State of New Jersey
DEPARTMENT OF TRANSPORTATION

TMC OPERATOR TRAINING COURSE

Statewide Traffic Management Center (STMC), Woodbridge
Traffic Operations Center (TOC) South, Cherry Hill

Prepared By:
ITS Resource Center, New Jersey Institute of Technology
Lead consultant: VHB Inc.
INTRODUCTION AND OVERVIEW

- Who are we?
- Who are you?
Course Outline

MODULE 1 – Course Overview and Expectations (1/2 Hour)

MODULE 2 – Introduction to Traffic Management Centers (2 Hours)

MODULE 3 – Overview of Regional Transportation System (1 1/2 Hours)

MODULE 4 – Incident Management (8 Hours)

MODULE 5 – Emergency Transportation Operations (4 Hours)

MODULE 6 – Traffic Management (4 Hours)

MODULE 7 – Introduction to Software Systems and Technologies (40 Hours)

MODULE 8 – Practical Exercise (3 Hours)

MODULE 9 – Course Review and Next Steps (1 Hour)
MODULE 1

COURSE OVERVIEW AND EXPECTATIONS
Course Overview

The training course explains:

- The role of the Traffic Management Center (TMC) in the regional transportation community and how the TMC delivers its services.
- Important concepts in Traffic Incident Management.
- Day-to-day functions and responsibilities of a TMC Operator to effectively manage incidents and traffic.
- Facilities available at the TMC.
After attending this training course the trainee will:

- Become familiar with the departments, facilities, systems, and technologies available at the TMC
- Understand the responsibilities and functions of a TMC Operator
- Understand the steps involved in managing incidents and traffic.
MODULE 2

INTRODUCTION TO TRAFFIC MANAGEMENT CENTERS
Two primary TMCs in the State

Statewide Traffic Management Center (STMC)
Woodbridge, NJ

**North Region Coverage:**
4:00 AM – 8:30 PM

**Statewide Coverage (Both North & South):**
8:30 PM – 4:00 AM

Traffic Operations Center South (TOC-S)
Cherry Hill, NJ

**South Region Coverage:**
Monday-Friday 4:00 AM – 8:30 PM
STMC (24/7 coverage)

- TMC for the northern half of the state
- Provides for evening/weekend/holiday operations coverage for the entire state
- NJDOT is co-located with the New Jersey State Police (NJSP) and the New Jersey Turnpike Authority (NJTA)

TOC- South (Monday – Friday, 4:00 AM – 8:30 PM)

- TMC for the southern half of the state and monitors the Route 29 tunnel
- STMC handles coverage for TOC-S during week nights (after 8:30 pm) and on weekends and holidays
STMC
Current Front Office Staff – STMC

- **Manager:** Michael Juliano
- **Senior Transportation Analyst:** Vacant
- **Engineering Technician 1:** Kevin Hall
Current Front Office Staff – STMC

➤ *Manager:* Michael Juliano

PLACEHOLDER SLIDE FOR PICTURE
Current Front Office Staff – STMC

- **Senior Transportation Analyst:** Vacant
Current Front Office Staff – STMC

- **Engineering Technician 1**: Kevin Hall

PLACEHOLDER FOR PICTURE
TOC- South
Current Front Office Staff – TOC-South

- **Manager:** William Day
- **Senior Transportation Analyst:** Vacant
- **Engineering Technician 1:** Dennis Caltagirone
Current Front Office Staff – TOC-South

➤ **Manager:** William Day

PLACEHOLDER SLIDE FOR PICTURE
Current Front Office Staff – TOC-South

- **Senior Transportation Analyst:** Vacant

PLACEHOLDER FOR PICTURE
Current Front Office Staff – TOC-South

- **Engineering Technician 1:** Dennis Caltagirone
TMC Operator Basics

- NJDOT/TSM Organization
- DOT Intranet
- ECATS
  - NJDOT Time Sheet Preparation Manual
- Phone Etiquette
- Workstations
- Equipment Checks
Overview of Transportation Systems Management (TSM) Organization

MODULE 2 – TRAFFIC MANAGEMENT CENTER FAMILIARIZATION
Key Management Personnel

- *Deputy Commissioner:* Joseph D. Bertoni
Key Management Personnel

- **Assistant Commissioner, TSM**: C. William (Bill) Kingsland
Key Management Personnel

- **Director, Traffic Operations:** Sal Cowan
Overview of TMC Organization
Manager, STMC/TOC-South

- Oversees Senior Transportation Analyst, Safety Service Patrol, and all TMC staff.
- Ensures that the TMC is properly staffed especially during special events, high profile construction, and emergencies.
- Responsible for the smooth operation of the TMC facility.
- Responds to inquiries about the TMC’s operation as directed by NJDOT.
Senior Transportation Analyst

- Serves as the Regional Incident Management Coordinator (RIMC).
- Coordinates Safety Service Patrol resources including vehicles and equipment for special events.
- Coordinates training of TMC staff.
- Facilitates outreach with NJSP and other responders.
- Responsible for coordination of special events.
  - Manages resources with other agencies.
  - Develops Traffic Management Plans (TMPs).
Engineering Technician 1

- Is a senior level position responsible for ensuring all operators are adequately trained and current in all tasks relevant to their position.
- Supervises Engineering Tech 2s.
- Responsible for timesheets and reviews overtime.
- Oversees the TMC schedule to ensure the proper use of overtime lists.
- Serves as a liaison to the Manager for identifying problems and/or weaknesses in TMC functionality.
- Prepares and maintains training documents and reports.
TMC Staff Positions and Responsibilities

**Engineering Technician 2**

- Is a senior level supervisor who has the responsibility for coordinating traffic and incident management functions in the TMC.
- Serves as the point person for information about ongoing incidents, interagency coordination, resource activations, email notifications, etc.
- Responsible for ensuring that operators on the same shift are adequately trained and current in all tasks relevant to their position.
- Serves as the shift liaison to the TMC Manager and Engineering Technician 1.
- Responsible for shift continuity, assessments and briefings between shift personnel.
TMC Staff Positions and Responsibilities

Operator (Engineering Technician - 3, - 4, - 5)

- Monitors, detects, notifies, and manages incidents.
- Generates and displays traffic related messages.
- Interacts with maintenance and technical personnel on system performance.
- Reports major incidents, full closures, and escalation of incident information to management/front office/communications.
- Responsible for inter/intra agency coordination to ensure accuracy and timeliness of information.
- Ensures transfer of information to the next shift is complete and accurate.
Primary Operator Job Functions

- Monitor traffic conditions and ongoing data events (construction, special events, etc.) using any and all available resources
- Detect incidents
- Notify appropriate responders to the incident
- Manage resources for the incident including personnel equipment and information
- Daily operational equipment inspections
- Communicate to the public
Operations Bulletins (OB)

- OBs are operational procedures that must be followed by employees. They cover a range of subjects from administrative actions to operational measures.

- Can be found through OpenReach and NJDOT Intranet

- Failure to abide by the OBs may result in employee discipline
Key OBs Addressed in this Course

- **OB1002C** NJDOT Video Camera Operations Policy
- **OB1003B** Operations, IMRT, and Duty Officer Contact Procedure (Non-Business Hours)
  - Appendix A: When to contact the Regional Director
  - Appendix B: When to contact the Director of Traffic Operations
  - Appendix C: When to contact the Assistant Commissioner, TSM
  - Appendix D: List of Incidents that may require an IMRT Response
- **OB1004C** AMBER and Silver Alert Procedure
- **OB2002C** ITS Maintenance Personnel Emergency Call Out Procedure
- **OB4001B** Weather Monitoring and Notification Procedure
Key OBs Addressed in this Course

- **OB5001C** Unanticipated Construction Delays
  - Attachment A: Unanticipated Construction Delay of 30 minutes or more Cheat Sheet for TOC Staff
  - Attachment B: Unanticipated Construction Delay Checklist

- **OB5003C** Transit Delays Advisory

- **OB5005C** Traffic Alerts

- **OB5006B** PATH Train Delays Advisories

- **OB5007B** TOC South Staffing Plan

- **OB5008B** TOC North Staffing Plan

- **OB5010C** Uniform Procedure for NJDOT Employees working on the Operations Floor
NJDOT Phone Etiquette Video
TOC- North
TOC- South
Traffic Operations Regional Readiness Reporting Daily Log

- Daily equipment inspection log is found on the DOT Intranet
- Checklist typically starts between 12AM and 4AM each day
  - STEP 1 – Adding a daily inspection readiness log
  - STEP 2 – Operators inspect and record results for each device (North and South)
  - STEP 3 – ITS Engineers review the issues found during inspection – sign-off
  - STEP 4 – At least 1 Manager (North or South) signs off
  - STEP 5 – ITS Managers generate resulting work orders
  - STEP 6 – Daily Statistics Report is sent to Director
Production - Welcome to the Traffic Operations - Regional Readiness Reporting Manager - Daily Log

Welcome to the Traffic Operations - Region Readiness Inspection Log Manager. This area encompasses the day to day readiness inspection effort for all of the devices owned and maintained by the NJDOT.

The day-to-day effort includes the following 6 steps:

1. **STEP 1** - Adding a Daily Inspection Readiness Log.
   (Whoever creates the Daily Inspection Log for the day, creates the Log for both the North and the South.)

2. **STEP 2** - Operators Inspection and recording results for each Device (North and South Regions)
   (Once Operators have completed inspection - Operators Signatures are required to inform Supervisors and complete this step)
   (Once Operators have signed off then Operator Supervisors must sign off to inform ITS Engineers and complete this step)

3. **STEP 3** - ITS Engineers Review the Issues found during Inspection (North and South Regions)
   (Once ITS Engineers have completed review of issues - ITS Engineers Signatures are required to inform Managers and complete this step)

4. **STEP 4** - This is the signatures area for all steps in the process.
   (Until at least 1 Manager signs this Daily Log (either N or S) Generation of Work Orders and Stat Reports will not go out.)

