout the year.
- Responsible for coordinating training needs with NCDOT IMAP Trainers.

Optional Personnel

The Department reserves the right to add additional personnel to the project management team as funds become available and needs change. The Department expects the Vendor to provide the responsibilities of the Optional Personnel noted below although the Optional Personnel are not initially part of the identified staff. The Vendor shall define roles and responsibilities for the optional personnel:

- Safety Coordinator
    - o Establish the Proposer's safety program.
    - o Create and oversee audits and assessments of staff.
    - o Identify processes and training needs based on identified gaps or trends in delivery of the SSP Program.
- Fleet Manager
    - o Responsible for ensuring that adequate vehicles and equipment are made available for the Project.
    - o Responsible for handling all maintenance issues of the vehicles and equipment, and ensure they are in good working order.
    - o Identifying any potential new technology for IMAP and then coordinating with NCDOT prior to introduction of new technology on vehicles.

Additional positions not included within the requirements may be proposed as the Vendor deems necessary. The Department may propose additional positions later in the contract term for the Vendor as well.

The Department expects any personnel, agent, or subcontractor of the Vendor performing services under this contract to undergo a background check at the expense of the Vendor.

The Vendor shall maintain current certified copies of the driving record for each driver authorized to drive prior to the contract start date or upon the hiring of a driver if hired after initial start date. Also, the Vendor shall provide driving records for all involved drivers for each contract renewal. The Vendor shall inform the Department within 24 hours, if a driver is charged with, convicted of, enters a plea of guilty or no contest to, or receives a prayer for judgment continued (PJC) for any crime. The Vendor shall provide driving records when requested by the Department.

The Vendor shall provide a *Personnel and Staffing Plan* no later than 30 days after the date of availability. The plan shall be updated as the Vendor hires new staff. The Department will work with the Vendor regarding expected roles and responsibilities between the Vendor and NCDOT.

The Personnel and Staffing plan shall outline the administrative and operational responsibilities within the contract. The Plan should include:

- Number of responders and supervisors to staff the initial routes specified in Section 4.82.
- Number of responders and supervisors recommended per each additional route.
- Goals used for IMAP personnel performance.
- Reporting hierarchy within the Vendor's staff
- Roles and responsibilities of project management staff.
- Career path for IMAP Responders and Supervisors.
- Project hours needed for adequate and competent coverage across the regions. Including breaks, lunch, shift change, and restocking supplies in the middle of a shift.
- Discipline approach for issues involving the public or NCDOT or when IMAP personnel leave their shift without approval or coverage.

3.8.2   SSP Operations

The Department expects the Vendor to provide IMAP services that includes IMAP Responders and Supervisors as outlined in the Contract Scope of Work.

Department's Expectation of Services Include:

- At a minimum for nine (9) IMAP routes initially and up to as many as twenty-four (24) IMAP routes total.
- Initially two (2) weekday shifts (AM/PM).
- Initial anticipated days of the week: Monday-Friday
- Initial anticipated hours of operations: 6:00am – 9:00pm
- Anticipated for each IMAP Responder to include pre- (before shift) and post-operational time (after shift) to ensure the vehicle is ready for the next shift at the end of the current shift, conduct any pre/post briefs on the routes, restock any expendables, perform any operator level maintenance, etc. Minimum gross hourly rate for an IMAP Responder shall be: $23.00 per hour.
- Additional routes will focus on the Triad, Triangle, and Metrolina regions; exacts routes, days and times are TBD

Table 3 shows the initial nine routes and how NCDOT shall expect the Vendor to staff the routes in Division 9 and 11.

Table 3. IMAP Staffing in Division 9 and 11

Route	MM-MM	IMAP Structure	
		IMAP Supervisor (AM)	IMAP Supervisor (PM)
1	**I-85 / I-285**: 84-87 / **US 52:** 85-103	Responder 1	Responder 2
2	**I-285 / US 52**: 103-129	Responder 3	Responder 4
3	**I-40**: 162-182	Responder 5	Responder 6
4	**I-40**: 189-208 / **I-74**: 55-63	Responder 7	Responder 8
5	**I-40**: 208-209 / **US 421**: to 227 / **I-74**: 53-42	Responder 9	Responder 10
6	**US 421**: 224-249	Responder 11	Responder 12
7	**I-85**: 63-88	Responder 13	Responder 14
8	**I-85**: 86-111	Responder 15	Responder 16
9	**I-77**: 51-73 / **US 421**: 265-281	Responder 17	Responder 18

The Department will expand to additional routes and potentially additional services as funding becomes available. The Department will coordinate with the Vendor on the execution of these services. Surge capability should be available no later than the Fully Outsourced Date.

3.8.2.1 Requirement 5: SSP Operation

The Department expects the Vendor to provide the following services for IMAP supervisors and responders. Qualifications for IMAP Supervisors and Responders are within Exhibit B. All IMAP supervisors and responders are required to follow all appropriate NC laws, NCDOT policies, standard operating procedures, guidelines, etc. Any responder or supervisor operating on NC roadways must sign the IMAP Code of Conduct Agreement in the "Field Training Manual for IMAP Responders" acknowledging the commitment for ethical conduct, safe conduct, and dedication to Public Service. It states,

"As an IMAP responder for the North Carolina Department of Transportation (NCDOT), I understand that;

1. I am a public servant and, as such, the interests of the public come before my own self-interests.
2. My appearance, behavior, and actions directly impact the credibility, value, and overall perception of the Department and of the IMAP program.
3. Ethical behavior and safe working practices are a condition of my employment.

While performing my duties as an IMAP responder, I agree to;

1. Hold myself and my team to the highest standards of ethical conduct.

2. Maintain safety as my #1 goal and to actively protect my own safety and the safety of others.
3. Adhere to all policies, procedures and safety precautions established for the IMAP program.
4. Actively assist all members of my team and seek their help when it is needed".

Signed copies shall be maintained by the Vendor, along with associated training records.

IMAP Supervisor and Responders

- **IMAP Supervisors** – shall be responsible for managing IMAP responder personnel. It is expected IMAP Supervisors will respond to incidents as needed, recognize the severity of incidents based on the relayed information, arrive on scene to assist mitigations and allow IMAP Responders to attend to Emergency Traffic Control or detour, coordinate with Division Incident Management Engineer regarding what is occurring on scene, know and understand all IMAP policies and standards and operating procedures include quick clearance, gather incident report information for interagency team meetings, build and maintain relationships with other first responder agencies. Completed IMAP Responder and Supervisor training and maintain certification.

  IMAP Supervisors are not to patrol a route but rather monitor and assess IMAP Responders.

- **IMAP Responders** – shall be responsible for the day-to-day functions and services set forth within the IMAP Field Training Guide and trained through the NCDOT IMAP training and certification program. It is expected IMAP Responders will be professional, courteous, provided and maintain appropriate level of training, maintain situational awareness, be able to communicate in English, pass and maintain physical fitness criteria as outlined in the IMAP position descriptions in Exhibit B, have and maintain standard uniform that is clean at the start of each shift, have and maintain a fully operational and clean vehicle at the start of each shift, confirm to and governed by the latest North Carolina Motor Vehicle Code, obey all federal, state, and local laws, ordinances, regulations, and standards related to traffic and motor vehicle operations and safety.

  IMAP Responders shall be responsible for communicating all stops during their shift to their corresponding STOC/RTMC; providing customer survey cards to motorists for feedback at each stop; attend corresponding safety meetings; collaborate alongside NCDOT IMAP Responders as applicable; and attend/participate in multi-agency training exercises as requested by the Department. Completed IMAP Responder Training and maintain certification.

General Guidelines:

1. **IMAP Dispatch** – ALL IMAP will be <u>dispatched by the STOC/RTMC</u>. There shall be no separate dispatch center as part of this contract. IMAP <u>must call in all stops</u> to the STOC/RTMC.
2. **Incidents Involving IMAP** – Any incident involving an IMAP responder or IMAP vehicle must be reported to the Department. An incident report shall be created within 48-hours of the incident. The incident report shall include, at a minimum, when, where, time, what was occurring at the time of the incident, and any additional comments such as mitigation measures. See section 3.8.2.5 for additional information.
3. **Holidays** – IMAP is expected to work on holidays that falls within the scheduled work week, at the normal hourly rate.
4. **Additional Hours Requested** – Any additional hours worked due to cleanup of a traffic incident, or as directed by NCSHP or the Department shall need approval from the Vendor Project Manager.

The Department reserves the right to adjust the hours of operations and the number of shifts to meet the Department's needs. This may include adding After-Hours response to areas already covered.

The Department reserves the right to require adjustments, alterations, or additions of route locations to better accommodate service demands and needs of the Department at any time during the contract. The Department must approve any requested changes by the Vendor prior to implementation.

The Department will advise the vendor of any required adjustments to a route within forty-eight (48) hours prior to implementing any adjustment, except during times of an emergency.

The Vendor shall provide a *Coverage Implementation Plan* within 15 days of receiving notice of a new coverage area. The Coverage Implementation Plan will outline the steps and timeline for the Vendor to be ready to provide additional services based on the notice provided.

Service to a new coverage area shall be at the same hourly rate as that for other coverage areas.

The Vendor shall operate within the routes designated by NCDOT. Each route shall have specific turn-around locations and shall include start and end at specific entrance/exit ramps. Refer to Exhibit F for more information regarding coverage areas.

	Number of Routes	Some Major Roadway for Anticipated Routes	Centerline Miles (approximate)
Initial Service	9	I-40, I-85, I-77	*202 miles*
Additional Service	15	I-40, I-85, I-485, I-77, I-540, I-440, US 64	*659 miles*
Total Routes:	24	Total Mileage:	*TBD (based on available routes)*

The Vendor shall acknowledge and understand the Vendor shall have no rights to any profits, revenues, or other funds generated from the Sponsorship Program. The Sponsorship program shall only be managed by the NCDOT and no other Vendor generated sponsors are permitted or allowed to be displayed.

The Vendor shall provide a *monthly operations report*. This report will be used to review monthly invoices and be added as backup documentation for the invoice. All information will be reviewed with the Divisions prior to coordination with the Vendor. The Report shall include, but not limited to, the following:

- Proposed IMAP personnel for the month
- Actual IMAP personnel for the previous month
- Actual hours of service provided and percentage of required hours of service
- Number of incidents responded to, response time, roadway clearance time
- Authorized surge activities (who, when, hours, where)
- Authorized after hours (who, when, hours, where)
- Any training needs and why
- Staffing level changes
- Any receipts for direct costs

The Vendor shall address any changes in the schedule on as 'as needed' basis.

3.8.2.2   Requirement 6: Surge Staffing

The Department needs the ability to surge IMAP staff for emergencies and special events. When there is a "Surge Event," the Vendor will likely work together with the NCDOT IMAP in a range of tasks. They could augment existing staff in another region, patrol routes that may not be normally patrolled, or work together on the same shift and same route depending on the size or complexity of the event. The overall goal is to mass the limited resources of the state to address a regional or statewide concern.

The Department recognizes that the Vendor may need additional resources to surge staffing for emergencies or special events, which is why the Vendor can provide a bid rate for surges (not to exceed 1.5 times the bid price for the daily operations). In emergencies, the Department will give as much advance notice as possible. The vendor will be notified 30 days in advance for special events.

- **Emergency or Surge Activity** – Examples include hurricane evacuation, major incident, roadway construction, NCSHP requests, or other surge activities, after hours, or weekend requests as approved by the Department or designee.
- **Special Events** – These activities are considered above and beyond normal non-surge patrol events and can include political visits, multi-agency training exercises, conference demonstrations.

Surge hours may include all day (24-hours) seven days a week (Sunday to Saturday), including holidays. NCDOT expects the Vendor to provide services regardless of weather.

The Vendor is to make available IMAP Supervisor and/or Responders as needed per the event. For Special Events, the Vendor is to provide IMAP Responders and/or Supervisors who are not otherwise scheduled for patrol. Any information regarding surge activities shall be included within the *monthly operations report* noted in the SSP Operations section.

Payment for any surge, after hours, weekend, and/or emergency activities will be based on the approved surge price. Exhibit G provides estimations for the frequency of surges and an estimation for the frequency of each Type of Service identified.

3.8.2.3   Requirement 7: Performance Management

The Department expects the Vendor to hold IMAP Responder and Supervisors to the same performance standards as the current IMAP Program. The Department expects the Vendor to conduct yearly assessments of the IMAP staff. This assessment is based on the data collected by the STOC/RTMC as communicated by the IMAP when dispatched and while on scene. Data collected by the STOC/RTMC will be provided to the Vendor monthly.

IMAP Responder Goals include data associated with the following:

- Incident Response Time – time between first notification of an incident by the STOC/RTMC and confirmation the responder has arrived on scene to the STOC/RTMC. To meet this goal, the IMAP Responder needs to arrive on scene within 20 minutes of notification at least 60% of the time.
- Roadway Clearance Time – time between first recordable awareness of an incident and the first confirmation all lanes are open for traffic. To meet this goal, IMAP must be able to clear the lane within 30 minutes of arriving on scene at least 60% of the time. This only applies to property damage incidents where IMAP can apply quick clearance.
- Customer Service – IMAP provides enough customer survey cards that at least 1.75 surveys are returned per month.
- Incident Audits – IMAP is performing as trained on scene during an audit at least 80% of the time.
- Inspections – Vehicles are cleaned, washed both interior and exterior at a minimum twice a month.

In addition to those goals listed above, Senior IMAP Responders also include:

- Management – demonstrate supervisory qualifications and can act as a supervisor if one is unavailable. They can provide on-the-job training to new IMAP, aware and familiar with assigned sections of the freeway, and able to handle and manage challenging incidents.

In addition to goals listed above, IMAP Supervisors goals include:

- Audits – complete at least 3 audits a month and at least 1 audit of everyone within the VIP period.

The Awarded Vendor shall provide a **monthly performance report** based on the agreed upon metrics noted for IMAP and the Project. NCDOT will review the auditable performance reports with regularity. If it is determined that a measure of performance is unacceptable, the Awarded Vendor shall submit a Recovery Plan identifying the reason for unacceptable performance and detailing the solution and timeframe to resolve the issue within one week of identifying the problem. If the Awarded Vendor fails to adhere to the Recovery Plan, NCDOT may consider this a violation of the contract and will respond in the best interest of NCDOT.

In addition to IMAP activity performance, the Vendor shall monitor its own performance of the contract. The additional performance metrics is intended to:

- Ensure consistent delivery of services
- Foster collaboration between the Department and the Vendor
- Support data-driven operational improvements

Project performance metrics includes an overarching view of the project and includes the following items:

- Providing required documentation within the timeframe noted
- Providing sufficient management staff to fulfill the project services as noted in the Scope of Work
- Providing IMAP personnel to patrol within designated time periods more than 90% of the time.
- Providing coverage of all designated routes more than 90% of the time
- Providing and maintaining vehicle fleet more than 95% of the time
- Meeting with first responders and other partners to establish and maintain relationships at least 3-4 times per month

The Vendor shall be responsible for the measures of performance specific to IMAP activities and shall support measures of performance not fully within their control. The Vendor shall work with the STOC/RTMCs to collect specific IMAP data captured daily and the NCDOT Divisions / Regions to understand additional requirements to incorporate into the performance requirements. The Vendor is not expected to capture or log data independently from the STOC/RTMCs.

3.8.2.4   Requirement 8: Training
The Department's intent is to partner with the Vendor's Trainer to deliver the IMAP standardized training. The Department will continue to provide training to new IMAP personnel until the Department deems the Vendor qualified to deliver IMAP training to their personnel. The Department reserves the right to determine when the Vendor is qualified to deliver the IMAP training independently from NCDOT.

The Vendor shall provide a **training plan** within 30 days of Date of Availability that includes:

- Responders and Supervisors attend, pass, and maintain certification
- Periodic assessment of all personnel to ensure standard operating procedures (SOP) and safety measures are followed
- Plan to work with the Department's trainer to learn the IMAP training program to transition to independently providing IMAP training
- Actively participate in multi-discipline training efforts as requested by the Department or another agency

The Vendor's staff must be trained and certified through the NCDOT IMAP Training and Certification Program. All initial IMAP training occurs at the TIM Training Track in Raleigh. The Vendor will be required to maintain certification throughout the project. The Department will assess the Vendor for certification and provide in-service training annually to maintain certification.

The Vendor shall assess their Responders and Supervisor independently to ensure they are following NCDOT IMAP Standard Operating Procedures appropriately and safely.

The Vendor may recommend additional training and/or revisions to the NCDOT Training and Certification program. However, no additional or revisions to training is permitted unless approved by the Department.

3.8.2.5   Requirement 9: Safety and Ethics

Safety is a priority within the Department, within the IMAP Program. The IMAP program is to provide safe response quickly to prevent additional incidents. When IMAP is not performing as trained unintentional consequences may occur. The Department expects the Vendor to uphold safety as one of its highest priorities as they are performing their services. This includes safety for the public, safety for IMAP personnel, and safety for the first responders that IMAP is providing coverage for.

The Vendor will maintain a regular ***auditing process*** to ensure IMAP personnel are operating in a safe manner as per the SOPs. This includes both the Vendor and IMAP personnel. IMAP personnel safety reviews include proper on-scene set-up, lane closures, communication and coordination with motorists, and overall general situational awareness. If IMAP personnel are found not following the SOPs or were operating in unsafe conditions, the Vendor is required to report these incidents to NCDOT with mitigations within 24 hours of the incident occurrence. If the problem(s) continue, NCDOT may constitute this as a violation of the contract.

The Vendor is expected to participate in the NCDOT Crash Review Boards if their responders are involved in an incident. Details on the crash review board are described in Section 2.3.8. Participation on the board is at the discretion of the NCDOT. The incidents shall be reported via an Incident Report (refer to Exhibit H) to the Division / Regional IME and NCDOT Project Manager as they occur.

Ethics

The Department requires the Vendor to look and act like NCDOT employees as part of this contract. The Department expects the Vendor to uphold and comply with the Department's Ethics Policy and the State Ethics Act, G.S. §138A-32. Failure to comply with either of these may result in the removal from the project.

The Vendor is required for all of their employees to sign an ethical policy within 10 days of hire. All signed policies are to be provided to NCDOT within 7 days after signature.

3.8.2.6   Requirement 10: Facilities

The Department will provide access to the Triad TMC to store property and vehicles for the initial transition period, 6 months from Effective Date. Following this period and because of the considerable distance between the Triad TMC and first nine (9) routes, the Vendor will be required to provide their own facilities to store property or vehicles. NCDOT will not be responsible for any damages, loss, or theft of Vendor property or vehicles stored at these locations. The Department would consider co-locations at DOT facilities in proximity to future route expansions.

The Vendor will be required to securely store vehicles when not in service. If After-Hours response is added services, personnel who will be responding overnight will be permitted to take their vehicle home. IMAP personnel shall remember the Ethics Policy as they store their vehicle at their place of residence.

3.8.2.7   Requirement 11: Vehicle Lifecycle Management

The Department expects the Vendor to provide a fleet of vehicles that are wrapped and look exactly like the NCDOT IMAP F-450 vehicles. Each vehicle is to include all equipment, tools, and resources needed to perform IMAP activities. Vehicle specifications are listed in Exhibit E.

The Department expects the vehicle fleet to be maintained regularly (e.g., inspections, preventative maintenance) and replaced on a consistent schedule (e.g., every 5 years or 300,000 miles, whichever comes first.) The Department will provide sponsorship specific markings for the wrap.

General Vehicle Guidelines

- All vehicles shall be licensed within the state of North Carolina. The Vendor will provide proof of such licensing to the Department prior to a vehicle used on this contract.
- All vehicles shall meet the specific vehicle specifications and be capable of carrying the equipment specified in this contract (refer to Exhibit E).
- All vehicles shall maintain all markings, in a clean and readable condition.
- All vehicles shall not reference the Vendor's company name or logo.
- All vehicles shall be painted white and shall only have the identification logos listed within Exhibit E attached in areas designated by the Department. NCDOT will provide identification logos. Vendor will procure, install, and maintain logos and designated markings.
- All vehicles shall be maintained to OEM standards for operations on public highways during the contract service period. The Vendor shall remove any vehicles that fails to meet these criteria.
- All vehicles shall not be greater than one (1) year old from their original manufactured date with a maximum of 500 miles when purchased for use.
- All used vehicles shall have verifiable maintenance records available for each vehicle that shows the vehicle's maintenance activities according to the manufacturer's service/interval recommendations. All body panels and parts on the used vehicles shall meet the same appearance standards as new vehicles.
- All vehicles shall be kept cleaned and orderly at the start of each shift.

All IMAP Vehicles are restricted for Department official use only and are to be used to provide the services contained herein. IMAP Vehicles are not to be used for personal or other business-related work of the Vendor. Covering Department identification logos or markings shall be prohibited.

The Department reserves the right to make changes to the vehicle specifications at any time during the contract as needed.

The Department may require an independent safety inspection of the vehicles by a technician of the Department's choosing.

The Vendor shall provide and maintain all vehicles in a safe, reliable, serviceable condition throughout the life of the contract. The Vendor shall provide a monthly **vehicle fleet health report** that summarizes each of the vehicle's maintenance, replacement schedule, purchasing challenges, outfitting of equipment, etc. The Department will review the report during a scheduled monthly review meeting. The Vendor should note in this report any events when a vehicle was unavailable and mitigations to prevent this from occurring in the future.

The Vendor vehicle availability and coverage includes:

- Vehicle availability during the entire service period
- Two vehicles available when shift schedules overlap
- One vehicle can be shared between supervisors for initial year only
- Minimum of 2 fully wrapped replacement vehicles ready to go within thirty (30) minutes of any IMAP vehicle out of service. Backup vehicles must be of the same type, equipped the same, and perform all the functions of a regular vehicle
- Stolen or pilfered vehicles
- Vehicle is struck or damaged during patrol, and how this may impact the overall lifecycle, if any
- Replacement of equipment on the trucks and expendables*
- Minimum total vehicles for first 9 routes shall be no less than twenty one (21) trucks

*Expendables include resources a Responder or Supervisor would use during a stop. These can include fuel, hoses, and blankets.

3.8.2.8 Requirement 12: SSP Equipment, Tool, and Technology

The following section references the equipment and tools specified for IMAP vehicles, additional technology to be added or piloted, and additional vehicle requirements.

Equipment/Tools and Technology on Vehicles

The Department expects the Vendor to purchase and install at least one wheel lift attachment within their vehicle fleet. The wheel lift attachment is to support relocating vehicles to a safer location as a quick clearance tool. It is not to be used for towing vehicles long distances. Refer to Exhibit E.

The Department reserves the right to pilot different technologies or equipment/tools as applicable on any IMAP vehicle. The Department strives to identify resources that support IMAP personnel in the services they provide, and this may include piloting technologies, equipment, or tools to determine the viability to meet the Department goals and needs.

The Department will inform the Vendor prior to implementing any on a contracted vehicle.

The Vendor may also pilot or add technologies to the IMAP vehicles, at the Department's discretion. Additional items implemented on the vehicles will be at the Vendor's expense. The Vendor shall inquire and acquire approval with the Department prior to implementing additional technologies on the vehicles.

Voice Interoperability Plan for Emergency Responders (VIPER) Radio System

The Department expects the Vendor to use communication equipment that can be on the VIPER system. The Vendor is responsible for the procurement, installation, and maintenance of both handheld and truck mounted radios. The Department will provide VIPER Identifications (IDs) and standard statewide templates for each radio. The Department would be available to program the radios per the Vendor's request.

The Vendor shall supply and maintain all communications equipment, including spare batteries and ensuring the radios are charged when not in use. The Vendor shall be responsible for installing radio mounts in each vehicle.

The Vendor must agree to the VIPER usage agreement as noted in Exhibit E.

The Vendor shall inform NCDOT if a radio is lost or needs replacement so that NCDOT is able to update the VIPER ID.

Smartphone Requirement

The Department expects the Vendor to provide smartphones to all IMAP personnel. The smartphones must have the capability to take and send images with the intent of providing situational awareness for the STOC / TMC. The smartphone would be used as redundant communication between the IMAP personnel and the STOC / TMC. All phone numbers must be provided to the Department. The Department may require the Vendor to send the images to the STOC / TMC as needed during designated events or circumstances. The data plans are the responsibility of the Vendor.

Automatic Vehicle Location (AVL) Requirements

The Vendor shall provide all vehicles with an operational AVL or GPS monitoring system in each vehicle and shall be responsible for protecting any installed system components in the vehicles. The AVL system shall include an application programming interface (API). The system must provide at a minimum the following vehicle location information:

- Latitude and longitude
- Vehicular number
- Speed

- Direction
- Vehicular diagnostics
- Driver activity

The Vendor shall provide an ICD (Interface Control Document) for the interface within 30 days of date of availability for NCDOT review and approval. At no time shall the Vendor alter or interfere with the operation or functions of the AVL system. The AVL system in each vehicle shall be operational at Service Commencement of each Work Order. The Vendor shall be responsible for demobilizing all AVL equipment at the conclusion of this Contract.

The Vendor, the Department, and the STOC/RTMC shall monitor the system.

Throughout the term of the Contract, the Vendor shall be responsible for all costs associated with the monthly service and maintenance of the system, including all elements required to render the system operational.

4 Proposal Submittal Requirements

General Submittal Instructions

Technical Proposals for all Proposers will be accepted until **November 14, 2023**, at **3:00 p.m.** local time at the office of the State Contract Officer as shown below. Sealed Price Proposals for all Proposers will be accepted until **November 21, 2023**, at **3:00 p.m.** at the State Contract Office as shown below:

Mr. Ronald E. Davenport, Jr., PE
Contract Standard and Development
1020 Birch Ridge Drive
Century Center Complex—Building B
Raleigh, NC 27610
No Proposals will be accepted after the date and time specified.

Proposals shall be submitted in separate, sealed parcels containing the Technical Proposal in one and the Price Proposal in the other parcel. Proposals shall be delivered to Door B3 of the Century Center Complex—Building B. The courier shall call either Ms. Marsha Sample at (919) 707-6915 or Mr. Ken Kennedy, PE at (919) 707-6919 to accept delivery at Door B3.

Technical Proposal Submittal Instructions

An electronic copy of the Technical Proposal, on a thumb drive, shall be submitted in a sealed package. The electronic copy shall be created by converting all files into a PDF format. The electronic copy shall be scaled to reproduce the appropriate page format, as defined below. The outer wrapping shall clearly indicate the following information:

Technical Proposal – Electronic Copy
Submitted By: Proposer's Name
Proposer's Address
Safety Service Patrol

Submittal by mail shall not be permitted for this Technical Proposal.

The aforementioned Cover Letter to Mr. Ronald E. Davenport, Jr., PE shall include a statement acknowledging that the NCDOT may destroy all Safety Service Patrol Technical Proposal not retained by the Department, or a

statement that the NCDOT should return all Safety Service Patrol Technical Proposal not retained by the Department.

Project Team members, identified in the Statement of Qualifications, shall not be modified in the Technical Proposal without written approval of the Department. Any such request should be sent to the attention of Mr. Ronald E. Davenport, Jr., PE to the Design-Build email address (designbuild@ncdot.gov).

Price Proposal Submittal Instructions

Proposer must provide a hard copy <u>and</u> electronic copy of the Price Proposal, by completing Exhibit J—Price Proposal. The electronic copy must be submitted in Microsoft excel and PDF Format.

Hard copy and soft copy (submitted on a thumb drive) Price Proposals shall be submitted in a sealed package. The outer wrapping shall clearly indicate the following information:

<div align="center">

Price Proposal – Electronic Copy
Submitted By: Proposer's Name
Proposer's Address
Safety Service Patrol

</div>

Proposers must take note that failure to execute the requirements in this RFP may render the Price Proposal non-responsive.

Submittal by mail shall not be permitted for this Price Proposal.

4.1 Proposal Contents

A page shall be 8 ½" X 11", except graphs, charts and project schedules may be on 11" x 17". Throughout the entire proposal, there is no required font size or line spacing. However, all aspects of the Request for Proposal, including but not limited to the narrative, tables, charts, and graphics, should be clearly legible.

If the Proposer uses dividers and they contain specific project related information they will count as part of the page count.

Submissions exceeding the page limitations outlined above may be rejected and the Proposer will be notified in writing of the reason(s) for the rejection.

Vendors shall populate all attachments as described herein that requires the Vendor to provide information and include all authorized signatures where requested. Vendor responses shall include the following items and attachments should be arranged in the following order.

a) Cover Letter
b) Title Page: Include the company name, address, phone number, e-mail address, and authorized representative along with the Proposal Number
c) Requirements 1-10 in 2 categories (no more than 20 pages)

Project Management
Requirement 1: Project Management Approach
Requirement 2: Mobilization Transition and Demobilization Approach
Requirement 3: Personnel and Staffing Approach

SSP Operations
Requirement 4: SSP Operations Approach

Requirement 5: Performance Management Approach
Requirement 6: Training Approach
Requirement 7: Safety and Ethics Approach
Requirement 8: Facilities Approach
Requirement 9: Vehicle Lifecycle Management Approach
Requirement 10: SSP Technology and Equipment Approach

d) Price Proposal – Refer below for details regarding the breakdown on price. Refer to Exhibit J for the Vendor to fill out regarding the Price Proposal.

e) Appendices
   a. Appendix A: Proposed Staffing Plan for Division 9 and Division 11 routes and Project Management Team

4.2 Proposal Evaluation Process

After issuance of this first industry draft RFP to short-listed Proposers from the RFQ process, the Department will hold 1-on-1 Question & Answers meetings with Proposers and issue future iterations of the RFP (if deemed necessary). The Department may hold optional Question & Answer meetings with the Vendors to further refine the draft RFP. A final RFP will be distributed to the Vendors for solicitation. The RFP process concludes after the Technical Review Committee reviews proposals and NCDOT determines the Preferred Vendor.

To ensure that information is distributed equitably to all short-listed Teams, **all questions and requests for information shall be directed to the State Contract Officer through the Design-Build e-mail address (designbuild@ncdot.gov)**. This precludes any team member, or representative, from contacting representatives of the Department, other State Agencies or Federal Agencies either by phone, e-mail or in person concerning the Design-Build Project

NCDOT has formed a Technical Review Committee with the necessary business and technical expertise to assess the Vendor's abilities, strengths, and weaknesses based on the proposal responses. NCDOT shall review all Vendor responses to confirm they meet the requirements of the Scope of Work. NCDOT reserves the right to waive any minor informality or technicality in the proposals reviewed.

NCDOT will evaluate the proposals according to completeness, content, and experience with the ability of the Vendor and their staff. Specific criteria are listed in **Technical Evaluation** below. Vendors are required to demonstrate an understanding of tasks and responsibilities defined within each requirement identified throughout this scope of work and each requirement shall be addressed as requested.

After evaluating the proposals, the Technical Review Committee may setup time for the Vendor to provide a presentation regarding their proposals.

If conducted, after completing the presentations, the Technical Review Committee will consider both the technical evaluation, presentations, and price in selecting a Vendor that is most advantageous to the State. The Technical Review Committee will review the proposal responses and responses during the presentations; failure to address any of the requirements can be deemed non-compliant and may be cause for proposal exclusion.

The Technical Review Committee will evaluate and score each response objectively with the use of an evaluation matrix to guide the weight of each identified focus area. The focus areas and associated weighted value is presented below in **Table 4** such that the Vendors have a clear understanding of NCDOT's priorities and method of evaluation.

The Project Award will be based on the technical proposal evaluation and price proposals. The Department will calculate an adjusted price using the evaluation scores from the technical evaluation and price. The Project award will be based on the lowest adjusted price. The Department will announce the Intended Award decision after totaling of scores at the Price Proposal opening specified in the Timeline.

Table 4. Technical Evaluation

Categories	Requirement	Focus Area	Weight
Project Management	1	Project Management Approach	10
	2	Mobilization Transition and Demobilization Approach	
	3	Personnel and Staffing Approach	
SSP Operations	4	SSP Operations Approach	20
	5	Performance Management Approach	
	6	Training Approach	
	7	Safety Approach	
	8	Facilities Approach	
	9	Vehicle Lifecycle Management Approach	
	10	SSP Technology and Equipment Approach	
		Sub Total	**30**

Price	11	Price Proposal	70
		Overall Total	**100**

Quality Credit Percentage for Technical Proposals

Technical Score	Quality Credit (%)	Technical Score	Quality Credit (%)
100	30.00	84	14.00
99	29.00	83	13.00
98	28.00	82	12.00
97	27.00	81	11.00
96	26.00	80	10.00
95	25.00	79	9.00
94	24.00	78	8.00
93	23.00	77	7.00
92	22.00	76	6.00
91	21.00	75	5.00
90	20.00	74	4.00
89	19.00	73	3.00
88	18.00	72	2.00

Technical Score	Quality Credit (%)	Technical Score	Quality Credit (%)
87	17.00	71	1.00
86	16.00	70	0.00
85	15.00		

The maximum Technical Score, including any extra credit given for warranties or guarantees, shall not exceed 100 points in determining the Quality Credit percentage.

If any of the Technical Proposals are considered non-responsive, the State Contract Officer will notify those Design-Build Teams of that fact. The State Contract Officer shall publicly open the sealed Price Proposals and multiply each Design-Build Team's Price Proposal by the Quality Credit Percentage earned by the Design-Build Team's Technical Proposal to obtain the Quality Value of each Design-Build Team's Technical Proposal. The Quality Value will then be subtracted from each Design-Build Team's Price Proposal to obtain an Adjusted Price based upon Price and Quality combined. Unless all Technical Proposals are non-responsive or the Department elects to proceed with the Best and Final Offer process, the Department will recommend to the State Transportation Board that the Design-Build Team having the lowest adjusted price be awarded the contract. The cost of the Design-Build contract will be the amount received as the Price Proposal.

The following table shows an example of the calculations involved in this process.

An Example of Calculating Quality Adjusted Price Ranking

Proposal	Technical Score	Quality Credit (%)	Price Proposal ($)	Quality Value ($)	Adjusted Price ($)
A	95	25.00	3,000,000	750,000	2,250,000
B	90	20.00	2,900,000	580,000	2,320,000
C *	90	20.00	2,800,000	560,000	2,240,000
D	80	10.00	2,700,000	270,000	2,430,000
E	70	0.00	2,600,000	0	2,600,000
* Successful Design-Build Team - Contract Cost $2,800,000					

4.3 Proposal Technical Evaluation Submission Requirement

As the Vendor address each of the subsections, they should include how they will leverage best practices, lessons learned, and experience from other contracts to accomplish this contract. The proposal technical evaluation is segmented into two distinct areas: Project Management and SSP Operations. Proposal requirements are defined in each of the subjections.

4.3.1 Project Management Approach

In the proposal provide: Summarized approach to Project Management. Provide highlights and at least one example of:

- The expertise of the Project Manager and how it applies to the project. Highlight their accomplishments in the industry and what they have done to mature the programs in other deployments.
- Accomplishments with maintaining budget and timeliness of delivery.
- An example of conflict resolution in another deployment.
- An example of how project management handled the resolution of not filling a shift on another deployment; provide a statement that outlines how they plan to escalate issues or concerns; how they will communicate to the NCDOT if ***routes are not being staffed***; and how any other changes will be managed.
- The Vendor's approach to communication, with Statewide NCDOT, with Division NCDOT, with other internal NCDOT, with first responders. Differentiate between Project-related communication and day-to-day IMAP communication. Identify the relationship between key stakeholders (both internal and external) and provide a statement indicating how they coordinate and collaborate among the various stakeholders.
- The Vendor's quality concept philosophy and how the Vendor will implement it for the project.

4.3.2 Mobilization Transition and Demobilization

In the Proposal Provide: An approach to mobilizing staff and resources to transition from NCDOT to the Vendor. Provide highlights and at least one example of:

- How continuity of operations was accomplished during transition from either a DOT or another contractor on another deployment; compare and contrast how this will apply to the NCDOT deployment.
- How staff and resources will be procured in preparation of the Fully Outsourced Date and highlight any known challenges and mitigations around these challenges.
- What is the Vendor's anticipated transition time?
- The factors and risks associated with accelerating mobilization.
- Process for transitioning ownership to another vendor or back to the DOT upon completion of the current contract if they are not selected as the next vendor, or if the contract is terminated early

4.3.3 Personnel and Staffing Approach

In the Proposal Provide*:* An organizational chart that identifies project management team. An approach to providing staff appropriate for the project. Include resumes of proposed Project Manager and Training Coordinator for this project in Appendix A. Provide highlights and at least one example of:

- Vendor's concept of the management team and identify key positions.
- An example from another deployment on establishing a career path for staff.
- Implementing performance reviews with staff – how were the goals are set, reviewed, audited, and updated.

Qualifications for Project Manager include:

- Prior experience managing large scale SSP projects.
- At least five (5) years of project management experience on a similar project type.
- Preference to have PMP certification.
- Understanding of incident management, incident command, and traffic engineering.

Qualification for Trainer include:

- Prior training experience on large scale projects.
- At least eight (8) years of training experience.
- Be able to work with multiple people in a fast-paced environment.
- Good communication skills.
- Able to work in multiple conditions (i.e., outdoors in weather conditions).

4.3.4   SSP Operations Approach

In the Proposal Provide: An approach to providing IMAP services during the life of the contact. Provide highlights and at least one example of:

- Providing services within the initial base scope. Include how this would change for additional coverage areas. Include hiring of staff, training of staff, services provided, etc.
- An example of when a route needs to be altered to better suite the needs of the DOT. Include information about shifting personnel and the communication provided to staff.
- Approach to handling incidents with SSP staff on other embedded staff projects with the NCDOT. Include any examples of what steps completed to minimize additional incidents.
- Approach to handling surge activities and special events.
- Estimated timeline for hiring, training, and equipping a single Responder with a vehicle.

4.3.5   Performance Management Approach

In the Proposal Provide: An approach to measuring performance for not only IMAP personnel but also the overall performance of the project, including services provided. Provide highlights and at least one example of:

- An example of providing performance measures on a similar project.
- A time when services fell below expectations and what mitigations were put in place to meet and/or exceed expectations.
- An approach to ensure VIP goals are met with IMAP staff.
- Examples of metrics used to measure project performance from similar projects.

4.3.6   Training Approach

In the Proposal Provide: An approach and methodology for training over the life of the contract and transition of training responsibilities. The approach should focus on IMAP personnel and include how the Vendor's management team will maintain a high level of IMAP expertise. The approach should address, at a minimum, the following topics:

- How the Vendor will coordinate and integrate with NCDOT's training program.
- Process of ensuring trained and certified IMAP staff within 4 weeks of hire
- How the Vendor will have their Responders and Supervisors attend, pass, and maintain certification.
- How the Vendor will perform periodic assessment of all personnel to ensure standard operating procedures (SOP) and safety measures are followed.
- How the Vendor's trainer will work with the Department's trainer to learn the IMAP training program to transition to providing IMAP training.

How the Vendor will actively participate in multi-discipline training efforts as requested by the Department or another agency.

4.3.7   Safety and Ethics Approach

In the Proposal Provide: A summarized approach to ensuring safety is a priority and all personnel are adhering to ethical policies. Provide highlights and at least one example of:

- How your company prioritizes safety.
- An incident where an SSP personnel was operating in an unsafe manner. What was the result of this unsafe manner. What was done to mitigate further occurrences.
- An incident where an SSP personnel was unethical. What was the result of this unethical behavior. What was done to mitigate further occurrences.
- Process of managing crashes involving SSP responders
- Provide any additional safety training or accommodations.

- Provide any additional ethical training or accommodations.

4.3.8   Facilities Approach

In the Proposal Provide: Summarized approach to identifying and acquiring facilities for storing vehicles and equipment. Provide highlights and at least one example of:

- Facility approach in another state where you did not have access to the state's facilities.
- Provide a map of locations for potential facilities.

4.3.9   Vehicle Lifecycle Management Approach

In the Proposal Provide: An approach to providing and maintaining a vehicle fleet. The approach shall provide lifecycle information that includes, but not limited to:

- Phased approach, plan, and corresponding process for purchasing and replacing vehicles with new, properly outfitted vehicles.
- Recommended vehicle assessment scoring model with defined criteria for evaluating the condition of all fleet vehicles.
- Proposed schedule for periodically assessing vehicle condition (for each region).
- Periodic summary report of fleet vehicle condition and condition percentage.
- Proposed parameters for identifying vehicles to be recommended for replacement.
- Proposed approach to managing a vehicle fleet toward the latter years of the contract.

The Vendor shall provide a statement regarding their experience with green vehicles. And note any impacts to costs, functionality, lifecycle, and other pertinent information.

4.3.10 SSP Technology and Equipment Approach

In the Proposal Provide: An approach to installing and maintaining technology, equipment, and tools used for IMAP operations. Provide highlights and at least one example of:

- Technology, equipment, and tools used on vehicles in similar projects. Include what it was used for and whether or not the entire fleet included this technology.
- Recommendations for additional technology to be added to vehicles. Include benefit to the program, how it would be used, potential costs implications, training needed, and location to store.
- Approach to incorporating technology into the NCDOT program's vehicles if not already equipped.
- Approach to training and acceptance of new technology.

4.3.11 Price Proposal

Proposers must complete Exhibit J – Price Proposal. The Price Proposal must be submitted in a spreadsheet format compatible with Microsoft Excel or PDF format created from the provided spreadsheet.

The price proposal shall constitute the total cost to the Vendor to complete service in accordance with the requirements and specifications herein, including all applicable charges handling, training, administrative, and other similar fees.

The price proposal calculations should be as follows:

Mobilization Fee + Project Management Fee (Project Manager + Trainer) + Direct Costs (based on NCDOT assumptions) + hourly cost x # responders (based on NCDOT assumptions) + hourly cost x # supervisors (based on NCDOT assumptions) + hourly surge cost x responders (based on NCDOT assumptions) + hourly surge cost x supervisor + fuel reimbursement (based on vehicle fuel type and NCDOT assumptions).

The Department will reimburse the Vendor for tolls incurred during service and fuel based on the calculations below.

Breakdown of the following items:

- **Mobilization Fee** – this includes the initial costs for the Vendor like to onboard staff, purchase vehicles and equipment, training, and facilities.
- **Project Management Fee** – this includes the annual costs associated with, but not limited to training, project management, performance assessment, fleet management, and invoicing. The Vendor shall include hourly rates for the specified management staff and optional personnel noted in the scope of work.
- **Direct Costs** – this includes reimbursement for lodging, food, or mileage per training, meeting, or surge event (based on assumptions within the price proposal).
- **Hourly Rate for Responder**– this includes the cost of a person and a vehicle for normal operations. Vehicle costs include purchase, maintenance, and any expendables used during service.
- **Hourly Rate for Supervisor** – this includes the cost of a person and a vehicle for normal operations. Vehicle costs include purchase, maintenance, and any expendables used during service.
- **Surge Hourly Rate for Responder** – this includes the cost of a person and a vehicle for surge activities defined above. Vehicle costs include purchase, maintenance, and any expendables used during service.
- **Surge Hourly Rate for Supervisor** – this includes the cost of a person and a vehicle for surge activities defined above. Vehicle costs include purchase, maintenance, and any expendables used during service.
- **Fuel Reimbursement Rate** – this includes a base fuel rate for both gasoline and diesel vehicles.

The Department will reimburse the Vendor the proposed and approved base fuel rate with the assumption of reimbursement at:

- 3 gal/hr. for gasoline
- 2 gal/hr. for diesel

The base fuel rate shall be based on the annual values from the AAA Gas Prices on the following website: (https://gasprices.aaa.com/?state=NC) and should not exceed $5. The Department shall review fuel prices annually to determine if there is a significant change (+/- 10%) in the base price of fuels. There will be separate calculations for Gasoline and Diesel Fuel.

Method of Fuel Computation:

- The average price calculation will compare the average price from the previous contract year.
- If the average price has not increased or decreased by more than 10%, there will be no change in the reimbursement rate.
- If the change is greater than 10% (+/-), then the Department will adjust the reimbursement rate to the closest full percent (%).

The actual adjustment calculation will subtract the base rate from the adjusted rate and multiplying the result by the gallons of consumption per hour / per vehicle and multiplying that result by the total vehicle hours for the month (invoice period).

4.4 Question and Answer Meeting

Due to the unique nature of the work involved in this contract, all short-listed teams will be required to attend an individual question and answer meeting with the Department to address project specifics and address questions related to this procurement and this RFP. These meetings will be held on October 13, 2023, via Microsoft Teams.

Each Team will be provided a one-hour fifteen-minute time slot that has been predetermined and transmitted via a letter from the State Contracts Engineer.

4.5 Disadvantaged Business Enterprises

The NCDOT is committed to complying with the North Carolina General Statute 136-28.4 with respect to disadvantaged minority-owned and women-owned business enterprises (MBE and WBE) for state funded projects and supporting Disadvantaged Business Enterprise (DBE) firms on federally funded projects. A DBE goal may be set forth in the Request for Proposals (RFP) but if not the utilization of additional DBE/WBE/MBE firms as well as Small Professional Service Firms will be encouraged.

4.6 General Information

It is not the intention of NCDOT to receive project specific design or engineering recommendations in response to this RFP. Proposers should limit their submittals to the information required by this RFP scope of works.

NCDOT reserves the right, at its sole discretion, to either proceed no further with the Project procurement process or to re-advertise in another public solicitation.

The NCDOT reserves the right to accept or reject any of the Proposal responses and / or discontinue the selection process at any time prior to contract execution.

The NCDOT assumes no liability and will not reimburse costs incurred by firms (whether selected or not) in developing Proposal responses to this RFP.

The NCDOT reserves the right to request or obtain additional information about any and all responses to the RFP. NCDOT may also issue addenda to the RFP which will be provided to all RFP holders.

No information identified through the contract is allowed for reuse or resell or share with the Department's approval. NCDOT is the owner of all documentation provided during the contract.

The prime proposer must perform at least 30% of the work.

Proposers are encouraged to familiarize themselves with the North Carolina Public Records Act, North Carolina General Statute § 132-1 et seq. In the event the Proposer submits any documents which the Proposer believes are not subject to disclosure pursuant to the aforementioned Act, it must conspicuously mark each document "CONFIDENTIAL" or "CONFIDENTIAL TRADE SECRETS." All unmarked pages will be subject to release in accordance with the North Carolina Public Records Act. Proposers should be prepared, upon request, to provide justification of why any or all marked materials should not be disclosed under the aforementioned Act.

All questions must be directed to the State Contract Officer, via the Design-Build e-mail address at designbuild@ncdot.gov. When making requests by e-mail, it is advisable to request a return receipt for your records.

EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

CORPORATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the Bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the Bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

_____
Full name of Corporation

_____
Address as prequalified

Attest _____   By _____
        Secretary / Assistant Secretary   President / Vice President / Assistant Vice President
        Select appropriate title   *Select appropriate title*

_____   _____
Print or type Signer's name   Print or type Signer's name

CORPORATE SEAL

EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

PARTNERSHIP

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

_____

Full Name of Partnership

_____

Address as Prequalified

By

_____   _____
Signature of Witness   Signature of Partner

_____   _____
Print or type Signer's name   Print or type Signer's name

EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

LIMITED LIABILITY COMPANY

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

_____
Full Name of Firm

_____
Address as Prequalified

_____   _____
Signature of Witness   Signature of Member / Manager / Authorized Agent
                                           Select appropriate title

_____   _____
Print or type Signer's name   Print or type Signer's Name

EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

JOINT VENTURE (2) or (3)

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the bidder has not been convicted of violating N.C.G.S. § 133-24 within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTORS

Instructions: **2 Joint Venturers** Fill in lines (1), (2) and (3) and execute. **3 Joint Venturers** Fill in lines (1), (2), (3) and (4) and execute. On Line (1), fill in the name of the Joint Venture Company. On Line (2), fill in the name of one of the joint venturers and execute below in the appropriate manner. On Line (3), print or type the name of the other joint venturer and execute below in the appropriate manner. On Line (4), fill in the name of the third joint venturer, if applicable and execute below in the appropriate manner.

(1) _____
Name of Joint Venture

(2) _____
Name of Contractor

_____
Address as prequalified

_____   By   _____
Signature of Witness or Attest   Signature of Contractor

_____   _____
Print or type Signer's name   Print or type Signer's name

If Corporation, affix Corporate Seal   and

(3) _____
Name of Contractor

_____
Address as prequalified

_____   By   _____
Signature of Witness or Attest   Signature of Contractor

_____   _____
Print or type Signer's name   Print or type Signer's name

If Corporation, affix Corporate Seal   and

(4) _____
Name of Contractor *(for 3 Joint Venture only)*

_____
Address as prequalified

_____   By   _____
Signature of Witness or Attest   Signature of Contractor

_____   _____
Print or type Signer's name   Print or type Signer's name

If Corporation, affix Corporate Seal

EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

Name of Contractor

_____
Individual name

Trading and doing business as

_____
Full name of Firm

_____
Address as Prequalified

_____	_____
Signature of Witness	Signature of Contractor, Individually
_____	_____
Print or type Signer's name	Print or type Signer's name

EXECUTION OF BID
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

Name of Contractor _____
Print or type Individual name

_____
Address as Prequalified

_____
Signature of Contractor, Individually

_____
Print or type Signer's Name

_____
Signature of Witness

_____
Print or type Signer's name

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation that is file with the Department, or has become erroneous because of changed circumstances.

2. The terms *covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal,* and *voluntarily excluded,* as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.

3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.

4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR* 1273) provided by the Department, without subsequent modification, in all lower tier covered transactions.

5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.

6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and

d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

☐   Check here if an explanation is attached to this certification.

Contract No.:   **HO-0010B**

Counties: **Statewide**

ACCEPTED BY THE
DEPARTMENT OF TRANSPORTATION

_____
Contract Officer

_____
Date

Execution of Contract and Bonds
Approved as to Form:

_____
Attorney General

Signature Sheet (Bid - Acceptance by Department)

Exhibit A
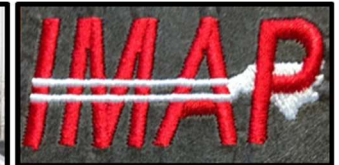# IMAP Uniform & Personal Protective Equipment (PPE)

Parts of the IMAP Uniform:

Objective: Learn about the various parts of the IMAP responder uniform

Critical Knowledge:

- **Uniform items that MUST be worn at all times while on duty include:**
  - Red IMAP Shirt
  - Black Cargo Pants
  - Black/Brown Steel-toed Boots
  - NCDOT Employee Badge
  - **Other items may be added as needed** (e.g. reflective vest, caps, portable radio, black or red suspenders, etc.)

- **All IMAP responders are issued:**
  - 10 Shirts*
  - 2 Pullovers
  - 5 Pairs of Black Cargo Pants
  - Black/Brown Steel-toed Boots
  - 2 Summer Caps
  - 2 Winter Caps
  - 1 Toboggan
  - 1 Lightweight Coat
  - 1 Winter Coat

- **Additional items issued as needed:**
  - Reflective Vest and other PPE
  - Rain Gear
  - Winter Gear
  - Flashlight
  - Portable Radio
  - Cell/Direct Connect Phone

IMAP Uniform Logos
(top to bottom):
- IMAP logo; Hat
- Incident Management logo; Left shoulder
- IMAP logo; Right shoulder
- NC State Flag; Left sleeve

*Responder may choose any combination of long and short sleeve shirts

Additional IMAP Apparel:

Objective: Become familiar with additional IMAP apparel* for normal wear & adverse weather

Critical Knowledge:

- **A –** IMAP Uniform & Reflective Vest

- **B –** IMAP Uniform & Lightweight Coat

- **C –** IMAP Uniform, Winter Coat, Toboggan, & Gloves

- **D –** IMAP Uniform & Waterproof Rain Gear

*Some additional IMAP apparel (e.g. Winter Coat & Rain Gear) may differ in appearance by Region

Equipment	
Reflective safety vest	ANSI, Class 3, Type R Hi-Vis Reflective
Steel-toed boots	with slip-resistant treads / soles
Work gloves	
Saftey glasses	
Medical grade gloves	
Hard hat	
Knee pads*	
Insect repellant*	
Sunblock*	

*Optional

Exhibit B
IMAP Job Description and VIP Goals

1. **DOT 4- Improve reliability and connectivity of the transportation network: Incident response time**

   Goal category(ies): Operations and Engineering
   Weight: 25%

   o Incident Response Time (IRT): Time between first notification of an incident by the STOC/TMC and confirmation through the STOC/TMC that the driver has arrived on scene.
      - **Meets expectation**: 60-89% on scene arrival within **20** minutes of notification of an incident by STOC/TMC
      - **Exceeds expectation**: 90-100% on scene arrival within **20** minutes of notification of an incident by STOC/TMC
      - **Below expectation**: 59% or below on scene arrival within **20** minutes of notification of an incident by STOC/TMC

   * IRT data source: obtained and calculated from IMAP logs that are maintained by the STOC/TMC. IRT averages include incidents IMAP personnel are <u>dispatched</u> to by STOC/TMC and <u>does not include</u> self-dispatched calls. Averages include drivers' and supervisors' IRT. Data captured include:
      - 10-50 (Collision- PD only)
      - 10-53 (Road Blocked)
      - 10-58 (Direct Traffic)
      - 10-59 (Convoy or Escort)
      - 10-63 (Investigate)
      - 10-68 (Livestock on Highway)
      - 10-77 (Assist Fire Department with Traffic)
      - 10-78 (Report of Abandoned Vehicle)
      - 10-82 (Report of Disabled Motorist)

   All response driving must be performed in strict compliance with IMAP training, NCDOT policy, and applicable local, state, and federal laws. As with all types of driving, response driving must also be performed with due regard and circumspection for the safety of others.

2. **DOT 4- Improve reliability and connectivity of the transportation network: Roadway clearance time**

    Goal category(ies): Operations and Engineering
    Weight: 25%

    o Roadway clearance times (RCT): FHWA defines RCT as the "time between first recordable awareness of an incident by a responsible agency and first confirmation that all lanes are available for traffic flow."
    Considerations: member efficiently push, pull, drag vehicles, removal of small trees, debris, and any other items drivers have been trained to effectively remove from the roadway. Drivers should not rely on the STOC/TMC to use a camera system to determine when all lanes are clear but should, as soon as practical, clearly communicate to the STOC/TMC when all lanes are clear.

        - **Meets expectation**: 60-84% lane clearance within **30** minutes of on-scene

        - **Exceeds expectation**: 85-100% lane clearance within **30** minutes of on-scene arrival

        - **Below expectation**: 59% or less lane clearance within **30** minutes of on-scene arrival

    * RCT data source: obtained from IMAP logs that are maintained by the STOC/TMC. Averages should include drivers' and supervisors' RCT. Data captured include:
        - 10-50 (Collision- PD only)
        - 10-53 (Road Blocked)
        - 10-68 (Livestock on Highway)
        - 10-78 (Report of Abandoned Vehicle)
        - 10-82 (Report of Disabled Motorist)

3. **DOT 2**- **Provide GREAT customer service: Customer Service**

    Goal category(ies): Administrative Support
    Weight: 10%

        - **Meets expectations:** member issues enough customer surveys to receive a rate of return of **1.75 to 2.75** survey responses per month during the VIP rating period.

        - **Exceeds expectation**: member issues enough customer surveys to receive a rate of return of **2.76 or greater** survey responses per month during the VIP rating period.

- **Below expectations**: member receives a rate of return of **1.74 or less** survey responses per month during the VIP rating period.

4. **DOT 1- On-scene incident audits (truck positioning, traffic control set-up, plan of action and any other items drivers have been trained on to effectively manage an incident scene).**

    Goal category(ies): Safety, Inspections, and Compliance
    Weight: 25%

    - **Meets expectation**: member has sufficient command of IMAP responsibilities at scene of an incident with 80-89% of documented audits meeting or exceeding expectations.

    - **Exceeds expectation**: member has exceptional command of IMAP responsibilities at scene of an incident with 90-100% of documented audits meeting or exceeding expectations.

    - **Below Expectations**: member lacks sufficient command of IMAP responsibilities at scene of an incident with 79% or less of documented audits meeting or exceeding expectations.

5. **DOT 1- Vehicle / equipment cleanliness and readiness**

    Goal category(ies): Safety, Inspections, and Compliance
    Weight: 10%

    - **Meets expectation**: The member washed the truck a minimum of **2** times during the month and the interior and exterior of the vehicle is free of excess dirt and debris. All required equipment in good working order and accessible.

    - **Exceeds expectation**: The IMAP truck is exceptionally clean inside and outside, all required equipment in good working order and readily accessible. It is evident the member washes his/her truck **3 or more times** per month and ensures his/her issued equipment is operational.

    - **Below Expectations**: The interior and exterior of IMAP truck is unkempt with excess dirt and debris or required equipment is unaccounted for or not in good working order. It is evident the member **does not** regularly wash/clean his/her truck or check to ensure his/her issued equipment is working properly.

6. **DOT 6 - Make our organization a great place to work: Diversity, Equity, and Inclusion**

   Goal Description:
   Weight: 5%

1. **DOT 4- Improve reliability and connectivity of the transportation network: Incident response time**

   Goal category(ies): Operations and Engineering
   Weight: 25%

   o Incident Response Time (IRT): Time between first notification of an incident by the STOC/TMC and confirmation through the STOC/TMC that the driver has arrived on scene.

      - **Meets expectation**: 60-89% on scene arrival within **20** minutes of notification of an incident by STOC/TMC
      - **Exceeds expectation**: 90-100% on scene arrival within **20** minutes of notification of an incident by STOC/TMC
      - **Below expectation**: 59% or below on scene arrival within **20** minutes of notification of an incident by STOC/TMC

   * IRT data source: obtained and calculated from IMAP logs that are maintained by the STOC/TMC. IRT averages include incidents IMAP personnel are <u>dispatched</u> to by STOC/TMC and <u>does not include</u> self-dispatched calls. Averages include drivers' and supervisors' IRT. Data captured include:
      - 10-50 (Collision- PD only)
      - 10-53 (Road Blocked)
      - 10-58 (Direct Traffic)
      - 10-59 (Convoy or Escort)
      - 10-63 (Investigate)
      - 10-68 (Livestock on Highway)
      - 10-77 (Assist Fire Department with Traffic)
      - 10-78 (Report of Abandoned Vehicle)
      - 10-82 (Report of Disabled Motorist)

   All response driving must be performed in strict compliance with IMAP training, NCDOT policy, and applicable local, state, and federal laws. As with all types of driving, response driving must also be performed with due regard and circumspection for the safety of others.

2. **DOT 4- Improve reliability and connectivity of the transportation network: Roadway clearance time**

    Goal category(ies): Operations and Engineering
    Weight: 25%

    o   Roadway clearance times (RCT): FHWA defines RCT as the "time between first recordable awareness of an incident by a responsible agency and first confirmation that all lanes are available for traffic flow."
        Considerations: member efficiently push, pull, drag vehicles, removal of small trees, debris, and any other items drivers have been trained to effectively remove from the roadway. Drivers should not rely on the STOC/TMC to use a camera system to determine when all lanes are clear but should, as soon as practical, clearly communicate to the STOC/TMC when all lanes are clear.

        - **Meets expectation**: 60-84% lane clearance within **30** minutes of on-scene

        - **Exceeds expectation**: 85-100% lane clearance within **30** minutes of on-scene arrival

        - **Below expectation**: 59% or less lane clearance within **30** minutes of on-scene arrival

    * RCT data source: obtained from IMAP logs that are maintained by the STOC/TMC. Averages should include drivers' and supervisors' RCT. Data captured include:
        - 10-50 (Collision- PD only)
        - 10-53 (Road Blocked)
        - 10-68 (Livestock on Highway)
        - 10-78 (Report of Abandoned Vehicle)
        - 10-82 (Report of Disabled Motorist)

3. **DOT 2- Provide GREAT customer service: Customer Service**

    Goal category(ies): Administrative Support
    Weight: 10%

    - **Meets expectations:** member issues enough customer surveys to receive a rate of return of **1.75 to 2.75** survey responses per month during the VIP rating period.

    - **Exceeds expectation**: member issues enough customer surveys to receive a rate of return of **2.76 or greater** survey responses per month during the VIP rating period.

    - **Below expectations**: member receives a rate of return of **1.74 or less** survey responses per month during the VIP rating period.

4. **DOT 1- On-scene incident audits (truck positioning, traffic control set-up, plan of action and any other items drivers have been trained on to effectively manage an incident scene).**

Goal category(ies): Safety, Inspections, and Compliance
Weight: 25%

- **Meets expectation**: member has sufficient command of IMAP responsibilities at scene of an incident with 80-89% of documented audits meeting or exceeding expectations.

- **Exceeds expectation**: member has exceptional command of IMAP responsibilities at scene of an incident with 90-100% of documented audits meeting or exceeding expectations.

- **Below Expectations**: member lacks sufficient command of IMAP responsibilities at scene of an incident with 79% or less of documented audits meeting or exceeding expectations.

5. **DOT 1- Vehicle / equipment cleanliness and readiness**

Goal category(ies): Safety, Inspections, and Compliance
Weight: 5%

- **Meets expectation**: The member washed the truck a minimum of **2** times during the month and the interior and exterior of the vehicle is free of excess dirt and debris. All required equipment in good working order and accessible.

- **Exceeds expectation**: The IMAP truck is exceptionally clean inside and outside, all required equipment in good working order and readily accessible. It is evident the member washes his/her truck **3 or more times** per month and ensures his/her issued equipment is operational.

- **Below Expectations**: The interior and exterior of IMAP truck is unkempt with excess dirt and debris or required equipment is unaccounted for or not in good working order. It is evident the member **does not** regularly wash/clean his/her truck or check to ensure his/her issued equipment is working properly.

6. **DOT 6 - Make our organization a great place to work: Diversity, Equity, and Inclusion**

Goal Description:
Weight: 5%

7. **DOT 6 - Make our organization a great place to work: Management &   Supervision**

Goal Description:
Weight: 5%

This goal includes objectives associated with a Senior IMAP Driver's limited supervisory responsibility as related to making DOT a great place to work, including employee safety, professional development, and employee engagement.

NOTE: While employees in this position do not directly supervise other employees, they will function as lead workers and/or provide on-the-job training to incoming Incident Management Responders.

Task Description: Employee Safety – Display proper driving techniques when on patrol and when responding to incident scenes. Set the example on the scene of incidents by adhering to all safety protocols outlined in the IMAP Training Manual. Safety protocols include, but are not limited to: Vehicle positioning and driver approach, effective temporary traffic control (TTC), queue management, etc. Is decisive and takes the initiative to request additional DOT resources when the incident exceeds the scope of IMAP's capability.

Progress:

Task Description: Professional Development – Demonstrate the ability to effectively manage an incident scene. Provide opportunities for new responders to manage an incident and engage the new responders with constructive feedback.

Task Description: Employee Engagement – Organize and prioritize the work schedules of others to manage multiple tasks and/or projects. Introduce new responders to responder partners (law enforcement, fire, EMS, towers, emergency management, etc) in respective Division/Region.

The Senior Responder must have strong communication skills, patience and aptitude for training incoming Incident Management Responders and demonstrate defensive driving skills and safe driving habits. They will maintain consistent communication with their supervisor.

The Senior Responder will take the lead upon arriving to an incident scene if there is more than one responder. They will be responsible for developing and finalizing incident paperwork as per the SOPs. The Senior Responder will perform a QA/QC review of detours that were put in place and will act as the incident management contact until more senior personnel arrives on scene. The Senior Responder also will practice scene management to then be the go-to person.

The Senior Responder will have a strong awareness and familiarity with assigned sections of highways and interstates and demonstrate the ability to manage challenging incidents with composure.

The Senior Responder will demonstrate the ability to handle both major and minor incidents in a timely manner and act as a lead worker on shift in absence of the IMAP supervisor.

The Senior Responder will mentor new responders prior to attending the required statewide responder certification training. They also will provide continuous mentoring to other drivers and will partner with the Statewide Trainers to assist with statewide in-service training for continuing education.

The Senior Responder will assist the Incident Management Responder Supervisor with administrative work when asked and will have the ability to perform limited supervisory activities in the absence of the IMAP supervisor. In addition, the Senior Responder will provide mentoring to coworkers to facilitate development and job performance and demonstrate strong leadership qualities and desire for professional growth in the Division.

VIP Goals

1.   **DOT 4- Improve reliability and connectivity of the transportation network: Incident response time**

Goal category(ies): Operations and Engineering
Weight: 25%

Division Incident Response Time (IRT): Time between first notification of an incident by the STOC/TMC and confirmation through the STOC/TMC that the driver has arrived on scene.

- **Meets expectation**: on average, 60-89% of Division IMAP Drivers under member's direct supervision arrive on scene within **20** minutes of notification of an incident by STOC/TMC.

- **Exceeds expectation**: on average, 90-100% of Division IMAP Drivers under member's direct supervision arrive on scene within **20** minutes of notification of an incident by STOC/TMC.

- **Below expectation**: on average 59% of Division IMAP Drivers under member's direct supervision arrive on scene within **20** minutes of notification of an incident by STOC/TMC.

* IRT data source: obtained and calculated from IMAP logs that are maintained by the STOC/TMC. IRT averages include incidents IMAP personnel are <u>dispatched</u> to by STOC/TMC and <u>does not include</u> self-dispatched calls. Averages include drivers' and supervisor's IRT. Data captured include:
- 10-50 (Collision- PD only)
- 10-53 (Road Blocked)
- 10-54 (Hit and Run- PD only)
- 10-58 (Direct Traffic)
- 10-59 (Convoy or Escort)
- 10-63 (Investigate)
- 10-68 (Livestock on Highway)
- 10-77 (Assist Fire Department with Traffic)
- 10-78 (Report of Abandoned Vehicle)
- 10-79 (Report of Vehicle Fire)
- 10-82 (Report of Disabled Motorist)

Supervisors are encouraged to frequently discuss safe driving practices with IMAP Drivers. IMAP Drivers should be reminded that all response driving must be performed in strict compliance with IMAP training, NCDOT policy, and applicable

local, state, and federal laws. As with all types of driving, response driving must also be performed with due regard and circumspection for the safety of others.

2. **DOT 4- Improve reliability and connectivity of the transportation network: Roadway clearance time**

Goal category(ies): Operations and Engineering
Weight: 25%

Division Roadway clearance times (RCT): FHWA defines RCT as the "time between first recordable awareness of an incident by a responsible agency and first confirmation that all lanes are available for traffic flow." **Considerations:** member efficiently push, pull, drag vehicles, removal of small trees, debris, and any other items drivers have been trained to effectively remove from the roadway. Drivers should not rely on the STOC/TMC to use a camera system to determine when all lanes are clear but should, as soon as practical, clearly communicate to the STOC/TMC when all lanes are clear.

- **Meets expectation**: 60-84% lane clearance within **30** minutes of on-scene

- **Exceeds expectation**: 85-100% lane clearance within **30** minutes of on-scene arrival

- **Below expectation**: 59% or less lane clearance within **30** minutes of on-scene arrival

* RCT data source: obtained from IMAP logs that are maintained by the STOC/TMC. Averages should include drivers' and supervisor's RCT. Data captured include:
- 10-50 (Collision- PD only)
- 10-53 (Road Blocked)
- 10-68 (Livestock on Highway)
- 10-78 (Report of Abandoned Vehicle)
- 10-82 (Report of Disabled Motorist)

3.   **DOT 1- On-scene incident audits (evaluating IMAP Drivers on truck positioning, traffic control set-up, plan of action, any other items drivers have been trained on to effectively manage an incident scene)**

Goal category(ies): Safety, Inspections, and Compliance
Weight: 20%

- **Meets expectation**: Supervisor completes **3-4** driver audits per month **and** completes at least one audit on all (100%) IMAP Drivers under member's supervision during the VIP rating period.

- **Exceeds expectation**: Supervisor completes **5 or more** driver audits per month **and** completes at least one audit on all (100%) IMAP Drivers under member's supervision during the VIP rating period.
- **Below Expectations**: Supervisor completes **2 or less** driver audits per month **or** at least one audit was not completed on all (100%) IMAP Drivers under member's supervision during the VIP rating period.

4.   **DOT 2- Provide GREAT customer service: Customer Service**

Goal category(ies): Administrative Support
Weight: 5%

- **Meets expectations:** on average, Division IMAP Drivers issue enough customer surveys to receive a rate of return of **1.75 to 2.75** survey responses per month.

- **Exceeds expectation**: on average, Division IMAP Drivers issue enough customer surveys to receive a rate of return of **2.76 or greater** survey responses per month.

- **Below expectations**: on average, Division IMAP Drivers receive a rate of return of **1.74 or less** survey responses per month.

* Supervisor ratings for customer service satisfaction surveys will be based upon the average number of customer survey cards Division drivers receive responses to as documented by the data collected by Traveler's Marketing.

5.   DOT 6 - Make our organization a great place to work: Management & Supervision

Goal Description:
Weight: 20%

This goal includes objectives associated with management tasks as related to making DOT a great place to work, including EEO compliance, performance management, employee safety, professional development, and employee engagement. To ensure that all DOT managers actively and effectively provide daily management and leadership to direct reports and other subordinates, it's recommended that all supervisors and managers have a predefined VIP Goal. Although the ability to add or amend items to this goal will be permitted, the following tasks shall be included on all supervisors' VIP performance plans.

NOTE: This goal has been assigned to the VIPs for positions that, according to BEACON, currently supervise other positions. Managers may determine that the goal should have be assigned to other positions. If needed, the Management and Supervision goal is available for use in the VIP goals library. If position to position reporting relationships need to be corrected in BEACON, then please work with your work unit's Personnel Technician to correct the organizational structure.

Task Description: EEO Compliance - Conduct a staff meeting to distribute & review all EEO-related policies. Ensure the most current EEO Policy is posted in the work area within the first 90 days of the PM Cycle. Ensure all subordinates have completed the EEO Compliance curriculum in the NC Learning Center.

Task Description: Performance Management - Comply with the Performance Management Policy by ensuring all employees have active and accurate NCVIPs. Conduct the Performance Planning, Interim Review, and Annual Performance Evaluation tasks within their required time periods.

Task Description: Employee Safety - Achieve a unit/division employee safety index within the acceptable range as provided on the Internal management Dashboard.

Progress:

Task Description: Professional Development - Provide opportunities for employees to participate in 1-2 professional development opportunities (excluding mandatory training requirements). Ensure an Employee Training & Development Plan is maintained for each direct report.

Task Description: Employee Engagement - Achieve a unit/division employee engagement score of 5.0 to 5.5.

6. **DOT 6 - Make our organization a great place to work: Diversity, Equity, and Inclusion**

Goal Description:
Weight: 5%

DEPARTMENT OF TRANSPORTATION
PeopleAdmin Position Description Guide

*Working Title of Position IMAP Responder		***Beacon Position Number**	
*Department/Agency NCDOT	***Division** DOH	***Section/Unit**	
Clone of Existing Position?		**If Yes, List University or Beacon Position Number**	
*Position Justification / Reasons for Classification Action Request New position description created for NCDOT Transportation Worker Project			
Present Classification Title / Salary Grade or Banded Level		**Proposed Classification Title / Salary Grade or Banded Level** Transportation Worker II / GN05	
*Name of Immediate Supervisor		***Supervisor's Position Title and Number** Transportation Supervisor I (Incident Management Assistant Patrol (IMAP) Responder Supervisor I)	
Work Schedule Monday – Friday (and on call)		**Work Hours** 5:30 am – 1:30 pm or 12:30 pm – 8:30 pm	

*Primary Purpose of the Organizational Unit

The primary purpose of the Incident Management Unit is to manage traffic on the State's freeway network in an effort to minimize non-recurring delay. This is accomplished with a combination of strategies, including interagency coordination and planning meetings, incident detection and verification (loops, CCTV cameras, etc.), motorist information (Changeable Message Signs, Highway Advisory Radios, etc.), and incident clearance (Incident Management Assistance Patrol (IMAP) trucks, wreckers). These strategies are employed to keep traffic flowing while incident remediation is ongoing and to expedite incident clearance, opening the roadway, and restoring normal traffic flow as quickly as possible. The secondary purpose of this unit is to determine and implement various methods to reduce recurring delays.

*Primary Purpose of the Position

This position will be staffed as an Incident Management Assistance Patrol (IMAP) Responder. The work will involve operation of an IMAP vehicle, traffic control deployments, route surveillance, incident response, removal of disabled and abandoned vehicles, incident/congestion management, and performing routine motorist assistance duties and debris removal to facilitate traffic flow and minimize congestion. This position also is responsible for communicating via two-way radio with the TMC dispatch as well as other first responder agencies for appropriate coordination as needed. Employees in this class do not supervise, but can function as lead workers and/or provide on-the-job training.

*Knowledge, Skills, and Abilities Recommended in this Position

This role requires the ability to work independently, think critically, prioritize, and control situations, and make decisions quickly under extreme pressure or in a hazardous environment.

This role requires working knowledge of fire safety (including the ability to operate a fire extinguisher), working knowledge of small hand and power tools, experience in minor mechanical repairs, the ability to operate an IMAP utility truck with winch, traffic control devices, and other small tools and equipment, knowledge of two-way radio systems and phone communications, and an understanding of dynamics of traffic control implementation based on roadway features, highway geometry, and weather conditions.

This role requires the ability to perform routine tasks, to move or lift heavy objects, to work in a variety of weather conditions, including rain, snow, heat, and ice, and to apply all computer applications required to perform the job, including Computer Aided Dispatch (CAD), SAP (timesheets), Outlook (email), Excel (spreadsheets), Word, and any other laptop applications as necessary (incident reports, logs). In addition, the responder must have the ability to maintain basic first aid and CPR training, to work outside of normal shift hours in the event of larger after-hours incidents or incidents that extend beyond normal working hours, and to skillfully maneuver IMAP vehicle in all weather and traffic conditions while communicating with other units and response partners.

This role requires the ability to be agile enough to respond and move quickly around fast-moving vehicles unassisted, to lift at least 50 pounds unassisted, to walk long distance multiples times throughout the day, and to change a tire unassisted.

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*Education and Experience Recommended
This role requires a high school diploma or GED and three years of relevant experience in one or more of the following areas: a) emergency response work; b) medical services; c) protective services in law enforcement/fire/inspection/arson/correctional/security; d) highway/bridge maintenance or construction; e) driving a utility repair type vehicle for business/government such as electrical, AAA, or similar type vehicle; f) automotive/maintenance, towing industry, and/or repair.

Additional Training/Experience: Employees will need to successfully pass both classroom training related to safety, IMAP, and traffic management operations and a field assessment review.

CDL is not required, but a valid NC Drivers' License is required due to the essential Traffic Function.

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*License or Certification Required by Statute or Regulation
- Valid NC Driver's License
- Current CPR Certification
- Current NCDOT IMAP Certification (on the job training)

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*Initiator

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*Description of Work – Describe in detail the major functions of this position as well as the duties and responsibilities required for each of those functions. Indicate the percentage of time the employee spends in each functional element using "percent" or "pct" rather than "%" to avoid an error in PeopleAdmin. The percentage amounts should add up to 100%. In addition, indicate whether it is an essential duty/function as defined by the Americans with Disabilities Act with an asterisk (*). The description of work should include the following:
- **Describe thinking, analysis, and judgments required to perform assigned tasks.**
- **Consequences of errors.**
- **Supervision received and directions provided.**
- **Supervision given.**
- **Describe decision-making authority.**
- **Variety and purpose of personal contacts.**
- **Work environment and conditions (hazards, physical effort, specialized training requirements, machines, tools, systems, instruments, equipment).**

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*Incident Response 35 pct (Essential)

The Responder will establish emergency temporary and permanent traffic control, using IMAP truck and traffic control devices, in accordance with the *Manual on Uniform Traffic Control Devices* (MUTCD) and IMAP SOP manual to isolate hazards and/or response personnel from motoring public. They will deploy permanent traffic control for longer running incidents and larger events (multi-day events, races, ballgames, etc.), ensure the safety of coworkers and other first responders by identifying, isolating, and/or removing hazards from the roadway, and ensure the safety of coworkers and other responders by establishing temporary traffic control (TTC) and facilitating in establishing or maintaining traffic flow.

The Responder will assess an incident scene quickly to determine damages, injuries, travel delays, lane blockages, and involvement of hazardous materials, then provide information and updates to Statewide Transportation Operations Center (STOC)/TMC to assist with updates of traveler information management system (TIMS). They will determine resources required to clear the roadway and resume normal traffic flow, function as a point of contact between responders and NCDOT agencies to coordinate the response plans and resources required for incident clearance and assist with the clearance of the incident scene using winch, push bumper, and any other necessary equipment. The Responder will evaluate roadway conditions and take necessary corrective actions to expedite incident clearance, open the roadways, and restore traffic flow as quickly as possible, while practicing Quick Clearance and complying with similar decisions and laws on behalf of the Department of Transportation (i.e., hazmat, fire hazard, etc.).

*Patrolling Designated Routes 25 pct (Essential)

The IMAP Responder will patrol designated sections of highway and interstates to identify traffic hazards and detect incidents, approach motorists in stopped vehicles and investigate the problem, provide assistance in accordance with approved guidelines and NCDOT's IMAP Standard Operating Procedures (SOP) manual, assist

motorists with repairs such as changing a tire or changing a hose, provide supplies such as fuel, air, or water, and provide transport for motorists to a safer location.

Partner Agencies/Communication/Relationship Building 20 pct (Essential)

*The Responder will communicate with various Public Safety Access Points (PSAPs), Public Safety Communication Centers (911 dispatch centers), other responders, and transportation management centers (TMCs) using two-way radio systems and phone systems, respond to incidents/congestion, and function as part of the Incident Management System with other responders to expedite incident clearance, open the roadways, and restore traffic flow as quickly as possible. They will operate an IMAP vehicle and associated equipment safely and in accordance with laws and procedures and act as IMAP incident command and coordinate with responders to establish a response plan on minor incidents.

Vehicle Upkeep 10 pct (Essential)

The Responder will perform preventative maintenance and emergency repairs on IMAP equipment (including IMAP trucks), ensure all equipment is maintained, clean, and safe, and ensure the IMAP vehicle is stocked with necessary equipment. They will enter messages in a variety of electronic message boards (as needed) and coordinate with various emergency response agencies in blocking roads, lanes, ramps, etc. for special events (e.g., presidential motorcades).

Administrative/Data Sharing 10 pct

The Responder will maintain work records (such as timesheets, job reports, inventory records, and material requisitioning), participate in tailgate safety meetings and monthly safety meetings, participate in assigned and on-the-job training as directed, administer first aid to victims, assist with cleanup of non-hazardous spills. They will also provide mentoring to coworkers to facilitate development and job performance.

*= Required

Physical Activity

YES	NO	
☐	☒	**Climbing.** *Ascending or descending ladders, stairs, scaffolding, ramps, poles and the like, using feet and legs and/or hands and arms. Body agility is emphasized. This factor is important if the amount and kind of climbing required exceeds that required for ordinary locomotion.*
☒	☐	**Balancing.** *Maintaining body equilibrium to prevent falling when walking, standing or crouching on narrow, slippery or erratically moving surfaces. This factor is important if the amount and kind of balancing exceeds that needed for ordinary locomotion and maintenance of body equilibrium.*
☒	☐	**Stooping.** *Bending body downward and forward by bending spine at the waist. This factor is important if it occurs to a considerable degree and requires full use of the lower extremities and back muscles.*
☒	☐	**Kneeling.** *Bending legs at knee to come to a rest on knee or knees.*
☒	☐	**Crouching.** *Bending the body downward and forward by bending legs and spine.*
☐	☒	**Crawling.** *Moving about on hands and knees or hands and feet.*
☒	☐	**Reaching.** *Extending hand(s) and arm(s) in any direction.*
☒	☐	**Standing.** *Particularly for sustained periods of time.*
☒	☐	**Walking.** *Moving about on foot to accomplish tasks, particularly for long distances or moving from one work site to another.*
☒	☐	**Pushing.** *Using upper extremities to press against something with steady force in order to thrust forward, downward or outward.*
☒	☐	**Pulling.** *Using upper extremities to exert force in order to drag, haul, or tug objects in a sustained motion.*
☒	☐	**Lifting.** *Raising objects from a lower to a higher position or moving objects horizontally from position-to-position. This factor is important if it occurs to a considerable degree and requires the substantial use of the upper extremities and back muscles.*
☒	☐	**Fingering.** *Picking, pinching, typing, writing or otherwise working, primarily with fingers rather than with the whole hand or arm as in handling.*
☒	☐	**Grasping.** *Applying pressure to an object with the fingers and palm.*
☒	☐	**Feeling.** *Perceiving attributes of objects, such as size, shape, temperature or texture by touching with skin, particularly that of the fingertips.*
☒	☐	**Talking.** *Expressing or exchanging ideas by means of the spoken word. Those activities in which they must convey detailed or important spoken instructions to other workers accurately, loudly or quickly.*
☒	☐	**Hearing.** *Perceiving the nature of sounds at normal speaking levels with or without correction. Ability to receive detailed information through oral communication, and to make fine discriminations in sound.*
☒	☐	**Repetitive motions.** *Substantial movements (motions) of the wrists, hands, and/or fingers.*
☒	☐	**Smelling.**

Physical Requirements *(choose one)*

☐   Sedentary work: Exerting up to 10 pounds of force occasionally and/or a negligible amount of force frequently or constantly to lift, carry, push, pull or otherwise move objects, including the human body. Sedentary work involves sitting most of the time. Jobs are sedentary if walking and standing are required only occasionally and all other sedentary criteria are met.

☐   Light work: Exerting up to 20 pounds of force occasionally and/or up to 20 pounds of force frequently, and/or a negligible amount of force constantly to move objects. If the use of arm and/or leg controls requires exertion of forces greater than that for Sedentary Work and the worker sits most of the time, the job is rated for Light Work.

☒   Medium work: Exerting up to 50 pounds of force occasionally, and/or up to 20 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects.

☐   Heavy work: Exerting up to 100 pounds of force occasionally, and/or up to 50 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects.

☐   Very heavy work: Exerting in excess of 100 pounds of force occasionally, and/or in excess of 50 pounds of force frequently and/or in excess of 10 pounds of force constantly to move objects.

Visual Acuity Requirements *(choose one)*

☐ A   The worker is required to have close visual acuity to perform an activity such as: preparing and analyzing data and figures, transcribing; viewing a computer terminal; extensive reading; visual inspections involving small defects, small parts, and/or operation of machines (including inspection); using measurement devices; and/or assembly or fabrication of parts at distances close to the eyes.

☐ B   The worker is required to have visual acuity to perform an activity such as: operated machines such as lathes, drill presses, power saws and mills where the seeing job is at or within arm's reach; performs mechanical or skilled trades tasks of a non-repetitive nature such as carpenters, technicians, service people, plumbers, painters, mechanics, etc.

☒ C   The worker is required to have visual acuity to operate motor vehicles or heavy equipment.

☐ D   The worker is required to have visual acuity to determine the accuracy, neatness, and thoroughness of the work assigned (i.e., custodial, food services, general laborer, etc.) Or to make general observations of facilities or structures (i.e., security guard, inspection, etc.).

Working Conditions

Yes	No	
☒	☐	The worker is subject to inside environmental conditions
☒	☐	The worker is subject to outside environmental conditions
☒	☐	The worker is subject to both environmental conditions
☒	☐	The worker is subject to extreme cold
☒	☐	The worker is subject to extreme heat
☒	☐	The worker is subject to noise
☐	☒	The worker is subject to vibration
☒	☐	The worker is subject to hazards
☒	☐	The worker is subject to atmospheric conditions
☒	☐	The worker is subject to oils
☐	☒	The worker is required to wear respirator.
☐	☒	The worker is frequently is in close quarters, crawl space, shafts, man holes, small enclosed rooms, small sewage and water line pipes, and other areas which could cause claustrophobia.
☐	☒	The worker is required to function in narrow aisles or passage ways.
☐	☒	The worker is exposed to infectious diseases.
☐	☒	The worker is required to function around prisoners or mental patients.
☐	☒	None: The worker is not substantially exposed to adverse environmental conditions (such as in typical office or administrative work).
☐	☒	The worker is exposed to blood borne pathogens.

Cognitive/Mental Capabilities
(Choose one in each category)

Comprehension
☐ *Understand and apply routine verbal and/or written instructions*
☐ *Understand and apply non-routine verbal and/or written instructions*
☒ *Understand complex problems and collaborate to explore alternative solutions*
Organization
☐ *Organize actions to complete sequential and/or routine tasks*
☒ *Organize and prioritize individual work schedule to manage multiple tasks and/or projects*
☐ *Organize and prioritize the work schedules of others to manage multiple tasks and/or projects*
Decision Making
☐ *Make decisions that have an impact on the individual's work*
☒ *Make decisions that have an impact on the immediate work unit's operations and/or services*
☐ *Make decisions that have an impact on a department's credibility, operations, and/or services*
Communication
☐ *Communicate and exchange routine/basic information*
☒ *Communicate and explain a variety of information*
☐ *Communicate in-depth information for the purpose of interpreting and/or negotiating*

DEPARTMENT OF TRANSPORTATION
PeopleAdmin Position Description Guide

*Working Title of Position		*Beacon Position Number	
Senior IMAP Responder			
*Department/Agency	*Division		*Section/Unit
NCDOT	DOH		
Clone of Existing Position?		If Yes, List University or Beacon Position Number	
*Position Justification / Reasons for Classification Action Request			
New position description created for NCDOT Transportation Worker Project			
Present Classification Title / Salary Grade or Banded Level		Proposed Classification Title / Salary Grade or Banded Level	
		Transportation Worker IV / GN07	
*Name of Immediate Supervisor		*Supervisor's Position Title and Number	
		Transportation Supervisor I (Incident Management Assistant Patrol (IMAP) Responder Supervisor II)	
Work Schedule		Work Hours	
Monday – Friday (and on call)		5:30 am – 1:30 pm or 12:30 pm – 8:30 pm	

*Primary Purpose of the Organizational Unit

The primary purpose of the Incident Management Unit is to manage traffic on the State's freeway network in an effort to minimize non-recurring delay. This is accomplished with a combination of strategies, including interagency coordination and planning meetings, incident detection and verification (loops, CCTV cameras, etc.), motorist information (Changeable Message Signs, Highway Advisory Radios, etc.), and incident clearance (Incident Management Assistance Patrol (IMAP) trucks, wreckers). These strategies are employed to keep traffic flowing while incident remediation is ongoing and to expedite incident clearance, opening the roadway, and restoring normal traffic flow as quickly as possible. The secondary purpose of this unit is to determine and implement various methods to reduce recurring delays.

*Primary Purpose of the Position

This position will be staffed as a Senior Incident Management Assistance Patrol (IMAP) Responder. This position requires prior experience and knowledge within the IMAP department. Employees in this role will be considered Senior Responders who have demonstrated commitment and quality in the work. The work will involve operation of an IMAP vehicle, traffic control deployments, route surveillance, incident response, removal of disabled and abandoned vehicles, incident/congestion management, and performing routine motorist assistance duties and debris removal to facilitate traffic flow and minimize congestion. This position also is responsible for communicating via two-way radio with the TMC dispatch as well as other first responder agencies for appropriate coordination as needed. Employees in this class do not directly supervise but can function as lead workers and/or provide on-the-job training to incoming Incident Management Responders.

*Knowledge, Skills, and Abilities Recommended in this Position

This role requires the ability to work independently, think critically, prioritize and control situations, and make decisions quickly under extreme pressure or in a hazardous environment.

This role requires working knowledge of fire safety (including the ability to operate a fire extinguisher), working knowledge of small hand and power tools, experience in minor mechanical repairs, the ability to operate an IMAP utility truck with winch, traffic control devices, and other small tools and equipment, knowledge of two-way radio systems and phone communications, and an understanding of dynamics of traffic control implementation based on roadway features, highway geometry, and weather conditions.

This role requires the ability to perform routine tasks, to move or lift heavy objects, to work in a variety of weather conditions, including rain, snow, heat, and ice, and proficiency in all computer applications required to perform the job, including Computer Aided Dispatch (CAD), SAP (timesheets), Outlook (email), Excel (spreadsheets), Word, and any other laptop applications as necessary (incident reports, logs). In addition, the responder must have the ability to maintain basic first aid and CPR training, to work outside of normal shift hours in the event of larger after-hours incidents or incidents that extend beyond normal working hours, and to skillfully maneuver IMAP vehicle in all weather and traffic conditions while communicating with other units and response partners.

The Senior Responder must have strong communication skills, patience and aptitude for training incoming Incident Management Responders and demonstrate defensive driving skills and safe driving habits. They will maintain consistent communication with their supervisor.

This role requires the ability to be agile enough to respond and move quickly around fast-moving vehicles unassisted, to lift at least 50 pounds unassisted, to walk long distance multiples times throughout the day, and to change a tire unassisted.

*Education and Experience Recommended
This role requires a high school diploma or GED, six years of experience, including four years of IMAP experience, and two years of relevant experience in one or more of the following areas: a) emergency response work; b) medical services; c) protective services in law enforcement/fire/inspection/arson/correctional/security; d) highway/bridge maintenance or construction; e) driving a utility repair type vehicle for business/government such as electrical, AAA, or similar type vehicle; f) automotive/maintenance, towing industry, and/or repair.

Additional Training/Experience: Employees will need to successfully pass both classroom training related to safety, IMAP, and traffic management operations and a field assessment review.

CDL is not required, but a valid NC Drivers' License is required due to the essential Traffic Function.

*License or Certification Required by Statute or Regulation
- Valid NC Driver's License
- Current CPR Certification
- Current NCDOT IMAP Certification (on the job training)

*Initiator

*Description of Work – Describe in detail the major functions of this position as well as the duties and responsibilities required for each of those functions. Indicate the percentage of time the employee spends in each functional element using "percent" or "pct" rather than "%" to avoid an error in PeopleAdmin. The percentage amounts should add up to 100%. In addition, indicate whether it is an essential duty/function as defined by the Americans with Disabilities Act with an asterisk (*). The description of work should include the following:
- **Describe thinking, analysis, and judgments required to perform assigned tasks.**
- **Consequences of errors.**
- **Supervision received and directions provided.**
- **Supervision given.**
- **Describe decision-making authority.**
- **Variety and purpose of personal contacts.**
- **Work environment and conditions (hazards, physical effort, specialized training requirements, machines, tools, systems, instruments, equipment).**

*Incident Response 35 pct (Essential)

The Senior Responder will take the lead upon arriving to an incident scene if there is more than one responder. They will be responsible for developing and finalizing incident paperwork as per the SOPs. The Senior Responder will perform a QA/QC review of detours that were put in place and will act as the incident management contact until more senior personnel arrives on scene. The Senior Responder also will practice scene management to then be the go-to person.

The Senior Responder will establish emergency temporary and permanent traffic control, using IMAP truck and traffic control devices, in accordance with the *Manual on Uniform Traffic Control Devices* (MUTCD) and IMAP SOP manual to isolate hazards and/or response personnel from motoring public. They will deploy permanent traffic control for longer running incidents and larger events (multi-day events, races, ballgames, etc.), ensure the safety of coworkers and other first responders by identifying, isolating, and/or removing hazards from the roadway, and ensure the safety of coworkers and other responders by establishing temporary traffic control (TTC) and facilitating in establishing or maintaining traffic flow.

The Senior Responder will assess an incident scene quickly to determine damages, injuries, travel delays, lane blockages, and involvement of hazardous materials, then provide information and updates to Statewide Transportation Operations Center (STOC)/TMC to assist with updates of traveler information management system (TIMS). They will determine resources required to clear the roadway and resume normal traffic flow, function as a point of contact between responders and NCDOT agencies to coordinate the response plans and resources

required for incident clearance and assist with the clearance of the incident scene using winch, push bumper, and any other necessary equipment. The Senior Responder will learn how to evaluate roadway conditions and take necessary corrective actions to expedite incident clearance, open the roadways, and restore traffic flow as quickly as possible, while practicing Quick Clearance and complying with similar decisions and laws on behalf of the Department of Transportation (i.e., hazmat, fire hazard, etc.).

*Patrolling Designated Routes 20 pct (Essential)

The Senior IMAP Responder will patrol designated sections of highway and interstates to identify traffic hazards and detect incidents, approach motorists in stopped vehicles and investigate the problem, provide assistance in accordance with approved guidelines and NCDOT's IMAP Standard Operating Procedures (SOP) manual, assist motorists with repairs such as changing a tire or changing a hose, provide supplies such as fuel, air, or water, and provide transport for motorists to a safer location. They will have a strong awareness and familiarity with assigned sections of highways and interstates and demonstrate the ability to manage challenging incidents with composure.

*Partner Agencies/Communication/Relationship 20 pct (Essential)

The Senior Responder will communicate with various Public Safety Access Points (PSAPs), Public Safety Communication Centers (911 dispatch centers), other responders, and transportation management centers (TMCs) using two-way radio systems and phone systems, respond to incidents/congestion, and function as part of the Incident Management System with other responders to expedite incident clearance, open the roadways, and restore traffic flow as quickly as possible. They will operate an IMAP vehicle and associated equipment safely and in accordance with laws and procedures and act as IMAP incident command and coordinate with responders to establish a response plan on minor incidents. The Senior Responder will demonstrate the ability to handle both major and minor incidents in a timely manner and act as a lead worker on shift in absence of the IMAP supervisor.

Training 5 pct (Essential)

The Senior Responder will mentor new responders prior to attending the required statewide responder certification training. They also will provide continuous mentoring to other drivers and will partner with the Statewide Trainers to assist with statewide in-service training for continuing education.

Vehicle Upkeep 5 pct (Essential)

The Senior Responder will perform preventative maintenance and emergency repairs on IMAP equipment (including IMAP trucks), ensure all equipment is maintained, clean, and safe, and ensure the IMAP vehicle is stocked with necessary equipment. They will enter messages in a variety of electronic message boards (as needed) and coordinate with various emergency response agencies in blocking roads, lanes, ramps, etc. for special events (e.g., presidential motorcades).

Administrative/Data Sharing 15 pct

The Senior Responder will maintain work records (such as timesheets, job reports, inventory records, and material requisitioning), participate in tailgate safety meetings and monthly safety meetings, participate in assigned and on-the-job training as directed, administer first aid to victims, assist with cleanup of non-hazardous spills. They will assist the Incident Management Responder Supervisor with administration work when asked and will have the ability to perform limited supervisory activities in the absence of the IMAP supervisor. In addition, the Senior Responder will provide mentoring to coworkers to facilitate development and job performance and demonstrate strong leadership qualities and desire for professional growth in the Division.

*= Required

Physical Activity

YES	NO	
☐	☒	**Climbing.** *Ascending or descending ladders, stairs, scaffolding, ramps, poles and the like, using feet and legs and/or hands and arms. Body agility is emphasized. This factor is important if the amount and kind of climbing required exceeds that required for ordinary locomotion.*
☒	☐	**Balancing.** *Maintaining body equilibrium to prevent falling when walking, standing or crouching on narrow, slippery or erratically moving surfaces. This factor is important if the amount and kind of balancing exceeds that needed for ordinary locomotion and maintenance of body equilibrium.*
☒	☐	**Stooping.** *Bending body downward and forward by bending spine at the waist. This factor is important if it occurs to a considerable degree and requires full use of the lower extremities and back muscles.*
☒	☐	**Kneeling.** *Bending legs at knee to come to a rest on knee or knees.*
☒	☐	**Crouching.** *Bending the body downward and forward by bending legs and spine.*
☐	☒	**Crawling.** *Moving about on hands and knees or hands and feet.*
☒	☐	**Reaching.** *Extending hand(s) and arm(s) in any direction.*
☒	☐	**Standing.** *Particularly for sustained periods of time.*
☒	☐	**Walking.** *Moving about on foot to accomplish tasks, particularly for long distances or moving from one work site to another.*
☒	☐	**Pushing.** *Using upper extremities to press against something with steady force in order to thrust forward, downward or outward.*
☒	☐	**Pulling.** *Using upper extremities to exert force in order to drag, haul, or tug objects in a sustained motion.*
☒	☐	**Lifting.** *Raising objects from a lower to a higher position or moving objects horizontally from position-to-position. This factor is important if it occurs to a considerable degree and requires the substantial use of the upper extremities and back muscles.*
☒	☐	**Fingering.** *Picking, pinching, typing, writing or otherwise working, primarily with fingers rather than with the whole hand or arm as in handling.*
☒	☐	**Grasping.** *Applying pressure to an object with the fingers and palm.*
☒	☐	**Feeling.** *Perceiving attributes of objects, such as size, shape, temperature or texture by touching with skin, particularly that of the fingertips.*
☒	☐	**Talking.** *Expressing or exchanging ideas by means of the spoken word. Those activities in which they must convey detailed or important spoken instructions to other workers accurately, loudly or quickly.*
☒	☐	**Hearing.** *Perceiving the nature of sounds at normal speaking levels with or without correction. Ability to receive detailed information through oral communication, and to make fine discriminations in sound.*
☒	☐	**Repetitive motions.** *Substantial movements (motions) of the wrists, hands, and/or fingers.*
☒	☐	**Smelling.**

Physical Requirements *(choose one)*

☐   Sedentary work: Exerting up to 10 pounds of force occasionally and/or a negligible amount of force frequently or constantly to lift, carry, push, pull or otherwise move objects, including the human body. Sedentary work involves sitting most of the time. Jobs are sedentary if walking and standing are required only occasionally and all other sedentary criteria are met.

☐   Light work: Exerting up to 20 pounds of force occasionally and/or up to 20 pounds of force frequently, and/or a negligible amount of force constantly to move objects. If the use of arm and/or leg controls requires exertion of forces greater than that for Sedentary Work and the worker sits most of the time, the job is rated for Light Work.

☒   Medium work: Exerting up to 50 pounds of force occasionally, and/or up to 20 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects.

☐   Heavy work: Exerting up to 100 pounds of force occasionally, and/or up to 50 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects.

☐   Very heavy work: Exerting in excess of 100 pounds of force occasionally, and/or in excess of 50 pounds of force frequently and/or in excess of 10 pounds of force constantly to move objects.

Visual Acuity Requirements *(choose one)*

☐ A   The worker is required to have close visual acuity to perform an activity such as: preparing and analyzing data and figures, transcribing; viewing a computer terminal; extensive reading; visual inspections involving small defects, small parts, and/or operation of machines (including inspection); using measurement devices; and/or assembly or fabrication of parts at distances close to the eyes.

☐ B   The worker is required to have visual acuity to perform an activity such as: operated machines such as lathes, drill presses, power saws and mills where the seeing job is at or within arm's reach; performs mechanical or skilled trades tasks of a non-repetitive nature such as carpenters, technicians, service people, plumbers, painters, mechanics, etc.

☒ C   The worker is required to have visual acuity to operate motor vehicles or heavy equipment.

☐ D   The worker is required to have visual acuity to determine the accuracy, neatness, and thoroughness of the work assigned (i.e., custodial, food services, general laborer, etc.) Or to make general observations of facilities or structures (i.e., security guard, inspection, etc.).

Working Conditions

Yes	No	
☒	☐	The worker is subject to inside environmental conditions
☒	☐	The worker is subject to outside environmental conditions
☒	☐	The worker is subject to both environmental conditions
☒	☐	The worker is subject to extreme cold
☒	☐	The worker is subject to extreme heat
☒	☐	The worker is subject to noise
☐	☒	The worker is subject to vibration
☒	☐	The worker is subject to hazards
☒	☐	The worker is subject to atmospheric conditions
☒	☐	The worker is subject to oils
☐	☒	The worker is required to wear respirator.
☐	☒	The worker is frequently is in close quarters, crawl space, shafts, man holes, small enclosed rooms, small sewage and water line pipes, and other areas which could cause claustrophobia.
☐	☒	The worker is required to function in narrow aisles or passage ways.
☐	☒	The worker is exposed to infectious diseases.
☐	☒	The worker is required to function around prisoners or mental patients.
☐	☒	None: The worker is not substantially exposed to adverse environmental conditions (such as in typical office or administrative work).
☐	☒	The worker is exposed to blood borne pathogens.

Cognitive/Mental Capabilities
(Choose one in each category)

Comprehension
- ☐ *Understand and apply routine verbal and/or written instructions*
- ☐ *Understand and apply non-routine verbal and/or written instructions*
- ☒ *Understand complex problems and collaborate to explore alternative solutions*

Organization
- ☐ *Organize actions to complete sequential and/or routine tasks*
- ☐ *Organize and prioritize individual work schedule to manage multiple tasks and/or projects*
- ☒ *Organize and prioritize the work schedules of others to manage multiple tasks and/or projects*

Decision Making
- ☐ *Make decisions that have an impact on the individual's work*
- ☒ *Make decisions that have an impact on the immediate work unit's operations and/or services*
- ☐ *Make decisions that have an impact on a department's credibility, operations, and/or services*

Communication
- ☐ *Communicate and exchange routine/basic information*
- ☒ *Communicate and explain a variety of information*
- ☐ *Communicate in-depth information for the purpose of interpreting and/or negotiating*

DEPARTMENT OF TRANSPORTATION
PeopleAdmin Position Description Guide

Working Title of Position		Beacon Position Number	
IMAP Responder Supervisor			
Department/Agency	**Division**		**Section/Unit**
NCDOT	Division Three		Traffic Services
Clone of Existing Position? *This section is for future use*	**If Yes, List University or Beacon Position Number** *This section is for future use*		
*Position Justification / Reasons for Classification Action Request			
New Position Description created for OSHR Comp Project			
Present Classification Title / Salary Grade or Banded Level Transportation Supervisor II	**Proposed Classification Title / Salary Grade or Banded Level** *This section is for future use – do not fill out*		
Name of Immediate Supervisor	**Supervisor's Position Title and Number**		
	Traffic Services Supervisor		
Work Schedule	**Work Hours**		
Tuesday – Friday & Emergency Callback	7:00am-6:00pm & After hours / Weekends		

Primary Purpose of the Organizational Unit

The primary purpose of the Incident Management Unit is to manage traffic on the State's freeway network in an effort to minimize non-recurring delay. This is accomplished with a combination of strategies, including interagency coordination and planning meetings, incident detection and verification (loops, CCTV cameras, etc.), motorist information (Changeable Message Signs, Highway Advisory Radios, etc.), and incident clearance (Incident Management Assistance Patrol (IMAP) trucks, wreckers). These strategies are employed to keep traffic flowing while incident remediation is ongoing and to expedite incident clearance, opening the roadway, and restoring normal traffic flow as quickly as possible. The secondary purpose of this unit is to determine and implement various methods to reduce recurring delays.

Primary Purpose of the Position

This position will be staffed as an Incident Management Responder Supervisor II. The primary purpose of this position is to guide the Incident Management department to minimize non-recurring congestion through both current and future planning efforts. The work of a supervisor requires coordination with senior leadership, communication with stakeholders and customer groups, delegation, data archive / management, training program development, performance metrics development, and emergency incident management. The position requires an individual with strong critical thinking skills, who is prepared to lead their team through challenges and develop solutions along the way. Qualified candidates for this position will have a mind that can balance detail-oriented everyday tasks with macro-level goals for the department. This role requires an individual who is highly skilled in managing personnel.

Knowledge, Skills, and Abilities Recommended in this Position

The Responder Supervisor II must have the ability to work both in a team setting and independently, to prioritize and control situations, to promote staff development and growth, and to serve as a mentor to staff, while both counseling and disciplining team members when required. This role requires strong written and oral communication skills, strong comprehensive skills, the ability to cater to executive and organizational needs, and the ability to make decisions quickly under extreme pressure or in a hazardous environment. The Supervisor II will need strong organizations ideas and skills to promote office efficiency and clear communication. In addition, they will maintain solid relationships with law enforcement, emergency responders, and other related organizations.

This role requires working knowledge of fire safety, working knowledge of small hand and power tools, experience in minor mechanical repairs, the ability to operate an IMAP utility truck with winch, traffic control devices, and other small tools and equipment, knowledge of two-way radio systems and phone communications, and an understanding of dynamics of traffic control implementation based on roadway features, highway geometry, and weather conditions. The Supervisor II must have the ability to work outside of normal shift hours in the event of larger after-hours incidents, or incidents that extend beyond normal working hour and be able to apply all computer applications required to perform the job, including Computer Aided Dispatch (CAD), SAP (timesheets), Outlook (email), Excel (spreadsheets), Word, and any other laptop applications as necessary (incident reports, logs).

This role requires the ability to comprehend all applicable manuals, including the Field Fiscal Procedures Manual, North Carolina General Statues, NCDOT Internet and Intranet, and NCDOT Workplace Safety Manual. The Supervisor II requires knowledge of permanent traffic controls that the team can deploy for longer-running incidents and larger events (multi-day events, races, ballgames, etc.) and the knowledge of how to operate an IMAP vehicle, its functions, and associated equipment, and how to perform day-to-day Incident Management Responder duties and in accordance with laws and procedures. This role requires the ability to develop and maintain working relationships with other agencies and to problem solve during major incidents.

This role requires both sedentary office work and active field time. The physical requirements are the ability to be agile enough to respond and move quickly, to lift at least 50 pounds unassisted, to stand for long periods of time, to walk long distance multiple times throughout the day, and to work in adverse weather and conditions.

All members shall maintain a neat, well-groomed appearance while on duty. Attention to personal hygiene is a requisite when in uniform. These procedures, regulations and policies are intended to promote the professional image expected by the department and to encourage good health for consistently optimum job performance while increasing public confidence.

Education and Experience Recommended
This role requires a high school diploma or GED, one year of relevant experience in a supervisory role related to emergency response or similar work, and seven years of directly related experience in one or more of the following areas: a) emergency response work; b) medical services; c) protective services in law enforcement/fire/inspection/arson/correctional/security; e) highway/bridge maintenance or construction; f), towing industry, and/or repair or an equivalent combination of training/college courses and directly related experience. Experience must be related to the functional area of the work that the position will supervise.

Additional Training/Experience: Employees will need to successfully pass both classroom training related to safety, IMAP and traffic management operations and a field assessment review.

CDL is not required, but a valid NC Drivers' License is required due to the essential Traffic Function.

License or Certification Required by Statute or Regulation
- Valid NC Driver's License
- Completion of IMAP Driving Training Program
- Completion of IMAP Supervisor Certification or be able to complete within 6 months of hire date
- Completion of basic first aid and CPR

*Initiator

Description of Work – Describe in detail the major functions of this position as well as the duties and responsibilities required for each of those functions. Indicate the percentage of time the employee spends in each functional element using "percent" or "pct" rather than "%" to avoid an error in PeopleAdmin. The percentage amounts should add up to 100%. In addition, indicate whether it is an essential duty/function as defined by the Americans with Disabilities Act with an asterisk (*). The description of work should include the following:
- **Describe thinking, analysis, and judgments required to perform assigned tasks.**
- **Consequences of errors.**
- **Supervision received and directions provided.**
- **Supervision given.**
- **Describe decision-making authority.**
- **Variety and purpose of personal contacts.**
- **Work environment and conditions (hazards, physical effort, specialized training requirements, machines, tools, systems, instruments, equipment).**

Administrative/ Data Sharing 45 pct (Essential)

The Supervisor II will create daily reports and submit payroll data, update maintenance logs, gather driver feedback about vehicle condition, oversee office operations while stationed in the IMAP office (unless needed elsewhere, such as a large planned event, meetings, community/agency outreach, public relations, etc.), keep a consistent line of communication with the team, develop work schedules with the IMAP Supervisor I for IMAP patrol drivers for assigned shifts and special events (while accounting for seasonal traffic volumes, days, and special events in their jurisdiction), and organize regular staff meetings to inform the team of past incidents, performance, and expectations for the upcoming week(s).

The IMAP Responder Supervisor II will oversee the Incident Management Program, provide assistance in accordance with approved guidelines and NCDOT's IMAP Standard Operating Procedures (SOP) manual, provide in-house training and serve as a resource for new Incident Management Supervisor I, and delegate shift-related tasks to the Incident Management Supervisor I or IM Responders. They will establish performance measures to enhance respond time, create a maintenance planning system to promote preventative maintenance, and analyze crash and traffic data to develop a staffing plan according to incident trends.

Partner Agencies/Communication/Relationship Building 35 pct (Essential)

The Supervisor II will share data with other applicable agencies and promote interagency collaboration, administer equipment to the team, analyze and create an organizational system for data storage, create performance measures based on existing data to establish team goals and targets, manage the team schedule, and delegate tasks based on an individual's skillset and knowledge. They will communicate with and coordinate IMAP resources with Emergency Operation Centers and other agencies during major incidents or emergencies, investigate and handle complaints from the public or other agencies concerning IMAP Responders, function as a Point of Contact or as an IMAP Incident Commander for major incidents, and investigate and handle accidents or property damage involving IMAP Responders. The Supervisor II manages office operations and is stationed in the office unless emergency service is requested in the field. They will participate in leadership meetings to discuss major incidents, personnel challenges, performance measures, and future plans.

Incident Response 10 pct (Essential)

The Supervisor II will enforce the *Manual on Uniform Traffic Control Device* (MUTCD) and IMAP SOP for Incident Management Responders, ensure Incident Management Responders follow appropriate procedures to isolate hazards and/or incident responders from live traffic, and ensure the safety of the team and other first responders by enforcing safe practices and provide insight during severe incidents.

The Supervisor II will communicate with various Public Safety Access Points (PSAPs), Public Safety Communication Centers (911 dispatch centers), other responders and agencies, and transportation management centers (TMCs) using two-way radio systems and phone systems when needed, as well as ensure that incidents and congestion are receiving prompt responses from Incident Management Responders to restore traffic flow as quickly as possible.

Patrolling Designated Routes/Vehicle Upkeep 10 pct (Essential)

The Supervisor II will assume the responsibilities of other Transportation Supervisors in their absence, remain in consistent communication with their supervisor, other Incident Management Responder Supervisors, and Incident Management Engineers, patrol areas when required, and apply advanced knowledge of incident management procedures. They will solve personnel issues and minimize staff conflicts and connect staff with support (emotional or professional) related to dealing with difficult on-the-job situations.

*= Required

Physical Activity

YES	NO	
×	☐	**Climbing.** *Ascending or descending ladders, stairs, scaffolding, ramps, poles and the like, using feet and legs and/or hands and arms. Body agility is emphasized. This factor is important if the amount and kind of climbing required exceeds that required for ordinary locomotion.*
×	☐	**Balancing.** *Maintaining body equilibrium to prevent falling when walking, standing or crouching on narrow, slippery or erratically moving surfaces. This factor is important if the amount and kind of balancing exceeds that needed for ordinary locomotion and maintenance of body equilibrium.*
×	☐	**Stooping.** *Bending body downward and forward by bending spine at the waist. This factor is important if it occurs to a considerable degree and requires full use of the lower extremities and back muscles.*
×	☐	**Kneeling.** *Bending legs at knee to come to a rest on knee or knees.*
×	☐	**Crouching.** *Bending the body downward and forward by bending legs and spine.*
☐	×	**Crawling.** *Moving about on hands and knees or hands and feet.*
×	☐	**Reaching.** *Extending hand(s) and arm(s) in any direction.*
×	☐	**Standing.** *Particularly for sustained periods of time.*
×	☐	**Walking.** *Moving about on foot to accomplish tasks, particularly for long distances or moving from one work site to another.*
×	☐	**Pushing.** *Using upper extremities to press against something with steady force in order to thrust forward, downward or outward.*
×	☐	**Pulling.** *Using upper extremities to exert force in order to drag, haul, or tug objects in a sustained motion.*
×	☐	**Lifting.** *Raising objects from a lower to a higher position or moving objects horizontally from position-to-position. This factor is important if it occurs to a considerable degree and requires the substantial use of the upper extremities and back muscles.*
×	☐	**Fingering.** *Picking, pinching, typing, writing or otherwise working, primarily with fingers rather than with the whole hand or arm as in handling.*
×	☐	**Grasping.** *Applying pressure to an object with the fingers and palm.*
×	☐	**Feeling.** *Perceiving attributes of objects, such as size, shape, temperature or texture by touching with skin, particularly that of the fingertips.*
×	☐	**Talking.** *Expressing or exchanging ideas by means of the spoken word. Those activities in which they must convey detailed or important spoken instructions to other workers accurately, loudly or quickly.*
×	☐	**Hearing.** *Perceiving the nature of sounds at normal speaking levels with or without correction. Ability to receive detailed information through oral communication, and to make fine discriminations in sound.*
×	☐	**Repetitive motions.** *Substantial movements (motions) of the wrists, hands, and/or fingers.*
×	☐	**Smelling.**

Physical Requirements *(choose one)*

☐ **Sedentary work:** Exerting up to 10 pounds of force occasionally and/or a negligible amount of force frequently or constantly to lift, carry, push, pull or otherwise move objects, including the human body. Sedentary work involves sitting most of the time. Jobs are sedentary if walking and standing are required only occasionally and all other sedentary criteria are met.

☐ **Light work:** Exerting up to 20 pounds of force occasionally and/or up to 20 pounds of force frequently, and/or a negligible amount of force constantly to move objects. If the use of arm and/or leg controls requires exertion of forces greater than that for Sedentary Work and the worker sits most of the time, the job is rated for Light Work.

✗ **Medium work:** Exerting up to 50 pounds of force occasionally, and/or up to 20 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects.

☐ **Heavy work**: Exerting up to 100 pounds of force occasionally, and/or up to 50 pounds of force frequently, and/or up to 10 pounds of force constantly to move objects.

☐ **Very heavy work**: Exerting in excess of 100 pounds of force occasionally, and/or in excess of 50 pounds of force frequently and/or in excess of 10 pounds of force constantly to move objects.

Visual Acuity Requirements *(choose one)*

✗ A The worker is required to have close visual acuity to perform an activity such as: preparing and analyzing data and figures, transcribing; viewing a computer terminal; extensive reading; visual inspections involving small defects, small parts, and/or operation of machines (including inspection); using measurement devices; and/or assembly or fabrication of parts at distances close to the eyes.

☐ B The worker is required to have visual acuity to perform an activity such as: operated machines such as lathes, drill presses, power saws and mills where the seeing job is at or within arm's reach; performs mechanical or skilled trades tasks of a non-repetitive nature such as carpenters, technicians, service people, plumbers, painters, mechanics, etc.

☐ C The worker is required to have visual acuity to operate motor vehicles or heavy equipment.

☐ D The worker is required to have visual acuity to determine the accuracy, neatness, and thoroughness of the work assigned (i.e., custodial, food services, general laborer, etc.) Or to make general observations of facilities or structures (i.e., security guard, inspection, etc.).

Working Conditions

Yes   No

Yes	No	
×	☐	The worker is subject to inside environmental conditions
×	☐	The worker is subject to outside environmental conditions
×	☐	The worker is subject to both environmental conditions
×	☐	The worker is subject to extreme cold
×	☐	The worker is subject to extreme heat
×	☐	The worker is subject to noise
☐	×	The worker is subject to vibration
×	☐	The worker is subject to hazards
×	☐	The worker is subject to atmospheric conditions
×	☐	The worker is subject to oils
☐	×	The worker is required to wear respirator.
☐	×	The worker is frequently is in close quarters, crawl space, shafts, man holes, small enclosed rooms, small sewage and water line pipes, and other areas which could cause claustrophobia.
☐	×	The worker is required to function in narrow aisles or passage ways.
☐	×	The worker is exposed to infectious diseases.
☐	×	The worker is required to function around prisoners or mental patients.
☐	×	None: The worker is not substantially exposed to adverse environmental conditions (such as in typical office or administrative work).
☐	×	The worker is exposed to blood borne pathogens.

Cognitive/Mental Capabilities
(Choose one in each category)

Comprehension
☐ *Understand and apply routine verbal and/or written instructions*
☐ *Understand and apply non-routine verbal and/or written instructions*
☒ *Understand complex problems and collaborate to explore alternative solutions*

Organization
☐ *Organize actions to complete sequential and/or routine tasks*
☐ *Organize and prioritize individual work schedule to manage multiple tasks and/or projects*
☒ *Organize and prioritize the work schedules of others to manage multiple tasks and/or projects*

Decision Making
☐ *Make decisions that have an impact on the individual's work*
☒ *Make decisions that have an impact on the immediate work unit's operations and/or services*
☐ *Make decisions that have an impact on a department's credibility, operations, and/or services*

Communication
☐ *Communicate and exchange routine/basic information*
☒ *Communicate and explain a variety of information*
☐ *Communicate in-depth information for the purpose of interpreting and/or negotiating*

Exhibit C
NCDOT and NCSHP Memorandum of Understanding (MOU)

INTERAGENCY MEMORANDUM OF UNDERSTANDING
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
NORTH CAROLINA DEPARTMENT OF PUBLIC SAFETY
DIVISION OF STATE HIGHWAY PATROL

REMOVAL OF VEHICLES FROM ROADWAY

This Memorandum of Understanding (MOU) made this 31st day of May, 2019 by and between the North Carolina Department of Transportation (NCDOT) and the North Carolina State Highway Patrol (SHP) is to provide guidance for implementation of the Quick Clearance provision of N.C.G.S. 20-161(f) on the state highway system.

WHEREAS, in an effort to minimize the potential personal injury and/or economic loss associated with disruptions to the regular flow of traffic, the North Carolina Legislature has enacted specific legislation authorizing the immediate removal (Quick Clearance) of vehicles and/or property which interfere with the regular flow of traffic or otherwise constitute a hazard on the state highway system; and

WHEREAS, these parties herein recognize the potential hazards and economic loss that may occur from wrecked, abandoned, disabled, unattended, burned, or partially dismantled vehicles, cargo, or other personal property on the state highway system when such occurrence or condition interferes with the regular flow of traffic; and

WHEREAS, the North Carolina Legislature has vested in investigating law enforcement officers the authority to immediately remove or cause to be removed such vehicles or property only when such vehicle or property interferes with the regular flow of traffic or otherwise constitutes a hazard and when done in conjunction with the concurrence of the North Carolina Department of Transportation;

NOW THEREFORE; the North Carolina Department of Transportation and State Highway Patrol each agree to the following described guidelines and delineation of specific authority and obligations in order to implement the provisions of the Quick Clearance legislation.

I.   General

Whenever a state highway is closed or partially blocked by a wrecked, abandoned, disabled, unattended, burned, or partially dismantled vehicle, cargo, or other personal property, the priority shall be to clear the road and reopen the roadway as soon as possible. It is understood that damage to vehicles and/or cargo may occur as a result of clearing the road on an urgent basis. Nonetheless, while reasonable attempts to avoid such damage should be taken, the highest priority is public safety. Additionally, while consideration for the vehicle and/or owner's preference for utilization of a wrecker

service and related service providers and for the integrity of the power unit, trailer, and cargo are not to be ignored in every circumstance, public safety and convenience of the motoring public shall be paramount. Consistent with this public safety and motoring public priority, the following procedure is hereby established.

II.   SHP Duties and Responsibilities

Members of the State Highway Patrol who respond to any of the above-described conditions (vehicle crashes, spilled cargo, etc.) on the state highway system must make an initial assessment of the scene and determine if the Quick Clearance provision of N.C.G.S. 20-161(f) are appropriate.

While it is understandable that vehicle and cargo owners may desire extreme measures be taken to protect their property from further damage, such measure may not be prudent if it is a time-consuming endeavor that will require restricting the flow of traffic or may constitute a hazardous situation. In such cases, the authority of N.C.G.S. 20-161(f) should be utilized to get the vehicles and cargo off the road so that the flow of traffic may resume in a timely manner.

Consistent with the need to get the highway open, if required, members of the State Highway Patrol will conduct their required investigation in as expedient a manner as possible, considering the severity of the collision and the need to maintain a high quality investigation. This may mean that certain "non-critical" portions of an investigation be conducted at a later time when traffic congestion is non-existent (i.e., non-peak periods). However, in the event of a motor vehicle crash or other occurrence involving death, or serious personal injury, no removal shall occur until the investigating member determines that adequate information has been obtained for preparation of a crash report (DMV-349).

With the concurrence of the Division Engineer or his representative, the investigating member may initiate steps to immediately clear the road of vehicles, cargo, or other obstructions and debris consistent with this MOU and N.C.G.S. 20-161(f). In order to accomplish this task, the investigating member may request the assistance of the Division Engineer or his representative and may utilize the services of immediately available rotation wrecker firms, the closest available rotation wrecker firm and/or available DOT resources. For major lane blocking or traffic disruption incidents, such as overturned tractor trailers, hazardous material spills, fatal investigations or multi-vehicle wrecks, contact should be made with the NCDOT State Traffic Operations Center (STOC) at 877-627-7862 (877-NCS-STOC). If concurrence between NCDOT and SHP is given, the STOC can assist with the coordination of detours, traveler information, traffic conditions and contacting appropriate towing and recovery resources.

III.   Procedure / Requirements - NCDOT

A. General

By signing this MOU, SHP concurs that for minor incidents, such as abandoned or disabled vehicles and minor crashes that occur on the paved or main-traveled portion of any highway that NCDOT's Incident Management Assistance Patrol (IMAP), or any contractor delegated Quick Clearance authority by NCDOT, if available, may properly mark the location of vehicles, assist in traffic control and/or relocate vehicles to a non-hazardous location without additional concurrence for Quick Clearance from the SHP. In cases where abandoned or disabled vehicles are left in a non-hazardous position off the roadway, the vehicles may be tagged and removed after 24 hours by the SHP, IMAP, or any contractor delegated Quick Clearance authority by NCDOT or another law enforcement agency. IMAP or any contractor delegated Quick Clearance authority by NCDOT shall contact SHP communications with the vehicle's tag and VIN information so that proper investigation can be performed. In the event IMAP or any contractor delegated Quick Clearance authority by NCDOT, tags a vehicle and it is later towed based upon that time stamp, any litigation or complaint that arises due to elapsed time issues will be borne by NCDOT and/or their Attorney General's office.

NCDOT will make every effort to ensure that there are designated on-duty personnel with the authority and expertise to grant the necessary concurrence to put into effect the Quick Clearance procedures described herein.

NCDOT will make every effort to ensure that each State Highway Patrol Communications Center is kept apprised of all necessary recall numbers for on-duty personnel responsible for implementing Quick Clearance procedures. This information will also be readily available at the STOC 877-627-7862.

NCDOT will make every effort to cooperate with the SHP in responding to all major incidents and in determining whether and to what extent the Quick Clearance procedures authorized by N.C.G.S. 20-161(f) are warranted. For major incidents where Quick Clearance occurs or other issues arise, NCDOT will perform after incident reviews to discuss positive and/or negative effects of decisions made at the incident scene.

In any case where a determination is made that the use of NCDOT equipment is the most expedient and prudent manner in which to move vehicles, cargo, or other personal property, NCDOT will make every effort to relocate cargo or other personal property in the shortest possible time, using whatever equipment is necessary. All such materials will be relocated as short a distance as necessary to clear the travel lanes or otherwise avoid any traffic hazard.

In any case where NCDOT personnel and equipment are used to clear a highway pursuant to the provisions of this MOU, the Division Engineer or his representative shall prepare a list of the personnel, materials, traffic control devices, and equipment used and the work hours involved so that the party responsible or owner of the vehicle and/or cargo can be billed for the work pursuant to N.C.G.S. 20-161(g).

B. <u>Hazardous / Flammable / Exploding Materials</u>

No attempt shall be made by NCDOT personnel to move any hazardous, flammable, or exploding materials <u>for any reason</u>. If NCDOT is first on the scene and cargo content is not readily identifiable, the Division Engineer or his representative will contact the proper authorities to ascertain if special measures should be taken.

Only after the load has been identified and appropriate safety precautions and/or clean up procedures have been completed shall the Quick Clearance measures described herein be adhered to.

C. <u>Delegation of Quick Clearance Authority by NCDOT</u>

At times, NCDOT may enter into a contractual agreement with other entities and delegate to them Quick Clearance responsibilities and authority as allowed by N.C.G.S. 20-161(f). In these limited circumstances and upon completion of required training, NCDOT will recognize the entities as IMAP and will extend blanket concurrence for trained personnel to self-initiate Quick Clearance procedures for minor incidents, such as abandoned or disabled vehicles and minor crashes that occur on the paved or main travelled portion of the identified state highway system. Additionally, NCDOT will authorize trained personnel of said entities to properly mark the location of vehicles, assist in traffic control and/or relocate vehicles to a non-hazardous location without additional concurrence for Quick Clearance from the SHP or NCDOT.

I-77 HOT Lanes Project- By agreement dated June 26, 2014, NCDOT contracted with I-77 Mobility Partners, LLC (I-77 MP) to finance, develop, design, construct, operate and maintain the I-77 HOT Lanes Project. As such, NCDOT considers I-77 MP IMAP for the purposes of initiating and/or implementing Quick Clearance as allowed by N.C.G.S. 20-161(f). NCDOT has extended blanket concurrence for I-77 MP technicians to self-initiate Quick Clearance procedures for minor incidents, such as abandoned or disabled vehicles and minor crashes that occur on the paved or main travelled portion of I-77 between mile marker 10 and 37 on both the general purpose and high occupancy toll lanes. NCDOT has also authorized I-77 MP to properly mark the location of vehicles, assist in traffic control and/or relocate vehicles to a non-hazardous location without additional concurrence for Quick Clearance from the SHP or NCDOT.

IV. <u>Public Safety Priority</u>

As indicated above, this MOU reflects the understanding and agreement of NCDOT and SHP that public safety must be afforded the highest priority in reopening traffic lanes blocked by motor vehicle crashes or other incidents. Further, utilization of the Quick Clearance procedures authorized by N.C.G.S.20-161(f) to expeditiously remove vehicles and cargo blocking highways, and thereby creating a safety hazard, may require the utilization of available resources and should immediately be put into effect.
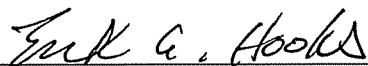
V.   Modifications

Appropriate NCDOT and SHP personnel shall review this MOU on an as needed basis to determine if any modifications are necessary.
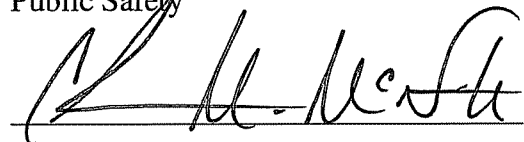
This MOU supersedes any previous agreements between NCDOT and SHP related to Removal of Vehicles from Roadway.

(SIGNATURE PAGE TO FOLLOW)
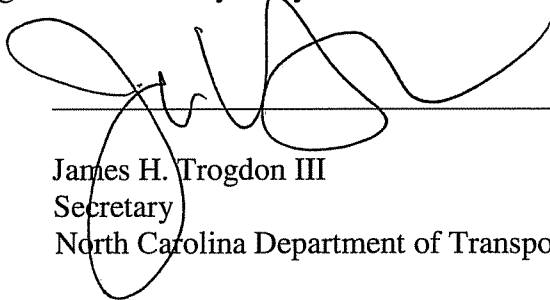
In Witness Whereof, each party hereto has caused this agreement to executed in its name and on its behalf by its duly authorized officer or agent as of this day and year first above written.

Erik A. Hooks
Secretary
North Carolina Department of
Public Safety

James H. Trogdon III
Secretary
North Carolina Department of Transportation

Glenn M. McNeill, Jr.
Colonel
North Carolina State Highway Patrol

Tim Little
Chief Engineer
North Carolina Department of Transportation

Exhibit D
IMAP Training, Access to the TIM Training and Development Track, & Field Training Guides for Responders and Supervisors

HISTORY OF IMAP AND THE TRAINING AND CERTIFICATION PROGRAM

The Incident Management Patrol, later named Incident Management Assistance Patrol, had its origins in the 1960s, and was formalized in 1991, with a focus on roadside assistance. In 2010, the agency implemented a certification process. With the final construction of the NCDOT Traffic Incident Management Training and Development Track in 2020, responders could do hands-on training in a safe and controlled environment. Supervisor certification was developed from 2019-2021 with the first sessions conducted in spring 2021. The sections below describe the training and path to certification for responders and supervisors.

INITIAL TRAINING AND CERTIFICATION

IMAP RESPONDER: Path to Certification
(Immediately Upon Hiring)

IMAP Responders are required to complete the following training for certification.

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5*	WEEK 6*	2-Month Trial Period	LIVE ASSESSMENT

IMAP SUPERVISOR: Path to Certification
(Within X Months after Promotion to Supervisor)

After completing the IMAP Responder Certification, IMAP Responder Supervisors are required to complete the following additional training for supervisor certification.

WEEK 1	WEEK 2	WEEK 3*

Optional additional weeks of training as required.

IMAP Training Type Legend

⬡ Classroom - presentations, incident videos, table-top exercise, and post-training recaps

⬡ Hands-On - trainer demonstrations, trainee exercise, vehicle and equipment use

⬡ On-the-Job - observing and practicing in live conditions under Trainer supervision

⬡ TMC Shadowing - observing and building relationships with TMC employees

⬡ Live Assessment - performing and assessing actual tasks in live conditions

⬡ Certification

CONTINUING EDUCATION

IMAP IN-SERVICE TRAINING
(Field Training Specific Exercises)

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IMAP REHIRE CERTIFICATION
(If Rehired After a Lapse in Employment of <12 Months)

If the responder had previously obtained the IMAP Responder Certification in their past employment, then the rehired responder will need to complete the following steps for recertification:

WEEK 1

Optional Pre-Assessment Ride Along

LIVE ASSESSMENT
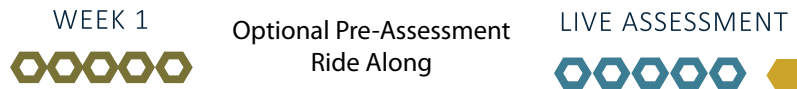
IMAP REHIRE TRAINING
(If Rehired After a Lapse in Employment of 12-24 months)
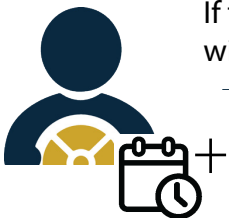
If the responder had previously obtained the IMAP Responder Certification in their past employment, then the rehired responder will need to complete the following steps for recertification:

WEEK 1   WEEK 2   WEEK 3   WEEK 4

Required Pre-Assessment Ride Along

LIVE ASSESSMENT

Optional additional weeks of training as required.

Training and Development Track Hold Harmless and Indemnification Agreement

INDEMNIFICATION AGREEMENT

This Indemnification and Hold Harmless Agreement ("Agreement") is entered into by

_____ ("Agency"); with a principle address of_____,

And the State of North Carolina on this _____ day of _____, 2022.

RECITALS

Agency desires to use the Training and Development Track ("Track"), State-owned property.

The Track is a joint venture between the Department of Transportation and the State Highway Patrol which was designed with the intent of allowing agencies to practice incident work zone applications and vehicle maneuvers in a safe and controlled environment.

Use of any training facility where motor vehicles are operated carries inherent dangers and risks. The specific risks will vary but may include personal injury including serious and permanent injury, death, and destruction, damage or loss of property.

The Tort Claims Act, N.C. Gen. Stat. § 143-291et seq., is a limited waiver of the State's sovereign immunity. Only the General Assembly can waive the State's sovereign immunity.

The intent of this Agreement is to indemnify the State, the Department of Transportation, the Department of Public Safety, and the State Highway Patrol ("State") from any liability arising from a non-State entity's use of the Training and Development Track.

Agreement:

For valuable consideration, to wit: use of the Track, the receipt of which is hereby acknowledged, Agency and the State agree as follows:

1. Agency is aware of and appreciates the inherent training risks that come from use of the Track with full understanding of the possible consequences and assumes responsibility for and over the actions of its agents, officers, and employees during use of the Track.

2. Agency shall indemnify, defend and hold harmless the State, its agents, officers and employees from and against any and all liability, expense, including defense costs and legal fees, and claims for damages including, but not limited to bodily injury, death, personal injury, or property damage arising from or connected with Agency's activities on the Track.

3. The State shall not be liable and shall be held harmless from any and all third-party claims that might arise on account of the Agency's negligence and/or responsibilities under the terms of this agreement.

4. Agency shall provide and maintain at Agency's expense at all times that Agency is engaged in use of the Track Comprehensive General Liability insurance with maximum limits of liability in the amount of (1) One Million Dollars ($1,000,000), (2) Automotive Liability in the amount of One Million Dollars ($1,000,000) and Workers Comp and Employer's Liability in the amount of One Million Dollars ($1,000,000).

Training and Development Track Hold Harmless and Indemnification Agreement

5. Prior to approval for use of the Track, Agency shall provide a copy of the certificate showing that
      (a) the required minimum amount of insurance coverage is in effect and
      (b) the State is a named insured.

6. Agency shall provide a formal, written training plan which must be approved by the State prior to Agency's use of the track. This formal training plan shall include:
      (a) A written description of the training to be performed;
      (b) The anticipated timeline of events of training;
      (c) A description of the equipment to be used by the Agency;
      (d) A description of any known training hazards associated with its planned activity; and
      (e) A description of the Agency's emergency response protocols in the event of a training accident or emergency.

7. A copy of this formal written training plan shall be maintained by the Agency on-site at the Track at all times when the Agency is training and shall be presented for inspection or review upon request by an agent of the State.

8. The State reserves the right to modify or terminate Agency's training based on any safety concerns that arise before or during Agency's training. The State's decision regarding modification or termination of training for safety reasons is final and all training must cease until the State deems the training environment is safe to proceed.

9. All Agency agents, officers, or employees using the Track must individually execute hold harmless and indemnification agreements which must be provided to the State prior to the Agency's use of the Track.

10. Following completion of its use of the Track, Agency agrees to return the Track to it's working condition prior to Agency's use of the Track. Agency agrees to repair or replace any damage caused during its use of the track by the Agency or any of its agents, officers, or employees.

11. This Agreement shall be interpreted under the laws of the State of North Carolina and shall remain valid for two years from the date of the last signature on this agreement.

12. Either party may terminate this agreement with 30 day's notice written notice provided to the other party.

13. This Agreement shall be binding on Agency, its successors and assigns, and shall inure to the benefit of the State, its successors and assigns.

Signature:_____   Signature:_____

Printed Name:_____   Printed Name:_____

Agency:_____   Agency:_____

Date:_____   Date:_____

Incident Management Assistance Patrol
Field Training Guide
for IMAP Responders

2022 Edition

North Carolina
Department of Transportation

Introduction:

Welcome to the 2022 Edition of the Incident Management Assistance Patrol (IMAP) Field Training Manual for IMAP Responders. This manual is one of the official training documents of the North Carolina Department of Transportation's IMAP Responders Training Program. The Field Training Manual (FTM) was designed for IMAP responders to use as a reference when participating in IMAP training.

The concepts and guidelines presented within this document were developed in collaboration with IMAP personnel from all regions of North Carolina. This manual is intended to provide standard, critical knowledge but should not be used as a substitute for training. Guidance from knowledgeable & experienced instructors is essential to assuring that all IMAP drivers are properly trained.

Contributors:

The North Carolina Department of Transportation (NCDOT) would like to recognize the following, whose input and involvement have made the IMAP Field Training Manual possible;

IMAP Supervisors	Master IMAP Trainer
IMAP Responders	Assistant IMAP Trainer
Division Traffic Engineers	Statewide (Traffic Systems Operations)
Regional ITS Engineers	Statewide TIM Coordinator
Incident Management Engineers	Mobility and Safety Group
Regional TIM Coordinators	

Feedback:

Please send all questions or feedback related to this document to NCDOT Statewide Traffic Incident Management (TIM) Coordinator.

Ordering Printed IMAP Training Materials:

If you would like to order hard copies of the IMAP Field Training Manual or other IMAP training materials, please submit your requests to NCDOT Printing Services by phone or email.

Phone: 919-707-2888

Email: dot.printingservices@ncdot.gov

Cost and time to receive printed materials are subject to change. Please inquire at time of order.

In Service Training:

All IMAP personnel must renew their certification every two-years after their first full year of service. IMAP personnel will be required to complete four (4) modules of mandatory training biennially (every 2 years).

Rehire Process:

Former IMAP personnel, who resigns from the Department and wishes to re-apply for employment, may re-apply at any time provided the member is otherwise qualified for employment as set forth in state personnel hiring guidelines, including successful re-completion of the IMAP Driver Training Course.

Former member separated for less than one (1) calendar year may reapply for employment with the NCDOT as an IMAP personnel provided the former member:

- Was assigned and worked as an IMAP personnel immediately prior to separation from the Department
- Had received and passed IMAP Training, IMAP Responder Assessment conducted by the Statewide IMAP trainer and had a current IMAP certification
- Member will ride with a Regional IMAP Field Training Driver (FTD) for one (1) week [5 calendar days] prior to being released for solo patrol
- Member may be subject to participate in and successfully complete a pre-assessment ride-along with a Regional IMAP Supervisor as well as successfully complete an assessment conducted by the Statewide IMAP Trainer
- Submit an application for re-employment with the Department and is actively employed within 12 months of date of separation

Former member separated for at least one (1) calendar year, but less than two (2) years may reapply for employment with the NCDOT as an IMAP personnel provided the former member:

- Was assigned and worked as an IMAP personnel immediately prior to separation from the Department
- Had received and passed IMAP Training, IMAP Responder Assessment conducted by the Statewide IMAP trainer and had a current IMAP certification
- Member will be required to participate and successfully complete In Service Training for recertification within two (2) years
- Member will be required to successfully complete two (2) weeks [10 calendar days] competency/refresher training conducted by the Statewide IMAP Trainer
- Member will ride with a Regional IMAP field Training Officer (FTO) for two (2) weeks [10 calendar days] prior to being released for solo patrol
- Member will be required to participate in and successfully complete a pre-assessment ride-along with a Regional IMAP Supervisor as well as successfully complete an assessment conducted by the Statewide IMAP Trainer
- Submit an application for re-employment with the Department and is actively employed within 24 months of date of separation

Field Training Manual
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Description:

Learn about the general rules, guidelines and expectations for the safe and ethical conduct of all IMAP responders.

Objectives:

- Become familiar IMAP's mission statement and understand the role of IMAP responders as public servants

- Learn about elements of the NCDOT Ethics Policy and expectations of professional and ethical conduct for all IMAP responders

- Learn about elements of the NCDOT Workplace Safety Manual and understand the necessity for all IMAP responders to perform their duties safely

- Review responder's commitment to the IMAP Code of Conduct Agreement

Audience: IMAP Responders

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- NCDOT Ethics Policy
- NCDOT Workplace Safety Manual

IMAP Mission through Dedicated Public Service:

Objective: Become familiar with IMAP's mission statement and understand the role of IMAP responders as public servants

Critical Knowledge:

IMAP Mission Statement:

"To manage incidents and congestion by utilizing all available means to communicate, coordinate, and cooperate with other agencies, the media, and the public, thereby improving **highway safety**, maintaining **traffic flow**, and thus saving lives, time, and money."

Public Service: IMAP responders are public servants which means;

- Public interest comes before a responder's own self-interest
- IMAP exists to improve conditions for members of the general public
- All IMAP services are free of charge

Representing NCDOT & IMAP: IMAP responders are not only public servants, they are representatives of the NCDOT and of the IMAP program overall

- Responders interact with partners & the traveling public every day
- A single responder's appearance, behavior, and actions directly impact the credibility, value, and overall perception of the Department and IMAP
- It is up to all IMAP responders to take pride in themselves and in the services they provide
- Responder's should hold themselves and their team to higher standards of conduct and performance
- **Without dedicated public servants, IMAP cannot truly achieve its mission**

Professional Conduct of IMAP Responders: All responders are expected to;

- Represent the NCDOT and IMAP program in a positive manner
- Take initiative and perform all duties to the fullest extent of their abilities
- Treat other responders, supervisors & TMC operators with courtesy & respect
- Actively assist other responders and seek their help when needed
- Be prompt & on-time for all shifts as scheduled
- Be polite, courteous and helpful to the general public and all partners

Ethical Conduct of IMAP Responders:

Objective: Learn about elements of the NCDOT Ethics Policy and expectations of ethical conduct for all IMAP responders.

Critical Knowledge:

NCDOT Ethics Policy:

- Applies to all NCDOT employees (see instructor for policy)
- **Ethical behavior is a condition of employment**
- All employees are expected to maintain and exercise the highest ethical standards in the performance of their duties
- **Examples of unethical behavior include** but are not limited to;
    - Acts of prejudice of any kind (e.g. race, religion, gender, etc.)
    - Accepting and/or failing to report gifts in return for services
    - Theft or misuse of state property
    - Dishonesty or misrepresentation
    - Misuse of position for personal gain
    - Participation in any illegal or criminal activity

Ethical Conduct of IMAP Responders:

- Committing or participating in unethical behavior is prohibited
- Even the appearance of unethical behavior should be avoided
- **Unacceptable behavior includes;**
    - Purchasing alcohol while in uniform
    - Leaving IMAP vehicle idle in public places unless on incident scene or performing vehicle maintenance/inspections
- **DO NOT accept any money or gifts** from the public for your services
    - If a citizen leaves money/gifts in your truck, contact TMC dispatch immediately via cell phone to report it
    - Turn money/gifts in to supervisor at the end of your shift
- DO NOT take equipment home unless approved by supervisor – exceptions include uniforms and state-issued pagers or cell phones
- State-issued cell phones are for business and emergency calls only
- Time spent while on-duty should be focused on performing work-related tasks or services
- Lunch/Breaks should be taken in close proximity to your patrol route (between 1 and 5 miles from route is best)

IMAP Responders' Commitment to Safety:

Objective: Learn about elements of the NCDOT Workplace Safety Manual and understand the necessity for all IMAP responders to perform their duties safely

Critical Knowledge:

NCDOT Workplace Safety Manual:

- Applies to all NCDOT employees (see instructor for policy)
- NCDOT believes that all accidents and injuries are preventable
- **Working safely is a condition of employment –** breaking any of the following can be grounds for disciplinary action up to & including dismissal;
    - Failure to report all incidents (e.g. accidents, injuries, etc.)
    - Possession of or use of illicit drugs or alcohol
    - Possession of firearms
    - Moving violations (e.g. speeding, not wearing seat belt, etc.)
    - Malicious destruction of state property
    - Fighting or horseplay
    - Falsification of any documents

Safe Working Practices for IMAP Responders:

- IMAP responders work in an unsafe and unpredictable environment
- IMAP's mission and all of its services **hold safety as the #1 goal**
- All IMAP responders must take personal responsibility for their own safety and the safety of their team
- NEVER take on the role of a law enforcement officer and DO NOT carry a weapon/object that is NOT necessary to perform your duties
- DO NOT attempt any procedure that is beyond your level of training
- **At all times while on-duty, responders must;**
    - Hold safety as the #1 goal when making decisions or taking action
    - Properly utilize their Personal Protective Equipment (PPE)
    - Adhere to all IMAP policies, procedures, and safety precautions
    - Watch for possible hazards and react responsibly in unsafe situations
    - Actively protect the safety of others by speaking up or taking action

IMAP Code of Conduct Agreement:

As an IMAP responder for the North Carolina Department of Transportation (NCDOT), I understand that;

1. I am a public servant and, as such, the interests of the public come before my own self-interests

2. My appearance, behavior, and actions directly impact the credibility, value, and overall perception of the Department and of the IMAP program

3. Ethical behavior and safe working practices are a condition of my employment

While performing my duties as an IMAP responder, I agree to;

1. Hold myself and my team to the highest standards of ethical conduct

2. Maintain safety as my #1 goal and to actively protect my own safety and the safety of others

3. Adhere to all policies, procedures and safety precautions established for the IMAP program

4. Actively assist all members of my team and seek their help when it is needed

Responder's Name:_____

Responder's Signature:_____ **Date:**_____

(see instructor for copy of agreement to sign)

Description:

Become familiar with the guidelines that comprise the dress code for all IMAP responders as well as details related to the IMAP uniform and its care.

Objectives:

- Learn about the various parts of the IMAP responder uniform

- Become familiar with additional IMAP apparel for normal wear & adverse weather

- Understand the primary dress code guidelines and expectations for responder appearance

- Become familiar with the guidelines & process for proper care and replacement of IMAP uniforms

Audience: IMAP Responders

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- GE-100: General Rules & Guidelines

Parts of the IMAP Uniform:

Objective: Learn about the various parts of the IMAP responder uniform

Critical Knowledge:

- **Uniform items that MUST be worn at all times while on duty include:**
  - Red IMAP Shirt
  - Black Cargo Pants
  - Black/Brown Steel-toed Boots
  - NCDOT Employee Badge
  - **Other items may be added as needed** (e.g. reflective vest, caps, portable radio, black or red suspenders, etc.)

- **All IMAP responders are issued:**
  - 10 Shirts*
  - 2 Pullovers
  - 5 Pairs of Black Cargo Pants
  - Black/Brown Steel-toed Boots
  - 2 Summer Caps
  - 2 Winter Caps
  - 1 Toboggan
  - 1 Lightweight Coat
  - 1 Winter Coat

- **Additional items issued as needed:**
  - Reflective Vest and other PPE
  - Rain Gear
  - Winter Gear
  - Flashlight
  - Portable Radio
  - Cell/Direct Connect Phone

IMAP Uniform Logos
(top to bottom):
- IMAP logo; Hat
- Incident Management logo; Left shoulder
- IMAP logo; Right shoulder
- NC State Flag; Left sleeve

*Responder may choose any combination of long and short sleeve shirts

Additional IMAP Apparel:

Objective: Become familiar with additional IMAP apparel* for normal wear & adverse weather

Critical Knowledge:

- **A –** IMAP Uniform & Reflective Vest

- **B –** IMAP Uniform & Lightweight Coat

- **C –** IMAP Uniform, Winter Coat, Toboggan, & Gloves

- **D –** IMAP Uniform & Waterproof Rain Gear

*Some additional IMAP apparel (e.g. Winter Coat & Rain Gear) may differ in appearance by Region

IMAP Dress Code Guidelines:

Objective: Understand the primary dress code guidelines and expectations for responder appearance.

Critical Knowledge:

- The complete IMAP uniform must be worn at all times while on duty

- DO NOT wear the uniform while off duty unless traveling to/from work

- Responders must wear the uniforms/apparel provided – No alterations or substitutions are allowed

- Steel-toed boots must be black or brown and kept in good condition

- Responders must wear their NCDOT employee badge at all times while on duty

- All IMAP responders must project a professional image for our customers, the motoring public, and the community
  - A neat, clean appearance must be maintained at all times
  - Uniforms/apparel must be clean & in good condition when worn
  - Torn, dirty or frayed clothing should be replaced
  - Shirts must be ironed and tucked into pants
  - Pants must be worn at the waist
  - Facial hair must be trimmed and groomed
  - Long hair must be pulled back & off the shoulder to prevent injury
  - Jewelry, makeup, and perfume/cologne should be in good taste and should NOT pose a safety hazard

- Dress code violations are determined at the discretion of the IMAP Supervisor
  - Dress code violations may result in disciplinary action
  - Responders in violation may be sent home to change into proper attire

Care & Replacement of IMAP Uniform:

Objective: Become familiar with the guidelines & process for proper care and replacement of IMAP uniforms

Critical Knowledge:

Uniform Care:

- All IMAP responders are responsible for cleaning their own uniforms – No cleaning allowance will be provided
- All uniforms and other apparel must be cleaned according to manufactures specifications
- Additional apparel (e.g. Winter Coat & Rain Gear) should be cleaned and dried off between each use
- Additional apparel kept on-hand should be folded/hung properly to preserve a neat appearance when they are worn

Uniform Replacements:

- New IMAP uniforms/apparel are issued to responders;
  - After initial training is complete
  - On an as needed basis to replace damaged uniforms
- Damaged uniforms/apparel may be replaced when needed
  - Responders should notify supervisor of damage within 24 hours
  - Damaged uniforms/apparel will NOT be replaced until returned
- All uniforms/apparel must be returned to supervisor upon separation from the IMAP program

Critical Thinking & Teamwork

Description:

Learn the importance of teamwork to IMAP's success and explore ways that Responders can use their knowledge & experience to solve problems

Objectives:

- Become familiar with the concepts of critical thinking and how it can be applied to incident managements

- Explore the concepts of teamwork and understand its necessity for IMAP

Audience: IMAP Responders

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
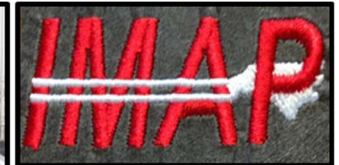- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques
- ETC-102: Temporary Lane Closures
- ETC-103: Emergency Rolling Roadblocks
- ETC-104: Motorist Cooperation
- IM-102: Push / Pull / Drag Operations

Critical Thinking:

Objective: Become familiar with the concepts of critical thinking and how it can be applied to incident management

Critical Knowledge:

- **All incidents are different** & no single plan or process can address all circumstances or obstacles – IMAP Responders must:
    - Think critically to overcome new challenges
    - Rely on their training & experience to respond properly

- **Critical Thinking** is a decision-making & problem-solving technique where solutions are formed by;
    - Considering the issue carefully & objectively (i.e. without bias)
    - Looking at all the factors that caused & surround an issue
    - Knowing what your resources are & what they can & can't do
    - Using knowledge & experience to adapt old solutions to new issues
    - Evaluating results & modifying solutions to be more effective

- **Opposite of Critical Thinking:**
    - Acting without thinking through an issue
    - Doing something just because it has always been done that way
    - Doing nothing because a solution does not appear immediately
    - Not having an ESCAPE ROUTE

- **Asking ourselves questions can help us think critically on-scene**

    - **Assess Location** – How many lanes are blocked and how many are open? Is sight distance affected? Are any ramps nearby?
    - **Assess Traffic** – How fast are cars traveling? Where is the queue building? How are motorists reacting to my traffic control?
    - **Action** – Do I have an escape route and where is it?
    - **Visualize Impact** – Where are responders at risk? How long could this incident last? How much congestion could it cause?
    - **Visualize Response** – How will lanes be reopened? What can I do to manage traffic? What can I do to reopen lanes sooner?
    - **Re-evaluate Response** – Do my actions match current conditions? What more can or should be done?
    - **Re-evaluate Impact** – Are my actions keeping others safe? Are my actions keeping traffic flowing?

Teamwork:

Objective: Explore the concepts of teamwork and understand its necessity for IMAP

Critical Knowledge:

- **A team is more than just a group of people.** People on a team;
    - Possess a variety of skills that complement one another
    - Understand their team's goals and are engaged in achieving them
    - Feel collectively responsible for the team's success
    - Support & help to improve other members

- IMAP may patrol alone but are often brought together suddenly to respond to major incidents – **if IMAP DO NOT act as a team:**
    - Response efforts will be ineffective & disorganized
    - Work will be unevenly distributed & also duplicated
    - Increased safety risk if no one is watching out for one another
    - Partners (e.g. SHP) will see IMAP as unreliable, ineffective amateurs

- **All IMAP Responders are expected to act as a team** which includes;
    - Sharing the workload & offering help without being asked
    - Getting to know the strengths & weaknesses of each member
    - Helping other Responders to develop & strengthen their skills
    - Communicating freely & being open to different opinions
    - Treating others with respect & consideration
    - Resolving conflict independently with the goal of mutual benefit
    - Including others, seeking their input, and making decisions together
    - Sharing recognition and even blame
    - Speaking positively about team members in public & in private
    - Leading when needed but ready to follow as other leaders step up

- **On-scene, IMAP team members should;**
    - Formulate a response plan together
    - Clearly establish who is responsible for specific tasks or actions
    - Perform duties to the best of their abilities
    - Regularly check on & communicate with one another
    - Help assure that all duties are performed properly
    - Remain with team until extra help is no longer needed

Handling Irate Motorists

Description:

Become familiar with the guidelines & processes for properly responding to irate motorists

Objectives:

- Learn about common causes of motorist frustration so Responders better understand & properly respond to irate motorists

- Explore the guidelines & processes for properly handling irate motorists

Audience: IMAP Responders

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- GE-100: General Rules & Guidelines
- MA-100: Changing Tires on Disabled Vehicles & IMAP Trucks
- MA-101: Providing Fuel to Motorists

Causes of Motorist Frustration:

Objective: Learn about common causes of motorist frustration to better understand & properly respond to irate motorists

Critical Knowledge:

- **All motorists are different** & respond to crisis/inconvenience differently. IMAP Responders should understand that most motorist they interact with;
  - Have just experienced a stressful, unexpected situation
  - Are unfamiliar with IMAP & unaware of what IMAP can/can't do

- **Common Causes of Motorist Frustration include;**
  - In a hurry or late for an important occassion
  - Tired or hungry
  - Unable to speak or understand English
  - Lost or unable to find destination
  - Overwhelmed by incident & unsure what to do
  - Concerned about financial or legal consequences of incident
  - Scared for the safety of themselves or others

- **Irate motorists typically want to be;**
  - Listened to & taken seriously
  - Treated with respect
  - Helped & have their problem resolved for them

- **Road Rage** – an extreme & potentially dangerous form of motorist frustration. Responders can recognize the signs of road rage in motorists who;
  - Accelerate, brake, or change lanes suddenly & without cause
  - Drive aggressively, forcing other vehicles to avoid them
  - Shout, gesture or otherwise threaten other motorists
  - Direct their anger/actions towards specific vehicles or individuals
  - Challenge others in order to instigate a fight
  - Physically or verbally assault motorists or even responders

Proper Response to Irate Motorists:

Objective: Explore the guidelines & processes for properly handling irate motorists

Critical Knowledge:

- **IMAP Responders are public servants** whose services exist to improve travel conditions for members of the general public – Responders should;
    - Positively represent NCDOT & IMAP in all interactions
    - Offer whatever help is within their power & abilities to provide

- **Communicating with an Irate Motorist:**
    - Remain patient, calm & professional
    - Speak at a lower volume & a slower pace than the motorist
    - Listen carefully with the goal of fully understanding their frustration
    - DO NOT interrupt – let them talk until they have vented completely
    - Empathize & directly acknowledge what is upsetting them
    - Offer help & suggest all options that are available
    - DO NOT become defensive or engage in an argument

- **Responding to Road Rage or Violent Motorists:**
    - DO NOT engage them or match their behaviors
    - Call TMC, law enforcement, or backup immediately if threatened
    - Hold down transmit button for radio – TMC will hear conflict and dispatch law enforcement to your location immediately
    - Keep distance from enraged motorist & **leave the scene if needed**

- **Processing a Formal Complaint:**
    - Provide motorist with IMAP supervisor name and contact information. The motorist may follow up with the supervisor about the complaint.
    - Notify IMAP supervisor via cell/direct connect immediately
    - Provide the IMAP supervisor an account of the complaint by end of shift

Interacting with Other Agencies

Description:

Become familiar with the guidelines & expectations related to proper, professional interaction between IMAP and other agencies as well as some groups internal to NCDOT

Objectives:

- Learn about the concepts and overall purpose of positive interaction between IMAP responders and their internal/external partners & agencies

- Explore the basic roles of agencies/partners that IMAP interacts with

- Become familiar with the concepts & guidelines for on-scene interaction related to the Incident Command System (ICS)

- Explore additional guidelines & provide further guidance to support positive interaction between IMAP & other agencies

Audience: IMAP Responders

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control Techniques
- IM-102: Push / Pull / Drag Operations

Introduction & Purpose of Positive Interaction:

Objective: Learn about the concepts and overall purpose of positive interaction between IMAP responders and their internal/external partners & agencies

Critical Knowledge:

- **Incident Management (IM)** is a set of actions & procedures taken by multiple agencies/partners acting cooperatively in a coordinated manner in order to respond to & resolve traffic incidents
    - Each agency typically has different resources & abilities
    - Each agency typically has different priorities & goals

- **NO agency has the resources or ability to properly manage every incident –** therefore, all agencies rely on one another to manage their particular piece of the puzzle

- As a whole, agencies may completely agree or disagree with one another **BUT it is the quality of the interaction between <u>individuals</u> that determines whether efforts fail or succeed**

- The **purpose of positive interaction** between IMAP responders & individuals from other agencies is to;
    - Overcome barriers that prevent agencies from working together
    - Understand each agency's goals so shared goals can form
    - Demonstrate capabilities so the work load is shared, not duplicated
    - Build cohesion between responders so their efforts are more effective
    - Establish positive relationships with each agency as a whole

Overview of Internal/External Partners Roles:

Objective: Explore the basic roles of agencies/partners that IMAP interacts with

Critical Knowledge:

- **Traffic Services/DOT Maintenance –** part of NCDOT, responsible for;
    - Repairing damage to roadway & other NCDOT property
    - Treating & clearing roads affected by adverse weather
    - Providing additional emergency traffic control (ETC) when needed

- **Traffic Management Centers** (TMC or STOC for statewide) – part of NCDOT, responsible for;
    - Detecting traffic incidents & notifying responders
    - Providing travel information & additional ETC through DMS
    - Coordinating response between NCDOT & other agencies/states

- **NC State Highway Patrol (NCSHP or SHP)** – responsible for;
    - Enforce NC laws, emergency response, crash investigation, & public safety on state highways
    - May dispatch IMAP in areas without TMC/STOC

- **Local/Municipal Law Enforcement (LE)** – responsible for;
    - Law enforcement, emergency response, & crash investigation on local roads and some areas on state highways
    - Operates local 911 comm. centers – dispatches Fire Dept. & EMS

- **Local/Municipal Fire Department (FD)** – responsible for;
    - Fire prevention & suppression
    - Rescue, emergency medical services, and HazMat support

- **Towing & Recovery** – private partners, responsible for;
    - Removing damaged vehicles from roadway
    - Cleanup/disposal of non-HazMat crash debris (e.g. plastic, glass, etc.)

- **IMAP may also interact with the following partners;**
    - HazMat Disposal Services
    - Municipal DOTs
    - Emergency Medical Services (EMS)
    - News Media
    - Medical Examiners
    - State & Local Emergency Management (EM)

Incident Command System (ICS):

Objective: Become familiar with the concepts & guidelines for on-scene interaction related to the Incident Command System (ICS)

Critical Knowledge:

- **Incident Command System (ICS)** is a standardized, on-scene, all-hazards approach to IM that focuses on **interoperability & coordination**

- In ICS, all on-scene responders (regardless of agency) coordinate their activities through an **Incident Commander (IC)** who;
    - Establishes the overall incident action plan
    - Prioritizes & delegates response activities
    - Oversees & assures progress of response activities
    - Communicates activity status to other internal groups (e.g. TMC)

- The IC can be from any agency (e.g. Fire Dept., SHP, etc.) but is typically the individual who;
    - Has the most experience of the responders who arrive 1ˢᵗ on-scene
    - Has the knowledge & authority to coordinate/procure necessary personnel/resources

- **Unified Command** is a form of shared leadership where the ICs of all participating agencies make decisions together but directly coordinate the activities of those within their own agency
    - **Ex.** Fire Dept., SHP, & IMAP each establish their own ICs – Individual IMAP units report to the IMAP IC
    - Responders will most often encounter this mode of command on-scene

- **IMAP responders should actively participate in ICS** and should;
    - Properly position their vehicle on-scene & assure their own safety
    - Assess the incident & traffic conditions & determine possible actions
    - Identify the IC or ICs and announce IMAP's presence on-scene
    - Advise the IC of initial actions IMAP may take (e.g. traffic control)
    - Work with IC to discuss & prioritize IMAP's actions
    - Establish IC for IMAP – call for backup/supervisor as needed
    - Perform initial actions as planned & follow-up with IC(s)

Additional Guidelines for Interacting with Other Agencies:

Objective: Explore additional guidelines & provide further guidance to support positive interaction between IMAP & other agencies

Critical Knowledge:

- In all interactions, IMAP responders should positively represent NCDOT & IMAP by demonstrating;
    - Their willingness & ability to work with & help others
    - The practical knowledge & relevant experience they possess
    - The value of having IMAP support

- **Clear, consistent communication** is critical. IMAP responders should;
    - Use simple, easily understood language to communicate
    - Avoid use of 10-codes (use plain English instead) or jargon
    - Meet with responders from each agency – ask what their objectives are and share IMAP's
    - Keep communication brief – focus on giving/receiving necessary info without detracting from your tasks or theirs
    - Follow-up with your IC and/or other ICs so all have up-to-date info

- **Polite, cooperative communication** is also critical. IMAP responders should;
    - Address everyone professionally & by their proper title/rank
    - Respect that other responders have different duties, goals, & policies
    - Seek to establish mutually respectful relationships & repair negative perceptions based on bad experiences in the past
    - Speak up about unsafe, incorrect, or ineffective actions – follow chain of command when possible
    - NOT tell people what to do – offer insight & alternate options
    - NOT say you CAN'T do something – attempt to do what is safe & within your abilities (call your supervisor for guidance, if needed)

- Individuals from other **agencies may question what you're doing** & why;
    - Calmly explain your actions & what you hope to accomplish
    - Ask for their input to form a mutually accepted plan
    - DO NOT compromise safety because of a disagreement
    - DO NOT argue – notify your supervisor if conflict persists/escalates

Multi-Unit Coordination

Description:

Become familiar with the processes & techniques for coordinating the response of multiple IMAP units at the same incident scene.

