

Incident Command System (ICS) Training for Field-Level Supervisors and Staff

DETAILS

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Incident Command System (ICS) Training for Field-Level Transportation Supervisors and Staff

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Files available for download at <http://www.trg.org/Main/Blurbs/173984.aspx>

MP4 video with voiceover

Video PPT for Modules 1a and 1b with voice-over- MP-4

ICS Instructor Guide

PPT provides slides and script, print 1 per page for Instructor Guide in “Notes Page” version; “Normal” version provides slides – print 2 per page for student manual.

MSPowerPoint slides for ICS for Field-Level Transportation Supervisors and Staff

ICS Course Evaluation

ICS Course Student Manual flier samples and examples

PDF Some of the individual suggested fliers for student manual; add or delete fliers to customize

MSWord Some of the individual suggested fliers for student manual; change verbiage to customize.

Briefing Training Instructor Guide

PPT Briefing Training - “View” version of PPT provides slides and script, print 1 per page for Instructor Guide; “Normal” version provides slides – print 2 per page for student manual

Briefing Training MSPowerPoint slides

Briefing Training Evaluation Sheet

Discussion-Based Training Scenarios with Instructor Notes

Remove instructor cues to create student version with questions; with evaluation sheet

Discussion-Based Training Scenarios Evaluation Sheet

Quick Start Card Masters

For customizing

Supervisor’s Folder Materials List and Construction Instructions

CHAPTER 1: USING THE INSTRUCTOR GUIDE

This guide is designed to assist instructors in the delivery of the new training course, “Incident Command System (ICS) Training for Field-Level Transportation Supervisors and Staff.” It includes lesson plans, guidance on classroom set-up, complete slide shows with scripts or instructor prompts, instructions for creating the ICS Quick Start Card set and Supervisor’s Folder, and some information about training for adults. If the trainer is experienced in the use of ICS in a field environment the preparation time should be approximately 24 hours to become familiar with the unique transportation-oriented material in this course and ancillary training sets, and to customize it for delivery in the specific state and jurisdiction where the course will be taught. All instructors for this course should have completed classes on delivering training to adults, have certificates in at least ICS 100, 200 and 300, and have some experience with ICS, at the field level or in an Emergency Operations Center (EOC). It is highly desirable for the instructor to also have experience working with a transportation agency in emergency planning or training, or as a field supervisor, and to have also completed ICS 400 and E/L449 ICS “Incident Command System Curricula TTT” courses.

The National Incident Management System (NIMS) requires the use of ICS at all emergency events. “This system will provide a consistent nationwide approach for Federal, State, and local governments to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.” (HSPD-5, 2003, (15)) US DOT/FHWA MUTCD states, “NIMS requires the use of ICS at traffic management scenes.” (2009, p. 726). This “ICS... for Transportation” course was developed as a baseline for all fifty states. Each instructor will need to customize the slide show to ensure that the emergency scenarios and examples used are appropriate to the conditions in the state where it is being taught. The instructor must be knowledgeable about state legal requirements for the use of ICS, and agency policy on safety and reimbursement issues. This information must be customized to the state where the training is being delivered.

PREFACE

The purpose of “ICS...for Transportation” is to ensure that all transportation field personnel operate safely in an emergency or traffic management event by being appropriately integrated into ICS in the field. This course assumes that all field-level transportation personnel have taken the ICS 100 course, either on line, or in a classroom, or have used the US DOT FHWA NIMS Workbook (FHWA, 2009) to complete the FEMA-accredited ICS training requirement. This course is intended to review the basic ICS structures and terminologies that ensure safety, personnel accountability and support for the agency’s financial reimbursement efforts. It teaches five possible roles for field-level transportation personnel at an event or traffic incident: joining an existing incident command as an operational asset; joining an existing incident command as a technical specialist; assuming Incident Command from another entity when all life safety issues have been addressed but transportation facility issues remain; participating in a unified command; or starting an incident command as initial Incident Commander. Its focus is solely on how transportation agency personnel and assets are part of the Incident Command System.

This instructor guide contains the materials needed to deliver the basic “ICS ... for Transportation” course, as well as some “tailgate” training refresher course materials, and a set of discussion based refresher course materials. The initial course may be offered as a stand-alone course in about four hours. The refresher courses are designed to be offered as training sessions within a daily briefing period, or as adjuncts to the basic course in a day-long hour format. Therefore the materials are offered as three sets of instructional materials (basic course, briefing and discussion-based), and the instructor may integrate these materials as appropriate for the time and audience.

Because the audience for this course is field-level supervisors and workers, it is recommended that the students be given the student notebooks as hardcopy so they can easily share the information with their families and keep the guidance materials in their work kits or vehicles. However, all student manual materials are provided in their native formats on the TRB website (<http://www.trb.org/Main/Blurbs/173984.aspx>) so that agencies may disseminate the information in whatever format is appropriate for their staff members.

Note that the ancillary materials on the website are generic and intended to meet the basic needs of transportation agencies in all fifty states. Instructors should carefully review all the work, home and personal preparedness fliers to ensure that they are appropriate for the state and jurisdiction where the training is being offered. The issue of disaster service worker should be reviewed with the agency's human resources professionals, and an appropriate agency-specific flier should be substituted. The state's Office of Emergency Services may have different or additional work, home and personal preparedness fliers that address jurisdiction-specific hazards and risk analysis. These may be substituted or added to the employee education materials to enhance the benefit of sharing that information.

The ICS Quick Start Cards master file is also intended to be carefully reviewed by the instructors and customized to meet agency-specific regulations and legal concerns as necessary. The cards are offered as an MSWord documents to facilitate the updating, augmentation and revision of the basic information to ensure that the guidance meets all state and agency mandates.

The Supervisor's Folder is designed to facilitate the use and updating of the ICS forms required for managing an event in the field. The instructors should determine which ICS forms are currently used by the agency and augment the number of pockets to include any additional state-specific form selections. The ICS 201, 208 and 214 represent the basic set of forms that should be used in all states to comply with ICS requirements to address the complexity of the response (safety) and diversity of responding entities (communications plan).

The goal of the "ICS...for Transportation" basic course is training transportation field-level personnel to

- understand the role of transportation in emergencies;
- understand ICS roles and terminology;
- understand the use of ICS for safety, personnel accountability and financial reimbursement;
- understand the application of ICS to an emergency or traffic incident involving transportation personnel and assets.

Field-level transportation personnel will leave the course understanding that they are an integral part of the emergency response organization, and that they should be specifically included in all ICS plans and implementation. The instructor guide and supporting materials will enable the instructors to thoroughly prepare to deliver the course and achieve its goals.

MATERIALS, AUDIO VISUAL, AND MISCELLANEOUS

Audio Visual Needs:

- MS PowerPoint presentation
- Laptop computer with appropriate power connection
- Projector on cart or table with appropriate power connection, and cable for laptop
- Screen
- Three 6' or longer tables
- Microphone (optional)

Props:

- Sets of 1:64 vehicles (Matchbox, Hot Wheels or similar), including police (2-6), fire (2-6), EMS (2-4), heavy equipment (4-8), media truck (2) and personal (20) vehicles, road cones, road signage and 2 tanker trucks
- Civil Engineer's tape
- Completed Supervisor's Folder
- 10 sets of ICS Quick Start Cards

Handout Materials per Pupil:

- Student Manuals as appropriate for lessons to be covered: ICS, Briefing Training, Discussion-Based Scenarios
- Course Evaluation sheets for each element taught – Modules 1a, 1b and 2 on one sheet
- ICS Field Operations Guide (FOG), 420 (FEMA version may be downloaded and printed at about \$30 per book; FIREScope ICS FOG 420 can be purchased on-line for \$5 per book plus shipping)

Seating Arrangement:

- Students in classroom style set up in any configuration that allows a clear view of the screen from every seat and adequate width to open the student manuals, and a view of one of the "accident" set up tables
- Instructors in front of the classroom where they can be easily heard by the students, and control the slide show

Table Set Up:

- One table at the front of the classroom to accommodate the instructor, laptop and instructor's written materials
- Tables and chairs for students with one student manual and one FOG manual per student on the tables, and one set of ICS Quick Start Cards for each table up to 10 tables. If there are additional tables place one set of cards for every 2 tables.
- Two tables set up as an accident scene. Use these instructions to create 2 different set ups on 2 tables, one on each side of the front of the room. Using Civil Engineer's tape create a "highway." Place the tanker truck on its side obstructing the highway, and about 10 personal vehicles in rear end collisions, "spinouts" and other accident-type positions. Place the heavy equipment in a reasonable configuration for highway work just ahead of the accident scene. Place the police, fire, ems and media vehicles and the cones and signs at the end of the road. These will be introduced into the accident scene as the scenario using ICS unfolds.

WORKSHOP SCHEDULING OPTIONS

Option One, 4 hours: 3 hours of instruction, 1 hour of introductory material, break, wrap-up

Welcome, Safety Message and Introductions: Instructors and Participants	15 mins.
Review of the Student Manual	15 mins.
Module 1a: ICS for Field Level Transportation Supervisors and Staff	60 mins.
Break	15 mins.
Module 1b: ICS in the Field: Five Roles of Transportation (ICS Quick Start Cards and Supervisor's Folder introduction)	45 mins.
Module 2: Working the Accident: You Start/You Join Selected Scenario	45 mins.
Questions/Discussion	30 mins.
Wrap-up and Course Evaluation for Modules 1a, 1b and 2	15 mins.

Option Two, 7 hours: Add Afternoon Session Below

Briefing Training Topic: Safety	15 mins.
Briefing Training Topic: Communications	15 mins.
Briefing Training Topic: Collaboration with Other Professions	15 mins.
Selected Scenario	30 mins.
Break	15 mins.
Selected Scenario	30 mins.
Selected Scenario	30 mins.
Questions/ Discussion	15 mins.
Wrap-up and Course Evaluation	15 mins.

Alternative Delivery Schedules

Note that the Briefing Training and Discussion-Based Training segments were designed as free standing instructional blocks within a morning briefing or other training environment. These can be used in any order, for example, the Briefing Training Topic: Safety module could be taught, followed by a Scenario, where safety can again be emphasized as the students work the wildland fire problem.

For a shorter training day just one of the Briefing Training modules and one of the discussion-based Scenario modules could be added to the morning session. In that case more time might be allotted for discussion of the accident in the morning, and the evaluation activity for the morning and afternoon modules could be moved to the afternoon.

Another possible configuration is to divide the students into 2 or 4 groups and have each work a different problem at the same time from the Discussion-Based Training segments, with an instructor or senior transportation emergency management staff member as the facilitator for each group. The groups could then report back to each other on the Incident Action Plan they created for the event they were managing using the ICS Quick Start Cards and FOG.

Free Standing Training

Each of the Briefing Training and Discussion-Based Training segments can also be offered as a separate instructional block at another time.

The Briefing Training segments were designed to be incorporated into the morning briefing as a thought-based refresher course for staff members who have completed the basic ICS course. These could be offered at quarterly meetings or as the ICS portion of training update events, as well.

The Discussion-Based Training segments were designed to be used as quick discussion-based refresher courses on all aspects of ICS. Using the little vehicles to work through the problem would quickly review all aspects of ICS activities within a locally-meaningful scenario.

In any case the purpose of Briefing Training and Discussion-Base Training segments is to reinforce and refresh the training provided in the morning.

SANDBOX METHOD OF EXERCISES



Note the engineer's tape creating the "highway", the simulated accident with the little cars, the emergency vehicles in Staging, the student book with the slides on the different ICS elements, and the Supervisor's Card sets that are distributed to students to help them work through the scenario.

The purpose of the Sandbox Method is to help students visualize the movement of personnel and equipment through a scenario as they practice their Incident Command System knowledge and terminology. This system has long been used by the US military to work an operational problem or to explain an operational plan. Field personnel are accustomed to thinking on their feet, and are likely to appreciate a kinesthetic approach to exercising their critical thinking skills and knowledge of a problem. Adult learning theory suggests that most adults remember best what they hear, see and do. The Sandbox Method incorporates these elements.

Matchbox-type cars can be bought in sets from internet resources that include construction equipment, cones and signage. Emergency responder vehicles and passenger cars also come in sets. On the internet these sets are generally less than \$20 for thirty or more small vehicles. You can use little buildings to complete the community, but these can be expensive. For a more flexible and cost-effective approach, create a building foot print with a sheet of plain cardstock cut to relative scale to represent significant buildings, parking lots, parks and other aspects of the community. Label the cards, or draw symbols on them to identify the building or community element that the card represents.

As students work through the scenario, they can move the vehicles and traffic control devices and block roads to simulate the progress of the problem.

As you demonstrate scenarios you will develop a collection of community element footprint cards that can be reused. The vehicles can be used for training in many configurations.

CHAPTER 2: COURSE DEVELOPMENT AND PILOT PROGRAMS

**NCHRP 20-59 (30)
Incident Command
System (ICS) for Field-Level
Transportation Supervisors
and Staff**

Developed by

Mineta Transportation Institute

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July 18, 2015

BACKGROUND

In 2013 the Transportation Research Board undertook NCHRP Synthesis 20-05/Topic 44-12, Interactive Training for All-Hazards Emergency Planning, Preparation, and Response for Maintenance and Operations Field Personnel, to discover what kinds of Incident Command System (ICS) training were being offered for State Department of Transportation (State DOT) field supervisors and personnel. Yuko Nakanishi, Ph.D. and Pierre Auza researched the kinds of training available, and discovered a gap. (Nakanishi and Auza, 2015) There was a robust collection of Federal Emergency Management Agency (FEMA) Independent Study on-line courses on ICS, as well as a number of classroom half day and full day courses, but none was designed especially for transportation personnel. The Federal Highway Administration (FHWA) created *National Incident Management System – A Workbook for State Department of Transportation Front Line Workers* (2009) to provide ICS training that was transportation oriented and did not require computer skills, but it required extended reading and writing to complete. Even the FEMA IS-100.PW that was designed for public works personnel—which might have been expected to include transportation workers—focused more on floods, pipelines and energy issues and little on transportation-specific roles like evacuation support, debris management and restoring traffic circulation to and within damaged areas. There was also no short course that would be appropriate for a field personnel training day where multiple topics would be covered, nor any brief refresher sessions suitable for tailgate meetings at the beginning of the work day.

Nakanishi and Auza noted the importance of this gap and the need to fill it. “Emergency response is becoming a larger part of state, tribal, and local transportation staffs’ responsibilities,

from the front office to the front lines” in *NCHRP Synthesis 468* (p. 5). “As budgets tighten, public sector employees are being asked to do more with fewer resources.” (p.6) “[Training] is needed ... to prepare field personnel to perform reliably and effectively with other partners under the National Incident Management System (NIMS), regardless of the agencies’ size or the nature of the occurrence, leading to improved preparedness for emergencies.” (p. 6)

State departments of transportation are required by the National Incident Management System (NIMS) (HSPD-5, 2003) to offer ICS-100 and IS-700 for all personnel who may be part of a field response using ICS, with supervisors needing additional training at least to the ICS-200 level.

Homeland Security Presidential Directive–5 requires all Federal departments and agencies to adopt the National Incident Management System (NIMS) and to use it in their individual incident management programs and activities, as well as in support of all actions taken to assist State, tribal, and local governments. The directive requires Federal departments and agencies to make adoption of NIMS by State, tribal, and local organizations a condition for Federal preparedness assistance (through grants, contracts, and other activities).” (FHWA, 2009, p. ii.)

While Presidential Policy Directive-8: National Preparedness (PPD-8) (2011) removed the NIMS training mandates that used to detail the specific ICS training required for personnel in specified organization levels (DHS, 2011), and substituted the achievement of locally-driven core capabilities for the training mandates (DHS, 2011, p. 8; Edwards, 2015), the need to deliver the basic information on field level ICS integration among agencies still remains.

There are several challenges to State DOT agencies in delivering meaningful ICS training to field personnel. First, State DOT field-level personnel may have little exposure to ICS beyond the computer-based or workbook-based class. Second, and perhaps most important, ICS is a seldom-used skill for most State DOT field personnel. Therefore, State DOT field personnel would benefit from a more interactive approach to delivering the ICS information, based on principles of andragogy, for example as expressed in the discussion-based “sandbox” approach to training.

When State DOT personnel are in the field they need to be able to assert their roles in ICS to personnel in other professions who may not understand transportation personnel as emergency response providers, but only view them as ancillary “logistics” providers. As Caltrans’ poster asserts, “No roads, no codes,” meaning that without passable and safe highways the other emergency response providers cannot reach the victims or areas of need, so collaboration among highway patrol and State DOT personnel is essential to manage traffic and road operations, while collaboration with fire and EMS personnel is required to meet the life safety needs of the traveling public.

During 2009-2010 the researchers had been delivering emergency operations center training courses to the staff members of a large state’s DOT. The researchers visited all the districts in the state and heard a consistent message: transportation workers have a problem integrating with ICS structures in the field. The three most common challenges were maintaining the safety of staff in a highly dynamic environment like a wildland fire or flood, obtaining adequate personnel support like meals and sleeping accommodations at remote ICS events, and getting the support of DOT field staff members in documenting the event and the work to support requests for reimbursement from federal and state sources to protect district maintenance budgets. These themes provided a framework for developing the modules in this course.

In 2014 TRB funded a project to fill the training gap by creating both a transportation-oriented brief refresher on ICS principles and terminology, and a set of transportation-oriented refresher presentations and supporting ICS aides that would be appropriate for briefing training at the beginning of a work day, or as short modules during a day-long multi-purpose training event. Specific tasks were established to lead to the desired set of andragogy-informed training elements. Recognizing that many State DOT field level personnel are unused to being indoors for

long periods of time, and to sitting during the workday, the course was designed to take less than 1 hour to deliver the basic ICS refreshers (Module 1a), and less than one hour to review the ICS position roles (Module 1b). The class was designed to be flexible in its scheduling, as either multiple 1 hour events or short events as part of a longer training day. A second module was developed using the “sandbox” approach to interactive learning, where kinetic aspects include having students use a scenario to understand the work of ICS, and to move small vehicles around to exemplify the actions needed.

METHODOLOGY

Several methodologies were used in the design and construction of the course suite. First a literature review was conducted to determine what courses might be available and what strategies might best support the development of the needed State DOT field staff ICS materials. Next leaders of two State DOTs, Tennessee and Florida, were interviewed to obtain information for meaningful scenarios that could be used in the kinetic aspects of the training. In addition an interview with a Washington State contract engineer was conducted to understand aspects of the Skagit Bridge collapse and reconstruction that might be useful in developing course materials. A well-known fire service ICS expert, Fire Chief Gerald Kohlmann of South San Francisco Fire Department, served as the subject matter expert for the interface between State DOT field personnel and ICS on the State Highway System (SHS), or when State DOT personnel were assisting with off-SHS ICS activities, such as wildland fire access management.

The researchers then developed a three aspect training set to meet the needs of State DOT field personnel. The classroom course Modules 1a was developed as a PowerPoint-supported lecture. Module 1b was developed as an interactive presentation with the students actively

engaged in using the supporting materials. Module 2 was developed to reinforce the classroom training using the “sandbox” approach with small cars and simulated road to demonstrate the ICS principles and possible State DOT field staff roles, from joining an existing ICS to starting an ICS. Next, briefing training was developed on three key ICS aspects – safety, communication and collaboration with other agencies - to be delivered in 15 minute segments during a tailgate meeting, or as a brief training refresher. Finally, four scenarios were developed that would be used for a 10 minute discussion-based “sandbox” refresher, using little vehicles to simulate the management of the event. A speedy presentation would challenge personnel to think quickly, but the same scenarios and approach could be used in a longer 30 minute format as a teaching tool. The teaching materials are in Chapters 4, 5, 6, 7, 8, and 9.

Following completion of the teaching materials, Modules 1a and 1b were piloted with the California Department of Transportation (Caltrans) personnel in nine diverse districts. Due to the size of the state they can offer a variety of State DOT environments, from deserts to the Sierra Nevada, with one district having both the highest (Mt. Whitney) and lowest (Death Valley) points in the continental “lower 48.” Pilot Caltrans districts included the densely populated Bay Area, Los Angeles metro, Sacramento metro and Inland Empire, as well as the sparsely populated northern rain forest, Central Valley, high desert and the remote Sierra Nevada Mountains in the northeastern portion of the state. Weather conditions span freezing and avalanches to intense heat and monsoons. The workforce is diverse as to age, ethnicity, gender, political perspective, and educational level. Collaborators in the field range from local government police, fire, EMS and transportation staff, to state highway patrol and fire agency personnel, to the National Forest Service, Bureau of Land Management, Coast Guard and Environmental Protection Agency. This diversity mirrors the nation, so the reactions to the delivery of the course to State DOT field

forces facing most of the typical challenges of State Highway System management, including a wide range of collaborators and hazards, provided a reasonable sample of probable reactions. Student evaluations were collected from 205 of the 278 individuals trained in nine districts over six months.

However, it should be noted that various states have different approaches to integrating transportation personnel into ICS. In Tennessee, for example, transportation personnel are part of a unified command structure with highway patrol and fire/EMS personnel. In other states the public safety responders may be less cordial in welcoming their non-uniformed emergency response colleagues, and in one instance a federal fire Incident Commander even refused to allow the transportation personnel to attend briefings or receive copies of the Incident Action Plan. It is to be hoped that by training transportation field level personnel in ICS they will be better prepared to be full partners in ICS-managed events and assert their need to be part of the ICS structure for safety and personnel accountability reasons.

Following the completion of the first five pilot programs, three State DOT leaders and one Amtrak leader were sent the course materials and supporting tools created for this program for their evaluation of their usefulness in other states. Interviews in Olympia and Boise were held while the last four pilot deliveries were completed. July interviews in Boston included both MassDOT and Amtrak, which had recently suffered a fatal derailment in Philadelphia, so their response to the value of the class for rail-based transportation was sought.

As the course materials were developed they were sent to the panel for review in January and April, 2015. Each set of comments was incorporated into the course at the next delivery. The materials sent in July, 2015 represented the integration of the comments from the panel, the students and the State DOT leaders.

Following the panel review in July a final revision was completed and course materials and an explanatory PowerPoint can be found at <http://www.trb.org/Main/Blurbs/173984.aspx>.

LITERATURE REVIEW

Professional ICS

There is a variety of training material available at the FEMA Independent Study website. IS-100.b (2013) offers computer-based training on basic ICS, and while intended to be generic is public safety-oriented. IS-100.PWb (2013) offers computer-based training on ICS for public works personnel, with public works photos. While the public works course includes discussion of pipe breaks and flooding as triggers for using ICS, the issue of roads as the means for delivering all other services is not addressed, and little transportation application information is provided.

Various ICS resources outside of FEMA were also investigated. California's Standardized Emergency Management System (SEMS) (2006) course materials for state agencies were reviewed to determine applicability of the state agency-oriented ICS courses to a national audience. The Federal Highway Administration's (FHWA) *National Incident Management System – A Workbook for State Department of Transportation Front Line Workers* (2009) provides optional course delivery for ICS, using transportation oriented materials and a “pen and paper” workbook format for those without ready access to the internet, or who prefer not to use a computer for training.

There are a variety of guidance materials that provide information on the role of State DOT in ICS field level implementation. The Department of Homeland Security's (DHS) *National Infrastructure Protection Plan (NIPP) 2013: Partnering for Critical Infrastructure Security and Resilience* (2013) discusses the achievement of NIPP goals under the new Presidential Policy

Directive-8 (PPD-8): National Preparedness (2011) and PPD-21: Critical Infrastructure Security and Resilience (2013) approaches, with transportation as part of the National Preparedness Goal (FEMA, 2015), and DOT as a co-lead with DHS on transportation issues (NIPP, 2013, Table 1, Sector and Cross-Sector Coordinating Structures, p. 11). The new PPD-21 (2013) structure emphasizes the importance of collaboration across sectors, across levels of government and with the private sector, which own 85% of the nation's critical infrastructure. (DHS, 2004) PPD-8 (2011) describes an emergency response organization that encompasses the "whole community," including not just government entities but also private sector and non-profit organizations.

Part of facilitating collaboration across agencies and jurisdictions in the field is understanding the meaning of the terms used for various entities when they respond to an event. State DOT field level students have reported being refused integration into the ICS by some agencies because they were "not public safety." Understanding the meaning of terms – for example "public safety" is a human resources term related to pensions and benefits – helps to clarify that transportation personnel are an integral part of response to any event involving the use of the State Highway System, and that as such they are "emergency response providers," just like law enforcement and fire personnel. That definition is found in the Homeland Security Act of 2002, which is still in effect. *NCHRP Research Results Digest 385: The Legal Definitions of "First Responder"* clarifies the definition of those who work at the scene of an emergency and their roles. It notes that although the term "first responder" was used in HSPD-8 (2003) to define the roles of public works personnel and heavy equipment operators, which would include many members of State DOT field staff, that presidential directive was overridden by PPD-8 (2011), so there is no longer a legal basis for that definition. PPD-8 was praised for its expanded definitions section that dealt with resilience and the five phases of emergency management, but it did not

define field responders in any category. (Edwards, 2015)

State DOT staff participation in the collection of documentation to facilitate reimbursement is an important aspect of ICS section work. It is important for the Operations Section staff at an event using ICS to document the damage, their work and the finished project to facilitate the collection of reimbursement for the work from the appropriate federal or state entity, which may not become available for many months after the event. For example, one large state DOT district did not collect cost information on the use of its internal personnel and equipment during a winter-weather-related disaster because there was no disaster declaration at the time, and they had no expectation of reimbursement. However, four months later a disaster declaration was issued for that event, but by then it was too late to try to recreate the records of which personnel and equipment were used in the disaster response. Based on the research it appears that State DOTs have relatively small “emergency funds” that are designed as cushions to permit emergency contracts to be issued for unexpected damages to the State Highway System. They are not large enough to permanently bear the whole cost of such repairs. Rather most serve as revolving funds that allow emergency work to start while permanent financing for the repairs is obtained from another entity. The FHWA *Emergency Relief Manual 2013* describes the changes to FHWA reimbursement requirements for state highway system damages, especially debris-removal-related expenses which may be reimbursed through FEMA. Managing two sets of reimbursement requests to two different agencies requires the cooperation of all State DOT field workers, since expenses for emergency repairs may mean that programmed projects are delayed, deferred or cancelled, which may cost jobs. The NCHRP 20-59 (37) report *Debris Management Handbook for Local and State DOTs* (Drenan and Treloar, 2012) also contains information not only on reimbursement for debris removal but also offers guidance on managing the debris

removal project and forms that might be useful in organizing the debris removal program.

ICS and Transportation

The field response to any emergency event, including traffic accidents, requires the use of NIMS, and at the field-level NIMS is the Incident Command System (ICS). (HSPD-5, 2003) “This system will provide a consistent nationwide approach for Federal, State, and local governments to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.” (HSPD-5, 2003, (15)) Furthermore, the FHWA *Manual on Uniform Traffic Control Devices* states, “NIMS requires the use of ICS at traffic management scenes.” (2009, p. 726). Thus all State DOT personnel must use ICS in the field at any emergency event. As noted above, PPD-8: National Preparedness’ Whole Community approach (2011) and PPD-21: Critical Infrastructure Security and Resilience (2013) both mark an expanded understanding of the role of State DOT personnel as partners in ICS. Furthermore, the National Preparedness Goal (2011) and the related *Response Frameworks* added Critical Transportation as one of the 14 “Core Capabilities,” in the Response Mission (DHS, 2014, p. 6), acknowledging for the first time the pivotal role that transportation plays in response to all emergencies.

One tactic for use at a highway-related emergency that involves response by multiple agencies is the US DOT, SHRP2, *Traffic Incident Management* (2013) training program. TIM provides a framework for managing traffic incidents, integrating and coordinating the positioning and use of law, fire, emergency medical, transportation and other resources. The TIM method serves as a “supporting plan” for the ICS’s Incident Action Plan, giving the Incident Commander a coordinated tactic for managing multiple agencies at the site of an event.

State DOT field level personnel serve a critical role in emergency response to events of all sizes, as the managers of the nation's critical highway infrastructure, and as the link between the traveling public and the emergency services that may need to be delivered. "No roads, no codes," is indeed a true slogan. The purpose of the new "Incident Command System (ICS) for Field Level Transportation Supervisors and Personnel" course with a more interactive format is to prepare State DOT field level personnel to be part of the new approach to emergency response that recognizes "critical transportation" as a "core capability" and an essential element of the emergency management cycle.

ICS and Andragogy

The "ICS for Field Level Transportation Supervisors and Personnel" course is designed for adult learners who generally work outdoors doing physical activity. They are not desk and computer-oriented in their normal work day, and do not generally spend time in indoor meetings. Therefore, the "Instructor is challenged to grab their attention" (Edwards and Goodrich, 2014, p. 40) Thus the ICS training has to be tailored to include activities that will hold their interest and include kinetic elements and group participation.

The challenge of maintaining the interest of adult learners is well known among educators. In 1980 Knowles recognized the special considerations that make teaching adults (andragogy) different from teaching children (pedagogy). In his landmark work on educating adults he said,

as a person matures, 1) his self-concept moves from one of being a dependent personality toward one of being a self-directed human being; 2) he accumulates a growing reservoir of experience that becomes an increasing resource of learning; 3) his readiness to learn becomes orientated increasingly to the developmental tasks of his social roles; and 4) his time perspective changes from one of postponed application of knowledge to **immediacy of application**, and accordingly his orientation toward learning shifts from one of subject-centered to one of **problem-centered**" (Knowles 1980, p. 39).

Using Knowles' paradigms the "ICS for Field-Level Transportation Supervisors and Staff" incorporates didactic training of under one hour, paired with participatory engagement and kinetic activities to reinforce learning.

Further, Zmeyov (1998) noted that "The learning of an adult is largely determined by his/her **life context**, i.e., time, place, daily life and occupational, social and family factors. The adult learning process is characterized by the **leading role of the learner himself or herself**. The **learner and the teacher co-operate** in all stages of learning, i.e., in the planning, realization, evaluation and correction of the learning process. (Zmeyov 1998, p. 106; in Edwards and Goodrich, 2014, p. 41.) "A classroom presentation of the [ICS] highlights illustrated with meaningful local examples is one way to impart useful knowledge." (Edwards and Goodrich, 2014, p.40)

In its train-the-trainer courses FEMA also encourages a problem-centered approach to training. Trainers are encouraged to "provide opportunities to critically reflect upon and immediately apply new learning in order to transfer that learning into habitual practice" (DHS 2011a, 4-5) "Recognizing that students in the transportation sector training are adults, and that the teaching environment is driven by the learner, trainers have to devise techniques and strategies that engage them and clearly demonstrate the relevance of the subject being taught in their life contexts." (Edwards and Goodrich, 2014, p. 41) FEMA further states, "those responsible for implementing the training program will benefit their students by sequencing the training and exercises offered in such a way as to allow the students the ability to directly and immediately apply their new learning in the operational context. This ... will assist the adult learners in readily transferring their new learning into habitual practice in their operational context" (DHS 2011a, 5).

The “ICS for Field-Level Transportation Supervisors and Staff” is designed to impart some basic knowledge about ICS through a lecture format that also uses practical application examples for check-in, check-out, demobilization and data collection. It includes segments on developing a personal support kit and professional support kit for work, and engaging in family preparedness activities to ensure the family’s ability to manage in a disaster without the employee. The second part of the class engages the learners in reading the ICS guidance and taking roles within ICS. The third segment uses the kinetic “sandbox” approach, with students using small vehicles to simulate the response to and management of an event. Thus the see/hear/do paradigm of andragogy is exemplified in the course structure.

One requirement of the new course was that it include refresher elements that could be offered at tailgate meetings or in other brief training environments. The National Fire Academy (2015) developed Coffee Break Training topics for fire personnel, recognizing that few departments could send personnel to longer training sessions. These brief sessions can be completed in one coffee break of 15 minutes, yet provide useful information on one focused topic within fire service or public outreach. This approach was used as a model for organizing the brief modules on central ICS topics: safety, communications and collaboration with other agencies. It also informed the creation of four scenario-based trainings that can use the “sandbox” approach to practice different transportation activities that are possible within ICS: joining an existing ICS, serving as a technical expert, participating in unified command, or assuming command of an event from another entity.

Knowles (1980) notes that “Training ... must be interactive to be effective. The students will be adults, whose motivation for learning is different from children. They are seeking problem-centered presentations that have immediate application to their jobs and life experiences.” (p. 41)

The “ICS for Field Level Transportation Supervisors and Staff” course is designed to meet the needs for refreshing ICS knowledge in a short time in a way that will engender interest in the participants and enhance learning.

COURSE MATERIALS

The course materials were developed using the standard FEMA IS-100.b as the base. Based on the NIMS requirements for employee training, the course was designed to be a transportation-specific refresher on the critical issues of ICS for transportation field level personnel. The three areas of emphasis grew out of a review of ICS-100, 200, 300 and 400 principles and strategies, and the researchers’ previous experience training State DOT personnel.

The TRB project required three specific types of training offerings: classroom-based refresher, tailgate meeting training topics and discussion-based training scenarios. The following course materials were developed specifically for State DOT field-level personnel, although interviews with Amtrak managers suggest that track-based transportation systems could also use the materials with slight local customization.

Basic ICS Course

Several supporting elements were developed for use in teaching the “ICS for Field Level Transportation Supervisors and Staff” course. The base element was a PowerPoint show module of about 45 minutes of lecture as an ICS refresher with a complete script, and another PowerPoint show module and script that was designed to be used interactively with the Supervisor Folder and Quick Start cards. Since all materials are available on the TRB website (<http://www.trborg/Main/Blurbs/173984.aspx>) in native format the photos can be changed to

reflect events and disaster types that are familiar to the audience. This was packaged as the Instructor Guide, which included guidance on running a “sandbox” exercise. To facilitate training in multiple types of venues, a video of the PPT with voiceover was created for self-study, or for group use when a trained instructor is unavailable.

A student manual was created that displays the PPT slides in a two per page format. This was selected rather than the traditional three slides with lines because the slides are easier to read in this format. The student guide includes a set of fliers on preparing a work vehicle emergency self-support kit, and developing an appropriate professional “drive-away” kit for the employee’s field role in an emergency, especially in remote locations or for an extended period of time. Items that are emphasized in the lecture are having adequate water and medications, both prescription and over-the-counter, available at all times.

Another section includes a selection of fliers to assist the employee in preparing his family for his absence during a disaster that may affect the area where his family lives, as well as his work site. Items emphasized in the lecture include the disaster service worker program, so families understand why the employee is required to be at work, gathering vital records to ensure that the family can get whatever non-profit and federal individual assistance might be available, and keeping the child’s school and day care emergency information up to date, as well as similar information for older dependent adults in the household.

The final segment of the student folder is a set of reference materials, including a glossary of terms and an acronym list. Information about the sponsoring organization and the speakers is also included.