5. **STEP 5** - ITS Managers generate resulting work orders (North and South).
   (Once Work Orders are generated, the Daily Log for this day will become View Only.)

   (Once Work Orders are generated, the Daily Statistics report must be sent out.)

Managing the Work Orders is done on the Work Orders Tab.

Daily Statistics Report can now be sent out by Managers (N&S).
## Daily Readiness KPI Report (01/07/2015)

### Overall Device Health

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Mobility Management Contact List

- ITS Maintenance Call Out List – Emergency call-out procedure primary and secondary contacts schedule
  - North
  - South

  - Procedure for ITS equipment damaged or becomes inoperable during non-business hours.
  - On an emergency basis under certain conditions as specified in this OB, ITS Maintenance Personnel should be notified to respond to the problem.
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If no response call the primary: Message not returned in 15 min. Call in that order.

**NAME** | **Primary** | **Secondary**
----------|-------------|-------------
WALLY NUNEZ | (732) 496-9434 | (201) 238-3035
PAUL LYNYAK | (201) 726-8135 | (201) 726-8135
MIKE SCHUTZ | (609) 358-1793 | (732) 940-0295
ALAN HUDSON | (609) 658-8535 | (201) 790-2112
JOHN GAZO | (609) 731-0778 | (551) 404-5692
STEVE WSZOLEK | (856) 433-0242 | (973) 296-7678
TIM BOURNE | (732) 988-7484 | (732) 496-9426
MIKE PILSBURY | (201) 439-0092 | (732) 496-9418

**ADESTA 0800-1700** 908-756-1181 **AFTER HRS/HOLIDAY** 1-877-637-2344

**MARKOUTS:**
http://www.state.nj.us/transportation/eng/elecITS/requests.shtml

**HUB ACCESS:**
http://www.state.nj.us/transportation/eng/elecITS/access.shtml
# MOBILITY MANAGEMENT SOUTH I.T.S. 2014

## NJDOT FIBER MARK-OUT

**http://www.state.nj.us/transportation/business/before_you_dig/**

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<td>BILL BRANTLEY</td>
<td>LOU RANSON</td>
</tr>
<tr>
<td>OCTOBER 20, 2014</td>
<td>KEITH KIRBY</td>
<td>BILL BRANTLEY</td>
<td>DECEMBER 26, 2014</td>
<td>LOU RANSON</td>
<td>KEITH KIRBY</td>
</tr>
<tr>
<td>OCTOBER 27, 2014</td>
<td>BILL BRANTLEY</td>
<td>KEITH KIRBY</td>
<td>JANUARY 2, 2015</td>
<td>KEITH KIRBY</td>
<td>BILL BRANTLEY</td>
</tr>
</tbody>
</table>

**CALL PRIMARY # FIRST, IF NO RESPONSE CALL SECONDARY #. MESSAGE NOT RETURNED IN 15 MIN. CALL SECONDARY TECH IF NO ANSWER FOR CALL OUT PLEASE CALL MARK RENNER OR BILL BRANTLEY FOR RESPONSE.**

<table>
<thead>
<tr>
<th>NAME</th>
<th>PRIMARY</th>
<th>SECONDARY</th>
<th>CALL #</th>
<th>OFFICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARK RENNER</td>
<td>856-433-0260</td>
<td>856-629-7203</td>
<td>73</td>
<td>856-486-6095</td>
</tr>
<tr>
<td>BILL BRANTLEY</td>
<td>609-658-9497</td>
<td>856-315-9156</td>
<td>730</td>
<td>856-486-5807</td>
</tr>
<tr>
<td>LOU RANSON</td>
<td>609-731-6152</td>
<td>856-691-1209</td>
<td>7301</td>
<td>856-486-5704</td>
</tr>
<tr>
<td>KEITH KIRBY</td>
<td>856-433-0282</td>
<td>856-829-1758</td>
<td>7303</td>
<td>856-486-5706</td>
</tr>
<tr>
<td>BRYAN KEPLER</td>
<td>856-433-0279</td>
<td>856-768-0433</td>
<td>7305</td>
<td>856-486-5705</td>
</tr>
<tr>
<td>DAN DOYLE</td>
<td>732-496-9432</td>
<td>609-870-0356</td>
<td>PRIMARY CALL</td>
<td>PORTABLE ITS DEVICES</td>
</tr>
</tbody>
</table>

**G4S TECH - 0800-1700**

**908-756-1131**

**AFTER HRS/HOLIDAY**

**1-877-637-2344**

**LIMITS OF COVERAGE ON DOT WEB SITE**

**EMERGENCY NETWORK ISSUES IT SUPPORT 609-530-3530/ 1-800-622-4357 PRESS "0"**
TMC Functions

- Traffic Incident Management
- Traffic Management
- Emergency Management
- Dissemination of Traveler Information
- Other Operations Support
What is an incident?
Traffic Incidents

Traffic incidents can be defined as non-recurring event that causes a reduction of roadway capacity due to motor vehicle crashes, vehicle fires, natural disaster, or other unplanned event that affects or impedes the normal flow of traffic. A goal of the TMC is to quickly and effectively clear the incidents through incident detection.
Primary Functions of the TMC

➢ Traffic Incident Management

TIM consists of a planned and coordinated multidisciplinary process to detect, respond to, and clear traffic incidents so that traffic flow may be restored as safely and quickly as possible. Effective TIM reduces the duration and impacts of traffic incidents and improves the safety of motorists, crash victims, and emergency responders.

➢ Traffic Management

Traffic management deals with optimization of traffic flows on the region’s major roadways. The TMC continuously monitors and evaluates traffic flows to identify problems and implements appropriate operational strategies to manage traffic.
Primary Functions of the TMC

- **Emergency Management**
  Emergency Management involves coordinating the response of emergency service providers (such as, police, fire, EMS, transportation agencies, and towing agencies) to emergency conditions (such as, incidents, disabled vehicles, natural disasters, and signal malfunctions).

- **Dissemination of Traveler Information**
  Real-time traveler information is information that allows motorists to choose the most efficient mode and route to their final destination. The TMC disseminates traveler information through various means, including Variable Message Sign (VMS) and Internet; NDJOT also provides information to Radio and Television.
Other Operations Support

Other Operations Support deals with functions the TMC does to support other entities in NJDOT, such as, Safety Service Patrol, Central Dispatch Unit, maintenance, etc.
TMC Relationships

Traffic Management Center

NJDOT Maintenance

CDU Emergency & Non-Emergency Calls

Safety Service Patrol

511 Products

Alerts to Traffic Services

Construction & Maintenance Lane Closures

ITS Field Devices (VMS)

Incident Management, IMRTs, and NJSP RIMC

Information Dissemination
TMC Partners

- New Jersey State Police (NJSP)
- Incident Management Response Teams (IMRT)
- Safety Service Patrol (SSP)
- Central Dispatch Unit (CDU)
- TRANSCOM
- NJDOT Maintenance
- Capital Program Management (CPM)
- Other TMCs in the state
- Other State DOTs
- Transportation Authorities
Partnership between NJSP and NJDOT since 1996, added partnership with New Jersey Division of Fire Safety (NJDFS) in 2004.

Consists of specially trained personnel that respond to major incidents, expediting coordinated multi-agency response efforts.

7 Troopers or Regional Incident Management Coordinators (RIMC), 4 NJDFS, & 16 NJDOT Members

The NJSP Incident Management Unit (IMU) serves as a member of IMRT and participates in statewide TIM initiatives.
Safety Service Patrol (SSP)

- Specialized vehicles continuously patrolling 230 miles on major freeway facilities.
- Provide full MUTCD safety for first responders (equipped with cones, signs, arrow boards, variable message signs, tools, etc.)
- Provide incident information to the TMC.
- Provide quick clearance by moving vehicles and other objects from the travel lanes, increasing both safety and mobility on the roadway.
- When possible, provide advanced warning so motorists may slow down when approaching an incident.
Central Dispatch Unit (CDU)

- The 24/7 CDU is NJDOT’s Emergency Call Center.
- Handle all emergency calls requiring NJDOT resources.
- Dispatches the appropriate staff to emergencies including traffic signal malfunctions, debris or trees in the roadway, structural or roadway failures, severe weather, etc.
The OpenReach software platform is utilized by a coalition of 16 public safety and transportation agencies in New Jersey, Connecticut, and New York. Transcom provides interagency communication and enhanced utilization of agency resources through the OpenReach program.

New Jersey implementation of the OpenReach program was the first instance of OpenReach to be deployed and has been stable in its operation since 2011.

http://www.covalsystems.com/latest/about/customers.html
NJDOT Maintenance

- Maintenance can be dispatched on ALL state-owned roadways, even rural roadways.
- Should be requested for major incidents that may last for over 2 hours.
- Provides a complete, construction-type safety set-up, including advanced warning.
- Brings equipment including loaders, sweepers, light towers, plows, sand trucks, salt trucks, and material to patch damaged roadways.
- Provide extra personnel that can assist with incident activities on scene.
Capital Program Documents are used by the New Jersey Department of Transportation to allocate funds. The Capital Program, Investment Strategy and Statewide Transportation Improvement Program are also included in the Capital Program area.