Objectives:

- Learn about IMAP's various responsibilities on an incident scene & explain how multiple IMAP units may be needed to perform all duties properly

- Explore the roles of primary and backup IMAP units & their responsibilities

Audience: IMAP Responders

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques
- COM-101: Interacting with Other Agencies

IMAP Responsibilities & Incident Activity Points:

Objective: Learn about IMAP's various responsibilities on an incident scene & explain how multiple IMAP units may be needed to perform all duties properly

Critical Knowledge:

- **IMAP often has several responsibilities at a moderate-major severity traffic incident,** which includes but is not limited to;
    - Deploying emergency traffic control (ETC)
    - Providing advance warning (AW)
    - Participating in Incident Command System (ICS)
    - Relaying info to TMC dispatch
    - Removing vehicles/clearing lanes
    - **Each of these can be described as an Incident Activity Point**

- **Incident Activity Points –** areas where at least 1 IMAP unit is needed to properly perform a specific response duty/task
    - For some incidents, 1 unit can manage all activity points, properly
    - However, larger/more complex incidents may involve more activity points or effort at each point may be more than 1 unit can handle
    - Responders should NOT abandon 1 activity point to handle another – responders should call for backup so all points are handled properly

- **Multiple IMAP units may be needed for incidents involving;**
    - Multiple lane closures
    - Multiple damaged vehicles to remove
    - Multiple accidents in close proximity to one another
    - Emergency rolling roadblocks

- **Responder (primary unit) should call for backup if the primary unit;**
    - Does NOT have sufficient resources for response (e.g. lane closure requires more cones than a single unit carries)
    - Cannot complete duties safely without assistance
    - Cannot perform duties at an activity point without neglecting duties at another activity point (e.g. AW is needed 1½ miles away and a nearby entrance ramp also needs to be closed)

Multi-Unit Coordination:

Objective: Explore the roles of primary & backup IMAP units & their responsibilities

Critical Knowledge:

- **1st IMAP responder to arrive on-scene of an incident is the primary unit**
  - This unit acts as the initial Incident Commander (IC) for IMAP
  - Less experienced responders can turn over command as backup arrives

- **Initial responsibilities of the primary unit include;**
  - Relaying initial incident details to TMC dispatch
  - Working with other agency ICs to identify/prioritize IMAP actions
  - Deploying initial ETC measures
  - Identifying separate incident activity points & determining backup units needed to handle all points properly
  - Contacting TMC dispatch to request closest available backup units

- **Responsibilities of primary unit once backup is dispatched include;**
  - Instructing backup units to switch to tactical radio channel
  - Assigning backup units to activity points based on priority & expected time of arrival (ETA) of each unit
  - Providing CLEAR instructions to backup units about where they should position & what they should do when they arrive

- **Responsibilities of primary unit once backup units arrive include;**
  - Briefing backup units on current conditions & incident activities
  - Regularly checking on the status/progress of backup units
  - Following-up with other ICs to report status & plan next tasks
  - Re-assigning backup units to new activity points/tasks
  - Continuing to relay up-to-date incident details to TMC dispatch

- **Responsibilities of backup units include;**
  - Acknowledging call for backup & providing ETA to location
  - Following instructions/completing tasks as directed by primary unit
  - Reporting status (e.g. on-scene, task complete, etc.) to primary unit
  - Assisting other IMAP units as needed/directed
  - Notifying primary unit of new tasks or delays in task completion
  - Requesting assignment if primary unit does NOT provide instruction

Personal Protective Equipment (PPE)

Description:

Become familiar with the personal protective equipment (PPE) used by IMAP to prevent injury

Objectives:

- Learn about the personal protective equipment (PPE) used by IMAP

- Explore all mandatory PPE items

Audience: IMAP Responders

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- GE-100: General Rules & Guidelines

Personal Protective Equipment (PPE):

Objective: Learn about the personal protective equipment (PPE) used by IMAP.

Critical Knowledge:

- **Purpose of PPE –** used to ensure the greatest possible protection for IMAP responders while performing everyday duties and unique tasks

- **Mandatory PPE –** all PPE items listed below are considered mandatory PPE that responders are required to have availabled at all times while on duty

- **Reflective Safety Vest –** must be worn whenever outside of IMAP truck

- **Steel-Toed Boots –** must be worn at all times while on-duty
    - Boots must be equipped with slip-resistant treads/soles
    - Toes must be steel or an approved composite material (see supervisor)

- **Work Gloves –** must be worn when there is risk of hand injuries including;
    - Abrasions or lacerations
    - Burns or blisters

- **Safety Glasses –** must be worn when eyes may be injured such as;
    - Handling chemicals or other fluids that may splash into eyes
    - Working near equipment that may kick up dust/small particles

- **Medical-Grade Gloves –** must be worn when handling biological pathogens or equipment contaminated with biological pathogens such as;
    - Removal of animal carcasses
    - Working in or near vehicles where bodily fluids (e.g. blood) is present
    - **Used medical gloves must be disposed of in a sealed container marked, "BIOHAZARD"**

- **Hard Hat –** must be worn when exposed to danger from falling objects or flying materials

Images of IMAP PPE:

← **Reflective Vest** (Front)

Hard Hat →

← **Reflective Vest** (Back)

Steel-toed Boots →

←**Work Gloves**

Medical Gloves →

←**Safety Glasses**

Description:

Become familiar with the IMAP vehicle including its primary technical specifications & capabilities and understand the responder's role in the routine maintenance & upkeep of their vehicle

Objectives:

- Explore the components, controls, and technical specifications of the IMAP vehicle

- Learn about the responder's role in maintaining their vehicle through regular inspections and basic, preventative care

- Become familiar with the primary guidelines related to the IMAP truck and vehicle maintenance procedures

- Learn about the important forms and documentation guidelines for vehicle inspections and maintenance activities

- Review step-by-step instructions for how to perform daily vehicle and equipment inspections at the beginning and end of every shift

Audience: IMAP Responders

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)

IMAP Vehicle Introduction:

Objective: Learn about the IMAP truck and establish core expectations for the vehicle's care and use by IMAP responders

Critical Knowledge:

- **All IMAP responders must have a valid state driver's license and must submit to an annual check of their driving record**

- The IMAP truck is one of the most important tools an IMAP responder has
    - It gets you where you need to go
    - It carries all of your equipment
    - It keeps you and everyone else around an incident safe

- Every IMAP Responder is responsible for assuring that their truck is;
    - Operated safely
    - Properly maintained
    - Ready for duty

- Truck models and features vary by region so **all responders must get to know their vehicle inside and out**

Walk Around Tour – Basic Vehicle Specifications:

Objective: Explore the components, controls, and technical specifications of the IMAP vehicle

Critical Knowledge:

- **Make and Model:** Ford F-250, F-350, or F-450 Super Duty*

- **Storage:** Truck bed for large equipment and 6 cabinets (3 on each side) for most other equipment

- **Transmission:** Automatic with optional 2 and 4-wheel drive

- **Fuel:** Diesel

- **Fully Loaded Weight:** Approx. 9,000lbs to 12,000lbs

- **Towing Capacity:** In optimal conditions, can pull a fully loaded tractor trailer

*Some older model IMAP trucks, made by Chevrolet, are still in use. Some features and controls mentioned in this document may vary or not apply to these vehicles.

Walk Around Tour – Front of Vehicle:

Objective: Examine the items equipped at the front of the IMAP truck

Critical Items:

- **A –** Push Bumper
- **B –** External Jumper Cable Hookup
- **C –** Air Horn
- **D –** Front-End Indicator
- **E –** Driver & Passenger-side Mirrors

- **F –** Rear View Mirror
- **G –** "Fish-Eye" Arrow Board Mirror
- **H –** Towing Anchor Bolts
- **I –** Front Winch Housing
- **J –** Front Winch

Walk Around Tour – Sides of Vehicle:

Objective: Examine the items equipped on the sides on the IMAP truck

Critical Items:

- **A –** Front Wheel Hub Locks
- **B –** Equipment Storage Cabinets (3 to a side)
    - **B1 –** Reflective tape on inside of cabinet door
    - **B2 –** Lock and latch system to secure cabinet doors
- **C –** Diesel Exhaust Fluid (DEF) Tank
- **D –** Diesel Fuel Tank
- **E –** Air Compressor
- **F –** Power Inverter
- **G –** Air Hose Reel

Walk Around Tour – Rear of Vehicle:

Objective: Examine the items equipped on the rear on the IMAP truck

Critical Items:

- **A –** Fire Extinguisher
- **B –** Spare IMAP Truck Tire
- **C –** Truck Bed and Tailgate
- **D –** Handhold for Mounting/Dismounting
- **E –** Towing Hooks (2) and Anchor Bolts (2)
- **F –** Sensor for Backup Alarm
- **G –** Rear Winch
- **H –** Trailer Hitch and Ball Mount
- **I –** Folding Safety Step

Walk Around Tour – In the Cab:

Objective: Examine the items and controls within the cab of the IMAP truck

Critical Items:

- Seatbelts, Adjustable Seat and Steering Wheel controls
- Accelerator, Brake, and Emergency Brake
- Running Lights, Turn Signals, Windshield Wiper, and Air Condition controls
- 2 and 4-Wheel Drive Shifter
- Public Address (PA) system and Radio equipment & controls
- Radio and Equipment Battery Chargers
- Emergency Lights and Arrow Board controls
- Dashboard Displays;

    o Speedometer
    o Odometer
    o Fuel Gauge
    o Voltmeter

    o Tachometer (RPM)
    o Oil Pressure Gauge
    o Water Temperature Gauge
    o Backup Alarm Indicator

Walk Around Tour – Vehicle Lights and Warning Devices:

Objective: Examine the different lights and warning devices used on the IMAP truck

Critical Items:

- **A –** Arrow Board
- **B –** Work Light
- **C –** Static "SUDDEN STOPS" Sign
- **D –** Light Bar
- **E –** Emergency Flashers
- **F –** 4-Way / Hazards
- **G –** PA Speaker / Air Horn

Walk Around Tour – Under the Hood:

Objective: Examine the internal components of the IMAP truck.
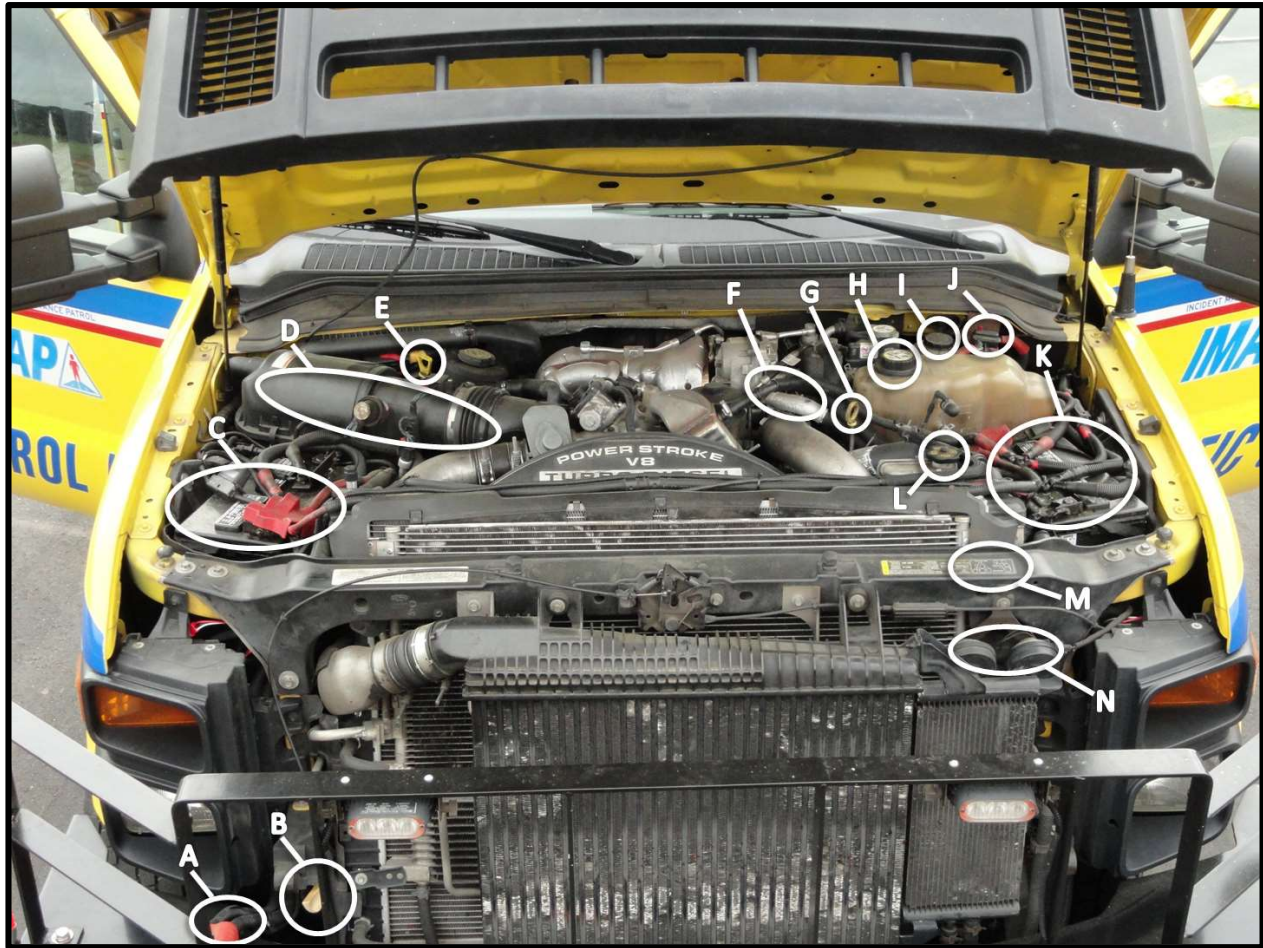
Critical Components:

- **A –** External Jumper Cable Hookup
- **B –** Hood Latch
- **C –** Battery #1
- **D –** Air Filter
- **E –** Transmission Fluid Dipstick
- **F –** Hoses
- **G –** Oil Dipstick

- **H –** Water/Coolant
- **I –** Brake Fluid
- **J –** Equipment Breaker
- **K –** Battery #2
- **L –** Power Steering Fluid
- **M –** Engine Drive Belts
- **N –** Horns

IMAP Vehicle and Maintenance Guidelines (1 of 2):

Objective: Become familiar with the primary guidelines and procedures that IMAP responders should adhere to in order to properly maintain the IMAP truck

Critical Knowledge:

- **Safety is Number 1 – Even with vehicle maintenance**
    - Know your vehicle and adhere to Vehicle Owner's Manual
    - Avoid performing any maintenance on the IMAP truck in an unsafe environment
        - IMAP headquarters is the best location for most maintenance
        - For emergency maintenance; seek solid, level ground away from traffic
        - ALWAYS call for backup if doing maintenance in the field
    - Wear proper safety equipment (e.g. safety glasses & work gloves)
    - Do NOT plug a punctured IMAP tire unless no other options are available
    - Use non-flammable solutions when cleaning vehicle/parts
    - Do NOT use slick cleaning solutions (e.g. tire shine) on floors
    - Always maintain **3 Points of Contact** when mounting truck:
        - One foot on the ground
        - One foot on the step
        - Firm grip on hand hold or truck
    - DO NOT JUMP FROM THE VEHICLE, EVER

- **IMAP Responders are NOT Mechanics**
    - Equipment Shop must approve any alterations to IMAP vehicle
    - All repairs must be reported to a supervisor/coworker PROMPTLY
    - All repairs or vehicle service must be documented in the **Equipment Maintenance Record (EMR) Booklet**

IMAP Vehicle and Maintenance Guidelines (2 of 2):

Objective: Become familiar with the primary guidelines and procedures that IMAP responders should adhere to in order to properly maintain the IMAP truck

Critical Knowledge:

- **Stay near and/or keep an eye on your vehicle at all times –** DO NOT leave the vehicle idling while in public places unless on an incident scene or performing vehicle maintenance/inspections

- **Truck must be checked BEFORE and AFTER each shift**
    - Walk Around Procedure (formal) – performed before each shift and documented using **Operator's Daily Inspection Sheet**

    - Walk Around Procedure (informal) – performed every time you exit and re-enter the vehicle

    - Shutdown Procedure – performed at end of each shift and ensures vehicle and equipment is ready for next shift

- **Responders are responsible for INSIDE and OUTSIDE of their truck**
    - Smoking is NOT allowed in the IMAP vehicle
    - Eating and drinking is allowed but you MUST keep truck clean
    - All surfaces within cab should be free of water, grease, and dirt
    - All items in the cab must be secured or removed
    - Items under pressure (e.g. aerosol cans) are NOT allowed in cab
    - Trucks should be washed TWICE a week outside of patrol hours
    - Safety decals must be kept clean and replaced if missing/damaged

- **The appearance of YOU and your TRUCK must positively represent the IMAP program and the NCDOT, overall**

Important Vehicle Documents:

Objective: Learn about the important documents related to the IMAP vehicle that should be readily accessible in all IMAP trucks

Critical Knowledge:

- **Vehicle Owner's Manual –** provides all official settings, levels, equipment and part specifications related to the vehicle

- **Vehicle Registration –** proof of vehicle ownership and current registration status

- **Driver's License –** proof of IMAP responder identification and legal ability to operate a motor vehicle

- **Accident Reporting Guide –** offers immediate instruction to responders for what to do when/if they are involved in an accident

- **Equipment Maintenance Record (EMR) Booklet –** kept by responders and used to document all repairs or vehicle services performed

- **Operator's Daily Inspection Sheet –** form MCSA1 or regional equivalent; completed each day BEFORE and AFTER each shift during the Pre-Start Inspection, Walk Around Procedure, and Shutdown Procedure. **Responders must turn this in to their supervisor at end of each week**

TIME & DAILY TRUCK INSPECTION SHEET
Incident Management Assistance Patrol

Driver P#							
Name							
PM Due							
DATE:							
Day of the Week	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Truck # ⟶							
Spare Truck # ⟶							
End Mileage ⟶							
Begin Mileage ⟶							
Total Trip Miles ⟶							
Route (Example AA, BB Etc..)							
SIGN IN: ⟶							
SIGN OUT: ⟶							
CHECK LIST							
WATER							
OIL & BATTERY							
TRANSMISSION FLUID							
POWER STEERING FLUID							
BRAKE FLUID							
BELTS/RUBBER HOSES							
TIRES/LUG NUTS							
WASHER FLUID/WIPER BLADES							
PM STICKER							
GROUND FOR OIL & WATER							
TRUCK FUEL LEVEL/CAP							
FRAME/BODY/DOORS							
SEAT/MIRRORS/WINDOWS							
LOW/HIGH BAND RADIOS							
BACK-UP ALARM & HORN							
EMERGENCY LIGHTS							
PARKING & HEAD LIGHTS							
CAB LIGHTS							
TAIL & BRAKE LIGHTS							
TURN SIGNALS & 4-WAY FLASHERS							
INTERIOR OF TRUCK CLEAN							
AC/HEAT							
PARKING BRAKE							
EQUIPMENT							
GAS CANS							
OIL DRI							
AIR COMPRESSOR							
ALL FIRE EXTINGUISHERS							
20 CONES Fleetside							
40 Cones Service Body							
FLARES							
2 WHEEL CHOCKS							
JUMP BOX (CHARGED)							
INSPECT WINCH & CABLES							
TOW STRAPS							
J-HOOKS							
ARROW BOARD							
Comments							

Pre-Start Inspection (1 of 2):

Objective: Learn about the Pre-Start Inspection procedure

Critical Knowledge:

- **Perform pre-start inspection BEFORE the IMAP truck is started**

1. **Check all safety features and equipment**
   a. **Seatbelts –** belts function properly, are accessible, and free from damage or fraying

   b. **Fire Extinguishers –** all extinguishers are accounted for, properly secured, and fully charged

   c. **First Aid Kit –** kit is fully stocked and accessible

   d. **Responder PPE –** All personal protective equipment (PPE) is accounted for, in good condition, and ready for use;
      i. Reflective Vest
      ii. Steel-toed Boots
      iii. Safety Glasses
      iv. Work Gloves AND Medical Grade Gloves
      v. Hard Hat

2. **Check oil levels and condition**
   a. Look for leaks and/or fluid on the ground beneath IMAP truck

   b. Remove oil dipstick to inspect oil for presence of contamination

   c. Foam or Condensation = bad oil filter or abnormal engine wear

   d. Wipe clean, replace, and pull dipstick again to confirm oil level

   e. Oil level should be between "ADD" and "FULL"

   f. Over-FULL oil level could = fuel or coolant contamination

   g. Add oil immediately when levels are low or contamination is present – bring vehicle to maintenance if needed

Pre-Start Inspection (2 of 2):

Objective: Learn about the Pre-Start Inspection procedure

Critical Knowledge:

3. **Check coolant and transmission fluid levels, hoses and radiator**
   a. Visually inspect ground under vehicle for fluids
   b. Visually inspect the radiator fill reservoir to determine coolant level – should be between "MIN" and "MAX" line
   c. Pull the transmission fluid dipstick out, wipe clean, replace, and pull again to confirm correct transmission fluid levels
   d. Inspect all engine hoses for wear, leaks, and loose clamps

4. **Check engine drive belts**
   a. ENGINE SHOULD NOT BE RUNNING
   b. Check for proper tension (not loose) and wear (not cracked)

5. **Check BOTH batteries**
   a. Inspect battery terminals for corrosion – clean if necessary
   b. Assure that wires are not worn or frayed and cable connections are tight

6. **Check tires, wheels, and body**
   a. Inspect tires for cuts, unusual wear and proper air pressure
   b. Check for cracked rims and missing or loose lug nuts
   c. Inspect truck body for dents and other damage

7. **Check windshield, windows, and mirrors**
   a. Assure that windshield and all windows and mirrors are clean
   b. Check windshield wiper blades for wear and confirm wiper fluid levels

Walk Around Procedure:

Objective: Learn about the formal Walk Around inspection process

Inspection Process:

1. **Warm-up engine**
   a. Start the engine and allow to warm-up for 3-5 minutes
   b. Check tachometer (i.e. RPM gauge) to assure engine idles at manufacturer-recommended levels

2. **Check gauges and indicators**
   a. If any system indicators (e.g. check engine light) remain on after 1 minute, **shut down the engine immediately**, and investigate
   b. Assure oil pressure and water temperature levels are normal
   c. Check fuel gauge to confirm that you have sufficient fuel

3. **Check auxiliary systems**
   a. Adjust driver's seat for comfort & all mirrors for clear viewing angle
   b. Confirm that windshield wipers function properly
   c. Check and adjust heater or air conditioning and defroster
   d. Roll down and roll up all windows
   e. Sound air horn
   f. Check radio equipment
   g. Turn on all vehicle lights and raise and activate the arrow board

4. **Check pedals and steering**
   a. Make sure NO objects are around or under any pedals
   b. Turn steering wheel side to side and confirm front wheels move

5. **Check vehicle lights and arrow board**
   a. Work with a partner to confirm that all lights are functioning
   b. Check all lights for burned-out bulbs, dirty lenses or other damage

6. **Check equipment and tools**
   a. Confirm all tools are in place, secured and cabinets are latched
   b. Test all equipment (e.g. winches, work light, air compressor, etc.)

7. **Fill out Operator's Daily Inspection Sheet**

Shutdown Procedure:

Objective: Learn about the final Shutdown Procedure for the IMAP vehicle

Procedure:

1. **Refuel truck and cans**
   a. Refuel vehicle as soon as you return to headquarters
   b. Make sure vehicle is parked and the engine is off
   c. DO NOT smoke in the vicinity of fuel pump or fuel cans
   d. Only use fuel specified for truck (diesel) and cans (gas or diesel)
   e. Place fuel cans on ground before refueling
   f. DO NOT overfill fuel cans – allow space for fume expansion
   g. Secure caps to fuel tank and cans tightly
   h. Wipe excess/spilled fuel from cans and truck bed
   i. Return and secure fuel cans to truck bed

2. **Park truck in a safe area**

3. **Allow engine to idle for 3-5 minutes**

4. **Perform final Walk Around inspection of the day**
   a. Inspect tires and lug nuts
   b. Check for damage to vehicle body, lights, mirrors, etc.
   c. Look for fluid leaks from underside of truck or cans in truck bed
   d. Replace and dispose of spent or damaged equipment
   e. Release compressed air from air compressor and hoses

5. **Clean out truck cab**
   a. Remove trash
   b. Organize and store equipment
   c. Return equipment and radio batteries to charging stations

6. **Shutdown IMAP Truck**
   a. Roll up all windows and lock doors
   b. Turn off engine
   c. Assure all vehicle lights are off
   d. Turn in all paperwork and truck keys if necessary

NC Department of Transportation
Field Training Manual
for IMAP Responders

Description:

Become familiar with the various tools and equipment found on the IMAP truck and explore the specific guidelines and procedures related to their use and care.

Objectives:

- Learn about the Responder's role in maintaining their equipment through regular inspections and basic, preventative care

- Become familiar with the primary guidelines related to the appropriate use of IMAP equipment

- Gain in-depth knowledge of all mandatory tools and equipment found on the IMAP truck

Audience: IMAP Responders

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance

IMAP Equipment Usage & Care Guidelines

Objective: Learn about the Responder's role in maintaining their equipment and understand the primary guidelines related to appropriate equipment use

Critical Knowledge:

- **All equipment must be inspected BEFORE & AFTER each shift** and inspections should be documented in the **Operator's Daily Inspection Sheet**

- **IMAP Responders should assure that all equipment is;**
    o Present and accounted for
    o In good condition and ready for use
    o Stored and secured properly when not in use

- **Damaged or missing equipment should be reported immediately** and should be **repaired or replaced as soon as possible**

- IMAP Responders should **wear all appropriate Personal Protective Equipment (PPE)** when moving or using equipment

- **Handle all equipment with care.** Below are some DOs & DO NOTs;
    o DO NOT – Throw, drop or abuse equipment
    o DO – Check for damage before each use
    o DO NOT – Leave equipment unattended or give it away
    o DO – Clean and dry off equipment before storing it
    o DO NOT – Store equipment haphazardly
    o DO – Keep equipment organized and **properly secured**

- IMAP Responders may use equipment in ways not specified in training in order to solve unique problems as they encounter them. **BEFORE using a tool for anything other than its intended use, make sure that;**
    o Available equipment is not better suited for the task
    o The equipment can withstand the weight or strain of use
    o Safety is NOT sacrificed

TIME & DAILY TRUCK INSPECTION SHEET

Incident Management Assistance Patrol

Driver P#							
Name							
PM Due							
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Day of the Week	SATURDAY	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
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Spare Truck # ⟶							
End Mileage ⟶							
Begin Mileage ⟶							
Total Trip Miles ⟶							
Route (Example AA, BB Etc..)							
SIGN IN: ⟶							
SIGN OUT: ⟶							
CHECK LIST							
WATER							
OIL & BATTERY							
TRANSMISSION FLUID							
POWER STEERING FLUID							
BRAKE FLUID							
BELTS/RUBBER HOSES							
TIRES/LUG NUTS							
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ALL FIRE EXTINGUISHERS							
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JUMP BOX (CHARGED)							
INSPECT WINCH & CABLES							
TOW STRAPS							
J-HOOKS							
ARROW BOARD							
Comments							

IMAP Personal Protective Equipment (PPE):

Objective: Gain in-depth knowledge of all IMAP tools & equipment

Critical Knowledge:

- **Mandatory PPE –** Responders must keep the following Personal Protective Equipment (PPE) with them or in IMAP truck at all times while on duty

- **A –** Reflective Safety Vest
- **B –** Steel-Toed Boots
- **C –** Work Gloves
- **D –** Safety Glasses
- **E –** Medical-grade Gloves
- **F –** Hard Hat

- **Suggested PPE –** Responders are encouraged to use the following PPE in order to increase their safety and comfort while on duty

- **A –** Knee Pads
- **B –** Insect Repellent
- **C –** Sunblock

First Aid & Fire Extinguishers:

Objective: Gain in-depth knowledge of all IMAP tools & equipment

Critical Knowledge:

- **First Aid Kit –** Each IMAP truck is equipped with an NC 24 Unit First Aid Kit
    - Kit must be accessible and fully stocked at all times
    - Dispose of and replace any used or expired items

- **Fire Extinguishers –** Each IMAP truck is equipped with four (4) fire extinguishers (shown below)
    - **A –** 1 small "ABC" extinguisher in truck cab
    - **B –** 2 medium "ABC" extinguishers on sides of truck
    - **C –** 1 large (2-gallon) Water extinguisher in truck bed
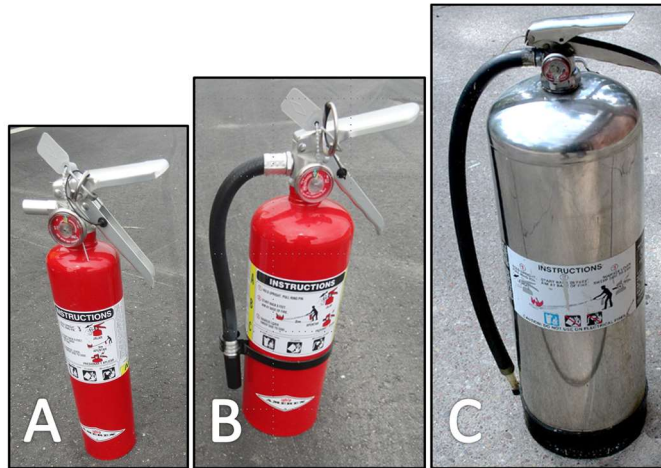
- **"ABC" Extinguishers** use a white, chemical powder to put out fires
    - Shake extinguisher to prevent powder from settling at bottom
    - Powder can blow sparks off of fire and into grass, causing more fires

- **Water Extinguisher** uses compressed water to put out fires
    - Responders should refill after every use
    - A small amount of EPA-friendly antifreeze can prevent water from freezing in cold weather

- **All fire extinguishers must be properly secured when not in use**

- Responders must **inspect all fire extinguishers daily** to confirm that they are **charged/filled, ready for use** and **up-to-date on monthly inspection**

Tire Changing Equipment (1 of 2):

Objective: Gain in-depth knowledge of all IMAP tools & equipment

Critical Knowledge:

- **A – Rolling Jack:**
  - Raises vehicles during tire changes
  - 2.5 ton capacity
- **B – Jack Stands:**
  - Supports raised vehicle in case jack slips/fails
  - MUST be used when a vehicle is raised
- **C – Bottle Jack:**
  - Raises larger vehicles including IMAP truck
  - 6 ton capacity
  - Place flat piece of metal under jack to stabilize
- **D – Jacks in Use:**
  - Jack & stand make contact with frame
  - Raise and lower vehicle CAREFULLY
- **E – Impact Wrench:**
  - Removes lug nuts
  - Assure battery is charged
- **F – Socket Set:**
  - Use with impact wrench
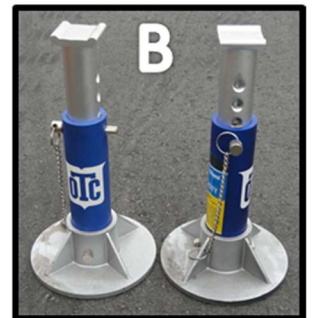 - Assure sockets fit lugs
  - Breaker Bar
- **G – 4-Way Lug Wrench:**
  - Manually removes lugs
  - Use to confirm lugs are on properly
- **H – Wheel Chocks:**
  - Prevents vehicles from rolling unintentionally
  - MUST be used when a vehicle is raised
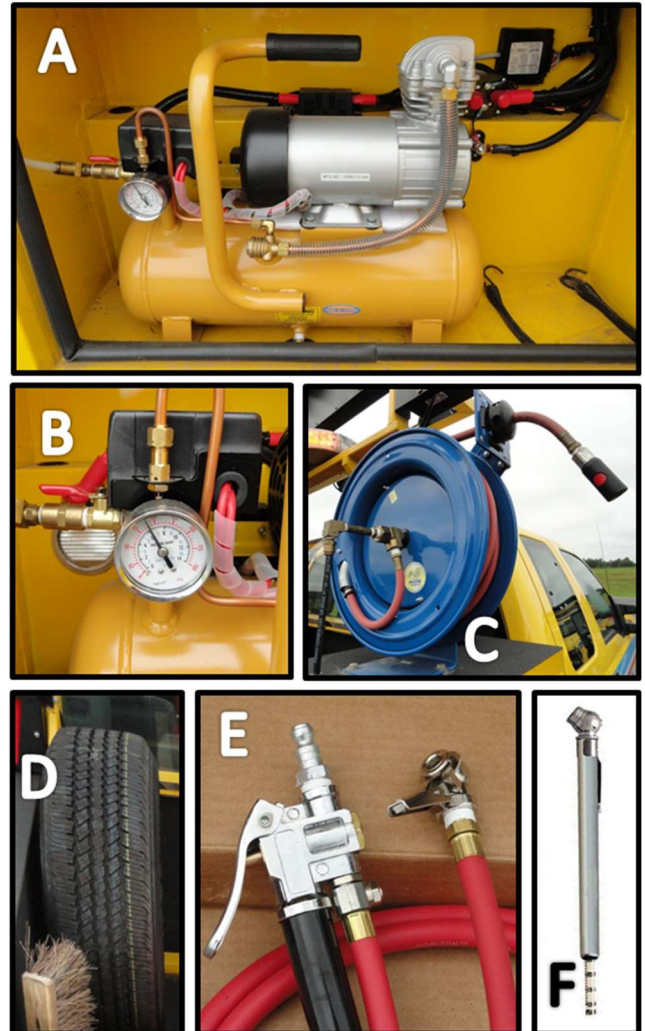- **I – Chocks in Use**

Tire Changing Equipment (2 of 2):

Objective: Gain in-depth knowledge of all IMAP tools & equipment

Critical Knowledge:

- **A – Air Compressor:**
  - Uses gas or electric motor to fill tank with pressurized air
  - Primarily used to refill flat tires
  - Different IMAP trucks have different models – know which you have and how to operate it

- **B – Pressure Gauge & Release Valve:**
  - Use pressure gauge to monitor pressure of air within tank
  - Use release valve to let air out of tank

- **C – Air Hose & Reel:**
  - Air hose feeds compressed air from tank to tire inflator
  - Reel spools out up to 30 feet of hose and keeps hose contained when not in use

- **D – Spare IMAP Tire:**
  - For use on IMAP trucks ONLY
  - Assure spare is filled and in good condition during all vehicle & equipment inspections

- **E – Tire Inflator & Pressure Gauge:**
  - Connects to air hose and feeds air into tire
  - Use built in pressure gauge to monitor air pressure in tire while filling

- **F – Small Pressure Gauge:**
  - OPTIONAL EQUIPMENT
  - Can make checking tire pressure more convenient

- **Air Compressor in Use:**
  - Wear all necessary PPE – especially work gloves and safety glasses
  - Activate air compressor and pressurize tank only when needed
  - Make sure tank has sufficiently pressurized before attempting to refill tire
  - Keep people and vehicles from standing on or parking on air hose
  - ALWAYS let pressurized air out of tank and air hose when not in use

Refueling, Coolant & Jumpstarting Equipment:

Objective: Gain in-depth knowledge of all IMAP tools & equipment

Critical Knowledge:

- **A – 2 Gallon Fuel Cans:**
  - Truck equipped with 2 cans
  - All fuel cans may carry either gas or diesel fuel

- **B – 5 Gallon Fuel Cans:**
  - Additional, smaller fuel cans may be substituted for 5 gallon cans
  - All cans should be wiped clean and secured properly

- **C – Funnel:**
  - Prevents spilling when pouring fuel for disabled vehicles
  - Rinse clean regularly

- **D – 1 Gallon Water Cans:**
  - 3-5 cans on truck to hold water for overheated coolant systems
  - Add small amount of EPA-friendly antifreeze to prevent freezing in cold weather

- **E – External Jumper Hookup:**
  - Located on IMAP front bumper
  - Replace cover when not in use

- **F – External Jumper Cables:**
  - Connect to external jumper hookup
  - Provides longer reach than standard jumper cables

- **H – Jump Box:**
  - Portable battery pack can be carried to disabled vehicle
  - MUST be fully charged before being used
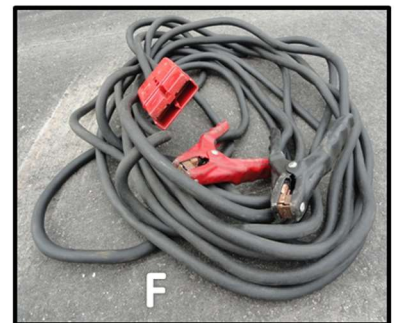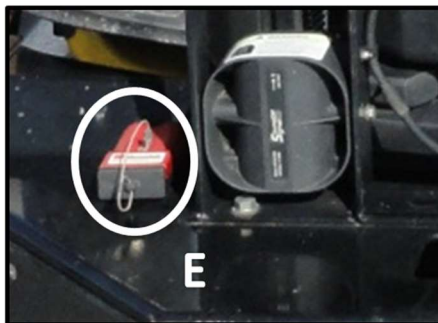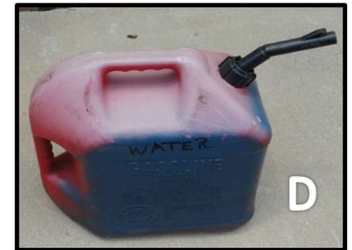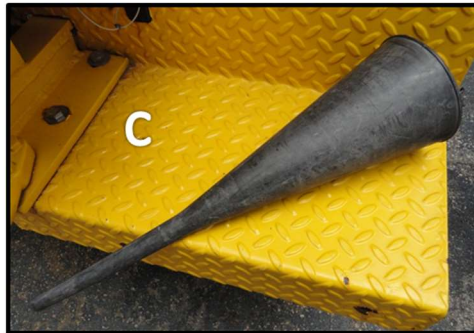
HazMat / Clean Up Equipment:

Objective: Gain in-depth knowledge of all IMAP tools & equipment

Critical Knowledge:

- **A – Binoculars:**
  - Use to read Hazardous Materials placards from a distance
  - Store in protective case
- **B – ERG Guidebook:**
  - "Emergency Response Guidebook"
  - Use to identify hazardous materials
- **C – Pop-Up Pool Bag:**
  - Contains Pop-Up Pool
  - Disposable
- **D – Pop-Up Pool:**
  - Use to collect fluids leaking from damaged vehicles or containers
  - Give used Pop-Up Pool to Fire Department for disposal
- **E – Quick Dry:**
  - Use to **increase traction** where fluids (e.g. fuel) have spilled
  - Can be used to create a dam around spills to keep them from spreading
  - Kept on hand in a 5 gallon bucket
- **F – Extra Quick Dry Bags:**
  - Use to refill Quick Dry bucket
  - 2-3 bags kept on IMAP truck
- **G – Push Broom:**
  - Use to spread Quick Dry
  - Can also sweep up small debris (e.g. glass) from lanes
- **H – Shovel:**
  - Use to remove smaller debris (e.g. gravel) from lanes
- **I – Push Magnet:**
  - OPTIONAL EQUIPMENT
  - Use to pick up small, metallic debris (e.g. nails)

Traffic Control & Lighting Equipment:

Objective: Gain in-depth knowledge of all IMAP tools & equipment

Critical Knowledge:

- **A – Traffic Cones:**
    - Use to guide on-coming traffic around & away from incident scenes
    - Must carry a minimum of 27 cones
    - Keep cones clean – dirty cones are less reflective and harder to see
    - Replace as needed – damaged cones do not stack or stand properly

- **B – "Cone Caddy":**
    - OPTIONAL EQUIPMENT
    - Collapsible hand truck that can make hauling cones easier

- **C – Flares:**
    - Use to make traffic control easier to see at night or in inclement weather
    - Also used as advanced warning
    - 30-minute burn time
    - Do NOT place in grass or near flammable surfaces/fluids

- **D – Electric Flares:**
    - OPTIONAL EQUIPMENT
    - Rechargeable, lit by LEDs

- **E – Work Light:**
    - Use to light incident scene
    - Can raise, lower or turn 360°
    - Direct at ground when not in use
    - ALWAYS wear gloves & adjust light by the handle
    - Do NOT point directly at traffic

- **F – Power Inverter:**
    - Powers electrical equipment on IMAP truck – including Work Light
    - Turn OFF if Work Light overheats

- **G – Flashlight:**
    - Use to help see in the dark
    - Can help draw motorist attention
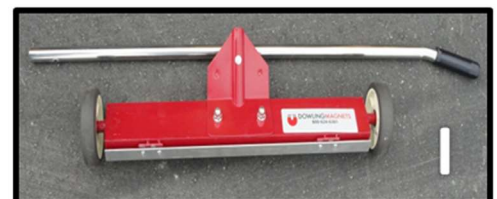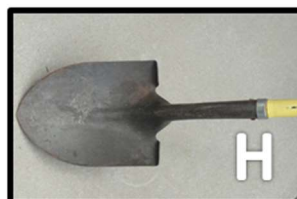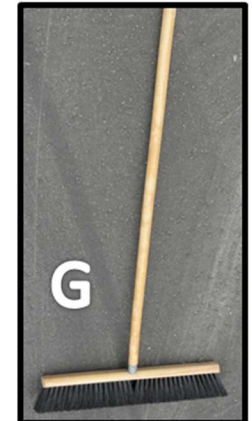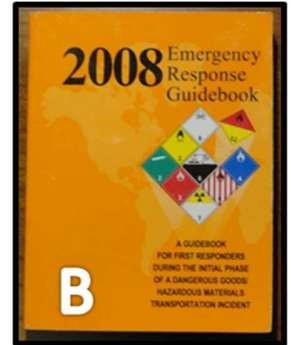   - Can also be used to signal motorists
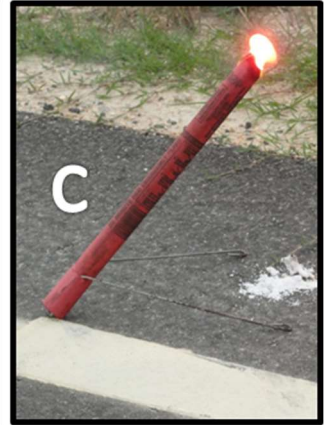
Hand Tools & Miscellaneous Equipment:

Objective: Gain in-depth knowledge of all IMAP tools & equipment

Critical Knowledge:

- **A – Hand Tools:**
  - Use to perform numerous tasks
  - Includes Screw Responders, Wrenches, Wire Cutters, Pliers, Box Cutters, etc.
- **B – Disposable Wipes:**
  - Use to clean vehicle, equipment, or hands
  - Kept on hand in dispenser bucket
- **C – "Tie Down" Equipment:**
  - SUGGESTED EQUIPMENT
  - Various items used to secure, seal or tie down equipment or other objects
  - Includes Duct Tape, Bailing Wire, Bungee Cords, etc.
- **D – Lubricant Spray:**
  - Use to maintain IMAP equipment (e.g. winch cable) & to loosen screws, nuts, etc.
  - Can also be used as a solvent to remove grease or other sticky fluids/residue
- **E – Starter Fluid:**
  - Typically sprayed into engine intake or spark plug holes to help re-start disabled vehicles
  - Read instructions and refer to vehicle owner's manual BEFORE using
- **F – Spray Paint:**
  - Use to mark vehicle location to assist with crash investigations
  - Must use brightly colored paint
- **G – Tire Plugs:**
  - OPTIONAL EQUIPMENT
  - Can repair small holes/punctures in tires
- **H – Storage Trays/Shelves:**
  - Use to store and organize small tools
  - Can be raised or lowered in storage cabinet
  - Keep tools from rusting by cleaning & drying them off before returning to trays
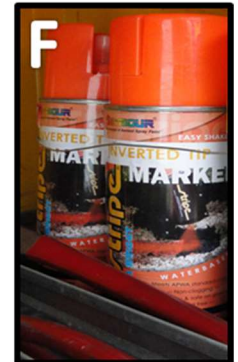
Towing Equipment – Front & Rear Winches:

Objective: Gain in-depth knowledge of all IMAP tools & equipment

Critical Knowledge:

- **A – Front Winch:**
    - Housed within push bumper
    - Assure front hook is flush with bumper before pushing
- **B – Rear Winch:**
    - Mounted on rear bumper
    - Both winches have pulling capacity of 12,000lbs
- **C – Winch Hooks & Cables:**
    - Both hold approx. 30ft of cable
    - Hooks equipped with safety clasps
- **D – Cable Clutch:**
    - Engages/disengages winch motor
    - Disengage to pull cable out by hand
- **E – Winch Controller:**
    - Use to operate winch from a safe distance and behind IMAP door
    - Connects to winch control boxes
- **F – Control Box:**
    - Connect winch controller here
    - Cover connection when not in use
- **G – Heavy Blanket/Rubber Mat:**
    - Drape across winch cable to prevent damage/injury if cable snaps
- **H – Wood Beam Wheel Chocks:**
    - OPTIONAL EQUIPMENT
    - Often used to keep overturned vehicle from rolling unintentionally
    - Place where tires of overturned vehicle will land once up-righted
- **I – Winch Use & Care:**
    - Typically used in combo with other towing equipment; **RED** = winch cable, **GREEN** = hook straps
    - Assure that both front & rear winches are functioning & cables are not damaged before each shift
    - Keep cable straight and taught when pulling cable in/out to **avoid kinks in the cable**
    - Use a clean rag or towel to remove dirt or debris from winch cable as needed
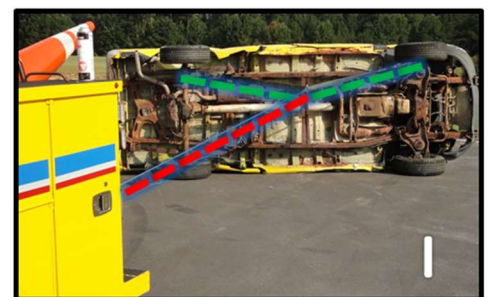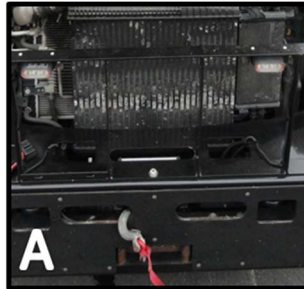
Towing Equipment – Hooks, Chains & Straps:

Objective: Gain in-depth knowledge of all IMAP tools & equipment

Critical Knowledge:

- **A – J-Hooks:**
  - Chain with large, "J" shaped hooks on each end
  - All-purpose accessory; best for moving large vehicles or objects
- **B – Tow Strap:**
  - Durable nylon strap in-place of chain with open loops on each end for various hooks
  - Often used to avoid damaging vehicles
- **C – Clevis Shackles:**
  - "U" shaped metal bolts with removable pins
  - Use to securely fasten hooks, chains, and straps together
- **D – Hook Strap:**
  - Similar to Tow Strap; uses nylon in-place of chain
  - Hook permanently attached to end(s) of strap
- **E – Frame Keys:**
  - Refers to bundle of metal "keys" at end of chain
  - Each "key" is designed to fit frame of a particular make of vehicle
  - Often used to hook onto smaller vehicles
- **F – Crowbar:**
  - Solid metal tool used to lift or bend objects
  - Use to clear bent bumpers away from tires
  - Use to pry stuck hooks from vehicles
- **G – Double-Loop Cable:**
  - OPTIONAL EQUIPMENT
  - Wrap around vehicle frames to create a solid connection point for other hooks and chains
- **H – Hooks/Chains/Straps Use & Care:**
  - Inspect all towing equipment before use
  - Only connect equipment to solid parts of the object/vehicle (e.g. frames, axles, etc.)
  - Only connect to the IMAP truck's Tow Hooks, Anchor Bolts, Winch Hooks, or Trailer Hitch
  - Store all hooks and chains in a dry location to avoid rusting

Description:

Become familiar with IMAP's radio equipment and the protocol for communicating with TMC dispatch, other responders, and law enforcement

Objectives:

- Learn about the different types of radios in the IMAP truck

- Explore the primary components of a typical handheld VIPER radio

- Learn the basic concepts of dispatch communication and understand the channels & call signs used by IMAP responders & TMC dispatch

- Become familiar with the use of 10-codes, signals, and plain English to communicate over the radio properly

- Learn the guidelines & techniques for proper radio communication

- Review specific call & response protocols for communicating with TMC dispatch & other IMAP units

Audience: IMAP Responders

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-101: IMAP Vehicle & Maintenance

Radio Hardware in the IMAP Truck:

Objective: Learn about the different types of radios in the IMAP truck.

Critical Knowledge:

- **All IMAP trucks are equipped with multiple radios –** since radio devices & channels are different in each region, all responders must learn;
  - What radios they will use in their truck & on-scene
  - How to operate the specific devices (e.g. change channels, etc.)
  - Which radio channels are used in their region & who uses them
  - Which radio channels CAN and CANNOT be used by IMAP

- **Primary Radio Hardware Guidelines –** all responders should;
  - Inspect all radio equipment & charge all batteries before every shift
  - Keep portable radios clipped to belt or in truck while on-scene
  - Keep radios organized & secured in truck cab while driving

- **VIPER/800 MHz Radios –** Voice Interoperability Plan for Emergency Responders (VIPER):
  - Primary radio for communication between TMC & other IMAP units
  - Also allows responders to communicate with other response agencies
  - **Scan mode** allows responders to listen to multiple channels at a time
  - Responders have one truck-mounted VIPER radio & one handheld

- **Cell Phone/Direct Connect –** a backup to VIPER, can be used to;
  - Communicate with TMC/IMAP without transmitting to all units
  - Help stranded motorists call for additional assistance (e.g. wrecker)
  - **DO NOT use for personal calls**

- **Low-Band Radios –** a backup to VIPER, can be used to communicate;
  - With other IMAP units (must use cell/direct connect for TMC)
  - With DOT maintenance who use low-band exclusively in some areas
  - With other response agencies – especially those NOT using VIPER
  - Some trucks have **CB radios** for talking to commercial truck drivers

- **Multi-Function PA System –** Public Address (PA) is used to;
  - Communicate with motorists over a truck-mounted loud speaker
  - Amplify radio traffic over loud speaker so it can be heard on-scene
  - Attract attention/alert bystanders using an air horn

Components of the Handheld VIPER Radio:

Objective: Explore the primary components of a typical handheld VIPER radio.

Critical Knowledge:

- **Handheld VIPER Radio Components –** some components may be different on different models but most handheld VIPER radios have;
    - **A –** Volume & Power Knob: turns radio on & raises/lowers volume
    - **B –** Channel Knob: selects channel that radio is tuned to
    - **C –** Mode Selector: **A-mode** = talk/listen, **B-mode** = define channels to scan, and **C-mode** = scan defined channels
    - **D –** Signal Strength Indicator: push to see signal strength (under 40 prevents communication)
    - **E –** Push to Talk (PTT) Button
    - **F –** Zone Selector: push & use arrows to select frequencies (zones)
    - **G –** Home Button: push to save settings & return to main screen
    - **H –** Zone Icon: shows zone currently in use
    - **I –** Talk Group Label: displays name of talk group currently in use
    - **J –** Mode/Priority Icon: shows priority level of scanned channels
    - **K –** Battery Status Indicator
    - **L –** Microphone: kept where responder can easily talk/listen to radio while keeping handheld clipped to belt

VIPER Channels & Call Signs:

Objective: Learn the basic concepts of dispatch communication & understand the channels & call signs used by IMAP responders & TMC dispatch.

Critical Knowledge:

- **Basics of Dispatch Communication –** dispatch/radio communication is different from other communication modes (e.g. telephones);
    - Two groups are involved – **Base** (TMC) & **Field** (IMAP units)
    - Communication between these groups is called **"Traffic"** or a **"Transmission"**
    - **Primary Dispatch Channel/Talk Group** is used for most traffic
    - **Tactical Channel/Talk Group** is used for special traffic
    - Traffic **can be heard by anyone** tuned to a particular talk group
    - Anyone on a talk group can transmit but only one transmission can be heard at a time (i.e. if someone is talking, others must wait to talk)

- **VIPER Zones, Channels & Talk Groups:**
    - Zones – reserved for different functions; contains multiple Channels
    - Channels – contain the individual Talk Groups available in a Zone
    - Talk Groups – unique channels where actual transmissions occur
    - Talk Groups are often referred to as "Channels" by VIPER users

- **Dispatch Call Signs –** the designations given to radio users to help identify who is speaking and who they are speaking to
    - Call signs for Base & Field are different for each IMAP region
    - **P#**'s are given to each IMAP responder (**Ex**. P311) – the number after the P defines which region the responder works in (**Ex.** P311 = Triad)

- **Call Signs & P#'s by Region:**
    - Western Mountains – Base: TMC or Mountain, Field: **P4**xx
    - Metrolina – Base: TMC or Metro, Field: **P1**xx
    - Triad – Base: TMC or Triad, Field: **P3**xx
    - Triangle – Base: STOC, Field: **P2**xx
    - Southeast Coastal – Base: STOC, Field: **P5**xx
    - **P01** thru **P09 –** call signs reserved for Statewide operations personnel
    - **P10** thru **P19** – call signs reserved for Regional Traffic Incident Management (TIM) Coordinators

10-Codes, Signals, & Plain English:

Objective: Become familiar with the use of 10-codes, signals, & plain English to communicate over the radio properly.

Critical Knowledge:

- **10-Codes & Signals –** numeric phrases developed to keep radio traffic brief & clear. IMAP responders should;
  - Learn the 10-codes/signals & know when each should be used
  - Relay as much information as possible through 10-codes/signals
  - Use **Plain English** as needed to relay a complete & clear message
  - **NEVER use 10-codes/signals** when communicating with ANY agency other than SHP or TMC/IMAP – use Plain English

- **Definitions of Commonly Used 10-Codes:**
  - **10-1:** Signal Weak (when radio traffic is hard to hear/understand)
  - **10-2:** Signal Good (when confirming radio traffic is clear)
  - **10-4:** Affirmative/OK
  - **10-7:** Out of Service (when taking breaks or transporting motorists)
  - **10-8:** In Service (when returning to active patrol from break/task)
  - **10-9:** Say Again/Repeat (when message was not fully understood)
  - **10-10:** Negative
  - **10-12:** Standby/Stop (when user must wait to give/receive info)
  - **10-17:** En Route (when user is on the way to a location)
  - **10-20:** Location
  - **10-22:** Disregard (when cancelling a request or correcting wrong info)
  - **10-23:** Arrived at Scene
  - **10-24:** Assignment Complete (when leaving scene/returning to patrol)
  - **10-41:** Beginning Tour of Duty (when starting shift & on patrol)
  - **10-42:** Ending Tour of Duty (when ending patrol & returning to base)
  - **10-50 (PD, PI, or F):** Collision (when reporting a vehicle crash)
  - **10-53:** Road Blocked (when all lanes & shoulders are closed to travel)
  - **10-63:** Investigate ___ at ___ (when reporting debris in the roadway)
  - **10-78:** Report of an Abandoned Vehicle
  - **10-79:** Report of a Vehicle Fire
  - **10-82:** Report of a Disabled Vehicle (when motorist is on-scene)

Radio Use & Etiquette:

Objective: Learn the guidelines & techniques for proper radio communication.

Critical Knowledge:

- **Primary Guidelines for Radio Communication:**
    - Only communicate on channels approved for IMAP's use
    - All transmissions must be appropriate (i.e. no foul language)
    - When hailed, responder must respond as soon as possible
    - TMC must be notified whenever a responder's location or availability changes **AND** whenever conditions at an incident change
    - Responders must notify TMC when they begin (10-41) & end (10-42) their tour of duty & must provide their truck's mileage at both times

- **ABCs of Proper Radio Communication:**
    - **A – ACCURATE.** Provide current & accurate info only (NO assumptions). Estimates are OK but state that they are estimates
    - **B – BRIEF.** All transmissions should be brief & relevant to incident response. Other users cannot transmit until you are done talking
    - **C – CLEAR.** Speak clearly & use easily understood language. Use Plain English and/or Phonetic Alphabet if words are long/unfamiliar

- **Tips for Better Radio Communication:**
    - **Listen before you speak** – DO NOT interrupt other transmissions
    - **Think before you speak** – long pauses & 'umms' make messages hard to understand & keep others from transmitting
    - **Speak at an even rate –** avoid talking too fast or changing the pitch of your voice; a medium-paced, monotone voice is best for radio
    - **Avoid 'Voice Clipping' –** voice clipping occurs when radio users push the transmit button too early/release it too soon while talking. Push button, start talking, finish talking, THEN release the button
    - **OK to Repeat or Standby –** accuracy & clarity are critical to radio communication so, if you didn't hear a message or need a moment to complete a task, it is okay to ask others to REPEAT or STANDBY
    - **Be Patient –** everyone using the radio (including TMC dispatch) has other tasks to do. Calmly give all users a moment to respond – your patience will be returned when you need a moment

Dispatch Protocol:

Objective: Review specific call & response protocols for communicating with TMC dispatch & other IMAP units.

Critical Knowledge:

- **Hailing Users –** calling for specific users in order to relay info
  - **Base to Field:** "TMC to P509…"
  - **Field to Base:** "P509 to TMC…"

- **Acknowledging Users –** alerting users that you are ready to receive info
  - **Base to Field:** "TMC to P509, go ahead…"
  - **Field to Base:** "P509 to TMC, go ahead…"

- **Reporting Incidents –** relaying ALL relevant & available incident details
  - **Crash:** "TMC: I'm 10-23 with a 10-50 PI on I-77 Northbound at mile marker 9. Lane #1 of 3 is blocked by SHP & Fire Dept. Vehicles involved are a blue sedan and an overturned box truck…"
  - **Disabled Vehicle:** "TMC: 10-82 on I-40 Eastbound at mile marker 161, on the right shoulder. Vehicle is a white Toyota Corolla with North Carolina plate ADAM, NORA, HENRY 1-4-6-1; that's A-N-H, 14-61…"

- **Acknowledging Receipt –** confirming info was heard & understood
  - **OK:** "P509 to TMC: 10-4…"
  - **OK + En Route:** "10-4 TMC. I'm 10-17 from I-40 Eastbound, mile marker 286…"

- **Miscellaneous Traffic:**
  - **Transporting Motorist (before):** "P211 to TMC: I'm 10-7 on I-40 Westbound at Gorman Street, Exit 295. Preparing to transport one female motorist to BP gas station. Beginning mileage 47, 386…"
  - **Missed Transmission:** "P322 to TMC: 10-9 your last; you're 10-1…"
  - **Standby Request:** "P130 to TMC: 10-12. I'm pulling a vehicle…"
  - **Disregard:** "P505 to TMC: 10-22 DMS for the 10-50 at Exit 412. All lanes are open and I'm 10-8…"
  - **Beginning Tour of Duty:** "P217 to TMC: 10-41. Mileage is 72,315…"

NC Highway Patrol 10-Codes:

10-1 Signal Weak	**10-30** Danger	**10-62** Burglary/Breaking and Entering
10-2 Signal Good	**10-31** Pick Up	**10-63** Investigate ___ at ___ (DEBRIS)
10-3 Stop Transmitting	**10-32** Units Needed (Specify)	**10-64** Crime in Progress
10-4 Affirmative (OK)	**10-33** Help Me Quick	**10-65** Report of Armed Robbery
10-5 Relay (to)	**10-34** Time	**10-66** Notify Coroner/Med. Examiner
10-6 Busy	**10-36** Restraint Violation	**10-67** Investigate Report of Death
10-7 Out-of-Service	**10-40** Fight in Progress	**10-68** Livestock on Highway
10-8 In-Service	**10-41** Beginning Tour of Duty	**10-69** Advise Present Phone Number
10-9 Say Again (Repeat)	**10-42** Ending Tour of Duty	**10-70** Improperly Parked Vehicle
10-10 Negative	**10-43** Chase	**10-71** Improper Use of Radio
10-12 Stand by (Stop)	**10-44** Riot	**10-72** Have Prisoner in Custody
10-13 Existing Conditions	**10-45** Bomb Threat	**10-73** Mental Subject
10-14 Message/Information	**10-46** Bank Alarm	**10-74** Prison or Jail Break
10-15 Message Delivered	**10-47** Complete Assignment Quickly	**10-75** Records Indicate Wanted/Stolen
10-16 Reply to Message	**10-48** Detaining Subject, Expedite	**10-76** Report of Prowler
10-17 En Route	**10-49** Drag Racing	**10-77** Assist Fire Dept. with Traffic
10-18 Urgent	**10-50** Accident PD, PI, F	**10-78** Report of Abandoned Vehicle
10-19 (in) Contact	**10-51** Wrecker Needed	**10-79** Report of Vehicle Fire
10-20 Location	**10-52** Ambulance Needed	**10-80** Report of Reckless Driving
10-21 Call – by phone	**10-53** Road Blocked	**10-81** Report of High Speed
10-22 Disregard	**10-54** Hit and Run PD, PI, F	**10-82** Report of Disabled Motorist
10-23 Arrived at Scene	**10-55** Intoxicated Driver	**10-83** Report of Improper Registration
10-24 Assignment Completed	**10-56** Intoxicated Pedestrian	**10-84** Report of License Violation
10-25 Report to (Meet)	**10-57** Request Breathalyzer Operator	**10-85** Report of Bike/GoCart Violation
10-26 Estimated Arrival Time	**10-58** Direct Traffic	**10-86** Beginning Authorized Travel
10-27 License/Permit Information	**10-59** Convoy or Escort	**10-87** Ending Authorized Travel
10-28 Ownership Information	**10-60** Investigate Suspicious Vehicle	
10-29 Records Check	**10-61** Stopping Suspicious Vehicle	

NC Highway Patrol Signals & Phonetic Alphabet:

Signal 1 Suspect Armed and Dangerous
Signal 2 Report of Suspected Drug Trafficking (vehicle/suspect description, direction of travel & "Signal 1" if applicable)
Signal 4 Report of Vehicle Stored/Recovered
Signal 9 Meet at – troop meeting or division meeting.
Signal 11 All men affected by this signal should immediately prepare for emergency duty and radio contact.
Signal 12 Report to – at – for emergency duty
Signal 13 Conviction/Revocation
Signal 14 Current Suspension/Revocation other than DWI
Signal 18 Accident/Incident involving Hazardous Material
Signal 19 Report of Aircraft Crash at
Signal 20 Report of Aircraft in Difficulty at
Signal 21 Request for radio or car repair
Signal 24 Daily accident summary
Signal 25 –needs immediate assistance to make arrest of resisting person. Report at once to
Signal 26 Computer terminal is temporarily out-of-service

A	ADAM	N	NORA
B	BOY	O	OCEAN
C	CHARLES	P	PAUL
D	DAVID	Q	QUEEN
E	EDWARD	R	ROBERT
F	FRANK	S	SAM
G	GEORGE	T	TOM
H	HENRY	U	UNION
I	IDA	V	VICTOR
J	JOHN	W	WILLIAM
K	KING	X	X-RAY
L	LINCOLN	Y	YOUNG
M	MARY	Z	ZEBRA

Description:

Become familiar with the guidelines & techniques used to properly operate IMAP vehicles on the roadway

Objectives:

- Learn about the primary guidelines that IMAP Responders must adhere to when operating an IMAP vehicle

- Become familiar with the concepts related to general stopping and maneuverability of the IMAP vehicle and guidelines for repositioning in reverse

- Explore the guidelines and strategies used by IMAP to detect incidents while patrolling their assigned route(s)

- Learn about the various guidelines and strategies used by IMAP Responders when unexpected driving conditions or circumstances occur

Audience: IMAP Responders

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics

Primary Guidelines for Operating the IMAP Vehicle:

Objective: Learn about the primary guidelines that IMAP Responders must adhere to when operating an IMAP vehicle

Critical Knowledge:

- IMAP Responders **must obey all traffic laws** when operating an IMAP vehicle;
    - DO NOT exceed the posted speed limit
    - Seatbelts must be worn at all times when IMAP vehicle is in motion
    - Vehicle lights and turn signals must be activated as appropriate
    - Aggressive or reckless driving is PROHIBITED

- IMAP Responders **should drive defensively** when operating an IMAP vehicle;
    - Prevent accidents by anticipating & avoiding hazardous situations
    - Adjust driving behavior to suit current travel conditions
    - Avoid conflict with aggressive or erratic Responders

- IMAP vehicles must be inspected BEFORE and AFTER each shift
    - IMAP vehicle must pass inspection before leaving headquarters
    - Report or (if minor) repair any malfunctions promptly

- **Additional guidelines for safe & effective driving include;**
    - ALWAYS have an ESCAPE ROUTE – even while driving
    - Know how your truck handles under normal & adverse conditions
    - Adjust seat, steering wheel position, mirrors, etc. to suit you
    - Keep truck cab organized and secure any loose items
    - Keep windshields & mirrors clean – remove fog/film before driving
    - Stay alert & continuously scan ahead and on both sides of vehicle
    - Check rear & side view mirrors frequently – at least every 6-8 seconds
    - Know where your blind spots are – watch them carefully & often
    - Maintain adequate distance from other vehicles on all sides of truck
    - Regularly check equipment, cabinets, and arrow board while in motion
    - Maintain steady speed consistent with traffic flow (within legal limits)
    - Avoid sudden stops/lane changes – brake gradually & merge smoothly
    - Sound air horn before repositioning in reverse or when maneuvering in heavy traffic

Stopping, Maneuverability & Repositioning in Reverse:

Objective: Become familiar with the concepts related to general stopping and maneuverability of the IMAP vehicle and guidelines for repositioning in reverse

Critical Knowledge:

- Sudden stops can disrupt traffic, cause rear-end crashes, and cause equipment to shift or fall off of the vehicle completely

- Responders should use brakes to control speed & bring IMAP vehicle to a safe and gradual stop. Below are a few DOs and DO NOTs for proper braking;
  - **DO** look at traffic ahead & behind to estimate safe stopping distance
  - DO NOT pump, slam, ride, or habitually tap the brakes
  - **DO** use steady, even pressure on brake pedal to decelerate/stop
  - DO NOT use emergency brake unless all other braking systems fail
  - **DO** use brakes to maintain a safe distance between other vehicles
  - DO NOT brake sharply when traveling around curves
  - **DO** gradually reduce speed then accelerate smoothly through curves

- **Factors that Affect Maneuverability & Stopping Distance:**
  - Higher Speed = less maneuverable & longer stopping distance
  - Wet/Slick Pavement = less maneuverable & longer stopping distance
  - Brakes Hot from Overuse = longer stopping distance
  - Letting ON & OFF Gas Pedal = less maneuverable

- **"Backing up" is NOT a suggested IMAP driving technique** – Responders may reposition the truck in reverse but must follow the guidelines below;
  - Plan ahead to minimize need to reposition in reverse
  - When parking, reposition into or pull through space so first vehicle movement is FORWARD when driving resumes
  - Assure area behind truck is clear & sound air horn before repositioning
  - Use mirrors rather than turning head so traffic in front & behind can be monitored continuously
  - Reposition at a significantly slower speed to prevent accidents
  - Use caution when maneuvering in reverse – steering may FEEL counter-intuitive but turning wheel right will point rear of truck right
  - **Responders should be familiar with backing policies for their Region**

Detecting Incidents while on Patrol:

Objective: Explore the guidelines and strategies used by IMAP to detect incidents while patrolling their assigned route(s)

Critical Knowledge:

- IMAP is responsible for actively patrolling assigned route(s) in order to detect road hazards, traffic incidents, and damaged DOT property

- In order to properly and thoroughly patrol a route, IMAP Responders should drive to and travel on all areas of the route which includes;
    - Full length of patrol route and both directions of travel
    - All entrance and exit ramps that access assigned route
    - All over/underpasses with return access to assigned route

- When searching for incidents while on patrol, IMAP Responders should;
    - Scan 12-15 second ahead
    - Visually sweep both directions of travel
    - Regularly note MM's/Exits #'s to locate incidents once detected

- Responders should watch for clues that may indicate a traffic incident such as;
    - Stopped vehicles and/or pedestrians on or near roadway
    - Flashing lights from other responders (e.g. law enforcement)
    - Abnormal congestion levels for area and/or time of day
    - Vehicles making sudden or unusual lane changes

- Responders should avoid traveling behind/beside large vehicles that can obstruct their view of the road and possible incidents

- **Additional guidance for initial arrival on-scene:**
    - See "Vehicle Positioning & Responder Approach" for complete guidance
    - IMAP may drive on shoulder to access incident scene (GS 20-168)
    - Watch for & avoid pedestrians, responders, & response vehicles
    - DO NOT drive over any equipment – especially fire hoses
    - If dispatched, steer into lane mentioned as "blocked" by dispatcher
    - If incident is accidently passed, DO NOT stop & reposition – notify TMC and take next exit in order to turn around & make a 2nd pass

Emergency Driving Techniques:

Objective: Learn about the various guidelines and strategies used by IMAP Responders when unexpected driving conditions or circumstances occur

Critical Knowledge:

- **Driving in Adverse Weather –** Adverse weather typically affects driving conditions by limiting visibility and/or decreasing traction. Responders should;
    - Travel at a reduced speed appropriate for conditions
    - Allow more distance between other vehicles and expect other motorists to drive erratically
    - Initiate all driving actions sooner, slower, & with more room to occur
    - Activate running lights & windshield wipers
    - Avoid using high beams/overrun lights which can cause glare
    - Resist instinct to brake when hydroplaning or skidding on ice – take foot off of gas pedal, keep steering wheel straight, and let truck's momentum decrease until tires regain traction
    - Engage 4-wheel drive and/or apply tire chains if needed
    - Steer away from ruts & snow banks and steer straight on hills

- **If IMAP Vehicle Gets Stuck –** If an IMAP vehicle becomes stuck on slick/unpaved surfaces, Responders may attempt any/all of the following;
    - Attempt to move with 4-wheel drive & front hub locks engaged
    - Shovel a clear path ahead of each tire
    - Place brush, tire debris, sand, etc. ahead of tires to increase traction
    - Use front/rear winch to pull truck to surface with better traction*****
    - Rock vehicle & push from behind while slowly pressing gas pedal*****
    - **If vehicle remains stuck or ceases to move after attempting any of the above, notify TMC dispatch to contact a wrecker (if applicable, one that has a contact with DOT for your area)**

    *IMAP Responder should call for backup before attempting this technique

2-Wheel/4-Wheel Drive

NC Department of Transportation
Field Training Manual
for IMAP Responders

Description:

Become familiar with the proper use of the IMAP truck's 2-wheel & 4-wheel drive capabilities

Objectives:

- Learn about the various drive capabilities that allow the IMAP truck to operate properly under different road/surface conditions

- Review step-by-step instructions for how to shift from 2 to 4-wheel drive on a typical IMAP truck equipped with manual wheel hub locks

Audience: IMAP Responders

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-104: Driving Techniques

IMAP Truck Drive Capabilities:

Objective: Learn about the various drive capabilities that allow the IMAP truck to operate properly under different road/surface conditions

Critical Knowledge:

- **2-Wheel HIGH (2H) –** for everyday on-road driving in dry conditions. Power from engine is sent only to rear wheels

- **4-Wheel HIGH (4H) –** for driving on slick surfaces and/or off-road. Power from engine is sent to ALL wheels. DO NOT use on dry pavement

- **4-Wheel LOW (4L) –** for low-speed, off-road conditions on a steep grade or on tough/low-traction terrain. Power from engine is sent to ALL wheels

- **Wheel Hub Locks –** engages & disengages the 4-wheel drive system
  - Most hub locks are manual – responders exit truck to engage hub locks
  - Some have a "push button" system to lock hubs without exiting truck
  - Some IMAP trucks DO NOT have wheel hub locks at all
  - Responders should confirm the type of hub locks (if any) on their truck

Example of Manual Wheel Hub Locks:

Shifting Between 2 and 4-Wheel Drive:

Objective: Review step-by-step instructions for how to shift from 2 to 4-wheel drive on a typical IMAP truck equipped with manual wheel hub locks

1. Lock the front wheel hubs;
   a. Park & safely exit IMAP truck
   b. Manually turn dials to LOCK on both front wheels & re-enter truck

2. Keep brake pedal depressed and shift transmission to neutral (N)

3. Position drive lever into appropriate 4-wheel drive setting (4H or 4L)

4. Shift transmission into reverse (R) or drive (D)

5. Let off of brake and accelerate slowly up to desired speed

6. When 4H/4L is not needed, assure that front wheel hubs are unlocked;
   a. Park & safely exit IMAP truck
   b. Manually turn dials away from LOCK on front wheels & re-enter truck

7. Keep brake pedal depressed and shift transmission to neutral (N)

8. Return drive lever to 2H position

9. Shift transmission into reverse (R) or drive (D)

10. Let off of brake and accelerate slowly up to desired speed

Description:

Become familiar with the sand truck & snow plow attachment as well as the guidelines and strategies for its use during winter weather operations

Objectives:

- Explore the components of the sand truck & snow plow

- Learn about the sand truck's purpose & the primary guidelines for its use

- Become familiar with the guidelines & procedures for inspecting the sand truck before use & properly shutting it down when sand & plowing operations are over

- Become familiar with the guidelines & techniques for driving the sand truck and for the backup unit (if used) escorting the sand truck

- Learn the guidelines & procedures related to plowing/sanding operations

Audience: IMAP Responders

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques
- IM-107: Adverse Weather – Reporting Conditions & Basic Response

Sand Truck Components:

Objective: Explore the components of the sand truck & snow plow.

Critical Knowledge:

- **IMAP Sand Trucks –** standard IMAP trucks modified to carry & spread sand over icy patches to increase traction during winter weather operations. Some sand trucks are also equipped with snow plows

- **Typical Components of the Sand Spreader:**
  - **A –** Hopper: holds sand for spreading
  - **B –** Auger: inside hopper; draws sand into spreader
  - **C –** Spinner: under spreader gates; spins to spread sand
  - **D –** Spreader Engine: powers auger & spinner
  - **E –** Spreader Gates: adjustable flaps; controls width of spread

- **Typical Components of the Snow Plow:**
  - **F –** Plow Blade: pushes snow & ice out of travel lanes
  - **G –** Hydraulic Lift: raises/lowers & adjusts angle of plow blade
  - **H –** Mount & Suspension: connects plow & controls to sand truck
  - **I –** Safety Chains: secures connection of plow attachment to truck
  - **J –** Headlights: work in place of truck lights which are blocked by plow
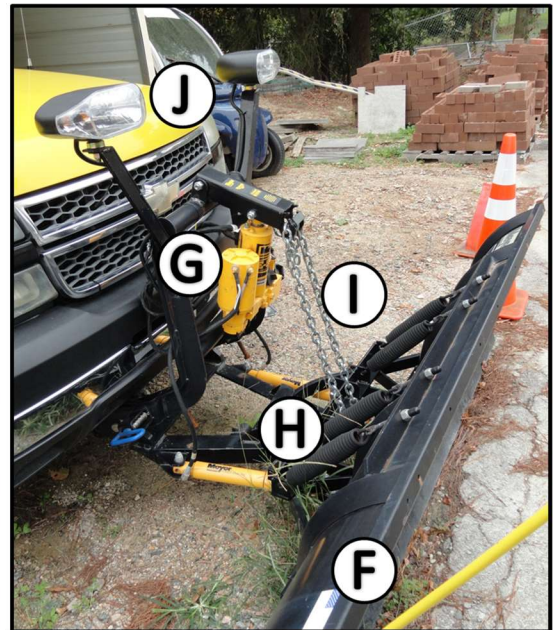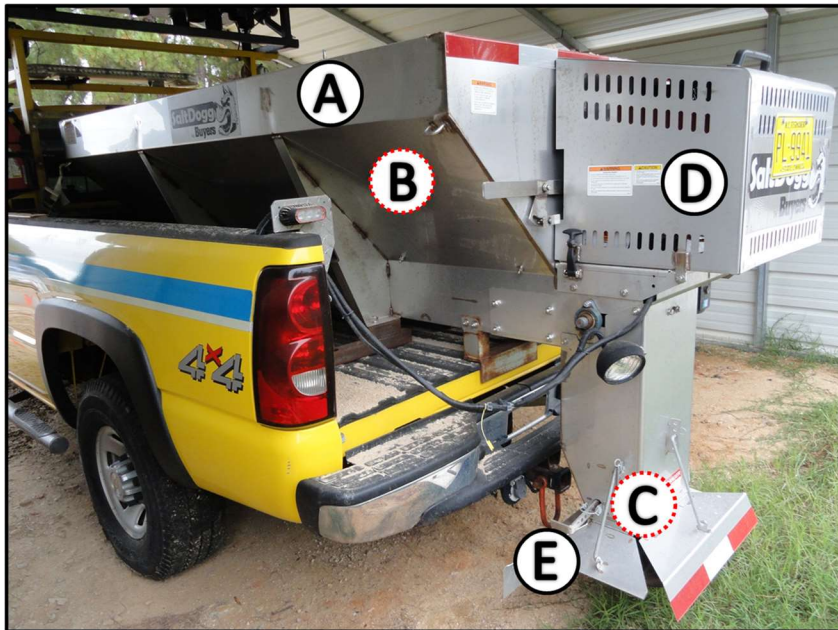
Purpose & Primary Guidelines of the Sand Truck:

Objective: Learn about the sand truck's purpose & the primary guidelines for its use.

Critical Knowledge:

- **Large-scale plowing & de-icing operations are handled by DOT Maintenance –** IMAP uses their sand truck to plow/spread sand on;
  o Minor icy patches that are an immediate hazard
  o Short stretches of single lane ramps, bridges & overpasses
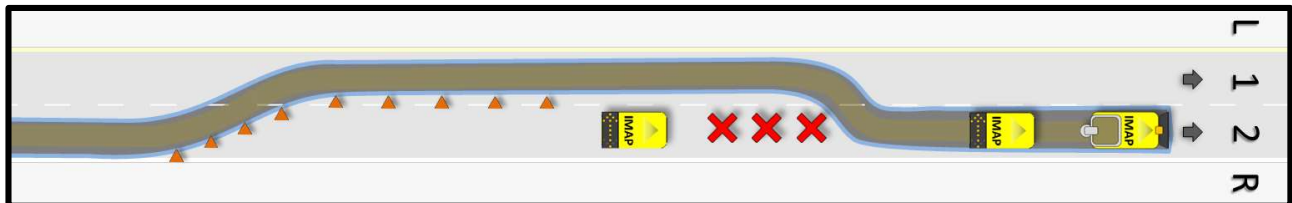 o Transition areas before and/or within a temp. traffic control (ETC) area
  o **IMAP does NOT plow/sand** sidewalks, driveways or parking lots
  o **IMAP may use plow to remove large amounts of small debris**

Example: Sand truck (escorted by backup unit) plowing snow & spreading sand in advance of ETC area, at transition area, & ahead of response vehicles

- **Primary Sand Truck Guidelines –** in addition to all guidelines related to IMAP vehicles, equipment, & driving techniques, IMAP responders should;
  o Be trained to operate the sand truck in order to use it for response
  o Request & receive supervisor approval before using sand truck
  o Notify TMC dispatch that they are leaving route to get sand truck
  o Wear all necessary PPE & appropriate winter weather gear
  o Inspect sand truck before use & perform shutdown procedure after
  o NEVER drive faster than road conditions & visibility permit
  o Avoid driving on rough terrain & DO NOT plow/sand off-road
  o NEVER start or run the spreader if someone is near the mechanism
  o Avoid plowing on bare pavement – only plow where there is snow/ice
  o NEVER plow if road has been treated with salt within last 1-2 hours – sanding is OK
  o Plow snow/ice to shoulder – DO NOT leave snow mounds in lanes
  o NEVER use sand truck to push vehicles or for ETC – call for backup

Sand Truck Inspection & Shutdown Procedures:

Objective: Become familiar with the guidelines & procedures for inspecting the sand truck before use & shutting it down when sand & plowing operations are over

Critical Knowledge:

- **Sand truck must be inspected before use**
    - Use **Operator's Daily Inspection sheet** to document inspection
    - Submit inspection sheet to IMAP supervisor

- **Pre-Start Check BEFORE Operating Sand Truck:**
    - Make sure hopper is sufficiently loaded with sand
    - Use shovel to break up sand & remove chunks/debris that may get caught in the spreader
    - Make sure plow is securely attached to sand truck
    - Refuel spreader engine & make sure it turns ON
    - Remove any loose items from truck bed & sweep away excess sand
    - Check sand truck's tires & attach snow chains if needed

- **Pre-Operations Check BEFORE Departing with Sand Truck:**
    - Turn ON truck & allow engine to warm up (approx. 3-5 minutes)
    - Confirm proper oil level in hydraulic lift's oil reservoir
    - Make sure plow's hydraulic lift works & plow is raised before driving
    - Test sand spreader controls – make sure spreader turns ON & OFF
    - Make sure all headlights work & brake lights/turn signals function

- **Shutdown Procedure AFTER Operating Sand Truck:**
    - Go to DOT Maintenance yard & receive assistance from maintenance personnel to refill hopper with sand
    - Use shovel to remove excess sand – sand level should NOT be greater than 6 inches above the sides of the hopper
    - Refuel sand truck & park at designated location at headquarters
    - Lower plow – NEVER leave plow in raised position when NOT in use
    - Shut OFF sand truck engine & make sure auger & spreader are OFF
    - Turn spreader engine ON (auger/spreader still OFF) & let spreader engine run out of fuel – prevents fuel from gelling between use
    - Remove all personal belongings from vehicle & return sand truck key to supervisor/proper storage location

Driving & Escorting the Sand Truck:

Objective: Become familiar with the guidelines & techniques for driving the sand truck and for the backup unit (if used) escorting the sand truck

Critical Knowledge:

- **Basic Guidance for Driving the Sand Truck:**
    - Follow guidelines related to driving techniques, 2-wheel/4-wheel driving, and adverse weather response
    - Adjust driving speed, stopping distance, & turn radius for weight of sand & weather conditions
    - Even when raised, plow has VERY low clearance – use caution
    - Look for & avoid obstructions – especially those hidden under snow
    - DO NOT ride brakes – brake gently, shift to lower gears to control speed & allow brakes to cool when possible
    - Avoid parking on slopes – use wheel chocks & emergency brake if needed
    - Activate emergency lights & arrow board when plowing/sanding

- **Repositioning Sand Truck in Reverse –** sand hopper & spreader prevent responder from seeing properly behind them
    - Plan ahead to minimize need to reposition in reverse
    - Use backup unit as spotter to help guide sand truck, if possible
    - Spotter should stand to side of sand truck – NOT directly behind
    - Make sure area behind truck is clear before & during repositioning
    - Sound air horn before repositioning in reverse

- **Escorting the Sand Truck –** sand truck driver may be escorted by a backup unit or law enforcement (LE). If used, backup unit should;
    - Follow behind the sand truck and activate emergency lights & arrow board as appropriate – coordinate arrow display with sand truck
    - Help sand truck driver plan plowing & sanding operations
    - Provide ETC as needed to protect sand truck while plowing/sanding
    - Remove obstructions in sand truck's path – push/pull/drag vehicles out of road **OR** provide motorist assistance if necessary
    - Watch sand truck's progress & notify its driver of issues (e.g. snow mounds left in travel lanes or no sand coming from spreader)
    - Help sand truck move if it gets stuck in slick conditions

Plowing/Sanding Operations (1 of 2):

Objective: Learn the guidelines & procedures related to plowing/sanding operations

Critical Knowledge:

- **PLAN AHEAD Before Plowing/Sanding:**
    - Determine where plowing/sanding will occur
    - Identify potential obstacles that might affect sand truck
    - Consider where plow will push snow/ice so snow mounds are NOT left in travel lanes – plan additional passes with plow if needed
    - Determine if escort is needed to protect sand truck
    - Discuss plan with other responders if needed – especially if plowing/sanding will occur at an active incident scene

- **Setting the Angle of the Snow Plow:**
    - Angle LEFT to push snow to LEFT shoulder
    - Angle RIGHT to push snow to RIGHT shoulder
    - SHALLOW angle if snow is DRY & LIGHT
    - STEEP angle if snow is WET & HEAVY

DRY/LIGHT Snow = **SHALLOW** Plow Angle

WET/HEAVY Snow = **STEEP** Plow Angle

- **Plowing Direction** – IMAP responders should plow;
    - In a steady, forward direction – DO NOT use back of blade to plow
    - In the same direction as traffic unless appropriate ETC is in-place
    - To low side of ramps/curves to keep water from melting snow from running back into lanes & potentially re-freezing

- **Plowing Speed –** sand truck should travel fast enough to move snow to shoulder but NOT fast enough to;
    - Cause damage/injury by throwing snow violently
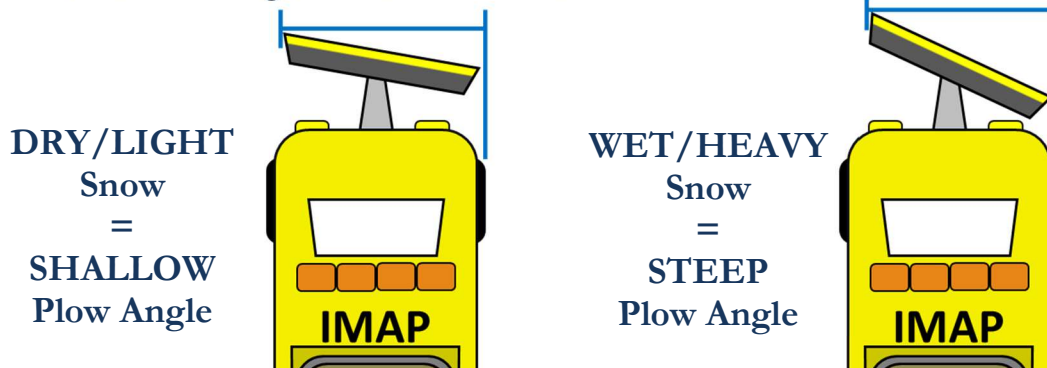   - Decrease visibility of responder or motorists behind sand truck

Plowing/Sanding Operations (2 of 2):

Objective: Learn the guidelines & procedures related to plowing/sanding operations

Critical Knowledge:

- **Spreading Sand –** sand is usually spread while plow is in use. If NOT, **plow FIRST, sand SECOND**

- **Spreading Speed –** sand truck should travel fast enough to evenly spread sand over the plowed area but NOT;
  - So slow that excess sand is dispensed in piles
  - So fast that sand is spread too thin

- **Turn sand spreader OFF when;**
  - Sand truck is stationary or sand is NOT needed
  - Sand is no longer coming out of spreader – even if some sand remains in hopper

- **To Begin Plowing/Sanding;**
  - Park on shoulder (or ramp) before area affected by snow/ice
  - Form a plan for plowing/sanding – advise escort/responders if needed
  - Advise TMC/DOT Maintenance where plowing/sanding will occur
  - Set plow angle & adjust spreader gates for appropriate spread width
  - Deploy ETC **OR** enter traffic carefully & use emergency rolling roadblock to reduce traffic to appropriate speed for plowing/sanding
  - Lower plow to pavement and/or turn ON spreader before affected area
  - If escort is used – notify BEFORE plowing/sanding begins

- **After Initial Plowing/Sanding;**
  - Raise plow and/or turn OFF spreader after affected area
  - Notify escort (if used) that plowing/sanding is complete
  - Park sand truck at safe location nearby
  - Check plow blade for damage & allow brakes to cool
  - Plan any additional passes (e.g. to remove snow mounds from lanes or plow any patches that were missed)
  - Execute additional passes as needed – avoid multiple passes if possible
  - Advise TMC dispatch/DOT Maintenance when plowing/sanding is complete

Description:

Become familiar with the guidelines, equipment, & processes related to portable changeable message signs (CMS).

Objectives:
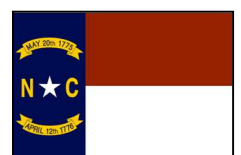
- Learn about the basic concepts & external components related to portable CMS

- Explore the additional components used to set up & operate portable CMS

- Learn about the guidelines & processes for connecting to & towing portable CMS

- Learn where CMS should be located & how to properly set them up to provide emergency traffic control on the roadway

- Become familiar with the primary CMS message policies

- Review the basic steps for how to program CMS to display message

- Review examples of CMS messages used for common incidents/conditions

Audience: IMAP Responders

Duration of Training: 4 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques
- ETC-102: Temporary Lane Closures

Introduction to CMS & External Components:

Objective: Learn about the basic concepts & external components related to CMS.

Critical Knowledge:

- **Portable Changeable Message Signs (CMS)** – trailer-mounted signs that can be placed where existing signs are not available & whose messages can be changed to advise motorists of unexpected traffic conditions

- **Dynamic Message Signs (DMS) vs. CMS –** Both can change their messages as needed & both display similar info but DMS;
    - Are fixed at permanent locations
    - Can only be controlled remotely (i.e. by TMC operators)
    - Are larger & can display more info than CMS

- **CMS models are different in each region** – IMAP Responders should learn;
    - Which models are used in their region & where they are located
    - How to set up & program their region's CMS

- **External components of portable CMS** most often include;
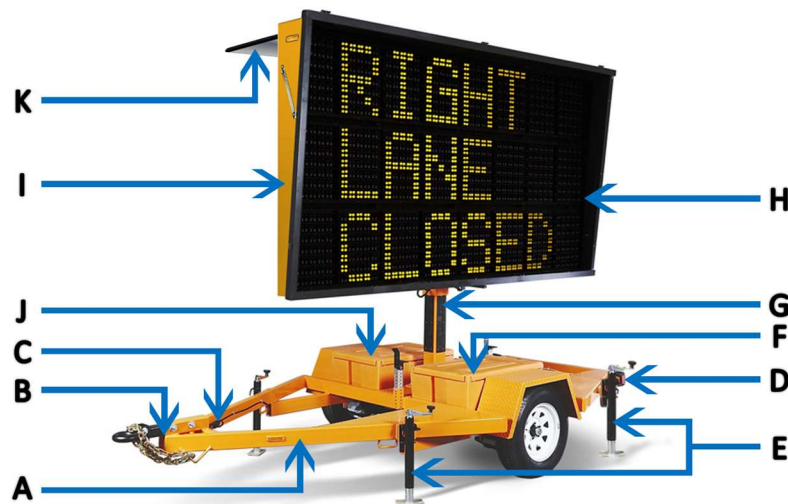
- **A –** Sign Trailer
- **B –** Trailer Hitch & Chains
- **C –** Brake Light/Turn Signal Cable
- **D –** Brake Lights & Turn Signals
- **E –** Leveling Jacks
- **F –** Control Cabinet
- **G –** Sign Mast
- **H –** Sign Face
- **I –** Sign Case
- **J –** Power Plant
- **K –** Solar Panels

Additional CMS Components:

Objective: Explore the additional components used to set up & operate CMS.

Critical Knowledge:

- **Additional CMS components differ by model** but most often include;
  - o **A –** Sign Lift/Rotation Mechanism (manual or pneumatic)
  - o **B –** Solar Panel Lift/Rotation Mechanism (solar-powered CMS only)
  - o **C –** Sign & Message Control Device; found in Control Cabinet
  - o **D –** Battery Gauge & Other Switches; found in Control Cabinet
  - o **E –** Diesel Generator (diesl-powered CMS only) & Batteries; found in Power Plant
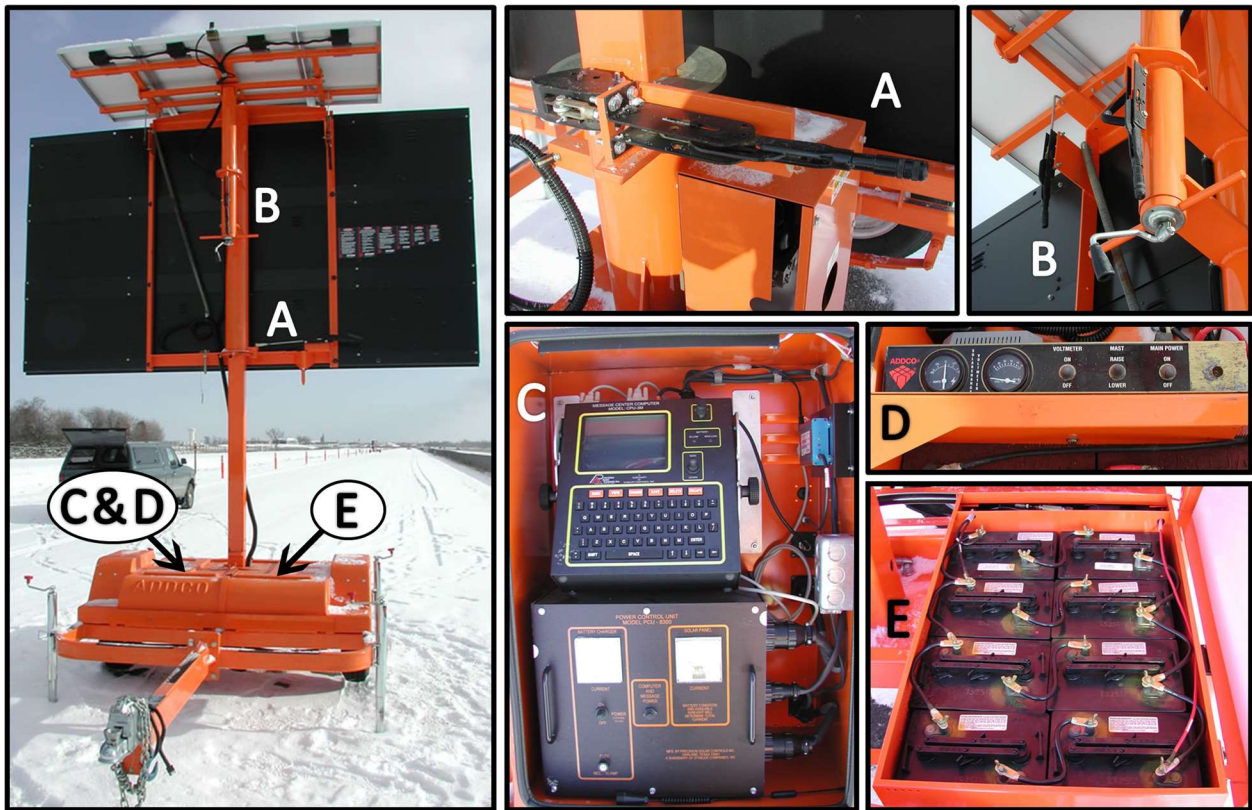
- **Other switches often found in CMS Control Cabinet** may include;
  - o Main ON/OFF switch
  - o Service switch – controls current from solar panel to batteries
  - o Communication Mode switch – determines if CMS is controlled remotely (i.e. by TMC) or locally (i.e. by on-scene personnel)

Hooking Up & Towing CMS:

Objective: Learn about the guidelines & processes for connecting to & towing CMS.

Critical Knowledge:

- **BEFORE hooking up to or towing a CMS,** IMAP Responders should;
    o Notify TMC dispatch that they are leaving patrol route to get CMS
    o Follow all regional guidelines for checking a CMS out for use

- **CMS Inspection & Hook-Up Preparation:**
    1. Confirm that trailer & trailer tires are in good condition
    2. Check battery gauge to assure CMS will operate as long as needed
    3. Make sure sign case is fully lowered & resting on sign supports
    4. Make sure the sign lift/rotation mechanism is locked in place
    5. Lower & lock any solar panels **OR** turn generator completely OFF
    6. Ensure all components are stored and all cabinets closed & locked

- **Hooking Up to a CMS Trailer:**
    1. Wear all necessary PPE – especially work gloves
    2. If needed, raise front two leveling jacks so CMS trailer hitch is above the ball of the IMAP truck's trailer hitch
    3. Position IMAP truck directly in front of CMS trailer hitch
    4. DO NOT allow anyone between the truck & the trailer
    5. Use a spotter to help keep truck in line with trailer while backing up
    6. Assure area behind is clear, sound horn, & reverse slowly to trailer
    7. When truck & trailer hitches are properly lined up, stop & park truck
    8. Slowly lower front leveling jacks until the hitch is firmly on the ball
    9. Attach trailer's safety chains in crossed pattern to truck's rear bumper
    10. Connect the brake light/turn signal cable to the IMAP truck
    11. Raise all four leveling jacks completely and lock them in-place
    12. Use a spotter to help test trailer's brake lights & turn signals
    13. Make sure all cables, chains, etc. are secure & will NOT drag ground

- **Towing a CMS will affect how IMAP truck handles while driving;**
    o Increase following distance & allow extra braking distance on stops
    o Signal WELL in advance & check blind spots carefully
    o Avoid quick stops & make wide, smooth turns to avoid jackknifing
    o Ease onto/off of shoulders gradually & avoid driving off-road

Site Selection & CMS Set Up:

Objective: Learn where CMS should be located & how to properly set them up to provide emergency traffic control (ETC) on the roadway.

Critical Knowledge:

- **CMS Placement Requirements –** CMS must be placed so that;
    - Sign is NOT within 6 feet of a travel lane
    - Sign is visible from 1/2 mile away under day or night conditions
    - Message is legible from ALL LANES at a distance of 1,000 feet

- **Guidelines for Optimal CMS Placement –** CMS should be placed;
    - In advance of incident work zone & before backup from incident – reposition CMS as conditions change
    - On level ground/wide shoulders and behind guardrails if possible
    - At least 500 feet from other signs (800 feet is better)
    - At least 1,000 feet from ramps – avoid placing in gore areas
    - **Use DMS rather than CMS** if DMS is located within 1/2 mile from desired CMS location

- **Unhooking & Setting Up a CMS –** IMAP Responders should;
    1. Activate emergency lights & arrow board properly
    2. Safely ease trailer into position and set truck's emergency brake
    3. Notify TMC dispatch & put on necessary PPE before exiting truck
    4. If CMS is NOT behind a guardrail/barrier, use cones to **deploy a shoulder taper behind the sign** – angle taper towards roadway
    5. Lower all of the trailer's leveling jacks to the ground & lock in-place
    6. Disconnect the brake light/turn signal cable & remove safety chains
    7. Unhook CMS trailer from hitch – raise front leveling jacks if needed
    8. Adjust leveling jacks as needed until CMS is completely level
    9. Confirm all jacks are lowered completely to the ground & are locked
    10. Turn CMS ON (activate solar panels/generator as appropriate)
    11. Raise sign case until bottom of sign is at least 7 feet above roadway
    12. Have/Utilize an Escape Route
    13. **DO NOT stand under sign case while raising/lowering**
    14. Lock sign case in position on sign mast
    15. Rotate/adjust sign face to face traffic & avoid sun glare – lock in-place
    16. Confirm CMS is level & all jacks/lifting mechanisms are locked

CMS Message Policies & Guidelines (1 of 2):

Objective: Become familiar with the primary CMS message policies.

Critical Knowledge:

- **NCDOT DMS/CMS Policy:** the official statement of guidelines that all DMS & CMS messages must adhere to.
    - Operational procedures DO NOT supersede the DMS/CMS policy
    - Only Division Engineer may authorize exceptions to the policy
    - **All IMAP Responders must read this policy before operating CMS**

- **Primary Guidelines from the DMS/CMS Policy:**
    - CMS must relay info that is relevent to the motorists that see it
    - CMS messages must reflect current travel conditions & be updated as conditions change
    - When **multiple incidents occur simultaneously**, CMS must **display a message for the incident that is higher in priority**
    - Messages must NOT in any way advertise commercial events/entities
    - Jingles, slogans, or catchphrases must NOT be displayed on CMS
    - When a CMS is NOT in use, it must remain blank or be removed

- **CMS Message Priorities** (ranked from highest priority to lowest) are;
    1. Signing for Work Zones (i.e. planned construction projects)
    2. Road closures on interstates/US routes within 10 miles of CMS
    3. Emergencies, such as evacuation information
    4. Congestion or lane closures due to incidents within 10 miles of CMS
    5. Closures due to incidents that are greater than 10 miles from CMS
    6. Advance notice of planned events likely to cause congestion
    7. Special Events (i.e. concerts, sporting events, etc.)
    8. Messages for other modes of transportation (e.g. ferries, buses, etc.)
    9. Congestion or unusual conditions greater than 10 miles from CMS
    10. Hazardous/uncommon conditions that require motorists to alter their driving (e.g. icy patches) within 10 miles of CMS
    11. MOVE OVER/FENDER BENDER messages
   12. Travel Times for closures, congestion, or other unusual conditions

CMS Message Policies & Guidelines (2 of 2):

Objective: Become familiar with the primary CMS message policies.

Critical Knowledge:

- CMS can display 3 lines of text at a time & each line can hold 8-9 characters (including spaces) – **each 3-line message is known as a "Panel"**

Panel 1	Panel 2
CRASH 3 MILES AHEAD	LEFT LANE CLOSED
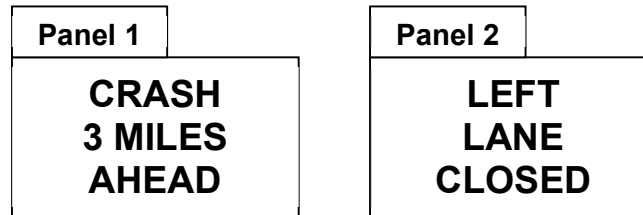
Example: 2-panel CMS Message

- **General CMS Message Guidelines:**
  - Each message panel should convey a single thought
  - Messages may use up to 2 panels only with NO blank panels between
  - If using 2 panels, each panel should be visible for at least 3 seconds

- **Guidelines for Message Content/Format –** messages should;
  - Be in ALL CAPS & centered on the panel
  - Be simple, clear, & specific – NO vague messages
  - Use appropriate language only & NOT diminish respect for the signs
  - NOT use fading, flashing, moving, or other animated effects
  - NOT use graphics, **other than static arrows** (→, ←, or ←→)
  - Only use approved special characters if needed such as **@, #,** or **–**
  - Only use approved abbreviations to make long words fit the sign
  - **NOT use the term, "BLOCKED" –** use "CLOSED" instead
  - Refer to MUTCD & NCDOT DMS/CMS Policy for complete message guidelines & lists of approved abbreviations

- **Message Development Guide –** IMAP Responders can create appropriate CMS messages by first asking themselves;
  - **HOW** is traffic affected and **WHAT** can motorists do to avoid it?
  - **WHERE** is this sign located and **WHERE** is traffic affected?
  - **WHEN** will traffic be affected and **HOW** long will it be affected?
 - **WHO** does this message apply to?

Programming CMS Messages:

Objective: Review the basic steps for how to program CMS messages.

Critical Knowledge:

- **Most Sign/Message Control Devices allow Responders to;**
    - Display messages & remove messages (a.k.a. "blank the sign")
    - Create custom messages by typing them out with a keyboard
    - Select existing messages saved in the CMS's **Message Library**
    - Program the sign to display/remove a message at certain times
    - Adjust message display options (e.g. how long each panel is shown)
    - Set the sign up to be controlled locally or remotely

Sign/Message Control Devices for Different CMS Models:
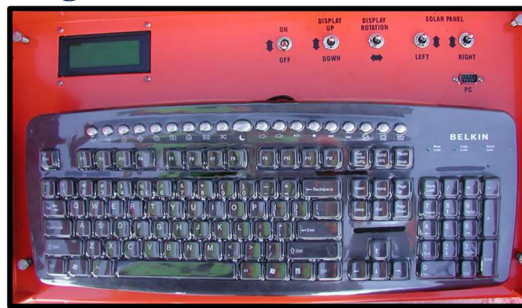
- **Basic Steps for Programming CMS:**
    1. Make sure that CMS is properly set-up & ETC is in-place
    2. If needed, call TMC to confirm the message that will be displayed
    3. Turn CMS ON (activate solar panels/generator as appropriate)
    4. Open control cabinet to access sign/message control device
    5. Follow prompts from device to manually enter the message **OR**
    6. Select the appropriate message from CMS's message library
    7. Adjust other settings as needed (e.g. sign brightness, display time, etc.)
    8. When message is ready, activate CMS to display message
    9. Review the actual message on the CMS for at least 1 minute
    10. If needed, deactivate message and reprogram CMS to fix any errors
    11. If CMS does NOT function properly, call TMC via cell for assistance
    12. Once the message is running properly, notify TMC dispatch
    13. Monitor the CMS while it is in use & adjust message/sign as needed
    14. When CMS is no longer needed, deactivate message & notify TMC
    15. Take CMS down, hook up to trailer, & return it to storage location

CMS Message Examples:

Objective: Review examples of CMS messages for common incidents/conditions.

Critical Knowledge:

- **CRASH AHEAD:**

Panel 1	Panel 2
CRASH 3 MILES AHEAD	←

Panel 1	Panel 2
TRAFFIC STOPPED AHEAD	PREPARE TO STOP

- **ALL LANES CLOSED:**

Panel 1	Panel 2
ALL LANES CLOSED	DETOUR: USE EXIT ____

- **DEBRIS AHEAD:**

Panel 1	Panel 2
DEBRIS AHEAD	REDUCE SPEED
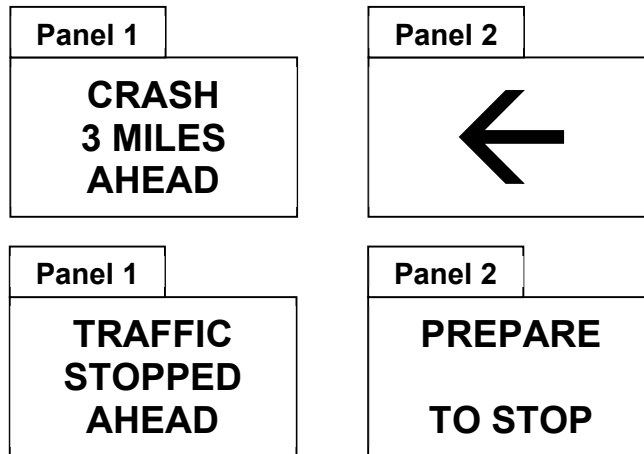
- **MOVE OVER:**
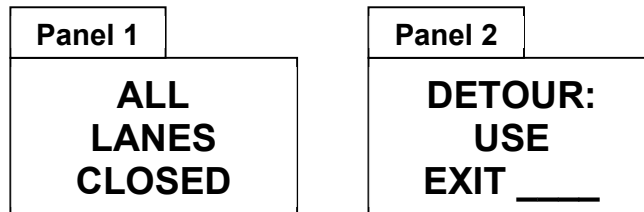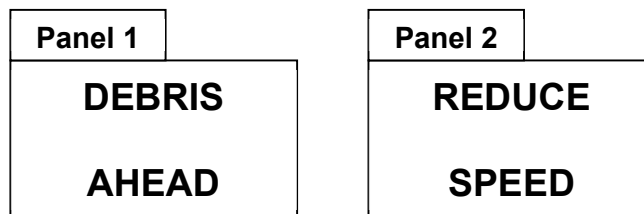
Panel 1	Panel 2
SHOULDER CLOSED	MOVE OVER
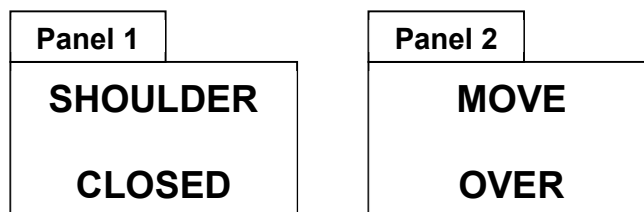
Changing Tires on Disabled Vehicles & IMAP Trucks

Description:

Become familiar with the guidelines and procedures for properly changing damaged or deflated tires on disabled vehicles and on the IMAP truck.

Objectives:

- Gain in-depth knowledge of tire changing equipment

- Become familiar with the guidelines and practices for working with flat and spare tires

- Learn about proper placement of jacks, jack stands, and wheel chocks during tire changes

- Review step-by-step instructions for how to refill a deflated tire

- Review step-by-step instructions for how to change a flat tire

Audience: IMAP Responders

Duration of Training: 4 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach

Tire Changing Equipment (1 of 2):

Objective: Gain in-depth knowledge of tire changing equipment.

Critical Knowledge:

Equipment Inspections: Inspect all equipment BEFORE every shift
- Check air pressure on all tires – including spare
- Inspect all tires for cuts, unusual wear, cracked rims, & missing/loose lug nuts
- **Make sure batteries for impact wrench are fully charged**
- Confirm air compressor works & tank is filling – release compressed air after inspection

Rolling Jack: use to raise most vehicles (2.5 ton capacity). To use;
- Insert lever into slot and twist until locked in place
- Raise by pumping lever up & down
- Lower by turning lever to the left
- Use the jack that came with the motorist's vehicle if rolling jack won't fit

Bottle Jack: use to raise large vehicles & IMAP truck (6 ton capacity). To use;
- Place a flat piece of metal underneath bottle jack to stabilize it
- Insert lever into slot and hook into place
- Raise by turning lever to the right
- Lower by turning lever to the left

Jack Stands: use to stabilize raised vehicles and as backup if jack fails. To use;
- Place jack stand near jack
- Raise jack stand so that vehicle's frame is resting securely on it
- **MUST be used whenever a vehicle is raised**

Wheel Chocks: Use to prevent vehicle from rolling unintentionally. To use;
- Place snuggly in front of or behind tires
- Place on side of tire in direction that you DO NOT want vehicle to roll
- **MUST be used whenever a vehicle is raised**

Tire Changing Equipment (2 of 2):

Objective: Gain in-depth knowledge of tire changing equipment.

Critical Knowledge:

Impact Wrench with Impact Sockets, Breaker Bar, & 4-Way Lug Wrench: use to tighten/loosen lug nuts.
- Lug nuts come in different sizes
  - Impact Wrench uses various sockets to match different lug nuts
  - Each end of 4-Way Lug Wrench fits a different size of lug nut
  - **If tool does not fit, lug nuts won't turn OR could be stripped**
- As Impact Wrench battery dies, torque decreases significantly
  - Keep batteries fully charged
  - **Use 4-Way Lug Wrench to confirm lug nuts are tight**
- The rolling jack lever can be fixed to the end of a socket wrench to provide additional leverage and torque
  - **DO NOT stand on levers or wrenches** to increase torque
  - Use a longer lever instead

Air Compressor & Accessories: use to assist with deflated tires.
- Deflated tires may NOT need to be removed in order to be refilled
- Turn air compressor on and pressurize tank BEFORE attempting to refill tire
- **Confirm proper air pressure BEFORE refilling tire**
- Make sure tire inflator is connected securely to air hose BEFORE refilling tire
- Keep people and vehicles from standing on or parking on air hose
- **Check air pressure periodically while refilling** to avoid over filling the tire
- Press a key or other tool against the tire's air valve to release excess pressure
- When finished using air compressor; release pressurized air from tank and hose, disconnect & stow tire inflator, and reel-in air hose

Tire Plugs: use to plug small holes in tires. **NEVER use if sidewall of tire is damaged.** To use Tire Plugs;
1. Receive approval from motorist BEFORE using
2. Fill tire with as much air as possible (DO NOT exceed owner manual specs)
3. Locate puncture and, if needed, remove obstruction (e.g. nail)
4. Thread plug into hole of insertion needle & quickly push into puncture
5. Remove insertion needle – plug should remain in tire, sealing puncture
6. Continue to fill tire with air until proper air pressure is reached

Flat Tires & Spare Tires:

Objective: Become familiar with the guidelines and practices for working with flat & spare tires

Critical Knowledge:

Assessing Flat Tires: BEFORE providing assistance, inspect and assess the condition of the flat tire to determine how it might be fixed. Examples below;

- **Deflated** – tire appears intact but sags indicating that it has lost air pressure. Tire may just need more air and may NOT need to be removed
- **Punctured –** tire appears deflated and is pierced by a sharp object. Tire plug may fix issue but tire will likely need to be removed or even changed
- **Worn Out –** tire appears deflated, tread depth is very thin, and metal wires may be sticking out. Tire will need to be removed and replaced
- **Blown Out –** tire is largely shredded with pieces missing or hanging off. Tire will need to be removed and replaced
- **Bent/Cracked Rims –** tire may appear intact and/or inflated but rims are bent or cracked. Tire will need to be removed and replaced
- **Custom Wheels/Rims –** regardless of appearance, custom wheels/rims are costly, easy to damage, and are sometimes equipped with locks. Responders should avoid working on custom wheels/rims that are damaged

Working with Spare Tires: BEFORE providing assistance, confirm that the motorist has a spare that is properly inflated and in good condition

- **If a good spare is NOT available**;
  - Determine if refilling flat tire with air will resolve problem, **OR**
  - Ask motorist if their auto insurance includes roadside assistance, **OR**
  - Contact a wrecker – advise that wreckers will charge for service, **OR**
  - Transport motorist to the nearest safe exit with telephone access
  - **DO NOT mount a spare tire that is in poor condition**
- **Spare tires can be hard to find –** Refer to owner's manual to locate spare
- **Proper air pressure may NOT be in owner's manual –** correct pressure level is also listed on the tire's sidewall
- **Remove spare tires carefully** to avoid damaging vehicle

Unsecured Tires: Lay all unsecured tires flat on the ground to prevent them from rolling into traffic

Jack, Jack Stand & Wheel Chock Placement:

Objective: Learn about proper placement of jacks, jack stands, & wheel chocks

Critical Knowledge:

- **A – Jack & Stand Placement:**
  - This diagram shows a typical vehicle chassis (left) & unibody frame (right)
  - **GREEN =** Solid parts of frame that can support vehicle's weight
  - **RED =** Weaker parts of frame that support vehicle parts (transmission, etc.) but CANNOT support weight of vehicle
  - **ORANGE =** Optimal locations to place Jack and Jack Stands

- **B – Jack & Stand in Use:**
  - This image shows the rolling jack and jack stand placed properly
  - They are pushing against a **solid portion of the frame** and are located **near the tire that will be changed**

- **C – Shock Bracket:**
  - This image shows the "shock bracket" in **ORANGE**. Each tire has a shock bracket near the axle.
  - This is also a solid location to place a jack – especially the **bottle jack**

- **D – Wheel Chock Placement:**
  - This diagram shows where wheel chocks should be placed **to prevent vehicles from rolling**
  - Chocks should be placed snuggly in front of or behind tires
  - Place on the side of the tire **of the direction that you DO NOT want the vehicle to roll**
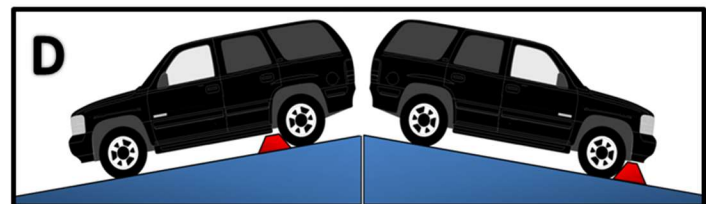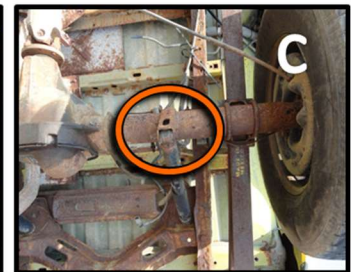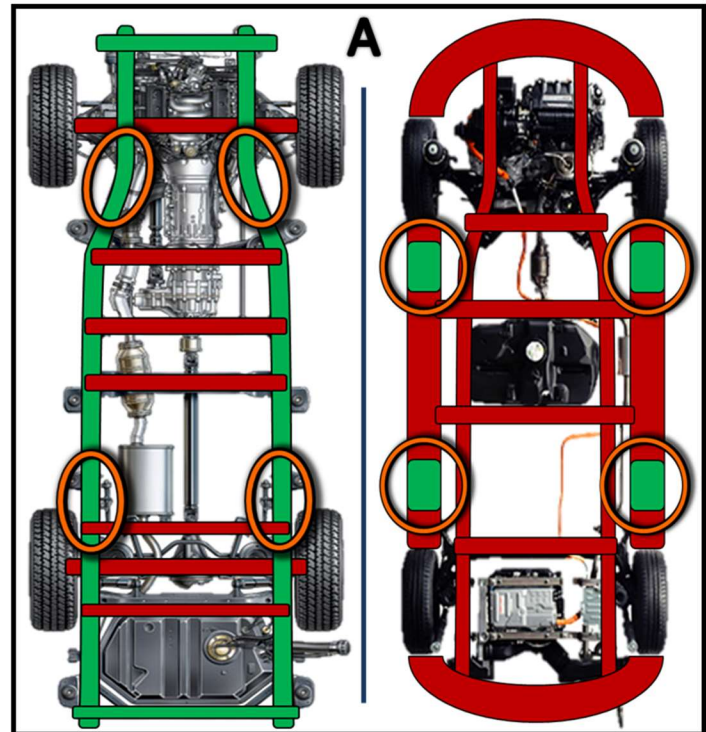
Wheel Chocks and Jack Stands MUST be used whenever a vehicle is raised.

Refilling Deflated Tires:

Objective: Review step-by-step instructions for how to refill a deflated tire

1. Assess on-coming traffic and assure that you are safely away from the road
   a. Instruct motorist to relocate vehicle if needed
   b. Continue to monitor traffic while the motorist does the same throughout process
2. **Put on PPE** – reflective vest, work gloves & safety glasses are mandatory
3. Inspect flat tire and determine if refilling with air may resolve issue
4. Locate and inspect condition of motorist's spare tire
5. Instruct motorist to turn off engine and engage parking brake
6. Keep motorist away from traffic & **DO NOT** allow them to stand in between your truck & their vehicle – they must watch for on-coming traffic, unless prevented to do so (i.e., amputation, etc.)
7. Turn on air compressor and allow tank to pressurize
8. Retrieve tire inflator & pressure gauge and pull air hose to deflated tire
9. Connect tire inflator & pressure gauge securely to air hose
10. Refer to owner's manual/tire sidewall to determine proper air pressure for tire
11. Use pressure gauge to determine what the tire's starting air pressure is
12. When air tank has pressurized, connect tire inflator to tire's air valve
13. Depress tire inflator's handle to allow pressurized air to flow into the tire
    a. Avoid kinks or knots in air hose – this will restrict air flow
    b. Keep people and vehicles from standing on or parking on hose
14. Release tire inflator's handle periodically to check current pressure in tire
15. Continue to fill tire with air until tire pressure reaches appropriate level
    a. **If tire does NOT inflate;**
        i. Air may be escaping from tire
        ii. Tank may not be pressurized or hose may be blocked/leaking
    b. **If tire bulges or inflates unevenly, tire may be damaged;**
        i. Stop refilling immediately
        ii. Consider replacing the tire with a spare
    c. **If you hear air leaking, tire is still losing air and will deflate**
16. When finished, turn off air compressor and release air from tank and air hose
17. Wait 5 minutes and check air pressure to see if air is still leaking out of tire
    a. If air pressure has dropped, remove and replace tire with spare
    b. If air pressure has NOT dropped, stow equipment and alert motorist

Changing Flat Tires:

Objective: Review step-by-step instructions for how to change a flat tire

1. Assess on-coming traffic and assure that you are safely away from the road
   a. Instruct motorist to relocate vehicle if needed
   b. Continue to monitor traffic throughout process
   c. **For IMAP:** Always call for backup if changing your own tire in the field
2. **Put on PPE** – reflective vest, work gloves & safety glasses are mandatory
3. Inspect flat tire and determine if refilling with air may resolve issue
4. Locate and inspect condition of motorist's spare tire
5. Instruct motorist to turn off engine and engage parking brake
6. Keep motorist away from traffic & **DO NOT** allow them to stand in between your truck & their vehicle – they must watch for on-coming traffic unless something is preventing them from doing so (i.e., amputation, etc.)
7. Retrieve all necessary equipment and set up work space near flat tire
   a. **For IMAP:** Remove all equipment & spare tire BEFORE raising truck
8. Place wheel chock(s) to prevent vehicle from rolling unintentionally
9. Position jack properly beneath vehicle, near the tire that needs to be changed
   a. **For IMAP:** Use bottle jack stabilized with flat piece of metal
10. Raise vehicle slightly but assure tire is still making solid contact with ground
11. Place jack stand(s) properly underneath vehicle, near the jack
12. Remove the hub cap and LOOSEN, but DO NOT REMOVE lug nuts
13. Inspect jack position to assure it has not slipped out of place
14. Continue to raise jack until flat tire is no longer making contact with ground
15. Raise and reposition jack stand(s) so that vehicle is stabilized and supported
16. Remove all lug nuts and place them in a safe location to prevent losing them
17. Remove flat tire and move it out of your work space
18. Retrieve spare tire and mount it on the exposed hub so that it is flush with hub
    a. Vehicle may need to be raised further in order for the spare to fit
    b. Larger spares can be hard to lift – use a sturdy tool to lever into place
19. Thread all lug nuts into place by hand
20. Tighten 1st lug nut with wrench; move in **crisscross pattern** to tighten the rest
21. Remove jack stand(s) & lower vehicle slowly – **make sure area is clear**, first
22. Use 4-Way/breaker bar wrench to confirm that all lug nuts are tightened securely
23. Replace hub cap and return flat tire to motorist's vehicle
    a. **For IMAP:** Return flat to maintenance and document in EMR booklet
24. Collect all equipment and return it to its proper location on the IMAP truck

Providing Fuel to Motorists

Description:

Become familiar with the equipment, guidelines and processes used to provide fuel to motorists.

Objectives:

- Learn about the equipment & guidelines used by IMAP to provide fuel

- Review step-by-step instructions for how to provide fuel to motorists

Audience: IMAP Responders

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach

Refueling Equipment & Primary Guidelines:

Objective: Learn about the equipment & guidelines used by IMAP to provide fuel

Critical Knowledge:

Refueling & Quick Dry Equipment:

- **2 Gallon Fuel Cans –** Each truck is equipped with two, 2 gallon cans

- **5 Gallon Fuel Cans –** Smaller fuel cans may be used in-place of 5 gal. cans

- **Cans may carry GAS or DIESEL fuel –** Responders must label cans

- **Funnel –** Used to prevent spilling when dispensing fuel

- **Quick Dry –** Used to increase traction where diesel fuel has spilled

- **Push Broom –** Often used to spread Quick Dry evenly over spilled fluids

Equipment Care Guidelines:

- Fuel cans may only be stored in the bed of the IMAP truck

- Properly secure fuel cans by running a locking cable through each can

- BEFORE every shift – count, inspect & properly secure all fuel cans

- AFTER every shift – refill all fuel cans and return them to IMAP truck

Primary Guidelines for Providing Fuel to Motorists:

- Wear proper PPE – especially reflective vest and safety glasses

- Consider which side of vehicle the fuel tank is on when positioning truck

- Only give motorists enough fuel to reach the next safe exit with gas station
    - Gas maximum: 2 gallons
    - Diesel maximum: 5 gallons
    - Larger vehicles or those parked on an incline may require more fuel

- IMAP only provides regular gas and diesel fuel

- Face traffic while refueling and look up often to keep an eye on traffic

- Ask motorists to attempt starting their vehicle BEFORE dispensing fuel

Providing Fuel to Motorists:

Objective: Review step-by-step instructions for how to provide fuel to motorists

1. Assess on-coming traffic and assure that you are safely away from the road
   a. Help motorist relocate vehicle or temporarily hold lane if needed
   b. Continue to monitor traffic throughout process

2. Instruct motorist to attempt starting their engine – if vehicle starts;
   a. Check fuel gauge & provide fuel if tank is nearly empty
   b. If tank has enough fuel, follow motorist to nearest gas station

3. Keep motorist away from traffic & **DO NOT** allow them to stand in between your truck & their vehicle – they may help you watch on-coming traffic with an air horn to keep everyone as safe as possible. Use horn if danger arises.

4. Ask motorist to confirm proper fuel type (gas or diesel)
   a. Regular gas can be used in vehicles that use higher octane gasoline but vehicle may run "rough" until refilled with higher octane gas
   b. IMAP may inform motorist of use of regular gasoline in high octane vehicle and offer enough regular gasoline to reach a gas station, OR
   c. Offer to transport motorist to gas station to purchase fuel

5. Retrieve proper fuel can and funnel from truck and safely return to vehicle

6. Remove cap from fuel tank

7. Insert funnel securely into fuel tank – hold funnel steady while refueling

8. Uncap fuel can and carefully pour fuel into wide-end of funnel

9. When finished providing fuel, remove funnel and replace fuel tank cap

10. Instruct motorist to try starting their engine – if vehicle still does not start;
    a. Provide 1-2 more gallons of fuel and attempt re-starting engine
    b. Offer to help arrange for further assistance (e.g. AAA or wrecker)

11. Evenly spread Quick Dry over any spilled diesel fuel to increase traction

12. Collect all equipment & return to its proper location on the IMAP truck

13. Once the motorist's vehicle starts, instruct them to refuel completely at the nearest gas station

Dispensing Quick Dry

Description:

Become familiar with the guidelines & process for dispensing Quick Dry to increase traction where fluids have spilled on the roadway

Objectives:

- Learn how Quick Dry is used & explore related equipment used for fluid spills

- Receive guidance & learn strategies for dispensing Quick Dry properly

Audience: IMAP Responders

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics

Quick Dry Use & Equipment:

Objective: Learn how Quick Dry is used & explore related equipment for fluid spills

Critical Knowledge:

- **Quick Dry –** a white, granular powder which is spread over fluid spills to **increase traction on the roadway**
    - In some regions, **Oil Dry** may also be carried by IMAP Responders
    - Oil Dry is used in the same way as Quick Dry but may be easier to dispense in high wind due to its heavier grains (similar to kitty-litter)

- **Additional Uses/Benefits of Quick Dry:**
    - **Containing Spills –** by pouring extra Quick Dry at edges of spill, Responders can create a dam to prevent the fluid from spreading
    - **Protecting Fresh Water –** by absorbing & containing spills, Quick Dry can prevent toxic fluids from contaminating water sources

- **IMAP Responders should use Quick Dry on fluids that;**
    - Are NOT immediately life-threatening
    - Cause slick spots on roadway (e.g. diesel fuel, engine oil, etc.)
    - Threaten to contaminate fresh water (e.g. 1+ gallon of gasoline)
    - **For high-volume spills, notify the local Fire Department**

- **Quick Dry Equipment & Guidelines:**
    - **Safety glasses –** mandatory PPE to protect eyes from Quick Dry
    - **Gloves –** Mandatory PPE to protect hands from any kind of splash or contamination
    - **1-5 Gallon bucket –** for carrying & dispensing Quick Dry
    - **Extra Quick Dry bags –** for refilling bucket as needed
    - **Push Broom –** for spreading & sweeping up Quick Dry
    - Refill & re-stock Quick Dry during daily vehicle inspections
    - Store Quick Dry in a secure, dry location

Safety Glasses: **Bucket:**   **Extra Bag:**   **Push Broom:**

Dispensing Quick Dry for Fluid Spills:

Objective: Receive guidance & learn strategies for dispensing Quick Dry properly

Critical Knowledge:

- **General Usage Guidelines for Quick Dry:**
    - Dispense Quick Dry by hand until spill area is evenly covered
    - If possible, stand upwind to avoid Quick Dry being blown into face
    - Avoid stepping in spill to prevent self-contamination
    - Use push broom to spread evenly over larger spill areas
    - Sweep excess to shoulder but leave enough on road for traction
    - DO NOT sweep Quick Dry onto grass/soil – fluids absorbed by Quick Dry can seep into & contaminate groundwater

- **For medium-large spills** (e.g. ruptured fuel tanks), **IMAP Responders should;**
    - Stop the leak, if possible, **OR**
    - Place **Pop-Up Pool** under leak source to catch leaking fluids
    - Create Quick Dry dams at edge of spill to keep fluid from spreading
    - Concentrate damming efforts at areas where fluids may spill into fresh water sources such as creeks or storm drains
    - Spread Quick Dry over remaining spill area – work from the far edge of the spill back to the spill's source
    - Continue to dispense Quick Dry until no pools of fluid remain
    - Sweep excess Quick Dry to shoulder
    - If Pop-Up Pool was used, call local Fire Dept. to come & collect the pool for proper disposal

Pop-Up Pool in Bag (left) **& Unfolded for Use** (right)**:**

Description:

Become familiar with the guidelines & process for transporting stranded motorists

Objectives:
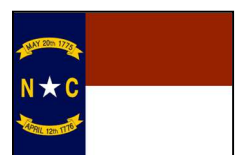
- Learn about the guidelines & process for transporting stranded motorists

Audience: IMAP Responders

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol

Guidelines for Transporting Motorists:

Objective: Learn about the guidelines & process for transporting stranded motorists

Critical Knowledge:

- IMAP responders can assist stranded motorists by transporting them to the **nearest safe exit that is well-lit and has telephone access**

- **Primary Guidelines for Transporting Motorists:**
  - IMAP responders must contact TMC dispatch BEFORE & AFTER transporting motorists
  - If TMC dispatch is NOT available in your region, motorist must complete a **"Rider Agreement"** form before entering the vehicle
  - IMAP responders must observe all safety precautions and driving laws when transporting motorists
  - All motorists riding in an IMAP truck must wear a seatbelt & children must be in appropriate child seat – request assistance from law enforcement if enough seatbelts are NOT available
  - Motorists should NOT be transported beyond the drop-off location where their vehicle was towed
  - DO NOT make any stops (including incidents) while transporting motorists
  - DO NOT stop for hitchhikers – notify TMC dispatch to contact law enforcement
  - Remind passengers to retrieve ALL personal items (e.g. purses, cell phones, etc.) before dropping them off – responders should also check their own equipment/items to assure nothing has been taken
  - Motorists may dial ***HP** if assistance is needed after drop-off

- **Info IMAP Must Relay to TMC Dispatch:**
  - IMAP truck mileage BEFORE transport
  - Number of passenger(s) & gender
  - Location transporting FROM
  - Location transporting TO
  - IMAP truck mileage AFTER transport

Jumpstarting
Disabled Vehicles

Description:

Become familiar with the guidelines & processes used to jumpstart disabled vehicles

Objectives:

- Gain in-depth knowledge of jumpstarting equipment

- Learn about the guidelines & safety precautions for jumpstarting disabled vehicles

- Review steps for jumpstarting disabled vehicles using external jumper cables

- Explore additional steps & guidelines for jumpstarting disabled vehicles

Audience: IMAP Responders

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach

Jumpstarting Equipment:

Objective: Gain in-depth knowledge of jumpstarting equipment.

Critical Knowledge:

Primary Jumpstarting Equipment:
- **Standard Jumper Cables –** two insulated cables with black (negative) & red (positive) clamps at both ends to connect a live battery to a dead battery.
- **External Jumper Hookup –** located on IMAP's front/rear bumper; provides connection to truck's battery without lifting hood to engine
- **External Jumper Cables –** similar to standard jumper cables except one end has black (-) and red (+) clamps while the other connects to the external jumper hookup
- **Jump Box –** portable battery pack that can be used to jumpstart a disabled vehicle without connecting the dead battery to the IMAP truck

Additional Jumpstarting Equipment & PPE:
- **Work Gloves –** mandatory PPE when jumpstarting; prevents injury to IMAP Responder from electrical shock and/or corrosive battery chemicals
- **Safety Glasses –** mandatory PPE when jumpstarting; prevents damage to IMAP Responders' eyes from toxic/corrosive battery fumes or chemicals
- **Flashlight –** helps IMAP Responder correctly identify battery components
- **Stiff Wire Brush –** can help Responder remove build-up of corrosive chemicals around battery terminals which can prevent battery from fully charging

Equipment Care:
- IMAP Responders are responsible for keeping their equipment in good condition and ready for use
- Jumper cables should be stored neatly so that kinks do not develop
- Inspect jumper cables BEFORE connecting and DO NOT use if;
  - Insulation is missing or damaged
  - Internal wires are exposed
- External jumper hookup cover should be replaced when not in use
- Jump box must be fully charged before being used

Guidelines for Jumpstarting Disabled Vehicles:

Objective: Learn about the guidelines & safety precautions for jumpstarting disabled vehicles.

Critical Knowledge:

- **NEVER attempt to jumpstart a dead battery that is;**
  - Frozen, expanded, or warped
  - Otherwise visibly damaged (e.g. cracked, leaking, or smoking)

Positive Terminal   **Vent Cap**   **Negative Terminal**

CAR BATTERY
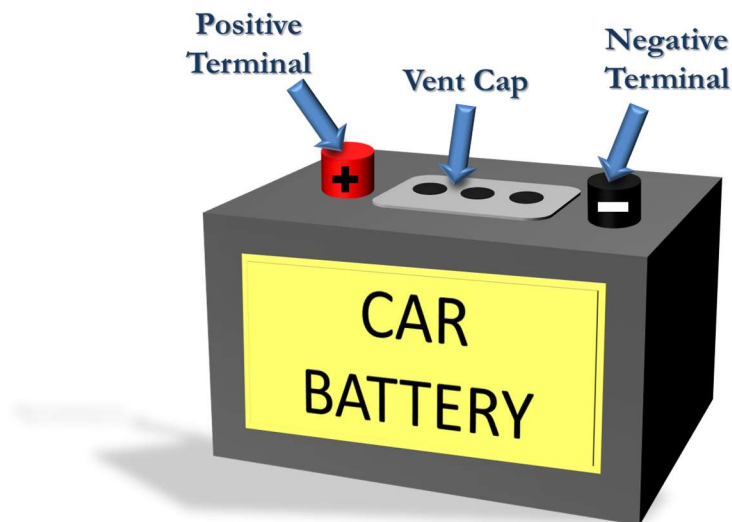
- **Use caution when jumpstarting vehicles to avoid damage/injury:**
  - **DO NOT stand between the IMAP truck and the disabled vehicle –** you could be pinned between them if they move suddenly
  - Use owner's manual to confirm live & dead batteries are same voltage
  - Vent caps of dead battery should be tight and level
  - Connect & remove jumper cables to battery in the proper order
  - Positive & negative clamps should NOT touch one another
  - Hold each clamp separately when handling live cables
  - Keep cables away from moving parts within the engine compartment
  - DO NOT attach black (-) clamp to painted or oily pieces of metal when grounding the connection with the disabled vehicle
  - Disconnect jumper cables if smoke is seen coming from the battery
  - **IMAP truck must be OFF at all times when jumpstarting luxury vehicles** (Mercedes, BMW, etc.)

Jumpstarting a Disabled Vehicle:

Objective: Review steps for jumpstarting disabled vehicles using external jumper cables

1. Assess on-coming traffic and assure that you are safely away from the road
   a. Help motorist relocate vehicle or temporarily hold lane if needed
   b. Continue to monitor traffic throughout process

2. Put on required PPE and keep motorist away from traffic – No one should stand between IMAP truck & disabled vehicle

3. Review owner's manual & raise vehicle's hood to inspect & confirm;
   a. Dead battery is NOT damaged & same voltage as IMAP truck
   b. Vent caps of dead battery are tight and level

4. Instruct motorist to try to start their engine – while restarting look/listen for;
   a. Vehicle lights off/flicker or engine fails to start, battery may be dead
   b. If vehicle starts, stay with motorist while battery recharges

5. Move IMAP truck in front of disabled vehicle, **leaving space between the IMAP truck & disabled vehicle**

6. Make sure vehicle & IMAP truck are OFF & parked with emergency brakes ON and all electrical components are OFF
   a. **Keep arrow board and emergency lights ON** – turn IMAP truck key to AUXILIARY

7. Remove cover from IMAP truck's external jumper hookup, retrieve external jumper cables, and safely return to vehicle

   a. **Use Jump Box prior to the external jumper hookup**. If this does not work, proceed with the external jumper hookup.

8. Attach red (+) jumper cable clamp to dead battery's red (+) terminal

9. Attach black (-) clamp to a piece of grounded metal on the disabled vehicle

10. Insert external jumper cable plug into hookup on front/rear bumper

11. Start the IMAP truck and allow dead battery to charge for 5-10 minutes – **Keep IMAP truck OFF when charging luxury vehicles**

12. Start disabled vehicle & let engine run for 10-20 minutes to fully charge battery
    a. If engine starts but battery light is ON, battery may NOT be charging – instruct motorist to seek assistance/replace battery immediately
    b. If engine does NOT start, dead battery may NOT be the issue – stay with motorist and help arrange further roadside assistance

13. Once vehicle starts & is fully charged, disconnect & store jumper cables and replace cover on external jumper hookup

Additional Guidance for Jumpstarting Disabled Vehicles:

Objective: Explore additional steps & guidelines for jumpstarting disabled vehicles.

Critical Knowledge:

- **Standard jumper cables** (if used) should be connected in the order below & disconnected by reversing the order of these steps;
    1. Red (+) clamp to dead battery's red (+) terminal
    2. Red (+) clamp to IMAP battery's red (+) terminal
    3. Black (-) clamp to IMAP battery's black (-) terminal
    4. Black (-) clamp to metallic ground of disabled vehicle

- **To use the Jump Box,** follow normal jumpstarting process and;
    1. Attach red (+) clamp to dead battery's red (+) terminal
    2. Attach black (-) clamp piece of grounded metal on disabled vehicle
    3. Jump box will automatically begin charging dead battery
        - Charging should take 5-10 minutes
        - Charging readout on box will indicate when charging is done
    4. Attempt to start disabled vehicle – if vehicle starts;
        - Let engine run for 10-20 minutes to fully charge
        - Disconnected cables and return jump box to IMAP truck

- IMAP Responders may jumpstart other vehicle types (e.g. electric vehicles, motorcycles, etc.) but must refer to owner's manual, FIRST to find specific process for each vehicle

Description:

Become familiar with the concepts related to cooling systems and guidelines for responding to overheated vehicles

Objectives:

- Learn basic concepts related to cooling systems & overheated vehicles

- Review basic steps & instructions for responding to overheated vehicles

Audience: IMAP Responders

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
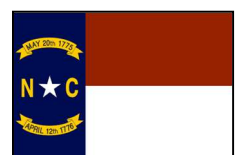
Introduction to Cooling Systems & Overheated Vehicles:

Objective: Learn basic concepts related to cooling systems & overheated vehicles

Critical Knowledge:

- **IMAP Responders assist motorists with overheated vehicles by;**
    - Checking coolant levels & looking for damage to cooling system
    - Pouring **water** into coolant reserve tank (or directly into radiator)
    - Helping motorist arrange for further assistance if needed

- **Components of a Typical Vehicle's Cooling System:**
    - **Radiator** – keeps coolant at appropriate temperature & circulates coolant through engine
    - **Coolant Reserve Tank** – plastic tank that releases excess coolant into radiator when needed (some vehicles may only have radiator)
    - **Radiator Hoses –** carries coolant to/from radiator and engine
    - **Thermostat –** controls the amount of coolant sent to the engine

- **General Knowledge about Overheated Vehicles:**
    - Vehicles most often overheat due to a lack of coolant
    - Most vehicles hold 2-3 gallons of coolant
    - Water can be used for coolant but as a temporary measure ONLY
    - Coolant in overheated vehicles is VERY HOT & under pressure which can cause SERIOUS injury
    - Engine block may crack if cold water is poured into hot engines
    - Water should be poured into coolant reserve tank OR directly into radiator if vehicle does NOT have a coolant reserve tank
    - Overheated vehicles may need 30+ minutes to cool down completely
    - Vehicle must be ON in order to pump coolant/water to engine

- **IMAP Equipment Guidelines for Overheated Vehicles:**
    - **Work gloves & safety glasses –** mandatory PPE
    - **3-5, 1-gallon water cans** – inspect & refill before each shift
    - Responders may add a small amount of EPA-friendly antifreeze to their water cans to prevent water from freezing in cold weather
    - **Rag –** place over radiator cap for additional protection from steam

Overheated Vehicle Response Process:

Objective: Review basic steps & instructions for responding to overheated vehicles

1. Have an ESCAPE ROUTE
2. Follow all guidelines from the Vehicle Positioning Process (ON SHOULDER)
3. Put on appropriate PPE (e.g. reflective vest, work gloves & safety glasses)
4. Approach vehicle & confirm motorist's vehicle is off & emergency brake is on
5. Have motorists stand in the safest location possible, watch for traffic to ensure safety of themselves and IMAP Responder while utilizing the air horn
6. Check for steam & look under car for signs of coolant leaks
   a. White clouds = steam
   b. Black/Gray clouds = smoke – follow procedure for Vehicle Fires
7. Raise hood carefully to avoid steam & allow engine to cool sufficiently
8. Check pressure of the radiator hose. If the hose is tight and cannot be squeezed together, there is pressure in the system. DO NOT OPEN RADIATOR CAP
9. Check cooling system for cracks/holes – if found, DO NOT add water until engine has cooled off completely (a wrecker will likely be needed for motorist)
10. Check coolant level in radiator/coolant reserve tank
    a. If empty, adding water may help vehicle run without overheating
    b. If full, issue may be mechanical – offer to call a wrecker for motorist
11. Inspect hoses & clamps – tighten or reattach if needed
    a. If main hose feels hard, hose is filled with hot coolant under pressure
    b. Responder must wait a few more minutes before opening radiator cap
12. Place rag over radiator cap & give cap a half turn to vent remaining pressure
    a. Use extreme caution to avoid steam
    b. A tight cap may mean HIGH pressure – allow more time to cool
13. When engine is cool enough for water, instruct motorist to turn vehicle on
14. Pour water into coolant reserve tank/radiator
    a. Coolant reserve tank – add water up to tank's DO NOT FILL line
    b. Radiator, only – add water until it is just visible but DO NOT top off
15. Replace caps to radiator and/or coolant reserve tank
16. Check vehicle's temperature gauge
    a. If gauge stays in RED, turn engine off & offer to call a wrecker
    b. If gauge reads normal, close vehicle's hood
17. Before sending motorist on their way, instruct them to;
    a. Seek long-term repair as soon as possible (especially in winter months)
    b. Watch temperature gauge carefully & allow enough time to reach a gas station/service center before vehicle overheats again
    c. If able to, turn off the heat inside the vehicle to pull more heat from the engine and keep it cooler while trying to make it to the next exit

Description:

Become familiar with the proper actions and safety precautions used by IMAP when positioning the IMAP truck at incident scenes and when the responder has exited the truck to approach the scene

Objectives:

- Become familiar with the Incident Work Zone and explore the common arrangement of responders on an incident scene

- Learn where responders should park the IMAP truck upon arriving on scene and proper distance from the incident

- Learn how to properly position the IMAP truck and understand how & when to angle tires

- Review different arrow board settings and vehicle lights and understand their use

- Review step-by-step instructions for how to position the IMAP truck for incidents on shoulders and in lanes

- Review step-by-step instructions for how to safely exit the IMAP truck

- Review step-by-step instructions for how to approach incidents on shoulders and in lanes

- Learn where to safely park the IMAP truck for incidents behind hills or curves

- Explore other safety precautions and considerations for responders' initial arrival on scene

Audience: IMAP Responders

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Communication Protocol
- VE-104: Driving Techniques

The Incident Work Zone:

Objective: Become familiar with the Incident Work Zone and explore the common arrangement of responders on an incident scene

Critical Knowledge:

- One of IMAP's main functions is to provide emergency traffic control (ETC) around an incident scene

- Incident Work Zone – the area that contains the incident and various response vehicles and separates responders and victims from on-coming traffic

- IMAP's goal is to create a SAFE Incident Work Zone that helps KEEP TRAFFIC MOVING

- Proper positioning of the IMAP truck is critical to creating a safe Incident Work Zone

- IMAP truck position establishes the BEGINNING of the Incident Work Zone

- Emergency vehicle lights and arrow board on IMAP truck also protect safety and help direct traffic

- IMAP responders must allow room for other responders to position their vehicles and operate their equipment

- If needed, IMAP responders should reposition their truck to;
    - Provide additional room for responders
    - Assure that motorists can see their truck in time to react safely
    - Close additional lanes to maintain a safe Incident Work Zone

Diagram of a Typical Incident Work Zone:

Wrecker: Access to damaged vehicle(s). Able to pull away from scene easily

Ambulance (EMS): Access to injured person(s). Able to leave scene quickly

INCIDENT SCENE: Where damaged vehicles are located and where clearance activities occur

Fire Truck: Takes LANE + 1. Acts as additional barrier and screens incident from view

Law Enforcement Patrol Unit: Additional barrier against stray vehicles. Establishes Investigation Area

IMAP Truck: 1st physical barrier against stray vehicles. Displays arrow board (←) to direct traffic to merge

Traffic Control (cones): Direct traffic away from and around incident scene

Staging Area

Incident Scene

Investigation Area

Incident Work Zone

LEFT SHOULDER

RIGHT SHOULDER
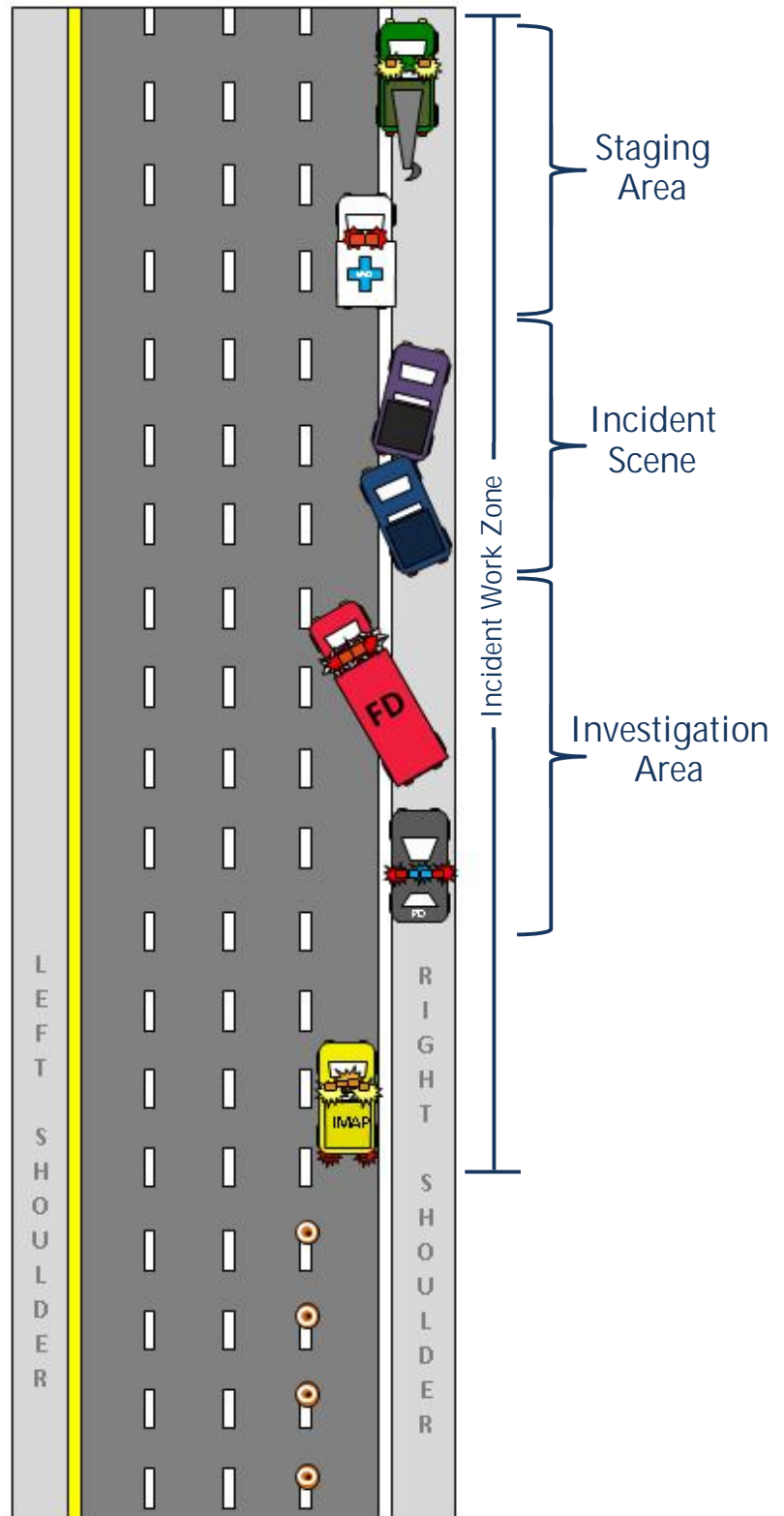
Where to Park Upon Arrival:

Objective: Learn where responders should park the IMAP truck upon arriving on scene and proper distance from the incident

Critical Knowledge:

- Where to park changes for every incident – responders' should park in a location that;
    - Makes the IMAP truck & arrow board as visible as possible
    - Provides the most protection for the IMAP responder
    - Is wide enough and can support weight of the IMAP truck

- DO NOT park on the opposite side of the road or in the opposite direction unless absolutely necessary

- Try to close lanes that are already blocked by the incident or other response vehicles

- Parking distance – leave enough room for additional responders to arrive and provide a buffer zone between traffic and incident scene

- HazMat parking distance – refer to the Emergency Response Guidebook (ERG) to determine safest parking distance

- Reposition IMAP truck to new location whenever needed – especially as the incident scene changes (e.g. lanes close or reopen)

How to Position IMAP Vehicle:

Objective: Learn how to properly position the IMAP vehicle and understand how and when to angle tires to provide additional protection

Critical Knowledge:

- How to position the IMAP truck changes for every incident – responders should position their vehicle so that;
    o On-coming traffic views arrow board head on – NOT at an angle
    o IMAP responder's approach to/from the incident is protected
    o If struck, IMAP truck and stray vehicle will be deflected AWAY from the responder and incident scene

- Off-set Position – try to position the truck so that it is slightly to the right or left of the vehicle in front of it
    o Helps protect responder's approach path/escape route
    o Do NOT block a lane in order to off-set truck

- Angle Truck for Arrow Board – when positioning near curves, responders may angle truck slightly so motorists view arrow board head on

- Angle Tires – when parked, angle front tires AWAY from responder's approach path/escape route & incident in case IMAP truck is struck

Left Shoulder	Center Lane	Right Shoulder
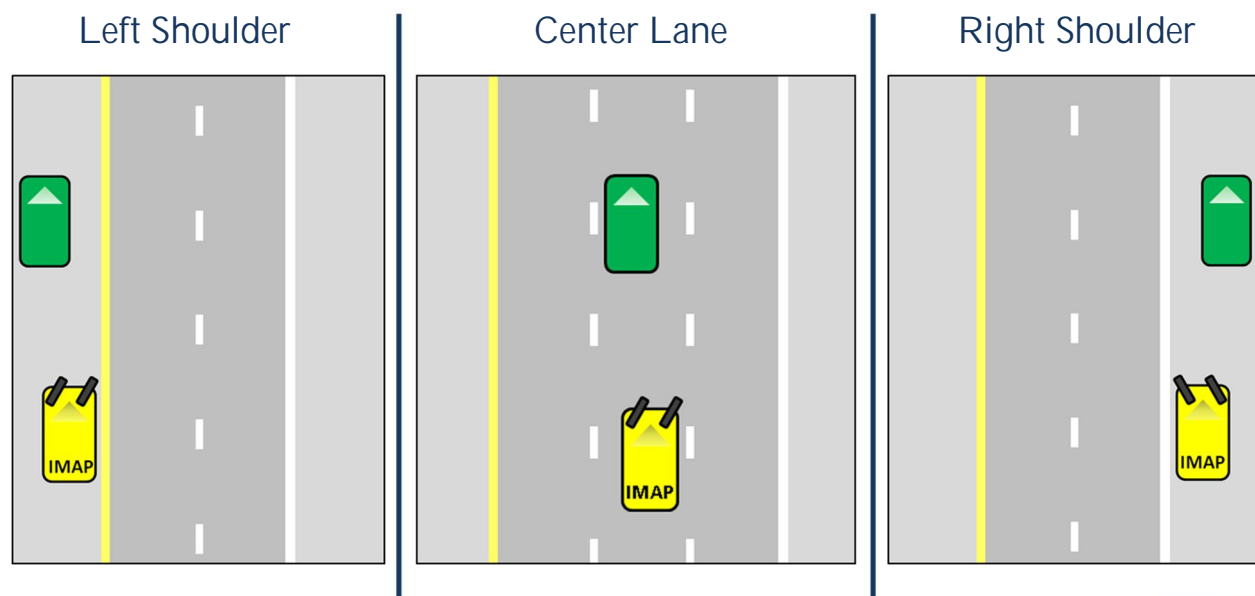
Arrow Board & Emergency Lights:

Objective: Review emergency lights & arrow board displays and understand their use

Critical Knowledge:

- Four Dots (∴ ∶) = CAUTION. Use to indicate that occupied shoulder or road ahead is NOT available for travel

- Right Arrow (→) = MERGE RIGHT. Use when blocking left lanes to instruct motorists to merge into the adjacent right lanes

- Left Arrow (←) = MERGE LEFT. Use when blocking right lanes to instruct motorists to merge into the adjacent left lanes

- Dual Arrow (←→) = MERGE LEFT or RIGHT. Use when blocking center lanes to instruct motorists to merge into the adjacent left or right lanes

- Do NOT use any BLINKING, ANIMATED, or SYNCHRONIZED arrow displays

- Activate ALL emergency lights as soon as incident is in sight OR when traffic backup created by the incident is encountered
  - All emergency lights should remain ON while on-scene
  - Deactivate emergency lights AFTER departing scene and once truck is back up to speed

- Activate arrow board upon arrival – Deactivate arrow board once safely clear from incident scene

- Check arrow board & emergency lights EVERY time you exit the IMAP truck
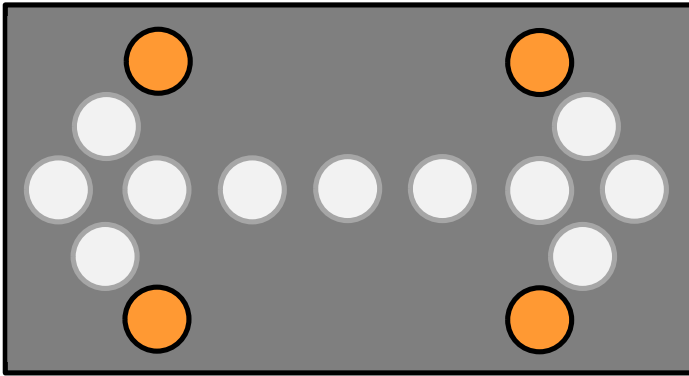
Arrow Board Diagrams:

Four Dots = CAUTION
Use to indicate that occupied shoulder or road ahead is NOT available for travel

Right Arrow = MERGE RIGHT
Use when blocking left lanes to instruct motorists to merge into the adjacent right lanes
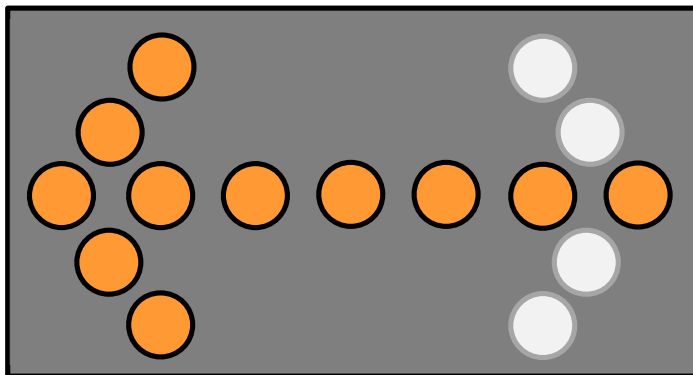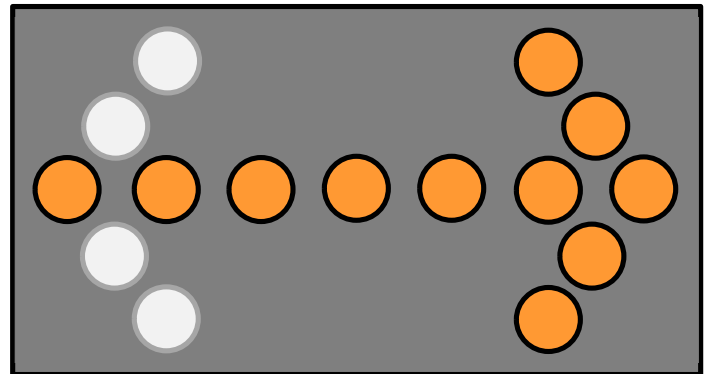
Left Arrow = MERGE LEFT
Use when blocking right lanes to instruct motorists to merge into the adjacent left lanes

Dual Arrow = MERGE LEFT or RIGHT
Use when blocking center lanes to instruct motorists to merge into the adjacent left or right lanes
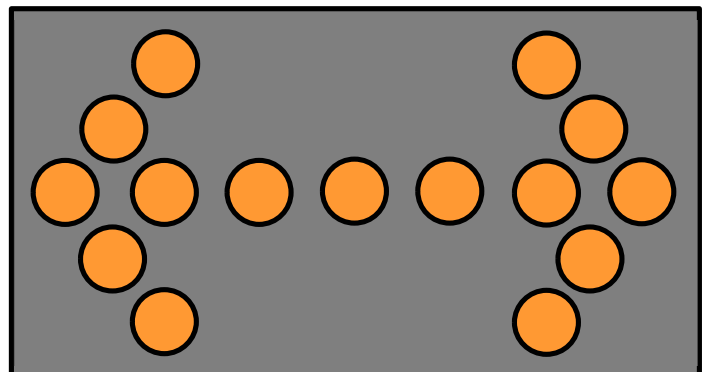
Vehicle Positioning Process (ON SHOULDER):

Objective: Review step-by-step instructions for how to position the IMAP truck for incidents on shoulders

Step-by-Step Process:

1. Activate all emergency lights once incident is in sight or backup from incident is encountered

2. Assess the scene and plan an escape route

3. Park truck to provide sufficient room for responders

4. Position truck properly (off-set if possible; angle truck if needed)

5. Activate CAUTION display on arrow board

6. Contact TMC – provide initial incident details BEFORE exiting vehicle

7. Set parking brake

8. Roll down driver-side window

9. Turn front wheels AWAY from escape route and incident work zone

10. Put on reflective vest & bring along other appropriate PPE (e.g. work gloves, safety glasses, etc.)

11. Bring handheld radio and any other neccesary communication devices (e.g. cell/direct connect)

12. Prepare to exit vehicle and check arrow board and lights

Vehicle Positioning Process (IN LANE):

Objective: Review step-by-step instructions for how to position the IMAP truck for incidents in lanes

Step-by-Step Process:

1. Activate all emergency lights once incident is in sight or backup from incident is encountered

2. Assess the scene and plan an escape route

3. Park truck to provide sufficient room for responders

4. Position truck properly (off-set if possible; angle truck if needed)

5. Activate arrow board with appropriate arrow display

6. Contact TMC – provide initial incident details BEFORE exiting vehicle

7. Set parking brake

8. Roll down driver-side window

9. Turn front wheels AWAY from escape route and incident work zone

10. Put on reflective vest & bring along other appropriate PPE (e.g. work gloves, safety glasses, etc.)

11. Bring handheld radio and any other necessary communication devices (e.g. cell/direct connect)

12. Prepare to exit vehicle and check arrow board and lights

Exiting the IMAP Truck:

Objective: Review step-by-step instructions for how to safely exit the IMAP truck

Step-by-Step Process:

1. Assure that:
   a. All emergency lights are ON
   b. An escape route is planned
   c. Arrow board is activated with proper display
   d. Vehicle is parked at a sufficient distance and positioned properly
   e. TMC has been contacted
   f. Parking brake is on
   g. Appropriate PPE is on/with responder & handheld radio is in-hand

2. Check all side-view mirrors to assess on-coming traffic

3. Roll the driver-side window down

4. Crack the door to 1st latch

5. Double-check the side mirror on door closest to traffic

6. Exit truck with extreme caution

7. Close driver-side door

8. Face and assess traffic

9. Walk behind truck to check lights and arrow board

Responder Approach Process:

Objective: Review step-by-step instructions for how to approach incidents on shoulders and in lanes

Step-by-Step Process upon Exiting IMAP Truck:

1. Face and assess on-coming traffic

2. Walk behind truck and visually check arrow board and emergency lights

3. Approach vehicle/incident with extreme caution
    a. Walk within shoulder if possible
    b. Walk behind guardrail/barrier if available
    c. Approach vehicle/incident on side furthest from traffic
    d. Continuously monitor traffic from arrival to departure

4. Inspect vehicle(s) and any passenger(s) inside or nearby

5. Place hand on vehicle's trunk or side panel to leave finger prints

6. Tap trunk to assure no one is inside

7. Assess incident and render services

8. Contact TMC to relay updated information and BEFORE departing scene

9. When departing, deactivate and lower arrow board – leave all emergency lights ON until you have re-entered traffic and are back up to speed

Parking Before Hills or Curves:

Objective: Learn where to safely park IMAP truck to limit impact to traffic for incidents behind hills or curves

Critical Knowledge:

- IF an incident is located around a curve or behind a hill, THEN park truck further back so oncoming traffic can see the IMAP truck & any traffic control devices before entering the curve or cresting the hill

- IF an IMAP truck cannot reposition safely, THEN a backup unit should be called for assistance

- Rule of Thumb: If you can't see traffic coming straight at you in your rear-view mirror, reposition (safely) until you can

INCORRECT

CORRECT
(Adequate Sight Distance)

CORRECT
(Inadequate Sight Distance)
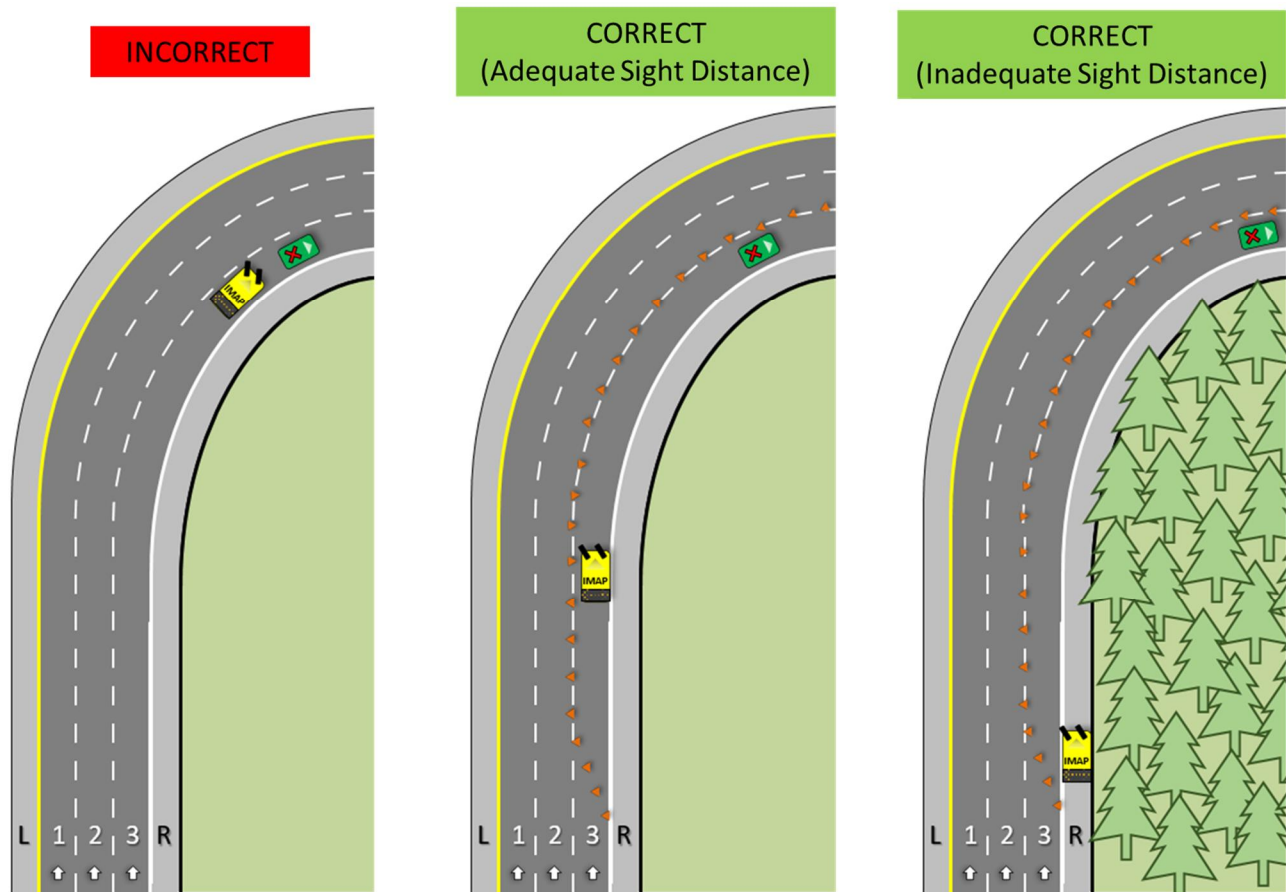
Other Safety Precautions & Considerations:

Objective: Explore other safety precautions and considerations for proper vehicle positioning and responder approach while on scene of an incident

Critical Knowledge:

- If responder believes lane(s) will be blocked for 15 minutes or more, a emergency lane closure using cones must be deployed as soon as possible

- While on scene, responders should watch for:
    - Motorists' reaction to incident & traffic control
    - Changes in congestion or traffic speed around incident scene
    - Missing, damaged, or relocated traffic control

- Before approaching a possible HazMat incident, responders should use binoculars to assess incident scene

- While on scene, responders should attempt to keep all bystanders away from travel lanes

- While providing motorist assistance, responders should ask motorists to keep an eye on traffic and alert them to possible hazards

- Reposition IMAP truck to new parking location whenever needed – especially as the incident scene changes

Description:

Become familiar with the various emergency traffic control (ETC) techniques and guidelines used by IMAP responders to manage the flow of traffic.