These materials were first reviewed by Fire Chief Gerry Kohlmann of South San Francisco Fire Department, a subject matter expert on the Incident Command System. After being modified

based on his guidance the materials were sent to the NCHRP panel for peer review and comment. Their modifications were integrated into the materials after each set of comments was received. The course was piloted nine times in a large State DOT, and student surveys were taken each time, generating 205 responses out of 278 students in attendance. The final version was distributed to the panel in July 2015.

The course emphasizes several transportation-specific issues. The first is “Transportation is the key to all emergency response: no roads, no codes.” This leads to a discussion of the need for coordination among emergency responders, that transportation personnel are “emergency response providers,” and as such are an integral part of the incident command system.

The topic then shifts to the five possible roles that transportation personnel might play in an emergency response using ICS. The most common role is joining an existing ICS, most often in an Operations Section function. In many states the highway patrol is Incident Commander (IC) on the state highway system when the event is a traffic circulation problem, and fire is IC when there are life safety or hazardous materials issues. Transportation personnel join ICS to manage information to the public using changeable message signs, portable signs, cones and other signals and signage. They may inspect bridges and tunnels, remove debris, trim landscaping, provide expedient repairs of the road surface and open emergency access for use by other emergency services, such as fire, law enforcement and medical.

A second common role is as a technical specialist in the Plans Section. Transportation personnel may be bridge inspectors, hazardous materials specialists or have other skills needed by the Incident Commander to manage the event.

A third common role is as a member of a unified command with fire and highway patrol. When an event occurs on a state highway system element the fire department is typically legally

responsible for life safety issues, the law enforcement agency is responsible for traffic flow, and the transportation agency is responsible for the usability of the road for safe passage. An ICS subject matter expert from an urban area noted that when he was IC at an event on the state highway system he always integrated State DOT into ICS when there was an accident or spill on the road, and looked to them for guidance on when the highway could safely be opened. His experience showed that while the highway patrol was always anxious to restore traffic flow the State DOT personnel had a more global view of the issues that needed to be addressed before traffic could safely use the highway again, such as how slippery the surface might still be from a spill or how strong a highway element might be after a fire, flood or explosion.

A fourth role for the State DOT could be assuming command from another entity. It might be assumption of command from the fire IC after all life safety issues were addressed, or from law enforcement when the traffic had been cleared to allow for remediation of road surface conditions. In one large state a mud flow onto the roadway at rush hour resulted in the highway patrol starting ICS to manage the traffic safety issues and get the relevant lanes closed safely. The State DOT then assumed Incident Command to perform a geotechnical study to determine whether the flow was likely to restart or worsen, and then to engineer and install protective material to hold back further rain-driven displacements. Once the protective barrier was installed and the mud was cleaned from the road, Incident Command was returned to law enforcement for the reopening of the lanes and restoration of traffic circulation patterns.

Finally, State DOT might be the initial Incident Commander if the event occurred adjacent to their work area, especially in a remote area or in the midst of heavily congested traffic, either of which could slow highway patrol response. The State DOT personnel can conduct a safety assessment of the work force, notify the TMC of the occurrence, size up the incident's scope and

immediately obvious challenges, document immediately available resources for managing the event, and start the ICS documentation. Whenever highway patrol arrives there can be a turnover of command, with the new IC benefitting from the information collection and the beginning of the ICS structure. State DOT personnel can then either continue in some roles, like Plans Section Chief, or start an Operations Section to begin resolving the event under the direction of the law enforcement Incident Commander.

Agencies should discuss the preferred order of ICS appointments and operations in their states. Based on laws, protocols or traditions there may be other ICS activities that are started in the first 10-15 minutes. In some states it is assumed that State DOT staff are all trained in safety, so the order of operations might be Plans, Logistics, Liaison and Operations, with Safety being appointed after more personnel arrive. If multiple jurisdictions will be involved at an event, a Liaison Officer might be more useful to the IC to integrate incoming personnel into the system efficiently. In a large scale event it might be prudent to appoint an Operations Chief early so that the IC can maintain the overall management of the event while the Operations Chief focuses on tasks to begin to resolve the problem.

As noted earlier, family preparedness is the key to keeping State DOT staff at work. Employees who are worried about their families will either leave work to assist them or be distracted worrying about their safety. This segment reviews the steps that families can take in advance to prepare for emergencies, and encourages State DOT staff to join the local community emergency response team so that they are part of a network of trained people who can help each other in emergencies.

The course also emphasizes the NIMS/ICS focus on performing reliably and effectively under ICS. Three elements that support these objectives are safety, personnel accountability and

reimbursement. The course notes that ICS is a seldom-used skill for most State DOT personnel, and describes how safety, personnel accountability and assistance with reimbursement are important parts of a State DOT worker's implementation of ICS in the field.

The supervisor's folder is introduced as a tool for helping State DOT personnel begin ICS effectively, with support focusing on the first 15 minutes while they await the arrival of law or fire personnel with more qualifications and certifications to be Incident Commander. These tools include the Quick Start Cards that detail the first steps for some key ICS positions in each of the five likely State DOT ICS roles. There is also a cardboard display for ICS forms or other information that arriving responders would need, a complete ICS Field Operations Guide (FOG ICS 420) to provide complete information for an unfolding event, and pens and pads to begin the event documentation process in a field environment with limited electronic capabilities.

Student feedback on this class and the tools was solicited in all nine of the pilot districts. Overall 72% of students rated the class 5 (excellent) or 4 (good). The statistics on the response are reported below.

Another element of the program is a pair of strategies for providing refresher training on ICS in a shorter format. Once a student has completed one of the available ICS 100 courses, or the course described here, he can refresh his knowledge through presentation of topics or discussion of scenarios, which may also use the "sandbox" approach of using small vehicles to represent the management of an event using ICS. As part of this project both types of resources were developed.

Briefing training topics were designed to be used at a tailgate meeting or some other short training event. The lead instructor would present a few PowerPoint slides focused on one topic that is important for ICS implementation. Example briefings on safety, communications and

collaboration with other agencies are provided as a PowerPoint show with a script. State DOTs can use these as models to develop additional briefing topics that are relevant to the state and district.

Discussion-based scenarios offer examples of the use of ICS in four of the ways that are presented in class. These can be used at a tailgate meeting or other short training venue. In this case the students are presented with a scenario and some questions about how to manage it. The instructor guide includes suggested answers or discussion elements. The sandbox approach with little vehicles is an effective method for presenting these scenarios.

Both of these techniques follow the principles of andragogy by involving the students in solving the problems using the ICS methods that were recently learned. State DOT leaders and Amtrak managers all agreed that these approaches were likely to engender discussion and critical thinking in the field level staff, who could relate these events to their own work.

FINDINGS

Research was conducted using both interviews and surveys. The interviews were initiated by the researchers with the assistance of TRB. The surveys were distributed to all the students in each of the nine classes taught during the contract period.

Interviews

The researchers interviewed eleven transportation professionals with a background in emergency management and Incident Command System (ICS) use within the transportation sector. They were from State DOTs in Florida, Idaho, Massachusetts, Tennessee and Washington State, as well as Amtrak. Two of the interviews were conducted when the course was in outline

form, while the other nine were conducted after the interviewees had received copies of the instructor and student manuals and the complete supervisor's folder, including the Quick Start cards. They were asked a consistent set of questions about ICS and transportation in their jurisdictions.

1. Has State DOT been teaching ICS to the field crews?

All interviewees stated that ICS 100 was either offered through new employees orientation, promotional training or was encouraged as part of other types of employee education. Four noted that IS-700 was included, and 3 stated that ICS 200 was either offered to field supervisors or they were encouraged to take it on-line.

2. Have State DOT employees used ICS when working with highway patrol or fire agency?

All eleven interviewees provided examples of when State DOT workers used ICS in the field in collaboration with fire and law enforcement personnel. These examples were captured and some were used to enhance the examples for the sandbox training.

One state transportation professional who was interviewed for this project noted that, "In urban areas the highway patrol will be at the scene in a few minutes, but in rural areas of the state, the [State] DOT staff may have to start ICS." An Amtrak official noted that, "We always have unified command when the railway is involved" in an emergency.

State DOTs have used ICS in the field in a variety of events, and have faced the same challenges of integrating with other professions efficiently, although the degree of integration varies among states, and between urban and rural settings.

3. Does State DOT have a system in place to capture costs for time/equipment/personnel in emergency response?

All interviewees responded that the agency has an accounting system to track costs of an

emergency event. One noted that their system has worked well and described a robust cooperative relationship with FHWA's emergency repair program. Three noted that reimbursement is less difficult when photos are included that clearly document the damage and the work being performed to restore the road. Two described the challenges of debris removal cost management with the new MAP-21 rules that sometimes bring FEMA in as a funding agency.

4. Does State DOT have a mechanism to track personnel for safety in dynamic situations?

All interviewees stated that there was a system in place for safety oversight, and that it worked well in highway accidents and events with static environments. One mentioned a dynamic event in which ICS proved beneficial in knowing the location of all workers. Another mentioned the importance of ICS in ensuring that there was continuous oversight of all elements of safety, such as power and gas lines, off-highway traffic signal operations and local road closures, some of which are outside the scope of normal State DOT safety programs.

One interviewee mentioned the challenge of getting all State DOT personnel integrated into the ICS safety officer's oversight, which often focuses on fire personnel and their proper use of personal protective equipment. Another pointed out that State DOT personnel may not take the initiative in engaging with an existing ICS structure. He stated that State DOT field personnel may feel that they know their own work and do not want to be told what to do by another entity, so they may be reluctant to check-in. Emphasizing check-in as a safety element may help to resolve this problem.

5. Would the draft TRB ICS class be useful for your field personnel to prepare them to use ICS for NIMS compliance and safety?

All interviewees stated that the draft class would be useful for their staff members. Five stated that State DOT field level staff members understand and retain more from ICS training that is

transportation-specific, where the illustrations and examples closely match their personal work environments, and where interactive teaching methods are used. “For field staff, sitting in front of a computer [for IS-100, IS-200 and IS-700] does not result in learning that is retained.” Four expressed the need for the tailgate training approach. “New employee orientation” and “promotion-based academies” are being used for basic and advanced ICS training in many State DOTs, so refresher training is needed. After some discussion four interviewees suggested that a fifth scenario be added to the discussion training for when State DOT field personnel start ICS, as at the scene of an accident in a rural setting.

One of the interviewees suggested adding a reference to the “time to clearance” standard in the *Manual of Uniform Traffic Control Devices* (MUTCD), p. 729 to the ICS class. This helps to define whether the event will be short, medium or long, and might help the initial supervisor on site to decide whether to start ICS or not. He also noted that the traffic dispatch center staff should be trained in ICS, which should be included in the dispatch operations manuals, since coaching from the dispatcher might make ICS implementation early in the event more common. Some triggers for ICS implementation in addition to time to clearance might be the involvement of multiple agencies in managing the event, or locally-created time-to-clearance standards that exceed the MUTCD standards.

All of the interviewees commented on the importance of the personal and family preparedness information that is included in the course, but is generally omitted from standard ICS training. The emphasis on water and medication was endorsed by six of the interviewees. One stated that family and individual preparedness is crucial in having State DOT field-level staff remain at work or return expeditiously in a regional disaster, such as flooding, snow storms, and power outages. Another stated, “Our CEO has been emphasizing getting the family ready to keep

employees on the job.” Three interviewees said they would build a “lunch and learn” session around the family preparedness information. One interviewee said he would add these fliers to an existing employee readiness program that lacked family resources.

6. Would the draft TRB ICS Quick Start card sets be useful for State DOT field personnel at the scene of an event as a refresher for first actions?

All nine of the interviewees who saw the card sets were enthusiastic about their benefits to field crews. Six were very interested in having the MSWord version of the cards so that unique aspects of response in that state could be added. One stated, “State DOTs will benefit from taking a standardized set of guidance materials and being able to customize the details to match their individual circumstances, such as staffing and hazards.”

Four were interested in adding an Operations Chief card for use after the development of the Incident Action Plan. In three organizations this led to discussion about the purpose of the cards (just first 15 minutes or longer time), the tie between ICS and federal guidance like the *Federal Highway Emergency Response Guidebook*, and state rules on what constitutes a major emergency where ICS would be likely to be needed.

All nine interviewees agreed that ICS is a seldom-used skill for most State DOT field workers and supervisors, so simplified guidance for starting and using ICS is beneficial, including guidance on the five different aspects of ICS where State DOT personnel may work or lead. One interviewee noted that guidance developed for State DOT field workers can be easily customized to meet the needs of rail-based transportation agencies. Another stated that “Conductors already focus on passenger and crew safety in an emergency, while station and track staff could fill other ICS roles.”

One interviewee suggested also having the card sets in the TMC, perhaps as an electronic

prompt for the dispatcher. He suggested that some training on the interface between the field and the TMC in an ICS event would be beneficial. This led to a discussion of the possible development of an app for smart phones that some State DOT field personnel are assigned.

7. Would the draft TRB supervisor folder of ICS forms be useful at an emergency event when ICS is needed?

All nine of the interviewees who saw the supervisor's folder liked the concept of a central location where basic information about the event could be posted. They all approved of the low cost, the functionality of the zip lock top pockets for the forms, and the compact size that would easily fit behind the seat in a work truck. Having extra forms and instructions in each pocket was universally endorsed.

However, no one was convinced that State DOT field crews would use the ICS forms in all events. Three interviewees thought that if the State DOT started ICS in an isolated event they might use the organization chart and communications plan for a phone list, but they doubted whether the whole suite of forms would be used. One thought that the map portion might be used when State DOT field crews joined an event. There is an aversion to paperwork among field crews that was noted by all eleven of the interviewees. "We don't have time for a lot of paperwork in the field" was one response. However, all nine who had seen the supervisor's folder with the blister pack of supplies (Quick Start cards, pen, note pads ICS FOG) thought that it was a good investment and a useful tool overall. One suggested that it could be used for posting information that the field crews got from the IC or from the TMC, not just ICS forms.

As a result of these comments, the researchers have prepared the courses and Quick Start Cards in MSWord format for inclusion on a CD to facilitate customization, along with instructions for constructing the Supervisor Folder.

8. How could the course delivery model be improved?

One interviewee suggested making the tie to ICS more robust and covering more aspects of ICS instead of just safety, personnel accountability and reimbursement. However, he could not suggest any topics to eliminate to maintain the 1 hour time limit. He then suggested adding another module to the basic class that would cover the Incident Action Plan in more detail.

Ten of the interviewees liked the length and content of the course modules and were very interested in using the briefing training. Four of the interviewees said they would use the three briefing training topics (safety, communications and collaboration with other agencies) as models to develop some additional agency-specific brief training topics to enlarge the collection for local use.

One interviewee suggested that the course should be locally modified to include information on the state emergency plan. Seven said that a MSWord version that allowed for customization by each state and district could enhance the value of the course and make it more “real” to the field staff by referencing events they would remember and changing the photos to local events and personnel.

9. How could the card set be improved?

All nine of the interviewees who saw the card sets agreed that having a MSWord version would enhance their usefulness. Three suggested adding an Operations Chief card for use after the Incident Action Plan was developed, “or when work escalates”, even though that would be beyond the “first fifteen minutes” approach used in creating the cards. One suggested adding “establish staging” to the Logistics Chief’s card.

At three of the agencies there was discussion about the timing of notification. The cards suggest appointing a safety officer and then calling the TMC, but some states have different

notification protocols. Having a MSWord version of the cards would allow agencies to customize their card sets to match their local protocols.

One interviewee raised the issue of providing more guidance on notification, since not all areas of the state may have cell phone access to the TMC. It was suggested that listing cell phone, land mobile radio and any other methods might be useful. Again the solution might be the MSWord version that can be customized, since the communications resources differ among states and even regions of the same state.

10. How could the supervisor's folder be improved?

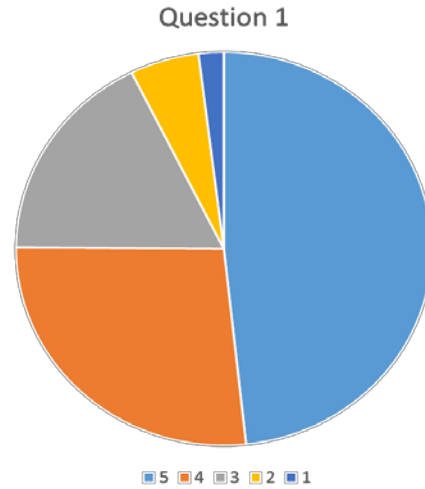
The nine interviewees who had the folders all liked them, and saw benefit in the tool. Two suggested adding agency-specific forms in the pockets. One said it could be used as an information board at non-ICS events.

Student Surveys

Courses were taught in nine districts of a large State DOT, representing urban and rural population densities, multiple types of hazards, and diverse demographic groups of employees. The questionnaire was structured with three questions that were answered with a numerical score and four that required verbal responses. Classes ranged in size from 12 to 60 people, with an average of 25. Out of the 278 students who signed in on the registration forms, 205 (75%) answered at least one question on the questionnaire. Their responses are presented below.

1. The ICS seminar was useful for me in my State DOT role: [205 responses]

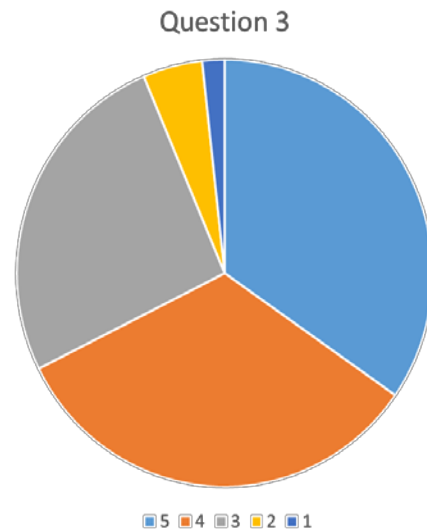
Rating	Number	%
5	99	48
4	55	27
3	36	18
2	11	25
1	4*	2



* Note that on two of the surveys rating the class as 1 the comments on question 2 were positive (best ICS class I have had, very interesting, importance of safety, use of forms) which suggests that they may have misunderstood the rating scale.

3. The sandbox exercise was useful for me in my State DOT role: [183 responses]

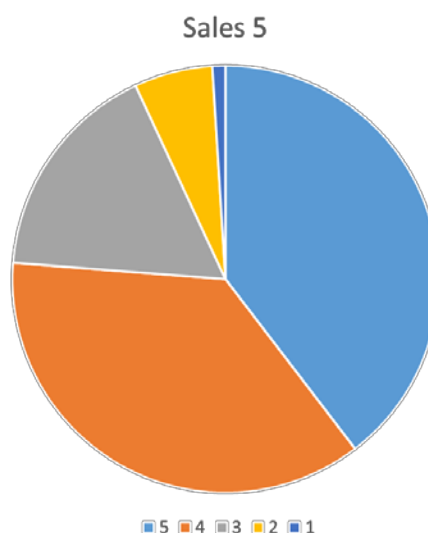
Rating	Number	%
5	60	33
4	57	31
3	45	25
2	8	8
1	3	3



The lower response rate to this question may be because the term “sandbox” was not explained in the class.

5. Today’s ICS seminar and exercise provided adequate information for me to work effectively in an ICS event: [197 responses]

Rating	Number	%
5	79	40
4	72	37
3	33	17
2	11	6
1	3	1



The numerical responses to the class suggest that most students found the class useful (75% and 64%), and relevant to their work (77%).

Responses to the other 4 survey items allowed the students to create their own verbal responses without prompts. The result was a wide range of statements regarding what was most important to them in the two segments. There were a few responses provided by 10 or more people, but most of the responses were mentioned less than ten times, and many of those were suggested by only one respondent.

2. The most useful thing I learned at today’s ICS seminar was: (The student had to write a phrase without prompts) [173 responses].

There were 30 different responses. Answers below represent those stated by 10 or more respondents. These responses were generally spread evenly over the nine districts.

Response	Numbe
ICS roles	28
ICS structure	26
ICS processes	18
Communication	15
ICS	11
Documentation	10
Kits	10
Safety	10

4. The most useful information in the sandbox exercise was: (The student had to write a phrase without prompts) [121 responses].

There were 34 different responses. Answers below represent those stated by 10 or more respondents. These responses were generally spread evenly over the nine districts.

Response	Numb
Professional kits	17
Delegation of responsibility within	14
Exercise	11

The last section of the survey asked students for ideas or additional items to be added to the training, or to be eliminated from the training.

Added for future training: (The student had to write a phrase without prompts) [92 responses].

There were 36 different suggestions for items to be added to future ICS training. Answers below represent those stated by 10 or more respondents. These responses were generally spread evenly over the nine districts.

Response	Numbe
Interagency interactions	19
More exercises	16

At the first class several students suggested to the instructors that adding law enforcement representatives to the training would be helpful. The State DOT invited highway patrol district representatives to attend the rest of the district-level training sessions, but no one ever came.

Including highway patrol representatives might be a useful addition to the learning environment. In districts where wildland fire events are common it might also be beneficial to add federal and state fire service representatives.

Eliminated from future training: (The student had to write a phrase without prompts) [21 responses].

There were five different suggestions for items to be eliminated from future ICS training. The answer below represents the one stated by 10 or more respondents.

Response	Numbe
Less MS PowerPoint	16

It is interesting to note that this comment clustered in 2 districts out of 9, with 6 and 4 responses respectively, and the 3 districts with the largest classes did not have any suggestions for items to be eliminated.

Student surveys were collected at the end of each of the nine sessions. The training staff reviewed them immediately and used the survey responses as well as informal class feedback to alter and augment future classes, including slight alterations in the wording of the slides, and the addition of information from the MUTCD.

ANALYSIS

The Findings demonstrate that the “Incident Command System (ICS) for Field Level Transportation Supervisors and Staff” course is likely to achieve the goals of providing ICS training to field level staff in a meaningful way that relates to both transportation activities and their field work environment. The course is brief enough to keep the attention of most field level personnel – only 16 out of 205 suggested shortening the course of instruction.

State DOT leaders and Amtrak management saw value in the tools created to assist with the field level implementation of ICS as a seldom used skill. They endorsed the use of the sandbox method of engendering critical thinking and ICS application to the scenarios provided, and all agreed that additional scenarios from local events could be developed by agency staff using these as a model.

Providing both a script and a voiceover DVD as methods for ICS class presentation should enable every district to offer the classroom modules, even in districts where there is no one who is willing to be a “public speaker.” A supervisor or lead worker could use the script or questions provided to lead the more informal tailgate briefings or discussions to keep employees thinking about ICS principles and their applications to transportation situations. Understanding the importance of reimbursement should make doing the paperwork and providing photographs less onerous and more obviously productive for the agency.

In the months before the meeting Amtrak had suffered a fatal derailment in Philadelphia that created an ICS environment with multiple jurisdictions and multiple professions working together to save lives and property, care for survivors and reassure the public. Because of the loss of life, injuries and community disruption, the documentation of the work done is an essential element of

the ICS implementation. With this real event fresh in their minds the Amtrak leaders agreed that this ICS training would also benefit rail-based personnel. By customizing the cards to a rail rather than highway environment they would see the benefit to station and track workers who go to the scene of a rail event, while the conductors are already focused on passenger and crew safety, and might benefit from refresher training experiences.

Conclusion

For most State DOT field level staff, ICS is a seldom-used skill. Holding short classroom format refresher trainings and tailgate format briefings and discussions can keep the principles of ICS in the skill set of field level transportation personnel, not only on the highway but also on rail-based transportation, and perhaps even in mass transit. The course is available as a suite of downloadable elements at the TRB website at no cost, enabling agencies with small budgets to offer the training using their own staff to cut costs. Since ICS is required at events from traffic accidents through catastrophes, this training can be applied by field level staff at a TIM event, an accident scene, a hazardous materials event or a major regional natural hazard-caused event.

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CHAPTER 3: LESSON PLANS

Modules for morning only (4 hours) or day-long (7 hours) workshop

Lesson 1: Welcome, Safety Message and Introductions: Instructors and Participants

Course Goal	To provide participants with the information on ICS that they need to safely function as Transportation workers in a multi-disciplinary event response and recovery, to support reimbursement of agency costs, and to be prepared at work and at home for unexpected response.
Objectives	At the conclusion of this module, learners will be able to: <ul style="list-style-type: none"> • Understand the purpose of the workshop • Know who prepared the workshop materials • Know the instructor(s) of the workshop • Know who the other learners are • Understand workshop housekeeping and procedures
Scope	The scope of this module will include: <ul style="list-style-type: none"> • Introduction of instructors and learners • Workshop housekeeping
Estimated Time	15 minutes
Slides	1
Training Methods	The instructor will begin this module by greeting learners and introducing instructor(s) and any other member of the training team or workshop sponsor in attendance. Workshop learners will introduce themselves, saying their name and the name and location of their transit system. Workshop housekeeping (location of exits, bathrooms, use of cell phones and breaks) will be covered.
Resources Required	<ul style="list-style-type: none"> ▪ Instructor manual ▪ Participant manual ▪ MS PowerPoint slides
Equipment	Computer with MS PowerPoint software, projector, screen, connector cords
Notes	Allow 10 minutes for student introductions in average class

Lesson 2: Review of Student Manual Content

Course Goal	To provide participants with the information on ICS that they need to safely function as Transportation workers in a multi-disciplinary event response and recovery, to support reimbursement of agency costs, and to be prepared at work and at home for unexpected response.
Objectives	At the conclusion of this module, learners will be able to: <ul style="list-style-type: none"> • Know the contents of the workshop materials
Scope	The scope of this module will include: <ul style="list-style-type: none"> • Introduction of student manual materials • Introduction of glossary and acronym list as a resource during training
Estimated Time	15 minutes
Slides	1
Training Methods	The instructor will begin this module by introducing the student manual. The instructor will note the location of the MS PowerPoint show and encourage students to write in their manuals. He will next highlight the colored divider sheets and the materials behind each. Point out that ICS uses many acronyms and terms that may not be familiar. Emphasize that students should raise their hands and ask for clarification if an instructor uses terminology that is unfamiliar or uses an acronym that he has not first defined/ stated as individual words.
Resources Required	<ul style="list-style-type: none"> ▪ Instructor manual ▪ Participant manual ▪ MS PowerPoint slides
Equipment	Computer with MS PowerPoint software, projector and screen
Notes	Just review the location of the personal preparedness and home preparedness fliers now, and note that you will review them in more detail later.

Lesson 3: Module 1a: ICS and Transportation's Role in Emergency Management

Course Goal	To provide participants with the information on ICS that they need to safely function as Transportation workers in a multi-disciplinary event response and recovery, to support reimbursement of agency costs, and to be prepared at work and at home for unexpected response.
Objectives	At the conclusion of this module, learners will be able to: <ul style="list-style-type: none"> • Understand transportation's role in an event • Understand the role of transportation workers in ICS • Understand the importance of safety, and how check-in, check-out and demobilization, and personnel accountability create a safe environment • Understand how field forces assist with agency reimbursement • Understand the importance of personal and home preparedness
Scope	The scope of this module will include: <ul style="list-style-type: none"> • The role of transportation in emergencies • The structure of ICS • The importance of safety, personnel accountability and reimbursement to transportation agencies, and how field staff fit into these activities • The importance of personal and family preparedness • Summary, questions and break.
Estimated Time	60 minutes
Slides	2-19
Training Methods	The instructor will begin this module by emphasizing the day's goals. MS PowerPoint-based lecture is the main method of instruction here. Use the script or develop the lecture from the learning points in the script.
Resources Required	<ul style="list-style-type: none"> ▪ Instructor manual with script ▪ Participant manual ▪ MS PowerPoint slides
Equipment	Computer with MS PowerPoint software, projector and screen
Notes	<p>The importance of transportation to all emergency response is the basis for this exercise, how these participants are connected to ICS.</p> <p>The definitions of emergency response providers establish the specific role of transportation workers in ICS field activities; gives them information to use with other field responders to establish their right to a place in the ICS.</p> <p>The ICS and NIMS information is intended as a quick review for people who have taken the course a while ago.</p> <p>Photos in the MS PowerPoint show can be changed to reflect the location where the training is being offered.</p> <p>The check-in, check-out and demobilization steps should be described and then questions should be solicited from the participants.</p> <p>The importance of personnel accountability should be described and then questions should be solicited from participants.</p> <p>The importance of documentation for reimbursement should be described and then questions should be solicited from the participants.</p> <p>The importance of having a personal preparedness kit and professional drive-away kit should be described, emphasizing the importance of water and medications, and then questions should be solicited from the participants.</p>

	<p>The importance of family preparedness should be described, emphasizing transportation workers' role as disaster service workers (or local agency requirements for response), vital records and children's/elderly relative issues, and then questions should be solicited from participants.</p> <p>Summarize the module.</p> <p>Introduce the Break.</p>
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Lesson 4: Module 1b: ICS in the Field: Five Roles of Transportation (ICS Quick Start Cards and Supervisor's Folder introduction)

Course Goal	To provide participants with the information on ICS that they need to safely function as Transportation workers in a multi-disciplinary event response and recovery, to support reimbursement of agency costs, and to be prepared at work and at home for unexpected response.
Objectives	At the conclusion of this module, learners will be able to: <ul style="list-style-type: none"> • Engage in the five ICS roles possible for transportation personnel • Take the role of IC in an event that starts in front of them • Understand the benefits of starting ICS quickly
Scope	The scope of this module will include: <ul style="list-style-type: none"> • Introduction of instructors and learners • Workshop housekeeping • Workshop materials content
Estimated Time	45 minutes
Slides	19-29
Training Methods	The instructor will begin this module by emphasizing the five roles that transportation personnel may take. MS PowerPoint-based lecture is blended with the use of the Quick Start cards on the ring and student participation in the descriptions. Use the script or develop the lecture from the learning points in the script for the slide-based information.
Resources Required	<ul style="list-style-type: none"> • Instructor manual • Participant manual • MS PowerPoint slides • Quick Start Cards – enough for half the students to have a card from the set • FOG • Supervisor's Folder
Equipment	Computer with MS PowerPoint software, projector and screen
Notes	<p>This module may use just the PPT and script, but it is more effective if the instructors integrate the Quick Start Cards into the module. For example, at the end of the script for slide 21 have a student read the first section of bullets on the beige card, Joining an Existing Incident Command. Then discuss briefly, get student buy-in for the activities, then go down each section of the card by having students read the material and pause for discussion are each section.</p> <p>When done go to slide 22 and use the script, then discuss the fact that there is information in the FOG ICS-420 for technical specialists starting on page 9-9 and hand the FOG to a student to read. Point out that the Quick Start Cards are provided for the activities that have several pages in the FOG to make the immediate response efficient, but that the FOG is the final guide in all ICS activities. The Quick Start Cards were developed by extracting the activities needed in the first 15 minutes of an event from the FOG. After that the FOG is provided to guide the longer term actions.</p> <p>Go back to slide 23 and deliver the information. After the slide open the FOG to page 6-3 and review the principles of unified command, then point out that more</p>

	<p>details are provided in the FOG, and a transportation representative to a Unified Command should have the FOG with him to guide his actions.</p> <p>Then go back to slide 24 and deliver the information. After the slide go to the gray card Transfer of Command. Have a few students take turns reading the directions on the card. The instructor should emphasize the importance of the overlap between incoming and outgoing staff for efficiency.</p> <p>Then go to slide 25 and 26, and deliver the information. Then have students take turns reading the items on the white card, Incident Commander. As other cards are introduced, have the Incident Commander (the person holding each card set) give the blue card to someone, who then reads the instructions in the first few bullets. Go to others with blue cards and have them take turns reading bullets.</p> <p>Then go back to each ICs and have them give the Orange card and ICS folder to another student and tell him he is the Planning/Intelligence Section Chief. Then have the orange card holders take turns reading the descriptions of their roles. Then have the IC give out the green cards and have them take turns reading descriptions of their jobs.</p> <p>At this point go back to the slides and deliver the information for slides 26 and 27 to reinforce the activity just completed. As the ICS forms are mentioned, have the Planning/Intelligence Section chiefs (orange card holders) point out the forms in the Supervisor's Folder to the students around them so they can see the different types of information that is documented on each. At the end of slide 27 go back to the IC with the cards. Have them take turns reading the backs of the white cards.</p> <p>Then go back to slide 28 and use the scripted guidance to describe the Supervisor's Board. Then have the ICs take turns reading the yellow cards, Incident Action Plan. Again have the P/I chiefs point out the forms in the cardboard display. Discuss that the IC has all the jobs until he gives them away. Note that in the first few minutes of an event the IC is probably also the Operations Section Chief unless he gives that job away to someone else. After the completion of the IAP an Operations Chief will be appointed.</p> <p>Then go back to slide 29 and use the scripted guidance to show the benefits of having transportation personnel start ICS while other emergency response provides an enroute.</p> <p>Read the Summary on slide 30. Go to slide 31 and take questions.</p>
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Lesson 5: Working the Accident: You Start/You Join

Course Goal	To provide participants with the information on ICS that they need to safely function as Transportation workers in a multi-disciplinary event response and recovery, to support reimbursement of agency costs, and to be prepared at work and at home for unexpected response.
Objectives	At the conclusion of this module, learners will be able to: <ul style="list-style-type: none"> • Start ICS at an event that has just occurred • Join an existing ICS event through proper check-in procedures • Use the ICS functions to manage an event
Scope	The scope of this module will include: <ul style="list-style-type: none"> • Practice starting an ICS or joining an existing ICS (instructor will select one) • Practice creating the activities at the scene of an event • Moving small vehicles through an environment to simulate the ICS response elements
Estimated Time	45 minutes
Slides	None
Training Methods	The instructor will begin this module by emphasizing the day’s goals. Sandbox Exercise simulation using small cars and building footprints will help students practice the principles and role of ICS. See above for Sandbox Exercise guidance.
Resources Required	<ul style="list-style-type: none"> • One of the Discussion-Based Training scenarios to be selected by the instructor • Instructor’s notes to guide the discussion • Quick Start Cards, FOG and Supervisor’s Folder for students
Equipment	Table with engineer’s tape to create the appropriate road, building footprints for the appropriate town (based on the scenario selected), collection of 1:64 scale or similar scale cars and trucks, response vehicles, cones and signs for students to use in the sandbox.
Notes	Refer to the Sandbox Exercise guidance. Use the Quick Start Cards and FOG to guide the play and document it using the ICS forms on the cardboard display. Use the instructor guidance to manage the discussion and play.

Lesson 6: Morning Wrap-Up

Course Goal	To provide participants with the information on ICS that they need to safely function as Transportation workers in a multi-disciplinary event response and recovery, to support reimbursement of agency costs, and to be prepared at work and at home for unexpected response.
Objectives	At the conclusion of this module, learners will be able to: <ul style="list-style-type: none"> • Understand the morning's lessons • Implement appropriate aspects of ICS
Scope	The scope of this module will include: <ul style="list-style-type: none"> • Questions regarding morning instruction and exercise • Discussion of issues raised by the participants • Summary of the morning's instruction
Estimated Time	30 minutes (Questions/Discussion) and 15 minutes (Wrap-up and evaluation)
Slides	30 & 31
Training Methods	The instructor will begin this module by emphasizing the day's goals. Interactive discussion and PPT-based summary lecture will be used.
Resources Required	<ul style="list-style-type: none"> ▪ Instructor manual ▪ Participant manual ▪ MSPowerPoint slides
Equipment	Computer with MSPowerPoint software, projector, screen, connector cords
Notes	Encourage open discussion of ICS use by transportation personnel, seek examples from the class of where it might be useful, and challenges participants see in implementing ICS in the field. This set of six lessons represents a complete training session. Afternoon sessions can augment learning.