- Major construction projects
- Majority of Lane Closure Requests (LCR)
Other TMCs in the State

- Burlington County TMC
- City of Newark, Division of Traffic and Signals
- PANYNJ AOC & EOC
- Others
  - PATH
  - NJ Transit
  - Port Authority Transit Corporation (PATCO)
Burlington County TMC

- Operating hours are 6 AM to 6 PM Monday-Friday
  - Staffed by 2 people
- 1 person for AM shift and 1 person for PM shift.
- Manages traffic operations on all county roadways.
- Manages 4 VMS signs (2 in design/construction)
- Manages about 400 cameras (about 80 stand-alone CCTVs and about 320 AUTOSCOPE cameras for signalized intersections)
- Manages about 300 signalized intersections (about 130 signals on centralized system)
City of Newark, Traffic & Signals Department

- Provides comprehensive planning, construction and maintenance of Newark’s transportation infrastructure
PANYNJ

Agency-wide Operations Center (AOC) & Emergency Operations Center (EOC)

- Provides advanced collaboration and monitoring of the New York and New Jersey region airports, ports, and roadways.

- Integrates a vast network of satellite offices, sensors, and alert and reporting systems for use by emergency responders.
Other Surrounding State DOTs

- New York State Department of Transportation (NYSDOT)
- Pennsylvania Department of Transportation (PennDOT)
- Connecticut Department of Transportation (ConnDOT)
- Delaware Department of Transportation (DelDOT)
Transportation Authorities

- Port Authority of NY & NJ (PANYNJ)
- New Jersey Transit (NJT)
- New Jersey Turnpike Authority (NJTA)
- South Jersey Transportation Authority (SJTA)
- Delaware River & Bay Authority (DRBA)
- Delaware River Port Authority (DRPA)
- Delaware River Joint Toll Bridge Commission (DRJTBC)
- Transportation Operations Coordinating Committee (TRANSOCOM)
Facilities at STMC

- A tour of the STMC facility
- Meet other operators
Facilities at TOC-South

- A tour of the TOC-South facility
- Meet other operators

Placeholder for TOC-South Layout
Module 2 Learning Checks

1. Have you learned about the key personnel in the TMC and the available facilities at the TMC including information about their location and access?

2. Have you learned about the partner agencies of the TMC?

3. Do you understand how the TMC coordinates with its internal partners?

4. Do you understand operational procedures and policies to be followed?

5. Have you attended a guided tour to get familiarized with the TMC?

6. Do you understand the role(s) of the TMC?
MODULE 3

OVERVIEW OF NEW JERSEY TRANSPORTATION SYSTEM
Transportation Networks within the State

- It is important for the operator to be knowledgeable of all modes of the transportation network within the State.

- These modes include:
  - Road transportation
  - Rail transportation
  - Maritime transportation
  - Air transportation
Transportation Modes

- Road transportation
  - Automobile/Car
  - Bus
  - Motorcycle
  - Truck
  - Bicycle

- Maritime transportation
  - Boat
  - Ferry

- Air transportation
  - Aircraft

- Helicopter

- Rail transportation
  - Commuter rail
  - Rapid transit (PATH, underground, subway, or elevated rail systems)
  - NJ Transit Light Rail (Hudson-Bergen, South Jersey, Newark City)
Major Roadways

- Interstate Highways (I-80, I-95, I-287, I-295)
- NJ State Highways (NJ24, NJ31, NJ73)
- US Highways (US1, US9, US22)
- New Jersey Turnpike
- Garden State Parkway
- Atlantic City Expressway
- Palisades Interstate Parkway
New Jersey Turnpike

The Turnpike was the first toll road in New Jersey and is maintained by the New Jersey Turnpike Authority. The Turnpike is considered the nation's sixth-busiest toll road and is one of the most heavily traveled highways in the United States. The Turnpike is a major route providing access to various localities in New Jersey, as well as Delaware, Pennsylvania, and New York. It is a total of 122.40 miles and runs from Interstate 295 (I-295) near the border of Pennsville and Carneys Point Townships in Salem County, one mile east of the Delaware Memorial Bridge in the southern terminus to the George Washington Bridge in Fort Lee, Bergen County in the northern terminus.
Garden State Parkway

The Parkway is considered the busiest toll highway in the country and is the longest highway in the state. The limited-access Parkway is 172 miles long and runs the entire length of New Jersey from the New York line at Montvale, New Jersey, to Cape May at New Jersey's southern terminus. At its north end, the Parkway becomes the Garden State Parkway Connector, which is apart of the New York State Thruway.
Atlantic City Expressway

The Atlantic City Expressway is a 44 mile controlled-access toll road that is managed and operated by the South Jersey Transportation Authority. It serves as an extension for the freeway portion of Route 42 in Turnersville southeast to Atlantic City. It connects the Philadelphia metropolitan area with Atlantic City and other Jersey Shore resorts.

The expressway intersects many major roads, including Route 73 in Winslow Township, Route 54 in Hammonton, Route 50 in Hamilton Township, the Garden State Parkway in Egg Harbor Township, and U.S. Route 9 in Pleasantville.
Palisades Interstate Parkway

The Palisades Interstate Parkway (PIP) is a 38 mile limited-access highway that runs between New Jersey and New York. In New Jersey the PIP begins at the George Washington Bridge (GWB) in Fort Lee and parallels US 9W and the Hudson River.

The entire New Jersey portion of the PIP is within Bergen County and is designated as a state scenic byway known as the Palisades Scenic Byway.
NJDOT Roadways
Major New Jersey Crossings
NJDOT STMC Coverage Area (North)
NJDOT TOC-South Coverage Area (South)
Mapping Information Resources

Available at the TMC for understanding transportation system

- OpenReach map
- Online map-based applications (i.e. Google Maps)
- 511 map
- RITIS
- GIS Applications
Module 3 Learning Checks

1. Have you gained a basic understanding about the transportation system?

2. Did you learn about the transportation networks and modes within the State?

3. Did you gain information about the resources available at the TMC for understanding the transportation system?

4. Did you learn about the TMCs’ jurisdictions?
MODULE 4

INCIDENT MANAGEMENT
Strategic Highway Research Program 2 (SHRP2)

- SHRP2’s National Traffic Incident Management Responder Training brings police, firefighters, DOT towing, medical personnel, and other incident responders together to engage in interactive, multidisciplinary training.

- A standardized training program for first responders and other agencies responsible for the safe, quick clearance of roadway incidents.

- Helps TMC Operators understand the needs and perspectives of those in the field.
An incident is defined as any non-recurring event that causes a reduction of roadway capacity or that affects or impedes the normal flow of traffic.

Examples of types of incidents:
- Motor vehicle crashes and/or fire
- Disabled vehicles
- Spilled cargo
- Highway maintenance, reconstruction, and construction projects
Incident Classification

Incidents can be classified based on the level of severity, as shown below (Based on the MUTCD):

<table>
<thead>
<tr>
<th>Incident Classification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MINOR</td>
<td>Events with a duration of less than 30 minutes and result in moderate traffic impact or safety risk such as traffic incident in the travel lane involving minor injuries but not blocking traffic, weather conditions impacting travel speed, minor planned events, etc.</td>
</tr>
<tr>
<td>INTERMEDIATE</td>
<td>Events with a duration of 30 minutes to 2 hours with widespread, high traffic impact or safety risk such as road closure that has a high traffic impact, major planned events, weather causing disruptions, bus/plane/train/ferry crash, amber alerts, etc.</td>
</tr>
<tr>
<td>MAJOR</td>
<td>Events with a duration of over 2 hours and widespread, severe traffic impact or safety risk such as closure of major highway or bridge, crash or event involving deaths of 10 or more people, school bus incident, etc.</td>
</tr>
</tbody>
</table>
New Jersey has expanded on the MUTCD classifications:

<table>
<thead>
<tr>
<th>MAGNITUDE</th>
<th>DURATION</th>
<th>PROTOCOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor</td>
<td>&lt;30 min</td>
<td>• Notify NJSP if incident is on roadway where a minor delay can create significant traffic impact</td>
</tr>
</tbody>
</table>
| Intermediate | 30 min to 2 hrs | • Notify NJSP  
• Establish TTC Components  
• Consider DOT Response (Supervisor Only) |
| Major     | 2+ hours      | • Notify NJSP  
• Request DOT Response (Trailer) Early  
• Establish Full Work Zone (Same as Non-Emergency) |
MODULE 4 – INCIDENT MANAGEMENT
TIM Stages

Traffic Incident Management (TIM) consists of six primary steps, as follows:

1. Detection
2. Notification
3. Arrival
4. Response Activities
5. Clearance & Termination
6. Recovery
TIM Stages

1. **Detection** – determining that an event has occurred and is brought to the attention of the agency/agencies responsible for maintaining traffic flow and safe operations on the facility.

2. **Notification** – confirming that an event has occurred, determining its exact location, and obtaining as many relevant details about the event in order to dispatch the proper initial response.

3. **Arrival** – dispatching the appropriate personnel and equipment, and activating the appropriate communication links and motorist information media as the event is verified.
TIM Stages

4. Response Activities

- Scene Management - the process of effectively coordinating and managing on-scene resources. Ensuring the safety of response personnel, incident victims, and other motorists is the foremost objective of incident site management.

- Traffic Management - applying traffic control measures onsite and in areas affected by an event.

- Motorist Information - disseminating event-related information to affected motorists through the use of various methods.
TIM Stages

5. **Clearance & Termination** – removing wreckage, debris, or any other elements that disrupt the normal flow of traffic.
   - Roadway Clearance Time – The time between first recordable awareness of an incident by a responsible agency and first confirmation that all travel lanes are open.
   - Incident Clearance Time – The time between the first recordable awareness and the time at which the last responder has left the scene.

6. **Recovery** – evaluating the long-term impact of an incident and identifying recovery actions needed to mitigate those impacts.
Important TIM Frameworks

- **National Incident Management System (NIMS)** developed by the Department of Homeland Security is a national standardized approach to incident management and response. It establishes a uniform set of processes and procedures that emergency responders at all levels of government use to conduct response operations.