Objectives:

- Learn about the purpose of emergency traffic control (ETC) & important ETC terminology

- Explore IMAP's ETC resources & discuss their use

- Become familiar with the primary guidelines associated with ETC

- Learn the basic concepts related to IMAP's various ETC techniques

Audience: IMAP Responders

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach

Introduction to Emergency Traffic Control:

Objective: Learn about the purpose of emerg. traffic control (ETC) & important terminology.

Critical Knowledge:

- The purpose of emergency traffic control is to create a safe area around an incident scene while keeping traffic flowing

- **Manual on Uniform Traffic Control Devices (MUTCD):** basis for IMAP's ETC activities; especially Chapter 6I: Temporary Traffic Control

- **Downstream:** the location of areas/objects in relation to the road's normal direction of travel

- **Upstream:** the location of areas/objects opposite to the road's normal direction of travel

- **A – Termination Area:** where the Traffic Control (TC) Area ends and where traffic returns to normal operations

- **B – Activity Area:** includes entire Incident Work Zone; separated from traffic by a longitudinal buffer

- **C – Transition Area:** where traffic is shifted from closed lanes to open lanes before the Incident Work Zone

- **D – Advanced Warning (AW) Area:** where devices are placed to notify traffic of an upcoming Incident Work Zone; Proper AW is placed before backup from incident **OR** a minimum of 1½ mile from end of Transition Area

- **E – Staging Area:** where other responders (e.g. EMS) park for easy access to & rapid departure from the incident scene

- **F – Incident Scene:** where first aid is rendered and where damaged vehicles are removed

- **G – Investigation Area:** where responders park and where Incident Command occurs

Traffic Control Area

Incident Work Zone
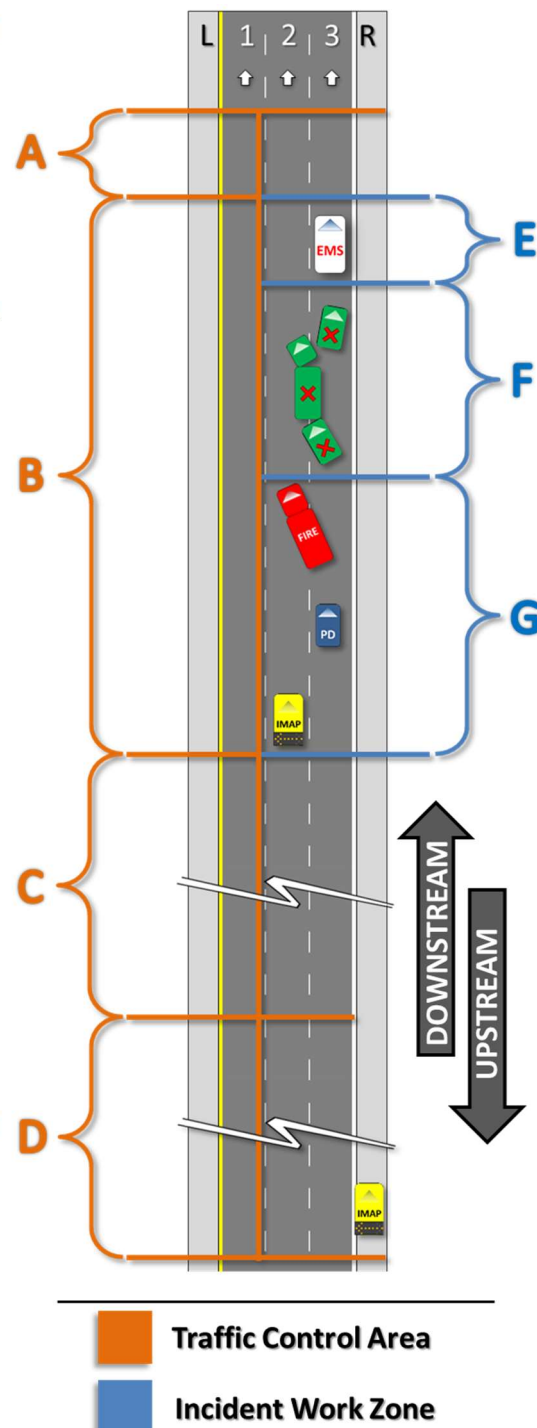
IMAP's Emergency Traffic Control Resources:

Objective: Explore IMAP's emergency traffic control resources & discuss their use.

Critical Knowledge:

- **IMAP Truck:**
    - Acts as a physical barrier between traffic and responders
    - Emergency lights make the truck more visible to motorists
    - Arrow board increases visibility & tells traffic what to do

- **IMAP Responder** (wearing reflective vest)**:**
    - Can verbally instruct motorists to stop, hold lanes, etc.
    - Use hand signals to attract motorists' attention & direct traffic

- **Traffic Cones:**
    - IMAP trucks carry a minimum of 27 traffic cones
    - Cones separate responders from traffic and shift on-coming traffic out of closed lanes and into available lanes
    - "Cone Caddy" can make hauling cones easier

- **Flares & Lighting:**
    - Flares make ETC areas easier to see at night/inclement weather
    - Flares can also provide advance warning before an incident scene
    - IMAP's Work Light helps light up incident scenes and can make the IMAP truck more visible to on-coming traffic
    - Flashlights can be used to signal motorists & direct traffic at night

- **TMC Dispatchers:**
    - Can monitor traffic around the incident and the queue behind it
    - Can notify IMAP responders of unsafe situations
    - Can activate dynamic message signs (DMS) as advance warning
    - Can plan detours/alternate routes & broadcast them to motorists

- **DOT Traffic Services/Maintenance:**
    - Brings additional ETC devices to establish "proper" ETC zones for incidents **expected** to last 2+ hours
    - Should be called as soon as possible to assure a timely response

Primary ETC Guidelines (1 of 2):

Objective: Become familiar with the primary guidelines associated with ETC.

Critical Knowledge:

- **All incidents are different –** responders must choose the ETC technique that is SAFEST and most EFFECTIVE for each circumstance

- **Minimize your exposure to traffic** as much as possible – stay out of travel lanes or behind barriers/ETC devices whenever possible

- **ALWAYS have an ESCAPE ROUTE** – even when conditions appear safe (e.g. While driving or when protected by ETC devices)

- **Try NOT to close lanes** unless absolutely necessary – if needed, only close lanes that are already blocked or must be closed for safety
  - Lanes are NEVER "partially closed"; lane is either open or closed
  - Responders must establish a lane closure using traffic cones whenever a lane is **expected** to be closed for 15 minutes or more
  - Upon arrival, determine an estimated duration as soon as possible
  - Call Traffic Services/Maintenance if closures are **expected** to last 2 hours or more

- **Motorists should NOT be surprised** by your ETC measures
  - Make yourself, your truck, and your ETC as visible as possible
  - Motorists should see your ETC well before they reach the incident
  - **Rule of Thumb –** if you CAN'T see traffic coming straight at you in your rear view mirror, reposition your truck (**safely**) until you can

- **Watch traffic carefully** and **modify your ETC as conditions change**
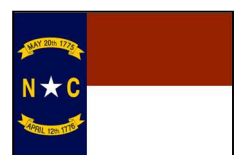
Primary ETC Guidelines (2 of 2):

Objective: Become familiar with the primary guidelines associated with ETC.

Critical Knowledge:

- **Communication is CRITICAL** – responders should;
    - Discuss their ETC plan with other IMAP units and with other responders
    - Work together with other IMAP units & clearly establish what each responder is responsible for. For example;
        - Unit 1 participates in incident command
        - Unit 2 deploys ETC devices and manages advance warning
    - Keep TMC dispatch informed

- **IMAP responders should call for backup** whenever ETC activities;
    - Are unsafe for a single unit
    - Exceed the capabilities of a single unit (i.e. more traffic cones are needed than are carried on a single truck)
    - Prevent responders from properly performing their other duties (i.e. participating in incident command, removing vehicles, etc.)

Emergency Traffic Control Techniques (1 of 2):

Objective: Learn the basic concepts related to IMAP's various ETC techniques.

Critical Knowledge:

IMAP Truck: used when stopping on the shoulder or when closures are BRIEF
- Emergency lights & arrow board MUST be properly activated
- Additional ETC measures should be used if closure may last longer than 15 minutes, if responder safety is threatened, or if visibility is limited

Emergency Rolling Roadblock: (a.k.a. "Moving Closure" or "Rolling Slowdown") used to control the speed of traffic by positioning IMAP truck(s) in front of moving vehicles & gradually slowing down or speeding up
- **Commonly used by IMAP when;**
  - Looking for debris in the roadway
  - Helping traffic get back up to speed safely after lanes are opened
- Can be performed by a single unit or multiple units
- When multiple units perform an emergency rolling roadblock, **communication is critical –** One unit should act as the leader & direct other units' actions

Motorist Cooperation: used to close lanes or divert traffic by verbally instructing lead motorists whose actions will stop or guide traffic behind them
- This method should only be used to close lanes BRIEFLY
- Responders should exercise EXTREME caution when using this method
- **Closing Lanes;**
  - IMAP responder signals lead motorists to slow & stop
  - Once stopped, responder tells each lead motorist to hold the lane until told to GO
  - When ready, responder steps out of travel lanes and instructs each lead motorist to continue forward
- **Diverting Traffic;**
  - IMAP responder signals lead motorists to slow & stop
  - Once stopped, responder tells each lead motorist which lane to move into (e.g. shoulder)
  - As lead motorist moves into lane and continues forward, responder waves traffic to follow lead motorist in new lane

Emergency Traffic Control Techniques (2 of 2):

Objective: Learn the basic concepts related to IMAP's various ETC techniques.

Critical Knowledge:

Temporary Lane Closures: used to close lanes or divert traffic by using traffic cones, arrow board, and other emergency traffic control (ETC) devices

- Use when lanes are **expected** to be closed for 15 minutes or more
- Traffic cones are used to create;
  - **Tapers** to gradually shift traffic from closed lanes to available lanes
  - **Buffers** to provide sufficient stopping distance for stray vehicles entering Activity Area and to separate responders from traffic
- ETC devices are deployed based on traffic conditions at the time of IMAP's arrival and must be modified as conditions change such as;
  - **Traffic speed increases**
  - **Sight distance is limited**

Increasing Visibility & Advance Warning: used to better attract motorists' attention & provide additional time to react before reaching the incident.

- **Initial vs. Proper Advance Warning (AW) –** Initial AW are basic measures (e.g. flares) deployed near Incident Work Zone. Proper AW are more complete measures positioned before backup from incident **OR** a minimum of 1½ miles from end of Transition Area
- **Flares** – can be used to increase visibility and as AW. Flares are placed in between traffic cones or on the shoulder before Incident Work Zone
- **Additional IMAP Unit –** can provide AW by parking before Transition Area. Advance warning unit should;
  - Activate all emergency lights & arrow board
  - Park before incident backup **OR** 1½ mile before Transition Area
  - Reposition as conditions change; if possible, park at an exit ramp and, when traffic backs up to you, take the exit and drive to a new exit (upstream) where the IMAP truck can be positioned as AW

Diverting Traffic onto Shoulder: used to ease congestion by allowing more vehicles to pass by the incident by traveling on an available shoulder

- Shoulder must be wide enough and should NOT be occupied by responders
- Use cones to divert traffic onto/off of shoulder and to separate shoulder traffic from traffic in the adjacent lane (if any)
- Use Motorist Cooperation technique to help start and stop this pattern

Emergency Lane Closures

Description:

Become familiar with the guidelines & processes used to deploy emergency lane closures

Objectives:

- Learn about emergency lane closures and their components

- Explore standard roadway dimensions and concepts related to traffic control configurations

- Explore the dimensions and guidelines of standard emergency lane closures

- Review step-by-step instructions for placing & removing a standard single lane closure

- Review step-by-step instructions for placing & removing a standard multiple lane closure

- Become familiar with the concepts & guidelines for modifying emergency lane closures when traffic speeds increase above 40mph

- Receive additional guidance & techniques to help deploy emergency lane closures properly

Audience: IMAP Responders

Duration of Training: 4 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques

Introduction to Emergency Lane Closures:

Objective: Learn about emergency lane closures and their components

Critical Knowledge:

- Emergency lane closures are used to close lanes & divert traffic by using traffic cones, arrow board, & other emergency traffic control (ETC) devices

- IMAP responders deploy emergency lane closures when lanes are expected to be closed for 15 minutes or more

- ETC devices are deployed based on traffic conditions at the time of IMAP's arrival and must be modified as conditions change such as;
  - Increase in traffic speed
  - Limited sight distance

- Components of a Emergency Lane Closure:
  - A – Advance Warning: optional measure (based on conditions) used to alert motorists of approaching incidents/traffic control

  - B – Taper: used to gradually shift traffic from closed lanes to available lanes

  - C – Buffer: used to provide sufficient stopping distance for stray vehicles entering incident work zone and/or to separate responders from traffic as it moves past the scene

  - D – IMAP Truck: uses emergency lights to alert motorists of an incident, arrow board to direct traffic towards available lanes, and can also serve as a physical barrier to protect responders
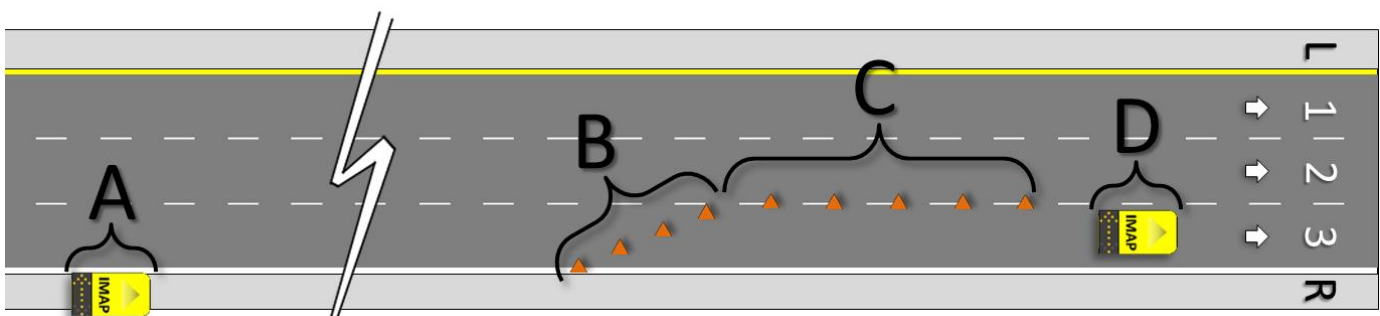
Roadway Dimensions & Traffic Control Configurations:

Objective: Explore standard roadway dimensions and concepts related to traffic control configurations

Critical Knowledge:

- Traffic control configurations describe the overall layout of ETC devices (e.g. traffic cones) used in emergency lane closures such as;
  - How many ETC devices are used
  - Distance between each ETC device
  - Length of traffic control area created by ETC devices

- The 2 primary factors that determine how to configure ETC devices are;
  - Traffic Speed – faster traffic needs more time & space to act
  - Sight Distance – limited sight distance gives less time & space to act

- When traffic speeds are higher and/or when sight distance is limited;
  - More ETC devices should be used
  - Length of traffic control area should increase

- IMAP responders must consider these factors when deploying emergency lane closures and must modify their closures as conditions change

- Standardized roadway dimensions help IMAP responders deploy ETC devices;
  - Lane Width = 12 feet
  - Skip Length = 10 feet
  - Space between Skips = 30 feet
  - Distance from Skip to Skip = 40 feet
  - Responders also count paces to judge distance (Skip to Skip = ~17 paces)
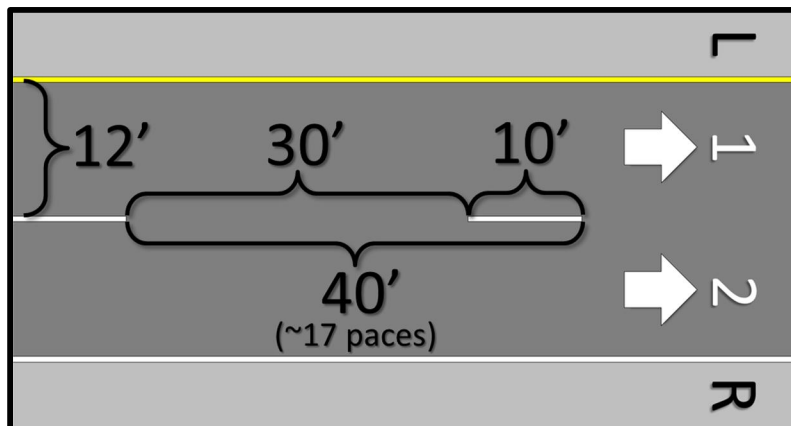
Standard Emergency Lane Closures:

Objective: Explore the dimensions & guidelines of standard emergency lane closures

Critical Knowledge:

- A standard*, single lane closure should be at least 320 feet long and should use at least 9 traffic cones
    - 4-cone Taper – should angle towards available travel lane
    - 5-cone Buffer – should extend from taper to back of IMAP truck

- Skips are used as reference points to place traffic cones
    - For a single lane, 9 cones are placed in the space of 8 skips (320ft)
    - Each of the 5 buffer cones is placed at the end of a skip (40ft apart)
    - Each of the 4 taper cones is placed in the space of 3 skips (30ft apart)

- To close a lane, responders should deploy ETC in the following order;
    - Activate lights & arrow board and park truck in the blocked lane
    - Place the 4-cone taper, starting at the shoulder & working to the skip
    - Place the 5-cone buffer, starting at the taper & working to the truck

- To open a lane, responders should remove ETC in the following order;
    - Pick up buffer cones starting from truck and working back to taper
    - Remove taper cones working from the skip to the shoulder
    - Reposition truck to shoulder – responders may reposition truck in between traffic cone pickup to make removal easier

- IMAP responders should walk on the shoulder as much as possible – only cross travel lanes to place or remove traffic cones

- Multiple lanes are closed by repeating the 9-cone configuration so that where the buffer of one lane ends, the taper of the adjacent lane begins
    - 1 Lane = 9 cones, 320 feet (~136 paces)
    - 2 Lanes = 18 cones, 640 feet (~272 paces)
    - 3 Lanes = 27 cones, 960 feet (~408 paces)
    - Close lane closest to shoulder, first before closing adjacent lane(s)

- If an IMAP responder does not have enough cones for a closure, they should call for a backup unit or Traffic Services/DOT Maintenance

* "Standard" refers to a closure on a straight section of roadway where traffic is NOT exceeding 40mph past the incident and where NO extenuating circumstances are present that require additional traffic control measures

Standard Emergency Lane Closures – 40mph or Less:

Example:
Triple Lane
Closure

Example:
Double Lane
Closure

Example:
Single Lane
Closure
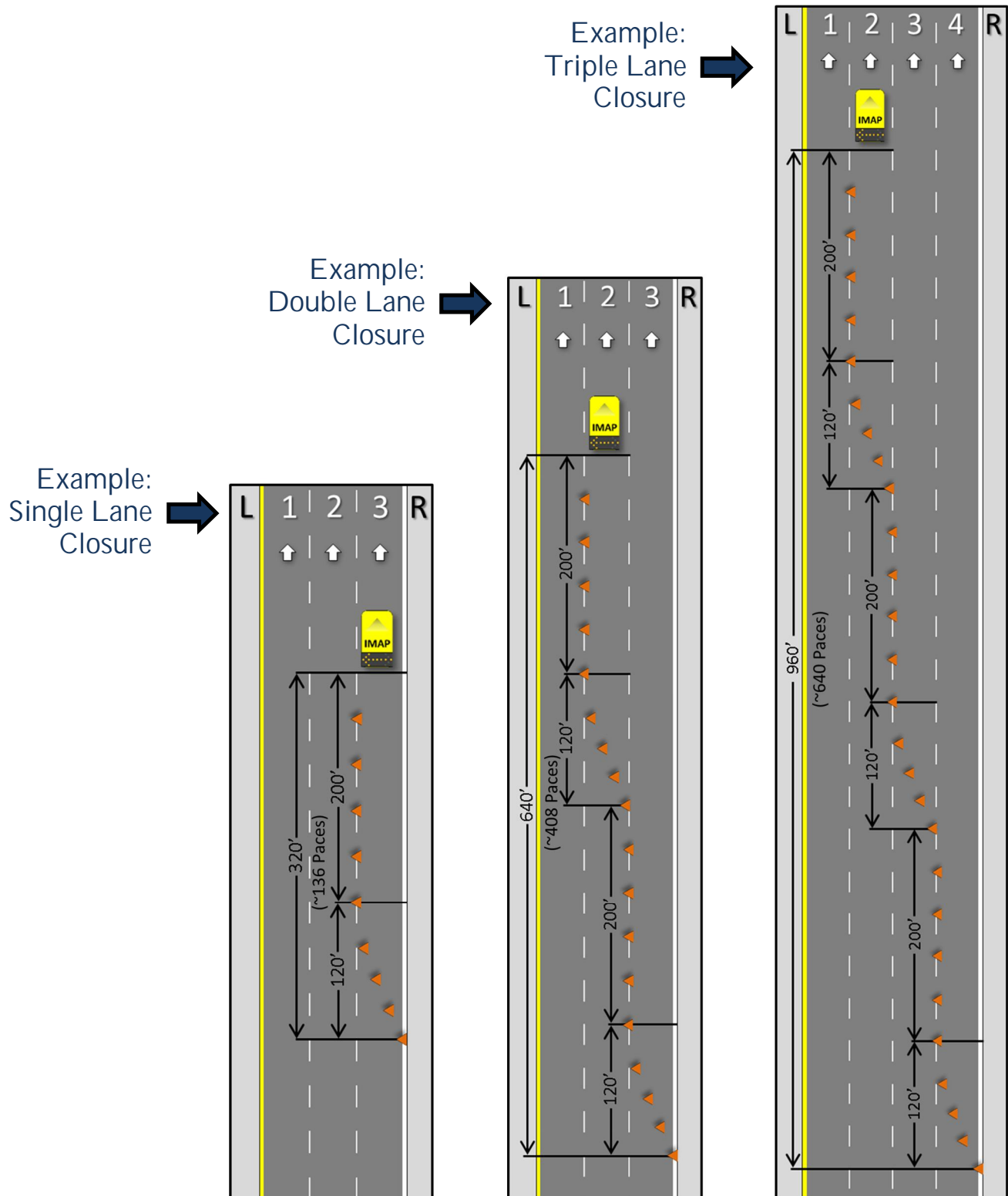
Deploying & Removing Standard SINGLE Lane Closures:

Objective: Review step-by-step process for deploying/removing a single lane closure

1. Follow all guidelines from the Vehicle Positioning Process (IN LANE)

2. Exit IMAP truck safely and keep an eye on traffic

3. Walk behind IMAP truck and confirm;
    a. All emergency lights are activated
    b. Arrow board display is correct

4. Retrieve traffic cones from IMAP truck and walk to shoulder

5. Carry cones upstream on shoulder to where traffic control (TC) area will begin
    a. Count skips as you walk
    b. There should be 8 skips in your TC area
    c. Cones may be staged on shoulder to make placement easier on return trip

6. Place the 4-cone taper, FIRST
    a. Put 1st cone on the edge of shoulder, in-line with 8th skip
    b. Put 2nd and 3rd cone evenly spaced between 1st taper cone and 6th skip
    c. Put 4th cone near the 6th skip to complete the taper

7. Place the 5-cone buffer, SECOND
    a. Each buffer cone will be placed on its own skip
    b. Start from the skip after the taper and work back towards IMAP truck

8. Monitor traffic and modify your ETC measures as conditions change

9. Once the lane is no longer blocked, remove your ETC measures
    a. Remove buffer cones, FIRST – start at IMAP truck & work to taper
    b. Remove taper cones, SECOND – start from skip & work to shoulder
    c. Reposition truck to shoulder, LAST – set arrow board to CAUTION

10. Return cones to truck and notify TMC dispatch that lanes have reopened

11. Once the incident is clear, notify TMC dispatch, and prepare to depart scene

12. Deactivate arrow board and safely re-enter traffic before deactivating emergency lights

Deploying & Removing Standard MULTIPLE Lane Closures:

Objective: Review step-by-step process for deploying/removing a multi-lane closure

1. Follow all guidelines from the Vehicle Positioning Process (IN LANE)
   a. Park truck in blocked lane closest to available travel lane(s)
   b. Ex. Lane #1 is open and lanes #2 & 3 are blocked. Park in lane #2

2. Exit IMAP truck safely and keep an eye on traffic

3. Walk behind IMAP truck and confirm;
   a. All emergency lights are activated
   b. Arrow board display is correct

4. Retrieve traffic cones from IMAP truck & safely cross blocked lanes to shoulder

5. Carry cones upstream on shoulder to where traffic control (TC) area will begin
   a. Count skips as you walk – each lane closure covers 8 skips
   b. Cones may be staged on shoulder to make placement easier on return trip

6. Close the lane closest to the shoulder, FIRST, before closing the next lane
   a. Each lane closure should use the same, 9-cone configuration
   b. Ex. Lane #1 is open and lanes #2 & 3 are blocked.
      i. IMAP truck parks in lane #2
      ii. Responder walks to right shoulder & walks upstream 16 skips (640ft)
      iii. Responder closes lane #3, FIRST
      iv. Responder closes lane #2, SECOND

7. Monitor traffic and modify your ETC measures as conditions change

8. Once the lanes are no longer blocked, remove your ETC measures
   a. Remove closure from lane closest to available travel lane(s), FIRST
   b. Remove closures from adjacent lanes working towards the shoulder
   c. Reposition truck to shoulder, LAST – set arrow board to CAUTION

9. Return cones to truck and notify TMC dispatch that lanes have reopened

10. Once incident is clear, notify TMC dispatch, and prepare to depart scene

11. Deactivate arrow board and safely re-enter traffic before deactivating emergency lights

Modifying Emergency Lane Closures for High Speed Traffic:

Objective: Become familiar with the concepts & guidelines for modifying emergency lane closures when traffic speeds increase above 40mph.

Critical Knowledge:

- As congestion near an incident decreases, traffic speeds tend to INCREASE – higher speed traffic requires more time & space to act

- Standard emergency lane closures are designed to safely control traffic moving 40mph or less

- When traffic speeds increase above 40mph, responders should use a longer lane closure to give higher-speed traffic more time & space to act safely

- If a standard (under 40mph) lane closure is already in place, responders must modify the closure to make it longer for higher speed traffic

- A high speed single lane closure should be at least 720 feet and should use at least 18 traffic cones
   - 9-cone Taper – each cone placed on/in-line its own skip (40ft apart)
   - 9-cone Buffer – each cone placed on its own skip (40ft apart)
   - Multiple lanes are closed by repeating the 18-cone configuration

- If an IMAP responder does not have enough cones for a closure, they should call for a backup unit or Traffic Services/DOT Maintenance

- Responders should follow the same procedure and guidelines for placing & removing a high speed lane closure as they would for a standard closure
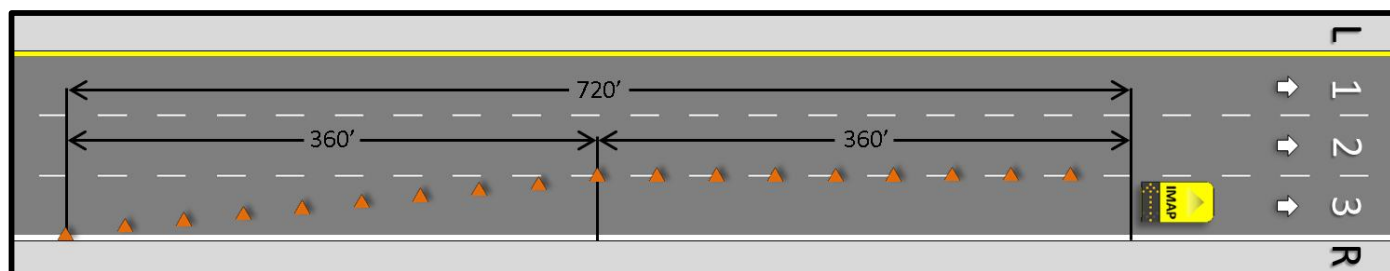
Additional Emergency Lane Closure Guidance/Techniques:

Objective: Receive additional guidance and techniques to help deploy emergency lane closures properly.

Critical Knowledge:

- ALWAYS have an ESCAPE ROUTE – even if traffic control is in-place

- Using a "Cone Caddy" can make hauling traffic cones easier – especially for high speed and/or multiple lane closures

- Plan Ahead – if you expect that more ETC will be needed than what you have, go ahead & call for backup or Traffic Services/DOT Maintenance

- When lane closures need to be adjusted, shift existing cones into new positions rather than picking up/deploying new cones

- Shoulder Taper – use to close shoulder if providing advance warning from shoulder or to prevent motorists from driving on shoulder
    - Arrange 4 cones (10ft apart) in taper across shoulder
    - Angle towards travel lanes

- Cone Spacing – use to control speed & keep motorists out of TC area
    - Add cones between existing ones if motorists drive between them
    - Push buffer cones closer to adjacent travel lane to make lane narrower which can reduce traffic speeds past the incident scene

- Lateral Buffers – use as additional protection against stray vehicles in TC area when buffers are longer than normal (i.e. traffic speeds above 40mph OR if incident is behind a hill/curve)
    - Place 2 cones perpendicular to traffic to create a lateral buffer
    - Space multiple lateral buffers evenly within main buffer

Example: Shoulder Taper
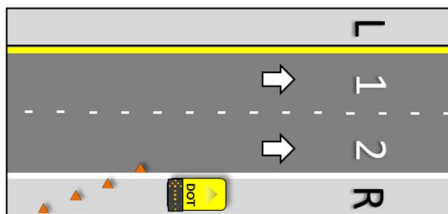
Example: Lateral Buffers

ETC – Emergency Rolling Roadblocks
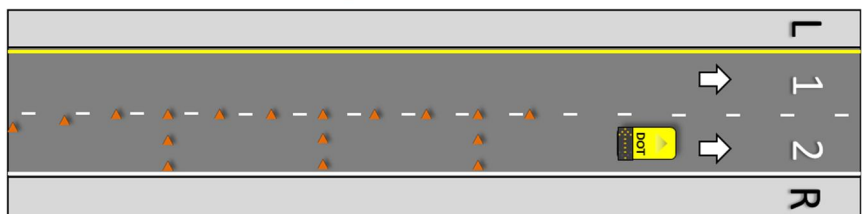
Description:

Become familiar with the guidelines & processes related to IMAP's use of emergency rolling roadblocks to control traffic

Objectives:

- Learn how emergency rolling roadblocks are used & the guidelines for their use

- Learn how IMAP Responders work together to perform emergency rolling roadblocks

- Review step-by-step instructions for performing an emergency rolling roadblock as a single IMAP unit

- Review step-by-step instructions for performing an emergency rolling roadblock as the primary unit with other IMAP units as secondary units

Audience: IMAP Responders

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques

Purpose & Guidelines for Emergency Rolling Roadblocks:

Objective: Learn how emergency rolling roadblocks are used & guidelines for their use

Critical Knowledge:

- **Emergency Rolling Roadblocks**
    - Used to control the speed of traffic by positioning IMAP truck(s) in front of moving vehicles & gradually slowing down, speeding up, or coming to a complete stop
    - Also referred to as, "Rolling Slowdowns" or, "Moving Closures"

- **Commonly used by IMAP when;**
    - Looking for & removing debris from the roadway
    - Allowing responders/other IMAP units to re-enter traffic safely
    - Helping traffic get back up to speed safely after lanes have opened

- **Primary Guidelines for Emergency Rolling Roadblocks:**
    - ALWAYS have an ESCAPE ROUTE – while in-motion & stopped
    - Roadblocks should begin NO LESS than ½ mile from incident
    - All emergency lights should be activated when roadblock begins
    - Arrow board should be activated when within 1 mile of incident
    - Arrow board display should direct motorists to open travel lane(s)
    - CAUTION display should only be used when all lanes are blocked
    - Traveling speed for rolling roadblocks should be below speed limit
    - All speed changes (i.e. stopping/starting forward) should be gradual
    - Any stops made during rolling roadblocks should be BRIEF
    - When stopping (e.g. to remove debris), Responders should control enough lanes to provide access to shoulder
    - Responders must carefully monitor traffic on all sides of IMAP truck
    - DO NOT weave to control lanes – straddle lane or call for backup
    - Notify TMC when emergency rolling roadblock begins and ends
    - If requesting an emergency rolling roadblock, clearly explain need for roadblock, where it is needed, and where units should meet

Communication & Responder Roles:

Objective: Learn how IMAP Responders work together to perform emergency rolling roadblocks

Critical Knowledge:

- Emergency rolling roadblocks can be performed by 1 IMAP unit or multiple units – COMMUNICATION IS CRITICAL with multiple units

- **Responder Roles during Multi-Unit Emergency Rolling Roadblocks:**
  - Primary Unit – leads the roadblock & instructs other Responders
  - Secondary Unit(s) – support roadblock by following instructions from primary unit
  - Exiting Responder – when stopped, the Responder who will exit the IMAP truck to perform BRIEF duties (e.g. removing debris)

- **Additional Guidelines for Multi-Unit Emerg. Rolling Roadblocks:**
  - Primary unit should establish a meet up area on a ramp at least ½ mile away from incident where units will meet & roadblock will begin
  - DO NOT start roadblock until all requested units have arrived
  - All units assisting with roadblock should switch to a tactical radio channel to communicate
  - Units should travel in-line with one another with enough space in-between so that other vehicles do not get past or between them
  - When stopped, the exiting Responder should be the one whose left side (driver-side door) is closest to shoulder or protected by another unit
  - When stopped, the exiting Responder should pull forward slightly so other units can protect them as they exit/re-enter the truck
  - When stopped, all units should angle tires away from exiting Responder & other units

- **Instructions that Primary Unit should Provide:**
  - Where units should meet to begin roadblock
  - Which lanes each unit will control
  - When to start and when to slow down & stop
  - What to display on arrow board
  - Which Responder will exit their truck when stopped

Emergency Rolling Roadblock – Single IMAP Unit:

Objective: Review step-by-step instructions for performing an emergency rolling roadblock as a single IMAP unit

1. Select an appropriate place to begin roadblock – Notify TMC dispatch

2. When safe, activate all emergency lights and enter traffic

3. Maneuver into the lane you wish to control as reported by TMC/other unit – if 2 lanes can be safely controlled by 1 unit, straddle both lanes with truck

4. Gradually reduce speed until traveling below the speed limit

5. Scan the roadway ahead for the incident/location where roadblock should stop

6. When within ½ mile from incident (or when incident is in sight) activate arrow board with appropriate display

7. Reduce speed further and carefully watch traffic on all sides of IMAP truck

8. If performing roadblock for another unit, notify them that you are approaching

9. When close to incident, gradually reduce speed before coming to a complete stop

10. Follow all guidelines from the Vehicle Positioning Process (IN LANE)

11. If exiting the IMAP truck;
    a. Exit safely while keeping an eye on traffic
    b. Quickly perform duties and return to truck

12. If NOT exiting the IMAP truck;
    a. Notify other IMAP unit that you have arrived
    b. Allow other unit/responder to enter traffic/perform brief task

13. When ready to continue forward, sound air horn and gradually accelerate

14. Deactivate arrow board when appropriate

15. Once up to speed, deactivate emergency lights & resume patrol – Notify TMC dispatch

Emergency Rolling Roadblock – Multiple IMAP Units:

Objective: Review step-by-step instructions for performing an emergency rolling roadblock as the primary unit with other IMAP units as secondary units

1. Select an appropriate place to begin roadblock

2. Notify TMC dispatch & request backup from closest available units – advise all to switch to tactical channel

3. Once all requested units have arrived, clearly describe purpose of roadblock and plan of action

4. When safe, activate all emergency lights and enter traffic

5. Maneuver into the lane you wish to control and direct other units to the lane(s) they should control

6. Maintain steady speed until all units are in position

7. Gradually reduce speed to below the speed limit & notify others to do same

8. Scan the roadway ahead for the incident/location where roadblock should stop

9. When within ½ mile from incident (or when incident is in sight) activate arrow board with appropriate display – instruct other units to do same

10. Reduce speed further and carefully watch traffic on all sides of IMAP truck

11. When close to incident, identify which Responder will be the exiting Responder

12. Instruct other units to prepare for stop and announce which Responder will exit

13. Gradually reduce speed until all units are stopped & slightly behind the exiting Responder's vehicle – all tires should be angled away from exiting Responder & other units

14. Carefully watch traffic & exiting Responder's progress until they re-enter their truck

15. When ready to continue, confirm that all units are also ready

16. Once all confirm, sound air horn and gradually accelerate

17. Deactivate arrow board when appropriate – instruct other units to do same

18. Once up to speed, deactivate emergency lights & resume patrol – instruct other units to do same and notify TMC dispatch

Description:

Become familiar with the guidelines & processes related to the motorist cooperation technique for controlling traffic.

Objectives:

- Learn about the primary concepts related to motorist cooperation as a traffic control technique

- Become familiar with the guidelines & safety precautions that responders must adhere to when using motorist cooperation to control traffic

- Learn about the hand signals used by IMAP to signal & instruct motorists

- Review step-by-step instructions for closing & opening lanes using motorist cooperation

- Review step-by-step instructions for diverting traffic to shoulders using motorist cooperation and traffic control devices

Audience: IMAP Responders

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques

Introduction to Traffic Control through Motorist Cooperation:

Objective: Learn about the primary concepts related to motorist cooperation as a emergency traffic control (ETC) technique.

Critical Knowledge:

- **Motorist Cooperation –** used by IMAP responders to briefly close lanes or redirect traffic by signaling & verbally instructing lead motorists whose actions will stop or guide traffic behind them

- **Lead Motorists –** refers to the citizen drivers who are instructed by IMAP to stop or guide traffic

- **How Motorist Cooperation Technique Works:**
  - NC law also allows IMAP to divert traffic onto the shoulder in response to traffic incidents (GS 20-146)
  - When properly signaled to slow & stop, vehicles driven by motorists can cause traffic behind them to also slow & stop
  - Motorists tend to follow the vehicle in front of them – if lead motorists are given clear instructions on where to go, they can set in motion a new traffic pattern that motorists behind them will follow

- **Examples of When Motorist Cooperation Technique is Used:**
  - Hold travel lanes to allow emergency response vehicles (e.g. ambulances, tow trucks, etc.) to reposition or depart scene
  - Hold travel lanes while debris is relocated to the shoulder
  - Direct traffic to travel on shoulder in order to decrease congestion by increasing traffic flow past an incident scene

Motorist Cooperation Guidelines:

Objective: Become familiar with the guidelines & safety precautions that responders must adhere to when using motorist cooperation to control traffic

Critical Knowledge:

- **Motorist cooperation should only be used to close lanes BRIEFLY –** IMAP responders should deploy a full lane closure and/or call for backup if;
    - Lane(s) needs to be closed for 15+ minutes
    - Traffic speeds are too fast to safely signal and stop motorists
    - Other duties prevent proper monitoring/directing of lead motorists

- **Exercise extreme caution when using motorist cooperation –** IMAP responders should;
    - ALWAYS have an ESCAPE ROUTE
    - Always wear reflective vest & make themselves as visible as possible
    - Stand so traffic can see responder clearly & have enough time to safely comply with hand signals & instructions
    - If incident is behind a hill or curve, responders should be visible to traffic BEFORE motorists come over the hill or around the curve
    - Approach lead motorists on side furthest from open travel lanes
    - Notify other IMAP units on scene BEFORE closing/opening lanes
    - Use traffic cones to divert traffic onto & off of the shoulder and assure that traffic control is in place BEFORE diverting traffic

- **IMAP must communicate with lead motorists clearly & carefully**
    - Be courteous but firm when instructing lead motorists
    - Use clear hand signals and simple but direct verbal instructions
    - Assure that you have lead motorists' attention – point to and make direct eye contact with the motorist you are addressing
    - Address and instruct lead motorists one at a time
    - Assure that lead motorists slow & STOP before stepping into roadway
    - Watch lead motorists closely to assure they continue to follow instructions

Hand Signals for Motorist Cooperation:

Objective: Learn about the hand signals used by IMAP to signal & instruct motorists.

Critical Knowledge:

- **IMAP Responder's Stance –** stand facing traffic with feet apart and eyes locked on approaching motorists
    - Initial position should be from shoulder or an already closed lane
    - Stand close to but NOT in travel lane(s) until they are safely closed

- **SLOW DOWN –** use to instruct on-coming traffic to reduce speed until a lead motorist can be identified, signaled, and stopped
    - Extend arms straight out with hands flat and palms facing traffic
    - Move arms up & down so palms point to ground on down stroke

- **STOP –** use to instruct a lead motorist to stop before approached by IMAP
    - Point to and make eye contact with lead motorist
    - Extend arms straight out with hands flat and palms facing traffic
    - Alternate pointing and hand signal until motorist stops completely

- **INDICATE MOTORIST –** use to attract lead motorists' attention
    - Start with hand to chest & sweep outward until pointing at motorist
    - Repeat until lead motorist stops and/or makes eye contact

- **CONTINUE TO HOLD LANE –** use to instruct lead motorists to remain stationary while relocation efforts continue
    - Stand in temporarily closed lanes where visible to all lead motorists
    - Hold arms outstretched with hands flat and palms facing traffic

- **DRIVE TO LOCATION –** use to direct motorists to a specific location
    - Point to and make eye contact with lead motorist
    - Sweep arm (turn body if needed) until pointing at desired location

- **PROCEED –** use to instruct lead motorists to continue moving forward
    - Point to and make eye contact with lead motorist
    - Sweep hand to chest while flattening hand and turning palm to chest
    - **Be sure that all lead motorists understand who should proceed**

Motorist Cooperation Diagrams:

Objective: Review the diagrams below showing motorist cooperation in use when closing lanes, opening lanes, and diverting traffic.

Critical Knowledge:

- **Closing Lanes –** IMAP signals and instructs lead motorists **(A & C)** to stop & hold lanes and instructs lead motorist **(B)** to pull onto shoulder while regular traffic (gray vehicles) stops or continues past incident
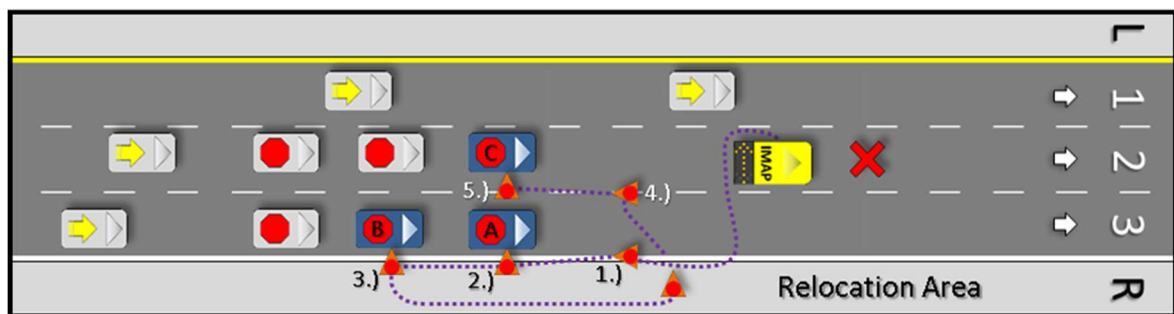
- **Opening Lanes –** IMAP instructs lead motorist **(B)** to re-enter traffic and instructs lead motorists **(A & C)** to proceed, allowing all traffic to continue
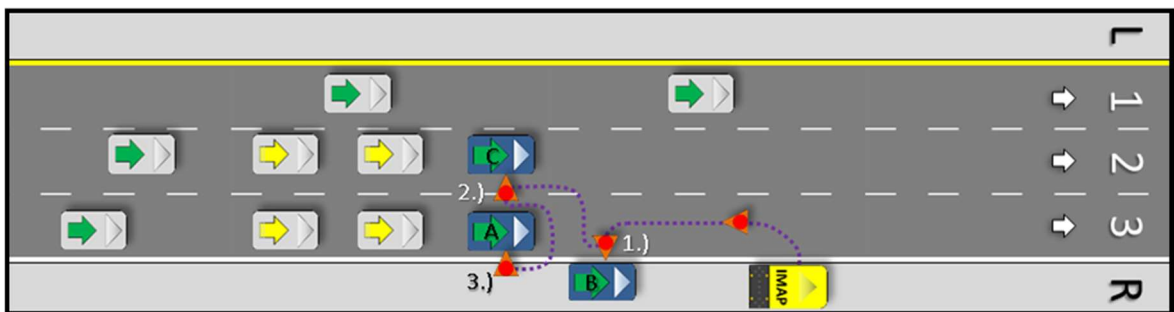
- **Diverting Traffic –** First IMAP unit stops lead motorist **(A)** at point **1.)** to divert traffic onto shoulder & gives instruction to merge into lane #1 when possible. Second IMAP unit waits at point **2.)** to end traffic shift when needed.
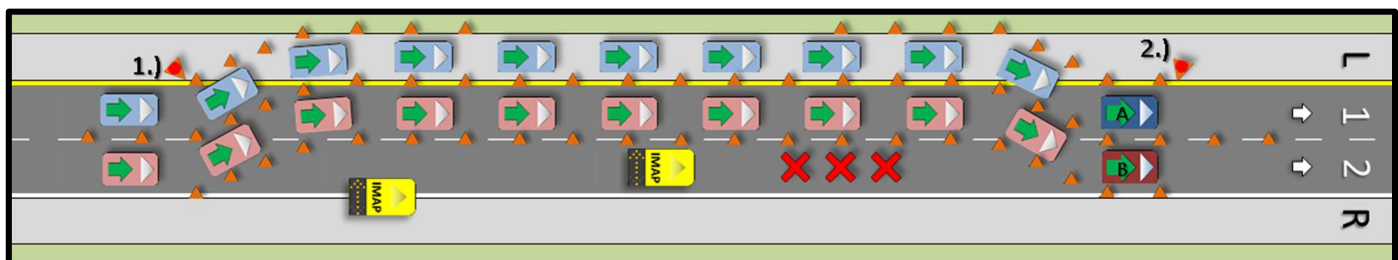
Closing & Opening Lanes using Motorist Cooperation:

Objective: Review steps for closing/opening lanes using motorist cooperation

1. Determine which lane(s) need to be closed and walk to the one closest to you

2. From the edge of this travel lane, use hand signals to instruct motorists to SLOW DOWN

3. Once traffic has slowed sufficiently, identify and make eye contact with a lead motorist – use hand signals to instruct them to STOP

4. When lead motorist has come to a complete stop, approach their vehicle
   a. Approach on side furthest from open travel lanes
   b. Maintain eye contact and hand signals while approaching

5. Verbally instruct lead motorist to hold lane until told to PROCEED

6. Repeat steps 1-5 until all necessary lanes are closed

7. If travel lane adjacent to shoulder is closed by a lead motorist;
   a. Approach 1st vehicle behind lead motorist in lane adjacent to shoulder
   b. Direct this 2nd lead motorist to drive to & HOLD THE SHOULDER
   c. At this point, all necessary lanes & shoulder are closed by lead motorists

8. Monitor traffic & lead motorists carefully – use signal for CONTINUE TO HOLD LANE if needed

9. When lanes are ready to be reopened, walk to a safe location where all lead motorists can easily see you – If shoulder is being held by a lead motorist;
   a. Instruct lead motorists in travel lanes to CONTINUE TO HOLD THEIR LANE(S)
   b. Signal lead motorist on shoulder to PROCEED into traffic

10. Address all lead motorists individually and signal each to PROCEED
    a. Start with the lead motorist in the travel lane furthest from you
    b. Work back to the lead motorist in the travel lane closest to you
    c. Continue until all temporarily closed lanes are moving steadily

Diverting Traffic to Shoulder using Motorist Cooperation:

Objective: Review steps for diverting traffic to shoulders using motorist cooperation

1. Once all appropriate traffic control measures are in-place, assess the shoulder & traffic conditions and determine if shoulder should be used for travel
   a. Call for a backup IMAP unit whenever diverting traffic
   b. Notify TMC dispatch

2. Add traffic cones to the furthest downstream buffer, extend beyond incident

3. On the shoulder where traffic will be diverted, arrange traffic cones to divert traffic onto/off of shoulder starting upstream and working downstream;
   a. Tapers diverting traffic onto & off of shoulders (or lanes, if traffic is diverted from inner lanes to outside lanes) should use standard, 4-cone taper configuration
   b. Tapers diverting traffic to shoulder (or lanes) should be parallel with the furthest original downstream taper
   c. Traffic on shoulder (or lanes) should be separated by cones in buffer configuration that should be same length as originally extended buffer
   d. Tapers diverting traffic off of shoulder (or lanes) should be parallel with one another & should begin where the extended/separating buffers end
   e. When multiple lanes are diverted at a time, 3-cone tails should be placed before and after diverting tapers

4. Stand in shoulder where traffic is being diverted, use motorist cooperation to signal a lead motorist in adjacent travel lane to SLOW DOWN and STOP

5. Instruct lead motorist to divert onto shoulder and merge back into adjacent travel lane when directed by temp. traffic control (ETC) – signal to PROCEED

6. Notify TMC & backup IMAP unit on-scene that traffic has been diverted to shoulder
   a. Backup unit should stand downstream where traffic returns to lanes
   b. Backup unit should use motorist cooperation to stop traffic while ETC is adjusted to divert additional lanes or to remove ETC when needed

ETC – Hills or Curves

Description:

Become familiar with the guidelines & concepts related to traffic control for closures or incidents behind hills or curves

Objectives:

- Learn about the concepts & primary guidelines related to the use of emergency traffic control (ETC) when closures/incidents are behind hills or curves

- Explore the dimensions and layout of ETC measures used by IMAP Responders to close lanes when incidents are behind hills or curves

- Review diagrams that illustrate possible ETC configurations for hills or curves

Audience: IMAP Responders

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques
- ETC-102: Temporary Lane Closures

Primary Traffic Control Guidelines for Hills or Curves:

Objective: Learn about the concepts & primary guidelines related to the use of emergency traffic control (ETC) when closures/incidents are behind hills or curves

Critical Knowledge:

- When an incident is around a curve or over a hill, on-coming traffic is NOT able to see the incident with enough time to safely react

- Primary Guidelines – In addition to all other emergency traffic control (ETC) guidelines, IMAP Responders should;
    - Assure that ETC measures are visible to motorists BEFORE they enter the curve or reach the top of the hill
    - Position IMAP truck so that on-coming traffic has a clear, head-on view of the arrow board
    - Use arrow board, DMS, or CMS to provide advance warning (AW) if lanes will be closed for 15+ minutes
    - Use as many traffic cones as are needed to extend the traffic control (TC) area over/around the hill/curve to the incident scene
    - Call for a backup IMAP unit or Traffic Services/DOT Maintenance to assist with additional cones and advance warning, if needed
    - Watch traffic conditions closely & coordinate with other IMAP units and/or TMC dispatch to monitor the TC area
    - If stopping during an emerg. rolling road block, stop before hill/curve
    - Avoid deploying center lane closures behind hills or curves

WRONG

RIGHT
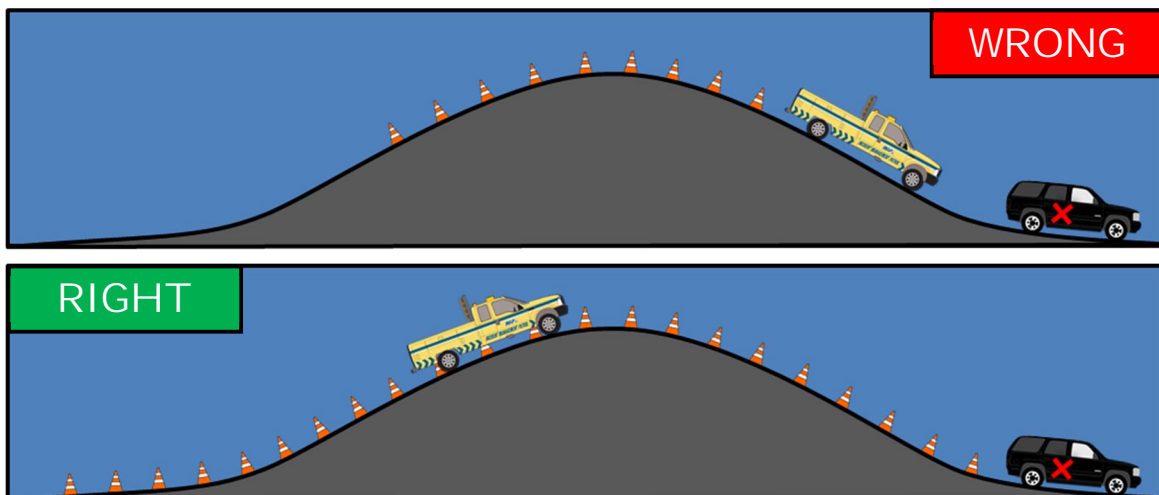
(Advance Warning NOT shown)

Lane Closure Configurations for Hills or Curves:

Objective: Explore the dimensions and layout of traffic control measures used by IMAP Responders to close lanes when incidents are behind hills or curves

Critical Knowledge:

- IMAP Truck Position – Park before hill/curve with lights & arrow board properly activated
  - For curves, Responders may angle the truck so that on-coming traffic has a clear, head-on view of arrow board from further away
  - Responders may initially park closer to taper so traffic can see them but should return to normal position once ETC is in place/backup arrives
  - Backup IMAP units should position upstream from lane closure to provide AW – park on shoulder, if available

- Tapers – When possible, motorists should see entire length of tapers
  - Avoid placing tapers across a hill or within a curve
  - Deploy shoulder tapers when parked on shoulder to provide AW
  - Deploy 9-cone (40+mph) taper if no shoulder is available for AW

- Buffers – Furthest downstream buffer should extend past the IMAP truck and up to the incident to keep motorists from re-entering TC area
  - Use as many cones as needed – determine if backup or Traffic Services/DOT Maint. are needed as soon as possible after arrival
  - Responders should deploy lateral buffers within the extended buffer

- Advance Warning (AW) – Should be used for incidents behind hills/curves whether lanes are closed or not
  - Place initial AW (e.g. flares) in immediate area, BEFORE hill/curve
  - Proper AW (e.g. backup IMAP or DMS/CMS) should be located before area where traffic begins to backup OR a minimum of 1½ miles upstream from Transition Area
  - Contact TMC dispatch to confirm DMS location & use for AW
  - AW should be modified as traffic conditions change
  - All arrow boards, DMS/CMS, and other devices should provide motorists with the same information – Notify TMC & others when information needs to be updated

Example Diagrams of ETC for Hills or Curves (1 of 3):

Objective: Review diagrams of possible ETC configurations for hills or curves

IMAP Truck NOT Angled: SHORTER Sight Distance
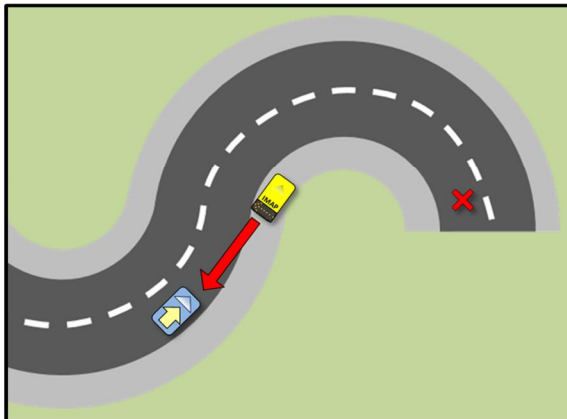
IMAP Truck Angled: LONGER Sight Distance
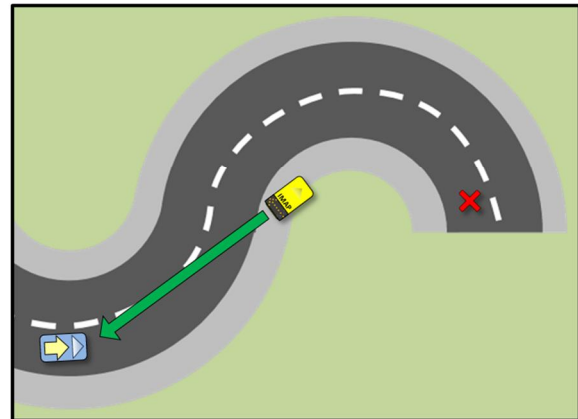
Repositioning IMAP Truck for AW in Relation to Backup from Incident:
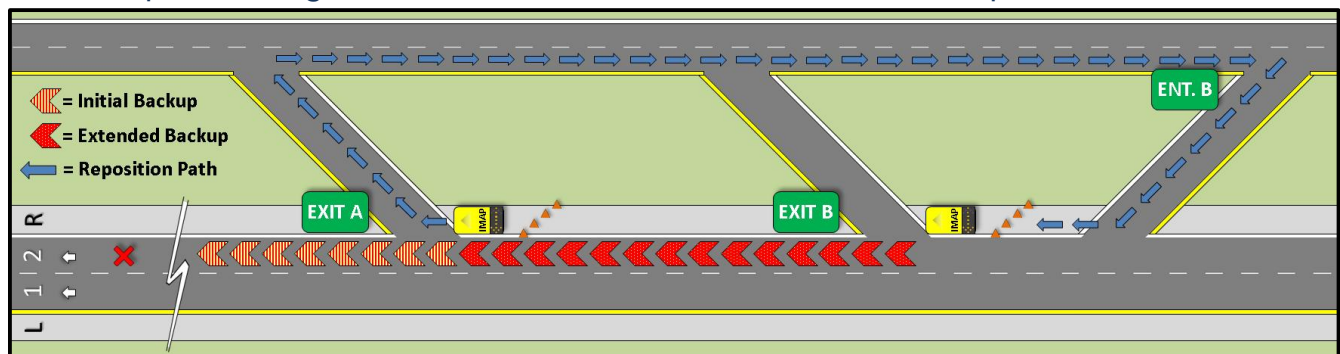
IMAP Truck as Advance Warning

With Shoulder: Deploys standard shoulder taper
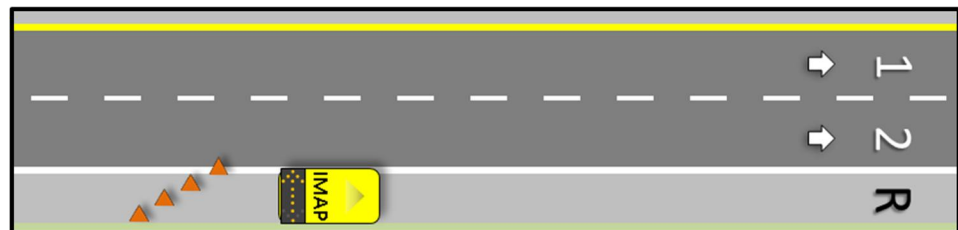
Without Shoulder: Deploys 9-cone / high speed taper

Example Diagrams of ETC for Hills or Curves (2 of 3):

Objective: Review diagrams of possible ETC configurations for hills or curves

On Shoulder, Disabled Vehicle in Curve: Flares on edgeline as initial advance warning
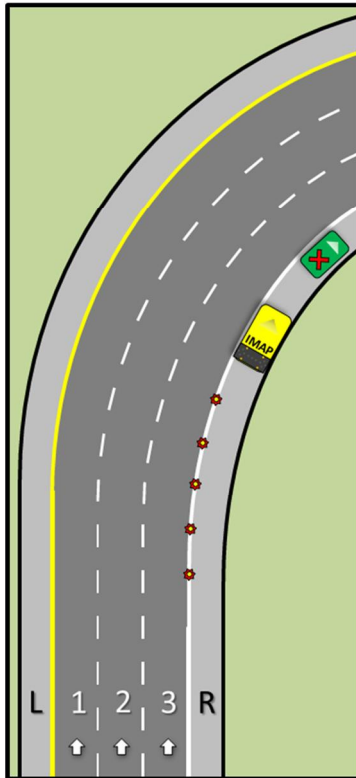
Single Lane Closure: Extended buffer deployed with lateral buffers
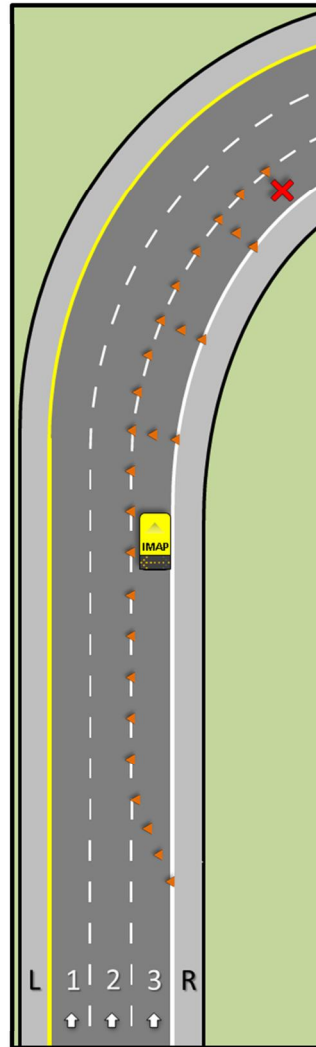
Double Lane Closure: Extended buffer deployed & backup IMAP unit on scene
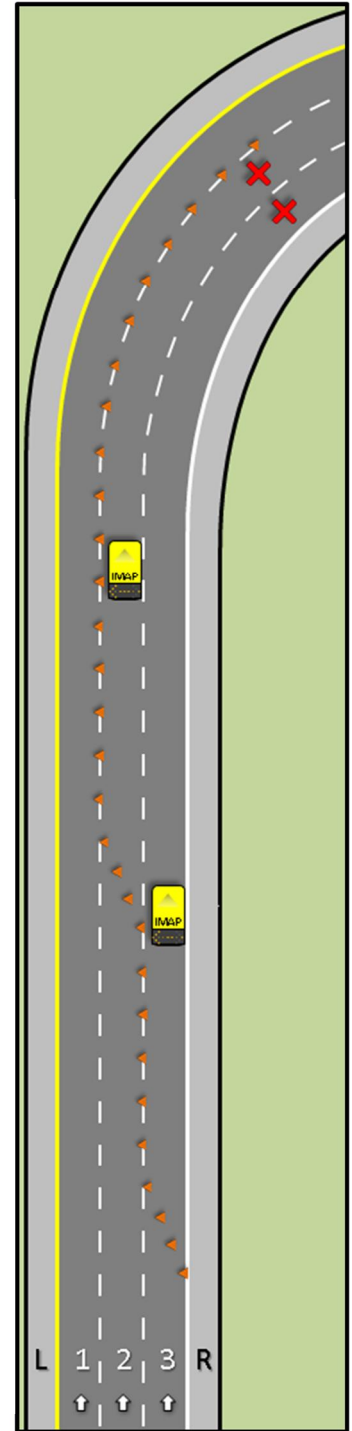
Example Diagrams of ETC for Hills or Curves (3 of 3):

Objective: Review diagrams of possible ETC configurations on Arterials with Multiple Driveways.

Crashed Vehicle in Through Lane:
- Commercial Vehicle turns into the open driveway upstream of incident
- Number of cones is based on roadway geometry
- If adequate distance based on stopping sight distance requires crossing several intersections, the taper pattern should be repeated to keep driveway open
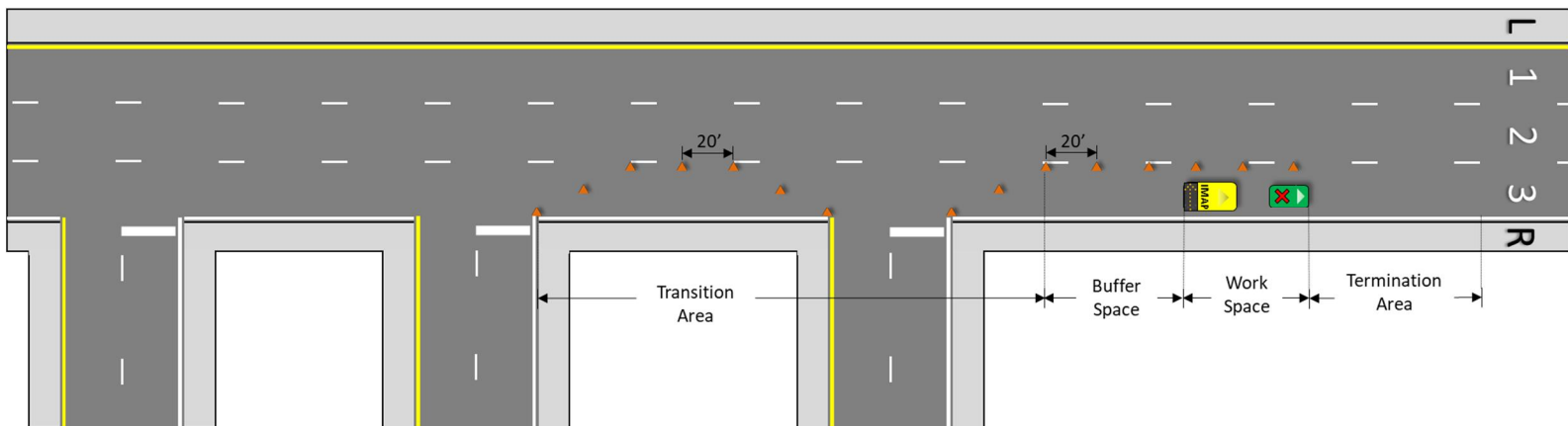
*If additional taper length is needed then repeat previous taper to first driveway

Center Lane Closures

Description:

Become familiar with the guidelines & processes used to deploy temporary center lane closures

Objectives:

- Learn about the guidelines for temporary center lane closures

- Explore the components and configuration of traffic control devices for center lane closures

- Review step-by-step instructions for deploying & removing a single center lane closure

- Review step-by-step instructions for deploying & removing a double center lane closure

Audience: IMAP Responders

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques
- ETC-102: Temporary Lane Closures

Introduction to Center Lane Closures:

Objective: Learn about the guidelines for temporary center lane closures.

Critical Knowledge:

- Standard* temporary center lane closures are used to close center travel lanes while keeping outside travel lanes open to traffic

- IMAP Responders may deploy center lane closures if lanes are **expected** to be blocked for 15 minutes or more

- Responders should close no more than 2 center travel lanes at a time

- A full, temporary lane closure between the affected lane(s) and the shoulder should be deployed if;
    - More than 2 center lanes need to be closed
    - A full closure is safer or more effective than a center lane closure
    - Travel lanes to either side need to be closed for 15 minutes or more
    - Traffic speeds are above 40mph

- Before closing center lanes, IMAP Responders should identify the Relocation Area (i.e. the side of the road where vehicles/objects will be relocated)

- When center lanes are closed, IMAP's arrow board should display a **double-arrow (←→)** to direct traffic to either side of the closure
    - Responders may deploy a full closure before adjusting to a center closure
    - If a full closure is deployed first, activate an appropriate arrow display

- ALWAYS have an ESCAPE ROUTE – for center lane closures, the safest escape route MAY be directly ahead; use/practice ESCAPE ROUTE

- Responders must use extreme caution when deploying center lane closures and should only walk on shoulder or in the lane(s) that are/will be closed

- Responders should call for backup if assistance with traffic control is needed

* "Standard" refers to a closure on a straight section of roadway where traffic is NOT exceeding 40mph past the incident and where NO extenuating circumstances are present that require additional traffic control measures

Center Lane Closure Configurations:

Objective: Explore the components and configuration of traffic control devices for temporary center lane closures.

Critical Knowledge:

- A standard, **single center lane** closure should be at least 420 feet long and should use at least 19 traffic cones in the space of 11 skips
    - **4-cone Taper** – should angle AWAY from relocation area
    - **3-cone "Tail"** – should extend upstream from taper
    - **5-cone Buffer 1** – should extend from taper to back of truck
    - **7-cone Buffer 2** – should extend from 1st taper cone to back of truck
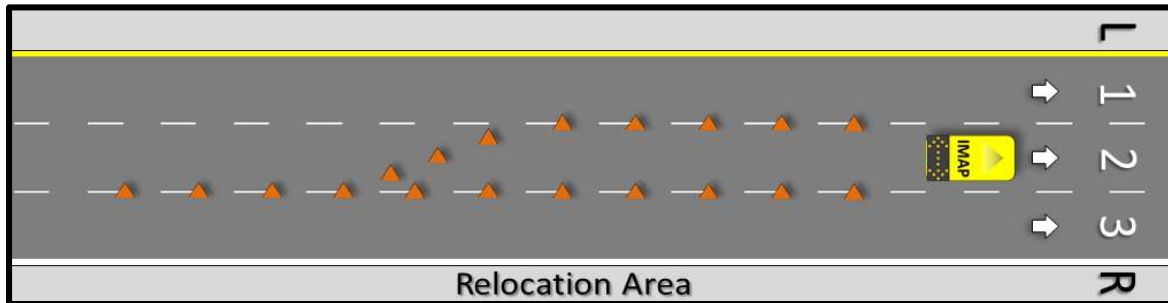
- A standard, **double center lane** closure should be at least 420 feet long and should use at least 20 traffic cones in the space of 11 skips
    - **4-cone Taper 1** – should angle towards available travel lanes
    - **3-cone Taper 2** – should angle towards available travel lanes
    - **3-cone "Tail"** – should extend upstream from taper
    - **5-cone Buffer 1** – should extend from Taper 1 to back of truck
    - **5-cone Buffer 2** – should extend from Taper 2 to back of truck
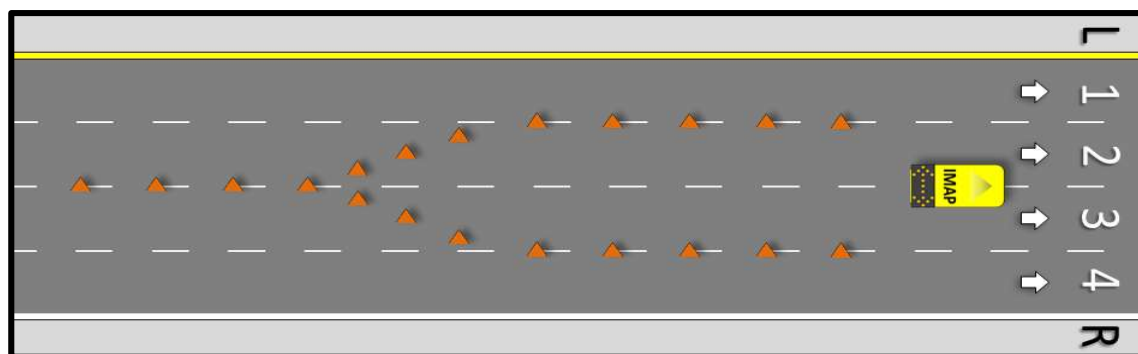
Deploying & Removing SINGLE Center Lane Closures:

Objective: Review the steps for deploying & removing a single center lane closure

1. Follow all guidelines from the Vehicle Positioning Process (IN LANE)

2. Once parked, identify the relocation area and activate arrow board with arrow pointing AWAY from relocation area

3. Exit the vehicle safely while keeping an eye on traffic

4. Walk behind the truck and check that all emergency lights & arrow board are activated appropriately

5. Retrieve traffic cones and safely cross travel lanes to shoulder (relocation area)
   a. Walk upstream to where traffic control (TC) area will begin
   b. Count skips as you walk – there should be 11 skips in your TC area

6. Deploy traffic cones in the following order;
   a. Use tail cones to create an "interim taper" to close outside lane(s), FIRST
   b. Place 4-cone taper, SECOND – angle AWAY from relocation area
   c. Place 5-cone buffer, THIRD – on side furthest from relocation area
   d. Place 7-cone buffer, FOURTH – on side closest to relocation area
   e. Adjust interim taper cones to complete 3-cone tail, LAST

7. Modify arrow board display to direct traffic to either side of IMAP truck (←→)

8. Monitor traffic & modify your ETC as conditions change – Notify TMC dispatch

9. When lane can be reopened, modify arrow board with arrow pointing AWAY from relocation area and remove traffic cones in the following order;
   a. Adjust tail & taper cones to interim taper closing lanes to shoulder, FIRST
   b. Remove buffer cones, SECOND – start from truck & work towards taper
   c. Remove taper cones, THIRD – reposition truck to lane adjacent to shoulder
   d. Remove tail cones, LAST

10. Reposition truck to shoulder and modify arrow board to CAUTION (: :) display – Notify TMC dispatch

11. Once the incident is clear, notify TMC dispatch, and prepare to depart scene

12. Deactivate arrow board and safely re-enter traffic before deactivating emergency lights

Deploying & Removing DOUBLE Center Lane Closures:

Objective: Review the steps for deploying & removing a double center lane closure

1. Follow all guidelines from the Vehicle Positioning Process (IN LANE) but park IMAP truck so that it straddles the skip line between the 2 closed lanes

2. Identify the relocation area where vehicles/objects will be relocated

3. Exit the vehicle safely while keeping an eye on traffic

4. Walk behind the truck and check that all emergency lights are activated and arrow board is showing the appropriate display (←→)

5. Retrieve traffic cones and walk upstream to where your TC area will begin
   a. Keep a close eye on traffic and wave traffic to either side of IMAP truck
   b. Count skips as you walk – there should be 11 skips in your TC area

6. Deploy traffic cones in the following order;
   a. Place 4-cone taper, FIRST – angle towards available travel lanes
   b. Place 3-cone taper, SECOND – angle towards available travel lanes
   c. Place 5-cone buffer, THIRD – on side furthest from relocation area
   d. Place 5-cone buffer, FOURTH – on side closest to relocation area
   e. Place 3-cone tail, LAST – on skips, upstream from where tapers meet

7. Monitor traffic & modify your ETC as conditions change – Notify TMC dispatch

8. When lanes can be reopened, modify arrow board with arrow pointing AWAY from relocation area

9. Remove traffic cones in the following order while repositioning IMAP truck to adjacent lanes working to shoulder;
   a. Adjust tail & taper cones to interim taper closing lanes to shoulder, FIRST
   b. Remove buffer cones, SECOND – start from truck & work towards taper
   c. Remove taper cones, THIRD
   d. Remove tail cones, LAST

10. Reposition truck to shoulder and modify arrow board to CAUTION (: :) display – Notify TMC dispatch

11. Once the incident is clear, notify TMC dispatch, and prepare to depart scene

12. Deactivate arrow board and safely re-enter traffic before deactivating emergency lights

Description:

Become familiar with the guidelines & processes related to emergency traffic control (ETC) for closures or incidents near entrance & exit ramps

Objectives:

- Become familiar with proper roadway terminology related to entrance & exit ramps

- Learn about the primary guidelines related to ETC used when entrance & exit ramps are nearby/within the traffic control (TC) area

- Explore the guidelines & ETC configurations used to accommodate ramp traffic through or around the traffic control area

- Explore the guidelines & ETC configurations used when the road is closed and/or when entrance or exit ramps are closed

Audience: IMAP Responders

Duration of Training: 5 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques
- ETC-102: Temporary Lane Closures

Roadway Terminology for Entrance & Exit Ramps:

Objective: Become familiar with proper roadway terminology related to entrance & exit ramps

Critical Knowledge:

- **Entrance Ramp –** short section of roadway that allows traffic to access freeways/expressways from another, sometimes smaller, roadway

- **Exit Ramp –** short section of roadway that allows traffic to leave a freeway/expressway in order to access other, sometimes smaller, roadways

- **Merge Lane –** section of roadway at the end of some entrance ramps that allows ramp traffic to accelerate & merge with freeway/expressway traffic

- **Exit Only Lane –** section of roadway on the main portion of the freeway/expressway that diverts traffic onto the exit ramp but does not continue as part of the main freeway/expressway

- **Collector/Distributor (C/D) Ramp –** any entrance/exit ramp that provides access to multiple routes and/or directions of travel

- **Gore Area –** small, triangular portion of shoulder in-between entrance/exit ramps

- **Interchange –** term used to refer to all ramps, merge & exit lanes that connect one or more routes to one another
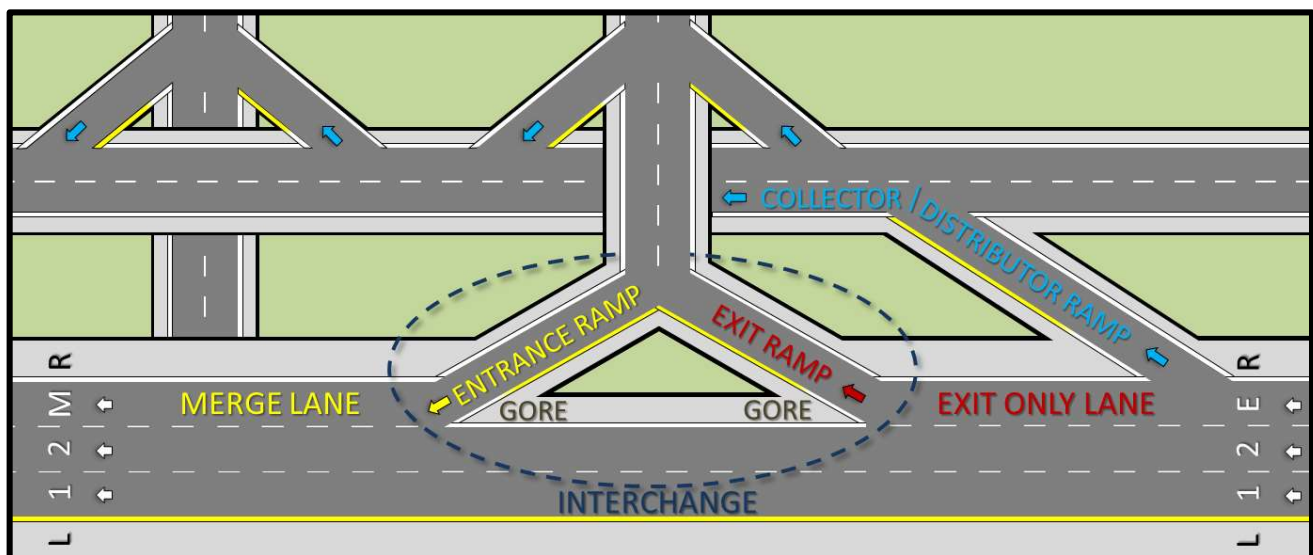
Primary ETC Guidelines for Entrance & Exit Ramps:

Objective: Learn about the primary guidelines related to temp. traffic control (ETC) used when entrance & exit ramps are nearby/within the traffic control (TC) area

Critical Knowledge:

- IMAP Responders should follow all other ETC guidelines & safety precautions when providing ETC for entrance & exit ramps

- When entrance and/or exit ramps are nearby, IMAP ETC should NOT;
  - Prevent traffic from entering/exiting the highway safely
  - Channel ramp or highway traffic into the incident work zone
  - Force traffic to exit (unless all lanes ahead are closed)
  - Block motorist's view of ramp/ramp traffic with IMAP truck

- If ramps are within the TC area, IMAP Responders should use traffic cones to;
  - Extend TC area to include ramp(s) – DO NOT make ETC shorter
  - Guide exiting traffic through TC area safely to access exit ramps
  - Channel entrance ramp traffic around incident/ETC, into travel lanes
  - Prevent motorists from entering TC area or accessing closed ramps

- **If accommodating ramp traffic threatens safety, IMAP should close the ramp(s) entirely**

- If all lanes are expected to be closed for an extended amount of time, IMAP should divert all traffic onto an exit ramp upstream from incident
  - Exit should access a viable detour/alternate route
  - Coordinate with other IMAP units & responders on-scene, first
  - Notify TMC dispatch before diverting traffic onto an exit ramp

- Deploy ETC for entrance/exit ramps in the following order;
  - Place cones to keep ramp traffic from entering incident work zone
  - Deploy tapers & buffers to properly close blocked travel lanes
  - Add to/adjust ETC to accommodate ramp access through TC area

- Closures involving ramps often require multiple ETC points – call for backup or Traffic Services/DOT Maint. so all points are managed safely

Accommodating Ramp Traffic through TC Area:

Objective: Explore the guidelines & ETC configurations used to accommodate ramp traffic through or around the traffic control (TC) area

Critical Knowledge:

- **Exit through TC Area –** use when exit ramp remains open
  - ○ Tapered channels guide exit traffic through TC area to exit ramp
  - ○ IMAP unit parks downstream from channel so motorists see exit open
  - ○ Shoulder taper used upstream to keep motorists out of TC area
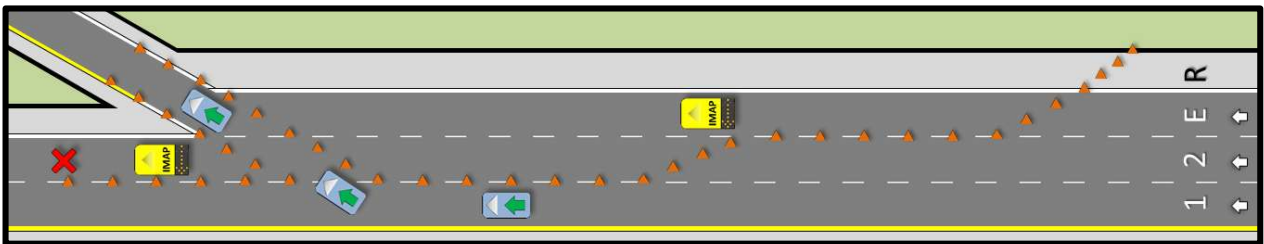
- **Entrance through TC Area –** use when entrance ramp remains open
  - ○ Tapered channels guide ramp traffic through TC area to travel lane
  - ○ Backup IMAP unit parked upstream on shoulder with shoulder taper to provide AW and to keep motorists out of TC area
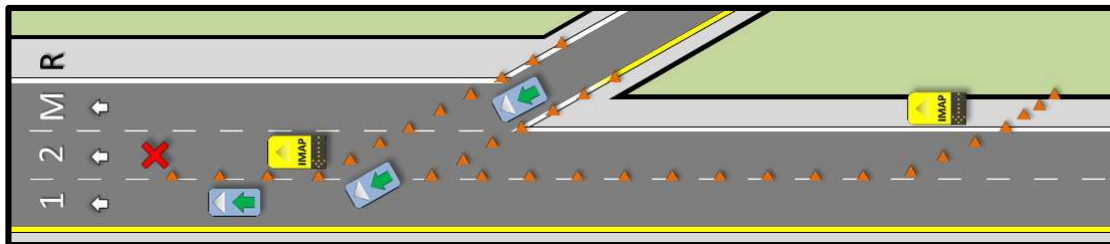
- **Narrow Entrance Ramp –** use when incident occurs at bottom of ramp
  - ○ Extended taper narrows ramp, guiding traffic past incident
  - ○ Downstream taper helps traffic in inside lanes merge after incident
  - ○ Downstream buffer allows ramp traffic to speed up before merge
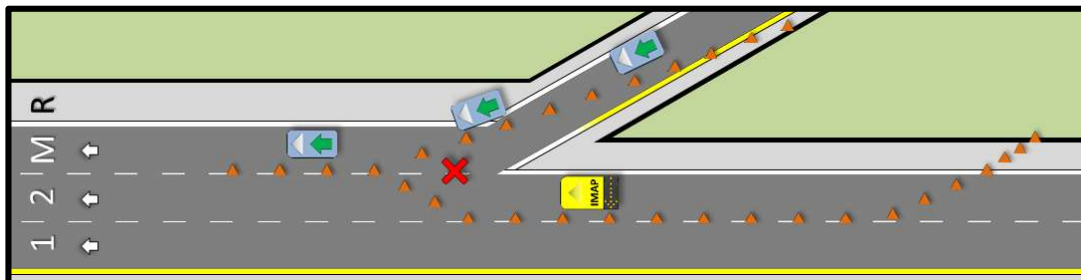
Road Closed & Ramp Closures:

Objective: Explore the guidelines & ETC configurations used when the road is closed and/or when entrance or exit ramps are closed

Critical Knowledge:

- **Road Closed/Divert to Exit –** use to divert traffic off of closed roads
  - Standard tapers shift traffic from inside lanes towards exit ramp
  - Taper on ramp & shoulder keeps motorists from getting past ETC
  - Responders may deploy a long taper across all lanes to ramp, initially – then adjust to proper configuration
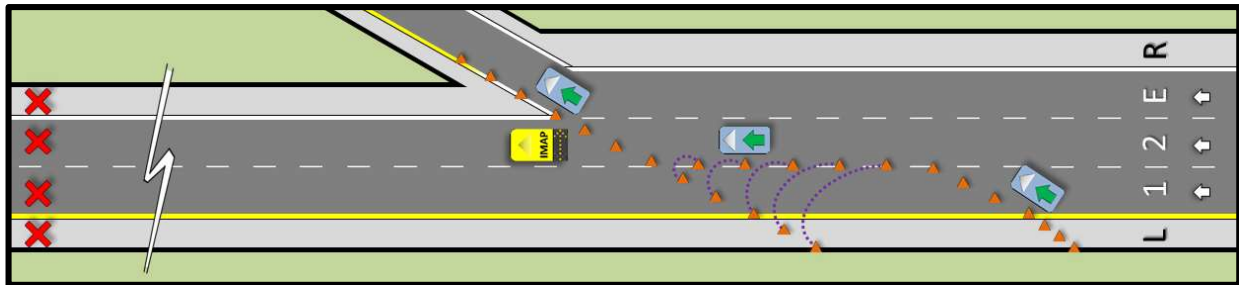
- **Ramp Closure –** use when roadway accessed by ramp is closed to travel
  - **To close exit ramp** (left diagram); park truck on ramp with appropriate arrow display activated. Use traffic cones to close off ramp and shoulders
  - **To close entrance ramp** (right diagram); park truck with front pointing straight down ramp with CAUTION display facing intersection. Use traffic cones to close off ramp and turn lanes for entrance ramp (if any)
  - Notify TMC whenever ramps are closed so DMS can be activated
  - Coordinate with law enforcement when closing entrance ramps – only certified traffic control officers can direct traffic at intersections
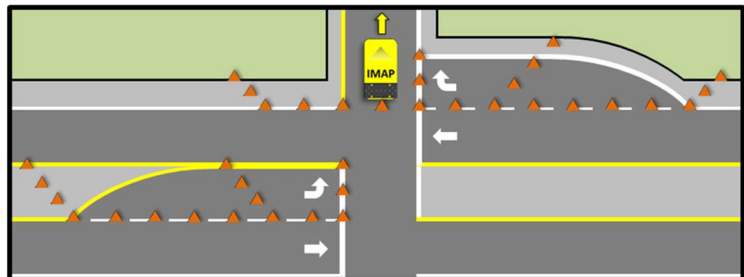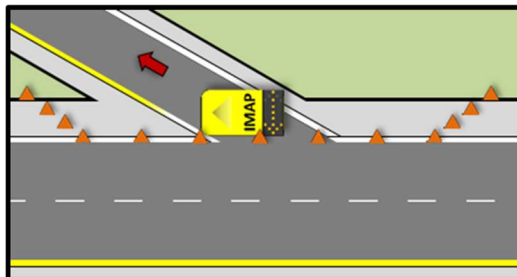
Description:

Become familiar with the concepts of traffic flow & queue formation and explore the guidelines, strategies, & processes used to properly manage traffic queues

Objectives:

- Learn the basic concepts & terminology related to traffic & queue management

- Explore the distinct areas of a queue & how it impacts traffic flow & safety

- Learn the guidelines & strategies for monitoring the queue & communicating queue details to TMC, other IMAP units, and law enforcement.

- Learn the role that rapid clearance plays in queue management and explore guidelines & strategies that support rapid clearance

- Become familiar with specialized emergency traffic control (ETC) techniques used by IMAP to manage queues

Audience: IMAP Responders

Duration of Training: 7 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control Techniques
- ETC-102: Emergency Lane Closures
- COM-101: Multi-Unit Coordination
- COM-102: Interacting with Other Agencies
- IM-101: Incident Priorities
- IM-102: Push / Pull / Drag Operations

Introduction to Queue Management:

Objective: Learn the concepts & terminology related to traffic & queue management

Critical Knowledge:

- Queue Management – refers to the coordinated efforts of IMAP, TMC, & other responders to limit the overall impact of an incident by;
    - Preventing queues from forming/decreasing queues once created
    - Using emergency traffic control (ETC) to keep traffic flowing safely

- Queue (a.k.a. Congestion) – a grouping of stopped or slow-moving vehicles whose normal traveling speed is limited by any of the following;
    - Peak travel periods (e.g. AM/PM rush hour or seasonal traffic)
    - Planned events (e.g. construction, concerts, sporting events, etc.)
    - Unplanned events (e.g. crashes, adverse weather, etc.)

- Queues are caused when VOLUME exceeds CAPACITY
    - Traffic Volume – number of vehicles traveling on a roadway
    - Roadway Capacity – maximum number of vehicles that a road is designed to handle without developing congestion

- Basic Traffic Flow Concepts – in general;
    - As volume increases and/or capacity decreases, congestion develops
    - Queue Length (amount of congestion in distance) increases over time
    - As duration increases, secondary crashes/responder injuries are more likely to occur
    - Secondary crashes account for 30% of ALL crashes & 18% of ALL highway fatalities

- Secondary Crashes & Responder Injury can be prevented by;
    - Decreasing incident duration through rapid response & lane clearance
    - Proper use of ETC & providing advance warning (AW) to motorists

- Traffic Volume can be managed by;
    - Diverting traffic to other, less congested routes
    - Increasing the road's capacity to handle a larger volume of vehicles

- Roadway Capacity can be increased by;
    - Reopening closed/blocked travel lanes as soon as possible
    - Creating "temporary travel lanes" (i.e. diverting traffic to shoulders)

Elements of the Queue & Hot Spots:

Objective: Explore the distinct areas of a queue & how it impacts traffic flow & safety

Critical Knowledge:
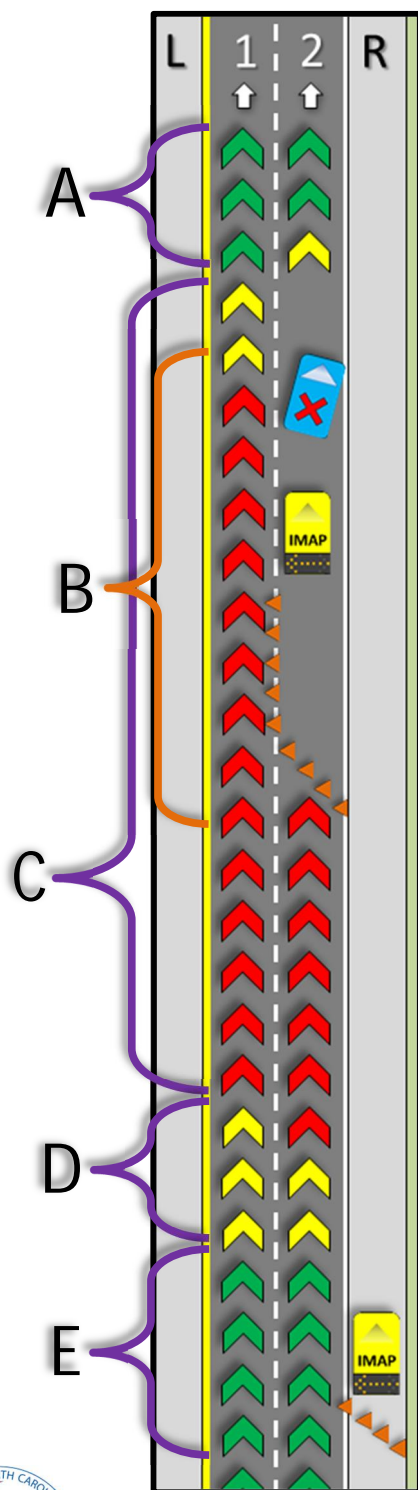
- A – Front of Queue: past incident; where traffic returns to normal speeds
  - Here, vehicles may collide as they shift into other lanes & pick up speed
  - A downstream buffer & taper may help here

- B – Activity Area & Transition Area: within queue; where traffic is guided safely around Incident Work Zone
  - Here, motorists may react unpredictably to ETC and/or slow down to look at incident
  - Transition Areas (tapers) may cause traffic to "bottleneck" (slowing/stopping to merge) – especially if tapers are NOT placed properly
  - Vehicles may collide with ETC here – especially if ETC is NOT visible in time

- C – Queue: main body of traffic congestion
  - Queue Length = distance from Front of Queue to End of Queue
  - Here, motorists often drive erratically in stop and go traffic (e.g. blocking shoulder, fender benders while changing lanes, etc.)

- D – End of Queue: before incident; where traffic speeds decrease significantly as vehicles enter queue
  - Hot spot for secondary crashes
  - Secondary crashes most often occur here when motorists are surprised by the sudden change in traffic speeds

- E – Before Queue: where traffic speeds are normal
  - Advance Warning (AW) should be placed here
  - Adjust AW to stay before End of Queue

Monitoring the Queue & Communication:

Objective: Learn the guidelines & strategies for monitoring the queue & communicating queue details to TMC, other IMAP units, and law enforcement.

Critical Knowledge:

- There is more to Incident Management than what is happening on-scene – IMAP manages the incident AND the queue it creates

- Queue Info is Critical to IMAP Response:
  - Traffic speed determines length of transition area (Ex. 120ft taper for 40mph or less vs. 360ft taper for 40+mph)
  - Queue length indicates where secondary crashes may occur, where AW should be placed, and whether alternate routes are needed
  - Vehicles stopping suddenly or colliding with ETC is a good indication that ETC is NOT placed properly

- TMC also relies on queue info & has special tools to monitor queue;
  - INRIX Maps – show live traffic speeds & full queue length
  - Traffic Cameras – can view incident scene & queue hot spots to monitor traffic's reaction to ETC and detect secondary crashes
  - These tools have their limitations so TMC & IMAP should share queue info to help one another respond properly

- Upon arrival, estimate Incident Duration ASAP
  - Best indicators are number of lanes blocked, type of vehicles involved (e.g. tractor trailers), and number of responders on-scene
  - Knowing typical response times for other responders can help, too
  - A good estimate can help initiate other actions sooner such as calling Traffic Services/DOT Maint. for proper TTC or requesting backup
  - Seek input from other responders to confirm or adjust your estimate

- Guidelines for Monitoring the Queue – IMAP responders should;
  - Monitor the queue regularly from arrival to departure
  - Communicate their observations/estimates to TMC & other units
  - Adjust their response (especially ETC) as the queue changes
  - Monitor queue hot spots – use backup units to monitor if possible
  - Backup unit providing AW should notify TMC & other units when queue length or approaching traffic speeds change

Rapid Lane Clearance:

Objective: Learn the role that rapid lane clearance plays in queue management and explore guidelines & strategies that support rapid clearance.

Critical Knowledge:

- Rapid lane clearance (when done safely) is the surest way to;
  - Decrease overall incident duration
  - Limit the amount of congestion that develops
  - Decrease the risk of responder injury & secondary crashes

- IMAP responders should NOT compromise safety in order to reopen lanes quickly – follow safety precautions but plan ahead & act decisively

- Common Strategies for Rapid Lane Clearance:
  - Anticipating required response efforts & initiating action ASAP
  - Marking vehicle locations to help speed up crash investigations
  - Advising motorists involved in fender benders to relocate to shoulder
  - Pushing, dragging, or up-righting to speed up vehicle removal

- Participate in Incident Command – engage other responders on-scene (e.g. Law Enforcement, Fire Dept., Towing & Recovery, etc.);
  - Discuss incident details as well as the incident's affect on traffic
  - Determine what is being done to open lanes & offer to help
  - Relay up-to-date queue info to Incident Commanders (IC) to emphasize traffic impact & so they can adjust their response if needed
  - Identify what actions are being taken to minimize congestion, provide input & notify TMC dispatch
  - Work with TMC to plan best detours/alternate routes & advise ICs

- Goals of Participating in Incident Command:
  - To play an active role in the response & management of the incident
  - NOT to take over OR give orders to other responders
  - To share info about traffic congestion so it can be addressed properly
  - NOT to force lane clearance as the highest priority – SAFETY is #1
  - To learn critical details that can support IMAP & TMC response
  - NOT to get involved in efforts that are outside of IMAP's domain

Traffic Control for Queue Management (1 of 3):

Objective: Become familiar with specialized traffic control techniques used to manage queues

Critical Knowledge:

- Properly deployed ETC can support queue management by;
  - Giving responders enough room to clear lanes quickly & safely
  - Guiding vehicles around incidents in a smooth & orderly fashion
  - Easing congestion by diverting excess volume to other routes
  - Recovering lost capacity by making new travel lanes (temporarily)

- Q-Technique # 1: Double Check ETC – watch for vehicles that are;
  - Stopping suddenly or swerving as they approach ETC area
  - Attempting to bypass ETC or drive on shoulder used by responders
  - If ETC is NOT working as intended, adjust it immediately

- Q-Technique # 2: DMS as Advance Warning – DMS can be used to provide AW instead of a backup unit if available DMS is;
  - Far enough from end of queue that motorists can react safely OR
  - Located at least 1½ miles from end of transition area
  - Notify TMC & request availability of DMS for AW – call for backup unit to provide AW if DMS is NOT available

- Q-Technique #3: Alternate Routes – IMAP should notify TMC to suggest alternate routes if;
  - 50% or more travel lanes are closed during peak hours OR
  - Incident causes more than 1 mile of congestion
  - DO NOT use ETC to divert traffic to an alt. route unless a Return Access Detour/Alt. Route is in place (Q-Technique #6)

- Q-Technique #4: Temp. Travel Lanes – if space permits, responders can;
  - Divert traffic onto shoulders NOT in use by responders OR
  - Combine 1 narrow shoulder with adjacent available travel lane to create 2, slightly narrow travel lanes
  - Responders must use tapers to shift traffic into & out of temporary lanes & must separate lanes from one another with a buffer

Traffic Control for Queue Management (2 of 3):

Objective: Become familiar with specialized traffic control techniques used to manage queues

Critical Knowledge:

- Q-Technique #5: Close Ramps to Affected Route
    - Can keep other routes from adding to backup on affected route
    - This can also limit queue buildup on the adjoining routes
    - Allow emergency responders to use ramps if needed

Example: Queue on affected & adjoining route BEFORE closing ramp (left) & AFTER (right)
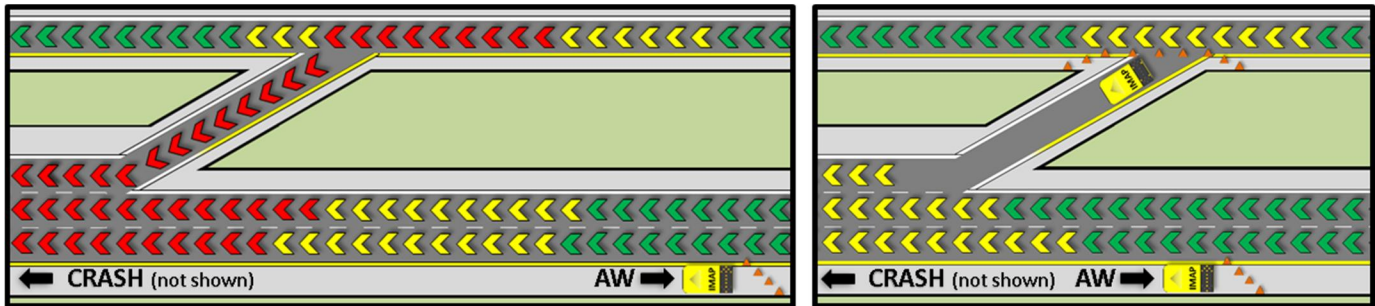
- Q-Technique #6: Return Access Detour/Alt. Route – use when;
    - Use when all or most travel lanes are blocked between the Exit & Entrance Ramp of the same exit
    - Exit MUST have return access to roadway
    - ETC may be used to divert traffic onto shoulder/temporary travel lanes unless traffic will disrupt incident clearance or endanger safety
    - Request Law Enforcement to control traffic at interchanges
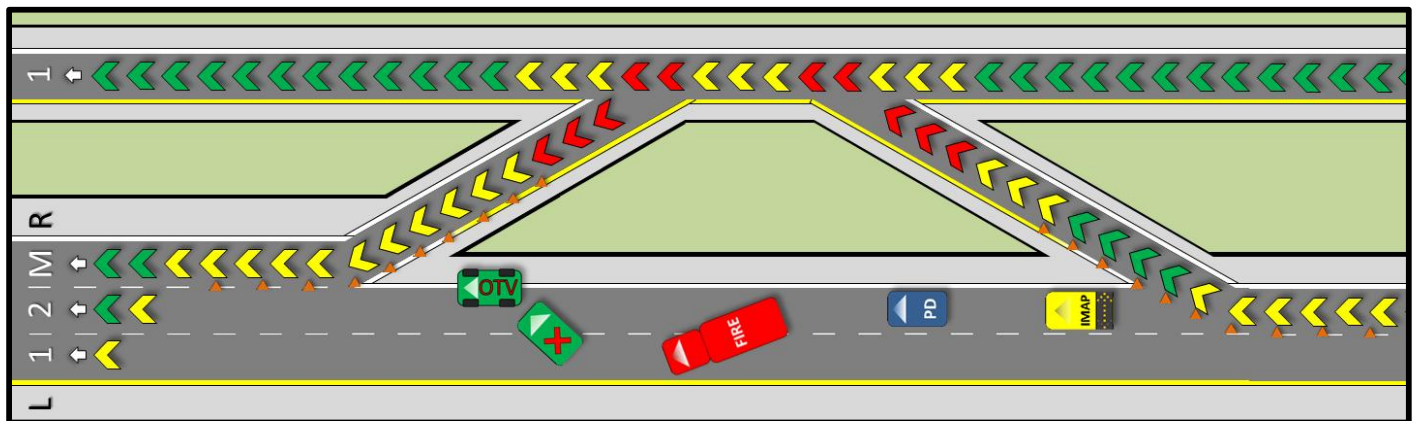
Traffic Control for Queue Management (3 of 3):

Objective: Become familiar with specialized traffic control techniques used to manage queues

Critical Knowledge:

- Q-Technique #7: Lane Closure and Traffic Shift Across Separator
  - Traffic is moved from managed lanes into general purpose lanes
  - Traffic control is placed to merge vehicles through a safe area
  - Arrowboard on IMAP vehicle points to the right to alert vehicles

Example: Managed Lanes Across Separator

MANAGED LANES

GENERAL PURPOSE LANES

4 cones
over 3 skips

5 cones,
1 per skip

Optional 3-5 cones
to prevent people
reentering lane
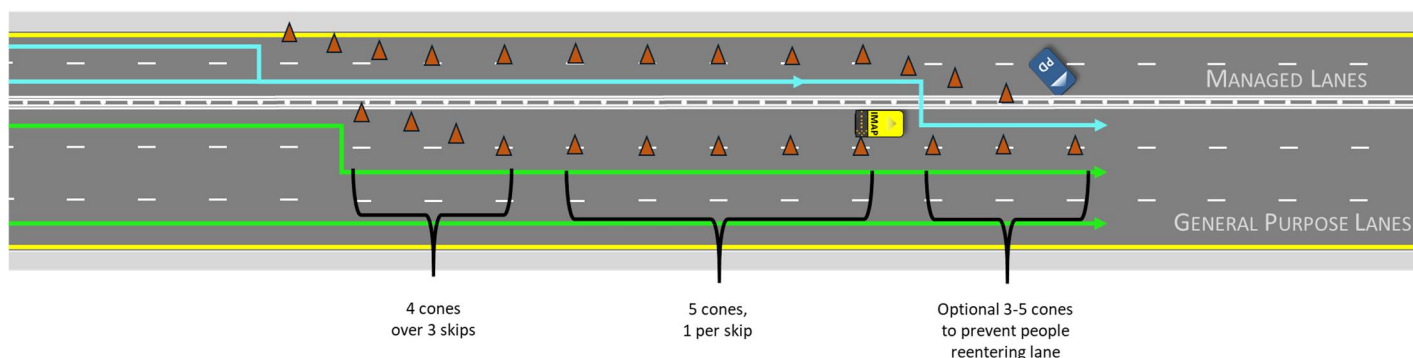
- Q-Technique #8: Lane Closure at Entry Access
  - Traffic is moved from managed lanes into general purpose lanes
  - Traffic control is placed to merge vehicles through a safe area
  - Arrowboard on IMAP vehicle points to the right to alert vehicles

Example: Managed Lanes Across Separator, at Entry Access, and at Exit and Entry Access

MANAGED LANES

GENERAL PURPOSE LANES

Taper 1:
4 cones
over 3 skips

Buffer 1:
5 cones,
1 per skip

Taper 2:
4 cones
over 7 mini-skips

Buffer 2:
5 cones,
1 per 3 mini-skips

Taper 3:
4 cones
over 7 mini-skips

Buffer 3:
5 cones,
1 per 3 mini-skips
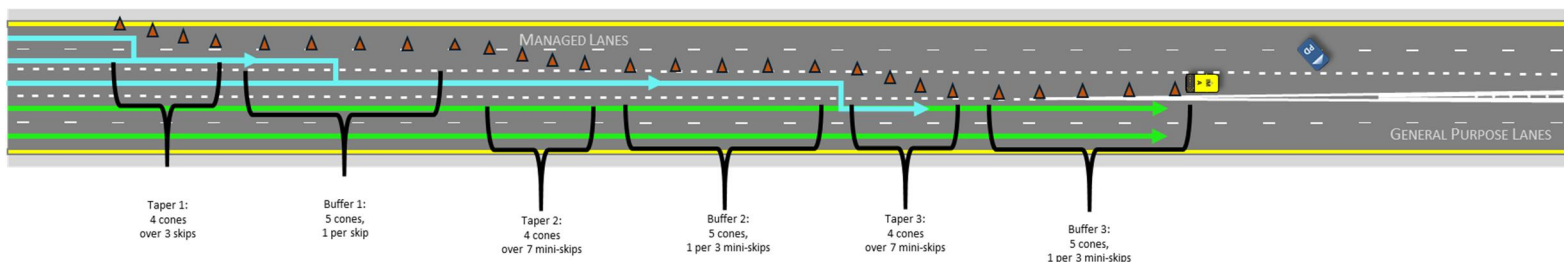
Description:

Become Familiar with the concepts & guidelines related to abandoned vehicles & the Signal 4 process

Objectives:

- Learn about abandoned vehicles and IMAP's responsibility to assist in the response and/or removal of abandoned vehicles from the roadway

- Become familiar with the guidelines & processes related to abandoned vehicle response

- Explore the components of the HP-303 tag for abandoned vehicles

- Learn about the Signal 4 process for removing abandoned vehicles

Audience: IMAP Responders

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
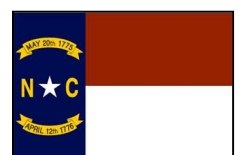
Overview of Abandoned Vehicles:

Objective: Learn about abandoned vehicles and IMAP's responsibility to assist in the response and/or removal of abandoned vehicles from the roadway

Critical Knowledge:

- **Abandoned vehicles** (including abandoned equipment or boat trailers) **can endanger safety whether travel lanes are affected or not**

- **IMAP response activities for abandoned vehicles include;**
    - Inspecting abandoned vehicles as they are detected
    - Reporting vehicle & location information to TMC dispatch
    - Tagging abandoned vehicles for later removal
    - Moving and/or coordinating immediate removal of vehicles from the roadway

- **When removed from the roadway, abandoned vehicles are towed & stored by private towing & recovery companies (a.k.a. wreckers)**
    - Wreckers are dispatched on rotation basis by Highway Patrol (SHP)
    - TMC operators or IMAP responders request wreckers by calling SHP

- **Abandoned vehicles left in NON-hazardous locations should be removed AFTER 24 hours –** non-hazardous locations may include;
    - Wide shoulders/medians of main roadway
    - Grassy area near roadway
    - Untraveled portions of entrance/exit ramps & rest areas

- **Abandoned vehicles left in HAZARDOUS locations should be removed IMMEDIATELY** if the abandoned vehicle;
    - Blocks travel lanes or threatens safety
    - Is damaged or vandalized
    - Impedes construction or maintenance activity
    - Prevents emergency vehicle access to incident scenes
    - Is left in area where NO PARKING/TOW AWAY signs are posted

Abandoned Vehicle Response Guidelines:

Objective: Become familiar with the guidelines & processes related to abandoned vehicle response

Critical Knowledge:

- Responders should adhere to all guidelines/processes from "Vehicle Positioning & Responder Approach" course which includes but is not limited to;
    - Positioning truck and activating emergency lights & arrow board
    - Relaying incident details to TMC dispatch
    - Safely exiting the IMAP truck & approaching the vehicle
    - Checking vehicle for occupants & leaving fingerprints on rear side panel of vehicle

- **Abandoned Vehicles in NON-Hazardous Locations:**
    - Inspect vehicle & notify TMC dispatch
    - Fill out **HP-303 sticker** and place on vehicle to tag it
    - Monitor vehicle while on patrol – stop & assist if owner returns
    - If vehicle is already tagged and 24 hour period has expired, initiate Signal 4 process to have vehicle removed from roadway

- **Abdandoned Vehicles in HAZARDOUS Locations:**
    - Notify TMC & deploy appropriate emerg. traffic control (ETC)
    - Inspect vehicle & determine how and where to relocate vehicle
    - Mark vehicle's wheel locations (see "Push/Pull/Drag Operations")
    - Push/Drag vehicle to a non-hazardous location and tag it, **OR…**
    - Initiate Signal 4 process to remove vehicle immediately
    - Remain on-scene until ETC is no longer needed

- **Additional Guidelines for Abandoned Vehicles:**
    - Tagging is NOT necessary if vehicle will be removed immediately
    - IMAP should NEVER enter an abandoned vehicle – if it seems suspicious, notify law enforcement immediately
    - If vehicle is in a non-hazardous location & owner plans to leave scene, advise that their vehicle will be towed after 24 hours – tag vehicle if it is still in-place by the end of your shift

HP-303 Vehicle Tag:

Objective: Explore the components of the HP-303 tag for abandoned vehicles

Critical Knowledge:

- All abandoned vehicles in NON-hazardous locations **must be tagged with a completed, HP-303 tag –** this tag is intended to;
    - Notify owner that vehicle will be towed if left on road for 24+ hours
    - Tell IMAP/SHP that vehicle was inspected & when it can be towed

- **Completing the HP-303 Tag:**
    - Remain in IMAP truck while filling out the HP-303 tag
    - Use black ink pen to write in all information requested on tag
    - Use large, black marker to write the date of the month when vehicle was inspected across front of the tag (**Ex.** 7/4/12 = **"4"** across tag)
    - Draw a black "X" over the date when a wrecker is called for vehicle
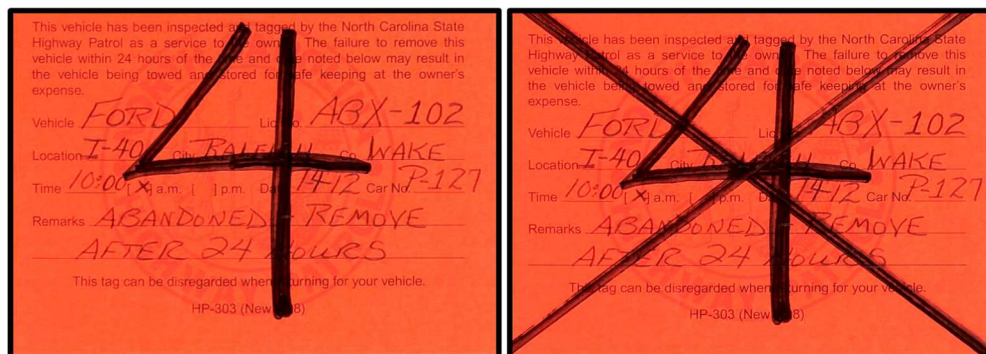
- **Placing the HP-303 Tag on the Vehicle:**
    - The HP-303 tag is a sticker with a powerful adhesive on the back
    - Tag will NOT stick to wet surfaces – dry with towel before placing
    - Place tag where it can be seen easily – lower corner of the vehicle's rear window is best
    - DO NOT place the tag on painted or plastic vehicle surfaces
    - DO NOT place tag where it will obscure owner's view of the road (e.g. on front windshield, etc.)
    - Tag may be placed on vehicle's antennae or on back wheel closest to traffic if glass windows are not available

- **If initial tag is removed;**
    - Contact TMC to verify time/date when vehicle was first tagged
    - Re-tag with initial info **OR** call wrecker if 24-hr period has expired

Signal 4 Process:

Objective: Learn about the Signal 4 process for removing abandoned vehicles

Critical Knowledge:

- **Signal 4** refers to the process where IMAP responders call SHP to request immediate removal of vehicles that have been abandoned;
  - In a NON-hazardous location for 24 hours or more
  - In a HAZARDOUS location for ANY amount of time

- **Notify TMC before initiating Signal 4** and relay the following;
  - Location of abandoned vehicle
  - Vehicle description
  - Reason for Signal 4 (e.g. 24-hr expiration, hazardous location, etc.)

- **Request wrecker through SHP –** switch radio to the appropriate District Channel for SHP and relay the following to their telecommunicator;
  - IMAP unit P#
  - Location of abandoned vehicle
  - Vehicle description
  - License plate # (including state & year of issue)
  - Last 5 characters of Vehicle Identification Number (VIN)
  - Condition of vehicle (e.g. disabled, wrecked, etc.)
  - Reason for Signal 4
  - **For regions without a TMC, IMAP responder should document the information above using a Vehicle Relocation Report form**

- **Once wrecker has been dispatched by SHP;**
  - Call TMC & advise name of towing company that SHP dispatched
  - "X-out" date on HP-303 tag
  - Remain on-scene if needed or resume patrol – **IMAP is NOT required to remain with vehicles in non-hazardous locations**
  - Monitor abandoned vehicle to confirm wrecker arrival
  - If wrecker does NOT arrive after 30 minutes (hazardous location) or 2 hours (non-hazardous location) call SHP to request wrecker's ETA
  - If owner arrives to claim vehicle after Signal 4 is initiated, notify TMC & call SHP to cancel wrecker – re-activate Signal 4 if needed
  - If able, notify TMC when wrecker arrives & when vehicle is removed

Description:

Become familiar with the factors/characteristics related to incident prioritization as well as the guidelines & processes used by IMAP to properly prioritize incident response efforts

Objectives:

- Learn about incident priorities and the factors/characteristics that determine the priority level of an incident

- Become familiar with the response guidelines related to incident priorities

Audience: IMAP Responders

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques
- ETC-102: Emergency Lane Closures

Understanding Incident Priorities:

Objective: Learn about incident priorities and the factors/characteristics that determine the priority level of an incident

Critical Knowledge:

- **Traffic incidents are prioritized based on the following;**
  - Threat to responder & motorist safety
  - Severity of impact to traffic
  - Urgency of assistance needed

- **Incident prioritization ensures that;**
  - IMAP support is deployed where & when it is needed most
  - Incidents with the greatest impact are responded to, FIRST

- **Incident Priorities** – shown below are IMAP's incident priorities. Higher priority incidents (those that should be responded to, first) are at the top & lower priority incidents are at the bottom;
  1. HazMat spill or overturned tractor trailer
  2. Accident with injuries and/or major investigation
  3. Accident with unconfirmed injuries
  4. Vehicle fire
  5. Accident with NO injuries
  6. Debris in a travel lane
  7. Disabled vehicle
  8. Assisting NCDOT Maintenance/Construction personnel
  9. Abandoned vehicle

- **Factors that Affect Priority Level:**
  - **Lane(s) blocked vs. lane(s) available – most important factor**
  - Current or expected impact to traffic
  - Presence of other responders on scene
  - IMAP responder's distance/travel time to incident
  - Number of IMAP units available to respond

Response Guidelines Based on Incident Priorities:

Objective: Become familiar with the response guidelines related to incident priorities

Critical Knowledge:

- While on patrol, IMAP responders should stop, investigate, and respond to any potential traffic incidents that they detect

- When multiple incidents are active at once, **responders should respond to higher priority incidents BEFORE lower priority incidents**

- If a responder is en route to an incident and detects/is dispatched to a new, higher priority incident, the responder should;
    - Respond to the new, higher priority incident, first
    - Advise TMC that they are en route & provide ETA to new incident

- **Responders may leave the scene of a lower priority incident** before services are complete **in order to respond to a higher priority incident**

- If providing motorists assistance when a higher priority incident is detected/dispatched;
    - Attempt to properly render services quickly before departing **OR**
    - Advise motorist that you must leave for a higher priority incident but that you or another IMAP unit will return
    - Notify TMC before departure & request backup to assist motorist
    - Retrieve & properly store all equipment before departure

- If providing temp. traffic control (ETC) to close 1 or more lanes when a higher priority incident or **secondary crash** is detected/dispatched;
    - DO NOT leave scene unprotected to respond to new incident
    - Call for a backup IMAP unit to relieve you at original incident **OR** to respond to new incident
    - If nearby, adjust existing ETC to include new incident or deploy initial ETC around new incident to create a separate TC area
    - Reposition truck & modify arrow board as appropriate for the furthest upstream TC area – backup units position at downstream TC area(s)

Push / Pull / Drag Operations

Description:

Become familiar with the guidelines, equipment, & processes used to properly remove damaged vehicles or other large objects from the roadway

Objectives:

- Learn about push/pull/drag (P/P/D) operations & important terminology

- Learn the primary guidelines related to P/P/D operations & equipment

- Explore IMAP's towing equipment & guidelines for its proper use for P/P/D (Equipment is described in greater detail in course titled, "IMAP Equipment Specifics")

- Learn about the basic concepts for using hooks, chains, etc. during P/P/D operations

- Receive guidance to help maneuver properly during P/P/D operations

- Become familiar with the guidelines & processes for marking vehicles for removal in order to assist law enforcement crash investigations & expedite lane clearance

- Learn about the guidelines & processes for moving vehicles that may or may not be operated by motorists during P/P/D operations

- Review basic steps & instructions for the overall P/P/D process

Audience: IMAP Responders

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- VE-105: 2-Wheel / 4-Wheel Drive
- ETC-100: Vehicle Positioning & Responder Approach

Introduction to Push/Pull/Drag Operations:

Objective: Learn about push/pull/drag operations & important terminology.

Critical Knowledge:

- **Push/Pull/Drag (P/P/D) Operations** refers to the techniques used by IMAP to remove damaged vehicles or large objects from the roadway
  - **PUSH** – to use the IMAP truck's push bumper to move an object/vehicle
  - **PULL** – to use hooks, chains, etc. to move a vehicle that is being operated by a motorist
  - **DRAG** – to use hooks, chains, etc. to move an object or a vehicle that is NOT being operated by a motorist

- **Push/Pull/Drag Legislation** – under certain circumstances, IMAP's use of P/P/D is protected and authorized by NC laws such as;
  - **Quick Clearance law (GS 20-161)** – IMAP may remove objects or vehicles that are a hazard to roadway or causing severe congestion
  - **Fender Bender law (GS 20-166)** – IMAP may remove vehicles following a minor crash if NO injuries/fatalities are involved
  - In ALL cases, IMAP may NOT move a vehicle that is involved in a crash investigation until law enforcement (LE) gives consent

- **IMAP responders should ONLY use Push/Pull/Drag if;**
  - The responder has experience moving a similar vehicle/object under similar conditions
  - Vehicle/object is in travel lanes or obstructing traffic
  - It is necessary to reopen travel lanes efficiently
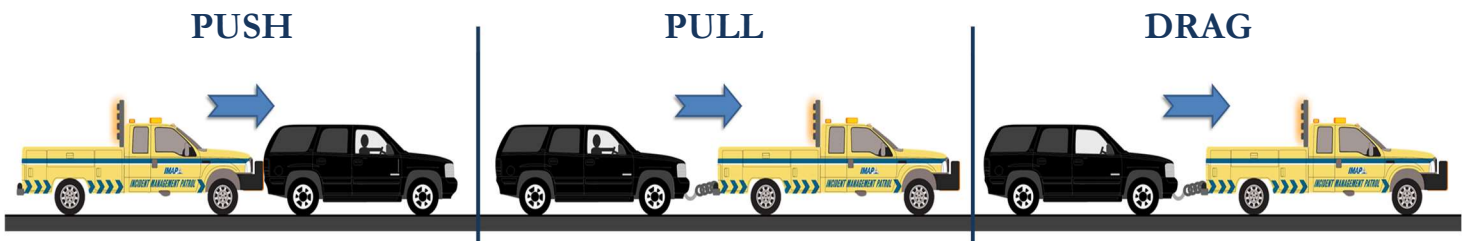
PUSH   **PULL**   **DRAG**

Push/Pull/Drag Guidelines:

Objective: Learn the primary guidelines related to P/P/D operations & equipment.

Critical Knowledge:

- **Push/Pull/Drag Safety:**
  - Wear all necessary PPE – especially work gloves & safety glasses
  - Deploy appropriate emergency traffic control (ETC), first
  - Keep P/P/D area free of bystanders – honk horn & shout, "ALL CLEAR" before moving

- **Inspect Vehicle/Object BEFORE Using P/P/D:**
  - Determine if vehicle can move safely under its own power
  - Determine if vehicle/object can be moved by IMAP truck
  - Check under & around vehicle for occupants
  - Look under & around vehicle for parts (e.g. gas tank) that may scrape the ground or prevent vehicle from being moved
  - Check vehicle for damage & point out existing damage to motorist
  - IMAP should seek to **cause NO additional damage** using P/P/D

- **P/P/D Equipment –** all hooks, chains, straps, etc. should;
  - Be inspected BEFORE being used for P/P/D
  - NOT be used if damaged or NOT rated for load
  - Be connected securely before any tension is placed on them
  - Be connected securely only at solid points of the vehicle/object
  - Only be connected to IMAP truck at approved points that can bear the full weight & tension of the vehicle/object being moved
  - Be wiped clean & stored in a secure, dry location after each use

- **Moving the Vehicle/Object:**
  - Identify a relocation area before using P/P/D
  - Maintain control of the IMAP truck & load while using P/P/D
  - Vehicles/objects should be moved across as few lanes as possible and should always be relocated to the same side of the road

- **Communicate with Law Enforcement (LE) & Motorist:**
  - LE – confirm that any crash investigation will NOT be impeded, discuss removal plan and receive consent to use P/P/D
  - Motorist – advise them that their vehicle will be moved & assure that they understand their part in relocating their vehicle (if any)

Hooks, Chains & Other P/P/D Equipment:

Objective: Explore IMAP's towing equipment & guidelines for its proper use for P/P/D. For equipment details, see course titled, "IMAP Equipment Specifics."

Critical Knowledge:

- **IMAP equipment used for P/P/D** includes but is not limited to;
    - Push bumper (DO NOT use "brush/cattle guard" for P/P/D)
    - Metal hooks, chains & cables (e.g. J-Hooks, frame keys, etc.)
    - Nylon tow straps
    - Front/Rear winch
    - Clevis shackles & other chain connectors

- **Using the Push Bumper:**
    - Push bumper should be level with vehicle/object being moved
    - Contact with bumper should be gentle – accelerate & stop gradually
    - Front winch hook must be flush with bumper BEFORE pushing

- **Only connect hooks/chains to following points on IMAP truck;**
    - Tow hooks & anchor bolts on front or rear bumper
    - Front/rear winch cable hooks (only if needed – winch is best used when IMAP truck is stationary)
    - Trailer hitch on rear bumper

- **Recommended locations on vehicles to connect hooks/chains;**
    - Vehicle frame or chassis
    - Trailer hitches, axles, etc.

- **Hooks should fit snuggly in vehicle, NOT jammed into place**
    - Poorly placed hooks may get stuck when put under tension
    - A crowbar may be used to remove stuck hooks

- **Use shorter chain lengths when pulling/dragging** (3-4ft is optimal)
    - Decreases force of "snap-back" if chain breaks
    - Can increase maneuverability of IMAP truck & load
    - Caution: if too short, vehicle may run into IMAP truck when stopped

- **Use the right hook, chain, strap, or cable for the job**
    - Nylon tow straps can prevent further vehicle damage during P/P/D
    - J-Hooks are large & very strong but may not fit smaller cars
    - Frame Keys are best for smaller cars but correct key must be used

Hook & Chain Configurations:

Objective: Learn about the basic concepts for using hooks, chains, etc. during P/P/D operations.

Critical Knowledge:

- **Hook & chain configurations should;**
  - Be appropriate for size & weight of vehicle/object being moved
  - Distribute tension evenly across hooks/chains used
  - Connect to vehicle/object so that it moves only in desired direction

GOOD   GOOD   BAD
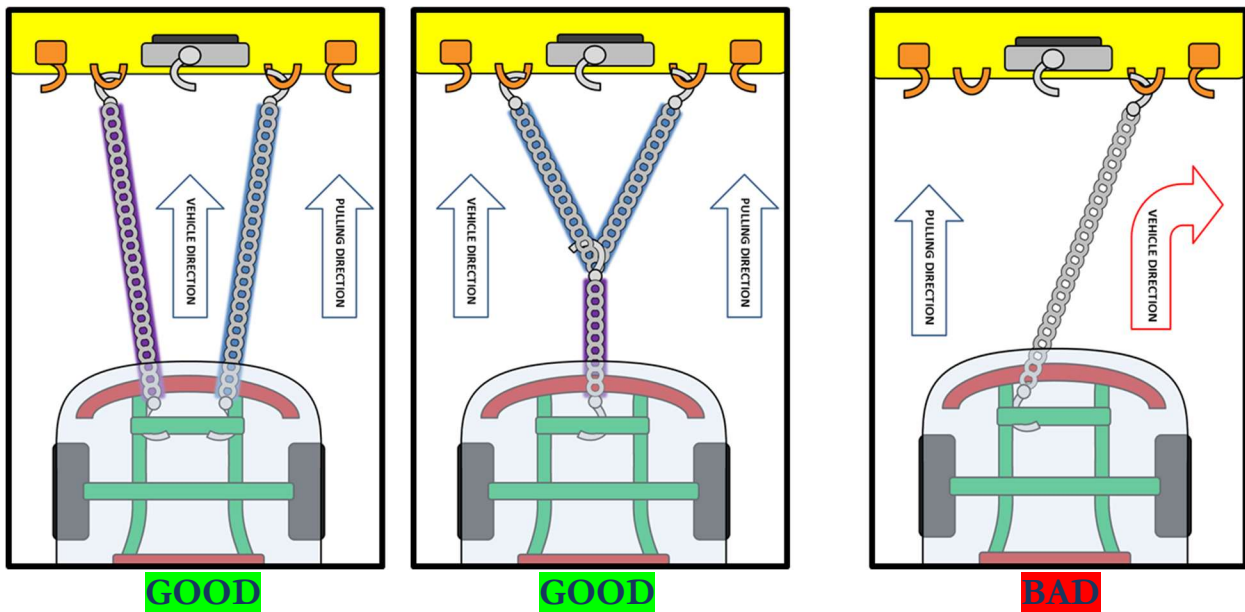
- **Dragging Tip:** if vehicle's front wheels are locked at an angle, connect chain to side of vehicle that wheels are pointing so vehicle stays straight
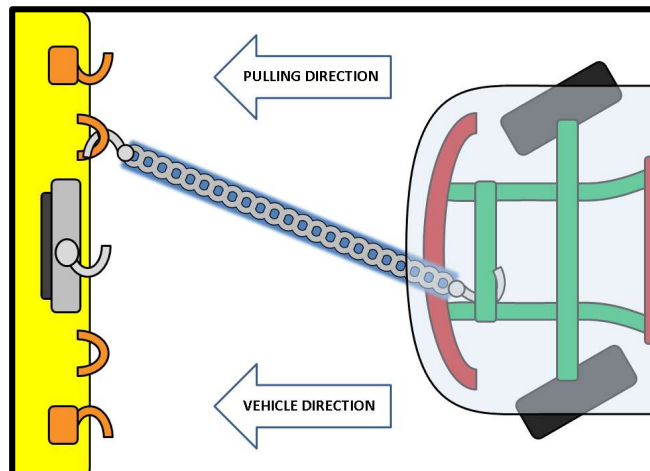
Maneuvering During P/P/D Operations:

Objective: Receive guidance to help maneuver during P/P/D operations.

Critical Knowledge:

- **Plan Ahead –** know what will be moved, how it will be moved, and where it will be moved to BEFORE initiating P/P/D

- **Increase Traction –** shift IMAP truck into 4-wheel drive & lock front wheel hubs if needed

- **To keep a vehicle/object going straight,** push/pull on the center mass of the vehicle/object

- **Steering is often counter-intuitive when pushing:**
  - Steer LEFT to push vehicle/object to the RIGHT
  - Steer RIGHT to push vehicle/object to the LEFT
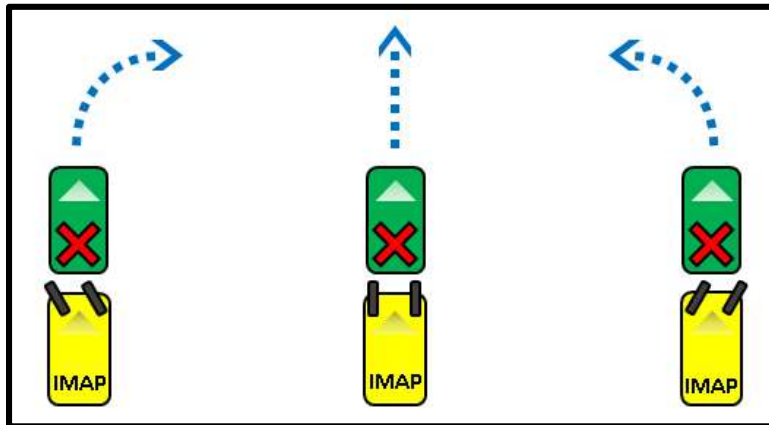
- **To turn a vehicle/object in-place, push off-center:**
  - Push LEFT side to turn CLOCKWISE
  - Push RIGHT side to turn COUNTER-CLOCKWISE
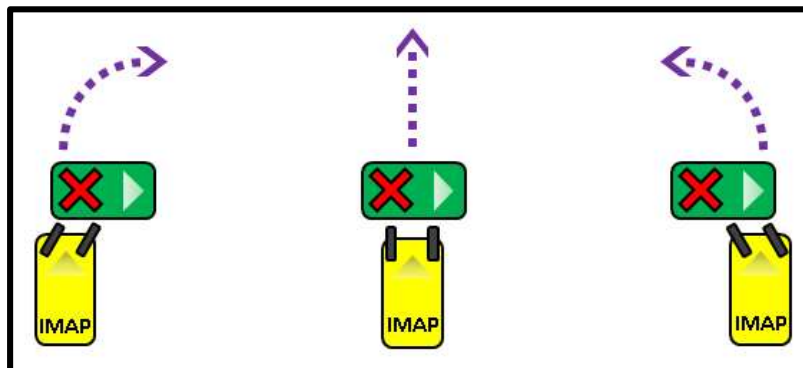
Marking Vehicles for Removal:

Objective: Become familiar with the guidelines & process for marking vehicles for removal to assist law enforcement (LE) crash investigations & expedite lane clearance.

Critical Knowledge:

- IMAP responders may mark wheel locations of crashed vehicles to assist LE crash investigations so that vehicles can be removed from travel lanes

- **BEFORE marking vehicles for removal,** IMAP responders should;
  - Confirm that NO injuries or fatalities are involved
  - Receive consent from LE to mark & remove damaged vehicles

- **Use high-visibility spray paint (NOT white) to mark wheels;**
  - Mark wheels BEFORE moving vehicles
  - Spray FRONT, OUTER EDGE, & REAR of each wheel of all vehicles involved in crash
  - Avoid getting paint on vehicle parts OTHER THAN TIRES
  - Make sure each wheel is clearly marked on the pavement

- **Paint Markings should Indicate;**
  - Vehicles involved in crash – within each vehicle's wheel markings, spray first 3 letters/numbers of vehicle's license plate
  - Direction of vehicle – for each vehicle, spray an arrow pointing in direction vehicle was facing when marked

- IMAP responders should **communicate with LE** to assure that investigating officers understand wheel markings & have all necessary information

Before Marking Wheels:
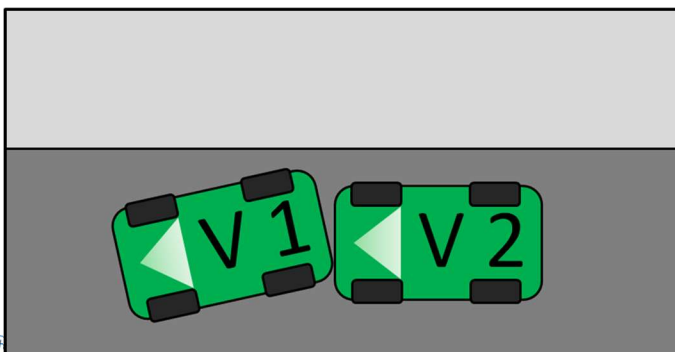
After Marking Wheels:
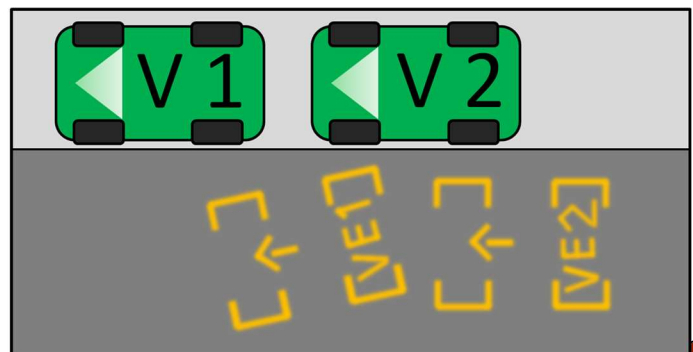
Moving Vehicles With or Without Motorists:

Objective: Learn about the guidelines & processes for moving vehicles that may or may not be operated by motorists during P/P/D operations

Critical Knowledge:

- Vehicles that can move under their own power should be relocated without using P/P/D
    - Front wheel drive vehicles may still be safe to operate after a rear-end collision (so long as gas tank is NOT dragging on the ground)
    - IMAP responders may relocate these vehicles if their owners are unable
    - Responders should **wear medical-grade gloves** if any blood-borne pathogens are present in the vehicle

- **Moving a vehicle operated by a motorist;**
    - Advise motorist that vehicle will be moved & ask if they can drive
    - Turn on engine (if possible) to activate power steering & brakes
    - Explain relocation plan clearly & describe any actions motorist will have to do during relocation (e.g. where to steer & when to stop)
    - Watch motorist carefully & continue to communicate throughout relocation using PA system and/or hand signals
    - If vehicle will be towed, advise motorist to take all items with them

- **Explain Relocation Plan to Motorist CLEARLY –** tell motorists;
    - How you will be moving their vehicle
    - What to expect as their vehicle is moved
    - Where you will be moving their vehicle to
    - What they may need to do during relocation (e.g. steer/stop)
    - What they should NOT do (e.g. make sudden stops or accelerate)
    - How & when you will communicate with them (e.g. PA system)

- **Before moving a vehicle NOT operated by a motorist;**
    - Shift vehicle into gear or "PARK" & engage emergency brake
    - Immobilize steering wheel by tying off with seatbelt/bungee chord

Push/Pull/Drag Process:

Objective: Review basic steps & instructions for the overall P/P/D process

1. After assuring that all emergency traffic control (ETC) measures are in-place, determine if P/P/D operations are necessary for incident
2. Put on appropriate PPE (e.g. work gloves & safety glasses)
3. Inspect the vehicles & area to assure that NO injuries or fatalities are involved
4. Identify an appropriate relocation area & formulate a relocation plan
5. Discuss relocation plan with law enforcement & receive consent for P/P/D
6. Notify TMC dispatch of P/P/D operations – call for backup if needed
7. Inspect vehicle for damage and, if possible;
   a. Point out existing damage to owner
   b. Remove any damage that prevents vehicle from moving
8. If motorist will operate vehicle being moved;
   a. Turn on engine (if possible)
   b. Explain relocation plan clearly to motorist
9. If motorist will NOT operate vehicle being moved;
   a. Shift vehicle into gear or "PARK" & engage emergency brake
   b. Immobilize steering wheel
10. If hooks, chains & other P/P/D equipment is needed;
    a. Retrieve & inspect P/P/D equipment
    b. Connect hooks, chains, etc. securely to damaged vehicle & IMAP truck
11. Make sure the area is clear of bystanders – honk horn & shout, "CLEAR THE AREA"
12. Slowly & carefully push, pull, or drag vehicle to relocation area
13. Bring IMAP truck & damaged vehicle to a gradual stop – if hooks/chains have been used, reverse slightly to give sufficient slack to remove hooks/chains
14. Check mirrors & safely exit the IMAP truck to confirm that vehicle is;
    a. No longer affecting travel lanes
    b. Turned off & parked with emergency brake set
15. Remove any hooks/chains used to relocate vehicle & repeat steps 7-14 for any remaining vehicles/objects that need to be removed
16. Return any P/P/D equipment used to its proper location on the IMAP truck
17. Notify TMC dispatch that P/P/D operations have completed

Description:

Become familiar with the guidelines, equipment, & processes used to properly up-right & remove overturned vehicles

Objectives:

- Learn about the primary guidelines related to overturned vehicle operations

- Become familiar with the primary guidelines for IMAP's up-righting equipment (Equipment is described in greater detail in course titled, "IMAP Equipment Specifics")

- Receive further details about the front & rear winch and guidelines for its use

- Explore the concepts & strategies used to up-right overturned vehicles

- Review basic steps & instructions for up-righting overturned vehicles

Audience: IMAP Responders

Duration of Training: 4 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- VE-105: 2-Wheel / 4-Wheel Drive
- ETC-100: Vehicle Positioning & Responder Approach

Guidelines for Overturned Vehicle Operations:

Objective: Learn about the primary guidelines related to overturned vehicle operations.

Critical Knowledge:

- **IMAP Responders should ONLY up-right overturned vehicles if;**
  - Law enforcement has given consent
  - Responder has up-righted similar vehicles under similar conditions before
  - Vehicle is in travel lanes or obstructing traffic
  - It is necessary to reopen travel lanes efficiently
  - Vehicle must be up-righted in order to be removed from travel lanes

- **Safety Precautions:**
  - Wear all necessary PPE – especially work gloves & safety glasses
  - Assure that appropriate emergency traffic control (ETC) measures are in place, first
  - Operate winch from behind a door of the IMAP truck or other solid structure
  - Keep area free of bystanders – honk horn & shout, "CLEAR THE AREA" before up-righting
  - Place heavy blanket/rubber mat over winch cable to prevent damage/injury if cable snaps
  - Have/Utilize an Escape Route

- **Inspect Vehicle BEFORE Up-Righting:**
  - Determine if vehicle must be up-righted to be removed from road
  - Determine if vehicle can be up-righted by IMAP truck
  - Check under & around vehicle for motorists
  - Look under & around vehicle for parts that may prevent vehicle from being up-righted or cause additional safety hazards

- **Up-Righting the Vehicle:**
  - Identify a relocation area before attempting to up-right a vehicle
  - Only close enough lanes to safely up-right the vehicle – Responders may close a lane briefly to protect motorists while winch is in use
  - Use wheel chocks to keep vehicle stationary once it is up-righted

- **Communicate with Law Enforcement (LE):**
  - Discuss up-righting & relocation plan
  - Confirm that any crash investigation will NOT be impeded

Up-Righting Equipment & Guidelines:

Objective: Become familiar with the primary guidelines for IMAP's up-righting equipment. For equipment details, see course titled, "IMAP Equipment Specifics."

Critical Knowledge:

- **IMAP's up-righting equipment** includes but is not limited to;
    - Push bumper (DO NOT use "brush/cattle guard" to up-right)
    - Metal hooks, chains & cables (e.g. J-Hooks, frame keys, etc.)
    - Nylon tow straps
    - Front/Rear winch
    - Wheel chocks (standard or wood beam)
    - Clevis shackles & other chain connectors

- **Up-Righting Equipment Guidelines –** all equipment should;
    - Be inspected BEFORE being used to up-right vehicles
    - NOT be used if damaged or NOT rated for load
    - Be connected securely before any tension is placed on them
    - Be connected securely only at solid points of the vehicle
    - Only be connected to IMAP truck at approved points that can bear the full weight & tension of the vehicle being up-righted
    - Be wiped clean & stored in a secure, dry location after each use

- **Only connect hooks/chains to following points on IMAP truck;**
    - Tow hooks & anchor bolts on front or rear bumper
    - Front/rear winch cable hooks
    - Trailer hitch on rear bumper

- **Recommended locations on vehicles to connect hooks/chains;**
    - Vehicle frame or chassis
    - Trailer hitches, axles, etc.

- **Hooks should fit snuggly in vehicle, NOT jammed into place**
    - Poorly placed hooks may get stuck when put under tension
    - A crowbar may be used to remove stuck hooks

- **Use the right hook, chain, strap, or cable for the job**
    - Tow straps are designed to stretch so chains are best for winching
    - "Double-loop" cables can prevent hooks, chains, etc. from getting stuck under vehicles once up-righted

How to Use the Front/Rear Winch (1 of 2):

Objective: Receive further details about the front/rear winch & guidelines for its use.

Critical Knowledge:

- **IMAP truck is equipped with 2 electric winches** (one mounted on front & rear bumper) – each has a pulling capacity of 12,000lbs

- **Components of the Front/Rear Winch:**
  - Control box & winch controller
  - Electric winch motor & cable clutch
  - Winch cable & hook

- **Inspecting/Maintaining the Winches:**
  - Inspect & confirm that both winches work at beginning of each shift
  - **To inspect cables** – pull out by hand, look for damage, then use motor to pull cable back in until winch hook is flush with bumper
  - Keep cable straight & taught to prevent kinks in cable
  - **DO NOT unspool entire length of cable** – use spray paint to mark 'end of pull' point on cable
  - Apply lubricant spray to cable & drum on a regular basis

- **Operating the Front/Rear Winch:**
  - IMAP truck must be ON in order to operate winches
  - Wear all necessary PPE – especially work gloves & safety glasses
  - Keep hands, fingers, and clothing away from cable drum
  - Position & park IMAP truck and engage emergency brake – use wheel chocks to keep truck stationary
  - Disengage cable clutch & pull cable out by hand as needed
  - Connect winch hook securely to vehicle/object or other hooks/chains
  - Connect winch controller to control box and engage cable clutch
  - Use motor to remove slack and place cable under SLIGHT tension
  - Place blanket/mat over cable near vehicle/object and clear area of bystanders in case cable snaps
  - Stand behind truck door, honk horn, & shout, "CLEAR THE AREA"
  - Use motor to pull cable in so vehicle/object is moved as needed – keep cable taught until load is moved and completely at rest
  - Disconnect winch hook & use motor to retract cable completely

How to Use the Front/Rear Winch (2 of 2):

Objective: Receive further details about the front/rear winch & guidelines for its use.

Critical Knowledge:

- **IMAP Truck Position –** in most cases, Responders should park truck;
    - In a safe area away from traffic & on dry, level ground (if possible)
    - In relocation area or between it & the vehicle/object being winched
    - Close enough so winch cable can reach vehicle/object

- **Vehicles/Objects may continue to move after being winched**
    - Have an escape plan in case vehicle/object continues toward you
    - If possible, engage vehicle's emergency brake
    - Place wheel chocks (wood beams are ideal) where vehicle will stop

Typical Winch Setup: Responder position, wheel chocks, & cable blanket/mat
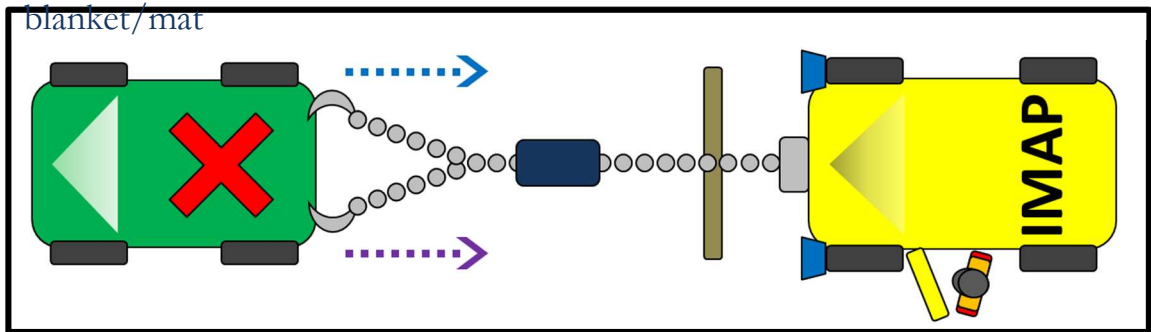
- **Turning a Vehicle In-Place with Winch:**
    - Position IMAP truck facing the direction you want vehicle to turn
    - Connect to vehicle at point that will face truck after winching
    - Place wheel chocks under both front or back IMAP truck wheels
    - If vehicle is up-right, chock one wheel to create a pivot point
    - Pull with winch until vehicle is facing the desired direction

Turning Up-Right Vehicle:
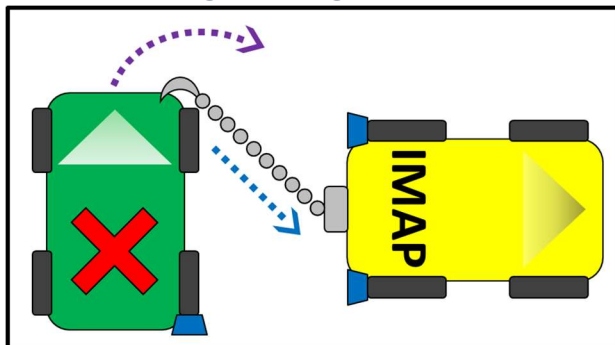
Turning Vehicle on Side:
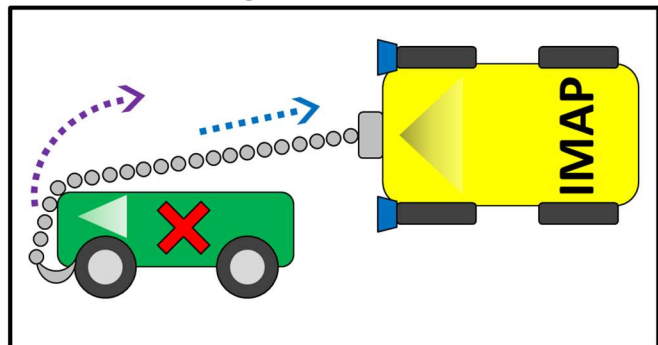
Strategies for Overturned Vehicle Operations (1 of 2):

Objective: Explore the concepts & strategies used to up-right overturned vehicles

Critical Knowledge:

- **Plan Ahead – goal is to remove vehicle from lanes quickly & safely:**
  - Before up-righting, call for backup or LE to maintain ETC
  - Avoid blocking additional lanes but be ready to if needed for safety
  - If vehicle DOES NOT need to be up-righted, push or drag instead
  - Make sure you have enough room to maneuver & up-right
  - Identify a relocation area & position so vehicle is winched towards it
  - **Consider terrain**; vehicle may continue to roll downhill toward you
  - **Consider vehicle's center of gravity;** let vehicle's weight do most of the up-righting work for you

- **Know where vehicle will land once up-righted –** make sure that;
  - Area is clear & vehicle will NOT roll back on you/other responders
  - All hooks, chains, & cables, will NOT get stuck under vehicle
  - Wheel chocks are placed to keep vehicle stationary once up-righted

- **Use hooks & chains in combination with winch:**
  - Connect hooks, etc. to front AND back of vehicle's frame/axles
  - Hook winch to chains on vehicle so cable & chains form "Y" shape
  - **Keep winch cable taught** while up-righting to prevent vehicle from turning back over

Hook/chain (blue) & winch cable (red) configurations (top & bottom left)

Wood beam wheel chocks (purple) where vehicle will land when up-righted (right)

Strategies for Overturned Vehicle Operations (2 of 2):

Objective: Explore the concepts & strategies used to up-right overturned vehicles

Critical Knowledge:

- **Up-Right Into Relocation Area –** if possible, position IMAP truck and connect winch & other hooks/chains so vehicle lands in relocation area
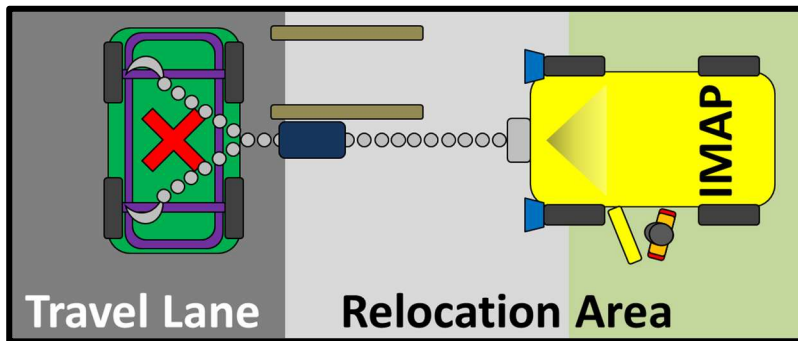
- **Snatch Block** (optional equipment) **–** changes pulling direction of winch & used when space is tight. Snatch block must be tied securely to a large tree, backup IMAP truck or other solid object
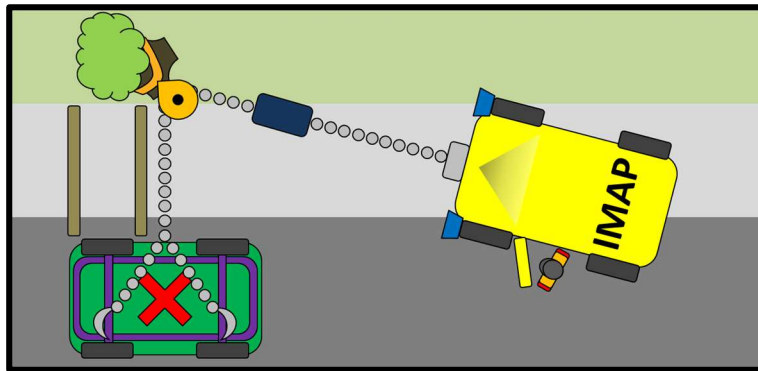
- **Boom Technique –** for additional leverage, a wood beam chock can be wedged in-between vehicle's frame & winch cable
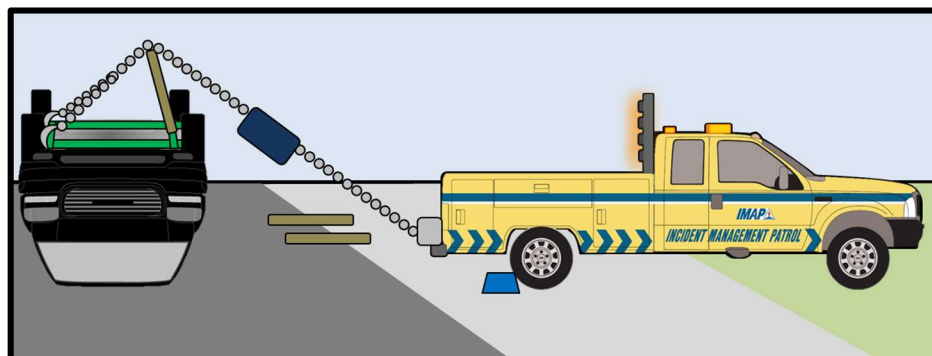
General Process for Overturned Vehicle Operations (1 of 2):

Objective: Review basic steps & instructions for up-righting overturned vehicles.