Lesson 7: 3 hours: Afternoon Session or Series of Free Standing Brief Training Events

Each of these lessons can be a free-standing review or part of a day-long training event.

Briefing Training Topics: Safety, Communication or Collaboration with Other Professions

Course Goal	To provide participants with the information on ICS that they need to safely function as Transportation workers in a multi-disciplinary event response and recovery, to support reimbursement of agency costs, and to be prepared at work and at home for unexpected response.
Objectives	At the conclusion of this module, learners will be able to: <ul style="list-style-type: none"> • Understand one unique aspect of ICS implementation • Apply the aspect of ICS in the field
Scope	The scope of this module will include: <ul style="list-style-type: none"> • The selected aspect of ICS implementation • Discussion of issues raised by the participants • Summary of instruction
Estimated Time	15 minutes each topic
Slides	Provided for each topic
Training Methods	The instructor will begin this module by emphasizing the day's goals. PPT-based lecture will be used.
Resources Required	<ul style="list-style-type: none"> ▪ Briefing Training Instructor manual ▪ Briefing Training Participant manual ▪ Briefing Training MSPowerPoint slides
Equipment	Computer with MSPowerPoint software, projector, screen, connector cords
Notes	Note that this element is one part of ICS implementation in the field. Encourage discussion of the field implementation of the topic.

Lesson 8: Discussion-Based Training Scenarios: Join ICS, Technical Specialist, Unified Command, Assume Command

Course Goal	To provide participants with the information on ICS that they need to safely function as Transportation workers in a multi-disciplinary event response and recovery, to support reimbursement of agency costs, and to be prepared at work and at home for unexpected response.
Objectives	At the conclusion of this module, learners will be able to: <ul style="list-style-type: none"> • Implement the aspect of ICS that they have discussed • Interact effectively with other emergency response providers • Use the ICS functions to manage an event
Scope	The scope of this module will include: <ul style="list-style-type: none"> • Practice starting an ICS implementation using a scenario • Practice creating the activities at the scene of an event using a scenario • Practice moving small vehicles through an environment to simulate the ICS response elements
Estimated Time	30 minutes each
Slides	None
Training Methods	The instructor will begin this module by emphasizing the day’s goals. Sandbox Exercise simulation using small cars and building footprints will help students practice the principles and role of ICS. See above for Sandbox Exercise guidance.
Resources Required	<ul style="list-style-type: none"> • One or several of the Discussion-Based Training scenarios to be selected by the instructor • Discussion-Based Training Instructor’s notes to guide the discussion • Discussion-Based Training Student Handouts with discussion-starter questions • Quick Start Cards, FOG and Supervisor’s Folder sets for students’ use in managing the selected scenario
Equipment	Table with engineer’s tape to create the appropriate road, building footprints for the appropriate town (based on the scenario selected), collection of 1:64 scale or similar scale cars and trucks, response vehicles, cones and signs for students to use in the sandbox.
Notes	Refer to the Sandbox Exercise guidance. Use the Quick Start Cards and FOG to guide the play and document it using the ICS forms on the cardboard display. Use the student questions and instructor guidance to manage the discussion and play.

Full Day : Culminating Lesson

Course Goal	To provide participants with the information on ICS that they need to safely function as Transportation workers in a multi-disciplinary event response and recovery, to support reimbursement of agency costs, and to be prepared at work and at home for unexpected response.
Objectives	At the conclusion of this module, learners will be able to: <ul style="list-style-type: none"> • Understand the five possible uses of ICS by transportation personnel • Understand the value of ICS for safety, communication and collaboration with other agencies • Implement appropriate aspects of ICS in the field
Scope	The scope of this module will include: <ul style="list-style-type: none"> • Questions regarding instruction and exercises • Discussion of issues raised by the participants • Summary of the day’s instruction
Estimated Time	15 minutes (Questions/Discussion) and 15 minutes (Wrap-up and evaluation)
Slides	None
Training Methods	The instructor will begin this module by emphasizing the day’s goals. Interactive discussion and instructor verbal summary.
Resources Required	<ul style="list-style-type: none"> ▪ Instructor manuals: Briefing Training and Discussion-Based Training ▪ Participant manuals: Briefing Training and Discussion-Based Training ▪ MSPowerPoint slides: Briefing Training
Equipment	Computer with MSPowerPoint software, projector, screen, connector cords
Notes	Encourage open discussion of ICS use by transportation personnel, seek examples from the class of where it might be useful, and challenges participants see in implementing ICS in the field. Use these interactive topics and kinetic scenarios to reinforce the morning’s learning, either the same day or as a refresher.

CHAPTER 4: MODULE 1 INSTRUCTOR MSPOWERPOINT SLIDES AND SCRIPT

NCHRP 20-59 (30)
Incident Command System (ICS)
for Field Level Transportation
Supervisors and Personnel

Sponsored by
State Department of Transportation

Instructors
John Smith, M.P.A., CEM, MEP (example)
Sue Williams, M.A., ACE (example)

Welcome to the “Incident Command System for Field-Level Transportation Supervisors and Staff” course. I am [name and affiliation]. My co-instructor is [name and affiliation]. Today’s class is supported by the [sponsoring agency].

Be sure to sign in to get credit for the class in your training record.

Let’s take a few minutes to look at the contents of your student manual. The first section is your copy of the MSPowerPoint slides from today. This book is your personal reference, so write notes in it throughout the class as ideas occur to you about the application of ICS in your work environment.

Starting at page 105 you will find guidance on developing an appropriate emergency kit for your daily work vehicle, emphasizing water and personal medications. The second section is a guide to developing a professional drive-away kit to support you during an extended emergency in the field.

Starting at page 110 is a collection of fliers that provide guidance on your role as a disaster service worker, and steps you can take to prepare your family to be safe in an emergency when you are not at home. We will discuss these later.

Starting at page 130 is a glossary and acronym list, information about today’s sponsoring agency, and the brief biographies of the instructors.

ICS and Transportation's Role In Emergency Management



• Today's learning goals:

- Review the role of transportation in emergencies
- Review ICS roles and terminology
- Review the use of ICS for safety, accountability and reimbursement
- Consider the application of ICS to transportation situations



9 1 15

ICS for Transportation Field Personnel

2

Thank you for coming to the "ICS for Transportation" class today. In the first segment we will describe the role of transportation in emergencies. Next we will conduct a brief review of the history, principles and terminology used in the Incident Command System. Then we will describe the use of the Incident Command System by State Transportation Agency personnel to create a safe, integrated and efficient emergency response, regardless of the triggering event. Finally some practical application of ICS principles to State Transportation Agency work will be described, and some innovative tools which you have been given today will be reviewed.

It is expected that all students have completed the Incident Command System 100 course, and the National Incident Management System 700 course. Therefore the general ICS review will be brief. Remember that there is a glossary and acronym list available at the back of the student manual for your use in recalling the terminology that we will be using. Raise you hand at any time if the instructor uses terminology that is unclear to you.

ICS for Transportation

- **Key to all emergency response**
 - Pre-event evacuation
 - Response
 - Post-event recovery
- **Coordination with other emergency responders**
 - No roads, no response
 - Transportation owns the road, so responsible for the safety of the road to serve the public
 - Safety Inspection- bridges, tunnels and road surface
 - Debris removal for access
 - Expedient repairs



9 1 15

ICS for Transportation Field Personnel

3

Transportation is the key to all aspects of emergency response, starting with pre-event activities, during the response and to facilitate recovery. Without roads, no response is possible. While law enforcement and fire personnel may be the personnel who delivery disaster response services, they cannot reach the victims without the use of a safe and debris-free road lane.

Before an event has occurred transportation is key to the development and implementation of evacuation activities, especially those using the roads to move people, using cars, busses, ambulances and paratransit. The state transportation agency also collaborates with other modes to create an evacuation system, such as rail and air assets.


During a response open roads are essential for moving public safety personnel to the scene of an event. Since the State Department of Transportation owns the roads they are responsible for the safety of the road to serve its users. Bridge, tunnel and road surface inspection and debris removal – and sometimes even expedient repairs- are required before public safety personnel can use the roads into a disaster area. This lesson was learned in the 1989 Loma Prieta, California Earthquake when a policeman died when his car went off a damaged bridge on Route 1 in Monterey County that had not been inspected yet.

Open roads are essential for disaster recovery. Supplies and personnel needed for community restoration have to travel by road. Repair and replacement equipment may need overweight permits and routing. Restoration of the supply chain demands a functioning state highway system, including its arterial connectors.

The state department of transportation's role is clear: as Caltrans says, "We're here to get you there," and that is never more important than in an emergency!

ICS Personnel Are “Emergency Response Providers”

- **Public Safety – Police, Fire, EMS**
 - Assist human victims
 - HR term related to benefits
- **“Emergency Response Provider” includes State DOT personnel**
 - Homeland Security Act 2002
 - Post-Katrina Emergency Management Reform Act 2006
- **“Critical transportation” = Core Capability under National Preparedness Goal**



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ICS for Transportation Field Personnel
4

The response to a disaster event involves collaboration among all emergency response providers. Each agency has its purpose in protecting the community and bringing it back to a functional state. Police, fire and emergency medical services personnel interact directly with members of the public at a time of stress, while transportation responders provide functioning roads to make that response possible.

Several terms are used for the personnel who work to resolve a disaster, and it is important to understand the differences among the terms. “Public safety personnel” is a human resources management term that defines a specific level of benefits for people who are frequently in harm’s way, especially pension benefits. “Emergency response provider” is used in Homeland Security Act 2002 and Post-Katrina Emergency Management Reform Act of 2006 to refer “to those who are first to respond to disasters or emergencies.” (Bricker et al., 2013) For example, in the immediate response to the World Trade Center on 9/11 police, fire and EMS personnel were obvious with their uniforms, but did you know that there were more transportation personnel at the World Trade Center site than any other profession? The engineers who shored up the plaza to hold the heavy equipment that made rescue possible, the welders who cut the girders and the heavy equipment operators were all from transit and transportation agencies. So clearly transportation personnel are “emergency response providers.” The role of Transportation is to provide the means for all emergency responders to access those in need and assist them in resolving their circumstances. You can argue that Transportation therefore is actually THE FIRST RESPONDER, because it makes all other response possible.

Incident Command System (ICS)

- ✉ 1970s California FIRESCOPE
- ✉ 1980 National Fire Academy
- ✉ 2004 NIMS
 - ✉ Homeland Security Presidential Directive-5 (HSPD-5), 2003



Oakland Hills Firestorm, 1991



Pentagon Attacked 9/11/2001

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ICS for Transportation Field Personnel

5

The Incident Command System was developed by the California fire service as a result of a series of wildland fires in Southern California in the 1970s that required a multijurisdictional response. This led to the creation of the FIRESCOPE organization that oversees the development of ICS today. In 1980 ICS was adopted by the National Fire Academy as a best practice for managing multi-agency, multi-jurisdiction fire and emergency events. ICS is now used by organizations at all levels of government and multiple professions, from small volunteer fire departments to the US Coast Guard, and it is mandated for the management of all hazardous materials accidents and incidents by the US Environmental Protection Agency (US EPA).

In 2001 the United States was attacked by terrorists who used airplanes as guided missiles, crashing into the World Trade Center in New York and the Pentagon near Washington, D.C. The Arlington, Virginia Fire Department used ICS to organize the response to the Pentagon, which is widely considered as a model disaster response, integrating local, state and federal assets for the rapid evacuation and care of the victims and mitigation of damage to the building. In Homeland Security Presidential Directive-5 in 2003 President George W. Bush ordered the creation of a National Incident Management System, "institutionalizing the use of ICS across the entire response system." The use of ICS is mandated for all agencies receiving federal disaster preparedness grants. This includes most State Transportation Agencies.

National Incident Management System (NIMS) Incorporates...

Incident Command System (ICS)

Modular, flexible, span of control, unity of command

Common Terminology

Management by Objective

Unified Command

Multi-agency coordination system (MACS)

Mutual Aid Agreements



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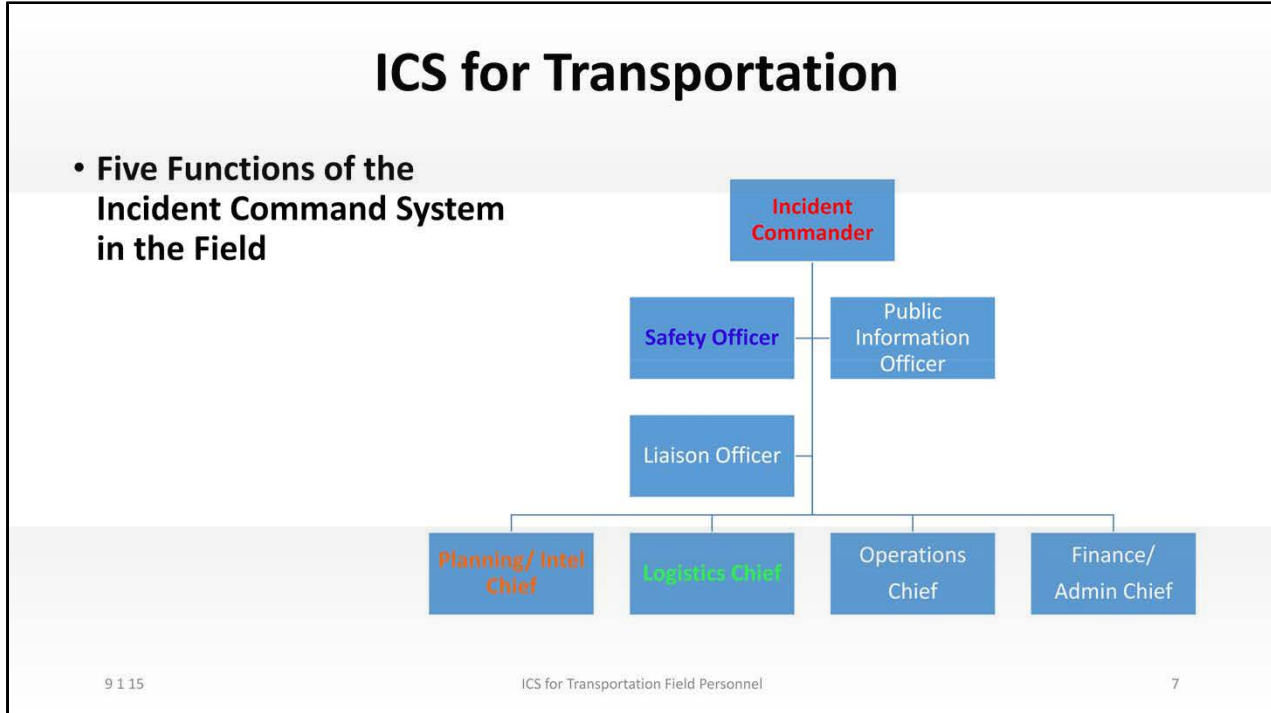
ICS for Transportation Field Personnel

6

NIMS is based on three basic elements: ICS, MACS and Mutual Aid.

ICS uses a modular approach. As you will see in the next slide, there are five basic functions and three Command Staff functions, but one person can handle multiple tasks, or many people can handle one task, depending on the size and complexity of the event. A supervisor should have no fewer than 3 subordinates and no more than 7 to ensure manageable span of control. Units, groups and branches can be created or collapsed to maintain the desired span of control. Unity of command means that every person has only one supervisor. Common terminology ensures that appropriate resources are provided and the right person is contacted. The Incident Commander sets the objectives for each Incident Action Period – management by objective. Using Unified Command the leaders of various agencies with equal responsibility for the resolution of an event can work together to create a common Incident Action Plan. Second, response is based on **multi-agency coordination**, where first responder agencies with overlapping jurisdictions collaborate to develop resource and information sharing systems to support field operations and prioritize incidents.

Third, response is supported by **Mutual Aid** agreements through which different professions provide immediate assistance to jurisdictions whose resources have been overwhelmed by the emergency. These include not only fire and law enforcement but also engineering and heavy equipment. The Emergency Management Assistance Compact has been signed by all 50 states, agreeing to provide assistance across state boundaries when requested.



There are five functions in the Incident Command System: Command, Operations, Planning/Intelligence, Logistics and Finance/Administration.

The Incident Commander (IC) is in overall charge of the field level event, sets the goals and priorities for the Incident Action Plan (IAP), sets the length of the Incident Action Period, and appoints people to fill any other field level ICS position that is required to meet the needs of the event. Not all positions have to be filled for every event, but the IC keeps all positions for which no one else is appointed.

The command staff supports the IC in three specific ways. The Public Information Officer (PIO) handles all media releases with the approval of the IC. Only the PIO speaks to the media and the public. The Safety Officer ensures that everyone operates safely at all times, using the right equipment. The Liaison Officer manages representatives for other organizations that assist in the response, such as utility representatives or American Red Cross representatives.

The General Staff is made up of the leaders of the four other functions. The Operations Section Chief is in overall charge of the tactical response, based on the goals set by the IC. The Planning/Intelligence Section Chief manages check-in, accountability for personnel, situation status, creates reports and organizes demobilization. The Logistics Section Chief provides the supplies and services needed to support Operations. The Finance/Administration Section tracks time, costs, and receipt of purchases to support Operations.

ICS for Transportation

- ICS is flexible and scalable
 - Use what you need, staff to meet span of control requirements
- ICS can be used for emergencies, disasters and catastrophes
 - Spilled potatoes
 - Hurricane Sandy
- ICS can be used for planned events
 - Parades
 - Sporting events
 - Planned maintenance



9 1 15

ICS for Transportation Field Personnel

8

The Incident Command System can support a variety of transportation activities, not only catastrophic events. ICS allows the Incident Commander to activate the elements of ICS that will best support the resolution of the problem in the community, and to activate only the number of people needed to manage the event to resolution.

ICS can be used for emergencies like wildland fires, but it can also be used for smaller problems like roadway hazards. In Tennessee a truckload of potatoes was spilled on the roadway. Rather than wait for a team of convicts to be brought to the scene to clear the hazard by hand, the Department of Transportation quickly put ICS in place, set the objective of opening the road within 30 minutes, and used a grader to push the potatoes into a ditch where they could be retrieved later without tying up traffic. This same ICS system allowed the New Jersey State Patrol and New Jersey DOT to quickly create contraflow on the Atlantic City Expressway to evacuate seashore residents ahead of Hurricane Sandy.

ICS can be used for parades, sporting events and other planned activities that will negatively impact traffic flow. Using ICS for planned events helps to familiarize transportation personnel with many aspects of ICS, such as using the terminology, and seeing how the functions collaborate.

Practical Application of ICS in Transportation



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ICS for Transportation Field Personnel

9

Sometimes State Transportation Agencies have planned events that are run using ICS, where the Incident Commander is a State Transportation Agency senior staff member, and all ICS positions are filled by State Transportation Agency staff. For example, SWARM 1&2 were scheduled maintenance projects in California Department of Transportation (Caltrans) District 7. Over 300 Caltrans personnel spent six hours on November 4, 2012 from 6 am through noon and again in February 2013 from 6 am through noon completing needed maintenance and repairs on closed portions of 101 and I-110 in Los Angeles. Caltrans was the Incident Commander, organizing its work, coordinating with the California Highway Patrol to close sections of the freeways, and with local police departments to close the on ramps from city streets and manage traffic impacts on city streets.

NIMS/ICS: Perform Reliably and Effectively

- **Goal of NIMS/ICS: Reliable and effective response to an event, emphasizing safety of DOT staff**
- **Achieved through**
 - **SAFETY**
 - Check-in
 - Check-out
 - Demobilization
 - **Personnel Accountability**
 - **Reimbursement**



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ICS for Transportation Field Personnel

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Emergency response can be organized in many ways, but the Incident Command System is designed specifically to ensure that all personnel are safe, that there is continuous accountability for personnel in the field, and that the organization gets the maximum reimbursement for its disaster-related costs.



The Safety Officer and the Planning/Intelligence Section Chief ensure the overall safety of the personnel at the event. The Safety Officer is concerned with the proper use of equipment and the use of appropriate personal protective equipment by responders.

The Planning/Intelligence Section Chief maintains information on the location of every person at the event for personnel accountability. He accomplishes this through the check-in/check-out function, and through demobilization at the end of an event.

All the sections cooperate with the Finance/Administration Section Chief to ensure that supplies are ordered properly, expenses are accounted for and receipts are safeguarded. They also collaborate to document the work of the response to ensure that expenses are tied to appropriate damage, rescues and other field work.

ICS for Transportation

- **Goals**
 - **Safety**
 - **Check-in**

Examples of "T" Cards

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ICS for Transportation Field Personnel
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ICS has three key purposes: safety, personnel accountability and cost reimbursement.

Safety begins with the Check-in process. When a person is assigned to an event he begins by checking in with the Planning/Intelligence (P/I) Section Chief at the Command Post. The P/I Chief creates a "T" card for each person or work unit with their personal information, duty assignment and communication contact information. It is through check-in that responders get counted for food, sleeping space and other personal support at the incident. Most important, it is through Check-in that the Incident Commander knows where his subordinates are at all times to ensure that they receive all safety messages and information about an evolving situation.

After checking in with the P/I Chief at the Incident Command Post the person may be assigned to a division or group, and he will check-in again with that supervisor and join the field activity.

Sometimes after check-in a person or work unit will be assigned to staging. Staging is a location where people and equipment wait for an assignment. The person signs in with the staging manager, and waits in the staging area until he is assigned to a field group or division, often at the next shift change. Sometimes the person may be assigned to a base or camp to rest or eat while awaiting an assignment.

Once the person is assigned to a field task he checks out with the staging manager, or base or camp manager, and checks in with the field supervisor. In this way there is continuous tracking of each person working at the event. This ensures that he is counted for meals and beds, but more importantly, he is notified if the situation changes and he needs to move to a safer location.

As the person completes one assignment and moves to the next he checks out with the supervisor he is leaving, and checks in with the P/I Chief to get his new assignment. In this way he keeps his location and supervisor information up to date.

ICS FOR TRANSPORTATION

- **Goals**
 - **Safety**
 - **Check out**
 - **Demobilization**



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ICS for Transportation Field Personnel

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Checkout occurs at each change of field assignment. A person may check out when an assignment is completed, or when his shift has ended. He checks out with his field supervisor and then with the Planning/Intelligence Chief at the Command Post. If he will be going to a base or camp to eat or sleep he will tell the P/I chief his destination, and check-in there. The next day he would check out of the base or camp and check in with the P/I chief at the Command Post again.

Check out at the end of the assignment period completes the safety oversight of that person. When the person is leaving the event he checks out with the field supervisor and then with the P/I Chief, giving the location of his destination and a contact phone number there. He is then sent to demobilization.

The demobilization process ensures that all equipment is returned, all reports and subordinate evaluations are completed, and all vehicles are safe for the trip home. Vehicles may have been exposed to fire, heat, freezing or other austere conditions that could damage their equipment. A mechanic checks over the mechanical systems, brakes and tires to ensure that the vehicle is roadworthy before the person leaves the ICS assignment.

ICS FOR TRANSPORTATION

- **Personnel accountability includes care**
 - **Food, shelter**
 - **Medical and mental health**
 - **Family contacts**



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ICS for Transportation Field Personnel

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Personnel accountability is the second purpose of the ICS. Through the P/I chief the IC knows at all times where his personnel are located, what field work groups and divisions have been organized, and how many people are in each. This allows the IC and the Operations Chief to ensure that the span of control for supervisors is kept to no more than 7 people per supervisor. Groups and divisions are created when the span of control becomes too large.

ICS also provides for the care of personnel in the field. Through the check-in procedure the IC knows how many people are working at the site. This number is used for ordering meals, portable restrooms and shelters. In an extended event it is used to order sleeping facilities, showers and laundry facilities, as well.

ICS also provides for the medical and mental health needs of the responders. The number of personnel working determines the level of medical oversight that will be at the scene, and the kinds of emergency medical equipment that will be readily available. During especially stressful events the work period may end with a critical incident stress defusing among those who shared the experiences on that shift. During the demobilization process each person is asked whether he suffered any medical or mental health injuries, and participants may be assigned to Workers Compensation for treatment, including critical incident stress counseling.

ICS provides for a family contact when possible. A liaison will generally be available to receive messages from families and relay messages to families when personnel are deployed over several days in areas with little communications capability. Often the amateur radio community supports the family communication system. These radio operators may be organized through RACES or ARES.

ICS FOR TRANSPORTATION

- **Reimbursement**
 - **The job you save may be your own**
 - **MAP-21 changes, some reimbursement now FEMA**



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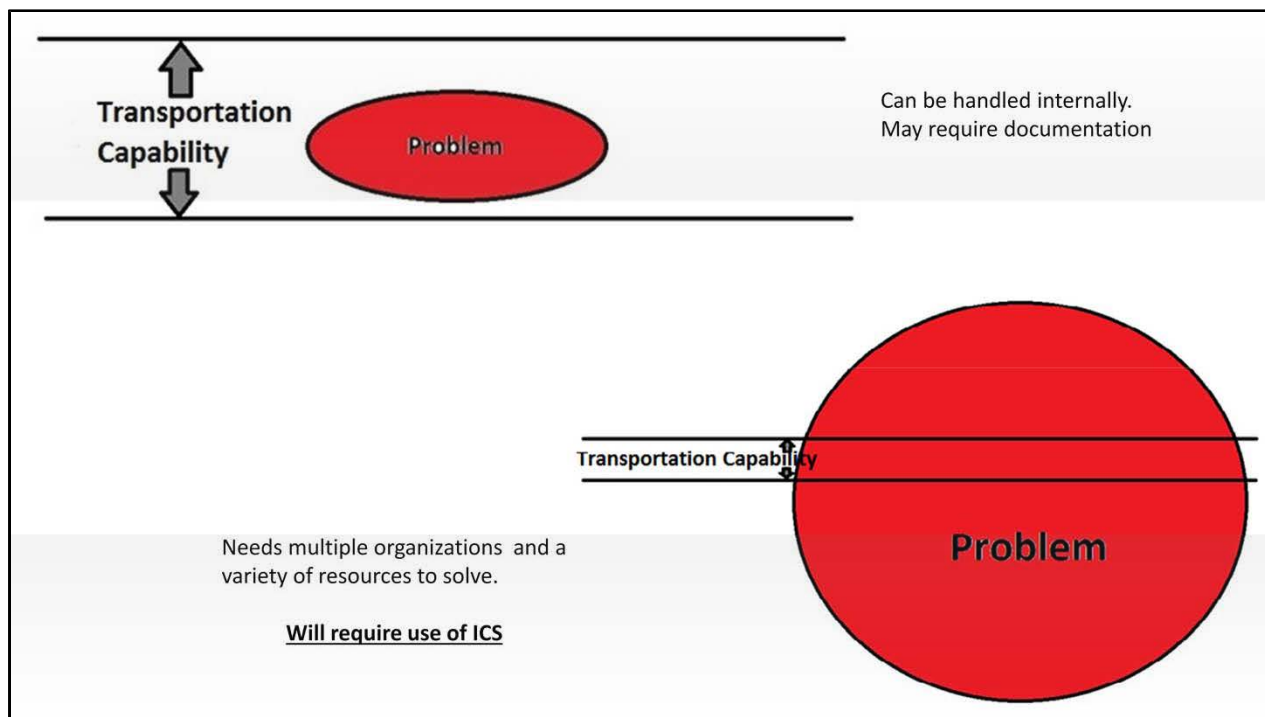
ICS for Transportation Field Personnel

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Reimbursement is another activity of ICS. When an emergency occurs it draws on resources that had been budgeted for another purpose. If reimbursement does not occur the original project cannot be accomplished. Reimbursement comes from the Federal Highway Administration if there is damage to the state highway system roadways. MAP-21 legislation changed the way reimbursement is managed by FHWA during some disasters. For example, debris removal reimbursement rules have changed. In an event with a Presidential Disaster Declaration, the cost of debris removal must be reimbursed through FEMA, which has very strict accounting requirements for documentation of not only the expenses but also the work itself and the eligibility of that work for reimbursement. FEMA generally only reimburses for 75% of the cost of non-emergency work.

The Finance Section at the field level must collaborate with the Operations Section to ensure that photos and other evidence are collected to support the requests for reimbursement for disaster-related work. The GIS function on the camera should be activated, and the date and time stamp must be set to the correct time so that the photos provide usable evidence for reimbursement.

The job you save may be your own! If the money is spent, and there is no reimbursement available, the organization's budget has to be rebalanced, meaning that some activities will have to be curtailed for that fiscal year, and jobs might even be lost.



Most day to day events can be handled as they have been in the past, but with the change in reimbursement requirements for FHWA and FEMA it may become necessary to start using Incident Command to document an incident to ensure that FHWA and FEMA requirements for documentation are met to protect the maintenance budget.

Then there are times when an event overwhelms not only DOT's day to day capability, but other responders as well, requiring coordination between the different organizations to resolve the problems. Under these circumstances, the Incident Command System is critical in bringing those organizations together, developing a common operating picture, identifying resources needed, and how they will be used, and in particular keeping responders safe and capturing data – through documentation – to ensure reimbursement.

ICS FOR TRANSPORTATION

- Transportation staff may be sent to an emergency at any time
- Getting ready in advance will make for a more efficient response
 - Work vehicle kit
 - Professional Drive Away Kit



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ICS for Transportation Field Personnel

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Transportation personnel may be sent to an emergency with little or no notice. Therefore it is wise to develop support materials to ensure your safety and capability to do your job. While personnel support may be provided in long term events, localized emergencies may leave you on your own as you accomplish emergency repairs or road closures.

Everyone should have a work car kit in the vehicle he uses during the work day, and a professional drive-away kit assembled or ready to be assembled. Two fliers have been provided to guide you as you make the kits. Let's turn to the fliers in your book at page 106. The most important element is drinking water. You can get along without food for a few days, but drinking water is essential for your health. We recommend that you keep one gallon of water per person in your work vehicle.

Information on safe storage of water is included in one of the family fliers to be discussed later. The second critical element is medication. Law forbids employers from dispensing any medications, even over the counter items. Keep a 30 day supply of essential prescription drugs, allergy medications, headache remedies or other over the counter medications that you use on a regular basis in your backpack, briefcase or purse. Never store medications in the car as the heat variance will damage most medications. Sturdy shoes or steel-toed boots and a blanket are other essential items. Review the suggested items in the kit and make a kit that is appropriate to your location, activities and personal medical requirements. Consult your physician regarding appropriate food if you have medical issues.

The professional drive away kit flier includes suggestions for augmenting your work vehicle kit, such as weather-related gear, communications and computer equipment, and plans and maps. Use the flier as a guide in developing your own kits. Put the work vehicle kit in your trunk and have it there every day. Know where your professional drive away kit items are kept and be ready to assemble them quickly following the checklist and based on weather conditions and assignments.

ICS for Transportation

- **Family preparedness**
 - **Family plan**
 - **Vital records**
 - **Family supplies at home**
 - **Community Emergency Response Team (CERT)**
 - **Family car kit**



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ICS for Transportation Field Personnel

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Transportation workers may have to go to emergency events with little or no notice and be gone for several days. These events may impact the whole community, including where workers' families live. The workers and their families need to plan in advance for community emergencies to ensure that the families are prepared and safe while transportation workers are absent fulfilling their disaster service worker roles. Let's look at the fliers starting at page 106.

A collection of home and personal preparedness fliers has been provided in your training materials to support getting your family prepared. You start by reviewing the Disaster Service Worker brochure with you family to ensure that they know that you may be gone during an emergency. Make a family emergency plan and prepare for the most likely emergencies in your community – floods, wildfires, hurricanes or earthquakes, for example. Create the vital records list for your family. You cannot be admitted to an American Red Cross shelter without proof of residence, and other documents are essential for filing insurance claims and getting assistance from FEMA. Work with your family to create kits for the home and each family car. Make lists of vital information and check on plans at your child's school or day care, or your parents' assisted living facility. Be sure to keep your emergency contact cards current so that an authorized person can help your child or loved one if you are unavailable. Then join with the Community Emergency Response Team in your neighborhood to share skills and assistance with those who live nearby. If you are called to work you have peace of mind knowing that your family is part of a network of disaster support while you are gone. If you do not have a neighborhood CERT team, contact your local Office of Emergency Services or Fire Department to start one.

ICS FOR TRANSPORTATION SUMMARY

- Transportation is the key to all emergency response
- ICS is the method required by the federal government to organize the response to a multi-jurisdictional, multi-profession emergency event
- The five functions of ICS are used in the field by all emergency response personnel
- Safety, accountability and care for personnel are accomplished through check-in, check-out and demobilization
- Put a work vehicle kit in your trunk and develop a professional drive-away kit for quick assembly.
- Getting your home ready for an emergency and your family into CERT will give you peace of mind when you are deployed in a disaster to help the community.



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ICS for Transportation Field Personnel

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Read the slide.

15 Minute BREAK



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ICS for Transportation Field Personnel

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- **Join an existing ICS in Operations**

- Wildland Fire

- **Join an existing ICS in Planning/Intelligence**

- Subject matter expert

- **Unified Command**

- Hurricane Sandy, New Jersey

- **Assume command**

- Mudslide

- **Incident Commander**

- Event occurs right in front of you
- Preplanned complex maintenance

Five ICS Roles Possible for Transportation Personnel



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ICS for Transportation Field Personnel

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Transportation has at least five distinct roles at a disaster. The State Transportation Agency may be integrated into an existing ICS structure in the Operations Section, it may be a technical specialist in the Planning/Intelligence Section, it may be part of a unified command, it may assume command once other problems are resolved, or it may be the Incident Commander in a rapid onset emergency on the State Highway System, or in a planned event like a maintenance project.

Join Existing Incident Command System

- State Transportation Agency's help would be requested by another agency, like a Fire Department
- DOT personnel would be dispatched from their normal duties to assist the requesting agency with road and bridge inspections, road damage assessment, expedient repairs or similar work.
- DOT workers formally join the existing ICS through the check-in procedure, and get assigned to the Liaison Officer or to a supervisor to perform tasks related to DOT's capabilities.



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ICS for Transportation Field Personnel

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Sometimes events occur that require the assistance of State Transportation Agency personnel and the use of State DOT equipment. The appropriate personnel from the district are dispatched from their normal duties to assist the requesting agency with road inspections, road damage assessment, expedient repairs or related work.