- **Incident Command System (ICS)** is a standardized, on-scene, all-hazards incident management approach that:
  - Allows for the integration of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure.
  - Enables a coordinated response among various jurisdictions and functional agencies, both public and private.
  - Establishes common processes for planning and managing resources.
TIM Agencies

First Responders
- Law Enforcement
- Fire and Rescue Agencies
- Emergency Medical Services (EMS)
- NJDOT SSP/IMRT

Other Responders
- NJDOT Maintenance
- Towing and Recovery
- Medical Examiner
- Utility Companies
FHWA TIM Handbook – Chapter 4

Incident Management Unit (IMU)

- Serves as a member of IMRT
- Agencies in IMU
  - New Jersey DOT
  - NJ State Police (NJSP)
  - New Jersey Division of Fire Safety (NJDFS)
- Personnel
  - NJSP – 1 Lieutenant (Unit Head), 6 Sergeant First Class Officers (SFC’s) or Regional Incident Management Coordinators (RIMC’s)
  - NJDOT – 16 Incident Management Responders (IMRT-ers)
  - NJDFS – 4 Regional Incident Responders
Incident Management Unit (IMU)

- There are 4 main TIM activities that the IMU gets involved with:
  - Roadway Incidents
  - Special Events
  - Highway Construction
  - Weather Related

- Members of this Unit typically serve as Incident Commander on scene, and their role is to coordinate response efforts among the various responder disciplines.
Module 4 Learning Checks

1. Do you understand the impacts of incidents?

2. Have you gained insight into how the incidents are classified based on the levels of severity?

3. Do you understand that incident management is a step-by-step process?

4. Do you understand the frameworks used for incident management?

5. Did you become familiar with responder agencies involved in TIM?
MODULE 5

EMERGENCY TRANSPORTATION OPERATIONS
Emergency Transportation Operations (ETO)

ETO is defined as “a comprehensive, coordinated, performance-oriented approach among the transportation, public safety, and emergency management communities in preparing for, responding to, and recovering from traffic incidents, planned events, natural or human caused disasters, and other types of events.”

http://www.ops.fhwa.dot.gov/eto_tim_pse/
Emergency Transportation Operations (ETO)

- Traffic Incident Management (TIM)
- Traffic Management for Planned Special Events
- ETO for Disasters

http://ops.fhwa.dot.gov/eto_tim_pse/about/eto.htm
Planned Special Events

- Public activity with a scheduled time, location and duration that may **impact the normal operation of the surface transportation system** due to increased travel demand and/or reduced capacity attributed to event staging.

- Examples: sporting events, concerts, festivals, and conventions occurring at permanent multi-use venues (e.g., arenas, stadiums, racetracks, fairgrounds, amphitheaters, convention centers),

- They also include less frequent public events such as parades, fireworks displays, bicycle races, sporting games, motorcycle rallies, seasonal festivals, and milestone celebrations at temporary venues.
Managing Travel for Planned Special Events

Involves:

- Advanced operations planning,
- Stakeholder coordination and partnerships,
- Developing a multi-agency transportation management plan,
- Raising awareness of general public and event patrons of potential travel impacts, and
- Coordinating agency services and resource sharing.
Planned Special Events – Super Bowl

- Agency partnerships
- Challenge – Traffic Management
- Planning for Operations
- Technology/ITS
  - Portable VMS
    - Message consistency
  - CCTV
Example Local Event

- PLACEHOLDER SLIDE TO DISCUSS LOCAL EVENT
Being the focal point of travel conditions, the demand on the functions performed by the TMC becomes greater as the severity of an event increases and more agencies become involved.
Role of TMC in ETO

- TMCs *monitor, detect, and verify incidents* affecting transportation operations and safety, serve as a clearinghouse, and provide information to emergency agencies on the status of the transportation infrastructure providing *situational awareness*.

- TMC functions include *gathering, synthesizing, and disseminating traffic and travel condition information*. These functions enable TMC personnel to monitor and control the operations of the transportation system, whether it is the management of congestion, incidents, or other events.
Functions of TMC in ETO

Functional categories

1. Incident Management
2. Freeway Management
3. Information Dissemination
4. Coordination with Other DOT Functional Groups
Functions of TMC in ETO

1. Incident Management
   - Support the emergency response activity through the use of existing and/or redeployed incident management systems and resources to more effectively deal with the emergency site and affected roadway facilities.

2. Freeway Management
   - Support the emergency response activity through the use of existing and/or redeployed freeway and arterial management systems and resources to more effectively manage the affected freeway and arterial facilities during the emergency conditions.
3. Information Dissemination
   - Support the emergency response activity by collecting and providing information regarding the status of traffic and highway conditions as well as emergency response activities.

4. Coordination with Other DOT Functional Groups
   - Support the emergency response activity by participating in the coordination of operational activities with internal functional groups and external operational partners.
NJ Office of Emergency Management (NJOEM)

- Works closely with federal, state and local partners to prepare for all hazards, natural or manmade that affect New Jersey.
- Responsible for emergency management activities in the State.
- Responsible for planning, directing and coordinating emergency operations within the State which are beyond local control.
- All activities and departments are coordinated, directed and controlled from the State Office of Emergency Management, Emergency Operations Center.
- The Superintendent of the NJSP is generally appointed as the State Director of the New Jersey Office of Emergency Management.
NJ Office of Emergency Management (NJOEM)

Consists of the following three bureaus:

- Emergency Response Bureau
- Recovery Bureau
- Communications Bureau
Regional Units

- Coordinate emergency management activities throughout the counties and municipalities in the Region (North, Central, South)

Hazardous Materials Response Unit (HMRU)

- Provides operational response and planning support for HAZMAT incidents

Urban Search and Rescue

- New Jersey Task Force One – specially trained for advanced level search and rescue
- Federal Surplus Property Program
NJOEM Recovery Bureau

➢ Public Assistance Unit
  ▪ Manages the Public Assistance Grant Program before, during, and after presidentially declared disasters or emergencies.

➢ Preparedness Unit

➢ Mitigation Unit
  ▪ Enhances state, county, and municipal risk reduction through the development and implementation of mitigation strategies.
NJOEM Recovery Bureau

➢ Field Training Unit

- Responsible for conducting emergency management training courses

➢ Support Services Unit

- Coordinates the development of all Citizen Corps Programs (Community Emergency Response Teams, Neighborhood Watch, Volunteers in Police Service, Fire Corps, and Medical Reserve Corps) throughout the State.
NJOEM Communications Bureau

➢ Radio/ Electronics Maintenance Unit (REMU)
  ▪ Maintenance of all public safety radio and related equipment

➢ Telecommunications Unit
  ▪ Telephone service, pagers, cellular phones, etc.

➢ Operational Dispatch Units
  ▪ Tracking patrols
  ▪ Processing state police emergency and non emergency phone lines.
    o North
    o Central
    o South
    o Turnpike/Parkway
    o Call Center
New Jersey County OEM

- Atlantic County
  - http://www.readyatlantic.org
- Bergen County
  - http://www.bcoem.org/
- Burlington County
  - www.co.burlington.nj.us/oem
- Camden County
- Cape May County
  - http://www.capemaycountygov.net
- Cumberland County
  - http://www.ccoem.org
- Essex County
  - http://www.essexsheriff.com/
- Gloucester County
  - http://www.co.gloucester.nj.us
- Hudson County
- Hunterdon County
  - http://www.co.hunterdon.nj.us/oem.html
- Mercer County
  - http://www.mercercounty.org
New Jersey County OEMs (continued)

- Middlesex County
  - [http://www.co.middlesex.nj.us/emergency/index.asp](http://www.co.middlesex.nj.us/emergency/index.asp)

- Monmouth County
  - [http://www.monmouthsheriff.org](http://www.monmouthsheriff.org)

- Morris County
  - [http://www.morrisoem.org](http://www.morrisoem.org)

- Ocean County
  - [http://www.co.ocean.nj.us/EMMgm/MMain.aspx](http://www.co.ocean.nj.us/EMMgm/MMain.aspx)

- Passaic County
  - [http://www.passaiccountynj.org](http://www.passaiccountynj.org)

- Salem County
  - [http://www.readysalem.org/](http://www.readysalem.org/)

- Somerset County
  - [http://www.co.somerset.nj.us/division/emergencyman.html](http://www.co.somerset.nj.us/division/emergencyman.html)

- Sussex County
  - [http://www.sussexcountysheriff.com/about/emergency_management/](http://www.sussexcountysheriff.com/about/emergency_management/)

- Union County
  - [http://www.ucnj.org](http://www.ucnj.org)

- Warren County
Module 5 Learning Checks

1. Did you learn a basic understanding of Emergency Transportation Operations?

2. Do you understand the purpose of the TMC during emergency response situations?

3. Did you learn about the functional roles of the TMC during emergencies?

4. Did you learn about the New Jersey Office of Emergency Management and the County OEMs?
TMC Operator Responsibilities

- Assist in incident detection and verification
- Operate Variable Message Signs (VMS)
- Operate Closed Circuit Television Cameras (CCTV)
- Monitor and exchange information during events and incidents
- Provide safety information to motorists
- Provide traveler information to partners, the public, and media
- Notify NJDOT staff (as appropriate)
- Documentation of incidents and planned events
Planned and Unplanned Events

Traffic impacting events on roadways are either unplanned or planned:

- Unplanned events are incidents such as crashes, debris on roadway, flooding
- Planned events include roadwork/highway construction and special events
Details – Operators need to determine the following details of incidents or events

- What is it? (roadwork, crash, debris, flooding, etc.)

- Where is it? Where does it start and end?
  - What road is it on?
  - What travel direction?
  - What is it near – Mile Marker(s), Exit(s), crossroad(s)?