1. After assuring that all emergency traffic control (ETC) measures are in-place, determine if overturned vehicle must be up-righted in order to be removed
   a. If up-righting is NOT needed – push or drag vehicle out of roadway
   b. If up-righting is needed – notify TMC dispatch & request backup IMAP unit or law enforcement to maintain ETC

2. Put on appropriate PPE (e.g. reflective vest, work gloves & safety glasses)

3. Inspect the vehicle & area to assure that NO injuries or fatalities are involved

4. Identify an appropriate relocation area & formulate a relocation plan

5. Discuss relocation plan with law enforcement & receive consent to up-right & relocate the overturned vehicle

6. Inspect overturned vehicle for damage and, if possible, remove any damage that prevents vehicle from being up-righted

7. Once ETC duties are handed off to backup unit or law enforcement, reposition IMAP truck & park at appropriate location to up-right vehicle
   a. Keep IMAP truck running
   b. Engage emergency brake

8. Retrieve all necessary equipment & organize work space

9. Place wheel chocks beneath IMAP truck wheels to keep truck stationary

10. If up-righting completely, place wheel chocks where vehicle's wheels will settle

11. Connect hooks, chains, etc. securely to the vehicle's frame or axles

12. Disengage cable clutch on winch and pull winch cable out by hand to overturned vehicle

13. Attach winch hook properly to hooks & chains connected to vehicle
    a. Hook is typically connected to center of chains forming a "Y" shape
    b. Safety clasp on winch hook should close completely

14. Connect winch controller to control box & engage cable clutch

15. Use winch motor to retract winch cable until cable is under SLIGHT tension

General Process for Overturned Vehicle Operations (2 of 2):

Objective: Review basic steps & instructions for up-righting overturned vehicles.

16. Drape heavy blanket/rubber mat over winch cable in case cable snaps
    a. If cable could snap into traffic, briefly stop traffic while winch is in use
    b. Make sure area around vehicle, truck & cable is clear of bystanders

17. Stand behind IMAP truck door, honk horn & shout, "CLEAR THE AREA"

18. Use winch motor to retract cable until vehicle turns over & settles completely
    a. Carefully monitor all equipment, vehicle, & winching area
    b. Keep winch cable taught after/in-between turns

19. Use winch motor to release tension on cable & allow vehicle to settle
    a. If needed, push or drag vehicle to relocation area
    b. Adjust wheel chocks to better stabilize up-righted vehicle

20. Remove any leftover debris from the roadway

21. Disconnect all hooks, chains, etc. & retract winch cable completely

22. Return all equipment to its proper location on the IMAP truck

23. Notify TMC dispatch that overturned vehicle operations have completed

Debris
Removal

Description:

Become familiar with the guidelines & processes related to proper debris removal response

Objectives:

- Learn about the concepts and primary guidelines that IMAP Responders should adhere to when removing debris from the roadway

- Receive further guidance to support proper removal & disposal of roadway debris

- Explore various emergency traffic control (ETC) techniques that IMAP Responders can apply to safely & effectively remove debris

- Review diagrams of possible ETC configurations for debris removal

Audience: IMAP Responders

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques
- ETC-104: Motorist Cooperation
- IM-102: Push / Pull / Drag Operations

Primary Debris Removal Guidelines:

Objective: Learn about the concepts & primary guidelines that IMAP Responders should adhere to when removing debris from the roadway

Critical Knowledge:

- **One of IMAP's services is to remove debris from the roadway** which includes but is NOT limited to;
    - Tire treads
    - Ladders
    - Mattresses
    - Appliances (e.g. refrigerators, washing machines, etc.)
    - Fallen trees or limbs
    - Animal carcasses
    - Gravel, sand, nails or other small objects

- **Radio Communication Regarding Debris –** IMAP Responders should;
    - Use the 10-code, **"10-63"** when referring to debris
    - Clearly describe the size, type & quantity of debris encountered
    - Precisely describe location – especially for small, hard to see debris

- **Primary Debris Removal Guidelines:**
    - Position vehicle prior to the debris (approximately 40 ft)
    - Regardless of size/type, if traffic is observed attempting to avoid debris, it should be removed from the roadway
    - Wear appropriate PPE when handling debris; work gloves are mandatory – other PPE (e.g. safety glasses) depends on debris type
    - Relocate debris to the shoulder OR grassy portion off roadway
    - Call TMC/DOT Maint. if additional disposal measures are needed
    - ALWAYS have an ESCAPE ROUTE – especially when carrying debris
    - Use emergency traffic control (ETC) measures appropriate for current traffic conditions when removing debris from the road
    - Identify debris relocation area before parking truck or deploying ETC
    - Use temporary lane closure if debris removal will take 15+ minutes
    - Call for backup if assistance with debris removal or ETC is needed

Additional Guidelines for Debris Removal & Disposal:

Objective: Receive further guidance to support proper removal & disposal of roadway debris

Critical Knowledge:

- **Debris Removal Techniques & Safety Precautions:**
    - Position vehicle prior to the debris (approximately 40 ft)
    - The winch or push bumper can help remove large/heavy debris
    - For large amounts of small debris (e.g. glass), use broom, shovel, or IMAP sand truck & plow (if trained to operate)
    - Where available, use push magnet for small, metallic debris (e.g. nails)
    - Wear work gloves & exercise caution when handling tire treads – dozens of sharp, metal wires are often exposed
    - Safety glasses should be worn if debris may threaten Responder's eyes (e.g. dust clouds formed when removing gravel or sand)
    - When removing debris from rock/landslide, beware of additional debris falling & wear hard hat while in the rock/landslide area
    - Plan ahead when walking into roadway to remove debris – know that you can move debris before running out to it
    - If debris is often used as a HazMat container (e.g. metal cylinder or barrel) treat it as HazMat until confirmed otherwise

- **Removal & Disposal of Animal Carcasses – Responders should;**
    - Position vehicle prior to the debris (approximately 40 ft)
    - Wear medical grade gloves along with other PPE
    - Remove carcass to a grassy portion off the roadway
    - Notify TMC/DOT Maint. to remove & dispose of carcass
    - Dispose of used medical gloves in a sealed container marked, "BIOHAZARD"

- **Contact TMC/DOT Maint. to assist with disposal of;**
    - Large/Difficult to move debris – appliances, boulders, etc.
    - Non-biodegradable debris – mattresses, plastic sheeting, etc.
    - Animal carcasses – deer, livestock, etc.
    - Any debris that poses a further threat or prevents safe use of shoulder – trees/limbs hanging over road, mounds of gravel, etc.

Emergency Traffic Control (ETC) for Debris Removal:

Objective: Explore various emergency traffic control (ETC) techniques that IMAP Responders can apply to safely & effectively remove debris

Critical Knowledge:

- Removing debris typically occurs quickly enough that full lane closures are NOT needed. However, Responders should **deploy a full lane closure if;**
    - Debris removal will take 15 minutes or more
    - Traffic conditions make debris removal unsafe without a lane closure

- **When traffic speed is LOW**, Responders may;
    - Park on shoulder, approximately 40 ft prior to the debris, wait for a gap in traffic, then safely cross lanes to retrieve debris, **OR**
    - Park in lane, use motorist cooperation technique to stop traffic & hold lanes, then safely cross lanes to retrieve debris, **OR**
    - Combine techniques (e.g. park on shoulder & use motorist cooperation)

- **When traffic speed is HIGH**, Responders may;
    - Use emergency rolling roadblock to slow/stop traffic then remove debris, **OR**
    - Park on shoulder as initial advance warning, approximately 40 ft prior to the debris, then call for backup unit to perform emergency rolling roadblock so debris can be removed

- IMAP truck position is also based on traffic conditions – Responders may park;
    - On shoulder before debris (approximately 40 ft) – prevents traffic from swerving into IMAP while avoiding debris
    - In lane before debris – truck acts as barrier between Responder & traffic
    - Straddle lanes before debris – for controlling 2 lanes with a single IMAP truck
    - **Angle front tires AWAY from Responder and/or relocation area**

- Arrow board display is based on truck position & debris relocation area
    - CAUTION (: :) – use when parked on shoulder. If a backup unit is assisting with emergency rolling roadblock, switch to arrow when backup arrives
    - LEFT or RIGHT ARROW (← or →) – use when in lane. Arrow should direct traffic AWAY from Responder and/or relocation area

Example ETC Diagrams for Debris Removal:

Objective: Review diagrams of possible ETC configurations for debris removal

Positioning IMAP Truck for Debris Removal:

On shoulder before debris: OK

On shoulder immediately after debris: NOT OK

On shoulder before debris with arrow: NOT OK
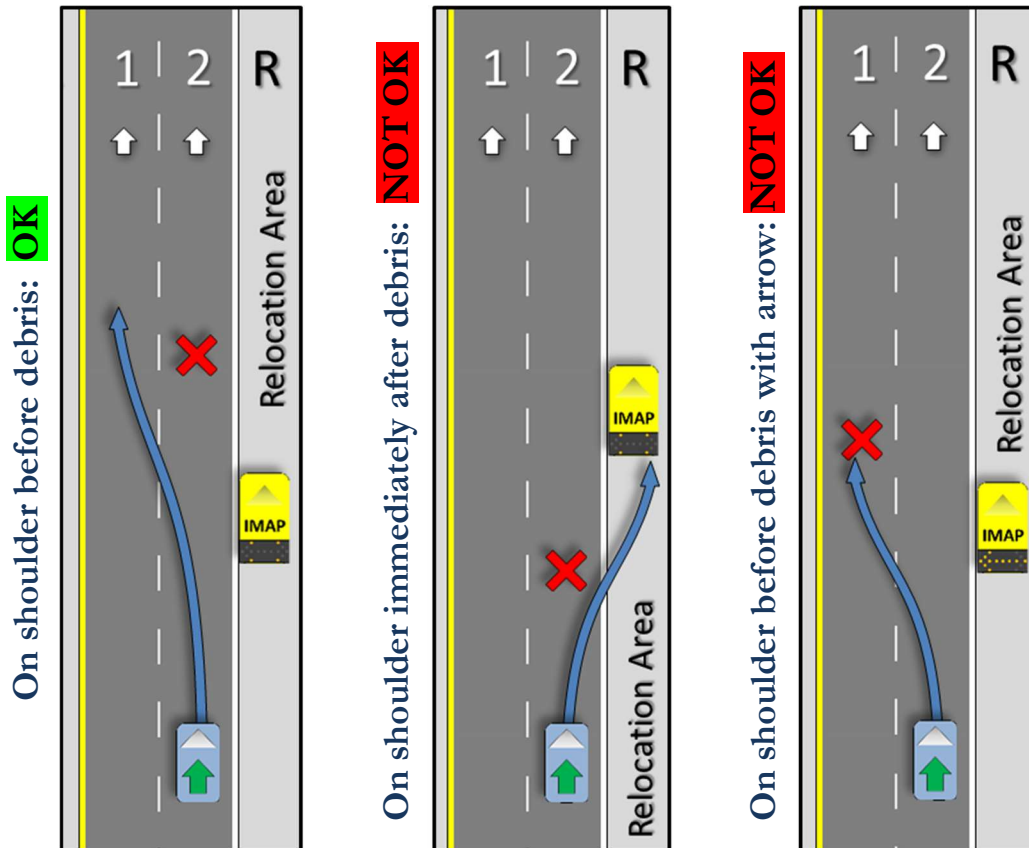
Rolling Roadblock for Debris Removal:

1 Unit – 1 Lane

1 Unit – Straddling 2 Lanes

Backup for Unit on Shoulder
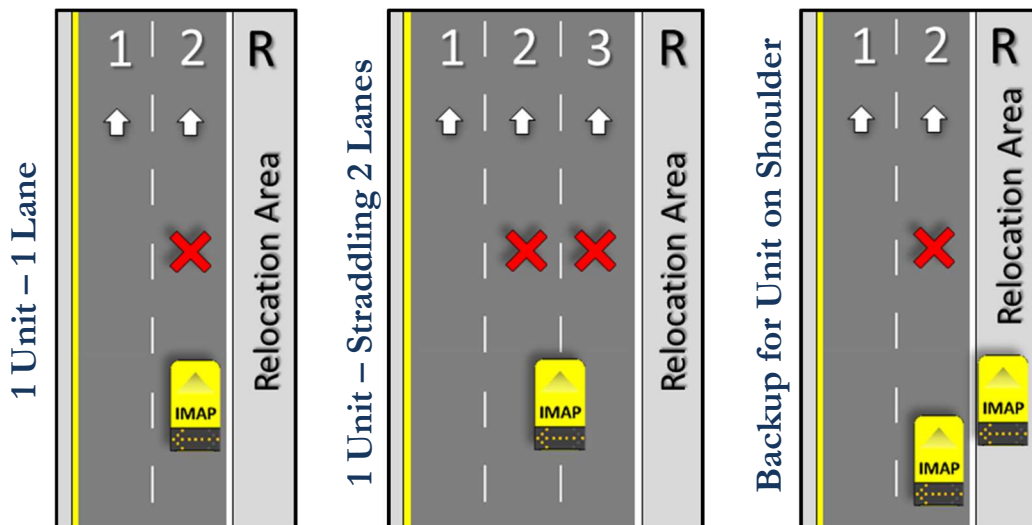
Description:

Become familiar with the guidelines, equipment, and processes related to vehicle & roadside fires.

Objectives:

- Learn about the basic knowledge & concepts related to vehicle & roadside fires

- Explore IMAP's fire response equipment & guidelines for its use. (Equipment is described in greater detail in course titled, "IMAP Equipment Specifics")

- Review the primary response guidelines related to vehicle & roadside fires

- Learn about the different methods for identifying hazardous materials

- Review basic steps & instructions for responding to vehicle fires & roadside fires

Audience: IMAP Responders

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach

Introduction to Vehicle & Roadside Fires:

Objective: Learn about the basic knowledge & concepts related to vehicle & roadside fires.

Critical Knowledge:

- **Affects of vehicle & roadside fires** include but are NOT limited to;
    - Severe injury or death due to burns and/or smoke inhalation
    - Destruction of equipment or property
    - Traffic delays due to lanes blocked by responders, limited visibility from smoke, and motorists slowing to look at fire
    - Secondary fires caused by thrown off sparks or embers
    - Compromised strength/stability of roadway when fire is instense
    - Igniting gas lines exposed beneath bridges or overpasses

- **Common causes of VEHICLE fires** include but are NOT limited to;
    - Electrical malfunctions that cause sparks or flames
    - Mechanical malfunctions igniting fuel or flammable engine fluids
    - Flammable cargo that is damaged or improperly transported
    - Engine exhaust igniting cargo/trailer – **especially for tractor trailers**

Example – Tractor Trailer at Risk of Fire: Most tractor trailers vent exhaust towards their trailer/cargo which can cause it to ignite. In some situations, **truck responders can disconnect & drive the cab away from the burning trailer**

- **Common causes of ROADSIDE fires** include but are NOT limited to;
    - Motorists throwing lit cigarettes into dry grass or brush
    - Sparks/embers thrown off by passing vehicles or nearby burn piles
    - **One fire source can cause multiple fires at different locations**

Fire Equipment Guidelines:

Objective: Explore IMAP's fire response equipment & guidelines for its use. For equipment details, see course titled, "IMAP Equipment Specifics."

Critical Knowledge:

- **PPE & Clothing:**
    - Wear all necessary PPE – especially work gloves & safety glasses
    - **Work gloves are NOT fireproof** but can prevent burned hands
    - Safety glasses can protect eyes from hot embers thrown by fires
    - **Reflective vest & clothing are flammable** – stay back from flames

- **Fire Extinguishers:**
    - ABC Extinguishers spray a chemical powder to put out fires
    - Water Extinguishers spray compressed water to put out fires
    - Inspect all extinguishers before each shift & secure when not in use
    - Extinguishers deliver less than 30 seconds of spray so **ONLY use on small fires** (i.e. fires the size of a small trash can)

- **Fire Extinguisher Use & P.A.S.S. Method –** if fire is small enough;
    - Stand upwind (and uphill, if able) from fire to avoid flames, smoke, embers, or steam and **spray downwind**
    - Stand 6-8 feet from fire to avoid heat & stay in extinguisher's range
    - **P –** Pull pin to allow extinguisher to spray
    - **A –** Aim nozzle at the base of the fire – NOT the flames
    - **S –** Squeeze lever to spray for 1-2 second intervals then quick bursts
    - **S –** Sweep nozzle back & forth and spray ignition source entirely

WIND DIRECTION

A
B
C

IGNITION
SOURCE

6-8 feet
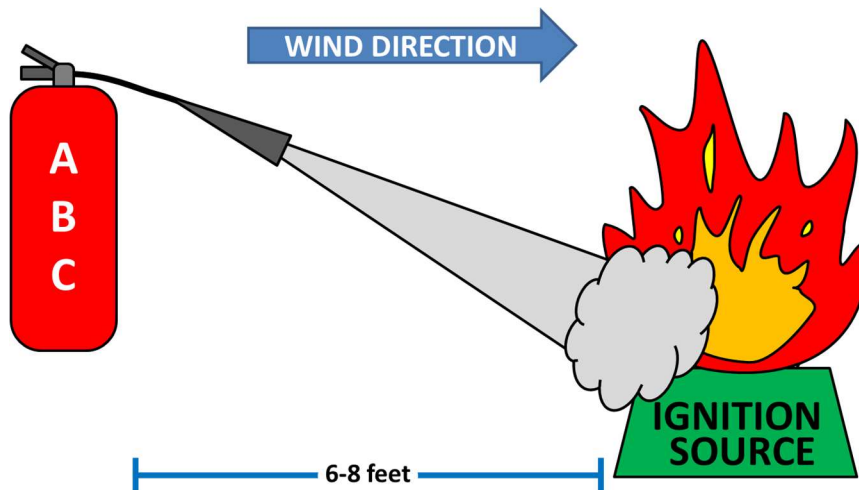
P.A.S.S.
P – PULL

A – AIM

S – SQUEEZE

S – SWEEP

Vehicle & Roadside Fire Response Guidelines:

Objective: Review the primary response guidelines related to vehicle & roadside fires

Critical Knowledge:

- **IMAP responders are NOT fire fighters**
  - DO NOT try to put out a fire that is too large for 1 fire extinguisher
  - Contact TMC dispatch/Fire Dept. to handle large fires

- **IMAP's role in responding to vehicle & roadside fires includes;**
  - Detecting incidents involving vehicle/roadside fires
  - Notifying TMC dispatch/Fire Dept.
  - Extinguishing **small fires** before they grow & spread
  - Deploying emergency traffic control (ETC) to keep motorists away from smoke & fire

- **When arriving on-scene of vehicle/roadside fires;**
  - Watch for other responders & DO NOT drive over fire hoses
  - If IMAP is 1st to arrive, leave enough room for Fire Dept. to park
  - Park where fire will NOT reach truck if fire continues to spread
  - Notify TMC/Fire Dept. BEFORE exiting vehicle

- **Assess the scene from a distance & use caution**
  - If possible, position upwind to avoid flames & fumes
  - Determine what is burning & what fire hazards are nearby
  - Clear area of bystanders – tell motorist to exit burning vehicle (if able)
  - Remember that vehicles on fire can explode at any time
  - WHITE clouds = overheated vehicle | BLACK clouds = vehicle fire
  - Overheated engines = steam dissipates quickly | Smoke from fire – does not dissipates quickly

- **Use the right fire extinguisher for the job**
  - **Use ABC extinguisher for vehicle fires** – Volkswagen engine blocks are made of magnesium & may explode if sprayed with water
  - **Use Water extinguisher for roadside fires**
  - Use medium extinguisher to put fire out & use small extinguisher for embers & hotspots

- **If the fire is too large;**
  - Call TMC dispatch/Fire Dept. immediately
  - Deploy ETC to keep motorists away from flames & smoke
  - Divert traffic to an exit if flames are too large to drive past safely

Vehicle & Roadside Fire Response Process:

Objective: Review basic steps & instructions for responding to vehicle/roadside fires

VEHICLE FIRES:

1. Put on appropriate PPE (i.e. reflective vest, work gloves & safety glasses) & notify TMC/Fire Dept. before exiting IMAP truck
2. Inspect under, around, and inside vehicle – If passengers are still in the vehicle, tell them to get out (use PA system if necessary)
3. Determine if fire is small enough for IMAP to handle
    a. YES – Proceed to step 4
    b. NO – Deploy emergency. traffic control (ETC) until Fire Dept. arrives
4. Retrieve medium & small ABC extinguisher & clear area of bystanders
5. If a trailer is on fire, use extinguisher to put out as much of the fire as possible before telling motorist to disconnect & pull away from the trailer
6. If fire is coming from under the vehicle's hood;
    a. Pull the hood latch from inside the vehicle (if able)
    b. DO NOT raise hood fully – could cause major flare up
    c. Aim extinguisher into opening & spray into engine compartment
    d. Allow chemicals to settle then raise hood to put out remaining hot spots
7. Inspect nearby area and/or vehicle's cargo area for embers that may reignite
8. Use small extinguisher to put out any remaining embers or hot spots
9. Deploy/adjust ETC as needed until lanes are open & incident is clear

ROADSIDE FIRES:

1. Put on appropriate PPE & notify TMC/Fire Dept. before exiting IMAP truck
2. Determine if fire is small enough for IMAP to handle
    a. YES – Proceed to step 3
    b. NO – Deploy ETC until Fire Dept. arrives
3. Retrieve water extinguisher & clear area of any bystanders
4. Spray water at base of fire until fire is out and ground nearby is thoroughly soaked with water
5. Inspect grass & trees nearby for embers that may reignite
6. Spray water on any remaining embers or hot spots until all are put out
7. Deploy/adjust ETC as needed until lanes are open & incident is clear
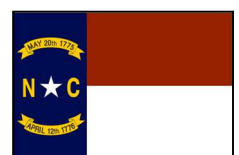
Description:

Become familiar with the guidelines & processes related to HazMat response as well as IMAP's use of the Emergency Response Guidebook (ERG).

Objectives:

- Learn about HazMat operations & define IMAP's role in HazMat response

- Become familiar with hazardous materials involved in HazMat incidents

- Explore different methods for identifying hazardous materials

- Learn about the primary guidelines for responding to HazMat incidents

- Become familiar with the ERG and how to use it at HazMat incidents

Audience: IMAP Responders

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol

Introduction to HazMat Operations:

Objective: Learn about HazMat operations & define IMAP's role in HazMat response.

Critical Knowledge:

- For the purpose of clarity, **Hazardous Materials (HazMat)** will refer to materials/circumstances where the following are immediately at risk;
  - Destruction of equipment or property
  - Contamination of surrounding area or water sources
  - Severe injury or incapacitation
  - Death

- **HazMat Operations –** refers to the coordinated efforts of normal responders (e.g. law enforcement, IMAP, etc.) and crews with special equipment & training (e.g. HazMat crews) in response to incidents involving hazardous materials

- IMAP responders are NOT equipped or trained to handle or dispose of hazardous materials **– IMAP responders only have AWARENESS & DISTANCE to protect them in a HazMat situation**

- **IMAP's Role in HazMat Operations:**
  - Detecting HazMat incidents and, if safe, helping identify materials
  - Notifying TMC; TMC notifies local Fire Dept. to send HazMat crews
  - Deploying emergency. traffic control to keep motorists out of HazMat areas
  - Coordinating with responders & relaying info to TMC dispatch

- **Role of HazMat Crews in HazMat Operations:**
  - Bringing proper equipment & trained personnel to incident
  - Identifying specific hazardous materials & quantities involved
  - Containing, stablizing, and/or neutralizing hazardous materials
  - Disposing of hazardous substances and contaminated materials

Overview of Hazardous Materials:

Objective: Become familiar with hazardous materials involved in HazMat incidents.

Critical Knowledge:

- **Hazardous materials can be SOLIDS, LIQUIDS, or GASSES** and can be hazardous on their own or due to different circumstances

- **HazMat Classification –** all hazardous materials are grouped into the HazMat CLASSES below based on HOW they cause damage;
  - **CLASS 1: Explosives –** may produce high heat and/or destructive blasts/shockwaves
  - **CLASS 2: Compressed Gasses –** any pressurized gas which may be flammable, poisonous, or otherwise hazardous
  - **CLASS 3: Flammable Liquids –** may be easily ignited, burn quickly, or spread fire
  - **CLASS 4: Flammable Solids –** may ignite & burn easily or become flammable when exposed to water
  - **CLASS 5: Oxidizers/Organic Peroxides –** may react dangerously to oxygen or cause substances to become explosive
  - **CLASS 6: Poisons/Bio-Hazards –** may cause severe injury to people or animals if touched, consumed, or inhaled
  - **CLASS 7: Radioactive Materials –** may emit harmful radiation and cause other materials to become radioactive
  - **CLASS 8: Corrosives –** may dissolve organic tissue and/or inorganic material through direct contact
  - **CLASS 9: Miscellaneous –** used when multiple hazardous materials in the same HazMat CLASS are stored together
  - **DANGEROUS –** technically not a CLASS but is used when materials from different HazMat CLASSES are stored together

- Based on quantity, level of exposure, & other factors (e.g. wind direction) **all hazardous materials have specific response requirements** such as;
  - **Minimum safe distance** (a.k.a. Evacuation or Isolation area)
  - **Mandatory PPE** (e.g. gas masks & oxygen tanks)
  - **Method of neutralizing threat** (e.g. use foam extinguisher because material may explode if exposed to water)
  - **Method of containment & disposal** (e.g. lead-lined barrels)

Identifying Hazardous Materials (1 of 2):

Objective: Explore different methods for identifying hazardous materials

Critical Knowledge:

- In addition to HazMat CLASSES, **all hazardous materials are assigned an individual 4-digit ID #**
  - **Ex.** Sulfuric Acid (CLASS 8) = ID #: 1830
  - **Ex.** Lead Cyanide (CLASS 2) = ID #: 1620

- **When shipped or stored, hazardous materials can be identified by;**
  - Shipping documents kept in cab of transport vehicle or with driver
  - Placards on containers & vehicles carrying hazardous materials
  - Orange Panels on intermodal shipping containers (e.g. rail cars)

- **HazMat Placards** use colors and recognizable symbols to identify hazardous materials and may also provide the HazMat CLASS & ID #

| FLAMMABLE | FLAMMABLE Liquid (CLASS 3) | FLAMMABLE Liquid (CLASS 3) Jet Fuel (ID #: 1863) |

- **Orange HazMat Panels** display the 4-digit ID # beneath a hazard code (based on HazMat CLASS) which gives more info about the material

| 1st digit of Hazard Code is HazMat CLASS (8 = Corrosive) | 2nd digit, if same as 1st, indicates greater intensity (88 = Stronger corrosive) | Different 2nd/3rd digit means additional hazard from other HazMat CLASS (83 = Corrosive & flammable) |

Identifying Hazardous Materials (2 of 2):

Objective: Explore different methods for identifying hazardous materials

Critical Knowledge:

- **HazMat Placards or Panels may NOT be available to identify a hazardous material –** other indicators of HazMat incidents include;
  - Damaged containers/vehicles that typically carry hazardous materials
  - Hissing or bubbling sounds (especially from HazMat containers)
  - Fumes, vapor, or smoke with or without an apparent ignition source
  - Unusual & often very distinct odors
  - Abnormally colored flames often including sparks
  - Collapsed bystanders who appear unconscious for no reason

- **Common HazMat Containers** include but are NOT limited to;

Gas Cylinders:	Metal Barrels:	Red "Bio" Bags:

- **Common HazMat Transport Vehicles** include but are NOT limited to;

Gas Cylinder Trucks:	Tanker Trucks:
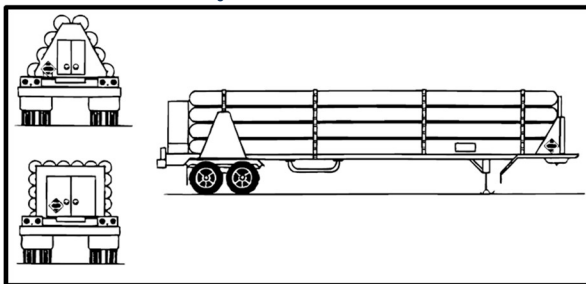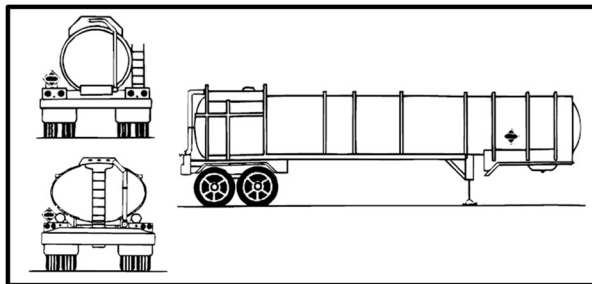
IMAP HazMat Response Guidelines:

Objective: Learn about the primary guidelines for responding to HazMat incidents

Critical Knowledge:

- **Assess the scene from a distance – DO NOT RUSH IN**
  - Stop approaching the moment you believe HazMat is involved
  - Park as far away as possible without losing sight of incident
  - If possible, park upwind and/or uphill from the incident
  - Use binoculars to search for placards or other signs of HazMat, **OR**
  - Contact TMC to use CCTV cameras to identify HazMat, **OR**
  - If safe to access, use shipping documents to identify HazMat
  - Relay observations to TMC to notify Fire Dept. and contact IMAP supervisor

- **IMAP responders should back away & call for help immediately** if they experience any of the following near a potential HazMat scene;
  - Sudden, unexplained dizziness, blurred vision, or nausea
  - Severe irritation wherever skin is exposed
  - Burning or stinging sensation in the eyes, nose or throat

- Refer to the **Emergency Response Guidebook (ERG)** to determine;
  - What hazardous materials are involved
  - How hazardous materials cause damage (e.g. inhalation, etc.)
  - Minimum safe distance to avoid harmful exposure

- **Once HazMat is confirmed, IMAP responders should;**
  - Make sure that HazMat crews are en route
  - Reposition to a location OUTSIDE of minimum safe distance, **OR**
  - Assemble with other responders at incident command post
  - Coordinate with Incident Commander (IC) from Fire Dept./HazMat crew & IMAP supervisor to plan next actions

- **Deploy Emergency Traffic Control (ETC) to keep motorists away**
  - Notify TMC to activate DMS to warn motorists if possible
  - Deploy ETC to divert traffic to exit outside of min. safe distance
  - Coordinate with responders & TMC to identify a detour route that does NOT travel through any part of HazMat area
  - Adjust ETC as needed to divert traffic away from HazMat area

How to Use the Emergency Response Guidebook (ERG):

Objective: Become familiar with the ERG and how to use it at HazMat incidents

Critical Knowledge:

- **Emergency Response Guidebook (ERG) –** a guide responders use to identify hazardous materials & find other info to assist HazMat response efforts & protect from exposure. **IMAP responders should;**
  - **Keep a copy of ERG in the IMAP truck at all times**
  - Be familiar with the ERG & know how to use it properly

- **Sections of the ERG:**
  - **WHITE Pages –** explain how to use the ERG & provide other useful info related to general HazMat knowledge & terminology
  - **YELLOW Pages –** list hazardous materials in **numerical order** by their 4-digit ID # & give the response guide # for that material
  - **BLUE Pages –** list hazardous materials in **alphabetical order** by the material's name & give the response guide # for that material
  - **ORANGE Pages –** contains **Response Guides** that describe the response requirements for different types of hazardous materials
  - **GREEN Pages –** provide additional info & response requirements for materials considered as **Toxic Inhalation Hazards (TIH).** Any material in ERG highlighted green is considered a TIH

- IMAP responders can find the appropriate **Response Guide (orange pages)** if they know the hazardous material's;
  - **Name** – turn to blue pages, look up material's name, find the 3-digit Response Guide #, then turn to guide in the orange pages
  - **ID #** – turn to yellow pages, look up material's ID #, find the 3-digit Response Guide #, then turn to guide in the orange pages

- **If the material's name or ID # is unknown,** IMAP responders should refer to the following Response Guides for initial guidance;
  - **Guide # 111 –** for mixed loads/unidentified hazardous cargo
  - **Guide # 112 –** for any cargo believed to be explosive (Guide # 114 may be used but ONLY if explosion hazard is known to be minor)
  - **Once material is confirmed, identify appropriate Response Guide and modify response**

Adverse Weather: Reporting Conditions & Basic Response

Description:

Become familiar with the concepts, guidelines & processes for reporting adverse weather conditions and basic weather response activities

Objectives:

- Learn about the primary concepts related to adverse weather impacts and guidelines for reporting conditions

- Become familiar with the basic adverse weather response activities performed by IMAP Responders

Audience: IMAP Responders

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents;

- IMAP Standard Operating Procedures (SOP)
- VE-100: Personal Protective Equipment (PPE)
- VE-101: IMAP Vehicle & Maintenance
- VE-102: IMAP Equipment Specifics
- VE-103: Radio Hardware & Dispatch Protocol
- VE-104: Driving Techniques
- ETC-100: Vehicle Positioning & Responder Approach
- ETC-101: Emergency Traffic Control (ETC) Techniques
- ETC-102: Temporary Lane Closures

Adverse Weather Impacts & Reporting Conditions

Objective: Learn about the primary concepts related to adverse weather impacts and guidelines for reporting conditions

Critical Knowledge:

- **Dense Fog –** significantly limits visibility causing traffic to reduce speed which can increase congestion and likelihood of rear end crashes

- **Heavy Rain –** significantly limits visibility causing congestion and other impacts including;
  - Standing Water/Flooding – can cause vehicles to spin-out/hydroplane
  - Washouts/Mudslides – wet soil can let mud, rocks or trees fall in road

- **High Winds –** strong wind gusts can blow debris into roadway, knock down road signs or traffic signals, and can even disrupt travel of high-profile vehicles (i.e. commercial vehicles with large, broad sides)

- **Snow/Ice –** can limit visibility but mostly impacts road by creating slick conditions due to icy patches. Other characteristics/impacts include;
  - Longer stopping distance due to ice can increase rear-end crashes
  - Icy patches (especially black ice) increase crashes due to spin-outs
  - Bridges, ramps & overpasses are often slicker than regular roadway

- **TMC Reporting Conditions to IMAP –** When TMC receives alerts from the National Weather Service (NWS), TMC dispatch will;
  - Contact all IMAP units over the radio to report conditions
  - Broadcast the type of weather warning/watch and the timeframe
  - **IMAP ceases outdoor operations** when sustained wind speeds are 35+mph

- **IMAP Reporting Conditions to TMC –** Responders should relay the following to TMC dispatch when weather impacts are observed;
  - Location where travel conditions/poperty damage has occurred
  - WHAT is affecting travel (e.g. Fog) & HOW (e.g. causing congestion)
  - Extent of impact/lanes affected, if any (e.g. 30ft ice patch in lane #1)
  - Info on any DOT property damage (e.g. sign for Exit 17 blown over)
  - Periodic status updates – have conditions gotten worse or better?

Basic Adverse Weather Response Activities:

Objective: Become familiar with the basic adverse weather response activities performed by IMAP Responders.

Critical Knowledge:

- **TMC Response Overview –** TMC operators/dispatch perform a variety of tasks in response to adverse weather including;
  - Coordinate with DOT Maintenance to remove, treat, or repair specific weather impacts such as icy patches or fallen trees
  - Activate DMS to warn motorists of unsafe travel conditions/closures

- **IMAP On-Scene Response** – some weather impacts can be resolved by IMAP Responders quickly rather than waiting for DOT maintenance
  - **Standing Water**: Often caused by clogged drains which IMAP Responders can unclog by using a shovel to remove the blockage
  - **Fallen/Almost Fallen Tree Limbs**: Often leaning against the guardrail and impacting travel lanes, IMAP Responders can proactively remove/pull down small to medium-sized limbs

- **Emerg. Traffic Control (ETC) Response –** Responders should use appropriate ETC measures when travel lanes are directly impacted by adverse weather
  - **When impacts PREVENT safe travel in lane(s)**: Follow same guidelines for lane closures as used for any lane-blocking incident
  - **When impacts REDUCE safe travel in lane(s)**: Position IMAP truck on shoulder upstream from impact and activate CAUTION display on arrow board to reduce traffic speeds
  - **For TREATED ice patches** (i.e. covered with salt or sand): Position on edgeline of shoulder, activate CAUTION display on arrow board, and deploy cones to narrow affected lane to reduce traffic speed – ice treatment is most effective when vehicles continue to travel over it

Example of IMAP truck in position upstream from a treated ice patch
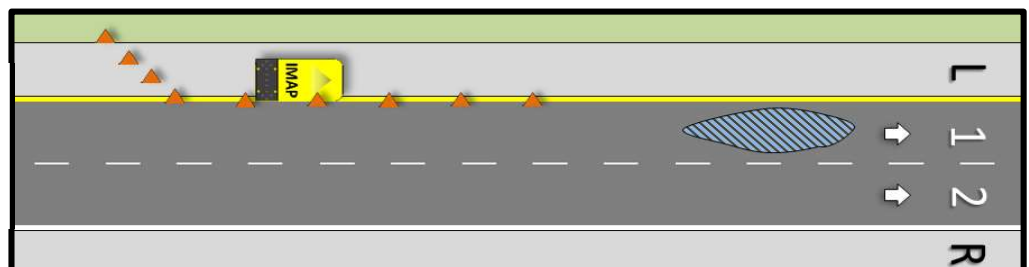
Description:

The forms & checklists within this document are designed to provide structure to on-the-job training (OJT) activities and to assure that the trainee's OJT experience is valuable & well-rounded.

Forms & Checklists Included in this Document:

- **IMAP Ride Along**
    - **Daily Summary** – a summary of each Ride Along day including duration, routes patrolled, and lessons learned during the Ride Along
    - **Equipment Checklist** – assures that trainee has seen & used all IMAP equipment in the real world
    - **Tasks & Services Checklist** – assures that trainee gains real-world experience by observing & performing fundamental IMAP tasks alongside their instructor
- **TMC/STOC Shadow**
    - **Summary & Incident Checklist –** a summary of each day shadowing operators and a checklist to assure trainee learns how operators respond to various incidents
    - **Tools & Tasks Checklist –** assures that trainee learns about the critical tools used at the TMC/STOC and gains hands-on experience with those tools

Instructions:

1. BEFORE training begins, make sure that your instructor has provided the following.
    a. **IMAP Field Training Manual (FTM)** (only required for NEW employees)
    b. **All IMAP SOPs** (NEW employees must read all SOPs before training concludes)
    c. **OJT Checklists** (this document – to be completed by trainee during OJT)
2. Bring the checklists with you and keep them safe and up to date throughout OJT
    a. Trainees are expected to complete all checklist items for OJT assigned to them
    b. If checklists are lost or NOT completed, trainee may have to repeat some/all OJT
3. As you observe or perform the checklist items, fill in the information requested for each (including Instructor/Operator initials) to confirm that the OJT item has been completed
4. Discuss incomplete checklist items with your instructor so they can help you complete any outstanding items
5. When training is complete, submit your OJT Checklists to your instructor – make sure to receive a copy of your OJT checklist for your records

IMAP Ride Along – Daily Summary:

Daily Ride Along Summary Summarize each Ride Along day using the form below. For each day, write in at least ONE lesson learned.				
RIDE ALONG DATE:	**START TIME:**	**END TIME:**	**ROUTES PATROLLED:**	**LESSON LEARNED DURING RIDE ALONG:**

Trainee Name: _____   **Instructor Name:** _____

IMAP Ride Along – Equipment Checklist (1 of 2):

IMAP Equipment Used/Observed in Use during Ride Along Enter date when item was used/observed during OJT. Asterisk (*) indicates required number of occurrences						
EQUIPMENT:	**DATE 1:**	**DATE 2:**	**DATE 3:**	**DATE 4:**	**DATE 5:**	**OTHER EQUIPMENT USED:**
All IMAP PPE	*	*	*	*	*	
Fire Extinguisher	*					
Traffic Cones	*	*	*			
Flares	*	*				
Rolling Jack	*	*	*			
Jack Stands	*	*	*			
Impact Wrench	*	*	*			
Battery Chargers	*	*	*			
Wheel Chocks	*	*	*			
Air Compressor & Hose	*	*				
Tire Inflator & Pressure Gauge	*	*				
Jumper Cables	*	*				
Jump Box	*	*				
Fuel Cans	*	*	*	*	*	
Funnel	*	*	*	*	*	

Trainee Name: _____   **Instructor Name:** _____

IMAP Ride Along – Equipment Checklist (2 of 2):

IMAP Equipment Used/Observed in Use during Ride Along Enter date when item was used/observed during OJT. Asterisk (*) indicates required number of occurrences						
EQUIPMENT:	**DATE 1:**	**DATE 2:**	**DATE 3:**	**DATE 4:**	**DATE 5:**	**OTHER EQUIPMENT USED:**
Quick Dry	*	*				
Push Broom	*	*				
Water Cans	*	*	*			
Work Light on IMAP Truck	*	*				
VIPER Handheld Radio	*	*	*	*	*	
VIPER Radio in IMAP Truck	*	*	*	*	*	
Direct Connect / Other Radios	*	*	*			
IMAP Truck's PA System & Loud Speaker	*	*	*			
Air Horn	*	*	*	*		
All Emergency Lights on IMAP Truck	*	*	*	*	*	
Arrow Board	*	*	*	*	*	
Push Bumper	*	*				
Front / Rear Winch	*	*				
Hooks, Chains, & Tow Straps	*	*				
Clevis Shackles & Other Chain Connectors	*	*				

Trainee Name: _____   **Instructor Name:** _____

IMAP Ride Along – Tasks & Services Checklist (1 of 2):

IMAP Tasks & Services Performed/Observed during Ride Along
Enter date when task was performed/observed during OJT. Asterisk (*) indicates required number of occurrences.
IMAP instructor must initial tasks performed by trainee to indicate task was performed properly.

TASKS & SERVICES:	DATE OBSERVED:	DATE OBSERVED:	DATE PERFORMED:	DATE PERFORMED:	INSTRUCTOR INITIALS:
Daily Vehicle & Equipment Inspection	*	*	*	*	
Refueled IMAP Truck & Refilled Fuel Cans	*	*	*	*	
Washed IMAP Truck			*		
Drove IMAP Truck on Patrol Route	*	*	*	*	
Detected an Incident while on Patrol Route	*	*	*	*	
Reported Incident to TMC/STOC on Radio	*	*	*	*	
Received Incident Report from TMC/STOC on Radio	*	*	*	*	
Communicated with Law Enforcement on Radio	*	*	*		
Positioned IMAP Truck on Highway Shoulder	*	*	*	*	
Positioned IMAP Truck in Highway Travel Lane	*	*	*		
Performed Emerg. Rolling Roadblock with Backup	*		*		
Used Traffic Cones to Close a Travel Lane	*		*		
Removed Traffic Cones to Reopen a Travel Lane	*		*		
Provided Advance Warning for a Lane Closing Incident	*		*		

Trainee Name: _____   Instructor Name: _____

On the Job Training (OJT) Checklists

IMAP Ride Along – Tasks & Services Checklist (2 of 2):

IMAP Tasks & Services Performed/Observed during Ride Along
Enter date when task was performed/observed during OJT. Asterisk (*) indicates required number of occurrences. IMAP instructor must initial tasks performed by trainee to indicate task was performed properly.

TASKS & SERVICES:	DATE OBSERVED:	DATE OBSERVED:	DATE PERFORMED:	DATE PERFORMED:	INSTRUCTOR INITIALS:
Tagged an Abandoned Vehicle	*	*	*	*	
Provided Fuel to a Stranded Motorist	*	*	*	*	
Dispensed Quick Dry	*		*		
Changed/Inflated a Flat Tire on a Disabled Vehicle	*	*	*	*	
Jumpstarted a Disabled Vehicle	*		*		
Assisted Motorist with an Overheated Vehicle	*		*		
Transported a Stranded Motorist	*				
Removed Debris from a Travel Lane	*	*	*		
Pushed, Pulled, Dragged or Up-Righted a Vehicle	*		*		
Met with Local Law Enforcement at Crash Scene	*	*	*		
Met with Highway Patrol at Crash Scene	*	*	*		
Met with Local Fire Department at Crash Scene	*	*	*		
Met with other DOT Responders at Crash Scene	*	*	*		
Met with Towing & Recovery at Crash Scene	*	*	*		

Trainee Name: _____   **Instructor Name: _____**

TMC/STOC Shadow – Summary & Incident Checklist:

TMC/STOC Operator Assignment & Daily Summary — Summarize each day you shadowed operators at the TMC/STOC using the form below. For each day, write in at least ONE lesson learned and ONE question to ask instructor during the next day of training.					
OPERATOR NAME:	**SHADOW DATE:**	**START TIME:**	**END TIME:**	**POSITIONS SHADOWED:**	**LESSON LEARNED & INSTRUCTOR QUESTIONS**
ADDITIONAL NAMES:	**DATES:**	**START:**	**END:**	**POSITIONS:**	**LESSONS & QUESTIONS:**

Incidents Observed while Shadowing TMC/STOC Operators — Use the form below to record details of incidents you observe while shadowing including operator response activities.					
INCIDENT TYPE:	**DATE:**	**LOCATION:**	**# LANES BLOCKED:**	**QUEUE LENGTH:**	**DESCRIPTION OF TMC RESPONSE ACTIVITIES:**
Minor Crash					
Major Crash					
Disabled / Abandoned Vehicle					
Debris Removal					
OTHER INCIDENTS:	**DATES:**	**LOCATIONS:**	**LANES:**	**QUEUES:**	**RESPONSE ACTIVITIES:**

Trainee Name: _____   **Instructor Name:** _____

TMC/STOC Shadow – Tools & Tasks Checklist:

TMC/STOC Tools Observed/Used while Shadowing Operators			
Ask each operator to explain their duties and demonstrate the tools they use. Use the form below to describe how the tools are used. Operator must initial tasks performed by trainee to indicate task was performed properly.			
NAME OF TOOL:	**HOW IS TOOL USED?**	**IMAP HANDS-ON TASK:**	**OPERATOR INITIALS:**
Traveler Information Management System (TIMS)		Enter & Timeout a LOW Impact TIMS Incident	
TIMS - SHP CAD Feed		Find an Incident for a Different IMAP Region	
INRIX Congestion Map		Find the Total Length of a Queue Caused by a Crash	
Google Maps (or similar)		Plan a Detour Route for an Example Interstate Closure	
National Weather Service (NWS) Website		Find any Active NWS Alerts for your Region	
VIPER Radio		Receive & Relay Incident Info to IMAP Drivers	
IMAP Dispatch Log		Enter an IMAP Stop as it is Called into TMC Dispatch	
CCTV Traffic Cameras		Use CCTV Controls to Pan, Tilt, & Zoom a Camera	
Monitor Wall		Select a Monitor & Change the Camera it is Displaying	
Dynamic Message Signs (DMS)		Activate & Deactivate a DMS Test/Safety Message	
OTHER TOOLS:	**USES:**	**HANDS-ON TASKS:**	**INITIALS:**

Trainee Name: _____   **Instructor Name:** _____

Trainee Notes

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Incident Management Assistance Patrol

Field Training Manual
for IMAP Responders

2022 Edition

North Carolina
Department of Transportation

Incident Management Assistance Patrol

Supervisor Training Guide

2020 Edition

North Carolina
Department of Transportation

Introduction:

Welcome to the 2020 Edition of the Incident Management Assistance Patrol (IMAP) Supervisor Training Guide. This guide is the primary training document of the North Carolina Department of Transportation's IMAP Supervisor Training Program. The Supervisor Training Guide (STG) was designed for IMAP instructors to use as they provide training to new & existing IMAP supervisors.

The concepts, guidelines, and training activities presented within this document were developed in collaboration with IMAP personnel from all regions of North Carolina. This guide is intended to provide a standard of instruction but should not be used as a substitute for training. Knowledgeable & experienced instructors are essential to assuring that all IMAP personnel are trained properly.

IMAP Supervisor Training Program Goals:

1. Safety of IMAP personnel, emergency responders, and the traveling public.
2. Enhanced leadership and administrative abilities of IMAP supervisors.
3. Consistency in the duties and expectations of IMAP supervisors across all IMAP regions.
4. Continuity of IMAP operations such that any IMAP employee can deploy to any region with no conflict in practices or standards.
5. Accountability for IMAP personnel and regional IMAP Leadership.
6. Mitigation of potential legal liability for NCDOT.
7. Improved incident clearance times, travel-time reliability, and other performance goals.
8. Stronger internal and external partnerships.
9. Maturation of the IMAP program, overall.

Audience for IMAP Supervisor Training:

Successful completion and certification through the IMAP Supervisor Training Program will be required for any employee classified as an IMAP supervisor. Therefore, the target audience for IMAP supervisor training will be all existing IMAP supervisors and any individual seeking to become an IMAP supervisor (i.e. current IMAP drivers).

Companion Materials:

The IMAP Supervisor Training Guide (this document) is the primary training document for the IMAP Supervisor Training Program. The materials below are official companions to this guide and are used throughout IMAP supervisor training:

- NCDOT Workplace Safety Manual
- IMAP Field Training Guide for IMAP Instructors (aka "IMAP Driver Manual")
- IMAP Supervisor Regional Training Checklist
- IMAP Supervisor Assessment & Approval Checklist

TABLE OF CONTENTS:

Description:

Familiarize trainees with the goals, capabilities, and services of the IMAP program and with the regional IMAP teams across the state.

Objectives:

- Introduce trainees to the IMAP program and its primary goals.

- Provide an overview of IMAP's core services and strategies.

- Introduce trainees to the other IMAP teams that operate across the state.

- Discuss the unique challenges that different IMAP regions face.

- Test trainee's understanding of partner engagement.

Audience: IMAP Supervisors

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- NCDOT Ethics Policy
- NCDOT Workplace Safety Manual
- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")

Quick Sheet – The IMAP Program:

Objective: Use this simplified guide to discuss the IMAP Program.

Talking Points:

- **IMAP = I**ncident **M**anagement **A**ssistance **P**atrol

- IMAP is a statewide traffic and incident management program that is operated by the North Carolina Department of Transportation's Division of Highways.

- In NC, IMAP operates on interstates and major US/NC routes for a region.

- **IMAP's Two, Primary Goals are to:**
  - Keep motorists and responders safe
  - Keep traffic flowing

- IMAP uses a range of strategies to achieve its goals. **These strategies can largely be grouped into the following areas of service:**
  - Incident Response
  - Emergency Traffic Control (ETC)
  - Motorist Assistance
  - Special Events / Emergency Operations

- **IMAP is a statewide program** – this means:
  - All IMAP teams share the same mission, goals, and operating guidelines which are established by NCDOT's Statewide Operations group.
  - Sharing knowledge, resources, and support with other IMAP teams is a key mandate for all IMAP teams across NC.

- **IMAP operates in multiple Divisions/Regions across NC**
  - IMAP teams report to the Division/Region that they are based in.
  - Each Div./Reg. manages their team's people, vehicles, & equipment.

- **IMAP Regions:**
  - Western NC – Division 13 & 14
  - Metrolina – Division 10 & 12
  - Triad – Division 7 & 9
  - Triangle – Division 5
  - Coastal NC – Division 3 & I-95 (Div. 4 & 6)

- Each IMAP region possesses unique challenges that are influenced by the region's terrain, urban vs. rural nature, and traffic type (commercial vs. commuter).

Introduction to the IMAP Program:

Objective: Introduce trainees to the IMAP program and its primary goals.

Talking Points:

- **IMAP = Incident Management Assistance Patrol**

- IMAP is a statewide traffic and incident management program that is operated by the North Carolina Department of Transportation's Division of Highways.

- **Nationwide, there are many programs that are similar to IMAP:**
  - Georgia DOT has Highway Emergency Response Operators (HERO). Maryland DOT has the Coordinated Highway Action Response Team (CHART).
  - Generally, the transportation industry refers to programs like IMAP as "Safety Service Patrol" programs, or "SSPs."
  - Most SSPs are operated by state DOTs. However, some SSPs are operated by law enforcement agencies (e.g. Dallas Sheriff's Courtesy Patrol in Texas) or by private entities (e.g. I-77 Mobility Partners).

- In NC, IMAP operates on interstates and major US/NC routes for a region.

- **IMAP's Two, Primary Goals are to:**
  - Keep motorists and responders safe
  - Keep traffic flowing

- IMAP uses a range of strategies to achieve its goals. **These strategies can largely be grouped into the following areas of service:**
  - Incident Response
  - Emergency Traffic Control (ETC)
  - Motorist Assistance
  - Special Events / Emergency Operations

- **In the past, IMAP stood for "Interstate Motorist Assistance Program"**
  - This name reflected IMAP's previous focus on motorist assistance.
  - Disabled/Abandoned Vehicles can impact traffic flow, prevent rapid response to incident scenes, and cause secondary crashes.
  - IMAP still provides motorist assistance, but it is no longer the program's focus. Today, motorist assistance is just another set of services used by IMAP to support its wider goals of safe and effective traffic incident management.

IMAP Services (1 of 2):

Objective: Provide an overview of IMAP's core services and strategies. Complete details and guidance can be found in the Field Training Guide for IMAP Instructors.

Incident Response services include:
- Detecting & assessing unplanned traffic incidents.
- Identifying & reporting damage to roadway infrastructure.
- Participating in the Incident Command System (ICS) on-scene.
- Coordinating with and supporting the incident response efforts of other groups within NCDOT (e.g. Maintenance, TMC, etc.)
- Relaying on-scene information to TMC dispatch.
- Removing vehicles, objects, and other debris from travel lanes.
- Tagging & initiating immediate removal of abandoned vehicles from the road.
- Up-righting overturned vehicles.
- Containing and/or extinguishing vehicle fires or roadside fires.
- Identifying HazMat incidents & initiating HazMat response.
- Containing fluid spills and increasing traction on affected travel lanes.
- Providing basic First Aid to crash victims.
- Assisting crash investigations by marking vehicle locations.
- Providing additional lighting for incident work zones.

Emergency Traffic Control (ETC) services include:
- Positioning IMAP truck in lanes/shoulders before incident scenes.
- Using Emergency Lights to increase visibility of IMAP truck & ETC.
- Activating truck-mounted arrow board to direct traffic.
- Deploying ETC to keep traffic flowing around incidents.
- Adjusting ETC for high-speed traffic or limited sight distance.
- Using backup IMAP units or DMS/CMS to provide Advance Warning.
- Performing emergency rolling roadblocks to control traffic speed.
- Deploying ETC to divert traffic onto shoulders and/or exit ramps.
- Accommodating entrance/exit ramp traffic through ETC areas.
- Coordinating detours/alternate routes with TMC & other responders.
- Coordinating deployment of long-term traffic control with NCDOT Maintenance.
- Preventing traffic queues from forming & limiting their impact to the roadway network.

IMAP Services (2 of 2):

Objective: Provide an overview of IMAP's core services and strategies. Complete details and guidance can be found in the Field Training Guide for IMAP Instructors.

Motorist Assistance services include:
- Assisting stranded motorists as they are detected/reported.
- Providing gasoline or diesel fuel.
- Changing and/or inflating flat tires.
- Jumpstarting disabled vehicles with dead batteries.
- Providing water for overheated vehicles.
- Assisting stranded motorists with minor mechanical repairs.
- Helping stranded motorists to properly secure loose cargo.
- Helping stranded motorists to arrange for additional assistance (e.g. tow truck).
- Providing directions to motorists who are lost.
- Transporting stranded motorists to safe locations off the roadway.

Special Event / Emergency Operation services include:
- Supporting traffic control efforts for event traffic.
- Providing incident response & motorist assistance services on event or evacuation routes.
- Initiating immediate removal of vehicles that may obstruct roadway treatment or disaster recovery efforts.
- Reporting road closures & weather impacts to TMC dispatch and other responders.
- Deploying additional response personnel & equipment to regions affected by major events/disasters.
- Clearing storm drains to prevent standing water on the roadway.
- Assisting other NCDOT groups (e.g. Maintenance) with debris removal and traffic control deployment.
- Using snow plows and/or sand spreaders to treat minor/urgent patches of snow & ice.

IMAP Teams Across NC:

Objective: Introduce trainees to the other IMAP teams that operate across the state.

Talking Points:

- **IMAP is a statewide program** – this means:
    - All IMAP teams share the same mission, goals, and operating guidelines which are established by NCDOT's Statewide Operations group.
    - Sharing knowledge, resources, and support with other IMAP teams is a key mandate for all IMAP teams across NC.

- **IMAP operates in multiple Divisions/Regions across NC**
    - IMAP teams report to the Division/Region that they are based in.
    - Each Div./Reg. manages their team's people, vehicles, & equipment.

- **Western NC IMAP – Divisions 13 & 14**
    - Division 13 Hours of Operation: 7am-6:30pm; Monday-Friday
    - Division 14 Hours of Operation: 24/7/365
    - Dispatched by the Mountain TMC, in Asheville (STOC, after-hours)
    - IMAP Call Signs: P-400 series

- **Metrolina IMAP – Divisions 10 & 12**
    - Hours of Operation: 5am-9pm; Monday-Friday
    - Dispatched by the Metrolina TMC, in Charlotte
    - IMAP Call Signs: P-100 series

- **Triad IMAP – Divisions 7 & 9**
    - Hours of Operation: 5:30am-9:30pm; Monday-Friday
    - Dispatched by the Triad TMC, in Greensboro
    - IMAP Call Signs: P-300 series

- **Triangle IMAP – Division 5**
    - Hours of Operation: 6am-8pm; Monday-Friday
    - Dispatched by the STOC, in Raleigh
    - IMAP Call Signs: P-200 series

- **Coastal IMAP – Division 3 & I-95 (Div. 4 & 6)**
    - Division 3's Hours of Operation: 6am-7:30pm; Tuesday-Friday
    - I-95's Hours of Operation: 10am-6pm; Monday-Sunday
    - Dispatched by the STOC, in Raleigh
    - IMAP Call Signs: P-500 series

Unique, Regional Challenges (1 of 3):

Objective: Discuss the unique challenges that different IMAP regions face.

Talking Points:

- Each region possesses unique challenges that impact their local IMAP teams more frequently or more severely than other regions.

- Unique, regional challenges are mostly influenced by a region's terrain, rural vs. urban nature, and the most common types of traffic that the region experiences (e.g. commuter vs. commercial traffic).

Western NC – Unique Regional Challenges:

- *Mountainous Terrain | Rural | Higher Commercial Traffic*
- **More Snow & Ice**
  - o Due to higher altitudes, this region experiences more winter weather.
  - o Not only is winter weather more frequent, it is typically more severe and longer in duration than in other NC regions.
- **Smaller Shoulders (or none at all)**
  - o Little/no space to relocate vehicles or to get around congestion when responding to an incident.
  - o With small shoulders or none at all, most incidents (even those that are minor) result in lane closures.
- **More Hills & Curves**
  - o Limited sight distance around curves/over hills requires more extensive traffic control and the use of Advance Warning measures.
  - o When vehicles go off the road, they often fall into ravines. Recovering these vehicles takes longer & requires special equipment.
- **Limited Road Network**
  - o Due to its (mostly) rural nature and mountainous terrain, there are fewer viable detour/alternate route options available.
  - o There are also fewer ways to get to an incident if the road is closed or severely congested.
- **More Tractor Trailers**
  - o More commercial traffic means more incidents involving commercial motor vehicles (CMVs).
  - o CMV incidents are often more severe, take longer to clear, and may require special tools & strategies to handle.

Unique, Regional Challenges (2 of 3):

Objective: Discuss the unique challenges that different IMAP regions face.

Major Cities (Metrolina, Triad, & Triangle) – Unique Regional Challenges:

- *Mostly Flat Terrain | Urban | High Commuter & Commercial Traffic*
- **Significantly Higher Congestion**
    - Larger populations mean more congestion.
    - Even minor incidents quickly result in abnormally high congestion.
    - Response times can be higher in these regions as IMAP drivers fight through stopped traffic to reach incident scenes.
- **Higher Incident/Event Activity**
    - More motorists means more incidents & higher activity levels.
    - When a region's base activity level is HIGH, the IMAP team's resources can get stretched easily when activity picks up even more.
    - Major cities also attract more special events (e.g. concerts, etc.).
    - Urban IMAP teams experience special events almost every day AND the events tend to be larger, with greater impacts to traffic.
- **More Major Construction Projects**
    - Roadwork is common across NC, but major construction projects occur more frequently in/near large cities.
    - Major projects typically take longer to complete, have a more severe impact on the region, and involve more complex/specialized response strategies (e.g. contract towing, integrated corridor management, etc.).
    - IMAP in these regions usually have to become more familiar with new partners and new tasks to support these projects.
- **More Managed Lanes/Tolled Roads**
    - Tolled roadways and managed lane strategies (e.g. HOV/HOT lanes, reversible lanes, etc.) are becoming more common in major cities across the U.S.
    - In Raleigh, there is the Triangle Expressway. In Charlotte, there is the Monroe Expressway and the I-77 Express Lanes.
    - IMAP in these regions often must become familiar with new stakeholders (e.g. NCTA and I-77 Mobility Partners).
    - IMAP is also usually required to perform different tasks and/or adhere to different priorities & guidelines to support managed lanes/tolled roads.

Unique, Regional Challenges (3 of 3):

Objective: Discuss the unique challenges that different IMAP regions face.

NC's Coast – Unique Regional Challenges:

- ***Low, Flat Terrain | Rural | Commercial & Seasonal Traffic***

- **More Hurricanes/Tropical Storms & Flooding**
  - This region is more prone to impacts from hurricanes/tropical storms which often have a more severe and longer lasting impacts on the coast than on regions further west.
  - Due to its low, flat terrain, roads in this region are more prone to flooding caused, not only by major storms, but heavy rain as well.

- **Limited Road Network**
  - Due to its (mostly) rural nature, there are fewer viable detour options and fewer ways to get to an incident.
  - Because numerous waterways crisscross this region, bridges are essential to transportation. One bridge closure can effectively isolate a very large geographic area.

- **Business/Residential Patrol Route**
  - One of the routes patrolled by Division 3 IMAP drivers is a business/residential road.
  - On this route, IMAP drivers must routinely deploy more extensive and complex traffic control measures to accommodate shared turn lanes and signalized intersections without limiting ingress/egress to stores and other business.

- **Seasonal Commuter Traffic**
  - Due to its (mostly) rural nature and lower commuter traffic, this region usually sees significantly lower congestion than larger cities.
  - However, during certain times of the year, an influx of tourists creates periods of high congestion that can be very disruptive and can significantly increase the work load of the region's smaller IMAP team.

Trial Exercise: The IMAP Program

Objective: Test trainees' understanding of the IMAP program.

Instructions: Ask discussion questions and engage trainee on scenarios related to the IMAP program. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**
  - What can IMAP do to make it stand out from other SSPs across the nation?

  - Why is it important for all IMAP teams across NC to operate by the same, consistent set of standards & guidelines?

  - Considering the unique challenges that different IMAP regions face, what are some things that one IMAP region can learn from another?

- **Scenarios: As an IMAP Supervisor, What Would You Do?**
  - You are being interviewed by a local TV-News reporter. The interview is live. The reporter asks, "What is IMAP?"

  - You are on-scene at a major incident. IMAP drivers from a neighboring region are also on-scene. You instruct one of the other region's IMAP drivers to do a routine task. The other region's driver dismisses your instruction and says, "We don't do that in my region."

  - A major construction project is planned for your region. You know that the project will close all shoulders in the work zone, there will be multiple detours/alternate routes used, and NO permanent lane closures will be permitted (i.e. contractor will have to deploy & remove traffic control before and after each work day). You are at a planning meeting for the project when someone asks, "What can IMAP do to help?"

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 – ACCEPTABLE	3 - EXCEPTIONAL
PASS/FAIL FOR COURSE (circle PASS or FAIL below - FAIL requires comments)		
PASS or FAIL	COMMENTS:	

Description:

Introduce trainees to the core duties of the IMAP supervisor role and the qualities of successful IMAP supervisors.

Objectives:

- Provide trainees with an overview of the IMAP supervisor role.

- Introduce trainees to IMAP's organizational structure, peers, and partners.

- Discuss the core duties of IMAP supervisors.

- Explore some of the qualities that successful IMAP supervisors possess.

- Test trainee's understanding of the IMAP supervisor role.

Audience: IMAP Supervisors

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- NCDOT Ethics Policy
- NCDOT Workplace Safety Manual
- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: The IMAP Program

Quick Sheet – The IMAP Supervisor Role (1 of 2):

Objective: Use this simplified guide to discuss the IMAP supervisor role.

Talking Points:

- **IMAP Mission Statement:**
  "To manage incidents and congestion by utilizing all available means to communicate, coordinate, and cooperate with other agencies, the media, and the public, thereby improving **highway safety**, maintaining **traffic flow**, and thus saving lives, time, and money."

- **All personnel are responsible for achieving IMAP's Mission Statement.**
  - IMAP drivers do this by managing incidents.
  - IMAP supervisors do this by managing people and resources.

- **IMAP supervisors must adhere to the same guidelines as IMAP drivers.**

- **IMAP Organizational Structure** – simplified org chart below:
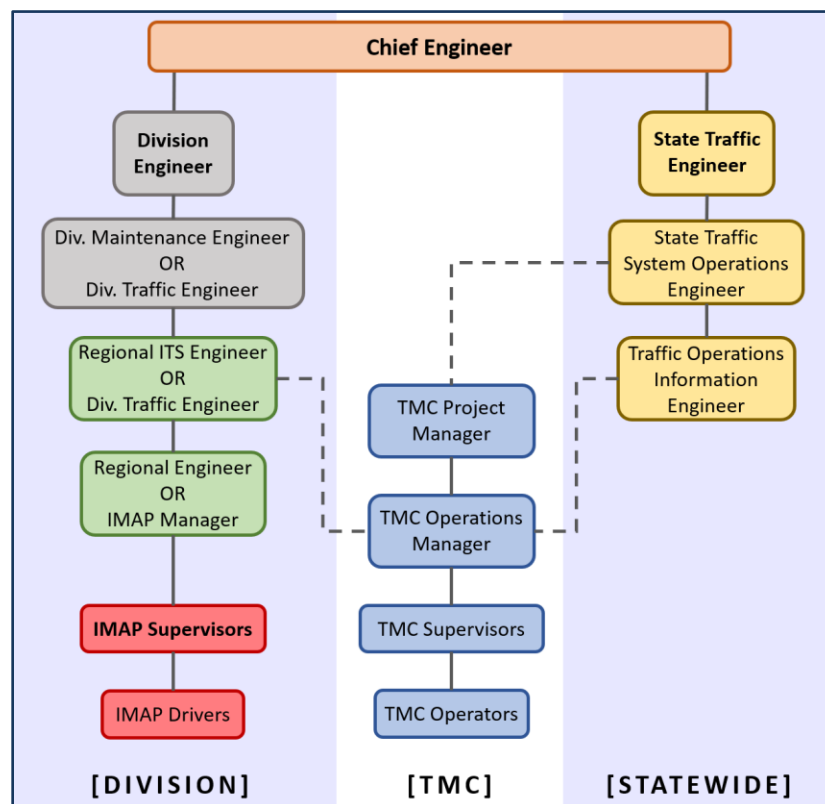
Quick Sheet – The IMAP Supervisor Role (2 of 2):

Objective: Use this simplified guide to discuss the IMAP supervisor role.

Talking Points:

- **Core Duties of IMAP Supervisors:**
    - Monitor traffic/incident activity and their drivers' activity.
    - Maintain operational coverage and coordinate driver schedules.
    - Support IMAP vehicle/equipment needs – especially maintenance.
    - Facilitate communication between drivers, leadership, etc.
    - Support driver development & improvement (e.g. coaching, etc.).
    - Support motorist and partner engagement.
    - Perform human resources functions (e.g. recruiting, payroll, etc.).
    - Support special projects and other higher-level tasks.

- **Qualities of Successful IMAP Supervisors:**
    - Holds themselves personally responsible for team's safety & success.
    - Does not practice or encourage a, "that's not my job" mindset.
    - Understands that the road is dangerous and that they must continuously push their drivers to improve in order to protect them.
    - Understands that their job is to solve problems – not just identify them.
    - Is supportive of change – "the way it's always been done" is not necessarily the right or best way.
    - Does what they say they will do.
    - Seeks to be proactive rather than reactive.
    - Promotes and exemplifies IMAP's values & goals.
    - Is readily available and accessible to their drivers.
    - Actively engages drivers and uses a team approach to get work done.
    - Behaves consistently and treats others consistently.
    - Projects a positive and competent professional image.
    - Speaks positively and listens patiently.
    - Communicates tactfully and truthfully – even if the truth will negatively impact them.

Overview of the IMAP Supervisor Role:

Objective: Provide trainees with an overview of the IMAP supervisor role.

Talking Points:

- **IMAP Mission Statement:**
  "To manage incidents and congestion by utilizing all available means to communicate, coordinate, and cooperate with other agencies, the media, and the public, thereby improving **highway safety**, maintaining **traffic flow**, and thus saving lives, time, and money."

- **All personnel are responsible for achieving IMAP's Mission Statement.**

- **IMAP drivers achieve the mission by managing incidents** which means:
  - Detecting and responding to traffic incidents.
  - Receiving and relaying critical incident details.
  - Assisting stranded motorists.
  - Deploying emergency traffic control (ETC).
  - Removing vehicles and debris from travel lanes.
  - Supporting the efforts of the TMC, emergency responders, etc.

- **IMAP supervisors achieve the mission by managing people and resources** which means:
  - Promoting and exemplifying IMAP's goals and values.
  - Adhering to and enforcing all NCDOT & IMAP policies and procedures.
  - Motivating, directing, and guiding their drivers.
  - Assuring that their drivers have the resources they need.
  - Building positive relationships with internal & external partners.
  - Performing special tasks that support IMAP and Incident Management.

- **IMAP supervisors are a vital link between "what IMAP should be" and "what IMAP actually is."** Every day, your actions and behavior determine how safe and successful your drivers are and how positive their workplace is.

- **IMAP supervisors must adhere to the same guidelines as IMAP drivers.** This includes but is not limited to the standards established in the following:
  - NCDOT Ethics Policy
  - NCDOT Workplace Safety Manual
  - Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")

IMAP Organizational Structure:

Objective: Introduce trainees to IMAP's organizational structure, peers, and partners.

Talking Points:

- IMAP's org structure varies depending on the Division/Region where an IMAP team is based.

- The simplified org chart (right) shows IMAP's typical reporting structure in a Division/Region and IMAP's connection to TMC staff and NCDOT Statewide Operations.

- IMAP personnel report to their Division/Regional leadership. Each Division /Region manages their IMAP team's people, vehicles, and equipment.

- NCDOT's Statewide Operations group manages the IMAP program, overall. This group establishes standards for IMAP equipment, vehicles, and operating practices; and provides other support to IMAP teams in each Division/Region (e.g. training & certification, etc.).

- TMC staff (including IMAP dispatchers) report to NCDOT Statewide Operations and to the Division/Regional leadership where the TMC is located. In TMC areas, IMAP managers & supervisors form a close team with TMC managers & supervisors. Together, they are responsible for day-to-day operations in their area.

- IMAP supervisors often work with many peers/partners including:
  o Office staff at their locations including administrative personnel.
  o Intelligent Transportation System (ITS) technicians and engineers.
  o NCDOT personnel with maintenance, traffic services, NCTA, etc.
  o NCDOT equipment and vehicle maintenance staff.
  o Emergency responders in their area and other local, external partners.
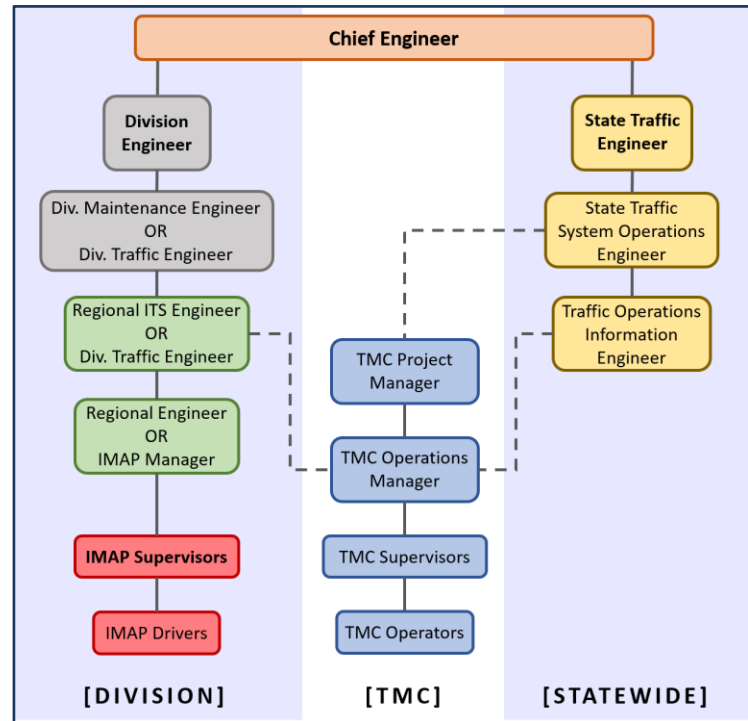
Core Duties of IMAP Supervisors (1 of 2):

Objective: Discuss the core duties of IMAP supervisors (detailed guidance for specific duties will be provided in other courses).

Core Duties:

- **Monitor traffic/incident activity and IMAP drivers' activity:**
  - Maintain awareness of what is happening on the road and how drivers are responding.
  - Assure IMAP's response is safe, effective, and appropriate.
  - Coordinate additional drivers or resources to enhance response.
  - Respond to incident scenes when a supervisor's presence is needed.
  - (See "Monitoring Traffic and IMAP Driver Activity")

- **Maintain operational coverage and coordinate driver schedules:**
  - Assure appropriate driver coverage on established IMAP patrol routes.
  - Assign drivers to routes and/or shifts and set driver work schedules.
  - Track driver's time, attendance, and time off (for payroll, etc.).
  - (See "Coverage and Route Assignments")

- **Support critical vehicle and equipment needs:**
  - Assure that all routine vehical/equipment tasks are conducted properly (e.g. daily inspections, equipment storage/disposal, etc.).
  - Coordinate vehicle/equipment maintenance and procurement.
  - Assign, distribute, and authorize use of vehicles/equipment.
  - Maintain vehicle/equipment records (inspections, maintenance, etc.).
  - (See "IMAP Vehicles and Equipment")

- **Facilitate internal communication:**
  - Serve as a point of contact (POC) for all drivers' questions, concerns, etc.
  - Provide regular guidance, direction, and other vital info to drivers.
  - Relay vital info (i.e. status updates, requests, etc.) to IMAP Leadership & other internal partners (e.g. TMC Leadership, etc.).
  - Facilitate conflict resolution for issues relating to IMAP.
  - (See "Communicating with IMAP Drivers")

Core Duties of IMAP Supervisors (2 of 2):

Objective: Discuss the core duties of IMAP supervisors (detailed guidance for specific duties will be provided in other courses).

Core Duties:

- **Support driver development and performance improvement:**
    - Coordinate formal training of new/existing drivers.
    - Assess & track drivers' performance and communicate any deficiencies.
    - Coach and mentor drivers; provide opportunities to grow and learn.
    - Establish performance/professional goals & conduct formal reviews.
    - (See "Driver Training and Continuing Education")

- **Support motorist and partner engagement:**
    - Assure that public outreach efforts (e.g. customer feedback cards, etc.) are conducted properly; communicate with motorists as needed.
    - Establish & maintain positive relationships with partners – especially local emergency responders & NCDOT staff (e.g. maintenance, etc.).
    - Relay vital info to partners (e.g. changes to IMAP coverage, etc.).
    - Coordinate on special projects and other complex or sensitive tasks.
    - Facilitate conflict resolution for issues relating to IMAP.
    - (See "Partner Engagement")

- **Work with IMAP Leadership, etc. to perform essential human resources functions:**
    - Recruiting and on-boarding of new IMAP staff.
    - Driver time entry, approval, and payroll.
    - Corrective action (i.e. discipline) for deficient driver performance.
    - Processing and maintaining employee records.
    - (See Regional Supervisor Training Checklist)

- **Support special projects and other higher-level tasks:**
    - IMAP supervisors' highest priorities are to oversee their drivers' activity and to assure that drivers have the resources they need.
    - Special projects/tasks are important but should not prevent or detract from a supervisor's higher-priority functions.
    - (See Regional Supervisor Training Checklist)

Qualities of Successful IMAP Supervisors (1 of 2):

Objective: Explore some of the qualities that successful IMAP supervisors possess.

Supervisor Qualities:

- **Ownership & Accountability**
  - Holds themselves personally responsible for their team's safety & success.
  - Sees IMAP as essential for safe, efficient roads – always looks for opportunities where IMAP can demonstrate their value.
  - Does not practice or encourage a, "that's not my job" mindset.

- **Critical Approach & Continuous Improvement**
  - Understands that the road is dangerous – even when drivers do everything right. "OK performance" is an accident waiting to happen.
  - Always looks for what could be done better instead of "why it's okay, as-is." Failing to push for improvement leads to complacency & injury.

- **Solution-Oriented & Critical Thinking**
  - Understands that, as a leader, their job is to solve problems – not just identify them.
  - Carefully and objectively considers issues; uses their experience to adapt old solutions to new challenges.

- **Supportive of Change**
  - Understands that change happens. Recognizes that their reaction to change will directly influence how their drivers react.
  - Seeks to support and influence change in order to achieve the best outcome for their team.
  - Understands that "the way it's always been done" is not necessarily the best way nor is it a valid reason to avoid change.

- **Responsive & Proactive**
  - Does what they say they will do.
  - When a need arises or there is work to do, they take action and stick with it until the work is done or the issue is resolved.
  - Seeks to proactively identify & address issues rather than react to them.

Qualities of Successful IMAP Supervisors (2 of 2):

Objective: Explore some of the qualities that successful IMAP supervisors possess.

Supervisor Qualities:

- **"Walks the Walk"**
  - Promotes and exemplifies IMAP's values and goals.
  - Adheres to the same rules & expectations that they hold their drivers to.

- **Present & Engaged**
  - Readily available and accessible to their drivers and eager to help them.
  - Regularly asks their team for help and reaches out to isolated members.
  - Knows what is happening with their team; fully understands their team's strengths, weaknesses, and preferences.

- **Consistent**
  - Avoids favoritism and applies the same standards to all drivers.
  - Their work, their behavior – even their daily routine – is reliable and rarely fluctuates. Others know what to expect from them.
  - Consistently follows the chain of command to address issues and get work done.

- **Positive, Patient, & Professional**
  - In appearance and behavior, consistently projects a competent, professional image that positively represents NCDOT & IMAP.
  - Speaks positively of others in public & private. Discourages gossip. Turns negative conversations into productive, solution-oriented discussions.
  - Listens patiently to concerns or issues. Seeks to understand BEFORE seeking to be understood.

- **Honest**
  - Seeks to describe situations accurately – "as they are" instead of "what we think they are" or "what we think people want to hear."
  - Communicates tactfully but truthfully.
  - Presents the truth, even if it may negatively impact them.
  - When they do not know something, they say so.
  - Fully investigates input from others BEFORE acting on that input or presenting it as fact.

Trial Exercise: IMAP Supervisor Role

Objective: Test trainees' understanding of the IMAP supervisor role.

Instructions: Ask discussion questions and engage trainee on scenarios related to the supervisor role. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**

  o Are supervisors responsible for their drivers' safety? What about their behavior or the quality of their work?

  o Of the core duties of an IMAP supervisor, which are you most familiar with and which are you least familiar with?

  o In your own words, what are IMAP's values?
    - Values are an organization's principles, priorities, or standards of behavior.

- **Scenarios: As an IMAP Supervisor, What Would You Do?**

  o You arrive at a crash to help one of your drivers who is already on scene. You quickly realize that the driver's emergency traffic control (ETC) is not properly setup. The driver has several years of experience and does not respond well to criticism.

  o One of your drivers tells you that a TMC dispatcher cursed at them over the radio yesterday. You did not hear this happen, but your driver is obviously upset.

  o Your IMAP Leadership issues a change in how IMAP responds to incidents in work zones. The new way is very different from how your team currently handles work zone incidents. The old way and the new way have PROS & CONS. Your drivers prefer the old way.

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 - ACCEPTABLE	3 - EXCEPTIONAL
PASS/FAIL FOR COURSE (circle PASS or FAIL below - FAIL requires comments)		
PASS or FAIL	COMMENTS:	

Description:

Familiarize trainees with the practices used by IMAP supervisors to communicate with IMAP drivers effectively.

Objectives:

- Introduce trainees to the fundamental elements of communication.

- Discuss the key concepts of effective communication.

- Discuss the purpose of communicating with drivers and the benefits that are achieved when communication is handled effectively.

- Discuss the guidelines for supervisor availability and explore opportunities to communicate with drivers.

- Introduce the regular meetings that IMAP supervisors are responsible for.

- Provide trainees with guidance on the strategies used to effectively communicate with IMAP drivers.

- Test trainee's understanding of IMAP driver communication.

- Test trainees' ability to properly facilitate Tailgate Meetings with IMAP drivers.

Audience: IMAP Supervisors

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: IMAP Program
- GE-301: The IMAP Supervisor Role

Quick Sheet – Communicating with IMAP Drivers (1 of 2):

Objective: Use this simplified guide to discuss IMAP driver communication.

Talking Points:

- **The graphic below describes how communication occurs:**
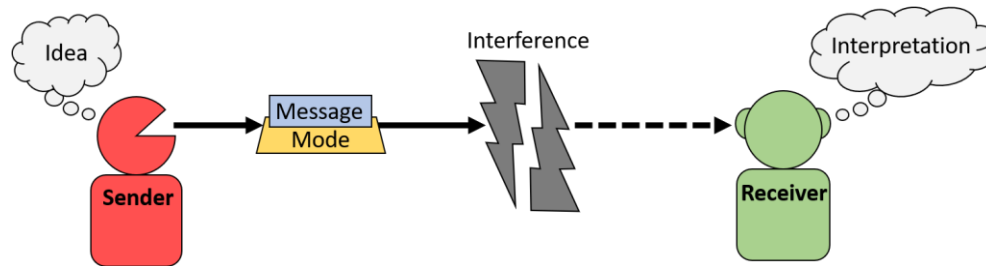
- **Key Concepts of Effective Communication:**
    - You are communicating even if you don't realize it.
    - There are MANY ways (aka "modes") to communicate.
    - What you say is not always what people hear or understand.
    - Previous interactions dictate how future interactions will go.
    - Frequent and inclusive communication is essential.
    - Communication is a 2-way street (i.e. dialogue, NOT monologue).

- **Purpose & Benefits of Effective Driver Communication:**
    - Keep drivers in the loop.
    - Strengthen supervisor and driver relationships.
    - Create opportunities to grow & improve (e.g. delegation & mentoring).

- **Regular Meetings that IMAP supervisors are responsible for:**
    - Tailgate Meetings – Daily (at the start of each day/shift, ideally).
    - Safety Meetings – Monthly.
    - After Action Reviews (AARs)/Table-Tops – Quarterly (minimum).
    - NOTE: supervisors may choose a time/date for regular meetings but must assure that meetings are held at the established frequency; all required drivers are in attendance; and meetings are valuable to drivers.

Quick Sheet – Communicating with IMAP Drivers (2 of 2):

Objective: Use this simplified guide to discuss IMAP driver communication.

Talking Points:

- **General Tips for Communicating with Drivers:**
  - Be Accessible – stop & talk when approached OR make time to talk.
  - Be Proactive – go to them; start the conversation; ask questions.
  - Listen – seek to understand BEFORE seeking to be understood.
  - Be Straightforward – clear, to the point, honest, and transparent.
  - Be Open – hear them out (positive or negative); reserve judgment.
  - Be Professional – polite but direct; calm, even when emotions are high.
  - Be Positive – keep conversations solution-oriented; discourage gossip.
  - Be Sympathetic & Empathetic – remember that drivers are human; remember that the job is complex, important, and dangerous.
  - Be Strategic – plan what you want and what you will say in advance.
  - Reflect – evaluate your recent interactions.
  - Be Considerate – "praise in public, punish in private."

- **Communicating with Drivers When Safety is at Risk:**
  1. Get the driver's attention.
  2. Tell the driver to STOP (or other action/phrase to prevent an accident).
  3. Assure that the driver and/or others are out of immediate danger.
  4. Tell the driver what they need to do to complete the task safely.
  5. Monitor until task is complete and/or it is safe to talk with the driver.
  6. Follow-up with the driver.
     a. Explain what you saw and why it was unsafe.
     b. Reiterate the proper method that should be used in the future.

- **Supervisors may only discuss Sensitive/Confidential info with members of IMAP leadership** (i.e. not with drivers) – this includes:
  - Personal details (relationships, medical info, legal/criminal history, etc.)
  - Identifying info (Social Security Numbers, etc.)
  - Financial info (salary, credit score, benefits, etc.)
  - Performance info (performance reviews, disciplinary action, etc.)

Fundamentals of Communication:

Objective: Introduce trainees to the fundamental elements of communication.

Talking Points:

- To be effective communicators, **supervisors must first understand how communication occurs**. The graphic & bullets below describe this process:
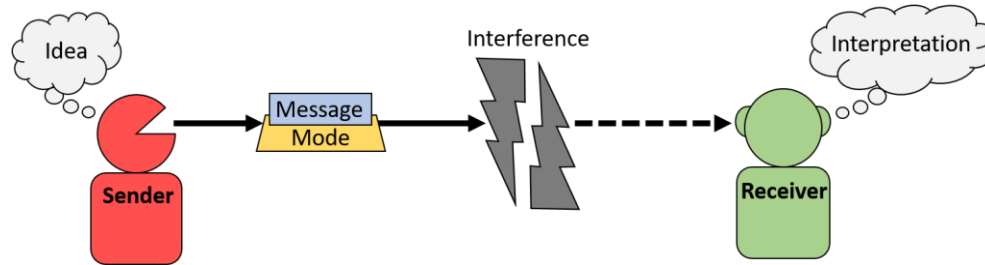
- **Sender** – the person who is communicating their idea through a message.
- **Receiver** – the person who receives & responds to the Sender's message.
- **Idea** – what the Sender wants to achieve by communicating with the Receiver (e.g. for the Receiver to perform a task properly).
- **Message** – the info that the Sender hopes will achieve their idea (e.g. what the task is, instructions, deadlines, motivation for the Receiver to do the task, etc.).
- **Mode** – the format that the Sender conveys their message in. This could be verbal or written; a visual picture/diagram; etc.
- **Interference** – external factors that impact the ability to send or receive messages clearly (e.g. noise, distractions, a bad connection, etc.).
- **Interpretation** – what the Receiver <u>thinks</u> the Sender said & meant.

Other Considerations on Communication:

- "**Personal Context**" is something that all people have and it is unique to each person. It includes a person's knowledge & experience; their feelings about what they're discussing and who they are discussing it with; and other issues that they're dealing with. Each person's Personal Context shapes their idea & interpretations AND it affects how they communicate.
- "**Current Situation**" is the environment, circumstances, and other parties present while the Sender & Receiver are communicating. The Current Situation has a significant impact on how people communicate. If the environment is distracting, communication will be challenging. If other parties are present, the Sender & Receiver may communicate/respond differently than they would if they were alone.

Key Concepts of Effective Communication (1 of 2):

Objective: Discuss the key concepts of effective communication.

Talking Points:

- **You are communicating even if you don't realize it**
    - Drivers are constantly watching you. What you do and how you act tells drivers what is OK for them to do or not do. Without saying a word, your actions & behavior influence your drivers.
    - Only 7% of verbal communication is based on the words that you use. 38% is based on your tone of voice. The other 55% is based on your body language. Effective communicators master their tone & body language, FIRST and their choice of words, SECOND.

- **There are MANY ways (aka "modes") to communicate**
    - Ways to communicate include tone of voice & body language; written, verbal, and visual modes; and even physical contact (e.g. handshake, etc.).
    - All modes have their strengths & weaknesses (e.g. verbal instructions are more personal and allow for questions & clarification BUT the details are not as easy to remember as written instructions).
    - Also, people understand & respond to different modes of communication better than others (e.g. a "visual" person will likely find a map more helpful than a list of roads and turns to take).
    - Effective communicators choose the best mode for the situation AND for who they are communicating with. They also blend modes together (e.g. verbal instructions + written steps).

- **What you say is not always what people hear or understand**
    - People forget, get distracted, or misunderstand – even when we think we've communicated clearly.
    - Effective communicators reitterate key points multiple times when delivering their message.
    - They also check that their audience has understood them AND that they have understood their audience. Asking questions and repeating information back are good ways to check for understanding (e.g. "Does that make sense?" "Let me see if I heard you correctly…").

Communicating with IMAP Drivers

Key Concepts of Effective Communication (2 of 2):

Objective: Discuss the key concepts of effective communication.

Talking Points:

- **Previous interactions dictate how future interactions will go**
  - "**Receptivity**" describes how open/understanding a person believes you were to them and what they had to say.
  - "**Transparency**" describes how honest, complete, and forthright a person believes you are with them.
  - "**Responsive**" describes how quickly & properly a person believes that you addressed issues/requests that they've brought to you.
  - If a person believes that you are NOT receptive, transparent, or responsive, they are unlikely to come to you on their own. When you go to them, they are unlikely to speak freely or listen to you.
  - Effective communicators see each interaction as the foundation for future interactions. They seek to establish relationships and expectations that will enable consistently effective communication.

- **Frequent and inclusive communication is essential**
  - When communication is frequent, it becomes a natural and expected part of daily life. When it is infrequent, it can feel awkard and is often met with anxiety or suspicion (e.g. "Why is he asking for me? We never talk… What have I done wrong?").
  - When communication is inclusive, everyone feels like they are part of the team and that they are welcome to contribute. When communication is exclusive, the people who are left out feel isolated and potentially "unworthy" of being involved.
  - Effective communicators are ACTIVE communicators. They capitalize on every opportunity to communicate and they reach out to all individuals – especially those who might normally be left out.

- **Communication is a 2-way street**
  - Very few people appreciate being "talked at." When there is no opportunity to contribute, people tend to disengage from the conversation and are unlikely to remember or do what you said.
  - Effective communicators seek to establish a dialogue with the people they communicate with – not a monlogue. They create space for others to talk, they ask questions, and they LISTEN.

Purpose & Benefits of Effective Driver Communication:

Objective: Discuss the purpose of communicating with drivers and the benefits that are achieved when communication is handled effectively.

Benefits of Effective Communication:

- **Keep drivers in the loop**
  - They understand their job and how to do it properly.
  - They are aware of items that may affect them and are up-to-date on efforts that are "in the works."
  - They understand what others are doing and become more familiar with other roles and the "big picture" of traffic operations.
  - They can hear the questions/ideas of others and have the opportunity to provide their own.

- **Strengthen supervisor & driver relationships**
  - Develop mutual trust and respect.
  - Understand one another's strengths, limitations, needs, and goals.
  - Learn how others make decisions and what motivates them.

- **Create opportunities to grow & improve**
  - By getting driver input, supervisors can deliver more effective solutions. Drivers feel greater ownership for their team & IMAP.
  - By delegating tasks to drivers, supervisors get more work done. Drivers learn new skills and have opportunities to demonstrate their what they can do and even gain recognition.
  - By interacting with their supervisors, drivers gain insight into the expectations and challenges of the supervisor role and learn the strategies that supervisors use to be successful.
  - By mentoring drivers, supervisors enhance their team's abilities and its resiliency to change (e.g. if a supervisor is out, a capable driver is ready to step in). Mentoring is also a motivating force because drivers see that their supervisor cares about their growth.

Opportunities for Driver Communication:

Objective: Discuss the guidelines for supervisor availability and explore opportunities to communicate with drivers.

Talking Points:

- As their driver's point of contact (POC), supervisors must be accessible to their drivers at any time – this means that supervisors should:
    - **Maintain an "Open Door Policy"** – drivers know that supervisor is available & feel comfortable coming to them with any issue.
    - **Answer Cell Phone 24/7** – respond to driver's calls at any time (even when off-duty). If unable to talk, responding to drivers in a timely fashion lets them know that you heard them and will follow-up.

- Drivers will reach out to their supervisors BUT supervisors must also reach out to their drivers via **Informal & Formal** communication opportunities.

- **Informal Opportunities** – chance interactions that occur every day, usually while performing duties or during breaks. These interactions provide opportunities to:
    - Establish close relationships with individual drivers.
    - Hear input or concerns in a safe, private environment.
    - Provide mentoring or corrective guidance in a setting that does not feel "punitive."
    - Delegate tasks, give instructions, or have in-depth conversation without distraction.

- **Formal Opportunities** – planned interactions that usually occur at regular intervals and are typically more structured. These interactions provide opportunities to:
    - Deliver training or instructions to most/all drivers at the same time.
    - Introduce IMAP to other partners (e.g. TMC staff, responders, etc.).
    - Gather input/suggestions from drivers in a goal-oriented setting (e.g. to investigate an issue, to plan for an upcoming event, etc.).
    - Meet with drivers individually in a setting that is official and professional (e.g. for performance reviews, etc.).

Regular Meetings with IMAP Drivers:

Objective: Introduce the regular meetings that IMAP supervisors are responsible for.

Tailgate Meetings
- Topics to Discuss:
    - Coverage & route assignments.
    - Maintenance, events, or other activities that will affect drivers.
    - Updates on efforts that are "in the works," new policies, etc.
    - Open forum for drivers' questions, concerns, or requests.
- Frequency: Daily (at the start of each day/shift, ideally)
- Who Attends: All Drivers for the Day/Shift
- Who Facilitates: IMAP Supervisor for the Day/Shift

Safety Meetings
- Topics to Discuss:
    - Guidance that helps drivers protect themselves or work safer
    - Other topics from NCDOT's Workplace Safety Manual.
- Frequency: Monthly
- Who Attends: All Drivers (TMC personnel & office staff in some regions)
- Who Facilitates: IMAP Supervisor and/or Leader of the Office/Unit

After Action Reviews (AARs) / Table-Top Exercises
- Topics to Discuss:
    - Recent incidents/events.
    - Actions that were taken and actions that were not taken.
    - Areas of success and areas for improvement.
- Frequency: Quarterly (minimum; more frequent AARs are recommended).
- Who Attends: All Drivers involved in the incident (min.). Supervisors may also invite other partners who were involved (e.g. TMC, responders, etc.).
- Who Facilitates: IMAP Supervisor

Additional Guidance on Regular Meetings:
- Supervisors may choose a time/date for regular meetings but must assure:
    - Meetings are held at the established frequency.
    - All required drivers are in attendance.
    - Meetings are valuable & relevant to their drivers.
    - TMC dispatch is aware of all drivers who have left their routes to attend.

How to Communicate with IMAP Drivers (1 of 2):

Objective: Provide trainees with guidance on the strategies used to effectively communicate with IMAP drivers.

General Tips & Guidance:

- **Be Accessible** – when approached, stop what you are doing to talk (if possible) and/or make time to talk.

- **Be Proactive** – go to them; start the conversation; ask questions.

- **Be Inclusive** – talk to all drivers; reach out to isolated team members.

- **Listen** – seek to understand BEFORE seeking to be understood.

- **Be Straightforward** – clear, to the point, honest, and transparent.

- **Be Open** – consider what they have to say (positive or negative); appreciate ideas/methods that are different from your own; reserve judgement until you have heard them out.

- **Be Professional** – remain calm; be polite but direct; do not match a driver's anger, frustration, or anxiety with your own.

- **Be Positive** – keep conversations solution-oriented; speak positively of others in public and in private; discourage gossip.

- **Be Sympathetic** – remember that they are human and have a life outside of IMAP; understand that what they say or how they respond is largely driven by their Personal Context, the Current Situation, and their previous interactions with you.

- **Be Empathetic** – recognize that the job of all IMAP employees is hard; don't diminish the job's complexity, importance, or risk.

- **Be Strategic** – whenever possible, plan your communication in advance; define what you want, what you will say, and the situation you will say it in.

- **Reflect** – take time to evaluate your recent interactions; Did they go how you expected? Did you get what you wanted? What could you have said or done differently?

- **Be Considerate** – remember the saying: "praise in public – punish in private."

How to Communicate with IMAP Drivers (2 of 2):

Objective: Provide trainees with guidance on the strategies used to effectively communicate with IMAP drivers.

Communicating with Drivers "In the Moment"

Supervisors should follow the process below when drivers need to act NOW to keep themselves or others safe (e.g. on-scene, when unsafe action is observed, etc.):

1. Get the driver's attention.
   a. If safe/possible, approach the driver.
2. Tell the driver to STOP (or other action/phrase that will prevent an accident).
   a. Project authority.
   b. Be clear and direct but remain calm – panic can make things worse.
3. Assure that the driver and/or others are out of immediate danger.
   a. If needed, take action to make sure the driver or others are safe.
4. Tell the driver what actions they need to take to complete the task safely.
5. Continue to monitor the driver until their task is complete and/or it is safe to talk with them further.
6. Follow-up with the driver.
   a. Explain what you saw and why it was unsafe.
   b. Reiterate the proper method that the driver should use in the future.
   c. If appropriate, apologize to the driver but emphasize that your actions were based on the need to keep them safe.

Sensitive / Confidential Information:

- Supervisors should be as honest and transparent with their drivers as possible. However, some information is not appropriate for drivers to be aware of.
- Supervisors must protect sensitive/confidential information and may only share it with members of IMAP leadership. Examples of sensitive /confidential information include but are not limited to the following:
  o **Personal details** such as relationships; political or religious affiliation; medical info; legal/criminal history; personal contact info; etc.
  o **Identifying information** such as Social Security Numbers, etc.
  o **Financial information** including salary, credit score, benefits, etc.
  o **Performance info** such as performance reviews, disciplinary action, etc.

See **"Partner Engagement"** for guidance on conflict resolution for issues related to IMAP.

Trial Exercise: Communicating with IMAP Drivers

Objective: Test trainees' understanding of IMAP driver communication.

Instructions: Ask discussion questions and engage trainee on communication-related scenarios. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**
  - What information do you think IMAP drivers are most interested in?

  - How does a driver's Personal Context affect what they hear and how they respond?

  - Regarding body language: what gestures, expressions, or posture would someone exhibit if they were unsatisfied?

  - What are the benefits AND risks of a supervisor creating strong relationships with IMAP drivers?

- **Scenarios: As an IMAP Supervisor, What Would You Do?**
  - You are monitoring a driver at an incident scene. Though the incident is very complex, the driver performs all tasks exceptionally well. You are very impressed.

  - You are on-scene with a driver who is about to upright a vehicle. You realize that the driver is standing next to the winch cable. The driver activates the winch and the cable goes taught.

  - You are alone when a driver approaches you. The driver appears enthusiastic. They express their desire to take on more of a leadership role and ask if there are any special tasks that they can help you with.

  - In 2 months, a major event will be held in your region. Several drivers have been talking about the event – some have even asked you about it, but you didn't have any answers for them. There seems to be a lot of interest but very little information or guidance for drivers.

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 - ACCEPTABLE	3 - EXCEPTIONAL

Full Demonstration: Tailgate Meetings

Objective: Test trainees' ability to properly facilitate Tailgate Meetings with IMAP drivers.

Instructions:

1. Advise trainee that their next 3 Tailgate Meetings will be monitored & scored to determine their final grade for this course.

2. Review the Demonstration Scorecard with the trainee so they are aware of how their Tailgate Meetings will be scored.

3. Attend 3 Tailgate Meetings (minimum) that are facilitated entirely by the trainee.
    a. Instructor may require additional Tailgate Meetings in order to properly evaluate the trainee's ability to communicate with IMAP drivers.
    b. Scores from only 3 Tailgate Meetings should be used to determine the trainee's final grade for the course.

4. Monitor trainee performance during each Tailgate Meeting. Trainees should:
    a. Assure that all required drivers are in attendance.
    b. Manage time effectively (i.e. start & end on time, cover topics without rushing, etc.).
    c. Provide valuable & relevant information to drivers – this should include operational instructions for the day (e.g. coverage assignments, etc.) and other general info (e.g. status of things that are "in the works," etc.).
    d. Communicate clearly & professionally.
    e. Ask questions and/or provide drivers with opportunities to contribute to the discussion.
    f. Respond to drivers' questions or input properly.

5. Use the **Demonstration Scorecard: Tailgate Meetings** to grade trainee's performance during each meeting.

Demonstration Scorecard: Tailgate Meetings

Trainee:_____ Instructor:_____ Date: _____

Assured that All Required Drivers Attended	**POINTS:**	**Day 1:**	**Day 2:**	**Day 3:**	**TOTAL**
	5 pts/day				
Managed Time Effectively	**POINTS:**	**Day 1:**	**Day 2:**	**Day 3:**	**TOTAL**
	5 pts/day				
Provided Valuable & Relevant Info to Drivers	**POINTS:**	**Day 1:**	**Day 2:**	**Day 3:**	**TOTAL**
	5 pts/day				
Communicated Clearly & Professionally	**POINTS:**	**Day 1:**	**Day 2:**	**Day 3:**	**TOTAL**
	5 pts/day				
Asked Questions or Gave Drivers the Chance to Contribute	**POINTS:**	**Day 1:**	**Day 2:**	**Day 3:**	**TOTAL**
	5 pts/day				
Responded to Drivers' Questions/Input Properly	**POINTS:**	**Day 1:**	**Day 2:**	**Day 3:**	**TOTAL**
	5 pts/day				
FINAL SCORE:			**PASS/FAIL FOR COURSE:**		

Trainee must score 72 or higher to pass course

Instructor Comments (must be provided if course is marked as FAIL)**:**

_____
_____
_____
_____

Instructor Signature:_____ **Trainee Signature**:_____

Description:

Familiarize trainees with the strategies and guidelines used by IMAP supervisors to build partnerships with other groups/agencies involved in traffic incident management.

Objectives:

- Introduce trainees to the concept of partnership and its defining qualities.

- Describe tangible benefits and discuss their importance in partnerships.

- Describe priorities & boundaries and their importance in partnerships.

- Provide guidance on the various methods used to engage with partners.

- Provide guidance on how to effectively perform partner outreach.

- Provide guidance on how to effectively resolve conflicts with partners.

- Test trainee's understanding of partner engagement.

Audience: IMAP Supervisors

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- NCDOT Ethics Policy
- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: IMAP Program
- GE-301: The IMAP Supervisor Role
- COM-300: Communicating with IMAP Drivers

Quick Sheet – Partner Engagement (1 of 2):

Objective: Use this simplified guide to discuss partner engagement.

Talking Points:

- **Partnerships and relationships are very similar** – both are based on:
    - A history of positive interaction.
    - Challenges (or even conflict) that were overcome, together.
    - A shared commitment to grow closer, over time.

- To help establish partnerships between IMAP/NCDOT and other agencies, IMAP supervisors must understand how partnerships are different from relationships – **the defining qualities of a partnership include:**
    - Affiliation is formally recognized and supported by leadership.
    - Standing agreements, rules, and established services exist.
    - Knowledge, resources, and other "tangible benefits" are exchanged.
    - Both parties are invested and equally own the risks & rewards.

- **To build partnerships, IMAP supervisors should:**
    - Meet with IMAP Leadership to discuss outreach efforts and the strategies/tangible benefits that will be used. Leadership must have on-going involvement in all outreach efforts.
    - Establish multiple points of contact with the partner agency and help others in IMAP/NCDOT create relationships with the partner.
    - Meet with partners to discuss challenges & opportunities and to plan for ways that the partnership will benefit both groups.
    - Share IMAP's priorities & boundaries and work to understand your partner's. Discuss how resources can be shared and establish agreements that will enable the partnership to be successful.

- **To maintain partnerships, IMAP supervisors should:**
    - Ensure that your drivers, Leadership, and others in NCDOT understand the partnership and follow-through on agreements made with the partner.
    - Frequently engage with partners in settings that are formal & informal.
    - Work with your partner to address & resolve issues in a timely manner.
    - Continue to seek new opportunities & new goals that will mutually benefit IMAP/NCDOT and your partner.
    - Remember that partnerships take years to build – be patient, responsive, and follow-through.

Quick Sheet – Partner Engagement (2 of 2):

Objective: Use this simplified guide to discuss partner engagement.

Talking Points:

- **Partnerships are only as strong as their ability to navigate and recover from conflict.** Conflict between partners is inevitable and is an on-going process. IMAP supervisors are essential to the conflict resolution process.

- **Resolving Issues Brought to IMAP by a Partner:**
    - Listen to partner's concerns without being defensive.
    - Record details of the issue and make sure you've understood it.
    - Take concerns seriously but avoiding making judgments.
    - Advise partner that you will investigate and keep them in the loop.
    - Discuss issue with IMAP Leadership and get their guidance.
    - Investigate the issue thoroughly and seek hard evidence.
    - Discuss investigation with IMAP Leadership and establish a plan. Formal disciplinary action requires IMAP Leadership involvement.
    - Execute the plan to resolve the issue.
    - Follow-up with your partner to advise what steps have been taken.

- **Bringing Issues to a Partner's Attention:**
    - Record specific details of the issue (e.g. names, dates, times, etc.).
    - Investigate the issue thoroughly; verify the details that were reported. If IMAP also has accountability, document & investigate as well.
    - Discuss issue with IMAP Leadership and get their guidance.
    - Bring issue & specific details to your partner's attention. Work with the right member of your partner's team who is responsible for addressing your issue.
    - Discuss the issue with your partner professionally. Listen to their side & encourage them to investigate. Trust your partner to take appropriate action.
    - Advise IMAP Leadership of your discussion with the partner including any steps that they committed to taking.
    - Monitor the issue. If issues continue, bring additional details to your partner's attention. If needed, work with IMAP Leadership to escalate the issue up your partner's chain of command. If improvement is observed, advise your partner and show appreciate for their help.

Introduction to Partner Engagement (1 of 2):

Objective: Introduce trainees to the concept of partnership and its defining qualities.

Talking Points:

- In the "Field Training Guide for IMAP Instructors," the course, **"Interacting with Other Agencies"** provides IMAP with a foundational understanding of the various groups/agencies that IMAP works with to support traffic incident management. The focus of that course was to enable drivers to foster positive **relationships** with the individuals that they work alongside, day-to-day.

- This course, "Partner Engagement," builds on that course. Rather than focus on relationships between individuals, this course offers guidance on how to foster long-term **partnerships** between the IMAP program and other groups/agencies involved in traffic incident management.

- That said, solid partnerships between agencies are almost always based on positive relationships between individuals (e.g. an IMAP supervisor has an excellent relationship with a local Fire Chief. Together, they forge a partnership between IMAP and the Fire Department).

- **Partnerships and relationships are very similar**. Both are based on:
  - A history of positive interaction.
  - Past challenges (or even conflict) that were overcome, together.
  - A shared commitment to grow closer, over time.

- IMAP supervisors must understand how partnerships are different from relationships. **The defining qualities of a partnership include:**
  - The affiliation is formally recognized and supported by both group's leadership.
  - There are standing agreements to cooperate that often define how to cooperate (e.g. rules of engagement, established services that partners perform for one another, etc.).
  - Both parties are committed to a mutually beneficial alliance where knowledge, resources, and other "tangible benefits" are exchanged.
  - There is a shared investment in the partnership with equal ownership of the risks and rewards.

Introduction to Partner Engagement (2 of 2):

Objective: Introduce trainees to the concept of partnership and its defining qualities.

Talking Points:

- IMAP supervisors play a vital role in creating and maintaining partnerships between IMAP and the other groups/agencies involved in traffic incident management.

- **IMAP supervisors should seek to build partnerships with all groups that IMAP works with**. This includes:
    - **State & Local Responders** (SHP, local law enforcement, Fire Department, Emergency Medical Services, etc.)
    - **NCDOT** (TMCs/STOC, Maintenance/Traffic Services, Statewide Operations, etc.)
    - **Private Entities** (towers, work zone contractors, event venues, etc.)

- When creating or maintaining a solid partnership, **the greatest challenges for an IMAP supervisor are**:
    - Making time to engage partners frequently.
    - Bridging the gap between an individual relationship and an agency partnership.
    - Giving & receiving tangible benefits that make the partnership mutually beneficial while maintaining clear boundaries & expectations.
    - Getting their drivers (and others with NCDOT) to help maintain the partnership by working well with other groups/agencies and by upholding the agreements made between them.

Tangible Benefits (1 of 2):

Objective: Describe tangible benefits and discuss their importance in partnerships.

Talking Points:

- One of the defining qualities of a partnership is the exchange of tangible benefits. **Examples of tangible benefits include:**
  - **Knowledge** – IMAP posses significant knowledge & experience that other groups may not. Likewise, other groups have knowledge & experience that IMAP does not. By pooling knowledge, partners can form better ideas and make more effective decisions than any single group can on its own.
  - **Resources** – this is a very broad category that includes **people** (who can help do work), **equipment**, **facilities** (e.g. training or meeting spaces), or even **money** (e.g. funds to pay for a joint venture).
  - **Understanding** – recognition of both partner's contributions, respect for both partner's boundaries/priorities, and patience/benefit of the doubt when conflict arises.

- **Providing tangible benefits is key**. It legitimizes the partnership by showing clear value and demonstrates that both parties are invested in the alliance.

- Sharing IMAP's knowledge, resources, and understanding is a strategy that can help IMAP supervisors to bridge the gap between an individual relationship and an agency partnership.

- **IMAP can build partnerships by providing their normal level of support and services**. However, they must deliver this support consistently, properly, and in a timely manner, such as:
  - Positive, professional interaction between IMAP and their partners.
  - Rapid response to incidents and effective support on-scene.
  - Accessibility to IMAP supervisors, leadership, and other NCDOT groups (i.e. they can reach you/NCDOT whenever they need to).
  - Attention and openness to a partner's concerns, suggestions, etc.
  - Consistent & timely follow-through (i.e. do what you say you will do).

Tangible Benefits (2 of 2):

Objective: Describe tangible benefits and discuss their importance in partnerships.

Talking Points:

- **To cement a partnership, IMAP may provide benefits that are "above and beyond" normal support**. This includes:
  - Providing support for incidents/events that are outside of IMAP's normal patrol routes or operating hours.
  - Assisting partners with efforts that are outside of IMAP's scope (e.g. helping NCDOT Maintenance deploy permanent traffic control, etc.).
  - Engaging partners in planning and decision-making – especially on things that will impact the partners and/or benefit from their input.
  - Loaning equipment/resources that help partners perform their duties (e.g. portable CMS, radios, etc.).
  - Providing training that will help partners perform their duties (e.g. how to push/pull vehicles, how to remove cable barriers, etc.).

- **When providing benefits to partners, caution is required** – IMAP supervisors must assure that:
  - They have approval and authority to provide these benefits.
  - They are adhering to NCDOT's ethics policies.
  - Providing benefits does not significantly detract from IMAP's core services or place IMAP staff in higher risk situations.
  - Providing benefits does not create unrealistic expectations in their partners (e.g. IMAP did it before, so they will do it any time we ask).

- **Meet with IMAP Leadership BEFORE Engaging Partners:**
  - **Discuss outreach efforts** – get approval to engage; understand what other outreach efforts are underway so IMAP's outreach does not duplicate or conflict with other outreach efforts.
  - **Determine what IMAP's message/goals are** – define what you want partners to know about IMAP; assure that IMAP's message properly represents NCDOT; establish what you hope to achieve through the partnership (e.g. safer work zones, quick clearance, etc.).
  - **Discuss benefits IMAP can offer** – get approval for the support that IMAP can provide. **NOTE**: IMAP Leadership must have on-going involvement in decisions related to partner engagement and any benefits offered by IMAP.

Priorities & Boundaries:

Objective: Describe priorities & boundaries and their importance in partnerships.

Talking Points:

- Providing benefits to partners can detract from IMAP's core duties and create unrealistic expectations. To prevent this, IMAP supervisors must assure that partners understand IMAP's priorities and boundaries.

- **IMAP's Priorities** – hierarchy of incidents/conditions that define what IMAP will respond to, first.
    - Partners must understand that IMAP's core duties will often take precedence over support/other benefits that IMAP may provide (e.g. IMAP will respond to lane-closing crashes on their normal patrol routes before responding off-route).
    - See, **"Incident Priorities"** in the "Field Training Guide for IMAP Instructors."

- **IMAP's Boundaries** – any mandatory or self-imposed limitation that IMAP places on its services OR how it delivers them. IMAP's boundaries are less defined and are often more flexible than its priorities.

- IMAP supervisors must carefully consider where to place boundaries and when to allow for exceptions. **Examples of IMAP boundaries include:**
    - **Number of IMAP Resources** – IMAP can devote some, but not all, of its resources (i.e. drivers, vehicles, or equipment) to help a partner.
    - **Patrol Routes & Hours of Operation** – IMAP can extend its hours, work on different days, or respond off-route to help a partner BUT should require partners to submit requests through the IMAP supervisor (or IMAP Leadership) on a case-by-case basis. IMAP supervisors should also assure that partners understand that IMAP is making an exception for them, in recognition of their partnership with IMAP.
    - **Safety & Ability** – IMAP can provide a wide range of support and can even assist with tasks that are generally considered as, "outside of IMAP's scope." IMAP supervisors should never offer/agree to assist partners with tasks that IMAP is not trained or equipped to do safely (e.g. arrest/detain citizens, clean up HazMat, etc.).

On-Scene Interaction & Outreach:

Objective: Provide guidance on the various methods to engage with partners.

- **On-Scene Interaction** is a great way to engage with partners.
  - These interactions occur on a daily basis, so they are the most frequent and convenient opportunities to engage with partners.
  - IMAP supervisors should capitalize on these opportunities and use them to get to know other groups/agencies better.
  - See **"Interacting with Other Agencies"** in the "Field Training Guide for IMAP Instructors."

- On-scene interaction is most effective for **meeting new partners** and **reinforcing existing relationships**.
  - IMAP supervisors should introduce themselves to new partners, exchange contact info (i.e. business cards), and offer to meet with them away from the incident scene.
  - Getting to know partners on a more personal level can help to strengthen a partnership. Supervisors can ask about a partner's family or life outside of work BUT must remain professional and cautious to prevent an inappropriate relationship from developing.

- However, **on-scene interaction is NOT the most effective method to build partnerships**. Building partnerships involves:
  - Discussing opportunities
  - Developing plans/strategies
  - Making agreements
  - Resolving disputes/conflict

- These types of partnership building activities require a level of focus that is not available at an incident scene.

- **Outreach** is a form of partner engagement where IMAP supervisors intentionally make time for their partners and focus on the activities that they & their partners are involved with. **Examples of outreach include:**
  - Visiting partners at their headquarters & inviting them to visit IMAP.
  - Providing training to partners and receiving training from them.
  - Hosting group activities so individuals from IMAP and the partner agency can get to know one another.
  - Engaging partners in meetings/work groups where issues or opportunities are discussed, planned for, and acted upon.

Engaging in Outreach (1 of 2):

Objective: Provide guidance on how to effectively perform partner outreach.

Talking Points:

- Once IMAP Leadership has given approval, IMAP supervisors should **reach out to the partners that they wish to engage**.
  - Contact a representative for the group/agency. This can be someone you met on-scene or you can call the group/agency's headquarters to ask who you should speak with.
  - Ultimately, supervisors should contact the group/agency's leadership, so they are aware and approve of further interaction with IMAP.

- After initial contact with the partner is made, IMAP supervisors should **setup a time to meet with members of the partner's team**.
  - Ideally, these first meetings should be informal and focused on making introductions and getting to know individuals.
  - First meetings can be focused on a specific topic (e.g. a new opportunity or upcoming event). Unless it cannot be avoided, first meetings should NOT focus on resolving conflict or complaints.
  - IMAP supervisors should seek to establish relationships with multiple members of the partner's team. They should also help others with IMAP/NCDOT to form relationships with these partners, too. **Multiple relationships across two groups is a key difference between an individual relationship & an agency partnership**.

- After first meetings are held, IMAP supervisors should seek to **engage partners in efforts that impact or may benefit both parties**.
  - IMAP supervisors should come prepared. Have clear goals, talking points, questions, and solutions.
  - Discuss what NCDOT/IMAP can bring to the table and be clear about what you are requesting from partners.
  - Don't get "tunnel vision" on your ideas or goals. Allow partners to shape or change your idea with their input. **"OUR idea is stronger than MY idea."**
  - Discuss IMAP's priorities & boundaries. Respect the priorities & boundaries of your partner.
  - Document plans and/or agreements. Establish action items and clearly define who is responsible for them and when they are due.

Engaging in Outreach (2 of 2):

Objective: Provide guidance on how to effectively perform partner outreach.

Talking Points:

- After formal engagement activities have occurred, IMAP supervisors have 2 critical tasks: **Follow-Through** and **Maintaining the Relationship**.

- **Follow-Through** – IMAP supervisors should:
    - Assure that IMAP/NCDOT does what they say they will do.
    - Work with partners to help keep them on-track with what they've agreed to.
    - Keep the rest of the IMAP team in the loop so they understand what outreach efforts are underway and who IMAP's partners are.
    - Assure that IMAP drivers understand that they play a vital role in supporting the partnership by properly interacting with partners, by doing their jobs effectively, and by eagerly offering assistance.

- **Maintaining the Relationship** – IMAP supervisors should:
    - Establish regular/frequent meetings with partners to stay on top of existing efforts and to plan for new opportunities.
    - Make time to interact with partners outside of formal work-efforts to reinforce positive, personal relationships.
    - Regularly visit their partner's headquarters with no other goal than to say hello, show appreciation, and catch up with partners. Regular phone calls can achieve the same results, but face-to-face interaction is preferred.

- **Building partnerships takes TIME – years in most cases.** Time allows:
    - Superficial relationships to develop into deep bonds.
    - History to develop through numerous experiences (good and bad).
    - Partners to learn, respect, and appreciate one another's priorities and boundaries.

Conflict Resolution with Partners (1 of 2):

Objective: Provide guidance on how to effectively resolve conflict with partners.

Talking Points:

- The following is also relevant when resolving complaints from citizens.

- **Partnerships are only as strong as their ability to navigate and recover from conflict.** Conflict between partners is inevitable and is an on-going process. IMAP supervisors are essential to the conflict resolution process.

Resolving Issues Brought to IMAP by a Partner – supervisors should:

- Listen openly to the partner's concerns (i.e. do not be defensive).
- Capture essential details and make sure you've understood the issue.
- Take your partner's concerns seriously, BUT avoid making judgements about what IMAP/NCDOT should have done.
- Advise partner that they will be kept in the loop on the investigation and corrective action (if any).
- Inform your IMAP Leadership so they are aware and can provide guidance on how to address the issue.
- Investigate the issue thoroughly. Seek hard evidence. Get input from your team and hear their side. When getting input, listen to info about the issue but put aside "counter-complaints" (e.g. "yes, I called the officer an idiot… BUT they always park in a lane, even when they don't need to!").
- Document your findings and bring them to your IMAP Leadership. Establish a plan for addressing and resolving the issue.
- Execute the plan to resolve the issue. Plans may include re-training, issuing an apology, or bringing individuals together to work out their differences. Formal disciplinary action should only occur with IMAP Leadership's involvement.
- Touch base with the partner who brought the issue to your attention. Advise them of your findings and inform them of the steps that were taken to resolve the issue. Encourage them to advise you if the issue continues OR if they see improvement.

Conflict Resolution with Partners (2 of 2):

Objective: Provide guidance on how to effectively resolve conflict with partners.

Bringing Issues to a Partner's Attention – supervisors should:

- Record details of the issue (e.g. names, dates, times, etc.). Details about specific occurrences are KEY. Very little can be done with a vague overview (e.g. "Your officers are rude."). Actual resolution can occur when clear details are provided (e.g. "Officer Jones told IMAP P400 to 'get the h*** out of his way' at an incident scene on Friday the 11th at 2:30pm.").

- Internally investigate the issue to assure that the partner actually has some level of accountability. If IMAP has any level of accountability in the issue, document and investigate as well – this may also require action as part of the conflict's overall resolution.

- Inform your IMAP Leadership so they are aware and can provide guidance on how to address the issue.

- Reach out to the right member of your partner's team. This should be the person who is officially responsible for whatever your issue is related to. Avoid involving unnecessary members of your partner's team (e.g. their bosses' boss). Working with the right individual builds trust and can allow the issue to be resolved without "blowing it out of proportion."

- Communicate the issue and your findings to your partner. Remain polite and professional. Be serious but not accusatory or judgmental. Listen openly to your partner's side of the issue. Encourage them to investigate the issue but do not push for any specific or immediate action – that is your partner's prerogative and you must trust them to act responsibly.

- Advise your IMAP Leadership of your conversations with the partner. If appropriate, inform your drivers so (at the very least) they know that their issue has been heard and acted upon by IMAP.

- Monitor the issue. If it continues to occur, record details of each occurrence and relay them to your partner. If the partner does not appear to be taking timely/appropriate action, advise your IMAP Leadership and discuss how to escalate the issue up your partner's chain of command. If improvement is observed, communicate this to your partner and show appreciation – **reward the behavior that you wish to see repeated**.

Trial Exercise: Partner Engagement

Objective: Test trainees' understanding of partner engagement.

Instructions: Ask discussion questions and engage trainee on scenarios related to the partnerships. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**
    - What groups/agencies do you think your IMAP team has a solid <u>partnership</u> with?

    - How would you describe a "one-sided" partnership?

    - What are some resources or capabilities that are controlled by a partner that you think IMAP could benefit from?

    - What are some "tangible benefits" that NCDOT's ethics policies would prohibit IMAP from offering to its partners?

- **Scenarios: As an IMAP Supervisor, What Would You Do?**
    - Emergency Management (EM) offers to buy 5 portable CMS (which your team needs). IMAP can use the CMS whenever they like <u>but</u>, if a major event occurs, IMAP must deploy them wherever EM requests.

    - Your IMAP team has an AM Shift and a PM Shift. A partner asks your IMAP team to operate differently on one of the shifts. They want AM-Drivers to use 10-codes over the radio and PM-Drivers to <u>only use</u> Plain English over the radio.

    - A major crash closes the main road used by a local hospital. There is another road that ambulances can use but traffic control is needed to help them get in & out and the road is not an IMAP route.

    - There is a history of negativity and rudeness between your IMAP drivers and the officers of a local police department. Both sides have dozens of very real and very serious complaints.

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 – ACCEPTABLE	3 - EXCEPTIONAL
PASS/FAIL FOR COURSE (circle PASS or FAIL below - FAIL requires comments)		
PASS or FAIL	COMMENTS:	

Description:

Familiarize trainees with the responsibilities, procedures, and documentation that IMAP supervisors use to properly manage and maintain IMAP vehicles and equipment.

Objectives:

- Introduce trainees to the roles and responsibilities related to the management of IMAP vehicles and equipment.

- Instruct trainees on how to properly equip IMAP employees and trucks.

- Discuss guidelines for assuring that IMAP vehicles and equipment are readily available and properly stored.

- Instruct trainees on how to assure that drivers are properly using, inspecting, and caring for their vehicles and equipment.

- Discuss the roles and guidelines related to formal inspections and preventative maintenance.

- Provide guidance on proper Equipment Shop coordination.

- Discuss the IMAP supervisor's role in procuring IMAP vehicles and equipment.

- Test trainee's understanding of IMAP vehicles and equipment.

Audience: IMAP Supervisors

Duration of Training: 4 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- NCDOT Workplace Safety Manual
- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: IMAP Program
- GE-301: The IMAP Supervisor Role

Quick Sheet – IMAP Vehicles & Equipment (1 of 2):

Objective: Use this simplified guide to discuss IMAP vehicles and equipment.

Talking Points:

- **All IMAP vehicles and equipment must be:**
  - Clean, in good condition, and ready for use at all times.
  - Regularly inspected and properly maintained.
  - Operated safely and used properly.

- **Primary Vehicle & Equipment Responsibilities of IMAP Supervisor:**
  - Equip drivers and trucks by assigning vehicles/equipment.
  - Assure that vehicles/equipment are readily available & stored properly.
  - Assure that drivers are properly using & caring for vehicles/equipment.
  - Maintain vehicle/equipment records.
  - Coordinate with Equipment Shop for PMs and repairs.
  - Notify leadership when new vehicles/equipment need to be purchased.

- **Supervisors should maintain thorough, up-to-date records** – including:
  - **Resource Assignments** – what resources are assigned to whom.
  - **Inventory** – type, quantity, condition, and important dates for all vehicles/equipment.
  - **Equipment Maint. Record (EMR) Booklet** – tracks service history.
  - **Equipment Repair and PM Order Form** – when requesting service from Equipment Shop.
  - **Supervisor Vehicle/Equipment Inspection Sheet** – for inspecting all driver's vehicles/equipment every 2 months (6 times/year, min.).
  - **Lost Tool/Equipment Form** – when resources go missing.

- **IMAP Vehicle & Equipment Storage:**
  - Only park vehicles or store equipment in locations approved for IMAP.
  - Keep storage facilities clean and secure (accessible to IMAP, only).
  - Store Safely – secure items; don't overload shelves/bins; don't block walkways or safety equipment; use PPE when handling items, etc.
  - Periodically use or inspect spares to assure they work when needed.
  - Track items that expire (sunscreen) or require regular inspection (fire extinguishers).
  - Organize resources so they are easy to find and get to when needed.

Quick Sheet – IMAP Vehicles & Equipment (2 of 2):

Objective: Use this simplified guide to discuss IMAP vehicles and equipment.

Talking Points:

- **Inspecting IMAP Vehicles & Equipment:**
  - Drivers inspect vehicles/equipment BEFORE & AFTER each shift.
  - Supervisors assure that drivers are using, inspecting, and caring for their vehicles/equipment.
  - **Daily Observation** – watch drivers perform inspections at start/end of shift. At incident scenes, watch how drivers use vehicles/equipment.
  - **Regular Supervisor Inspections** – every 2 months, inspect all drivers' vehicles/equipment. Use "Supervisor Vehicle/Equipment Inspection Sheet."

- **Formal Inspections & Preventative Maintenance (PM):**
  - IMAP employees are NOT mechanics.
  - Equipment Shop performs all formal inspections, PMs, repairs, etc.
  - Drivers must notify supervisor of any damage/malfunctions.
  - Supervisors must track PM needs by truck and assure that all IMAP trucks receive PM on schedule.
  - Supervisors must assure that drivers perform emergency maintenance safely and properly (e.g. fixing a flat tire on IMAP truck).

- **Coordinating with Equipment Shop:**
  - Each Division has an Equipment Shop. Other groups also service IMAP vehicles/equipment – go to the right group for the right reason.
  - Be positive, professional, and as helpful as possible in all interactions.
  - Troubleshoot issue 1st – resolve issue or gather helpful details about it.
  - Communicate issues clearly & stay engaged with Shop until resolved.
  - Respect the Shop's priorities & workload – IMAP is not the only group that relies on the Equipment Shop.

Introduction to IMAP Vehicles & Equipment:

Objective: Introduce trainees to the roles and responsibilities related to the management of IMAP vehicles and equipment.

Talking Points:

- This course focuses on IMAP supervisor responsibilities. Refer to the "Field Training Guide for IMAP Instructors" for details on driver tasks & guidelines.

- **IMAP relies on its vehicles and equipment in order to operate**. All IMAP vehicles and equipment must be:
    - Clean, in good condition, and ready for use at all times.
    - Regularly inspected and properly maintained.
    - Operated safely and used in accordance with manufacturer specifications and NCDOT & IMAP policies and procedures.

- **IMAP Vehicles & Equipment – Roles & Primary Responsibilities:**
    - **IMAP Leadership** (Div/Region) – purchases vehicles & equipment.
    - **Equipment Shop** – performs preventative maintenance (PM) and repairs; performs installations and other approved alterations.
    - **IMAP Drivers** – uses resources properly and safely; performs daily inspections; cleans and cares for vehicles and equipment; and notifies supervisors of any damage or malfunctions.
    - **IMAP Supervisor** – see primary responsibilities below.

- **Primary Vehicle & Equipment Responsibilities of IMAP Supervisor:**
    - Equip drivers and trucks by assigning vehicles/equipment.
    - Assure that vehicles/equipment are readily available & stored properly.
    - Assure that drivers are properly using & caring for vehicles/equipment.
    - Maintain vehicle/equipment records.
    - Coordinate with Equipment Shop for PMs and repairs.
    - Notify leadership when new vehicles/equipment need to be purchased.

- **IMAP supervisors are responsible for all IMAP vehicles & equipment for their region.** If an IMAP employee wears it, uses it, or drives it, then an IMAP supervisor is most likely responsible for it.

Assigning IMAP Vehicles/Equipment:

Objective: Instruct trainees on how to properly equip IMAP employees & trucks.

Talking Points:

- Supervisors are responsible for assuring that all IMAP trucks and personnel (including themselves) are properly equipped.

- Review the following courses in the "Field Training Guide for IMAP Instructors" to learn how each truck and IMAP employee should be outfitted:
    - "IMAP Dress Code" **and** "Personal Protective Equipment (PPE)"
    - "IMAP Vehicle & Maintenance" **and** "IMAP Equipment Specifics"
    - "Radio Hardware & Dispatch"

- **Assigning IMAP Trucks to Drivers:**
    - Each driver must have an IMAP truck assigned to them.
    - Supervisors may assign specific trucks to individual drivers OR may assign trucks to be shared by drivers on different shifts.
    - Prior to assigning a truck, supervisors must conduct a complete inspection to assure the vehicle is functional and fully equipped.
    - Supervisors must document truck assignments.

- **Authorizing Use of Vehicles/Equipment:**
    - Most IMAP resources may be used by any IMAP employee, as-needed.
    - Supervisors should only authorize special use of resources to drivers who are properly trained/experienced AND/OR when special use is warranted by operational need.
    - **Trained/Experienced Examples**: Sand truck/plow or portable CMS.
    - **Operational Need Example:** Taking truck home during winter weather.

- **Supervisors must document all resource assignments** involving vehicles, radios, cell phones, and other "non-disposable" equipment (i.e. jump boxes, impact wrenches, etc. – NOT traffic cones, flares, fuel cans, etc.).
    - Resource assignment records must be updated as assignments change.
    - Avoid assigning duplicate resources to the same driver at the same time (e.g. Driver X shouldn't have 2 trucks assigned to them at once).

- **Minimum Details to Record for Resource Assignments:**
    - Name & ID # of resource being assigned
    - Name of driver(s) that the resource is assigned to
    - Mileage and/or condition when resource was assigned and returned
    - Date when resource was assigned and returned.

Storing IMAP Vehicles & Equipment (1 of 2):

Objective: Discuss guidelines for assuring that IMAP vehicles and equipment are readily available and properly stored.

General Guidelines for IMAP Vehicle/Equipment Storage:

- Vehicles/equipment may only be parked and/or stored in locations reserved for IMAP.

- Storage locations should be clean, dry, well-lit, and otherwise suited to protect and preserve the vehicles/equipment stored in them.

- Walkways near/around stored equipment must be clear of obstructions and other slipping or tripping hazards.

- Materials should never be stored where they block access to doors, stairs, electrical boxes, or safety equipment (e.g. fire extinguishers, first aid, etc.).

- Vehicles/equipment should be cleaned prior to storage. Dirty or leaking equipment should be repaired, disposed of, or stored in a location that will not be damaged by such equipment.

- Only authorized personnel may access storage locations. Storage locations must remain locked at all times when an authorized employee is not present.

- Shelving and containers must be able to safely support the size and weight of all items stored on/in them.

- Equipment should not be stored in such a way that it can damage other items. If equipment may fall and cause damage, it must be properly secured.

- Equipment that produces fumes (e.g. fuel, solvents, etc.) must be properly sealed and stored in well-ventilated locations.

- Flammable, pressurized, or hazardous items must be stored separately and away from possible sources of spark or flame.

- All personnel must wear appropriate PPE and use caution when handling equipment – especially sharp, heavy, or toxic items.

- Similar items should be stored together and all equipment should be properly organized/labeled so it is easy to find and access.

Storing IMAP Vehicles & Equipment (2 of 2):

Objective: Discuss guidelines for assuring that IMAP vehicles and equipment are readily available and properly stored.

Talking Points:

- IMAP resources can be placed in the following categories related to storage:
  - **Daily Use** – trucks used every day & the equipment stored on them.
  - **Replacements** – extra supplies for replacing frequently used or disposable resources (e.g. Quick Dry, duct tape, fire extinguishers, etc.).
  - **Special Use** – vehicles/equipment used only in special situations (e.g. portable CMS, winter weather gear, etc.).
  - **Spares** – extra resources kept on-hand if a Daily Use resource is missing or being repaired (e.g. spare trucks, radios, uniforms, etc.).

- **Guidelines for Daily Use Items when they are Not in Use:**
  - Trucks must be locked and parked in approved spaces.
  - Truck keys should be turned in at the end of the day or shift and must be kept in a secure area – ideally in supervisor's office.
  - Equipment may be stored in IMAP truck but must be secured. All storage cabinets on truck must be closed and locked.

- **Guidelines for Replacement Items, Special Use Items, & Spare Items:**
  - Vehicles/equipment must be inspected periodically to assure that they are still functioning and ready for use when needed.
  - Supervisors are encouraged to rotate spare trucks into daily use to keep them running properly.
  - Fuel cans, water fire extinguishers, and other refillable containers should be emptied and cleaned prior to long-term storage.
  - Items that expire (e.g. sunscreen) must be replaced prior to expiration.
  - Supervisors must assure that items requiring regular, 3rd party inspection (e.g. fire extinguishers) are inspected/re-certified on schedule.

- **Supervisors must maintain a complete and up-to-date inventory of all vehicles/equipment** – at a minimum, inventories should include:
  - Name & ID # of resource
  - Name of driver(s) that the resource is assigned to (if applicable)
  - Mileage and/or condition of resource as of last inspection
  - Expiration dates and/or dates of upcoming inspections/maintenance

Inspecting IMAP Vehicles & Equipment:

Objective: Instruct trainees on how to assure that drivers are properly using, inspecting, and caring for their vehicles/equipment.

Talking Points:

- **IMAP Driver Tasks Related to Vehicles & Equipment:**
    - Inspect vehicle and equipment BEFORE and AFTER each shift.
    - Complete **"Operator's Daily Inspection Sheet"** when inspecting truck BEFORE each shift and turn into supervisor at the end week.
    - Clean interior & exterior of truck cab and bed daily. Wash truck as needed but at least every 2 weeks.
    - Notify supervisor of any missing, damaged, or malfunctioning vehicles/equipment.
    - Maintain the **Equipment Maintenance Record (EMR)** booklet for the vehicle assigned to them.

- Supervisors must assure that drivers are using, inspecting, and caring for their vehicles and equipment. Strategies to do this include **Daily Observation** and **Regular Supervisor Inspections**.

- **Daily Observation:**
    - Be present when drivers begin/end their shifts. Check that they are performing inspections, cleaning vehicles, restocking equipment, etc.
    - When drivers are at incident scenes, watch how they operate their vehicles/equipment. Check that they are using them safely & properly.
    - Address improper/unsafe use immediately with the individual driver.

- **Regular Supervisor Inspections:**
    - Every 2 months, inspect all drivers' vehicles and the equipment stored on them. More inspections are preferred but 6 per year is the minimum.
    - Perform inspections outside of drivers' shifts (i.e. inspect 1st shift drivers' trucks during 2nd shift hours and vice versa).
    - Avoid giving drivers advance notice of inspections. Performing 1-2 inspections with a driver present is encouraged so all drivers are aware that they are regularly inspected.
    - Document each driver's inspection using the **"Supervisor Vehicle /Equipment Inspection Sheet."** Keep sheets in driver's file.
    - Address unsatisfactory areas immediately with the individual driver.

IMAP SUPERVISOR'S VEHICLE & EQUIPMENT INSPECTION SHEET - PAGE 1 of 2			
Driver Name:		**Supervisor Name:**	
Inspection Date:		**Supervisor Signature:**	

Score each item by checking the corresponding box for **S** (Satisfactory), **U** (Unsatisfactory), or **N/A** (Not Applicable). All items should have an option checked to indicate review.

VEHICLE INTERIOR	S	U	N/A
NO hazardous or prohibited items in cab			
NO cigarette ashes, butts, or cigarette smell			
Seats are free of food or drink stains			
Seats, floor, and spaces between seats are free of excess crumbs/clutter			
All surfaces free of water, grease, or dirt			
All items are organized and properly secured			
Sufficient space for 2 people (min.) to sit in back seat			
TOOL BINS & EQUIPMENT CABINETS	**S**	**U**	**N/A**
Equipment is organized properly and easy to access			
Equipment is stored in the appropriate location			
Equipment is properly secured			
Bins & Cabinets are clean, dry, and free of hazardous materials			
All Cabinets are closed and latched			
TRUCK BED	**S**	**U**	**N/A**
Clean and free of spent equipment or unnecessary items/debris			
Equipment, spare tires, fuel cans, etc. are properly secured			
All traffic cones are clean, in good condition, and properly secured			
VEHICLE EXTERIOR	**S**	**U**	**N/A**
All surfaces, mirrors, tires, and lights are clean and in good condition			
Signs, reflective tape, and safety decals are present and in good condition			
All fuel tanks and equipment hook-ups are properly capped or stowed			
Winch cables and air hoses are spooled properly and will unspool easily			
NECESSARY FORMS	**S**	**U**	**N/A**
2 Incident Packets; 1 injury + 1 property damage (in truck)			
Accident Reporting Guide (in truck)			
Vehicle Owner's Manual and Vehicle Registration (in truck)			
Traveler's Insurance Card (in truck)			
Equipment Maintenance Record Booklet (in truck)			
10 (min.) HP-303 stickers (in truck)			
10 (min.) IMAP Rider Agreement Forms (in truck)			
1 month of completed Operator Daily Inspection Sheets			

IMAP SUPERVISOR'S VEHICLE & EQUIPMENT INSPECTION SHEET - PAGE 2 of 2										
Driver Name:						**Supervisor Name:**				
Inspection Date:						**Supervisor Signature:**				
For each item, check **P** (Present) or **M** (Missing) then score each item's condition as **S** (Satisfactory), **U** (Unsatisfactory), or **N/A** (Not Applicable). All items should have an option checked to indicate review.										
EQUIPMENT NAME	**P**	**M**		**S**	**U**	**N/A**	**EQUIPMENT NAME**	**P**	**M**	**S**	**U**	**N/A**
First Aid Kit							Traffic Cones (27)					
Fire Extinguisher (4)							**Front & Rear Winch**					
Rolling Jack							Winch Cable Mat					
Jack Stands (2)							Hooks, Chains, Straps					
Bottle Jack							Crowbar					
Impact Wrench							Trailer Hitch & Cable					
Socket Set							Shovel					
4-Way Lug Wrench							Hammer					
Wheel Chocks (2)							Screwdriver Set					
Air Compressor							Plier Set					
Inflator & Gauge							Box Cutter					
Spare IMAP Tire							Can of Lubricant					
2-Gal. Fuel Cans							Can of Starter Fluid					
5-Gal. Fuel Cans							Can of Marking Paint					
Fuel Funnel							Disposable Wipes					
Water Cans							Rubber Gloves					
Jumper Cables							**OTHER/OPTIONAL**	**P**	**M**	**S**	**U**	**N/A**
Jump Box							Breaker Bar					
Binoculars							Rake					
ERG Book							Push Magnet					
Pop-Up Pool							Cone Caddy					
Quick Dry Bucket							Tire Plug Kit					
Quick Dry (2-3 Bags)							Wood Beam Chocks					
Push Broom												
Emergency Lights												
Arrow Board												
Flares												
Flashlight & Charger												
Work Light												
Supervisors should test and/or perform further inspection on equipment highlighted in **YELLOW**											

Formal Inspections & Preventative Maintenance:

Objective: Discuss the roles and guidelines related to formal inspections & preventative maintenance.

Talking Points:

- **IMAP employees are NOT mechanics**
  - Aside from daily checks and routine care, IMAP employees should NOT perform maintenance on any IMAP vehicle or equipment.
  - **Equipment Shop** performs all formal inspections, preventative maintenance, repairs, installations, or alterations.
  - Drivers should report damage/malfunctions to a supervisor immediately.

- **Inspections & Preventative Maintenance (PM)**
  - Each IMAP truck must be inspected periodically by the Equipment Shop and receive other PM service at regular intervals (e.g. oil changes, etc.).
  - Supervisors must track PM needs by truck and assure that all IMAP vehicles receive PM on schedule.
  - Supervisors should plan ahead by scheduling PMs and/or assigning spare vehicles to avoid coverage or vehicle availability issues.
  - Supervisors should track upcoming PMs in vehicle/equipment inventory.
  - Drivers must document PMs in their truck's **"Equipment Maintenance Record (EMR) Booklet."**
  - Supervisors should retain copies of all paperwork for any PMs.

- **Emergency Maintenance** – any damage or malfunction that prevents vehicles or equipment from functioning properly or being operated safely.
  - **Examples include:** flat tires, dead batteries, inoperable lights, or other symptoms that may indicate/lead to a critical failure.
  - Drivers may perform emergency maintenance to remove themselves from unsafe situations (e.g. fix a flat tire on IMAP truck on highway) BUT must notify a supervisor before attempting maintenance.
  - Supervisor must assure that driver is performing emergency maintenance properly and should send a backup unit if needed.
  - Notify Equipment Shop of any emergency maintenance performed. This should also be recorded in the truck's EMR booklet.

Coordinating with Equipment Shop (1 of 2):

Objective: Provide guidance on proper Equipment Shop coordination.

Talking Points:

- **Equipment Shop** – groups approved to service IMAP vehicles/equipment.
    - Each Division has an Equipment Shop who is responsible for vehicles /equipment in their Division (e.g. Div. 10 trucks go to Div. 10 Shop).
    - NCDOT Equipment Shops handle most vehicle/equipment needs.
    - State Farm truck wraps are performed by specific, private vendors.
    - Some malfunctions (e.g. recalls) are handled by the manufacturer.
    - Only send service requests to the group who is responsible for it.

- **Requesting Service from NCDOT Equipment Shops:**
    1. Assess the issue/malfunction carefully (skip to step 2 for PM).
        a. Determine if immediate service is needed.
        b. If possible & safe, troubleshoot issue to resolve malfunction (e.g. fix a flat tire, etc.) OR to gather details that will help Equipment Shop.
    2. Notify Equipment Shop, relay details, and schedule service date.
    3. Collect the following forms:
        a. Equipment Maintenance Record (EMR) Booklet – Driver completes
        b. Equipment Repair and PM Order – Supervisor & Shop completes
    4. Transport vehicle/equipment to Equipment Shop.
        a. If vehicle cannot be operated safely, arrange for a tow truck.
    5. Meet with Equipment Shop staff.
        a. Discuss issue/malfunction.
        b. Submit Equipment Repair and PM Order form.
        c. If possible, receive an estimate on time to complete service.
    6. Address impacts related to vehicle/equipment availability – such as:
        a. Notifying leadership, partners, etc. if coverage/operation is affected.
        b. Adjusting route assignments to maintain coverage.
        c. Assigning spare vehicles/equipment while service is underway.
    7. Maintain regular contact with Equipment Shop until service is complete.
    8. When complete, retrieve vehicle/equipment and perform a full inspection to assure that it functions properly.
    9. Update all PM forms, inventories, and resource assignment records (if needed). File all paperwork appropriately.

Coordinating with Equipment Shop (2 of 2):

Objective: Provide guidance on proper Equipment Shop coordination.

Talking Points:

- **Equipment Shops are essential to IMAP's safe, continuous operation.** This section provides guidance on how to maintain an effective relationship with the people who keep IMAP vehicles/equipment running.

- **Positive, Professional Interaction**
    - Supervisors interact with Equipment Shops regulary.
    - In all interactions, be positive and professional.
    - Be as helpful as possible to Equipment Shop (help them help you).

- **Troubleshoot the Issue, FIRST**
    - Before requesting service, inspect the issue carefully.
    - Avoid submitting requests for issues that you can and are approved to resolve yourself.
    - If you cannot resolve the issue or determine its cause, seek to gather as many details as possible that may help diagnose the problem.
    - Minor issues that do NOT impact safety may be submitted during routine PMs instead of as separate requests.

- **Communicate the Issue Clearly**
    - Relay what you know about the issue as clearly as possible.
    - Convey what troubleshooting steps you have taken.
    - Avoid telling Shop how to resolve issue – trust them to do their job.

- **Respect the Equipment Shop's Priorities & Workload**
    - IMAP is not the only group that relies on the Equipment Shop.
    - The Shop's priorities/workload are often seasonal (e.g. servicing plows is highest priority in winter).
    - Be patient when IMAP requests are not the Shop's highest priority.
    - When interacting with Shop staff, attempt to understand their current and anticipated workload.
    - Schedule PM needs well in advance and, when possible, outside of the Shop's "busy seasons."

Equipment Maintenance Record (EMR) Booklet

ED-EMR-1
REVISED
11-98

NORTH CAROLINA D. O. T.

PREVENTIVE MAINTENANCE SCHEDULE

02 - MINOR P.M.
5,000 MILE - 100 HOUR - OR 1 YEAR WHICH EVER COMES FIRST

Next Insp. At	Performed By	Date	Actual

03 - PERIODIC P.M.
20,000 MILE - 1,000 HOUR - OR 1 YEAR WHICH EVER COMES FIRST

Next Insp. At	Performed By	Date	Actual

USE THIS FORM WHEN REQUESTING ANY WORK TO BE DONE ON THIS PIECE OF EQUIPMENT INCLUDING PM INSPECTIONS

Equipment Repair and PM Order Form

512321 NC DOT EQUIPMENT REPAIR AND PM ORDER

SHOP	VEHICLE#	LICENSE#	WS	METER	YR	MAKE AND MODEL

AGENCY

REPAIR AUTH/NO.

A EMERG. REPAIR
B SCH'D. REPAIRS
C CONV. REPAIR
D PM

G UNQUAL. OPER
I NON/FLEET/EQ
J ACCIDENT
K BLDG. REPAIR

ATTENTION REQUIRED: _____

IS EQUIP. OPERABLE? YES NO IF NO, TIME SHOP NOTIFIED:

DATE: MO DA YR TIME: DEPT: ASSIGNED TO: DELAY REASON

PROM:

COMP: PHONE: CD REMARKS:

REC: SIGNATURE:

USER NOTIFIED COMPLETE?

E/T-DAYS: HRS:

L = LABOR
P = PARTS
I = INPROGRESS

REPAIRS PERFORMED:		VMRS	WA RC	EST HRS	ACT HRS

TRAVEL ROAD / MILES:

CHASING PARTS / HRS:

MECHANIC: _____ TOTAL HOURS: _____

SUPERVISOR: _____

Procuring IMAP Vehicles & Equipment:

Objective: Discuss the supervisor's role in procuring IMAP vehicles/equipment.

Talking Points:

- IMAP Leadership is responsible for procuring vehicles/equipment for their region's IMAP team. Supervisors support procurement as described below.

- **Prevent Uneccessary Purchases**
  - Assure that resources are used & cared for properly so they remain functional for their full lifespan.
  - Store & track resources properly so they do not go missing.

- **Proactively Identify Resource Needs**
  - Procuring new vehicles or equipment can be a lengthy process.
  - Submitting resource requests proactively can prevent critical issues related to vehicle/equipment availability.
  - Inspect all vehicles, equipment, and other resources regularly.
  - Maintain a thorough and up-to-date inventory of all IMAP resources.
  - Know when resources need to be replaced/restocked. Track resources that are at risk of failure/expiration. Set minimum quantities for frequently used items (e.g. Buy more Quick Dry when only 10 bags left).

- **Communicate Resource Needs**
  - Communicate resource requests to IMAP Leadership in writing.
  - Be clear on the type & quantity. Reason & date needed may also be required, depending on the request.

- **Lost Tool/Equipment Form**
  - If IMAP resources go missing, supervisors must complete a "Lost Tool/Equipment Form" and submit to IMAP Leadership.
  - This form must be submitted as soon as a resource is determined to be missing. If the resource is later found, the form must be updated.
  - Procuring a new resource may be necessary in order to replace the missing resource and/or to maintain sufficient number of spares.
  - Supervisors should investigate missing resources to assure that theft or improper practices are not the cause. Preventing further loss is the goal.

Trial Exercise: IMAP Vehicles & Equipment

Objective: Test trainees' understanding of IMAP vehicles and equipment.

Instructions: Ask discussion questions and instruct trainees to perform basic tasks. Circle trainee's score for exercise based on their answers & task performance.

- **Discussion Questions:**

  o How can an IMAP supervisor assure that drivers are using their vehicles/equipment safely and properly?

  o Which items of the IMAP uniform are provided to IMAP employees and which items are IMAP employees expected to provide themselves?

  o Why is it important for IMAP supervisors to maintain a complete and up-to-date inventory of all vehicles and equipment?

  o If drivers are responsible for inspecting their vehicles/equipment before each shift, why should supervisors inspect all trucks every 2 months?

  o What vehicle issues can IMAP employees attempt to resolve without requesting service from the Equipment Shop?

- **Basic Tasks:**

  o Walk through the area(s) where IMAP equipment is stored. Compare the storage practices in use to the "General Guidelines for IMAP Vehicle/Equipment Storage."

  o Complete an entry in the "Equipment Maintenance Record (EMR)" booklet for a routine oil change on an IMAP truck.

  o Fill out an "Equipment Repair and PM Order" form for the installation of a new battery in an IMAP truck.

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 - ACCEPTABLE	3 - EXCEPTIONAL

Full Demonstration: Supervisor Inspection

Objective: Test trainees' ability to perform an inspection of an IMAP vehicle and the equipment stored on it.

Instructions:

1. Secure a fully equipped IMAP truck – ideally one that is in daily use.

2. Park IMAP truck in an open space away from vehicle traffic.

3. Print 2 copies of the "Supervisor Vehicle/Equipment Inspection Sheet."

4. Perform a full inspection of the IMAP truck and the equipment stored on it. Fill out the "Supervisor Vehicle/Equipment Inspection Sheet."
   a. Trainee should NOT be present during Instructor's inspection.

5. Provide trainee with a blank copy of the "Supervisor Vehicle/Equipment Inspection Sheet."

6. Instruct trainee to perform a full inspection of the IMAP truck and the equipment stored on it. During inspection, trainee should:
   a. Thoroughly inspect the IMAP truck and the equipment on it.
   b. Handle equipment properly and perform the inspection safely (e.g. maintain 3 points of contact when mounting/dismounting truck, etc.).
   c. Test and/or perform further inspection on equipment highlighted in YELLOW on the inspection sheet.
   d. Properly complete the "Supervisor Vehicle/Equipment Inspection Sheet."
   e. Properly identify any missing items or unsatisfactory areas. Trainee's scores should align with the scores recorded by the Instructor during their inspection.

7. Monitor performance, provide feedback, and repeat demonstration as needed.

8. Compare trainee's inspection sheet to the inspection sheet completed by the instructor.

9. Complete **Demonstration Scorecard: Supervisor Inspection.**

Demonstration Scorecard: Supervisor Inspection

Trainee:_____ Instructor:_____ Date: _____

	10 points	10 points	TOTAL
Safety & Handling	Performed Inspection Safely	Handled Equipment Properly	
Thorough Inspection	Inspected All Items on Page 1 of Supervisor's Inspection Sheet	Inspected All Items on Page 2 of Supervisor's Inspection Sheet	
Testing/Further Inspection (YELLOW Items on Inspection Sheet)	Tested/Inspected All YELLOW Items	Conducted Tests /Inspections on YELLOW Items Properly	
Proper Completion of Inspection Sheet (All items have scores, etc.)	Properly Filled Out Page 1 of Inspection Sheet	Properly Filled Out Page 2 of Inspection Sheet	
Trainee Scores Match Instructor's Scores	Fewer than 10 Areas are Scored Differently: **20 POINTS**	More than 10 Areas are Scored Differently: **FAIL**	
ABORTED EXERCISE	**FAIL**	**TOTAL SCORE:**	
		PASS/FAIL FOR COURSE:	

Trainee must score 80 or higher to pass course

Instructor Comments (must be provided if course is marked as FAIL)**:**

_____

_____

_____

_____

Instructor Signature:_____ Trainee Signature:_____

Description:

Provide guidance to trainees on the tools & strategies used by IMAP supervisors to monitor traffic and IMAP driver activity.

Objectives:

- Introduce trainees to the IMAP supervisor's role in activity monitoring.

- Discuss tools used to monitor real-time & historical activity.

- Provide guidance on the strategies used to monitor activity.

- Test trainee's understanding of activity monitoring.

- Test trainees' ability to properly monitor IMAP drivers at an incident scene.

Audience: IMAP Supervisors

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: IMAP Program
- GE-301: The IMAP Supervisor Role

Quick Sheet – Monitoring Traffic & Driver Activity (1 of 2):

Objective: Use this simplified guide to discuss activity monitoring.

Talking Points:

- **Monitoring driver activity is an IMAP supervisor's highest priority.**
  Reasons to effectively monitor drivers include:
    o To keep drivers and others safe.
    o To keep drivers on-task & assure they are doing things properly.
    o To enhance response by coordinating help & providing guidance.
    o To better understand their drivers – as individuals & as a team.
    o To understand their region & the things that affect IMAP, locally.
    o To show drivers that their supervisor is engaged & is watching them.

- **All drivers require frequent oversight & guidance, regardless of their experience or confidence.**

- **Supervisors must continuously monitor their drivers throughout each day/shift.** This means that supervisors must:
    o Make time for monitoring.
    o Establish a routine that balances monitoring with their other tasks.
    o Use tools/strategies to monitor while activity is occurring AND after.

- Effective activity monitoring requires supervisors to understand & track **WHAT DRIVERS ARE DOING in relation to WHAT IS HAPPENING**.
    o "What is Happening" = Traffic Activity & Incident Activity
    o Traffic & Incidents change; supervisors must assure that Driver's Activity is appropriate for what is happening and is adjusted as conditions change.

- **Oversight is only effective if it results in consistently safe & proper action.**
  Supervisors must respond to what they observe in a timely fashion.
    o Halt & correct unsafe/improper action or behavior immediately.
    o Assure that drivers ask for and/or receive the help they need.
    o Immediately attempt to reach drivers who are unresponsive or absent.
    o Prompt drivers to action or provide direction if they are not on-task.
    o Respond to incidents where a supervisor's presence on-scene is required. Ideally, supervisors proactively identify & respond to these incidents without being asked to respond.

Quick Sheet – Monitoring Traffic & Driver Activity (2 of 2):

Objective: Use this simplified guide to discuss activity monitoring.

TOOLS for Monitoring Activity

- **VIPER & Other Radio Traffic**
  - **Dispatch Talkgroups** – monitor quality of TMC/IMAP communication; track progress of individual incidents (when lanes close, reopen, etc.).
  - **Responder Traffic** – detect incidents that TMC/IMAP aren't aware of yet; hear responder's requests for IMAP assistance.
- **CCTV Traffic Cameras**
  - View full incident scene (what's happening & what drivers are doing).
  - View multiple areas (incident, traffic queue, etc.) and monitor multiple drivers at the same incident.
- **Traffic Maps**
  - View all roads in region and the current speed of traffic on them.
  - Available online (e.g. Google Maps, drivenc.gov, etc.)
- **NCDOT's TIMS Website (drivenc.gov)**
  - View details for all active incidents in region including crashes, maintenance, and construction.
  - Subscribe to TIMS Notifications to get incident alerts & updated info.
- **TMC's Incident Management Log (aka "Dispatch Log")**
  - View data related to individual drivers and specific incidents.
  - Request reports that describe IMAP activity for entire region, specific days/weeks/months, individual shifts, specific drivers, etc.

STRATEGIES for Monitoring Activity

- **Be Present at Start & End of Shift** – monitor driver's arrival & departure times; monitor driver's vehicle/equipment inspections.
- **Patrol Routes to Monitor Driver** – assess your driver's performance while on patrol/at incident scenes; do this frequently (i.e. daily).
- **Keep Radio ON at All Times** – carry handheld with you & stay tuned to dispatch talkgroups; listen for critical/unusual radio traffic.
- **TMC Observation** – (where available) visit control room & interact with TMC staff frequently; monitor drivers via CCTV, radios, traffic maps, etc. all at once.
- **Make Time for Monitoring** – supervisors should spend at least half of their time ACTIVELY monitoring drivers (e.g. watching inspections, patrolling routes, or observing from TMC).

Introduction to Effective Activity Monitoring (1 of 2):

Objective: Introduce trainees to the IMAP supervisor's role in activity monitoring.

Talking Points:

- **Overseeing IMAP driver's activity is the highest priority** for an IMAP supervisor. Reasons for supervisors to effectively monitor their drivers include:
  - To keep their drivers and others safe by identifying unsafe situations or practices and intervening before accidents occur.
  - To assure that drivers are on-task, that they are doing what needs to be done, and that they are doing things properly.
  - To support response to complex incidents by coordinating additional resources or by providing unique solutions/strategies.
  - To understand their region (e.g. incident activity, partner interaction, etc.) and the challenges & opportunities that affect IMAP, locally.
  - To understand their driver's strengths & weaknesses as well as the relationships & social dynamics within their own team.
  - To show drivers that their supervisor is engaged in what they do and that their work is being monitored.

- **All drivers require frequent oversight & guidance, regardless of their experience/confidence.**
  - New drivers need to know where they can improve so they do not develop improper/unsafe habits early on.
  - Experienced/confident drivers need regular guidance to prevent them from taking short cuts or developing their own (often unsafe) methods.

- Effective oversight is required for an IMAP team to be successful **but it is also very challenging for IMAP supervisors**.
  - Drivers work independently, they are mobile, and they are spread over a large area so it is tough for supervisors to monitor all drivers at all times.
  - Supervisors have other critical tasks so it can be hard to focus on what drivers are doing when other tasks are competing for a supervisor's time.

- Despite these challenges, **supervisors must continuously monitor their drivers during each day/shift**. This means that supervisors must:
  - Set aside time to monitor their drivers and establish a routine that balances monitoring and their other tasks.
  - Use tools/strategies that monitor real-time activity (while work is happening) & historical activity (after work has occurred).

Introduction to Effective Activity Monitoring (2 of 2):

Objective: Introduce trainees to the IMAP supervisor's role in activity monitoring.

Talking Points:

- Monitoring driver activity (i.e. WHAT DRIVERS ARE DOING) is essential but it is only one part of effective oversight.

- Effective oversight of IMAP operations requires **Full-Time Situational Awareness** – the practice of understanding & continuously tracking WHAT DRIVERS ARE DOING in relation to WHAT IS HAPPENING.

- **"What is Happening" is largely described by:**
  - **Traffic Activity** – current speeds, number of vehicles, location & extent of congestion, etc.
  - **Incident Activity** – current number, type, location, and severity of planned & unplanned incidents and how they affect IMAP drivers.

- **Traffic & Incident Activity (i.e. "What is Happening") changes constantly** based on time of day, weather conditions, responder progress with incidents, and many other factors. Supervisors must assure that drivers are:
  - Applying the correct services & strategies based on the incidents they are handling and the traffic conditions around them.
  - Constantly evaluating what's happening and adjusting their response to match current conditions, address issues, and/or achieve better results.