Upon arrival the State DOT workers formally join the existing ICS system by checking-in at the Incident Command Post with the Planning/Intelligence section chief. They receive an assignment within Incident Command System's existing Incident Action Plan, and are either assigned to the Liaison Officer or to a division supervisor, in which case they travel to the site to meet the supervisor. They get a briefing on the existing situation status, location of their work site, and a safety briefing, at a minimum.

In a multi-day incident the State DOT workers should receive food, lodging, and other support through the ICS.

Transportation as a Technical Specialist

- State DOT may be tasked as technical specialist to another organization
- Technical specialists are part of the Planning/Intelligence Section in ICS.



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ICS for Transportation Field Personnel



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In some events State Transportation Agency engineers, surveyors, geologists and other specialists may be called on for their unique expertise that is needed by another entity. Most often this would be a city or county road department or a special district.

The appropriate State DOT management would select an employee with the proper qualifications and certifications to fulfill the request. That employee would go to the Incident Command Post as a single resource, check-in, and serve as a technical specialist under the Planning/Intelligence Section. Some Technical Specialists might be assigned to Operations Section groups or to other ICS organizational units. The guidance for Technical Specialists is on page 9-9 of the FEMA FOG, 2010.

- **“Unified command is a team effort that allows all agencies with jurisdictional responsibility for an incident, either geographical or functional, to participate in the management of the incident...developing and implementing a common set of incident objectives...without losing ...agency authority, responsibility or accountability.” FEMA FOG, 2010, p. 6-2.**
- **Type of incident example – major accident**
 - Law Enforcement is the Incident Commander
 - Law Enforcement provides traffic control and scene access control
 - May require that road damage assessment and expedient repairs begin immediately to permit access to victims, or that road management change, such as contraflow.
 - May include Fire and EMS for life saving services
 - May include EPA for hazmat cleanup
 - May include Fish and Wildlife for environmental cleanup; Coast Guard for navigable waterways

Unified Command



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ICS for Transportation Field Personnel

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In a complex event involving the state highway system State Transportation Agency personnel may become part of a unified command. According to the ICS Field Operations Guide, “Unified command is a team effort that allows all agencies with jurisdictional responsibility for an incident, either geographical or functional, to participate in the management of the incident...developing and implementing a common set of incident objectives...without losing ...agency authority, responsibility or accountability.” (FEMA FOG, 2010, p. 6-2)

A multi-vehicle accident is a good example of when unified command would be needed. Law enforcement would generally be the Incident Commander. State DOT might need to open the roads so that fire and EMS personnel could access injured drivers. Damaged vehicles might need to be moved off the road to open an access lane while expedient repairs were made to bridges, guard rails or other damaged portions of the road infrastructure. Fire and EMS would be responsible for life saving rescue and care, while highway patrol and other law enforcement agencies were creating traffic control and access control.

Many multi-vehicle accidents include loads of hazardous materials in transit that are spilled. The state’s environmental protection agency would have to collaborate with the State DOT staff and oversee the clean-up. If hazardous materials got into storm drains or waterways from runoff the Fish and Wildlife agency might oversee environmental clean-up in wildlife areas. The Coast Guard would participate in cleanup plans for navigable waterways.