- What effect? (road or ramp closure(s), what lanes are closed, expected duration)
Collection of additional incident details where incident response involves IMU

- Hazmat?
- Evacuation?
- Traffic flow?
- Traffic recovery strategy?
Detection and verification of unplanned events/incidents

- Highway cameras
- Speed data maps
- Safety Service Patrols (SSP)
- New Jersey State Police (NJSP)
- Local Police
- DOT crews
- Motoring public
Incident and Event Detection and Verification

➢ Planned Roadwork, Highway Construction
  ▪ Resident engineers and contractors submit roadwork and highway construction forms to the STMC and TOC-South email addresses
  ▪ Operators review and approve these request

➢ Planned Special Events
  ▪ Small events come in via fax or email
  ▪ Larger events involve NJDOT Traffic Operations planning and coordination and the TMC role is defined from this planning
Incident and Event Response – Operator Action Overview

- **Detect/Verify/Monitor:**
  - Highway cameras
  - Phones, radio
  - Speed and incident maps
  - Safety Service Patrol (SSP) status
  - Weather systems

- **Information Exchange:**
  - Internal/External coordination and response

- **Incident and event documentation**

- **Information Dissemination:**
  - Safety messages (VMS)
  - Traveler information (511)
  - Clearing house (TRANSCOM)
  - Internal/external notifications (Email)
Detect / Monitor / Verify

- **Highway cameras**
  - TMC Video Wall
  - Camera Control Software
  - Other agency and partner cameras

- **Speed maps**

- **Phone, Radio, Email**
  - DOT Phones
  - Central Dispatch Unit

- **Weather systems**
  - Real-time current information
  - Radar and forecast information

(CDU) radio and SSP dispatch

- DOT Email
Information Exchange

- Receive reports of incidents, verify incidents, and enters event details into OpenReach database.
- Response actions on the floor between TOC staff, status of incidents and events.
- Communication with CDU and SSP.
- Communicate with NJSP or local police or county communications center as per direction from shift supervisor.
- Communicate with supervisor as needed if incident requires response from IMRT or Traffic Operations Duty Officer (DO), as per Operations Bulletin 1003B Appendix D.
Duty Officer Contact List

- Provides phone numbers of Duty Officers at NJDOT units, as well as partner agencies, including:
  - State agencies (NJSP, DEP, NJTA, SJTA, etc.)
  - PANYNJ
  - FHWA
  - Media
  - TRANSCOM
  - Utilities

- List is kept at STMC and TOC South, and is also available through NJDOT Intranet.
Information Exchange: IMRT Roster

Provides the following information:

- IMRT coverage areas by road mile marker
- Primary and secondary contacts
Information Exchange: Law Enforcement Book

- Municipal Police Departments
- NJ State Police
- County Agencies
- County Office or Emergency Management
- Federal agencies
- Port Authority Police Department
Information Exchange: Central Dispatch Unit (CDU)

- NJDOT’s Emergency Call Center
- CDU personnel receive maintenance requests for salt spreader, plow truck, etc.
- IMRT-ers on site may also request NJDOT maintenance at the site of an incident
- All CDU calls are in radio log; emergency calls, including electrical or maintenance requiring work orders get entered into CDU dispatch database (EL-15)
Information Exchange: Safety Service Patrols (SSP)

- Central Dispatch Unit (CDU) on TMC Floor
  - Coordinate SSP dispatch through CDU
  - Monitor the dispatch database, CDU Radio

- Safety Service Patrols roadway coverage times
  - 4:00 AM – 8:30 PM (Weekdays All Year)
  - 10:00 AM – 8:30 PM (Weekends)
  - 9:00 AM – 7:30 PM (Memorial Day Weekend to Labor Day Weekend*)

* South Region Only For Shore Traffic
North Region SSP Coverage Area Map
Information Exchange: IMRT

- The NJDOT IM officer (IMRT-er) is an on-scene at the incident coordinator that relays information to the TMC and the Director.

- An IMRT-ers role is to oversee and coordinate all DOT activities during an incident with the aim of reopening lanes for traffic as quickly and safely as possible.

- Generally, if a request for the IMRT is made, the shift supervisor on duty at either the STMC or TOC South will make the determination to call out the IMRT.
Information Exchange: IMRT

Appendix D: List of Incidents that may require an IMRT Response:

The Incident Management Response Team shall be notified immediately for lane/road closures on any State or Interstate Roadway for any of the reasons listed below. The Traffic Operations Center shall notify the NJDOT and the NJSP Response Personnel concurrently.

1. Overturned Tractor Trailer.
2. Any Hazmat incident, excluding a small (less than 20 gallon) motor vehicle fluid spill.
3. MVA causing structural damage to a roadway or bridge structure, including overhead bridge structures.
4. MVA with fatalities.
5. Total roadway closure (in one or both directions) for 2 hours or more that has the potential to affect the morning rush hour. (Road closures caused strictly by a Traffic Signal Knock Down are not to be considered a major incident).
6. Fire/Explosion on, under or adjacent to a State or Interstate Roadway that results in a closure or damage to the roadway.
7. Any time an Incident Command Post is established involving lane/roadway closures.
8. Any airplane crash (commercial or private) that will result in a closure of NJDOT maintained roads.
9. Unplanned events requiring NJDOT resources (i.e. civil disorders, disasters, search and rescue operations.)
10. School Bus Accident on all NJ Roads with injuries to Children and/or Adults. If serious injuries – send IMRT and/or SSP and/or NJSP or all to the scene.
Incident and Event Documentation

TMC operators document incidents and events in the OpenReach database

- Incident data entry form
- Highway construction data entry form
- Update records as conditions change; close record when incident clears or event finish

- Tracking of operator inputs:
  - Monthly reporting to identify different types of incidents and roadway locations for measuring incident durations.
  - Goal: average incident durations of less than 50 minutes on Interstates, and less than 90 minutes on US/State routes.
Incident and Event Documentation

OpenReach – Incident Record Lifecycle

1. Open record for highway incident

2. Enter incident details
   - Incident Type*
   - Facility/Route*
   - Direction*
   - Mile Post/Exit*
   - Duration*
   - Lane Closures
   - User Actions

3. Submit incident record into database

4. Update incident record
   - Change in estimated duration
   - Lane Closure changes
   - Responders enroute/rerouted/on scene/leave scene
   - ITS Equipment used

5. Incident cleared – Close incident record
VMS software is used to create and send messages to electronic message boards on the roadways

- Create quick messages for incidents
- Create and save messages to the message library for planned events like highway construction
- Create and save messages to the message library for Public Service Announcements (PSAs) and special events
Information Dissemination: Traveler Information

- The OpenReach software uses the incident or event detail information that the operator inputs into the system utilizing the drop down menus to create a message that is then passed to NJ DOT’s 511 traveler information system

  - [www.511nj.org](http://www.511nj.org)
The OpenReach software platform is utilized by a coalition of 16 public safety and transportation agencies in New Jersey, Connecticut, and New York. Transcom provides interagency communication and enhanced utilization of agency resources through the OpenReach program.

New Jersey implementation of the OpenReach program was the first instance of OpenReach to be deployed and has been stable in its operation since 2011.

http://www.covalsystems.com/latest/about/customers.html
Email Distribution Lists

Notifying Front office/Executives

- The OpenReach software provides the ability for an Operator to create and disseminate emails with incident or event details that will auto-populate with text from the OpenReach record.

- This function is used to alert ‘the front office/executives’ and other stakeholders of incidents and events as outlined in OB5005C Traffic Alerts Section B.

- The emails are sent from the STMC email account or the TOC-South email account depending on OpenReach system login:
  - Operators are to initial these emails upon sending them
  - All email updates should be modified to read “update 1” “update 2” etc.
NJTA and SJTA Notifications

- New Jersey Turnpike Authority (NJTA) provides TIM support to New Jersey Turnpike and Garden State Parkway
- South Jersey Transportation Authority (SJTA) provides TIM support to Atlantic City Expressway
- NJDOT STMC and TOC-South may assist these agencies:
  - Supervisor to Supervisor request for additional TMC support
  - NJDOT will post messages on VMS as support
  - OpenReach program may be used where major events impact DOT roadways
- **OB5005C Traffic Alerts** “Major incidents that occur on non-NJDOT highway jurisdictions.”
Weather Events

- The CDU monitors weather reports, especially during the period from November 1\textsuperscript{st} to April 30\textsuperscript{th}

- CDU notifies designated person from the Operations Division when said reports contain an Advisory, Special Statement, Warning or alludes to an adverse winter weather condition that will affect the state of New Jersey

- Operations Bulletin 4001B
Planned Special Events - General

- Notification of planned special events may come in via fax or email
  - These events are typically small and the NJDOT permits office directed the event sponsor to submit an Lane Closure Request (LCR)

- Special events requiring more planning and coordination will come down from Traffic Operations with a predetermined TIM plan
  - TMC informed of their role by phone or email
Unanticipated Construction Delays

OB5001C Unanticipated Construction Delays (Late Running Construction)

- Operator monitors and gathers information first 15 minutes of late running construction
  - Operator should contact construction contact or Resident Engineer for details on lane closures and reason for delay per OB.
  - Fill out UCD checklist form.
- Procedure for when construction exceeds 30 minutes over approved scheduled times
  - Operator to create a new event as UCD incident with updated lane closure as indicated by the Resident Engineer.
  - Begin notification process per OB.
Amber Alert / Silver Alert

- NJSP send alert to NJDOT with Alert information in the form of an email or fax
- NJDOT assist NJSP by utilizing statewide ITS resources as part of the AMBER and Silver Alert programs
- Guidelines for NJDOT support role can be found in OB1004C.
PATH Trains Delays Advisories on Variable Message Signs (VMS)