- **Oversight is only effective if it results in consistently safe & proper action**. Supervisors must respond to what they observe in a timely manner:
  - If unsafe/improper action or behavior is observed, supervisors must halt & correct the action/behavior immediately.
  - If drivers need help, supervisors must assure that drivers ask for help OR the supervisor should provide/coordinate the help that is needed.
  - If drivers are unresponsive (e.g. to calls from dispatch) or are not where they should be, supervisors must attempt to reach them immediately.
  - If drivers are not on-task or seem unsure of what to do next, supervisors must prompt them to action or provide direction.
  - If a supervisor's presence on-scene is required, supervisors must be available to respond. Ideally, supervisors should proactively identify & respond to incidents where they are needed vs. being asked to respond.

Tools for Monitoring Activity (1 of 3):

Objective: Discuss tools used to monitor real-time & historical activity.

Monitoring Tools:

VIPER & Other Radio Traffic

- **Dispatch Talkgroups** – talkgroups that drivers & TMC dispatchers use to communicate. Allows supervisors to monitor real-time activity as well as:
    - Quality of IMAP & TMC communication (e.g. accuracy & professionalism, time for drivers/dispatch to respond, etc.).
    - Progress of individual incidents (e.g. when lanes close, reopen, etc.).
- **Responder Traffic** – various channels used by local responders (e.g. law enforcement, fire dept., etc.). Allows supervisors to track:
    - Incidents that may not have been reported to the TMC or IMAP yet.
    - Responder requests for IMAP assistance.
- **Recorded Radio Traffic** – in some regions, all transmissions between TMC dispatch & IMAP are recorded. This is used by dispatchers to re-listen to info from IMAP to make sure they heard it correctly. If available, IMAP supervisors can review recorded radio traffic to assess historical IMAP activity (e.g. to investigate an issue, etc.).

CCTV Traffic Cameras

- Traffic cameras are excellent for monitoring real-time activity and can provide other benefits that are not available to those on-scene such as:
    - **Bird's-eye-view of incident** – full view of scene allows supervisors to assess if driver's activity aligns with what's happening.
    - **Multiple perspectives** – by turning 1 camera or using multiple cameras, supervisors can view the incident, traffic flow upstream & downstream, and other critical areas (e.g. ramps, etc.). From these perspectives, supervisors can spot issues (e.g. poor traffic control setups) and monitor multiple drivers at the same incident.
- Most traffic cameras can record video. Supervisors can use this to assess historical IMAP activity (e.g. for training, AARs, etc.). Supervisors must contact their TMC to request that an incident or other situation be recorded.

Tools for Monitoring Activity (2 of 3):

Objective: Discuss tools used to monitor real-time & historical activity.

Monitoring Tools:

Traffic Maps
- Traffic Maps show the layout of roads in a region and the current speed of vehicles traveling in certain locations and directions.
- Traffic Maps use a range of colors to indicate different traffic speeds.
  - GREEN indicates free-flow traffic, YELLOW indicates slower traffic, and RED/Darker Shades indicate very slow/stopped traffic.
  - Patterns of colors can differentiate regular traffic jams from traffic incidents (see graphic at right – Blue circle is around a crash affecting both directions of travel).

- Traffic Maps are widely available online including NCDOT's TIMS website (drivenc.gov) or Google Maps (with traffic feature turned ON).

TIMS (Traveler Information Management System)
- NCDOT's TIMS website (drivenc.gov) allows supervisors to monitor incidents in their area.
  - **Regional Incident List** – shows details for all active incidents in a region including crashes, maintenance, and construction.
  - **TIMS Notifications** – as incidents are added or updated, TIMS sends out details of the incident via email or text. Subscribing to notifications allows supervisors to track an incident's progress from beginning to end. Contact TMC staff to subscribe to TIMS notifications and to manage your subscription settings (e.g. only receive notifications for a particular division or county, etc.).
- TIMS has many other features that can benefit IMAP supervisors such as:
  - **SHP CAD Feed** – current incidents reported to NC Highway Patrol.
  - **Search for Incidents** – find specific incidents from the past.

Tools for Monitoring Activity (3 of 3):

Objective: Discuss tools used to monitor real-time & historical activity.

Monitoring Tools:

TMC Incident Management (IM) Log:
- The IM Log (aka "Dispatch Log") is used by TMC dispatchers to track the location and availability of IMAP drivers. The IM Log is updated in real-time but it is best used by IMAP supervisors to assess historical activity.
- **IM Log Data that is Beneficial to IMAP Supervisors:**
  - **Patrol & Break Times** – when drivers began & ended patrol (10-41 & 10-42) as well as break times (10-7 & 10-8).
  - **Time Received & Dispatched** – when TMC became aware of an incident compared to when it was dispatched to IMAP.
  - **Dispatch & Arrival Times** – when TMC dispatched IMAP compared to when they arrived on-scene; provides the driver's Response Time.
  - **Times Lanes Closed/Opened & IMAP Departure** – when lanes initially closed, when all lanes re-opened, and when driver left the scene; provides Incident Duration & time taken to re-open lanes.
  - **Detection Methods** – how incident was detected (i.e. reported to TMC/IMAP or detected by TMC/IMAP); NCDOT strives to be proactive so higher rates of detection by TMC/IMAP are preferred.
- **Reports based on IM Log Data** – supervisors can request reports from TMC staff to help assess IMAP at different levels of detail (i.e. the entire region; specific days/weeks/months; individual shifts; specific drivers; etc.). Common reports that are beneficial to IMAP supervisors include:
  - **Incident Types** – helps assess activity levels and determine what incidents are more common than others; this info is most beneficial when viewed by route, by shift, by driver, etc.
  - **Response Times** – helps assess driver's responsiveness & availability; also used to evaluate routes & driver coverage.
  - **Incident Duration** – higher than normal durations may indicate challenges with communication protocols, partner relationships, incident clearance strategies, etc.

Strategies for Monitoring Activity:

Objective: Provide guidance on the strategies used to monitor activity.

Strategies:

- **Be Present at Beginning & End of Day/Shift** – assure that all drivers are:
  - Present & on-time for duty.
  - Conducting vehicle/equipment inspections consistently & properly.
  - Starting their patrol promptly & returning to headquarters safely.

- **Patrol Routes to Monitor Drivers**
  - Select specific routes to patrol or establish a "supervisor route" that covers all patrol routes.
  - Join the driver who is assigned to the route at any incident scene you come across; monitor their performance & provide feedback.
  - Use this strategy frequently (i.e. daily) to assure that all routes and all drivers are regularly monitored.

- **Keep Radio ON at All Times**
  - Carry handheld VIPER radio with you at all times and keep it tuned to the dispatch talkgroup that your drivers use.
  - Passively monitor radio traffic but listen for critical/unusual traffic (e.g. raised voices, long pauses between transmissions, key words like "fatality," "HazMat," or "tractor trailer").

- **TMC Observation**
  - Especially in IMAP regions with a TMC, supervisors are encouraged to regularly visit their region's TMC control room.
  - Observing from the TMC provides access to traffic cameras, traffic maps, radio traffic, and other resources all at once.

- **Make Time for Monitoring**
  - On almost all days, **supervisors should spend at least half of their time ACTIVELY monitoring their drivers** (e.g. watching inspections, patroling routes, or observing from the TMC).
  - Supervisors should establish a daily/weekly routine where time is set aside for monitoring AND for other tasks (e.g. vehicle/equipment maintenance, meetings, special projects, etc.).

Trial Exercise: Monitoring Traffic & IMAP Driver Activity

Objective: Test trainees' understanding of activity monitoring.

Instructions: Ask discussion questions & engage trainee on scenarios related to activity monitoring. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**
  - What routine could you establish that would allow you to monitor all of your drivers frequently AND complete your other supervisor tasks?

  - What should a supervisor look for when they are observing a driver at an incident scene?

  - Why is it important to understand current traffic & incident activity when monitoring what your drivers are doing?

  - What information from the IM Log do you think would best help an IMAP supervisor monitor their driver's activity or performance?

- **Scenarios: As an IMAP Supervisor, What Would You Do?**
  - One of the IMAP routes in your region is very remote, it does not connect with another IMAP route, and there are no traffic cameras on the route. The driver who patrols this route operates out of a different facility than you or your other drivers.

  - You asked the TMC for a report showing response times for each of your drivers over the past 3 months. While reviewing the report, you realize that one driver's response times are much higher than others on their shift, regardless of which route they're assigned to.

  - You are presenting at tomorrow's Safety Meeting. The day is nearly over, and you have only just started on your presentation. Over the radio, you hear one of your drivers dispatched to an incident by TMC. There's an overturned tractor trailer and unconfirmed reports of a fatality and HazMat.

| TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 - ACCEPTABLE	3 - EXCEPTIONAL

Full Demonstration: Monitoring Driver Activity

Objective: Test trainees' ability to properly monitor an IMAP driver at an incident.

Instructions:

1. Set up track as shown in diagram (**DEMO-Ex001**).

2. Advise trainee that the Instructor will act as an IMAP driver who is responding to a crash in lanes #3 & 4. Advise that traffic speed is less than 40mph.

3. Position trainee where they can adequately view the Instructor's actions.

4. Provide trainee with a pen, paper, and handheld radio. Advise them to:
   a. Monitor Instructor's actions as they would if they were a supervisor.
   b. Write down any incorrect action that they observe.
   c. Promptly notify Instructor via radio of any incorrect action observed.

5. Perform a double lane closure BUT include the incorrect actions listed below. All other actions must be performed properly & adhere to IMAP standards:
   a. Do NOT angle front tires of IMAP truck properly.
   b. Do NOT notify TMC dispatch upon arrival.
   c. Activate the Arrow Board with the arrow facing the WRONG direction.
   d. Do NOT wear reflective vest during demonstration.
   e. Walk in lane #4 when deploying traffic control, NOT on the shoulder.
   f. When deploying traffic control, only place 3 cones in the taper closest to the IMAP truck.
   g. When removing traffic control, start by removing the taper that is furthest from the IMAP truck.

6. Monitor performance, provide feedback, and repeat demonstration as needed.

7. Use the **Demonstration Scorecard: Monitoring Driver Activity** to grade trainee's performance.
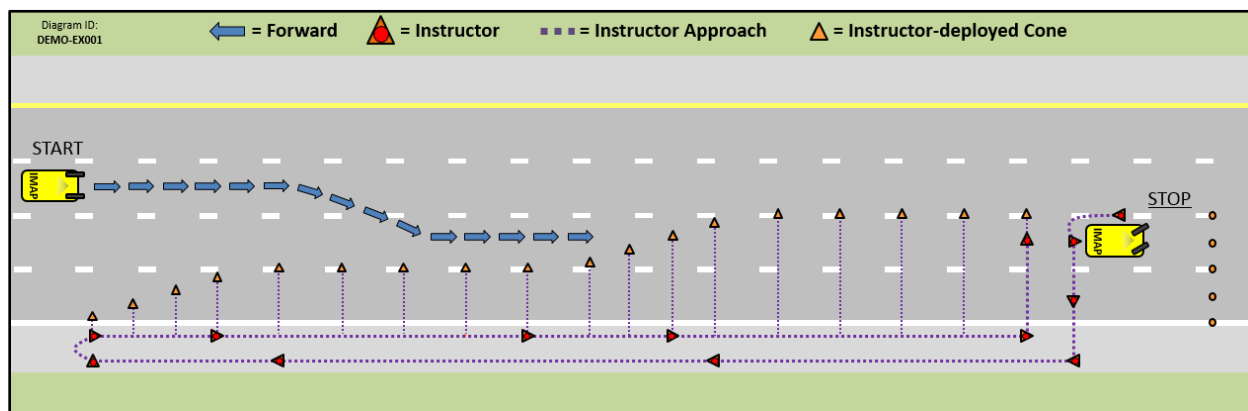
Demonstration Scorecard: Monitoring Driver Activity

Trainee:_____ Instructor:_____ Date: _____

	15 points if properly identified (5 pts if identified late) (0 pts if NOT identified)	TOTAL
IMAP Truck Position	Identified that front tires of truck were NOT angled properly	
TMC Notification	Identified that Instructor did NOT notify TMC Dispatch after arrival	
Arrow Board	Identified that Arrow Board display was pointing in WRONG direction	
Reflective Vest	Identified that Instructor was NOT wearing reflective vest	
Walking in Travel Lane	Identified that Instructor did NOT walk on shoulder when deploying traffic control	
Traffic Control Taper	Identified that Taper closest to IMAP truck only had 3 cones	
Removing Traffic Control	Identified that Instructor did NOT remove traffic control in correct order	
NEGATIVE POINTS	(-2) points for any correct action identified as Incorrect.	
BONUS POINTS	(+2) points each time trainee properly advised Instructor of incorrect action during demo.	
TOTAL SCORE:		
PASS/FAIL FOR COURSE:		

Trainee must score 84 or higher to pass course

Instructor Comments (must be provided if course is marked as FAIL)**:**

_____
_____
_____
_____

Instructor Signature:_____ **Trainee Signature**:_____

Description:

Familiarize trainees with the responsibilities and procedures that IMAP supervisors use to assure consistent and appropriate coverage on IMAP patrol routes in their area.

Objectives:

- Introduce trainees to the IMAP supervisor's role in coverage and route assignments.

- Discuss the guidelines and processes used by IMAP supervisors to develop schedules for their drivers.

- Discuss strategies and guidelines for managing IMAP coverage, day-to-day.

- Discuss best practices related to IMAP supervisors patrolling routes.

- Test trainee's understanding of IMAP coverage and route assignment.

Audience: IMAP Supervisors

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: IMAP Program
- GE-301: The IMAP Supervisor Role
- CT-300: Monitoring Traffic & IMAP Driver Activity

Quick Sheet – Coverage & Route Assignment (1 of 2):

Objective: Use this simplified guide to discuss IMAP coverage & route assignment.

Talking Points:

- During normal operations, IMAP maintains established patrol routes and operating hours. However, **all IMAP personnel can be scheduled for**:
    - Extended hours (i.e. more than 40 hours/week).
    - Different hours (e.g. other shifts, weekends, overnight, holidays, etc.).
    - Other routes/regions (e.g. event deployment in another region, etc.).

- **In each region, IMAP Leadership establishes the following:**
    - **Hours of Operation** – days/times when IMAP is on-duty and shift times.
    - **Patrol Routes** – includes <u>Normal Routes</u> (where IMAP actively patrols) and <u>Response Areas</u> (where IMAP will respond, if needed).
    - **Coverage Guidelines** – route-specific rules for proper coverage.
    - **IMAP Drivers** – number of drivers employed, their classification, and the regions/shifts that they typically work.

- <u>**IMAP supervisors must use the drivers that they have to cover the routes and hours of operation that are defined for their region.**</u>

- **When assigning drivers to a route, supervisors must consider:**
    - **The Route** – its size; roadway geometrics; incident activity levels; traffic speeds/congestion levels, etc.
    - **The Driver** – do they have the skills & experience to safely & properly handle the route they are being assigned to?

- **Guidelines for Driver Schedules & Time-Off:**
    - Schedules should be created by supervisor(s) on a weekly basis and sent out a week in advance.
    - For each driver, schedule should specify days & times when on-duty and route assigned for each day.
    - IMAP employees should submit time-off requests in writing at least 2 weeks in advance.
    - When making schedules, supervisors should consider upcoming events or time-off and their drivers' employee classifications.
    - Supervisors should rotate drivers across all routes in their region.
    - Archive all Driver Schedules (including changes made, day-to-day) and all time-off requests; Use this to support time-entry/payroll for drivers.

Quick Sheet – Coverage & Route Assignment (2 of 2):

Objective: Use this simplified guide to discuss IMAP coverage & route assignment.

Talking Points:

- **Beginning of Each Day/Shift** – supervisor must:
    - Assure that all scheduled drivers are present & on-time for duty.
    - Confirm that each driver knows which route they are assigned.
    - Assure that drivers begin patrol promptly after pre-start inspections.

- **End of Each Day/Shift** – Until all drivers have come off the road, a supervisor (or designated driver) must remain on-duty.

- **Common Strategies for Assuring Coverage:**
    - Schedule a driver for overtime to cover gap.
    - Combine an open route with a route that is covered.
    - Pull 1 driver from a route that is covered by 2 drivers.

- **Off-Route Requests** – supervisors should approve response if…
    - Driver safety is not placed in greater risk.
    - Total time to respond off-route and return will be brief.
    - Patrol routes are being effectively managed by other available drivers.
    - Off-route incident has a severe impact on regional/statewide travel.
    - Responding off-route will help strengthen partner relationships.

- **Guidelines for IMAP Breaks:**
    - Notify TMC via radio when breaks begin/end.
    - Drivers get two, 15-min. breaks & one, 30-min. meal break per shift.
    - Most/all drivers should NOT be on break at the same time.
    - Take breaks close to patrol route & be responsive to calls from TMC.
    - Don't take breaks during peak travel times or during incident response.

- **Supervisors Covering Routes**
    - Supervisors should only cover routes in extreme cases OR in special, short-term cases when it is advantageous to do so (e.g. driver coaching).
    - Supervisors should patrol routes to monitor their driver's activity.
    - Supervisors should be ready to respond to major crashes or other incidents that require a supervisor's presence.

Introduction to Coverage and Route Assignment (1 of 2):

Objective: Introduce trainees to the IMAP supervisor's role in coverage and route assignments.

Talking Points:

- Traffic incidents can occur anytime and anywhere. During normal operations, IMAP maintains established patrol routes and operating hours.
- However, all IMAP personnel are expected to support incident response whenever and wherever a need for IMAP arises. This means that all IMAP personnel can be scheduled for:
  - Extended hours (i.e. more than 40 hours/week)
  - Different hours (e.g. other shifts, weekends, overnight, holidays, etc.)
  - Other routes/regions (e.g. major event deployment in another region, etc.)

In each IMAP region, IMAP leadership has established the following:

- **Hours of Operation** – days and times times when IMAP is on-duty; this includes start/end times of any shifts AND any rules for after-hours response.
- **Patrol Routes (or "Zones")** – defined roadways that IMAP patrols AND the areas on these roads where IMAP will respond to incidents.
  - **Normal Route** – the established section of a route that will be actively covered by IMAP. Drivers must patrol & respond to the full length of this route in both directions AND to all entrance/exit ramps and under/overpasses at interchanges.
  - **Response Area** – an extended portion of a Normal Route that drivers do not actively patrol BUT will respond to if requested (typically for major incidents). Drivers should receive supervisor approval before responding in these areas.
- **Coverage Guidelines** – route-specific rules, often related to the number of drivers that should be assigned to a route. Guidelines are based on the unique characteristics and/or expected activity of the route (e.g. Urban Route = 2 drivers/shift; Rural Route = 1 driver/shift).
- **IMAP Drivers** – the number of IMAP drivers that each IMAP team employs, their employee classifications, and the shifts and/or regions that they typically work in.

IMAP supervisors are responsible for using the drivers that they have to cover the routes and hours of operation that are defined for their area.

Introduction to Coverage and Route Assignment (2 of 2):

Objective: Introduce trainees to the IMAP supervisor's role in coverage and route assignments.

Talking Points:

- NCDOT tells motorists and local responders which roads are patrolled by IMAP and what IMAP's hours of operation are. It is critical that IMAP supervisors maintain the expected level of coverage defined for their area.

- **How Coverage Can Be Affected:**
  - Driver absences; <u>planned</u> (vacation, etc.) or <u>unplanned</u> (out sick, etc.).
  - IMAP truck is unavailable due to malfunction or repairs.
  - Drivers deployed to other routes/regions for major incidents/events.
  - Drivers leaving their route to assist units on another route.
  - Drivers participating in meetings, training, or other activities.

- Supervisors assure coverage by scheduling drivers for duty and assigning them to IMAP routes in their area. **Route characteristics that supervisors should consider when assigning drivers to a route include:**
  - **Size** – overall length, number of lanes, number of interchanges, etc.; on larger routes, response times may be longer since drivers have further to travel.
  - **Roadway Geometrics** – elements that affect sight distance or stopping distance such as hills or curves; incidents near hills/curves may require more traffic control than a single IMAP truck can provide.
  - **Incident Activity Levels** – number and frequency of incidents expected on a route; higher activity levels may require more drivers to manage the workload; more experienced drivers may also be needed to manage the workload efficiently.
  - **Traffic Speeds/Congestion Levels** – typical speed of vehicles and the extent of regular congestion on a route; heavy congestion often results in longer response times; high traffic speeds require extended traffic control measures.
  - **Access Points/Turn-Arounds** – roadway features that allow drivers to access areas of the route or different directions; routes with many access points/turn-arounds often have shorter response times (even on large routes).

- Supervisors must also consider their drivers when assigning them to routes – do they have the skills & experience needed to safely & properly handle the route?

Driver Schedules (1 of 2):

Objective: Discuss the guidelines and processes used by IMAP supervisors to develop schedules for their drivers.

Talking Points:

- Supervisors should create schedules for all drivers. **Driver Schedules should clearly specify:**
    - The days and times that each driver will be on-duty.
    - The route that each driver will be assigned to for each day.

- Driver Schedules should be created on a weekly basis and should be provided to drivers at least 1 week in advance.

- In areas with multiple IMAP supervisors, all supervisors must work together to develop Driver Schedules.

- All IMAP employees must submit written requests for time off to their supervisor at least 2 weeks in advance.
    - Supervisors may approve/reject time off at their discretion BUT must do so consistently and only after considering coverage impacts.

- When creating Driver Schedules, supervisors should **LOOK AHEAD**:
    - What events, meetings, or other activities are planned?
    - Do any drivers have time off?
    - Are any IMAP vehicles scheduled for maintenance/repairs?

- When creating Driver Schedules, supervisors must consider each of their driver's employee classification (e.g. full-time vs. part-time; temporary vs. permanent, etc.). Each driver's schedule must align with the requirements specified by their employee classification.

- IMAP Leadership for the area must review and approve all Driver Schedules BEFORE they are provided to drivers.
    - IMAP Leadership will send the schedule out to all drivers.
    - If planned coverage will be different than normal, supervisors should advise TMC staff and local responders/comm. centers in advance.

- Supervisors must archive all Driver Schedules (including any changes made, day-to-day) and all driver's time off requests. Supervisors should use this documentation to support time entry and payroll for their drivers.

Driver Schedules (2 of 2):

Objective: Discuss the guidelines and processes used by IMAP supervisors to develop schedules for their drivers.

Talking Points:

- Supervisors may schedule IMAP drivers to work more than their typical hours in a pay period. Supervisors must assure that "overtime scheduling" is:
  - Done only when absolutely necessary (i.e. to maintain coverage, NOT to supplement a driver's income).
  - Evenly distributed across all drivers (i.e. overtime doesn't go to the same driver most/all of the time).
  - Done responsibly and with consideration for how extended hours may impact a driver's ability to operate safely and effectively.

- Supervisors may schedule IMAP drivers for hours and/or shifts that they do not typically work.
  - This is best done on a limited/temporary basis to resolve coverage gaps or to support major incident/event response.
  - Permanent shift changes should only be done if no coverage gaps will result AND only after discussing the change with the driver in advance.

- Supervisors are encouraged to regularly rotate drivers across all routes in their area. Doing so provides the following benefits:
  - Increases all drivers' familiarity with all routes.
  - Provides relief to drivers who regularly patrol "high activity" routes.
  - Prevents complacency AND enhances driver's skills by experiencing routes with different activity levels, roadway geometrics, etc.

Managing Daily Coverage (1 of 2):

Objective: Discuss strategies & guidelines for managing IMAP coverage, day-to-day.

Talking Points:

- **Beginning of Each Day/Shift** – supervisors must:
    - Assure that all scheduled drivers are present & on-time for duty.
    - Confirm that each driver knows which route they are assigned to.
    - Assure that drivers begin patrol promptly after pre-start inspections.
    - Notify IMAP Leadership, TMC, and local responders if coverage is different than normal.

- **Absent or Late Drivers:**
    - Drivers who will be absent/late must notify a supervisor immediately.
    - If a driver is late and has NOT notified a supervisor, the supervisor must immediately attempt to contact the driver.
    - As soon as they know that a driver will be late/absent, supervisors must take steps to resolve any coverage issues.
    - Supervisors must notify IMAP Leadership if a driver shows a pattern of tardiness/absenteeism. Supervisors should document each occurrence.
    - IMAP Leadership will determine what corrective action is necessary.

- **Common Strategies for Assuring Coverage** include but are not limited to:
    - Scheduling a driver for overtime to cover a gap on a different shift. Works best when a driver is late but may be used to cover a full shift.
    - Combining an open route with one that is covered and having the driver(s) assigned cover both routes. Works best when 2 smaller/less active routes are combined.
    - Pulling 1 driver from a route that is covered by 2+ drivers and assigning them to the open route. Works best on days with low incident activity.
    - Adjusting a route's patrol hours (e.g. one 9am-5pm "mid-shift" instead of two normal shifts). Avoid if possible – peak activity typically occurs before 9am and after 5pm.
    - "Leaving the route open" (i.e. not assigning a driver to the route). Avoid if possible. IMAP should still respond to lane-closing incidents.

- **End of Each Day/Shift** – supervisors must assure that all drivers have returned safely to headquarters. Supervisors must remain on-duty until all drivers have come off the road. If a supervisor is not on-duty, they must designate a driver who will assure that all other drivers are accounted for.

Managing Daily Coverage (2 of 2):

Objective: Discuss strategies & guidelines for managing IMAP coverage, day-to-day.

Talking Points:

- **Off-Route Request** – a request for IMAP to respond to an incident that is NOT located on an established IMAP patrol route. These requests typically originate from local responders and are relayed to IMAP by TMC dispatchers.

- **Consider the following before approving off-route requests:**
  - **Time of Day** – is the request during peak hours and/or will it require response outside of IMAP's operating hours?
  - **Distance Off-Route** – how long will it take to get there and back?
  - **Activity Level** – are there active incidents on a patrol route? Is a driver even available to respond to the off-route request?
  - **Reason for Request** – is the off-route incident having a severe impact on the region/state? Does the request involve someone who is closely connected to one of NCDOT/IMAP's major partners?

- **Supervisors are encouraged to approve off-route response if…**
  - Driver safety is not placed in greater risk.
  - Total time to respond off-route and return will be brief.
  - Patrol routes are being effectively managed by other available drivers.
  - Off-route incident has a severe impact on regional/statewide travel.
  - Responding off-route will help strengthen partner relationships.

- **Managing Breaks**: IMAP supervisors are responsible for monitoring their drivers' breaks and for enforcing the following guidelines related to breaks:
  - Any IMAP employee who is patrolling a route or is otherwise in the field must notify the TMC via radio when their break begins/ends.
  - Drivers are allotted two, 15-minute breaks and one, 30-minute meal break per shift.
  - Drivers should take breaks in close proximity to their patrol route (1-5 miles is best) and must remain responsive to incident calls from TMC.
  - A sufficient number of drivers should remain actively on patrol while other drivers are on break (i.e. most/all drivers should not be on break at the same time).
  - Breaks should not be taken during peak travel times (e.g. AM/PM rush hour) OR when actively responding to an incident.

IMAP Supervisor Routes:

Objective: Discuss best practices related to IMAP supervisors patrolling routes.

Talking Points:

- The core duties of an IMAP supervisor are different from those of an IMAP driver. Regularly covering an IMAP route significantly detracts from a supervisor's ability to perform their duties – especially overseeing their driver's activity and assuring that drivers have the resources they need.

- **Supervisors should only cover an IMAP route in the following cases:**
  - In extreme cases where full/expanded coverage must be maintained (e.g. major incidents, significantly high activity, or deployment for events).
  - In special, short-term cases where it is advantageous for a supervisor to cover a route (e.g. to coach a new driver, etc.).

- Supervisors should monitor driver and incident activity throughout each day/shift and should be ready to respond to incidents that require a supervisor's presence (e.g. major crashes, incidents involving IMAP, etc.).

- Supervisors should patrol all IMAP routes in their region on a regular basis in order to monitor their driver's activity – NOT to provide coverage for a route. Strategies include:
  - **Rotate Routes** – each day, select 1-2 routes to patrol. By the end of the week, supervisor will have patrolled all routes in their region.
  - **Create a "Supervisor Route"** – establish a route that connects all routes in the region and that begins & ends at IMAP headquarters.

- **When Patrolling Routes to Monitor Drivers** – supervisors should:
  - Select a time to monitor (this should only be a part of a supervisor's day); peak hours offer more opportunity to see drivers in action.
  - Sign on and off for duty by notifying TMC via radio and provide starting/ending mileage.
  - Respond to any incidents detected; notify TMC and the driver(s) assigned to the route; hand-off response when the route's driver arrives; monitor the driver's performance and provide feedback.
  - Stop on any incident where a driver is already on-scene; Allow the driver to take the lead on the incident; monitor the driver's performance and provide feedback.
  - If needed, take the lead on the incident or provide other assistance.

Trial Exercise: Coverage & Route Assignment

Objective: Test trainees' understanding of IMAP coverage and route assignment.

Instructions: Ask discussion questions and engage trainee on scenarios related to the supervisor role. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**

  - What may happen if a normally patrolled route is NOT covered?

  - What may happen if one driver is assigned to cover two routes?

  - Of the routes in your region, which has the highest incident activity?

  - What are the benefits of rotating drivers across all routes?

  - Why should supervisors limit how often they cover a route?

- **Scenarios: As an IMAP Supervisor, What Would You Do?**

  - Route A is large. Route B is busy. Route C is slow. You are the 1st Shift Supervisor. You typically have 3 drivers to provide coverage but 1 of them called out sick today.

  - You receive an off-route request from a local police captain. Her daughter's car is out of gas 2 miles from an IMAP patrol route.

  - You are patrolling routes to monitor your driver's activity. During the PM rush hour period, you see one of your drivers parked on an entrance ramp. There does not appear to be an incident nearby.

  - You have been covering a route for the last 4 weeks. You are behind in vehicle PMs and are running low on supplies that you need to order.

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 - ACCEPTABLE	3 - EXCEPTIONAL
PASS/FAIL FOR COURSE (circle PASS or FAIL below - FAIL requires comments)		
PASS or FAIL	COMMENTS:	

Description:

Familiarize trainees with the IMAP supervisor's role in their drivers' professional development and performance improvement.

Objectives:

- Introduce trainees to the IMAP supervisor's role in driver training, coaching, and continuing education.

- Discuss formal IMAP driver training and the supervisor's role in it.

- Discuss best practices used by IMAP supervisors to coach their drivers.

- Introduce the concept of mentorship and discuss its importance.

- Describe continuing education opportunities that are available to IMAP.

- Test trainee's understanding of IMAP training, coaching, and continuing education.

Audience: IMAP Supervisors

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: IMAP Program
- GE-301: The IMAP Supervisor Role
- COM-300: Communicating with IMAP Drivers

Quick Sheet – Driver Training & Con-Ed. (1 of 2):

Objective: Use this simplified guide to discuss driver training & continuing education.

Talking Points:

- **IMAP supervisors are responsible for supporting driver development and performance improvement** – primarily, this means:
  - Assisting with formal training by coordinating with IMAP instructors and ensuring their trainee's OJT experience is valuable & well-rounded.
  - Continuously assessing their drivers' performance and communicating any deficiencies to IMAP Leadership.
  - Coaching & mentoring their drivers and providing them with opportunities to grow & learn.
  - Establishing performance goals and conducting formal reviews.

- **Common Types of Training that IMAP Supervisors are Involved with:**
  - **Formal Driver Training** – structured curriculum from the IMAP Driver Certification Program; delivered by certified IMAP instructors.
  - **Continuing Education** – typically formal/structured training; includes IMAP In-Service training, regular After-Action Reviews, and other courses available through NCDOT, partners, etc.; typically delivered by certified trainers.
  - **Coaching** – unstructured training focused on refining skills OR addressing skills gaps; typically delivered as-needed by IMAP supervisors or experienced drivers.
  - **Mentoring** – unstructured training focused on enhancing skills through real-world application; typically delivered over an extended period of time by IMAP supervisors.

- **For training to be effective and for drivers to be successful, IMAP supervisors must:**
  - Make time to train.
  - Take an active role in their driver's development.

IMAP supervisors will only get out of their drivers what they put in.

<u>Quick Sheet – Driver Training & Con-Ed. (2 of 2):</u>

Objective: Use this simplified guide to discuss driver training & continuing education.

Talking Points:

- **Coaching IMAP Drivers**
    - Supervisors must critically examine their drivers' performance.
    - Supervisors must quickly address any performance issues they observe.
    - Bad habits are created when supervisors allow issues to linger.
    - Where drivers do well, supervisors should coach them to do even better.
    - Coaching is NON-Punitive – keep improvement as the goal.
    - Be patient, calm, and encouraging when coaching drivers.
    - Focus coaching on decision-making – drivers need to understand why things are done a certain way and must be able to adapt to new/different situations.

- **When does "Coaching" end and "Discipline" begin?**
    - Communicate all performance deficiencies and coaching efforts to IMAP Leadership.
    - Documentation is always required for corrective action so, supervisors should be proactive and document all deficiencies and coaching efforts.
    - IMAP Leadership will determine if formal corrective action is needed but, as a rule of thumb, discipline may be the next best step after a driver has been **A) TOLD what to do**, and then, **B) TAUGHT what to do**.

- **Mentoring IMAP Drivers**
    - Mentoring drivers helps build driver's skills while preparing them to grow in their careers. It also makes the IMAP team more resilient to change (i.e. team members leaving).
    - Effective mentoring takes a long time – years in most cases – and requires proteges (those being mentored) to perform higher-level tasks in real-world environment.
    - IMAP supervisors can mentor experienced drivers who may one day become supervisors by delegating supervisor tasks to them.
    - Experienced drivers can mentor new drivers to become more skilled/well-rounded and to potentially become leaders within the IMAP team.

Learning should happen every day.

Everyone should be a student AND a teacher.

Introduction to Driver Training & Continuing Education:

Objective: Introduce trainees to the IMAP supervisor's role in driver training, coaching, and continuing education.

Talking Points:

- One of the core duties of an IMAP supervisor is to, **"support driver development and performance improvement."**

- **This is an on-going effort that requires IMAP supervisors to:**
    - Coordinate formal training for new/existing IMAP drivers.
    - Assess & track drivers' performance and communicate any deficiencies.
    - Coach and mentor drivers; provide opportunities to grow and learn.
    - Establish performance/professional goals and conduct formal reviews.

- **The importance of effective training and coaching cannot be overstated:**
    - Keeps drivers, responders, and the public safe.
    - Improves the efficiency, quality, and effectiveness of what IMAP does.
    - Enhances IMAP's reputation and grants them a seat at the table among other, well-established peers in the responder community.
    - Improves morale, teamwork, and ownership within an IMAP team.

- **Types of training that IMAP supervisors are involved with include:**
    - **Formal Training** – highly structured training that aligns with official policies/standards; typically delivered at established intervals by a certified instructor. Continuing Education is most often considered a type of formal training
    - **Coaching** – unstructured training that focuses on refining skills OR addressing skill gaps; typically delivered as-needed by an experienced leader (i.e. IMAP supervisor) or peer (i.e. experienced IMAP driver).
    - **Mentoring** – unstructured training that focuses on enhancing skills through real-world application; typically delivered over an extended period of time by an experienced leader.

- **For training to be effective, IMAP supervisors must be committed to their drivers' development** – for the most part, this means:
    - Making time to train.
    - Taking an active role in drivers' development.

IMAP supervisors will only get out of their drivers what they put in.

Formal IMAP Driver Training (1 of 2):

Objective: Discuss formal IMAP driver training and the supervisor's role in it.

About the IMAP Driver Training Program:

- All IMAP employees are required to successfully complete the IMAP Driver Training & Certification Program.
    - Program is administered by NCDOT's Statewide Operations group.
    - Training is delivered by certified IMAP instructors.

- Driver training provides instruction on the tools, tasks, and guidelines that IMAP employees use when delivering IMAP driver services. **Driver training focuses on core topics, including:**
    - Vehicle/Equipment Use & Maintenance
    - Radio Hardware & Dispatch Protocol
    - Emergency Traffic Control Strategies
    - Traffic Incident Management
    - Motorist Assistance

- **Driver Training Duration:** 4-5 weeks

- **Driver training occurs in a variety of settings, including:**
    - **Classroom** – instructor-led presentations, educational videos, table-top exercises, etc.
    - **Training Track** – hands-on use of IMAP equipment, trainee & instructor demonstrations in a safe but true-to-life environment, etc.
    - **Live Roadway** – on-the-job training (OJT) where actual IMAP services are delivered under the supervision of an instructor, etc.

- **Trainees achieve IMAP Driver certification by:**
    - Successfully completing all Exercises or Demonstrations for each training course.
    - Successfully completing an Assessment Week in live conditions. This assessment occurs 2 months (min.) after all training courses have been completed. During the assessment, an IMAP instructor rides with the trainee on a patrol route and observes the trainee as they perform routine IMAP services. The instructor then determines if the trainee has acquired the knowledge & skills needed to perform the job of an IMAP driver.
    - Receiving written approval to operate as an IMAP driver from their IMAP supervisor and from their IMAP instructor.

Formal IMAP Driver Training (2 of 2):

Objective: Discuss formal IMAP driver training and the supervisor's role in it.

Supervisor's Role:

- **BEFORE TRAINING – Coordinate with IMAP Instructors**
    o Request training and advise how many trainees need training.
    o Establish the dates when training will occur.
    o If needed, create a driver schedule that allows for training to occur while minimizing impacts to daily route coverage.
    o Arrange for travel and other logistics (e.g. lodging, etc.) for trainees.

- **DURING TRAINING – Work with Trainees & Instructor**
    o **Assure trainee's OJT is valuable** – instruct your drivers to teach trainees specific tasks during OJT; rotate trainee across different drivers and patrol routes.
    o **Check-in with trainee regularly** – ask what they are learning; quiz them or ask them to show you something that they've learned.
    o **Check-in with instructor regularly** – ask how the trainee is doing; ask what you can work on with them outside of formal training.
    o **Keep the instructor in-the-loop** – relay your obervations of the trainee's performance; discuss any good/bad habits that you think may be forming.

- **AFTER TRAINING – Prep for Assessment & Support Certification**
    o Before their assessment, assign experienced drivers to ride with the trainee as they patrol routes.
    o Before their assessment, ride with the trainee yourself and perform your own, "unofficial assessment"; allow the trainee to take the lead as much as possible but step in when needed.
    o After their assessment, work with the instructor to determine if the trainee is ready to be certified or if they need additional training.
    o Draft a recommendation stating whether the trainee should be approved for IMAP operations or not; send this to your IMAP Leadership and to the IMAP instructor.
    o If certified, retain a copy of the trainee's certificate and add it to their employee file.

Coaching IMAP Drivers:

Objective: Discuss best practices used by IMAP supervisors to coach their drivers.

Talking Points:

- **Learning should happen every day.**
  - Supervisors must critically examine their drivers' performance and should constantly look for opportunities to refine their drivers' skills.
  - In areas where your drivers already do well, coach them on strategies that will enable them to do even better.
  - In areas where your drivers struggle, coach them on how to do things properly, safely, and consistently.

- **Supervisors must quickly address any issues that they observe.**
  - Any issue is an opportunity to learn and to educate.
  - Bad habits are created when supervisors allow issues to linger.
  - IMAP's job is dangerous – there is no issue that is worth, "just letting it go."

- **Coaching is NON-Punitive.**
  - Keep improvement as the goal – NOT punishing or building a case against the driver for future corrective action.
  - Be patient, calm, and encouraging when coaching drivers.
  - Emphasize the consequences of improper action and/or the benefits of doing things properly.
  - Focus coaching on decision-making (why do we do things the way that we do?). Show drivers the proper way, then have them demonstrate it for you.

- **When does "Coaching" end and "Discipline" begin?**
  - Supervisors should communicate their performance observations AND their coaching efforts to IMAP Leadership. IMAP Leadership will determine what corrective action is necessary, if any.
  - Documentation is always required for corrective action so supervisors should be proactive and document all performance observations AND what they've done to address them (i.e. coaching).
  - As a rule of thumb, discipline may be the next step if poor performance continues after the driver has been **A) TOLD what to do**, and then, **B) TAUGHT what to do**.

Mentoring IMAP Drivers:

Objective: Introduce the concept of mentorship and discuss its importance.

Talking Points:

- **"*Longevity is one of the IMAP program's greatest risks*"** – Rod Wyatt, IMAP Supervisor, Division 3
    - When people leave the IMAP program, they take their knowledge and experience with them.
    - Those who remain may have less knowledge/experience than the people who leave. When this happens, the team suffers until the remaining members learn & grow to the level of the person who left.
    - Sometimes, these knowledge/experience gaps can take years to recover from.

- **IMAP supervisors can minimize or even eliminate this risk by:**
    - **Engaging in Succession Planning** – where supervisors work with a capable and experienced driver over an extended period of time. Here, the goal is to equip the driver with the knowledge & skills needed to become an IMAP supervisor themselves. Supervisors should delegate appropriate supervisor-level tasks to the drivers that they mentor.
    - **Cross-training** – where supervisors use route assignments, task delegation, and coaching to assure that all drivers have a well-rounded understanding of the entire region and with all driver tasks. Here, the goal is redundancy (i.e. the IMAP team does not solely depend on one person because all team members know how to do everything).
    - **Using high-performing drivers as mentors** – where supervisors direct their high-performing drivers to coach and mentor new or struggling drivers. Here, the goal is to bring all drivers up to the same level of high performance.

- **Overall, IMAP supervisors should seek to establish a culture throughout their team where:**
    - Everyone is a student and everyone is a teacher.
    - Learning is continuous.
    - Knowledge, skills, and experience are evenly spread across the team.

Continuing Education:

Objective: Describe continuing education opportunities that are available to IMAP.

IMAP In-Service Training

- **Summary of In-Service Training:**
  - All IMAP employees must complete X hours of in-service training per year to maintain their certification to operate as an IMAP driver.
  - In-service training will be primarily based on the concepts & activities taught in the IMAP Driver Training & Certification Program.
  - In-service training will occur in Raleigh and will be held once a month to provide IMAP teams with flexibility on which sessions they attend.

- **In-Service Training Roles:**
  - **IMAP Instructors** – develop the in-service training curriculum; schedule training sessions; select IMAP supervisors to deliver training; and support delivery of training.
  - **IMAP Supervisors** – deliver in-service training to the drivers and supervisors that attend their assigned sessions. By teaching a session, supervisors can earn the in-service training hours that they need.

Other Continuing Education Opportunities

- There is a nearly endless list of skills, tools, and tasks that make for excellent continuing education topics for IMAP drivers and supervisors.
  - **Many are IMAP-specific** (e.g. new or advanced strategies for traffic control, incident management, etc.).
  - **Many come from other agencies/disciplines** (e.g. crash investigations, first aid, fire suppression, HazMat response, etc.).

- **Examples of continuing education opportunities include:**
  - After-Action Reviews (AARs) & Table-Top Exercises.
  - Joint Training (e.g. mock incidents with TMC staff, local responders, local NCDOT maintenance personnel, etc.).
  - SHRP-2 Training.
  - NCDOT Training (e.g. online courses available through Beacon-LMS, Supervisor Academy, etc.).
  - External, 3rd Party Training (e.g. First Aid, CPR, etc.).
  - Site Visits (e.g. shadowing TMC operators, meeting at local responders' headquarters, etc.).
  - Lunch & Learns (i.e. inviting an expert to teach drivers a new topic).

Trial Exercise: Driver Training and Continuing Education

Objective: Test trainees' understanding of IMAP training, coaching, and continuing education.

Instructions: Ask discussion questions and engage trainee on scenarios related to the supervisor role. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**

  o Unless they are taught or coached, how would a driver learn that they are doing something in an unsafe way?

  o What are some critically important skills that drivers do NOT learn during formal driver training?

  o With all of their other responsibilities, how can an IMAP supervisor make time to coach and mentor their drivers?

  o How did you acquire your knowledge/skills?

- **Scenarios: As an IMAP Supervisor, What Would You Do?**

  o Your drivers deploy Emergency Traffic Control (ETC) well in normal situations but you notice that all of them deploy ETC near ramps differently and their ETC setups are often unsafe or ineffective.

  o Your drivers often complain about officers from a law enforcement agency in your region. You've also received complaints about your drivers from that agency. The relationship between your drivers and their officers has never been great but seems to be getting worse.

  o One of your drivers is exceptional – great performance, great attitude, great commitment.

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 - ACCEPTABLE	3 - EXCEPTIONAL
PASS/FAIL FOR COURSE (circle PASS or FAIL below - FAIL requires comments)		
PASS or FAIL	COMMENTS:	

Description:

Introduce trainees to the policies, processes, and best practices used when handling incidents that involve IMAP employees or equipment.

Objectives:

- Introduce trainees to the course and its basis in the NCDOT Workplace Safety Manual.

- Discuss the goals and process for responding to & investigating incidents involving IMAP.

- Test trainee's understanding of incidents involving IMAP.

Audience: IMAP Supervisors

Duration of Training: 1 hour

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- NCDOT Workplace Safety Manual
- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: IMAP Program
- GE-301: The IMAP Supervisor Role
- VE-300: IMAP Vehicles & Equipment

Course Introduction:

Objective: Introduce trainees to the course and its basis in the NCDOT Workplace Safety Manual.

Talking Points:

- The goal of this course is to provide trainees with an opportunity to discuss and gain hands-on experience with the policies, processes, and best practices used when handling incidents that involve IMAP employees or equipment.

- This course is based on details described in the **NCDOT Workplace Safety Manual**.
  - All IMAP employees must read and be familiar with this manual.
  - Working safely is a condition of employment for all NCDOT employees.

- **NCDOT believes that ALL accidents and injuries are preventable.** At all times while on-duty, IMAP employees must:
  - Hold safety as the #1 goal when making decisions or taking action.
  - Properly use Personal Protective Equipment (PPE).
  - Adhere to all NCDOT & IMAP policies, procedures, and safety precautions.
  - Watch for possible hazards and react responsibly in unsafe situations.
  - Actively protect the safety of themselves and others by speaking up or taking action.

- In the event of an incident involving IMAP, supervisors must adhere to the NCDOT Workplace Safety Manual and to the guidance of IMAP Leadership.

- **Incident** – any event that could have, or did, result in personal injury or damage to state or private property. Examples include but are not limited to:
  - IMAP truck colliding with or being struck by another vehicle or object.
  - IMAP employee struck or nearly struck by another vehicle or object.
  - Injury or near injury to an IMAP employee or bystander that occurs while performing IMAP duties.

Response & Investigation (1 of 2):

Objective: Discuss the goals and process for responding to & investigating incidents involving IMAP.

Talking Points:

- Goals of properly responding to & investigating incidents involving IMAP:
    - Prevent further injury or damage.
    - Mitigate liability and risk for IMAP and the department.
    - Provide appropriate care and/or restitution for victims – including IMAP employees.
    - Determine the cause of incidents so IMAP can learn from them and prevent them in the future.

- **Overview of the Incident Response & Investigation Process:**
    1. **Incident occurs**

    2. **IMAP supervisor learns of incident**
        a. IMAP drivers must notify their supervisor immediately of any incidents or "near misses."
        b. IMAP supervisors must make all reasonable efforts to respond to the scene while the incident is still underway. If unable, supervisor must notify IMAP Leadership to respond.

    3. **IMAP supervisor facilitates initial response & investigation**
        a. Check on the driver and assess their condition.
        b. Retrieve the "Equipment Maintenance Record (EMR) Booklet" and "Operator's Daily Inspection Sheet" from the driver's IMAP truck.
        c. Record statements from all parties involved (e.g. IMAP driver, responders, witnesses, etc.)
        d. Take pictures of the scene, vehicles, and/or structures involved.
        e. Direct IMAP driver to medical facility for care and/or drug test.
        f. Record law enforcement's incident report # so the incident report can be retrieved when it is ready (typically within 1-3 days).

    4. **IMAP supervisor facilitates initial notifications**
        a. IMAP Leadership
        b. NCDOT Safety Engineer
        c. Local IMAP team
        d. Emergency contacts of the IMAP driver involved

Response & Investigation (2 of 2):

Objective: Discuss the goals and process for responding to & investigating incidents involving IMAP.

Talking Points:

- **Overview of the Incident Response & Investigation Process** (continued):

   5. **IMAP Leadership assembles an Incident Investigation Team**
      a. IMAP supervisor (direct supervisor of IMAP driver involved).
      b. Peer of the IMAP driver involved (another driver NOT involved in the incident).
      c. Other management, technical, or safety staff as needed.
      d. IMAP driver who was involved in the incident (as appropriate).

   6. **IMAP driver involved completes the following forms** (as appropriate):
      a. Employee's Statement Form (I-1)
      b. NCDOT Medical Authorization/Return to Work Form
      c. NCDOT Work Ability Evaluation Form
      d. Leave Option Form (FR-26)
      e. Worker's Compensation Information Brochure

   7. **Incident Investigation Team investigates & documents incident:**
      a. Employee's Statement Form (I-1) – within 1 day of incident
      b. Form 140 – if IMAP equipment involved; within 2 days of incident
      c. NC Industrial Commission Form (19) – if injury involved; within 1 day of incident
      d. Previous Accident History
      e. Incident Investigation Summary Form (I-2) – parts I, II, and IV; as soon as possible following the incident

   8. **Recommendations are made & corrective action is taken:**
      a. All documentation of incident is reviewed by NCDOT Safety Subcommittees, Division Safety Engineer, and IMAP Leadership.
      b. Based on findings, corrective actions are recommended
      c. IMAP supervisors ensure that corrective actions are implemented
      d. NCDOT Safety Subcommittees certify that corrective actions have been implemented fully and properly

Trial Exercise: Incidents Involving IMAP

Objective: Test trainees' understanding of incidents involving IMAP.

Instructions: Ask discussion questions and engage trainee on scenarios related to incidents involving IMAP. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**
  o Where can IMAP supervisors find complete guidance on the response & investigation process for incidents involving IMAP?

  o Where are the incident response & investigation forms located?

  o What is a "near miss"? Describe a situation involving an IMAP driver or their truck where the incident response & investigation process does NOT need to be completed.

  o What documents and details do IMAP supervisors need to collect from the scene of an incident involving IMAP?

- **Scenarios: As an IMAP Supervisor, What Would You Do?**
  o It's the end of the day and you are watching your drivers perform their end-of shift duties. On one of your driver's trucks, you see that the rear bumper is dented, and a tail light is broken. They explain that someone backed into their truck in a parking lot earlier that day.

  o You over hear radio traffic from one of your drivers that sounds panicked and is suddenly cut off. TMC dispatch attempts to reach the driver multiple times but there is no response.

  o You are on-scene of a crash involving one of your drivers. The driver was in their IMAP truck when it was hit. The driver says that they do not need medical attention.

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 – ACCEPTABLE	3 - EXCEPTIONAL
PASS/FAIL FOR COURSE (circle PASS or FAIL below - FAIL requires comments)		
PASS or FAIL	COMMENTS:	

Description:

Familiarize trainees with Incident Management Strategies and the methods & considerations used by IMAP supervisors to develop them.

Objectives:

- Introduce trainees to Incident Management Strategies.

- Provide guidance on how to develop an Incident Management Strategy.

- Discuss best practices used to develop Incident Management Strategies.

- Discuss examples of existing strategies developed by IMAP supervisors.

- Test trainee's understanding of Incident Management Strategies.

Audience: IMAP Supervisors

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: IMAP Program
- GE-301: The IMAP Supervisor Role

Quick Sheet – Incident Management Strategies:

Objective: Use this simplified guide to discuss incident management strategies.

Talking Points:

- **The focus of this course is on developing new/unique Incident Management (IM) Strategies** when routine IM Strategies alone cannot sufficiently manage the incident or address obstacles or risks.

- **Incident Management Strategy** – a plan that leverages the knowledge, experience, and resources that are available to IMAP in order to achieve IMAP's goals of **improving highway safety** and **maintaining traffic flow**.

- **Guidance on Developing an IM Strategy:**
  - Begin by evaluating the needs/goals of the situation as well as the obstacles that will impact or prevent your efforts.
  - The end goals of all IM Strategies are SAFETY & TRAFFIC FLOW.
  - The Root Cause of a situation is the problem that your IM Strategy must solve. <u>Example Problem</u>: Traffic entering Activity Area. <u>Root Cause</u>: Insufficient ETC to keep traffic out of Activity Area. <u>IM Strategy</u>: Additional ETC to keep traffic out of the Activity Area.
  - Understand your resources (people, equipment, knowledge, etc.) and their limitations. Your IM Strategy should not exceed the limitations of your resources.
  - Seek IM Strategies that are safest, have the greatest benefit, and the fewest consequences/risks.
  - Don't attempt to solve all problems or mitigate all risks with a single IM Strategy. No strategy is perfect – lean towards strategies that are safe and functional.
  - Keep strategies as simple as possible. However, do not OVER-simplify a strategy. IM Strategies should be as complex as needed, but no more.
  - Seek to adapt old solutions to new problems. Existing strategies are tried and proven to work.
  - Communicate IM Strategies that you have used or observed to IMAP Leadership. Only strategies that are approved by IMAP Leadership should be used in the future.

Introduction to Incident Management Strategies:

Objective: Introduce trainees to incident management strategies used by IMAP.

Talking Points:

- **Incident Management Strategy** – a plan that leverages the knowledge, experience, and resources that are available to IMAP personnel in order to achieve IMAP's goals of **improving highway safety** and **maintaining traffic flow**.

- Most of the services/practices used by IMAP are considered, "Incident Management (IM) Strategies."
    - Emergency Traffic Control (ETC) is a strategy that protects responders & motorists while easing traffic flow around incidents.
    - Motorist Assistance is a strategy that protects motorists & helps responders access incident scenes by removing disabled vehicles from the roadway.
    - Push/Pull/Drag, up-righting vehicles, and marking vehicle locations are all strategies that protect safety and keep traffic flowing by opening lanes quickly and by decreasing an incident's duration.
    - ICS, Multi-Unit Coordination, and Partner Engagement are strategies that enhance IMAP's positive impact through communication, collaboration, and efficient use of resources.

- While all of the examples above are considered, "IM Strategies," they are also well-established (i.e. routine) and all IMAP personnel are expected to be proficient in them.

- **The focus of this course is on developing new/unique IM Strategies** when routine IM Strategies alone cannot sufficiently manage the incident or address obstacles or risks.

- All IMAP personnel must use critical thinking & sound judgement to adjust their efforts to suit different incidents or conditions. However, IMAP supervisors must carefully consider the strategies that they develop and that they authorize their drivers to use.

Developing an IM Strategy (1 of 3):

Objective: Provide guidance on how to develop an IM strategy.

Talking Points:

- **Look before you leap**
  - Plans based on hasty decisions & snap judgements are often flawed.
  - Take a moment to think before you put a plan into action.

- **Identify needs/obstacles & assess impacts**
  - Effective strategies must consider all of the relevant details, conditions, obstacles, and risks that are present.
  - These factors must be identified, and their impacts must be assessed before a new strategy can be developed.

- **Know your end goals & root cause**
  - Once the needs & obstacles are understood, jump ahead to the goals that you want your strategy to achieve (e.g. Safety & Traffic Flow).
  - With the end goals in mind, ask yourself, **"What is preventing us from achieving our goals?"** You may have to ask this question multiple times in order to find the root cause.
  - The root cause of a problem is what your strategy must address.
  - Example of finding the Root Cause. End Goal: **SAFETY**
    - **What is Preventing? (1):** Motorists are driving on the shoulder and entering the incident Activity Area.
    - **What is Preventing? (2):** The ETC that is currently in-place is not preventing motorists from driving on the shoulder.
    - **What is Preventing? (3):** IMAP unit on-scene does not have enough ETC to close the shoulder to prevent motorists from entering the Activity Area.
  - In the example above, we had to ask the question 3 times to determine that "Insufficient ETC" is the root cause of the problem.
  - Possible strategies to address the problem in this example include:
    - Adjusting available ETC to close the shoulder.
    - Using the "Motorist Cooperation" technique to stop a lead vehicle on the shoulder, thereby preventing other motorists from using the shoulder to enter the Activity Area.
    - Calling a backup IMAP unit to deploy additional ETC to close the shoulder.

Developing an IM Strategy (2 of 3):

Objective: Provide guidance on how to develop an IM strategy.

Talking Points:

- **Identify your resources**
    - Resources include people, vehicles, and equipment.
    - Existing strategies, knowledge, experience, and time are also resources.
    - IMAP can also leverage the resources of their partners (i.e. responders, TMC, and other NCDOT groups).
    - Knowing what you have available is essential to developing an IM Strategy.

- **Consider how you will use your resources**
    - How your resources are used to solve a problem is the basis of an IM Strategy.
    - Resources can be applied in conventional ways (e.g. using a wood beam wheel chock to prevent a vehicle from rolling).
    - Resources can also be applied in unconventional ways (e.g. using a wood beam wheel chock to increase a winch's leverage when up-righting a vehicle).

- **Consider the limitations of your resources**
    - All resources have limitations. There are many types of limits such as:
        - **Physical limits** (e.g. jacks can only hold so much weight)
        - **Usage limits** (e.g. fire extinguishers can only put out small fires)
        - **Knowledge limits** (e.g. IMAP is not trained/equipped to cleanup HazMat)
        - **Time limits** (e.g. the closest IMAP driver is 20 minutes away)
        - **Availability limits** (e.g. DMS/CCTV are not everywhere)
        - **Legal limits** (e.g. IMAP cannot drive above the speed limit to get to an incident faster)
        - **Institutional limits** (e.g. vehicles may not be moved until crash investigations are complete).
    - Understanding these limitations is crucial. The IM Strategy that you develop must not exceed the limitations of your resources.

Developing an IM Strategy (3 of 3):

Objective: Provide guidance on how to develop an IM strategy.

Talking Points:

- **Choose a course of action**
  - Defining the needs & obstacles allowed you to understand what you were up against.
  - Establishing your end goals & the root cause helped to identify the problem that your IM Strategy needs to solve.
  - Considering your resources & limitations helped highlight possible solutions.
  - Now, you are ready to choose an IM Strategy. Evaluating an issue is far less challenging than choosing the right course of action.
  - There are many criteria, but IMAP supervisors should lean towards the IM Strategy that is safest, has the greatest benefit, and the fewest consequences/risks.

- Developing an IM Strategy is slightly different when the strategy is improvised at an incident scene vs. planned for future application.

- **When developing an IM Strategy that will be applied in the future**, IMAP supervisors must assure that the strategy:
  - Is Safe.
  - Is Effective.
  - Properly represents the NCDOT and IMAP program.
  - Can be executed in the future with the same level of safety and effectiveness.
  - Can be executed with existing resources and/or with minimal need for costly or "strategy-specific" resources.
  - Can be executed by all IMAP personnel, with minimal need for additional training or specialized knowledge/skills.

- IMAP supervisors should take care that they use IM strategies that are safe, appropriate, and approved. IMAP drivers will see the strategies that their supervisors use and will assume that it is acceptable for them to use the same strategies.

Best Practices for IM Strategies:

Objective: Discuss best practices used to develop IM Strategies.

Talking Points:

- **Don't let "perfect" be the enemy of "good"**
  - Very few strategies achieve all of the desired goals. Even fewer are cost/consequence-free.
  - Especially when time is of the essence, a good plan now is often better than a perfect plan later.
  - Safety, however, should never be compromised.

- **Keep it simple**
  - When problems are complex, there is a tendency to apply complex solutions.
  - However, complex strategies are hard to communicate, are less likely to be successful, and often cannot be applied to a variety of situations and conditions.

- **Don't innovate for innovation's sake**
  - Most new problems can be addressed with old solutions.
  - Whenever possible, adjust a familiar strategy to apply to a new situation.
  - Existing strategies have proven to be effective through years of real-world application.
  - Don't dismiss that track-record of success without careful consideration.

- **Keep IMAP Leadership in the loop**
  - Ideally, supervisors should discuss new strategies with IMAP Leadership before they are put into practice.
  - When a strategy is improvised at an incident scene, supervisors should seek to discuss the strategy with IMAP Leadership while the incident is underway.
  - If this is not possible, supervisors should review the strategy with IMAP Leadership immediately following the incident to determine if the strategy was appropriate and/or viable for future use.

Example IM Strategies:

Objective: Discuss examples of existing strategies developed by IMAP supervisors.

Talking Points:

- **IM Strategies related to Training:**
    - Arranging for local Fire Dept. to provide First Aid & CPR training to IMAP drivers. This strategy equips drivers with critical knowledge and fosters a closer relationship with an important partner.
    - Hosting Mock-Incident/Table-Top exercises with IMAP drivers, local responders, TMC, and NCDOT Maintenance. This strategy enhances coordination between partners, builds relationships, and educates all parties on what other groups/agencies do to support incident management.

- **IM Strategies related to Communication/Partner Engagement:**
    - Response planning for a major event/construction project. This strategy enhances response efforts while minimizing traffic impacts caused by the event/project. It also builds relationships and educates external partners on the importance of quick clearance & traffic flow.
    - Getting responders to re-open lanes faster by projecting authority & using phrases that resonate with responders (e.g. "Vehicles have been removed so you are clear to relocate to the shoulder."). This strategy can re-open lanes sooner and demonstrates that IMAP personnel are leaders & decision-makers at incident scenes.

- **IM Strategies that Leverage other Partner's Resources:**
    - Using an LE patrol car as a "drone vehicle" to reduce speeding near work zones. This strategy builds relationships, makes work zones safer, and frees-up LE resources by having IMAP position the drone vehicle where it is needed.
    - Using the TMC's CCTV cameras & traffic maps to find better/faster routes to reach an incident scene. Using the TMC's DMS to provide advance warning (rather than using a 2nd IMAP truck). These strategies enhance IMAP's response, frees-up IMAP resources, and enhances the relationship between IMAP and the TMC.

Trial Exercise: Incident Management Strategies

Objective: Test trainees' understanding of Incident Management Strategies.

Instructions: Ask discussion questions and engage trainee on scenarios related to the audits. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**
    - What is the difference between a strategy that an IMAP driver uses and a strategy that is used by an IMAP supervisor?

    - Are there any IM Strategies that you use that you believe all IMAP personnel across the state should adopt? Describe your strategies.

    - How is improvising or developing a new IM Strategy different from breaking NCDOT/IMAP policy?

- **Scenarios: As an IMAP Supervisor, What Would You Do?**
    - A major incident occurs on one of your normal patrol routes. You need all drivers to respond but pulling them from their assigned routes will leave the rest of your region without IMAP coverage.

    - One of your drivers is at an incident scene. You are at the TMC and are monitoring your driver's activity via CCTV. You watch as multiple vehicles swerve and slam on their brakes as they reach your driver's ETC taper. You can see this, but your driver is unaware.

    - You are on-scene of an incident where a passenger vehicle has gone off the road and down a steep hill. The wrecker has tried to winch it out but keeps slipping on the wet pavement and mud. The wrecker is making very little progress, if any.

    - You are monitoring radio traffic when you hear police and fire dispatched to a "suspicious package" on one of the ramps of a major interchange between two interstates.

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 – ACCEPTABLE	3 - EXCEPTIONAL
PASS/FAIL FOR COURSE (circle PASS or FAIL below - FAIL requires comments)		
PASS or FAIL	COMMENTS:	

Description:

Familiarize trainees with the strategies and guidelines used by IMAP supervisors to effectively coordinate with other agencies and to lead the response efforts of NCDOT & IMAP.

Objectives:

- Introduce the fundamental roles & concepts of major incident coordination.

- Discuss the various roles & levels of authority at incident scenes.

- Provide guidance on determining when additional response is needed.

- Instruct trainees on how to act as NCDOT/IMAP's Incident Commander.

- Test trainee's understanding of major incident coordination.

Audience: IMAP Supervisors

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: IMAP Program
- GE-301: The IMAP Supervisor Role
- COM-300: Communicating with IMAP Drivers
- COM-301: Partner Engagement

Quick Sheet – ICS & Multi-Unit Coordination (1 of 2):

Objective: Use this simplified guide to discuss ICS & multi-unit coordination.

Talking Points:

- **Review the following courses from the IMAP Driver Manual:**
    - Interacting with Other Agencies
    - Multi-Unit Coordination
    - Critical Thinking & Teamwork

- **"Who is in-charge at an incident scene?"** – best answers include:
    - There are many leaders. Each agency has a specific role to play and has authority over that role.
    - Leadership changes as the incident progresses. Different needs arise that take priority. The agency responsible for that priority has the lead.
    - Leadership changes as responders with different levels of experience/authority arrive on-scene.
    - Regardless of who is on scene or what the current priorities are, **all responders must work together**.

- **Proactivity is KEY** – to respond proactively, IMAP supervisors must:
    - Understand what their resources & limitations are. This includes the resources & limitations of other responders and NCDOT groups.
    - Understand their roadway network including geographical constraints (hills, curves, etc.), typical traffic speeds & activity levels, etc.
    - Understand the factors that make incidents severe/more complex as well as the response measures & timeframes associated with major incidents.
    - Continuously monitor for incidents that require higher levels of response such as crashes involving tractor trailers or incidents in major work zones.
    - Err on the side of caution. Start implementing higher-level response measures even if all details aren't confirmed. These measures can always be cancelled if they are later found to be unnecessary.
    - Coach your drivers to understand the need for proactivity so they can independently (and appropriately) execute higher levels of response rather than waiting for you to tell them to.

Quick Sheet – ICS & Multi-Unit Coordination (2 of 2):

Objective: Use this simplified guide to discuss ICS & multi-unit coordination.

Talking Points:

- **IMAP supervisors serve as the Incident Commander (IC) for NCDOT/IMAP.** As the IC, IMAP supervisors should:
    - Get to the scene of major incidents as soon as possible.
    - Gather details and the assess the incident in order to quickly determine the number of drivers and other response measures that will be needed.
    - Advise TMC dispatch and the additional IMAP units that are needed. If needed, instruct the TMC and additional IMAP units to switch to a VIPER talkgroup used for major incidents.
    - Make sure the Activity Area around the incident is safe.
    - Prioritize IMAP's response efforts. Safety always comes first. After that, supervisors can implement measures to get traffic moving.
    - Delegate response efforts. Give clear instructions to additional IMAP units and TMC dispatch.
    - Communicate with ICs of other agencies on-scene. Understand what they are doing and inform them of what NCDOT/IMAP is doing. Keep them informed of traffic conditions (e.g. speed of vehicles approaching the Activity Area, etc.) and impacts to traffic (e.g. queue length), Offer assistance. Respect the roles & priorities of other agencies, but encourage them to take steps to re-open lanes as soon as it is appropriate to do so.
    - Stay in touch with TMC dispatch and additional IMAP units. Relay new info about clearance activities and lane status as changes occur. Reach out to IMAP units to assess their status and to relay additional instructions. Regular check-ins with IMAP units, TMC, and other NCDOT responders should occur at least every 20 minutes.

Introduction to ICS & Multi-Unit Coordination:

Objective: Introduce the fundamental roles & concepts of incident coordination.

Talking Points:

- **Review from IMAP Driver Manual – "Interacting with Other Agencies":**
    - IMAP works with many different agencies and partners to manage traffic incidents.
    - Each agency/partner is different. Each has their own capabilities and their own priorities.
    - No agency or individual can manage every incident on their own. All must work together effectively to get the job done properly.
    - **Incident Command System (ICS)** is an approach to incident management that focuses on how **Incident Commanders (IC)** leverage resources and coordinate response efforts.
    - **Unified Command** is the most common form of ICS that IMAP will encounter at incident scenes. In Unified Command, leadership is shared. ICs of each agency make decisions together but are responsible for managing the resources/efforts of their own agency.

- **Review from IMAP Driver Manual – "Multi-Unit Coordination":**
    - Not all incidents can be properly managed by one IMAP unit, alone. Multiple units are often required for more severe/complex incidents.
    - Incident Activity Points are separate areas/tasks that require at least one IMAP unit (e.g. deploying ETC, removing vehicles, etc.).
    - When multiple IMAP units are managing the same incident, they must coordinate their efforts for the overall response to be effective.

- **IMAP Supervisor's Role in Incident Coordination:**
    - Identify when incidents require more IMAP units, different response strategies/equipment, and/or support from other NCDOT groups.
    - Participate in ICS by serving as the IC for NCDOT/IMAP.
    - Work with other ICs to establish the overall incident action plan and the specific tasks that NCDOT/IMAP will perform.
    - Prioritize & delegate tasks to IMAP drivers. Oversee & assure task completion. Keep drivers and others informed and in-the-loop.
    - Coordinate with other NCDOT partners (e.g. Maintenance, TMC, etc.) to assure NCDOT's overall response is seamless and effective.

Who is "In-Charge" at an Incident Scene:

Objective: Discuss the various roles & levels of authority at incident scenes.

Talking Points:

- **"Who is in-charge?"** is one of the most common and challenging questions at an incident scene. There are many ways to answer this question, but the most counter-productive answers are:
  - **No one is in-charge** – "We each do our own thing and try not to get in each other's way…"
  - **Law Enforcement (or other agency) is in-charge** – "What they do is more important, and we do whatever they tell us to…"
  - **IMAP/NCDOT is in-charge** – "This is our road. Every other agency needs to respect that and do what we tell them to do…"

- **More realistic and productive answers to this question are:**
  - **There are many leaders** – each agency has a specific role to play and has authority over that role. Fire/EMS often has authority over crash victim safety or HazMat; Law Enforcement (LE) may have authority over crash investigations; and NCDOT/IMAP may have authority over traffic control and lane clearance.
  - **Leadership changes (1)** – as the incident progresses, different priorities arise that align with the role/capability of a different agency. Fire/EMS may be in-charge early in a crash, when crash victim safety is the priority. When victim safety is resolved, incident leadership may transition to LE while investigations are underway.
  - **Leadership changes (2)** – as incidents progress, more responders may arrive who have different levels of experience/authority. Early in a crash, the first IMAP unit on-scene may be in-charge. When a more experienced driver or supervisor arrives, leadership should transition to them. Should an NCDOT Engineer arrive, all IMAP on-scene should follow the Engineer's direction.
  - **NOTE**: In truth, all 3 of the answers above are correct at the same time. Regardless of what an agency/individual's is OR where we are in an incident's timeline, **all who respond must work together**.

Identifying when "MORE" is Needed (1 of 2):

Objective: Provide guidance on determining when additional response is needed.

Talking Points:

- When severe/complex incidents are unfolding, **PROACTIVITY** is the key to an effective response.

- Incidents become less-safe and have a greater impact on traffic as time goes by. Congestion grows as more vehicles add to the queue, and secondary crashes become more likely.

- Incident response measures (including additional responders and/or specialized equipment) take time to coordinate and more time to get on-scene.

- **IMAP supervisors must proactively identify when "more" is needed** for an incident so appropriate response measures are in-place quickly, when they can better prevent or mitigate impacts.

To proactively respond to major incidents, IMAP supervisors must:

- **Understand what their resources & limitations are**
    - This includes the number of IMAP drivers on-duty, where they are located, what tasks require more than one unit, etc.
    - This also includes other NCDOT groups.
    - Maintenance/Traffic Services can provide "proper"/permanent traffic control (TC), but often have a 2+ hours response time and a 2+ hour TC-deployment time.
    - TMC/STOC can use DMS to provide advance warning or use CCTV to monitor traffic, but DMS & CCTV are not available everywhere.

- **Understand their roadway network**
    - This includes geographical constraints, roadway geometrics, typical traffic speeds/congestion levels, etc.
    - Areas with hills, curves, and/or higher traffic speeds often require more emergency traffic control (ETC) than what a single IMAP unit can provide.
    - Pulling IMAP units from one route to assist with an incident in another area can be risky. Especially if the area that the unit is being pulled from has higher incident activity or is where a major construction project is located.

Identifying when "MORE" is Needed (2 of 2):

Objective: Provide guidance on determining when additional response is needed.

To proactively respond to major incidents, IMAP supervisors must:

- **Understand the factors that make incidents severe/complex**
    - This includes being familiar with the impacts, typical response measures, and durations associated with major incidents.
    - This also includes being familiar with the things that are commonly involved in major incidents such as overturned commercial vehicles, injuries/fatalities, HazMat cleanup, crash investigations, detour implementation, etc.
    - More severe/complex incidents almost always require more than one IMAP unit and often require additional NCDOT responders (e.g. Maintenance, Engineers, etc.).

- **Monitor for incidents that need "more"**
    - This involves continuous monitoring of various resources (e.g. radio traffic, etc.) to detect severe/complex incidents by listening for key words/phrases such as, "overturned tractor trailer" or "HazMat."
    - This also involves listening for incidents reported in areas that require additional resources/strategies (e.g. major work zones, etc.).

- **Err on the side of caution**
    - This involves initiating a higher-level response based on reported, but not confirmed information.
    - For example, if the initial report states that a tractor trailer is overturned, multiple IMAP units should begin heading to the scene.
    - If new info arrives that removes the need for additional units, the elevated response can be cancelled.

- **Spread understanding & proactivity to IMAP drivers**
    - Supervisors should educate their drivers to understand when "more" is needed.
    - Supervisors should also encourage their drivers to be proactive and to err on the side of caution, so they can independently decide to assist vs. waiting for their supervisor to tell them to.
    - Supervisors must monitor their drivers to assure they are responding when needed OR staying in-place when they aren't needed.

Being the Incident Commander (1 of 3):

Objective: Instruct trainees on how to act as NCDOT/IMAP's Incident Commander.

Talking Points:

- IMAP supervisors serve as the Incident Commander (IC) for NCDOT/IMAP during most major incidents – even if the role of IC transitions to an NCDOT Engineer later.

As the IC for NCDOT/IMAP, supervisors should:

- **Get to the incident scene as soon as possible**
    - For supervisors who have TMCs in their region, the control room may provide resources that make staying in the TMC attractive.
    - TMCs have CCTV that can view multiple areas/drivers at once and there are numerous radios to monitor/stay in-touch with drivers.
    - However, major incidents require a direct and visible leadership presence that can only be achieved by going to the scene.

- **Gather details & assess the incident**
    - Determining what response measures are needed is mostly based on WHAT is involved (e.g. commercial vehicles, fatalities, etc.) and WHERE it is occurring (e.g. road geometrics, traffic speeds, etc.).
    - Some of this information may not be available immediately but IMAP supervisors must still ascertain the situation quickly.
    - Using whatever information is in-hand, supervisors must quickly visualize the entire incident response/clearance process, so they can proactively identify what NCDOT/IMAP may need to do next (see IMAP Driver Manual – "Critical Thinking & Teamwork").

- **Advise TMC & additional IMAP units**
    - Assure that those who can provide immediate assistance are aware of what's happening. For example, TMC can activate DMS to advise motorists to avoid closed lanes before IMAP arrives to deploy ETC.
    - Additional IMAP units should start making their way to the scene. If possible, provide them with specific destinations and/or tasks.
    - Instruct responding IMAP units and TMC dispatch to switch to a VIPER talkgroup that is established for major incidents so the primary dispatch talkgroup is not tied-up.

Being the Incident Commander (2 of 3):

Objective: Instruct trainees on how to act as NCDOT/IMAP's Incident Commander.

As the IC for NCDOT/IMAP, supervisors should:

- **Make sure the Activity Area is safe**
  - Understanding WHAT others are doing (e.g. HazMat cleanup, investigations, etc.) is also critical when planning NCDOT/IMAP's response.
  - However, one of IMAP's primary duties is to create a safe Activity Area for responders by deploying ETC.
  - Coordination with other agency's ICs on-scene must wait until efforts to protect the Activity Area are complete or fully underway.

- **Prioritize response efforts**
  - Supervisors should prioritize activity based on what needs to be done, first. Immediate safety always comes first (e.g. ETC around Activity Area, advance warning where the queue begins, etc.).
  - After that, supervisors should consider what can be done to keep traffic flowing. Re-opening lanes is the best method but, in the early stages, may not be a possible solution.
  - Adjusting or deploying additional ETC is most effective in the early stages of a major incident. This could include implementing detours, directing traffic onto the shoulder, closing ramps, etc.

- **Delegate response efforts**
  - Supervisors must give clear instructions to the additional IMAP units and to the TMC and other NCDOT responders. Each party must understand where they need to be and what they need to do.
  - Supervisors should consider where their resources are and how long it will take to arrive or complete their tasks. For example, the IMAP unit who will arrive first should be assigned to a higher priority task than a unit who will arrive later.
  - Alternatively, if an IMAP unit's route to the scene will bring them to an important location (e.g. where a ramp needs to be closed, etc.), then the supervisor should assign the task to that unit.

<u>Being the Incident Commander (3 of 3):</u>

Objective: Instruct trainees on how to act as NCDOT/IMAP's Incident Commander.

<u>**As the IC for NCDOT/IMAP, supervisors should**</u>:

- **Stay in touch**
  - As response efforts are underway and until the incident is cleared, IMAP supervisors must communicate regularly with all agency ICs and will all NCDOT/IMAP responders (including the TMC).
  - Supervisors should check in with their drivers frequently to make sure they are safe, to get status updates, and to relay new information or instructions.
  - Supervisors should also convey new information to the TMC, so they can adjust their response measures.
  - Supervisors should also coordinate frequently with other agency's ICs to determine what actions are complete and what needs to be done next. As the incident progresses, supervisors should continue to raise other IC's awareness of the incident's impact to traffic and should encourage them to take steps to re-open travel lanes.
  - All communication should be frequent & timely. Regular check-ins with other IMAP units, NCDOT, or the TMC should occur at least every 20 minutes. New information or instructions should be relayed as it is received.

Trial Exercise: ICS & Multi-Unit Coordination

Objective: Test trainees' understanding of ICS & multi-unit coordination.

Instructions: Ask discussion questions and engage trainee on scenarios related to the coordination. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**
  - What are the individual tasks/services that IMAP provides in response to a major incident?

  - How many IMAP units are usually needed to deliver all of the tasks/services that IMAP provides for a major incident?

  - What other groups/agencies are involved in major incident response and what tasks/services do they provide?

- **Scenarios: As an IMAP Supervisor, What Would You Do?**
  - While monitoring the radio of a local law enforcement agency, you hear a report of an overturned tractor trailer on one of your IMAP routes. You wait to hear the TMC or one of your drivers relay this report to one another but the dispatch talkgroup is silent for minutes.

  - TMC dispatch relays an incident report to one of your drivers. The report involves an overturned diesel tanker and a possible fatality.

  - You are the 1st Shift supervisor. You and your drivers have been working a major incident for several hours and the incident looks like it will continue for several more hours. 1st Shift is about to end and 2nd Shift drivers will soon begin patrol.

  - You are on-scene of a major incident that is nearly over. All crash victims have been transported and the crash investigation is complete. You ask one of the other ICs – a local Fire Chief – to relocate his fire trucks to the shoulder so a lane can re-open. The Fire Chief refuses.

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 – ACCEPTABLE	3 - EXCEPTIONAL
PASS/FAIL FOR COURSE (circle PASS or FAIL below - FAIL requires comments)		
PASS or FAIL	COMMENTS:	

Description:

Familiarize trainees with the strategies and guidelines used by IMAP supervisors to conduct Worksite Audits to evaluate their driver's performance at incident scenes.

Objectives:

- Introduce trainees to Worksite Audits.

- Discuss the performance areas and other factors that are audited.

- Review the official Worksite Audit form (NCDOT Form R-1).

- Provide guidance on how to properly conduct a Worksite Audit.

- Test trainee's understanding of Worksite Audits.

Audience: IMAP Supervisors

Duration of Training: 2 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- NCDOT Workplace Safety Manual
- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: IMAP Program
- GE-301: The IMAP Supervisor Role
- COM-300: Communicating with IMAP Drivers
- VE-300: IMAP Vehicles & Equipment
- CT-300: Monitoring Traffic & Driver Activity

Quick Sheet – Worksite Audits (1 of 2):

Objective: Use this simplified guide to discuss Worksite Audits.

- **Worksite Audit** – an official review & evaluation of an IMAP driver's performance as they manage a traffic incident in live roadway conditions.

- **IMAP supervisors are responsible for performing Worksite Audits for all of their drivers.**
  - At a minimum, supervisors should perform an audit once per month.
  - Supervisors must audit each driver no less than once per year.

- **Worksite Audits should focus on the driver's performance, including:**
  - Safe working practices & PPE use.
  - Driving & positioning the IMAP truck.
  - ETC deployment including emergency lights & arrow board.
  - Communication with TMC, responders, and motorists.
  - Proper execution of IMAP services & use of equipment.
  - How quickly & completely driver performed their duties.
  - **NOTE**: Factors beyond a driver's control should not count against them.

Worksite Audit Process:

1. **Select a driver to audit and make time to conduct the audit.**
   a. Audits can be planned or conducted as opportunities arise.
   b. Supervisors may inform drivers of an audit at their discretion.
2. **As soon as the incident occurs, drive to the scene.**
   a. Worksite Audits must be performed on-scene, in real-time.
   b. Supervisor must record instances where they had to assist the driver.
3. **Perform the audit and complete the Worksite Audit form (Form R-1).**
   a. Complete the Worksite Audit form in real-time.
   b. Take pictures of the incident scene and driver activity.
4. **Discuss the audit with IMAP Leadership.**
   a. Review the audit form, pictures, and other supporting materials.
   b. Determine if additional training or corrective action is needed.
5. **Review the audit with the IMAP driver.**
   a. Discuss the driver's performance (good and bad).
   b. Implement any training or corrective action that was approved.
6. **Distribute and archive the completed Worksite Audit form.**
   a. Provide copies to IMAP Leadership & Division Safety Engineer.
   b. Place a hardcopy of Audit materials in the driver's employee file.

Introduction to Worksite Audits:

Objective: Introduce trainees to Worksite Audits.

Talking Points:

- **Worksite Audit** – an official review & evaluation of an IMAP driver's performance as they manage a traffic incident in live roadway conditions.

- Auditing is an important key to improved safety and performance.

- Auditing identifies unsafe acts and practices before an injury takes place.

- **When properly used, auditing can**:
  - Maintain standards by ensuring that IMAP drivers follow NCDOT/IMAP rules and procedures.
  - Identify where existing rules or procedures are insufficient.
  - Measure the effect of safety education and continuous training.
  - Reveal weaknesses in the safety program or training practices.
  - Motivate IMAP drivers by showing the result of their safety efforts.
  - Increase safety awareness.

- **IMAP supervisors are responsible for performing Worksite Audits for all of their drivers.**
  - At a minimum, supervisors should perform an audit once per month.
  - Supervisors must assure that each of their drivers is audited no less than once per year.

What is Audited (1 of 2):

Objective: Discuss the performance areas and other factors that are audited.

Talking Points:

- **Worksite Audits evaluate an IMAP driver's performance at an incident scene**:
  - o Crashes are the most common type of incident to audit.
  - o However, supervisors are encouraged to audit their drivers' performance at other types of incidents (e.g. disabled vehicles, etc.).
  - o Performing multiple audits for the same driver is also encouraged in order to evaluate their abilities with different services or strategies (e.g. push/pull/drag, detour implementation, etc.).

- Ideally, **IMAP supervisors audit their driver's performance for the entire incident** – from arrival on-scene to departure. However, this may not always be possible.
  - o Supervisors should seek to audit as much of the incident as possible.
  - o At a minimum, audits should begin when all initial/required measures are in-place (e.g. once traffic control is deployed).
  - o Supervisors should not perform an audit if the driver is wrapping up when the audit is ready to begin.

- When conducting a Worksite Audit, an **IMAP supervisor should focus on the driver's performance** which includes but is not limited to:
  - o Proper use of personal protective equipment (PPE) and other safe working practices.
  - o Safe driving practices and proper positioning of the IMAP truck.
  - o Effective and appropriate deployment of emergency traffic control (ETC) including use of emergency vehicle lights & arrow board.
  - o Accurate and effective communication and coordination with TMC dispatch, emergency responders, and motorists.
  - o Safe and effective delivery of IMAP services including vehicle/debris removal, motorist assistance, etc.
  - o Timeliness of all actions (i.e. taking action when it is needed and completing tasks quickly).

What is Audited (2 of 2):

Objective: Discuss the performance areas and other factors that are audited.

Talking Points:

- What drivers do on-scene should align with what the incident requires AND the environment that they are operating in.

- **To properly audit a driver, IMAP supervisors must consider:**
    - **Details of the incident that the driver is managing** (e.g. #/types of vehicles involved; presence of injuries, fatalities, or HazMat; etc.).
    - **Road geometrics and/or traffic conditions** (e.g. presence of hills/curves; work zones or other incidents nearby; speed/volume of traffic; etc.).
    - **Time of day & weather conditions** (e.g. nighttime operations; during AM/PM rush hour; wet/slick roads; etc.).

- **IMAP supervisors should also capture any other relevant observations** that they make during the audit – this includes but is not limited to:
    - Damage to the road or other NCDOT property.
    - Existing factors that impact safety (e.g. improper traffic control deployed by road work crews, flaws in roadway design/signage, fading lane markings, etc.).
    - Instances where NCDOT/IMAP rules or procedures are insufficient (i.e. driver could not achieve IMAP's goals even though they did what they were supposed to do).
    - **NOTE**: Any of the above factors should be documented on the audit form and reported to IMAP Leadership.
    - **NOTE**: Instances where NCDOT/IMAP rules or procedures are insufficient should NOT count against the driver when scoring their performance on the audit form.

Worksite Audit Form – NCDOT Form R-1 (1 of 2):

Revision Date:	7/02

Form R-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
WORKSITE AUDIT

Date: _____ Time: _____ AM/PM   Auditor Name: _____

Division: _____ Department: _____ County: _____

Worksite Location: _____

In-Travel Lane? _____ Posted Speed Limit: _____

Operation Being Audited: _____

Category	Rating			Observations/Corrective Actions	Abatement Date
	S	U	N/A	S=Satisfactory, U=Unsatisfactory, N/A=Not Applicable	If corrective actions needed
Safety Equipment					
Hard Hat					
Vest					
Shoes					
Hearing Protection					
Eye/Face Protection					
Foot Protection					
Gloves					
Chain Saw Chaps					
Other					
Traffic Control					
Signs					
Work Zone Length					
Flaggers					
Taper					
Cones, Drums					
Arrow Boards					
Attenuator					
Sight Distance					
Other					
Worksite					
Utilities Located/Guarded					
Excavation					
Confined Space					
Housekeeping					
Lockout/Tagout					
Fire Protection					
Hazardous Materials					
Electrical Hazards (GFCI)					
Other					

> Sample Form
>
> For online form,
> see: http://www.doh.dot.state.nc.us/forms/files/FORMR-1.doc

61-50010   (over)

Chapter 7 – Form R-1

Worksite Audit Form – NCDOT Form R-1 (2 of 2):

Revision Date:	7/02

Category	Rating			Observations/Corrective Actions	Abatement Date
	S	**U**	**N/A**	**S=Satisfactory, U=Unsatisfactory, N/A=Not Applicable**	If corrective actions needed
Tools					
In Safe Condition					
Used Correctly					
Right for Job					
Other					
Equipment					
Back-up Alarms					
Spotter for Backing					
Strobes/Warning Lights					
Seat Belt Use					
Pinch Points					
Other					
Elevated Work					
Ladders					
Lifelines					
Harness/Lanyards					
Scaffolds					
Other					
People					
Positioning					
Lifting Techniques					
Respiratory Hazards					
Skin Irritants					
Other					
Tailgate Safety Meeting					

Sample Form

For online form,
see: http://www.doh.dot.state.nc.us/forms/files/FORMR-1.doc

General Comments:

CC: Supervisor's Supervisor
Audit Review Subcommittee

Chapter 7 – Form R-1

How to Conduct Worksite Audits (1 of 2):

Objective: Provide guidance on how to properly conduct a Worksite Audit.

Process:

7. **Select a driver to audit and make time to conduct the audit.**
   a. Audits are best performed when they are intentionally planned. When an audit is planned, supervisors can patrol the route that the driver is on and can get to incidents sooner. Quicker arrival on-scene allows for a more thorough audit.
   b. Supervisors may perform audits as the opportunity arises (e.g. while patrolling, a supervisor sees one of their drivers at an incident scene).
   c. Supervisors may decide whether or not to inform their drivers in advance that they will be audited.

8. **As soon as the incident occurs, drive to the scene.**
   a. Worksite Audits must be performed on-scene, in real-time.
   b. Find multiple vantage points that allow you to properly observe the incident and what the driver is doing.
   c. Let the driver take the lead but step in to correct any immediately unsafe or improper action. On the audit form, make note of any corrections or guidance that you have to provide to the driver.

9. **Perform the audit and complete the Worksite Audit form (Form R-1).**
   a. Assess the incident, evaluate traffic conditions, and monitor the driver's performance.
   b. Complete the Worksite Audit form in real-time. Supervisor's observations become less accurate as time goes by.
   c. Take pictures of the incident scene and driver activity. Pictures clearly illustrate things that are observed during the audit.

10. **Discuss the audit with IMAP Leadership.**
    a. Review the Worksite Audit form, pictures, and any other supporting materials.
    b. Discuss the driver's performance (good and bad).
    c. Determine if additional training or corrective action is needed and make a plan for how to improve the driver's performance.
    d. Discuss any other observations (e.g. road damage, insufficient rules/procedures, etc.) and determine how to address/resolve them.

How to Conduct Worksite Audits (2 of 2):

Objective: Provide guidance on how to properly conduct a Worksite Audit.

Process:

11. Review the audit with the IMAP driver.

    c. Set aside time to go over the audit with the driver.

    d. Discuss the driver's performance (good and bad). Acknowledge areas where the driver did well and provide guidance for how they can improve.

    e. Implement any additional training or corrective action that was approved by IMAP Leadership.

12. Distribute and archive the completed Worksite Audit form.

    c. Scan the completed form and email it to your IMAP Leadership and to the Division Safety Engineer.

    d. Place a hardcopy of the completed form in the driver's employee file.

    e. Any pictures/supporting materials should also be distributed and archived.

Trial Exercise: Worksite Audits

Objective: Test trainees' understanding of Worksite Audits.

Instructions: Ask discussion questions and engage trainee on scenarios related to the audits. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**
  - How can an IMAP supervisor conduct a Worksite Audit for an entire incident (i.e. from driver's arrival on-scene to departure)?

  - What is the difference between a Worksite Audit and an After-Action Review (AAR)?

  - Worksite Audits can improve a single driver's performance, but how can a supervisor use audits to improve the IMAP program, overall?

- **Scenarios: As an IMAP Supervisor, What Would You Do?**
  - You have received complaints about one of your drivers and you have observed them making mistakes. However, whenever you conduct a Worksite Audit for them, their performance is impeccable.

  - You start a Worksite Audit for one of your drivers but quickly get drawn into the incident that you're trying to audit. Before you realize it, the incident is over, and the audit form is practically blank.

  - You complete a Worksite Audit and meet with the driver that was audited. Your evaluation of their performance is not good. The driver disagrees with your evaluation and says that your audit is inaccurate. They claim that they didn't do what you say they did.

  - You are conducting a Worksite Audit for one of your drivers. You see the driver perform a task in a way that you haven't seen before. Their method does not align with NCDOT/IMAP policy. However, their method appears to be safe and it was definitely effective.

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 – ACCEPTABLE	3 - EXCEPTIONAL
PASS/FAIL FOR COURSE (circle PASS or FAIL below - FAIL requires comments)		
PASS or FAIL	COMMENTS:	

Description:

Familiarize trainees with the processes and guidelines used by IMAP supervisors when deploying IMAP drivers to other regions in support of major events.

Objectives:

- Introduce trainees to major events and to IMAP's role in their response.

- Summarize the major event process from before the event to after.

- Discuss the various roles and hierarchies involved in major events.

- Discuss how IMAP supervisors prepare for major events in advance.

- Provide guidance on how to prepare for approaching major events.

- Discuss guidelines and strategies for IMAP during major event response.

- Discuss activities that occur after a major event has concluded.

- Test trainee's understanding of major events and IMAP deployment.

Audience: IMAP Supervisors

Duration of Training: 3 hours

Prerequisite Knowledge: Before participating in this course, trainees should complete the following courses and review supporting documents:

- Field Training Guide for IMAP Instructors (aka "IMAP Training Manual")
- GE-300: IMAP Program
- GE-301: The IMAP Supervisor Role
- COM-300: Communicating with IMAP Drivers
- VE-300: IMAP Vehicles & Equipment
- CT-300: Monitoring Traffic & IMAP Driver Activity
- CT-301: Coverage & Route Assignments
- IM-300: Incident Management Strategies
- IM-301: ICS & Multi-Unit Coordination

Quick Sheet – Deployment for Major Events (1 of 2):

Objective: Use this simplified guide to discuss deployment for major events.

Talking Points:

- **Major Events** – planned or unplanned events that severely impact safety & traffic flow for one or more regions:
    - **Adverse Weather** (unplanned): Hurricanes/Tropical Storms; Winter Weather; other impacts such as flooding or rockslides.
    - **High Attendance/High Profile Events** (planned): events such as the Republican or Democratic National Conventions in Charlotte.

- **Affected Regions** – areas directly impacted by event; often the home region of local IMAP teams.

- **Deploying Regions** – IMAP regions that will deploy IMAP personnel /resources to an Affected Region to support major event response.

- **IMAP is responsible for executing NCDOT's Response Plan (RP).**

Overview of IMAP Deployment & Event Response Process:

- **EVENT IS IDENTIFIED:**
    - Event timing & impacts are assessed.
    - Response planning begins & decision to deploy IMAP from other regions is made.
    - NCDOT's RP is finalized; Affected & Deploying IMAP regions prepare for the event.
- **EVENT BEGINS:**
    - Affected & Deploying IMAP regions execute NCDOT's RP.
    - RP is updated as event progresses and conditions change.
- **EVENT ENDS:**
    - Recovery Plan (if needed) is developed and executed to resolve any lingering impacts.
    - Decision to return to normal operations is made and deployed IMAP personnel return to their home regions.
    - Affected & Deploying IMAP regions return to normal operations.
    - All IMAP and other NCDOT personnel who were involved with event participate in an After-Action Review (AAR). RPs are updated to reflect lessons-learned.

Quick Sheet – Deployment for Major Events (2 of 2):

Objective: Use this simplified guide to discuss deployment for major events.

NCDOT Roles & Hierarchy for Major Events:

- **Division/Regional Leadership** – Leads response planning and directs response efforts in their region.
- **Statewide Operations Group** – Supports response planning and coordinates with internal/external partners and other state DOTs.
- **IMAP from Affected Region** – reports to their IMAP Leadership; IMAP supervisors often direct IMAP staff from Deploying Regions.
- **IMAP from *Deploying Region*** – reports to their IMAP Leadership but takes direction from IMAP leader/supervisors from the Affected Region.

Summary of Event Prep, Response Activities, and other Guidelines:

- **EVENT PREP – Continuous Efforts:**
    - Assure drivers understand what is expected of them during major events (sudden deployment, long hours, away from home, etc.).
    - Familiarize drivers with event RPs and provide refresher training on event-specific equipment and response strategies.
- **EVENT PREP – Immediately Before Event:**
    - Fully evaluate and understand the event, its impacts, what NCDOT's RP is, what IMAP will do, and what resources are needed.
    - Check and prepare your event-specific resources. Inventory your supplies. Assure that your drivers & trucks are fully equipped.
    - Confirm event patrol routes & operating hours. Identify drivers who will deploy. Create Driver Schedules.
    - Communicate with your drivers & IMAP Leadership.
- **DURING THE EVENT:**
    - Assure that drivers follow normal rules/routines, execute NCDOT's RP properly, and are taking appropriate safety precautions.
    - Continuously communicate with Event Leadership, IMAP Leadership, and your drivers. **Use Plain English over the radio**.
    - Take pictures of incident scenes, damage, etc. and send to TMC.
- **AFTER THE EVENT:**
    - Inspect, return, and inventory all equipment.
    - Establish & execute a plan to return to normal operations.
    - Participate in an After-Action Review (AAR) of the event.

Introduction to Deployment for Major Events (1 of 2):

Objective: Introduce trainees to major events and to IMAP's role in their response.

Talking Points:

- This course focuses on major events that have a significant regional/statewide impact and where IMAP is typically deployed to support response efforts. However, many topics discussed in this course will still be relevant to IMAP support for smaller, regional events.

- **Major Events** – planned or unplanned events that severely impact safety and traffic flow for one or more regions and where additional resources and/or unique strategies are required to properly mitigate or resolve these impacts.

- **Adverse Weather** (unplanned)
  - Most often refers to Hurricanes/Tropical Storms or Winter Weather. Can also refer to other severe weather impacts (e.g. heavy rain resulting in region-wide flooding or rock slides).
  - Typically regarded as "unplanned" due to the uncertainty of the event's timing, location, and severity.
  - Common impacts include: destructive winds; limited visibility; road/infrastructure damage or destruction; power outages; road closures due to debris or flooding; hazardous road conditions due to snow & ice; and more frequent/more severe traffic incidents.

- **High Attendance/High Profile Events** (planned)
  - Most often refers to events that receive a high degree of national or international attention and whose attendance level is high enough to severely disrupt normal traffic flow (e.g. Republican or Democratic National Conventions).
  - Typically regarded as "planned" because the event's timing and location are known well in advance.
  - Common impacts include: significantly higher than normal congestion; road closures to accommodate event venues and general ingress/egress; and heightened public safety concerns due to increase in pedestrian traffic and/or potential for criminal activity/terrorism.

Introduction to Deployment for Major Events (2 of 2):

Objective: Introduce trainees to major events and to IMAP's role in their response.

Talking Points:

- Throughout this course, two main groups will be discussed: **Affected Regions** and **Deploying Regions**. These groups are impacted by major events differently and often have different responsibilities.

- **Affected Regions**
    - Refers to regions that are directly impacted by a major event.
    - Most often, these are also the home regions of local IMAP teams.
    - IMAP in these regions typically play a larger role in the response planning process.

- **Deploying Regions**
    - Refers to the IMAP regions who will deploy IMAP personnel to an Affected Region to support major event response.
    - IMAP in these regions may play a smaller role in the planning process. However, their role in event preparation and response execution is essential to the overall success of NCDOT's response efforts.

- Regardless of whether an IMAP team is in the Affected Region or the Deploying Region, **IMAP is responsible for executing NCDOT's Response Plan (RP).**

- **With Major Events, IMAP supervisors are responsible for:**
    - Assisting with efforts to plan for the event & develop NCDOT's RP.
    - Coordinating the drivers, vehicles, & equipment required by the RP.
    - Assuring that their drivers, vehicles, & equipment are ready to support major event response whenever the need arises.

- All IMAP personnel must maintain a thorough & up-to-date knowledge of the following documents that support major event response:
    - **NCDOT Workplace Safety Manual** – provides general guidance on safety equipment and safe working practices.
    - **NCDOT Emergency Response Manual** – provides guidance on response strategies used by other NCDOT groups (e.g. maintenance).
    - **Regional Emergency Response Plans** – provides instructions on how NCDOT within a region will respond to specific/common events.
    - **Field Training Guide for IMAP Instructors** – provides detailed guidance on routine and emergency response strategies and equipment.

Overview of IMAP Deployment & Event Response Process:

Objective: Summarize the major event process from before the event to after.

EVENT IS IDENTIFIED

- Timing and expected impacts of the event are identified and assessed.

- Initial Response Plan is developed by Event Leadership, Affected Regions, and other stakeholders.

- Need for additional IMAP is identified and the decision to request IMAP from other regions is made.

- Regions who can deploy IMAP accept the deployment request.

- Affected & Deploying Regions help finalize NCDOT's Response Plan; IMAP supervisors brief their teams on the Response Plan.

- Affected Regions prepare for the event; Deploying Regions prepare for deployment; General logistical needs are addressed (e.g. lodging, etc.).

- Vehicles/equipment required for event response are prepped and/or distributed; If needed, regions loan resources to address resource gaps.

- Affected & Deploying Regions begin pre-event response efforts (e.g. immediate towing, etc.).

EVENT BEGINS

- Affected & Deploying Regions execute NCDOT's Response Plan.

- Progress and results of response efforts & event impacts are evaluated; Response Plan is updated to address current conditions/needs.

EVENT ENDS

- Lingering impacts of event are assessed and Recovery Plan (if needed) is developed; Affected & Deploying Regions execute Recovery Plan.

- Lingering impacts are resolved; Decision to return to normal operations is made by IMAP Leadership of Affected & Deploying Regions.

- Deploying Regions return to their home regions and execute steps to return to normal operations.

- Affected & Deploying Regions participate in an After-Action Review (AAR) of the event; Response Plans and strategies are updated to reflect lessons-learned.

Overview of Major Event Roles & Hierarchy:

Objective: Discuss the various roles and hierarchies involved in major events.

- **Common Major Event Roles** – major events are supported by numerous groups/agencies. Though their roles change depending on the event (what it is and where it is), all major events involve the same two, basic roles:
  - **Event Leadership** – holds final decision-making authority over event response efforts. For high profile/attendance events, this may be the event venue or a higher authority (e.g. Democratic Party & Secret Service during the 2012 Democratic National Convention). For adverse weather events, this may be federal or state emergency management (FEMA/NCEM) or the Governor of North Carolina.
  - **Event Stakeholders** – follow the direction of Event Leadership and support the event by contributing resources and/or directly engaging in response efforts. ***All groups described below are considered, Event Stakeholders.***

- **State and Local Emergency Responders** – focuses on public safety, law and order, damage prevention, clean-up and recovery. Includes numerous agencies including but not limited to State/Local Law Enforcement; Fire & Emergency Medical Services; and Volunteers.

- **NCDOT** – focuses on transportation safety and maintaining the flow of goods, services, and people. Lead by the Secretary & Board of Transportation.
  - **Division/Regional Leadership** – holds final decision-making authority over NCDOT response in their region; includes leaders of other NCDOT groups in the region including Maintenance & IMAP.
  - **Statewide Operations Group** – supports event planning process; coordinates with internal/external partners to acquire resources and address logistical needs.

- **IMAP Reporting Structure During Major Events:**
  - **IMAP Leadership (Affected Region)** – directs all IMAP staff involved in event; reports to their Division/Regional Leadership.
  - **IMAP Supervisors (Affected Region)** – directs drivers & supervisors from Affected/Deployed regions; reports to their IMAP Leadership.
  - **IMAP Supervisors (*Deployed Region*)** – reports to their IMAP Leadership and to IMAP supervisors from Affected Regions; may direct drivers if specifed in the Response Plan.

EVENT PREP – Continuous Efforts:

Objective: Discuss how IMAP supervisors prepare for major events in advance.

Talking Points:

- Major events are extremely complex and demanding on everyone involved with them. Proper preparation is an on-going activity. Supervisors must continuously work to make themselves and their drivers ready.

- **Manage Driver Expectations** – assure that drivers understand:
  - All IMAP staff must support event response when the need arises.
  - Major events can happen at any time, so the call to respond will almost always come at short notice.
  - Response often requires working long hours and on different days.
  - Deployment to other regions may be required, so drivers must be prepared to be away from their families/homes for multiple days.
  - Event response requires different tools/strategies, so drivers must be adaptable and prepared to operate outside of their comfort zone.

- **Train Yourself and Your Drivers:**
  - Be familiar with the NCDOT Emergency Response Manual and with your Region's Emergency Response Plans for different events.
  - Routinely practice how to use event-specific equipment such as Portable CMS, Sand Trucks & Plows, etc.
  - Provide regular refresher training on major event strategies and guidelines such as Immediate Tow, Emergency Traffic Control (ETC), Dispatch Protocol, Adverse Weather Gear & Safety Procedures, etc.

- **Keep Your Resources Ready:**
  - Regularly inspect the vehicles/equipment used during major events.
  - Rotate event-specific vehicles/equipment into daily use or routinely practice with them to assure that they work when they're needed.
  - Assure that your equipment inventory is properly stocked so your team does not run out of resources during a sudden event.
  - Assure that adverse weather gear is stored properly, in good condition, and that you have enough to fully outfit all drivers.
  - Assure that all drivers know where event-specific resources are kept and how to access them, when needed.

EVENT PREP – Immediately Before Event (1 of 3):

Objective: Provide guidance on how to prepare for approaching major events.

Talking Points:

- **Assess IMAP's Situation Completely:**
  - **Understand the Event** – What is it? Where is it? When will it begin & end? What type of impacts can be expected?
  - **Understand the Players** – Who are the leaders & decision-makers? Who do I and my drivers report to? What other groups with NCDOT are involved? What other stakeholders are involved?
  - **Understand NCDOT's Response Plan** – What will IMAP do, where will they do it, and when will they do it? What are other NCDOT groups doing and how does that affect IMAP? How will IMAP communicate among themselves and with other stakeholders?
  - **Understand the Resource Needs** – What drivers, vehicles, and other equipment does the Response Plan call for? Do I have enough resources for my team? Can my team provide resources to another region? What food, fuel, lodging, etc. is available in the affected region? Who will provide or pay for these resources?

- **Check & Prepare Your Resources:**
  - If needed, unpack and equip drivers with adverse weather gear and other event-specific resources that may be needed (e.g. extra batteries, blankets, snacks & water, etc.).
  - Inspect any event-specific vehicles/equipment that will be used. Assure that they work and are event-ready.
  - Assure that all driver's trucks are refueled and fully-stocked with equipment.
  - Inventory your supplies. Assure that you have what you need for your drivers AND for drivers from other regions. Assure that your vehicle/equipment assignment records are up-to-date, so you know what has been assigned and to whom.
  - Consider how the event may impact your resources (deployed or at headquarters). Equipment outdoors may need to be brought in or better secured. If Response Plan calls for equipment to be deployed, determine how you will deploy it and when (e.g. Driver-X will deploy CMS along evacuation routes AFTER high winds subside).

EVENT PREP – Immediately Before Event (2 of 3):

Objective: Provide guidance on how to prepare for approaching major events.

Talking Points:

- **Establish a Coverage Plan – Affected Region:**
  - Are additional routes being added to what is normally covered?
  - Are operating hours different from or longer than normal hours?
  - What routes/hours can your team cover and what do you need a team from another region to cover?
  - **Create an Event Driver Schedule** that shows which drivers will be assigned to specific routes and when. Coordinate with IMAP supervisors from Deploying Regions to create this schedule. Get approval from your IMAP Leadership before publishing the schedule.

- **Establish a Coverage Plan – Deploying Region:**
  - How many drivers will your region deploy and how does that affect coverage/operating hours in your home region?
  - If you/other supervisors from your region will deploy, who will serve as the supervisor for drivers who do NOT deploy?
  - **Ask your drivers for volunteers to deploy.** If needed, you may have to assign drivers to deploy in order to fulfill the Response Plan.
  - **Create a Driver Schedule** that shows how coverage will be maintained in your home region by the drivers who do not deploy. Coordinate with your IMAP Leadership, especially if home coverage cannot be adequately maintained. With approval from your leadership, you can ask other regions to deploy drivers to help provide coverage in your region.

- **COMMUNICATE to your IMAP Leadership:**
  - Advise what your resource needs are (equipment & people). Regions who do not deploy may be able to loan resources that you need.
  - Advise what resources your team has that can be loaned to other regions – especially those who are Affected/Deploying.
  - Advise how IMAP operations in your region will be impacted by the event, whether this is a direct impact from the event or indirectly because your region is deploying drivers. Discuss and plan for how to resolve or mitigate these impacts. Advise your local responders and TMC dispatch of any changes to your team's operations.

EVENT PREP – Immediately Before Event (3 of 3):

Objective: Provide guidance on how to prepare for approaching major events.

Talking Points:

- **COMMUNICATE to your IMAP Drivers:**
  - Brief them on the event and the Response Plan. Assure that they understand what they will be doing, including any special assignments or event-specific strategies or guidelines.
  - Advise them of where they will deploy and when. Provide times and addresses for key locations (e.g. Hotel, meet-up locations, etc.).
  - Provide them with the Event Driver Schedule and assure that they understand where they will patrol and when. As much as possible, familiarize them with the area and/or offer guidance on how to navigate it (e.g. some event routes do not have mile markers, so land marks or cross streets are better ways to describe location).
  - Instruct them on what equipment to bring and provide information on resources available in the affected region (e.g. where to get fuel, food, etc.).
  - Get up-to-date contact info and emergency contacts for any driver who is involved in the event response. Share this info with the IMAP Leadership of the affected region.
  - (For Deploying Regions) Provide drivers who will not deploy with a Driver Schedule that shows how coverage in their home region will be maintained and, if needed, who their supervisor will be.

During the Event (1 of 5):

Objective: Discuss guidelines and strategies for IMAP during major event response.

Talking Points:

- **Normal Rules/Routines Still Apply.** IMAP supervisors must assure that essential routines and standards are still being maintained, such as:
  - Drivers are present and on-time for duty according to the Event Driver Schedule. Supervisors must still record the days and hours that deployed drivers work during the event.
  - Drivers are performing normal vehicle/equipment inspections at the start and end of each day/shift.
  - Drivers know which routes/areas they have been assigned to and understand the event-specific tasks that they must perform.
  - Drivers are performing their duties safely & properly. They are adhering to the Response Plan – including communication/dispatch protocols.
  - Drivers are safe and accounted for at the end of each day/shift.

- **Communication is Key.** IMAP supervisors play a vital role in the chain of communication. During events, supervisors should:
  - **At the start of each day/shift**, communicate with IMAP Leadership to confirm the day's action plan and to receive new info/instructions.
  - **Every hour**, perform a status check with each of your drivers to keep track of their location, status, and needs in real-time.
  - **As significant issues arise**, communicate with IMAP Leadership and drivers to address time-sensitive issues or to relay new info.
  - **At the end of each day**, communicate with IMAP Leadership to describe activity levels & to relay suggestions, concerns, or questions.
  - (For Deployed Supervisors) **Every day**, check in with supervisors /leadership from your home region to provide updates on event response and to assess needs back home.

During the Event (2 of 5):

Objective: Discuss guidelines and strategies for IMAP during major event response.

Talking Points:

- Clear information is essential to effective incident/event response. During major events, CCTV cameras (the resources that provide the clearest information) are often not working or not available.

- Throughout event response, IMAP personnel should take pictures of lane closures, incident scenes, or other unique situations and should send them to TMC dispatch. Pictures help TMC dispatchers and Event Leadership make decisions that improve event response and keep IMAP safe.

- **To take and send pictures to TMC dispatch, IMAP personnel should follow the steps below:**
    1. Open the Camera App on your smartphone.
    2. Take pictures of the scene/situation (1-3 pictures should be sufficient).
    3. Open your smartphone's Photo Album to access the pictures you have taken (this can typically done within the Camera App, itself).
    4. Tap the "Send" icon and select the picture(s) that you wish to send to TMC dispatch.
        a. Send only 1-3 pictures at a time.
        b. Sending more than 3 pictures at a time will take much longer and may not send at all.
    5. Tap the "Email" icon OR the "Text Message" icon to choose how you will send the picture(s) that you have selected.
    6. A message window will open with your selected picture(s) attached. In the "To:" line, type the email address of your TMC (e.g. STOC = stoc@ncdot.gov).
        a. Entering an email address instead of a cell number is okay – even if you choose to send via Text Message.
        b. Your pictures will still send, regardless.
    7. Tap the "Send" button.
        a. If you chose to send via Email and did NOT enter a subject, you may be prompted to enter one at this time. You do not have to enter a subject in order to send.
        b. If you are prompted to select a size for the picture(s) your are sending, choose, "Actual Size" (or similar option).

During the Event (3 of 5):

Objective: Discuss guidelines and strategies for IMAP during major event response.

Common Major Event Strategies/Guidelines:

- **Immediate Tow:**
    - When IMAP drivers and law enforcement arrange for any vehicles parked on/near roadways in the event area to be towed away as soon as they are discovered (rather than waiting 24+ hours as required during normal, "Signal 4" operations).
    - Used to keep roads clear of abandoned vehicles which significantly obstruct evacuations, snow removal, and general traffic flow.
    - Immediate Tow is most often implemented days in advance of an event but may remain in effect during or after the event as well. Implementation and Cancellation of Immediate Towing can only be authorized by NCDOT's Statewide Operations Group with concurrence from the NC Highway Patrol (SHP).

- **Emergency Traffic Control (ETC):**
    - ETC is a core strategy used by IMAP every day. However, major events often introduce roadway configurations or other situations that many IMAP rarely encounter, if ever.
    - Uncommon ETC situations that happen frequently during major events include closing entrance/exit ramps, deploying ETC on low-volume roadways near parking lot/business entrances, diverting traffic onto shoulders or into the opposite direction of travel, or closing entire intersections that are equipped with traffic signals.
    - IMAP supervisors should familiarize themselves and their drivers with the proper ETC configurations for these situations and train their team to deploy this kind of ETC.
    - For details on various major event ETC, supervisors should review the Field Training Guide for IMAP Instructors and should seek guidance from IMAP Leadership. Other local partners, such as Maintenance personnel or law enforcement often have experience with this type of ETC and can be a resource to help familiarize IMAP.

During the Event (4 of 5):

Objective: Discuss guidelines and strategies for IMAP during major event response.

Common Major Event Strategies/Guidelines:

- **Event-Specific Vehicles/Equipment:**
  - Primarily refers to Sand Spreaders, Snow Plows, and Portable CMS.
  - Sand Spreaders are used to increase traction on icy roads by putting a layer of sand on the road. Sand spreaders are often used in conjunction with Snow Plows.
  - Snow Plows are used to increase traction on icy roads by removing snow and ice from travel lanes. During winter weather, IMAP uses Sand Spreaders and Snow Plows to address problematic icy spots (i.e. where crashes continue to occur) AND to increase traction in lanes leading up to long-term incident scenes to prevent vehicles from sliding into responders.
  - Portable CMS are used to provide event-related instructions such as evacuation routes or closure information to motorists. CMS are most often deployed in key locations (e.g. on evacuation routes, in advance of event parking areas, etc.).
  - Experience with and access to event-specific vehicles/equipment varies from IMAP region to IMAP region. Guidance on their use can be found in the Field Training Guide for IMAP Instructors. Supervisors are also encouraged to reach out to IMAP regions that frequently use this equipment to coordinate hands-on training for their drivers.

- **Safety Guidelines:**
  - **Safety is always #1**. However, major events often introduce unsafe situations that IMAP may be unfamiliar with. Complete safety guidance can be found in the NCDOT Workplace Safety Manual. The items below represent common, event-related guidelines.
  - **Do NOT attempt to cross flooded roads**. Water can be deeper than expected and is faster-moving and more powerful than you realize.
  - **IMAP ceases outdoor operations when wind speeds exceed 60mph**. This is the threshold to stop what you're doing and seek shelter. However, wind can still be unsafe or have a destructive affect well below 60mph (e.g. damaging raised arrow boards, flying debris, etc.).

During the Event (5 of 5):

Objective: Discuss guidelines and strategies for IMAP during major event response.

Common Major Event Strategies/Guidelines:

- **Dispatch Protocol:**
    - Dispatch protocol (and guidelines for radio use, in general) almost always change during a major event.
    - New or different VIPER talkgroups are often established specifically for IMAP drivers involved in event response.
    - Additional radio users may also communicate over the talkgroup(s) used by IMAP, such as NCDOT Maintenance or local law enforcement. **For this reason, Plain English should be used instead of 10-Codes.**
    - Some routes that are patrolled during major events do not have mile markers or exit numbers. In these situations, IMAP drivers and TMC dispatchers may have to refer to land marks or cross streets in order to describe incident locations.
    - Dispatch protocol (i.e. the order in which information is relayed and the specific phrasing used) is standardized, statewide. However, significant regional variance exists from region to region. During major events, IMAP from multiple regions must communicate with one another and overcome these "regional radio dialects." In this situation, patience and Plain English are key.

After the Event:

Objective: Discuss activities that occur after a major event has concluded.

Talking Points:

- **Major event response and IMAP deployment ends when Event & IMAP Leadership advise that the event is over**. When this direction is received, IMAP supervisors involved in the event should meet with all other event-IMAP to inform them that the event is over and to release deployed IMAP to return to their home regions.

- Before returning home, deployed IMAP must perform a full inspection and inventory of their vehicles/equipment. Any items that were loaned to them by another IMAP region must be accounted for and/or returned to the appropriate region's IMAP supervisor.

- IMAP supervisors who loaned vehicles/equipment must inspect any resources that are returned to them and must document the condition that they were returned in. Supervisors who receive returned resources must also review & update their inventories to confirm that all loaned resources were returned properly.

- When the event is over, IMAP supervisors should meet with their IMAP Leadership to plan for their region's return to normal operations.
    - Most often, this means creating a Driver Schedule to reintegrate deployed drivers.
    - However, any issues that affect a return to normal operations should be discussed (e.g. time off for deployed drivers, vehicle/equipment repairs, etc.).
    - If a return to normal operations is affected, IMAP supervisors should advise their TMC and local responders, and should provide a timeframe for when normal operation may resume.

- As soon as possible following the event (2 weeks, max.), IMAP supervisors should participate in an After-Action Review (AAR) to discuss the event and identify ways that future event response can be improved. Suggestions or concerns from the AAR should be communicated to the region's IMAP Leadership and to NCDOT's Statewide Operations Group.

Trial Exercise: Deployment for Major Events

Objective: Test trainees' understanding of major events and IMAP deployment

Instructions: Ask discussion questions and engage trainee on scenarios related to the major events. Circle trainee's score for exercise based on their answers & scenarios.

- **Discussion Questions:**
  - How are the impacts of a Hurricane different from the impacts of Winter Weather?

  - What is the greatest threat to an IMAP driver's safety during a high attendance/high profile event?

  - Under what circumstances would it be appropriate for an IMAP region to decline a request to deploy drivers to a region affected by a major event?

  - How can the concepts discussed in this course be applied to smaller, regional events?

- **Scenarios: As an IMAP Supervisor, What Would You Do?**
  - A Hurricane is approaching, and confidence is high that it will severely impact your region. Everyone is talking about it, but you haven't heard any specifics about a Response Plan.

  - Your region is deploying half of your IMAP team to another region to assist with a multi-day event. You don't have enough drivers to adequately cover your region's routes or operating hours.

  - It is Day 4 of an extremely destructive weather event in your region. The event does not seem like it will end soon. You and your drivers are exhausted.

  - Your region receives a request to deploy drivers to another region for a major event. You've asked for volunteers, but no one has stepped up.

TRIAL EXERCISE SCORE (circle 1, 2, or 3 below)		
1 - UNACCEPTABLE	2 – ACCEPTABLE	3 - EXCEPTIONAL
PASS/FAIL FOR COURSE (circle PASS or FAIL below - FAIL requires comments)		
PASS or FAIL	COMMENTS:	

IMAP Supervisor Regional Training Checklist

Description:

The course materials provided in the IMAP Supervisor Training Guide establish the core responsibilities and guidelines for IMAP supervisors in all IMAP regions. However, trainees must also become familiar with the specific practices used in their home regions. This document identifies the region-specific practices that must be discussed with trainees in order to complete IMAP Supervisor training.

Instructions:

1. Provide trainees with a blank copy of the **IMAP Supervisor Regional Training Checklist** (this document). Advise trainee that they must keep up with this document, assure that it is completed, and return it to the IMAP instructor at the end of training.

2. During On-the-Job Training (OJT) and other periods as determined by the IMAP instructor, trainees should engage existing IMAP supervisors/Leadership for their home region in discussion on the items presented in this checklist.

3. As each checklist item is discussed, the trainee's IMAP supervisor/Leadership should initial the item to confirm that it was discussed with the trainee.

4. At the end of training, the trainee must return this completed checklist to the IMAP instructor.

5. IMAP instructors should review trainee's Regional Training Checklists to assure they are complete when filling out the **IMAP Supervisor Approval Form**.

6. Once the trainee's approval status has be determined and all training is officially complete, this checklist should be archived in the employee's training records.

IMAP Supervisor Regional Training Checklist (1 of 4):

GE-301: The IMAP Supervisor Role	
REGIONAL ITEMS TO DISCUSS:	**REG. COACH INITIALS:**
Overview of reporting structure for IMAP in region	
Introduction to TMC Managers, Supervisors, and Operators that support region	
Introduction to other regional employees that trainee will frequently interact with	
COM-300: Communicating with IMAP Drivers	
REGIONAL ITEMS TO DISCUSS:	**REG. COACH INITIALS:**
Regular meetings that IMAP supervisors are responsible for	
Other regional communication routines or meetings that IMAP supervisors attend	
COM-301: Partner Engagement	
REGIONAL ITEMS TO DISCUSS:	**REG. COACH INITIALS:**
IMAP Customer Feedback cards	
Local Partners - descriptions, locations, points of contact, and contact info	
Local Partner Engagement - overall strategies/goals; current engagement efforts; regular meetings; partner-specific services & agreements; etc.	
Partner Engagement Materials - brochures, handouts, business cards for IMAP supervisors, etc.	
IMAP Leadership guidelines for IMAP supervisors engaging with partners	

IMAP Supervisor Regional Training Checklist (2 of 4):

VE-300: IMAP Vehicles and Equipment	
REGIONAL ITEMS TO DISCUSS:	**REG. COACH INITIALS:**
Division Equipment Shop(s) & Service Providers - descriptions, locations, and contact info	
Vehicle & Equipment Assignment - existing assignments, tools for tracking assignments, etc.	
Vehicle & Equipment Inventory - existing inventories; tools/practices for tracking vehicles, equipment, and other IMAP supplies; etc.	
Storage - approved parking and equipment storage facilities, security measures, storage routines, etc.	
Vehicle & Equipment Maintenance - existing practices and/or tools for tracking and scheduling maintenance activities.	
Procurement - practices for requesting and purchasing new/replacement vehicles, equipment, and other IMAP supplies.	
Disposal - practices for disposing of and/or turning in IMAP resources; approved disposal sites and other guidelines.	

CT-301: Coverage and Route Assignments	
REGIONAL ITEMS TO DISCUSS:	**REG. COACH INITIALS:**
Hours of Operation - normal hours, shift hours, after-hour response guidelines, supervisors' schedule/hours, etc.	
IMAP Routes - normal patrol routes; response areas & guidelines; coverage guidelines; etc.	
IMAP Drivers - number of drivers/staffing levels; employee classifications; division assignments; etc.	
Driver Schedule production & publication process	
Time Off request & approval process for IMAP supervisors and drivers	
Time entry & payroll practices and guidelines for IMAP supervisors and drivers	
Off-Route Response guidelines	

IMAP Supervisor Regional Training Checklist (3 of 4):

CT-302: Driver Training and Continuing Education	
REGIONAL ITEMS TO DISCUSS:	**REG. COACH INITIALS:**
Mentoring/Succession-Planning - guidelines & limitations for IMAP drivers to fill in as IMAP supervisor or perform "supervisor-level" tasks	
Training Resources - training spaces (i.e. conference rooms, driver tracks, etc.), training materials, and internal/external training opportunities (e.g. First Aid, SHRP-2, etc.)	
Additional training requirements for IMAP supervisors and drivers	
Corrective Action - practices, forms, and other guidelines for corrective action and other formal disciplinary measures to address deficient IMAP driver performance/behavior.	

CT-303: Incidents Involving IMAP	
REGIONAL ITEMS TO DISCUSS:	**REG. COACH INITIALS:**
NCDOT Workplace Safety Manual - chapter on workplace incidents and investigations.	
Incident & Investigation Forms - all forms including: Employee Statement Form, Form 140 (if IMAP equipment involved), and Incident Investigation Summary Form	
Region-specific process and points of contact when responding to & investigating incidents involving IMAP	

IM-300: Incident Management Strategies	
REGIONAL ITEMS TO DISCUSS:	**REG. COACH INITIALS:**
Common challenges and regional IM Strategies	
Unique regional IM resources/equipment	

IM-302: Worksite Audits	
REGIONAL ITEMS TO DISCUSS:	**REG. COACH INITIALS:**
Performance goals for IMAP supervisors & drivers	
Other regional auditing/performance measurement practices for IMAP	
Formal performance review process and materials for IMAP supervisors & drivers	

IMAP Supervisor Regional Training Checklist (2 of 4):

IM-303: Deployment for Major Events	
REGIONAL ITEMS TO DISCUSS:	**REG. COACH INITIALS:**
NCDOT Emergency Response Manual	
Regional Emergency Response Plans	
Event-specific Resources - portable CMS, sand truck/plow, adverse weather gear, etc.	
Event Logistics - practices and responsible parties for event logistics including lodging, meals, transporting employees to-from work, etc.	
Procurement of event resources & P-Card use	
Coverage plans for home region if IMAP supervisors and drivers are deployed to another region	

Description:

The following is used to confirm that an employee has completed all assigned training and to document that the employee is approved to serve as an IMAP supervisor.

Instructions:

Once the employee has completed all assigned training, perform the following steps:

1. Complete the **Course Performance Summary** sheet to summarize the employee's performance for each course they were assigned.

2. Review the employee's **IMAP Supervisor Regional Training Checklist** to assure that all appropriate topics have been reviewed with the employee.

3. Meet with the employee's supervisors and/or IMAP Leadership to assess their performance during training and to complete & sign the **IMAP Supervisor Approval Form**.

4. Notify employee of their approval status as appropriate and file the completed & signed copy of this document in the employee's training record.

Course Performance Summary:

	DATE TRAINED:	COURSE PASS/FAIL:	INSTRUCTOR COMMENTS:
GE-300: IMAP Program			
GE-301: The IMAP Supervisor Role			
COM-300: Communicating with IMAP Drivers			
COM-301: Partner Engagement			
VE-300: IMAP Vehicles and Equipment			
CT-300: Monitoring Traffic and IMAP Driver Activity			
CT-301: Coverage and Route Assignments			
CT-302: Driver Training and Continuing Education			
CT-303: Incidents Involving IMAP			
IM-300: Incident Management Strategies			
IM-301: ICS and Multi-Unit Coordination			
IM-302: Worksite Audits			
IM-303: Deployment for Major Events			

IMAP Supervisor Approval Form:

TRAINEE INFORMATION:				
TRAINEE NAME:				
DATE OF HIRE:	**TRAINING START STATE:**	**TRAINING END DATE:**	**COMPLETED COURSES (Y/N)?**	**REG. TRAINING COMPLETE (Y/N)?**

IMAP INSTRUCTOR RECOMMENDATION:		
INSTRUCTOR NAME:	**APPROVE SUPERVISOR?**	**INSTRUCTOR SIGNATURE:**

INSTRUCTOR COMMENTS:	DATE:

IMAP MANAGER FINAL RULING:		
MANAGER NAME:	**APPROVE SUPERVISOR?**	**MANAGER SIGNATURE:**

MANAGER COMMENTS:	DATE:

Exhibit E
IMAP Truck Dimensions, Sponsorship, Vehicle Equipment, CMS, and CCTV Cameras

F-450

F-450

F-450

IMAP SPONSORSHIP MATERIALS

Graphic Location	Graphic	Size	Color	Notes
Side cab doors	NCDOT Incident Management	42"w x 11"h	Blue	Flexible enclosed lens, retroreflective film, ASTM grade 1; Cut
Side rear cab door	IMAP	20"w X 6.5"h	White	Flexible enclosed lens, retroreflective film, ASTM grade 1 / screen printed; Print cut laminate
Side rear cab door	For assistance call *HP	20.48"w x 1.5"h	Blue	Flexible enclosed lens, retroreflective film, ASTM grade 1; Cut
Side bed	Division of Highways	14"w x 9"h	White	Flexible enclosed lens, retroreflective film, ASTM grade 1 / screen printed; Print cut laminate
Side bed	Unit number	14"w x 1.5"h	Blue	Flexible enclosed lens, retroreflective film, ASTM grade 1; Cut
Side bed	Div. number	5.6"w x 1.5"h	Blue	Flexible enclosed lens, retroreflective film, ASTM grade 1; Cut
Side lower cab	Blue stripes	103"w x 14"h	Blue	Flexible enclosed lens, retroreflective film, ASTM grade 1
Side lower cab	White stripes	103"w x 1.75"h	White	Flexible enclosed lens, retroreflective film, ASTM grade 1; Over 14" blue stripes
Side lower bed front	Blue stripes	50"w x 14"h	Blue	Flexible enclosed lens, retroreflective film, ASTM grade 1
Side lower bed front	White stripes	50"w x 1.75"h	White	Flexible enclosed lens, retroreflective film, ASTM grade 1; Over 14" blue stripes
Side lower bed rear	Blue stripes	45"w x 14"h	Blue	Flexible enclosed lens, retroreflective film, ASTM grade 1
Side lower bed rear	White stripes	45"w x 1.75"h	White	Flexible enclosed lens, retroreflective film, ASTM grade 1; Over 14" blue stripes
Side upper cab & bed	Blue conspicuity	600"w x 2"h	Blue	Highly reflective micro prismatic sheeting 3990 series ASTM grade type 8; 2" conspicuity
Hood	NCDOT	22"w x 5.3"h	Blue	Flexible enclosed lens, retroreflective film, ASTM grade 1; Cut
Hood	Incident Management	36"w x 2.5"h	Blue	Flexible enclosed lens, retroreflective film, ASTM grade 1; Cut
Back arrow board	NCDOT Incident Management	66"w x 9"h	White	Flexible enclosed lens, retroreflective film, ASTM grade 1 / screen printed; Print cut laminate
Rear	Blue Conspicuity	50"w x 2"h	Blue	Highly reflective micro prismatic sheeting 3990 series ASTM grade type 8; 2" conspicuity
Rear	Caution sudden stops	16"w x 7"h	White	Flexible enclosed lens, retroreflective film, ASTM grade 1 / screen printed; Print cut laminate
Rear	IMAP	12.5"w x 4"h	White	Flexible enclosed lens, retroreflective film, ASTM grade 1 / screen printed; Print cut laminate
Rear tailgate	White backer	57"w x 13"h	White	Flexible enclosed lens, retroreflective film, ASTM grade 1
Rear	Chevron	16' w x 3"h	Blue	Highly reflective micro prismatic sheeting 3990 series ASTM grade type 8; 3" Chevron
Rear	Chevron	16' w x 3"h	White	Highly reflective micro prismatic sheeting 3990 series ASTM grade type 8; 3" Chevron

Equipment	Quantity and / or Type
Fire extinguishers	1 small ABC extinguisher, 2 medium ABC extinguishers, 1 large (2-gallon) water extinguisher
First aid kit	24-unit
Rolling jack	
Jack stands	
Bottle jack	
Impact wrench	
Socket set	
4-way lug wrench	
Air compressor	output capacity of 30 cubic feet per minute (CFM) or higher @100psi
Pressure gauge & release valve	
Wheel chocks	2
Air hose & reel	
Spare IMAP tire	
Tire inflator & pressure gauge	
Small pressure gauge*	
2-gallon fuel cans	2
5-gallon fuel cans	
Funnel	
1-gallon water can	3-5
External jumper hookup	
External jumper cables	
Jump box	
Binoculars	
ERG guidebook	
Pop-up pool bag	
Pop-up pool	
Quick dry	
Extra quick dry bags	
Push brooms	
Shovel	
Push magnet*	
Traffic cones	20 cones (fleetside), 40 cones (service body)
Cone caddy	
Flares	
Electric flares*	
Work light	
Power inverter	
Flashlight	
Hand tools	
Disposable wipes	
Tie down equipment*	Duct tape, bungee cords, bailing wire
Lubricant spray	
Starter fluid	
Spray paint	
Tire plugs*	
Storage trays/shelves	
Arrow board	
Oil-Dri	

Equipment	Quantity and / or Type
Front winch	
Rear winch	
Winch hooks and cables	
Cable clutch	
Winch controller	
Control box	
Heavy blanket/rubber mat	
*Wood beam wheel chocks**	
J-hooks	
Tow straps	
Clevis shackles	
Hook strap	
Frame keys	
Crowbar	
*Double-loop cable**	

*Optional Items

Examples of Wheel Lift Attachment

Source: https://liftandtow.com/wp-content/uploads/2015/04/1-540x3401.jpg

Source: https://liftandtow.com/wp-content/uploads/2020/03/29664757_386603448473862_6385009022725576234_o-300x300.jpg

CMS Scripting for IMAP Trucks
OPTION 1 (Preferred)

	PANEL 1	PANEL 2
Crash Ahead Right Lane/Shoulder Closed	CRASH AHEAD	<-------
Crash Ahead Left Lane/Shoulder Closed	CRASH AHEAD	------->
Crash Ahead Center Lane Closed	CRASH AHEAD	<------->
Crash Ahead Both Shoulders Closed	CRASH AHEAD	ALL LANES OPEN

1

CMS Scripting for IMAP Trucks

OPTION 1 (Preferred)

Road Closed	PANEL 1	PANEL 2
	ROAD **CLOSED**	**PREPARE TO STOP**

All Traffic Exit (Right Exit Ramp)	PANEL 1	PANEL 2
	ALL TRAFFIC EXIT	------->

All Traffic Exit (Left Exit Ramp)	PANEL 1	PANEL 2
	ALL TRAFFIC EXIT	<-------

Ramp Closed	PANEL 1	PANEL 2
	RAMP **CLOSED**	<-------

Ramp Closed (Left-Hand Ramp)	PANEL 1	PANEL 2
	RAMP **CLOSED**	------->

CMS Scripting for IMAP Trucks
OPTION 1 (Preferred)

Slow Roll

PANEL 1

DO
NOT
PASS

PANEL 2
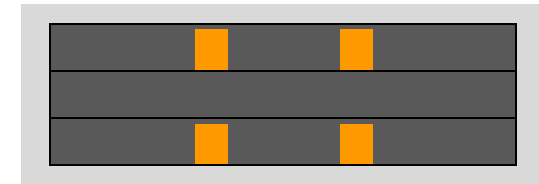
Blasting Zone

PANEL 1

BLASTING

ZONE

PANEL 2

DO
NOT
PASS

Debris on Right

PANEL 1

DEBRIS
IN
ROADWAY

PANEL 2

<-------
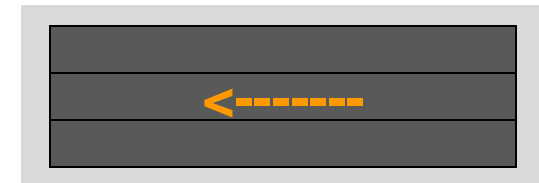
Debris on Left

PANEL 1

DEBRIS
IN
ROADWAY
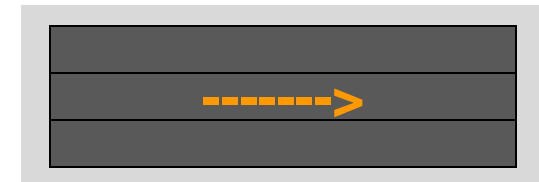
PANEL 2

------->

CMS Scripting for IMAP Trucks

OPTION 1 (Preferred)

	PANEL 1	PANEL 2
Debris in Roadway	DEBRIS IN ROADWAY	PREPARE TO STOP
Emergency Services On Right	MOVE OVER <-------	SLOW DOWN <-------
Emergency Services On Left	MOVE OVER ------->	SLOW DOWN ------->
Emergency Services Ahead	EMERGNCY VEHICLES AHEAD	PREPARE TO STOP
Road Work Right Lane Closed	ROAD WORK AHEAD	<-------

CMS Scripting for IMAP Trucks
OPTION 1 (Preferred)

Road Work Left Lane Closed	PANEL 1	PANEL 2
	ROAD WORK AHEAD	------>

Workers in Roadway	PANEL 1	PANEL 2
	WORKERS IN ROADWAY	DO NOT PASS

Flooding on Right	PANEL 1	PANEL 2
	FLOODING ON ROAD	<------

Flooding on Left	PANEL 1	PANEL 2
	FLOODING ON ROAD	------>

Smoke Ahead	PANEL 1	PANEL 2
	CAUTION SMOKE AHEAD	REDUCE SPEED

LiteReader®

Model 1030A-4

Vehicle Changeable Message Signs
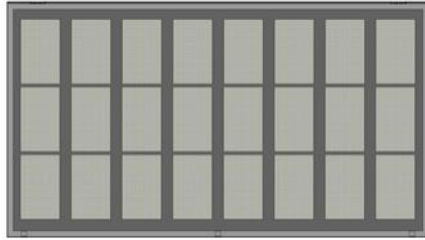
3 Line, 10", Character Matrix Display

Small "Programmable" Font:
3 Lines of 10" Characters
8 Characters Per Line
Large "Pre-Programmed" Font:
1 Line of 23" Characters
4 Characters Per Line
Graphics: MUTCD Symbols
Legibility Distance: 650' +
Viewing Angle: 30˚+
LED's Per Pixel: 4
Cabinet Size: 75" x 41" x 5"
Display Size: 72" x 36"
Message Auto Dim: Yes
Cabinet Construction: Aluminum
Cabinet Finish: Powder Coat
Cabinet Color: Flat Black Face, Balance White

Touch Screen

Keypad
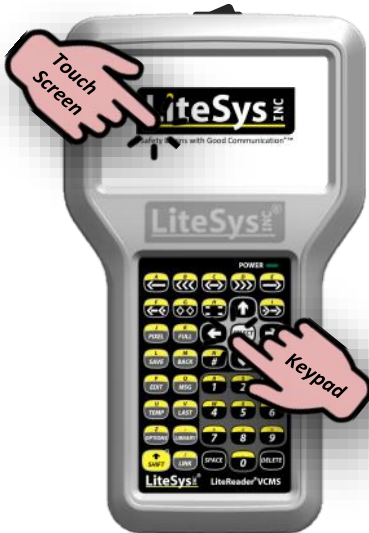
Dual Input Controller
creates, edits, and displays
messages.

10" Characters

23 " Characters

Arrow/Symbols

Display Position

Stow Position

Full Mount

LiteReader® VCMS Products are manufactured in the United States
LiteSys® Inc. Is a United States manufacturing company located in Belgrade Montana

LiteSys INC®

"Safety Begins with Good Communication" ™

Digital CCTV Camera Assembly Specifications

Contents

1. DIGITAL CCTV CAMERA ASSEMBLY

1.1. DESCRIPTION

Furnish and install a Digital CCTV Camera Assembly as described in these Project Special Provisions. All new CCTV cameras shall be fully compatible with the video management software currently in use by the Region and the Statewide Traffic Operations Center (STOC). Provide a Pelco Spectra Enhanced low light 30X minimum zoom, Axis Dome Network Camera low light 30X minimum zoom or an approved equivalent that meets the requirements of these Project Special Provisions.

1.2. MATERIALS

A. General

Furnish and install new CCTV camera assembly at the locations shown on the Plans and as approved by the Engineer. Each assembly consists of the following:

- One dome CCTV color digital signal processing camera unit with zoom lens, filter, control circuit, and accessories in a single enclosed unit
- A NEMA-rated enclosure constructed of aluminum with a clear acrylic dome or approved equal Camera Unit housing.
- Motorized pan, tilt, and zoom
- Built-in video encoder capable of H.264/MPEG-4 compression for video-over IP transmission
- Vehicle-mount camera attachment assembly
- A lightning arrestor installed in-line between the CCTV camera and the equipment cabinet components.
- All necessary cable, connectors and incidental hardware to make a complete and operable system.

B. Camera and Lens

1. Cameras

Furnish a new CCTV camera that utilizes charged-coupled device (CCD) technology or Complementary Metal-Oxide-Semiconductor (CMOS) technology. The camera must meet the following minimum requirements:

- Video Resolution: Minimum 1920x1080 (HDTV 1080p)
- Aspect Ratio: 16:9
- Overexposure protection: The camera shall have built-in circuitry or a protection device to prevent any damage to the camera when pointed at strong light sources, including the sun
- Low light condition imaging
- Wide Dynamic Range (WDR) operation
- Electronic Image Stabilization (EIS)
- Automatic focus with manual override

2.   **Zoom Lens**

Furnish each camera with a motorized zoom lens that is a high-performance integrated dome system or approved equivalent with automatic iris control with manual override and neutral density spot filter. Furnish lenses that meet the following optical specifications:

- 30X minimum optical zoom, and 12X minimum digital zoom
- Preset positioning: minimum of 128 presets

The lens must be capable of both automatic and remote manual control iris and focus override operation. The lens must be equipped for remote control of zoom and focus, including automatic movement to any of the preset zoom and focus positions. Mechanical or electrical means must be provided to protect the motors from overrunning in extreme positions. The operating voltages of the lens must be compatible with the outputs of the camera control.

3.   **Communication Standards:**

The CCTV camera shall support the appropriate NTCIP 1205 communication protocol (version 1.08 or higher), ONVIF Profile G protocol, or approved equal.

4.   **Networking Standards:**

- Network Connection: Minimum 10/100 Mbps auto-negotiate
- Frame Rate: 30 to 60 fps
- Data Rate: scalable
- Built-in Web Server
- Unicast & multicast support
- Two simultaneous video streams (Dual H.264 and MJPEG):
    - Video 1: H.264 (Main Profile, at minimum)
    - Video 2: H.264 or MJPEG
-       Supported Protocols: DNS, IGMPv2, NTP, RTSP, RTP, TCP, UDP, DHCP, HTTP, IPv4, IP6
- 130 db Wide Dynamic Range (WDR)

The video camera shall allow for the simultaneous encoding and transmission of the two digital video streams, one in H.264 format (high-resolution) and one in H.264 or MJPEG format (low- resolution).

Initially use UDP/IP for video transport and TCP/IP for camera control transport unless otherwise approved by the Engineer.

The 10/100BaseTX port shall support half-duplex or full-duplex and provide auto negotiation and shall be initially configured for full-duplex.

The camera unit shall be remotely manageable using standard network applications via web browser interface administration. Telnet or SNMP monitors shall be provided.

C.   **Camera Housing**

Furnish new dome style enclosure for the CCTV assembly. Equip each housing with mounting assembly for attachment to the IMAP vehicle. The enclosures must be equipped with a sunshield and be fabricated from corrosion resistant aluminum and finished in a neutral color of weather resistant enamel. The enclosure must meet or exceed NEMA 4X ratings. The viewing area of the

enclosure must be tempered glass. The pendant must meet NEMA Type 4X, IP66 rating and use 1-1/2-inch NPT thread. The sustained operating temperature must be -50 to 60C (-58 to 144F), condensing temperature 10 to 100% Relative Humidity (RH).

D. Pan and Tilt Unit

Equip each new dome style assembly with a pan and tilt unit. The pan and tilt unit must be integral to the high-performance integrated dome system. The pan and tilt unit must be rated for outdoor operation, provide dynamic braking for instantaneous stopping, prevent drift, and have minimum backlash. The pan and tilt units must meet or exceed the following specifications:

- Pan: continuous 360 Degrees rotation
- Tilt: up/down +2 to -90 degrees minimum
- Motors: Two-phase induction type, continuous duty, instantaneous reversing
- Preset Positioning: minimum of 128 presets
- Low latency for improved Pan and Tilt Control
- FCC, Class A; UL/cUL Listed

E. Video Ethernet Encoder

Furnish cameras with a built-in digital video Ethernet encoder to allow video-over-IP transmission. The encoder units must be built into the camera housing and require no additional equipment to transmit encoded video over IP networks.

Encoders must have the following minimum features:
- Network Interface: Ethernet 10/100Base-TX (RJ-45 connector)
- Protocols: IPv4, Ipv6, HTTP, UpnP, DNS, NTP, RTP, RTSP, TCP, UDP, IGMP, and DHCP
- Security: SSL, SSH, 802.1x, HTTPS encryption with password-controlled browser interface
- Video Streams: Minimum 2 simultaneous streams, user configurable
- Compression: H.264 (MPEG-4 Part 10/AVC)
- Resolution Scalable: NTSC-compatible 320x176 to 1920x1080 (HDTV 1080p
- Aspect Ratio: 16:9
- Frame Rate: 1-30 FPS programmable (full motion)
- Bandwidth: 30 kbps – 6 Mbps, configurable depending on resolution
- Edge Storage: SD/SDHC/SDXC slot supporting up to 64GB memory card

F. Control Receiver/Driver

Provide each new camera unit with a control receiver/driver that is integral to the CCTV dome assembly. The control receiver/driver will receive serial asynchronous data initiated from a camera control unit, decode the command data, perform error checking, and drive the pan/tilt unit, camera controls, and motorized lens. As a minimum, the control receiver/drivers must provide the following functions:

- Zoom in/out
- Automatic focus with manual override
- Tilt up/down
- Automatic iris with manual override

- Pan right/left
- Minimum 128 preset positions for pan, tilt, and zoom, 16 Preset Tours, 256 Dome Presets
- Up to 32 Window Blanks.

In addition, each control receiver/driver must accept status information from the pan/tilt unit and motorized lens for preset positioning of those components. The control receiver/driver will relay pan, tilt, zoom, and focus positions from the field to the remote camera control unit. The control receiver/driver must accept "goto" preset commands from the camera control unit, decode the command data, perform error checking, and drive the pan/tilt and motorized zoom lens to the correct preset position. The preset commands from the camera control unit will consist of unique values for the desired pan, tilt, zoom, and focus positions.

G. Electrical

The camera assembly shall support Power-over-Ethernet (PoE) in compliance with IEEE 802.3. Provide any external power injector that is required for PoE with each CCTV assembly.

H. CCTV Camera Attachment to Vehicle

Furnish and install an attachment assembly for the CCTV camera unit. Use stainless steel banding approved by the Engineer.

Furnish CCTV attachments that allow for the removal and replacement of the CCTV enclosure as well as providing a weatherproof, weather tight, seal that does not allow moisture to enter the enclosure.

Furnish a CCTV Camera Attachment Assembly that can withstand wind loading at the maximum wind speed and gust factor called for in these Special Provisions and can support a minimum camera unit dead load of 45 pounds (20.4 kg).

I. Riser

Furnish material meeting the requirements of Section 1091-3 and 1098-5 of the 2024 Standard Specifications for Roads and Structures. Furnish a 1" riser with weatherhead for instances where the riser is only carrying an Ethernet cable. For installations where fiber optic cable is routed to the cabinet through a 2" riser with heat shrink tubing the Contractor may elect to install the Ethernet cable in the same riser with the fiber cable.

J. Data line Surge Suppression

Furnish data line surge protection devices (SPD) shall meet the following minimum requirements:
- UL497B
- Service Voltage: < 60 V
- Protection Modes: L-G (All), L-L (All)
- Response Time: <5 nanoseconds
- Port Type: Shielded RJ-45 IN/Out
- Clamping Level: 75 V
- Surge Current Rating: 20 kA/Pair
- Power Handling: 144 Watts
- Data Rate: up to 10 GbE
- Operating Temperature: -40º F to + 158º F

- Standards Compliance: Cat-5e, EIA/TIA 568A and EIA/TIA 568B
- Warranty: Minimum of 5-year limited warranty

The data line surge protector shall be designed to operate with Power Over Ethernet (POE) devices. The SPD shall be designed such that when used with shielded cabling, a separate earth ground is not required. It shall be compatible with Cat-5e, Cat 6, and Cat-6A cablings.

Protect the electrical and Ethernet cables from the CCTV unit entering the equipment cabinet with surge protection. Provide an integrated unit that accepts unprotected electrical and Ethernet connections and outputs protected electrical and Ethernet connections.

K. POE Injector

Furnish POE Injectors meeting the following minimum performance requirements and that is compatible with the CCTV Camera and Ethernet Switch provided for the project.

- Working temp/humidity: 14º F to 131º F/maximum 90%, non-condensing
- Connectors: Shielded RJ-45, EIA 568A and EIA 568B
- Input Power: 100 to 240 VAC, 50 to 60 Hz
- Pass Through Data Rates: 10/100/1000 Mbps
- Regulatory: IEEE 802.3at (POE)
- Number of Ports: 1 In and 1 Out
- Safety Approvals: UL Listed

Ensure the POE Injector is designed for Plug-and-Play installation, requiring no configurations and supports automatic detection and protection of non-standard Ethernet Terminal configurations.

1.3. CONSTRUCTION METHODS

A. General

Obtain approval of the camera locations and orientation from the Engineer prior to installing the CCTV camera assembly.

Mount CCTV cameras on the IMAP vehicle.

Install the data line surge protection device and POE Injector in accordance with the manufacturer's recommendations.

Install the riser in accordance with Section 1722 of the 2024 Standard Specifications for Roads and Structures. Install the Ethernet cable in the riser from the field cabinet to the CCTV camera.

B. Electrical and Mechanical Requirements

Install an "Air Terminal and Lightning Protections System" in accordance with the Air Terminal and Lightning Protection System Project Special Provisions for the CCTV Camera Assembly. Ground all equipment as called for in the Standard Specifications, these Special Provisions, and the Plans.

Install surge protectors on all ungrounded conductors entering the CCTV enclosure.

C. General Test Procedure

Test the CCTV Camera and its components in a series of functional tests and ensure the results of each test meet the specified requirements. These tests should not damage the equipment. The Engineer will reject equipment that fails to fulfill the requirements of any test. Resubmit rejected equipment after correcting non-conformities and re-testing; completely document all diagnoses and corrective actions. Modify all equipment furnished under this contract, without additional cost to the Department, to incorporate all design changes necessary to pass the required tests.

Provide 4 copies of all test procedures and requirements to the Engineer for review and approval at least 30 days prior to the testing start date.

Only use approved procedures for the tests. Include the following in the test procedures:

- A step-by-step outline of the test sequence that demonstrates the testing of every function of the equipment or system tested

- A description of the expected nominal operation, output, and test results, and the pass / fail criteria

- An estimate of the test duration and a proposed test schedule

- A data form to record all data and quantitative results obtained during the test

- A description of any special equipment, setup, manpower, or conditions required by the test

Provide all necessary test equipment and technical support. Use test equipment calibrated to National Institute of Standards and Technology (NIST) standards. Provide calibration documentation upon request.

Conform to these testing requirements and the requirements of these specifications. It is the Contractor's responsibility to ensure the system functions properly even after the Engineer accepts the CCTV test results.

Provide 4 copies of the quantitative test results and data forms containing all data taken, highlighting any non-conforming results and remedies taken, to the Engineer for approval. An authorized representative of the manufacturer must sign the test results and data forms.

A. Compatibility Tests
1. CCTV System

Compatibility Tests are applicable to CCTV cameras that the Contractor wishes to furnish but are of a different manufacturer or model series than the existing units installed in the Region. If required, the Compatibility Test shall be completed and accepted by the Engineer prior to approval of the material submittal.

The Compatibility Test shall be performed in a laboratory environment at a facility chosen by the Engineer based on the type of unit being tested. Provide notice to the Engineer with the material submitted that a Compatibility Test is requested. The notice shall include a detailed test plan that will show compatibility with existing equipment. The notice shall be given a minimum of 15 calendar days prior to the beginning of the Compatibility Test.

The Contractor shall provide, install, and integrate a full-functioning unit to be tested. The Department will provide access to existing equipment to facilitate these testing procedures. The

Engineer will determine if the Compatibility Test was acceptable for each proposed device. To prove compatibility the Contractor is responsible for configuring the proposed equipment at the applicable Traffic Operations Center (TOC) with the accompaniment of an approved TOC employee.

B. Operational Field Test (On-Site Commissioning)

    1.   CCTV System

    Final CCTV locations must be field verified and approved by the Engineer. Perform the following local operational field tests at the camera assembly field site in accordance with the test plans and in the presence of the Engineer. The Contractor is responsible for providing a laptop for camera control and positioning during the test. After completing the installation of the camera assemblies, including the camera hardware, power supply, and connecting cables, the contractor shall:

C. Local Field Testing

    Furnish all equipment and labor necessary to test the installed camera and perform the following tests before any connections are made.

- Verify that physical construction has been completed.
- Inspect the quality and tightness of ground and surge protector connections.
- Check the power supply voltages and outputs, check connection of devices to power source.
- Verify installation of specified cables and connection between the camera, PTZ, camera control receiver, and control cabinet.
- Make sure cabinet wiring is neat and labeled properly; check wiring for any wear and tear; check for exposed or loose wires.
- Perform the CCTV assembly manufacturer's initial power-on test in accordance with the manufacturer's recommendation.
- Set the camera control address.
- Exercise the pan, tilt, zoom, and focus operations along with preset positioning, and power on/off functions.
- Demonstrate the pan, tilt and zoom speeds and movement operation meet all applicable standards, specifications, and requirements.
- Define, test and/or change presets.
- Ensure camera field of view is adjusted properly and there are no objects obstructing the view.
- Ensure camera lens is dust-free.
- Ensure risers are bonded and conduits entering cabinets are sealed properly.
- Lightning arrestor bonded correctly.

D. Central Operations Testing

- Interconnect the CCTV Camera's communication interface device with one of the following methods as depicted on the plans:
  - communication network's assigned Ethernet switch and assigned fiber-optic trunk cable and verify a transmit/receive LED is functioning and that the CCTV camera is fully operational at the TOC.

OR

- o to the DOT furnished cellular modem and verify a transmit/receive LED is functioning and that the CCTV camera is fully operational at the TOC.

- Exercise the pan, tilt, zoom, and focus operations along with preset positioning, and power on/off functions.
- Demonstrate the pan, tilt and zoom speeds and movement operation meet all applicable standards, specifications, and requirements.
- Define, test and/or change presets.

Approval of Operational Field Test results does not relieve the Contractor to conform to the requirements in these Project Special Provisions. If the CCTV system does not pass these tests, document a correction or substitute a new unit as approved by the Engineer. Re-test the system until it passes all requirements.

1.4. MEASUREMENT AND PAYMENT

Digital CCTV Camera Assembly will be measured and paid as the actual number of digital CCTV assemblies furnished, installed, integrated, and accepted. No separate measurement will be made for electrical cabling, connectors, CCTV camera attachment assemblies, conduit, condulets, risers, grounding equipment, surge protectors, PoE Injectors, PoE Cable, Air Terminal and Lightning Protection System, compatibility testing, operational testing or any other equipment or labor required to install the digital CCTV assembly.

Payment will be made under:

Digital CCTV Camera Assembly ....Each

Exhibit F
Route Coverage Maps

Initial Routes

Legend
- IMAP Route
- Interstate
- US Route

Hamptonville

Winston Salem

Greensboro

Asheboro

Statesville

Charlotte

0   4   7   15 Miles
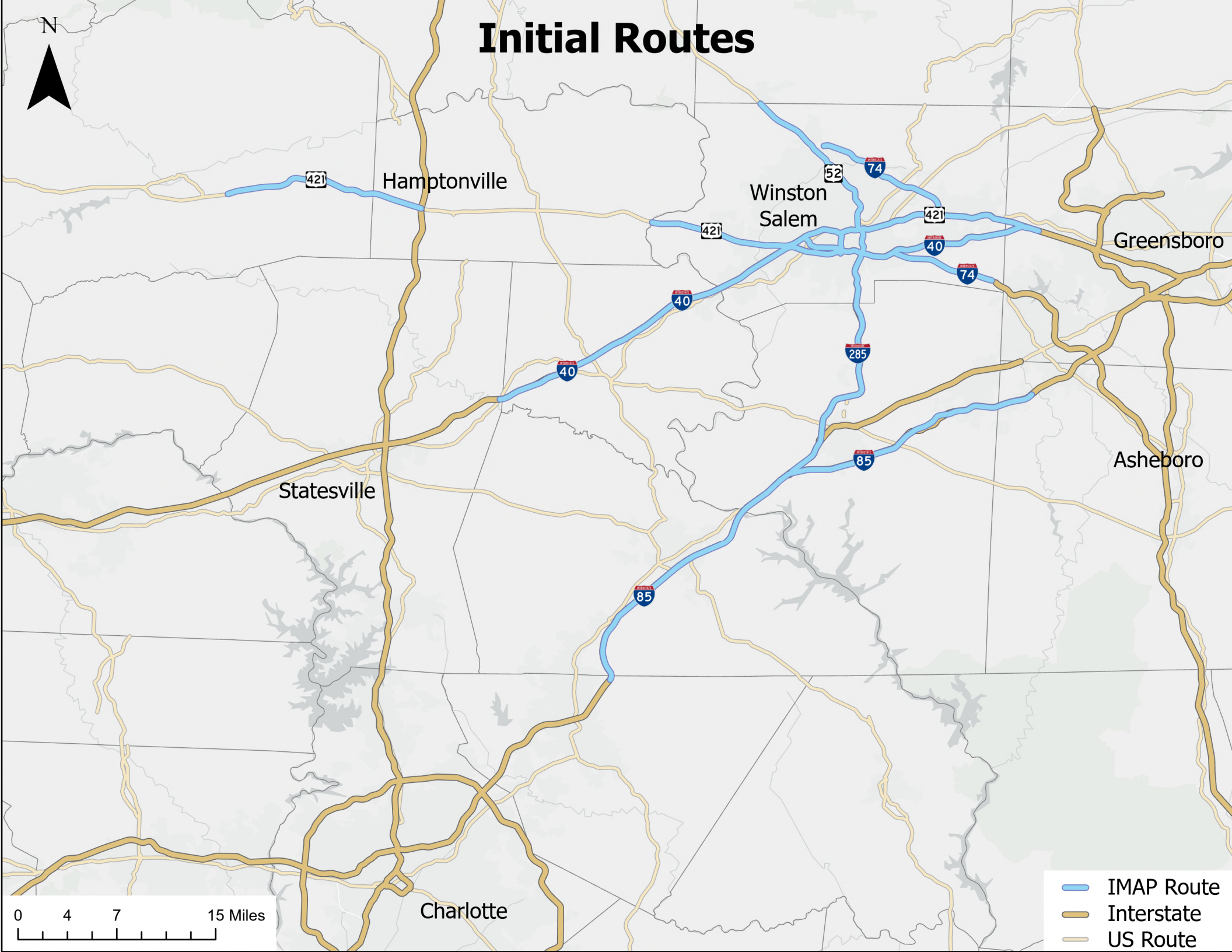
Anticipated Additional IMAP Coverage

N

Winston Salem
Greensboro
Durham
Raleigh
Statesville
Asheboro
Charlotte
Fayetteville

⬤ IMAP Route	
⬤ Interstate	
⬤ US Route	

0   8   15   30 Miles
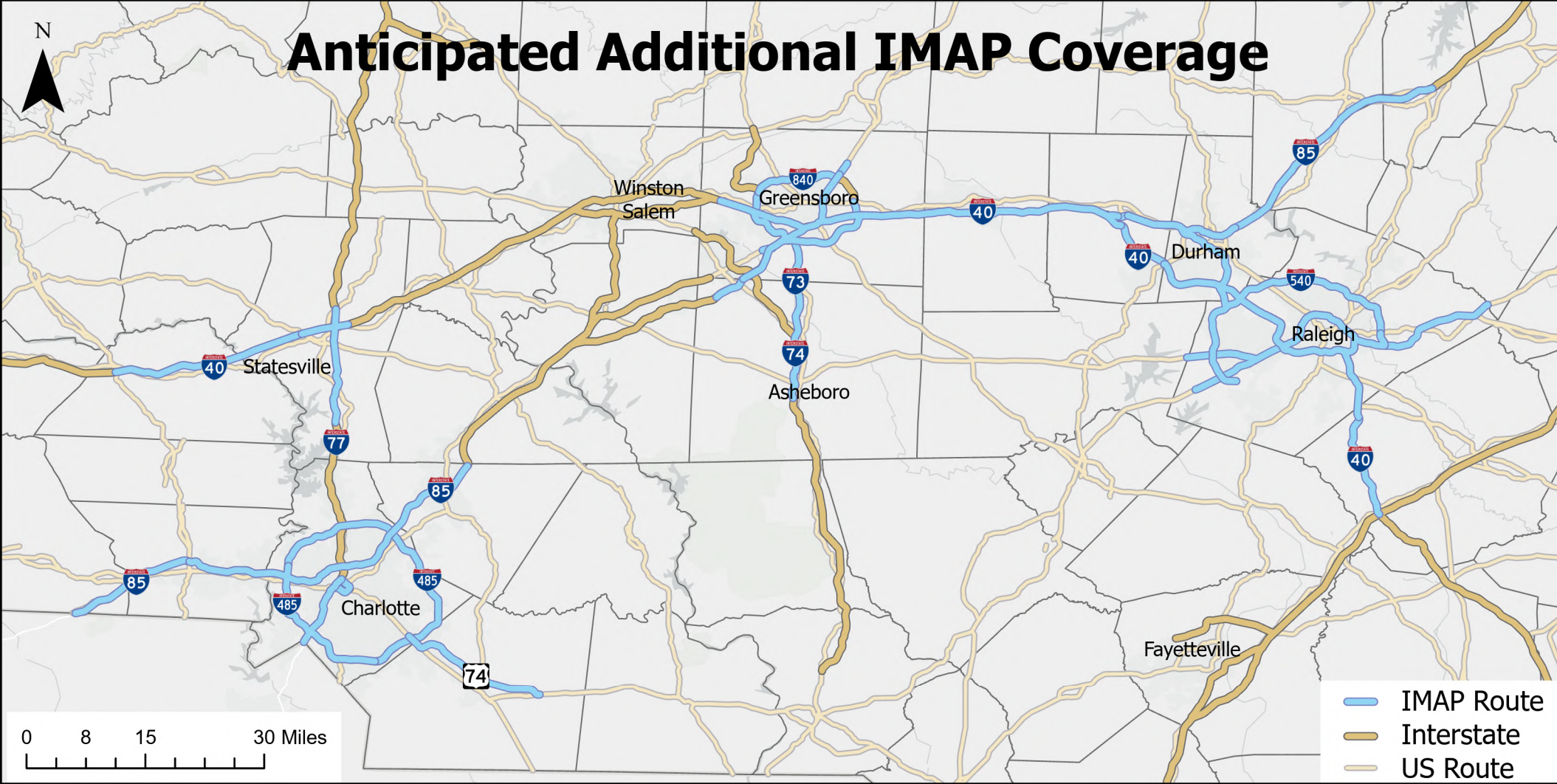
Exhibit G
Estimated Surge Numbers

Levels	Evaluation of Special Events Annually (Weekends)											
	Triangle			Triad			Metrolina			Major Statewide Events		
	No. Events/year	Shifts	Staffing/shift	No. Events/year	Shifts	Staffing/shift	No. Events/year	Shifts	Staffing/shift	No. Events/year	Shifts	Staffing/shift
1	24	1	1	24	1	1	24	1	1			
2	6	1	4	6	1	4	6	1	4			
3*	2	6	3	2	6	3	2	6	3			
4*	4	10	3	4	10	3	4	10	3			
5*										8 (4 winter + 4 hurricane)	10	4
6*										1	20	8

Project management staff to be utilized for logistics and travel coordination

<u>Level Descriptions</u>
Level 1: Working outside normal hours inside region
Level 2: Massing within normal hours inside region
Level 3: Planned event supporting another region
Level 4: Regional weather event
Level 5: Statewide weather event with surge of staff (<1 week impact)
Level 6: Critical statewide long-term weather event (>1 week impact)

<u>Responder and Supervisor Staffing per Level</u>
Level 1: 1 responder + 1 on-call supervisor
Level 2: 3 responders + 1 supervisor in supported region to oversee additional staff
Level 3: 3 responders + 1 supervisor for Statewide support
Level 4: 3 responders + 1 supervisor per shift
Level 5: 4 responders + 1 supervisor per shift
Level 6: 8 responders + 2 supervisors per shift

Exhibit H
Incident Report Example

NCDOT SUPERVISOR INCIDENT INVESTIGATION REPORT

Instructions: Begin investigation within 24 hours and attach the Employee Incident Report and Witness Reports to this report. Forward all reports ASAP.