Golden Gate Bridge Mud Slide, December 2014

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graph TD
    IC[Incident Commander] --- SO[Safety Officer]
    IC --- PIO[PIO]
    IC --- LO[Liaison Officer]
    IC --- PIC[Planning/Intel Chief]
    IC --- LIC[Logistics Chief]
    IC --- OC[Operations Chief]
    IC --- FAC[Finance/Admin Chief]
  
```

Assume Command

- Report to existing Incident Command event
- Assume command from another agency whose work is done
- Continue the Incident Command until all road-related issues are successfully completed
- Close out the Incident or transfer the command to another agency with responsibility for the remaining issues
 - For example, to EPA for environmental remediation

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ICS for Transportation Field Personnel
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State Transportation Agency personnel may assume command from an existing Incident Commander whose work is completed. For example, when there was a mudslide near the San Francisco Golden Gate Bridge during heavy rains in December 2014 the California Highway Patrol (CHP) was initial Incident Commander, as the traffic issues had to be resolved to protect life. As soon as the detours had been established and the road segment was closed the command passed to Caltrans to investigate the geotechnical issues causing the mud slide, remediate the road blockage and undertake expedient repairs to get the road opened before the morning commute.

When the cleaning and repairs were completed the Incident was returned to CHP to manage the road reopening and traffic management. In other circumstances the command might be turned over to a different agency, such as to state EPA if environmental clean-up were needed.

Each time command is passed all the records for the event have to be turned over to the new Incident Commander for use in After Action Review and the eventual reimbursement and close-out process. This includes all the ICS forms completed to date, all the Incident Action Plans and all receipts. If there is Logistics support of personnel needed, the Incident Commanders have to determine how those services will continue to be provided. Requests for additional agency involvement can be made if the new Incident Commander lacks the capacity to staff all the needed ICS positions. For example, State DOT could request Planning/Intelligence support from Fire through Dispatch.

Starting Incident Command

- Event on an isolated road
- DOT is first on the scene, there doing maintenance
- Supervisor starts ICS



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ICS for Transportation Field Personnel

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When a disaster occurs on a road, or involving a road, the State Transportation Agency personnel may be the first on the scene, or the first personnel able to manage the event. On a major state highway there may be regular highway patrol beats that bring an officer to the scene quickly, but in more remote parts of the state it may be hours before highway patrol personnel are available. If DOT workers were already in the area they may be the first emergency responders to arrive at the scene who can organize the response, communicate situation status information to their headquarters and start to organize emergency response. This may be as simple as determining what resources are needed to resolve the event, or as complex as providing first aid to injured motorists.

Incident Commander

- Establish command
- Assess situation
- Appoint ICS positions
 - Field ICS requires a Safety Officer
- Document using ICS 201

The image shows a screenshot of the ICS 201 form. The top part of the form includes fields for 'INCIDENT NAME', 'DATE PREPARED', and 'TIME PREPARED'. Below these is a section titled '4. MAP SKETCH' which contains a hand-drawn map with several points labeled 'A' and 'B'. The bottom part of the form is labeled '5. PREPARED BY (NAME AND POSITION) (IC-51)'.

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ICS for Transportation Field Personnel

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The first person on the scene who is capable of starting a response becomes the Incident Commander (IC). This could be a State Transportation Agency road crew supervisor or worker. He would identify someone to assume the role of the Safety Officer to round up transportation personnel and identify hazards. The IC would then notify dispatch that he is establishing Incident Command. Next he would identify someone to be the Planning/Intelligence Section Chief to begin documentation. A third person is identified as the Logistics Section Chief, and inventories available supplies. This approach divides the work and allows multiple sources of information for assessing the situation. The situation assessment helps to identify additional ICS positions that are needed, and contributes to the development of an Incident Action Plan.

The Planning/Intelligence Section Chief would complete the ICS 201, the event size up, to document conditions at the scene. It helps to organize the information gathered in the initial phases of an event. The ICS 214 is an activity log that is used to document the work of all components of the incident command. It is used to provide a chronological list of actions taken and decisions made. The ICS 208 is the Safety Message. This is issued when the Incident Command is started to remind all personnel about safe actions for the initially responding units.


The IC may also request assistance from other State Transportation Agency field personnel, or from other first responders. He would remain the Incident Commander until someone with more appropriate qualifications and certifications assumes command.

ICS: Seldom Used Skill

Guides for the Incident Commander

Incident Command System Field
Operations Guide, ICS-420-1

Supervisors' Checklist Cards



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ICS for Transportation Field Personnel
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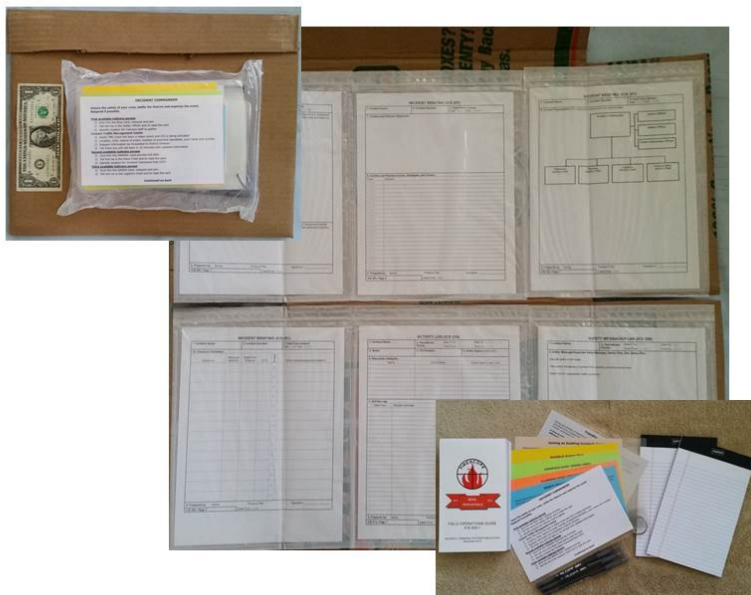
The Incident Command System may be a seldom used skill for most State Transportation Agency supervisors. Therefore it is important to have guides readily available for when the supervisor becomes part of an Incident Command system in any role.

The first tool is the Incident Command System Field Operations Guide, known as ICS -420-1 or the FOG. This provides detailed checklists for every position in the ICS emergency response organization. There is a FOG in the Supervisor's Folders that were distributed today.

However, State Transportation Agency personnel would only assume some of those roles in an emergency. So you have also been given some laminated cards on a ring. These cards provide a focused set of checklists for the positions that State Transportation Agency personnel are likely to fill, or that would be filled during a DOT-led activation. The Incident Commander can distribute the cards to the person he assigns to each ICS position, which will help him keep track of which positions have been assigned and which he is still filling himself. It allows the staff members to quickly focus on just the assignment each has for that Incident Action Period. Cards can be easily swapped when roles change, at shift change, or when Incident Command is passed to another entity. When the State Transportation Agency is no longer in charge the supervisor can retrieve his cards during check-out as a means of completing personnel accountability.

Organizing the Paperwork in a Field Environment

- Supervisor's Folder
 - ICS forms 201, 208, 214
 - Communications plan with district level contact information



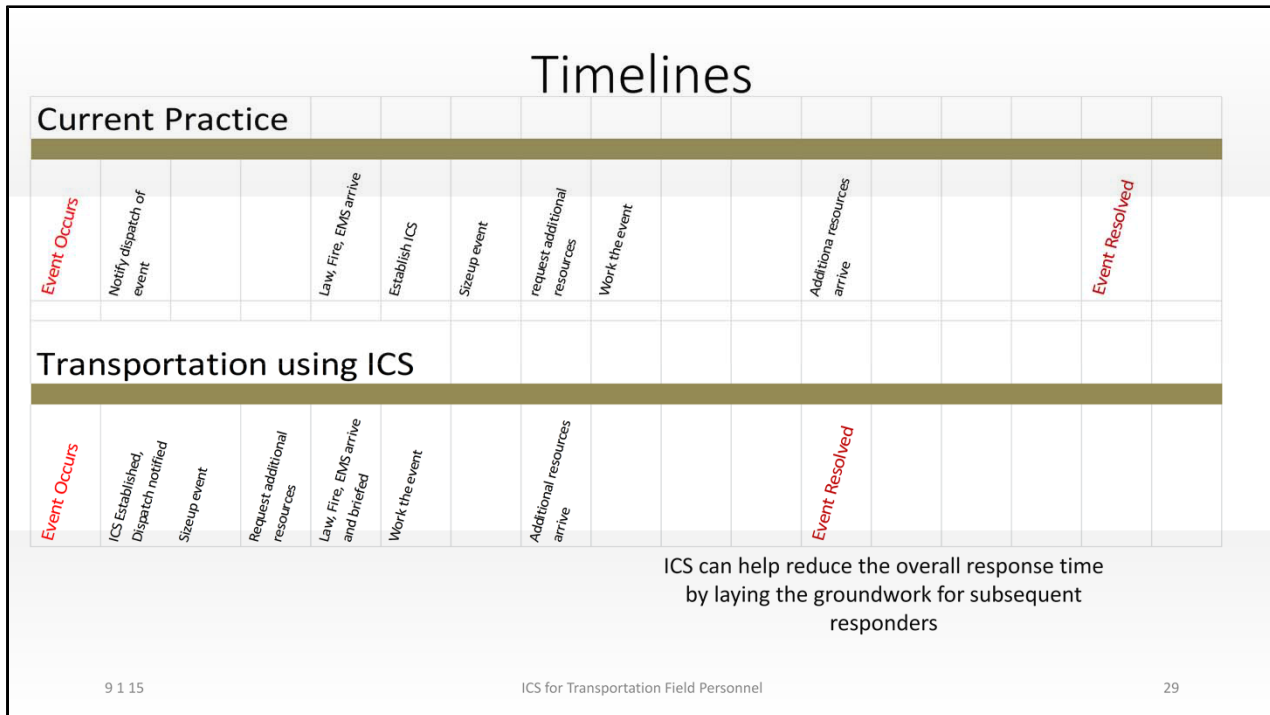
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ICS for Transportation Field Personnel

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A Supervisor's board is a handy tool for use in passing or assuming command. The individual ICS forms can be completed and posted in the self-adhesive, clear plastic packing pockets attached to a cardboard backing. The zip lock tops protect the forms from rain and wind, but allow them to be easily updated or changed at each new Incident Action Period. Arriving personnel can easily obtain needed information from the ICS 201, including the map of the event, the objectives, the organization's staffing for the current Incident Action Period, and the safety message. The cardboard can be cut to fit as many ICS forms as the Incident Commander wants to display for incoming personnel.

The Incident Commander and Planning/Intelligence Section Chief can make a board quickly with stored supplies. The board can be attached to the side of a truck with duct tape or magnetic clips. When the time comes for shift change or change of organizational command the outgoing IC can take a photo of the forms for his records and pass the board to the incoming IC. The board costs only a few dollars to make, so passing it along to another agency is not a financial consideration.



In the first timeline, which shows incident management without the use of ICS, you see a progression of notification of event, in which case the dispatchers need to determine what the nature of the event is, in order to dispatch the proper discipline (fire, law, medical). That unit then has to arrive on scene, size up the situation, and it may have to ask for even more resources.

In the second time line, by using ICS, the overall response time is reduced by having the first responder on the scene establish ICS, then employ additional transportation agency crew members who are present to begin filling the ICS roles and starting those tasks, allowing multiple lines of activity to be engaged in at the same time. Notification, resource assessment, ingress and egress routes for responding units, personnel accountability and safety oversight all occur simultaneously through the Command function, Safety Officer, Planning/Intelligence function, and Operations function. An overall picture and size up of the event can then occur, based on the efforts of multiple staff working in concert to create an accurate report for dispatch and higher levels of the organization’s management.

Summary



- All State Transportation Agency response to a multi-agency event must use NIMS, which is ICS in the field
- Personnel safety, accountability for personnel and reimbursement are the three purposes of ICS
- The State Transportation Agency is the owner of the SHS
- The State Transportation Agency may have a variety of roles in the response to planned event, an emergency or a catastrophic disaster

9 1 15

ICS for Transportation Field Personnel

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In summary, all State Transportation Agencies must use NIMS in response to any event involving multiple agencies, multiple professions or multiple jurisdictions. This means that ICS must be used in the field.

There are many ways to manage an emergency, but ICS has three specific purposes: to ensure the safety of all personnel at the event, to ensure accountability for all personnel during their time at an event, and to ensure that all possible reimbursement for work done by the State Transportation Agency personnel is received.

The State Transportation Agency is the owner of the State Highway System within the state. As such it is obligated to ensure that the roads are safe for all the traveling public, including emergency response by public safety personnel.

The State Transportation Agency may have a variety of roles within an ICS depending on the phase of the event and the tasks assigned to DOT personnel.

Questions?



9 1 15

ICS for Transportation Field Personnel

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Are there any questions about ICS and its applications, or anything else you learned in today's class?

Please complete the evaluation sheet and leave it on the front table as you depart. Your comments are very important to us, as they allow us to continuously improve the course delivery.

CHAPTER 5: MODULE 1A AND 1B STUDENT MANUAL WITH EVALUATION SHEET

Sponsoring Agency Logo

**NCHRP 20-59 (30)
ICS for Field-Level
Transportation
Supervisors
and Staff**

**Course of Instruction
Student Manual**

Organizational
Logo
Here

NCHRP 20-59 (30) Incident Command System (ICS) for Field-Level Transportation Supervisors and Staff

Sponsored by

State Department of Transportation

Instructors

John Smith, M.P.A., CEM, MEP (example)

Sue Williams, M.A., ACE (example)

ICS and Transportation's Role In Emergency Management



• Today's learning goals:

- Review the role of transportation in emergencies
- Review ICS roles and terminology
- Review the use of ICS for safety, accountability and reimbursement
- Consider the application of ICS to transportation situations



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ICS for Transportation Field Personnel

2

ICS for Transportation

- **Key to all emergency response**
 - Pre-event evacuation
 - Response
 - Post-event recovery
- **Coordination with other emergency responders**
 - No roads, no response
 - Transportation owns the road, so responsible for the safety of the road to serve the public
 - Safety Inspection- bridges, tunnels and road surface
 - Debris removal for access
 - Expedient repairs



9 4 15

ICS for Transportation Field Personnel

3

ICS Personnel Are “Emergency Response Providers”

- **Public Safety – Police, Fire, EMS**
 - Assist human victims
 - HR term related to benefits
- **“Emergency Response Provider” includes State DOT personnel**
 - Homeland Security Act 2002
 - Post-Katrina Emergency Management Reform Act 2006
- **“Critical transportation” = Core Capability under National Preparedness Goal**



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ICS for Transportation Field Personnel

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Incident Command System (ICS)

- ☒ 1970s California FIRESCOPE
- ☒ 1980 National Fire Academy
- ☒ 2004 NIMS
 - ☒ Homeland Security Presidential Directive-5 (HSPD-5), 2003



Oakland Hills Firestorm, 1991



Pentagon Attacked 9/11/2001

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ICS for Transportation Field Personnel

5

National Incident Management System (NIMS) Incorporates...

Incident Command System (ICS)

Modular, flexible, span of control, unity of command

Common Terminology

Management by Objective

Unified Command

Multi-agency coordination system (MACS)

Mutual Aid Agreements



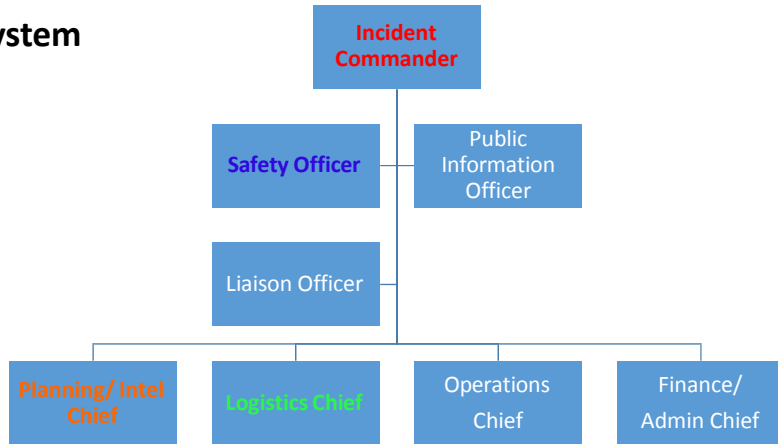
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ICS for Transportation Field Personnel

6

ICS for Transportation

- **Five Functions of the Incident Command System in the Field**



9 4 15

ICS for Transportation Field Personnel

7

ICS for Transportation

- **ICS is flexible and scalable**
 - Use what you need, staff to meet span of control requirements
- **ICS can be used for emergencies, disasters and catastrophes**
 - Spilled potatoes
 - Hurricane Sandy
- **ICS can be used for planned events**
 - Parades
 - Sporting events
 - Planned maintenance



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ICS for Transportation Field Personnel

8

Practical Application of ICS in Transportation



9 4 15

ICS for Transportation Field Personnel

9

NIMS/ICS: Perform Reliably and Effectively

- **Goal of NIMS/ICS: Reliable and effective response to an event, emphasizing safety of DOT staff**
- **Achieved through**
 - **SAFETY**
 - Check-in
 - Check-out
 - Demobilization
 - **Personnel Accountability**
 - **Reimbursement**



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ICS for Transportation Field Personnel

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ICS for Transportation

- **Goals**
 - **Safety**
 - **Check-in**



Examples of "T" Cards



9 4 15

ICS for Transportation Field Personnel

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ICS FOR TRANSPORTATION

- **Goals**
 - **Safety**
 - **Check out**
 - **Demobilization**



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ICS for Transportation Field Personnel

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ICS FOR TRANSPORTATION

- **Personnel accountability includes care**
 - **Food, shelter**
 - **Medical and mental health**
 - **Family contacts**



ICS for Transportation Field Personnel



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ICS FOR TRANSPORTATION

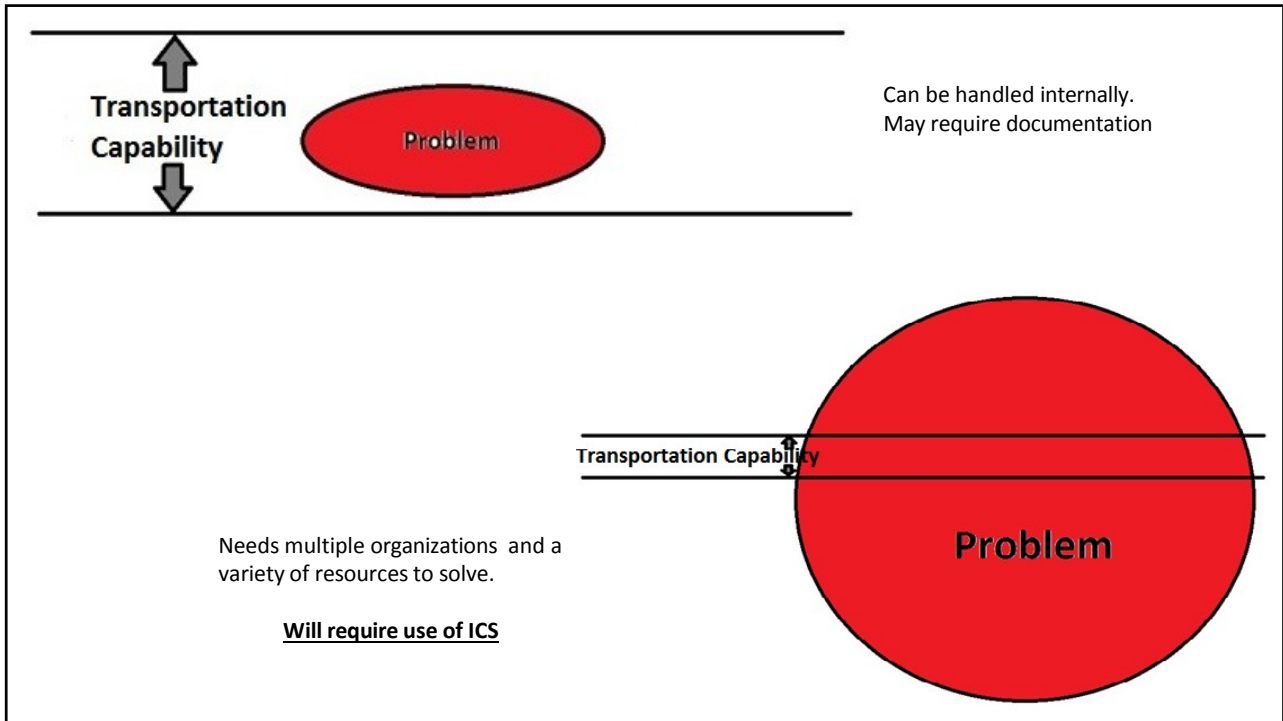
- **Reimbursement**
 - **The job you save may be your own**
 - **MAP-21 changes, some reimbursement now FEMA**



ICS for Transportation Field Personnel

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ICS FOR TRANSPORTATION

- Transportation staff may be sent to an emergency at any time
- Getting ready in advance will make for a more efficient response
 - Work vehicle kit
 - Professional Drive Away Kit



ICS for Transportation

- **Family preparedness**
 - **Family plan**
 - **Vital records**
 - **Family supplies at home**
 - **Community Emergency Response Team (CERT)**
 - **Family car kit**



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ICS for Transportation Field Personnel

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ICS FOR TRANSPORTATION SUMMARY

- Transportation is the key to all emergency response
- ICS is the method required by the federal government to organize the response to a multi-jurisdictional, multi-profession emergency event
- The five functions of ICS are used in the field by all emergency response personnel
- Safety, accountability and care for personnel are accomplished through check-in, check-out and demobilization
- Put a work vehicle kit in your trunk and develop a professional drive-away kit for quick assembly.
- Getting your home ready for an emergency and your family into CERT will give you peace of mind when you are deployed in a disaster to help the community.



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ICS for Transportation Field Personnel

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15 Minute BREAK



9 4 15

ICS for Transportation Field Personnel

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- **Join an existing ICS in Operations**
 - Wildland Fire
- **Join an existing ICS in Planning/Intelligence**
 - Subject matter expert
- **Unified Command**
 - Hurricane Sandy, New Jersey
- **Assume command**
 - Mudslide
- **Incident Commander**
 - Event occurs right in front of you
 - Preplanned complex maintenance

Five ICS Roles Possible for Transportation Personnel



9 4 15

ICS for Transportation Field Personnel

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Join Existing Incident Command System

- State Transportation Agency's help would be requested by another agency, like a Fire Department
- DOT personnel would be dispatched from their normal duties to assist the requesting agency with road and bridge inspections, road damage assessment, expedient repairs or similar work.
- DOT workers formally join the existing ICS through the check-in procedure, and get assigned to the Liaison Officer or to a supervisor to perform tasks related to DOT's capabilities.



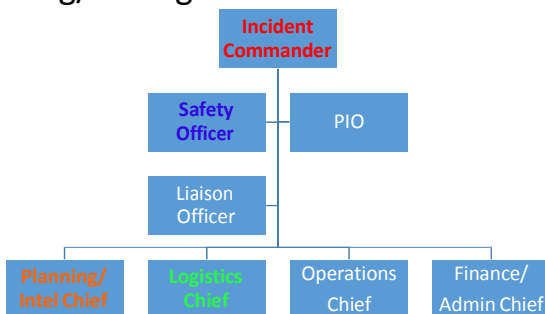
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ICS for Transportation Field Personnel

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Transportation as a Technical Specialist

- State DOT may be tasked as technical specialist to another organization
- Technical specialists are part of the Planning/Intelligence Section in ICS.



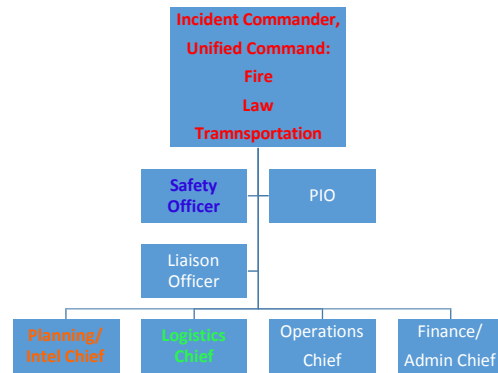
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ICS for Transportation Field Personnel

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- **“Unified command is a team effort that allows all agencies with jurisdictional responsibility for an incident, either geographical or functional, to participate in the management of the incident...developing and implementing a common set of incident objectives...without losing ...agency authority, responsibility or accountability.” FEMA FOG, 2010, p. 6-2.**
- **Type of incident example – major accident**
 - Law Enforcement is the Incident Commander
 - Law Enforcement provides traffic control and scene access control
 - May require that road damage assessment and expedient repairs begin immediately to permit access to victims, or that road management change, such as contraflow.
 - May include Fire and EMS for life saving services
 - May include EPA for hazmat clean up
 - May include Fish and Wildlife for environmental clean-up; Coast Guard for navigable waterways

Unified Command



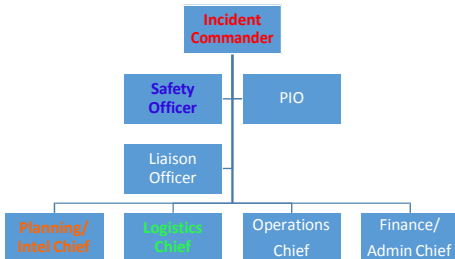
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ICS for Transportation Field Personnel

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Golden Gate Bridge Mud Slide, December 2014



Assume Command

- Report to existing Incident Command event
- Assume command from another agency whose work is done
- Continue the Incident Command until all road-related issues are successfully completed
- Close out the Incident or transfer the command to another agency with responsibility for the remaining issues
 - For example, to EPA for environmental remediation

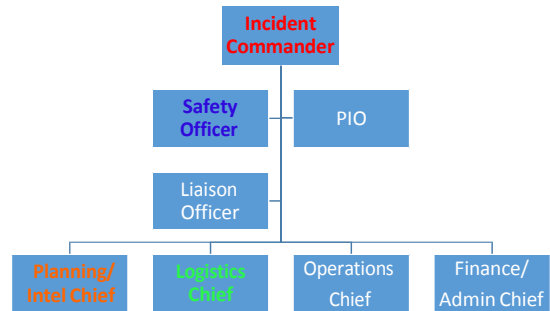
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Starting Incident Command

- Event on an isolated road
- DOT is first on the scene, there doing maintenance
- Supervisor starts ICS



9.4.15

ICS for Transportation Field Personnel

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Incident Commander

- Establish command
- Assess situation
- Appoint ICS positions
 - Field ICS requires a Safety Officer
- Document using ICS 201



INCIDENT BRIEFING	1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED
	Block	8/8/2015	Emp. time
4. MAP SKETCH			
ICS 201	PAGE 1	5. PREPARED BY (NAME AND POSITION) BC-51	

INCIDENT NAME	2. PREPARED BY (NAME AND POSITION)	3. DATE PREPARED	4. TIME PREPARED
5. INCIDENT DESCRIPTION (Include location, type of incident, and any other information that may be helpful to the incident commander.)			
6. ADDITIONAL INFORMATION			
7. COMMENTS			
8. PREPARED BY (NAME AND POSITION)			
9. DATE PREPARED			

9.4.15

ICS for Transportation Field Personnel

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ICS: Seldom Used Skill

Guides for the Incident Commander

Incident Command System Field Operations Guide, ICS-420-1

Supervisors' Checklist Cards



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ICS for Transportation Field Personnel

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Organizing the Paperwork in a Field Environment

- Supervisor's Folder
 - ICS forms 201, 208, 214
 - Communications plan with district level contact information



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ICS for Transportation Field Personnel

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Timelines

Current Practice													
Event Occurs	Notify dispatch of event			Law, Fire, EMS arrive	Establish ICS	Sizeup event	request additional resources	Work theevent			Additional resources arrive		Event Resolved
Transportation using ICS													
Event Occurs	ICS Established, Dispatch notified	Sizeup event	Request additional resources	Law, Fire, EMS arrive and briefed	Work theevent		Additional resources arrive				Event Resolved		

ICS can help reduce the overall response time by laying the groundwork for subsequent responders

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ICS for Transportation Field Personnel
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Summary



- All State Transportation Agency response to a multi-agency event must use NIMS, which is ICS in the field
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- The State Transportation Agency is the owner of the SHS
- The State Transportation Agency may have a variety of roles in the response to planned event, an emergency or a catastrophic disaster

9 4 15
ICS for Transportation Field Personnel
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Questions?



9 4 15

ICS for Transportation Field Personnel

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Professional Preparedness Materials

1. Emergency Kit for Work Vehicle
2. Professional Drive-Away Kit



EMERGENCY KIT FOR THE WORK VEHICLE

WATER. This is your most important item. You will need water to drink, for first aid, and to take medicine. In your kit, have at least one gallon of water per person, based on who usually rides in your work vehicle. You could purchase a box of foil packets or cans of water at a camping store, or one liter bottles in a 20 bottle flat.

PRESCRIPTION MEDICATIONS. This is the second most important item. If you take medications on which your health depends you must carry a three-day supply at all times. This would include heart, blood pressure and diabetic medications. If you regularly take other prescription drugs for allergies or other health concerns, it is also wise to carry these. **STORE IN YOUR BACKPACK, BRIEFCASE OR PURSE – NOT IN YOUR CAR.** Keep this supply fresh by rotating it every week. Also include any non-prescription medications you often use: nose drops, antihistamine, allergy remedies, diarrhea medication, headache remedies or indigestion medications. In times of stress such as an emergency health problems can become worse. Having proper medications and keeping to the prescribed schedule is very important.

FOOD. Food is important for psychological reasons and to keep your blood sugar level up to avoid dizzy or shaky feelings. For this reason you should select food for your kit that you like and that you are used to eating. In addition, people with diabetes, heart disease, or other health problems should consult their physicians for advice about the foods for their kits. The healthy general public should select foods like crackers, peanut butter, snack packs of fruit or pudding, granola bars, protein bars, dried fruit, water-packed tuna or chicken and single serving cans of juice. Plan on four light meals per day.

Avoid high sugar foods like candy and soft drinks as they make you very thirsty. Avoid alcoholic beverages.

Avoid MREs, as they are very high in fat and sodium and can make you very sick if you are not accustomed to a high fat diet.

Avoid “emergency food bars” as they are designed for shipwrecked people who are sedentary in a boat and may get seasick. They are designed to keep blood sugar up in a few bites. They are not designed to satisfy hunger in a person who is moving around and working. They are also very high in sugar and fat.

Avoid camping foods and other dried food, as they require a lot of water consumption to metabolize. They are also high in calories.

LIGHT SOURCE. A chemical light stick provides long shelf life and a sparkless source of light. A flashlight with a special long-life battery or a long-burning candle may be used after you have checked to be sure that there is no leaking gas or petroleum in the area. Do not rely on a regular flashlight as ordinary batteries lose their power quickly in the heat of a car. You might consider an electric light with an attachment to your car cigarette lighter, available at camping stores.

COMMUNICATION. Your cell phone can be charged from your car battery. Use only the text function in a disaster to conserve battery life and bandwidth. Even when the voice function will not work it is likely that a text will go through. Put your spouse or parents' numbers in the ICE function, and keep other key numbers in the directory.

RADIO. Your car radio is your source for emergency broadcast information. Get a list of all-news stations for the area where you live, work, and areas you drive to or through. Keep this list in your glove compartment and in your emergency kit. A hand cranked emergency radio is also useful and eliminates the need for batteries. These often come with flashlights that run on the same power source. Some also have a solar power panel.

EMERGENCY BLANKET. Mylar emergency blankets are available at camping-goods stores. They can be used as a blanket or a heat shield against the sun. They fold into a small package. A thermal blanket may be added when storage space permits.

FIRST AID SUPPLIES. Include 4x4 gauze, cloth that can be torn into strips to hold a bandage in place, Kerlex, anti-bacterial ointment (such as Neosporin, Bacitracin), burn cream, rolls of gauze, large gauze pads, rolls of first aid tape, scissors, a large cloth square for a sling or tourniquet, safety pins, needles and heavy thread, matches, eye wash, a chemical ice pack and a first aid book. Rotate the medical supplies every six months.

PERSONAL CARE AND HYGIENE ITEMS. Alcohol-based hand sanitizer, baby wipes, small plastic bottle of pine oil or other disinfectant, six large heavy-duty garbage bags with ties for sanitation and waste disposal, box of tissues, roll of toilet paper, plastic bucket to use as a toilet after lining it with a plastic garbage bag.. (Your smaller kit items can be stored in your bucket inside a sealed trash bag). Tooth brush/tooth paste, mouth wash, deodorant, face cloth, folding cup, and other person items should be based on personal needs.

ADDITIONAL ITEMS TO CONSIDER. Sturdy shoes (especially if your work shoes are not good for walking), sweater or jacket, hat/sun visor, feminine hygiene supplies, whistle (to attract attention and call for help), rope or string, pencil and paper, safety pins, \$100 in small bills to buy essential supplies in case the ATM does not work, a roll of quarters for a pay phone. Add appropriate climate-related items like sun screen or gloves.

DON'T LET YOUR GAS TANK FALL BELOW HALF FULL! The radio and heater in your car may save your life, but you can't run the car's accessories long without the gas to start the engine and re-charge the battery. If you travel in isolated areas, on the freeway, or far from home, an adequate gasoline supply is crucial. Fill up often. After a disaster the gas pumps may not work for several days while electrical power is restored, and once the pumps work, the supplies will quickly be depleted through panic buying. **NEVER CARRY CANS OF GAS IN YOUR TRUNK!** A can of gas is a bomb!

**PROFESSIONAL DRIVE-AWAY KIT
FOR FIELD ICS STAFF**

Note: this is in ADDITION TO your personal car kit, which should be brought along.

CRITICAL PERSONAL PREPAREDNESS:

- adequate supply of drinking water for 5 days (1 gallon/person/day recommended)
- adequate supply of prescription and OTC medications for at least 10 days, or the duration of the assignment, whichever is greater
- if you have a medical condition that limits food choices, check with the COOP/COG staff for a list of food stored at the COOP site and supplement as needed. Use guidance from the Car Kit flier.

Personal protective equipment:

- hard hat, vest, steel-toed shoes/boots
- gloves, eye protection, ear protection

Personal weather gear:

- rain suit, rain boots, umbrella
- hooded sweatshirt
- cold weather outerwear (hat, gloves, scarf, ear muffs, ski mask, jacket, pants)
- sun hat, sun glasses
- sun screen, hand cream, face cream, lip balm

Personal supplies:

- eye glasses – prescription (reading, computer, sun glasses, other), spare pair, repair kit
- hearing aid and batteries
- baby wipes, hand sanitizer
- deodorant, tooth brush, toothpaste
- t-shirts, spare underwear and socks
- cot, pillow, sleeping bag, blanket
- towel, wash cloth, soap
- trash bags, toilet paper, small shovel
- other personal support items for austere circumstances

Communications equipment: Note- cell phones should allow use while recharging

- GETS card
- WPS card
- Cell phone
 - car charger
 - wall charger
 - solar charger
 - spare battery
- Solar/crank radio
- Radio
 - car charger
 - wall charger
 - solar charger

- spare battery
- Satellite phone
 - car charger
 - wall charger
 - solar charger
 - spare battery

Note: getting equipment that uses a USB connection for charging can limit the number of chargers needed.

Computer equipment:

- Laptop
 - car charger
 - wall charger
 - solar charger
 - spare batteries
- Thumb drive
- Digital camera
 - car charger
 - wall charger
 - solar charger
 - spare batteries
- Small portable printer
 - cables to connect to various computers
 - paper
 - spare cartridges
- Tablet computer, PDA, SMART Phone or other small computer
 - car charger
 - wall charger
 - solar charger
 - spare batteries
- Note: getting equipment that uses a USB connection for charging can limit the number of chargers needed.
- AC extension cord with at least 3 plug-in slots
- Appropriate software for each computer
 - Internet connection
 - Office Suite (MSWord, MExcel, others)
 - GPS
 - GIS
 - CAD
- Program files to support the field work
 - Maps
 - As-builts
 - Plans
 - Directories – department phone list, relevant contracts contacts
 - Forms, regulations, other essential documents

Paper copies of relevant plans and maps

- ICS forms
- Supervisor's ICS Cards
- Supervisor's ICS folder
- Area maps
- District Emergency Operations Plan
- District Fan-out chart
- Maps of critical facilities in the district
- District employee phone lists
- District employee emergency contact lists

Office Supplies

- Pens, pencils, sharpener, eraser
- Scissors, string, twine
- Portfolio or clipboard and spare paper pads
- Laptop desk or small folding table and chair
- Paper clips, binder clips, magnetic clips
- Scotch tape, electrical tape, package tape, duct tape
- Stapler and staples

Family Preparedness Materials

- 1. California DSW information folder**
- 2. Confidential Household Data for your Disaster Kit**
- 3. FEMA : Family Basic Disaster Supplies**
- 4. Car kit**
- 5. Vital Records Emergency Information**
- 6. Low Cost/ No Cost Emergency Preparedness**
- 7. School/ Child Day Care Emergency Plans; Adult Day Care Emergency Plans**
- 8. CERT Flier: Palm Bay Emergency Preparedness (example)**

For more information, please visit the following sites:

CALIFORNIA EMERGENCY SERVICES ACT

www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=08001-09000&file=8550-8551

CALIFORNIA GOVERNMENT CODE §3100-3109

www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=03001-04000&file=3100-3109

THE CALIFORNIA CONSTITUTION OATH OR AFFIRMATION

www.leginfo.ca.gov/.const/.article_20

CALIFORNIA GOVERNOR'S OFFICE OF EMERGENCY SERVICES

www.oes.ca.gov

CALIFORNIA DEPARTMENT OF TRANSPORTATION

www.dot.ca.gov

AS A CALIFORNIA STATE AGENCY, CITY, COUNTY, OR PUBLIC DISTRICT EMPLOYEE, YOU MAY BE CALLED UPON AS A DISASTER SERVICE WORKER IN THE EVENT OF AN EMERGENCY. THE INFORMATION CONTAINED IN THIS PAMPHLET WILL HELP YOU UNDERSTAND YOUR ROLE AND OBLIGATION.

CALTRANS OFFICE OF EMERGENCY MANAGEMENT

1120 N Street, Suite 3200

Sacramento, California 95814

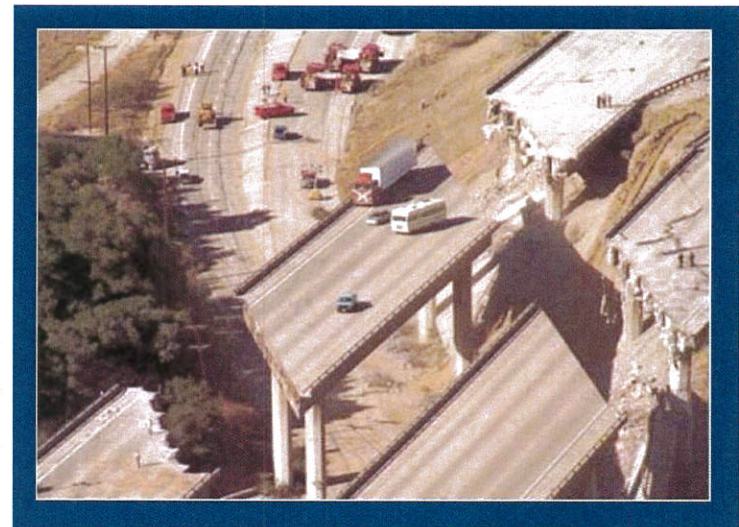
(916) 654-1498 or (916) 657-4911

Highway Hotline - 1-800-427-ROAD (7623)



California Public Employee

Disaster Service Worker



Caltrans Office of Emergency Management

Public Employee Disaster Service Worker Status

California Government Code §3100-3109:

It is hereby declared that the protection of the health and safety and preservation of the lives of the people of the state from the effects of natural, man-made, or war-caused emergencies which will result in conditions of disaster or extreme peril to life, property, and resources is of paramount state importance... in protection of its citizens and resources, all public employees are hereby declared to be Disaster Service Workers...

All Disaster Service Workers shall, before they enter upon the duties of their employment, take and subscribe to the oath or affirmation in Article 20 of the State Constitution.

What is meant by disaster service?

Disaster service means all activities authorized by and carried out pursuant to the California Emergency Services Act

Who is included in the Disaster Service Worker status?

All public employees are included in the Disaster Service Worker status, meaning all persons employed by any State, County, or City agency or any public district.

What are the scope and duties of an employee as a Disaster Service Worker?

Any public employee performing the duties as a Disaster Service Worker shall be considered acting within the scope of disaster service duties while assisting any unit of the organization or performing any act contributing to the protection of life or property, or mitigating the affects of an emergency.

How are public employees assigned disaster service activities?

Public employees are assigned disaster service activities either by their superiors or as designated by law to assist the agency in carrying out its responsibilities during times of disaster.

Do public employees acting as Disaster Service Workers get paid?

Public employees performing the duties as a Disaster Service Worker shall be paid as long as they have taken and subscribed to the oath or affirmation.

What is the oath or affirmation referred to in the government code?

Before entering upon the duties of employment, all public employees take and subscribe to the oath or affirmation as set forth and required by the California Constitution that declares them to be Disaster Service Workers in time of need.

When do public employees take this oath or affirmation?

Most public employees sign the oath or affirmation during the hiring process, which is then kept on file with the employing department or agency..

Can Disaster Service Workers be sued for actions taken while performing duties?

Public employee Disaster Service Workers for government and non-profit organizations cannot, by law, be held liable for their actions during a disaster, as long as they are acting within the scope of their responsibilities or assigned duties.

What if a public employee is injured while acting as a Disaster Service Worker?

Claims sustained by public employees while performing work as a Disaster Service Worker are filed as worker compensation claims under the same authorities and guidelines as any other employee in the agency that work is being performed for.



For further information, please refer to the websites on the back.



Confidential Household Data for Your Disaster Kit

Address: _____ **Phone:** _____
Adult Name: _____ **Work Phone:** _____
Employer: _____ **Work Hours:** _____
Adult Name: _____ **Work Phone:** _____
Employer: _____ **Work Hours:** _____

Other adults in the household:
Any with disabilities?:

Children	Birth Year	School
_____	_____	_____
_____	_____	_____
_____	_____	_____

Persons authorized to pick-up children from school (Info on emergency release card)

Name _____	Phone _____
Name _____	Phone _____
Name _____	Phone _____
Name _____	Phone _____

Pets in Household:

Type: _____ **Medical Problems** _____
Type: _____ **Medical Problems** _____
Type: _____ **Medical Problems** _____

Household Cell Phones, E-mail addresses, Ham Radio Call Signs, etc.

What language is spoken at home: _____

What languages can you act as a translator for:

Important Medical Conditions in Family, including allergies and special medications:

Neighbors that have your house key:

Address _____

Out of Area Contact:	Relationship:	City:	Phone:
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Family meeting place:
Address: _____

Phone: _____

Make a rough sketch of your home showing the locations of gas & water valves and electric switches. Show entry and exits, location of pool or hot tub. Include location of your emergency and first aid supplies.

Hot Water Heater Strapped Top & Bottom Yes _____ No _____ Need Help _____

What neighborhood teams are your family members part of?

FEMA: Family Basic Disaster Supplies

Keep the items that you would most likely need during an evacuation in an easy-to-carry container. Possible containers include a large, covered trash container; a camping backpack; or a duffle bag.

There are six basics you should stock in your home:

Water: <http://www.fema.gov/plan/prepare/water.shtm>

How Much Water do I Need?

You should have at least a three-day supply of water and you should store at least one gallon of water per person per day. A normally active person needs at least one-half gallon of water daily just for drinking.

Additionally, in determining adequate quantities, take the following into account:

- Individual needs vary depending on age, physical condition, activity, diet, and climate.
- Children, nursing mothers, and ill people need more water.
- Very hot temperatures can double the amount of water needed.
- A medical emergency might require additional water.

How Should I Store Water?

To prepare the safest and most reliable emergency supply of water it is recommended that you purchase commercially bottled water. Keep bottled water in its original container and do not open it until you need to use it.

Observe the expiration or “use by” date.

If You are Preparing Your Own Containers of Water

It is recommended that you purchase food-grade water storage containers from surplus or camping supply stores to use for water storage. Before filling with water, thoroughly clean the containers with dishwashing soap and water. Rinse them completely so that there is no residual soap. Follow the directions below on filling the container with water.

If you choose to use your own storage containers, choose two-liter plastic soft drink bottles NOT plastic jugs or cardboard containers that have had milk or fruit juice in them. Milk protein and fruit sugars cannot be adequately removed from these containers and provide an environment for bacterial growth when water is stored in them. Cardboard

containers also leak easily and are not designed for long-term storage of liquids. Also, do not use glass containers, because they can break and are heavy.

If storing water in plastic soda bottles, follow these steps:

Thoroughly clean the bottles with dishwashing soap and water. Rinse completely so that there is no residual soap. Sanitize the bottles by adding a solution of 1 teaspoon of non-scented, liquid household chlorine bleach to a quart of water. Swish the sanitizing solution around in the bottle so that it touches all surfaces. After sanitizing the bottle, thoroughly rinse out the sanitizing solution with clean water.

Filling Water Containers

Fill the bottle to the top with regular tap water. If the tap water has been commercially treated from a water utility with chlorine, you do not need to add anything else to the water to keep it clean. If the water you are using comes from a well or water source that is not treated with chlorine, add two drops of non-scented, liquid household chlorine bleach to the water. Tightly close the container using the original cap. Be careful not to contaminate the cap by touching the inside of it with your finger. Place a date on the outside of the container so that you know when you filled it. Store in a cool, dark place. Replace the water every six months if not using commercially bottled water.

Food: <http://www.fema.gov/plan/prepare/food.shtm>

Store at least a three day supply of non-perishable food. Select foods that require no refrigeration, preparation or cooking, and little or no water. If you must heat food, pack a can of Sterno. Select food items that are compact and lightweight. Avoid foods that will make you thirsty. Choose salt-free crackers, whole grain cereals, and canned foods with high liquid content.

*Include a selection of the following foods in your Disaster Supplies Kit:

Note: Be sure to include a manual can opener.

- Ready-to-eat canned meats, fruits and vegetables
- Canned juices, milk, and soup (if powdered, store extra water)
- Staples--sugar, salt, pepper
- High energy foods--peanut butter, jelly, crackers, granola bars, trail mix
- Vitamins
- Foods for infants, elderly persons, or persons with special dietary needs
- Comfort/stress foods--cookies, hard candy, sweetened cereals, lollipops, instant coffee, tea bags

First aid supplies: <http://www.fema.gov/plan/prepare/firstaid.shtm>

Assemble a first aid kit for your home and one for each car. A first aid kit should include:

- Sterile adhesive bandages in assorted sizes
- 2-inch sterile gauze pads (4-6)
- 4-inch sterile gauze pads (4-6)
- Hypoallergenic adhesive tape
- Triangular bandages (3)
- 2-inch sterile roller bandages (3 rolls)
- 3-inch sterile roller bandages (3 rolls)
- Scissors
- Tweezers
- Needle
- Moistened towelettes
- Antiseptic
- Thermometer
- Tongue blades (2)
- Tube of petroleum jelly or other lubricant
- Assorted sizes of safety pins
- Cleansing agent/soap
- Latex gloves (2 pair) Sunscreen

Non-prescription drugs

- Aspirin or non-aspirin pain reliever
- Anti-diarrhea medication
- Antacid (for upset stomach)
- Syrup of Ipecac (use to induce vomiting if advised by the Poison Control Center)
- Laxative
- Activated charcoal (use if advised by the Poison Control Center)

[Contact your local American Red Cross chapter](#) to obtain a basic first aid manual.

Clothing, bedding and sanitation supplies:

<http://www.fema.gov/plan/prepare/clothing.shtm>

Clothing and Bedding

If you live in a cold climate, you must think about warmth. It is possible that you will not have heat.

*Include at least one complete change of clothing and footwear per person.

- Jacket or coat
- Long pants

- Long sleeve shirt
- Sturdy shoes or work boots
- Hat, gloves and scarf
- Rain gear
- Thermal underwear
- Blankets or sleeping bags
- Sunglasses

Sanitation

- Toilet paper
- Soap, liquid detergent
- Feminine supplies
- Personal hygiene items
- Plastic garbage bags, ties (for personal sanitation uses)
- Plastic bucket with tight lid
- Disinfectant
- Household chlorine bleach

[Tools](http://www.fema.gov/plan/prepare/tools.shtm): <http://www.fema.gov/plan/prepare/tools.shtm>

- Mess kits, or paper cups, plates and plastic utensils
- [Emergency preparedness manual](#)
- Portable, battery-operated radio or television and extra batteries
- Flashlight and extra batteries
- Cash or traveler's checks, change
- Nonelectric can opener, utility knife
- Fire extinguisher: small canister, ABC type
- Tube tent
- Pliers
- Tape
- Compass
- Matches in a waterproof container
- Aluminum foil
- Plastic storage containers
- Signal flare
- Paper, pencil
- Needles, thread
- Medicine dropper
- Shut-off wrench, to turn off household gas and water
- Whistle
- Plastic sheeting
- Map of the area (for locating shelters)

Special items:

Remember family members with special needs, such as infants and elderly or disabled persons.

- **For Baby**
 - Formula
 - Diapers
 - Bottles
 - Pacifiers
 - Powdered milk
 - Medications

- **For Adults**
 - Heart and high blood pressure medication
 - Insulin
 - Prescription drugs
 - Denture needs
 - Contact lenses and supplies
 - Extra eye glasses
 - Hearing aid batteries

- **Entertainment--games and books.**



EMERGENCY KIT FOR THE FAMILY CAR

WATER. This is your most important item. You will need water to drink, for first aid, and to take medicine. In your kit, have at least one gallon of water per person, based on who usually rides in your car. You could purchase a box of foil packets or cans of water at a camping store, or one liter bottles in a 20 bottle flat.

PRESCRIPTION MEDICATIONS. This is the second most important item. If you take medications on which your health depends you must carry a three-day supply at all times. This would include heart, blood pressure and diabetic medications. If you or your children regularly take other prescription drugs for allergies or other health concerns, it is also wise to carry these. **KEEP MEDICATIONS IN YOUR PURSE OR BRIEFCASE, NOT IN THE CAR.** Keep this supply fresh by rotating it every week. Also include any non-prescription medications you often use: nose drops, antihistamine, allergy remedies, diarrhea medication, headache remedies or indigestion medications. In times of stress such as an emergency health problems can become worse. Having proper medications and keeping to the prescribed schedule is very important.

FOOD. Food is important for psychological reasons and to keep your blood sugar level up to avoid dizzy or shaky feelings. Children need familiar food at regular intervals. For this reason you should select food for your kit that you like and that you are used to eating. In addition, people with diabetes, heart disease, or other health problems should consult their physicians for advice about the foods for their kits. The healthy general public should select foods like crackers, peanut butter, snack packs of fruit or pudding, granola bars, protein bars, dried fruit, water-packed tuna or chicken and single serving cans of juice. Plan on four light meals per day.

Avoid high sugar foods like candy and soft drinks as they make you very thirsty. Avoid alcoholic beverages.

Avoid MREs, as they are very high in fat and sodium and can make you very sick if you are not accustomed to a high fat diet. Do not feed MREs to children.

Avoid “emergency food bars” as they are designed for shipwrecked people who are sedentary in a boat and may get seasick. They are designed to keep blood sugar up in a few bites. They are not designed to satisfy hunger in a person who is moving around and working. They are also very high in sugar and fat. Do not feed emergency bars to children.

Avoid camping foods and other dried food, as they require a lot of water consumption to metabolize. They are also high in calories.

LIGHT SOURCE. A chemical light stick provides long shelf life and a sparkless source of light. A flashlight with a special long-life battery or a long-burning candle may be used after you have checked to be sure that there is no leaking gas or petroleum in the area. Do not rely on a regular flashlight as ordinary batteries lose their power quickly in the heat of a car. You might consider an electric light with an attachment to your car cigarette lighter, available at camping stores.

COMMUNICATION. Your cell phone can be charged from your car battery. Use only the text function in a disaster to conserve battery life and bandwidth. Even when the voice function will not work it is likely that a text will go through. Put your spouse or parents' numbers in the ICE function, and keep other key numbers in the directory.

RADIO. Your car radio is your source for emergency broadcast information. Get a list of all-news stations for the area where you live, work, and areas you drive to or through. Keep this list in your glove compartment and in your emergency kit. A hand cranked emergency radio is also useful and eliminates the need for batteries. These often come with flashlights that run on the same power source. Some also have a solar power panel.

EMERGENCY BLANKET. Mylar emergency blankets are available at camping-goods stores. They can be used as a blanket or a heat shield against the sun. They fold into a small package. A thermal blanket may be added when storage space permits.

FIRST AID SUPPLIES. Include 4x4 gauze, cloth that can be torn into strips to hold a bandage in place, Kerlex, anti-bacterial ointment (such as Neosporin, Bacitracin), burn cream, rolls of gauze, large gauze pads, rolls of first aid tape, scissors, a large cloth square for a sling or tourniquet, safety pins, needles and heavy thread, matches, eye wash, a chemical ice pack and a first aid book. Rotate the medical supplies every six months.

PERSONAL CARE AND HYGIENE ITEMS. Alcohol-based hand sanitizer, baby wipes, diapers, feminine hygiene supplies, small plastic bottle of pine oil or other disinfectant, six large heavy-duty garbage bags with ties for sanitation and waste disposal, box of tissues, roll of toilet paper, plastic bucket to use as a toilet after lining it with a plastic garbage bag.. (Your smaller kit items can be stored in your bucket inside a sealed trash bag). Tooth brush/tooth paste, mouth wash, deodorant, face cloth, folding cup, and other personal items should be based on personal needs.

ADDITIONAL ITEMS TO CONSIDER. Sturdy shoes, sweater or jacket, hat/sun visor, whistle (to attract attention and call for help), rope or string, pencil, pencil sharpener and paper, safety pins, \$100 in small bills to buy essential supplies in case the ATM does not work, a roll of quarters for a pay phone. Add appropriate climate-related items like sun screen or gloves; books or games for children and adults.

DON'T LET YOUR GAS TANK FALL BELOW HALF FULL! The radio and heater in your car may save your life, but you can't run the car's accessories long without the gas to start the engine and re-charge the battery. If you travel in isolated areas, on the freeway, or far from home, an adequate gasoline supply is crucial. Fill up often. After a disaster the gas pumps may not work for several days while electrical power is restored, and once the pumps work, the supplies will quickly be depleted through panic buying. **NEVER CARRY CANS OF GAS IN YOUR TRUNK!** A can of gas is a bomb!