- For 60 minute delays or greater
- Incident messages have priority over PATH Train Delay advisory
- Guidelines found in OB5006B
Incident Occurs

PD Calls NJDOT Central Dispatch Unit (CDU)

Assistance Needed

CDU: Creates EL-15
Calls Crew/SSP
Calls TOC N/S

Traffic Operations Center (TOC):
Calls PD to confirm info
Activates ITS
Enters Incident into Openreach/511
Dispatches IMRT/Div Crew
Dispatches NJSP-RIMC
Sends Traffic Alerts

Incident Management Response Team (MRT):
NJDOT/NJSP
Notifies CDU when on scene
Gives Dashboard Size Up
Checks in at CP
Updates TOC
Handles Incident as NJDOT Liaison

CDU: Creates EL-15
Calls TOC

Assistance Not Needed

CDU: Creates EL-15
Calls Crew

TOC:
Updates Openreach/511
Updates ITS
Sends Traffic Alerts
Clears Incident

NJDOT MAINT. CREW/SSP:
Notifies CDU when on scene
Gives Dashboard Size Up
Reports to IMRT
Performs required work
Calls CDU with Updates
Calls CDU when Incident clears

Traffic Operations Center (TOC):
Calls PD to confirm info
Activates ITS (if needed)
Enteres Incident into Openreach
Calls PD for updates
Closes Incident
Deactivates ITS

CDU:
Calls TOC with update
Calls TOC when Incident Clears
Closes out EL-15
Important Points to Remember:

- Acquiring timely and accurate traffic data is the key to efficient traffic management.

- It is critical to be aware of all the resources available for traffic monitoring and have a good working knowledge of them.
Module 6 Learning Checks

1. Have you identified methods used to monitor traffic used in the TMC and in the state?

2. Do you understand the responsibilities of the TMC and the role of TMC operators regarding traffic monitoring and management?

3. Did you gain hands-on experience with gathering the correct information when being notified of incident?

4. Are you able to identify different information exchanges in the incident management process?

5. Are you able to identify the different OBs that enable operators and shift supervisors to make informed decisions?
MODULE 7

INTRODUCTION TO SOFTWARE SYSTEMS AND TECHNOLOGIES
Primary TMC Software Systems and Technologies

TMC operators utilize three primary tools to effectively and efficiently managing events on NJDOT’s road network.

- **OpenReach**
  - Incident and planned event management information system
  - Incident and Planned event documentation and information dissemination (feeds 511NJ system)

- **Vanguard**
  - Primary software for controlling VMS
  - Permanent (static, overhead) VMS and Portable VMS

- **Genetec**
  - Traffic video surveillance and CCTV control software
  - Camera manipulation (Pan/Tilt/Zoom)
OpenReach

- NJDOT’s primary traffic management and data entry software.
- Database for capturing all traffic incident and event details.
- Regional system used by partner agencies
- Used by operators to record (input), review, and update all incidents and events occurring on NJDOT roads, as well as review events on roads operated by the partner agencies.
- Seamlessly transfers incident and event data to NJDOT’s 511 phone and web systems.
- Provides additional functionality such as viewing cameras, monitoring VMS, and producing performance and management reports.
Genetec

- NJDOT’s primary CCTV and statewide camera control software.
- This software connects operators to hundreds of cameras for viewing and pan, tilt, zoom camera control functionality.
- This software also provides TMC operators with monitor grid layouts for viewing multiple cameras of interest at once on workstation monitors.
- Video management software for accessing and reviewing archived video
Vanguard

- NJDOT’s primary VMS sign control software.
- Creating, editing, saving, previewing, posting, monitoring, and deleting messages to and from the hundreds of VMS out on the NJDOT roads.
- The software handles many different sign types and models.
- It is used for checking sign status and running device diagnostics.
- The software logs all user actions sent to the signs from the software.
Secondary Software Systems

- Real-time highway speed mapping tools
  - Current travel speed by highway link (segment) in real time
  - Displayed on a map with different colors indicating speed variation
  - Additional useful features
- EL-15 database (CDU database and SSP dispatch)
- Interactive Detour Route Mapping (IDRuM)
- Weather Systems
  - Real-time weather
  - Radar and Forecast weather information
Real-time Travel Speed Data Maps

- Electronic maps that provide indication of color-coded prevailing travel speed on street maps.
- Useful in monitoring traffic conditions, detecting and verifying incidents and events on NJDOT roads.
- The use of more than one speed map seem redundant, but can help in confirming incidents and providing more complete roadway (network) coverage.
Real-time Travel Speed Data Maps

- INRIX
- Regional Integrated Transportation Information System (RITIS)/Vehicle Probe Project (VPP) Suite
- TRANSCOM DFE Map in OpenReach
- BlueTOAD
INRIX

- Data provided as part of the I-95 Vehicle Probe Project
- Provides users access to current and historical traffic.
- Provides continuous coverage of the I-95 corridor from New Jersey through Florida as well as coverage of limited access roads in New Jersey.
- [http://i95.inrix.com](http://i95.inrix.com)
- Provides continuous coverage of the I-95 corridor from New Jersey through Florida as well as coverage of limited access roads in New Jersey.
TRANSCOM DFE Map in OpenReach

- Functionality can be accessed through OpenReach.
- Covers the entire NY/NJ/CT region.
- Combines various speed data sources (INRIX, HERE, TrafficCast, BlueTooth, Transmit).
- Data includes link speeds, and provides tools to determine travel time information with average speeds.
- Contains a map based link speed tool as well as a Link Viewer that can be used to build different link sets.
Regional Integrated Transportation Information System (RITIS) / Vehicle Probe Project (VPP) Suite

- TMC operators have access to this automated data sharing, dissemination, and archiving system.

- Tools can be used for mapping congestion and identifying bottlenecks on the transportation network.

- Provides a variety of services including visual analytics and performance measures.

- https://www.ritis.org/
BlueTOAD (TrafficCast)

- Web-based system for viewing and managing the Bluetooth travel time detectors deployed around the state.
- Operators use this tool to see device location, their status, and reported data.
- Provides speed maps with colored lines that show current speed as it relates to the speed limit. Clicking on these lines provides more details including a 48-hour chart showing speed and travel time information.
EL-15 Database

Operators use this database to monitor CDU logs.

The database is separated into three regions (North, Central, and South).

Operators use this database and the CDU radio to learn about different situations occurring on the roadways and whether a TMC operational response is needed.

- Date and time of event
- Type of event
- Route
- Route direction
- Mile post

Monitor status of Safety Service Patrol team members.
Interactive Detour Route Mapping (IDRuM)

- This web-based tool provides NJDOT detour route maps for segments of roadways in New Jersey.

- If there is a road closure, the detour route maps available in the interactive tool have been approved as a potential detour route for traffic.

- Goal of this tool is to have interactive detour mapping of all of New Jersey’s major routes mapped by county.

- www.dvrpc.org
Weather Systems Tools

- Road Weather Information Stations (RWIS)
  - NJDOT has deployed stand alone road weather stations that collect and measure the weather and surface temperatures.
  - RWIS stations are outfitted with cameras
  - Weather stations feed data back to a central server that makes the data available through a web browser (log-in required).
  - Provide current weather information regarding temperature and precipitation, as well as other weather data.

- MxVision WeatherSentry
  - A subscription service available to TMC operators for viewing weather information.
  - Provides radar information feeds as well as detailed forecasts.
Other Support Tools

- **WAZE**
  - Crowdsourcing web tool that provides information on traffic conditions and incident.

- **Google maps**

- **Bing maps**

- **DOT Intranet**

- **Total Traffic**
Getting Started

- Understanding the tools that are at your disposal is important to being a fully capable member of the operations staff.

- In addition to the technology that is available through the computer at the operator workstation, it is also important to ensure that the operator knows what equipment is available in the field.

- Highway cameras and VMS for the most part stay in one place. Knowing where they are is an important element of an efficient traffic management and incident response.
OpenReach Home Page

- Button Bar
- Map Control
- Owner Markings
- Our Resources
OpenReach for Equipment Location Discovery

- New Map button in OpenReach
  - All CCTV and VMS equipment locations
- There are over 350 CCTV
  - Over 200 in the north
  - Over 150 in the south
- There are over 150 VMS
  - Over 100 in the north
  - Over 60 in the south
OpenReach for Equipment Location Discovery

- New Map button in OpenReach
  - All CCTV and VMS equipment locations
OpenReach Map Controls

The image shows a screenshot of a software interface for managing map controls, specifically focusing on an item labeled "NJ-29 South of NJ-129 (Hamilton) M...". The interface includes options for selecting and managing different items, with a filter set to "VMS" and a scope set to "Owned by: NJ DOT - TOC South".
OpenReach Map Demonstration

- New Map
- Map Control
511 Traffic Map for Equipment Location Discovery

- 511nj.org/trafficmap.aspx

- Another tool that TMC operators can use when identifying the locations of different cameras

- The 511 site also provides live traffic speed data
511 Traffic Map Demonstration

- Camera Layer
- Live Traffic Speed Layer
Controlling the Field Equipment

- Each piece of field equipment has a feedback to the TMC
- The feed goes to an equipment control software that the TMC operators use every day in their job.
- The equipment control software provide an operator the ability to disseminate safety messages to roads all over New Jersey and to view the road network they are responsible for all from the floor of the TMC.
CCTV Control Software

- Statewide camera control head end software system.
- TMC operators have full control of NJDOT cameras using this software.
- NJTA cameras can only be viewed by TMC operators. Operators cannot control them.
  - NJ Turnpike Authority cameras
    - Garden State Parkway
    - NJ Turnpike
- PANYNJ cameras also available for viewing
Genetec Live Viewer
CCTV Control Software

- Navigation pane
  - Cameras are grouped by owner and then by road
  - Entity Search Tool