Division/Unit: Division 14 IMAP 150519	Date of Incident: 08/09/2023
Department: Incident Management	County: Haywood

Employee Name: Chris Strader Employee Personnel #: 1558216 Employee Beacon #: 01843494 Employee Phone #: (878) 226-8266

Supervisor Name: Marlon Ferguson Supervisor Personnel #: 1509735 Supervisor Beacon #: 00330373 Supervisor Phone #: (828) 399-0288

Incident Classifications (check all that apply)   ☑ Equipment Damage

☐ Near Hit   ☐ Injury   ☐ Fatality   ☐ Property Damage   ☐ Spill   ☐ Possible Blood Borne Pathogen exposure

Employee required:

☐ First-Aid Only   ☐ Medical treatment and released   ☐ Hospitalized   ☐ Other: N/A No injuries

Employee:

☑ Returned to work no restrictions   ☐ Returned to work with restrictions   ☐ Did not return to work (Lost Days)

Hazard Types (select one based on origination of injury in this preference order)

☐ Violence or injuries caused by people or animals   ☑ Transportation   ☐ Fires or Explosions
☐ Slips, Trips, Falls Surface Level   ☐ Fall from Elevation   ☐ Exposure to harmful substances or environment
☐ Contact with objects or equipment (Struck By, Struck Against, Caught-on, Caught between, Puncture, Cut)   ☐ Over-Exertion (lifting)
☐ Bodily Motion (reaching, twisting, running)   ☐ Other (List Here):

Names of Witnesses Interviewed: N/A

Incident Information

Describe the specific activity the employee was engaged in and the sequence of events. Include objects or substances that directly injured or made the employee ill. Describe tools, equipment, and PPE in use. Describe property damage. Attach pictures or police reports. Describe the estimated damage to any vehicles or equipment (make, model, ID number, etc.)

Mr. Strader had deployed emergency traffic control for a blow-through hole in the right lane of the bridge over Jonathan Creek Rd on I-40 westbound, and was waiting for the Bridge Dept. to arrive with the resources to install permanent traffic control. An approaching pickup truck drove around all the traffic control that was in place, clipped the right mirror on Mr. Strader's IMAP truck, and continued through the lane closure and left the scene.

Is the activity part of the employee's normal job? ☑ Yes ☐ No	Prior to beginning activity, did the employee review potential hazards/dangers? ☑ Yes ☐ No	Date employee last received SOP Review 7/18/2023

Post-Crash Testing is required following any crash for employee in which an employee is involved while operating a motor vehicle or equipment on the job in which (1) A life is lost, or 2) driver is cited for moving traffic violation and individuals were either transported for medical treatment or vehicle is disabled and removed from the scene by other than its own power.

Did any of the above conditions result from the accident? NO If Yes, was Post-Accident Testing conducted?
If not, why? Doesn't meet above conditions

What was the root cause of the incident? Ask why then ask why again (e.g. Why? The employee slipped on scrap metal. Why? The work area was not cleaned up. Why? The employee was rushing to get a project done and did not take time to clean up the work area.) POV driver not obeying traffic laws.

Action taken or will be taken to prevent reoccurrence (If corrective action will occur in the future, provide estimated completion date.)

POV Driver obey traffic laws and respect work zones and traffic control.

I hereby certify that the information I have provided is true and accurate. Any inaccurate or false statements may result in a delay in process of this claim. I further understand that this information may be used to determine whether the claim will be paid or denied. I also acknowledge that I understand that in addition to being disciplined for providing false and/or misleading information up to and including dismissal, I may also be subjected to additional criminal and/or civil liability.

Supervisor's Name: Marlon Ferguson   Signature: [signature]   Date of Report: 8/11/2023

The Supervisor will forward the signed copies of the Employee Incident Report I-1, Supervisor's Incident Investigation Report I-2, and Witness Statements I-3, to the Incident & Injury Investigation Subcommittee. The Incident & Injury Subcommittee will review and ensure acceptable Corrective Action has been identified and implemented The WCA will receive all reports and all supporting documentation.

I&I Subcommittee Members: Chad Franklin, Doug Blackwell, Jason Jenkins, Lucas Brooks

Date Corrective Actions Completed:

ACCIDENT BREAKDOWN BY CHARACTERISTIC
(check all that apply)

Nature of Injury

- ☐ Amputation or Enucleation
- ☐ Assault
- ☐ Burn or Scald
- ☐ Contusion, Bruise
- ☐ Electric Shock
- ☐ Eye, Foreign body in
- ☐ Fracture, Broken Bone
- ☐ Freezing, Frostbite
- ☐ Hearing Loss or Impairment
- ☐ Heat Exhaustion, Sunstroke
- ☐ Hernia or Rupture
- ☐ Infection

- ☐ Inhalation Injury-Toxic Substance
- ☐ Insect Bites
- ☐ Laceration (Cut)
- ☐ Multiple Injuries
- ☐ Needle Puncture
- ☐ Rash, From Plants
- ☐ Rash, Not From Plants (Dermatitis)
- ☐ Scratches, Abrasions
- ☐ Sprain, Strains
- ☐ Other

N/A

Part of Body Affected

- ☐ No Physical Injury
- ☐ Head
- ☐ Neck
- ☐ Eyes (Including Vision)
- ☐ Arm(s) (Above Wrist)
- ☐ Hand(s) (Including Wrist)
- ☐ Finger(s) and Thumb(s)
- ☐ Upper Extremity, Multiple Parts (shoulder, arm, forearm, wrist, or hand)
- ☐ Abdomen (Including Internal Organs)
- ☐ Back (Including Muscles, Spine)
- ☐ Chest (Including Internal Organs)
- ☐ Hips (Including Pelvic Organs)

- ☐ Shoulder(s)
- ☐ Trunk, Multiple Parts
- ☐ Leg(s) (Above Ankle)
- ☐ Foot (Including Ankle)
- ☐ Toes
- ☐ Lower Extremity, Multiple Parts (from the hip to the toes)
- ☐ Multiple Parts of Body, Severe
- ☐ Digestive System
- ☐ Respiratory System
- ☐ Circulatory System
- ☐ Skin
- ☐ Other

N/A

Type of Accidents

- ☐ Bodily Reactions (Sprains, Strains, Rupture, Etc.)
- ☐ Caught In, Under, Or Between
- ☐ Contact With Temperature Extremes (Fire, Cold)
- ☐ Disease Exposure
- ☐ Electrical Shock
- ☐ Falls (All Types)
- ☐ Noise Exposure
- ☐ Repetitive Motion

- ☐ Rubbed Or Abraded By Object
- ☐ Struck Against Object
- ☐ Struck by Flying Object
- ☐ Struck by Other Object/Person
- ☐ Toxic Materials Exposure
- ☐ Vehicle or Equipment Accident
- ☐ Other

N

Safety Equipment in Use

- ☐ Hard Hat
- ☐ Safety Glasses
- ☐ Goggles
- ☐ Face shield or welder helmet
- ☐ Gloves
- ☐ Fire Shirt
- ☐ Fire Pants
- ☐ Safety Shoes
- ☐ Fire line Boots
- ☐ Ear Protection

- ☐ Respirator
- ☐ Lanyards & Lifelines
- ☐ Fluorescent Vests
- ☐ Buoyant Work Vest
- ☐ Warning & Control
- ☐ Seat Belts
- ☐ Shoulder Harness
- ☐ Safety Equipment, National Electrical Code (NEC)
- ☐ Lab Coat
- ☐ Other

N/A

EQUIPMENT ACCIDENT BY CHARACTERISTIC
(check all that apply)

Roadway Condition	Weather	Type of Equipment Accident	Causes for Equipment
☑ Dry	☑ Clear	☐ Turning	☐ Operating at Unsafe Speed
☐ Wet	☐ Cloudy	☐ Backing	☐ Improper Backing
☐ Snow/Ice	☐ Fog	☐ Rear-End Collision	☑ Failure to Obey Traffic Laws — *POV*
☐ Mud	☐ Misting	☑ Struck by Another Vehicle	☐ Ingesting or Mixing Controlled Substance to Create Hazard
☐ Other	☐ Rain	☐ Object Dropped on Vehicle	☐ Unsafe Equipment
	☐ Snow/Sleet/Ice	☐ Hit Stationary Object	☐ Other
	☐ Smoke/Dust	☐ Ran Off Road	☐ No Unsafe Acts Observed
		☐ Passing	
		☐ Moving from Parked Position	
		☐ Rolled from Parked Position	
		☐ Hit Animal	
		☐ Overturned	
		☐ Flying Object	
		☐ Other	

When submitting this report, include pictures of incident location, equipment in use, the vehicle used (if applicable), and any third party reports (I.e. Police Report, OSHA Report, etc.).

December 2017

I- 2

NCDOT EMPLOYEE INCIDENT REPORT

Instructions: Employee must complete report. If more room is needed, continue in a Word document and attach it to this submission.

Employees are required to complete this form for all incidents and near hits. This form should be completed in its entirety and should be an accurate and truthful Account of the accident/incident. Providing false and/or misleading information may result in disciplinary action up to or including dismissal and/or additional criminal and/or civil liability. This form should be completed by the employee only.

Supervisor Review: If an employee is unable to complete this form, the Supervisor must list reason(s) for assisting or completing this report.

My signature below certifies that the information I have provided is true and accurate. I further understand that this information may be used to determine whether the claim will be paid or denied and that I should not complete this form unless there are exceptional circumstances present preventing the employee from completing this form. Check ☐ Not applicable (employee completed form) or sign below if you assisted with the completion of this form.

Supervisor Name: _____ Signature: _____

Employee Information

Name (Full): Christopher Austin Strader	
Employee Personnel/Beacon #: 1555216 / 01843494	
Job Title: IMAP Responder	☒ Male ☐ Female
Employee Telephone #: 828-226-8266	
Division/County: 14 / Haywood	
Department: IMAP	
Dated Hired: June 27, 2022	Time in Current Job: 59 weeks
Supervisor: Jody Moore	Supervisor Phone #: 828-399-0227

Date/Location Information

Date of Incident: 8/10/2023   Time of Day: 2pm
Date Reported to Supervisor: 8/10/2023   Time of Day: 2pm
Work Address: 619 Paragon Parkway, Clyde NC 28721
Incident Location (address, Building name, office, cross streets, fire name, woods, facility, room #, etc.): I-40 WB 20.6 MM, Right Lane, Inside lane Closure
County: Haywood

Witness Information

Were there any witnesses to the incident? ☐ Yes ☒ No   Number of Witnesses (if applicable): _____

If yes, list all known witnesses/phone #'s below, please include additional names on attachment if needed.

Name: _____   Phone #: _____
Name: _____   Phone #: _____

Medical Information

Part(s) of the body injured: None

Prior to this accident/incident, have you ever been hurt, suffered injury, or received treatment for the body part(s) listed above? Yes ☐ No ☒

If yes, please provide the date of prior injury, type of injury, names of treating physician or practice group.

Description of Accident/Incident (If this is a Backing Accident, state whether a Spotter was available in vehicle or close by that could have assisted.

Sitting in IMAP Truck, 1462-3916-0210, I-40 WB 20.6 MM, Right Lane, Inside Temporary lane Closure, with all emergency lights activated and tright board in the Raised position. Displaying Right lane Closed and a arrow pointing to the leftlane. A message black Ford extended Cab truck veered onto the right shoulder around the closure, and passed by on passenger side Striking the Mirror. Minor Scratch.

What was the root cause of the incident? Ask why, and then ask why again. (e.g. Why? I slipped on scrap metal. Why? The work area was not cleaned up. Why? I was rushing to get project done and did not take time to clean up the work area.)

The other driver being late for work and didn't want to get in the left lane with all the other Moving traffic.

Suggested Corrective Actions

POV could obey traffic laws and respect work zones

I hereby certify that the information I have provided is true and accurate. Any inaccurate or false statements may result in a delay in process of this claim. I further understand that this information may be used to determine whether the claim will be paid or denied.

Employee Name: Christopher Austin Strader   Signature: Christopher Austin Strader   Date: 8/11/23

December 2017   I-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
EQUIPMENT ACCIDENT AND PROPERTY DAMAGE REPORT

Safety & Risk Management
Registration Number
_____

1 Accident

List of all divisions, units or sections involved **Division 14 IMAP 150519**

Location of accident **Haywood** (County), **I-40 WB** (Hwy. No.), **20.6 MM** (City or Miles)

West (East, West, No., So.), **Waynesville** (of City or Intersection) Date **8/10/2023** **2**, **00** AM/**PM**

Thursday (Day of Week) Roadway **60** MPH (Speed Limit) **2** (No. of Lanes), **12'** (Lane Width), **Asphault** (Surface Material)

2 State Operators/ Employees

Veh. No. 1: Name **Christopher Austin Strader** Beacon # **01843494** Dept. Code **150519** Co. No. **44** Age **43**

Address **619 Paragon Pwky., Clyde, NC 28721** Bus. Phone **828-454-0326** Home Phone **828-226-8266**

Driver Lic. No. **25919949** Class (A, B, C) **A** Driving Experience **27**

Classification **Permanent** Temporary Service. (Yrs.) **11 months** Permanent Service (Yrs.) **8 month**

Dates of previous accidents while driving state equipment **N/A**

Veh. No. 2: Name **N/A** Beacon # **01843494** Dept. Code _____ Co. No. _____ Age **43**

Address _____ Bus. Phone _____ Home Phone _____

Driver Lic. No. _____ Class (A, B, C) _____ Driving Experience _____

Classification _____ Temporary Service. (Yrs.) _____ Permanent Service (Yrs.) _____

Dates of previous accidents while driving state equipment

3 State Equipment/ Injuries

State Veh. No. 1: Equip No. **1462-3916-0210** Lic. No. **PA 5441** Make & Type **Ford F-450** Year **2018**

Equip. Damage: (describe fully) **No Damage**

Est. Cost of Repair **0** Who made estimate **Doug Blackwell**

Speed at time of accident (mph) **0** Injuries (describe fully, include names) **None**

State Veh. No. 2: Equip No. **N/A** Lic. No. _____ Make & Type _____ Year _____

Equip. Damage: (describe fully) _____

Est. Cost of Repair _____ Who made estimate _____

Speed at time of accident (mph) _____ Injuries (describe fully, include names) _____

NOTE: FORM 19 MUST BE COMPLETED FOR EACH EMPLOYEE INJURED

4 Private Parties and their Equipment

Veh. No. **2** Name **Mark Donaldson Kunpat** Address **404 Glaze Mountain Dr. Canton 28716** Home Phone **321-914-2853**

Business Phone _____ Age **63** Driver Lic. No. **Reducted** Veh. Make/Type/Year **Ford / F150 2013**

Veh. Lic. No. **PKB 3190** State **NC** Speed at time of accident (mph) **10** No. of other occupants **0**

Liability insurance company (name, address & policy number) **GEICO / 4597099243**

Owners name and address (if different from driver) **Same**

Est. damage to veh. **0** Describe injuries to all occupants (identify by name and age) **None**

5 Property Damage

Property Damage **N/A**

Estimated value of property before accident _____ Estimated cost to repair or replace _____

(Note: Complete items 4 and 5 on persons involved in property damage)

6

Description and cause of accident **Sitting Stationary in lane Closure with emergency lights activated and message board up. Driver came onto shoulder and as passing by the right side of work truck. Striking Mirrors and then drove off.**

I have investigated this accident and answered all questions fully and accurately

Marion Ferguson
Supervisor's Name Typed Here

Supervisor's Signature

8/11/2023
Date

IMAP Division 14 69 Paragon Parkway Clyde, NC.
Dept. Name and Address

7

FILL IN THE FOLLOWING SPACE SHOWING DIRECTION & POSITIONS OF AUTOMOBILES INVOLVED, DESIGNATING CLEARLY POINT OF CONTACT.

INDICATE BY ARROW
DIRECTION OF NORTH

INSTRUCTIONS
(1) USE SOLID LINE TO SHOW PATH OF VEHICLE BEFORE ACCIDENT _____ SOV [1]▷

_·_·_·_·_·_ [2]▷ DOTTED LINE AFTER ACCIDENT

(2) NUMBER EACH VEHICLE & SHOW DIRECTION OF TRAVEL _____ POV [2]▷
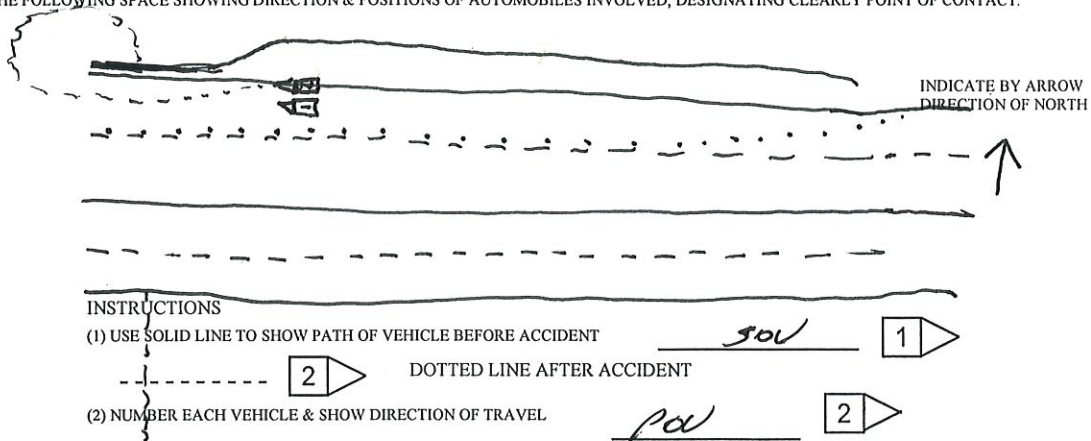
8

Witnesses and remarks (provide witnesses names & addresses)

None

9

Travelers Insurance Company notified (if applicable): Date: _____ How _____ Time _____ AM/PM

N/A —

10

Traffic citations (X if applicable): Driver of Veh. No. 1 ☐   Driver of Veh. No. 2 ☑   Driver of Veh. No. ☐
Violations charged Hit + Run Leave Scene   Name and address of investigating officer Trp. Joey Henderson

For incidents where no traffic citation issued, were there other contributing factors for equipment damage: (X if applicable):
NCDOT Employee at Fault ☐   NCDOT Employee Not at Fault ☐   Other (List Below) ☒
Describe Other: N/A —

11

Thrown Objects by Trucks/Mowers

When did claimant advise operator of alleged accident? At scene _____ Other Location _____
Distance from scene _____ Was operator aware his equipment caused the damage? _____
Was load or mower inspected by supervisor following the accident? _____ If so, when? _____
Truck: Was truck properly loaded to avoid spillage? _____
    Was object reported to have thrown by wheel? _____
    Was there evidence of stone or dirt on body or chassis rails? _____
Mower: Condition of area being mowed – Rocky ☐   Rough & Uneven ☐   High Grass ☐   Normal ☐   Intersection ☐
Other _____ Were safety shields in place? _____ At what height was mower set to cut? _____
Was mower traveling with flow of traffic? _____ Against flow of traffic? _____
Distance of mower from claimant's vehicle _____ Comments _____

Equipment No. 1762 - 396 - 0210

Operator

Pay Period 418

Operators Inspection Sheet: NON-CDL

#	Inspection Item
1	Inspect For Leaks: Oil, Water, Fluid
2	Fluid Levels: Oil, Coolant, Power Steering
3	Inspect Fan Belts And Hoses for Wear And Damage
4	Inspect Alternator, Water Pump, Air Conditioner
5	Inspect Battery And Cables For Corrosion/Wear
6	Ensure Brakes Are In Proper Working Condition
7	Inspect Fuel Tank For Leaks
8	Inspect Doors And Mirrors For Damage/Malfunction
9	Tires: Wear And Damage, Check Between Any Dual Tires
10	Inspect Drive Shaft, Exhaust System, Frame
11	Inspect Mirrors, Lights, Windshield For Damage
12	Adjust Seat And Mirrors
13	Inspect Clutch, Gearshift, Accelerator
14	Start Engine, Listen For Unusual Noises
15	Check Gauges: Oil Pressure, Ammeter, Voltmeter
16	Steering Wheel Play Should Be Less Than 3 Inches
17	Check: Wipers, Heaters, Defrosters
18	Test Horn And Backup Alarm (if applicable)
19	Lights: Hi/Lo Beam, Parking, Tail, Backup, Brake
20	Lights: Cab, Clearance, Turn Signal, Flashers, Strobe
21	Safety/Emergency: First Aid, Fire Extinguisher, Fuses
22	Secure/Remove Loose Items: Tools, Equipment etc.
23	Remove All Trash
24	
25	
26	
27	
28	Operator's Initials Day Shift
29	Operator's Initials Night Shift

Notes/Malfunctions:

Day columns (month = 8):
Day	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	S	S	M	T	W	T	F	S	S	M	T	W	T	F

(Inspection checkmarks ✓ entered in columns for dates 8/10 and 8/11 for items 1–23.)

Operator's Initials Day Shift: (initials entered under 8/10, 8/11)

In.		In.	Date	Time	Operator
			29		

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
MONTHLY SAFETY MEETING REPORT

Department Code   150519/150493

Date 7/18/2023

Unit: IMAP   District: Division: 13/14

Address: 11 Old Charlotte Hwy, Asheville

Meeting Chairman: Marion Ferguson

Where feasible attendance should be documented.

Other Persons Present: Mike Messer, Kevin Harrell, Bill Chandler, Bruce Brown, Chris Strader, Garret McFalls, Justin Watts, Leslie Perrico, Daniel Paris, James Beasley, Cathy Fisher

Formal Presentation: (Name of presenter and topic):   Heat, Snakes, and Bees; IMAP Manual - Interacting with Other Agencies (Garret McFalls); NCSHP Trooper shooting; "Repeat Offenders"; safehighways.org

Other Subjects Discussed:

Reports on Weekly Meetings:

Employee's Comments/Suggestions:

_____   Marion F.
                                        Chairman's Signature

CC: Safety Committee

N.C. PERMANENT

PA-5441

N.C. 15

· STATE OWNED ·

IMAP

INCOMPLETE VEHICLE MFD. BY FORD MOTOR COMPANY

DATE: 03/18

GVWR: 7484 KG (16500 LB)

FRONT GAWR: 2722 KG (6000 LB)
WITH 225/70R19.5G 128/126N
19.5X6.0RW
AT 655 kPa/ 95 PSI COLD

REAR GAWR: 5842 KG (12880 LB)
WITH 225/70R19.5G 128/126N
19.5X6.0RW
AT 620 kPa/ 90 PSI COLD

TIRES
RIMS

TIRES
RIMS DUAL

VIN: 1FD0W4HT1JEC11700

EXT PNT: Z1 | INT TR | TP/PS | R | AXLE | TR | SPR |
WB 179 | AS | 5 | 4N | W | CCBB |
MADE IN U.S.A. RC: 21 DSO: ULN

▽ 5U5A-3520472-AA

DRIVER EXCHANGE FORM
compliments of the
STATE HIGHWAY PATROL

Driver MARK   DONALDSON   KUNDRAT
First   Middle   Last

Address 404 GLADE MOUNTAIN DR

City CANTON   **State** NC   **Zip** 28716-7046

Same Address on Driver's License? [X] Yes [ ] No   Driver's Phone Numbers   H (321) 914-2853   W

D.L. # 43xxxxxxx   **State** NC
CDL License [ ]

DOB xx/xx/1960   **Unit Number** 1

Owner MARK DONALDSON KUNDRAT

Address 404 GLADE MOUNTAIN DR

City CANTON   **State** NC   **Zip** 28716-7046

Plate # PKB3190   **Plate State** NC   **Plate Year** 2024

VIN 1FTVX1CF4DKE99385

Vehicle Make FORD   **Vehicle Year** 2013

Insurance Company GEICO

Policy # 4597099243

Towed By

Towed To

08/09/2023   HAYWOOD   [X]
Date of Crash   County   Non-Reportable

TRP. J P HENDERSON   230809066GA
Officer Name   Local Report Number

YOU MAY RECEIVE A COPY OF THE COLLISION REPORT BY GOING TO NCDPS.GOV, SELECT STATE HIGHWAY PATROL AT THE BOTTOM OFF THE PAGE UNDER LAW ENFORCEMENT. THEN SELECT COLLISION INFORMATION. YOU MAY SEARCH FOR THE REPORT USING ANY ONE OF THE THREE OPTIONS PROVIDED. YOU CAN ALSO RECEIVE A COPY OF THE REPORT BY CONTACT NCDMV AT (919) 715-7000

Driver CHRISTOPHER   AUSTIN   STRADER
First   Middle   Last

Address 99 FERGUSON ST

City CANTON   **State** NC   **Zip** 28716-3422

Same Address on Driver's License? [X] Yes [ ] No   Driver's Phone Numbers   H (828) 226-8266   W

D.L. # 25xxxxxxx   **State** NC
CDL License [ ]

DOB xx/xx/1980   **Unit Number** 2

Owner DIVISION OF HIGHWAYS NCDOT

Address 4809 BERYL RD

City RALEIGH   **State** NC   **Zip** 27606

Plate # PA5441   **Plate State** NC   **Plate Year** 2024

VIN 1FD0W4HT1JEC11700

Vehicle Make FORD   **Vehicle Year** 2018

Insurance Company SELF INSURED

Policy #

Towed By

Towed To

08/09/2023   HAYWOOD   [X]
Date of Crash   County   Non-Reportable

TRP. J P HENDERSON   230809066GA
Officer Name   Local Report Number

YOU MAY RECEIVE A COPY OF THE COLLISION REPORT BY GOING TO NCDPS.GOV, SELECT STATE HIGHWAY PATROL AT THE BOTTOM OFF THE PAGE UNDER LAW ENFORCEMENT. THEN SELECT COLLISION INFORMATION. YOU MAY SEARCH FOR THE REPORT USING ANY ONE OF THE THREE OPTIONS PROVIDED. YOU CAN ALSO RECEIVE A COPY OF THE REPORT BY CONTACT NCDMV AT (919) 715-7000

Exhibit I
TMC Standard Operating Procedures
(SOPs)

North Carolina

Department of Transportation

CONTROL ROOM

SOP MANUAL

Version 2.8

04.12.2023

TABLE OF CONTENTS

OVERVIEW

Last updated: 04.12.2023

Last updated: 04.12.2023

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Last updated: 04.12.2023

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Last updated: 04.12.2023

Last updated: 04.12.2023

Last updated: 04.12.2023

Last updated: 04.12.2023

CCTV RECORDING GUIDELINES

SERVICE ISSUES

APPENDICES

Last updated: 04.12.2023

1. PRIMARY EMPLOYEE POLICIES AND PROCEDURES

1.1. NCDOT ACCEPTABLE USE POLICY

1.1.1. The following is a summary of the NCDOT Acceptable Use Policy. The complete policy can be found online on the NCDOT intranet. All operators are responsible for reading this policy and signing off to confirm that they have read and understood it.

1.1.2. NCDOT devices and equipment such as computers, phone, and internet must be used for work related tasks, only.

1.1.3. Damaging or theft of NCDOT devices or equipment or using them for reasons that are not work related can lead to disciplinary action up to and including termination.

1.1.4. For additional guidelines related to control room operations, see section 1.9 and 1.10

1.2. NCDOT FRAUD, ETHICS, AND SECURITY AWARENESS POLICY

1.2.1. The following is a summary of the NCDOT Fraud, Ethics, and Security Awareness Policy. The complete policy can be found online on the NCDOT intranet. All operators are responsible for reading this policy and signing off to confirm that they have read and understood it.

1.2.2. All operators must adhere to established expectations for honest, ethical, and professional behavior always while on duty.

1.2.3. All operators are prohibited from disclosing information that is characterized as sensitive or confidential to individuals other than NCDOT and STOC management.

1.2.4. Failure to behave honestly, ethically, and professionally can lead to disciplinary action up to and including termination.

1.2.5. For additional guidelines related to control room operations, see section 1.10.

1.2.6. Inappropriate disclosure of sensitive or confidential information can lead to disciplinary action up to and including termination.

1.3. NCDOT SAFETY POLICY

1.3.1. The following is a summary of the NCDOT Safety Policy. The complete policy can be found online on the NCDOT intranet.

1.3.2. NCDOT maintains that all accidents and injuries can be prevented. As such, working safely is a condition of employment for all operators.

1.3.3. Operators are expected to know their limits, take necessary precautions, and follow all established instructions and guidelines for safe behavior.

1.3.4. Operators may not have or use illicit drugs or alcohol while on duty. Regardless of the illicit nature of a substance, operators may not be impaired by any substance while on duty.

1.3.5. Operators may not fight or engage in horseplay while on duty.

1.3.6. Operators must notify their supervisor immediately if they or others are hurt or almost hurt (e.g., near misses) or if they see potentially unsafe actions or situations.

1.3.7. Failure to work safely or to otherwise adhere to NCDOT's policies and expectations for safety can lead to disciplinary action up to and including termination.

1.4. OPERATOR ROLES AND TEAMWORK

1.4.1. The Statewide Transportation Operations Center (STOC) control room will be staffed to support the roles shown below. The numbers indicate minimum staffing requirements per shift, subject to change at the discretion of NCDOT.

- During regular operations on 1st and 2nd Shift (M-F), the STOC control room is staffed to support the roles shown below:
    - STOC Shift Supervisor (1)
    - Regional TMS Operator (1)
    - Regional IMAP Dispatcher (1)
    - Statewide TMS Operator (1)
    - Statewide IMAP Dispatcher (1)
    - Turnpike TMS Operator – Triangle Expressway (1)
    - Work Zone Operator (1)
- During normal weekend operations on 1st and 2nd Shift (Sat-Sun)
    - STOC Shift Supervisor (1)
    - Regional TMS Operator (1)
    - Statewide TMS Operator (1)
    - Statewide/Regional IMAP Dispatcher (1)
- During Normal operations 3rd Shift (Mon-Fri).
    - STOC Shift Supervisor (1)
    - Regional TMS Operator (1)
    - Statewide TMS Operator (1)
- During normal Weekend operations on 3rd Shift (Sat-Sun)
    - STOC Shift Supervisor (1)
    - Statewide TMS (1)

1.4.2. The Triad Traffic Management Center (TRTMC) control room will be staffed to support the roles shown below. The number indicates minimum staffing requirements per shift, subject to change at the discretion of NCDOT.

- During normal operations on 1st and 2nd Shift (M-F)
    - TRTMC Shift Supervisor (1)
    - Triad TMS Operator (1)

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- o Triad IMAP Dispatcher (1)

1.4.3. The Metrolina Traffic Management Center (MRTMC) control room will be staffed to support the roles shown below. The number indicates minimum staffing requirements per shift, subject to change at the discretion of NCDOT.

- During normal operations on 1st and 2nd Shift (M-F)
  - o MRTMC Shift Supervisor (1)
  - o Metrolina TMS Operator (1)
  - o Metrolina IMAP Dispatcher (1)
  - o Turnpike TMS Operator – Monroe Expressway (1)

1.4.4. The Mountain Traffic Management Center (MTMC) control room will be staffed to support the roles shown below. The number indicates minimum staffing requirements per shift, subject to change at the discretion of NCDOT.

- During normal operations on 1st and 2nd Shift (M-F)
  - o MTMC Shift Supervisor (1)
  - o Mountain TMS Operator (1)
  - o Mountain IMAP Dispatcher (1)

1.4.5. In order to maintain operational integrity, the following criteria must be maintained in the STOC and all TMCs:

- At all times supervisory duties must be fulfilled by a supervisor or their designated POC.

- Dispatch positions must always be covered by an individual that is dispatch qualified, or if not fully qualified, under the strict supervision of a dispatch qualified supervisor or POC.

1.4.6. The Division IMAP Dispatcher is responsible for dispatching all IMAP units assigned to them. Including, as necessary, IMAP units designated to patrol the Turnpike. Division TMS operators and Turnpike TMS operators must communicate and work together as needed to ensure IMAP coordination and traffic incident management is handled appropriately and in a timely manner, regardless of incident location.

1.4.7. Turnpike operators are responsible for monitoring VIPER radio traffic between IMAP and the assigned dispatcher. When IMAP provides information pertaining to the Turnpike incidents, Turnpike TMS operators must ensure the information has been properly logged and, when appropriate, NCTA personnel have also received the information. Examples include but are not limited to:

- Reported/confirmed incidents, trash/debris, or other adverse travel conditions

- Disabled or abandoned vehicles

- Damage to NCTA property including the number that has been tagged on the damaged property by SHP/Law Enforcement (if a tag is present)
- Use of a detour that sends traffic onto the Triangle or Monroe Expressway.
  - NOTE: Any detour that sends traffic onto the Turnpike must be approved by the NCTA Roadway Manager responsible for the Turnpike in that area.

1.4.8. Turnpike operators should notify a Shift Supervisor immediately when:

- A lane-closing incident has occurred on the Turnpike, allowing the supervisor to provide guidance, review and approve operator response activities and to facilitate communication between all operators.

- The Turnpike operator has created or updated a calendar event and/or response plan for a planned incident/event occurring on the Turnpike allowing the supervisor the opportunity to review and approve the calendar event and/or response plan.

1.5. CONFLICT RESOLUTION IN THE CONTROL ROOM

1.5.1. Open conflict with any partner or customer (internal or external), team member, or process will not be tolerated.

1.5.2. Operators are encouraged to resolve conflict with their peers on their own but must do so in an appropriate, professional, and private manner.

1.5.3. If needed, operators should escalate conflict/issues with peers or processes to a supervisor or other member of STOC management as appropriate.

1.5.4. At no point should an operator escalate conflict to NCDOT personnel or otherwise engage other partners in conflict.

1.6. ATTENDANCE EXPECTATIONS

1.6.1. Operators and Supervisors are responsible to monitor their own attendance in accordance with the NC Traffic Management Centers Project (Atkins) attendance policy.

1.6.2. All operators must keep track of their schedule and must work the hours they are assigned unless a change in their schedule has been approved by a member of STOC management.

1.6.3. All operators must be on-time for duty. To be considered "on-time," operators must be present, in-place at their console, and ready for duty at the time for which they are scheduled.

1.6.4. At the end of their scheduled shift, operators who are working in an IMAP dispatch role must be relieved by another IMAP dispatcher OR must remain on-duty until all IMAP units have officially ended their tour of duty for that day.

1.6.5. During emergency operations (e.g., adverse weather or other major events), all operators are expected to work any additional hours or times that they are assigned by STOC management. This may include extended hours and/or different times of day which may be assigned with limited advanced notice.

- During adverse weather when travel to and from the STOC may be hazardous or unreliable, operators are responsible for working with their supervisors to establish lodging plans to assure that they are present for emergency operations coverage as assigned.

- Operators who do not support emergency operations coverage as assigned may be subject to disciplinary action at the discretion of STOC management.

1.7. BREAKS

1.7.1. Unless otherwise specified by STOC management, all operators are allowed two, 15-minute breaks and one 30-minute break for lunch during a normal operating shift.

1.7.2. Breaks cannot be taken during peak travel times (e.g., AM/PM rush hour), major incidents, or other periods of high activity.

- During regular work weeks (Mon-Fri) on 1st and 2nd Shift, no fewer than 50% of assigned staff should be in the control room at any given time; except to allow for operator breaks/lunches, and then for periods not to exceed 30 minutes.

- During 3rd Shift and on Weekends, no fewer than 50% of assigned staff should be in the control room at any given time; except to allow for operator breaks/lunches, and then for periods not to exceed 30 minutes.

1.7.3. Operators must coordinate their breaks with their supervisor OR with another operator if a supervisor is not on duty.

1.7.4. Before leaving the control room, all operators must notify their supervisor OR another operator if a supervisor is not on duty.

1.7.5. Operators should exit the control room during breaks to avoid disrupting operators who are working. When the break period is over, operators must return promptly for duty.

1.7.6. All tobacco products, electronic cigarettes, and vaping devices may only be used outdoors and only in areas officially designated for smoking.

1.8. OPERATOR DRESS CODE

1.8.1. The STOC/TMC Dress Code Policy is designed to provide a consistent professional appearance. Our appearance reflects on ourselves, Atkins, and the NC Department of Transportation. The goal is to maintain a positive appearance and not to offend customers, clients, or colleagues.

1.8.2. All employees are expected to dress in NCDOT issued uniforms while on duty or when representing the NCDOT at events.

- When an employee is conducting any work on the STOC/TMC control room floor, a red uniform garment must be worn. If no uniform garments have been issued, a solid red (non-patterned), collared shirt must be worn. This requirement applies to all control room employees, including trainees.

1.8.3. Employees must always present a clean and professional appearance.

1.8.4. Uniforms: Staff will be provided with clothing articles than can include Oxford shirts, polo shirts (long or short sleeve), and a light jacket in accordance with NCDOT Operator and IMAP Uniform Guidelines (Control Room Operators/Supervisors – 7 articles/Office Staff – 3 articles).

- Under normal circumstances, uniform items may be ordered on an as needed basis once per year, up to the maximum allowed quantities as designated by job position. Employees should request new uniform items to replace worn out or damaged uniforms. Employees should not order uniforms simply because they are eligible to do so; so to be good stewards of the limited funding available for Traffic Operations. Supervisors will take an active role in ensuring that uniforms are only ordered on an as needed basis.

- If NCDOT outerwear has not been issued, non-NCDOT outerwear (e.g., jackets, half-zip pullovers, etc.), may be worn but must be solid red or black in color and must blend with the current approved uniform standard. If NCDOT outerwear has been issued to an individual, then non-NCDOT outerwear may not be worn on the control room floor.

- Undershirts (long or short sleeve) may be worn, but must be conservative and solid in color (e.g., white, gray, black, etc.) No bright colors or graphics may be visible.

1.8.5. Non-Uniform Items:

- Pants:
  - Business casual/dress style pants and cargo pants are acceptable. They must be neutral in color (e.g., khaki, black, navy, gray, etc.)
  - Pants must be worn with a belt if belt loops are present.
  - Jeans may only be worn on Friday/Saturday/Sunday, holidays, and/or management discretion. If jeans are worn, they must be blue or black in color.
  - Skirts must be neutral in color (e.g., khaki, black, navy, gray, etc.) with hems extending down to knee length.
  - Skirts must be worn with a belt if belt loops are present.

- Shoes:
  - Business casual/dress style, boots, and athletic shoes are acceptable.
  - All shoes must be clean, in good condition, laced/tied properly, and conservative in style and color.

1.8.6. Miscellaneous:

- Headwear should not be worn in the building or while on duty, unless approved by the Operations Manager.

- Clothing, hats, and grooming styles dictated by religion, ethnicity, or documented medical condition are eligible for exceptions).

- Cologne/perfume, makeup, jewelry, and other accessories should be minimal, and conservative in style.

1.8.7. The following clothing items are prohibited:

- Distressed clothing (items with holes, tears, or other signs of wear).

- Clothing with visible offensive or inappropriate designs or stamps.

- Clothing with big or large logos.

- Clothing with big or large pictures, words, patterns, etc.

- Revealing clothing.

- Open-toed sandals, flip-flops, slippers, crocs, and bright or neon-colored shoes.

1.8.8. Dress Code Violations:

- Managers or supervisors are expected to inform employees when they are violating the dress code. These instances must be documented. Employees in violation are expected to immediately correct the issue.

1.9. PROHIBITED ITEMS AT STOC CONSOLES

1.9.1. The following are prohibited at STOC consoles:

- Food

- Drinks, unless in a spill-proof container.

- Excessive use of electronic devices, including but not limited to, personal cell phones, tablets, laptop computers, media players, Apple (or similar type) watches, or any other items that may cause operator distraction.

1.9.2. NCDOT or STOC management may prohibit additional items at STOC consoles at their discretion to ensure appropriate operator behavior and performance.

1.9.3. Operators should store personal items in their assigned locker rather than at their console.

1.9.4. Jackets and other outerwear should be hung or kept neatly at the lockers rather than over the backs of chairs or at the console.

1.10. OTHER CONTROL ROOM RULES AND ETIQUETTE

1.10.1. Operators must assure that the console computer(s), phone, and all necessary tools are open, logged in, and ready for use always while on duty.

1.10.2. Operators must always remain vigilant and on task while on duty. Sleeping while on duty OR when representing NCDOT or the STOC is strictly prohibited and will be grounds for immediate disciplinary action up to and including termination.

1.10.3. News websites are the only non-work-related sites that operators are allowed to visit while on duty, and then only for current traffic related issues (see section 14.3.2). Exceptions must be specified and approved by NCDOT or STOC management.

1.10.4. Use of any non-work-related website – including news websites – is also prohibited if such use detracts from operational duties as determined by NCDOT or STOC management.

1.10.5. Operators should avoid loud or disruptive behavior while in the control room.

1.10.6. Operators should avoid unnecessary socializing and should stay at or near their console while on duty in the control room.

1.10.7. Operators must keep the control room and all consoles neat, clean, and organized.

1.10.8. Operators and all other STOC personnel are responsible for supporting a positive, productive, and professional environment. Failure to do so may result in immediate disciplinary action up to and including termination. Such behaviors include but are not limited to:

- Threatening, intimidating, bullying, or otherwise exhibiting violent behavior.

- Engaging in sexual harassment including verbal or physical advances.

- Discriminating based on age, race, gender, economic status, religion, or sexual orientation.

- Engaging in rude, insulting, or otherwise derogatory behavior.

- Openly engaging in political, social, or other divisive discussion or debate.

- Withholding information; or providing false or misleading information.

- Refusing to follow instructions, excessive or aggressive push-back, or other insubordinate behavior.

1.10.9. During facility fire alarms Operators and all other STOC/TMC personnel are to perform the following actions:

- Everyone is to evacuate the building following established local evacuation procedures.

- STOC Only: Supervisor will ensure the warden radio is secured if the TSO Warden is not present. If necessary, the STOC Supervisor will coordinate with the JFHQ Lead Warden to account for STOC personnel and monitor the warden radio for further instruction.

- After evacuation, Assemble at the pre-determined checkpoint for your STOC/TMC location.

- It will be the responsibility of all STOC/TMC Supervisors to account for ALL OPERATIONS STAFF. If for any reason an individual's location and well-being cannot be accounted for, the supervisor will report the situation to the Operations or Project Manager immediately.

- Remain at the designated check point until building staff announces all-clear to re-enter the building or issues instructions to evacuate the location.

2. GENERAL OPERATING POLICIES AND PROCEDURES

2.1. RESPONSIBILITY FOR STANDARD OPERATING PROCEDURES (SOP)

2.1.1. All operators are responsible for the following related to standard operating procedures (SOP):

- Reading and adhering to all current SOPs

- Reviewing and keeping track of all new or updated SOPs

- Knowing where to find electronic copies of current SOPs on the shared drive

- Asking supervisors or management personnel for guidance or clarification if needed.

2.2. FUNDAMENTAL OPERATOR EXPECTATIONS

2.2.1. When you are not actively working an incident, you should be trying to detect new ones.

2.2.2. All potential incidents/reports should be investigated with the goal of confirming them and initiating an appropriate response.

2.2.3. Even if an incident cannot be confirmed, if there is an observable impact to traffic, some level of response is needed.

2.2.4. Response measures should address current conditions – modify the response as conditions change OR if the original response did not have the desired effect on traffic.

2.2.5. Based on available information and your experience, if you expect a response measure will be needed, implement it.

2.2.6. Follow your SOPs and direction from management – if you have questions, ask for guidance.

2.2.7. If action is needed but guidance is unavailable, act – if you can provide a sound reason for your actions, you have nothing to worry about.

2.2.8. Seek to be as helpful as possible – always offer assistance, do what is asked of you, and do what you say you will do.

2.2.9. Do not leave when there is work to be done – complete your tasks and stay until work is over OR until you are relieved by another operator.

2.2.10. In all interactions, operators should represent the NCDOT and STOC in a positive and professional manner.

2.3. NCDOT BUSINESS AND AFTER HOURS

2.3.1. For the purposes of contacting Division and Maintenance staff, NCDOT "Business Hours" are defined as 7:00am to 3:30pm, Mon-Fri (excluding state holidays).

2.3.2. Anything outside of the times described above is considered "After Hours."

2.4. DETERMINING WHEN AN INCIDENT IS OVER

2.4.1. Operators can determine when an incident has concluded based on one or more of the following, as applicable:

- Lane and Responder Clearance – when all lanes have reopened and all responders, equipment, and vehicles have left the scene.

- End Time Expiration – for planned events only when the established end time occurs. Operators should verify that no impact to traffic is present before considering the incident over.

- NCDOT/Responder Confirmation – when the on-scene point of contact advises that work is complete and/or lanes are open.

2.4.2. Operator activity and all related control room response measures may only be discontinued once an incident has concluded.

2.5. HIGHER ORDER ROUTES

2.5.1. "Higher order routes" is a system for ranking road types based on size and traffic volume handled. State-maintained roads are ranked below in descending order from highest to lowest:

- Interstates

- US Routes

- NC Routes

- Secondary Roads (SR)

2.5.2. Operators should use the higher order routes ranking system to:

- Prioritize traffic monitoring, incident detection, and response efforts

- Determine which route to refer to in TIMS, DMS, Alerts, etc. for incidents occurring on concurrent routes

2.5.3. See sections on TIMS, DMS, and Alerts for further details on how higher order routes affect these response measures.

2.6. CONCURRENT ROUTES

2.6.1. Concurrent Routes (aka "Dual Routes") – roadways that are formed when 2 or more separate routes run together. Concurrent routes are officially referred to by the numeric designations of each separate route (e.g., I-40/I-85, US 29/US 70, etc.).

2.6.2. Concurrent Interstate Routes – concurrent routes formed when 2 interstate routes run together. In North Carolina, the following concurrent interstate routes have been identified:

- I-40/I-85 (mm 131-163)

- I-40/I-85 BUS (mm 219-227)

- I-73/I-74 (Randolph Co. south to Rockingham)

- I-26/I-240 (West Asheville)

- I-77/I-74 (Surry Co.)

- I-73/I-840 (West Greensboro)

2.6.3. For concurrent routes that include different route types (in addition to or other than an interstate), operators will refer to the higher order route.

2.6.4. For concurrent routes that include the same route types, operators will refer to the route with the lowest number.

2.6.5. The examples below are given to demonstrate the concepts discussed above:

- I-40 BUS/US 421 – refer to I-40 BUS because I-40 BUS (an interstate) is a higher order route than US 421 (a US route).

- US 29/US 70 – refer to US 29 because both routes are US routes and 29 is a lower number than 70.

- US 301/NC 13 – refer to US 301 because, though 13 is a lower number than 301, US 301 is a higher order route than NC 13.

2.6.6. See sections on TIMS, DMS, and Alerts for further details on how concurrent routes affect these response measures.

2.7. BEGINNING OF SHIFT – SHIFT EXCHANGE

2.7.1. "Shift Exchange" is used to describe the handoff of information from one shift to another as one shift leaves for the day and the next shift reports for duty.

2.7.2. Actively participating in the Shift Exchange is the responsibility of all operators – whether they are reporting for duty (incoming) or leaving for the day (outgoing).

2.7.3. Incoming and outgoing operators should discuss any items that are ongoing or may otherwise affect the operations on the next shift including but not limited to:

- Incidents/other activity that occurred or are still going on

- Action items/response activities that require follow-up

- Any issues or malfunctions that may affect operators,

- Any pertinent communication with our partners that needs to be passed on

- Any new policies, procedures or other instructions from management

2.7.4. Before outgoing operators leave for the day, incoming operators should help wrap-up and/or hand-off any outstanding tasks.

2.7.5. Once an operator is in-place, they are responsible for all tasks associated with their assigned role and for the overall performance of their shift.

2.8. BEGINNING OF SHIFT – CONSOLE SETUP

2.8.1. Incoming operators are encouraged to thoroughly wipe down their console, phone, and keyboard with a disinfecting wipe at the beginning of each shift.

2.8.2. The following resources must be on, open and ready for use always during an operator's shift:

- All console computers

- Console phone logged into the appropriate line and set to READY state

    o Only operators in a Dispatch role may set their phone to "NOT READY".

- All VIPER radios are on, tuned to correct talkgroups, and set to an appropriate volume

- Vanguard software for DMS

- VideoPro

- TIMS,

- HERE,

- STOC email inbox,

- STOC Contact Matrix

- Appropriate log/database for position as described below:

    o Major Incident (TMS) Log for Regional or Statewide TMS

    o Incident Management (Dispatch) Log and 41/42 Log for Regional or Statewide Dispatchers

    o Work Zone Incident Log for Division 5 Regional TMS

    o Customer Service Database for DOT Customer Service Representative (CSR)

- Floodgate Dashboard

- Local Law Enforcement (LE) CAD feed, if available.

2.8.3. Recommended tools and websites to have open and ready for use include:

- Google Maps (including NC Operations Map)

- Wikipedia Exit Lists

- DOT Secondary Roads (SR) Lookup Database

- National Weather Service (NWS) website

2.9. BEGINNING OF SHIFT – INITIAL SHIFT SWEEP

2.9.1. All operators should perform the following "Shift Sweep" within the first 15 minutes of every shift:

- Check HERE – briefly investigate and note any areas of congestion.

- Check SHP/Local CAD feed – note any incidents on interstates and US/NC routes reported within last hour.

- Check TIMS – note any items that are active, about to expire, or are out of date including the following:

    o TIMS incidents, especially crashes or lane closures

    o County Alerts and/or Special Alerts

- County Adverse Weather Listings

- Check the TIMS Alerts status and perform the following:

  - Ensure that floodgates are active for all Alerts requiring a floodgate

  - Ensure that Alert checklists are filled out for active Alerts

- Use CCTV to scan any active incidents or known hotspots.

- Check Vanguard – review any active DMS/CMS messages.

- Check STOC inbox and review any/all:

  - Emails received/sent during previous shift, especially Shift Updates

  - Calendar items for that day

- Check and follow-up on any missed calls or voicemail messages.

- Check NWS website for any adverse weather alerts or forecasts.

- Review log entries from previous shift and note any on-going entries.

- Review any applicable checklists or response plans (RP).

2.10. END OF SHIFT – WRAP-UP AND SHUTDOWN

2.10.1. All operators should prepare for the end of their shift in advance by completing the following as the end of shift approaches:

- Wrap-up any unfinished tasks.

- Plan which tasks will be handed off to the next operator.

- Collect any notes, checklists, or RPs that the next operator will need.

- Save, logout, and close all tools including logs and other shared documents.

2.10.2. Operators should prepare their console for the next operator by:

- Organizing and storing any reference materials (e.g., camera lists, etc.)

- Cleaning up and properly disposing of any trash

- Storing all personal belongings in assigned locker or taking them home.

3. COMMUNICATION AND RESPONSE COORDINATION

3.1. COORDINATING WITH NCDOT AT THE APPROPRIATE LEVEL

3.1.1. Operators should coordinate with NCDOT personnel at the County or District level, only.

3.1.2. Operators may only coordinate with NCDOT personnel at or above the Division level if:

- Personnel are listed as a point of contact (POC) in STOC Contact Matrix

- Instructed by SOPs or Response Plans (RPs)

- Instructed by a member of NCDOT or STOC management

3.2. MONITORING COMMUNICATION RESOURCES

3.2.1. All communication resources should always be monitored.

3.2.2. Each operator must always be logged into the appropriate STOC phone line with the phone set to READY state while the operator is present at the console.

- NOTE: Only operators in a Dispatch role may set their phones to "NOT READY."

3.2.3. All operators must be logged into STOC email and have it open throughout their shift.

3.2.4. All necessary radios must be on, tuned to the appropriate channels/talkgroups, and set to an appropriate volume.

3.3. TIMEFRAME TO ANSWER INCOMING COMMUNICATION

3.3.1. All calls, emails, etc. should be answered promptly and within the timeframes below:

- Radio – within 10 seconds

- Phone – within 3 rings

- Missed calls – return within 15 minutes

- Voicemails – review and respond within 30 minutes

- Emails – within 15 minutes

3.4. OFFICIAL TELEPHONE GREETINGS

3.4.1. When answering in-coming phone calls or making out-going calls, operators must always provide their name and use the official greetings that correspond to the phone line that the operator is answering (i.e., STOC line, DOT CSC line, or NCTA line).

3.4.2. STOC Official Greeting (in-coming call):

- "Thank you for calling NCDOT Statewide Transportation Operations Center, this is _____. How may I assist you?"

3.4.3. STOC Official Greeting (out-going call):

- "Hello. This is _____ at the NCDOT Statewide Transportation Operations Center."

3.4.4. DOT CSC Official Greeting (in-coming call):

- "Thank you for calling NCDOT customer service, this is _____. How may I assist you?"

3.4.5. DOT CSC Official Greeting (out-going call):

- "Hello. This is _____ at the NCDOT Customer Service Center."

3.4.6. NCTA TMC Official Greeting (in-coming call):

- "North Carolina Turnpike Authority, this is _____. How may I assist you?"

3.4.7. NCTA TMC Official Greeting (out-going call):

- "Hello. This is _____ with the North Carolina Turnpike Authority."

3.5. GENERAL EMAIL COMMUNICATION GUIDELINES

3.5.1. All operators are required to check their individual NCDOT email accounts every day that they are on duty. Operators should use their individual NCDOT email accounts when communicating with other STOC team members.

3.5.2. All operators are required to be logged into the STOC email account (stoc@ncdot.gov) at all times while on duty and must check for new emails regularly throughout their shift.

3.5.3. All email communication between operators and internal/external partners must occur using the STOC email account.

3.5.4. Operator emails from the STOC account must adhere to the following:

- All emails must be positive, professional, appropriate, and relevant to operations.
- All emails must be addressed to the appropriate and intended recipients.
- At a minimum, a supervisor or other member of STOC management should be copied on all emails and replies.
- All emails must include a clear subject line relevant to the content of the email.
- Operators must include their name in the body of all emails, above the email signature.
- All emails must include the STOC's official email signature.

3.6. DOCUMENTATION GUIDELINES FOR REPORTS/REQUESTS

3.6.1. Operators should carefully document all incident reports/requests for assistance including:

- Time and date when report/request was received
- Name and agency (if applicable) of party relaying report/request
- Call back number of party relaying report/request BUT only if:
  - Party can provide on-going information (e.g., motorist staying on scene)
  - Number is not already saved as a speed dial or in the STOC Contact Matrix.

- Details of report/request

- Description of operator activity and/or obstacles related to report/request.

3.6.2. Operators should assure that all relevant information related to a report/request as well as any resulting operator activity is properly entered and saved in the appropriate log/database.

3.7. WHEN TO CONTACT NCDOT PERSONNEL

3.7.1. When contacting NCDOT personnel, operators must contact the appropriate point of contact (POC) that is responsible for:

- The affected area (i.e., County, Division, Region, etc.)

- Addressing the incident, report, or request

3.7.2. Unless otherwise specified in the STOC Contact Matrix, operators must contact appropriate NCDOT personnel in the following circumstances:

- When a confirmed incident has occurred on a state-maintained roadway in NC.

- When an NCDOT response (e.g., DMS, maintenance, etc.) has been requested in their area and operators are unable or NOT authorized to implement that response without NCDOT approval.

- When new or updated information essential to NCDOT's response is available.

- When NCDOT personnel possess information, updates, or other guidance that is needed to support STOC response efforts.

- When contacting an NCDOT POC has been requested by a partner (e.g., law enforcement, other NCDOT personnel, etc.).

- When contacting an NCDOT POC has been directed by an SOP/Response Plan (RP) or a member of STOC management.

3.8. APPROVED CONTACT LISTS

3.8.1. Operators may only use approved contact lists and other contact resources when contacting internal/external partners.

3.8.2. Operators must notify their supervisor if any missing, out of date, or incorrect information is found in an approved list/resource.

3.8.3. The following contact lists/resources are approved for use by operators:

- STOC Contact Matrix

- SOPs/RPs/Checklists

- Statewide Law Enforcement Contact List

- Console Phone Speed Dials

- Customer Service Center (CSC) Binder

- Fortify Response Binder

- NCDOT Directory

3.9. STOC CONTACT MATRIX

3.9.1. Operators must access the matrix by opening the matrix's "START HERE" file located at Z:\TSOU\511 Operators\Contact Lists\Matrix.

- DO NOT navigate to the County/Division contact pages directly – doing so may result in contacting the wrong POC.

3.9.2. Operators must carefully consider incident details to properly navigate the contact matrix and locate the correct NCDOT POC including:

- Whether incident is occurring during NCDOT business or afterhours

- Whether the type of road that is affected is an interstate, US/NC route, or SR

- What County and Division incident is occurring in

- Other incident details (e.g., lanes closed, presence of HazMat or fatalities, requests for NCDOT assistance, etc.)

3.9.3. To select the correct POC from the County/Division contact page, operators must:

- Check the contact criteria for each POC, shown above each POC's name (e.g., "On Shoulder," "1 Lane Closed," etc.)

- Check each of the tabs for "Vehicle Accident," "Maintenance Requests," or "Other" to assure that all possible POCs have been reviewed.

3.9.4. Each POC will have one or more of the following contact methods listed:

- Office phone

- Home phone

- Mobile phone

- Pager

- Email address

3.9.5. Operators should choose the appropriate contact method to use based on the following:

- The time when the incident/request is occurring (NCDOT business or afterhours)

- POC-specific instructions for how to contact (e.g., use email vs. phone) – if available, special instructions take precedence over normal contact procedures.

3.9.6. Unless special instructions exist, during business hours, operators should attempt to contact POCs by:

- Office phone – 1st

- Mobile phone/Pager – 2nd

- Note: DO NOT call Home phone during business hours.

3.9.7. Unless special instructions exist, during afterhours, operators should attempt to contact POCs by:

- Mobile phone/Pager – 1st

- Home phone – 2nd

- NOTE: DO NOT call Office phone during afterhours.

3.10. CALL ESCALATION WITHIN THE STOC CONTACT MATRIX

3.10.1. Operators should attempt to contact the Primary POC first. The Primary POC will be listed at the top and labeled as "Primary Contact."

3.10.2. Operators should attempt to contact Backup POCs if the Primary POC does not answer. Backup POCs will either be listed beneath the primary contact or provided within special instructions on the matrix page for that POC.

- Operators should leave a detailed voicemail message with reason for call as well as the callback number for STOC (877-627-7862).

- Operators should wait 15 minutes before attempting to call Backup POCs to allow time for the POC to return STOC's call.

3.10.3. If none of the NCDOT personnel listed in the contact matrix answer, operators should then attempt to reach a member of STOC management, starting with their Shift Supervisor.

3.11. NCDOT CALL ESCALATION

3.11.1. If a POC with NCDOT does not answer a call from STOC, operators should escalate the call by attempting to contact another, relevant POC who can assist with the request.

- NOTE: Operators should wait 15 minutes before attempting to call Backup POCs to allow time for the POC to return STOC's call.

3.11.2. Escalation processes for contacting specific, Backup POCs are described in the STOC Contact Matrix OR in an SOP/RP for a specific situation.

3.11.3. General Escalation Process – if a POC does not answer a call, operators should:

- Leave a detailed voicemail with reason for call as well as the callback number for STOC (877-627-7862).

- Attempt call to POC's alternative contact methods (e.g., cell phone, etc.) immediately. Operators should leave a detailed voicemail at each contact method attempted.

- Wait 15 minutes and attempt call to a Backup POC. If needed, attempt call to Backup POC's alternative contact methods before moving on to another Backup POC.

- Document any failure to/delay in making contact.

- If all relevant POCs for area/situation do not answer, attempt to call a member of STOC management as described in section 3.13.

3.12. MISSING OR OUT OF DATE INFORMATION IN THE STOC CONTACT MATRIX

3.12.1. If the STOC Contact Matrix does not have the necessary information or the information is out of date, operators should:

- Ask a supervisor for advice or another operator if a supervisor is not on duty, OR
- Contact the next best POC for that area from within the contact matrix, OR
- Use the NCDOT Directory to determine who the best POC might be.

3.12.2. If updated contact information is found, operators should email the information to a supervisor so the matrix can be updated.

3.12.3. All changes to the STOC Contact Matrix must be approved by the NCDOT Traffic Operations Engineer before the matrix can be updated.

3.13. STOC MANAGEMENT CALL ESCALATION

3.13.1. When attempting to call a member of STOC management for any reason, operators should follow the STOC Management Call Escalation process as described below:

- 1st POC: Shift Supervisor,
    - Operators may contact another supervisor before moving on to next POC.
- 2nd POC: STOC Operations Manager,
- 3rd POC: STOC Project Manager, and
- Final POC: NCDOT Traffic Operations Engineer.

3.13.2. If a management POC does not answer, operators should leave a voicemail with their name and reason for the call before attempting to call the next management POC.

3.14. COORDINATING WITH NCDOT PERSONNEL

3.14.1. In general, operators should clearly relay the following to NCDOT personnel when advising them of incident reports or requests for assistance:

- What is happening and where it is located,
- Who reported it and/or how it was verified by STOC,
- What NCDOT service has been requested, and
- What is involved (e.g., types of vehicles, description and extent of damage, etc.).

3.14.2. NCDOT personnel determine what to do based on what is happening and what is involved – NOT based on what is requested.

3.14.3. Operators should perform any tasks that are requested by NCDOT personnel.

- "Can't" or "Won't" are not acceptable terms – operators should do what is in their power to do and work with their team and supervisor to complete tasks. If unsure, operators should accept the request and then notify their supervisor immediately. Operators must document the situation thoroughly.

- Operators should accept POC information and guidance BUT should advise if any conflicting information is received/observed (e.g., NCDOT press release does not match POC's information, etc.).

- If possible, operators should seek to fulfill the request while POC is still on the phone.

- Operators should explain what STOC plans to do and ask for the POC's input.

- If actions that have been discussed with the POC cannot be completed as discussed or if there are delays, additional obstacles, or further information needed, operators should call the POC back to advise.

3.15. GETTING UPDATES FROM NCDOT PERSONNEL

3.15.1. If NCDOT (e.g., IMAP, CME, etc.) is on scene, operators should contact these POCs for updated information instead of other external partners (e.g., SHP/LE, etc.).

3.15.2. Operators should call the on scene POC for NCDOT to gather updated information as needed, especially for unplanned incidents (e.g., crashes, etc.).

3.15.3. To properly coordinate updates with NCDOT POCs, operators should:

- Work with the POC to establish a reasonable timeframe/frequency for STOC to call back based on the incident's expected duration.

- Request that the POC call STOC back as new information is available such as when lanes reopen. If no call is received and changes to the incident/impact are observed, operators should contact the POC to request an update.

3.16. RECEIVING REQUESTS FOR TRIAD PORTABLE SIGNS

3.16.1. Operators receiving requests for portable signs (CMB, CMS, and Vermac) in the Triad should ensure the following information is captured for each request:

- The agency or Contractor that are requesting the signs

- The name of the person making the request

- Email address and/or phone number for the requesting party

- The method which they wish to be contacted (e.g., by email, phone, or both)

- The dates the signs will be needed

- How many signs are needed for the project

- The requested location of the signs

- The message that needs to be placed on the signs
    - Operators may suggest appropriate messages that align with policy.

- The duration the messages should play

3.16.2. Once the information described above has been captured, operators should:

- Open the "Triad Portable Sign Request" email template from STOC email account.

- Enter the details of the request into the template.

- Review the email with a supervisor/POC or another operator to assure all information has been captured properly.

- Address the completed and approved email to the distribution list called, "Triad Portable Sign Request Group" and click "Send."

3.17. RECEIVING REPORTS/REQUESTS FROM SHP/LAW ENFORCEMENT (LE)

3.17.1. When receiving incident reports and/or requests for NCDOT assistance from SHP/LE, operators should:

- Confirm the incident type and location.

- Ask if an SHP/LE unit has been or is on scene to confirm the incident.

    o If a unit has not been on scene, operator should ask if they can call back once the unit is on scene.

- Ask if any lanes are closed and, if so, ask which lanes are closed specifically.

- Ask for further details based on what is reported/requested such as:

    o For a crash: Ask for TYPES of vehicles (e.g., commercial vehicles, motorcycles, etc.) and the condition of vehicles (e.g., overturned, etc.) – DO NOT ask for "vehicle descriptions".

    o For debris/spill: Ask for the type of debris/spill (e.g., nails, fuel, etc.) and the size/quantity of the debris/spill (e.g., 20 gallons of fuel, etc.).

    o For NCDOT property damage: Ask what has been damaged and ask for the extent of the damage (e.g., 30ft of guardrail knocked down, etc.).

- Always ask if NCDOT assistance is needed but on the initial call, only.

3.17.2. Operators should NOT ask for sensitive information including types of injuries or names of motorists involved in crashes.

3.18. FURTHER GUIDANCE ON QUESTIONS TO ASK SHP/LE

3.18.1. When communicating with SHP/LE, operators should NOT ask vague questions (e.g., "Can you tell me what's going on?") and should ONLY ask for information that operators cannot get elsewhere. Examples of good, specific questions include but are not limited to:

- "Can you tell me how large the tree is that's fallen?"

- "Did your unit advise how many feet of guardrail were damaged?"

- "You mentioned a fuel spill – do you know how much fuel?"

- "You said that all lanes are closed – do you know if traffic is being diverted and, if so, to which road?"

- "My congestion map is showing a significant amount of backup in that area – are you aware of any crashes that have been reported there?"

3.18.2. Operators are encouraged to lead with a clear, direct question but immediately follow it with a short example or reason that helps the SHP/LE dispatcher understand what STOC is looking for and why. Examples of this strategy are shown below:

- "Can you tell me what types of vehicles are involved – commercial vehicles, motorcycles, or things like that? Are any overturned?"

- "Do you need DOT assistance – for DOT property damage or traffic control?"

- "Are any injuries involved so I know if this incident might have an extended duration?"

3.18.3. If information is unavailable or the SHP/LE dispatcher does not want to provide it to the STOC, operators should:

- Suggest a reasonable time when STOC can call back for the information OR

- Offer to put the officer on scene directly in touch with a responding NCDOT employee

    o Request the on-scene officer's mobile number to provide to NCDOT POC, OR

    o Offer the NCDOT POC's mobile number so the on-scene officer can call them.

3.19. CALLING SHP BASED ON CAD FEED REPORTS

3.19.1. For details on using the SHP CAD Feed to detect/verify incidents, see section 4.6.

3.19.2. Operators should avoid making unnecessary calls to SHP using the guidelines below:

- Only call for information that operators cannot acquire elsewhere (e.g., from IMAP/NCDOT on scene, CCTV, VIPER talkgroups for the SHP/LE agency, etc.).

- Gather as much information from other sources BEFORE calling SHP.

- Only call for incidents with an observable impact to traffic.

- Only call for incidents on SRs where observed impact is SEVERE – SHP will call STOC for SR incidents if NCDOT assistance is needed.

3.19.3. Operators may only call SHP once the following times for the CAD feed report have elapsed:

- Date Entered field – 30 minutes after report is entered, OR

- Unit Arrival field – 15 minutes after unit arrives on scene.

- NOTE: If the observed impact of an incident is exceptionally severe OR if directed by NCDOT personnel or STOC management, operators may call SHP before the times above have elapsed.

3.19.4. While waiting for the times described above to elapse, operators should:

- Continue attempts to confirm the reported incident via other resources

- Implement response measures if the incident can be considered, "verified" (see section 4.4 and section 4.5).

3.20. CALLING SHP/LE FOR UPDATES

3.20.1. When an NCDOT POC is not on scene, operators should call SHP/LE to gather new or updated information, as needed.

3.20.2. Operators should work with the SHP/LE dispatcher to establish a reasonable timeframe/frequency to call back for updates.

3.20.3. If new or updated information from SHP/LE affects or negates STOC response measures and/or response by NCDOT personnel or other partners, operators should modify their response measures to reflect current conditions and should follow-up with NCDOT personnel/partners to relay the new information from SHP/LE.

3.21. SHP/LE REQUESTS FOR NCDOT MAINTENANCE

3.21.1. For the next few sections, "NCDOT Maintenance" or "NCDOT POC" will be used to refer to a variety of NCDOT personnel including but not limited to:

- NCDOT Maintenance (e.g., CMEs, etc.)

- Signal Technicians

- Traffic Services

- Bridge Inspectors

3.21.2. NOTE: Operators should use the STOC Contact Matrix to determine who the appropriate NCDOT POC to contact is based on the details of the incident/request.

3.21.3. Operators should gather and document all relevant details of the request from SHP/LE as described in section 3.17 and section 3.18.

3.21.4. Operators should only contact NCDOT Maintenance for SHP/LE requests that are considered, "confirmed" (see section 4.3).

3.21.5. Operators should contact the appropriate NCDOT Maintenance POC in a timely manner once the request from SHP/LE has been received and confirmed.

3.21.6. Operators should call SHP/LE back if the following occurs during contact with the NCDOT POC:

- NCDOT POC is unreachable – advise SHP/LE of a possible delay in NCDOT response while further attempts are made to contact an NCDOT POC.

- NCDOT POC advises they are unavailable – advise SHP/LE that NCDOT is unavailable to respond. If necessary, convey information from NCDOT POC about alternate POCs that SHP/LE may need to contact (e.g., municipal personnel, local Fire Dept., etc.).

- NCDOT POC advises of delayed response – advise SHP/LE of delay in NCDOT response and provide expected response time if given by NCDOT POC. For debris removal and/or traffic control, operators may ask if SHP/LE or local Fire Dept. can respond instead of NCDOT or until NCDOT arrives.

- NCDOT POC requests additional information or action from SHP/LE – relay NCDOT POC's request to SHP/LE. If needed, offer to put the officer on scene directly in touch with the NCDOT POC.

    o   Request the on-scene officer's mobile number to provide to NCDOT POC, OR

    o   Offer the NCDOT POC's mobile number so the on-scene officer can call them.

3.21.7. NOTE: Operators should follow-up with the NCDOT POC as needed to advise that the POC's information/request has been relayed to SHP/LE and/or to relay any additional information/requests relayed by SHP/LE.

3.22. NCDOT MAINTENANCE – EMERGENCY VS. NON-EMERGENCY RESPONSE

3.22.1. Incidents that are considered by NCDOT as EMERGENCY in nature include but are not limited to:

- Traffic control and other incident management support for unplanned incidents that impact travel lanes

- Debris, flooding, and other obstructions in travel lanes

- Emergency roadway repairs where work occurs in travel lanes

- Damage to NCDOT infrastructure that impacts travel lanes (e.g., guardrail in roadway) or makes travel immediately unsafe (e.g., bridge damage)

- Downed stop signs

- Traffic signals where all signals for one or more directions of travel are out

3.22.2. For incidents that are emergency in nature, operators should:

- Call an appropriate NCDOT POC immediately

- Support incident and traffic management through all STOC response measures as appropriate (e.g., TIMS, DMS, Alerts, Detours/Alternate Routes, etc.)

3.22.3. Incidents that are considered by NCDOT as NON-emergency in nature include but are not limited to:

- Debris or animal carcasses on the shoulder

- Damage to NCDOT infrastructure that does NOT impact travel lanes or safety

- Downed signs (e.g., speed limit signs, etc.)

- Traffic signals where only 1 signal head is out/malfunctioning.

3.22.4. For incidents that are non-emergency in nature, operators should:

- Call an appropriate NCDOT POC immediately, if during NCDOT business hours, OR

- Email an appropriate NCDOT POC if during NCDOT afterhours

- Support incident and traffic management through appropriate STOC response measures (e.g., TIMS, DMS, etc.) but only when NCDOT arrives on scene.

3.23. NCDOT MAINTENANCE – AFTER HOURS RESPONSE

3.23.1. NCDOT Maintenance's expected time of arrival (ETA) for requests after-hours is 2 hours, minimum. Operators should inform SHP/LE of this extended ETA when the initial request is received.

3.23.2. During NCDOT's afterhours period (see section 2.3), NCDOT Maintenance will only respond to after-hours requests that meet the following criteria:

- Incident is considered, "confirmed"
- Incident is emergency in nature
- Incident cannot be resolved by SHP/LE and/or local Fire Department
- SHP/LE unit will remain on scene until NCDOT arrives.

3.23.3. If the above criteria are NOT met, operators should advise SHP/LE that NCDOT will not respond until regular business hours. If needed, operators may offer to:

- First: Contact the NCDOT POC to relay incident details and determine if NCDOT will respond.
- Second (if needed): Put the officer on scene directly in touch with the NCDOT POC.

3.23.4. For incidents that are non-emergency in nature that occur during NCDOT's after-hours period, operators should coordinate with STOC personnel that will be on duty when NCDOT business hours resumes so that response to the incident can be continued.

3.24. COORDINATING WITH MOTORISTS

3.24.1. When receiving reports/requests from members of the traveling public (i.e., motorists), operators should:

- Ask for all necessary information but VERIFY details via other sources as much as possible.
- Confirm and re-confirm location. If motorist is unsure of location, ask where they started their trip and where they are going. Ask if they see any signs, especially exit numbers/mile markers.
- Repeat motorist's request back to them to assure it is understood.
- Only request their name and call back number if:
  - They will remain on scene throughout the incident. OR
  - Their request requires follow-up from STOC or other party.

3.24.2. For emergency reports from motorists (e.g., lanes closed, stop sign down, crashes, etc.), operators should do either of the following before initiating NCDOT response:

- Attempt to confirm or verify the report via CCTV, HERE, etc. AND/OR
- Call IMAP or SHP/LE to respond and confirm the report.

3.24.3. For potential "Non-issues" from motorists (e.g., traffic signal too slow), operators should attempt to verify the report but should only initiate response if impacts are observed.

3.24.4. Operators should make all reasonable efforts to resolve a motorist's issue and/or fulfill their request during the initial call.

3.24.5. If a motorist's request requires a follow-up contact later, operators should document the caller's name, call back number, and request. Operators must ensure that this information is passed along to other operators/NCDOT personnel if needed.

3.24.6. If a motorist's report/request is NOT a service provided by NCDOT/STOC, operators should advise the caller that NCDOT will be unable to assist with their request. The operator should attempt to provide further guidance that may help the caller. Examples include:

- Reporting a drunk or reckless driver – advise the motorist to call *HP or 911.

- Requesting a service provided by another agency (e.g., DMV, NCTA, etc.) – provide motorist with the publicly available phone number and/or website for the appropriate agency.

- Requesting NCDOT assistance for a road that is NOT state-maintained – provide motorist with the phone number for the appropriate municipal agency and/or the non-emergency phone line for the appropriate local law enforcement agency.

3.25. ASSISTING MOTORISTS IN LIFE-THREATENING SITUATIONS

3.25.1. If a motorist is involved in an emergency or life-threatening situation, operators should:

- Quickly and calmly collect critical information including:
  - What is happening
  - Location of caller and situation
  - Caller's name and call back information

- Advise the caller that they need to hang-up and dial 911 immediately.

- Advise the caller of the need to hang-up so STOC can call 911 on their behalf as well.

- Hang-up with the caller and call the appropriate LE agency immediately.

- Advise the LE dispatcher of the situation and provide the caller's name, location, and call back number – remain on the line with LE if needed.

- If possible, ask another operator to use CCTV or dispatch IMAP to find and monitor the distressed motorist – if the motorist is found, advise LE.

- Notify a supervisor/POC immediately and document the occurrence thoroughly.

3.26. HANDLING IRATE MOTORISTS

3.26.1. Operators should remain positive, polite, and professional always when communicating with motorists. If a motorist is irate, operators should:

- Attempt to diffuse the situation and resume the call calmly, or

- If needed, offer to escalate the call to a supervisor/POC.

3.26.2. Operators should avoid hanging up on irate motorists unless necessary. Operators may terminate the call if a motorist uses profanity or derogatory or threatening language.

- Before hanging up, operators must warn the irate motorist that the call will be terminated if they continue to use inappropriate language.

- If the motorist continues using inappropriate language after being warned, operators should terminate the call immediately.

- Any calls involving threats must be reported to a supervisor/POC immediately.

3.27. COORDINATING WITH NEWS MEDIA

3.27.1. Operators should interact with members of the News Media as they would members of the travelling public (i.e., motorists):

- Interaction should be positive, polite, and professional

- Reports must be confirmed before NCDOT response is initiated

- Operators should seek to fulfill requests on the initial call

- Operators should avoid hanging-up unless profanity or derogatory/threatening language is used.

3.27.2. Operators may only provide News Media with current, publicly available travel conditions and advisories (i.e., what is already provided in TIMS). If a member of the News Media requests information beyond current travel conditions, operators should:

- Direct the media representative to an NCDOT Public Information Officer (PIO), or

- Provide the non-emergency phone number for the appropriate local LE agency.

3.27.3. If a member of the News Media requests an interview with a representative of NCDOT or would like to schedule a visit to an NCDOT site, operators should direct the media representative to the NCDOT Public Information Office (see Appendix N).

- Operators are NOT permitted to provide media interviews or to authorize News Media visits/tours of NCDOT sites.

- Operators may NOT allow any member of the News Media to access the control room unless they are escorted by a member of NCDOT or STOC management.

3.27.4. Any interaction with a member of the News Media that is not routine (e.g., media calling to report an incident that may be visible on CCTV, etc.) must be reported to a supervisor/POC immediately.

3.27.5. Upon being notified members of the News Media will be visiting the control room; all operators must assure that they are appropriately attired (see section 1.8 on Dress Code) and that the control room is clean and organized.

3.28. COORDINATING WITH NCDOT PUBLIC INFORMATION OFFICE (PIO)

3.28.1. Operators should coordinate with an NCDOT Public Information Officer (PIO) in the following situations:

- To assist with News Media requests that are not routine incident reports,

- When directed by SOPs, Response Plans (RPs), or the Special Alert Checklist, and

- When directed by a member of NCDOT or STOC management.

3.28.2. In general, operators should contact NCDOT PIOs via their on-call phone number. (see Appendix N)

3.28.3. When necessary, operators should relay incident information to NCDOT PIOs (a.k.a. NCDOT Communications) as they would any other partner with NCDOT.

3.28.4. When operators are unable to reach an NCDOT PIO, operators should:

- Leave a detailed voicemail with the reason for the call and STOC's call back number (877-627-7862),

- Wait 10 minutes to allow the NCDOT PIO to call back,

- Send an email to the NCDOT Chief Communications Officer (see Appendix N) advising that STOC was unable to contact the on-call NCDOT PIO and providing the reason for the call and the time when STOC's call to the NCDOT PIO was made. This email should have the following members of NCDOT and STOC management copied:

  o NCDOT Traffic Operations Engineer

  o STOC Operations Manager

  o STOC Supervisors

3.29. RESTRICTED INFORMATION FOR MOTORISTS OR NEWS MEDIA

3.29.1. When communicating with motorists or with members of the News Media, operators should NOT provide:

- Cell phone or personal contact information for any NCDOT personnel or partner (except the NCDOT PIO's on-call number)

- Any contact information for STOC other than 511

- Any contact information for SHP other than *HP

- Sensitive or disturbing information (e.g., injuries, fatalities, peoples' names, etc.)

- Assumptions about incidents (e.g., why it occurred, etc.)

- Any information that casts NCDOT, STOC, or its partners in a negative light,

- Driving directions other than official detours/alternate routes that are in use

- Written communication (e.g., email, documents, etc.) unless directed by management

3.30. CONTACTING THE FEDERAL HIGHWAY ADMINISTRATION (FHWA)

3.30.1. Highway incidents (including those that affect infrastructure) and other incidents or events meeting one or more of the following criteria shall be reported to the FHWA HQ EC:

- Any incident or event that, in the opinion of the Division Administrator or FLH Division Director, will generate immediate national interest and/or media coverage.

- Incidents or events that create disruption to NHS operations for 8 hours or more. These incidents can include, but are not limited to:
  - Damage to, or closure of highways or highway infrastructure caused by an act of nature including, but not limited to, earthquakes, floods, tornadoes, hurricanes, or wildfires. For winter weather, only report closures to the Interstate Highway System.
  - Damage to, or closure of highways or highway infrastructure, caused by crashes, terrorist or criminal acts, or unknown causes.
  - Evacuation conducted for any reason.
  - Planned special events or construction that requires an extended (greater than 8 hour) closure on the Interstate Highway System.

- Other highway incidents (including incidents that occur on NHS and non-NHS roads) that shall be reported regardless of the reason or duration of the disruption:
  - Crashes involving 6 or more fatalities
  - Crashes involving 10 or more vehicles
  - Commercial Vehicle crashes resulting in 2 or more fatalities or receiving statewide media attention
  - Highway fatalities directly related to a natural disaster
  - School bus crashes resulting in serious injuries, fatalities, or statewide media attention
  - Passenger bus crashes (including transit buses and private motor coach operations) resulting in 2 or more fatalities, 5 or more serious injuries (requiring transport), or receiving statewide media attention
  - Crashes or other incidents involving significant damage to highway infrastructures

- Highway incidents resulting in the loss of life or serious injury of a prominent individual such as a Member of Congress, senior member of the Executive Branch, military official, diplomatic dignitary, or other major public figure.

- Please report these incidents to the FHWA Primary or Alternate contacts (see Appendix N).

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3.30.2. If the incident requires FHWA coordination operators should contact FHWA within 15 minutes.

3.30.3. Before contacting FHWA, operators should document all incident details.

3.30.4. Operators should continue to provide FHWA officials with updated incident information, especially information related to current response measures and the incident's impact to traffic.

3.31. NEIGHBORING STATES AND SOUTHERN TRAFFIC INCIDENT EXCHANGE (STIX)

3.31.1. Traffic incidents or special events must meet the criteria below before activating STIX:

- Lane-closing incidents within 50 miles of a state/regional line with expected duration of 2+ hours

- Planned, special events that will impact traffic across state/regional lines

- Major emergency that will impact traffic across state/regional lines

3.31.2. When STIX criteria is met, operators should:

- Notify their supervisor and receive approval to contact other state's DOT personnel

- Contact DOT personnel for the affected state to gather/relay information and discuss response measures

- Contact GDOT's statewide TMC in Atlanta to advise them of STIX activation and inform them of relevant incident details and response activities.

3.31.3. If STOC is contacted by a neighboring state or Atlanta TMC for a STIX activation, operators should notify their supervisor and receive approval for STOC and/or NCDOT response measures which includes but is not limited to:

- Activation of a County or Special Alert and floodgate

- Activation of DMS within NC

- Implementation of detours/alternate routes in NC and the affected state

- Coordinating on-scene response by NCDOT personnel

3.31.4. Operators should establish a point of contact in the affected state and should record their contact information so it can be passed along to operators on other shifts, if needed.

3.31.5. Once STIX has been activated, operators should:

- Continue to monitor the incident/event throughout its duration

- Contact the POC for the affected state and/or Atlanta TMC to receive updated information as needed

- Relay updated information received from the affected state's POC, Atlanta TMC, or other sources to the appropriate parties in a timely manner

- Coordinate additional STOC/NCDOT response and/or modify existing response as conditions change or updated information is received.

4. INCIDENT DETECTION, VERIFICATION, AND CONFIRMATION

4.1. GENERAL INCIDENT DETECTION AND INVESTIGATION GUIDELINES

4.1.1. Operators should continuously monitor traffic conditions and seek to proactively detect incidents that have occurred on and/or are affecting state-maintained roads.

4.1.2. Operators must investigate ALL incidents that are reported to them to determine if any further response or support is necessary regardless of whether the report pertains to a state-maintained road or not.

- If report is for a state-maintained road, operators should seek to verify or confirm the incident and should initiate response as appropriate.

- If report is for a road that is NOT state-maintained, operators should:

    o Confirm that the road is NOT state maintained

    o Determine if the reported incident is or could affect a state-maintained road and initiate response to that impact as appropriate

    o Advise the reporting party that the road is not state-maintained and seek to provide that party with information on who to relay their report to

    o Relay the report to the appropriate agency/individual who can resolve the reported issue

4.1.3. Operators should monitor and detect incidents on/affecting state-maintained roads of all sizes and locations but should prioritize their efforts on higher order routes. See section 2.5 for details on higher order routes.

4.1.4. Operators should regularly monitor all required and recommended tools and resources described in section 2.8 and 2.9 and should assure that these tools are open and ready for use throughout their shift.

4.1.5. Since most traffic monitoring and incident detection methods have limitations, operators must compare information from multiple resources to build a complete picture of the incident and its impact to traffic.

4.1.6. Operators should use Google Maps to evaluate and confirm incident locations before initiating response measures or contacting internal/external partners.

4.2. DEFINITION OF INCIDENT CONFIRMATION AND VERIFICATION

4.2.1. Confirmation – when an incident, due to the source of the report/information, requires no further investigation before a full response can be initiated.

4.2.2. Verification – when there is enough information or observable impact to suggest that an incident is occurring but where information related to the incident is either unreliable or incomplete such that a full response cannot yet be initiated. Example of a verified incident is shown below:

- CAD Feed (SHP or Local Law Enforcement) report of a crash plus abnormal and heavy congestion observed on traffic management maps near the area of the reported crash.

- Waze report of a crash plus abnormal and heavy congestion observed on traffic management maps near the area of the reported crash.

4.3. INCIDENT CONFIRMATION CRITERIA

4.3.1. An incident is considered "Confirmed" if any of the following applies to the incident:

- Visible on CCTV

- Reported by NCDOT personnel – this includes but is not limited to:
    o NCDOT field or office personnel
    o IMAP drivers or TMC/STOC operators
    o Any member of STOC management
    o Any NCDOT contractor, utilities crews, or municipal DOT personnel

- Reported directly by SHP or Law Enforcement with a unit on scene
    o NOTE: A unit MUST be on-scene to consider this report "Confirmed"

4.4. INCIDENT VERIFICATION CRITERIA

4.4.1. An incident is considered "Verified" if it does not meet confirmation criteria and any of the following applies to the incident:

- Observable impact (e.g., congestion, etc.) can be associated with a reported/detected incident

- SHP or Law Enforcement report an incident but do not yet have a unit on scene

4.5. GUIDANCE ON RESPONSE TO VERIFIED INCIDENTS

4.5.1. Response for verified incidents includes but is not limited to:

- Attempting to confirm the incident (e.g., use CCTV to obtain a visual, dispatch IMAP to the reported area, etc.).

- Entering a Congestion incident into TIMS stating there is a reported incident at the location.

- Activating one or more DMS to advise of congestion but only if abnormal congestion is observed on CCTV or traffic management maps.

4.5.2. Operators should continue attempts to confirm the incident so a full response can be initiated (e.g., advising NCDOT maintenance personnel, activating Special/County Alerts, providing specific traveler information such as actual incident type and lanes closed, etc.)

4.6. SHP CAD FEED

4.6.1. All operators should have TIMS open and always logged in during their shift so that the SHP CAD feed can be quickly and regularly accessed.

4.6.2. Operators are expected to check the CAD feed for new incidents at least every 15 minutes.

4.6.3. Operators may use filters to help search for incidents but must assure that use of filters does not cause incident reports to be overlooked.

4.6.4. Operators may not leave the Route filter on continuously for any single route type (e.g. "Interstate" filter left on for entire shift).

4.6.5. Operators should proactively search for and investigate CAD feed reports of incidents on Interstates and US/NC routes.

4.6.6. Operators should check the CAD feed for SR reports when there is a significant observed impact to an SR (i.e. abnormal and heavy congestion).

4.6.7. Information in the CAD feed is a report. Operators must verify and/or confirm all information through other sources before initiating response.

4.6.8. The following columns in the SHP CAD feed are known to provide reliable information and may be used in decision-making and response:

- Highway – shows which route the incident is reported to be affecting
- Location – shows approximately where on the affected route the incident has been reported
- County – shows the county in which the incident is reported to be located
- Description – shows what incident type (i.e., Accident) that the incident has been reported as
- Radio – shows which SHP Troop received the report (1st letter) of the incident
  - Example: "HA" = Troop H received report
- Date Entered – shows the time and date when SHP received the report
- Unit Arrival – shows the time and date when an SHP unit arrived on scene

4.6.9. NOTE: Though reliable, operators should use information from the columns above as a starting point and should still confirm/verify this information through other sources before initiating response.

4.6.10. The following columns in the SHP CAD feed are known to provide UNRELIABLE information. Operators should avoid using information in these columns in decision-making or response:

- Signal – indicates presence of injuries and other details about the reported incident using the letters shown below:
  - PD (Property Damage) – intended for incidents without injuries

- PI (Personal Injury) – intended for incidents involving 1 or more injuries

- P – intended for incidents where presence of injuries is unknown

- F (Fatality) – intended for incidents where a fatality has been reported

- NOTE: Operators may use information from the Signal column (e.g., PD, PI, etc.) when communicating with responders (e.g., NCDOT POCs, IMAP, etc.) but must clearly state that this information is "REPORTED."

- Road Status – indicates lane/road closure details due to the reported incident using the letters shown below:

  - O (Open) – intended for incidents where no travel lanes are reported as closed

  - P (Partial) – intended for incidents where 1 or more travel lanes are reported as closed

  - C (Closed) – intended for incidents where all travel lanes in one or both directions are reported as closed

4.7. LOCAL LAW ENFORCEMENT CAD FEEDS

4.7.1. Where available, operators should also use local law enforcement (LE) CAD feeds to detect incidents and should adhere to the same guidelines as described for use of the SHP CAD feed (see section 4.6 including but not limited to:

- Keeping them open and checking them regularly

- Viewing CAD information as a REPORT and seeking to verify/confirm details before initiating response

- Prioritizing detection and response efforts on higher order routes

4.7.2. Operators should use the local LE CAD feeds listed below while on duty:

- Raleigh: http://incidents.rwecc.com

- Charlotte: http://maps.cmpd.org/trafficaccidents/

- New Hanover County (Wilmington): https://twitter.com/nhc911

- Johnston County: https://twitter.com/JoCo911?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor

4.8. CCTV TRAFFIC CAMERAS

4.8.1. CCTV traffic cameras should only be used for traffic and incident management or to test/monitor ITS devices.

4.8.2. CCTV cameras are NOT used to:

- Determine or assign blame for traffic incidents

- Identify wanted persons or felons

- Issue speeding tickets or other moving violations

4.8.3. Operators must NOT focus cameras on graphic, disturbing, or inappropriate images.

4.8.4. Operators must NOT point cameras at anything other than traffic incidents or the roadway such as buildings, trees, or people.

4.8.5. Operators must ALWAYS reposition cameras after each use. Repositioned cameras should:

- Provide a good view of the roadway and traffic

- Avoid glare from the sun.

4.8.6. Operators should avoid zooming in too closely on any subject. Incident AND approaching traffic should be in view whenever possible. Zooming in close is okay but should be BRIEF (e.g., to read HazMat placards).

4.8.7. Operators may NOT record CCTV footage unless instructed to do so by management.

4.9. GENERAL CCTV USAGE GUIDELINES

4.9.1. If possible, operators should seek to get a visual of any incident in camera range before initiating a response.

4.9.2. Whenever CCTV are available to view an incident, operators should obtain a visual and continuously monitor the incident throughout its duration. If possible, all IMAP stops should be monitored via CCTV.

4.9.3. Incidents that are visible on camera should be displayed on a computer screen/monitor wall and should be monitored by an operator until the incident is over.

4.9.4. If possible, operators should use additional CCTV to acquire multiple visuals of an incident and from multiple angles.

4.9.5. If possible, operators should use CCTVs to monitor the incident, the entire length of the queue, and the end of the queue (where secondary crashes are most likely).

4.9.6. If streaming video from a camera is not available, operators should monitor still images from the camera (i.e., TIMS traffic cameras).

4.10. TRAFFIC MANAGEMENT MAPS

4.10.1. Traffic Management Maps show a map of where congestion is on NC roads but not what is causing it. Operators must verify and/or confirm all information through other sources before initiating a response.

4.10.2. All operators must have traffic management maps always opened at their console during their shift.

4.10.3. Operators are expected to check traffic management maps every 15 minutes and investigate any areas of congestion.

4.10.4. Operators are to use traffic management maps data for all Special Alerts and reporting in the Shift Update.

5. TRAVELER INFORMATION MANAGEMENT SYSTEM (TIMS)

5.1. EXPECTATION FOR ALL TRAVELER INFORMATION

5.1.1. Operators should assure that all traveler information is:

- Accurate and up to date

- Clear and concise

- Free of spelling, grammar, and format errors

- Professional and appropriate

- Easily accessible and available where it is needed

- Relevant and, ideally, helpful to the public

5.2. WHAT TRAVELER INFORMATION SHOULD TELL MOTORISTS

5.2.1. In general, operators should use traveler information to tell motorists:

- What is happening (e.g., crash, disabled vehicle)

- Where impacts are (e.g., I-40 East at US 64 (Exit 293))

- What impact is (e.g., right lane closed)

- What to do next (e.g., follow detour, expect delays, etc.)

5.3. WHEN TO CREATE NEW TIMS INCIDENTS

5.3.1. New TIMS incidents should be created only when state-maintained roads (i.e., I/US/NC/SR) are affected and only in the following circumstances:

- Directed by STOC management or NCDOT personnel,

- Verified or Confirmed incidents with an expected duration of 15 minutes or more, or

- Abnormal and heavy congestion is observed.

5.4. TIMS LOCATION TAB – DIRECTION

5.4.1. Operators should select the direction of travel that is affected as described below:

- "North," "South," "East," or "West" should be selected when only one direction of travel is affected.

    o For most Interstates or US/NC routes, operators should select the appropriate direction of travel by following the rule stating that odd numbered routes run North and South while even numbered routes run East and West. (e.g., For I-95, operators should select either North or South, as appropriate.)

    o For SRs, operators should select the direction of travel that aligns with the general direction of the road based on the map compass.

    o In all other cases, operators should select the direction of travel based on how the road is signed and/or what NCDOT personnel advise.

- "Inner" or "Outer" should ONLY be selected for incidents occurring on I-485 or I-277.
- "Both" should be used when both directions of travel are affected by the incident.

5.5. TIMS LOCATION TAB – NEAREST CROSS STREET

5.5.1. Operators should enter the route number for the roadway that intersects the affected route closest to the incident's location.

- This should be a road that motorists on the affected route will see signs for – NOT an un-signed underpass or overpass.
- If the cross street is an SR, operators should use the SR database to lookup correct SR #.
- If the cross street is not an I/US/NC or SR, operators may use SR-9999 then enter the common name of the cross street in the common name field (i.e., if Lake Boone Trail is the cross street; enter SR-9999 in the route fields, then type "Lake Boone Trail" in the common name for cross street" field).

5.6. TIMS LOCATION TAB – MAP ICON

5.6.1. Operators should place the map icon as close to the incident location as possible.

5.6.2. If the incident is a work zone with a beginning and ending mile marker, operators should place the map icon as close to the midpoint between the mile markers.

5.6.3. Operators will receive an email notification as TIMS incidents are added by other TIMS users across the state. As notifications are received, operators should review new TIMS incidents and properly place the map icon if it was not placed properly by the original user.

5.6.4. TIMS Affected Route

- Operators should enter the route that is affected by the incident in question.
  - This is done by first selecting the appropriate route type under prefix (I/US/NC/SR). Next, type the route number in the "Number" box.
  - If the route entered does not exist in the county which was selected, then the error message "_____ (route) does not exist in _____ county" will appear. Should this occur double check the county, prefix, and route number to ensure they are accurate. If everything is correct, then inform your supervisor.
  - If the affected route is not an I/US/NC or SR Route, choose "SR 9999" and enter the name of the road in the "common name" field
  - Third, choose a suffix (if one applies). The suffix options are as follows:
    - ALT: Applies to Alternate routes. These could be signed in two different ways. The first way an alternate route could be signed is "US 64 Alternate". The second way an alternate route could be signed is "US 74A".

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- BUS: Applies to Business routes such as "I-95 Business", "US 17 Business", or "NC 43 Business".

  BYP: Applies to Bypass routes such as "US 1 Bypass" or "NC 55 Bypass". There are currently no Interstate bypass routes, so, the BYP suffix should only apply to US or NC routes.

- CONN: Applies to Connector routes. The only two Connector routes in NC are US 117 Connector between Calypso and I-40 in Duplin and Wayne Counties; and US 19 Connector in Bryson City (Division 14).

- EXP: Applies to Express Lanes. These are Tolled HOV lanes separate from the main flow of traffic. There are currently Express lanes on I-77 in the Metrolina region. Future express lane locations include I-485 in Mecklenburg County and US 74 (Independence Blvd) in Mecklenburg County.

- TRK: Applies to Truck Routes. These are usually signed in the same manner as Business or Bypass routes. Examples include "US 17 Truck" and "US 258 Truck". There are no Interstate truck routes, so, this will only apply to US and NC routes.

- TOLL: This applies to Toll facilities. Examples include NC 540 TOLL and NC 147 TOLL on the Triangle Expressway and US 74 TOLL (Monroe Expressway).

- Next enter the common name for the roadway. Most Freeways and Expressways do not have or need a common name. The exception would be a concurrent route. In the case of a concurrent route, you may enter both in the common name box (i.e. US 15/501, US 1/64, I-40/85). US/NC routes can have both a route number and a common name in some cases. Examples include US 1 – Capital Blvd in Raleigh; US 74 – Independence Blvd in Charlotte; US 25 Merrimon Avenue in Asheville; NC 67 – Silas Creek Parkway in Winston-Salem, etc.

- Next enter the mile marker range affected by the incident. Mile markers are required for any incident on an interstate but should be used on any other route which has mile marker signs along the route. A single point incident such as a crash or disabled vehicle will only require the "mile marker start" box to have an entry. A lane closure for construction or maintenance will require a start and an end. The start box should be the mile marker where traffic is first affected, or, where a lane closure begins. The end box should be where traffic returns to normal patterns.

5.7. TIMS LOCATION TAB – COMMON NAME FOR CROSS STREET

5.7.1. Unless the cross street is an interstate, operators should enter the road's common name as it is signed or as it is shown on Google Maps. If the common name is filled in automatically, operators must assure that the name is correct and should update it if needed. If the cross street is not an I/US/NC or SR, operators may use SR 9999 then enter the common name of the cross

street in the common name field (i.e., if Lake Boone Trail is the cross street; enter SR 9999 in the route fields, then type "Lake Boone Trail" in the common name for cross street" field).

5.8. TIMS GENERAL TAB – INCIDENT TYPES

5.8.1. Operators should use the TIMS incident types below for the following circumstances:

- Vehicle Accident – use for:
    - Crashes involving vehicles, structures, and/or pedestrians
    - Vehicle fires
    - Incidents involving HazMat or other fuel/fluid spills

- Disabled Vehicle – use for:
    - Disabled vehicles
    - Abandoned vehicles or trailers

- Construction – use for planned road work on or near roadway

- Nighttime Construction – use for planned road work on or near roadway that occurs only at night.

- Weekend Construction – use for planned road work on or near roadway that occurs only on the weekend.

- Maintenance – use for:
    - Planned or unplanned road work on or near roadway
    - Damage to roadway or other NCDOT property
    - Cleanup or repairs occurring after a crash

- Nighttime Maintenance – use for same situations as described for maintenance but where work occurs only at night.

- Special Event – use for planned events such as concerts, sporting events, etc. that are having an observed impact to traffic on state-maintained roadways OR where high attendance is expected (e.g., 20,000 or more attendees). Guidelines for TIMS incidents for Special Events also includes the following:
    - If the event/venue is located on/near multiple state-maintained roadways, operators should use the highest order route as the event's location in TIMS.
    - If the event/venue is NOT on a state-maintained roadway, operators should use the state roadway that is most affected as the event's location in TIMS.
    - Other roadways that are affected by the event should be listed in the Reason field of the TIMS incident whether they are state-maintained or not.

- Congestion – use for:

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- o Abnormal and heavy congestion that is observed and does not have a reported incident in the specific area.
  - o Delays remaining from a recently cleared incident
- Road Obstruction – use for:
  - o Debris (tire treads, downed trees or power lines, rockslide, etc.)
  - o Animal carcasses
- Weather Event – use for impacts caused by weather at a specific location on a route (NOT area-wide impacts). Examples of when to use this incident type include:
  - o Snow/ice patches
  - o Flooding including roadway washout
- Fire or Fog – use when the impact to traffic at a specific location on a route is limited visibility due to smoke or fog (as appropriate).
  - o Fire examples include brush fires, controlled burns, or structure fires.
- Signal Problems – use for damaged or malfunctioning traffic lights or other electronic signals. NOT for: Sign damage (e.g., stop signs) or ITS (e.g., DMS).
- Other – use for:
  - o Police activity (bomb threats/terrorist action NOT speed traps, checkpoints, or roadblocks)
  - o Television or movie shoots
  - o Other non-traffic related distractions or obstructions (e.g., citizen hanging a protest sign on an overpass)
  - o TIMS system tests (see section 16.4 for details on entering test incidents)
- Reported Incident – use for:
  - o Verified incidents as a placeholder until the incident can be confirmed.

5.9. TIMS GENERAL TAB – INCIDENT IMPACT LEVELS

5.9.1. Unless otherwise directed by an NCDOT employee or member of STOC management, operators should set TIMS incidents to the following impact levels based on the criteria below:

- HIGH
  - o Interstates: 1 or more lanes are affected
  - o US/NC routes: half or more of available lanes are affected
  - o Major incident (see section 15.12) on any roadway type
- MEDIUM

- Interstates: on/near roadway but no lanes are affected (e.g., on the shoulder/median)
- US/NC routes: less than half of available lanes are affected
- Intermediate incident (see section 15.12) on any roadway type
- All incidents where Congestion or Reported Incident is used as the incident type unless otherwise directed.

- LOW
  - US/NC routes: on/near roadway but no lanes are affected
  - SR: LOW should be used for most incidents on SRs unless Major or Intermediate criteria is met
  - Minor incident (see section 15.12) on US/NC route or an SR unless lanes are affected.

5.9.2. Operators should raise an incident's impact level as conditions change (e.g., additional lanes are closed, duration increases, etc.) but should NOT lower the impact level once a higher impact is established.

5.10. TIMS GENERAL TAB – INCIDENT CONDITION

5.10.1. Operators should select the following conditions for TIMS incidents based on the criteria shown below:

- Congestion – use for:
  - Incidents causing abnormal and heavy congestion
  - Verified incidents as a placeholder until the incident can be confirmed.
- Shoulder Closed – use for incidents where only the right shoulder or median is closed.
- Lane/Lanes Narrowed – use if:
  - Width of lanes has been reduced due to construction and operators have been directed to select this condition by NCDOT personnel.
  - Ramp/rest area is affected but remains accessible to motorists
  - TIMS incident type is "Weather Event" and lane(s) are affected but road/lanes remain accessible (e.g., snow/ice patches).
- Ramp Closed – use if ramp/rest area is closed and is inaccessible to motorists
- Lane Closed – use for incidents where one travel lane is affected
  - NOTE: Unless otherwise directed, if a travel lane is even partially affected, the lane is considered closed.
- Lanes Closed – use for incidents where more than one travel lane is affected but other travel lanes remain open

- Road Closed – use for incidents where all travel lanes are closed

- Road Closed with Detour – use for incidents where the road is closed, and detour information is provided in the TIMS incident

  - NOTE: This condition applies when a detour is in use – not an alternate route.

- Road Impassable – use if TIMS incident type is "Weather Event" and if both conditions below are met:

  - All lanes are closed

  - Road is completely inaccessible, even for emergency responders (e.g., flooding/washout due to Hurricanes or Tropical Storms).

- Moving Closure – use for incidents where the location of the closure changes throughout the incident's duration (e.g., rolling roadblocks)

5.10.2. When both directions of travel on a roadway are affected, operators should set the condition to align with the direction of travel most affected (e.g., One westbound lane is closed, and two eastbound lanes are closed. Condition should be "Lanes Closed").

5.11. TIMS GENERAL TAB – TIMS EVENT

5.11.1. Operators should select the appropriate TIMS event if the incident is caused by or directly related to an event (e.g., adverse weather) for which there is a unique TIMS event created.

- Example: "Tropical Storm Alex 2013"

5.11.2. If an incident is not caused by or related to a TIMS event, operators should select "None."

5.11.3. A TIMS event may only be created at the direction of NCDOT or STOC management.

5.12. TIMS GENERAL TAB – START AND END TIME

5.12.1. Start Time – operators should enter the time and date for when the incident is planned to start (e.g., construction) OR when it was initially verified/confirmed (e.g., crash).

5.12.2. End Time – operators should enter the time and date for when incident is planned to end OR when it is expected to end based on estimated duration.

5.12.3. As this expected duration changes, operators should update the End Time accordingly.

5.13. TIMS GENERAL TAB – CONTACT INFORMATION

5.13.1. Operators should enter contact information as described below:

- For unplanned incidents verified/confirmed by STOC operators – enter "STOC" as the contact name and "877-627-7862" as the contact number.

- For planned or unplanned incidents reported to STOC by NCDOT or a contractor, enter the name and number for the NCDOT employee or the contractor that reported the incident.

5.14. TIMS GENERAL TAB – CONSTRUCTION/MAINTENANCE DAYS & TIMES

5.14.1. Construction/Maintenance Days & Times – operators should enter the days and times when work for this project is taking place each day. Operators should enter this field based on information received from NCDOT or contractor when it is reported. Examples below:

- Example if work occurs at the same time each day: "Mon-Fri, 9pm-6am"

- Example if work occurs on different times/days: "Mondays, 10am-3pm" or "Saturdays, 8pm-5am and Sundays, 11am-4pm"

5.15. TIMS GENERAL TAB – TIP/CONTRACT

5.15.1. TIP/Contract # – operators should enter this information if it is provided to them by NCDOT personnel or NCDOT contractor.

5.16. TIMS DESCRIPTION TAB

5.16.1. In all publicly visible fields on the Description tab, operators must:

- Follow the formatting guidelines for information entered in these fields

- Use complete sentences, free of spelling and grammatical errors

- Provide accurate, up-to-date information that is appropriate and relevant to motorists (e.g., no information on fatalities/injuries, DOT jargon, or contact information of any kind)

- Avoid duplicating information already provided in previous TIMS fields (e.g., route affected, incident type, etc.)

5.16.2. Operators should not include statements in any publicly visible field that can be perceived as advertisements such as jingles, slogans, or specific names of special events.

5.17. TIMS DESCRIPTION TAB – REASON FIELD

5.17.1. Operators should enter information into the Reason field of a TIMS incident as described below:

- If lanes are affected, specifically describe which lanes are affected. Examples below:
    - "The median is closed at…"
    - "The left lane is closed at…"
    - "The two right lanes are closed near…"
    - "All lanes are closed near…"

- Provide the cross street along with its corresponding route number or exit number.
    - If the cross street has an exit number, provide the exit number in parentheses. Example: "…near Gorman St (Exit 295)" or "…near US 15/501 (Exit 270)."

- o If the cross street has a common name but no corresponding exit number, place the route number in parentheses. Example: "…near Glenwood Ave (US 70)" or "…near Erwin Rd (SR 1734)."

- o If the cross street does not have a corresponding route number or exit number, provide the common name, only. Example: "…near Main St."

- o NOTE: Operators should avoid using mile markers whenever possible.

- If the incident is in a work zone, describe where the work zone begins and ends using the same formatting guidelines described for cross streets. Example: "…between New Hope Church Rd (Exit 263) and NC 86 (Exit 266)."

- If the incident is verified (but NOT confirmed), specify that the incident is verified by referring to it as a reported incident.

- o Example: "There is congestion near NC 147 (Exit 172) due to a reported incident."

- Operators should use "Crash" instead of "Vehicle Accident."

- Operators should use "Closed" instead of "Blocked."

5.18. TIMS DESCRIPTION TAB – DETOUR / ALTERNATE ROUTE FIELD

5.18.1. Detour or alternate route information must be entered in the Detour/Alternate Route field, only.

5.18.2. If detour/alternate route information is entered into the TIMS incident, operators must click the correct box for "Detour" or "Alternate Route."

5.18.3. Detour/alternate route instructions must be entered using complete sentences and in turn-by-turn format. For complete information on crafting detours/alternate routes, see 7.3

5.19. TIMS DESCRIPTION TAB – LINKS FIELD

5.19.1. Operators may only enter links into a TIMS incident when instructed by NCDOT personnel or STOC management.

5.19.2. Links must be entered in the Links field, only.

5.19.3. Operators must test links before they are saved to the TIMS incident to assure that the link will direct users to the correct site and that the site is appropriate for the general public.

5.20. TIMS DESCRIPTION TAB – DOT NOTES FIELD

5.20.1. The DOT Notes field is not visible to the public. Therefore, information entered in this field is not subject to strict formatting guidelines. However, operators may not enter crass, negative, or otherwise unprofessional comments into this field.

5.20.2. When adding a new TIMS incident, operators must describe (at a minimum) how the incident was detected, how it was verified OR confirmed, and the operator's initials.

- Example: "Detected via HERE. Confirmed via CCTV 1024. RPG"

5.20.3. Other information restricted for public TIMS fields (e.g., DOT jargon, contact information, injuries/fatalities, names of events, etc.) should be placed in the DOT Notes field.

5.20.4. If this information was included in other, publicly visible fields, operators should move the information from the publicly visible fields to the DOT Notes field.

5.20.5. Operators should not delete or modify existing notes – new notes should be added on a new line beneath existing notes and operators must enter their initials to each line of notes that they add.

5.21. TIMS RESTRICTIONS TAB ITEMS

5.21.1. For the "Limits have Changed to" [weight, width, or height] fields, operators should only enter information if directed by NCDOT personnel or STOC management.

5.21.2. For the "Please check if" options, operators should only check the appropriate boxes when both criteria below are met:

- Incident is confirmed (not verified)

- Option (e.g., HazMat, fatality, etc.) has been confirmed to be involved by NCDOT personnel or Law Enforcement on scene OR visual on CCTV confirms option.

5.22. TIMS PREVIEW TAB

5.22.1. Before saving an incident, operators must review all information to assure that it is correct and meets all format standards and other guidelines.

5.23. UPDATING TIMS INCIDENTS

5.23.1. Operators should update TIMS incidents in a timely manner:

- As conditions change

- As new information about the incident is available

- As incorrect, unclear, or improperly formatted information is found

5.23.2. Operators should only change the Incident Type of an incident in the following circumstances:

- Initial incident type was incorrect (e.g., Reported as a disabled vehicle but found to be a crash when IMAP arrived on scene and provided further details.)

- Incident was verified when entered and confirmed after (e.g., Reported crash was entered with incident type, "Reported Incident,"; upon being confirmed, was updated to "Vehicle Accident" as incident type.)

5.23.3. When maintenance or additional impacts (i.e., congestion) occur that are caused by and related to an initial incident, operators should enter new, separate TIMS incidents to reflect this maintenance activity and/or additional impacts. An example of this is shown below:

- Phase 1: A reported crash is verified but not yet confirmed

  o TIMS incident #0001 is entered with "Reported Incident" as incident type

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- Phase 2: Crash is confirmed
    - TIMS incident #0001 is updated with "Vehicle Accident" as incident type
- Phase 3: Crash clears but abnormal and heavy congestion remains
    - TIMS incident #0001 for "Vehicle Accident" is timed out
    - New TIMS incident #0002 is entered with "Congestion" as incident type
- Phase 4: Congestion subsides and NCDOT crews return to repair damage from crash
    - TIMS incident #0002 for "Congestion" is timed out
    - New TIMS incident #0003 is entered with "Maintenance" as incident type

5.24. TIMS INCIDENTS FOR CONCURRENT ROUTES

5.24.1. See section 2.6 for details on concurrent routes and concurrent interstate routes and section 2.5 for details on higher order routes.

5.24.2. Before creating or updating a TIMS incident, operators should use the dual or confusing route map tool and/or other available resources (e.g., Wikipedia, Street View, CCTV, Supervisors, Etc.) to determine if the route in question is a concurrent route or concurrent interstate route.

5.24.3. For incidents on a concurrent interstate route (e.g., I-40/I-85), operators should click the "+" box underneath the text "Other Route Numbers". This will drop down another line where multiple other routes can be added. TIMS will automatically create a separate TIMS entry for each additional route entered. These additional entries are linked and any details in the initial incident will be duplicated in all other linked incidents. Operators should use the following guidelines when entering concurrent route TIMS:

- Refer to the mile markers and/or exit numbers that are signed on the roadway and are visible to motorists, and
- Refer to both routes in the Reason field and the Common Name field.

5.24.4. For incidents on a concurrent route of different classifications or dual US and NC routes (e.g., I-40 BUS/US 421, US 29/US 70), operators should enter only one TIMS incident and should enter it for the route that is the highest order route. In this TIMS incident, operators should:

- Refer to the mile markers and/or exit numbers that are signed on the roadway and are visible to motorists, and
- Refer to each route in the Reason field.
- Example: Incident on I-40 BUS/US 421 – enter a single incident for I-40 BUS. Refer to the mile marker and exit numbers of I-40 BUS. Refer to both I-40 BUS and US 421 in the reason field, "The right lane is closed on I-40 BUS/US 421 near Cherry St (Exit 5C)."

5.24.5. For construction or maintenance where a work zone spans from one concurrent route to another, operators should create one new TIMS entry and add as many routes by using the "+" button as is appropriate to adequately meet the requirements described above for concurrent interstate routes and/or concurrent routes. Example: for a work zone that is ~2 miles in length

that starts at Exit 226 on I-40/I-85 BUS and ends at Exit 132 on I-40/I-85, operators should enter one TIMS incident with the following routes:

- 1st route: I-40 (Exit 226 to Exit 132),

- 2nd route: I-85 BUS (Exit 226 to Exit 132)

- 3rd route: I-85 (Exit 131 to Exit 132).

5.24.6. TIMS will automatically make changes to all linked/concurrent TIMS entries when an operator changes any one of the linked incidents. Example: An operator creates a TIMS entry for US 29 and adds US 70 and US 52 under the "other route numbers section". TIMS creates three separate entries with the same incident details but under different route numbers (one for US 29, one for US 70, and one for US 52). The incident details change from a lane closure to a shoulder closure. The operator can make the change in any one of the three linked incidents and TIMS will automatically make the same change to the other two linked incidents.

5.24.7. For TIMS incidents that are entered by other TIMS users (e.g. NCDOT CMEs, contractors, etc.), operators should determine if the incident has been entered for a concurrent route. TIMS should specify if the incident is linked to others and give the linked incident numbers. An operator should then:

- Assure that it is entered for the correct route numbers, that the appropriate mile markers/exit numbers are used, and that all routes are referenced in the Reason field.

5.24.8. Operators should attempt to contact TIMS users who have created a concurrent route incident to discuss any modifications to their incident before changes are made. If the user advises that changes/additional TIMS incidents are NOT needed, operators should comply with this direction and should document the discussion in their log.

5.24.9. NOTE: Contact information for specific TIMS users can often be found in the "Contact Name" and "Contact Phone" fields on the Location tab of the TIMS incident.

5.25. SENDING TIMS EMAIL NOTIFICATIONS

5.25.1. TIMS email notifications should be sent whenever an incident is:

- Created

- Updated with critical incident details

- Timed out

5.25.2. Critical incident details for which operators should send notifications include when changes are made to:

- Location

- Duration (Start and/or End Time)

- Impact (HIGH, MEDIUM, or LOW)

- Lanes affected

- Restriction Tab items

- Detours/Alternate Routes are added

5.25.3. Operators should NOT send TIMS email notifications when the following changes are made:

- Correcting spelling/grammar/format errors

- Entering links

- Adding information to DOT Notes

- Other minor updates that do not impact the overall nature of the incident

5.26. TIMING OUT TIMS INCIDENTS

5.26.1. TIMS incidents should remain active for as long as an incident is active on the roadway and having an impact to traffic.

5.26.2. Always send notifications at timeout – notifications should always be sent when an incident is timed out, so notification recipients know the incident is over.

5.26.3. Operators should enter a final entry in the Reason field to indicate that the incident is over when a TIMS incident is timed out.

- Example: "All lanes have reopened near Exit 11 (US 401) and traffic in the area has returned to normal."

5.26.4. Once the incident is known to be clear and the final Reason field entry has been made, the incident should be "timed out" (aka "deactivated"). Below are the two approved methods:

- Method 1: Set End Time to current time and Save

- Method 2: Click "Timeout" button

5.26.5. DO NOT delete TIMS incidents. Unless an incident has been added entirely in error (e.g., a duplicate incident entered when one was already in place), operators should always properly time the incident out rather than deleting it.

5.27. TIMS ADMINISTRATIVE FUNCTIONS

5.27.1. The following administrative functions may be performed by operators without prior approval by a supervisor or member of STOC management:

- Searching for TIMS incidents

- Using the Secondary Roads Database

- Managing personal TIMS email notification settings

5.27.2. The following administrative functions may only be performed by operators with direct oversight and approval of a supervisor or member of STOC management:

- Managing TIMS email notification settings for other users,

- Creating Projects or TIMS Events

- Emailing all TIMS users

- Adding routes to TIMS

5.27.3. The following administrative functions may NOT be performed by operators. Operators must notify a supervisor and/or the STOC Traffic Operations Specialist or Assistant Traffic Specialists for the following:

- Managing TIMS cameras

- Managing TIMS user accounts

5.28. TIMS ADMIN. FUNCTIONS – SEARCHING FOR TIMS INCIDENTS

5.28.1. This function can be accessed from the TIMS Admin. Home page by clicking the "Search for Incidents" link on the left-hand side of the page.

5.28.2. Operators may use this function to search for current and previous TIMS incidents as needed. Uses of this function include but are not limited to:

- Finding incidents that have timed out and need to be reactivated

- Completing the STOC Road Closure Report (see section 9.31)

- Pulling multiple incidents for the purpose of data analysis

5.28.3. While the Search for Incident function can be used to find incidents that have timed out, operators are encouraged to use the following alternative method instead of Search for Incidents:

- Find and copy the TIMS incident number of the desired incident (i.e., from logs, Shift Updates, TIMS notification emails, etc.)

- Open the editable version of any active TIMS incident by clicking the Pencil icon

- In the URL/address bar, highlight the TIMS number of the active incident and replace it with the desired incident that has timed out.

- Press "Enter" on the keyboard. The editable version of the desired incident will open.

5.28.4. Guidance on using the Search for Incident function includes:

- Do NOT click the "Search" button without entering search criteria OR by entering minimal criteria that will return too many results (e.g., entering any incident type as only search criteria) – your search will take several minutes, during which you will not be able to use TIMS and your computer may restart.

- When using Start dates as search criteria, give one day of padding on either side of your search to improve your search results. Example: Searching for incident the occurred on April 23rd, enter search dates from April 22nd to April 24th.

- When many search results are returned, click the "Export to Excel" link to download an Excel spreadsheet with your search results. Viewing and managing this data is much easier in Excel.

5.29. TIMS ADMIN. FUNCTIONS – TIMS EMAIL NOTIFICATIONS

5.29.1. Operators may only use this function without prior approval if they are modifying notification settings for their own, personal TIMS account. Operators must receive supervisor/management approval before modifying notification settings of other TIMS users.

5.29.2. This function can be accessed from the TIMS Admin. Home page by clicking the "Manage Notifications" link on the left-hand side of the page. Notification settings are managed across several tabs (like a TIMS incident). Each tab and their associated notification settings are described in the next several statements below.

5.29.3. General Tab

- Modify Notifications for... – sets which user these settings will apply to:
  - Self – applies to the operators' personal TIMS account
  - New Notification – (from drop down box) applies to email typed into "Email" field
  - Other email chosen from drop down box applies to emails for existing TIMS notification subscribers. When editing settings for an existing user, operators will select that user's email from this list.

- Is this a pager? – tells TIMS to format notifications sent to the user for mobile pagers.

- Temporarily Suspend? – tells TIMS to NOT send notifications to this user until the user decides to remove the suspension:
  - Yes = do not send notifications
  - No = send notifications

- Limit Notify – instructs TIMS to only send notifications for TIMS incidents based on their impact level:
  - Low, Medium, & High – send notifications for all Low/Medium/High incidents
  - Medium & High – send notifications only for Medium and high incidents
  - High Only – send notifications only for High impact incidents
  - None – only send notifications that meet other criteria (e.g., Special Alerts).

5.29.4. Location Tab

- Select the Division and District... – limits notifications sent to user based on the Division(s) and/or District(s) where incidents have occurred.

- Select the counties... – limits notifications sent to user based on the County where incidents have occurred.

5.29.5. Special Tab

- The following notification settings are related to the Restriction tab of individual TIMS incidents. When a TIMS incident is added/updated and these items are selected, users who have subscribed for the settings below will receive notifications for these incidents:

    o Commercial Vehicle

    o Fatalities

    o Hazardous Materials

    o Limits (H/W/W)

    o Oversized Vehicle

    o Structure

    o Work Zone

- Adverse Weather – user receives notifications when the "Adverse Weather County Roadway Status" is updated but only for counties the user is subscribed to.

- Construction/Maintenance – users receive notifications when construction or maintenance TIMS incidents are added/updated but only for counties the user is subscribed to.

- Special Alert Changes – users receive notifications when a Special Alert is added/updated.

- Traffic Sensor Congestion – DO NOT SUBSCRIBE ANY USER TO THIS OPTION.

5.29.6. Preview Tab

- Provides an overview of the user's TIMS notification subscription settings.

- Clicking the "Save" button will apply any settings to the user's subscription.

5.30. TIMS ADMIN. FUNCTIONS – CREATING/MODIFYING TIMS NOTIFICATION SUBSCRIPTION

5.30.1. When receiving a request to create or modify TIMS notification settings for a user, operators must accurately capture all details about the user's request including:

- User's first and last name

- Email address related to user's TIMS notifications,

    o NOTE: Email for notifications can be an NCDOT account or any personal email account as requested by the user.

- Whether the user is requesting a new notification account or is requesting that an existing account be canceled, suspended, or modified.

- Types of notifications the user wishes to receive (e.g., incidents, Special Alerts, etc.)

- Divisions, Districts, or Counties the user would like to receive notifications for

- Any desired limitations on their notifications (e.g., notifications for LOW, MEDIUM, and/or HIGH impact incidents, only, etc.

5.30.2. After a request for assistance with TIMS notifications is received, operators should:

- Notify their supervisor/management and request approval to make changes.

- Follow the guidelines in this section to fulfill the user's notification request.

- Advise the user (via email) when their notification request has been completed.

5.30.3. To create or modify a notification subscription, operators should follow the instructions below, starting from the General tab on the Manage Notifications page:

- Determine if the user is a new or existing subscriber:

  - New subscriber – select the "New Notification" option from the drop-down list under the "Modify Notifications for" heading and type the user's email address in the Email field.

  - Existing subscriber – select the user's email address from the drop-down box under the "Modify Notifications for" heading.

- Select either "Yes" or "No" as appropriate for the following options:

  - Is this a pager? – choose "No" unless user specifies that they will use a mobile pager, and

  - Temporarily Suspend – choose "No" unless user is requesting to temporarily suspend their notifications. If "Yes," advise user to contact STOC when they wish to resume notifications.

- Select the option that limits notifications by impact level (Low/Medium/High/None) as requested by the user.

- Click the "Next >" button to move on to the Location tab.

- Select the Division that user will receive notifications for from the drop-down list next to the "Division" heading:

  - All – user will receive notifications for all 14 NCDOT Divisions,

  - 1-14 – user will receive notifications for the Division(s) selected, only. A specific Division must be selected in order to further limit notifications to a specific District, if desired, or

  - None – user will not receive notifications by Division. If "None" is selected, specific counties must be selected in the next step.

- Select one or multiple counties that user will receive notifications for from the drop-down list next to the "Counties" heading and click the button labeled, "Add."

  - "All Counties," individual counties, or "None" can be selected.

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- Remove selected counties by clicking the red "X" next to the county you wish to remove.

- Click the "Next >" button to move on to the Special tab.

- Select any special notifications/criteria for the user by clicking the "Yes" button that corresponds to the desired subscription option.

- Click the "Next >" button to move on to the Preview tab.

- Review the subscription options that were selected for the user and assure that:

    - Subscriber's email address is correct

    - All requested subscription options have been selected – return to previous tabs and adjust settings if needed.

- Click the button labeled, "Save" to apply the user's subscription settings.

- Notify the user via email that their TIMS email notification settings have been created/modified and request that they notify STOC if any changes are needed.

5.31. TIMS ADMIN. FUNCTIONS – CANCELLING TIMS NOTIFICATIONS FOR A USER

5.31.1. Operators may only cancel TIMS notifications for a user at the request of the user and/or by direction from a supervisor/management.

5.31.2. Cancelling TIMS notifications will permanently remove the user from the list of TIMS notification subscribers and will discontinue any TIMS notifications the user received – if the user is requesting a "temporary cancellation," operators should follow the instructions in section 5.30 to temporarily suspend the user's notifications instead.

5.31.3. To permanently cancel a user's TIMS notification subscription, operators should follow the instructions below, starting from the General tab on the Manage Notifications page:

- Select the desired user's email from the drop-down list under the "Modify Notifications for" heading

- Confirm that the correct user's email address has been selected

- Click the button labeled, "Delete"

- Confirm that the user's notification subscription has been cancelled by scrolling through the drop-down list of subscribers under the "Modify Notifications for" heading.

    - If the cancellation was successful, the user's email should NOT appear.

- Notify the requesting party via email that the user's subscription has been cancelled.

5.32. TIMS ADMIN. FUNCTIONS – TIMS NOTIFICATIONS VIA TEXT MESSAGE

5.32.1. Users can subscribe to receive TIMS notifications via email and/or text message to a mobile device. To do so, operators must receive and provide additional information from the user when the request is made. Operators should follow the instructions below:

- Receive all information from the user as described in section 5.30, and request the following additional information:
    - User's mobile phone number where notification texts will be sent
    - User's mobile service provider (e.g., Sprint, AT&T, etc.)
- Advise the user of the following considerations related to text notifications:
    - Email, text, or both? – in order to receive notifications as text AND email, operators must create two separate notification subscriptions
    - Texting fees and data – receiving notifications via text may result in additional text and/or data usage fees as determined by their mobile service provider.
    - Incomplete/multiple messages – Notification texts may come to the user as a single, incomplete message, OR as multiple messages.
- Refer to Appendix A: Email to Text Template to determine how to format the user's mobile phone number as an email address as described below:
    - Find the user's mobile service provider (e.g., AT&T)
    - Locate the corresponding email to text template (e.g. [10-digit phone number] @txt.att.net)
    - Apply the user's mobile phone number to this template (e.g., 9191234567@txt.att.net)
- Navigate to the General tab of the "Manage Notifications" page in TIMS
- Select "New Notification" from the drop-down list under the "Modify Notifications for" heading
- Enter the formatted email address for the user into the box labeled, "Email"
- Continue to follow all instructions for creating/modifying TIMS notifications as described in section 5.30.

5.33. TIMS ADMIN. FUNCTIONS – CREATING PROJECTS OR TIMS EVENTS

5.33.1. Operators may only create or modify Projects or TIMS events when directed by a supervisor or member of management.

5.33.2. Creating Projects

- Click the "Projects" link on the left-hand side of the TIMS Admin. Home page
- Assure that the project does not already exist OR that an existing project is not similarly named
- Click the "Add Project" button
- Under the heading, "Draw," select the option for how to define the area of the work zone associated with the project on the TIMS map

- o Polygon – creates a square/rectangle over the project area

- o Freehand Polygon – creates a custom shape to define the project area

- In the field next to the "Name" heading, type in the name of the project as given by your supervisor/member of management

- Click the "Save" button to activate the project in TIMS. It will now be accessible as a TIMS Event that users can select when creating/updating TIMS incidents

- Open the editable version of any existing TIMS incident and, on the General tab, use the drop-down box under the "Event" heading to confirm that the project has been added

- Work with a supervisor/management to send an email to all TIMS users to advise them of the newly added project and provide guidance on how it should be used.

  - o See section 5.34 on Emailing All TIMS Users

5.33.3. Deleting Projects

- Click the "Projects" link on the left-hand side of the TIMS Admin. Home page

- Locate the desired project by its name

- Click the red "X" near the desired project

- Open the editable version of any existing TIMS incident and, on the General tab, use the drop-down box under the "Event" heading to confirm that the project has been removed.

5.33.4. Creating TIMS Events

- Click the "Settings" link on the left-hand side of the TIMS Admin. Home page

- Click the "Event Types" link

- Assure that the event does not already exist OR that an existing event is not similarly named

- Click the "Add Event Type" button

- In the field next to the "Event Name" heading, type in the name of the event as given by your supervisor/member of management

- Assure that the "Active" box is checked,

- Click the "Save" button to activate the event in TIMS. It will now be accessible as a TIMS Event that users can select when creating/updating TIMS incidents

- Open the editable version of any existing TIMS incident and, on the General tab, use the drop-down box under the "Event" heading to confirm that the event has been added

- Work with a supervisor/management to send an email to all TIMS users to advise them of the newly added TIMS event and provide guidance on how it should be used
  - See section 5.34 on Emailing All TIMS Users.

5.33.5. Updating TIMS Events

- Click the "Settings" link on the left-hand side of the TIMS Admin. Home page

- Click the "Event Types" link

- Locate the desired TIMS event and click the corresponding Pencil icon

- Rename, reactivate, or deactivate the event as instructed by a supervisor/management:
  - To rename the event, select the text in the field next to the "Event Name" heading and modify as instructed
  - To reactivate the event, check the "Active" box
  - To deactivate the event, assure that the "Active" box is NOT checked. Operators should NOT delete a TIMS event

- Click the "Save" button,

- Open the editable version of any existing TIMS incident and, on the General tab, use the drop-down box under the "Event" heading to confirm that the desired changes to the TIMS have taken effect.

- Work with a supervisor/management to send an email to all TIMS users to advise of the changes to the TIMS event and provide guidance on how it should be used.
  - See section 5.34 on Emailing All TIMS Users

5.34. TIMS ADMIN. FUNCTIONS – EMAILING ALL TIMS USERS

5.34.1. Operators may only email all TIMs users when directed by a supervisor or member of management.

5.34.2. Emails to all TIMS users must be reviewed and approved by a supervisor or member of management BEFORE they are sent.

5.34.3. Operators must assure that any email sent to all TIMS users is:

- Accurate and up-to-date

- Clear and concise

- Free of spelling, grammar, and format errors

- Professional and appropriate

5.34.4. Emails to all TIMS users are generally sent to advise users of:

- New/updated TIMS Events or Projects and how they should be used

- Information related to TIMS features and/or possible outages due to system maintenance, malfunctions, etc.

- Adverse weather guidelines for TIMS entries including when to update County Adverse Weather Roadway Statuses

5.34.5. When directed by a supervisor/management to email all TIMS users, operators should:

- Click the "Email All Users" link on the left-hand side of the TIMS Admin. Home page

- Enter a succinct but clear subject line that is relevant to the intent of the email in the field next to the "Subject" heading

- Enter the text for the body in the field beneath the subject line using complete sentences and proper spelling/grammar. Email body should:

  o Contain an appropriate greeting (e.g., "Good Afternoon," etc.)

  o Explain what TIMS users need to know and/or what they will need to do

  o Identify which TIMS users this information applies to (typically, it will be all users)

  o Describe the timeframe that this information applies to (i.e. when changes, outages, user actions, etc. will take place)

  o Offer 24/7/365 support for users from STOC and provide STOC's contact information (phone: 877-627-7862 and email: stoc@ncdot.gov)

  o Provide an appropriate sign off (e.g., "Thank you," or "Take care and be safe,") and signature (e.g., "-STOC")

- Request that a supervisor/management review and approve the email

- Once approved, click the "Send" button

5.35. TIMS ADMIN. FUNCTIONS – ADDING ROUTES TO TIMS

5.35.1. Operators may only add routes to TIMS when directed by a supervisor or member of management.

5.35.2. TIMS recognizes routes that exist in counties across NC to prevent users from creating incidents for roadways that do not exist in a particular county. However, TIMS may not allow users to enter an incident for a route in a particular county even though it does exist.

5.35.3. When an operator experiences this error OR it is reported to them by another TIMS user, operators should:

- Work with a supervisor/management to confirm that the route does exist in the specific county and receive approval to add the route to TIMS.

- Click the "Settings" link on the left-hand side of the TIMS Admin. Home page

- Click the "Routes" link

- Use the drop-down lists and field described below to select the desire route

- First drop-down list – select route type (I, US, NC, or SR)

- Field – enter route number (e.g., "1652" to add SR 1652)

- Second drop-down list – select route description ([None], ALT, BUS, BYP, TRK, or TOLL)

- Use the drop-down list beneath the route information to select the county that the route will be added to and click the "Add" button.

  - Operators may add the route to one county or to multiple counties by repeating this step as needed.

  - Counties may be removed by clicking the red "X" for the corresponding county.

- Click the "Add Route" button

- Attempt to add a new TIMS incident for the recently added route in the counties that the route has been added to – this will confirm that the route has been added successfully.

  - NOTE: A complete TIMS incident should not be added – only the General tab needs to be completed. Cancel the TIMS incident once the route is confirmed.

5.35.4. For Secondary Roads (SR), operators must also notify NCDOT's GIS Unit to assure that the road is also updated in the "Secondary Roads Database." See section 5.37 for details on coordinating with the GIS Unit on additions/corrections in the SR Database.

5.36. TIMS ADMIN. FUNCTIONS – SECONDARY ROADS DATABASE

5.36.1. The Secondary Roads Database (aka "Secondary Roads Database Lookup" or "SR Database") can be used by operators as needed, without prior approval.

5.36.2. Operators are encouraged to make regular use of the SR Database to:

- Confirm that a road is state maintained,

- Find the correct SR number associated with the common name of an SR, and

- Find the correct common name associated with an SR number.

5.36.3. To access and use the SR Database, operators should:

- Click the "Travel & Maps" link at the top of the NCDOT Home Page (www.ncdot.gov),

- Click the "Maps & Publications" link in the blue, menu on the left side of the page,

- Scroll down the page and click the "Secondary Roads Database Lookup" link,

  - NOTE: Operators should add the SR Database as a Favorite on their browser.

- Use the fields shown below to enter search criteria that will help return the desired SR information:

  - Division

  - County

- o Road Name

- o Road Number

- Click the "Submit" button to return search results based on the criteria entered.

5.37. TIMS ADMIN. FUNCTIONS – SUBMITTING CHANGES TO THE SR DATABASE

5.37.1. Operators must coordinate with the NCDOT's GIS Unit to request changes to the SR Database such as:

- SR name and/or number is missing from a county

- SR name is associated with an incorrect SR number

- SR number is associated with an incorrect SR name

- SR name is misspelled or incomplete

5.37.2. Operators must receive supervisor or management approval before submitting change requests for the SR Database to the GIS Unit.

5.37.3. To submit change requests for the SR Database to the GIS Unit, operators should:

- Use the Secondary Roads Database to confirm that information about the SR is missing, incorrect, or incomplete

- Receive supervisor/management approval to notify the GIS Unit

- Email the GIS Unit at GIShelp@ncdot.gov (supervisor/management should be copied) from the STOC email account and provide the following information as appropriate for request:

  - o Division

  - o County

  - o Road Number

  - o Road Name as listed in the SR Database

  - o Nature of the correction/discrepancy to resolve

  - o Additional road name that needs to be associated with the road number

  - o Actual road name that should replace an incorrect road name

  - o Correct spelling of the road name

5.38. TIMS ADMIN. FUNCTIONS – MANAGING TIMS CAMERAS

5.38.1. TIMS cameras are managed by approved STOC personnel in partnership with NCDOT personnel at a statewide and regional level.

5.38.2. Operators who are not approved to manage TIMS cameras are responsible for:

- Checking TIMS cameras regularly and identifying malfunctioning cameras

- Receiving reports/complaints related to malfunctioning cameras

- Relaying details on malfunctioning cameras to STOC's Traffic Operations Specialist and Assistant Traffic Specialists

5.39. TIMS ADMIN. FUNCTIONS – MANAGING TIMS USER ACCOUNTS

5.39.1. TIMS user accounts are managed by approved STOC personnel in partnership with NCDOT personnel at a statewide level.

5.39.2. Operators who are not approved to manage TIMS user accounts are responsible for:

- Maintaining their personal user credentials and working with NCDOT Help Desk when they are unable to login to TIMS

- Receiving requests from individuals for new TIMS user accounts and/or new levels of access

- Relaying TIMS user account requests to STOC's Traffic Operations Specialist and Assistant Traffic Specialists

5.39.3. Adding a New TIMS User

- When a DOT employee wants access to TIMS they usually contact the DOT Help Desk or the STOC directly. Sometimes the DOT IT person for their Division will contact the DOT Help Desk on their behalf.

- The DOT Help Desk notifies the TIMS GroupAdmin Email Group (DOT.TIMSHELP DOT.TIMSHELP@ncdot.gov) via a HEAT Ticket that someone has requested TIMS access. This is done via an email to all the people in the TIMS Heat Group.

- Go to the DOT directory and verify that the person is a DOT employee and seems like someone who would need TIMS access and that the access level they are requesting is appropriate based on the role definition at the beginning of this SOP. If you have any questions, ask the Mobility Program Manager or the Traffic Operations and Incident Management Engineer.

- Whichever person opens and acknowledges the HEAT Ticket becomes the owner of the ticket and should complete it or ask another GroupAdmin group member to complete the ticket.

- Instructions for adding a new user in Web Role Manager is attached as Appendix J to this SOP.

- Instructions for using HEAT is attached as Appendix K to this SOP.

- Once the HEAT ticket is complete the person who completed the request should email the user, and the person who originated the request, and let them know that they are now an authorized TIMS users. Also let them know if they have any questions or ever need assistance using TIMS they can contact the STOC, 24 x 7, at 877-NCS-STOC.

- If the request for TIMS access comes straight into the STOC directly then the same process in Appendix A is used, except for there is no need to do the HEAT ticket.

5.39.4. Setting up a new Group Administrator must be done through the DOT Help Desk and the Web Team.

- TSO staff will request that the Help Desk add a user to the TIMS HEAT group and ask for an Active Directory (AD) account to be created for that user.

- A current GroupAdmin must add the new user's Active Directory account (yes, really, AD account) as a TIMS SuperAdmin in TIMS Web Role Manager.

- TSO staff will request that the Web Team give them access to Web Role Manager

- The Help Desk will give them access to the HEAT program.

- The Web Team will give them access to Web Role Manager.

5.39.5. Misdirected TIMS Heat Tickets

- If we get a ticket from the Help Desk for something that someone else (or someone from the STOC) has called in that is not something we can handle a TIMS GroupAdmin can reassign this back to the Help Desk by clicking on the Spade at the top of the screen in HEAT See Appendix K for Heat Instructions). (Just notate in the Journal Entry that it needs to go to "Web Apps" because it was incorrectly assigned.

- Please make sure to document any issues that arise.

6. DYNAMIC MESSAGE SIGNS (DMS)

6.1. WHEN TO USE DMS

6.1.1. Operators should activate DMS for the following purposes:

- To advise motorists of congestion, lane closures, adverse weather, or other incidents or events that may affect travel conditions

- To provide motorists with traveler information such as travel times or detour/alternate route instructions

- To convey safety messages that reiterate NC driving laws and encourage motorists to adopt safe driving practices

- To support Amber Alerts and Silver Alerts for missing persons in NC.

6.1.2. DMS should only be used if signs are:

- Facing motorists who are traveling in or towards affected areas,

- Available in an appropriate proximity to an incident/affected area, and

- Not currently in use for a higher priority message.

6.2. WHEN TO UPDATE AND DEACTIVATE DMS

6.2.1. Operators must assure that all active DMS are always displaying accurate and up-to-date information.

6.2.2. DMS messages must be updated in a timely manner as incident or travel conditions change.

6.2.3. DMS messages should be deactivated when the incident/event is over and/or when travel conditions return to normal.

6.2.4. For DMS messages that are programmed to activate and deactivate on a set schedule, operators should assure that the message has activated and deactivated at the allotted time and should manually activate or deactivate the message if needed.

6.3. DMS MESSAGE PRIORITIES

6.3.1. DMS message priorities are shown in descending order below with higher priority messages at the top:

- Priority 1 - Road closures on any major network facility within a 10-mile radius of the DMS,

- Priority 2 - Emergencies, such as evacuation information,

- Priority 3 - Congestion, lane closures, lane shifts, or shoulder closures due to incidents within a 10-mile radius of the DMS,

- Priority 4 - Closures due to incidents that are greater than a 10-mile radius away,

- Priority 5 - Amber Alerts, Blue Alert, and Silver Alerts

- Priority 6 - Hazardous or uncommon road conditions that require drivers to alter their driving (e.g., standing water, icy roads, etc.) within 10-mile radius of the DMS where information is available on road conditions,

- Priority 7 - Travel Times during road closures, congestion, or other unusual conditions,

- Priority 8 - Congestion or unusual conditions greater than a 10-mile radius away,

- Priority 9 - Special Event messages,

- Priority 10 - Advance notice of events likely to cause congestion, such as:

  o Future road, lane, or ramp closures or special events, or

  o Closures of congestion on another primary route (i.e., adjacent routes).

- Priority 11 - Supplemental signing for Work Zones,

- Priority 12 - Ozone Action Day Alerts,

- Priority 13 - Safety Messages, and

- Priority 14 - Multi-modal traveler information such as ferries, transit, park & rides, etc.

6.3.2. Before activating a message on a DMS, operators should check the DMS to determine if it is already in use.

6.3.3. If a DMS is already in use, operators must determine if the existing message is a higher or lower priority than the new message that the operator wishes to display.

6.3.4. In Division 1, operators should call the division personnel to determine which is a higher priority.

6.3.5. If an existing DMS message is lower priority than a new message, operators should:

- Note the DMS and the full wording of the lower priority message,

- Replace the existing, lower priority message with the new, higher priority message, and

- Deactivate the higher priority message when it is no longer needed and reactivate the previous, lower priority message if it is still needed.

6.4. DMS FOR TRAVEL TIMES

6.4.1. DMS Selection – operators should only activate travel times on DMS that have been selected and programmed to display travel time messages by NCDOT or STOC management.

6.4.2. DMS Messaging – operators may only activate the pre-programmed travel time message on the DMS that has been specifically selected for that travel time message.

6.4.3. Travel Time Activation – operators should activate and deactivate travel time messages on the days and times that have been established by NCDOT or STOC management.

6.4.4. If a travel time message is set to automatically activate and deactivate on a schedule, operators should assure that the message has successfully activated and deactivated at the appropriate times and manually activate and deactivate them if needed.

6.5. DMS SELECTION FOR INCIDENTS/TRAVEL CONDITIONS

6.5.1. Operators must use the NC Operations Map (resource in Google Maps) whenever planning DMS activation.

6.5.2. Similar maps for regional operators (e.g., Triad Resource Map) may also be used but, if incident is a major and/or long-term incident or if it is affecting other regions, operators should use the NC Operations Map to assure that all appropriate DMS are activated.

6.5.3. If a DMS is within the area affected by an incident/event, it must be used.

- Example: DMS within the queue behind an incident.

6.5.4. If a DMS is at/before a key decision point, it should be used.

- Example: DMS before an exit where a detour/alternate route begins.

6.5.5. After the rules above have been followed, operators should activate DMS on the affected route and on adjacent routes nearby such that motorists who are or may become impacted will view the message with enough time to read the message and react safely. Operators are encouraged to follow the "20/10 Rule" described below.

6.5.6. 20/10 Rule for DMS selection:

- On affected route, operators should select all DMS that are:
    - Within the affected area AND
    - Within 20 miles from the incident or end of queue.
- On adjacent routes, operators should select all DMS that are:
    - On adjacent routes that are within the DMS activation area for the affected route AND
    - Within 10 miles of the adjacent routes' intersection with the affected route.
- This rule states that 20/10 miles are based on the total time in hours of the incident's expected duration.
    - Example: 1 hour duration = 20 miles back and 10 miles out.
    - Example: 2 hour duration = 40 miles back and 20 miles out.
- If duration calls for DMS activation in other Divisions/States, operators should discuss with a supervisor/POC before coordinating with these other parties.
- The 20/10 rule is a general guideline whose goal is to emphasize the need to:
    - Expand DMS selection as the severity of an incident increases and
    - Effectively utilize DMS on adjacent routes as well as affected routes.

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6.6. DMS SELECTION FOR INCIDENTS ON RAMPS OR SHOULDERS

6.6.1. Operators should only use DMS that are on the route where the ramp or shoulder is affected (i.e., DMS on adjacent routes should not be used).

6.6.2. Only DMS that are within 10 miles of the affected ramp or shoulder should be used unless DMS further than 10 miles are at or before a key decision point.

6.7. DMS MESSAGE GUIDELINES – PANELS

6.7.1. DMS messages may consist of 1 or 2 panels but NEVER more than 2 panels.

6.7.2. Each panel should be displayed for 3 seconds. In general, operators should not modify the panel's default display time.

6.7.3. Each panel must convey a complete thought (i.e., do not carry sentences across 2 panels).

6.7.4. Whenever possible, operators should craft and use DMS messages that are 1 panel only. 1 panel messages are preferred because they can help:

- Minimize confusion by limiting the amount of information motorists must read and digest and
- Prevent motorists from slowing down to read multiple panels.

6.8. DMS MESSAGE GUIDELINES – ROWS

6.8.1. Operators should craft DMS messages that use 2-3 rows per panel.

6.8.2. If only 2 rows of a panel are used, DO NOT leave the middle row blank. The 2-row message will automatically be centered vertically on the board.

6.8.3. Unless directed by NCDOT personnel or STOC management, operators should not display a panel where only 1 row is used.

6.9. DMS MESSAGE GUIDELINES – FORMATTING AND WORDING

6.9.1. Operators should adhere to the following format and wording guidelines when crafting DMS messages:

- Text should be in ALL CAPS and centered.
    - o NOTE: Travel Time messages may be set to Left Alignment.
- Use simple, brief, legible, and clear messages that minimize confusion.
    - o Do not use NCDOT jargon or other technical phrases.
    - o Do not say "LEFT" and "RIGHT" on the same panel. Choose one idea to convey or reword the message but do not use both.
    - o Language should not be overly simplistic/vague (e.g., "CONGESTION AHEAD," as only information in message).
- Do NOT use overly dramatic language or wording that could adversely affect the respect motorists have for the signs and for NCDOT. Overly dramatic message examples below:

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- o "CAUTION! CAUTION! CAUTION!"

- o "CRASH WITH FATALITIES"

- Do NOT display any messages containing jingles, slogans, or other content that may seem like an advertisement. Generic terms for events and/or venues that can be used in place of the specific event/venue name include but are not limited to:

  - o "EVENT"

  - o "RACE"

  - o "CONCERT"

  - o "SPEEDWAY"

  - o "ARENA"

  - o "STADIUM"

  - o "COLISEUM"

- Do NOT use any animations, moving or fading text, or graphics other than those approved by NCDOT or STOC management.

- Avoid use of special characters. Dashes, colons, parentheses, and ampersands may be used but all others (e.g., #, @,!) should not be used without approval.

- Do NOT display phone numbers greater than 4 digits, web sites, or mailing addresses.

  - o "511" may be displayed for Amber/Silver Alert messages.

  - o Only display "911" or "*HP" when directed by STOC management.

- Operators should provide exit numbers instead of common street names or mile markers whenever possible.

  - o If an exit also has a letter designation, that letter must also be provided. Example: "EXIT 1D."

- Operators should use "CLOSED" instead of "BLOCKED."

- Operators should use "CRASH" instead of "VEHICLE ACCIDENT" or "ACCIDENT."

- Operators should use "CONGESTION" or "DELAYS" to refer to traffic congestion.

- Operators should use "DEBRIS" to refer to debris and other obstructions.

- Operators should use "DISABLED VEHICLE" to refer to disabled or abandoned vehicles.

- "ROAD WORK" or "WORK ZONE" should be used in place of "CONSTRUCTION" or "MAINTENANCE" unless otherwise specified by NCDOT or management personnel.

6.10. DMS MESSAGE GUIDELINES – APPROVED ABBREVIATIONS

6.10.1. Only abbreviations approved by the NCDOT and/or MUTCD may be used on DMS.

6.10.2. Abbreviations should only be used when space is needed and should be used sparingly. Too many abbreviations on the same panel can be confusing.

6.10.3. Operators may only use NCDOT/MUTCD-approved abbreviations on DMS. For a list of approved abbreviations, see Appendix E.

6.10.4. When additional space is needed to describe lanes or shoulder closed, operators should abbreviate lanes (i.e. "LNS") or shoulder ("SHLDR") and should not abbreviate "RIGHT," "LEFT," or "CLOSED." Examples below:

- "2 LEFT LNS CLOSED"

- "RIGHT SHLDR CLOSED"

6.11. DMS MESSAGE GUIDELINES – TIMES AND DATES

6.11.1. If the DMS message is for an incident/event that will occur later on the same day, operators should provide the time only. Example: "5:00 PM" or "5 PM."

6.11.2. If the DMS message is for an incident/event that will occur within the same week, operators should provide the day of week. Example: "MONDAY" or "MON."

- Time may also be shown, as needed. Example: "MONDAY AT 5:00 PM" or "MON 5 PM."

6.11.3. If the DMS message is for an incident/event that will occur more than 7 days out, operators should provide the date. Example: "5/25/15."

6.12. DMS MESSAGE GUIDELINES – GENERIC ACTIONS FOR MOTORISTS

6.12.1. Operators may use the following phrases on DMS messages when describing generic actions for what motorists should do:

- "REDUCE SPEED"

- "PREPARE TO STOP"

- "EXPECT DELAYS"

- "SEEK ALTERNATE" or "USE ALTERNATE"

- "USE DETOUR" or "FOLLOW DETOUR"

- "USE CAUTION"

6.12.2. When possible, operators should seek to provide more specific instructions for what motorists should do – especially regarding detours or alternate routes.

6.13. DMS MESSAGE GUIDELINES – DESCRIBING DISTANCE

6.13.1. Operators must consider the location of the DMS in relation to the incident and/or the end of the queue when describing distance.

6.13.2. For DMS on the affected route:

- If DMS is 0-20 miles away, use "[X] MILES AHEAD" – Example: "5 MILES AHEAD"

- Especially in areas with numerous, interconnected adjacent interstates (e.g., Triad Region), operators should use "NEAR EXIT [X]" even if DMS is within 20 miles of the incident/queue.
- Operators may use "AHEAD" at their discretion if DMS is in immediate proximity (e.g. less than 1 mile) to the incident/queue.

- If DMS is 20+ miles away, use "NEAR EXIT [X]" – Example: "NEAR EXIT 285." The options below may also be used if an exit is not near the incident/queue:
  - "NEAR [CITY]" – Example: "NEAR RALEIGH"
  - "NEAR [STATE LINE]" – Example: "NEAR NC/VA BORDER"

6.13.3. For DMS on an adjacent route, "[X] MILES AHEAD" should NOT be used. "NEAR EXIT [X]," "NEAR [CITY]," or "NEAR [STATE LINE]" should be used instead, regardless of distance from the DMS to the incident/queue.

6.13.4. Operators may use "AT" instead of "NEAR" as appropriate to describe the location of the incident/queue.

6.13.5. Operators should always use ROAD WORK as two separate words for DMS Activation.

6.14. DMS MESSAGE TEMPLATE – DMS ON AFFECTED ROUTE

6.14.1. The following is the message template for DMS on an affected route that operators should use for most incidents or traffic queues unless circumstances require that additional information is displayed:

- Top Row: [INCIDENT TYPE]
- Middle Row: [DISTANCE TO INCIDENT]
- Bottom Row: [LANE(S) CLOSED/DRIVER ACTION]

6.14.2. Examples of DMS messages for crashes:

- 0-20 miles away:
  - "CRASH | 5 MILES AHEAD | RIGHT LANE CLOSED"
- 20+ miles away:
  - "CRASH | NEAR EXIT 285 | 2 RIGHT LNS CLOSED"

6.14.3. Examples of DMS messages for construction or maintenance:

- 0-20 miles away:
  - "ROAD WORK | 10 MILES AHEAD | LEFT LANE CLOSED"
  - "WORK ZONE | 2 MILES AHEAD | RIGHT SHLDR CLOSED"
- 20+ miles away:
  - "ROAD WORK | NEAR EXIT 14 | RIGHT LANE CLOSED"
  - "WORK ZONE | NEAR EXIT 46B | 2 LEFT LNS CLOSED"

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6.14.4. Examples of DMS messages for abnormal and heavy congestion:

- DMS within traffic queue:
    - "CONGESTION | NEXT 3 MILES | EXPECT DELAYS"
    - NOTE: Here, distance describes how far from the DMS to where traffic returns to normal flow.
- 0-20 miles away:
    - "CONGESTION | 1 MILE AHEAD | REDUCE SPEED"
- 20+ miles away:
    - "CONGESTION | NEAR EXIT 179 | EXPECT DELAYS"

6.15. DMS MESSAGE TEMPLATE – DMS ON ADJACENT ROUTES

6.15.1. The following message templates are for DMS on an adjacent route that operators should use to advise of incidents or traffic queues on an affected route unless circumstances require that additional information is displayed.

6.15.2. Short Template for Adjacent Route DMS – used for messages with fewer characters:

- Top Row: [INCIDENT TYPE] ON [AFFECTED ROUTE] [DIRECTION]
- Middle Row: [LOCATION ON AFFECTED ROUTE]
- Bottom Row: [LANE(S) CLOSED/DRIVER ACTION]

6.15.3. Example of DMS message using Short Template:

- "CRASH ON I-540 E| NEAR EXIT 16 | 2 RIGHT LNS CLOSED"

6.15.4. Long Template for Adjacent Route DMS – used for messages with more characters requiring additional space.

- Panel 1
    - Top Row: [INCIDENT TYPE] ON
    - Middle Row: [AFFECTED ROUTE] [DIRECTION]
    - Bottom Row: [LOCATION ON AFFECTED ROUTE]
- Panel 2
    - Top Row: [DUPLICATE PANEL 1 INFORMATION]
    - Middle Row: [DUPLICATE PANEL 1 INFORMATION]
    - Bottom Row: [LANE(S) CLOSED/DRIVER ACTION]

6.15.5. Example of DMS message using Long Template:

- (P1) "ROAD WORK ON | I-440 WEST | NEAR EXIT 2A"
- (P2) "ROAD WORK ON | I-440 WEST | RIGHT LANE CLOSED"

6.16. DMS MESSAGE TEMPLATE – DMS FOR INCIDENTS ON RAMPS

6.16.1. DMS messages for ramps must indicate the exit number for the affected ramp unless the exit is not given a numeric designation.

- Letter designations (e.g. "EXIT 7B"), if included, must also be used.

6.16.2. If the exit does not have a numeric designation, the official route designation (e.g. US 70) or the common name for the route (e.g. "GLENWOOD AVE") must be provided.

- If needed, the direction of travel for the route that the ramp accesses should be provided (e.g. "US 1 NORTH" or "US 1 N").

6.16.3. The following templates are for DMS message that operators should use to advise motorists of incidents occurring on ramps unless circumstances require that additional information is displayed.

6.16.4. Short Template for DMS Advising of Ramp Incidents – used for messages with fewer characters:

- Top Row: [INCIDENT TYPE] ON RAMP
- Middle Row: TO [EXIT # #/ROUTE]
- Bottom Row: [LANE(S) CLOSED/DRIVER ACTION]

6.16.5. Examples of DMS messages using Short Template:

- "CRASH ON RAMP | TO EXIT 298A | LEFT LANE CLOSED"
- "CRASH ON RAMP | TO WADE AVE | RAMP CLOSED"

6.16.6. Long Template for DMS Advising of Ramp Incidents – used for messages with more characters requiring additional space.