FIRES, FLOODS, FAULTS, TERRORISTS...*DO YOU KNOW WHERE YOUR VITAL RECORDS EMERGENCY INFORMATION IS...?*

During a disaster, such as an earthquake or flood, you may need to evacuate your home rapidly. You will want to have some important legal documents with you and others in a safe place. Take steps now to ensure that you safeguard your legal documents and have appropriate access to them for disaster recovery!

1. Open a bank safe deposit box or buy a fireproof safe for essential, irreplaceable, original documents. These include:

- Family birth certificates
- Marriage certificates and divorce papers
- Citizenship papers
- Military records and discharge papers, copies of the face of military ID cards
- Copies of insurance policies with agent contact information
- A list of bank accounts with the bank address
- A list of credit card numbers and addresses
- Accountant's copy of your income tax filings for 7 years
- Securities, US Savings Bonds, certificates of deposit, and other financial instruments
- Original Social Security Cards for all family members
- Titles and deeds for property
- Vehicle titles and a copy of the registration papers

2. Make a GoKit Document Cache to keep in your family emergency kit. Organize these records in a 1" ring binder with page protectors or in a waterproof container. You can make a waterproof container with a 14" piece of 3" PVC pipe and two end caps. Use adhesive to attach one end cap permanently and use a threaded cap for the other end. Fill the book or tube with the following documents/copies and update it each spring and fall.

- Copies of birth certificates and marriage/divorce papers
- Emergency contact information for all family members: work address and phone, school address and phone, day care/after school care address and phone
- Out of area contact person's name, address and phone number
- Copies of citizenship papers/green cards
- Original passports for all family members
- Military papers to prove Veterans Benefits eligibility, copies of the face of military ID cards
- Copies of medical information for each family member: physicians names and numbers, prescription drug names and dosages, pharmacy name and number
- Copies of insurance policies with 24 hour contact information for every policy
- Copies of the tax bill, mortgage papers or property deed to prove homeownership; copy of lease to prove legal right to alternate shelter
- Copies of 2 utility bills less than 1 year old to prove residency (owners and renters)
- Copies of the credit card list and emergency numbers to report lost cards
- Copies of all family drivers licenses and auto registrations
- Copies of all Social Security Cards
- One pad of checks and one credit card for an account that you seldom use. Use for emergency expenses: food, alternate lodging, replacement clothing
- \$100 in small bills in case cash registers and credit card machines do not work
- \$10 in quarters for the pay phone
- A copy of the wills for each family member. Make sure that an out of area family member has another copy in a safe place, and that your legal adviser has a copy.
- Copies of funeral arrangements in place or last wishes for adults.

DON'T LEAVE YOUR FAMILY'S FINANCIAL SECURITY TO CHANCE...BE PREPARED!



Low Cost/No Cost Emergency Preparedness

1. Get a family out-of-state phone contact and make a wallet card for each family member.
2. Ensure that school emergency contact cards are regularly updated, and that each child has at least 2 people listed to pick him/her up if parents are unavailable.
3. Select two family reunification points for use if the home is inaccessible. Select one place in the neighborhood, such as a friend's home, food store, or other location well known to all family members. Select another location not in your immediate neighborhood but easily accessible by all family members, such as your place of worship, a movie theater, or a regional mall.
4. Locate your gas meter and learn how to use the gas shut-off valve and **when** to shut off your gas.
5. Store heavy objects on low shelves or on closet floors, not on high shelves. Heavy pots, pans, and storage boxes may fall during earthquakes and injure family members.
6. Remove any heavy objects from overhead shelves in bedrooms. When people are asleep, they cannot protect themselves from falling objects.
7. **Water** is the most important element. Each person needs one (1) gallon for drinking and food preparation each day. Additional water is needed for sanitation, clean up, and for pets. A dog will need one (1) gallon a day and a cat will need at least a pint.

Storing water is easy. Wash and rinse clean 2-liter soda bottles or **clear plastic** juice bottles. Fill them with tap water, then add four (4) drops of liquid **chlorine bleach** (Clorox, the plain unscented type.)

Do not use the frosted type of plastic jugs that we buy milk and water in for storage purposes. These are for **short term** use and will deteriorate too soon for storage use.

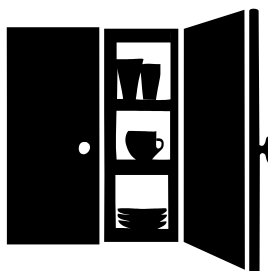
Keep some coffee filters available to be able to filter any cloudy or murky water you obtain during an emergency. Then treat it with sixteen (16) drops of chlorine bleach. Mix well and let stand for at least thirty (30) minutes before using.

A little Tang or Kool-Aid can be added at the time of drinking to avoid the slight bleach taste.

(OVER)

8. Make a GoKit Document Cache:

- Copies of the tax bill, mortgage papers, or property deed to prove homeownership; copy of lease to prove legal right to alternate shelter.
- Copies of 2 utility bills less than 1 year old to prove residency (owners and renters.)
- Copies of the credit card list and emergency numbers to report lost cards
- Copies of all family members' driver's licenses and auto registrations
- Copies of all Social Security Cards
- A copy of the wills for each family member. Make sure that an out of area family member has another copy in a safe place, and that your legal adviser has a copy.
- Copies of funeral arrangements in place or last wishes for adults.

**9. Make a Car Kit:** Have some simple things in your car. Think about yourself and family members.

- Water, some snack food, any required prescription medication, and any special needs for your children.
- Hat, jacket, blanket, or shawl. You may need to keep warm.
- Writing paper, several pencils, a flashlight. Keep the batteries **out** of the flashlight until you need it. This prevents corrosion of the flashlight.
- Shoes you can walk some distance in. Jogging shoes too worn for running are a good choice. Ladies should avoid high heels, open toes, and sandals.
- Simple personal hygiene and other items for your comfort.

Water, Food, and Medication should be **changed weekly**. Put a fresh supply into the kit and use what you take out. This way you do not have to buy extra supplies and nothing will spoil. Flashlight batteries should be replaced and used every few months.

Shoes and **extra clothes** need not be new. Those that are out of style, may need a little sew-up, or have a stain will work just fine in an emergency.

Start small. Then build as you can. **Begin**, the rest is easy.



School/Child Day Care Emergency Plans

Adult Day Care Emergency Plans

Some State DOT employees may have dependent children or dependent older adults in their households. These employees need to plan in advance for participation in State DOT emergency response activities, including deployment to the alternate continuity site if assigned.

To avoid stress for the employee and the dependent at the time of an emergency steps should be taken now to clarify how the dependent will be cared for during a disaster.

Know your children's school / day care emergency plan:

- Ask how the school/day care will communicate with families during a crisis. Is there an automated phone dialing system to contact your work, cell, or home phone? Is there a radio station that you should monitor for information from the school or district?
- Ask if the school/day care stores adequate food, water, and other basic supplies. Work with other parents to ensure that there is an adequate stockpile of water and medical supplies at the school. Suggest that each child bring a backpack of personal support food, clothing, and a family photo to store at the school/day care each school year. At the end of the year the students can use the food and water for a picnic or donate the food and water to a shelter.
- Ask how long children will be supervised at the school/day care if you are delayed in picking up a child in a disaster. For example, in California teachers must stay until the last child is released, or until the principal combines remaining classes of children under the supervision of a teacher. Day care, however, has no such requirement. Who on the staff is committed to staying with children until authorized caregivers pick them up?
- Find out if the school/day care is prepared to shelter-in-place if need be, and where they plan to go if they must get away. How will the children be transported and who will be responsible for them?
- Ensure that you know the school/day care's emergency release policy. Keep the emergency release card up to date with the names of family members, friends, and neighbors who are authorized to take the child from school during an emergency.
 - Be sure to include any court-ordered protective orders to prevent inappropriate relatives – including a non-custodial parent – from picking up the child.
 - Remember that only those on the emergency card will be allowed to take the child from school or day care, so ensure that there are adequate numbers of authorized caregivers.

- Ensure that these caregivers are aware that they may be picking up the child in an emergency. Be sure the authorized caregivers have each other's names, addresses, and contact information.
- Know the location of pick-up and what documentation will be required for the child's release: driver's license, other photo identification, or child's consent?

Know your adult dependent's day care or nursing home facility emergency plan:

- Ask how the day care or nursing home will communicate with families during a crisis. Is there an automated phone dialing system to contact your work, cell, or home phone? Is there a radio station that you should monitor for information from the facility?
- Ask if the facility stores adequate food, water, and other basic supplies. Work with other responsible caregivers to ensure that there is an adequate stockpile of water and medical supplies at the facility. For day care, suggest that each client bring a backpack of personal support food, clothing, and a family photo to store at the facility each school year. At the end of the year the clients can use the food and water for a picnic, or donate the food and water to a shelter.
- Ask how long clients will be supervised at the day care or nursing home if you are delayed in picking up a dependent adult in a disaster. Few adult day care facilities have legal mandates to stay at the facility. Nursing homes have contracts that should include continuous care, but check carefully to know exactly who will be staying at the nursing home until all clients are picked up and what alternate sites may be used for the care of the last few clients. Some nursing homes have mutual aid agreements, so be sure to know where your dependent might be sent.
- Find out if the facility is prepared to shelter-in-place if need be, and where they plan to go if they must get away. How will they be transported? How will their medical records, medical supplies, and pharmaceuticals be safeguarded if they are moved?
- Ensure that you know the facility's emergency release policy. Keep the emergency release card up to date with the names of family members, friends, and neighbors who are authorized to take the client from day care or the nursing home during an emergency.
 - Be sure to include any court-ordered protective orders to prevent inappropriate relatives – including a non-custodial spouse or children – from picking up the client.
 - Remember that only those on the emergency card will be allowed to take the client from school, so ensure that there are adequate numbers of authorized caregivers.
 - Ensure that these caregivers are aware that they may be picking up the client in an emergency. Be sure the authorized care givers have each other's names, addresses, and contact information.
 - Know the location of pickup and what documentation will be required for the client's release: driver's license, other photo identification, or client's consent?

You're On Your Own!

An Introduction to the Community Emergency Response Team (CERT)

Did you know ...?

- ❖ There is a very good chance that your neighborhood will be on its own during the early stages following a catastrophic disaster.
- ❖ After a catastrophic disaster, citizens will volunteer to help. Without proper training these people can expose themselves to potential injury and even death!
- ❖ Experience has shown that basic training in disaster survival and rescue skills improves the ability of citizens to survive until responders or other assistance arrives

City of Palm Bay Community Emergency Response Team (CERT) Program

The **City of Palm Bay Office of Emergency Preparedness (OEP)** has become a part of a national network of **CERT** communities. **OEP** has developed a program that is designed to help neighborhoods prepare for and respond after catastrophic disasters such as hurricanes, tornadoes, and other major emergencies.

Individuals completing CERT training may be affiliated with one or more of the following teams:

- **Neighborhood CERT:** Ten or more neighbors serving immediate residential neighborhood.
- **Business or Government CERT:** Co-workers serving places of business and surrounding areas, or county, municipal, or state agency employees
- **School CERT:** Faculty and staff serving a particular school and the surrounding areas.
- **Faith-Based CERT:** Teams based at a house of worship serving the immediate neighborhood, or travel into areas that need assistance.
- **Youth CERT:** Organized service-oriented groups, such as Civil Air Patrol, Fire or Police Explorers, or school-based clubs. 16 years and older.

Individuals not affiliated with a team may still be trained and serve the Palm Bay community.

Once trained, a **CERT** will be able to provide the following services to their neighborhood:

- ❖ Increase their neighborhood's disaster readiness
- ❖ Perform triage and provide medical services to the injured
- ❖ Perform light search and rescue operations
- ❖ Extinguish small fires and teach fire safety.
- ❖ Assess damage after a disaster
- ❖ Organize procurement of supplies

CERT Course Content

The basic course will include those components necessary to get the team started and become capable of performing basic **CERT** functions. Each member must complete 32 hours of classes in the following areas to become certified. Classes are scheduled to accommodate the needs of each team and are available at convenient times.

Teams will learn:

Disaster Preparedness: Instructs team members how to prepare themselves and their neighborhoods for the various hazards that may occur.

Team Organization and Disaster Psychology:

Addresses organization and management principles necessary for a **CERT** to operate successfully. Covers critical incident stress for victims as well as workers.

Medical Operations: Team members will learn how to conduct triage, establish medical treatment areas, and provide basic first aid for victims.

Damage Assessment: Team members will learn how to rapidly assess damage employing a standardized format used throughout the city.

Disaster Simulation: A small-scale disaster simulation is also a part of the basic program.

Fire Suppression: Team members will learn how to use extinguishers and other equipment to suppress small fires.

Light Search and Rescue: Team members will learn light search and rescue planning, techniques, and rescuer safety.

Frequently Asked Questions

What is a CERT Member?

A **CERT** member is a person who is trained to prepare for and respond after a disaster in their neighborhood. A group of ten or more members of a neighborhood, apartment complex, business, or similar residential area comprise a team. Persons not affiliated with a team may serve as individuals.

Who may join a CERT?

CERT is for anyone who is interested in helping his or her neighborhood prepare for a disaster and provide assistance afterward. Team training is preferred however persons may be trained even if they are not affiliated with a team.

Where can I get more information about the CERT program ?

Contact the City of Palm Bay Office of Emergency Preparedness at: (321) 952-3400 Ext. 4504
or E-mail to: schulm@palmabayflorida.org

The CERT Information Line:

(321) 952-3400 Ext. 4504 - This information line will make available training schedules and other information relevant to the CERT program

CERT WEBSITE RESOURCES:

City of Palm Bay Office of Emergency Preparedness
Program information and emergency preparedness tips
schulm@palmabayflorida.org

Federal Emergency Management Agency:

<http://www.fema.gov/emi/cert>

Information about the National CERT program and links to other CERT sites

Continuing Education:

Refresher classes are held several times a year and are open to all teams based on availability and need.

Some of the other available continuing education courses:

- **Terrorism Awareness**
- **Communications** (Amateur radio operations, hand-held)
- **CPR courses** are available. Contact the Palm Bay Fire Department at 321-409-6300
- **Critical Incident Stress Management**
- **Large-scale disaster simulations** are held once- a -year where all teams are invited to participate.

*CPR is **NOT** considered a component of CERT training.



CITY OF PALM BAY

**OFFICE OF
EMERGENCY
PREPAREDNESS**

Palm Bay Fire Department

EOC Training Materials Reference Materials

- Glossary of Terms
- About MTI (example sponsor info.)
- Instructor Bios (examples)



ICS Glossary of Terms and Acronym List

GLOSSARY	
Command	Field level tactical direction of an emergency; responsible for the directing, ordering, and/or controlling of resources at the field response level.
Community Emergency Response Team	An organization of neighborhood-based volunteers trained to respond to neighborhood needs in the immediate aftermath of an emergency; training supported by FEMA nationwide
Emergency Operations Center	A location from which emergency response is managed
Emergency Responder	Any employee of a public agency that responds to disasters
Finance/Administration Section	Responsible for all administrative and financial considerations surrounding an incident.
Field Operations Guide	A checklist-based guidebook to using each position in the Incident Command System
First Responder	An employee of a public agency who goes to the scene of an emergency to assist with its resolution
Incident Action Plan	An oral or written plan containing general objectives reflecting the overall strategy for managing an incident, goals, identification of operational resources and assignments.
Incident Command Post	The field location where the primary functions are performed. The ICP may be co-located with the incident base or other incident facilities.
Incident Command System	A tactical, hierarchical, flexible system for responding to emergencies at the field level
Incident Commander	The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources. The IC has overall authority and responsibility for conducting incident operations and is responsible for the management of all incident operations at the incident site.

Joint Operations Policy Statements	An official signed document that outlines the agreement between Caltrans and CHP regarding operating the State Highway System, including Incident Management.
Liaison Officer	A member of the Command Staff responsible for coordinating with representatives from cooperating and assisting agencies or organizations.
Logistics Section	Responsible for providing facilities, services and material support for an incident.
Multi-Agency Coordination System	Agencies and disciplines at any level of the ICS organization working together in a coordinated effort to facilitate decisions for overall emergency response activities, including the sharing of critical resources and the prioritization of incidents.
Mutual Aid	A mechanism to quickly obtain emergency assistance in the form of personnel, equipment, materials and other associated services. The primary objective is to facilitate rapid, short-term deployment of emergency support prior to, during, and/or after an incident.
National Incident Management System	An integrated system to enable public, NGO and private sector partners to seamlessly prevent, protect against, respond to, recover from and mitigate the effects of incidents, regardless of cause, size, location, or complexity, in order to reduce the loss of life or property and harm to the environment.
Operational Area	An intermediate level of the state emergency organization, consisting of a county and all other political subdivisions within the geographical boundaries of the county.
Operations Section	Responsible for all tactical incident operations and implementation of the Incident Action Plan; may include subordinate branches, divisions, and/or groups.

Planning/Intelligence Section	Responsible for the collection, evaluation and dissemination of operational information related to the incident and for the preparation and documentation of the IAP; maintains information on the current and forecasted situation and on the status of resources assigned to the incident.
Public Information Officer	A member of the Command Staff responsible for interfacing with the public and media and/or with other agencies with incident-related information requirements.
Sandbox exercise	A method of simulating actions and events using small vehicles and taped road markings on a table or floor
Safety Officer	A member of the Command Staff responsible for monitoring incident operations and advising the IC on all matters relating to operational safety, including the health and safety of emergency responder personnel.

ACRONYMS	
CERT	Community Emergency Response Team
DOC	Department Operations Center
EOC	Emergency Operations Center
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FOG	Field Operations Guide, especially in ICS
IAP	Incident Action Plan
ICP	Incident Command Post
ICS	Incident Command System
MACS	Multi-Agency Coordination System
MAP-21	Moving ahead for Progress in the 21 st Century; federal highway funding bill
NIMS	National Incident Management System
PIO	Public Information Officer
SOC	State Operations Center

MINETA TRANSPORTATION INSTITUTE (MTI)

The Mineta Transportation Institute (MTI) was established at San José State University by Congress as part of the Intermodal Surface Transportation Efficiency Act of 1991. The Institute was reauthorized in 1998 and 2006, and it was selected through a competitive process in 2011. MTI receives oversight from an internationally respected Board of Trustees (see insert) whose members represent all major surface transportation modes.

MTI was created to identify through research, to teach through graduate education and certification programs, and to disseminate publicly the best transportation practices in use throughout the world. This helps to ensure that our nation's transportation systems remain competitive. MTI's prestigious board and its affiliation with the College of Business, rather than with the School of Engineering, make it unique among the US University Transportation Centers. The Institute's transportation policy work is centered on three primary responsibilities:

Research: The Mineta Transportation Institute provides policy research to all levels of government and the private sector to foster the development of optimum surface transportation systems. Projects are selected through an extensive needs assessment process, and only research with a practical application is pursued. MTI is widely recognized for expertise in public transit, transportation security, transportation tax measures, high-speed rail, and land use.

Security: MTI established its National Transportation Safety and Security Center (NTSSC) in 1996. Ten years later, US DHS Secretary Michael Chertoff designated MTI as a National Transportation Security Center of Excellence. Since its inception, MTI's NTSSC has completed many detailed case studies, with additional studies in process, covering every major terrorist attack against a transportation target anywhere in the world since 1990. NTSSC also created a computerized chronology of every reported terrorist attack against a US transportation system since 1920. MTI conducted security needs assessments for international bridges and major tunnels, along with detailed SEMS/NIMS emergency response plan reconciliations and tabletop exercises for Caltrans districts. MTI also has conducted several Norman Y. Mineta National Policy Summits on related security issues. These were co-sponsored by US DOT, DHS, AASHTO, APTA, Caltrans and others.

Education: MTI, in partnership with the College of Business at San José State University, offers an accredited California State University Master of Science in Transportation Management and transportation-related graduate certificates.

The curriculum was designed in consultation with the MTI Board of Trustees and is delivered at night via videoconference throughout California so working people may earn their graduate degrees. A periodic needs assessment assures that the course work remains relevant to transportation industry needs. More than 200 students have graduated from the program, many of whom credit their degrees for their career advancements.

Technology Transfer: MTI uses several methods to distribute research findings. Research reports are posted to MTI's website, which averages more than 380,000 hits and 100,000 downloads per month. Research associates are frequently interviewed for news stories, and many articles have been published about MTI research. The Institute sponsors symposia and forums to present research results and to discuss transportation issues with industry professionals. Research associates are encouraged to publish articles about their work and to present at conferences. MTI's digital newsletter, World in Motion, covers innovation in the research and education programs. The Institute's extensive collection of transportation-related publications is integrated into San José State University's library.

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INSTRUCTOR NAME

John Smith, M.P.A., CEM, MEP is the [Continue with no more than one page of course-related education, training and experience. Be sure to include relevant FEMA certifications.]

State DOT District X
ICS for Transportation Field Personnel Training
Date
Evaluation

5= Completely agree

1= Completely disagree

Please circle your responses for 1, 3 and 5

Use the back side for extra space for any question, or for additional comments

1. The ICS seminar was useful for me in my State DOT role: 5 4 3 2 1

2. The most useful thing I learned at today's ICS seminar was:

3. The sandbox exercise was useful for me in my State DOT role: 5 4 3 2 1

4. The most useful information in the sandbox exercise was:

5. Today's ICS seminar and exercise provided adequate information for me to work effectively in an ICS event. 5 4 3 2 1

Important thing (s) that should be added for future training:

What should be eliminated from future training?

CHAPTER 6: BRIEFING TRAINING TOPICS INSTRUCTOR MSPOWERPOINT SLIDES AND SCRIPT

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NCHRP 20-59
ICS for Field-Level
Transportation Supervisors
And Personnel

Sponsored by
State Department of Transportation

Briefing Training
Instructor Notes and Slides



Today we are starting our shift with a brief review of the **Safety** elements of the **Incident Command System**. The safety of our personnel is the #1 objective of the State Transportation Agency at all times. In normal working conditions the methods for ensuring safety are well known and practiced.

However, under the stress of an emergency or disaster it might be easy to forget that your personal safety is still #1. If you rush in and behave in an unsafe manner you may become another victim, which enlarges the emergency and denies a resource to the response.

ICS provides a system for ensuring that all personnel operate safely at all times.

Safety in ICS

- Personnel safety is the #1 objective of all ICS operations



ICS for Transportation Field Personnel: Safety

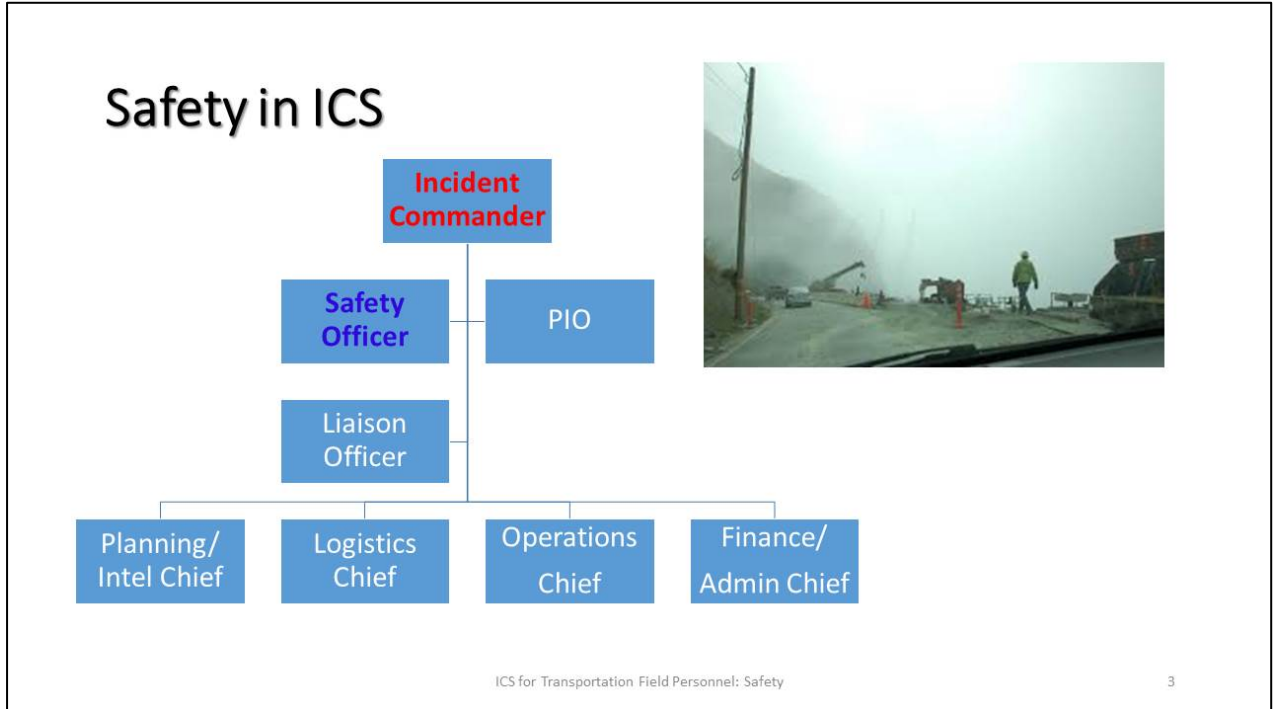
2

All ICS activities begin with the objective: “All personnel will work safely at all times.”

Safety begins with each worker using appropriate safety equipment and following appropriate safety rules.

Most State Transportation Agency field work is done on or near a functioning road, which is inherently dangerous. Warning signs should be placed far enough in front of the work area to give motorists warning to slow down and move over.

In an emergency or disaster these same precautions are even more important. Motorists may be frightened or confused by the event. Use cones, signs, lighted message boards and other safety equipment to warn and guide drivers for your safety and theirs.

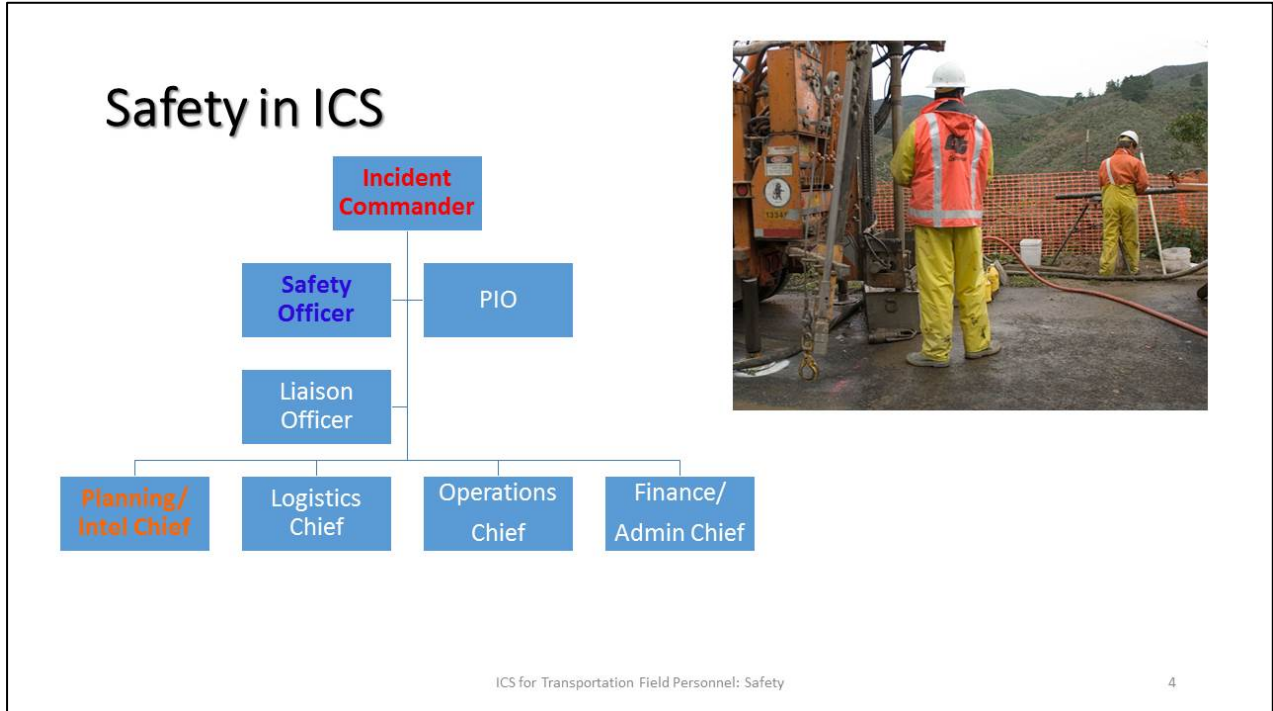


The first person at the scene of an emergency is the **Incident Commander**. He is in overall charge of the event. He should remove the Supervisor's folder from his vehicle, access the laminated card set, and read the guidance for Incident Commander. **Safety is the #1 objective for the Incident Action Period.**

When a second person arrives the Incident Commander designates the Incident Command Post and gives him the **Safety Officer** card. That person is now the Safety Officer, and must gather all personnel, conduct roll call, ascertain their health and safety status, and any potential areas of danger to avoid. He relays the roll call information to the Planning/Intelligence Section Chief, when appointed.

The Safety Officer is then responsible to ensure that everyone in the ICS organization acts safely at all times. This includes wearing the required personal protective equipment, such as a hard hat, reflective vest, eye protection appropriate for the work environment, appropriate footwear and any other safety equipment appropriate for the work being done.

The Safety Officer also ensures that all personnel are using the appropriate equipment for the task being performed, and that they are using the equipment safely. This is a continuous assignment that ends only when the incident is resolved.

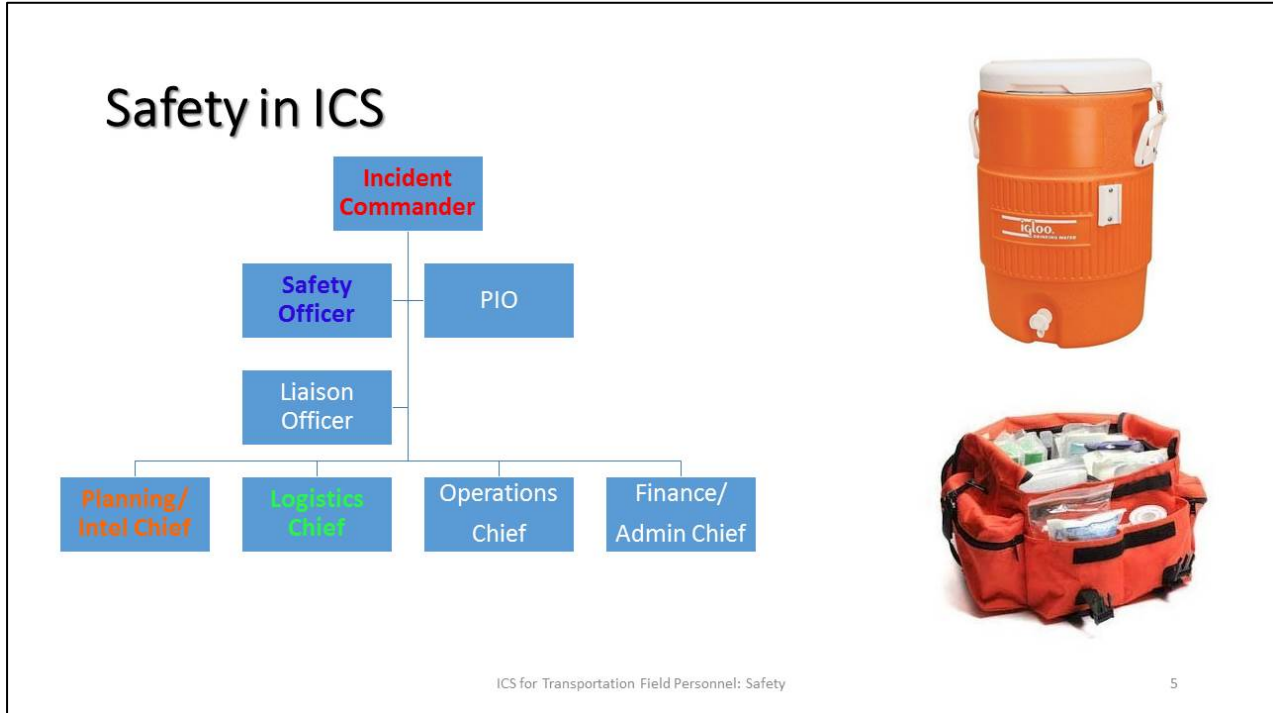


When a third person arrives on the scene, the Incident Commander gives him the **Planning/Intelligence Section Chief** card. He hangs up the Supervisor's Folder, completes the initial forms in concert with the Incident Commander, and obtains the personnel roll call information from the Safety Officer to create initial check-in. He then obtains the names, contact information – radio or phone currently in their possession- and current work location and assignment within ICS from the personnel present.

As additional people arrive they will check-in with the Planning/Intelligence Section Chief, and be given a specific assignment and a specific supervisor. The transportation workers will maintain these positions until the task is completed. When the initial assignment is complete they will check out with the Planning/Intelligence Section Chief. If the emergency has not been completely mitigated, the P/I Chief will give the worker a new assignment and a new supervisor.

If the worker has completed his shift, he will sign out with the Planning/Intelligence Section Chief and provide his destination, whether back to the yard or home.

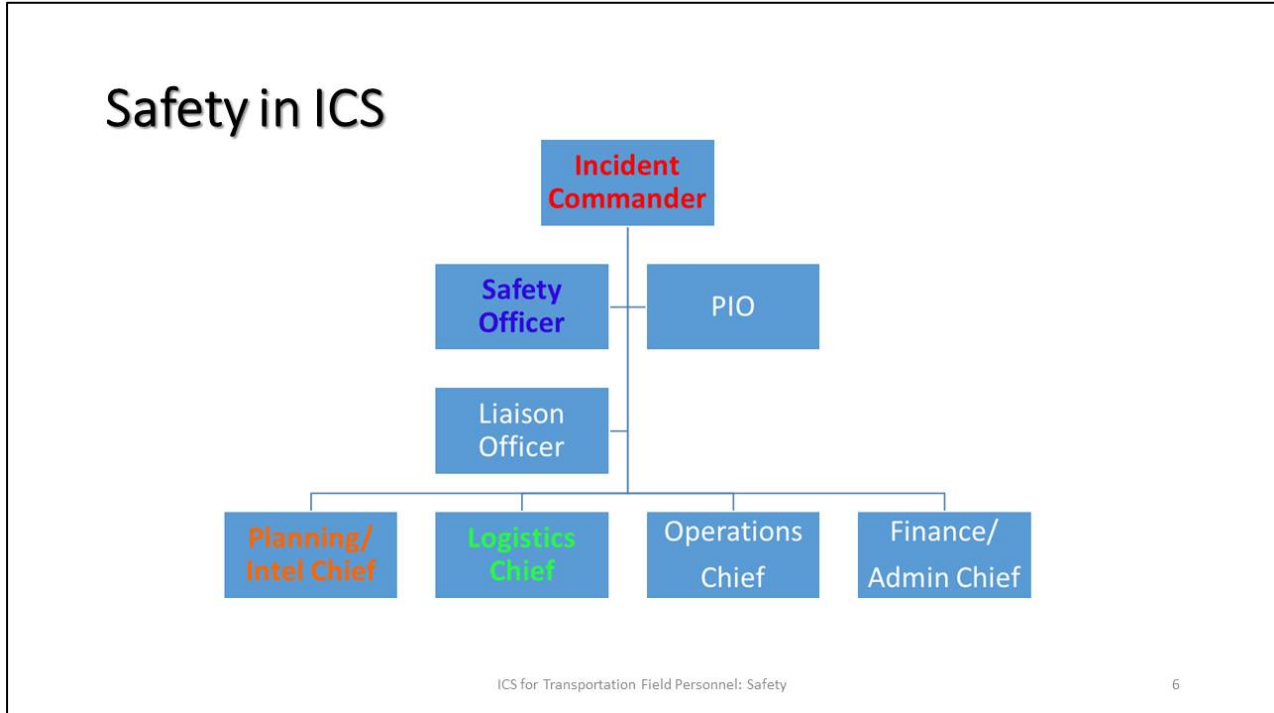
Through the P/I Chief's management of the check-in/ check-out process the Incident Commander maintains control over the locations and safety of all personnel in the Incident Command System.



When a fourth person arrives on the scene, the Incident Commander gives him the **Logistics Section Chief** card. That person's role is to inventory all supplies and equipment that are currently available at the scene. These are items that have been brought by the workers in their vehicles, or items that had been delivered to the scene earlier for routine work.

The Logistics Chief's initial focus for the inventory is quantities of items needed to support the safe operation of incident personnel: water, medical supplies, clothing, blankets and food. The next focus is tools, vehicles (availability and serviceability), radios, flashlights, batteries, signage and sanitation. This inventory checks whether the emergency has damaged or destroyed any of the items.

The Logistics Chief reports to the Incident Commander with a list of currently available personnel support items. Based on the Incident Commander's estimate of time for the resolution of the emergency, or 24 hours if the length is unknown, the Logistics Chief and Incident Commander jointly determine a list of items and quantities that need to be ordered expeditiously to support continued safe operations.



With the ICS established with four personnel the overall safety of the operation is protected. As additional personnel arrive they can be given Operations assignments to begin responding to the event. The Incident Commander can establish an Operations Section at any time when the combined duties of Incident Command and Operations Section Chief become too large for one person, or when the number of people being supervised exceeds seven, the mandated maximum span of control under ICS. A Finance/Administration Section can be established if needed.

The **Safety Officer** ensures that all workers are wearing the required safety equipment, and all work is being performed safely. The **Planning/Intelligence Section Chief** knows who is working at the emergency site and exactly where each has been assigned. The **Logistics Section Chief** knows what resources are available to support the safe operations of the emergency response, and what items have been ordered to augment the resources.

Remember that the **Incident Commander** retains all responsibilities not given to others. While the Planning/Intelligence Chief, Logistics Chief and Safety Officer are doing their jobs, the Incident Commander is sizing up the situation, determining the type and extent of damage, the number of possible injuries and whether the situation is getting better or getting worse. The required work of the Incident Commander, Safety Officer, Planning/Intelligence Section Chief and Logistics Section Chief should be able to be accomplished by the four ICS positions simultaneously, requiring ten minutes or less, yet ensuring a safe work environment.

Questions?



ICS for Transportation Field Personnel: Safety

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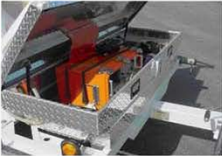
Are there any questions about today's briefing training on Safety and ICS?

Thank you for attending. Have a good day and always operate safely!



Communications

Incident Command System for Field Transportation Personnel



ICS for Transportation Field Personnel: Communications

8

Today we are starting our shift with a brief overview of **communications** in the **Incident Command System**. The safety of our personnel is the #1 objective of the State Transportation Agency at all times. Safety is also the #1 Objective of the Incident Command System. The communications functions within ICS help to ensure that all employees working in an ICS environment are safe.

Communications in ICS

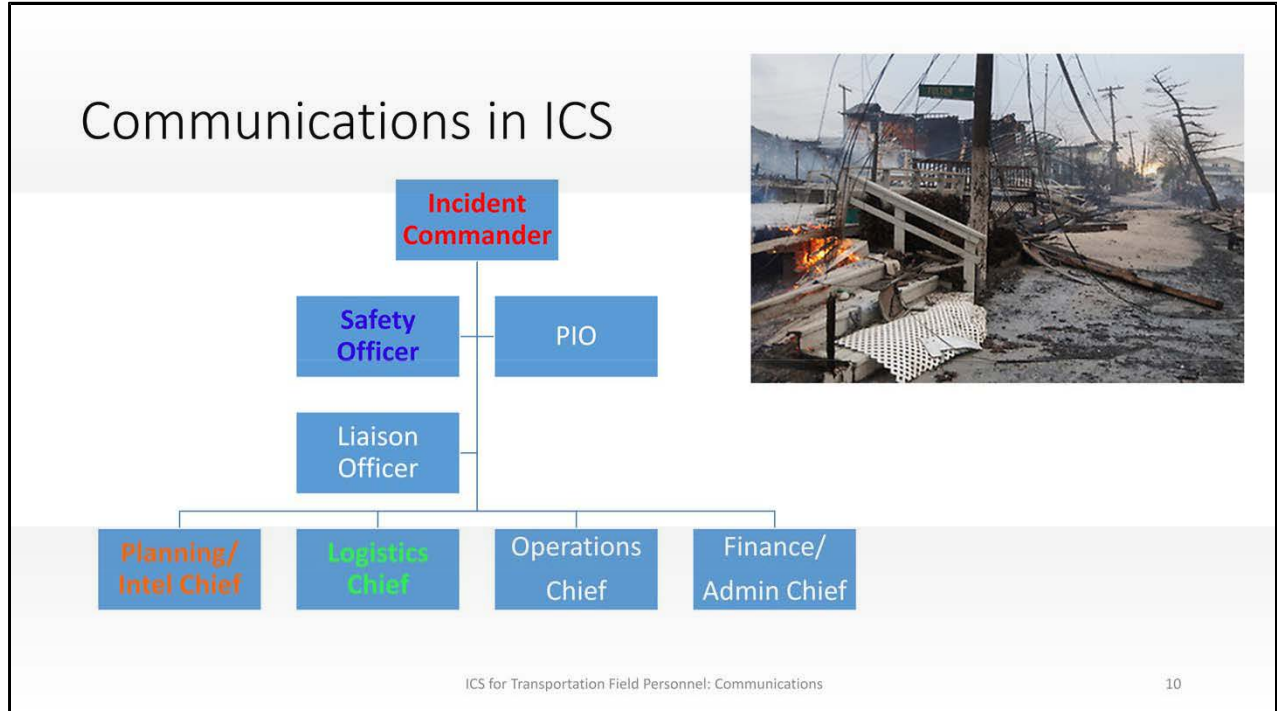
- Day to day operations
 - Mobile radios in vehicles
 - Hand held radios
 - Cell phones



ICS for Transportation Field Personnel: Communications

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The State Transportation Agency has a robust communications system for use in day-to-day activities. Many personnel have access to mobile radios in vehicles or to hand held radios. Some staff have cell phones. These devices allow the dispatchers to contact field crews for new assignments and safety updates. It also allows supervisors to stay in contact with crews that are spread out over a large work area.



In a disaster day to day communication systems may not work due to loss of power or damage to repeaters. Dispatch centers may be overwhelmed with calls, and unable to respond to all of them. People working together in an ICS event still must be able to communicate to ensure the safety of all personnel.

The Logistics Chief is responsible for the establishment of an ICS 205 Incident Radio Communications Plan, which is given to the Planning/Intelligence Section Chief for inclusion in the Incident Action Plan, or IAP. The Logistics Chief may make the plan himself, or assign it to someone with better qualifications and certifications, such as a dispatcher, if one is at the scene, who is designated as the Communications Unit leader.

For an incident where the State Transportation Agency has started the ICS, and there are few workers at the scene, the plan may just be a list of the names and radio call signs or cell phone numbers for the people working at the event. The plan must be tested to see if communications are still working for local communication at the event. Sometimes radios will still work locally using line-of-site communication when repeaters are not functioning.

Communications in ICS



ICS for Transportation Field Personnel: Communications

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In a large scale event, when the State Transportation Agency personnel join an existing ICS, their radio frequencies should be added to the Incident Radio Communications Plan, ICS 205, at check-in. Their individual names and call signs or phone numbers will then be added to the ICS 205A Communications List, using either their cell phones and DOT radio call signs, if they are working, or call signs for radios provided by the ICS organization.

The DOT unit's leader should receive a copy of the complete Incident Action Plan from the Planning/Intelligence Section, which will include the updated ICS 205 Incident Radio Communications Plan. The ICS 205A Communications List will be posted and distributed by the Logistics Chief, or by the Communications Unit if it has been established, and serves as a "phone directory" for the event, allowing personnel to contact other people assigned to the response.

Communications in ICS

- Disaster communications technologies
 - Text messaging
 - Satellite phones
 - Portable repeaters
 - Satellite dispatch radios
 - Transportable satellite stations
 - Portable Wi-Fi systems
 - Amateur radio



ICS for Transportation Field Personnel: Communications

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When State Transportation Agency workers are in remote locations after a disaster they may have to rely on alternate communications methods. For example, during Hurricane Katrina it was discovered that text messages sent by cell phone were successfully received even when voice communication was not possible.

Some DOTs have alternate communications technologies that are already deployed with supervisors, such as satellite phones. Other technologies have to be ordered by the Logistics Chief and brought to the scene of the incident. Portable repeaters and satellite communications technology may be included, as well as portable Wi-Fi systems that enable e-mail and other web-based technologies.

Some DOT members may be amateur radio operators and have their own HAM radios with them. Some DOTs sponsor amateur radio clubs as part of the Amateur Radio Emergency Service (ARES) or Radio Amateurs in Civil Emergency Service (RACES) organizations. Ham radio operators can join a worldwide network to communicate emergency information.

Communications in ICS



ICS for Transportation Field Personnel: Communications

13

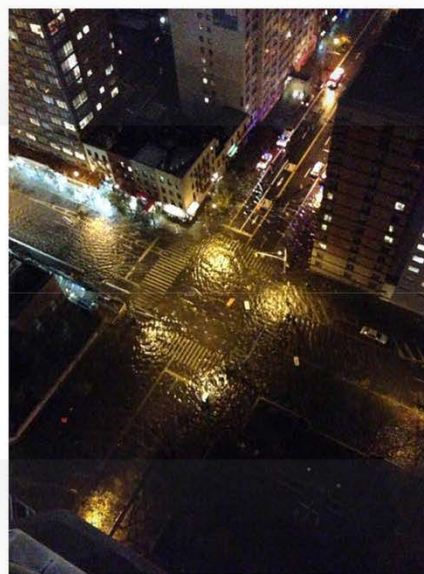
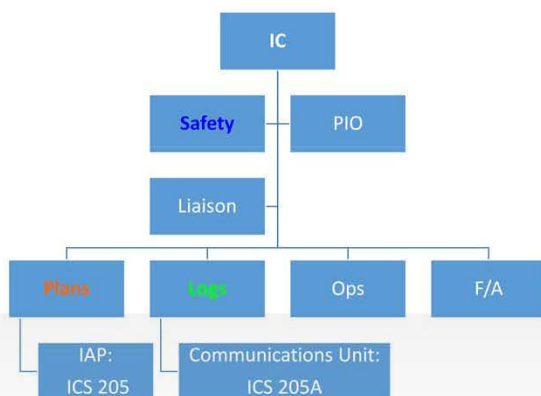
Phones and radios depend on power to broadcast. Your work vehicle emergency kit should include a variety of adapters, connectors and batteries to power your communications equipment when the internal batteries are no longer charged.

The work vehicle battery is the first option for charging a phone or radio. Proper connectors for the cigarette lighter or USB connection should be in your work vehicle emergency kit to connect the radio or phone to the vehicle's electrical system. However, the work vehicle battery will become drained if the engine is not running to recharge it. This means that there must be adequate fuel available to keep the vehicle running to charge its battery.

Portable batteries are available that will hold a charge for several months. These can then charge a phone or radio several times before failing. Solar chargers are also available for cell phones and some radios.

In a large event in austere conditions it is likely that portable generators will be provided to power communications equipment and recharge handheld units.

Communications in ICS



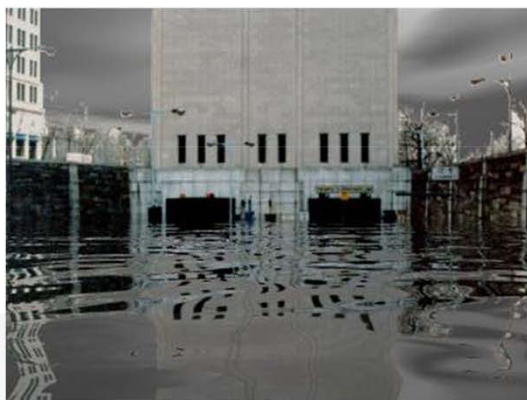
ICS for Transportation Field Personnel: Communications

14

Safety is the #1 Objective in all ICS Incident Action Plans. Communications plans and systems ensure that personnel receive all safety messages while they are in the field. This includes warnings about changing conditions and orders to move. Communications systems enable personnel to have immediate access to assistance with their work, or if they are injured.

While day to day communications may still function in an emergency, alternate means of communication are available when those methods fail. The Logistics Chief plays the key role in developing the communications plan and documenting the phone numbers, frequencies and call signs of all members of the ICS at an event.

Questions?



ICS for Transportation Field Personnel: Communications

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Are there any questions about today's briefing training on Communications and ICS?

Thank you for attending. Have a good day and always operate safely!



Today we are starting our shift with a brief review of the positions State Transportation Agency personnel might hold when collaborating with other professions within the Incident Command System. The safety of our personnel is the #1 objective of the State Transportation Agency at all times.

In many emergencies on the State Highway System, the State Transportation Agency will be just one profession working to save lives, protect property and the environment, and prevent the emergency from growing. Success requires collaboration across professions.

Collaboration with Other Professions



- Disasters require collaboration among many emergency response organizations to help the victims
 - Law enforcement
 - Fire
 - EMS
 - Transportation

ICS for Transportation Field Personnel: Collaboration

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When there is an emergency – whether a vehicle accident or a hurricane – transportation cannot usually resolve all aspects of the event alone. The #1 Objective of ICS is the safety of all personnel. The rest of the initial objectives - to save lives, protect property and the environment, and prevent the emergency from growing –will usually require collaboration with other professionals who provide rescue, care and protection to the victims and the community.

State Transportation Agency personnel frequently collaborate with other emergency response personnel on the state highway system when responding to vehicle accidents. Law enforcement personnel direct traffic, fire personnel rescue people trapped in vehicles and emergency medical services personnel provide field level expedient medical care to the injured. DOT personnel provide supporting services like traffic control devices, highway signage for notification of the accident to other drivers, management of hazardous materials spills, like vehicle fuel, and lane closures during emergency operations.

Collaboration with Other Professions

Roles for Transportation in ICS



- Transportation personnel may
 - Start Incident Command
 - First on scene
 - Transportation-only event
 - Join Incident Command
 - Agency Liaison
 - Tech specialist
 - Ops or Logistics
 - Join Unified Command
 - Multiple agencies with equal responsibility for the outcome

ICS for Transportation Field Personnel: Collaboration

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State Transportation Agency personnel may be part of ICS at several levels. If DOT personnel are the first on the scene, especially in a remote area, they may establish ICS, notify dispatch of the emergency, conduct size up, begin to regulate traffic flow to ensure access for other emergency responders, and order additional resources. They may even provide exigent care to injured victims.

More often DOT personnel will join an existing ICS in any of several roles, including agency liaison, technical specialist, or as part of Operations or Logistics.

In large or long term events DOT personnel may help to create a Unified Command.

Collaboration with Other Professions

- Starting incident command
 - First on the scene
 - Turn over to other profession
 - Transportation-only event
 - Planned event



ICS for Transportation Field Personnel: Collaboration

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State Transportation Agency personnel may start ICS if they are the first emergency responders on the scene of an event, especially a vehicle accident in a remote area. The DOT staff will establish ICS, notify Dispatch of the event, appoint a Safety Officer, Planning/Intelligence Section Chief and a Logistics Section Chief, and begin size up of the event, perhaps even ordering additional resources.

Once another emergency response organization arrives the DOT personnel may turn over the Incident Command role to a Fire or Law Enforcement officer with more qualifications, certifications or experience. The DOT staff may then become part of the ICS, or may be relieved until all life safety issues have been resolved.

Some events only involve the failure of the State Transportation Agency property, with no life safety implications, and DOT personnel may fully staff the ICS through the event until its resolution. Sometimes DOT staff will use ICS to manage planned maintenance or a planned road closure for another purpose. Other professions may not be needed, and DOT will manage all ICS roles throughout the event.

Collaboration with Other Professions

- Joining existing Incident Command
 - As Agency Liaison
 - As Technical Specialist
 - In Operations
 - In Logistics
 - Accept IC from another agency



ICS for Transportation Field Personnel: Collaboration

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State Transportation Agency personnel may be requested to assist with an existing ICS event. In some cases the Incident Commander will request a DOT agency liaison to provide information on transportation assets and capabilities that might be needed as resources for the resolution of the problem. This could include the use of operators and equipment, or the application of specialized knowledge.

Some DOT personnel might be needed as technical specialists. They might be invited to join the Planning/Intelligence Section to provide information on the geology of the area, the construction material in the road, or the design of the road or bridge, including disaster resilient elements list wind and shaking resistance.

DOT assets and personnel might be requested to join ICS in the Operations Section, when their capability is needed for rescue, road clearance, tree removal or expedient repairs to the road surface to provide emergency access for other responders.

DOT assets and personnel might be requested to join ICS in the Logistics Section, when personnel support equipment, communications equipment or power and lighting might be needed.

In some cases DOT personnel might join the ICS, and then the most qualified and experienced DOT staff member present may assume Incident Command when all life safety issues have been resolved, but the road still needs clearance or repair before being reopened.

Collaboration with Other Professions



- Unified Command

- All professions have an equal role in developing the Common Objectives for the Incident Action Plan (IAP)
- “Unified Command is a team effort that allows all agencies with jurisdictional responsibility for an event...to participate in the management of the incident. Developing...a common set of incident objectives...without losing...authority, responsibility or accountability.” FEMA FOG, 2010, p. 6-2.

ICS for Transportation Field Personnel: Collaboration

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Many emergencies that involve the State Highway System require the cooperation of multiple agencies to manage and resolve the situation. Traffic control will usually be the responsibility of law enforcement, which may have initial Incident Command. If there are trapped or injured people the fire department and emergency medical services personnel may be called to the scene to care for life safety issues. In many jurisdictions the fire service would have Incident Command until all life safety issues were resolved. DOT personnel would normally have a supporting role in traffic management, access and egress control and debris management while the life safety issues were addressed. Utility workers might be needed to mitigate hazards like downed power lines or broken pipelines. If the emergency occurred at an overcrossing of a city street or county road there could be other transportation personnel working at the scene.

When multiple professions or multiple jurisdictions have responsibilities for the management of the event a Unified Command may be established. This allows the development of a common operating picture among the professions and jurisdictions, and the creation of a single Incident Action Plan with unified objectives that will guide the work of all the organizations present. Unified Command is collaboration among many emergency responders for the benefit of the victims, the community and the resolution of the emergency.

Collaboration with Other Professions



- ICS provides the framework for collaboration.
- “A successfully managed multiagency incident will occur only when the participating agencies’ personnel have confidence in each other’s competencies, authorities, responsibilities and limitations as they relate to the incident.”
- FEMA FOG, 2010, p. 6-3.

ICS for Transportation Field Personnel: Collaboration

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The Incident Command System provides a framework that allows emergency responders from multiple agencies to collaborate on resolving a common challenge. It allows for the structured interaction between multiple professions, and provides for each to use the personnel skills and resources at its disposal to assist with the resolution of the emergency.

Collaboration at an event is enhanced by holding joint training on ICS and by regular exercises of the ICS that include all the jurisdictions and professions that might be working together in an emergency. The State Transportation Agency must be recognized as a full partner in response and recovery for all emergencies involving the State Highway System.

“A successfully managed multiagency incident will occur only when the participating agencies’ personnel have confidence in each other’s competencies, authorities, responsibilities and limitations as they relate to the incident.”

Collaboration with Other Professions



23

Are there any questions about today's briefing training on Collaboration with Other Professions in ICS?

Thank you for attending. Have a good day and always operate safely!

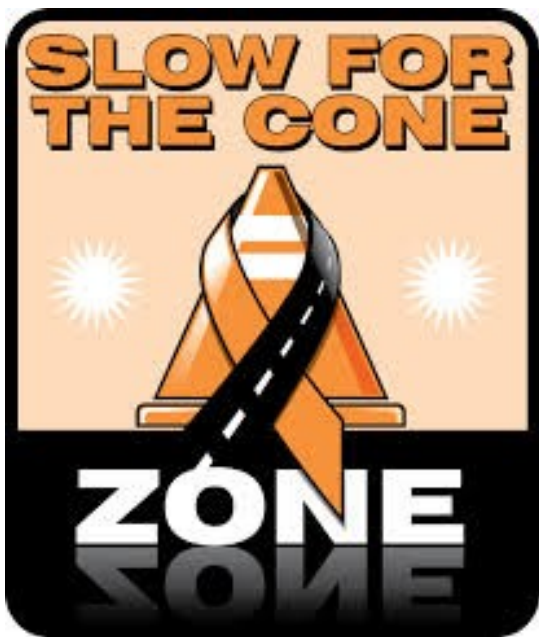
CHAPTER 7: BRIEFING TRAINING TOPICS STUDENT HANDOUTS WITH EVALUATION SHEET

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NCHRP 20-59 (30)
ICS for Field Level
Transportation Supervisors
and Personnel

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State Transportation Agency

Briefing Training
Student Handouts



SAFETY

Incident Command System
for Field Transportation Personnel

ICS for Transportation Field Personnel: Safety

1

Safety in ICS

- Personnel safety is the #1 objective of all ICS operations




ICS for Transportation Field Personnel: Safety

2

Safety in ICS