- Camera PTZ (dome cameras)
  - Full onscreen control panel
  - Quick PTZ toolbar

- Setup camera layout grids on monitor
  - Configure camera groups in different video layouts
CCTV Control Software

- Live Viewer
  - Full Screen Mode
  - Full Screen Video Mode

- Using Multiple Screens
  - Configure for displaying video grids on computer monitors
CCTV Control Software

- Recorded video archives
  - Recorded video is retained for 7 days
  - Review **OB1002C** – NJDOT’s Video Camera Operations Policy

- When a camera captures an incident or event on the camera an operator is to leave camera zoomed out or turn camera from incident; in some cases a supervisor will block image from leaving Genetec software.
  - Camera continues recording
  - If camera is not blocked, camera image continues to be passed to OpenReach, 511, and other partners
CCTV Control Software Demonstration

- Camera search and camera tree
- Live view
- Camera PTZ
- Camera presets/Home
- Monitor camera grids
- Video Archive
- Camera positioning
OpenReach CCTV Camera Viewing

- **CCTV viewer**
  - Enables an operator to search out any camera by owner and then by camera name

- **New Map**
  - This been discussed, it provides all the regional cameras on a map

- **Video wall**
  - Provides operators access to pre-made video grids with transitions for select areas of the region determined on a state level as an important group of cameras to monitor.
CCTV Camera Viewing Demonstration

- CCTV viewer
- New Map
- Video wall
Student Activity

1. Find a camera in Genetec, then find it on OpenReach map
2. Find camera on 511 web page, then find it in Genetec
3. In Genetec PTZ control a camera and use presets and return it to home position
4. In Genetec create a monitor video grid
5. In OpenReach locate a NY owned camera
VMS Control Software

- NJDOT electronic signboards or Variable Message Signs (VMS)
  - On permanent overhead or roadside fixture
  - Portable VMS

- Control software connects to signs and allows the operators to:
  - Send messages
  - Blank messages
  - Send message schedules
    - Planned event message schedules
    - Travel time message schedules
Portable and Permanent VMS

- Portable VMS

- Permanent VMS
VMS Control Software

- Approved VMS Messages Types
  - Blank signs
  - Traffic incidents
  - Construction and maintenance activities
  - Emergency messages
  - Special events
  - Adverse weather and roadway conditions
  - Advanced notification of future roadwork or special events
  - Travel times
  - Safety campaigns
  - Test messages
VMS Message Parameters – MUTCD Guidance

- NJDOT follows the MUTCD guidelines for posting messages to VMS on roadways.

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Number of Information Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>What happened?</td>
<td>MAJOR CRASH</td>
<td>1</td>
</tr>
<tr>
<td>Where?</td>
<td>AT EXIT 12</td>
<td>1</td>
</tr>
<tr>
<td>Who is the advisory for?</td>
<td>Drivers Heading TO NEW YORK</td>
<td>1</td>
</tr>
<tr>
<td>What is advised?</td>
<td>USE ROUTE 46</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: The following is an example of a two-phase message that could be developed from the four information units shown in this table:

- **Phase 1**: MAJOR CRASH AT EXIT 12
- **Phase 2**: USE ROUTE 46 TO NEW YORK

VMS Message Parameters – MUTCD Guidance

- The minimum time that an individual phase is displayed should be based on 1 second per word or 2 seconds per unit of information, whichever produces a lesser value. The display time for a phase should never be less than 2 seconds.
- The maximum cycle time of a two-phase message should be 8 seconds.
- The duration between the display of two phases should not exceed 0.3 seconds.
- No more than three units of information should be displayed on a phase of a message.
- No more than four units of information should be in a message when the traffic operating speeds are 35 mph or more.
- No more than five units of information should be in a message when the traffic operating speeds are less than 35 mph.
- Only one unit of information should appear on each line of the CMS.
- Compatible units of information should be displayed on the same message phase.

VMS Message Parameters – MUTCD Guidance

- Sign format
VMS Message Parameters – MUTCD Guidance

- MUTCD acceptable abbreviations

<table>
<thead>
<tr>
<th>Acceptable Abbreviations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Word Message</strong></td>
<td><strong>Standard Abbreviation</strong></td>
</tr>
<tr>
<td>Afternoon / Evening</td>
<td>PM</td>
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<tr>
<td>Alternate</td>
<td>ALT</td>
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<tr>
<td>East</td>
<td>E</td>
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<tr>
<td>Friday</td>
<td>FRI</td>
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<tr>
<td>Hazardous Material</td>
<td>HAZMAT</td>
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<tr>
<td>High Occupancy Vehicle</td>
<td>HOV</td>
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<tr>
<td>Information</td>
<td>INFO</td>
</tr>
<tr>
<td>Junction / Intersection</td>
<td>JCT</td>
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<tr>
<td>Monday</td>
<td>MON</td>
</tr>
<tr>
<td>Morning / Late Night</td>
<td>AM</td>
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<tr>
<td>North</td>
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<tr>
<td>Saturday</td>
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<td>Wednesday</td>
<td>WED</td>
</tr>
<tr>
<td>Morning / Late Night</td>
<td>AM</td>
</tr>
</tbody>
</table>
Creating safety messages

- Quick – created for quick and efficient posting, usually for incidents
- Stored – created for planned events
VMS Control Software

- VMS Diagnostics
  - Pixel Test
VMS Control Software Demonstration

- Review different sign types and how the effects message length
- Review sending single message vs. grouped message
- Review button control options in ribbon
- Create and send a quick message
- Create, save, and send a library message
- Run a pixel test
Preparing and posting signs for highway construction planned events:

- Verify there is no already planned roadwork in this area at the same time
- Identify applicable signs
- Create sign messages by sign types
- Save to libraries
Planned Construction Event Demonstration

- Review construction handout
- Run a coordination report in OpenReach
- Verify work has not already been entered into systems
- Identify field equipment that can be used to support the event
Student Activity

1. Find a sign on OpenReach map, then find it in Vanguard software

2. Create a traffic incident sign (quick message)

3. Create a roadwork sign (message library)

4. Run a pixel test
OpenReach Incident and Event Documentation

- Sort incident list by column headers
- Sort highway construction list by column headers
OpenReach Incident and Event Documentation

OpenReach Highway Event Panel List – Column Headers

- **Facility**: displays at which place or roadway the Event is located.

- **Type**: displays which Type of Event each Event is considered to be.

- **Last Change**: displays the time and date of the last Update of each Event, if no Updates have been made, the time of creation, or, if the Event was closed and no other Updates have been made since, the time of Closing.
OpenReach Incident and Event Documentation

OpenReach Highway Event Panel List – Column Headers

- **Impact**: displays the severity of the Event's impact.

- **Details**: provides a short description of each Event; hovering over the description will open a tooltip with the description.

- **State, County**: displays the State and County in which an Event is located.

- **Mile Post**: displays the Mile marker at which the Event is occurring.

- **Relationship**: Shows if this event is a **parent** or **child** of another event.
To sort for a very specific incident a TMC operator can filter events with the following criteria:

- Severity
- Event State
- Organization
- Date

- Type
- Facility
- Secondary events
OpenReach Incident and Event List Documentation Demonstration

- Highway Incident sorting
- Highway Construction sorting
Incident and Event Documentation

- Straight Line Diagrams
  - This tool will assist you in determining mile marker/mile posts if you have crossroad information
Incident and Event Documentation

- Mile Markers in New Jersey
  - North/South Roads
    - Mile Markers count up going North
    - Mile Markers count down going South
  - East/West Roads
    - Mile Markers count up going East
    - Mile Markers count down going West
Incident and Event Documentation

- Straight Line Diagrams can be used to view interchanges and Jurisdiction lines
Straight Line Diagram Incident and Event Documentation Demonstration

- Straight Line Diagrams
OpenReach Data Entry

- Highway Incident
- Weather Event
- Amber Alert
- Silver Alert
- Special Event
- Highway Construction Event
  - One and done
  - Recurring schedule
OpenReach Data Entry

➤ Add User Actions

▪ An Incident or event can have User Actions associated with it. These actions include:
  o IMRT
  o Crew
  o State Police
  o Other (ITS equipment used)
  o Construction Zone
Example User Action Page
Incident and Event Documentation

OpenReach Data Entry

- Email Distribution *per OB5005C*
- Update an event
  - From Highway Event Panel List
  - From Highway Construction List
OpenReach Incident and Event Documentation Demonstration

- Create highway incident
- Create weather event
- Create Amber Alert
- Create Special Event
- Create highway construction
- Add User Actions
- Email Distribution
- Update/Close Incident and Event
**Student Activity**

1. Provide an example road and crossroad. Using any resources available have the student identify what town or county road location is, then use the straight line diagram to determine what mile marker the crossroad is located.

2. Create an incident in OpenReach at that location that has User Actions including - IMRT on scene, identify what ITS equipment could be used, Maintenance dispatched

3. Prepare an email message for distribution
Information Dissemination

NJ 511 Phone and Web

- **511NJ** is a free phone and web service that consolidates traffic and transportation information into a one-stop resource for commuters and motorists in the Garden State. 511NJ provides up-to-the-minute traffic conditions and it's available seven days a week, 365 days a year.