- Top Row: [INCIDENT TYPE] ON
- Middle Row: RAMP TO [EXIT # #/ROUTE]
- Bottom Row: [LANE(S) CLOSED/DRIVER ACTION]

6.16.7. Example of DMS message using Long Template:

- "ROAD WORK ON | RAMP TO US 1 NORTH | RIGHT SHLDR CLOSED"

6.17. "MOVE OVER" DMS MESSAGE FOR SHOULDER INCIDENT

6.17.1. If a shoulder is closed and IMAP or Law Enforcement are on scene and a DMS is relatively close (i.e., 1-2 miles away), operators are encouraged to use the following DMS message:

- (P1) "MOVE OVER | FOR EMERGENCY | VEHICLES"
- P2) "SLOW DOWN | FOR EMERGENCY | VEHICLES"

6.18. "WRONG WAY DRIVER" DMS MESSAGE FOR REPORTED INCIDENTS

6.18.1. If a wrong way driver has been reported by NCDOT Personnel, Law Enforcement or CCTV Visual Confirmation, operators must:

- Notify Supervisor

- Activate all DMS within a 20-mile radius on the main route & within 10 miles on adjacent routes

    o WRONG WAY DRIVER | REPORTED IN AREA | STAY ALERT

- Attempt to gain visual confirmation via CCTV

- If found then notify reporting agency and LEO

    o Follow normal incident management

- If **not** found then continue to monitor for 20 mins

    o After 20 mins deactivate signs

    o Contact Law Enforcement after 10 mins for update

- Adjust signs accordingly during the incident (e.g., driver is caught then deactivate signs; driver crashes then update to reflect the crash)

6.18.2. If the incident results in a crash, operator must notify the Operations Manager immediately and document accordingly.

6.19. REQUESTS FOR EXCEPTIONS TO DMS POLICY

6.19.1. Operators may receive requests to display DMS messages that are not in line with the policies and guidelines described in this document.

6.19.2. All requests for exceptions to this policy must be submitted to the appropriate Division Engineer of the Division where the DMS in question is located. The Division Engineer must review the request and, if approved, must submit it to the NCDOT ITS Operations Unit for further review. After reviewing the request from the Division Engineer, the ITS Operations Unit will forward the request to the NCDOT Chief Engineer of Operation with a recommendation to approve or deny the request. The final ruling to approve or deny the request will be made by the Chief Engineer of Operations.

6.19.3. Until the NCDOT Chief Engineer of Operations approves a request for an exception to the DMS policy, the message in question may not be displayed on DMS.

6.19.4. If a request for an exception to this policy is received, operators must forward the request via email to the NCDOT Traffic Operations Engineer (part of the ITS Operations Unit) and should copy their supervisor and the STOC Operations Manager. Email should include:

- Full name and contact information for the requesting party,

- If applicable, requesting party's title and agency that they represent,

- Complete details on the message that requesting party wishes to display, and/or

- Details of their request and the policy exception they are requesting, and

- Location of DMS that have been requested for use including route, direction of travel, county, and Division.

6.20. REQUEST OF DIVISION 3 CAUSEWAY DMS ACTIVATION

6.20.1. Operators may receive requests to display DMS messages for Division 3 Bridge personnel. If a request is received by the STOC for activation, first obtain the following information:

- Name and/or agency of party who made request,

- Requesting party's contact information,

- What bridge are the messages for, and

- Time, date, and overall duration when party requested message to be displayed.

6.20.2. Once all information has been obtained, operators should navigate to Vanguard and perform the appropriate actions:

- For the **Cape Fear Bridge** and/or the **Isabel Holmes Bridge** the following DMS need activation:

  o D03 DMS-02 (US 17 NB/74/76 EB)

  o D03 DMS-06 (US 17 NB/74 EB/421 NB)

  o D03 DMS-09 (US 421 SB at Pender/NH line)

- The corresponding approved messages for each bridge have been created and can be accessed within the STOC Vanguard using the following steps:

  o Right click on the correct DMS sign

  o Under Options, select **Play Message**

  o Navigate to the **D3 messages -> D3 Bridges** folder

  o Select the requested bridge (Cape Fear or Isabel Holmes)

  o Input the requested duration and press play

  o Continue until **All Three DMS** have been activated

  o Confirm that all DMS activated correctly

6.20.3. Operators should monitor the signs throughout the duration and seek confirmation of deactivation from the requester, before timing out DMS.

7. DETOURS AND ALTERNATE ROUTES

7.1. WHEN TO IMPLEMENT A DETOUR

7.1.1. Operators should plan and implement detours when all travel lanes are closed due to an incident.

- If all lanes will be closed briefly (e.g., to relocate vehicles to the shoulder), a detour may not be necessary.

- If all lanes will be closed for an extended period, a detour will be necessary.

7.1.2. If responders have diverted traffic onto a route that does not serve as a viable detour, operators should support that on-scene detour as appropriate (e.g., information on DMS) and should implement an additional detour/alternate route that is viable, if viable routes are available.

7.1.3. Operators should implement additional detours as needed to address increasing congestion levels and/or to serve traffic in other areas or on other routes.

7.2. WHEN TO IMPLEMENT AN ALTERNATE ROUTE

7.2.1. Operators should plan and implement an alternate route in the following circumstances:

- When 50% of more of available travel lanes are closed during peak hours and with one mile of congestion of more AND/OR

- When an existing detour/alternate route is or may become heavily congested.

7.2.2. Operators should implement additional alternate routes as needed to address increasing congestion levels and/or to serve traffic in other areas or on other routes.

7.2.3. In general, operators should NOT implement an alternate route for an incident whose duration is expected to be less than 30 minutes.

7.3. PLANNING DETOURS/ALTERNATE ROUTES

7.3.1. Operators should plan and implement viable detours/alternate routes – a viable route should:

- Divert traffic off the affected route BEFORE the incident location.
  - If possible, traffic should be diverted before the congested area.

- Return traffic to the affected route AFTER the incident location

- Use high capacity roads – further guidance below:
  - Interstate to interstate is BEST
  - Interstate to large US/NC is OK
  - Interstate to small US/NC or SR is PROHIBITED unless approved by NCDOT or management

- DO NOT use tolled roads as detours/alternate routes unless there are NO other viable alternatives. If a tolled road must be used, then there must be coordination with the NCTA prior to implementing the detour/alternate route so that motorists are not charged for using the toll road.

- Avoid using routes that are:
    - Affected by incidents, work zones, or regularly high congestion
    - Main thoroughfares that travel directly through cities or towns
    - Intersected by traffic circles (i.e., roundabouts) or railroad tracks
    - Not intended to carry vehicles of all sizes and weights.

- Use the shortest route possible and with as few turns as possible.
    - NOTE: Travel time via an alternate route must be shorter than if motorists remained on the affected route with the incident.

7.3.2. When planning and implementing detours/alternate routes, operators should:

- Use Google Maps to carefully inspect the area around the incident and routes that may be used to determine if the detour/alternate route is viable.

- Discuss the detour/alternate route with another party to confirm that the route is best and that it aligns with other, on-scene efforts.
    - First, discuss with another operator and/or supervisor.
    - Then discuss with a NCDOT POC, ideally someone on-scene.

- Craft clear and concise driving instructions that motorists can follow.

- Use DMS (if available) to provide instructions before and along the detour/alternate route.

- Monitor the incident, the affected route, and the detour/alternate route. If needed, operators should:
    - Modify the detour/alternate route if it is no longer viable.
    - Implement an additional alternate route further back to alleviate congestion on an existing detour/alternate route.
    - Remove the route if it is no longer needed.

7.3.3. For longer-term detours, operators should:

- Contact law enforcement to request assistance with traffic control at traffic signals and intersections along the detour route.

- Discuss deployment of CMS and/or static signs with NCDOT county maintenance personnel.

o NOTE: Discussion with NCDOT personnel should occur as soon as possible since the response time for county maintenance may be as long as 2-3 hours.

7.4. DETOURS/ALTERNATE ROUTES IN TIMS INCIDENTS

7.4.1. In a TIMS incident, driving instructions for detours/alternate routes should be entered on the Description tab in the box labeled "Describe Detour [or] Alternate Route below".

7.4.2. Operators must select the appropriate check box to designate the route as either a "Detour" or an "Alternate Route".

7.4.3. Operators should NOT modify the detour/alternate route information in a TIMS incident that has been entered or is being managed by an external TIMS user (i.e., local NCDOT personnel) unless they have received approval from the NCDOT personnel that are responsible for the incident/area.

7.5. DETOURS/ALTERNATE ROUTES IN SPECIAL ALERTS

7.5.1. In a Special Alert, driving instructions for detours/alternate routes should be entered below the incident information in the body of the alert as a separate paragraph.

7.5.2. Operators should record detour/alternate route instructions as part of the floodgate message for a Special Alert.

7.5.3. If a Special Alert is used, operators must assure that detour/alternate route instructions always match the instructions in the TIMS incident.

7.6. DETOUR/ALTERNATE ROUTE FORMAT FOR TIMS

7.6.1. Operators should adhere to the following wording and format guidelines when entering detour/alternate route instructions in a TIMS incident or Special Alert.

- Write instructions in a turn-by-turn format using complete sentences.
  - o Operators should keep sentences short – one turn per sentence is best.
- Provide exit numbers and common names of routes that are used.
- Describe direction of travel that motorists must follow along route
- Multiple detours/alternate routes (if used) should be written separately and as a separate paragraph
  - o This includes if a detour/alternate route is provided for both directions of travel on an affected route. Both directions must have complete route instructions.

7.6.2. Example of a detour if I-40 West is closed at MM 272:

- "Detour: Take Exit 273A for NC 54 West. Follow NC 54 towards Chapel Hill then turn right onto the ramp for US 15/501 North. Continue US 15/501 North to re-access I-40 near Exit 270."

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7.7. DMS SELECTION FOR DETOURS/ALTERNATE ROUTES

7.7.1. Standard rules for DMS selection apply to detours/alternate routes – especially DMS at or before key decision points (i.e., exit or intersection where the detour/alternate route begins).

- See Section 6.5 DMS Selection for Incidents/Travel Conditions

7.7.2. Operators should use DMS along the detour/alternate route to continue to guide motorists and (where appropriate) to provide additional route instructions that may not have fit on DMS that motorists have already seen.

7.8. CRAFTING DMS MESSAGES FOR DETOURS/ALTERNATE ROUTES

7.8.1. When crafting DMS messages for detours/alternate routes, operators should:

- Adhere to standard formats and templates for DMS messages as much as possible
  - In most cases, DMS should still describe where impacts are and how motorists are affected (e.g., which lanes are closed).
- Provide exit numbers and official route designations (e.g., I-40, US 70)
  - Avoid using common names or mile markers, if possible
  - DO NOT provide SR numbers – Use common name, if needed
- Describe direction of travel that motorists must follow on route
- Use "Detour" or "Alternate Route" to state that information is related to a detour or alternate route.
  - "ALTERNATE", "ALT", OR "ALT RTE" may be used
  - "[ROUTE] TRAFFIC | USE…" is also acceptable. Example: "I-40 TRAFFIC | USE…"
- Use abbreviations to save space but use them SPARINGLY.
- Get input from other operators or supervisor to ensure the message is clear and understandable.

7.8.2. Operators should adhere to the DMS message templates described in the next several sections except in the following circumstances:

- When directed by NCDOT or STOC management to activate a different message.
- Response plans or specific SOPs instruct use of a different message for the situation
- When the DMS message templates do not meet the needs for a circumstance. In these cases, operators must seek supervisor approval for non-template messages.

7.9. DMS TEMPLATES – PLANNED/ON-SCENE DETOUR

7.9.1. The following DMS message templates should be used for detours that are either:

- Planned in advance and where static signs or other instructions are in place before and along the detour route OR

- Implemented on-scene by responders (i.e., law enforcement) and where motorists are being directed onto the detour route that they must use.

7.9.2. For DMS on the affected route, use the template below:

- Top Row: ROAD CLOSED

- Middle Row: [DISTANCE TO INCIDENT]

- Bottom Row: FOLLOW DETOUR

7.9.3. Example of planned/on-scene detour message for DMS on affected route:

- "ROAD CLOSED | NEAR EXIT 301 | FOLLOW DETOUR"

7.9.4. For DMS on an adjacent route, use the template below:

- Top Row: [AFFECTED ROUTE] [DIRECTION] CLOSED

- Middle Row: [LOCATION ON AFFECTED ROUTE]

- Bottom Row: FOLLOW DETOUR

7.9.5. Example of planes/on-scene detour message for DMS on an adjacent route:

- "I-540 EAST CLOSED | NEAR EXIT 16 | FOLLOW DETOUR"

7.10. DMS TEMPLATES – GENERIC ALTERNATE ROUTE

7.10.1. The following DMS message templates should be used when multiple alternate routes are available and/or when motorists, in general, should choose their own routes (e.g., during special events).

- When possible, operators should seek to provide more specific instructions for what motorists should do.

7.10.2. For DMS on the affected route, use the template below:

- Top Row: [INCIDENT TYPE/LANES(S) CLOSED]

- Middle Row: [DISTANCE TO INCIDENT]

- Bottom Row: SEEK ALTERNATE

7.10.3. Examples of generic alternate route message for DMs on affected route:

- "DELAYS | NEAR EXIT 1D | SEEK ALTERNATE"

- "2 RIGHT LNS CLOSED | NEAR EXIT 2 | SEEK ALTERNATE"

- NOTE: If lanes are closed, operators should state which lanes are closed on the top row.

7.10.4. For DMS on an adjacent route where fewer characters are needed, use the Short Template below:

- Panel 1

- o Top Row: [INCIDENT TYPE] ON [AFFECTED ROUTE] [DIRECTION]
- o Middle Row: [LOCATION ON AFFECTED ROUTE]
- o Bottom Row: [LANES(S) CLOSED]
- Panel 2
  - o Top Row: [DUPLICATE PANEL 1 INFORMATION]
  - o Middle Row: [DUPLICATE PANEL 1 INFORMATION]
  - o Bottom Row: [SEEK ALTERNATE]

7.10.5. Example of generic alternate route message for DMS on adjacent route (Short Template)

- (P1) "CRASH ON I-440 W | NEAR EXIT 2 | 2 RIGHT LNS CLOSED"
- (P2) "CRASH ON I-440 W | NEAR EXIT 2 | SEEK ALTERNATE"

7.10.6. For DMS on an adjacent route where more characters are needed, use the Long Template below:

- Panel 1
  - o Top Row: [INCIDENT TYPE] ON
  - o Middle Row: [AFFECTED ROUTE] [DIRECTION]
  - o Bottom Row: [LOCATION ON AFFECTED ROUTE]
- Panel 2
  - o Top Row: [DUPLICATE PANEL 1 INFORMATION]
  - o Middle Row: [DUPLICATE PANEL 1 INFORMATION]
  - o Bottom Row: SEEK ALTERNATE

7.10.7. Example of generic alternate route message for DMS on adjacent route (Long Template):

- (P1) "ROADWORK ON | I-440 WEST | NEAR EXIT 2"
- (P2) "ROADWORK ON | I-440 WEST | SEEK ALTERNATE

7.11. DMS TEMPLATES – DETOUR/ALTERNATE ROUTE USING ONLY ONE ROAD

7.11.1. The following DMS message templates should be used detours/alternate routes that use only one road to divert traffic around the incident and return it to the affected route.

7.11.2. For DMS on the affected route, use the template below:

- Panel 1
  - o Top Row: [INCIDENT TYPE/LANE(S) CLOSED]
  - o Middle Row: [DISTANCE TO INCIDENT]

o Bottom Row: [USE ALTERNATE] or [FOLLOW DETOUR]

- Panel 2

  o Top Row: [DETOUR] or [ALTERNATE ROUTE]

  o Middle Row: USE [EXIT #] or [RAMP] TO

  o Bottom Row: [ROUTE] [DIRECTION]

7.11.3. Examples of detour/alternate route message for DMS on affected route:

- (P1) "ROAD CLOSED | NEAR EXIT 301 | FOLLOW DETOUR"

- (P2) "DETOUR | USE EXIT 306 TO | US 70 WEST

- (P1) "DELAYS | NEAR EXIT 295 | USE ALTERNATE"

- (P2) "ALTERNATE ROUTE | USE EXIT 301 TO | I-440 WEST"

7.11.4. For DMS on an adjacent route, use the template below for a DETOUR:

- Panel 1

  o Top Row: [AFFECTED ROUTE] [DIRECTION] CLOSED

  o Middle Row: [LOCATION ON AFFECTED ROUTE]

  o Bottom Row: FOLLOW DETOUR

- Panel 2

  o Top Row: [AFFECTED ROUTE] [DIRECTION] DETOUR

  o Middle Row: USE [EXIT #] or [RAMP] TO

  o Bottom Row: [ROUTE] [DIRECTION]

7.11.5. Example of detour (one road only) message for DMS on an adjacent route

- (P1) "I-40 WEST CLOSED | NEAR EXIT 295 | FOLLOW DETOUR"

- (P2) "I-40 WEST DETOUR | USE EXIT 301 TO | I-440 WEST"

7.11.6. For DMS on an adjacent route, use the template below for an ALTERNATE ROUTE:

- Panel 1

  o Top Row: [AFFECTED ROUTE] DIRECTION] DELAYS

  o Middle Row: [LOCATION ON AFFECTED ROUTE]

  o Bottom Row: USE ALTERNATE

- Panel 2

  o Top Row: [AFFECTED ROUTE] [DIRECTION] ALTERNATE

  o Middle Row: USE [EXIT #] or [RAMP] TO

  o Bottom Row: [ALTERNATE ROUTE] [DIRECTION]

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7.11.7. Example of an alternate route (one road only) message for DMS on an adjacent route:

- (P1) "NC 147 N DELAYS | NEAR EXIT 8 | USE ALTERNATE"

- (P2) "NC 147 N ALTERNATE | USE EXIT 270 TO | US 15/501 NORTH"

7.12. DMS TEMPLATES – DETOUR/ALTERNATE USING MULTIPLE ROADWAYS

7.12.1. The following DMS message templates should be used when detours/alternate routes use multiple roadways to divert traffic and return it to the affected route.

7.12.2. For DMS on the affected route, use the template below for a DETOUR:

- Panel 1

    o Top Row: ROAD CLOSED

    o Middle Row: [DISTANCE TO INCIDENT]

    o Bottom Row: FOLLOW DETOUR

- Panel 2

    o Top Row: DETOUR

    o Middle Row: [EXIT #] or [RAMP] TO [1ST ROUTE] [DIRECTION]

    o Bottom Row: [2ND ROUTE] [DIRECTION] TO [3RD ROUTE] [DIRECTION]

    o NOTE: Operators should only include 3rd route if necessary

7.12.3. Examples of detour messages for DMS on the affected route:

- (P1) "ROAD CLOSED | 2 MILES AHEAD | FOLLOW DETOUR

- (P2) "DETOUR | EX 283 TO I-540 E | US 70 E TO I-440 W"

- (P1) "ROAD CLOSED | NEAR EXIT 287 | FOLLOW DETOUR"

- (P2) "DETOUR | EX 283 TO I-540 E | US 70 E TO I-440 W"

7.12.4. For DMS on the affected route, use the template below for an ALTERNATE ROUTE:

- Panel 1

    o Top Row: [LANE(S) CLOSED] or [DELAYS]

    o Middle Row: [DISTANCE TO INCIDENT]

    o Bottom Row: USE ALTERNATE

- Panel 2

    o Top Row: ALTERNATE ROUTE

    o Middle Row: [EXIT #] or [RAMP] TO [1ST ROUTE] [DIRECTION]

    o Bottom Row: [2ND ROUTE [DIRECTION] TO [3RD ROUTE] [DIRECTION]

    o NOTE: Operators should only include 3rd route if necessary.

7.12.5. Example of an alternate route message for DMS on the affected route:

- (P1) "2 LEFT LANES CLOSED | 2 MILES AHEAD | USE ALTERNATE
- (P2) "ALTERNATE ROUTE | EX 283 TO I-540 E | US 70 TO I-440 W"

7.12.6. For DMS on an adjacent route, use the template below for a DETOUR:

- Panel 1
  - Top Row: [AFFECTED ROUTE] [DIRECTION] DELAYS
  - Middle Row: [LOCATION ON AFFECTED ROUTE]
  - Bottom Row: FOLLOW DETOUR
- Panel 2
  - Top Row: [AFFECTED ROUTE] [DIRECTION] DETOUR
  - Middle Row: [EXIT #] or [RAMP] TO [1ST ROUTE] [DIRECTION]
  - Bottom Row: [2ND ROUTE] [DIRECTION] TO [3RD ROUTE] [DIRECTION]
  - NOTE: Operators should only include 3rd route if necessary.

7.12.7. Example of a detour message for DMS on an adjacent route:

- (P1) "I-40 EAST CLOSED | NEAR EXIT 285 | FOLLOW DETOUR"
- (P2) "I-40 EAST DETOUR | EXIT 4A TO US 70 E | TO I-440 WEST"

7.12.8. For DMS on an adjacent route, use the template below for an ALTERNATE ROUTE:

- Panel 1
  - Top Row: [AFFECTED ROUTE] [DIRECTION] DELAYS
  - Middle Row: [LOCATION ON AFFECTED ROUTE]
  - Bottom Row: USE ALTERNATE
- Panel 2
  - Top Row: [AFFECTED ROUTE] DIRECTION] ALTERNATE
  - Middle Row: [EXIT #] or [RAMP] TO [1ST ROUTE] [DIRECTION]
  - Bottom Row: [2ND ROUTE] [DIRECTION] TO [3RD ROUTE] [DIRECTION]
  - NOTE: Operators should only include 3rd route if necessary.

7.12.9. Example of a detour message for DMS on an adjacent route:

- (P1) "I-40 EAST DELAYS | NEAR EXIT 285 | USE ALTERNATE
- (P2) "I-40 EAST ALTERNATE | EXIT 4A TO US 70 E | TO I-440 WEST

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7.13. DMS TEMPLATES – USE NEXT EXIT AND OTHER EXIT DETOURS

7.13.1. The following DMS message template should be used when there are exit(s) available between the DMS and an incident where all lanes are closed.

- If there are multiple exits between the DMS and the incident, operators should specify which exit to use.

- If there is only one exit between the DMS and the incident, operators may use, "USE NEXT EXIT" as part of the DMS message.

- Whenever possible, the exit stated on the DMS message should direct motorists to a viable detour route.

7.13.2. For DMS on the affected route, use the template below:

- Top Row: ROAD CLOSED

- Middle Row: [DISTANCE TO INCIDENT]

- Bottom Row: USE [NEST EXIT] or [EXIT #]

7.13.3. Examples of detour messages for DMS on affected route:

- "ROAD CLOSED | 1 MILE AHEAD | USE NEXT EXIT"

- "ROAD CLOSED | 1 MILE AHEAD | USE EXIT 224"

7.13.4. Short Template (fewer characters needed) for DMS message where an exit ramp is closed, and a viable exit ramp is nearby:

- Top Row: [EXIT #] or [ROUTE # RAMP] CLOSED

- Middle Row: USE [EXIT #] or [ROUTE # RAMP]

- Bottom Row: [COMMON NAME]

7.13.5. Examples of DMS messages where an exit ramp is closed and where a viable exit ramp is nearby (Short Template):

- "EXIT 285 CLOSED | USE EXIT 284 | AIRPORT BLVD"

- "NC 51 RAMP CLOSED | USE NC 49 RAM | BLADEN ROAD

7.13.6. Long Template (more characters needed) for DMS message when an exit ramp is closed, and a viable exit is nearby:

- Panel 1

  - Top Row: [EXIT #] or [RAMP] TO

  - Middle Row: [COMMON NAME] or [ROUT # OF INACCESSIBLE ROUTE]

  - Bottom Row: CLOSED

- Panel 2

  - Top Row: USE

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- Middle Row: [EXIT #] or [RAMP] TO

- Bottom Row: [COMMON NAME] or [ROUTE # OF ROUTE TO USE]

7.13.7. Example of DMS message where an exit ramp is closed and where a viable exit ramp is nearby (Long Template):

- (P1) "RAMP TO | US 64 BYP EAST | CLOSED"

- (P2) "USE | RAMP TO | POPLAR AVE"

8. IMAP DISPATCH AND RADIO COMMUNICATION

8.1. EXPECTATION FOR ALL DISPATCH AND RADIO COMMUNICATION

8.1.1. All dispatch and radio communication must be:

- Clear, complete, and accurate,
- Brief,
- Consistent,
- Professional and appropriate, and
- Relevant to incident management and/or IMAP coordination.

8.1.2. When hailed, STOC must respond as soon as possible, preferably within 10 seconds.

8.1.3. New information or changes in conditions, if relevant to IMAP, must be relayed as it is available – especially if an incident clears before IMAP arrives.

8.1.4. Whenever there is a fire alarm within the STOC, each dispatcher will:

- Notify their specific IMAP region of the fire alarm within the STOC and that all operators will be leaving the control room floor.
- Notify their specific IMAP region that they will continue radio communication via VIPER Handheld and Nextel phones, but they will not be able to assist with CCTV or CAD detection.
- Each dispatcher is required to collect, and document all stops during the fire alarm and enter it into the IM Log once the alarm has concluded.

8.2. VIPER – PRIMARY DISPATCH TALKGROUP

8.2.1. All operators must monitor the primary dispatch talkgroup for the IMAP region that they are always dispatching during their shift.

8.2.2. All routine dispatch communication should occur over the primary dispatch talkgroup unless other talkgroups (e.g., Ops Talkgroups) or resources (e.g., Nextel) are needed and are being utilized.

8.3. VIPER – "OPS" DISPATCH TALKGROUPS

8.3.1. Ops dispatch talkgroups may also be referred to as "Secondary" or "Backup" talkgroups and are often preceded by a number (e.g., "Ops 5").

8.3.2. All operators must monitor the ops dispatch talkgroups for the IMAP region that they are always dispatching during their shift.

8.3.3. Ops talkgroups should only be used to:

- Receive or relay lengthy or complex traffic
- Communicate with a single driver without transmitting to all drivers
- Communicate with multiple drivers at the same, often major incident scene

- Share dispatch duties with another operator when IMAP activity is especially high.
    - Operators should discuss with a supervisor and/or IMAP supervisor before shifting to an ops talkgroup to share dispatch duties.

8.3.4. Use of ops talkgroups must be called for by either an IMAP driver or an operator who must also instruct who should use the talkgroup.

8.4. OTHER VIPER RADIO AND COMMUNICATION RESOURCES

8.4.1. Each STOC console (dispatch and TMS) is equipped with VIPER radios (console and/or handheld) that are programmed to monitor specific VIPER talkgroups used by partners such as Law Enforcement.

8.4.2. All operators are responsible for assuring that handheld radios are charged so they are ready when needed.

8.4.3. All operators must assure that the radios at their consoles are tuned to the appropriate talkgroups that have been programmed for their console.

8.4.4. All programmed talkgroups must always be monitored. Operators may only communicate on these other talkgroups if:

- The talkgroup is established for regular use by STOC
- STOC is hailed directly on the talkgroup by a partner
- Use of the talkgroup is directed/approved by a supervisor

8.5. VIPER TALKGROUPS – STATEWIDE

8.5.1. The VIPER talkgroups below should be used by operators in the Statewide Dispatch role:

- Div 3 (Wilmington) AND Div 4 & 6 (I-95) IMAP:
    - Primary Dispatch Talkgroup (Console): IM TMCIMDur
    - Primary Dispatch Talkgroup (Handheld): IMDspWlm (Zone 8, Channel 1)
    - Operations 1 Talkgroup (Console): IM IMtoIMTri
    - Operations 1 Talkgroup (Handheld): IMOps1Wlm (Zone 8, Channel 2)
- Div 13 (Buncombe County) and Div 14 (Haywood, Henderson, and Polk County) IMAP:
    - Combined Primary Dispatch Talkgroup (Console): IM 911TMCHay
    - Primary Dispatch Talkgroup (Handheld): IMDspHay (Zone 7, Channel 1)
- Div 13 (Buncombe County) Secondary Talkgroups
    - Div 13 Operations 1 Talkgroup (Console): IM TMCIMbun
    - Div 13 Operations 1 Talkgroup (Handheld): IMOps1Bun (Zone 7, Channel 5)
    - Div 13 Operations 2 Talkgroup (Console): IM IMtoIMbun
    - Div13 Operations 2 Talkgroup (Handheld): IMOps2bun (Zone 7, Channel 6)

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- Div 14 (Haywood, Henderson, Polk Counties) Secondary Talkgroups
    - Div 14 Operations 1 Talkgroup (Console): IM TMCIMHay
    - Div 14 Operations 1 Talkgroup (Handheld): IMOps1Hay (Zone 7, Channel 2)
    - Div 14 Operations 2 Talkgroup (Console): IM IMtoIMHay
    - Div 14 Operations 2 Talkgroup (Handheld): IMOps2Hay (Zone 7, Channel 3)

8.5.2. In addition to dispatch talkgroups, VIPER talkgroups corresponding to their work area should be actively monitored by operators in the Statewide roles:

- Operators should monitor on the VIPER console, or, tune to specific talkgroups on the handheld as needed to detect and monitor incidents. See section 8.8 for details on selecting specific talkgroups on the handhelds.

8.6. VIPER TALKGROUPS – TRIAD

8.6.1. The following VIPER talkgroups should be used by operators in the Triad Dispatch role:

- Div 7 and 9 IMAP:
    - Primary Dispatch Talkgroup (Console): IM 911TMCFor
    - Primary Dispatch Talkgroup (Handheld): IMDspFDR (Zone 5, Channel 10)
    - Operations 1 Talkgroup (Console): IM TMCIMFor
    - Operations 1 Talkgroup (Handheld): IMOps1FDR (Zone 5, Channel 11)
    - Operations 2 Talkgroup (Console): IM IMtoIMFor
    - Operations 2 Talkgroup (Handheld): IMOps2For (Zone 5, Channel 12)

8.6.2. Operators in the Triad Regional TMS role should actively monitor the dispatch talkgroups for Triad IMAP via the console. Operators should tune to specific talkgroups on the handheld as needed to detect and monitor incidents. See section 8.8 for details on selecting specific talkgroups. Common, specific talkgroups to tune to on the handheld include:

- SHP – Guilford County: Trp D Dist 2
- SHP – Rockingham County: Trp D Dist 3
- SHP – Caswell and Person County: Trp D Dist 4
- SHP – Alamance County: Trp D Dist 5
- SHP – Orange County: Trp D Dist 7
- SHP – Davidson County: Trp E Dist 1
- SHP – Rowan County: Trp E Dist 3
- SHP – Forsyth County: Trp E Dist 4
- SHP – Stokes and Surry County: Trp E Dist 5
- SHP – Yadkin and Davie County: Trp E Dist 7

8.7. VIPER TALKGROUPS – DIVISION 5

8.7.1. The VIPER talkgroups below should be used by operators in the Division 5 Dispatch (including NCTA Triangle Expressway Dispatch) role:

- Div 5 IMAP:
    - Primary Dispatch Talkgroup (Console): IM 911TMCWak
    - Primary Dispatch Talkgroup (Handheld): IMDspWDJ (Zone 4, Channel 1)
    - Operations 1 Talkgroup (Console): IM TMCIMWak
    - Operations 1 Talkgroup (Handheld): IMOps1WDJ (Zone 4, Channel 2)
    - Operations 2 Talkgroup (Console): IM 911TMCdur
    - Operations 2 Talkgroup (Handheld): IMOps2WDJ (Zone 4, Channel 3)

8.7.2. Operators in the Division 5 Regional TMS and Turnpike TMS roles should actively monitor the dispatch talkgroups for Division 5 IMAP via the console. Operators should tune to specific talkgroups on the handheld as needed to detect and monitor incidents. See section 8.8 for details on selecting specific talkgroups. Below are common talkgroups used by the Div. 5 Regional TMS:

- Via Console:
    - Raleigh Police SW and NW Districts: IMAP TRG – Console, (Zone 28, Channels 2-7- Handheld)
    - Wake County Sheriff: SO D1 - Console
    - Durham Police: DPD Ops 1 or DPD Ops 2 - Console
    - Special Events and/or traffic from NCDOT/STOC management: DOT COMM1 – Console (Zone 1, Channel 1 - Handheld)
- SHP Troop and Districts:
- SHP – Wake County: Trp C Dist 3
- SHP – Vance, Warren, and Franklin County: Trp C Dist 4
- SHP – Johnston County: Trp C Dist 6
- SHP – Durham and Granville County: Trp C Dist 7
- SHP – General: Trp C Comm 1
- Mutual Aid for Raleigh, Cary, Wake, Durham, Morrisville, and RDU: Tricom PL 1

8.8. TUNING TO SPECIFIC SHP TALKGROUPS ON VIPER HANDHELD

8.8.1. Operators should use the VIPER handheld radios to tune to specific SHP talkgroups in order to detect and monitor incidents. To do so, operators should:

- Use the link below to access SHP's Troop map:

- o http://www.ncdps.gov/Our-Organization/Law-Enforcement/State-Highway-Patrol/Troop-Offices

- Based on the location of the incident, use the SHP Troop map to determine the Troop and District number of the SHP units who may be responding to the incident.

    - o Example: Incident on I-95 at Exit 17 near Lumberton is in Robeson County. Robeson County is patrolled by SHP Troop B, District 7.

- On the VIPER handheld, use the buttons on the front of the radio to select the Zone associated with the desired SHP Troop.

    - o Example: SHP Troop B is Zone 17.

- With the Zone selected, turn the knob on the top of the radio to select the Channel associated with the desired SHP Troop. This Channel should align with the District number.

    - o Example: SHP Troop B, District 7 is Channel 7 on Zone 17.

- The resulting combination of Zone and Channel will give you the specific VIPER talkgroup for the desired SHP Troop which should be visible on the radio's display.

    - o Example: Talkgroup for SHP Troop B, District 7 is "HP B7" which is found by selecting Troop B's Zone (Zone 17) and then their Channel (Channel 7).

8.8.2. Operators should monitor/listen to these talkgroups for information gathering purposes only and may only transmit across these talkgroups if the conditions described in section 8.4 for Other VIPER Radio and Communication Resources are met.

8.9. NEXTEL/CONSOLE PHONE

8.9.1. Operators may use the Nextel and/or console phone to communicate with IMAP in place of VIPER but ONLY on a limited basis and when the need to do so is critical such as:

- To reach drivers if VIPER is not functioning or reception is very poor, or

- To BRIEFLY relay incident details to a driver without transmitting to all drivers.

8.9.2. IMAP drivers may call operators on the Nextel/console phone to relay regular traffic. If so, operators must answer these calls but should use VIPER in all other communication unless the need to use the Nextel/console phone is critical.

8.9.3. Operators in the dispatch role should treat IMAP drivers as their highest priority point of contact and should treat VIPER radio as the highest priority communication method. Examples of this concept are shown below:

- Operator is receiving VIPER traffic from an IMAP driver when a call from another IMAP driver is received via Nextel – Operator should answer Nextel after communication over VIPER is complete.

- Operator is receiving information via Nextel from an IMAP driver when VIPER traffic from another IMAP driver is received – Operator should tell driver on Nextel to stand by and should answer the driver on VIPER before returning to the driver on Nextel.

- Operator is communicating with SHP via console phone when communication from an IMAP driver is received – Operator should tell SHP to stand by and should answer the IMAP driver before returning to SHP.

8.9.4. Operators must assure that all Nextel phones are in place at their assigned consoles and are charged so they are ready when needed.

8.10. IMAP DISPATCH PROTOCOL – CALL SIGNS

8.10.1. Operators must refer to themselves and to the IMAP drivers they are communicating with by their appropriate call signs whenever transmitting.

- STOC's Call Sign: "STOC"

- IMAP Call Signs: each IMAP driver is assigned a unique "P#" which identifies the individual unit as well as the region they patrol.

8.10.2. IMAP P#'s for each region are shown below:

- Statewide Personnel: Pxx

- Metrolina (Div. 10 and 12): P1xx

- Triangle (Div. 5): P2xx

- Triad (Div. 7 and 9): P3xx

- Western Mountains (Div. 13 & 14): P4xx

- Wilmington (Div. 3): P5xx

- I-95 (Div, 4 and 6): P6xx

8.10.3. P#'s for regional IMAP supervisors will include a "0" as the second number in their call sign. Example: P205 is an IMAP supervisor in the Triangle Region (Division 5).

8.11. IMAP DISPATCH PROTOCOL – 10 CODES, SIGNALS, AND PHONETIC ALPHABET

8.11.1. Operators may only use the approved 10 codes, signals, and phonetic alphabet established for IMAP dispatch.

8.11.2. Operators should relay as much information as possible through 10 codes and signals.

- 10 Codes list – see Appendix F

- Dispatch Signals list – see Appendix G

8.11.3. Plain English should be used, as needed, to fill in the gaps where 10 codes or signals do not apply so that the full message is clear and complete.

8.11.4. The Phonetic Alphabet should be used when communicating individual letters (e.g., license plate information) or to clarify spelling.

- Phonetic Alphabet list – see [Appendix H](#)

8.11.5. NEVER use 10 codes or signals when communicating with ANY agency other than SHP or IMAP. In these situations, plain English should be used as 10 codes may vary from agency to agency.

8.12. IMAP DISPATCH PROTOCOL – HAILING AND ACKNOWLEDGING USERS

8.12.1. Hailing users occurs when one radio user calls specifically to one or more users in order to relay information.

8.12.2. STOC should use the following script to hail users: "STOC to [CALL SIGN]…"

- Example: "STOC to P212…"

8.12.3. STOC will be hailed by IMAP drivers by the following script: "P[#] to STOC…"

- Example: "P212 to STOC…"

8.12.4. Acknowledging users occurs when a hailed radio user responds to advise that they are ready to receive information.

8.12.5. STOC should use the following script to acknowledge users: "STOC to [CALL SIGN], go ahead…"

- Example: "STOC to P212, go ahead…"

8.12.6. IMAP will acknowledge STOC by the following script: "P[#] to STOC, go ahead…"

- Example: "P212 to STOC, go ahead…"

8.13. IMAP DISPATCH PROTOCOL – RELAYING INFORMATION

8.13.1. Relaying information refers to how operators and IMAP drivers use 10 codes and other elements of dispatch protocol to convey critical incident details.

8.13.2. When relaying the initial report of an incident to IMAP, operators should convey:

- Operator's call sign and the call sign of the IMAP driver(s) being hailed,

- Route affected and direction of travel,

- Closest exit and cross street,

    o Operators should use "East of Exit," "North of Exit," etc. whenever possible to help describe where the incident is in relation to these locations.

    o Mile markers may also be provided if an exit or cross street is not available.

- Incident type,

    o For crashes, operators should provide "PD," "PI," or "Fatality" if this information is known.

- Statements to help distinguish if incident/details are confirmed or not,

    o Words like "Reported" or "Possible" indicate NOT confirmed.

- Statements including "are" or "is" or "Visual of…" indicate confirmed.

- Lanes closed and lanes available,

  - Operators must state all lanes/shoulders impacted using proper lane designation terms (i.e., Median, Right Shoulder, Lane #1, etc.).

  - Operators must also provide number of lanes available. Example: "Lane #1 and 2 of 3 are 10-53…"

- Description of what is involved in the incident including:

  - Types of vehicles (full descriptions are only required for 10-78 and 10-82),

  - Type of debris (e.g., tire treads, glass, etc.) as well as size or amount, and

  - Description of damage (e.g., 30ft of guardrail) or condition (e.g., overturned tractor trailer).

- Presence of other responders on scene.

8.13.3. Additional information to provide after the initial report is relayed includes:

- How to best access the scene (e.g., "access from Exit [X]…" or "use Exit [X] to turn around…"),

- Obstacles affecting IMAP's approach and arrival on scene (e.g. disabled vehicle preventing IMAP from using shoulder to reach incident),

- Traffic speed near incident and/or motorists' reaction to traffic control,

- Details on responder activity, including other IMAP units (e.g., ETAs, etc.), and

- Details on operator activity in support of IMAP response (e.g., DMS use, etc.).

8.13.4. Examples of proper dispatch protocol are below:

- STOC relaying: "P212: Visual of a 10-50 PI on I-40 Eastbound, east of Exit 295, Gorman St. Median and lane #1 of 3 are 10-53 by a blue sedan and an overturned box truck. SHP and Fire Department are 10-23…"

- STOC relaying: "P215: Possible 10-63 on I-85 Northbound between mile marker 170 and mile marker 172. Report of nails in lane #2 of 3 – no visual…"

- IMAP Relaying: "STOC: I am 10-23 with a 10-50, PD only, on I-440 Westbound, west of Exit 10, Wake Forest Rd. Right shoulder and lane #4 of 4 are 10-53 by a red sedan and white pickup truck. SHP is 10-23…"

- IMAP Relaying: "STOC: I am 10-23 with a 10-82 on the right shoulder of I-40 Eastbound west of Exit 303, Jones Sausage Rd. Vehicle is a green Jeep Cherokee, North Carolina tag ADAM, NORA, HENRY 1-4-6-1; that's A-N-H, 14-61. Out of gas…"

8.14. IMAP DISPATCH PROTOCOL – ACKNOWLEDGING RECEIPT

8.14.1. Acknowledging Receipt refers to how operators and IMAP drivers confirm that the information relayed was heard and understood.

8.14.2. STOC should use the following scripts when acknowledging traffic from another user:

- STOC acknowledging, only: "STOC to [CALL SIGN]: 10-4…"
  - Example: "STOC to P212: 10-4…"
- STOC acknowledging and the next action the operator will take: "STOC to [CALL SIGN]: 10-4. [ACTION]…"
  - Example: "STOC to P212: 10-4. I'll have P205 10-17…"

8.15. IMAP DISPATCH PROTOCOL – UPDATES AND REGULAR STATUS CHECKS WITH DRIVERS

8.15.1. Operators must maintain regular contact with all IMAP drivers that are on-duty in order to:

- Assure all IMAP drivers' safety and
- Properly track the status, location, and availability of all drivers.

8.15.2. Operators should contact drivers as needed in order to dispatch them to new incidents and/or to receive up-to-date information on incidents including details on the incident's impact to traffic as well as the clearance and traffic management efforts of IMAP and other responders.

- Operators should allow drivers time to assess an incident scene and/or perform on scene duties before contacting the driver for updates.

8.15.3. When multiple IMAP units are on the scene of the same incident, operators are encouraged to prompt all units on that scene to switch to an ops channel. Operators should also work with these IMAP drivers to determine who the primary point of contact will be. Once a primary POC for IMAP is established operators should direct most of their communication about the incident to this IMAP POC.

8.15.4. NOTE: The Primary POC for IMAP at an incident scene is most often the first unit to arrive. In many cases, once the IMAP supervisor arrives, that supervisor becomes the primary POC.

8.15.5. Operators are required to perform status checks with all IMAP drivers assigned to their areas of responsibility. The time frame for these status checks are based on the operator's last contact with an IMAP driver. Based on the times referenced below, the last time you checked with a driver will determine when you check with them again.

- **Patrolling/In-Service Drivers:** Status checks will be performed on drivers who are in-service (e.g., patrolling but not dispatched to an incident) if the operator has not heard from the driver every:
  - 60 minutes (1 hour) in Divisions 3 (Beach), 7/9 (Triad), and 13 & 14 (Mountains)
  - 120 minutes (2 hours) in Divisions 5 (Triangle), 4/6 (I-95), and 10/12 (Metrolina)
- **Active Incidents:** Status checks will be performed on drivers who are actively working an incident if the operator has not heard from the driver or gained visual of the driver from CCTV every:

- 15 minutes in Divisions 3 (Beach), and 13 & 14 (Mountains)

- 60 minutes (1 hour) for Divisions 5 (Triangle), 4/6 (I-95), 7/9 (Triad), and 10/12 (Mountains)

- A status check is not required if the driver is visible on camera.

- **NOTE**: Status checks should NOT be performed on a routine schedule regardless of when drivers were last heard from. In other words: **DO NOT** perform status checks at 2pm, 3pm, 4pm, 5pm, etc. **DO** perform a status check for drivers that you have not heard from after the designated time frames.

  8.15.6. To perform a status check, operators should use proper IMAP dispatch protocol and:

- Hail the intended IMAP driver

- Once acknowledged by the driver, request driver's location and status.

- After driver relays their location and status, acknowledge receipt of driver's information and record driver's location and status details in the appropriate Dispatch Log.

8.16. IMAP DISPATCH PROTOCOL – EMERGENCY PROCEDURES AND MISSED STATUS CHECKS

8.16.1. Operators are responsible for monitoring all active IMAP drivers throughout their shift which includes but is not limited to:

- Using CCTV to monitor driver activity whenever CCTV are available near their location,

- Continuously monitoring all communication methods used by IMAP drivers (e.g., VIPER, Nextel, etc.),

- Communicating with drivers as needed and performing regular status checks, and

- Documenting IMAP activity in real-time such that location, status, and availability of all drivers is known and recorded in the IM Log.

8.16.2. Emergency situations involving IMAP drivers include but are not limited to:

- Driver does not respond to operator's attempts to make contact (e.g., routine dispatch, status checks, etc.),

- Driver reports that they are in danger and/or asks for IMMEDIATE assistance, or

- Operator observes driver in danger and/or involved in a situation that threatens driver, responder, or motorist safety.

8.16.3. IMAP drivers may use Plain English or any of the following 10-codes to advise that they are in an emergency situation:

- 10-18: "Urgent"

- 10-30: "Danger"

- 10-33: "Help Me Quick"

8.16.4. If an IMAP driver reports that they are in danger/needs immediate assistance and/or operator observes the driver in danger, operators should:

- Notify the driver in danger, if possible, and advise them of the potential emergency situation, or

- Contact other available IMAP units and/or SHP/LE and request that they respond to the location of the driver in potential danger to provide assistance, and

- Contact the IMAP supervisor via Nextel and advise supervisor of the situation.

8.16.5. If an IMAP driver does NOT reply when an operator attempts to make contact (including regular status checks), operators should:

- Attempt to hail the intended IMAP driver again over VIPER,

- After 3 unsuccessful attempts over VIPER, attempt to contact the driver via Nextel,

    - If IMAP driver responds over VIPER or Nextel, operators should request driver's location and status and carry on with routine dispatch if no emergency is present.

    - Move on to the next step If IMAP driver does not respond over VIPER or Nextel.

- Attempt to locate driver on CCTV, if available,

    - Operators should use the route/zone where driver is assigned or the driver's last known location as a starting point.

    - Operators are encouraged to get other operators to assist with CCTV scans and other tasks to locate the driver to ensure the most rapid response.

- Advise STOC supervisor/POC, if available, of potential emergency situation,

- Over the primary dispatch talkgroup (VIPER), advise all active IMAP units and IMAP supervisor using the following script:

    - "STOC to All IMAP Units: 10-18, unable to locate or contact [P#]. Unable to locate or contact [P#]. Last known location for [P#] is [ROUTE], [DIRECTION], and [CROSS STREET/EXIT #]. Available units closest to [P#'s] last location, please respond."

- When available IMAP drivers respond, request that they divert to the driver's last known location and attempt to locate them.

- Contact the IMAP supervisor via Nextel and advise supervisor of the situation directly.

- Notify SHP/LE of potential emergency situation involving an IMAP driver. Provide driver's last known location and request that SHP/LE dispatch a unit to attempt to locate the driver.

- Continue to scan CCTV and monitor all IMAP communication methods for information on the location and status of the missing IMAP driver.

8.17. HANDLING REQUESTS FOR IMAP ASSISTANCE

8.17.1. Operators may dispatch IMAP as needed if the request is for a service that IMAP provides and IMAP is available in the area where the request is made.

8.17.2. If IMAP is NOT available in that area, operators should:

- Advise the requesting party that IMAP is not currently available, and

- If appropriate, contact SHP/LE to respond (if a motorist has requested assistance).

8.17.3. If IMAP is available but they are busy responding to a higher-priority incident (see section 8.18), operators should:

- Advise the requesting party that IMAP is currently working an incident,

- Contact SHP/LE to respond (if a motorist has requested assistance), and

- Notify the IMAP driver assigned to that area so they can respond when they are available. If able, operator should monitor the incident and dispatch IMAP when a driver is available to respond.

8.17.4. If the request is off IMAP's patrol route and/or outside of their typical services, operators should:

- Advise requesting party that IMAP may not be available to respond, and

- Notify the IMAP supervisor and ask for approval to dispatch IMAP,
  - If the IMAP supervisor approves – advise the requesting party and dispatch IMAP.
  - If the IMAP supervisor does NOT approve – advise the requesting party that IMAP is not available and contact SHP/LE to respond and/or NCDOT personnel (as instructed by IMAP supervisor).

8.17.5. For disabled vehicles, operators should gather all necessary information as well as:

- Name and contact information for the stranded motorist,

- Vehicle description including make, model, and color, and

- Type of vehicle malfunction (e.g., flat tire, out of gas, etc.).

8.17.6. Operators should NOT provide motorists with an estimated time of arrival (ETA) for when IMAP will arrive to provide assistance. If the motorist requests an ETA, operators should advise the motorist that:

- "…lane-closing incidents are a higher priority, and that IMAP is required to divert to these incidents before addressing incidents on the shoulder."

8.18. IMAP INCIDENT PRIORITIES

8.18.1. "IMAP Incident Priorities" is a ranking system used by IMAP drivers and operators to determine the order in which incidents should be handled based on the severity of the incident as well as its actual or potential impact to safety and to traffic flow.

8.18.2. Operators and IMAP drivers should respond to higher priority incidents before responding to lower priority incidents according to the priorities listed below:

- HazMat spill or overturned tractor trailer,

- Crash with injuries/fatalities or major investigation,

- Crash with unconfirmed injuries,

- Vehicle fires,

- Crash with NO injuries,

- Debris in travel lane(s),

- Disabled vehicles,

- Assisting NCDOT Maintenance/Construction, and

- Abandoned vehicles.

8.18.3. Operators must also consider travel lane(s) closed when determining priority such that an incident that is closing travel lane(s) is responded to before an incident that is not closing travel lane(s).

8.18.4. Operators working in the Division 5 Dispatcher role must also adhere to the following guidelines concerning incident priority when dispatching Division 5 IMAP units to incidents occurring on the Triangle Expressway:

- Incidents occurring on the Triangle Expressway are the top priority of the IMAP unit that is assigned to the Triangle Expressway (aka "Tri-Ex Unit").

  o NOTE: If necessary, the Tri-Ex Unit may be dispatched to high-priority incidents on other routes if lane-closing incidents are NOT occurring on the Triangle Expressway.

- The Tri-Ex Unit should be dispatched immediately to investigate and/or respond to incidents occurring on the Triangle Expressway.

- If an incident occurs on the Triangle Expressway and the Tri-Ex Unit is on break OR is assisting on another route, the Tri-Ex Unit should be notified immediately.

  o NOTE: The dispatcher should transmit this incident on the primary talkgroup so all Division 5 IMAP units can receive the information and determine which IMAP unit is best able to respond.

- If the Tri-Ex Unit is unavailable OR there is no unit currently assigned to the Triangle Expressway, the Division 5 Dispatcher should select the most appropriate response below:
  - Dispatch the closest available unit to the Triangle Expressway incident, OR
  - Coordinate with the IMAP Supervisor on-duty to determine which IMAP unit is best able to respond.

8.18.5. If an IMAP unit is unable to respond to a lane-blocking incident on the Triangle Expressway during IMAP's normal operating hours, Division 5 and Turnpike operators must coordinate as described below:

- Once it is determined that an IMAP unit is unavailable, a Division 5 operator (Dispatcher or TMS) should immediately advise a Turnpike operator as well as the STOC Shift Supervisor.
- The Turnpike operator should then immediately contact the NCTA Roadway Manager by phone to advise them of the incident.

8.19. SIGNAL 4 RESPONSE

8.19.1. "Signal 4" refers to the signal code (#4) for "report of vehicle stored/recovered" but is more commonly used to describe the process for removing private vehicles from the roadway, typically by a towing company (aka "wrecker").

8.19.2. Under Signal 4, vehicles that have been abandoned in a nonhazardous location should be removed AFTER 24 hours. Non-hazardous locations include:

- Wide shoulders/medians,
- Grassy area near roadway, and
- Untraveled portions of entrance/exit ramps and rest areas.

8.19.3. For vehicles in a nonhazardous location, operators should:

- Dispatch an IMAP unit to the vehicle to investigate and determine if Signal 4 should be activated,
  - If vehicle is recently abandoned and/or will not be removed immediately, the IMAP driver will tag the vehicle with a sticker indicating the time when the vehicle was identified.
  - If vehicle has already been tagged AND the sticker indicates that the vehicle has been abandoned for over 24 hours, the IMAP driver will activate Signal 4 to have the vehicle removed.
- If the IMAP driver advises the operator that Signal 4 will be activated, the IMAP driver will contact SHP/LE directly, provide details on the vehicle, and request a wrecker to remove the vehicle immediately,

- After communicating with SHP/LE, the IMAP driver will notify the operator and provide information on the Signal 4 activation which the operator must record in their IM Log. These details are in addition to what the operator would normally record and includes:
    - Time and date when the vehicle was originally tagged,
    - Time and date when Signal 4 was activated,
    - Reason for Signal 4 activation (e.g., "24-hr expiration"), and
    - Name of Towing Company.

- Monitor the vehicle – either via CCTV or updates from IMAP – until the vehicle is removed.
    - NOTE: IMAP is not required to remain on scene for vehicles in non-hazardous locations.

- If the towing company does not arrive within 30 minutes, operators should:
    - Call SHP/LE and request an estimated arrival time (ETA) for the wrecker and
    - Contact IMAP and provide wrecker's ETA.

- Once the vehicle is removed by the wrecker, operators should complete the entry for this incident in the IM log and should record the time and date when the vehicle was removed.

8.19.4. Operators may be asked to search the IM Log for previous entries related to a specific vehicle in order to help IMAP determine if Signal 4 activation is necessary. If asked, operators should assist with this request by searching the IM Log and providing their findings to the IMAP driver – particularly the time and date when the vehicle was last encountered by IMAP.

- Operators should use the "Find" feature of the IM Log to perform the search by holding down the "CTRL" button and hitting the "F" key. Operators can then type their search details into the box that appears and hit "Enter."

- Operators should search for the description of the vehicle (i.e., make and model) and/or the vehicle's license plate number to find previous IM Log entries for the vehicle.

- Operators should enter only part of the information in their search to assure that the result they are looking for is not omitted. For example:
    - If license plate is originally logged as "123ABC," operator will NOT find the entry by searching for "NC 123-ABC." Enter "ABC" instead and compare results with vehicle description.
    - If vehicle description is originally logged as "Mustang GT500," operator will NOT find the entry by searching for "Ford Mustang." Enter "Mustang" instead and compare results with license plate number.

8.19.5. Under Signal 4, vehicles that have been abandoned in HAZARDOUS circumstances should be removed IMMEDIATELY if the vehicle:

- Impacts travel lanes or threatens safety,

- Is damaged or vandalized,

- Impedes construction or maintenance activity,

- Prevents emergency vehicle access to incident scenes, or

- Is left in areas where NO PARKING/TOW AWAY signs are posted.

8.19.6. For vehicles abandoned in HAZARDOUS circumstances, operators may support Signal 4 response in a few ways. Below are the acceptable methods:

- In most cases, operators should notify IMAP and/or SHP/LE to respond and determine if Signal 4 activation is necessary. If Signal 4 is activated, IMAP or SHP/LE will arrange for a wrecker to remove the vehicle and operators will follow the process as described for non-hazardous locations.

- If vehicle is in an area where NO PARKING/TOW AWAY signs are posted, operators should contact SHP/LE directly and request a wrecker to remove the vehicle immediately. Operators must clearly state that the removal is for a Signal 4 activation due to the vehicle's presence in a No Parking/Tow Away area.

  o NOTE: In some major construction work zones operators may contact the towing company directly to request a wrecker. In these cases, contact information for a specific towing company will be provided as part of the response plan for the work zone.

- During emergency operations (typically for adverse weather), operators may be instructed by a member of management to help assure that all abandoned vehicles are removed from the roadway. In these cases, even vehicles abandoned in areas typically considered "non-hazardous" should be removed immediately. When this instruction is given, operators will:

  o Proactively detect abandoned vehicles and

  o Notify SHP/LE directly and request a wrecker to remove the vehicle immediately.

8.20. IMAP DISPATCH DOCUMENTATION

8.20.1. All IMAP activity should be properly documented in real-time in the appropriate Incident Management (IM) Log.

8.20.2. As a rule of thumb: If a transmission is received or relayed, an entry should be made in the IM Log for that driver.

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8.21. IMAP DISPATCH AND DOCUMENTATION – IMAP 41/42 LOG

8.21.1. Dispatchers will log the beginning and ending tour of duty IMAP information in the "IMAP 41/42 Log".

8.21.2. At the beginning of each IMAP shift, drivers will sign on stating "10-41" and will advise what route they are patrolling and may advise the beginning mileage of their vehicle.

- ROUTE: Select the IMAP driver's route from the drop-down menu. If the route is not listed; or if the IMAP driver will be covering more than one route, enter the route information in the "Comments" section.

- MILEAGE: Local procedures will dictate if IMAP drivers report their vehicle mileage at the beginning (10-41) and end (10-42) of their shift. If an IMAP driver gives you their mileage, log it.

- NOTE: IMAP supervisors typically DO NOT provide beginning or ending mileage. Triad IMAP supervisors are an exception to this practice.

8.21.3. At the end of each IMAP shift, drivers will sign off stating "10-42" and may advise what the ending mileage is for their IMAP vehicle. Dispatchers should acknowledge each driver and must enter any information given by the driver in the IM Log.

8.22. IMAP DISPATCH AND DOCUMENTATION – STATEWIDE AND REGIONAL IMAP LOGS

8.22.1. Statewide and Regional IMAP Logs are used to document individual IMAP incidents. Operators will ensure all applicable entries are entered accurately.

8.22.2. INCIDENTS WITH MULTIPLE IMAP UNITS RESPONDING: If multiple IMAP units respond to the same incident, each responding unit should have their own log entry. Each log entry should use the same incident code (e.g., "502 – Crash PI/F"). TIMS incident number (if created) should be entered for each unit's log entry. Complete incident details – all times, notes, services, etc. – should only be entered for the primary unit (i.e., the first driver dispatched). The log entries of the other responding units should contain the arrival and departure times for the appropriate unit and "Assist other IMAP Unit" should be selected. Any other appropriate notes/services for these other units may be entered as needed.

8.22.3. INCIDENT TYPE: In the "Incident" field, dispatchers should select the 10-code number from the drop-down box that best corresponds to the incident type the IMAP unit is responding to.

- 7 – Out of Service: Use when IMAP driver is not actively patrolling/responding to new incidents. This includes the following:
  - Breaks
  - Transporting Motorists – also apply service code 15.
  - Administrative duties (e.g., taking truck into shop, etc.) or Training tasks – also apply service code 40

- o IMAP drivers will advise when they are no longer actively patrolling by using the code "10-7". When they return to active patrol the code "10-8" will be used. Operators will record the effective times in the appropriate log.

- o Dispatchers will record the following information in the appropriate IM Log:

  - ▪ Time the driver went 10-7.

  - ▪ Reason for the driver going 10-7 (e.g., breaks, truck maintenance, other assigned duties, etc.).

  - ▪ Location where the driver went 10-7.

  - ▪ When the driver returns 10-8, operators must record the time when the driver returned for duty.

- 11 – Special Assignment: Use when IMAP is providing additional and/or unique support that is not specifically associated with common incident types such as crashes, disabled/abandoned vehicles, etc. Examples of Special Assignments include but are not limited to:

  - o Supporting funeral processions or motorcades – also apply service code 28.

  - o Assisting with general Police Activity – also apply service code 32.

- 13 – Water / Fire / Weather: Use when IMAP is responding to a situation whose primary impact is environment or weather-related. Examples include:

  - o Standing water

  - o Brush fires, structure fires, or heavy smoke (NOT for Vehicle Fires)

  - o Icy patches

- 20 – Radio Check: Use when performing as-needed radio checks or periodic driver status checks (see SOP 8.15). NOTE: all driver status checks must be logged.

- 501 – Crash PD: Use for vehicle crashes that involve property damage (PD), only. Enter "501" if presence of injuries/fatalities are not known or reported.

- 502 – Crash PI/F: Use for vehicle crashes that involve confirmed or reported injuries and/or fatalities. If a crash is entered as "501" (PD, only) but operator later learns injuries/fatalities were involved, the operator should update the incident to correct incident type.

- 52 – Medical Emergency: Use when IMAP is responding to incidents whose primary impacts result from a medical emergency (e.g., motorist suffering a heart attack, etc.). Crashes involving injuries/fatalities should continue to be logged as "502 – Crash PI/F."

- 63 – Debris: Use when IMAP removes and/or responds to an incident whose primary impact is debris or other materials on the roadway. This includes but is not limited to small debris like tire treads, etc. or large debris like rockslides, downed trees, etc.

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- 68 – Animal (dead or alive): Use when IMAP is responding to incidents whose primary impacts result from live or deceased animals.

- 78 – Abandoned: Use when IMAP responds to a vehicle where motorist(s) are NOT present. Also use for trailers, boats, or other vehicle equipment where motorist(s) are NOT present.

- 79 – Vehicle Fire: Use for vehicle fires. Vehicle crashes that result in vehicle fires should continue to be logged as vehicle crashes.

- 82 – Disabled: Use when IMAP responds to a vehicle where motorist(s) – typically the owner – are present. Also use for trailers, boats, or other vehicle equipment where motorist(s) are present.

- 86 – Travel (non-patrol): Use when IMAP is traveling to a location but are NOT on patrol or other active duty while traveling (e.g., driving from base to another region to patrol hurricane evacuation routes, etc.). Operators must capture the starting/ending times and mileage, destination, and other relevant details in the Comments.

- 88 – Maintenance / Road Work: Use when IMAP is assisting DOT maintenance forces or work zone crews (e.g., IMAP performs a rolling slow down so crews can deploy traffic control, etc.).

- 90 – Rest Area Check: Use when IMAP inspects a Rest Area. If IMAP responds to another incident at the Rest Area (e.g., a disabled vehicle at a Rest Area), the incident should be logged as a separate entry, using the appropriate incident type.

- 92 – Radio / Patrol Notes: Use when documenting details related to driver communication or availability. NOTE: This refers to longer-term situations (i.e., some or all of the shift), not a single incident. Example situations where "Radio/Patrol Notes" should be used include but are not limited to:

  ○ Driver will be on an Ops Talkgroup throughout their shift.

  ○ Driver is patrolling a different route for the next few hours.

  ○ Driver will only respond to major incidents in an area that is normally patrolled.

- 94 – Potential Incident / Report: Use when IMAP is investigating or reporting a possible incident where the precise nature/type of the incident is unknown (e.g., abnormal congestion observed whose cause is currently unknown, etc.). NOTE: log entry should be updated to reflect a more specific incident type if possible.

- 99 – TMC / ITS Support: Use when IMAP performs a task to assist TMC and/or ITS operations. Examples include:

  ○ Inspecting a possible DMS malfunction – also apply service code 29.

  ○ Deploying CMS for an event – also apply service code 29.

  ○ Performing 811 utility locates – also apply service code 31.

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8.22.4. COMMENTS: Dispatchers should use the "Comments" field to enter any pertinent information concerning the incident. This information could include items such as vehicle descriptions, road conditions, responder actions, information for multiple vehicles involved, special instructions to/from IMAP, etc. If you as the dispatcher consider any information important, include it in the "Comments" section.

8.22.5. SERVICES PROVIDED: Services Provided are the numerical codes used to refer to various IMAP services performed for an incident. IMAP will describe what they do on-scene in Plain English and operators must enter the service codes that apply in the SERV 1 / SERV 2 / SERV 3 columns in the IM Log. If more than three codes are used during an incident, include them in the "Comments" section. Services Provided codes and their use are listed below:

- 1 – Traffic Control: Use when IMAP deploys traffic cones and/or other traffic control devices to provide advance warning, to restrict access, or to guide traffic around an incident. Do NOT use when IMAP truck is only traffic control device in use.

- 2 – Assisted other IMAP Unit: Use when IMAP provides direct assistance to another IMAP unit during an incident. Unless told differently by an IMAP Supervisor, consider the first IMAP unit dispatched to an incident to be the primary unit. Any other IMAP unit involved with the incident should use this code in addition to other services provided.

- 3 – Tagged Vehicle: Use when IMAP tags an abandoned vehicle for removal.

- 4 – Signal 4 via SHP: Use for incidents involving immediate removal of a vehicle from the roadway under Signal 4 guidelines (see SOP 8.19.1). NOTE: this should be used when vehicle removal is initiated through Highway Patrol, NOT just when vehicle is tagged OR when wrecker is called via other process.

- 5 – IMAP/TMC Called Wrecker: Use when IMAP or TMC calls for a wrecker to an incident. Do not use this code if the vehicle's owner or responding agencies call for a wrecker.

- 6 – Motorist/Other Called Wrecker: Use when a motorist has called for their own wrecker OR another agency has called the wrecker on the motorist's behalf.

- 7 – Removed Debris: Use when IMAP removes any debris from the roadway.

- 8 – Tire: Use when IMAP conducts any service related to tire issues (e.g., changes a flat, supplies air, etc.).

- 9 – Fuel: Use when IMAP supplies fuel to a disabled vehicle.

- 10 – Jump Start: Use when IMAP jump starts or attempts to jump start a vehicle.

- 11 – Mechanical Assist: Use when IMAP administers physical repairs to address a vehicle issue/malfunction. Do not use this code when IMAP examines a vehicle and determines they cannot affect repairs.

- 12 – Fluids: Use when IMAP supplies any fluid other than fuel to a disabled vehicle.

- 13 – Directions: Use when IMAP gives driving directions to assist a motorist.

- 14 – Secured Load: Use when IMAP assists by securing a loose or dangerous load a vehicle is towing or carrying.

- 15 – Transported: Use when IMAP transports individuals in the IMAP vehicle to a separate location. (See 8.23 for required log information).

- 16 – Escort/Follow Motorist: Use when IMAP accompanies a motorist-operated vehicle, either by leading or following, to a separate and safe location off the roadway.

- 17 – Pushed/Pulled: Use when IMAP physically pushes or pulls a vehicle for any reason. This code should also be used if IMAP actively participates in up-righting an overturned vehicle.

- 18 – Motorist Relocated Vehicle: Use when a motorist relocates their vehicle, either out of a travel lane or to a separate and safe location.

- 19 – Request Responder Assistance: Use when IMAP requests assistance from another emergency responder (e.g. EMS, law enforcement, fire department, etc.). Do NOT use this when requesting a wrecker.

- 20 – Report Damage / Request Maintenance: Use when IMAP reports damage to DOT infrastructure (e.g. damage to guardrail, asphalt, bridge, etc.) and/or directly requests assistance from DOT maintenance forces.

- 21 – Disregard/Cancel Stop: Use when IMAP declines to respond to an incident or when the need to respond to the incident is cancelled by any agency.

- 22 – Delayed Response: Use when IMAP will be delayed for any reason in responding to an incident. Include the reason for the delay in the "Comments" section of the log.

- 23 – No Assistance: Use when IMAP provides no services for an incident. Also used when IMAP checks on drivers/passengers and determines that no assistance is required (e.g. motorist stopped to make a phone call).

- 24 – Unable to Locate: Use when IMAP is dispatched to an incident but is unable to locate the incident after arriving in the area.

- 25 – Assist Other Agency/Partner: Use when IMAP provides support to another responder agency or to another partner (e.g., wreckers, event venues, etc.) AND the support provided by IMAP does not better align with a more specific service code on this list. Do NOT use this code when one IMAP unit assists another IMAP unit.

- 26 – Rolling Slowdown: Use when IMAP performs a rolling slowdown or moving closure.

- 27 – Off-Route Response: Use for situations where IMAP is responding to a location that is not part of an official IMAP patrol/response route, OR where IMAP supervisor approval is required prior to dispatching.

- 28 – Motorcade/Procession: Use when IMAP is supporting funeral processions or VIP motorcades.

- 29 – CMS / DMS Support: Use when IMAP is assisting with CMS or DMS devices including deployment, activation, issue investigation, etc.

- 30 – CCTV Support: Use when IMAP is assisting with CCTV devices including deployment, activation, issue investigation, etc.

- 31 – 811 Locates: Use when IMAP is supporting 811 Utility Locates.

- 32 – Police Activity: Use for situations that involve law enforcement but are not related to more common incident types or service codes. Examples include but are not limited to

    - General officer/trooper assistance

    - Protests

    - Fugitive searches

    - Investigations not associated with traffic incidents.

- 33 – IMAP / Responder Involved: Use when IMAP or any other emergency responder (including work zone crews or wreckers) is involved in an incident. Examples include but are not limited to:

    - IMAP/responder injuries or fatalities

    - Damage to IMAP/responder vehicles

    - Motorist Assistance services provided to IMAP/responders (e.g. IMAP changes a tire for an SHP unit; IMAP pulls a sheriff's patrol vehicle out of a ditch, etc.).

- 34 – HazMat Involved: Use when an incident involves hazardous materials. Amount and type of hazardous material should be documented in the Comments field.

- 35 – Diverted Traffic: Use when IMAP or other responders physically divert traffic (e.g., install a hard closure, force traffic onto a detour, shift traffic onto the shoulder, etc.). This code should remain in the log entry even if the closure/diversion is removed by responders.

- 36 – Impaired Citizen: Use when incident involves a citizen/motorist who is drunk, intoxicated, or otherwise impaired. NOTE: Here, "impaired" generally refers to someone whose behavior is potentially threatening to their safety or others – not to any confirmed physical or mental state.

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- 37 – Pedestrian: Use for situations that primarily involve citizens on the roadway, on foot.

- 38 – Extinguish Fire: Use when IMAP driver takes direct action to extinguish a fire. Do not use this code when other responders (e.g., fire department) provide this service.

- 39 – First Aid: Use when IMAP driver administers first aid to any individual on-scene. Do not use this code when other responders provide this service.

- 40 – Admin or Training Duty: Use when IMAP's activity is related to administrative duties (e.g., taking truck to shop for maintenance) or training tasks (e.g. driving to IMAP training track).

8.23. IMAP DISPATCH AND DOCUMENTATION – TRANSPORTING MOTORISTS

8.23.1. When needed, IMAP will transport stranded motorists to a safe location off the roadway. In general, this is the nearest safe location that is well lit and has telephone access such as a gas station.

8.23.2. IMAP drivers will also use 10-7 ("out of service") when they leave their patrol route to transport a motorist and will use 10-8 ("in service") when they return to their patrol route.

8.23.3. When IMAP transports a motorist, operators must record the following in the IM Log:

- Time when transport began

- Mileage of IMAP truck before transport

- Where the motorist is transported from and where they are transported to

- Description and phone number of the motorist(s) being transported

- Time when transport ended

- Mileage of IMAP truck after transport.

9. ADVERSE WEATHER

9.1. NATIONAL WEATHER SERVICE (NWS)

9.1.1. Operators must use the National Weather Service (NWS) as STOC's official source of information related to adverse weather.

9.1.2. All operators must check the NWS website for active weather alerts and forecasts at the beginning of every shift as part of their initial shift sweep.

- From the NWS website, operators must use the "Warnings by State" drop down box to view details on all active NWS Alerts for North Carolina.

9.1.3. During adverse weather, operators should check the NWS website more frequently for updates on current or forecasted weather activity. The frequency of the checks should increase with the severity of the weather.

9.1.4. Any updates that affect current or planned response activities must be discussed with a supervisor immediately so response can be modified, if needed.

9.2. NWS BRIEFINGS AND TELECONFERENCES

9.2.1. Weekly NWS Briefings are held every Monday at 11:30am.

9.2.2. NWS Teleconferences are held during emergency operations for major weather events.

- The date and time for these calls will change and the NWS will notify partners.

9.2.3. For weekly briefings or NWS teleconferences an operator from STOC must attend, take notes, and send those notes to members of STOC management.

- Primarily, this will be the Statewide TMS and a supervisor.
- Operators should discuss briefing/teleconference attendance with their team and supervisor and determine who will attend, take notes, and send notes out.

9.2.4. If at any time an STOC operator needs more information or clarification on information from NWS, they may call meteorologists at any of the NWS's 24/7 operation centers.

- NWS Centers and Contact Information – see Appendix I

9.3. DMS FOR ADVERSE WEATHER – MESSAGE PRIORITIES

9.3.1. When selecting DMS, operators must refer to the DMS Message Priorities to determine if messages for adverse weather are higher priority than existing messages.

9.3.2. DMS message priorities related to adverse weather are shown below:

- Priority 2 – Emergencies such as evacuation information.
- Priority 6 – Hazardous or uncommon conditions that require drivers to alter their driving within a 10-mile radius of the DMS.
- Priority 8 – Congestion/unusual conditions greater than 10-mile radius from DMS.

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9.4. DMS FOR ROUTINE ADVERSE WEATHER

9.4.1. DMS for "routine" adverse weather is NOT driven by NWS Alerts. Instead, it relates to weather that operators observe to be impacting travel which includes:

- Heavy Rain

- Dense Fog

- Flooding

9.4.2. Operators should activate DMS for routine adverse weather when impacts are observed and/or are reported by NCDOT/Law Enforcement.

9.4.3. Operators should deactivate the DMS when weather clears and/or when weather impacts subside.

9.5. DMS FOR ROUTINE ADVERSE WEATHER – DMS SELECTION

9.5.1. For routine adverse weather, operators should only activate DMS that are:

- On the affected route, AND

- No more than 10 miles away from where the route is impacted.

9.6. DMS FOR ROUTINE ADVERSE WEATHER – HEAVY RAIN

9.6.1. For Heavy Rain where the DMS is OUTSIDE of the affected area, use the DMS message below:

- "STATE LAW | LIGHTS ON WHEN| WIPERS ON"

9.6.2. For Heavy Rain where the DMS is WITHIN the affected area, use the DMS message below:

- "LOW VISIBILITY | REDUCE SPEED"

- NOTE: Operators may use the "Lights on when wipers on" message within the affected area if rain is not significantly limiting driver visibility.

9.7. DMS FOR ROUTINE ADVERSE WEATHER – DENSE FOG

9.7.1. For Dense Fog where the DMS is OUTSIDE of the affected area, use the DMS messages below as appropriate based on fog density and/or proximity of DMS to fog location:

- General purpose message when fog is well ahead of DMS:

    o "DENSE FOG | [X] MILES AHEAD | EXPECT DELAYS"

- More urgent message when fog is severe and is immediately ahead of DMS:

    o "DENSE FOG AHEAD | REDUCE SPEED"

- More informative message when fog is close to but still ahead of DMS:

    o "DENSE FOG | NEXT [X] MILES | REDUCE SPEED"

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9.7.2. For Dense Fog where the DMS is WITHIN the affected area, use the DMS message below:

- "LOW VISIBILITY | REDUCE SPEED"

- NOTE: Operators may use the "Dense fog next [X] miles" message within the affected area if appropriate.

9.8. DMS FOR ROUTINE ADVERSE WEATHER – FLOODING

9.8.1. For Flooding where the DMS is OUTSIDE of the affected area, use the DMS messages below as appropriate based on the level of standing water and/or proximity of DMS to water location:

- General purpose message when standing water is well ahead of DMS:

  - "STANDING WATER | [X] MILES AHEAD | REDUCE SPEED"

- More urgent message when standing water is immediately ahead of DMS:

  - "STANDING WATER | AHEAD | REDUCE SPEED"

- More urgent message when standing water is immediately ahead of DMS and water level is high such that vehicles cannot safely travel through it:

  - "STANDING WATER | AHEAD | [X] LANE(S) CLOSED"

- General purpose message when standing water is well ahead of DMS and water level is high such that vehicles cannot safely travel through it:

  - "STANDING WATER | [X] MILES AHEAD | [X] LANE(S) CLOSED"

9.8.2. For Flooding where the DMS is WITHIN the affected area, use the DMS messages below as appropriate based on extent of standing water and/or impact to nearby roadways:

- "REDUCE SPEED | STANDING WATER"

- (P1) "LOCAL ROADS | CLOSED DUE TO | FLOODING"

- (P2) "DO NOT ATTEMPT | TO CROSS| FLOODED ROADS"

  - NOTE: This message may only be used at the direction of NCDOT or STOC management.

9.9. DMS BASED ON NWS ALERTS

9.9.1. DMS messages based on NWS Alerts typically occur before, during, and after major weather events such as Winter Weather and Hurricanes/Tropical Storms.

9.9.2. Operators must utilize information from NWS alerts to plan:

- Which DMS to activate and in what areas, AND

- What DMS message to use along with when to update and/or deactivate the message.

9.9.3. Activation of DMS based on NWS alerts must be done with input and approval from a supervisor/POC or other member of STOC management.

9.9.4. Once NWS has issued an alert for which DMS are utilized, operators should continue to monitor the weather event's progress and expected impact closely throughout the event's lifespan or until the event is no longer a threat to NC roadways.

9.9.5. DMS messages based on NWS Alerts should be modified as conditions change and/or as NWS Alert info changes.

9.10. DMS BASED ON NWS ALERTS – DMS SELECTION AND ACTIVATION BY DIVISION

9.10.1. For DMS based on NWS Alerts, operators should select DMS that are:

- In the affected/forecasted area based on information from the NWS Alert listed under, "Affected Areas" and/or,

- 0-20 miles away from affected/forecasted area and facing motorists who are heading towards this affected/forecasted area.

  o Use of DMS further than 20 miles away must be discussed with and approved by a supervisor.

9.10.2. DMS activation by Division should occur as described below:

- Operators will activate DMS that are STOC-accessible.

  o In Division 5, 7, and 9 no call to NCDOT personnel is needed.

  o In other Divisions with STOC-accessible DMS, operators should seek input and approval from a supervisor before calling NCDOT personnel in that Division to discuss DMS activation.

9.11. DECODING NWS ALERTS FOR DMS

9.11.1. Operators must carefully review NWS Alerts and accurately decode the alert information in order to properly activate and manage DMS based on NWS Alerts.

9.11.2. Below are examples of NWS Alerts as they will appear on the NWS website:

| **Winter Storm Warning** Issued: January 02 at 4:27PM EST Expiring: January 03 at 7:00AM EST | **Urgency:** Expected **Status:** Actual |
| Areas affected:Ashe; Watauga | |

| **High Wind Warning** Issued: January 02 at 4:15PM EST Expiring: January 03 at 12:00PM EST | **Urgency:** Expected **Status:** Actual |
| Areas affected:Alleghany | |

| **Wind Advisory** Issued: January 02 at 4:15PM EST Expiring: January 03 at 12:00PM EST | **Urgency:** Expected **Status:** Actual |
| Areas affected:Stokes; Surry; Wilkes; Yadkin | |

9.11.3. In the next several sections, the information contained within an NWS Alert will be provided and guidance will be given on how to use alert information for DMS.

9.12. DECODING NWS ALERTS FOR DMS – TYPE OF ALERT AND SELECTED WEATHER TYPES

9.12.1. "Type of Alert" includes "Watches," "Warnings," "Advisories," and "Special Weather Statements" and also describes the type of Watch, Warning, etc. (e.g., Hurricane Warning).

9.12.2. DMS based on NWS Alerts may only be activated for NWS WARNINGS.

9.12.3. Operators must use the "Type of Alert" to determine which Selected Weather Type will be displayed on DMS. Selected Weather Types (i.e., what is displayed on DMS) will be provided below along with their corresponding NWS Alert types:

- "HIGH WIND" – display on DMS for the following types of NWS Alert:
  - Extreme Wind Warning
  - Gale Wind Warning
  - High Wind Warning
- "SEVERE STORM" – display on DMS for the following types of NWS Alert:
  - Severe Storm Warning
  - Storm Warning.
- "HURRICANE" or "TROPICAL STORM" – display on DMS for the following types of NWS Alert:
  - Hurricane Force Wind Warning
  - Hurricane Warning
  - Tropical Storm Warning
- "WINTER WEATHER" – display on DMS for the following types of NWS Alert:
  - Blizzard Warning
  - Ground Blizzard Warning
  - Heavy Snow Warning,
  - Ice Storm Warning
  - Sleet Warning
  - Special Avalanche Warning
  - Winter Storm Warning

9.13. DECODING NWS ALERTS FOR DMS – ISSUED, URGENCY, AND EXPIRING

9.13.1. "Issued" describes when the alert was released by NWS.

9.13.2. "Urgency" describes when the weather event will occur in terms of "Immediate" or "Expected."

- Immediate – refers to weather that is happening NOW.

- Expected – refers to weather that is forecasted for later.

9.13.3. DMS should NOT be activated if weather is forecasted for more than 3 days away.

9.13.4. For NWS Warnings where "Urgency" is "Immediate" or "Expected" and where weather is forecasted for 3 days away or less, "IN EFFECT" should be displayed on DMS.

9.13.5. "Expiring" describes when the alert (and therefore, the adverse weather) will no longer be occurring.

- Weather impacts often occur for longer than the weather itself. Operators should address ongoing impacts via DMS for routine weather or DMS for Winter Weather or Hurricanes/Tropical Storms (BEFORE, DURING, and AFTER) as appropriate.

9.13.6. Operators must regularly check the NWS website for updated NWS Alerts to assure that alert information on DMS remains accurate and up to date.

9.14. DECODING NWS ALERTS FOR DMS – AREAS AFFECTED AND REFERENCE CITIES/AREAS

9.14.1. "Areas Affected" describes the counties that are/will be impacted by the weather event.

9.14.2. Operators must use the "Areas Affected" to determine which reference city/area will be displayed on any messages on DMS that are OUTSIDE the affected area.

- DMS that are WITHIN the affected area should NOT display a reference city/area.

9.14.3. Below are the approved reference cities/areas that may be displayed on DMS:

- WESTERN NC
- CENTRAL NC
- EASTERN NC
- AREAS EAST (E) OF I-95
- AREAS WEST (W) OF I-95
- AREAS EAST (E) OF I-77
- AREAS WEST (W) OF I-77
- TN/NC BORDER
- VA/NC BORDER
- GA/NC BORDER
- SC/NC BORDER
- WESTERN MOUNTAINS (MTNS)
- COASTAL REGION
- OUTER BANKS
- ASHEVILLE AREA

- STATESVILLE

- CHARLOTTE AREA

- WINSTON-SALEM

- GREENSBORO AREA

- FAYETTEVILLE

- RALEIGH-DURHAM

- WILMINGTON AREA

- ROCKY MOUNT (MT) AREA

9.15. DMS TEMPLATES FOR DMS BASED ON NWS ALERTS

9.15.1. Once the NWS Alert has been reviewed and DMS activation has been approved, operators should insert the information from the NWS Alert into the DMS message templates described throughout this section as appropriate.

9.15.2. Template if DMS is WITHIN the affected area:

- Top Row: [SELECTED WX TYPE]

- Middle Row: WARNING

- Bottom Row: IN EFFECT

9.15.3. Example if DMS is within affected area:

- "WINTER WEATHER | WARNING | IN EFFECT"

9.15.4. Template if DMS is OUTSIDE of the affected area:

- Panel 1

  o Top Row: [SELECTED WX TYPE]

  o Middle Row: WARNING

  o Bottom Row: IN EFFECT

- Panel 2

  o Top Row: [SELECTED WX TYPE]

  o Middle Row: WARNING FOR

  o Bottom Row: [REFERENCE CITY/AREA]

9.15.5. Example if DMS is outside affected area:

- (P1) "WINTER WEATHER | WARNING | IN EFFECT"

- (P2) "WINTER WEATHER | WARNING FOR |RALEIGH-DURHAM"

9.16. OTHER DMS MESSAGES BASED ON NWS ALERTS

9.16.1. Operators should use the DMS messages described in the next few sections to address specific weather impacts or other weather-related actions BEFORE, DURING, and AFTER weather events as appropriate.

9.16.2. Since these messages address specific impacts, they should only be used on DMS that are WITHIN the affected area unless directed by NCDOT or STOC management.

9.16.3. Where possible, DMS messages stating "WARNING IN EFFECT" should remain active OR may be augmented with messages for specific impacts as the second panel.

9.17. DMS MESSAGES FOR WINTER WEATHER – BEFORE EVENT

9.17.1. Operators should use the DMS message described below for impacts/actions occurring BEFORE Winter Weather occurs.

9.17.2. Anti-Icing Operations:

- (P1) "ANTI-ICING | OPERATIONS | IN EFFECT"

- (P2) "WATCH FOR | SLOW MOVING | VEHICLES"

  - NOTE: Operators should only use this message when it is confirmed that anti-icing (i.e. pretreating roads with brine or sand) will occur AND only in the area/route where anti-icing is occurring.

9.18. DMS MESSAGES FOR WINTER WEATHER – DURING EVENT

9.18.1. Operators should use the DMS messages described below for impacts/actions occurring DURING Winter Weather.

9.18.2. Observed/Potential Icy Spots:

- (P1) "WINTER WEATHER | WARNING | IN EFFECT"

- (P2) "WATCH FOR | POSSIBLE | ICY SPOTS"

9.18.3. Observed Limited Visibility due to Flurries:

- "LOW VISIBILITY | REDUCE SPEED"

  - NOTE: Operators may replace messages stating, "WARNING IN EFFECT" with the message above if visibility is severely limited by snow/ice flurries.

9.19. DMS MESSAGES FOR WINTER WEATHER – AFTER EVENT

9.19.1. Operators should use the DMS messages described below for impacts/actions occurring AFTER Winter Weather.

9.19.2. De-Icing Operations:

- (P1) "DE-ICING | OPERATIONS | IN EFFECT"

- (P2) "WATCH FOR | SLOW MOVING | VEHICLES"

- (P1) "DE-ICING | OPERATIONS | IN EFFECT"

- (P2) "VEHICLES PARKED | ON SHOULDER | WILL BE TOWED"

  - NOTE: Operators should only use the de-icing messages above when it is confirmed that de-icing (i.e. plowing snow, spreading salt/sand, etc.) will occur AND only in the area/route where de-icing is occurring.

  - NOTE: Operators should only use the towing message when emergency towing of vehicles has been confirmed AND only on the route where towing will occur.

9.19.3. General Purpose Messages for Winter Weather:

- (P1) "REDUCE | SPEED"

- (P2) "WATCH FOR | POSSIBLE | ICY SPOTS"

- (P1) "REDUCE SPEED | BRIDGES & RAMPS | MAY BE ICY"

  - NOTE: The message above is best for areas with multiple bridges and ramps.

9.20. DMS MESSAGES FOR HURRICANES/TROPICAL STORMS – BEFORE EVENT

9.20.1. Operators should use the DMS messages described below for impacts/actions occurring BEFORE Hurricanes/Tropical Storms.

9.20.2. NOTE: Operators must use "HURRICANE" or "TROPICAL STORM" based on how the event is currently classified by NWS and must modify messages if the classification changes.

9.20.3. General Purpose Message BEFORE Hurricane/Tropical Storm:

- (P1) "TROPICAL STORM | WARNING | IN EFFECT"

- (P2) "PREPARE FOR | STRONG WIND | RAIN AND DEBRIS"

- (P1) "HURRICANE | WARNING | IN EFFECT"

- (P2) "PREPARE FOR | STRONG WIND | RAIN AND DEBRIS"

9.20.4. Evacuations in Effect:

- (P1) "HURRICANE | EVACUATIONS | IN EFFECT"

- (P2) "FOLLOW SIGNED | EVAC ROUTE AND| LAW ENFORCEMENT"

- (P1) "TROPICAL STORM | EVACUATIONS | IN EFFECT"

- (P2) "FOLLOW SIGNED | EVAC ROUTE AND| LAW ENFORCEMENT"

  - NOTE: Evacuation messages should only be used when evacuations are confirmed. Operators must discuss use of evacuations message with a supervisor prior to activation.

9.21. DMS MESSAGES FOR HURRICANES/TROPICAL STORMS – DURING EVENT

9.21.1. Operators should use the DMS messages described below for impacts/actions occurring DURING Hurricanes/Tropical Storms.

9.21.2. General Purpose Message DURING Hurricane/Tropical Storm:

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- (P1) "HURRICANE | WARNING | IN EFFECT"
- (P2) "WATCH FOR | DEBRIS IN | ROADWAY"
- (P1) "TROPICAL STORM | WARNING | IN EFFECT"
- (P2) "WATCH FOR | DEBRIS IN | ROADWAY"

9.21.3. Observed Limited Visibility due to Storm:

- "LOW VISIBILITY | REDUCE SPEED"
  - NOTE: Operators may replace messages stating, "WARNING IN EFFECT" with the message above if visibility is severely limited by heavy rain.

9.22. DMS MESSAGES FOR HURRICANES/TROPICAL STORMS – AFTER EVENT

9.22.1. Since impacts following Hurricanes/Tropical Storms are usually identical to regular incidents (e.g., debris) or routine weather (e.g., flooding), operators should use routine weather messages and/or regular incident messages for the situations that apply. Examples are listed below.

9.22.2. Example of Debris Message:

- "DEBRIS | 6 MILES AHEAD | RIGHT LANE CLOSED"

9.22.3. Example of a Road Closure and Detour Message:

- "ROAD CLOSED | NEAR EXIT 277 | FOLLOW DETOUR"
  - Operators should activate the detour/alternate route message that is appropriate for the situation. See 7.7 for further guidance and DMS messages for detours and alternate routes.
  - For detours/alternate routes following a Hurricane/Tropical Storm, operators must discuss the route with an appropriate NCDOT POC for the area to assure that the detour/alternate route is still viable following the storm.

9.22.4. Examples of Messages for Flooding:

- "STANDING WATER | AHEAD | REDUCE SPEED"
- "STANDING WATER | 4 MILES AHEAD | RIGHT LANE CLOSED"

9.23. TIMS COUNTY ADVERSE WEATHER ROAD STATUSES

9.23.1. All operators must assure that the County Adverse Weather Road Status of all NC counties in TIMS are accurate and up-to-date at the beginning of every shift as part of their initial shift sweep.

9.23.2. Throughout a weather event, these statuses must be updated as conditions change or at least twice per day at 9:00am and 3:00pm.

9.23.3. All times and roadway statuses must be accurate and align with information received from NCDOT personnel or observations by operators.

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9.23.4. Below are the County Adverse Weather Road Status types that operators must choose from when managing county road statuses in TIMS:

- Clear – use when roads are not affected by snow and ice and/or when roads have been cleared by clearing operations.

- Clear with Possible Icy Spots – use when roads are mostly unaffected by snow and ice but where some impacts might be present and/or where clearing operations have almost completely cleared roads, but some ice may reoccur (i.e. melted ice refreezing overnight).

- Partially Covered with Snow/Ice – use when roads have frequent locations of snow and ice coverage but where some cleared areas are also present.

- Covered with Snow/Ice – use when snow and ice coverage on roads is predominant throughout the county.

- N/A – used to indicate that the county does not have this particular route type (e.g. counties without interstates will have "N/A" for the Interstate status) – DO NOT CHANGE THIS STATUS.

9.24. MANAGING COUNTY ROAD STATUSES IN TIMS

9.24.1. Below is the process that operators must follow when managing county road statuses in TIMS:

- In TIMS, navigate to the County Page for the county that you wish to update.

- Click the pencil icon under the "Adverse Weather Listing" heading.

- Click the "Precipitation Start" button and set the time and date to accurately reflect when snow/winter precipitation began to fall.

- This can be done in real-time (e.g., as snow falls) or it can be done soon after.

- When snow/winter precipitation stops, click the "Precipitation End" button and set the time to accurately reflect when precipitation ended.

- Use the drop-down boxes labeled, "Change Status" to select the road status for each route type.

- After selecting each route's status, click "Update" for each.

- Repeat the steps above as needed to assure that all counties' roadway statuses remain up to date throughout the event.

- Once all route types for a county have achieved the status of either "Clear" or "Clear with Possible Icy Spots," click the "Clearing Operation Complete" button.

9.25. ASSISTING NCDOT PERSONNEL WITH ROAD STATUS UPDATES

9.25.1. During adverse weather events, all counties' statuses must be updated by 8:00am and 2:00pm daily (at a minimum) until all roads are "Clear" or "Clear with Possibly Icy Spots."

9.25.2. Operators are responsible for updating counties in Divisions 5, 7, and 9 and may do so using their own observations of weather impacts and without contacting NCDOT personnel.

9.25.3. For all other counties, operators must coordinate with NCDOT personnel to assist with updates to their counties' roadway statuses. This process is described below:

- In TIMS, click the "Adverse Weather" link from the Admin Home page to view all counties' adverse weather road statuses.

- Click "Export to Excel" and use the spreadsheet that opens to complete the following steps:
  - Identify counties who have not updated their statuses by reviewing information in the "Last Update" column for times that are NOT within 3 hours of the daily update times of 9AM and 3PM.
  - For each out-of-date county, locate the contact information for the appropriate NCDOT POC in the columns labeled, "Contact Name" and "Contact Phone."
  - Organize out-of-date counties by the NCDOT POC listed so that the same POC is not contacted multiple times.

- Call the appropriate NCDOT POC for each out-of-date county and request current roadway statuses.
  - Operators should offer to enter the updated statuses into TIMS for the POC.
  - If the POC does not answer, operators should leave a voicemail with STOC's callback number and should then use the STOC Contact Matrix to identify other NCDOT POCs for the county that can provide updates.

- Please note that if a county has been updated within the last 2 hours of 9:00 AM and 3:00 PM, no call is needed to the NCDOT POC.

9.26. TIMS EVENTS FOR ADVERSE WEATHER

9.26.1. Operators should select these events when creating TIMS incidents that are related to or directly caused by the event for which the TIMS event is named (e.g., "Snow Storm 2/23/14").

9.26.2. As operators receive TIMS email notifications for incidents that have been recently added by other TIMS users across the state, operators should review the incident in TIMS and assure that it is properly assigned to a TIMS event if appropriate. TIMS notifications should NOT be sent if the only update to the incident is to assign it to a TIMS event.

9.27. TIMS INCIDENTS FOR ADVERSE WEATHER

9.27.1. When adverse weather is confirmed to be affecting travel conditions at a specific location on a specific route, a TIMS incident for that specific impact should be created.

9.27.2. Below are common weather impacts that require TIMS incidents and how they should be entered by operators unless otherwise directed by NCDOT or STOC management.

9.27.3. For Dense Fog

- Incident Type: Fog

- Condition: "Congestion"

- Impact: MEDIUM

- Reason: "Congestion and limited visibility near [COMMON NAME] ([EXIT #/ROUTE #]) due to dense fog."

9.27.4. For Snow/Ice Patches in Lane(s)

- Incident Type: Weather Event

- Condition: Select from the following as appropriate for the situation:
  - "Lane Closed" or "Lanes Closed" or
  - "Lane Narrowed" or "Lanes Narrowed," or
  - "Road Closed" or "Road Closed with Detour."

- Impact: Select from the following as appropriate for the situation:
  - MEDIUM if "Lane Narrowed" or "Lanes Narrowed" or
  - HIGH if "Lane Closed/Lanes Closed/Road Closed" or "Road Closed with Detour."

- Reason: Select from the following as appropriate for the situation:
  - "The [LANE(S)] [IS/ARE] affected by icy patches near [COMMON NAME] ([EXIT #/ROUTE #])."
  - "The road is closed due to icy patches near [COMMON NAME] ([EXIT #/ROUTE #])."

9.27.5. For Snow/Ice Patches on Ramps

- Incident Type: Weather Event

- Condition: "Lane Narrowed" or "Lanes Narrowed"

- Impact: MEDIUM

- Reason: "The exit ramp for [COMMON NAME] ([Exit #]) is affected by icy patches"

9.27.6. For Flooding/Standing Water in Lane(s)

- Incident Type: Weather Event

- Condition: Select from the following as appropriate for the situation:
  - "Lane Narrowed" or "Lanes Narrowed,"

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- o "Road Closed" or "Road Closed with Detour," or
  - o "Road Impassable" – operators may ONLY use this condition when travel is restricted to motorists AND emergency responders
- Impact: Select from the following as appropriate for the situation:
  - o MEDIUM if "Lane Narrowed" or "Lanes Narrowed" or
  - o HIGH if "Road Closed," "Road Closed with Detour," or "Road Impassable"
- Reason: Select from the following as appropriate based on Condition:
  - o "The [LANE(S)] [IS/ARE] affected by standing water near [COMMON NAME] ([EXIT #/ROUTE #])." or
  - o "The road is closed due to standing water near [COMMON NAME] ([EXIT #/ROUTE #])."

9.28. WEBEOC/NC-SPARTA

9.28.1. Use of WebEOC will be directed by a supervisor before major weather events. When directed, operators must have WebEOC open and ready for use throughout their shift and must check it regularly throughout the event until directed by a supervisor to discontinue its use.

9.29. WEBEOC/NC-SPARTA LOGIN INFORMATION

9.29.1. The following login information for WebEOC is for STOC personnel only and may not be shared or distributed by operators for any reason.

- URL for WebEOC: www.Ncsparta.gov/eoc7
- Position: STOC-Read Only
- Incident: Select the incident named for the current weather event, or Daily Operations 20XX (Current Year)
- Ensure that the "Filter By" drop-down box has the option "All" selected so that all major events are displayed appropriately.

9.30. WEBEOC/NC-SPARTA – SIGNIFICANT EVENTS

9.30.1. Upon logging in, WebEOC, users will be brought to a Notifications page, alerting users that a new version of NCSPARTA is now in use:

- Control Panel – In the upper left corner, there is a blue icon with gray lines and a drop-down arrow. Users will navigate NCSPARTA by using the drop-down menu from the Control Panel icon, and selecting the appropriate resource (e.g., Significant Events).

9.30.2. Operators should use WebEOC to help identify road closures caused by the weather event by reviewing entries in WebEOC's "Significant Events" feature.

9.30.3. Operators must check Significant Events every 15 minutes while use of WebEOC has been directed.

9.30.4. Operators must carefully review each entry to identify potential incidents, road closures, or other items affecting traffic.

9.30.5. Incidents found in Significant Events should be treated like information in the SHP CAD Feed – as a report, where further verification must be found before response is initiated.

9.30.6. For incidents found that were previously unknown, operators should attempt to verify/confirm the incident via standard procedures.

- Incidents that cannot be verified/confirmed should be entered into the STOC Road Closure Report on the "Reported Closures" tab.

- Incidents that can be verified/confirmed should be entered into TIMS as appropriate and assigned to the correct TIMS event.

9.31. STOC ROAD CLOSURE REPORT

9.31.1. The STOC Road Closure Report is produced by operators and sent out multiple times per day as described below to provide lists of incidents related to a major weather. These lists are organized on the tabs described below:

- Reported Closures – incidents that have been reported/detected (i.e., via WebEOC's Significant Events) but have not yet been confirmed.
  - Operators manually enter these into the report as they are detected.

- Confirmed Closures – incidents that have been verified/confirmed, often including incidents that were previously on the Reported Closures list

- Recently Opened Closures – previously verified/confirmed incidents that have now been cleared or are no longer affecting traffic.
  - This list is created by removing incidents from the Confirmed Closures list once those incidents have been cleared.

9.31.2. STOC management will advise when to begin to produce and send this report out and when to stop and return to normal operating procedures.

9.32. STOC ROAD CLOSURE REPORT – MAINTAINING THE REPORT

9.32.1. Operators should follow the process described below to properly maintain the STOC Road Closure Report in between times when it is sent out.

- Open the Excel report template that has been created for the specific event.
  - Template is found at Z:\TSOU\511 Operators\STOC Closure Report.

- As lane/road closures related to the event are reported or identified (e.g., via WebEOC), operators should respond based on whether incident is verified/confirmed or not:
  - If verified/confirmed, add the incident to TIMS and assign the correct Event.
  - If NOT verified/confirmed, enter information about the reported closure on the "Reported Closures" tab of the report spreadsheet.

- If a reported closure is verified/confirmed later, operators should:
  - Remove the entry for that report from the "Reported Closures" tab.
  - Create an incident in TIMS and assign it to the correct TIMS Event
- If a reported closure is later found to be open, operators should remove the entry from the spreadsheet entirely.

9.32.2. Operators should save the report after adding an entry or otherwise making significant changes.

9.33. STOC ROAD CLOSURE REPORT – GENERATING THE REPORT

9.33.1. Operators should follow the process described below to generate the STOC Road Closure Report so it can be sent out.

- Using the "Search for Incidents" feature in TIMS, select the appropriate TIMS event and click the "Search" button.
- When the search results appear, click the "Export to Excel" link.
  - If a dialog box pops up, click "Yes" to open spreadsheet.
- Once open, copy all of the incident information (NOT the headings) and paste it into the "Confirmed Closures" tab of the STOC Road Closure Report.
  - Operators should paste over and/or remove any previous entries on this tab.
- Review each of the entries on the "Confirmed Closures" tab and perform the following:
  - Compare entries to those on the "Reported Closures" tab. If an entry on the "Confirmed Closures" tab is the same as an entry on the "Reported Closures" tab, operators should delete the entry from the "Reported Closures" tab.
  - Select and cut rows for any entries on the "Confirmed Closures" tab whose End Time indicates that the incident is over. Operators should then paste/insert these rows onto the "Recently Opened Closures" tab. Operators should assure that the incident is over and that the TIMS incident has not simply timed out.
  - Select and delete any other entries from the "Confirmed Closures" tab that DO NOT represent current lane or road closures related to the event.
- Perform a final review of the report to assure all entries on all tabs accurately reflect the status of current closures, reported closures and recently opened closures related to the event.
  - Operators should also have a supervisor (or another operator if a supervisor is not on duty) review and approve the report.
- Save the report and prepare to send it out.

9.34. STOC ROAD CLOSURE REPORT – SENDING THE REPORT

9.34.1. Once directed to begin producing the STOC Road Closure Report, operators must assure that it is updated and sent out every day at the times specified by a supervisor. Typically, these times are:

- 6:45am
- 2:00pm
- 6:45pm

9.34.2. The STOC Road Closure Report must be sent out via email using the STOC email account and addressed to the STOC Road Closure Report distribution list.

9.34.3. Operators should attach the recently updated and approved STOC Road Closure Report to an email and should format the email as described below:

- SUBJECT: "[NAME OF EVENT] Road Closure Report for [CURRENT DATE AND TIME]"
- BODY GREETING: "Good [MORNING/AFTERNOON/EVENING],"
- BODY: "Please find attached the current road closure report for [NAME OF EVENT]. If there is anything else we can do, please let us know,"
- BODY SIGNATURE: "[OPERATOR'S NAME]"

9.34.4. Operators should NOT send a blank report. If there are no current, reported, or recently opened closures related to an event at the time when the report should be sent out, operators should send an email to the STOC Road Closure distribution list as described below:

- SUBJECT: "[NAME OF EVENT] Road Closure Report for [CURRENT DATE AND TIME]"
- BODY GREETING: "Good [MORNING/AFTERNOON/EVENING],"
- BODY: "At this time, there are no current or reported closures related to [NAME OF EVENT] that have been detected. If you have information regarding a road closure related to the storm, please let us know. Thank you,"
- BODY SIGNATURE: "[OPERATOR'S NAME]

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10. SPECIAL, AMBER, BLUE, FUGITIVE, AND SILVER ALERTS

10.1. CHECKING ALERTS AND 511 FLOODGATES

10.1.1. All operators must check TIMS and 511 Floodgate recordings at the beginning of every shift to identify any active Special, Amber, Blue, Fugitive, or Silver Alerts and must ensure:

- Alert information is accurate and up to date on TIMS and 511 Floodgate

- Alert text in TIMS (e.g., Headline, Body) is properly formatted,

- All alerts requiring a Floodgate have a corresponding message set to play on the 511 Floodgate.

- All 511 Floodgates are clear and understandable, and playing at the appropriate volume.

10.2. ALERT CHECKLISTS

10.2.1. Operators must complete the appropriate Alert Checklist for all Special, Amber, Blue, Fugitive, or Silver Alerts.

- Blank Alert Checklists are located behind the Statewide TMS position in the "Alert Checklists" binder.

- Master copies for printing check lists are located on the Z:drive at Z:\\511 Operators → Current Alert Checklists

10.2.2. On-coming operators and supervisors must be informed of and shown any active alerts checklists during shift changeover. (see 2.7.3)

10.2.3. Completed alert checklists must be reviewed and properly filed by the shift supervisor at the conclusion of the alert.

10.3. 511 FLOODGATES

10.3.1. Operators should record and set 511 Floodgates to play in a timely manner once an alert is activated.

10.3.2. Operators should use the 511 System – Accessing and Recording (511 Floodgate) instructions, located in the operator's Quick Reference Book → Procedures & Policies. The Quick Reference Books are located at each of the TMS and Dispatch positions on the control room floor.

10.3.3. The 511 Floodgate script (i.e., the information the floodgate provides) for Special Alerts should be the same as the text from the TIMS Special Alert. Operators should read the headline and body of the alert when recording the 511 Floodgate. Detour/alternate route instructions should be included in 511 Floodgates for Special Alerts. DO NOT reference links when recording the 511 Floodgates.

10.4. UPDATING ALERTS AND 511 FLOODGATES

10.4.1. TIMS Alert text, 511 Floodgates, and Alert Checklists should be updated as incident details or travel conditions change. **Never send a blank TIMS notification**.

10.4.2. Regardless of alert status or conditions, alerts should be reviewed by operators and supervisors a minimum of every four hours.

10.4.3. Whenever a 511 Floodgate is activated or updated, operators must call 511 to ensure the message audio quality is clear and understandable with appropriate volume.

10.4.4. When TIMS Alerts are cancelled with no changes to remaining TIMS Alerts, do not send notifications.

10.4.5. Any TIMS alert or 511 Floodgate which is incorrect, improperly formatted, or otherwise requiring modification should be updated with correct information immediately.

10.5. CONTACTING NCDOT PERSONNEL FOR ALERT UPDATES

10.5.1. Operators should coordinate with NCDOT personnel as needed to ensure Special Alerts are updated properly – this NCDOT employee is either the appropriate NCDOT POC for the incident OR the person who entered or requested the alert.

10.5.2. Operators can identify who entered an alert by opening the alert for editing. This will show the username of the TIMS user who entered the alert.

- If the user is another operator, operators should discuss updates with them or a supervisor to determine how to update the alert.

- If the user is an NCDOT employee, operators should locate their contact information in the STOC Contact Matrix or the NCDOT Directory and call them to discuss alert updates.

10.5.3. Operators should not contact NCDOT personnel for updates if only minor changes or corrections are needed, or if the alert only requires the addition of a corresponding 511 Floodgate.

10.6. MANAGING MULTIPLE ALERTS

10.6.1. Multiple alerts for the same type may be activated simultaneously (e.g., two Special Alerts, or two Amber Alerts, or two Silver Alerts with Vehicle Information). Operator actions will depend on the type of alerts involved.

10.6.2. Special Alerts: When multiple Special Alerts are active at the same time, the following processes will be used:

- When multiple alerts are active at the same time, they should occupy the same alert box (i.e., Special Alert box).
- New alerts should be entered above existing alerts. When alerts are updated with any information, they should be moved above existing alerts.
- In the case of multiple Special Alerts, there may not be enough space in the Special Alert box for all alerts OR the alert box may become overly cluttered. If this occurs, supervisors will coordinate with the STOC Operations Manager and the Traffic Operations Engineer to discuss solutions on rewording or combining alerts to save space.

- If a decision is made to remove an active Special Alert for space purposes, but the incident is still active, operators should remove the alert from TIMS and remove the 511 Floodgate.

10.6.3. Amber/Blue/Fugitive Alerts: 511 Floodgate and TIMS procedures do not change from normal procedures for these alerts.

10.6.4. Silver Alerts with Vehicle Information: If the alerts are in separate divisions, normal procedures apply (see 10.18.3)

- For alerts in the same division:
  - Record both Silver Alerts as one Floodgate.
  - Copy both Silver Alerts into the appropriate County Alert.
  - Notify the 511 Operators multiple Silver Alerts are active and in which county the alert information can be found.

10.6.5. For Multiple Alerts of the same type, the following DMS message will be placed on all applicable DMS (normal DMS message priorities apply):

<div align="center">
[AMBER/BLUE/FUGITIVE/SILVER] ALERTS
CALL 511
FOR INFO
</div>

- When the number of like alerts has been reduced to one alert, change the DMS to reflect the normal DMS message for that type of alert.

10.6.6. Operators will ensure the appropriate 511 Floodgates are playing BEFORE any DMS advising the public to call 511 is activated for Multiple Alerts.

10.7. SPECIAL ALERT ACTIVATION CRITERIA

10.7.1. Special Alerts should be activated for confirmed incidents of any incident type (e.g., crashes, construction, congestion, etc.) occurring on:

- 2-digit interstates (excluding BUS or ALT routes) OR
- NC 12 (south of US 64 in Dare County)

10.7.2. Special Alerts for congestion caused by planned construction projects will be used for a maximum of seven (7) days; or when all construction work affecting the roadway concludes, whichever occurs first. These alerts, including associated DMS, will remain active for the duration of the alert (i.e., don't activate and deactivate as congestion or planned conditions change).

- Construction Special Alerts are considered exceptions and require approval of TSO Staff prior to activation. Contact TSO Staff (See Appendix N) in order until approval is granted.

- If congestion is expected to continue in excess of seven (7) days, it will be regarded as recurring congestion. If this occurs, the ATS team should be notified to consider developing a long term response plan to the project.

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10.7.3. Special Alerts should only be activated for incidents/conditions meeting the criteria described below:

- Incidents/conditions MUST MEET:
    - <u>BOTH</u> **Criteria A** and one requirement of **Criteria B**
    - <u>OR</u> Incident meets **Congestion Criteria**
- **Criteria A:**
    - Full road closures in one or both directions
- **Criteria B:**
    - Overturned commercial vehicle (large truck, cement mixer, dump truck, tractor trailer, etc.)
    - Fatal or life threatening injury crashes involving multiple vehicles
    - Incidents that require on-scene crash investigations
    - HAZMAT (any placarded substance) situations that result in evacuations, detours, or environmental issues (spillage into a waterway or drainage system)
    - Incidents involving structural damage to the roadway (Roads, Bridges, & Overpasses)
    - Unusual extreme event not captured above (e.g., Plane landing on Interstate, Terrorist Activities)
        - NOTE: These alerts must be approved through NCDOT or STOC Management.
- **Congestion Criteria** (exclude recurring)**:**
    - Traffic mapping software shows congestion (orange, red, or black) > 5 miles.
    - If congestion is due to planned construction, refer to 10.7.2.
    - NOTE: If congestion is growing and the incident is not expected to clear soon, operators should activate an alert proactively in anticipation that congestion criteria will be met.

10.8. SPECIAL ALERTS IN TIMS

10.8.1. Special Alert Headlines: In TIMS, the headline of a Special Alert must adhere to the format guidelines below:

- Text should be centered, ALL CAPS, bold, and black in color,
- Headline should be brief and should NOT provide counties, incident type, exits, cross streets, or other extraneous details,
- Route and direction of travel affected should be provided,

- Operators should use "congestion," "lane," "lanes," or "closed" to describe condition and

- Operators should use "in," "near," or "between" a reference city or state line – DO NOT use counties.

  o For Special Alerts, operators may only use approved reference cities.

    ▪ If there are two incidents on the <u>same route</u> that will use the <u>same geographical reference</u>, operators may use a nearby non-approved city to distinguish between the two incidents.

  o The route must travel between or through the cities referenced.

10.8.2. Reference Cities and Locations: Operators may only use the approved cities and geographical areas referenced below in Special Alert headlines:

- Asheville

- Statesville

- Charlotte

- Winston-Salem

- Greensboro

- Fayetteville

- Raleigh

- Durham

- Wilmington

- Rocky Mount

- Between Ref City "A" and Ref City "B"

- For NC 12, use nearest city or name of island (e.g., Ocracoke)

- Any State Line – (Example: "I-85 CLOSED NEAR THE VIRGINIA STATE LINE")

- Another Interstate (e.g., "I-40 CLOSED NEAR I-95")

- If two incidents on the <u>same route</u> will use the <u>same geographical reference</u> it is permissible to use a nearby non-approved city to distinguish between the two incidents.

10.8.3. Special Alert Body: The body of a Special Alert must adhere to the format guidelines below:

- Centered text, normal capitalization, complete sentences, and black in color.

- Operators should provide incident type/reason for alert such as "Crash," etc.

- Body should be brief but provide additional details including but not limited to:

- o Which lanes are closed,

- o Local city near incident (instead of the reference city in the Headline). The city may be the same in Headline and Body, if appropriate.

- o Exit numbers and common names of cross streets. Operators should NOT use counties, mile markers, or SR numbers.

- Operators should describe when lanes are expected to reopen and/or when conditions are expected to return to normal.

  - o If same day, provide the time, only (e.g., 2:00 PM).

  - o If across days OR on 3rd Shift, provide the time and day (e.g., 2:00 PM on Friday).

- If a detour/alternate route is in use, the detour/alternate route instructions should be entered in the alert body. Detour instructions must be entered using a turn-by-turn format and as a separate paragraph below the main body.

10.8.4. Special Alert Examples in TIMS:

- Example 1:

I-95 SOUTH CLOSED NEAR ROCKY MOUNT

I-95 South is closed near Rocky Mount at Exit 132, West Mount Drive, due to debris in the road. The road is expected to reopen by 6:00 AM on Wednesday.

- Example 2:

I-40 CLOSED NEAR ASHEVILLE

I-40 is closed in both directions near Black Mountain at Exit 50, US 25, due to a crash. The road is expected to reopen by 4:00 PM.

Detour: Motorists on I-40 West should use Exit 53B for I-240 West and then take Exit 31B to return to I-40 West. Motorists on I-40 East should take Exit 46B for I-26 West/I-240 East and continue to follow signs for I-40 East.

10.9. TIMS NOTIFICATIONS FOR SPECIAL ALERTS

10.9.1. TIMS email notifications should be sent whenever the Special Alert is created, when significant changes to the alert are made, and when the alert is removed. DO NOT send TIMS notifications when an All Clear is terminated.

10.9.2. Operators should not send notifications if only minor changes to a Special Alert are made (e.g. correcting spelling/format errors). **Never send a blank TIMS notification.**

10.10. SPECIAL ALERTS FOR ADVERSE WEATHER (INCLUDING NC 12) OR SPECIAL EVENTS

10.10.1. All Special Alerts for adverse weather or special events must be composed with input and approval from a supervisor before activation.

10.10.2. Special Alerts and TIMS for Weather Related Closures of NC 12 (i.e., storm surge, flooding, high tide, etc., that close NC 12 intermittently):

- Div 1 Communications Director (See Appendix N) or designee is the primary point of contact for information related to NC 12 closures. If information is received from any other source, call the Div 1 Communications Director or designee to verify.

  - Contact Div 1 Communications Director or designee and discuss the Special Alert text and any NC 12 TIMS incidents to ensure that correct and consistent messages are being conveyed to motorists.

    - IMPORTANT: Contact Div 1 Communications Director or designee when any updates to NC 12 Special Alerts are required. All changes to NC 12 Special Alerts must be discussed with Div 1 Communications Director or designee prior to changes being made.

    - NOTE: Contact Div 1 Communications Director or designee when any NC 12 TIMS incidents are added or updated to ensure all information remains consistent.

- Contact the Women's Prison Supervisor to relay all current information concerning the closure of NC 12. Advise the supervisor the call takers should inform callers that the reopening time for NC 12 may be extended until weather conditions improve (despite published TIMS reopening times). STOC should call 511 and ask to speak to a Supervisor, if the Women's Prison Supervisor is not available, relay the information and guidance to a Women's Prison call taker.

  - Women's Prison call takers may forward motorist calls concerning NC 12 to the STOC if they do not have answers to motorist's questions. If this happens, the STOC Supervisor should call the Women's Prison Supervisor to confirm all current information has been relayed and advise the Supervisor that no further information is available at this time.

- Div 1 Communications Director or designee will manage NC 12 TIMS (unless he delegates the task to the STOC). If additional TIMS incidents for NC 12 are detected from other sources, call Div 1 Communications Director or designee to discuss.

- The STOC will NOT put an expected reopening time for NC 12 in the Special Alert/Floodgate.

  - NC 12 Special Alert wording should draw from the 'Reason' text of the TIMS incidents (e.g., "Ocean over wash is expected to continue on Ocracoke Island throughout the day today, especially at high tide.")

  - NC 12 may reopen and close several times while severe weather is occurring, especially at high tide. The STOC will NOT deactivate and reactivate the Special Alert/Floodgate when this happens. The Special Alert/Floodgate will be maintained until NC 12 reopens on a long-term basis; or when Div 1

Communications Director or designee directs deactivation of the Special Alert/Floodgate.

- o While NC 12 is "temporarily open" during these times, the Special Alert/Floodgate wording should reflect the current roadway condition, while addressing the likely re-closure (e.g., "NC 12 is currently open near Ocracoke Island. However, the road may close again, especially at high tide."

10.11. DEACTIVATING SPECIAL ALERTS

10.11.1. Special Alerts should be removed from TIMS and the 511 Floodgate as soon as the incident is over and/or when travel conditions have returned to normal.

- For Special Alerts, operators should:
    - o Enter an alert in TIMS stating the incident is over, and congestion remains.
    - o If there is no congestion or when the traffic has returned to its normal flow enter an All Clear alert in TIMS.
    - o The 511 Floodgate should be updated to match each TIMS update.
    - o Once notifications have been sent for the final All Clear alert and the All Clear alert has been up for an hour, operators should remove the alert from TIMS and the 511 Floodgate. DO NOT send TIMS notifications when an All Clear is terminated.

10.11.2. Example of Special Alert while Active:

I-40 EAST CLOSED IN RALEIGH

I-40 East is closed in Raleigh near Exit 287, Harrison Ave, due to a crash. The road is expected to reopen by 3:00 PM.

10.11.3. Example of Deescalated Special Alert:

I-40 EAST REOPENED IN RALEIGH: CONGESTION REMAINS

All lanes of I-40 East have reopened in Raleigh following an earlier crash near Exit 287, Harrison Ave. However, 5 miles of congestion remains in the area.

10.11.4. Example of Final Special Alert (All Clear):

I-40 EAST REOPENED IN RALEIGH

All lanes of I-40 East have reopened in Raleigh following an earlier crash near Exit 287, Harrison Ave. Travel conditions in the area have returned to normal.

10.12. AMBER, BLUE, FUGITIVE, AND SILVER ALERTS – GENERAL

10.12.1. Amber/Blue/Silver Alerts: Operators may only act on information received IN AN EMAIL from the North Carolina Center for Missing Persons (NCCMP) OR the North Carolina Alcohol Law Enforcement Division (NCALE) of the NCSBI.

- NCCMP - *missingpersons@nccrimecontrol.org*

- NCALE - *NCAMBERAlerts@ncale.org*

10.12.2. Fugitive Alerts: Operators may only act on information received by a verifiable Law Enforcement agency and approved by NCDOT TSO Staff.

10.12.3. Information received by other methods or from other sources may NOT be used unless approved by NCDOT TSO Staff (See Appendix N).

10.12.4. Operators should carefully review information from approved sources and compare this with the Amber/Blue/Fugitive/Silver Alert Checklist to determine:

- When to activate the alert.

- When to cancel the alert.

- Whether the alert requires a 511 Floodgate, and if so, what information to include

- Whether the alert requires a TIMS Special Alert

- Which divisions may require DMS activation

- How long the DMS alert messages should be displayed.

10.13. AMBER, BLUE, FUGITIVE, AND SILVER ALERTS – DMS ACTIVATION

10.13.1. Operators will use the Alert DMS Activation Matrix to coordinate with each division that requires DMS activation for an alert. The matrix is located on the Z: drive → 511 Operators → Current Alert Checklists.

10.13.2. Operators will ensure the appropriate 511 Floodgate is playing BEFORE any DMS advising the public to call 511 is activated for any Alert.

10.13.3. CMS, Vermacs, and CMBs should NOT be used for Amber/Blue/Fugitive/Silver Alerts unless the portable message sign is designated as a replacement for an "out of order" DMS.

10.13.4. All DMS in the appropriate Division(s) should be activated except on DMS that are already in use for higher priority messages (see section 6.3).

- The priority between Alerts is Amber, Blue, Fugitive, and Silver. Any deviation from this priority will only be at the direction of NCDOT personnel.

10.13.5. Multiple Alerts for the same type may be activated simultaneously (e.g., two Amber Alerts or two Silver Alerts with Vehicle Information).

- Amber/Blue/Fugitive Alerts: 511 Floodgate and TIMS procedures do not change from normal procedures for these alerts.

- Silver Alerts with Vehicle Information: If the alerts are in separate divisions, normal procedures apply (see 10.18.2). For alerts in the same division, refer to Appendix L: Multiple Silver Alerts – 511 Floodgate Procedures.

10.13.6. For Multiple Alerts of the same type, the following DMS message will be placed on all applicable DMS (normal DMS message priorities apply):

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10.13.7. When the number of like alerts has been reduced to one alert, change the DMS to reflect the normal DMS message for that type of alert.

10.13.8. Operators should use the Statewide ITS Map to determine which Divisions have STOC-accessible DMS (Star = STOC accessible, Circle = NOT accessible to STOC).

10.14. DMS ALERT NOTIFICATION EMAILS

10.14.1. Operators will use the DMS Alert Notification email templates to advise NCDOT Division personnel of DMS activations and deactivations for Amber, Blue, Fugitive, or Silver Alerts. Operators will send these emails from the STOC Inbox, using the 'DMS Alert Notification' distribution list.

10.14.2. The DMS Alert Notification emails should be sent in a timely manner to all divisions upon receiving notice from approved sources.

10.14.3. Sending of DMS Alert Notification emails will be documented in the operator's TMS log.

10.14.4. The DMS Alert Notification email templates are found in the STOC Inbox -> Templates folder. Below are the items included in the DMS Alert Notification templates and what operators should enter for each:

- DMS Alert Notification – Activation Template

    o An active Alert has been initiated that requires use of the Dynamic Message Signs (DMS). Based on your local procedures, this email may be a follow-up to a previous phone notification. Details concerning this Alert are included below.

    ▪ Type of Alert:
    [Amber] [Blue] [Fugitive] [Silver]

    Issued by:
    [Name of issuing agency (NCCMP, NCALE, Law Enforcement Agency, etc.)]

    Date & Time:
    [When the alert was issued]

    Divisions Affected:
    [For Amber and Blue Alerts, enter "All"]
    [For Fugitive and Silver Alerts, enter the division where the incident is occurring]

    DMS Activation Issues:
    [Inform the division(s) of any issues encountered with DMS malfunctions that prevented activation of alert messages, include specific DMS information]

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Anticipated Duration of DMS Usage:
[Amber Alert – Until Alert Cancellation]
[Blue Alert – Until Alert Cancellation]
[Fugitive Alert – Until Alert Cancellation]
[Silver Alert – 24 Hours]

STOC Contact Information:
[Operators should enter their name and STOC contact information]

- o NOTE: Be aware the Alert DMS messages may be preempted for higher priority incidents, but Alert messages must be resumed when those incidents are concluded.

- DMS Alert Notification – Cancellation Template

  - o The active *[Type]* Alert has been cancelled as of *[Date & Time]*. All DMS activated by the STOC for this alert have either been blanked or returned to their previous status. Based on your local procedures, this email may be a follow-up to a previous phone notification.
  [Amber] [Blue] [Fugitive] [Silver]

  STOC Contact Information:
  [Operators should enter their name and STOC contact information]

10.15. AMBER ALERTS

10.15.1. Upon receiving information from approved sources, operators should initiate the appropriate Amber Alert response which includes but is not limited to:

- Activate Amber Alert in TIMS and the 511 Floodgate

- Activate Amber Alert message on appropriate DMS

- Coordination with NCDOT personnel

- Initiate a County Alert in the issuing county (see 10.15.11)

10.15.2. Amber Alert 511 Floodgate: Operators should record the headline and script as a single 511 Floodgate.

10.15.3. 511 Floodgate Headline:

- Amber Alert Headline: "North Carolina Amber Alert issued for [MISSING PERSON'S NAME] in [COUNTY PERSON WENT MISSING], in [CITY PERSON WENT MISSING]."

- For the Amber Alert 511 Floodgate headline use the following example:

"NORTH CAROLINA AMBER ALERT ISSUED FOR JOHN SMITH IN WAKE COUNTY IN RALEIGH"

10.15.4. 511 Floodgate Script:

- 511 Floodgate script of an Amber Alert should be comprised of the alert headline (as described above) and of information provided by approved sources about the

missing/injured person. Full details provided by approved sources which should be recorded as part of the 511 Floodgate include but are not limited to:

- o Name, age, and description of the missing person

- o Name, age, and description of the alleged abductor

- o Vehicle description (including make, model, color, and license plate)

- o Where the missing person was last seen and/or might be headed

- o Instruction for motorists to call 911 or *HP if they have information about the situation. DO NOT include any 10-digit phone numbers in the 511 Floodgate.

- o For the Amber Alert 511 Floodgate script use the following example:

"An Amber Alert has been issued for John Smith, a two-year-old black male, approximately two feet tall, weighing 32 pounds. He was last seen wearing black jeans, a red and white striped shirt, and blue sneakers.

John Smith is believed to have been abducted by Deborah Lee Smith, a 24-year-old black female, approximately five feet, eight inches tall and weighing 120 pounds. Ms. Smith was last seen headed east on I-40 in a Red Honda Accord, NC license plate FHJ668.

*If you have any information regarding this abduction, please call 911 or *HP."*

10.15.5. 511 Floodgate Script Conclusion: Amber Alert 511 Floodgate scripts will end with the following statement.

"This concludes the Amber Alert information. For traffic information, please stay on the line. If you require no further assistance, you can disconnect this call now."

10.15.6. Amber Alert Cancellation Script: When an AMBER Alert has been cancelled, operators should replace the 511 Floodgate with a new 511 Floodgate reflecting the cancellation. The cancellation script should remain running for 24 hours. If the message needs to be taken down for a higher priority incident, replace the message when the incident is over. Operators should use the following script:

"AMBER ALERT CANCELLED – The previously issued North Carolina Amber Alert for [MISSING PERSON/VEHICLE] has been cancelled. This concludes the Amber Alert information. For traffic information, please stay on the line. If you require no further assistance, you can disconnect this call now. Thank you."

10.15.7. Amber Alert TIMS Headline:

- Text should be centered, ALL CAPS, bold, and black in color.

- Headline should state, "North Carolina Amber Alert issued for [MISSING PERSON'S NAME] in [COUNTY PERSON WENT MISSING] in [CITY PERSON WENT MISSING]."

- For the Amber Alert TIMS headline use the following example:

*"**NORTH CAROLINA AMBER ALERT ISSUED FOR JOHN SMITH IN WAKE COUNTY IN RALEIGH**"*

10.15.8. Amber Alert TIMS Body:

- Text should be centered, normal capitalization, and black in color.

- Body should state, "For more information, click <u>HERE</u>."

  - "<u>HERE</u>" should be a hypertext link to the page for the specific missing person on the approves source's website.

10.15.9. For Amber Alerts WITH vehicle information, operators should:

- Activate Special Alert in TIMS until alert is cancelled.

- Record and play 511 Floodgate until alert is cancelled.

- Activate Amber Alert message on DMS in all NCDOT Divisions until the Amber Alert is cancelled.

- AMBER ALERT | Description of Vehicle | License Plate Info

<div align="center">

AMBER ALERT
RED HONDA ACCORD
NC TAG: FHJ-6688

</div>

- Send DMS Alert Notification – Activation email

10.15.10. For Amber Alerts WITHOUT vehicle information, operators should:

- Activate Special Alert in TIMS until approved sources advise that alert is cancelled,

- Record and play 511 Floodgate until alert is cancelled.

- Activate Amber Alert message on DMS until alert is cancelled.

<div align="center">

AMBER ALERT
CALL 511
FOR INFO

</div>

- Operators will ensure the appropriate 511 Floodgate is playing BEFORE any DMS advising the public to call 511 is activated for any Alert.

- Send DMS Alert Notification – Activation email

10.15.11. County Alert: Operators will copy and paste the complete TIMS Alert (title and body) into the County Alert system, under the county where the incident was issued from. Copy and paste information from the linked Amber Alert into the County Alert. 511 Operators cannot open the link inside the Special Alert, so they must use the County Alert to reference the details.

- Call 511 to notify 511 Operators of an active alert in that county.

10.15.12. Amber Alert Cancellations: Amber Alerts remain active until approved sources advise STOC the alert has been cancelled.

10.15.13. If the media is reporting an alert is over, please contact NCDOT TSO Staff for direction.

10.15.14. For Amber Alert cancellations, operators should:

- Deactivate the alert message on any DMS activated for the alert and replace previously posted messages.

- Send a DMS Alert Notification - Cancellation email to advise of the alert cancellation.

- Time out the alert from TIMS.

- Remove the alert 511 Floodgate.

- Deactivate the County Alert and notify 511.

- Completed Amber Alert Checklists must be reviewed and properly filed by the shift supervisor at the conclusion of the alert.

10.16. BLUE ALERTS

10.16.1. Upon receiving information from approved sources, operators should initiate the appropriate Blue Alert response which includes but is not limited to:

- Activate Blue Alert in TIMS and the 511 Floodgate

- Activate Blue Alert message on appropriate DMS

- Coordinate with NCDOT personnel

- Initiate a County Alert in the issuing county (see 10.16.11).

10.16.2. Blue Alert 511 Floodgate: Operators should record the headline and script as a single 511 Floodgate.

10.16.3. 511 Floodgate Headline:

- Blue Alert Headline: "North Carolina Blue Alert issued for [TYPE OF VEHICLE] in [COUNTY PERSON WENT MISSING], in [CITY PERSON WENT MISSING]."

- For the Blue Alert 511 Floodgate headline use the following example:

"NORTH CAROLINA BLUE ALERT ISSUED FOR GOLD HYUNDAI SONATA IN NEW HANOVER COUNTY IN WILMINGTON"

10.16.4. 511 Floodgate Script:

- 511 Floodgate script of a Blue Alert should be comprised of the alert headline (as described above) and of information provided by approved sources about the incident. Full details provided by approved sources which should be recorded as part of the 511 Floodgate include but are not limited to:

  o Vehicle description (including make, model, color, and license plate)

  o Complete suspect information supplied by the issuing agency.

  o County where the incident is occurring

  o Instruction for motorists to call 911 or *HP if they have information about the situation. DO NOT include any 10-digit phone numbers in the 511 Floodgate.

  o For the Blue Alert 511 Floodgate script use the following example:

"Law Enforcement is looking for a suspect in the New Hanover County area travelling in a gold Hyundai Sonata with North Carolina License Plate CDE-4567. Please call 911 or *HP if you have seen a vehicle matching this description in the New Hanover County area."

10.16.5. 511 Floodgate Script Conclusion: Blue Alert 511 Floodgate scripts will end with the following statement.

"This concludes the Blue Alert information. For traffic information, please stay on the line. If you require no further assistance, you can disconnect this call now."

10.16.6. Blue Alert Cancellation Script: When a Blue Alert has been cancelled, operators should replace the 511 Floodgate with a new 511 Floodgate reflecting the cancellation. The cancellation script should remain running for one hour. If the message needs to be taken down for a higher priority incident, replace the message when the incident is over. Operators should use the following script:

"BLUE ALERT CANCELLED – The previously issued North Carolina Blue Alert for the [VEHICLE] in [COUNTY] has been cancelled. This concludes the Blue Alert information. For traffic information, please stay on the line. If you require no further assistance, you can disconnect this call now. Thank you."

10.16.7. Blue Alert TIMS Headline:

- Text should be centered, ALL CAPS, bold, and black in color.

- Headline should state, "North Carolina Blue Alert issued for [MISSING PERSON'S NAME] in [COUNTY PERSON WENT MISSING] in [CITY PERSON WENT MISSING]."

- For the Blue Alert TIMS headline use the following example:

*"**NORTH CAROLINA BLUE ALERT ISSUED FOR GOLD HYUNDAI SONOTA IN NEW HANOVER COUNTY IN WILMINGTON**"*

10.16.8. Blue Alert TIMS Body:

- Text should be centered, normal capitalization, and black in color.

- Body should include additional facts concerning the incident. Include any web link to Blue Alert information supplied by the issuing agency.

- For the Blue Alert TIMS Body, use the following example:

"Law Enforcement is looking for a suspect in the New Hanover County area travelling in a gold Hyundai Sonata with North Carolina License Plate CDE-456. Please call 911 or *HP if you have seen a vehicle matching this description in the New Hanover County area."

10.16.9. For Blue Alerts WITH vehicle information, operators should:

- Activate Special Alert in TIMS until alert is cancelled.

- Record and play 511 Floodgate until alert is cancelled.

- Activate Blue Alert message on DMS in all NCDOT Divisions until the Blue Alert is cancelled.

Last updated: 04.12.2023

- P1 SUSPECT AT LARGE | Description of Vehicle | License Plate Info
- P2 BLUE ALERT | Description of Vehicle | License Plate Info
- Example:

Panel 1	Panel 2
SUSPECT AT LARGE	BLUE ALERT
GOLD HYUNDAI	GOLD HYUNDAI
NC TAG: CDE-4567	NC TAG: CDE-4567

- Send DMS Alert Notification – Activation email

10.16.10. For Blue Alerts WITHOUT vehicle information, operators should:

- Activate Special Alert in TIMS until approved sources advise that alert is cancelled,
- Record and play 511 Floodgate until alert is cancelled.
- Activate Blue Alert message on DMS until alert is cancelled.

BLUE ALERT
SUSPECT AT LARGE
CALL 511 FOR INFO

- Operators will ensure the appropriate 511 Floodgate is playing BEFORE any DMS advising the public to call 511 is activated for any Alert.
- Send DMS Alert Notification – Activation email

10.16.11. County Alert: Operators will copy and paste the complete TIMS Alert (title and body) into the County Alert system, under the county where the incident was issued from. Type out all information in the Alert and do not use links in the County Alerts. 511 Operators cannot open the link inside the Special Alert, so they must use the County Alert to reference the details.

- Call 511 to notify 511 Operators of an active alert in that county.

10.16.12. Blue Alert Cancellations: Blue Alerts remain active until approved sources advise STOC that the alert has been cancelled.

10.16.13. If the media is reporting an alert is over, please contact NCDOT TSO Staff or the designated law enforcement contact for direction.

10.16.14. For Blue Alert cancellations, operators should:

- Deactivate the alert message on any DMS activated for the alert and replace previously posted messages.

- Send a DMS Alert Notification - Cancellation email to advise of the alert cancellation.

- Time out the alert from TIMS.

- Remove the alert 511 Floodgate.

- Deactivate the County Alert and notify 511.

- Completed Blue Alert Checklists must be reviewed and properly filed by the shift supervisor at the conclusion of the alert.

10.17. FUGITIVE ALERTS

10.17.1. Upon receiving information from approved sources, operators should initiate the appropriate Fugitive Alert response which includes but is not limited to:

- Initiate the Fugitive Alert checklist.

- Compile the identification information of the requestor and relay the following information to the TSO staff for confirmation:

  o Requestor Identity

  o NCIC or DCI Case Number

  o SHP Troop C (Ref Fugitive Alert Checklist)

  o If SHP Troop C cannot verify. Contact ISSAC (Ref Fugitive Alert Checklist)

- Contact the TSO Staff in order (See Appendix N), until confirmation is received:

- Determine the affected NCDOT division and refer to the Z: drive → 511 Operators → Current Alert Checklists →Alert DMS Activation Matrix to coordinate with the division that requires DMS activation for the alert (see 10.13.1).

- Activate Fugitive Alert in TIMS and the 511 Floodgate

- Activate Fugitive Alert message on appropriate DMS

- Coordinate with Law Enforcement POC to:

  o Determine time of alert activation

  o Establish LEO contact name and phone number

- Send the DMS Alert Notification – Activation Email

- Initiate a County Alert in the issuing county. (see 10.17.12)

- Send a Mini-Update upon initiation and cancellation of a Fugitive Alert.

10.17.2. The operator will call and check for updates with the designated Law Enforcement POC every four hours until the alert is cancelled.

10.17.3. Fugitive Alert 511 Floodgate: Operators should record the headline and script as a single 511 Floodgate.

10.17.4. 511 Floodgate Headline:

- Fugitive Alert Headline: "North Carolina Fugitive Alert issued for [TYPE OF VEHICLE] in [COUNTY]"

- For the Fugitive Alert 511 Floodgate headline use the following example:

"NORTH CAROLINA FUGITIVE ALERT ISSUED FOR BLUE FORD FOCUS IN GUILFORD COUNTY"

10.17.5. 511 Floodgate Script:

- 511 Floodgate script of a Fugitive Alert should be comprised of the alert headline (as described above) and of information provided by approved sources about the incident. Full details provided by approved sources which should be recorded as part of the 511 Floodgate include but are not limited to:

    o Vehicle description (including make, model, color, and license plate)

    o County where the incident is occurring

    o Instruction for motorists to call 911 or *HP if they have information about the situation. <u>DO NOT include any 10-digit phone numbers in the 511 Floodgate.</u>

    o For the Fugitive Alert 511 Floodgate script use the following example:

*"Law Enforcement is looking for a suspect in the Guilford County area travelling in a blue Ford focus with California License Plate 2RAP337. Please call 911 or *HP if you have seen a vehicle matching this description in the Guilford County area."*

10.17.6. Floodgate Script Conclusion: Fugitive Alert 511 Floodgate scripts will end with the following statement.

"This concludes the Fugitive Alert information. For traffic information, please stay on the line. If you require no further assistance, you can disconnect this call now."

10.17.7. Fugitive Alert Cancellation Script: When a Fugitive Alert has been cancelled, operators should replace the 511 Floodgate with a new 511 Floodgate reflecting the cancellation. The cancellation script should remain running for one hour. If the message needs to be taken down for a higher priority incident, replace the message when the incident is over. Operators should use the following script:

"FUGITIVE ALERT CANCELLED – The previously issued North Carolina Fugitive Alert for the [VEHICLE] in [COUNTY] has been cancelled. This concludes the Fugitive Alert information. For traffic information, please stay on the line. If you require no further assistance, you can disconnect this call now. Thank you."

10.17.8. Fugitive Alert TIMS Headline:

- Text should be centered, ALL CAPS, bold, and black in color.

- Headline should state, "North Carolina Fugitive Alert issued for [VEHICLE] in [COUNTY PERSON WENT MISSING]."

- For the Fugitive Alert TIMS headline use the following example:

"NORTH CAROLINA FUGITIVE ALERT ISSUED FOR BLUE FORD FOCUS IN GUILFORD COUNTY IN WILMINGTON"

10.17.9. Fugitive Alert TIMS Body:

- Text should be centered, normal capitalization, and black in color.

- Body should include additional facts concerning the incident. For the Fugitive Alert TIMS Body, use the following example:

*"Law Enforcement is looking for a suspect in the Guilford County area travelling in a blue Ford Focus with California License Plate 2RAP337. Please call 911 or *HP if you have seen a vehicle matching this description in the Guilford County area."*

10.17.10. For Fugitive Alerts WITH vehicle information, operators should:

- Activate Special Alert in TIMS until alert is cancelled.

- Record and play 511 Floodgate until alert is cancelled.

- Activate Fugitive Alert message on DMS until alert is cancelled.
  - P1 SUSPECT AT LARGE | description of Vehicle | License Plate Info
  - P2 FUGITIVE ALERT | Description of Vehicle | License Plate Info

Panel 1	Panel 2
SUSPECT AT LARGE	FUGITIVE ALERT
BLUE FORD FOCUS	BLUE FORD FOCUS
CA TAG: 2RAP337	CA TAG: 2RAP337

- Send DMS Alert Notification – Activation email

- Send a Mini-Update upon initiation and cancellation of a Fugitive Alert.

10.17.11. For Fugitive Alerts WITHOUT vehicle information, operators should:

- Activate Special Alert in TIMS until approved sources advise that alert is cancelled,

- Record and play 511 Floodgate until alert is cancelled.

- Activate Fugitive Alert message on DMS in the NCDOT Division where the incident is occurring until the Fugitive Alert is cancelled.

FUGITIVE ALERT
SUSPECT AT LARGE
CALL 511 FOR INFO

- Operators will ensure the appropriate 511 Floodgate is playing BEFORE any DMS advising the public to call 511 is activated for any Alert.

- Send DMS Alert Notification – Activation email

- Send a Mini-Update upon initiation and cancellation of a Fugitive Alert.

10.17.12. County Alert: Operators will copy and paste the complete TIMS Alert (title and body) into the County Alert system, under the county where the incident was issued from. Type out all information in the Alert and do not use links in the County Alerts. 511 Operators cannot open the link inside the Special Alert, so they must use the County Alert to reference the details.

- Call 511 to notify 511 Operators of an active alert in that county.

10.17.13. Fugitive Alert Cancellations: Fugitive Alerts remain active until the Law Enforcement POC advises STOC that the alert has been cancelled.

10.17.14. If the media is reporting an alert is over, please contact NCDOT TSO Staff for direction.

10.17.15. For Fugitive Alert cancellations, operators should:

- Capture the time of cancellation and the total time of alert activation

- Deactivate the alert message on any DMS activated for the alert and replace previously posted messages.

- Remove the alert 511 Floodgate.

- Time out the alert from TIMS.

- Contact NCDOT TSO Staff to notify them of the cancellation

- Send a DMS Alert Notification - Cancellation email to advise of the alert cancellation.

- Send a Mini-Update upon cancellation of a Fugitive Alert.

- Deactivate the County Alert and notify 511.

- Completed Fugitive Alert Checklists must be reviewed and properly filed by the shift supervisor at the conclusion of the alert.

10.18. SILVER ALERTS

10.18.1. Silver Alerts DO NOT require a Special Alert in TIMS or a 511 Floodgate, (exception see 10.13.4 and 10.19).

- Operators will copy and paste the complete Silver Alert information, supplied by the issuing agency into the County Alert system, under the county where the incident was issued from.

- Call 511 to notify 511 Operators of an active alert in that county.

10.18.2. Upon receiving information from approved sources, operators should determine if the Silver Alert is WITH or WITHOUT vehicle.

10.18.3. For Silver Alerts WITH vehicle information, operators should:

- Determine the affected NCDOT division and refer to the Z: drive → 511 Operators → Current Alert Checklists → Alert DMS Activation Matrix to coordinate with the division that requires DMS activation for the alert (see 10.13.1).
  - Activate Silver Alert message on DMS in the affected division
  - Operators should activate Silver Alert message on DMS no longer than 24 hours, or until alert cancellation, whichever occurs first.
- MISSING PERSON | Description of Vehicle | License Plate Info

MISSING PERSON
GREEN TOYOTA CAMRY
NC TAG: LMN-9876

- Send DMS Alert Notification – Activation Email

10.18.4. For Silver Alerts WITHOUT vehicle information, operators should:

- File the Silver Alert email in the STOC Inbox → NCCMP folder
- Operators should NOT activate DMS messages for Silver Alerts WITHOUT vehicle information (exception see 10.19).

10.18.5. The NC Center for Missing Persons or law enforcement may request to use DMS for a Silver Alert without vehicle information in unique situations in which the use of the signs would be actionable. If a request of this type is received the STOC Supervisor should refer to Section 10.19 for direction.

10.18.6. Silver Alert Cancellations: Silver Alerts remain active, officially, until the approved source advises the Silver Alert has been cancelled.

- NOTE: DMS activated for a Silver Alert WITH vehicle will remain activated for 24 hours, or until the Silver Alert is cancelled, whichever occurs first.
- Send DMS Alert Notification – Cancellation Email when DMS have been deactivated.

10.18.7. If the media is reporting an alert is over, please contact NCDOT TSO Staff for direction.

10.18.8. For Silver Alert cancellations, operators should:

- Deactivate the alert message on any DMS activated for the alert and replace previously posted messages.
- Send a DMS Alert Notification - Cancellation email when the DMS are deactivated
- Deactivate the County Alert and notify 511.
- Completed Silver Alert Checklists must be reviewed and properly filed by the shift supervisor at the conclusion of the alert.

10.19. SILVER ALERT EXCEPTION FOR DMS

10.19.1. In rare cases, approved sources (see 10.12.1) may request a Silver Alert without Vehicle Information near a major roadway to be posted on DMS and include a 511 Floodgate for the

alert. These would be exception cases when there are indications that the missing person may be near an interstate or road equipped with operational DMS, and approved sources request their use.

10.19.2. Operators will ensure the appropriate 511 Floodgate is playing BEFORE any DMS advising the public to call 511 is activated for any Alert .

10.19.3. Only NCDOT TSO Staff can authorize the use of DMS in these cases. If law enforcement contacts the STOC directly to request use of DMS for this purpose, STOC is to direct the law enforcement agency to the approved source that issued the original Silver Alert, and consult with TSO Staff for permission to activate DMS

10.19.4. When directed to initiate this type of Silver Alert, operators should:

- Activate Silver Alert Checklist

- Assess the area where the person was last seen and select the major roadway and exit number closest to that area. Select the closest cross street if exits are not numbered. (e.g., "Brier Creek area" equates to "I-540 Exit 4")

- Call the TSO Staff (See Appendix N), in order, until someone is reached.

- Notify NCDOT TSO Staff of the Alert and ask direction for modified or additional measures. Share with TSO Staff the following:

    o The major roadway and exit closest to the "last seen" location

    o Proximity of DMS to the assessed area

- When the exception is approved, the TSO Staff will determine the DMS message to activate. If the TSO Staff does not dictate a specific message, the following message will be used <u>in the Division where the person was last seen</u>.

Panel 1	Panel 2
MISSING PERSON	MISSING PERSON
LAST SEEN NEAR	CALL 511
ROAD / EXIT #	FOR INFO

- Send DMS Alert Notification – Activation Email

- Send a Mini-Update upon initiation and cancellation of a Silver Alert Exception for DMS

10.19.5. Silver Alert 511 Floodgate: Operators should record the headline and script as a single 511 Floodgate.

10.19.6. 511 Floodgate Headline:

- Silver Alert Headline: "North Carolina Silver Alert issued for [MISSING PERSON'S NAME] in [COUNTY PERSON WENT MISSING], in [CITY PERSON WENT MISSING]."

Last updated: 04.12.2023

- For the Silver Alert 511 Floodgate headline use the following example:

"NORTH CAROLINA SILVER ALERT ISSUED FOR JOHN SMITH IN WAKE COUNTY IN RALEIGH"

10.19.7. 511 Floodgate Script:

- 511 Floodgate script of a Silver Alert should be comprised of the alert headline (as described above) and of information provided by approved sources about the missing person. <u>Be sure to include the statement declaring the individual was "last seen near…"</u> Full details provided by approved sources which should be recorded as part of the 511 Floodgate include but are not limited to:

  - Name, age, and description of the missing person

  - Where the missing person was last seen and/or might be headed

  - Instruction for motorists to call 911 or *HP if they have information about the situation. <u>DO NOT include any 10-digit phone numbers in the 511 Floodgate.</u>

  - For the Silver Alert 511 Floodgate script use the following example:

"A Silver Alert has been issued for Bobby Lopez, a twenty- two-year-old Hispanic male, approximately five feet eight inches feet tall, weighing 185 pounds. He was last seen wearing black jeans, a red and white striped shirt, and blue sneakers.

Mr. Lopez was last seen near I-540 Exit 4, US 70/Glenwood Avenue.

*If you have any information regarding Mr. Lopez, please call 911 or *HP."*

10.19.8. 511 Floodgate Script Conclusion: Silver Alert 511 Floodgate scripts will end with the following statement.

"This concludes the Silver Alert information. For traffic information, please stay on the line. If you require no further assistance, you can disconnect this call now."

10.19.9. Silver Alert Cancellation Script: When a Silver Alert has been cancelled, operators should replace the 511 Floodgate with a new 511 Floodgate reflecting the cancellation. The cancellation script should remain running for one hour. If the message needs to be taken down for a higher priority incident, replace the message when the incident is over. Operators should use the following script:

"SILVER ALERT CANCELLED – The previously issued North Carolina Silver Alert for [NAME] has been cancelled. This concludes the Silver Alert information. For traffic information, please stay on the line. If you require no further assistance, you can disconnect this call now. Thank you."

10.19.10. Silver Alert Cancellations: Silver Alerts remain active, officially, until the approved source advises the Silver Alert has been cancelled.

10.19.11. If the media is reporting an alert is over, please contact NCDOT TSO Staff for direction.

10.19.12. For Silver Alert cancellations, operators should:

- Deactivate the alert message on any DMS activated for the alert and replace previously posted messages.

- Send a DMS Alert Notification - Cancellation email when the DMS are deactivated

- Send a Mini-Update upon cancellation of a Silver Alert Exception for DMS

- Completed Silver Alert Checklists must be reviewed and properly filed by the shift supervisor at the conclusion of the alert.

11. **NCTA SUPPORT AND TURNPIKE OPERATIONS**

11.1. GENERAL GUIDELINES FOR STOC SUPPORT OF NCTA

11.1.1. NCTA's TMC is staffed and operated by NCTA operators from 6AM to 10PM, Monday-Friday (excluding holidays). When NCTA operators are on-duty, Turnpike operations will be primarily handled by them. However, STOC operators are expected to provide support which includes but is not limited to:

- Monitoring incidents and travel conditions on tolled roadways,

- Advising NCTA operators of incidents/requests affecting tolled roadways, and

- Coordinating with NCTA operators in response to incidents affecting tolled roadways.

11.1.2. NOTE: See the following sections for additional guidelines related to NCTA support:

- 1.4 – Operator Roles & Teamwork
- 8 – VIPER Talkgroups: Division 5 and Division 10
- 8.18 – IMAP Incident Priorities

11.1.3. Outside of NCTA's operating hours (i.e., 3rd Shift, holidays, and weekends), STOC will be primarily responsible for maintaining Turnpike operations which includes but is not limited to:

- Traffic and incident management for tolled facilities,

- Monitoring NCTA ITS devices and toll equipment and reporting malfunctions,

- Responding to Reverse Vehicle Notifications (RVN), and

- Documenting activity and sending Shift Passovers to NCTA TMC personnel.

11.1.4. For situations that this chapter does not address, operators will adhere to the policies, procedures, and guidance provided in the other chapters of this document.

11.2. TRAFFIC AND INCIDENT MANAGEMENT FOR TOLLED FACILITIES

11.2.1. NCTA personnel that serve as STOC's primary POCs for incident management and other guidance related to Turnpike operations can be found in Appendix N.

11.2.2. Operators should call the NCTA POCs above immediately if any of the following affect the Triangle or Monroe Expressways:

- Incidents causing significant congestion (more than 1 mile of queue),

- Incidents involving a fatality,

- Incidents requiring traffic to be redirected either off or onto the tolled facility,

- Acts of terror,

- Severe weather that has impacted lanes of travel, or

- Damage to toll equipment/facilities.

11.2.3. For crashes occurring on a tolled facility, operators should contact the responding LE agency and request their report number for the crash. Triangle Expressway is in SHP Troop C

jurisdiction, while Monroe Expressway is in SHP Troop H Jurisdiction. The report numbers can also be found in the live SHP CAD Feed during an incident. Operators should include this report number along with a description of the crash in the NCTA Access Log.

11.2.4. For removal of debris, litter, animal carcasses, etc. that is NON-emergency in nature (i.e., not in a travel lane), operators should contact NCTA POCs for guidance. (See Appendix N).

11.2.5. If a detour needs to be implemented on the Triangle Expressway, operators should:

- Contact an NCTA POC (See Appendix N) prior to posting DMS messages.
- Use the "Detour Route Packet" for the applicable facility to plan and implement an approved detour.
    - A copy of this guide can be found on the z: drive: Z:/NCTA Operators/Triangle or Monroe Expressway.

11.3. TIMS INCIDENTS FOR TOLLED FACILITIES

11.3.1. When creating a TIMS incident for an incident that occurs on a tolled route, operators should follow all other guidelines for TIMS incident entry as well as the following:

- For incidents occurring on the NC 540 portion, enter as "NC 540 TOLL"
    - Enter "Triangle Expressway" as the common name for the route.
- For incidents occurring on the NC 885 portion, enter as "NC 885 TOLL"
    - Enter "Triangle Expressway" as the common name of the route.
- For incidents occurring on the Monroe Expressway enter "US 74 TOLL"
    - Enter "Monroe Expressway" as the common name for the route.

11.4. NCTA CCTV AND OTHER CAMERAS

11.4.1. Traffic cameras (i.e., CCTV) are accessible to STOC operators and are controlled in the same way that STOC uses other CCTV. Operators must adhere to the same guidelines as described in section 4.8 and section 4.9 when using NCTA traffic cameras.

11.4.2. Other NCTA cameras include the following which are controlled via the software platforms Toll Host for Triangle Expressway (see 11.4.5), and Transportal for Monroe Expressway (see 11.4.6)

- Axis Security Camera System – used to monitor the facilities housing toll collection equipment.
- Digital Video Audit System (DVAS) – mounted to the overhead gantries at each toll zone and used to monitor the roadway beneath and immediately around a toll zone.

11.4.3. NCTA Camera Tours are an important part of detecting potential incidents, monitoring maintenance requirements, and maintaining NCTA device capabilities.

- On normal weekdays (Mon-Fri), NCTA operators on 1st and 2nd Shift are responsible for performing a camera tour at least twice per hour.

- STOC operators during 3rd Shift, holidays, and weekends are responsible for performing a camera tour at least twice per shift. The first camera tour should be completed within the first hour of the operator's shift. The second camera tour should be completed around the midpoint of the operator's shift.

11.4.4. To perform a camera tour properly, operators should:

- View all CCTV and Toll Zone cameras on the workstation monitor.

    o (Triangle Expressway Only) An automatic tour of CCTV cameras can be played in Dynac so the screen will switch from one traffic camera to another and will do so continuously such that all NCTA traffic cameras are displayed.

    o In VideoPro, each CCTV camera would be selected chronologically, enter "1" or "2" in the preset window to automatically pan the camera to each direction,

        ▪ If any incidents or congestion are visible, zoom in and investigate. Using Activu, post the view of the incident on one of the top monitors in Operational Group 3 so that others in operations can view the event more easily.

    o Record the completion of the camera tour and any relevant comments in the Access NCTA Log.

11.4.5. To use Toll Host to view and control Triangle Expressway Toll Zone cameras, operators should:

- Open the Toll Host software from Google Chrome on the Kapsch computer at a NCTA workstation.

- Login using provided credentials.

- Select "☰" in the upper left of the screen,

- Select "ROMS" and, from the drop-down list, select "Live Video" and

- Click on the desired toll zone location and camera from the drop-down lists in the upper right of the screen.

- NOTE: Only 4 camera views can be selected at a time. To view another camera view, deselect all and reselect the new camera views.

11.4.6. To use Transportal to view Monroe Expressway toll zone cameras operators should:

- Open the Transportal software by from a browser from an NCTA workstation at the MRTMC or from the laptops at the NCTA workstation at the STOC,

- Login using provided credentials,

- Select a Toll Zone symbol on the map to open the Site Summary,

- Click on the camera links beneath Live Video in the Site Summary to view each camera.
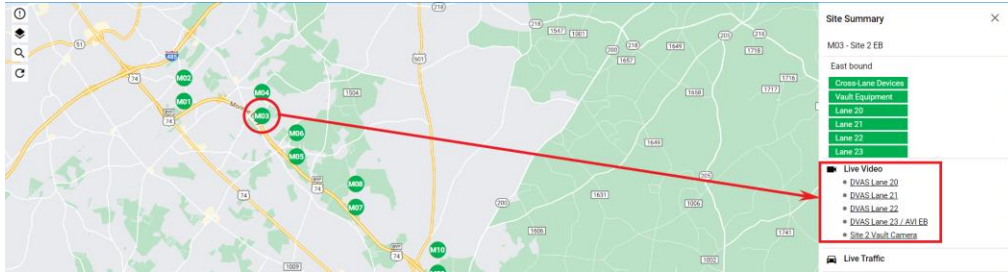
11.5. REQUESTS FOR RECORDED NCTA VIDEO OR IMAGES

11.5.1. NCTA toll zone cameras are continuously recording video and images. These recordings may be requested by other agencies or members of the public. Operators and NCTA must abide by the information sharing restrictions stated in the North Carolina General Statute 136-89.213 when processing these requests.

11.5.2. If a request for information is received, operators should:

- Record the details of the request including the following:

    o Requesting party's name and agency (if applicable),

    o Phone number and email address of requesting party,

    o Description of information that is being requested including details that may help locate the information such as time and date, and

    o Reason for the request (i.e., how requesting party intends to use the information).

- Inform the requesting party of the following:

    o Their request will be relayed to an NCTA supervisor who will be in contact with them,

    o They will need to obtain a proper court order and should provide the court order to the NCTA supervisor when the supervisor contacts them, and

    o Any questions that they have can be answered by the NCTA supervisor.

    o NOTE: DO NOT provide contact information for the supervisor or any other member of NCDOT or NCTA.

- Compile the details of the request in an email and send them to the NCTA TMC supervisor.

- NOTE: If a member of law enforcement requests recorded video or images in person, operators must direct them to the NCTA TMC supervisor.

11.6. NCTA LOG AND SHIFT PASSOVER

11.6.1. Like the STOC Logs described in Section 15, NCTA Logs must contain accurate entries detailing any incident, equipment issues, and operator activity related to NCTA operations for that shift.

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- The NCTA Log is used for entries related to all tolled facilities.
- Columns that are specific to the NCTA Log are described below:
  - WWVD – Wrong Way Vehicle Detection
  - MOMS – Management of Maintenance System, to be used when ITS maintenance tickets are submitted.
  - MOMS # – The ITS maintenance ticket from Toll Host (Triangle Expressway) or Transportal (Monroe Expressway).
  - NCTA NTFD – The time that the NCTA POC was notified of an incident or device failure. This field to be filled out for incidents that meet the requirement for notification of NCTA.

11.6.2. For each shift that STOC and MRTMC supports Turnpike operations for the NCTA, a Shift Passover must be completed and emailed to NCTA and STOC management personnel before the end of the shift. To do so, operators should:

- Assure all tasks are completed and all sections have been properly filled out. Sections include the following:

  - Incidents

  - Work Zone Events

    - Completed Work Zones

    - Ongoing Work Zone Events

    - Upcoming Work Zone Events

  - Camera Tours

  - Maintenance Tickets

  - Coordination/Action Items

- Review the completed Shift Passover with a supervisor or NCTA POC and receive approval to send the summary.

- Once approved, open a new email message from the NCTA_TMC or NCTA_MRTMC email account (1st and 2nd Shifts) or STOC email account (3rd and Weekend Shifts) and attach the Shift Passover for your shift,

- Enter an appropriate subject in the Subject line of the email as shown below:

  - "Triangle Expressway Shift Passover – [Weekday], [Month] [DD], [YYYY] – [H:MM AM/PM]"

    - Example: "Triangle Expressway Shift Passover - Thursday, September 22, 2022 - 5:45 AM"

  - "Monroe Expressway Shift Passover – [Weekday], [Month] [DD], [YYYY] – [H:MM AM/PM]"
    - Example: "Monroe Expressway Shift Passover - Thursday, September 22, 2022 - 5:45 AM"

- Address the email to the "NCTA TriEx Shift Passover" or NCTA MonEx Shift Passover" and click "Send."