```
graph TD; IC[Incident Commander] --- SO[Safety Officer]; IC --- PIO[PIO]; IC --- LO[Liaison Officer]; IC --- P[Planning/Intel Chief]; IC --- L[Logistics Chief]; IC --- O[Operations Chief]; IC --- FA[Finance/Admin Chief];
```



ICS for Transportation Field Personnel: Safety 3

Safety in ICS

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graph TD; IC[Incident Commander] --- SO[Safety Officer]; IC --- PIO[PIO]; IC --- LO[Liaison Officer]; IC --- P[Planning/Intel Chief]; IC --- L[Logistics Chief]; IC --- O[Operations Chief]; IC --- FA[Finance/Admin Chief];
```



ICS for Transportation Field Personnel: Safety 4

Safety in ICS

The organizational chart shows the Incident Commander at the top. Reporting to the Incident Commander are the Safety Officer, PIO, and Liaison Officer. Reporting to the Liaison Officer are the Planning/Intel Chief, Logistics Chief, Operations Chief, and Finance/Admin Chief. To the right of the chart are two images: an orange Igloo cooler and an orange safety bag filled with supplies.

```
graph TD; IC[Incident Commander] --- SO[Safety Officer]; IC --- PIO[PIO]; IC --- LO[Liaison Officer]; LO --- PIC[Planning/Intel Chief]; LO --- LC[Logistics Chief]; LO --- OC[Operations Chief]; LO --- FAC[Finance/Admin Chief];
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ICS for Transportation Field Personnel: Safety

5

Safety in ICS

The organizational chart shows the Incident Commander at the top. Reporting to the Incident Commander are the Safety Officer, PIO, and Liaison Officer. Reporting to the Liaison Officer are the Planning/Intel Chief, Logistics Chief, Operations Chief, and Finance/Admin Chief.