- Traffic and travel information offered on the **511NJ** web site and telephone phone service is managed by a partnership of public agencies led by the New Jersey Department of Transportation, the New Jersey Turnpike Authority, the South Jersey Transportation Authority, the New Jersey State Police, the Port Authority of New York and New Jersey, the Delaware River Joint Toll Bridge Commission and the Delaware River Port Authority.
Manually Posting a Severity Alert onto the 511 webpage

There are 6 elements to each alert

1. **Message** – Actual content of alert (what is posted on NJ511 webpage).
2. **URL** – Web address to provide more detailed information, if available.
3. **Start** – Date and Time for the alert to become active (visible) on the NJ511 webpage.
4. **End** – Date and Time for the alert to become inactive (clears) on the NJ511 webpage.
5. **Priority** – Importance of alert in comparison to the rest of the alerts.
6. **Active** – Make sure it becomes visible on the NJ511 webpage.
Information Dissemination Demonstration

- Dial 511 Phone
- Review 511 Web
- 511 Web Severity Alerts
Student Activity

1. Dial 511

2. Use voice command shortcuts.

3. Listen to audio for incident messages.
EL-15 Database

The Central Dispatch Unit Database is used for monitoring entries made by the CDU based on the calls they have received.

The database is broken into 3 regions, north, central, and south.

TMC operators will use this database and the CDU radio logs to learn about different situations occurring on the roadways and the status of those incidents.

A TMC operator can monitor this database and view details of the CDU record including Date, time, type of event, Route, Route direction, mile marker for each emergency log entry, as well as who has been dispatched and if they are on scene.

Using these details the TMC operator can determine if TMC operation response is needed. And can view statuses of Safety Service Patrol team members to understand if they are available or still responding to highway events.
EL-15 Database

![Image of EL-15 Database form]

**Date**: 5/12/2015 14:01

**Description of Call**: 

**Next Call**: 
- **1st** 
- **2nd** 
- **3rd** 
- **4th** 
- **5th** 
- **6th** 
- **7th**

**Crew or Contact Person Responded**: 

**Crew at Incident**: 
- **Time Call Dispatched**
- **Time Crew on Scene**
- **Date Incident Completed**
- **Time Incident Completed**

**Additional Details**: 

**CDU PHONE NUMBERS**: 
- **NORTHCOREM**: 609.588.6211
- **CENTRAL COMM**: 609.588.6212
- **SOUTHCOREM**: 609.588.6213

**Completed By**: 

**SAVE RECORD**
- **Email to TOC - North**
- **Email to TOC - South**
- **Email to REO - North**
- **Email to REO - Central**
- **Email to REO - South**
EL-15 Database (North)
CDU Dispatch Database

CDU Dispatch Regions:
CDU Dispatch Database Demonstration

- Review Emergency Records
- Monitor SSP
Speed Maps

INRIX

- The INRIX travel speed data is provided as part of the I-95 Vehicle Probe Project.

- The I-95 Traffic Monitoring site provides users access to maps showing current traffic conditions, as well as archived (historical) traffic data.

- Layers can be toggled on and off to show just interstates highways, all highways, or arterials.

- There are controls for identifying congestion information and speed information as well as toggling on alerts related to incidents and construction.
Speed Maps

TRANSCOM DFE Map

- TRANSCOM provides a Data Fusion Engine for the entire NY/NJ/CT region
- This engine combines TRANSMIT data with private information service provider and other traffic data
- The data includes link speed data, and provides tools to determine travel time information with average speeds
- There is a map based link speed tool as well as a Link Viewer that can be used to build different link sets
Speed Maps

BlueTOAD

➢ This is a web-based vendor provided system for viewing and managing the bluetooth travel time detectors deployed around the state.

➢ The web-based tool provides operators the ability to view device lists with device details and location.

➢ Provides a speed map with colored lines that show current speed as it related to the speed limit. Clicking on the lines provides more details including a 48 hour chart showing speed and travel time information.
Speed Maps Demonstration

- Inrix
- TRANSCOM Data Fusion Engine
- BlueTOAD
IDRuM Diversionary Route Tool

- Interactive Detour Route Mapping
  - Identify route, route segment
  - PDF files containing detour information
- Identify county of interest (if no diversionary routes in system, county will be grayed out)
IDRuM Diversionary Route Tool Demonstration

IDRuM
Weather Systems

Road Weather Information Systems (RWIS)

A RWIS is comprised of Environmental Sensor Stations (ESS) in the field, a communication system for data transfer, and central systems to collect field data from numerous ESS. These stations measure atmospheric, pavement and/or water level conditions. Central RWIS hardware and software are used to process observations from ESS to develop nowcasts or forecasts, and display or disseminate road weather information in a format that can be easily interpreted by a manager. RWIS data are used by road operators and maintainers to support decision making.

http://www.ops.fhwa.dot.gov/weather/faq.htm
Weather Systems

- MxVision Weather Sentry subscription
  - Top-rated weather information delivered via the Web
  - Provides SOAP or REST services
  - Hourly and daily forecasts for the 15-day outlook, with associated actual observations available
  - Available hourly and daily parameters include those common to energy operations and planning, such as temperature values, heat index, humidity, wind characteristics, precipitation type and amount, barometric pressure, and many others
  - Provides parameters not available from free sources, such as heating degree days and cooling degree days, irradiance, evapotranspiration, and others
  - Climatological (normal) data also available for North American locations

Weather Systems Demonstration

- RWIS
- MxVision Weather
Regional Integrated Transportation Information System (RITIS)

- TMC operators have access to this automated data sharing, dissemination, and archiving system.
- This tool provides a variety of services including visual analytics and performance measures.
- TMC operators can use this tool for mapping congestion and identifying bottlenecks on the transportation network.
Regional Integrated Transportation Information System (RITIS)

- RITIS incident list
  - All New Jersey events from OpenReach

- Traffic Map
  - Vehicle speed probe data (Inrix, Navteq, TomTom)
    - Smooth data
  - Incidents and events from OpenReach

- Regional Explorer

- Dashboard
The Regional Integrated Transportation Information System (RITIS)

- There are three main RITIS components including
  - Real-time data feeds,
  - Real-time situational awareness tools, and
  - Archived data analysis tools (VPP Suite).

- An online tool, accessed through an internet portal
  - Requires username and password
  - Access through NJDOT’s membership in the I-95 Corridor Coalition
Getting Access & User Instruction

- Sign up for the account through RITIS homepage:
  
  https://vpp.ritis.org/

- Instructional Tools
  
  - Screencasts (instructional videos)
    
    https://vpp.ritis.org/suite/screencast/

  - VPP Online Help Documentation
    
    https://vpp.ritis.org/suite/help/
RITIS/VPP Suite Features & Tools

- RITIS Real-Time Situational Awareness Tools
  - Traffic Map and Incident Overview List

- VPP Suite
  - Region Explorer
  - Dashboard
Getting Access to RITIS – Demo
RITIS Real-Time Situational Awareness
Accessing VPP Suite

Region Explorer
Explore the relationships between bottlenecks and traffic events in real-time and in the past.

Massive Raw Data Downloader
Download raw probe data from our archive for offline analysis.

Congestion Scan
Analyze the rise and fall of congested conditions on a stretch of road.

Trend Map
Create animated maps of roadway conditions.

Performance Charts
Chart performance metrics over time.

Performance Summaries
Report on Buffer Time Index, Planning Time Index, and other performance metrics.

Bottleneck Ranking
Rank bottlenecks and discover which ones have the greatest impact.

User Delay Cost Analysis
Put a dollar amount on how much a road's performance impacts its users.

Dashboard
Create your own personal dashboards to monitor corridor performance in regions of interest.

Tutorials
Learn how to use each of the tools in the suite.
VPP Suite Region Explorer – Demo
Region Explorer Map Features – Demo
Region Explorer Event List Features – Demo
VPP Dashboard – Demo
Regional Integrated Transportation Information System (RITIS) Demonstration

- RITIS
Important points to note

- Understand what resources you have available to help you provide the most accurate and timely information you can.

- Understand the requirements for logging incident information and archiving data.

- Understand the tools you have available to you often change, but that the steps you have to take to ensure that you are recording good data does not. Software systems and technology are continually evolving and improving the capabilities and efficiency of a TMC operator.
Module 7 Learning Checks

- Did you become aware of the basic software systems used in the TMC?
- Do you understand all the TMC software systems used specifically for the purpose of incident management including the specific functions they perform?
- Did you gain a basic hands-on experience in using all the relevant software systems?
MODULE 8

PRACTICAL EXERCISE
Scenario #1

Three vehicles are driving East along I-195 near Exit 6: one car, one SUV, and a tanker truck carrying gasoline. The SUV sideswipes the truck, hits the divider, and is stopped along the right shoulder. The overturned truck blocks part of the right lane. There is a potential for a leak in the gasoline container of the tank truck.
Scenario #2

Due to a snow event there is four-vehicle accident on Route I-78 East by Exit 52 involving a car, motorcycle, a truck carrying propane, and an SUV. The truck driver’s leg is trapped as a result of his truck overturning and is also complaining about pain in his chest and shortness of breath.
MODULE 9

COURSE REVIEW AND NEXT STEPS
Trainee Feedback

- Review course expectations
- Are there any topics that you feel you need more information?
- Were the training materials effective?
- Any comments/suggestions regarding the course?
On-the-Job Training

- Provide On-the-Job practical training as an extension of this course

- This will be achieved by:
  - The trainee spending 2 weeks on the TMC floor (normally during the hours of 8:00 AM – 4:00 PM).
  - The trainee shadowing existing operators in all daily activities and applying concepts and skills obtained during this course.

- At the conclusion of the On-the-Job training, trainees will assume the role of a TMC operator and are expected to perform the duties.
Important Notes

- Maintain course materials for future reference, including software quick guides, OBs, and course lecture notes.

- Become familiar with any updates of OBs and other documents outlining procedures and guidelines for TMC operators as they get issued.

- Don’t hesitate to ask for advice or help from your more experienced fellow operators.
State of New Jersey
DEPARTMENT OF TRANSPORTATION

TMC OPERATOR TRAINING COURSE

Statewide Traffic Management Center (STMC), Woodbridge
Traffic Operations Center (TOC) South, Cherry Hill