11.7. NCTA ITS DEVICE MALFUNCTIONS

11.7.1. If an ITS device, Turnpike workstation computer, or tolling equipment malfunctions, operators should:

- Check the Duke Progress Energy Outage Map (http://outagemap.duke-energy.com/ncsc/default.html) to determine if the malfunction is related to a known power outage.

- Call the applicable NCTA POC (see Appendix N) to report the malfunction. The Monroe Expressway On-Call Technician schedule is emailed every two weeks. The Triangle Expressway On-Call Technician schedule can be found in Toll Host under ROMS/Technician Schedule.

- Enter a maintenance ticket for the malfunction (see 11.7.2 of 11.7.3 for instructions).

- Record the details of the malfunction and any other relevant details (e.g., steps taken to verify and/or report the malfunction, ticket #, etc.) in the NCTA Log and in the Shift Passover.

11.7.2. To use the Toll Host platform to view and submit a maintenance ticket for Triangle Expressway devices (MVD, DMS, and CCTV) operators should:

- Open the Toll Host from a browser on the Kapsch computer at a NCTA workstation,

- Login using provided credentials,

- Select "☰" in the upper left of the screen,

- Select "ROMS" and, from the drop-down list, select "Service Issues" and,

- Click on "Create Ticket" in the top-right of the window and fill in the appropriate information, example below.

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11.7.3. To use Transportal to submit a maintenance ticket for Monroe Expressway devices (VDS, DMS, and CCTV) operators should:

- Open Transportal by from a browser from an NCTA workstation at the MRTMC or from the laptops at the NCTA workstation at the STOC,

- Login using provided credentials.

- Select "☰" in the upper left of the screen,

- Under Work Orders select "Manage Work Order" (1),

- Click the "Add Work Order" button (2) in the top-right of the window and fill in the appropriate information, example below
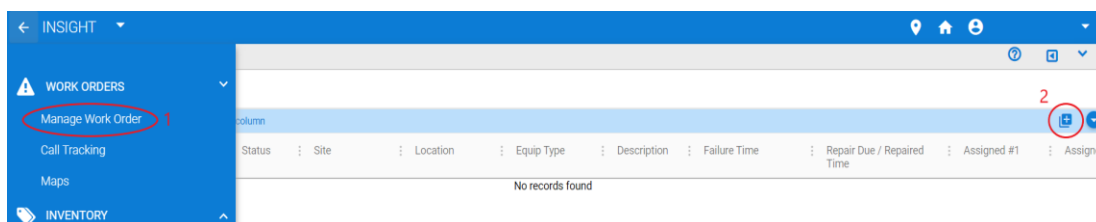
- Submit the ticket by clicking "Save".

11.8. REVERSE VEHICLE NOTIFICATION (RVN)

11.8.1. Reverse Vehicle Notification (RVN) refers to the process of responding to system-generated notifications that are automatically sent to STOC and/or MRTMC operators when a vehicle has been detected traveling in the wrong direction through a Toll Zone. Both Triangle Expressway and Monroe Expressway have a Reverse Vehicle Notification systems. There is also a BlinkLink reverse vehicle notification site on Triangle Expressway on NC-885 Exit 2 to Davis Drive.

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11.8.2. Once the RVN email is received, operators must act quickly to initiate an effective response. The RVN response process that operators should follow is described below:

- Review the information in the RVN email to determine where the vehicle was detected and which direction it is traveling.

- Use NCTA's CCTV cameras and Toll Zone cameras to obtain a visual of the vehicle, starting at the initial Toll Zone where the vehicle was detected.

- If the RVN was caused by maintenance personnel, if the vehicle immediately self-corrected, or if a wrong way vehicle cannot be located, SHP does not need to be called.

- If an actual wrong way vehicle is identified, operators should call SHP to advise them of where it was detected, and what direction it may be traveling.
    - Post DMS in the area with the message "WRONG WAY VEHICLE | DETECTED IN AREA | USE CAUTION"

- Continue to use CCTV cameras further away (in the direction the vehicle is traveling) and work back towards the Toll Zone where the vehicle was initially detected.

- If possible, another operator should perform this scan while SHP is being notified.

- Once the cause of the RVN is determined and any incident management activities are completed, operators should take a screenshot of the vehicle that caused the RVN.

- From the NCTA_TMC email account, locate the initial RVN email and select the "Forward" option.

- Attach the screenshot of the wrong way vehicle to the forwarded email.

- Enter a brief statement in the Body of the email:
    - Describe the wrong way vehicle (Contractor, Self-Corrected, False Alert, Actual – Contacted SHP)
    - The operator sending the email should include their name above the signature.

- Address the email to the "TriEx RVN" or "MonEx RVN" group and click "Send".

11.8.3. For reverse vehicles identified on the Triangle Expressway, an email with the subject, "Alert – Wrong Way Vehicle Detected" will be sent to the NCTA_TMC from the address alertnotify@ncta.roms.us .

- Provide incident information like the example below:
    - Urgent: Vehicle detected going the wrong way through the plaza.
    - Plaza: T-18 – NC 540 Southbound, Morrisville Parkway to Green Level West Rd
    - Lane: 3
    - Time: 01-15-2023 07:12:12 PM EST

- Once the email is received, use the Toll Host platform to follow the steps below to identify the reverse vehicle. For details on RVN response, see section 11.8.2.
  - Open and log into Toll Host as described in the previous sections,
  - Select "☰" in the upper left of the screen and then select "Lane Historic View"
  - Within the Input Parameter window fill in the details of the RVN including date, time, and toll zone location. Click Submit.

- Click on each resulting transaction that matches the time of the event to view video. You may need to click the arrows in the video window to go forward or backward frames.
- If the Entry camera was selected in the input parameters, identify the vehicle going the wrong direction as the vehicle exiting the video frame and vice versa.
- Pause the video so that the majority of vehicle driving in the wrong direction is visible,
- Use the Snipping Tool to capture, copy, and then paste an image of the RVN for the email response.

11.8.4. For reverse vehicles identified on Monroe Expressway, an email with the subject, "Insight System Alert: 10270524 – ORT IVIS Reverse Vehicle" will be sent to the NCTA_TMC and STOC inbox from the address nctamoms@transcore.com .

- Provide incident information like the example below:
  - Site 1 EB
  - Lane 10
  - Event Code 10270524 – ORT IVIS Reverse Vehicle
  - At: 12/19/2022 11:03:37 AM EST
- Once the email is received, use the Client Alert Utility to follow the steps below to identify the reverse vehicle. For details on RVN response, see section 11.8.2.

- Check that the Monroe Expressway laptop at the STOC is connected to the internet and through Global Protect VPN (vpn.nctartcs.net).
- If the Client Utility Alert window is not open, click on the icon from the taskbar and then from the hidden icons (1),
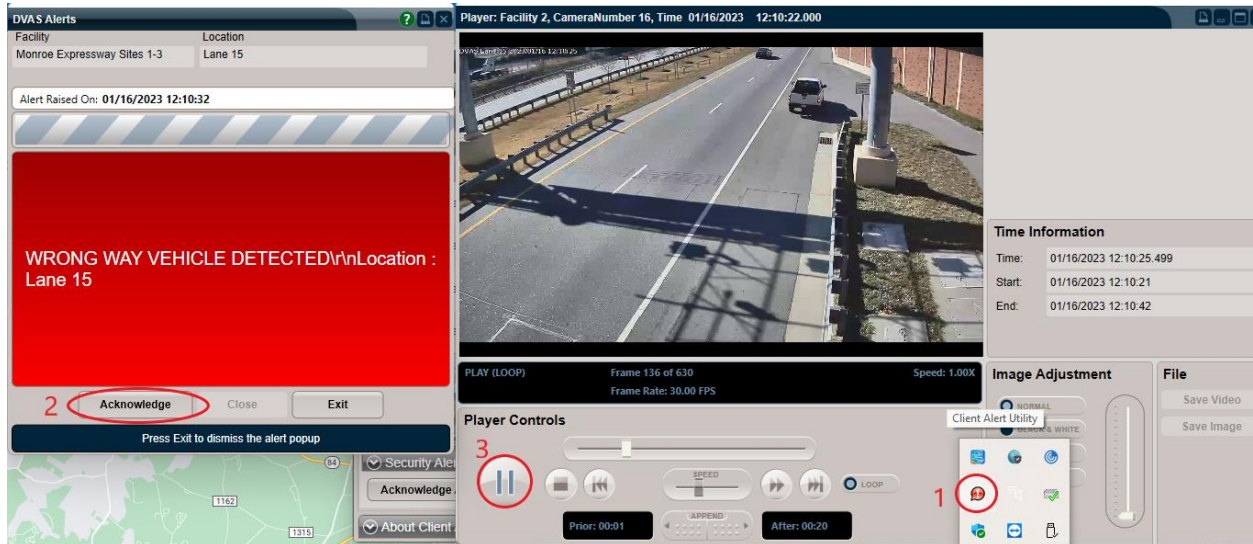
- If the Client Alert Utility does not automatically show the alert than right click on the corresponding event to open the alert and video player window,
- Acknowledge the alert from the alert window (2),
- Pause (3) the video so that the majority of vehicle driving in the wrong direction is visible,
- Use the Snipping Tool to capture, copy, and then paste an image of the RVN for the email response.

11.8.5. For reverse vehicles identified by BlinkLink, an email with the subject, "BLINKLINK ALERT - Wrong Way Confirmation" will be sent to the NCTA_TMC and STOC inbox from BlinkLink@blinklink.net that provides information like the example below:

- Provide incident information like the example below:
    - Customer: North Carolina Department of Transportation
    - System Details: NC-147 NB @ Davis Drive
    - Asset Name: Camera 2 - Confirmation Camera
    - Alert Time: 2022-10-17T23:12:10Z
- Once the email is received, open the attached images, and follow the steps below to identify the reverse vehicle and respond to the alert.
    - Find the attached image that best shows the reversing vehicle. Refer to 11.8.2 for the appropriate response steps.
    - Click on the first link in the alert email to navigate to the alert in blinklink.net.

- Log in using the credentials below:
    - UN: NCTA_TMC@ncot.gov
    - PW: Welcome123
- View the video in BlinkLink, select the appropriate Alert Resolution, write a note with further description, and hit "Save."

11.9. TOLL ROAD DAILY TRAFFIC REPORTS

11.9.1 During the weekdays on 1st shift the NCTA operator updates the MVD (Triangle Expressway) and VDS (Monroe Expressway) Reports. These reports are created for the purpose of tracking daily traffic volume and identifying device issues. Both reports involve pulling a summary of the previous day's traffic and transaction data. Further detailed steps can be found in the Z drive.

- Triangle Expressway MVD Report How-To Guide can be found at z:\NCTA\Operators\Triangle Expressway\MVD Tables\
    - Have the report reviewed by NCTA representative or supervisor before sending to "MVD Tables List" from the NCTA_TMC mailbox.
- Monroe Expressway VDS data is automatically pulled while connected to the DOT network. Monroe Expressway transaction data is automatically pulled and sent as an attachment in an email to NCTA_MRTMC@ncdot.gov every morning.
    - Email resulting VDS data file to "Monroe Expressway Group" from the STOC mailbox.

12. RAMP METERS

12.1. RAMP METER OPERATIONAL LOCATIONS

12.1.1. Current Ramp Meter operations consist of four entrance ramps to I-540 West where ramp signals and hardware are installed; a larger Ramp Meter Zone encompassing the ramps and mainline roadway where ramp metering will have an effect; and the STOC where system monitoring and incident management takes place.

- The specific entrance ramp locations are:
    - Exit 14, Falls of Neuse Road to I-540 West
    - Exit 11, Six Forks Road to I-540 West
    - Exit 9, Creedmoor Road (NC 50) to I-540 West
    - Exit 7, Leesville Road to I-540 West
- The Ramp Meter Zone begins where Gresham Lake Road passes under I-540 West and extends to Exit 4, I-540 to Glenwood Ave (US 70) West.

12.2. HOURS OF OPERATION

12.2.1. Ramp Meter monitoring operations will be conducted Monday – Friday from 6:00 AM – 9:00 AM.

- Decisions affecting ramp meter signal operations may require lengthy response times (e.g., shutdown for adverse weather, or calling signal technicians). Operator should expect and plan for these delays.
- Do not activate ramp meters when schools are not in operation.

12.2.2. Ramp Meter signals are scheduled to be activated:

- Monday – Thursday from 7:00 AM – 9:00 AM
- Friday from 6:30 AM – 8:30 AM

12.2.3. On select NCDOT holidays, Ramp Meter signals are scheduled NOT to activate. No action is required by STOC operators on these days:

- New Year's Day
- Martin Luther King, Jr. Day
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Day after Thanksgiving
- Christmas Eve

- Christmas Day

- New Year's Eve

12.3. RAMP METER PHONE RESPONSE MATRIX

12.3.1. During Ramp Meter operations the operator may encounter a variety of situations involving signal or system issues, traffic incidents, and adverse weather. Use the following phone response matrix to deal with these situations. The matrix is a quick reference for contacting individuals to ensure a timely response. Depending on the situation, additional contact requirements may be necessary, such as emails. These additional requirements are defined in the body of this SOP.

RAMP METER PHONE RESPONSE MATRIX					
Comm. Failure	On-Call Signal Tech*	If no response then call	Atkins Senior Traffic Engineer*	If no response then call	Control Tech*
Signal Malfunction – Lights On but Not Working Properly	On-Call Signal Tech*	If no response then call	Atkins Senior Traffic Engineer*	If no response then call	Control Tech*
Signal Malfunction – No Lights – Local power outage	Atkins Senior Traffic Engineer*	If no response then call	NCDOT Staff *	and	STOC Operations Manager*
Signal Malfunction – No Lights – No power outage	On-Call Signal Tech*	and	Atkins Senior Traffic Engineer*	If no response then call	Control Tech*
Signal Damage	On-Call Signal Tech*	and	Atkins Senior Traffic Engineer*	If no response then call	Control Tech*

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System Issue	On-Call Signal Tech*	and	Atkins Senior Traffic Engineer*	If no response then call	Control Tech*
Two simultaneous incidents w/ injury (PI) in Ramp Meter Zone	Atkins Senior Traffic Engineer*	If no response then call	NCDOT Staff *	and	STOC Operations Manager*
Incident on a metered ramp	Atkins Senior Traffic Engineer*	If no response then call	NCDOT Staff *	and	STOC Operations Manager*
Adverse Weather – requiring deactivation of any ramp signals	NCDOT Staff * permission required	and	Atkins Senior Traffic Engineer*	and	STOC Operations Manager*
Anytime safety dictates any ramp signals should be deactivated	NCDOT Staff * permission required	and	Atkins Senior Traffic Engineer*	and	STOC Operations Manager*
*See Appendix N					

12.4. STARTUP PROCESS

12.4.1. The Ramp Meter system uses the program MAXVIEW to activate, deactivate, and monitor ramp metering operations.

- Sign into MAXVIEW at http://34.235.176.163/maxview/ This program can only be opened using Internet Explorer.

12.4.2. Display all four ramp signal windows. To do this, click on "Favorite Devices – 4 Favorite Devices" near the bottom of the initial screen.

12.4.3. Check for any active alarms.

- If there are any active alarms, a blue alert bar may appear at the top of the screen just below the menu bar.

- Click on the blue alert bar to bring up the list of active alarms that have not be acknowledged.

- Active alarms may be in effect even if the blue alert bar is not present.

  o Select "Alarms" on the top menu bar; then select "Active Alarms" to display all active alarms; then proceed to 12.4.4.

12.4.4. There are two types of alarms possible, Comm Failure and Time Drift:

- Comm Failure: This indicates that communication to the ramp meter signal controller has been lost.

  o Acknowledge the error by clicking the check box underneath the column titled "Acknowledged".

  o Click on "Recent System Alarms" for more details and to see if the alarm has cleared.

  o Check the status of the ramp meter signal controller which experienced the comm failure.

  o Click the Menu > Monitoring > Device Status to bring up a window. On the window, click on the Ramp Meters tab (2nd tab in the third row of the window) to bring up the listing of each ramp meter signal controller. Ignore devices other than the four I-540 Live Ramp Meters.

  o Check that the ramp meter which experienced the error is showing a green square in the column "Online". If not, comm has been lost.

  o If comm has been lost, refer to the response matrix (see 12.3)

  o NOTE: The above process must be accomplished before the scheduled start time for the ramp meter signals.

- Time Drift: These alarms occur when the internal clock of the ramp signal controller has drifted away from the central server time clock.

  o Acknowledge this error by clicking the check box underneath the column titled "Acknowledged".

  o Click on "Recent System Alarms" for more details and to see if the alarm has cleared.

  o No further action by the Operator is needed for this alarm.

12.4.5. If a Ramp Meter software or system malfunction (other than Comm Failure) occurs leading up to or during normal hours of operation, refer to the response matrix (see 12.3)

12.4.6. Ramp Meter signals should automatically turn on by 7:00 AM on all normal days of operation. Operators will verify individual Ramp Meter operation by accomplishing the following:

- Verify by CCTV the signals for both lanes on each ramp are turning from red to green as the vehicles pass through them.

- Verify the yellow flashing light on the warning sign upstream of the material has turned on.

- NOTE: If traffic is light, the signals may remain dark until the traffic levels increase. If this occurs, check meter operation in the following manner:
  - Select 'Monitoring' on the top menu bar
  - Select 'System Detectors' → 'Status'
  - Confirm data is active on each Ramp Meter site. Data should change at approximately one-minute intervals.

12.5. INCIDENT MANAGEMENT IN THE RAMP METER ZONE

12.5.1. No changes to the Ramp Signal Status, Signal Rates, Active Queue, or Recall settings should be made without approval from STOC management or NCDOT.

12.5.2. Unless otherwise directed by NCDOT personnel, the ramp meters will continue operation during any incidents that occur on the mainline freeway. The traffic-responsive ramp meters will adjust the traffic flow to fit the available mainline capacity and can even help traffic to recover.

12.5.3. When one or more of the following conditions exist, deactivation of Ramp Meter signals may be considered by NCDOT Staff. Refer to the response matrix (see 12.3)

- An incident where a lane is blocked on one of the metered ramps.

- Two or more personal injury (PI) incidents occurring at the same time within the Ramp Meter Zone

12.5.4. Confirmation and permission by NCDOT staff is required before STOC personnel can deactivate any ramp meter signals. Refer to the response matrix (see 12.3) to call NCDOT Staff in order until permission for deactivation is obtained.

- Notify the following personnel by email when any ramp meter signals have been deactivated for any reason (See Appendix N):
  - State Traffic Systems Operations Engineer
  - State Traffic Operations Engineer
  - Atkins Senior Traffic Engineer
  - STOC Operations Manager

12.6. ADVERSE WEATHER OPERATIONS

12.6.1. During adverse weather, conditions should be evaluated daily during multi-day events. One of the following conditions must be met daily to consider deactivation of the Ramp Meter Signals:

- Wake County School closings or delays due to adverse weather have been announced.

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- Black ice or icy spots have been reported on the primary or adjacent routes of the on-ramp signals by NCDOT, SHP, or local law enforcement.

- Confirmation of an immediate road hazard that could impact traffic, including but not limited to, snow, slush, or black ice. However, if the road hazard is cleared within the normal ramp meter operations schedule, the ramp meter should be reactivated at the direction of NCDOT staff.

- NOAA-issued weather warnings are in effect for the county which contains the on-ramp signals.

    - NOAA warnings for North Carolina
      https://alerts.weather.gov/cap/nc.php?x=1

12.6.2. When one or more criteria for adverse weather listed above are met, confirmation and permission by NCDOT staff is required before STOC personnel can deactivate the ramp meter signals. Refer to the response matrix (see 12.3) to call NCDOT Staff in order until permission for deactivation is obtained.

- Notify the following personnel by email when ramp meter signals have been deactivated for adverse weather (See Appendix N):

    - State Traffic Systems Operations Engineer

    - State Traffic Operations Engineer

    - Atkins Senior Traffic Engineer

    - STOC Operations Manager

12.7. RESUMING NORMAL RAMP METER OPERATIONS

12.7.1. NCDOT personnel have the authority to direct the STOC to resume normal ramp meter operations at any time.

12.7.2. If ramp meter operations are cancelled, and no further direction is given by NCDOT personnel, then operations shall remain cancelled for that calendar day. Normal Ramp Meter operations will resume the next scheduled day.

12.7.3. When NCDOT personnel direct STOC to resume normal ramp meter operations for same day operations, regardless of conditions, notify the following personnel by email (See Appendix N):

- State Traffic Systems Operations Engineer

- State Traffic Operations Engineer

- Atkins Senior Traffic Engineer

- STOC Operations Manager

12.8. MONITORING AND LOGGING

12.8.1. Operators should use the following tools to monitor the ramp meter signals.

- MAXVIEW - http://34.235.176.163/maxview/ (Internet Explorer).

- Web-based Traffic Maps (e.g., Google Maps, HERE)

- Waze Live Map (Google Chrome)

- TIMS: SHP CAD Feeds

- Raleigh / Wake County 911 Incidents - http://incidents.rwecc.com/

- CCTV

12.8.2. Logging of Incidents. Operators will enter in TIMS all traffic incidents that occur on the Ramp Meter ramps, corresponding mainline route, and adjacent surface streets to document traffic impact on ramp meter operations. This should be done in accordance with normal traffic operator duties as specified (see 5.3). These incidents will also be entered into the Operator TMS log, as outlined in Section 15.

12.8.3. Each instance Ramp Meter operations are cancelled or resumed due to adverse weather will be treated separately and entered in the TMS log accordingly.

- Incident Type – Signal Problem

- Enter date and time Ramp Meter operations were suspended. Comments should include the initial request time to NCDOT, the time approval for deactivation was given, the name of the NCDOT representative giving approval for deactivation, a description of the adverse weather criteria met, and the storm name if a storm event has been set in TIMS.

- Enter the date and time Ramp Meter operations were resumed. Comments should include the time direction to resume normal operations is received from NCDOT, and the name of the NCDOT representative giving the direction.

12.8.4. Logging of Equipment or Software Malfunctions. Operator will enter in the TMS log all equipment and software malfunctions associated with Ramp Meter operations including:

- MAXVIEW issues

- Signal malfunctions

- Comm errors

- Sensor malfunctions

- Other equipment malfunctions

12.8.5. When logging equipment and/or software issues the TMS log shall include the following:

- Date, time, and location fields

- Incident Type – Signal Problem

- Responder Time – use the time the NCDOT signal tech arrived

- Ensure that the Active checkbox is unchecked after the malfunction has been fixed.

12.8.6. Ramp Meter Entries in the Shift Update. If the following conditions occur during daily Ramp Meter operations, they should be included in the Shift Update:

- Ramp Meter operations cancelled due to weather or equipment/software malfunctions

- Any specific ramp signals that were non-operational for the entire scheduled AM operational period due to hardware or software malfunctions (excepting comm errors)

12.9. SHUTDOWN PROCESS

12.9.1. All ramp meter signals are scheduled to deactivate by 9:00 AM on Monday – Friday.

- If the ramp signals do not shut down by the scheduled time, contact the Traffic Engineer immediately and refer to Section 12.11 Manual Shut Down of the Ramp Signals) for additional action items.

12.10. I-540 RAMPS AND MAINLINE CCTVS

12.10.1. It is recommended that CCTVs are displayed on the traffic control room screens. They can also be accessed via a web browser.

- All mainline CCTV's have the following presets
    - 1 = westbound view
    - 2 = arterial ramp view
    - 3 = eastbound view
- All ramp CCTV's have the following presets
    - 1 = view of signal
    - 2 = view of entire ramp

12.10.2. The following CCTVs are associated with Ramp Meter operations

- D05-1207 – I-540 @ Leesville Road (mainline)
- D05-1207.5 – I-540 @ Leesville Road Ramp
- D05-1209 – I-540 @ Creedmoor Road/NC-50 (mainline)
- D05-1209.5 – I-540 @ Creedmoor Road/NC-50 Ramp
- DO5-1211 – I-540 @ Six Forks Road (mainline)
- D05-1211.5 - I-540 @ Six Forks Road Ramp
- D05-1214 – I-540 @ Falls of Neuse (mainline)
- D05-1214.5 - I-540 @ Falls of Neuse Ramp
- D-05-1212 – I-540 @ Honeycutt Road (mainline)

12.11. MANUAL SHUTDOWN OR REACTIVATION OF RAMP SIGNALS

12.11.1. To manually turn off all signals, click on the Device Control link at the top left of the page, select Manual Control, continue at C below.

12.11.2. To manually turn off an individual signal, click on More on that signal window, then select Manual Control.

12.11.3. After select all signals or an individual signal:

- Select 'Set Manual Command'

- Click the 'Command' drop down

- Select 'Ramp Meter' from the list

- Click on the 'Value' drop down arrow

- Select 'Dark' from the list for Lanes 1 & 2

- Select the date and time in the "End" box. Enter the date and time to one-half hour after the current day's scheduled ramp meter end time. (see 12.2.2)

- Click Set button. The signals will turn green and then shut off. In MAXVIEW the rate will change to 899, and the selected signals will grey out.

12.11.4. Reactivating Ramp Meter Signals. To reactivate signals for same day operations, click "Cancel" in the Dark mode function.

13. NCDOT CUSTOMER SERVICE CENTER

13.1. NCDOT CSR COMPLIANCE WITH CONTROL ROOM SOPS

13.1.1. The policies, procedures, and other guidance contained in this document are primarily intended to apply to operator roles associated with traffic management and IMAP dispatch (e.g. Regional TMS, Statewide TMS, IMAP Dispatchers, etc.).

13.1.2. This chapter provides policy, procedure, etc. that specifically applies to the NCDOT Customer Service Center (CSC) and must be adhered to by operators working in the role of NCDOT Customer Service Representative (CSR).

13.1.3. For situations that this chapter does not address, CSRs will adhere to the policies, procedures and other guidance as provided in the other chapters of this document.

13.1.4. CSRs must be familiar with all SOPs in this document, especially those discussed in Sections 1-3:

- Section 1 – Primary Employee Policies and Procedures
- Section 2 – General Operating Policies and Procedures
- Section 3 – Communication and Response Coordination

13.2. CSR SHIFT HOURS AND COVERAGE

13.2.1. During regular operations, the NCDOT CSR role must be staffed by an operator who is trained and approved for CSR duty during the days and times described below:

- Monday – Friday, 8:00AM-5:00PM

13.2.2. In order to meet operational needs, NCDOT and STOC management may modify or extend the days and times that the CSR role must be staffed by an approved operator. Management may also modify or extend the number of operators required to provide CSR coverage at their discretion.

13.2.3. If call volume and/or voicemail volume increases significantly, CSRs must notify their supervisor immediately so that additional operator support for the CSC can be arranged, if needed.

13.3. LOGGING INTO AND OUT OF THE CSC PHONE SYSTEM

13.3.1. CSRs must always be logged into the CSC phone line while on duty.

13.3.2. CSRs login to the CSC line via the buttons and menu options available on the CSC phone. To login to the CSC line, CSRs should:

- Press the "Services" button,
- Press "3" to access the "Extension Mobility" function,
- Enter the unique service ID associated with the CSC phone. Service IDs include:
  - 7002711
  - 7002712

- o 7002713

- o 7002714

- o 7002715

- Enter "12345" when prompted for a PIN and allow the phone to boot up,

- Once the phone has completely booted up, press "Services,"

- Press "2" to access the "CSX12_IPPA_PRIM" function,

- Enter the unique service ID associated with the CSC phone,

  - o NOTE: Use the same Service ID as entered previously

- Enter "12345" when prompted for a PIN,

- Enter the same service ID as previously entered,

  - o NOTE: The Service ID entered will become the extension for your phone

- On the CSC phone's display screen, locate the menu option for "State" and press the physical button beneath that option, and

- Press "1" to set the CSC phone to a "Ready" state and begin answering CSC calls.

13.3.3. CSRs must log out of the CSC line at the end of their scheduled shift.

13.4. SETTING AND CHANGING CSC PHONE STATES

13.4.1. The CSC phone can be set to the following states when logged in:

- Ready – open to receive CSC calls from the public,

- Break – CSC calls go to voicemail or other "Ready" CSC phones. Use for short breaks (i.e., 15 minutes) only, and

- Lunch – CSC calls go to voicemail or other "Ready" CSC phones. Use for longer breaks (i.e., 45 minutes) only, and

- Meeting – CSC calls go to voicemail or other "Ready" CSC phones. Use when attending a meeting, only. CSRs must receive supervisor approval prior to attending any meetings.

13.4.2. CSRs must assure that the CSC phone is set to "Ready" state at all times when they are present at the CSC phone.

13.4.3. When a CSR will not be present at the phone during their scheduled shift, the CSR must set the CSC phone to "Break," "Lunch," or "Meeting" as appropriate.

13.4.4. After returning from break, CSRs must return the CSC phone to "Ready" state and must review and return any voicemails.

13.4.5. To set the CSC phone to a different state, operators should:

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- Locate the menu option for "State" on the CSC phone's display screen and press the physical button beneath that option,
- Press "1" to set the CSC phone to the "Not Ready" state, and
- Press the button that corresponds to one of the options below as appropriate:
    - "1" – Break
    - "2" – Lunch
    - "3" – Meeting

13.5. CHECKING CSC VOICEMAILS AND MISSED CALLS

13.5.1. CSC voicemails and missed calls should be reviewed and responded to in a timely manner (see section 3.3).

13.5.2. CSRs should review and respond to CSC voicemails during their scheduled shift and should seek to respond to all voicemails before leaving for the day.

13.5.3. Operators on duty when a CSR is not available should monitor the CSC phone for any new voicemails and should review and respond to them promptly. Operators should seek to respond to all voicemails such that there are none/few left when the CSR reports for duty next.

13.5.4. To check voicemails on the CSC phone, CSRs should:

- Press the button with a picture of an envelope that is labeled, "messages,"
- Enter "123321#" when prompted for the CSC voicemail PIN,
- Listen to the message and record all pertinent information including:
    - Caller's name and contact information,
    - Nature of caller's request,
    - Location relevant to caller's request (e.g. route, county, etc.), and
    - Time and date of caller's request.
- Select one of the options below to determine what to do with the voicemail:
    - Save Message – use to refer to message later
    - Delete Message – use to delete messages if all information is captured
    - Repeat Message – use to listen to message again to capture further information

13.5.5. Operators/CSRs should respond to voicemails based on:

- Urgency – caller's request is significant, time sensitive, or otherwise requires immediate response,
- Caller Availability – caller indicates when they will/won't be available and/or returning the call requires operator/CSR to contact caller between 7pm-7am, and

- Time/date received – older voicemails should be responded to before new voicemails.

13.5.6. To check missed calls on the CSC phone, CSRs should:

- Press the button with a picture of an open book that is labeled, "directories,"

- Select the option for "Missed Calls" by pressing "Select" or "1" on the phone's keypad,

- View information for the missed call on the CSC phone's display screen and make note of the following:
    - Caller's name/agency and phone number and
    - Time and date of missed call.

13.5.7. Operators/CSRs should respond to missed calls as described below:

- If the missed call is less than 15 minutes old, return the call immediately, or

- If the missed call is older than 15 minutes, respond to any voicemails before returning the call UNLESS returning the call requires contacting the caller between 7am-7pm.

- If returning the call requires contacting the caller between 7pm-7am, pass the information for the missed call along to an operator/CSR who will be on duty later and can return the call between 7am-7pm.

13.6. **511 TRANSFERS TO WOMEN'S PRISON**

13.6.1. The 511 IVR should be transferred to/from the Women's Prison daily under the direction of a supervisor at the following times:

- Monday- Friday 8:15 am and 7:45 pm

- Saturday- Sunday 8:15 am and 4:45 pm

- State Holidays 9:15am and 4:45pm

13.6.2. The transfer is made by logging in at:
https://www.att.com/ebiz/registration/home.jsp#/login

13.7. **RECEIVING GENERAL DOT COMPLAINTS**

13.7.1. If a caller contacts a CSR with a general complaint the CSR will:

- Take all of the contact information from the caller and let the caller know that they can expect a response in 2 business days,

- Contact the correct person within DOT and pass along the request.

13.7.2. If a caller advises the CSR that they have previously contacted DOT personnel but the complaint has not been resolved the CSR will:

- Locate the call in the database

- Contact either the Division Engineer or the District Engineer to relay the complaint.

13.7.3. If a caller contacts a CSR and requests to speak to a Supervisor the CSR will:

- Ask caller what the nature of the call is. If the call is something that the CSR can handle let the caller know this and provide them with the appropriate information,

- If the caller wants to speak with someone with DOT, find out what county they are calling from, the issue they are calling about, and obtain the caller's contact information. Then place a call to the appropriate member of DOT with the caller's contact information. The highest escalation level is to the District Engineer.

13.7.4. After Hour complaints are:

- Complaints that are received between 5:00 pm and 8:00,

- Are relayed during business hours unless it is an emergency,

  - Emergency complaints are relayed to local law enforcement for verification before contacting DOT.

13.8. RECEIVING TURNPIKE AUTHORITY COMPLAINTS

13.8.1. When the CSR gets a complaint for the NC Turnpike Authority (NCTA) they should:

- Record the name and number of the caller,

- Record a summary of the caller's complaint including time and date when the situation occurred,

- Record the name of the NCTA customer service representative the caller spoke to,

- Advise caller that their complaint will be relayed to an NCTA supervisor, and

- Send an email to the NCTA TMC Supervisor with the previously recorded details of the complaint.

13.9. POTHOLE MAINTENANCE REQUESTS

13.9.1. When a customer calls in to report a pothole the CSR should input all required information on the NCDOT website in the system for potholes.

13.9.2. The CSR should also document the call information in the CSR database.

13.10. SWAT A LITTER BUG

13.10.1. When the CSR receives a call from a motorist reporting a littering offense the CSR should enter the following information in the Swat a Litterbug System and the CSR database:

- Date

- Time of Occurrence

- County, City, and Roadway

- License Plate

14. SHIFT UPDATES AND MINI-UPDATES

14.1. SHIFT UPDATES AND MINI-UPDATES PURPOSE AND EXPECTATIONS

14.1.1. Shift Updates provide a summary of statewide incident activity occurring on a shift. Shift Updates are internal publications, sent to STOC/TMC staff and to regional and statewide NCDOT leadership. Shift Updates help communicate general activity levels and serve as a form of historical documentation.

14.1.2. Mini-Updates provide notification and an ongoing narrative of significant incidents affecting NCDOT operations as they occur and develop. Mini-Updates are internal and external publications, sent to STOC/TMC and NCDOT leadership and to partners such as NC Emergency Management and Highway Patrol.

Prompt initial Mini-Updates, along with timely follow-ups, help to rapidly communicate real-time incident details and impacts to internal management, enabling critical responses in an efficient manner. Mini-Updates also serve as a detailed form of historical incident documentation.

14.1.3. All Shift Updates and Mini-Updates should:

- Maintain a civil and professional tone

- Accurately describe incidents, operator activity, and obstacles encountered

  o Any mistakes made by operators should also be included as well as how they were identified and corrected.

- Be generally free of spelling, grammar, and format errors

  o It is highly recommended that operators/supervisors format updates in Word with grammar check and spell check enabled; then copy and paste the completed update into Outlook. (See 14.1.4)

- Contain NO assumptions, opinions, subjective language, or personal interpretations.

14.1.4. All Shift and Mini-Updates must be reviewed and approved by a supervisor or POC before they are sent out. If a supervisor is not on duty, another operator should review.

14.1.5. The name of the operator who wrote the update and the supervisor/operator who reviewed it must be included in the body of the update, above the email signature.

14.1.6. All operators are expected to review any Shift Updates or Mini-Updates from the previous shift as part of their initial shift sweep.

14.2. SHIFT UPDATE GUIDELINES

14.2.1. Shift Updates should be sent at least once during every shift at the following times:

- 1st Shift: 1:15 PM

- 2nd Shift: 9:15 PM

- 3rd Shift: 5:15 AM

14.2.2. Shift Updates are compiled and sent out by a single operator assigned the task by the STOC Supervisor. However, all operators must contribute information to the Shift Update and otherwise assure that the update is completed and sent out on time. During their hours of operation, regional TMC operators must complete the portions of the Shift Update that correspond to their TMC's area (e.g., MRTMC completes the Division 10 & 12 portion of the Shift Update.

14.2.3. Shift Updates must be sent from the STOC email account and must use the following:

- Shift Update email template and

- Shift Update distribution list.

14.2.4. Shift Update Subject Line: The Subject Line must identify the email as a Shift Update and the time and date when it was sent. Example: "Shift Update – Monday, July 27, 2016 – 1:15 PM."

14.2.5. Every heading within the Shift Update email template must have information entered that reflects current/recent incident and operator activity related to that section.

- If no incident/activity has occurred, operators should state that no significant incidents or other activity have occurred rather than leaving the section blank.

14.2.6. Incidents to Include in Shift Updates: Unless otherwise specified by NCDOT, incidents with all the following characteristics should be included in Shift Updates:

- Unplanned Incident

- Occurring on an Interstate, US, or NC route

    o Incidents on SRs should only be included if they are classified as Major Incidents (see section 15.12).

- Resulting in a lane closure or road closure in one or more directions

    o Incidents involving ramp or shoulder closures should only be included if they are classified as Major Incidents (see section 15.12).

- **NOTE**: if a Mini-Update is sent out for an incident or other situation, then that incident/situation must also be reported in the Shift Update.

14.2.7. Shift Update Sections: To follow are the sections included in the Shift Update template and the guidelines for each section. All sections must be completed for each update and must either include relevant incident/activity information OR indicate no incident/activity has occurred:

- "DIVISION" sections – separate sections for specific Division groupings. Enter incident details in the appropriate Division section according to the incident's location (e.g., incidents occurring in Division 4 are entered in the "DIVISION 4/6" section, etc.). During their operating hours, Regional TMC staff are primarily responsible for populating the Division sections that correspond to their TMC's coverage area (e.g., Triad TMC staff populate the "DIVISION 7/9" section, etc.).

- "STATEWIDE" section – where details are entered for incidents that are not located in one of the specific "DIVISION" sections. STOC staff are primarily responsible for populating this section.

- "Work Zone" or "Project" sections – where details are entered for incidents that occur within the limits of specific, long-term construction projects listed in the Shift Update template. Incidents occurring within project's limits should be listed under the appropriate section, regardless of what Division the incident is located in.

  - For ICM-designated work zones/areas: Include in the incident synopsis ICM measures activated for the incident, and the status (active or inactive) of those measures.

    - Ex. 1 – 4:14 PM, I-95 South near Exit 71 (Long Branch Road), Road Closed, Detected via SHP, Road Reopened/Incident Cleared 7:00 PM, Duration of 2 hrs 46 mins, Queue of 4 miles, TIMS 611701, IMAP Responded, Sign Scenario: I95S75-71/81-50Clos (deactivated), Signal Set: I95S75-71/81-58Heav (deactivated).

    - Ex. 2 – 9:25 AM, I-40 East near Exit 303 (Jones Sausage Road), Lanes 2 of 3 Closed, Detected via SHP, Incident Ongoing, Queue of 3 miles, TIMS 526114, IMAP Responded, Sign Scenario: I40E301-303Open (active), Signal Set: I40E301-303Open (deactivated per C. Braam).

    - Ex. 3 – 11:10 AM, I-26 East near Exit 49 (US 64), 1 of 2 lanes closed, Detected via IMAP, Lane reopened/Incident cleared at 11:35 AM, Duration of 25 mins, Queue of 2 miles, TIMS 456321, IMAP Responded, Sign Scenario used: N/A – Follow SOP, Signal Set used: N/A – Follow SOP

- Queue Reports section – This section will only be included by direction of NCDOT TSO for limited periods of time. Unlike other work zone or project sections, this section is NOT used for incident details. Instead, operators should record the maximum queue lengths in areas designated by NCDOT observed during the shift.

  - Example:

    - I-77 / I-5912 Yadkin County (MM 78-83)

      Northbound: 2 miles

      Southbound: 1 mile

- "ALERTS" section – identifies any Special Alerts or Amber/Blue/Fugitive/Silver alerts that were activated, on-going, or deactivated during the shift. At a minimum, alert details in this section should include:

  - Type of Alert (Special, Amber, etc.)

  - Brief description of alert to help identify it (e.g., "Special Alert: I-85 North Closed near Exit 65" or "Amber Alert: John Doe in Wake County")

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- Time(s) when alert was activated, deactivated, or note that alert is on-going

- "WEATHER ALERTS" section – where operators list any NWS Watches, Warnings, or Advisories that occurred during the shift. When such NWS alerts are active, this section should (at a minimum), describe the type of alert (e.g., "Winter Weather Warning"), the counties and areas the alerts were issued for, and the effective times of the alerts. This section must also include the following statement and NWS link:

  - "For the most current weather information, please click here." Where 'here' is hyperlinked to the NWS website – list of active alerts for NC.

  - NWS link url: https://alerts.weather.gov/cap/nc.php?x=1

- "COORDINATION" section – where operators describe any coordination or other activity that was unusual (i.e., "not routine") or problematic. This could include any number of situations, like "Calling a member of NCDOT's TIM team to get incident details that law enforcement could not provide," or "Coordinating with a work zone contractor to address a hacked CMS," or "Handling a call from an irate citizen about their car being towed." Staff must keep their descriptions brief, factual, and professional.

  - NOTE: Any interaction with state leadership, or any other noteworthy party, must be included in this section, followed by an escalation call to the STOC OM. This includes, but is not limited to:

    - Individual visiting the STOC/TMC Control Rooms

    - Individual informing STOC/TMC of a pending visit

    - Individual reporting an incident

    - Individual requesting assistance

14.2.8. Incidents included in the Shift Update involving lane/road closures will use the following format:

- Time, Location, Road condition, Detection method, Complete lane/road reopening time, Incident clearance time OR "Incident ongoing," Duration, Maximum observed queue length, TIMS #, IMAP response, Major incident description (if applicable), ICM activation details (if applicable).

  - **NOTE**: Use ¼ mile increments when reporting queue length (e.g., 2.25 miles, 4.5 miles).

- If the incident is in a designated ICM area and the ICM database directs activation, include activation/deactivation times for Signal Action Timing Set and/or DMS Sign Scenarios used.

- Example 1: 4:14 PM, I-95 South near Exit 71 (Long Branch Road) - Cumberland County, 1 of 2 Lanes Closed, Detected via SHP, Lane Reopened at 6:38 PM, Incident Cleared at 7:00 PM, Incident Duration of 2 hours 46 mins, Queue of 4 miles, TIMS 611701, IMAP

Responded, Fatality, Sign Scenario: I95S75-71/81-50Clos (deactivated), Signal Set I95S75-71/81-58Heav (deactivated),.

- Example 2: 4:23 PM, US 264 East near Exit 77 (NC 33) in Pitt County, Road Closed with Detour, Detected via SHP Radio Traffic, Incident Ongoing, Observed queue 2.75 miles, TIMS 789456, No IMAP response, Overturned Tractor Trailer/Fatality.

14.2.9. For incidents on concurrent interstate routes, operators should describe the incident as a single incident but should provide the TIMS incident number for each route (e.g., I-40 TIMS # 40001, I-85 TIMS # 40002).

14.3. MINI-UPDATE GUIDELINES

14.3.1. Mini-Update Criteria:

- Interstate and US Routes

  o Mini-Updates should be sent for severe and/or noteworthy incidents occurring on Interstate or US Routes. Severe/Noteworthy incidents include, but are not limited to, any unplanned incidents that:

    ▪ Meet Major Incident criteria (See 15.12.2)

    ▪ Will close or drastically affect use of the roadway for an extended period, even if major incident criteria have not been met.

    ▪ Will result in immediate and/or extended media coverage of the incident.

- NC and SR Routes:

  o NC Toll Routes and NC 12: Mini-Updates should be sent if the incident occurs on a toll road (e.g., NC 147 Toll, NC 540 Toll, US 74 Toll); OR if the incident occurs on NC 12.

  o Remaining NC and SR Routes: Mini-Updates are **NOT** necessary for these routes unless the incident is severe, and/or noteworthy.

  o Fatalities on NC and SR Routes: A Mini-Update for these routes is **NOT** required solely because a fatality occurs. If multiple major incident criteria are met (See 15.12.2), then consider sending the Mini-Update.

- Severe and/or noteworthy incidents do not have to occur on the roadway. If an incident affects travel on a roadway adversely, especially for an extended period, send a Mini-Update. This applies for all types of roadways. These could include incidents such as:

  o Airplane crashes

  o Train derailments

  o Facility and infrastructure damage (e.g., gas leaks or structure fires affecting roadways)

14.3.2. Mini-Updates for Media Reported Incidents. STOC/Regional TMC will monitor assigned news outlets for reports of incidents that adversely affect traffic in their regions. Occasionally, the local media will be how the STOC/TMC detects an incident. Any traffic-related incident resulting in media attention should be investigated.

- A Mini-Update will be sent for active, unplanned, and impactful incidents reported by the media that meet normal Mini-Update criteria (see 14.3.3).

    o Do not send Mini-Updates on media-reported roadwork or upcoming roadway construction/maintenance.

    o It is permissible to send a single Mini-Update stating an incident reported by the media has no impact on traffic in the area.

    o If a media-reported incident has already been the subject of a previous Mini-Update, there is no need to send an additional Mini-Update.

- Supervisors and Operators will monitor the following news websites for traffic-related reporting:

    o Asheville – WLOS – www.wlos.com

    o Charlotte – WSOC – www.wsoctv.com

    o Fayetteville – WRAL – www.wral.com

    o Raleigh-Durham – WRAL – www.wral.com

    o Wilmington – WECT – www.wect.com

    o Winston-Salem/Greensboro – WGHP – www.myfox8.com

14.3.3. In addition to the previous criteria for route types, Mini-Updates should be sent under the following circumstances:

- Special Alert activated for a traffic incident (must send within 30 minutes of alert activation).

- Incident involving a fatality (see exception above in 14.3.1), HazMat, overturned commercial vehicle, or serious damage to roadways infrastructure.

- Incident involving NCDOT employees/contractors, IMAP employees, construction or maintenance personnel, towing/wrecker crews, law enforcement, or other emergency responders.

- Protest events (includes any event, political in nature, that adversely affects NCDOT infrastructure).

- Incidents requiring an extended on-scene investigation or law enforcement activity.

- Incidents requiring an ICM response.

- Anytime NCDOT or STOC management directs a Mini-Update be sent.

- Any unusual or extreme event that affects NCDOT infrastructure or NCDOT/STOC/TMC operations (e.g., network outages, major system malfunctions, facility power loss, etc.)

- High activity prevents sending a Shift Update on time.

- NOTES:

    o The list above represents the <u>minimum</u> requirements for sending a Mini-Update. If STOC/TMC personnel are unsure if a Mini-Update is needed for an incident or situation, they are encouraged to <u>send the Mini-Update</u>.

    o Mini-Updates should be sent within 30 minutes of any item above occurring or being confirmed.

14.3.4. (Quick) Initial Mini-Updates: A Mini-Update should be sent as soon as possible after determining a Mini-Update is necessary.

- The initial Mini-Update should be brief and should provide minimal information to include the incident location, lane closure/impact details, and a brief statement of what has occurred (e.g., "incident involves and overturned tractor trailer").

- Initial Mini-Updates must also state: "STOC (or TMC) is responding to this incident and will send additional details in the next Mini-Update." The next Mini-Update with additional details should be sent as soon as other urgent, time-sensitive tasks are complete (e.g., DMS activation, etc.), but within 30 minutes, at most.

- Example: "All lanes of I-40 East are closed near Exit 300 (Rock Quarry Road) due to a crash involving an overturned tractor trailer. STOC is responding to this incident and will send additional details in the next Mini-Update."

14.3.5. Operators should send frequent updates as incident conditions or situations develop, or when new information is available.

- At a minimum, operators should send follow-up Mini-Updates no less than once per hour for incidents up to 4 hours in duration. For incidents exceeding 4 hours, send follow-up Mini-Updates no less than every 2 hours. For incidents lasting multiple days, send follow-up Mini-Updates at the beginning and end of each shift.

- A final Mini-Update should be sent when the incident/situation is over, and conditions return to normal.

- Follow-up Mini-Updates should be sent on the email thread of the initial Mini-Update for the incident/situation.

14.3.6. Mini-Update emails should be sent from the STOC email account.

14.3.7. Operators should use the Statewide Mini-Update distribution list.

14.3.8. Mini-Update Subject Line: The Subject Line must identify the email as a Mini-Update and must be formatted as: Mini-Update: [Incident Type / Noteworthy Attribute] – [Route & Direction Impacted] – [County where Incident Occurred]. Additional guidance to follow:

- Noteworthy Attribute – Think of the Mini-Update subject line like the headline of a newspaper. The purpose of the subject line is to quickly capture what makes the incident significant and to help differentiate it. Additional noteworthy attributes may be included in the subject line, if necessary. Examples of noteworthy attributes include but are not limited to:
  - "Overturned Tractor Trailer"
  - "Fatality"
  - "IMAP Unit Struck"
  - "Rockslide"
- Work Zone or WZ – For incidents that occur in major work zones, "Work Zone" or "WZ" must be included in the "Noteworthy Attribute" section of the Subject Line. This is mandatory for all incidents requiring ICM response, but also includes any major work zone that is not an ICM response area.
- Direction impacted – when describing the direction(s) impacted by an incident, operators may only use the following options:
  - North = "North" or "N"
  - South = "South" or "S"
  - East = "East" or "E"
  - West = "West" or "W"
  - Inner or Outer = "Inner" or "Outer" only as appropriate and only for I-277 or I-485 in Charlotte. No abbreviations are acceptable.
  - Both Directions = "Both Directions." No abbreviations are acceptable.
- <u>Examples of Mini-Update Subject Lines are shown below</u>:
  - "Mini-Update: Fatality – I-40 East – Wake County"
  - "Mini-Update: Work Zone Crash and ICM – I-26 West – Buncombe County"
  - "Mini-Update: Derailed Train – US 49 Both Directions – Transylvania County"
  - "Mini-Update: Mall Shooting Closes Multiple Roads in Durham County"

14.3.9. Mini-Updates involving incidents that result in lane/road closures should include the following content:

- Complete location for incidents/events (e.g., route, direction, cross street, etc.)
- Summary of incident/event details (e.g., types of vehicles involved, presence of injuries/fatalities, HazMat, etc.)
- Summary of incident response measures utilized <u>including times when these measures were implemented</u>, such as:

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- Detection, verification, and confirmation efforts

- Presence of IMAP or other NCDOT personnel

- Use of Special/County Alerts

- Use of detours/alternate routes (route instructions should also be provided)

- Name, title, and Division/Agency of individuals whom STOC has coordinated with

- Description of any obstacles experienced and/or irregular communication that is preventing or complicating operations (e.g., inability to contact NCDOT personnel, etc.)

- Irregular requests or other potentially adversarial coordination

- Reported vs. actual lane status – Describe how the road status was reported by SHP/LE (either in CAD feed or over the phone radio), as well as what the lane/road status was when confirmed and/or what SHP/LE advised when details were requested.

  - Example 1: "At 3:54 PM, STOC observed abnormal congestion on HERE. The SHP CAD feed showed a reported incident in the area with the road status as "Open". At 3:55 PM, STOC contacted SHP Troop C Dispatch who advised all lanes are closed."

  - Example 2: "At 2:00 PM, Durham PD advised STOC of a crash and advised all lanes were open. At 2:05 PM, STOC obtained a visual of the crash via CCTV and observed all lanes were closed."

  - Keep the description factual and avoid any subjective language or personal interpretations (See 14.1.3)

- Description of current/maximum impact in terms of queue length. Use ¼ mile increments when reporting queue length (e.g., 2.25 miles, 4.5 miles).

- ITS Devices used while managing the incident (e.g., CCTV, DMS, CMS). For ICM incidents, operators should state the ICM sign plan being used (e.g., "I95N61-65Close"), instead of noting individual sign IDs.

  - ITS Devices Not Working – include descriptions of DMS and/or CCTV that were needed for an incident but could not be utilized because the device was not working or was unusable (e.g., CCTV line-of-sight blocked by untrimmed tree limbs).

  - Example: "At 2:18 AM, STOC activated detour messages on DMS 5-03 and 5-05. STOC was unable to activate detour messages on DMS 5-07, 5-09. And CMS 06 because the signs are not currently working."

14.4. ADVERSE WEATHER MINI-UPDATES

14.4.1. Adverse Weather Mini-Updates are intended to provide readers with a general understanding of what weather conditions are occurring; how travel is impacted by weather and

weather-related incidents; and what operational activities are underway – especially related to STOC/TMC operations, IMAP, and NCDOT.

14.4.2. Adverse Weather Mini-Updates will be drafted by STOC experienced staff, only at the ATS/Supervisor/OM level. They must be carefully reviewed by an additional team member before they are sent. They must be sent <u>from</u> the STOC Inbox <u>to</u> the Statewide Mini-Update distribution list. Additional Adverse Weather Mini-Updates for the same event must be sent as a "Reply All" to the previous mini-update to ensure all successive updates are part of a single email chain.

14.4.3. The Subject Line must identify the email as an Adverse Weather Mini-Update and reflect the weather type (e.g., "Winter Weather 1/22/2021", "Hurricane Florence", etc.) If a TIMS Event has been created, use the TIMS Event Name in the subject line.

14.4.4. Adverse Weather Mini-Updates for a designated event should be considered when one of the following criteria are met:

- Any NWS/NOAA Weather Advisory, Watch, or Warning is issued for an affected area(s).

- NCDOT TSO or STOC Management determines Adverse Weather Mini-Updates are warranted based on anticipated or current road conditions.

- Adverse Weather Mini-Updates should start when weather/precipitation begins (i.e., when the weather system arrives, not when weather-related incidents begin occurring). STOC Shift Supervisors should coordinate with the STOC DOM/OM to initiate updates when weather begins.

14.4.5. When Adverse Weather Mini-Updates are initiated, follow-up Mini-Updates will be sent a minimum of every 12 hours. This frequency can and should be increased under the following circumstances:

- Weather conditions affecting roadways significantly changes.

- NCDOT TSO or STOC management request a specific follow-up schedule.

- If severe conditions change quickly or noteworthy activity occurs, additional Adverse Weather Mini-Updates may be sent apart from any scheduled times.

14.4.6. Adverse Weather Min-Updates should be discontinued for a specific event upon NCDOT concurrence. The final update should reflect conditions have returned to normal and advise the update is the final update for the weather event. The following criteria should be considered when choosing to discontinue Adverse Weather Mini-Updates:

- NCDOT TSO determines no further Mini-Updates are necessary.

- Weather conditions normalize and weather-related activity returns to normal (e.g., If the STOC/TMC is still receiving an above -normal number of calls, the updates should continue.)

14.4.7. Adverse Weather Mini-Updates should reflect a statewide or multi-region perspective. (e.g., the update states how the entire state is affected, or how "Western NC" is affected; NOT how local weather is being affected.) Individuals drafting Adverse Weather Mini-Updates must

coordinate with Regional TMCs and other agency partners as needed to receive the required information to compile the updates. Adverse Weather Mini-Updates will include information in sections as defined below. Guidelines for additional content in Winter Weather Updates is also described below.

14.4.8. Required Sections

- Weather and Travel Conditions: Brief description of current weather and roadway conditions according to live observations, current weather reports, input from field staff, etc.

  o Describe current weather impacts. These impacts could include, but are not limited to:

    ▪ Rain/Snow/Ice accumulation amounts

    ▪ Wind speed

    ▪ Weather-related incident/activity levels

    ▪ NWS Warnings

    ▪ Evacuation orders

    ▪ Weather-related DMS activations (see Section 9)

- Operational Notes and Activity Levels: Brief overview of weather-related operational activities, particularly focused on STOC/TMC and IMAP.

  o Each update should state which centers and IMAP regions are operating (additional notes only needed if a center/IMAP region is not open as expected).

  o Activity levels (high, medium, or low) should be described; most common types of incidents (crashes. salt/sand requests, downed trees/power lines, etc.; call volumes and types of calls; and if necessary, additional information pertinent to the event (keep it simple and brief).

- Incidents – Important: All significant weather-related incident or crashes on an Interstate, US, or NC route in a weather-affected area MUST be reported in the Adverse Weather Mini-Update.

  o This especially holds true for high-visibility hotspots (e.g., winter weather for I-40 in McDowell County/I-77 in Surry County; OR hurricane/tropical storm/rain events for I-95/I-40; OR NC 12/major evacuation routes in eastern NC).

  o NOTE: These incidents also require a separate non-weather, "normal" Mini-Update to be sent.

- IMAP Stops: Current number of IMAP stops for the shift, organized by IMAP region. Only reflect IMAP regions that have been operating during the shift.

14.4.9. Additional Content for Winter Weather Updates:

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- NCDOT Winter Weather Dashboard
  - Include the following link: https://ncdot.maps.arcgis.com/apps/dashboards/f34a6bbb5c144c8181c741a3bb7b377d

- TIMS Snow and Ice Map
  - During Winter Weather events, each Adverse Weather Mini-Update must also contain a current screenshot of the DriveNC map with the Snow/Ice filter turned ON, and other filters turned OFF. Include an additional screenshot of the Snow & Ice portion of the DriveNC map legend.
  - The Snow & Ice Map must reflect the Date & Time the screenshot of the map was taken.

- TIMS Camera Screenshots
  - Include a few screenshots of TIMS cameras of weather-affected areas.
  - Good, clear pictures, only. Make sure the camera location is captured in the screenshot.
  - Show a good sampling of locations from around the weather-affected area.

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15. LOGS, TIMELINES, AND OTHER DOCUMENTATION

15.1. EXPECTATION FOR ALL DOCUMENTATION

15.1.1. All documentation by STOC operators must be:

- Accurate and captured in real-time,

- Complete and representative of all relevant incident details, operator activity, and obstacles/errors encountered,

- Written or entered in a consistent manner and in the appropriate format, and

- Appropriate, objective, and free of spelling and grammar errors.

15.1.2. All operators must thoroughly document their activity relating to traffic and incident management and other duties throughout every shift.

15.1.3. All operators are expected to review the log entries of the previous shift as part of their initial shift sweep.

15.2. LOGS TO USE BASED ON POSITION ASSIGNMENT

15.2.1. All operators must use the log/database that is intended for the position that the operator is assigned to as described below:

- DOT Customer Service Representatives use the Customer Service Database,

- Regional TMS use the appropriate Regional TMS Log (i.e., Regional, Triad, Metro)

- Statewide TMS use the Statewide TMS Log

- IMAP Dispatchers use the appropriate Incident Management (IM) Log for the IMAP region being dispatched (i.e., IMAP Triad, IMAP Triangle, IMAP SW West Log, or SW East Log).

15.3. PRIMARY GUIDELINES FOR MAJOR INCIDENT LOGS AND INCIDENT MANAGEMENT LOGS

15.3.1. Operators may enter information in approved fields within the log but must NOT:

- Modify or remove any elements of the log's overall structure or function such as:
  - Columns, rows, or headings or
  - Formulas or other reference data.
- Copy and/or paste information into any cell.

15.4. LOGGING DETECTION METHOD

15.4.1. Operators are responsible for recording the method that was used to initially detect an incident in their logs. When an incident is detected, operators will select the code for the detection method used in the column labeled, "DETECTED." Below are the codes for each detection method and the definitions for when they should be used:

- 1 – CCTV: use for incidents detected by obtaining a visual of the incident on camera.

- o Example: Incident seen when scanning cameras or when watching the end of the queue.
- 2 – Radio Traffic: use for incidents detected by overhearing radio traffic between responder agencies that is NOT specifically directed at operators.
  - o Example: Communication between an SHP dispatcher and an SHP unit in the field.
- 3 – CAD Feed: use for incidents detected by monitoring reported incidents listed in the CAD feeds of SHP or a local law enforcement agency.
- 4 – HERE: use for incidents detected by observing congestion that appears on a traffic map such as HERE or Google Maps (with Traffic turned on).
- 5 – Media: use for incidents reported directly to operators by news media OR when an operator detects the incident via media publications including TV, radio, or online (e.g. Twitter).
- 6 – IMAP: use for incidents reported directly to operators by an IMAP driver or supervisor.
- 7 – SHP: use for incidents reported directly to operators by a member of SHP.
  - o NOTE: This mostly refers to calls from SHP to operators, NOT when the incident is detected through the SHP CAD feed or by overhearing SHP radio traffic.
- 8 – LEO: use for incidents reported directly to operators by a law enforcement officer (LEO) or a dispatcher from a local law enforcement/responder agency.
- 9 – Citizen: use for incidents reported directly to operators by a member of the traveling public (aka "Motorist" or "Citizen").
  - o NOTE: "Citizen" should be selected as detection source even if SHP or another agency put the citizen in direct contact with an operator.
- 10 – DOT: use for incidents reported directly to operators by a Department of Transportation (DOT) employee. Other cases where "DOT" should be selected include:
  - o Incident is reported by an employee/representative of another state's DOT.
  - o Incident is reported by a representative of DOT including TMC/STOC personnel who saw the incident while driving.
- 11 – Contractor: use for incidents reported directly to operators by contract personnel involved with road work on behalf of DOT.

15.4.2. Operators must log the detection method used to *initially* detect the incident and NOT the method used to verify or confirm the incident. For example, if an operator initially detects an incident via the SHP CAD feed but then finds the incident on camera, the operator should log the incident as detected via code 3 for "CAD Feed."

15.5. MAJOR INCIDENT LOGS – FIELDS AND ENTRY GUIDELINES

15.5.1. Each row in the log should be used to represent a single incident or single action by an operator. Log fields and usage guidelines are described below:

- Entry # – indicates the specific row used to document an incident/action.

- Operator ID – unique IDs assigned to operators to indicate who made an entry.

- Date – date when incident/action occurred and when entry was made.
- Time of Entry – time when entry was made.
  - This time should align with when the incident/action occurred.
  - Note: Other action times (i.e., when partners were notified, etc.) should be entered in the specific fields that they relate to.
- TIMS Incident # – unique ID assigned to the TIMS incident entered.
- DMS – indicates if DMS activation occurred.
- Detected Via – how the incident was detected by operators. Options include:
  - NCDOT Confirmed,
  - IMAP Confirmed,
  - SHP or PD Confirmed,
  - CAD Feed Report (i.e., detected via the CAD feed but verified/confirmed through other means),
  - HERE Report (i.e., detected via HERE but verified/confirmed via other means),
  - News Media Report (i.e., detected via News Media but verified/confirmed through other means),
  - Motorist Report (i.e., detected via Motorist but verified/confirmed through other means), and
  - VIPER Radio (i.e., detected while monitoring VIPER radio traffic but verified/confirmed through other means
  - NCTA – use when a member of NCTA Staff informs of the incident.
  - DOT Confirmed
  - Contractor Confirmed
- Major Incident ID – labels used to mark that entry is a major incident
- Operator Actions/Notes – comments and details from operators about the incident/actions taken. This includes but is not limited to:
- Actions taken to verify/confirm incidents,
  - Description of vehicles/property damaged and their condition,
  - Names and contact information for personnel coordinated with,
  - Information or instructions provided by personnel coordinated with,
  - Description of response measures initiated (i.e., alerts, detours, etc.),
  - Obstacles encountered while performing duties,
  - Clarification of information entered in other fields, and

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- o   Other details about incident/action not associated with a specific field.
- Work Zone – indicates that the incident occurred within a work zone.
- DOT Notified – time when operators first contacted NCDOT personnel to report incident or request NCDOT assistance.
- Incident Type – the incident type that was selected when the TIMS incident was entered.
- County – the county in which the incident/action occurred.
- Route Type – I/US/NC/SR classification of the affected route.
- Route # – numeric designation for the affected route (i.e., enter "70" for US 70).
- Direction – direction of travel affected (North, South, East, West, or Both).
- MM – mile marker associated with the nearest cross street or location where the incident occurred on the affected route.
- Cross Street – common name/route designation for the cross street nearest to the incident's location.
- Responders' Arrival Time – time when the first of responders (IMAP, SHP/LE, etc.) arrived on scene.
- # Lanes Closed – maximum total number of travel lanes closed by the incident
- Do NOT lower this number as lanes are reopened.
- # of Lanes Available – total number of travel lanes at the incident location.
- Queue Length – maximum length of congestion (in miles) due to the incident.
    - o   Queue length is measured upstream from incident to where traffic is at free flow (i.e., the end of the queue).
    - o   Do not lower this number as the traffic returns to normal flow.
- Time Lanes Reopened – time when all lanes reopened for the final time.
- Responders' Departure Time – time when the last of all responders left the scene.
- End Time of Incident – time when incident was determined to be over/resolved.
    - o   See section 2.4 for Determining When an Incident is Over.
    - o   Row for this log entry will be "greyed out" when this time is entered, indicating that the incident is now over.
- End Date of Incident – date when incident was determined to be over/resolved.
    - o   This field must be filled out if the incident occurs across 2 or more days including those that start before midnight and end after midnight.

15.6. MAJOR INCIDENT LOGS – FORMAT GUIDELINES

15.6.1. Time should be entered in the logs using military time, separated by a colon (e.g., 8am = 8:00 and 8pm = 20:00).

15.6.2. Fields that are not applicable to entry should be left blank. Operators should not enter "N/A" or other information (e.g., comments, spaces, etc.).

15.7. INCIDENT MANAGEMENT (IM) LOGS – FIELDS AND ENTRY GUIDELINES

15.7.1. Each row in the IM log is used to represent a single incident (aka "stop") involving IMAP or other activity performed by the dispatcher.

15.7.2. Below are the fields found in the main portion of the IM Log where dispatchers enter information related to each IMAP stop:

- Date – date when incident/action occurred and when entry was made.

- Op ID – unique IDs assigned to operators to indicate who made an entry.

- IMAP ID – unique IDs assigned to IMAP drivers to indicate which driver was dispatched.
    - ID is the unit's P# – operators should not enter the "P", only the number.

- Incident – the 10-code associated with the incident/stop.

- County – code assigned to the county where the incident/stop occurred.

- Route – numeric designation for the affected route (i.e., enter "40" for I-40).

- Dir – direction of travel affected (enter as N, S, E, or W).

- MM – mile marker associated with the nearest cross street or location where the incident/stop occurred on the affected route.

- Lanes Closed – maximum total number of travel lanes that were closed by the incident.
    - Do not lower this number as lanes are reopened.

- Total Lanes – total number of travel lanes at the incident/stop location.

- Vehicle – code assigned to the type of vehicle involved in incident/stop.
    - Operators should choose the option that best reflects what type of vehicle is involved.
    - If multiple vehicles are involved, enter the code for the vehicle that best reflects the focus of the incident (e.g., Tractor Trailer and multiple passenger vehicles involved: enter "6" to indicate Tractor Trailer).

- State – abbreviation for the state that issued the license plate of the vehicle reported (e.g., enter "NC" for North Carolina, etc.).

- License Plate (10-28) – alphanumeric portion of the vehicle's license plate.

- o Operators should NOT include dashes or spaces (e.g., for tag ABC-1234: enter "ABC1234").
- Comments – notes and details from dispatchers about the incident/actions taken.
  - o This field should be used in the same way that the "Operator Note/Actions" field is used in the Major Incident Log.
- Rec – time when incident was first reported to/detected by STOC dispatcher.
- Disp – time when IMAP unit was dispatched to the incident/stop by STOC.
  - o If incident/stop was detected by IMAP, leave blank.
- Arrv – time when IMAP unit arrived at the incident/stop.
- Ln Clsd – time when lanes were closed due to the incident/stop.
  - o This time may be the same as Rec, Disp, and Arrv time if lane(s) were already closed prior to IMAP unit's arrival.
- DMS – time when DMS were activated for the incident/stop.
  - o Enter "NA" if DMS are not available or not needed for incident. Enter "NW" if DMS was not working.
- TIMS – time when a TIMS incident was entered for the incident/stop.
  - o TIMS incident # should be entered with other incident/stop comments.
- Ln Open – time when all lanes reopened for the final time.
- Depart – time when IMAP unit left the scene.
  - o Row for this log entry will be "greened out" when this time is entered, indicating that IMAP is no longer on scene.
- Detected Via – code associated with how the incident was detected as shown below:
  - o NCDOT Confirmed
  - o IMAP Confirmed
  - o SHP or PD Confirmed
  - o CAD Feed Report (i.e., detected via the CAD feed but verified/confirmed through other means).
  - o HERE Report (i.e., detected via HERE but verified/confirmed through other means).
  - o News Media Report (i.e., detected via News Media but verified/confirmed through other means).
  - o Motorist Report (i.e., detected via Motorist but verified/confirmed through other means).

- o VIPER Radio (i.e., detected while monitoring VIPER radio traffic but verified/confirmed through other means).
- o "Public Service/Other" use for incidents/stops reported by motorists or other partners (not DOT or SHP/LE).
- o NCTA – use when a member of NCTA Staff informs of the incident.
- o DOT Confirmed
- o Contractor Confirmed

- Services Provided – code assigned to each type of service performed by IMAP while on the incident/stop. Operators can enter up to 3 services for a single stop.

15.8. INCIDENT MANAGEMENT (IM) LOGS – FORMAT GUIDELINES

15.8.1. Time should be entered in the logs using military time.

15.8.2. Fields that are not applicable to entry should be left blank. Operators should NOT enter "NA" or other information (e.g., comments, spaces, etc.).

15.9. INCIDENT MANAGEMENT (IM) LOGS – OTHER LOGS

15.9.1. The following describes the different tabs contained in the IM Log and how operators should use these tabs and enter information, if needed.

15.9.2. IMAP 41/42 – used when each IMAP driver signs on for duty (10-41) and when they sign off for the day (10-42). At these times, dispatchers should enter the following:

- Date – date of IMAP driver's shift.

- IMAP Unit # – ID for unit signing on and off.

- 10-41 Time – Sign on time of the IMAP Driver

- 10-42 Time – Sign off time of the IMAP Driver

- Route – The specific route of the IMAP Driver

- Beginning Miles – Total starting mileage for the driver's IMAP truck as reported by the driver. Operators should enter mileage without commas.

- Ending Miles – Total ending mileage for the driver's IMAP truck as reported by the driver. Operators should enter mileage without commas.

- Total Miles – DO NOT ENTER. This field is automatically completed when 10-42 Mileage is entered.

- Comments – notes relevant to IMAP route coverage or miles driven by a unit.

15.9.3. County Log – DO NOT MODIFY ANY INFORMATION ON THIS TAB.

15.9.4. IMAP Routes – List of all routes within the Triangle, Triad, Metrolina, Division 3, Division 13, and Division 14.

15.9.5. Gas Abuse Log – aka "Gas Abuser Log." Used to keep track of and identify motorists who have come to abuse the IMAP program by repeatedly requesting free fuel from IMAP drivers. See section 15.10 for further guidance.

15.10. GAS ABUSE LOG

15.10.1. As IMAP drivers encounter potential gas abusers, IMAP will contact STOC dispatchers and either:

- Request to verify motorist as abuser – when this occurs, operators should check the Gas Abuse tab for information matching the vehicle and plate description provided by IMAP. If motorist is listed an abuser, advise IMAP. The IMAP driver may leave the scene without providing fuel.

- Request to add motorist as abuser – when this occurs, operators will enter the abuser's vehicle and plate information into the appropriate fields on the Gas Abuse Log for future verification of the motorist as an abuser.

    - NOTE: Operators should email the details relating to the new gas abuser to the STOC Traffic Operations Specialist. These details should include a description of the abuser's vehicle, license plate number, and time and date when they were identified as an abuser.

15.11. EXPECTATION FOR ALL MAJOR INCIDENT TIMELINES

15.11.1. All Major Incident Timelines should accurately reflect the following:

- All incident details including location, lanes closed, description of vehicles/property damaged, etc.,

- Incident's impact to traffic (i.e., maximum queue length),

- Response measures implemented by operators, IMAP drivers, and other partners (also justifications of decisions made/actions taken, if needed),

- Coordination efforts between partners and operators, and

- Any obstacles encountered by operators while performing duties.

15.12. MAJOR, INTERMEDIATE, AND MINOR INCIDENT CRITERIA

15.12.1. "Major Incidents" refers to unplanned incidents, only (e.g., crash, road obstruction, etc.) occurring on state-maintained roadways.

15.12.2. An incident is classified as a major incident if any of the following occur on a multi-lane facility where a full road closure in one or both directions is involved and where the expected roadway clearance time is 2 or more hours OR incident clearance time is 4 or more hours:

- Overturned tractor trailer,

- Full road closure in one direction on a multilane facility,

- Fatal or life-threatening injury crashes,

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- Hazardous materials (aka Hazmat), or

- Structural damage that compromises further safe use of roadway.

15.12.3. "Intermediate Incidents" refers to unplanned incidents, only occurring on state-maintained roadways.

15.12.4. An incident is classified as an intermediate incident if any of the following occur on a single or multi-lane facility where 1 or more travel lanes are closed in one or both directions and where the expected roadway clearance time is 90 minutes or more OR incident clearance time is 120 minutes or less:

- Overturned passenger vehicle,

- Multi-vehicle crashes,

- Crashes involving personal injury, or

- Commercial vehicle/tractor trailer crash (not overturned).

15.12.5. "Minor Incidents" refers to unplanned incidents, only occurring on state-maintained roadways.

15.12.6. An incident is classified as a minor incident if any of the following occur on a single or multi-lane facility where there is minimal disruption to the flow of traffic and where the expected roadway clearance time and incident clearance time is 30 minutes or less:

- Disabled vehicles,

- Roadway debris,

- Crashes involving property damage only, or

- Incidents that fall under the "Fender Bender" law.

15.13. MAJOR INCIDENT TIMELINES – WHEN TO CREATE A TIMELINE

15.13.1. Operators should generate a timeline for a major incident when the following criteria is met:

- For Division 7 and 9 – any major incident with a 2+ hour duration.

  o Triad Template should be used to make the timeline.

- For Division 10 and 12 – any major incident with a 4+ hour duration that occurs during MRTMC's afterhours period.

  o NOTE: MRTMC operates from 6:00am to 9:00pm, M-F (except holidays).

  o Division 10/12 Template should be used to make the timeline.

- For all other Divisions – as requested for any major incident with a 4+ hour duration.

  o STOC Divisions Template should be used to make timeline.

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15.14. MAJOR INCIDENT TIMELINES – TEMPLATES AND DISTRIBUTION

15.14.1. Templates are used by STOC to generate major incident timelines:

- Division 10/12 Template – found in STOC Contact Matrix for MRTMC and

- STOC and Triad Template – found at Z:\TSOU\511 Operators\Major Incident Timelines.

15.14.2. Operators must assure that the correct template is used and that the template is not overwritten or deleted.

15.14.3. Completed timelines (whether STOC, Triad, or Division 10/12 template) must be saved to the Z: Drive at Z:\TSOU\511 Operators\Major Incident Timeline and in the correct folder for the year and month when the incident occurred.

15.14.4. Upon completing a timeline, operators should:

- Submit the timeline to a supervisor for review and approval,

- Save the approved timeline to the Z: Drive at Z:\TSOU\511 Operators\Major Incident Timeline in the appropriate year/month folder, and

- Email the timeline from the STOC email account to the following management personnel:

  - Appropriate Regional partner (e.g., NCDOT POC for incident),

  - STOC Shift Supervisors,

  - STOC Project Manager,

  - STOC Operations Manager, and

  - NCDOT State Traffic Operations Engineer.

15.15. MAJOR INCIDENT TIMELINES – CONTENT REQUIREMENTS

15.15.1. For the Triad and Division 10/12 Template, operators must assure that all relevant fields are completed.

15.15.2. For the STOC Divisions Template, operators must assure that all information related to the sections below are provided in complete sentences, free of spelling, grammar, or format errors:

- Header Requirements include:

  - Description – enter the incident type (e.g., "Crash"),

  - County,

  - Route,

  - Direction,

  - Mile Marker,

  - Cross Street,

- o TIMS (enter the TIMS incident number),

- o Queue Length (enter the maximum length of the queue at its peak),

- o Date (enter date when incident occurred),

- o Incident Start Time,

- o Incident End Time,

- o Incident Clearance Time (enter the total duration of incident from start to end using hours and minutes), and

- o Report Prepared By (enter the name of operator who generated timeline and the supervisor who reviewed and approved it).

- Body Requirements include:

  - o Each action/condition/observation should be entered as a separate line aligned with the time when that item occurred. Time should be expressed in standard format (i.e., 4am is 4:00 AM and 4pm is 4:00 PM),

  - o Timeline should indicate the names of operators and partners who performed actions or reported occurrences,

  - o If DMS are used, operators should specify which DMS are used, and the message displayed on each DMS. Operators should insert screenshots of the DMS messages and label them with the appropriate DMS ID,

  - o If County/Special Alerts activated, operators should include the alert text, and

  - o If detours/alternate routes used, operators should include the full detour/alternate route instructions unless this has already been provided in alert text.

- Supplemental Information Requirements include:

  - o Any additional, external documentation should be attached to and submitted with the completed timeline.

  - o Congestion scans and/or HERE screenshots of incident's impact should be attached. At a minimum, operators should include scans showing impact when detected, peak impact, and impact at time of incident clearance.

  - o Press Releases issued by NCDOT should be attached along with any links to related news articles, if these are available.

  - o Images of the incident (e.g., screenshots of CCTV, photos provided by on-scene POCs, etc.) should also be attached if these are available.

16. NCEM WEA SYSTEM & TRAPPED QUEUES

16.1. DEFINITIONS

16.1.1. Wireless Emergency Alert (WEA) System – a system managed by NC Emergency Management (NCEM) which allows NCEM personnel to send a text message to all mobile devices located in a specific geographic location, NCEM typically sends WEA text messages to citizens located in an area where a hazardous weather advisory (e.g., Flash Flood Warning, etc.) has been issued. NCDOT can coordinate with NCEM to use the WEA System to relay critical traveler information to stationary motorists in a specific location (e.g., motorists trapped in a queue, etc.).

16.1.2. Trapped Queue – refers to a large group of stationary motorists who are unable to progress due to an incident/road closure and who are unable to leave the impacted roadway (usually for an extended period). For example: Rockslide closes I-40 West near Exit 7 where the closest exit prior to the closure is Exit 20. Motorists stuck between Exit 20 and the Rockslide are referred to as a "Trapped Queue".

16.1.3. Polygon – refers to a shape that users draw on an electronic map (e.g., Google Maps or WEA System map) to specify where WEA text messages should be sent.

16.1.4. Message Trigger – a pre-determined condition, event, or time when a WEA text message should be sent. STOC personnel must establish message triggers when receiving NCDOT approval to use the WEA System. STOC personnel must keep track of established message triggers and must advise NCEM personnel when it is time to send a WEA text message.

16.2. WHEN TO USE THE WEA SYSTEM

16.2.1. The WEA System should be used in situations where a large group of stationary motorists are or could become severely impacted by a major incident or significantly hazardous travel conditions. It is important to note that WEA text messages should only be sent to motorists who are <u>stationary</u> so that text messages do no distract motorists who are driving. Examples of when to use the WEA System include but are not limited to:

- Trapped queues where motorists cannot make forward progress due to an incident /road closure and cannot leave the impacted road.
  - In this situation, the goal is to provide the trapped queue with information about clearance activities and expected timeframes.
  - Here, the polygon would be drawn around the road and trapped queue from where the road is closed to the closest location where motorists could leave the impacted route.
- When a major incident is impacting the primary route near a large event venue when a high-attendance event (e.g., concert, etc.) is underway
  - In this situation, the goal is to advise event attendees of the incident/closure BEFORE the event ends and a high volume of motorists attempt to use the impacted route at the same time.
  - Here, the polygon would be drawn around the event venue.

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- When a major disaster or adverse weather event has made an entire area unsafe for roadway travel.
    - In this situation, the goal is to advise those in the affected area that roadway travel is unsafe and to provide additional instructions (e.g., "Stay in-place if your current location is safe," or "Dial 9-1-1 if you are not in a safe location.", etc.).
    - Here, the polygon would be drawn around the area where roadway travel is unsafe.

16.2.2 STOC/TMC personnel are expected to identify situations where NCDOT's use of the WEA System would be beneficial to motorists. However:

- Only STOC staff may coordinate with NCEM to use the WEA System. Therefore, TMC staff must contact STOC to request use of the WEA System.

- STOC must receive approval from NCDOT-TSO Staff prior to coordinating with NCEM.

- NCEM personal may decline STOC's request to use the WEA System. If NCEM declines STOC's request or places conditions on use of the WEA System, STOC must advise NCDOT-TSO Staff immediately.

16.3. WEA TEXT MESSAGES

16.3.1. STOC/TMC staff should adhere to the following guidelines when composing WEA text messages:

- NCDOT-TSO Staff must approve all WEA text messages.

- Be brief. WEA text messages should be no less than 40 characters and no more than 90 characters. Spaces count as characters. Ensure that messages are within the character limits before coordination with NCEM.

- Each message should indicate what the target area is or who the target audience is. Examples include:
    - "I-40 Rockslide near Exit 7. One westbound lane opening soon."
    - "Speedway visitors: I-85 South closed near I-485. Take US 29 South to I-485."
    - NOTE: Successive messages should typically begin with the same statement that indicates an area or audience (i.e., each message about I-85 being closed near the Speedway should begin with, "Speedway visitors:").

- Use complete sentences, proper punctuation, and avoid abbreviations unless necessary to make the message fit within the character limits.

- Messages must be free of spelling errors.

- Limit the number of messages that are sent. 1-2 should be enough for most situations. Multiple messages should NOT be used to convey a single thought or set of instructions.

16.4. NCDOT WEA ACTIVATION REQUEST FORM

16.4.1. STOC personnel must complete the "NCDOT WEA Activation Request Form", Appendix M, whenever use of the WEA System is requested.

- The form can be found on the Z: Drive at [Z: Drive → 511 Operators → Resources].

- The form must be updated as WEA activity occurs and/or if the activation request is changed. A completed form should accurately capture all WEA activity.

- The form will be submitted to NCEM personnel when the activation request is made. However, STOC personnel should retain a copy of the form.

16.4.2. STOC should complete each of the fields within the NCDOT WEA Activation Request Form as described below.

- INCIDENT INFO:

  - Incident Location – describe the location of the incident/situation that has created the need for the WEA System to be used.

  - Date & Time – enter the date and time when the incident/situation occurred that created the need for the WEA System to be used.

  - Incident Description – briefly describe the incident/situation and indicate why the WEA System is being used (e.g., "Trapped Queue between Exit 7 and Exit 20.", etc.).

  - STOC POC and Phone Number – enter the name, title, and best phone number for the STOC team member who is coordinating with NCEM to activate the WEA System.

- POLYGON INFO:

  - Polygon Description – enter a short description of the route/area where the WEA text message should be sent

  - Map with Sample Polygon – paste the link to the Google Map that shows the sample polygon where WEA text message should be sent. Instructions to created & share a sample map with polygon is provided in this SOP, and Appendix M.

  - NOTE: In the interest of time, STOC may use an alternative method for generating a map and highlighting the area where the WEA System should be used (e.g., screenshot of a map with box drawn around WEA activation area). This map must be attached to the WEA Request form when submitted to NCEM.

- MESSAGES:

  - NOTE: This portion of the form has three sections; one for each WEA text message. Each of these three sections is the same. If more than three WEA

text messages will be used, another request form must be completed and attached to the original form.

- o Message Text – enter the WEA text message exactly as it is intended to be sent by NCEM

- o Trigger to Send Message – enter a brief and clear description for when the WEA test message should be sent. STOC personnel must advise NCEM when each message should be sent. NCEM will not send WEA text messages unless advised to do so, even if the trigger is provided to them in advance.

- o Time Message Sent – enter the actual time when each WEA text message was sent by NCEM

16.5. CREATING A MAP WITH SAMPLE POLYGON

16.5.1. NCEM must be provided with a map and sample polygon showing where WEA text messages should be sent whenever use of the WEA System is requested. The link to this map and sample polygon must be included on the NCDOT WEA Activation Request Form.

16.5.2. STOC personnel should follow the steps below to create a map with sample polygon:

1. Open web browser and log into Google (e.g., Gmail, Google Maps, etc.).
   a. Navigate to Google Maps – www.maps.google.com.

   b. Click the menu on the left side of the map.

   c. Click "Your Places" on the menu.

   d. Click "Maps" at the top of the menu.

2. Click "Create Map" at the bottom of the menu.
   a. Focus map on the area where you would like to draw the polygon.

   b. On the map toolbar (under the map's search bar), click the icon for "Draw a line."

   c. From the "Draw a line" submenu, select the "Add line or shape" option.

   d. Click the map to set the 1st point of your polygon – a line will extend from this point and will follow your cursor until you click another point.

   e. Click the map in the appropriate locations around the WEA activation area to add a 2nd and 3rd point for your polygon and then click the 1st point you created – this will complete the polygon, DO NOT create more than 4 points for a polygon.

   f. Click the "Save Polygon" button.

   g. To delete a polygon if it was not drawn correctly, click the polygon and select the Trash Can-shaped icon (Delete feature).

3. Once an appropriate polygon is created, click the "Share" icon on the map's menu.

4. Enter a brief "Map title" and "Description" in the box that appears – Examples below:

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a. Map title: "I-40 Rockslide 6-11-19"

b. Description: "I-40 between Exit 7 and Exit 20"

5. Copy the link for the map from the "Sharing settings" box that appears.

   a. If needed, change the map's accessibility to "On – Anyone with the link" and click "Save".

6. Paste the map link into the "Map with Sample Polygon" field of the WEA Activation Request Form.

7. Email the completed WEA Activation Request Form to nceoc@ncdps.gov.

16.6   WEA ACTIVATION PROCESS

16.6.1 STOC personnel should adhere to the steps below to develop, coordinate, and execute the use of the WEA System:

1. Assess the incident/situation and determine if use of the WEA System is appropriate.
2. Contact a member of NCDOT-TSO Staff (in person or via phone) and discuss the following:

   a. Details of the incident/situation and why use of the WEA System may be appropriate. Also advise if the request for WEA activation has come from another TMC, NCDOT employee, or partner.
   b. Area where WEA text messages should be sent.
   c. Specific text to use for each WEA text message and what their corresponding triggers should be.
   d. Approval to request WEA activation.
3. Use Google Maps to create a map with sample polygon.
4. Complete the NCDOT WEA Activation Request Form.

   a. Save a copy to the Z: Drive at [Z: Drive →511 Operators → Resources]. Update this version throughout the WEA activation process.
   b. Email the completed form to nceoc@ncdps.gov. CC the STOC Operations Manager and the member of the NCDOT-TSO Staff who approved the WEA activation.
5. In person, visit NCEM's 24-hr communication center (behind STOC control room).
   a. Greet them and provide your name and title.
   b. Advise NCEM of the incident/situation that has created a need for WEA System use.

   c. Request use of the WEA System. Discuss the NCDOT WEA Activation Request Form that was emailed to NCEM including the map with sample polygon, proposed WEA text messages, and the anticipated triggers for sending the messages out.
6. When the established trigger occurs to send a WEA text message, return to the NCEM Comm. Center and advise them that it is time to send a WEA text message.

a. Ensure that NCEM has the correct message and polygon.

b. Remain with NCEM to answer questions and/or assist until the WEA text message is sent. NOTE: The initial request may take a while. STOC supervisors should inform their operators that they are leaving and should ensure that another supervisor or experienced operator is in-place to manage the floor.

c. Note the time when the WEA text message was sent. Update the NCDOT WEA Activation Request Form with this time.

d. Repeat this step for each WEA text message.

7. When all planned WEA text messages have been sent, advise the NCEM Comm. Center staff and thank them for their assistance.

17. PROTEST RESPONSE PROCEDURES

17.1   STOC RESPONSIBILITIES

17.1.1 There is a high level of attention given to protests. NCDOT leadership, our partners, elected officials, and the news media are paying very close attention to protests, and to the subsequent response by government agencies.

17.1.2 Action is required when protests impact NC roadways, especially Interstates and major US/NC Routes:

8. Act quickly.

9. Execute response measures; do not hesitate or wait to see how things develop.

10. Take care with the information released; consider how it reflects on NCDOT and our partners.

11. Contact the STOC Operations Manager immediately. (See Appendix N)

12. Contact the Federal Highway Administration (FHWA), whether a Special Alert is activated or not. (See Appendix N)

17.1.3 Contact the Statewide Traffic Incident Management Coordinator if:

- Information from SHP/LE is unavailable or unclear

- STOC, IMAP, or NCDOT personnel need additional support from SHP/LE

17.2   PLANNED PROTESTS

17.2.1 SHP/LE may give the STOC advance warning about an upcoming protest OR you might read about a planned protest in the news.

17.2.2 If an operator learns about an upcoming protest, notify the STOC Operations Manager and all STOC Supervisors via email with details of the protest.

17.3   RECORDING PROTESTS

17.3.1 Use Snagit to record CCTV video – instructions are on the Z: drive at:

- Z:\511 Operators\Resources

17.3.2 Save video to the Z: drive at:

- Z:\Incident Recordings

17.3.3 Notify the STOC Operations Manager via email when a protest recording has been made.

17.4   PROTEST INFORMATION

17.4.1 Information about protests can help NCDOT, IMAP, and other responders make good, safe decisions, BUT it can also paint a negative picture concerning our response.

17.4.2 TIMS, Special Alerts, and Mini-Updates are visible to the public.

- Release the information and level of detail we would normally include.

- Review the contents of all public-facing notifications, prior to publication, to ensure that the information contained cannot be negatively construed.

17.4.3 Internal phone calls or radio traffic are only accessible to NCDOT, IMAP, and responders. It is appropriate to share additional details that will aid in their decision-making, such as:

- Negative interactions with protesters.

- Confirmed or reported cases of hostile protester action (e.g., violence, looting, etc.)

- Confirmed or reported cases of escalated actions against protesters (e.g., tear gas, etc.)

17.5   PROTESTS - DOCUMENTATION

17.5.1 Mini-Updates

- Mini-Updates should be sent out whenever an Interstate or major US/NC route is impacted by protests.

- Try to get the first Mini-Update out as soon as possible after you confirm the protest. The best way to do this is to write a BRIEF initial Mini-Update, then include further details in follow-up Mini-Updates.

17.5.2 TIMS

- Use "Other" as the incident type.

- In the "Reason" field, describe where the closure/delay is and state that it is "due to police activity" (e.g., "All lanes are closed near NC-82 (Exit 65), due to police activity.")

- In the "Notes" field, indicate the incident is due to protesters.

17.6   PROTESTS - DMS

17.6.1 DMS

- Do not describe the reason for the closure/delay as "Protesters", "Police Activity", etc.

- Use "ROAD CLOSED" or "DELAYS", or whatever the impact is (e.g., ROAD CLOSED | 5 MILES AHEAD | FOLLOW DETOUR).

- DMS should always be updated to reflect current conditions – especially roadway or lane closures.

17.7   PROTESTS – SPECIAL ALERTS

17.7.1 A Special Alert and Floodgate may be needed if a 2-digit interstate is impacted by protests.

- Activate the Special Alert and Floodgate if:

  o   All lanes in one or both directions are closed

  o   5+ miles of congestion occur

- Initiate the Special Alert (if conditions are met) regardless of the time of day; or whether you believe the roadway may reopen quickly; or if the closures are

intermittent (i.e., they close for a short time, reopen, then close again for a short time).

17.8   PROTESTS – INTERMITTENT IMPACTS

17.8.1 If the impacts from a protest are intermittent, do not time out and reactivate a TIMS or Special Alert multiple times.

17.8.2 Activate the TIMS and Special alert and let them run until all protest activity is over. Indicate in the TIMS and Special Alert that closures, delays, etc., are intermittent and may re-occur throughout the event.

Last updated: 04.12.2023

18. VIDEO RECORDING

18.1 INTENT

18.1.1. Recorded video from CCTV traffic cameras is used to support training for IMAP and TMS/STOC staff. Videos of traffic incidents enhance training by providing a level of clarity and realism that still images or diagrams cannot.

18.2 WHEN TO RECORD CCTV VIDEO

18.2.1 CCTV traffic cameras do not "passively record" (i.e., they are not always recording by default). Therefore, TMC/STOC staff must intentionally initiate the recording process.

18.2.2 Too many recorded videos can create issues with available storage on DOT shared drives. An excess of recorded videos can also make it difficult to locate videos that are truly beneficial for training. Therefore, TMC/STOC should be selective of what they choose to record. Below are additional examples of when to record CCTV video:

- Incidents that involve unique situations or severe impacts, such as:
    - Damage to DOT or responder's personnel or equipment.
    - Large commercial vehicles, 10+ vehicles, and/or uncommon vehicles or cargo.
    - Large fires, HazMat, severe weather impacts, and/or livestock.
    - Police or terrorist activity or social disturbances.
    - Significant damage to infrastructure
- Incident that involve unique response activities, such as:
    - Improper or incorrect response implementation.
    - Complex removal of vehicles or cargo.
    - Large area response efforts or evacuations.
    - Special investigations, involvement of unusual agencies/entities, or use of new technology.
- Any other incident as directed by a TMC/STOC Supervisor or IMAP Supervisor.

18.2.3 TMC/STOC staff should NOT record CCTV video that depicts disturbing images or sensitive/confidential information.

18.2.4 TMC/STOC staff should attempt to record CCTV video as soon the need to record is identified. Starting recordings quickly will ensure that the intended situation is captured fully. However, TMC/STOC staff should ensure that other tasks that have an immediate impact to safety have been completed first (e.g., DMS activation, IMAP notification, Law enforcement notification, etc.).

18.3 RESPONSE TO REQUESTS FOR RECORDED CCTV VIDEO

18.3.1 Whenever a TMC/STOC employee is asked if DOT records CCTV video, their response should be:

- "DOT traffic cameras are not set to continuously record. CCTV video is only recorded for training purposes."

18.3.2 TMC/STOC staff may not share recorded CCTV video or confirm if such video is available unless instructed to do so by a member of NCDOT-TSO leadership.

18.3.3. If a TMC/STOC employee receives a request for recorded CCTV video, they should follow the process below:

1. Collect the following details from the requestor:
    a. First and last name
    b. Title and agency/group that they represent (if applicable)
    c. Phone number and email address
    d. Purpose for requesting recorded video
    e. Description of what they are requesting including specific Location, Date, and Time
2. Advise the requestor that their request will be sent for review and followed-up on by a member of DOT leadership.
3. Send the details of the request via email to the STOC Operations Manager.
4. STOC Operations Manager will determine if recorded video matching the request is available and will relay the request to NCDOT-TSO Leadership for guidance on next steps.

18.4 HOW TO RECORD CCTV VIDEO

18.4.1 TMC/STOC staff will use Snagit to record CCTV video. Instructions on how to use Snagit can be found on the Z: Drive at the following location:

- Z:\511 Operators\Resources

18.4.2 TMC/STOC may move a CCTV while recording is underway in order to assess the incident properly. However, Staff should make their team aware that recording is underway, and all staff should seek to move the camera as little as possible.

18.4.3 TMC/STOC may end a recording at any time if the incident (or unique circumstance) has concluded, if disturbing or sensitive information is/becomes visible, or they are otherwise directed to end the recording.

18.4.4 TMC/STOC staff should follow the process below to record and archive CCTV video:

1. Use VideoPro to view and control a CCTV traffic camera.

2. Use the PTZ function to maneuver the camera so that it has a good view of the incident and traffic.

3. Notify other on-duty staff that the incident is about to be recorded.

4. Use Snagit to start the recording.

5. When appropriate, stop the recording.

6. Save the recorded video as described below:

    a. File naming convention: *Route_County_Brief Descriptor_ Date of Recording* (e.g., "I-40_Wake_Overturned Cattle Truck_ 5-11-20")

    b. Z: Drive location: Z:\Incident Recordings

7. If the recording was initiated at the request of a supervisor or member of management, staff should notify the requesting party via email that the recording has been completed.

18.4.5 TMC/STOC staff are encouraged to create multiple recordings of a single incident. This involves starting, stopping, and re-starting the recording the recording during the incident. Doing so ensures that recorded videos are not excessive in length or file size. If staff do this, they should follow the additional guidance below:

- Seek to record important moments of the incident's progress and stop recording during long periods of inactivity.

- Create a sub-folder in the "Incident Recordings" folder where all videos related to the incident can be housed in one location and easily found.

    o Sub-folder naming convention: *Route_County_Brief Descriptor_Date of Recording* (e.g., "I-40_Wake_Overturned Cattle Truck_5-11-20")

- Save individual video recordings as described below so they can easily be viewed chronologically:

    o File naming convention: *Route-County-Brief Descriptor-Date of Recording-Letter in Sequence (*e.g., First video is "I_40_Wake_Overturned Cattle Truck_5-11-20_**A**", Second video is "I-40_Wake_Overturned Cattle Truck_5-11-20_**B**"

18.5 MANAGING RECORDED CCTV VIDEO FILES

18.5.1 To prevent storage issues on DOT shared drives, all recorded CCTV videos that are older than 30 days will be permanently deleted from the "Incident Recordings" folder on the Z: Drive. The "Incident Recordings" folder is NOT the long-term storage location for recorded videos.

18.5.2 STOC supervisors are responsible for periodically reviewing the "Incident Recordings" folder and deleting any recorded CCTV videos that are older than 30 days.

18.5.3 Individuals who use recorded CCTV videos are responsible for copying the videos that they need and archiving them to a separate location. Users should copy but should not

permanently remove recorded videos from the "Incident Recordings" folder. Users can prevent unintended loss of recorded videos by:

- Keeping in mind that videos are deleted after 30 days.

- Promptly retrieving videos that they have requested.

- Periodically checking the "Incident Recordings" folder for videos and copying any they want to use to a separate location.

19. DEVICE/SYSTEM MALFUNCTIONS AND FACILITY ISSUES

19.1. ITS DEVICE TESTING

19.1.1. Device testing should be completed by STOC/Regional TMCs Monday thru Friday according to the assigned schedule.

19.1.2. All CCTV cameras for all divisions must be tested for an active video feed as well as motion control (PTZ – pan, tilt, zoom). Possible error statuses included on the report are as follows:

- No Video: blue or black screen

- Color Bars: multicolor vertical bars are displayed.

- Pixels: a live video feed is present but displays a poor/unidentifiable image

- No PTZ: a live video feed is present but has limited to no motion control.

19.1.3. Divisions 7 and 9 municipal cameras must be tested for PTZ through VideoPro every Friday by the STOC and daily by the Triad TMC.

19.1.4. All DMS for Divisions 1, 2, 5, 7, and 9 must be tested for an active, working connection and pixel display status. Possible error statuses included on the report are as follows:

- Comm Error: there is no communication between Vanguard and the sign (Error will be listed under the signs communication status).

- Offline: communication with the sign has been manually disconnected (Error will be listed under the signs communication status).

- Pixel Error: One or more pixels are not functional (Pixel errors will be listed under the signs status errors in Vanguard).

19.1.5. DMS should be tested by activating that week's safety message. The messages can be located in the STOC Vanguard under "Play Message → DMS Test – Approved Messages." And in the TRIAD Vanguard under "Play Message → Test Messages → DMS Test – Approved Messages." (Upon Supervisor approval, the "Lights On When Wipers On" message and the "Deer Activity October – December" message can be displayed during device testing).

- Week 1: Secure Load Message

- Week 2: Fender Bender Law Message

- Week 3: Move Over Law Message

- Week 4: Seatbelt Law Message

- Week 5: Motorcycle Safety Message

19.1.6. DMS that are currently displaying an active message should be tested by refreshing the sign. Active messages should not be overridden by safety messages.

19.1.7. Divisions 7 and 9 DMS must have a pixel test performed and reported every Wednesday. The test should be performed in both STOC and Triad Vanguards by right clicking on the DMS and

selecting open pixel test. Once the test is open, select refresh, and report any errors that may occur.

19.2. REPORTING DEVICE MALFUNCTIONS AND FACILITY ISSUES

19.2.1. Operators must document any significant device malfunctions and/or facility issues and report them to an appropriate POC in a timely manner.

19.2.2. For significant malfunctions of any ITS devices or travel information resources, operators should use the Device Malfunctions and Facility Issues option in the STOC Contact Matrix to determine who to report the malfunctions to. See section 3.9 for general details on the STOC Contact Matrix.

19.2.3. To use the Device Malfunctions and Facility Issues feature properly, operators must:

- Identify the section for the device malfunction/facility issue that is appropriate,

- Review the POCs listed for a particular situation and assure that only those responsible for the situation/division are called and

    o If a POC does not answer a call from STOC, operators should escalate the call to other POCs by following the escalation process described for the situation.

- Review the information under the heading, "Other Guidance & Actions" and perform any of the actions described for that situation.

19.3. TESTING TIMS CAMERAS

19.3.1. The TIMS Cameras are tested from the TIMS Main Page.

19.3.2. Operators should filter cameras region by region and scan the cursor over each camera icon to see if the camera image is displayed.

19.3.3. If the camera is not working as intended the screen will display "image unavailable" or a blue screen.

19.3.4. The failed camera location should be documented in the correct column for the region within the device test.

19.4. TIMS MALFUNCTIONS

19.4.1. Operators are responsible for identifying and troubleshooting TIMS malfunctions and for notifying the appropriate personnel in a timely manner so the malfunction can be resolved.

19.4.2. Examples of TIMS malfunctions include but are not limited to:

- Unable to login to or access TIMS,

- Unable to create or edit TIMS incidents,

- Not receiving any TIMS notifications,

- Unable to activate or edit County or Special Alerts,

- SHP CAD feed is inaccessible or is not displaying new reports,

- Links do not work or direct users to incorrect locations, and

- Performance of entire system is exceptionally slow or frequently logs users out.

19.4.3. For a malfunction with TIMS email notifications (i.e. notifications are not being received), operators should perform the following to verify/troubleshoot the issue:

- Assure that there are no internet connection issues and that the STOC email account is open and receiving emails (send a test email to STOC account to confirm this),

- Enter a test incident in TIMS. Create a new TIMS incident via normal procedures but with the following details:

  o County: Wake,

  o Road: Choose a minor roadway such as an NC route or SR,

  o Impact: LOW,

  o Incident Type: Other,

  o Condition: Congestion,

  o Reason: "TEST INCIDENT. PLEASE DISREGARD," and

  o DOT Notes: Brief description of reason for test incident and operator's initials (e.g., "Attempting to verify issues with TIMS notifications – RPG").

- Check the STOC inbox to see if the TIMS notification for the test incident has arrived,

- If the TIMS notification has not arrived after 5 minutes, proceed with the process for reporting the malfunction as described in the next statement.

19.4.4. When TIMS system is down and completely inaccessible, operators should:

1. Troubleshoot the issue (e.g., login and log out, see if others are having the same issue, etc.)

   a. Determine that TIMS is completely down/inaccessible.

   b. If there is an issue with a TIMS feature (CAD Feed, notifications, Special Alert, etc.) call the STOC Operations Manager (1st) or the Traffic Operations Information Engineer (2nd) for direction on how to move forward.

   c. NOTE: The SHP CAD Feed routinely goes down on Sundays from 6am-11am for maintenance. Calling the STOC Operations Manager, Help Desk, etc. is not necessary during this time.

2. Check the NCDIT Service Status website:

   a. https://ncconnect.sharepoint.com/sites/DITCommHub/Lists/Services/AllItems.aspx

   b. Scroll to confirm the status of NCID (green, yellow, or red)

3. Wait 10-15 minutes and check TIMS again.

4. If TIMS is still down, contact Help Desk and <u>get Help Desk Ticket #.</u>

   a. Help Desk: 919-707-7000

   b. Tell Help Desk: "<u>The issue is critical and must be addressed immediately.</u>" (use this <u>exact</u> phrase)

   c. Call the STOC Operations Manager and the Traffic Operations Information Engineer if unable to reach the Help Desk OR if the Help Desk states that they will get to it later/next business day.

5. Contact the STOC Operations Manager to provide initial notification (if not contacted sooner). (See Appendix N)

6. Send a Mini-Update with information about the outage. Be sure to include:

   a. Help Desk Ticket #

   b. NCID status from the NCDIT website

7. Log the malfunction. Include the Help Desk Ticket # and details on the notification efforts.

8. Throughout the malfunction, regularly check if TIMS is still down.

9. Contact the STOC Operations Manager if (See Appendix N):

   a. TIMS is still down after one hour since the Help Desk was first notified.

   b. Additional information arises related to the outage and/or the Help Desk provides an update.

   c. The Help Desk (or other IT POC) indicates that the outage will last longer than two hours.

10. Every hour contact the Help Desk (or other IT POC) to request an update.

    a. Send a Mini-Update to provide a status update on the TIMS outage.

11. When TIMS is back up:

    a. Contact the STOC Operations Manager (See Appendix N)

    b. Send a final Mini-Update.

19.5. NC 511 MALFUNCTIONS

19.5.1. Operators are responsible for identifying and troubleshooting potential malfunctions with the NC 511 system and for notifying the appropriate personnel in a timely manner so the malfunction can be resolved. This includes:

- NC 511 Traveler Information Hotline,

- NC 511 Floodgate Phone Utility.

19.5.2. Minor/Moderate NC 511 malfunctions include but are not limited to:

- Individual floodgate messages are not playing, or

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- NC 511 Traveler Information Hotline is not transferring callers to a live operator.

19.5.3. Major NC 511 malfunctions include but are not limited to:

- NC 511 Traveler Information Hotline is not accessible,

- All floodgate messages are not playing, or

- NC 511 Floodgate Phone Utility is not accessible.

19.5.4. For Minor/Moderate NC 511 malfunctions, operators should:

- Attempt to verify and, if possible, troubleshoot the malfunction. Troubleshooting strategies include but are not limited to:

  o Call 511 via console phone (877-511-4662) and cell phone to verify issue,

  o Attempt to recreate the malfunction by performing the action again,

  o Ask if other operators are experiencing the same issue,

  o Check internet connection by visiting other websites,

  o Log out of Floodgate Dashboard and log back in, and/or

  o Restart computer.

- Advise supervisor or POC, if available.

- Call the following personnel and describe the malfunction:

  o Traffic Operations Engineer (See Appendix N)

  o STOC Operations Manager (See Appendix N)

  o If the Traffic Operations Engineer asks you to create a ticket, please call DIT Help Desk at (919) 754-6000.

    ▪ Inform the DIT Help Desk to open a ticket with the AT&T IPTF Advance Services Center for Account 999-011-1335 toll free number 877-511-4662.

- Document malfunction and notification activities in log.

19.5.5. Once a malfunction has been identified and reported, operators should:

- Regularly check NC 511 to determine if the malfunction is ongoing, and

- Report the status of the malfunction in all Shift Updates until the issue is resolved.

19.5.6. Once the malfunction has been resolved, operators should send an email from the STOC email account to the same recipients that received the initial malfunction notification. Email should include:

- Brief description of the malfunction,

- Time when malfunction was resolved, and brief description of how the malfunction was resolved, if known.

APPENDIX A: EMAIL TO TEXT TEMPLATE

Alltel	[10-digit phone number]@message.alltel.com
Alaska Communications System	[10-digit phone number]@msg.acsalaska.com
AT&T	[10-digit phone number]@txt.att.net
Boost:	[10-digit phone number]@myboostmobile.com
CellularOne (Dobson):	[10-digit phone number]@mobile.celloneusa.com
CellularOne West	[10-digit phone number]@mycellone.com
Cellular South:	[10-digit phone number]@csouth1.com
Centennial Wireless	[10-digit phone number]@cwemail.com
Cincinnati Bell	[10-digit phone number]@gocbw.com
Cricket	[10-digit phone number]@sms.mycricket.com
EinsteinPCS / Airadigm Communications	[10-digit phone number]@einsteinsms.com
Globalstar (satellite)	[10-digit phone number]@msg.globalstarusa.com
Idea Cellular	[10-digit phone number]@ideacellular.net
Iridium (satellite)	[10-digit phone number]@msg.iridium.com
i-wireless	[10-digit phone number].iws@iwspcs.net
Meteor	[10-digit phone number]@sms.mymeteor.ie
Metro PCS	[10-digit phone number]@mymetropcs.com
Metrocall Pager	[10-digit phone number]@page.metrocall.com
Mobilfone	[10-digit phone number]@page.mobilfone.com
Nextel	[10-digit phone number]@messaging.nextel.com
O2 (formerly BTCellnet)	[username]@o2.co.uk
Skytel – Alphanumeric	[10-digit phone number]@skytel.com
Sprint	[10-digit phone number]@messaging.sprintpcs.com
Southern Linc	[10-digit phone number]@page.southernlinc.com

APPENDIX B: SPECIAL ALERT CHECKLIST

SPECIAL ALERT CHECKLIST	County, Route, Direction, & MM _____ Date: _____ Operator: _____ Incident Start Time: _____ End Time: _____ Duration: _____

SPECIAL ALERT CRITERIA	
APPLIES TO ALL 2-DIGIT INTERSTATES* & NC-12 (SOUTH OF US 64) *** Excluding Business and Alternate Routes**	
Major Incident: **Must meet BOTH Criteria A and one of Criteria B**	**A. Full road closures in one or both directions** **B. One of the following criteria:** • Overturned commercial vehicle (large truck, cement mixer, dump truck, tractor trailer, etc.) • Fatal or life-threatening injury crash involving multiple vehicles • Incidents that require on-scene crash investigations • HAZMAT (any placarded substance) situations that result in evacuations, detours, or environmental issues (spillage into a waterway or drainage system) • Incidents that involve structural damage to the roadway (Roads, Bridges, & Overpasses) • Unusual extreme event not captured above (e.g., plane landing on interstate, terrorist activities) Note: These must be approved through NCDOT STOC management.
OR	
Congestion: **Excluding Recurring**	• INRIX shows congestion (orange, red, or black) **> 5 miles.**

ACTIVATION		
APPROVED GEOGRAPHICAL REFERENCES ARE: ASHEVILLE, STATESVILLE, CHARLOTTE, WINSTON SALEM, GREENSBORO, FAYETTEVILLE, RALEIGH, DURHAM, ROCKY MOUNT, AND WILMINGTON; ANY STATE LINE; BETWEEN REF CITY 'A' AND REF CITY 'B'; FOR NC-12 USE THE NEAREST CITY OR ISLAND; ANOTHER INTERSTATE (Ex., "I-40 CLOSED NEAR I-95"). If two incidents on the <u>same route</u> will use the <u>same geographical reference</u>, it is permissible to use a nearby non-approved city to distinguish between the two incidents.		
1.	Add Special Alert to TIMS • Has an approved geographical reference (see above) been used in the headline? Reference: _____	**TIMS Notifications sent and Special Alert printed** ☐
2.	Send out Mini-Update Time sent: _____	**Mini-Update sent** ☐
3.	What Division is the incident located in? _____ Name of person contacted: _____ Time called: _____	**POC for Division contacted** ☐
	Have the appropriate DMS been activated? Yes No	**DMS Activated** ☐
	Are there additional DMS in other Divisions that could be used? Yes No Div. _____ Name of person contacted: _____ Time called: _____	**POC for additional Division contacted** ☐
4.	Is the incident in TIMS? TIMS # _____	**Incident entered into TIMS** ☐
5.	Does the incident require a detour? Yes No If yes, check status of detour routes for other incidents in TIMS, SHP feed, and HERE.	**Detour Route clear of incidents** ☐
6.	Does this incident involve a weather-related closure of NC-12? Yes No • Contact Tim Hass, NCDOT Div. 1 Communications, 252-423-5109 for all weather-related NC-12 TIMS incidents to ensure consistent messaging is maintained. Any updates to weather-related NC-12 TIMS incidents must be approved by Mr. Hass. • Contact the Women's Prison Supervisor and relay all current information; advise that call-takers should inform callers that NC-12 re-opening times may be extended until weather conditions improve (despite published TIMS re-opening times. STOC should call and ask to speak to a supervisor, if a WP Supervisor is not available, relay the info & guidance to a WP call-taker.	**NCDOT Div, 1 Comm contacted** ☐ **Women's Prison contacted** ☐
7.	Record 511 Floodgate message: 800-658-7828 User: 971750 PIN: 55265960 ID: 204450	**511 Floodgate recorded** ☐

Last updated: 04.12.2023

8.	Have a 2nd Operator call 511 and verify the accuracy and sound quality of the floodgate.	**511 Checked – 2nd Operator**	☐
9.	Call NCDOT Public Information Office – not necessary during normal business hours • 919-218-2353 – After normal business hours Name of person contacted: _____ Time called: _____	**Public Information Office contacted**	☐
10.	Has this incident resulted in a "Trapped Queue" which may require use of the NCEM WEA System? (See SOP 16) – STOC Must complete a WEA Request form and submit to NCEM's EOC). Name of NCEM contact: _____ Time contacted: _____	**NCEM WEA System requested**	☐
11.	Does this incident affect traffic in other states? Yes No Name of person contacted: _____ Time called: _____	**Contact other states DOT**	☐
12.	**Does this incident meet STIX criteria?** (See SOP 3.32) Yes No GDOT/STIX: 888-635-8287 Name of person contacted: _____ Time called: _____	**GDOT/STIX contacted**	☐
13.	**Does this incident meet the Reporting Criteria for FHWA?** (See SOP 3.31.1) Yes No Tammy Richards 919-906-6163 Brad Hibbs 919-624-9723 Name of person contacted: _____ Time called: _____	**FHWA contacted**	☐
14.	Update Google Maps and Waze Time updated: _____	**Google Maps and Waze**	☐

IMPORTANT: Every 45 minutes there should be communication between the STOC and responding personnel. If there is an increase or a decrease in severity, the POC for the affected division(s) should be contacted. Also, Mini Updates should be sent throughout the duration of the incident, highlighting important information regarding the incident, traffic, and DOT response.

DEACTIVATION			
1.	Verify that the incident is over. Name of person contacted: _____ Time called: _____	**Verification complete**	☐
2.	Contact Division POC to deactivate DMS messages. Name of person contacted: _____ Time called: _____	**POC for Division contacted**	☐
	Deactivate additional DMS in other Divisions and contact POC. Name of person contacted: _____ Time called: _____	**POC for additional Divisions contacted**	☐
3.	Time out incident in TIMS.	**TIMS deactivated**	☐
4.	Update Special Alert (All Clear or Congestion Remains message) and send notification.	**Special Alert updated**	☐
5.	Update 511 Floodgate to match the Special Alert	**Floodgate updated**	☐
6.	Notify NCDOT PIO incident is over – not necessary during normal business hours • 919-218-2353 – After regular business hours Name of person contacted: _____ Time called: _____	**Public Information Office contacted**	☐
7.	If the incident required the use of the NCEM WEA system, notify NCEM incident is over. Name of NCEM contact: _____ Time contacted: _____	**NCEM contacted**	☐
8.	If the incident affected traffic in other states, let them know the incident has ended. Name of person contacted: _____ Time called: _____	**Contact other states DOT**	☐
9.	If GDOT/STIX was notified, advise them the incident has ended. GDOT/STIX: 888-635-8287 Name of person contacted: _____ Time called: _____	**GDOT/STIX contacted**	☐
10.	If FHWA was notified, advise them the incident has ended. Name of person contacted: _____ Time called: _____	**FHWA contacted**	☐
11.	Deactivate the "All Clear" Special Alert and Floodgate when it has been active for an hour	**SA and FG deactivated**	☐
12.	Send the final Mini-Update advising the incident is over and file completed checklist.	**Final Mini-Update sent**	☐
13.	Remove any updates to Google Maps and Waze reflecting the incident.	**Google Maps and Waze**	☐

Last Updated 9.12.2022 – WDP/KEW

Last updated: 04.12.2023

APPENDIX C: AMBER/BLUE/SILVER ALERT CHECKLIST

AMBER/BLUE/SILVER ALERT CHECKLIST	Subject Name: _____
Amber ☐ Blue ☐ Silver ☐	Date: _____ Time: _____
With Vehicle ☐ Without Vehicle ☐	Operator: _____

Contacted by:

1. NC Center for Missing Parsons (NCCMP) Email – *missingpersons@nccrimecontrol.org* ☐

2. NC Alcohol Law Enforcement Division (NCALE) Email – *NCAMBERAlerts@ncale.org* ☐

3. Verifiable Law Enforcement Agency (approved by NCDOT TSOU Staff) – *BLUE ALERT ONLY* ☐

   Agency & Contact Info:

   _____

Create:

4. TIMS Special Alert *(Amber/Blue Alerts Only)* ☐

5. 511 Floodgate Message *(Phone: 800-658-7828; Access: 971750; PIN: 55265960; Announcement* ☐
   ID: 204450) [Amber/Blue Alerts Only]
   a. Floodgate should instruct motorist to call 911 or *HP if they have information about the
      missing person. **Do not** include 10-digit phone numbers in the floodgate.
   b. **Alert Floodgates must end with the following:** "This concludes the [Amber/Blue] Alert
      information. For traffic information, please stay on the line. If you require no further
      assistance, you may disconnect the call now."

6. Activate County Alert with complete information from issuing agency. *(All Alerts)* ☐

7. Contact Women's Prison via 511, identify yourself, and advise that an alert is active and which ☐
   county contains the alert details. *(All Alerts)*

DMS Activation: *(Follow NCDOT SOP DMS message priorities)*

8. For **Amber Alerts**: Activate all DMS in all Divisions, send the DMS Alert Notification – Activation ☐
   Email.

9. For **Blue & Silver Alerts**: Refer to Contact Matrix → DMS Alert Activations for Division contacts ☐
   and instructions, send the DMS Alert Notification – Activation Email.

10. Divisions noted with asterisk (*), post DMS message and email Division Contact. ☐

Division/TMC Contacted						
Division/TMC	**Person Contacted**	**Time**	**By Email**	**By Phone**	**DMS Activated?**	
1			☐	☐	Yes	No
2			☐	☐	Yes	No
3 *			☐	☐	Yes	No
Jacksonville TMC			☐	☐	Yes	No
4 *			☐	☐	Yes	No
5 *			☐	☐	Yes	No
6 *			☐	☐	Yes	No
7/9 *			☐	☐	Yes	No
10/12			☐	☐	Yes	No
I-77 Mobility TMC			☐	☐	Yes	No
11 *			☐	☐	Yes	No
13 *			☐	☐	Yes	No
14 *			☐	☐	Yes	No

DMS Examples:

Amber	Blue	Silver	Multiple Alerts
AMBER ALERT RED HONDA ACCORD NC TAG: FHJ-6688	SUSPECT AT LARGE GOLD HYUNDAI NC TAG: CDE-4567	MISSING PERSON GREEN TOYOTA CAMRY NC TAG: LMN-9876	AMBER* ALERTS CALL 511 FOR INFO
	BLUE ALERT GOLD HYUNDAI NC TAG: CDE-4567		*Specify alert type

Alert Duration:

	Amber/Blue with vehicle	Silver with vehicle	Amber/Blue w/o vehicle	Silver w/o vehicle
TIMS Special Alert	Until Cancelled	N/A	Until Cancelled	N/A
Floodgate Duration	Until Cancelled	N/A	Until Cancelled	N/A
DMS Duration	Until Cancelled	24 Hours	Until Cancelled	N/A

Alert Cancellation:

1. Take down TIMS Special Alert *(Amber/Blue Alerts Only)*   ☐

2. Change 511 Floodgate to reflect Alert Cancellation. *(Amber/Blue Alerts only)*   ☐
   a. "The previously issued North Carolina [Amber/Blue] Alert for [MISSING PERSON/VEHICLE] has been cancelled. This concludes the [Amber/Blue] Alert information. For traffic information, please stay on the line. If you require no further assistance, you can disconnect this call now. Thank you."
   b. (Amber) Deactivate the cancellation script after **twenty-four (24) hours**.
   c. (Blue) Deactivate the cancellation script after **one (1) hour**.

3. Deactivate DMS and send DMS Alert Notification – Deactivation Email *(All Alerts)*   ☐

4. Note reason DMS were deactivated:
   a. Alert timed out   ☐
   b. NCCMP advised NCDOT to deactivate signs.   ☐
   c. DMS changed for a message of higher priority.   ☐
   d. DMS message caused excessive traffic congestion.   ☐
   e. Alert cancelled.   ☐
   f. Other: _____   ☐

5. Deactivate County Alert. *(All Alerts)*   ☐

6. Complete Alert paperwork and file appropriately.   ☐

Last Updated 9.12.2022 WDP/KEW

APPENDIX D: FUGITIVE ALERT CHECKLIST

FUGITIVE ALERT CHECKLIST	DATE/TIME: _____
LAW ENFORCEMENT AGENCY: _____	**VEHICLE:** _____
LE POC NAME & PHONE #: _____	**LICENSE PLATE:** _____
NCIC/DCI CASE #:	**DOT DIVISIONS:**

NCDOT TSOU STAFF CONFIRMATION AND APPROVAL

1) Supply TSOU Staff Member with the following information: ☐

    a. Requestor Identity

    b. NCIC/DCI Case Number

    c. Phone Numbers

        i. Troop C 919-716-1111

        ii. If Troop C cannot verify; Contact ISSAC 888-624-7222

2) TSOU Staff Member contacted for approval (contact in order) :

    ☐ Dominic Ciaramitaro   ☐ Jennifer Portanova

SPECIAL ALERT/FLOODGATE/DMS

3) Create TIMS Special Alert   ☐

4) Create 511 Floodgate Message   ☐

    a. Ph #: 800-658-7828 / Access code: 971750 / Pin # 55265960 /Annc. ID 204450

    b. Floodgate should instruct motorists to call 911 or *HP if they have information about the incident.

5) Activate DMS   ☐

    a. Refer to Z:\\511 Operators\Alert Checklists\Alert DMS Activation Matrix

    b. Only activate DMS in affected divisions.

DIVISION	PERSON CONTACTED	METHOD OF CONTACT		TIME OF CONTACT	DMS ACTIVATION DENIED
1*		Email	Phone		
2*		Email	Phone		
3**		Email	Phone		
4		Email	Phone		
5		Email	Phone		
6		Email	Phone		
7/9		Email	Phone		
10/12		Email	Phone		
11		Email	Phone		
13		Email	Phone		
14		Email	Phone		

*If DMS is in use, call for permission.

**Contact Jacksonville TMS 910-938-5070 to activate Jacksonville City DMS as well.

Last updated: 04.12.2023

DMS MESSAGES

6) With vehicle:

    a. P1: SUSPECT AT LARGE | VEHICLE INFO | LICENSE PLATE INFO

    b. P2: FUGITIVE ALERT | VEHICLE INFO | LICENSE PLATE INFO

7) Without vehicle:

    a. FUGITIVE ALERT | SUSPECT AT LARGE | CALL 511 FOR INFO

DMS EXAMPLES

WITH VEHICLE		WITHOUT VEHICLE
Panel 1	Panel 2	FUGITIVE ALERT
SUSPECT AT LARGE	FUGITIVE ALERT	SUSPECT AT LARGE
BLUE FORD FOCUS	BLUE FORD FOCUS	CALL 511 FOR INFO
CA TAG: 2RAP337	CA TAG: 2RAP337	

8) DMS Alert Notification Activation – Email Sent ☐

9) Copy Fugitive Alert information into a County Alert for the issuing county and notify the 511 call center. ☐

10) Send Mini-Update ☐

11) Contact Law Enforcement POC <u>every four hours</u> for alert updates. ☐

ALERT TERMINATION

1) Verify with Law Enforcement POC that the Fugitive Alert has ended. ☐

    a. Time of deactivation: _____

    b. Alert Duration: _____

2) Deactivate DMS: ☐

    a. Remove all alert messages on DMS activated for this alert.

    b. Replace preciously posted messages.

3) Remove TIMS Special Alert ☐

4) Remove 511 Floodgate ☐

5) Inform NCDOT TSOU Staff of deactivation ☐

6) DMS Alert Notification Cancellation – Email Sent ☐

7) Delete County Alert and notify the 511 call center ☐

8) Ensure all paperwork is complete and filed. ☐

9) Send Mini-Update ☐

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APPENDIX E: APPROVED ABBREVIATIONS FOR DMS

WORD	ABBREVIATION	NOTES
Afternoon/Evening:	"PM"	
Alternate:	"ALT"	
AM Radio:	"AM [FREQUENCY]"	Example: "AM 640"
Avenue:	"AVE" or "AV"	
Bicycle:	"BIKE"	
Bridge:	"BR"	Must be preceded by bridge name
Boulevard:	"BLVD"	Only use as part of a road name
CB Radio:	"CB"	
Center:	"CNTR"	
Circle	"CIR"	Only use as part of a road name
Civil Defense:	"CD"	
Compressed Natural Gas:	"CNG"	
Court:	"CT"	Only use as part of a road name
Crossing:	"X-ING" or "XING"	Other than highway-rail
Drive:	"DR"	Only use as part of a road name
East:	"E" or "E-BND"	Do not use "EB"
Electric Vehicle:	"EV"	
Exit:	"EX"	
Expressway:	"EXPWY"	Only use as part of a road name
Feet:	"FT"	
FM Radio:	"FM [FREQUENCY]"	Example: "FM 100.5"
Freeway	"FRWY" or "FWY"	Only use as part of a road name
Friday:	"FRI"	
Georgia:	"GA"	
Hazardous Materials:	"HAZMAT"	
High Occupancy Vehicle:	"HOV"	
Highway:	"HWY"	Only use as part of a road name
Hospital:	"HOSP"	
Hour(s):	"HR" or "HRS"	
Information:	"INFO"	
International:	"INTL"	
Interstate:	"I-[# #]"	Example: "I-40"
Junction/Intersection:	"JCT"	
Lane(s):	"LN" or "LNS"	
Liquid-Propane Gas:	"LPG"	
Maximum:	"MAX"	
Mile(s):	"MI"	
Miles Per Hour:	"MPH"	

WORD	ABBREVIATION	NOTES
Minimum:	"MIN"	
Minutes:	"MIN"	
Monday:	"MON"	
Morning/Late Night:	"AM"	
Mount:	"MT"	
Mountain:	"MTN"	
National:	"NTL"	
North:	"N" or "N-BND"	Do not use "NB"
North Carolina:	"NC"	
NC Route:	"NC [# #]"	Example: "NC 147"
Parkway:	"PKWY"	Only use as part of a road name
Pedestrian:	"PED"	
Place:	"PL"	Only use as part of a road name
Pounds:	"LBS"	
Road:	"RD"	Only use as part of a road name
Route:	"RT" or "RTE"	
Saint:	"ST"	
Saturday:	"SAT"	
Shoulder:	"SHLDR"	
South:	"S" or "S-BND"	Do not use "SB"
South Carolina:	"SC"	
Street:	"ST"	Only use as part of a road name
Sunday:	"SUN"	
Telephone:	"PHONE"	
Temporary:	"TEMP"	
Tennessee:	"TN"	
Terrace:	"TER"	Only use as part of a road name
Thursday:	"THURS"	
Thruway:	"THWY"	Only use as part of a road name
Tons of Weight:	"T"	
Trail:	"TR"	Only use as part of a road name
Tuesday:	"TUES"	
Turnpike:	"TPK"	Only use as part of a road name
Two-Way Intersection:	"2-WAY"	
US Route:	"US [# #]"	Example: "US 70"
Vehicle(s):	"VEH" or "VEHS"	
Virginia:	"VA"	
Wednesday:	"WED"	
West:	"W" or "W-BND"	Do not use "WB"

APPENDIX F: DISPATCH 10-CODES LIST

Code	Description	Code	Description
10-1	Signal Weak	10-48	Detaining Subject, Expedite
10-2	Signal Good	10-49	Drag Racing
10-3	Stop Transmitting	10-50	Collision PD, PI, F
10-4	Affirmative (OK)	10-51	Wrecker Needed
10-5	Relay (to)	10-52	Ambulance Needed
10-6	Busy	10-53	Road Blocked
10-7	Out-of-Service	10-54	Hit and Run PD, PI, F
10-8	In-Service	10-55	Intoxicated Driver
10-9	Say Again (Repeat)	10-56	Intoxicated Pedestrian
10-10	Negative	10-57	Request Chemical Analyst on Duty to Meet _____
10-12	Stand by (Stop)	10-58	Direct Traffic
10-13	Existing Conditions	10-59	Convoy or Escort
10-14	Message/Information	10-60	Investigate Suspicious Vehicle
10-15	Message Delivered	10-61	Stopping Suspicious Vehicle
10-16	Reply to Message	10-62	Burglary/Breaking and Entering
10-17	En route	10-63	Investigate _____ at _____
10-18	Urgent	10-64	Crime in Progress
10-19	(In) Contact	10-65	Report of Armed Robbery
10-20	Location	10-66	Notify Medical Examiner
10-21	Call _____ by phone	10-67	Investigate Report of Death
10-22	Disregard	10-68	Livestock on Highway
10-23	Arrived at Scene	10-69	Advise Present Telephone Number
10-24	Assignment Complete	10-70	Improperly Parked Vehicle
10-25	Report to (Meet)	10-71	Improper Use of Radio
10-26	Estimated Arrival Time	10-72	Have Prisoner in Custody
10-27	License/Permit Information	10-73	Mental Subject
10-28	Ownership Information (Vehicle)	10-74	Prison or Jail Break
10-29	Records Check	10-75	Records Indicate Wanted or Stolen
10-30	Danger/Caution	10-76	Report of Prowler
10-31	Pick Up	10-77	Assist Fire Department with Traffic
10-32	_____ Units Needed (Specify)	10-78	Report of Abandoned Vehicle
10-33	Help Me Quick	10-79	Report of Vehicle Fire
10-34	Time	10-80	Report of Careless and Reckless Driving
10-35	Valid Concealed Handgun Permit	10-81	Report of High Speed
10-36	Restraint Violation	10-82	Report of Disabled Motorist
10-40	Fight In Progress	10-83	Report of Improper Registration
10-41	Beginning Tour of Duty	10-84	Report of Operator's License Violation
10-42	Ending Tour of Duty	10-85	Report of Mini Bike/Go Cart Violation
10-43	Chase	10-86	Beginning Authorized Travel
10-44	Riot	10-87	Ending Authorized Travel
10-45	Bomb Threat	10-90	Rest Area/Welcome Center Check
10-46	Bank Alarm	10-91	CMV Inspection
10-47	Complete Assignment Quickly		

Last updated: 04.12.2023

APPENDIX G: DISPATCH SIGNALS LIST

SIGNAL 1	Suspect Armed and Dangerous
SIGNAL 2	Report of Suspected Drug Trafficking (vehicle/suspect description, direction of travel and "SIGNAL 1" if applicable)
SIGNAL 3	Confidential Traffic
SIGNAL 4	Report of Vehicle Stored/Recovered
SIGNAL 5	Situation under control, no further assistance necessary
SIGNAL 6	Violator on active probation/parole
SIGNAL 7	Report to District Office/Troop HQ without delay/disturbance
SIGNAL 8	Your equipment is ready for service
SIGNAL 9	Meet at _____Troop or District meeting
SIGNAL 10	Possible suicidal person
SIGNAL 11	All members affected by this signal should immediately prepare for emergency duty and maintain radio contact
SIGNAL 12	Report to _____ at _____ for emergency duty
SIGNAL 13	Conviction/Revocation
SIGNAL 14	Current Suspension/Revocation Information other than DWI
SIGNAL 15	Protection Order
SIGNAL 16	Registered Sex Offender
SIGNAL 17	Gang Member
SIGNAL 18	Accident/Incident Involving Hazardous Material
SIGNAL 19	Report of Aircraft Crash at _____
SIGNAL 20	Report of Aircraft Difficulty at _____
SIGNAL 21	Request for radio or car repair
SIGNAL 22	Fatal Collision Report
SIGNAL 23	Message requiring special handling (answer requested)
SIGNAL 24	Daily Fatality Summary
SIGNAL 25	_____ needs immediate assistance to make arrest of resisting person. Report at once to _____
SIGNAL 26	Computer terminal is temporarily out-of-service
SIGNAL 27	Pick-up License Revocation Confirmed
SIGNAL 28	Pick-up Registration Plate Revocation Confirmed
SIGNAL 30	Individual of the opposite sex must be placed within Patrol vehicle for the purpose of public service or enforcement contacts

APPENDIX H: PHONETIC ALPHABET

PHONETIC ALPHABET	
A	ADAM
B	BOY
C	CHARLES
D	DAVID
E	EDWARD
F	FRANK
G	GEORGE
H	HENRY
I	IDA
J	JOHN
K	KING
L	LINCOLN
M	MARY
N	NORA
O	OCEAN
P	PAUL
Q	QUEEN
R	ROBERT
S	SAM
T	TOM
U	UNION
V	VICTOR
W	WILLIAM
X	X-RAY
Y	YOUNG
Z	ZEBRA

National Weather Service Forecast Offices Serving the State of North Carolina and the North Carolina Dept of Transportation

The numbers below are the phone lines to contact the NWS offices that serve the state of North Carolina. These numbers are answered 24/7 by NWS meteorologists and are intended for weather briefings and information exchange for core NWS partners, such as DOT officials, emergency management, and first responders. The NC DOT is encouraged and welcome to call their corresponding NWS any time 24/7 with any weather questions or concerns, requests for weather briefings and updates, and real-time information exchange and collaboration.

Northwest Counties
NWS Blacksburg, VA
540-552-1324

Central Counties
NWS Raleigh, NC
919-515-8200

Northeast Counties
NWS Wakefield, VA
757-899-5730

Cherokee and Clay Counties
NWS Morristown, TN
423-586-8400

Southwest Counties
NWS Greer, SC
864-848-1332

Eastern Counties
NWS Newport, NC
252-223-2328

Southeast Counties
NWS Wilmington, NC
910-762-1374

Map updated 20Feb2013
NWS Raleigh, NC

APPENDIX J: ADDING A TIMS USER WEB ROLE MANAGER

Web Role Manager is found here: https://apps.dot.nc.net/WebRoles//

If you get an error message when you go to this web page, please take a screen shot of the error message and send it in an email to the DOT IT Help Desk (DOTHELP@ncdot.gov) and ask them to create a ticket for the Web Team to give you access to Web Role Manager. This system is IP address dependent so if you use a different computer or if the IP address changes on a computer you have used before you may have to do this step from time to time.
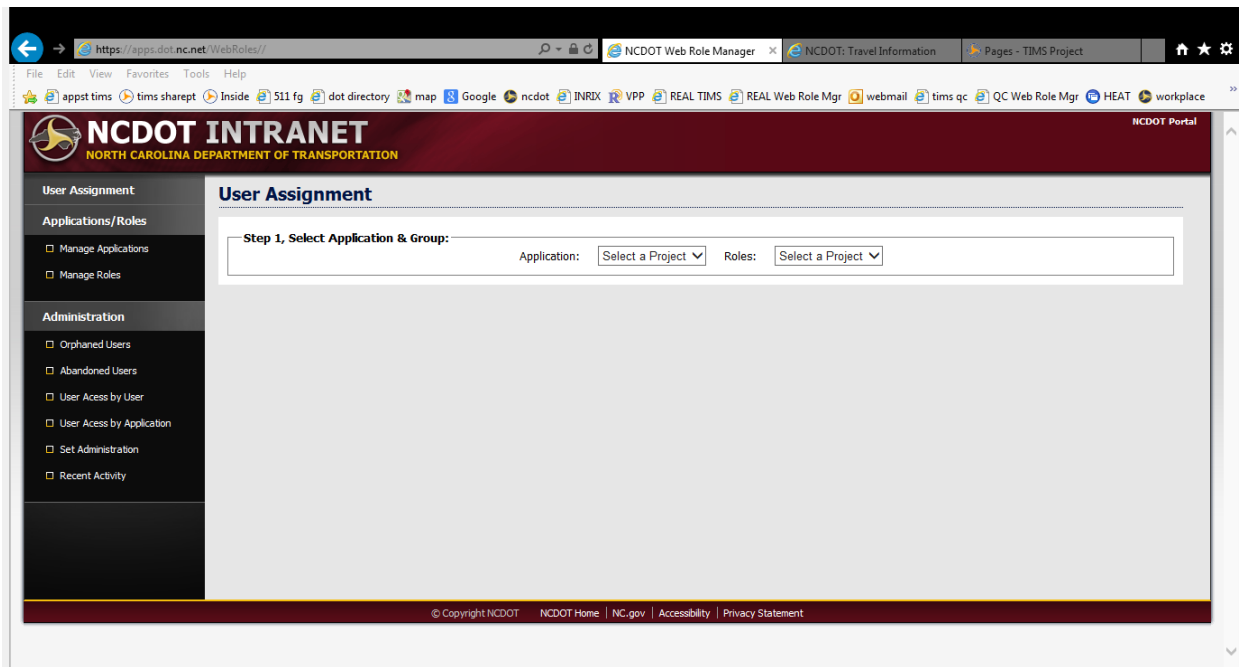
- Application: choose TIMS
- Roles: select the role you are giving access to Admin, SuperAdmin or ExternalUser

Last updated: 04.12.2023

- Select NCID from the first window. (The only time you will use AD is if you are adding a GroupAdmin user.)
- Type in the employee's NCID. If the ticket does not give the NCID, or you are unclear what the NCID is, you can contact the user to verify.
- Hit Search
- Select the employee's NCID from the list
- Click on the Add arrow
- Allow about 20 seconds for the application to run. If you do anything during these 20 seconds it will be lost, so don't bother.
- Check to be sure that the user you added on the left side of the screen now appears on the right side of the screen. (Control F works great to find someone's name on this page. The list on the right is slightly annoying in that the name can be alphabetical by FIRST, LAST or LAST, FIRST or just random in the list of NCID's without names.)

APPENDIX K: USING HEAT TO ADD A TIMS USER

HEAT is found here: https://remote.services.ncdot.gov/vpn/index.html

If you cannot get to this screen, call the DOT Help Desk and tell them you need access to HEAT and they can help you.
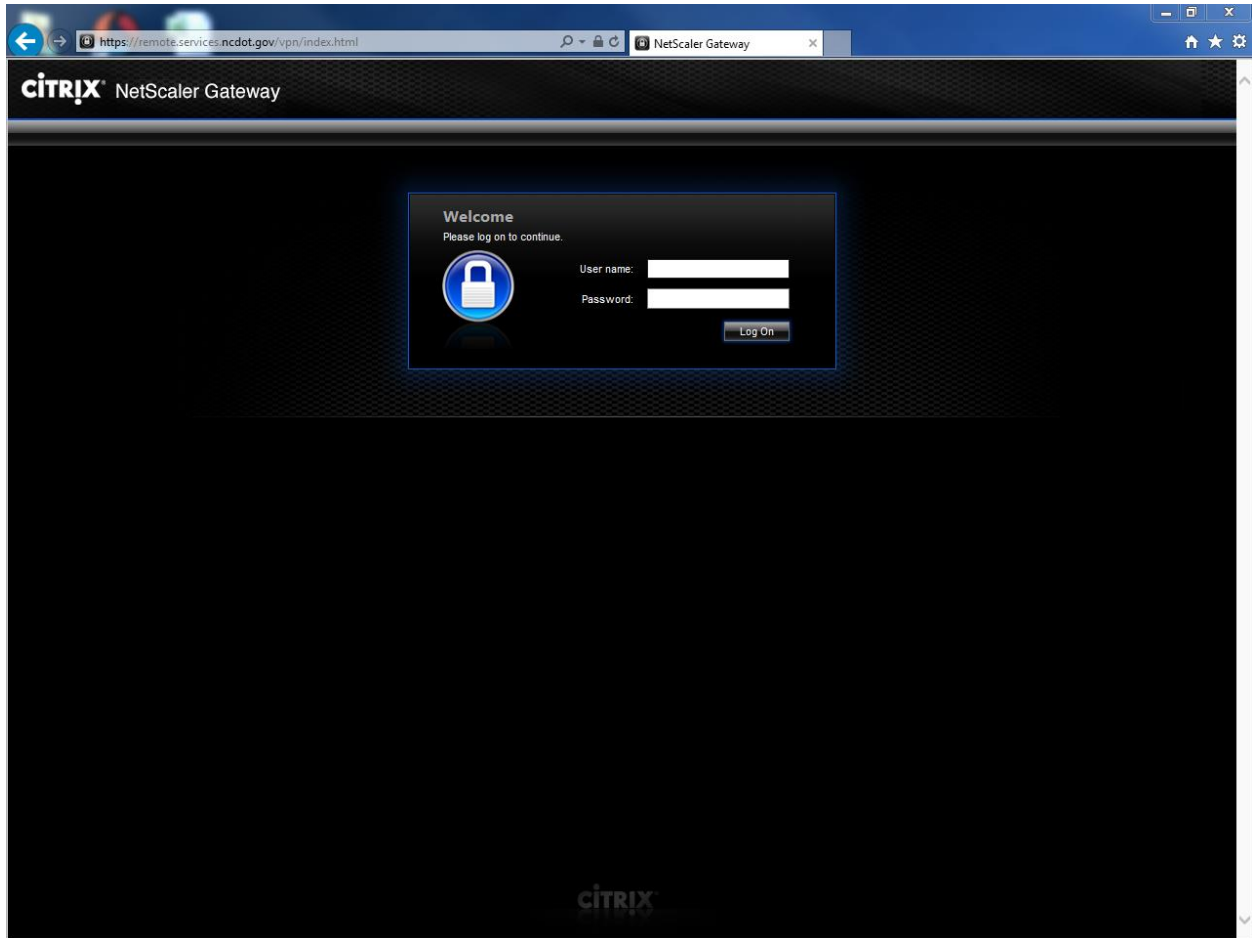
- Log On to Citrix using your NCID username and password.

- Then select Heat 8

Last updated: 04.12.2023
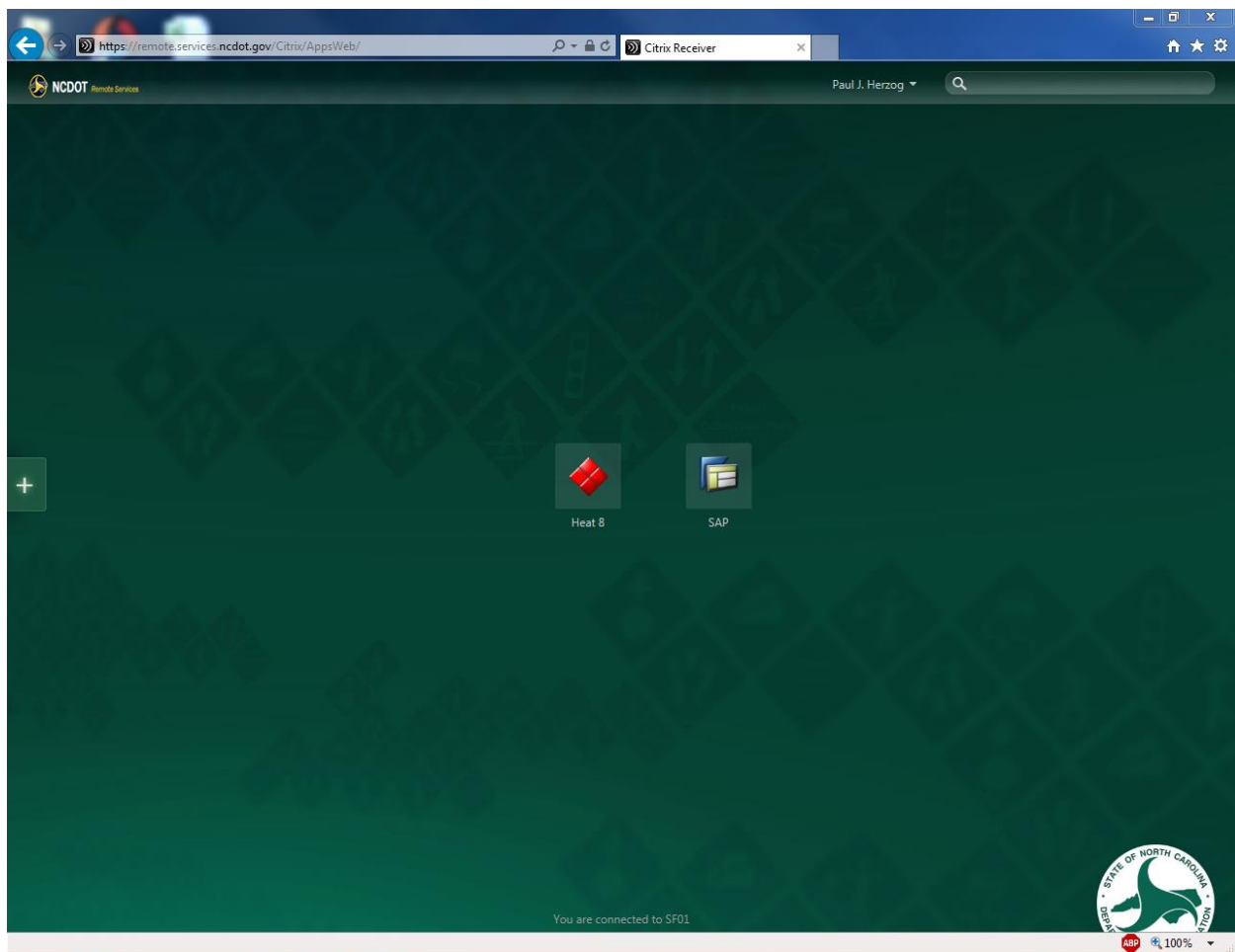
- If you receive this Security Warning, click Permit use (You can click the box to not be asked again)
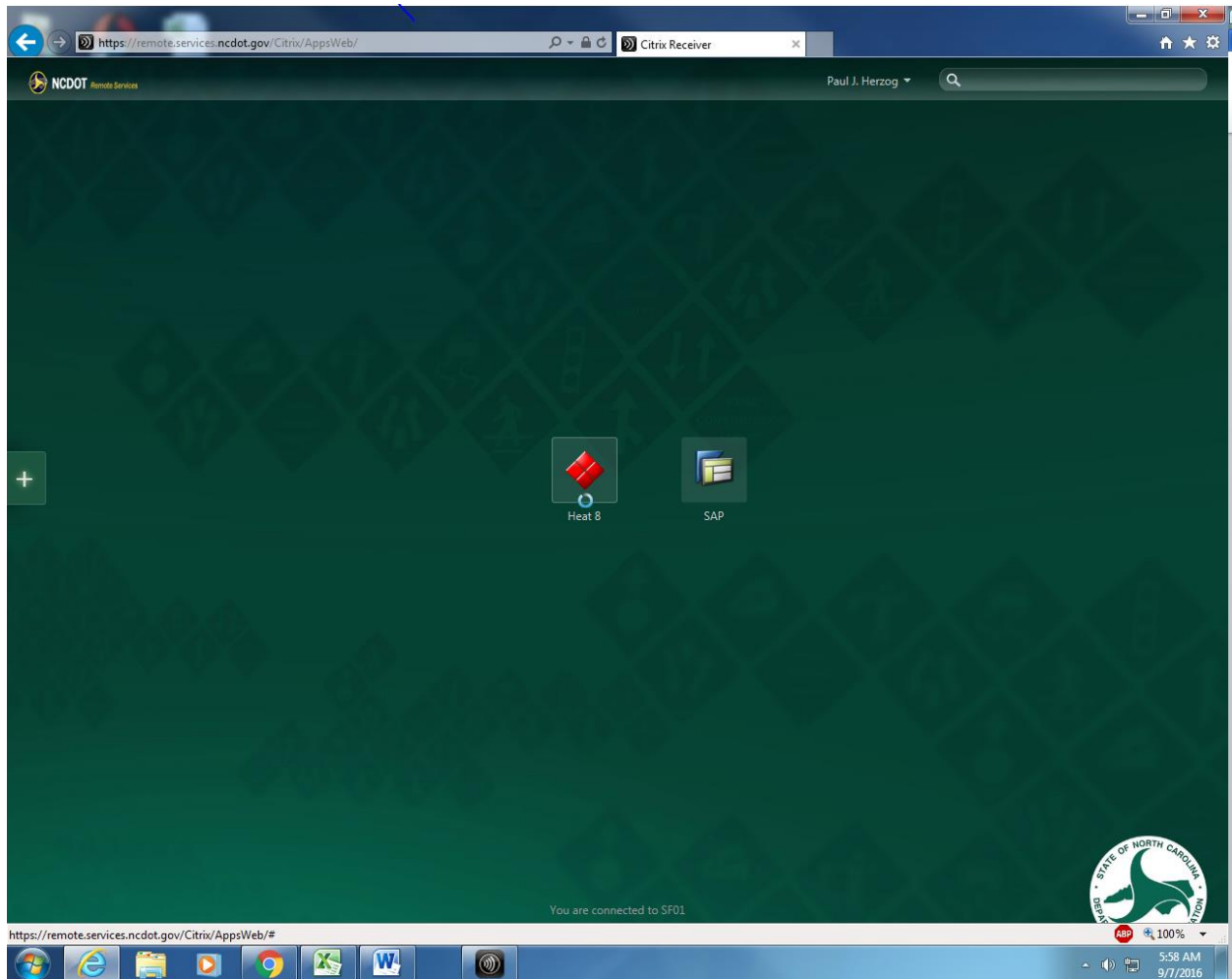
The system will appear to be idle, but a new icon will appear on the lower task bar . Click this to access the HEAT Login Screen.

Last updated: 04.12.2023
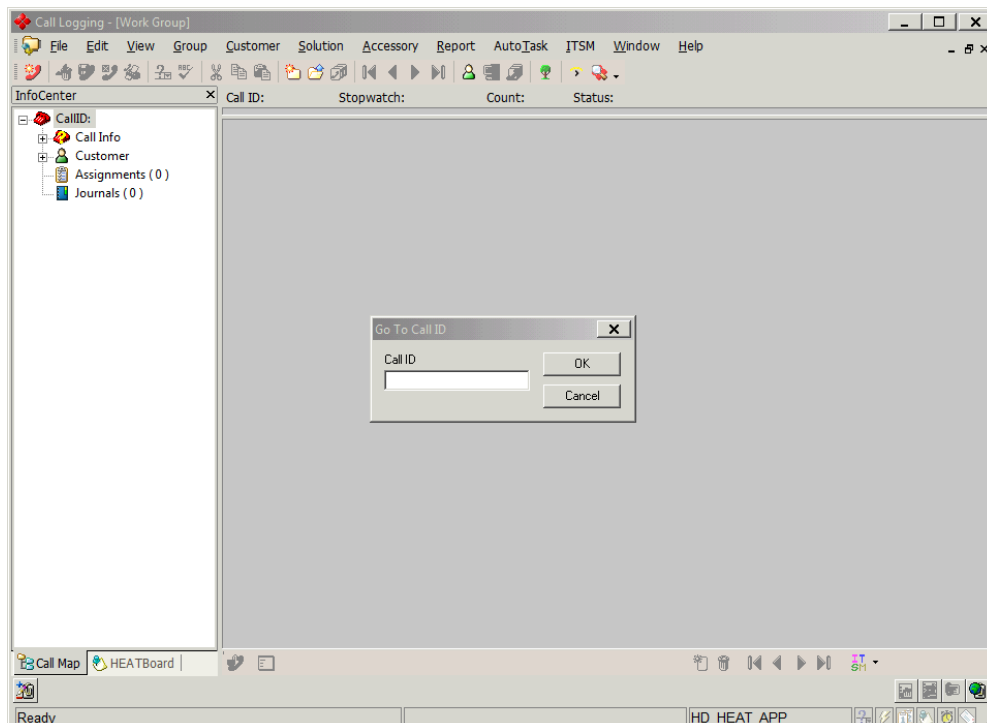
- Your User ID should already be filled in.
- Enter Password
- Click "OK"

Last updated: 04.12.2023

- From the File Menu item select Go To Call ID
- Enter the Call ID from the HEAT ticket into the box. The Call ID is called the Case # and Journal Entry in the email you will get from HEAT. It is a 6-digit number like this: 995267.

- You will use 3 tabs in a Call Record
  - Call Log
  - Assignment
  - Journal

Last updated: 04.12.2023

- On the Assignment Tab, right click on "Acknowledged" to accept the ticket.

- On the Journal Tab, read what the user wants (usually it will be Needs TIMS Access or TIMS Access is not working).
- Go into Web Role Manager (Appendix A to this SOP) and make them a TIMS user.
- Type in what you did (ie "Kelly Wells added BREID as a TIMS Admin User") into the Journal Entry box.
- Copy what you just wrote.

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- Paste the info you copied from the Journal tab into the Solution field on the Call Log tab.
- Make sure the Call Type field says "SOFTWARE/APPS"
- Select "S/A – Request Complete" from the pull-down menu on the Cause field.

- Go to the Assignment Tab.
- Right click over Resolved to confirm that you have resolved the ticket.
- Select "Completed" in the Resolution box.
- Select "Save Call Record" from the File menu option at the top left of the screen.

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- Go to the Call Log tab.
- Select "CLOSED" from the pull-down menu on the Status field. Do not use the Quick Close Option – it will not close the ticket and you (and the rest of the email group) will keep getting emails telling you that the ticket is still open.
- Go to File on the top menu bar and select Save Call Record.

APPENDIX L: MULTIPLE SILVER ALERTS – 511 FLOODGATE PROCEDURES

It is possible that two or more Silver Alerts with Vehicle Information can be activated in the same division at the same time. When this occurs, the Silver Alerts will be recorded in the 511 Floodgate system. Use the following procedures to structure the 511 Floodgate recordings:

1. Silver Alert 511 Floodgate: Operators should record the headline and script as a single 511 Floodgate.

2. 511 Floodgate Headline:

- Silver Alert Headline: "North Carolina Silver Alert issued for [TYPE OF VEHICLE] in [COUNTY]"

- For the Silver Alert 511 Floodgate headline use the following example:

   "SILVER ALERT ISSUED FOR JAMES JONES IN GUILFORD COUNTY"

3. 511 Floodgate Script:

- 511 Floodgate script of a Silver Alert should be comprised of the alert headline (as described above) and of information provided by approved sources about the incident. Full details provided by approved sources which should be recorded as part of the 511 Floodgate include but are not limited to:

   o Missing person's name and physical description

   o Clothing description (if known)

   o Vehicle description (including make, model, color, and license plate)

   o County where the incident is occurring

   o Instruction for motorists to call 911 or *HP if they have information about the situation. <u>DO NOT include any 10-digit phone numbers in the 511 Floodgate.</u>

   o For the Silver Alert 511 Floodgate script use the following example:

*"The North Carolina Center for Missing persons has issued a Silver Alert for James Jones of Guilford County. He is believed to be suffering from dementia or some other cognitive impairment. Mr. Jones was last seen at 1006 Pine Tree Drive in Greensboro, North Carolina. Mr. Jones is described as a 83 year old white male, standing 5 foot 7 inches tall, weighing approximately 175 pounds, with short white hair, and blue eyes. He was last seen wearing a mint green shirt, and tan pants. Mr. Jones is believed to be driving a 2004 Buick LeSabre with a NC license plate WVV-8359. Anyone with information regarding James Jones is asked to call 911 or dial *HP."*

4. Continue to record the next Silver Alert 511 Floodgate following guidance listed above. The 511 Floodgate system only allows one recording with a maximum time of four minutes. Structure all alerts to be recorded including headlines and scripts prior to beginning the recording process.

5. Floodgate Script Conclusion: The complete Silver Alert 511 Floodgate script will end with the following statement:

"This concludes the Silver Alert information. For traffic information, please stay on the line. If you require no further assistance, you can disconnect this call now."

Alert Cancellation: When the number of Silver Alerts with Vehicle Information has been reduced to one alert due to cancellation(s), remove the remaining Silver Alert with Vehicle Information from the 511 Floodgate and return to normal alert procedures outlined in Section 10.

EMERGENCY MANAGEMENT
24-HOUR OPERATIONS CENTER

NCDOT Wireless Emergency Alert (WEA) Activation Request Form

INCIDENT INFO	
Incident Location	I-40 West near Exit 7
Date & Time	6/11/19 at 1:15pm
Incident Description	Rockslide. I-40 West closed. Trapped Queue between Exit 7 and Exit 20.
STOC POC and Phone Number	Bryan Gunter (STOC Operations Manager); 678-592-2356
POLYGON INFO	
Polygon Description	All of I-40 between Exit 7 and Exit 20.
Map with Sample Polygon	https://drive.google.com/open?id=1_J8EO5rjvS0o6pwFRfpMzO9IOO7htasy&usp=sharing
MESSAGES - Min. 40 characters; Max 90 characters	
Message 1 Text	I-40 Rockslide near Exit 7. One westbound lane opening soon.
Trigger to Send Message 1	Send when notified by STOC POC.
Time Message 1 Sent	5:45pm
Message 1 Text	I-40 Rockslide near Exit 7. One westbound lane open. Please be patient as traffic clears.
Trigger to Send Message 1	Send when notified by STOC POC.
Time Message 1 Sent	6:15pm
Message 1 Text	N/A
Trigger to Send Message 1	
Time Message 1 Sent	

Last updated: 04.12.2023

APPENDIX N: QUICK REFERENCE CONTACT INFORMATION

3.28.2 / 3.28.4 / 11.2.5 – NCDOT Public Information Office	
NCDOT Public Information Office	(o) 919-707--2660
NCDOT Public Information Office On-Call	**(**m) 919-218-2353
NCDOT Chief Communications Officer	Carly S. Olexik – csolexik@ncdot.gov

3.31.1 – FHWA Contacts		
Primary	Tammy Richards	(m) 919-906-6163
Alternate	Brad Hibbs	(m) 919-624-9723

10.7.2 / 10.17.1 / 10.19.3 / 12.3.1 – TSO Staff		
<u>Note:</u> TSO Staff must be contacted in order until someone is reached.		
Dominic Ciaramitaro	State Traffic Operations Engineer	(m) 910-850-4291
Jennifer Portanova	State Systems Operations Engineer	(m) 919-696-8857

10.10.2 – Division 1 Communications Director	
Tim Hass	(m) 252-423-5109

11.2.1 – NCTA POCs		
Triangle Expressway	POC: Chelsea Davis	(m) 704-999-4359
Monroe Expressway	POC: Zack Chambers	(m) 704-942-8238

12.3.1 – Ramp Meter Phone Response Matrix		
On-Call Signal Technician	Reference STOC Inbox → Signal Calls → Division 5	
Dan Sagan	Control Technician	(m) 724-470-7411
Jill Sanders	STOC Operations Manager	(m) 314-566-2255
TSO Staff	Reference TSO Staff phone numbers above	
Steve Wardle	State ITS Operations Engineer	(m) 919-264-7227

12.6.2 – Ramp Meter Adverse Weather Deactivation / 12.7.3 – Ramp Meter Reactivation		
State Systems Operations Engineer	Jennifer Portanova	jportanova@ncdot.gov
State Traffic Operations Engineer	Dominic Ciaramitaro	djciaramitaro@ncdot.gov

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STOC Operations Manager	Jill Sanders	ext-jmsanders@ncdot.gov
19.4.4 / 19.5.4 – 511 Malfunctions		
511 Console Phone		877-511-4662
Traffic Operations Engineer	Kelly Wells	(m) 919-215-2073