```
graph TD; IC[Incident Commander] --- SO[Safety Officer]; IC --- PIO[PIO]; IC --- LO[Liaison Officer]; LO --- PIC[Planning/Intel Chief]; LO --- LC[Logistics Chief]; LO --- OC[Operations Chief]; LO --- FAC[Finance/Admin Chief];
```

ICS for Transportation Field Personnel: Safety

6

Questions?



ICS for Transportation Field Personnel: Safety

7



Communications

Incident Command System for Field Transportation Personnel



ICS for Transportation Field Personnel: Communications

8

Communications in ICS

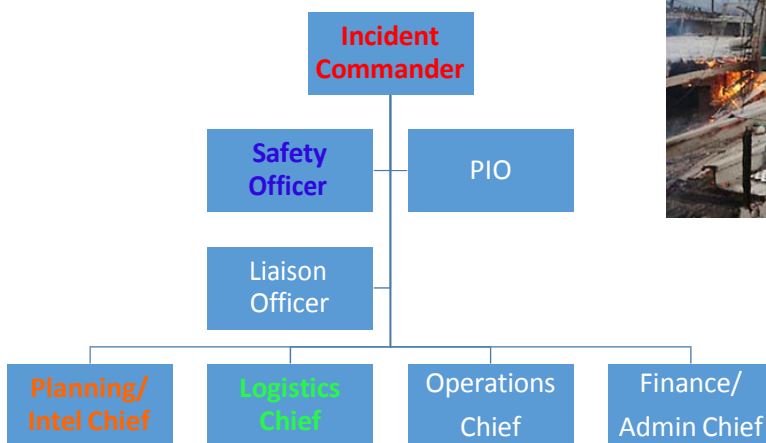
- Day to day operations
 - Mobile radios in vehicles
 - Hand held radios
 - Cell phones



ICS for Transportation Field Personnel: Communications

9

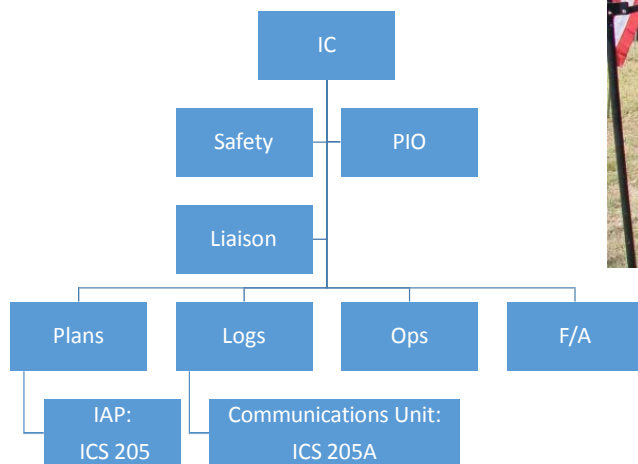
Communications in ICS



ICS for Transportation Field Personnel: Communications

10

Communications in ICS



ICS for Transportation Field Personnel: Communications

11

Communications in ICS

- Disaster communications technologies
 - Text messaging
 - Satellite phones
 - Portable repeaters
 - Satellite dispatch radios
 - Transportable satellite stations
 - Portable Wi-Fi systems
 - Amateur radio



ICS for Transportation Field Personnel: Communications

12

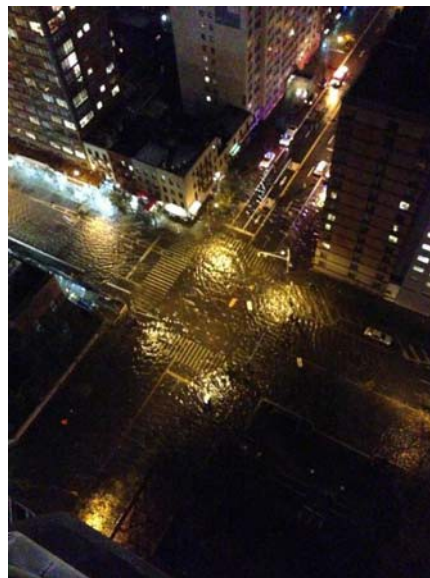
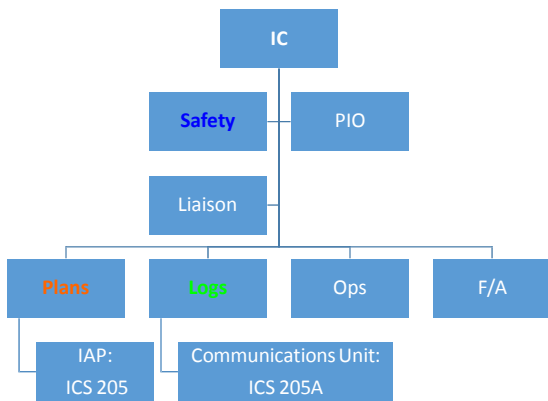
Communications in ICS



ICS for Transportation Field Personnel: Communications

13

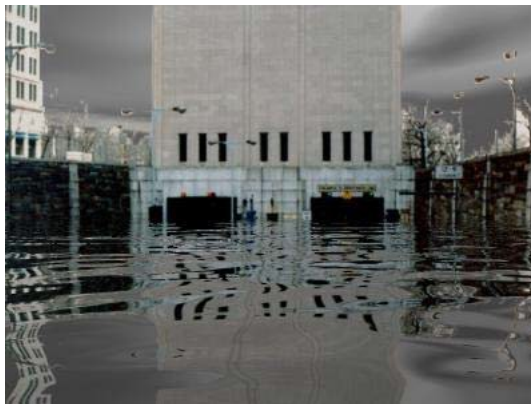
Communications in ICS



ICS for Transportation Field Personnel: Communications

14

Questions?



ICS for Transportation Field Personnel: Communications

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Collaboration with Other Professions

Incident Command System for Field Transportation Personnel

ICS for Transportation Field Personnel: Collaboration

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Collaboration with Other Professions



- Disasters require collaboration among many emergency response organizations to help the victims
 - Law enforcement
 - Fire
 - EMS
 - Transportation

ICS for Transportation Field Personnel: Collaboration

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Collaboration with Other Professions

Roles for Transportation in ICS



- Transportation personnel may
 - Start Incident Command
 - First on scene
 - Transportation-only event
 - Join Incident Command
 - Agency Liaison
 - Tech specialist
 - Ops or Logistics
 - Join Unified Command
 - Multiple agencies with equal responsibility for the outcome

ICS for Transportation Field Personnel: Collaboration

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Collaboration with Other Professions

- Starting incident command
 - First on the scene
 - Turn over to other profession
 - Transportation-only event
 - Planned event



ICS for Transportation Field Personnel: Collaboration

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Collaboration with Other Professions

- Joining existing Incident Command
 - As Agency Liaison
 - As Technical Specialist
 - In Operations
 - In Logistics
 - Accept IC from another agency



ICS for Transportation Field Personnel: Collaboration

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Collaboration with Other Professions



- Unified Command

- All professions have an equal role in developing the Common Objectives for the Incident Action Plan (IAP)
- “Unified Command is a team effort that allows all agencies with jurisdictional responsibility for an event...to participate in the management of the incident. Developing...a common set of incident objectives...without losing...authority, responsibility or accountability.” FEMA FOG, 2010, p. 6-2.

ICS for Transportation Field Personnel: Collaboration

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Collaboration with Other Professions



- ICS provides the framework for collaboration.
- “A successfully managed multiagency incident will occur only when the participating agencies’ personnel have confidence in each other’s competencies, authorities, responsibilities and limitations as they relate to the incident.”
- FEMA FOG, 2010, p. 6-3.

ICS for Transportation Field Personnel: Collaboration

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Collaboration with Other Professions



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State DOT District X
Briefing Training: Topic (substitute name of topic)
Date
Evaluation

5= Completely agree

1= Completely disagree

Please circle your responses for 1, 3 and 5

Use the back side for extra space for any question, or for additional comments

1. The briefing was useful for me in my State DOT role: 5 4 3 2 1

2. The most useful thing I learned at today's ICS seminar was:

3. Today's briefing seminar provided useful information for working effectively in an ICS event. 5 4 3 2 1

Important thing (s) that should be added for future training:

4. What should be eliminated from future briefing training?

CHAPTER 8: DISCUSSION-BASED SCENARIOS WITH INSTRUCTOR NOTES

Sponsoring Agency Logo

NCHRP 20-59(30) ICS for Field-Level Transportation Supervisors and Staff

Sponsored by
State Department of Transportation

**Discussion-Based Training
Scenarios with Instructor Notes**

Scenario: Wildland Fire

DOT Joins ICS

It is September 10 at 10:00 am. There is a wildland fire burning in Hilly County near the town of Foresthill off Yankee Jims Road. Fire personnel from ten agencies have responded to the fire, and State Fire Department is the Incident Commander. They have reopened an old fire camp to support operations but access is limited.

You have been assigned to join State Fire Department at their command post. Your mission is to repair a temporary road to the fire camp in support of fire operations. The existing dirt road has not been used for over twenty years and it is overgrown with brush. The area has already been surveyed and the track of the old road is visible in some sections. Your job is to restore the road for use by heavy fire equipment. You will be joining the existing Pollock Pines Incident.

The DOT Task Force includes two Senior Superintendents, and field crews and supervisors sufficient to operate heavy equipment for 2 12-hour shifts each day. The Task Force has its own grader, roller, back hoe, light unit and generator. Each vehicle is on its own trailer pulled by a truck. It will need fuel for all the vehicles after the first shift. There are 18 people in the Task Force who will have to be fed and housed during the road building operation.

Discussion:

[Note to Instructor:

If possible set up a table with appropriate small vehicles to represent the Incident Command Post, the Staging Area, the track that will become a road, the camp area, and the main road with the designated DOT vehicles. Include a motel and restaurant down the main road. Encourage students to move the vehicles around during the discussion to reflect the actions they would take. For example, they should park all the heavy equipment in Staging for the night. Do they have space in the superintendents' sedans for the people who were in the trucks moving the heavy equipment? If not, how will they get to lodging and food?]

1. Where do you go when you get to Yankee Jim Road? It is getting too dark to survey the camp road tonight.

[Discuss the need to go to the Command Post to Check-In. This Task Force will check in as a unit, with each of the senior superintendents completing one T card for each shift of the DOT Task Force with all the names and contact information for the personnel on each shift and all the shared equipment. Since they are not immediately assigned due to darkness they will park the heavy equipment in Staging and take the personnel for food and lodging.]

2. How will you get food and lodging for tonight?

[Discuss the role of check-in for getting integrated into the fire camp system. If the fire camp is inaccessible which options do you have for tonight? Does one of the superintendents have a DOT credit card authorized to pay for food and lodging for tonight? Discuss the role of Finance/Administration for getting DOT reimbursed for lodging and food. How will they move the 18 DOT Task Force members?]

3. How will you get fuel for the road building equipment, which needs diesel? For the trucks that need gas? For the lighting trailer generator that needs diesel?

[Discuss the role of Logistics for getting needed supplies and equipment.]

Scenario: Hurricane

State DOT as a Technical Specialist in Operations

Hurricane Lulu has developed from a tropical storm into a Category 2 hurricane as it passed over Cuba. Florida has been hit with 120 mile per hour winds and driving rain as the hurricane passed through, and the storm, which is over 500 miles in diameter, has already begun to cause storm surge, flooding and wind damage in your state. Your state's emergency operations center has been activated, mandatory evacuations of the coast have been underway for several hours, and the State Highway System has traffic jams along most routes moving away from the coast. One of these State Highway System routes is the main street of Leafville, where your State DOT Maintenance District headquarters is located.

Leafville, a community of 10,000 people, 25 miles from the coast, has declared a state of emergency for the impending storm, and begun the evacuation of low lying areas of the community to a shelter at the high school. The high school is located one block from the town's Main Street, which is US Route X, and part of the State Highway System. There are no interstates in the area. Traffic is beginning to build up in the community as residents leave their homes with multiple vehicles per household, heading for the high school shelter, and some feeder streets are clogged. Residents are fearful and driving aggressively. The local streets department director is new to the area, and has never been through a hurricane before. He is asking for a traffic control specialist from the State DOT Maintenance District to join the Operations Section at the Incident Command Post to advise on improving traffic flow through the community to the high school.

Discussion:

[Note to Instructor: set up a table with little cars and buildings to show the location of the Command Post, US Route X through town, the high school, traffic coming from the coast, some city streets including residential feeder streets, and any other visuals that will help the participants understand the scenario events. Include some traffic control signs, cones or other accessories that might be useful. Encourage students to move the vehicles and traffic control devices around, or introduce more vehicles and traffic control devices from a staging lot at the side of the table.]

1. You have been assigned to be the technical specialist because you have lived in the community for twenty years and been through several hurricanes and tropical storms. What personal supplies and equipment would you need?

[Discuss weather-related clothing in case of needing to make field surveys of conditions, camera/cell phone to record conditions, which State DOT vehicle to use for personal transportation to the command post and potentially around the community. How will you communicate back to the State DOT Maintenance District office for additional information or resources?]

2. It appears that the Operations Section needs some specialist information on State Highway System roadway capacity (notably Main Street), areas of historic flooding, methods that have worked for traffic management in the past. What information will you need to have with you to provide this assistance?

[Discuss where you can get traffic capacity for US Route X, which is likely to be used for evacuation to the high school. Are there any other State Highway System roadways that would be useful? Could you do anything about the coastal evacuation routing to lessen its impact on Main Street? Discuss how traffic lights on the State Highway System might be managed to facilitate traffic flow, and how you would interface with that system from the Command Post. Discuss other kinds of traffic control devices and strategies that might be used and how State DOT would support the evacuation.]

3. It appears that there is no plan for people with access and functional needs to get close to the high school shelter, or for parking the vehicles of the evacuees once the school's lot is full. What information would you need to bring to the command post to help develop such plans?

[Discuss what kinds of maps you would need and whether they are available on your smart phone, as paper maps, and what would be the best strategy for getting information during the on-going storm conditions? What kinds of resources might you offer to help improve evacuation and where and how would the town get them?]

Scenario: Flooding

State DOT in Unified Command

The Mississippi River is swollen with spring melt from the snow and ice that has accumulated in communities along its length throughout the winter of 2015. Oakton is a town of 50,000 people on the western banks of the Mississippi River. It draws its drinking water from the Mississippi River at the northern boundary of the town, and disposes of its storm water runoff along the length of the city's shoreline, and its water treatment plant effluent in the river about five miles south of the drinking water intake.

The interstate crosses the Mississippi River after it passes through Oakton and after crossing the river is in another state. The interstate roadway's bridge carries the electrical power grid connection cables, phone and internet fiber optic lines, and a natural gas line. This is the only bridge across the river for ten miles north and ten miles south. The bridge approach crosses some low lying areas that are prone to flooding, however most of the interstate is elevated as it passes through the commercial district of the town.

About 25% of the town is below the river and protected by a levee that is owned by the Army Corps of Engineers. It has only 500 year flood protection. Most of the town is in a 100 year flood plain. The main commercial district of the community is in the flood plain. The only hospital is in the flood plain, and the only large rehabilitation center is next door to the hospital, in the flood plain. The local government buildings are on raised pads but are in the commercial district in the flood plain. Two of the four fire stations are in the flood plain and the police station is in City Hall, on a raised pad but in the flood plain. The Public Safety Answering Point (9-1-1 center) is in the City Hall but on the 4th floor. There are six assisted living centers in town, of which five are in the flood plain. The only commercial day care center is in the flood plain.

The state's hydrologist has warned that the river is flooding north of Oakton. The mayor has declared a local emergency, and has all available city resources sandbagging critical buildings. The city's emergency operations center is open and the police chief has just called for an evacuation of the critical facilities in the flood plain. He is discussing using the interstate as an evacuation route. The Oakton Fire

Chief has been appointed Incident Commander and is working with city staff from law enforcement, the building department and the streets department to create a multi-modal evacuation plan. He has asked State DOT to join the Unified Command, and they have asked a senior field superintendent from the Maintenance District for Oakton to represent the State DOT.

Discussion:

[Note to Instructor: set up a table with little cars and buildings to show the location of the Command Post, the river, the flood plain, critical buildings in the flood plain (fire stations, city hall, shops, hospital/rehab center), the interstate roadway through town and across the river, the levee, rescue vehicles remaining at the Command Post and any other visuals that will help the participants understand the scenario events.]

1. Who would be the best person to represent the State DOT Maintenance District in the Unified Command?

[Discuss what the purpose of the Unified Command is. Discuss who has participated in local exercises with the community. Consider what kinds of requests might come from the Unified Command to the State DOT.]

2. What would the Maintenance District’s objectives be for an evacuation plan?

[Discuss what role the interstate plays in the local circulation pattern. What role is it likely to play in an evacuation plan? What steps would need to be taken by the Maintenance District to protect its assets?]

3. What resources does the Maintenance District have that might be useful in an evacuation of the flood plain?

[Discuss the use of lighted sign board, highway emergency radio system, State DOT website and other communications assets to assist with traffic management during the evacuation. Discuss the State DOT’s priorities for evacuation – least disruption of travel on the interstate and maintenance of the interstate bridge connection. Discuss how the State DOT would get reimbursed for its costs in providing staff and resources for evacuation management off the State Highway System, like the movement of signage and traffic control devices, creation of road closures in dangerous low lying areas, facilitation of the delivery of critical supplies like drinking water.]

Scenario: Bridge Collapse

State DOT Assumes Incident Command

It is November 15. Three days ago a deck truss bridge over the Old Muddy River collapsed at the end of rush hour when a truck with an oversize load ran into one of the steel beams, dislodging the gusset plate, which led to the structural failure. City Fire Department was the initial Incident Commander because there were people trapped on the undamaged portions of the bridge who had to be rescued, as well as people and vehicles in the water. During this time the State Police led the Law Enforcement Branch of the Operations Section. They detained the truck driver, did a blood alcohol and drug test and interviewed him. He stated that the wind on the span over the river caused him to lose control of the wide load, which shifted as he approached the steel girder that he hit. The State Police cleared him of drug or alcohol involvement.

One State DOT engineer was a Technical Specialist in the Operations Section to advise on issues of bridge construction and failure. Other State DOT personnel were assigned to the Logistics Section where they organized bridge inspection equipment and other specialized equipment to assist with the early investigation of the failure. As soon as the victims were rescued or recovered the Incident Command was turned over to State Police on Day Two, and they did a crime scene investigation of the portions of the bridge still standing to confirm the driver's story. Having completed their investigation they are turning over Incident Command to the State DOT today.

You have been appointed State DOT Incident Commander for the first day.

Discussion:

[Note to Instructor: set up a table with little cars and buildings to show the location of the Command Post, the broken bridge, rescue vehicles remaining at the Command Post and any other visuals that will help the participants understand the scenario events. Encourage students to move the vehicles around or introduce more vehicles from a staging lot at the side of the table.]

1. Where will you go to assume Incident Command?

[Discuss the location of the Incident Command Post, and what information you could get from current State DOT staff who are working in the ICS now.]

2. What documentation would you need from the departing Incident Commander?

[Discuss the existence of an Incident Action Plan. Where would you get a copy?

How would you document the turnover of command from Law Enforcement?

Would the new IC ask the departing IC to remain for an hour until all of the transition of operations to State DOT has been completed? What about supplies that have been ordered and not delivered? Expenses from before you assumed command? Photos that have been taken? What is the prognosis for the event?]

3. Where would you get personnel to fill the ICS positions? Which would you fill with State DOT personnel and which would you request to fill with personnel from other agencies? Why?

[Discuss what positions would be needed by State DOT for a complete ICS staff. How soon could they arrive? Discuss other sources of personnel to fill specialty roles. Ensure that departing ICS staff leave contact information with new staff for follow-up.]

Instructor's Guide: Sandbox Method of Exercises



Note the engineer's tape creating the "highway", the simulated accident with the little cars, the emergency vehicles in Staging, the student book with the scenario, and the Quick Start Card sets that are distributed to students to help them work through the scenario.

The purpose of the Sandbox Method is to help students visualize the movement of personnel and equipment through a scenario as they practice their Incident Command System knowledge and terminology. This system has long been used by the US military to work an operational problem, or to explain an operational plan. Field personnel are accustomed to thinking on their feet, and are likely to appreciate a kinesthetic approach to exercising their critical thinking skills and knowledge of a problem. Adult learning theory suggests that most adults remember best what they hear, see and do. The Sandbox Method incorporates these elements.

Matchbox type cars can be bought in sets from internet resources that include construction equipment, cones and signage. Emergency responder vehicles and passenger cars also come in sets. On the internet these sets are generally less than \$20 for 30 or more small vehicles. You can use little buildings to complete the community, but these can be expensive. For a more flexible and cost-effective

approach, create a building foot print with a sheet of plain cardstock cut to relative scale to represent significant buildings, parking lots, parks and other aspects of the community. Label the cards, or draw symbols on them to identify the building or community element that the card represents.

As students work through the scenario they can move the vehicles and traffic control devices, and block roads to simulate the progress of the problem.

As you demonstrate scenarios you will develop a collection of community element footprint cards that can be reused. The vehicles can be used for training in many configurations.

CHAPTER 9: DISCUSSION-BASED SCENARIOS STUDENT HANDOUTS WITH EVALUATION SHEET

Sponsoring Agency Logo

NCHRP 20-59(30) ICS for Field-Level Transportation Supervisors and Staff

Sponsored by State DOT

Discussion-Based Training Student Handouts

Scenario: Wildland Fire

DOT Joins ICS

It is September 10 at 10:00 am. There is a wildland fire burning in Hilly County near the town of Foresthill off Yankee Jims Road. Fire personnel from ten agencies have responded to the fire, and State Fire Department is the Incident Commander. They have reopened an old fire camp to support operations but access is limited.

You have been assigned to join State Fire Department at their command post. Your mission is to repair a temporary road to the fire camp in support of fire operations. The existing dirt road has not been used for over twenty years and it is overgrown with brush. The area has already been surveyed and the track of the old road is visible in some sections. Your job is to restore the road for use by heavy fire equipment. You will be joining the existing Pollock Pines Incident.

The DOT Task Force includes two Senior Superintendents, and field crews and supervisors sufficient to operate heavy equipment for 2 12-hour shifts each day. The Task Force has its own grader, roller, back hoe, light unit and generator. Each vehicle is on its own trailer pulled by a truck. It will need fuel for all the vehicles after the first shift. There are 18 people in the Task Force who will have to be fed and housed during the road building operation.

Discussion:

1. Where do you go when you get to Yankee Jim Road? It is getting too dark to survey the camp road tonight.
2. How will you get food and lodging for tonight?
3. How will you get fuel for the road building equipment, which needs diesel? For the trucks that need gas? For the lighting trailer generator that needs diesel?

Scenario: Hurricane

State DOT as a Technical Specialist in Operations

Hurricane Lulu has developed from a tropical storm into a Category 2 hurricane as it passed over Cuba. Florida has been hit with 120 mile per hour winds and driving rain as the hurricane passed through, and the storm, which is over 500 miles in diameter, has already begun to cause storm surge, flooding and wind damage in your state. Your state's emergency operations center has been activated, mandatory evacuations of the coast have been underway for several hours, and the State Highway System has traffic jams along most routes moving away from the coast. One of these State Highway System routes is the main street of Leafville, where your State DOT Maintenance District headquarters is located.

Leafville, a community of 10,000 people, 25 miles from the coast, has declared a state of emergency for the impending storm, and begun the evacuation of low lying areas of the community to a shelter at the high school. The high school is located one block from the town's Main Street, which is US Route X, and part of the State Highway System. There are no interstates in the area. Traffic is beginning to build up in the community as residents leave their homes with multiple vehicles per household, heading for the high school shelter, and some feeder streets are clogged. Residents are fearful and driving aggressively. The local streets department director is new to the area, and has never been through a hurricane before. He is asking for a traffic control specialist from the State DOT Maintenance District to join the Operations Section at the Incident Command Post to advise on improving traffic flow through the community to the high school.

Discussion:

1. You have been assigned to be the technical specialist because you have lived in the community for twenty years and been through several hurricanes and tropical storms. What personal supplies and equipment would you need?
2. It appears that the Operations Section needs some specialist information on State Highway System roadway capacity (notably Main Street), areas of historic flooding, methods that have worked for traffic management in the past. What information will you need to have with you to provide this assistance?
3. It appears that there is no plan for people with access and functional needs to get close to the high school shelter, or for parking the vehicles of the evacuees once the school's lot is full. What information would you need to bring to the command post to help develop such plans?

Scenario: Flooding

State DOT in Unified Command

The Mississippi River is swollen with spring melt from the snow and ice that has accumulated in communities along its length throughout the winter of 2015. Oakton is a town of 50,000 people on the western banks of the Mississippi River. It draws its drinking water from the Mississippi River at the northern boundary of the town, and disposes of its storm water runoff along the length of the city's shoreline, and its water treatment plant effluent in the river about five miles south of the drinking water intake.

The interstate crosses the Mississippi River after it passes through Oakton and after crossing the river is in another state. The interstate roadway's bridge carries the electrical power grid connection cables, phone and internet fiber optic lines, and a natural gas line. This is the only bridge across the river for ten miles north and ten miles south. The bridge approach crosses some low lying areas that are prone to flooding, however most of the interstate is elevated as it passes through the commercial district of the town.

About 25% of the town is below the river and protected by a levee that is owned by the Army Corps of Engineers. It has only 500 year flood protection. Most of the town is in a 100 year flood plain. The main commercial district of the community is in the flood plain. The only hospital is in the flood plain, and the only large rehabilitation center is next door to the hospital, in the flood plain. The local government buildings are on raised pads but are in the commercial district in the flood plain. Two of the four fire stations are in the flood plain and the police station is in City Hall, on a raised pad but in the flood plain. The Public Safety Answering Point (9-1-1 center) is in the City Hall but on the 4th floor. There are six assisted living centers in town, of which five are in the flood plain. The only commercial day care center is in the flood plain.

The state's hydrologist has warned that the river is flooding north of Oakton. The mayor has declared a local emergency, and has all available city resources sandbagging critical buildings. The city's emergency operations center is open and the police chief has just called for an evacuation of the critical facilities in the flood plain. He is discussing using the interstate as an evacuation route. The Oakton Fire Chief has been appointed Incident Commander and is working with city staff from law enforcement, the building department and the streets department to create a multi-modal evacuation plan. He has asked State DOT to join the Unified Command, and they have asked a senior field superintendent from the Maintenance District for Oakton to represent the State DOT.

Discussion:

1. Who would be the best person to represent the State DOT Maintenance District in the Unified Command?
2. What would the Maintenance District's objectives be for an evacuation plan?
3. What resources does the Maintenance District have that might be useful in an evacuation of the flood plain?

Scenario: Bridge Collapse

State DOT Assumes Incident Command

It is November 15. Three days ago a deck truss bridge over the Old Muddy River collapsed at the end of rush hour when a truck with an oversize load ran into one of the steel beams, dislodging the gusset plate, which led to the structural failure. City Fire Department was the initial Incident Commander because there were people trapped on the undamaged portions of the bridge who had to be rescued, as well as people and vehicles in the water. During this time the State Police led the Law Enforcement Branch of the Operations Section. They detained the truck driver, did a blood alcohol and drug test and interviewed him. He stated that the wind on the span over the river caused him to lose control of the wide load, which shifted as he approached the steel girder that he hit. The State Police cleared him of drug or alcohol involvement.

One State DOT engineer was a Technical Specialist in the Operations Section to advise on issues of bridge construction and failure. Other State DOT personnel were assigned to the Logistics Section where they organized bridge inspection equipment and other specialized equipment to assist with the early investigation of the failure. As soon as the victims were rescued or recovered the Incident Command was turned over to State Police on Day Two, and they did a crime scene investigation of the portions of the bridge still standing to confirm the driver's story. Having completed their investigation they are turning over Incident Command to the State DOT today.

You have been appointed State DOT Incident Commander for the first day.

Discussion:

1. Where will you go to assume Incident Command?
2. What documentation would you need from the departing Incident Commander?
3. Where would you get personnel to fill the ICS positions? Which would you fill with State DOT personnel and which would you request to fill with personnel from other agencies? Why?

State DOT District X
Discussion-Based “Sand Box”: Scenario (substitute name of scenario)
Date
Evaluation

5= Completely agree

1= Completely disagree

Please circle your responses for 1, 3 and 5

Use the back side for extra space for any question, or for additional comments

1. The sand box training was useful for me in my State DOT role: 5 4 3 2 1

2. The most useful thing I learned at today’s sand box training was:

Important thing (s) that should be added for future training:

What should be eliminated from future training?

CHAPTER 10: ICS QUICK START CARDS PRINTOUT AND INSTRUCTIONS

This example card set content is provided as an overview of suggested content, with MSWord version on the TRB website at <http://www.trb.org/Main/Blurbs/173984.aspx>. Instructions for creating the cards follow the example card set.

INCIDENT COMMANDER (WHITE CARD)—The First 15 Minutes

Ensure the safety of your crew, notify the District and organize the event.

Respond if possible.

First available DOT person

- Give him or her the Blue Card, notepad and pen
- Tell the person he or she is the Safety Officer and to read the card
- Identify location for DOT staff to gather

Contact Traffic Management Center

- Notify Dispatch that there has been a major event and ICS is being activated
- Give Dispatch the location, time, nature of event, number of potential casualties, your name and number
- Request information be forwarded to District Director
- Tell Dispatch you will call back in 10 minutes with updated information

Second available DOT person

- Give him or her the ORANGE Card and the ICS BOX
- Tell the person he or she is the Plans Chief and to read the card
- Identify location for Incident Command Post (ICP)

Third available DOT person

- Give him or her the GREEN Card, notepad and pen
- Tell the person he or she is the Logistics Chief and to read the card

Continued on back

Size up the situation.

- How broad is the impact/what is involved?
- What is the biggest issue? Hazmat spill/structural collapse/people trapped.
- Is this a single event or part of a larger event? (Bad traffic incident vs. regional storm)
- Is there a pathway for responders in and out, only in or out or no pathway?
- Is the situation stable, getting better or worse?
- Estimated duration of the event: 2 hours/2 days/2 weeks?
- Casualty estimate?

District Update

- Have Planning Chief present to provide information as needed
- Call District and provide update of event

Assess staff

- Are tasks assigned to Safety Officer, Plans and Logistics Chiefs handled satisfactorily?
- Assign new staff or augment with additional personnel as needed.

Incident Action Plan

- Refer to Incident Action Plan Checklist (YELLOW CARD)

IF IN DOUBT EXERCISE CAUTION. DO NOT CONTRIBUTE TO THE PROBLEM.

For protracted events review additional responsibilities in the IC 420 book, Chapt. 5.

SAFETY OFFICER (BLUE CARD)—The First 15 Minutes

Ensure that personnel are safely conducting themselves, and that dangerous situations/areas are avoided. Your authority comes directly from the INCIDENT COMMANDER and you report only to him/her.

- Gather State DOT personnel into the area identified by the Incident Commander.
 - Conduct roll call to determine who is present
- Document location of injured people unable to be moved and who, if anybody, is attending to them.
- Identify potential areas of danger to avoid.
 - Chemical spill
 - Structural Instability
 - Fire
- Report information to Plans Chief (ORANGE CARD) for documentation
- Allow the Logistics Chief (GREEN CARD) to proceed with duties UNLESS the situation is unsafe.

Continued on back

Once the Incident Action Plan is established

- Monitor behavior of staff.
 - Food / water / rest / weather?
 - Developing tunnel vision with task(s)?
 - Work with Logistics Chief (GREEN CARD) for meals / water / sanitation
 - Work with Planning Chief (ORANGE CARD) for scheduling / shifts
- Ensure safety measures are carried out.
- Continue to monitor area for emerging threats
 - Report information to Plans Chief (ORANGE CARD) for documentation and notify Incident Commander

For protracted events review additional responsibilities in ICS 420 book, Chapter 5.

PLANNING CHIEF (ORANGE CARD)—First 15 Minutes

Collect, organize and present information concerning the event and actions taken in responding to it. Use the ICS BOX with enclosed forms to help accomplish this task. **Print** your name and contact information on ALL forms you fill out

Move ICS BOX to location that Incident Commander has identified as Incident Command Post

- Find location to hang ICS BOX
 - Position so that it can be readily seen by personnel
 - Easy to access forms
- Begin documentation of ICS Form 201 (4 pages)
 - Page 1: Time, location, sketch of incident, summary of event
 - Page 3: Organization Chart names of Incident Commander, Safety Officer, Planning and Logistics Section Chiefs.
 - Add other names as positions require
- Collect information from Safety Officer (BLUE CARD) and add to ICS 201 page 1 sketch
 - Number and locations of injured
 - Hazards to be avoided

Continued on back

- Keep list of DOT personnel present that was provided by Safety Officer with ICS 201 page 3
 - Transfer names to ICS 205A and add contact information when possible
 - Add information to ICS 205A as additional personnel arrive
- Collect information from Logistics Chief and add to ICS 201 page 4
 - Items and quantities needed and when
- Collect information from any / all sources
 - weather, sunrise/sunset/ tides (if applicable)
- Work with Safety officer (BLUE CARD) to develop schedule / shifts if necessary

Incident Action Plan

- List Incident Commander's goals for action period and who is tasked with achieving those goals on ICS 201 page 2
- Develop Communications plan, fill out ICS 205 as appropriate

For protracted events review additional responsibilities in ICS 420 book, chapter 9.

LOGISTICS CHIEF (GREEN CARD)—First 15 Minutes

Inventory supplies. Identify items needed to support and enable continued field response.

Inventory available supplies. DO NOT ASSUME ITEMS ARE SERVICEABLE UNTIL INSPECTED. The event may have damaged/destroyed them.

- Water
- Medical supplies
- Clothing including blankets (weather and night relevance)
- Food
- Tools
- Vehicles
 - Serviceability and position allowing use
 - Fuel
 - Tires
 - Use as shelter
- Radios
- Flashlights
- Batteries

Continued on back

- Sanitation
 - Porta-potty
 - Toilet paper
 - Shovel
 - Work with Safety Officer (BLUE CARD) and Planning Chief (ORANGE CARD) if temporary trench needs to be created

Identify resources needed to sustain present DOT personnel for 24 hours

- Water
- Food
- Clothing

Identify items needed to support field operations for 24 hours

- Portable lights
- Barricades
- Equipment
- Brief Incident Commander on available resources and items recommended to be requested.
- Provide Planning Chief (ORANGE CARD) with list of items to be requested on ICS 201 Page 4

Incident Action Plan

- Adjust/add items requested to reflect the needs of addressing goals of the IAP

For protracted events review additional responsibilities in ICS 420 book, Chapter 10.

Incident Action Plan (YELLOW CARD)

Once the Logistics Chief and Safety Officer have assessed their areas and reported back to Incident Command, initiate meeting to develop an Incident Action Plan.

- Personnel present should include:
 - Incident Commander and Command staff (Safety Officer, PIO, Liaison)
 - General Staff (Logistics, Planning, Operations and Finance Section Chiefs)
- Each provides an update on current activities and knowledge.
 - General Staff members also provide their concerns for the next 2-24 hours
- **Key points of consideration**
 - Overall situation
 - Inventories and supplies
 - Crew capability
 - Time before additional resources arrive
 - Safety
- **Incident Commander develops objectives**
 - Appropriate to the abilities, resources available and time
 - Safety
- **Incident Commander identifies organization**
 - Assign more, or reallocate existing, personnel to Incident Command positions
 - Identify Operations Chief to handle field tasks
 - Update ICS-201, page 3, organization chart, as needed

Continued on back

- **Incident Commander identifies assignments to accomplish objectives**
 - Who is responsible for what?
 - Strategy/tactics/ approach to be used
 - How resources are to be used
 - Fill out ICS 201 page 2, as appropriate
- **Identify supporting items needed**
 - Additional plans, as required
 - communications plan, medical plan, traffic plan, others
 - Additional resources required
 - Fill out ICS 201 page 4, as appropriate
- **Identify time frame of Action Plan**
 - When objectives should be completed or reached a certain stage
 - When additional resources are anticipated
 - Anything that could cause the current course of action to change

Once the Incident Commander determines the Action Plan, the Planning Section Chief Documents it on ICS 201 Page 2.

If the situation has multiple safety issues, the Safety Officer shall work with the Planning Chief to create a detailed ICS-208 Safety Plan outlining how issues will be addressed or avoided.

Once the Operations Chief has been identified documentation related to his tasks will be made on the ICS-214 Activity Log.

Joining an Existing Incident Command (BROWN CARD)

Prior to leaving your normal work place, your deployment briefing should include:

- The location of the Incident Command Post.
 - What your responsibilities will be.
 - Scope of your authority to commit additional State DOT resources.
 - Communications procedures for contacting your home district.
 - Identify purchasing authority and procedures.
 - Determine how food and lodging will be provided.
 - Incident type and name.
 - Incident check-in location.
 - Specific assignment.
 - Reporting date and time.
 - Travel instructions.
 - Communications instructions.
 - Specialized supplies or equipment required to last for expected stay
 - Special support requirements (facilities, equipment, transportation, etc.)
 - Travel authorization for air, rental car, lodging, meals, and incidental expenses
- **Once you arrive, Check In only once.**
- Incident Command Post (Planning/Intelligence Section, Resources Unit)
- **You should have only one “T” card assigned**
- As an individual to provide technical expertise
 - As a unit of several personnel and equipment that will stay together
- **If there are any problems/issues with Check In contact home office.**

Continued on back

Once Checked In obtain the name and location of your supervisor.

Your initial briefing should include at a minimum:

- Current situation assessment.
- Identification of your specific job responsibilities.
- Identification of coworkers.
- Location of work area.
- Identification of eating and sleeping arrangements, as appropriate.
- Procedural instructions for obtaining additional supplies, services, and personnel.
- Operational periods/work shifts.
- Required Personal Protective Equipment (PPE) and safety procedures.
- Communications plan (frequencies, phone numbers and equipment)

Prior to field deployment conduct full communications check

Guidelines for incident recordkeeping (ICS 214):

- Print or type all entries.
- Enter dates by month/day/year format.
- Enter date and time on all forms and records.
- Fill in all blanks. Use N/A as appropriate.
- Use military 24-hour time.

Photograph work area before, during and after work is performed.

Photograph all documentation before it is turned in.

Demobilize according to plan.

Transfer of Command (GRAY CARD)

During the process of response and recovery it may be necessary for DOT to assume command of an incident from another agency. It may also be necessary for DOT to transfer command to another authority in an incident that DOT has been handling.

A face-to-face transfer of command must take place, with the following items addressed at a minimum.

- Situation Status
- Objectives and priorities
- Current organizational structure
- Resource assignments
- Resources that are enroute or ordered
- What facilities have been established
- Communications plan
- Safety plan
- Prognosis
- Concerns/Related issues

Continued on back

Command and General Staff positions' change over should occur face-to-face, as well.

At the end of the briefing, all incoming ICS positions should

- Take custody of all the documentation to date; ensure outgoing staff retains copies via photographs
- Request copies of all pictures of event to date
- Obtain contact information for the outgoing person
 - name, regular title, organization, phone number, email
- Incoming Command and General Staff should ensure that there is adequate staffing with qualified individuals
 - Request outgoing command to remain at the scene until adequate replacement staffing can arrive.

Outgoing staff should remain with oncoming staff for another 30 minutes after transfer to ensure smooth transition.

Quick Start Card Masters

Printable masters are provided on the website in MSWord format for ease of customization.

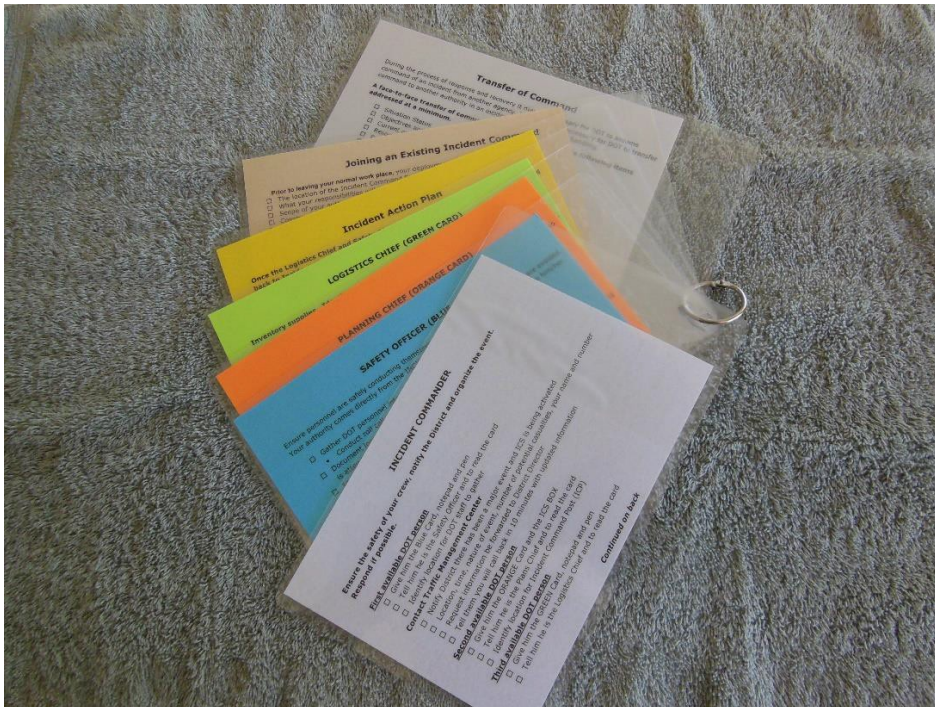
Current layout is designed to maximize the use of paper and minimize labor by printing two cards per sheet of paper, double-sided.

Cards are intended to be modified by state and local jurisdictions to coincide with their specific safety and response protocols.

Directions

Print out the sheets of cards to make a master set

Match the front and back of each card, and print each card double-sided on the selected color. Cut in half to create 2 cards.



Quick Start Cards Supplies and Equipment

These instructions presume that the cards will be made within the agency. Commercial production and assembly has been estimated at \$30 per set, while internal production is about \$10 for materials and labor if a laminating machine is available. A new lamination machine costs less than \$100, and a corner rounder is about \$40. Other items are typical office supplies.

Supplies and equipment:

7 different colors of 24 lb. paper, 8.5" x 11" (white, blue, orange, green, yellow, brown, gray – or light tone colors that are available in agency stock, and change the cards' color references to reflect the match of color and position/activity)- makes 2 cards per sheet; one of each color per set

9" x 11.5" / 5 mil lamination sheets – makes 2 cards each 1" loose leaf rings, 1 ring per set

Lamination machine – Apache AL13P Professional Thermal Laminator was used for the project. Other laminators are available at a lower cost but may not stand up to the production demands of the project. If an internal machine is already available, for example for making badges, it may be adequate as long as it accepts large enough sheets.

10 mm radius corner punch rounder paper cutter

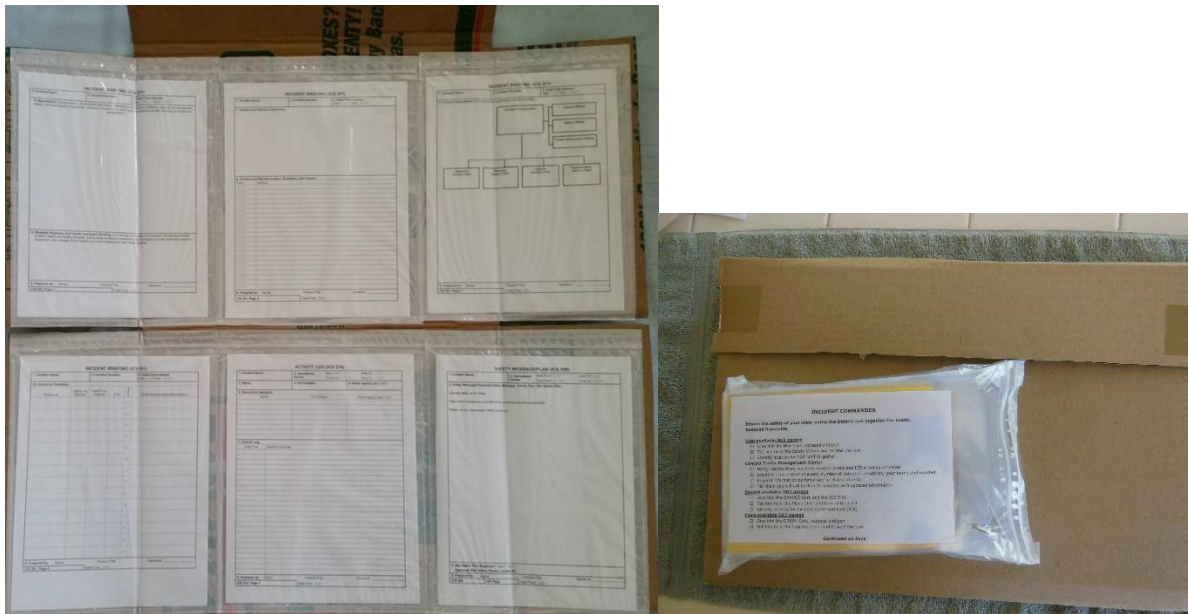
Hole punch/paper punch

Directions:

1. Print out card masters double-sided; cut into single cards
2. Laminate 2 cards per sheet, place to allow space between cards for cutting
3. Round all corners – lamination is sharp
4. Punch hole in one corner
5. Assemble set on ring, one color each in uniform order: Incident Commander, Safety Officer, Planning Chief, Logistics Chief, Incident Action Plan, Joining and Existing Incident Command, Transfer of Command

CHAPTER 11: SUPERVISOR'S FOLDER DESCRIPTION, MATERIALS LIST AND CONSTRUCTION INSTRUCTIONS

Supplies: Folder Construction



The Supervisor's Folder. Note the top flap of cardboard that serves as both the closure and the hanging point. Note the placement of the forms across the panel, with the side flaps folding the envelopes as the folder is closed. On the right is the folded version with the blister pack of supplies in place.

Boxes – 6 panel – holds 6 different forms = medium size U-Haul boxes – 18” length x 18” width x 16” height, \$1.35/box, yields 2 folders

8 panel – holds 8 different forms = 24” length x 18” width x 18” height- \$3/ box, yields 2 folders

Zip lock top packing envelopes – clear reclosable packing list enclosed envelope, plain face, back load (self-adhesive), 2.0 mil thick, 9” x 12”. Need 6 or 8 per panel, plus one for outside blister pack (see below). Available in 500 per case quantity, about \$.18 each

ICS forms, available online for download at

<http://www.training.fema.gov/emiweb/is/icsresource/icsforms.htm>,

should be printed on one side only except for the ICS-214 and instructions on how to fill out forms

Supplies: Blister Pack



ICS Field Operations Guide – FEMA downloadable for printing (about \$30 each) or mobile devices

http://www.usfa.fema.gov/downloads/pdf/publications/field_operations_guide.pdf

ICS FOG may be purchased from FIRESCOPE

for \$5 each <http://www.firescope.org/fog-order-info.htm>

5" x 8" white pads, 50 sheets per pad

3 ballpoint pens

1 set of Quick Start Cards created using instructions above

Equipment

Box cutter

Directions for Folder

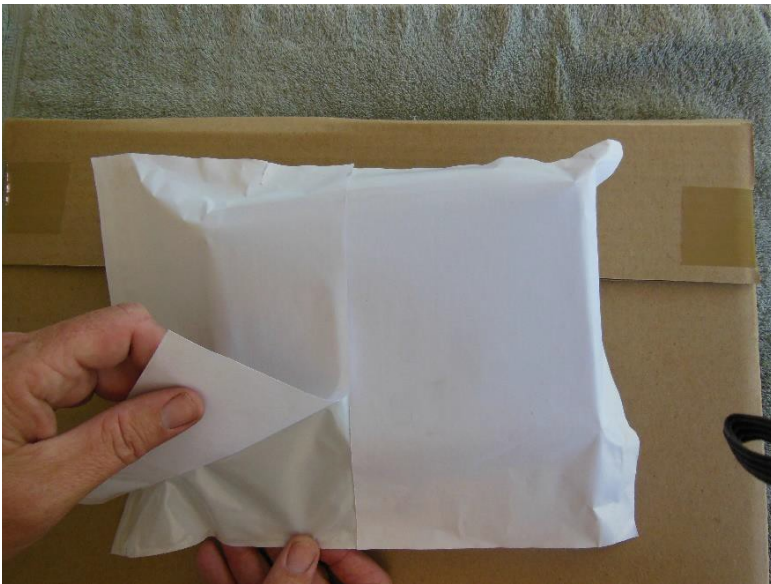
1. Identify the ICS forms needed by your agency's field crew: recommended 201, 208, 214, and
2. Determine the number of panels required for these forms when printed one-sided, except for 214.
3. Purchase appropriate sized boxes to accommodate 6 or 8 forms.
4. Print 2 of each form per folder to be made, plus one set of instructions for each form
5. Place 2 copies of each form and one set of instructions in each packing envelope
6. Locate the seam where the cardboard overlaps on the box, use a box cutter to cut that seam. And the seam on the opposite edge of the box. You now have 2 equal cardboard panels.
7. Take one panel, turn sideways so that the flaps are on the right and left sides, with the advertising or writing on the box facing up.
8. Lay out the forms on the marked (advertising) side of the box so that they coincide with the seam in the middle being the folding point, with half of the envelopes above the fold and half below.
9. Adhere the form envelopes to the box by removing the paper covering the self-adhesive surface.
10. Use box cutter to trim bottom and sides to match packing envelopes.
11. On top cut the excess flap material from each side, leaving the center panel top intact.
12. Fold in flaps on the bottom and top portions of the cardboard; fold bottom half upward onto the top half; fold the remaining center portion to overlap the bottom half.
13. Use packing tape on edges of top flap to seal.

Directions for Blister Pack

Take one packing envelope, with clear side facing up, open zip lock and insert 2 pads, 3 pens, the ICS FOG 420 . Put the Quick Start Cards on top with the Incident Commander card facing out.

Reseal the zip lock top of the envelope.

Turn over so adhesive side is facing up, peel off backing, fold side edges on envelope $\frac{1}{2}$ " in so adhesive sides stick to themselves.



Fold in bottom $\frac{1}{2}$ " so adhesive edge sticks to itself.



Grasp top corners of bag (edge with zip lock), position bag bottom first on the back of the cardboard folder, then lay down, and press FIRMLY into the cardboard. Press around edges to ensure full adhesion to cardboard.



Lessons learned

Cardboard

Source this though your local U-haul, Home Depot, Walmart, Staples, Office Depot, local moving company or DOT back-dock/recycling program.

Understanding the size and flap locations is critical. When you use the box for this project its orientation is going to change from “Height” to “Length.” The flaps will go from top and bottom to right and left side. The cuts for the flaps and related fold seam will become the divider for the top and bottom.

When selecting a box to use as the source material, all three dimensions are important (LxWxH). Width will dictate the length of the flaps divided by two. For example, an 18” wide moving box will have 9” wide flaps. If the box is 18” high as well, then four packing list envelopes, which are 12” tall and 9” wide, will fit side by side (two in the middle with one on each flap).

It is recommended that while field researching, take the number of packing list envelopes you intend to use. Lay them out on the potential cardboard as you intend to use it.

Going beyond 8 panels is possible, but isn’t practical due to folds and size. It is probably better to make a supplementary kit for the additional forms.

Materials, Tools and Notes

13” Laminator

http://www.amazon.com/gp/product/B0012UEQ5C?psc=1&redirect=true&ref=oh_aui_detailpage_o01_s00
Maintained temperature with continuous feeding. Allowed packets to go through sideways for faster production. Needed to adjust tension on rollers.

5 Mil 9 x 11.5 laminating pouches

http://www.amazon.com/gp/product/B00FORXKOC?psc=1&redirect=true&ref=oh_aui_detailpage_o00_s00
Used a variety of manufacturers, this seemed to bubble the least. 3 Mil is an option but seemed flimsy.

10mm Radius Corner Punch Rounder

http://www.amazon.com/gp/product/B0048W0MQI?psc=1&redirect=true&ref=oh_aui_detailpage_o03_s00
This is an option but you do need to clean up the sharp edges on the laminate after going through trimmer.

Guillotine Trimmer, 15-Inch Cut Length

http://www.amazon.com/gp/product/B00006IATG?psc=1&redirect=true&ref=oh_aui_detailpage_o00_s00

Look around your administrative areas, you probably already have one.

Legal pad, 5"x 8", 12 pads per pack

http://www.amazon.com/gp/product/B000AN0UH0?psc=1&redirect=true&ref=oh_aui_detailpage_o01_s00

Ball pen, medium point

http://www.amazon.com/gp/product/B0012YVGOW?psc=1&redirect=true&ref=oh_aui_detailpage_o05_s00

Binder rings, 1" capacity

http://www.amazon.com/gp/product/B00008XPLC?psc=1&redirect=true&ref=oh_aui_detailpage_o00_s00

Cardboard for 8 panel box

http://www.amazon.com/gp/product/B00E81SZ7W?psc=1&redirect=true&ref=oh_aui_detailpage_o00_s00

Makes two kits per box. This can be an expensive item but shouldn't be. Source locally through U-Haul, Home Depot, Staples, etc.

Cardboard for 6 panel box.

<http://www.uhaul.com/MovingSupplies/Boxes/Standard-sized-moving-boxes/Medium-Moving-Box?id=2793>

Makes two kits per box. At less than \$1.50 per box...

Clear Re-closable Packing List Enclosed Envelope Plain Face Back Load 2.0 Mil Thick - 9" x 12"

http://www.amazon.com/gp/product/B00BY2UWWY?psc=1&redirect=true&ref=oh_aui_detailpage_o00_s00

Available in 500 count increments. Had problems with company sending wrong item ordering through Amazon. Recommend contacting them directly.

<https://www.packagingsuppliesbymail.com/re-closable-packing-list-envelopes.html>

Civil Engineer Tape

<http://www.amazon.com/Copernicus-Civil-Engineer->

[Tape/dp/B007CLVBGC/ref=sr_1_1?ie=UTF8&qid=1442341546&sr=8-1&keywords=civil+engineer+tape](http://www.amazon.com/Copernicus-Civil-Engineer-Tape/dp/B007CLVBGC/ref=sr_1_1?ie=UTF8&qid=1442341546&sr=8-1&keywords=civil+engineer+tape)

Narrow for 1:64 scale but cheaper than other brands and more of it.

CHAPTER 12: ICS AND TIMS REFERENCE LISTS

There are two categories listed below. The first category is related to the Incident Command System (ICS). The second category is related to the Traffic Incident Management System (TIMS). These two systems are not the same, they complement one another. ICS is concerned with the strategic level through organization of the event while TIMS provides the tactical employment of resources. There will be situations when ICS and TIMS will be used together. However, there are also situations when one or the other will be used separately.

These lists provide further references to consult when developing your ICS training program, they are not exhaustive. Additionally, other disciplines' perspectives through their training and exercises should be sought to develop as holistic a program as possible for both ICS and TIMS.

Incident Command System

Federal Emergency Management Agency, Emergency Management Institute

NIMS/ICS training reference page

<http://www.training.fema.gov/nims/>

U.S. Department of Labor

ICS explanation

https://www.osha.gov/SLTC/etools/ics/what_is_ics.html

YouTube Videos

ICS (multiple videos)

<https://www.youtube.com/watch?v=cadxBy6jMFI&index=1&list=PL0EE9AEEE46802DB>

B ICS (multiple videos)

https://www.youtube.com/watch?v=BUQxkIK_MYQ&index=1&list=PL4lpKYnm8AscDwPd4FkDISDe07vt3_87Hj

Example of Unified Command (animated)

<https://www.youtube.com/watch?v=2iWqNV0j2IE>

RMPCorp training (classroom)

<https://www.youtube.com/watch?v=pxEvCdDHOwU>

Introduction to Sand Table Exercises (Sandbox Exercises)

<https://www.youtube.com/watch?v=hmVOxryU7YE>

Traffic Incident Command System

Traffic Incident Management Network

<http://timnetwork.org/>

U.S. Fire Administration / Federal Emergency Management Agency Emergency Vehicle Safety Initiative (2014) http://www.usfa.fema.gov/downloads/pdf/publications/fa_336.pdf

Traffic Incident Management Systems (2012)

http://www.usfa.fema.gov/downloads/pdf/publications/fa_330.pdf

I-95 Corridor Coalition

Traffic Incident Management Teams Best Practice Report (2010) <http://www.i95coalition.org/wp-content/uploads/2015/03/TIMTeamBestPracticesFINALREPORT.pdf?5a9c76> TIme4Safety Traffic

Incident Management/Responder Safety Handbook [http://www.i95coalition.org/wp-content/uploads/2015/03/09.08.19_TPO_TIM- Handbook_Aug2009.pdf?5a9c76](http://www.i95coalition.org/wp-content/uploads/2015/03/09.08.19_TPO_TIM-Handbook_Aug2009.pdf?5a9c76)

TIme4Safety Traffic Incident Management/Responder Safety Top 10

http://www.i95coalition.org/wp-content/uploads/2015/03/TOP_10_7-23.pdf?5a9c76

Emergency Responder Safety Institute

Video page <http://www.respondersafety.com/Videos/Default.aspx> Resources Page

<http://www.respondersafety.com/Resources/Default.aspx>

Southwestern Pennsylvania

Traffic Incident Management Program Guide

<http://www.spcregion.org/pdf/tim/ProgramGuide.pdf>

YouTube Videos

Florida traffic safety (multiple videos)

https://www.youtube.com/watch?v=3HPfEj0TCqI&list=PLN3DM0k69CsuR1igGH3A_RmeeGOsngnZu

Traffic Incident Management 2012

<https://www.youtube.com/watch?v=FrnmYHq0LYs>

Hats of Highway Incident Management (humorous but serious issue)

<https://www.youtube.com/watch?v=ckM6oxQvkFQ>