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Niagara International Transportation Technology Coalition

Highway Safety Awareness for First Responders Course Resources

As of: 05/25/06

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Niagara International Transportation Technology Coalition

HIGHWAY SAFETY AWARENESS COURSE FOR FIRST RESPONDERS

Designed for:

Law Enforcement, EMS Personnel, Firefighters, Towing/Recovery Contractors, DOT/DPW Personnel, Highway Maintenance and Construction Workers, Dispatchers and anyone involved or interested in traffic control or highway safety. Designed for front line employees, first line supervisors, management and chief officers.

About this Course:

Whether we realize it or not, the practice of controlling traffic as law enforcement, emergency medical personnel, highway maintenance or construction, fire police or firefighters – is probably the job we do most often – and certainly one of the most dangerous jobs we do.

This highway safety awareness training course is designed for every first responder – anyone who may respond to a traffic incident on a rural, urban or limited access highway – and regardless of rank or title.

The goals of this training course are to:

- Give all related personnel the basic tools, resources, knowledge and understanding they need to operate safely at highway incidents
- Improve communications, coordination and cooperation between responders at highway incidents
- Build awareness as to the standards, tools, training and resources available to the emergency services community

It's important to note that this course is not intended to be comprehensive in nature, but only to provide a general awareness of:

- NITTEC Organization and Resources
- The extent of the highway safety problem
- Related laws and standards
- Vehicle and driver reaction
- Effective traffic control
- Personnel and vehicle safety practices
- Available tools and resources

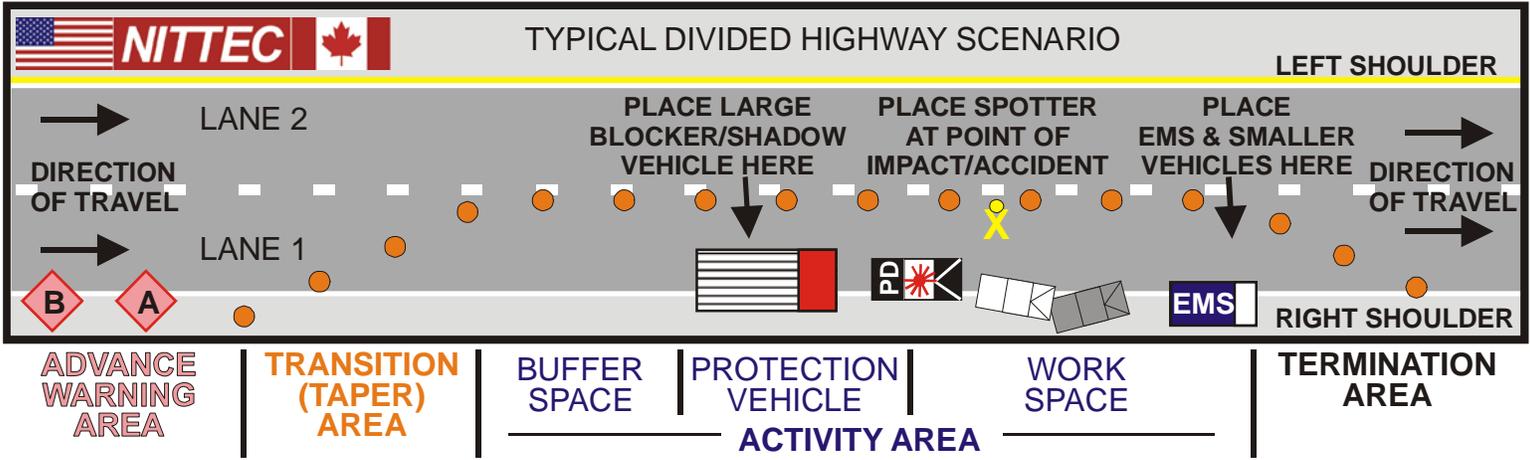
About NITTEC:

The Niagara International Transportation Technology Coalition (NITTEC) is an organization of fourteen local, regional and international agencies with a common goal to improve regional and international transportation mobility, promote economic competitiveness and minimize adverse environmental effects related to the regional transportation system.

The mission of NITTEC is to support member agencies in coordinating, operating and maintaining transportation information systems, integrating technology and communicating transportation information across all modes of transportation, among member agencies and to other public and private stakeholders, to enhance the safety and efficiency of the regional bi-national transportation system.

Feedback:

We hope you find this course and these resources useful in ensuring the safety of all your personnel. Thank you for taking the time to increase your Highway Safety Awareness. We welcome your feedback.



INCIDENT MAGNITUDE		
MAGNITUDE	DURATION	STEPS TO TAKE
Minor	<30 Minutes	<ul style="list-style-type: none"> Notify NITTEC if incident is on roadway where a minor delay can create significant traffic impact Establish Advance Warning Area and other TTC Components as time/personnel permits
Intermediate	30 minutes - 2 hours	<ul style="list-style-type: none"> Notify NITTEC Establish TTC Components Consider DOT Response (Supervisor Only)
Major	2+hours	<ul style="list-style-type: none"> Notify NITTEC Request DOT Response (Trailer) Early Establish Full Work Zone (Same as Non-Emergency)

ADVANCE WARNING AREA		TRANSITION AREA	
SPEED	SIGN DISTANCE	TAPER LENGTH	TYPICAL #CONES
40	A 350	320 ft.	8
55	A 750	660 ft.	16
65	A/B 1000/1500	780 ft.	18

RULES OF THUMB: 1. Travel lanes numbered from right-to-left. 2. Skip line is 10 ft. long with 30 ft. between skips. Taper cones at start of each skip line (40 ft.). 3. Length of Advance Warning Area = 8 x Roadway MPH. Use 12x factor for rural roads due to limited sight distance. Sign distance is from start of taper/transition.



Emergency Responder Checklist

“Traffic Control is the Responsibility of On-scene Responders – Communicate, Coordinate, Cooperate”

INITIAL ACTION ITEMS: (Within first 15 minutes)

- Estimate magnitude/expected duration of incident
- Estimate vehicle queue (backup) length
- Establish Incident Command/Unified Command Post
 - o Assign Traffic Control Officer
- Identify the need for and request secondary response agencies: NITTEC, HazMat, Towing/Recovery, DPW, NYS DEC, DOT, Ag & Markets (perishable loads), Accident Reconstruction, Medical Examiner, etc.
- Set-up appropriate TTC Components based on estimates. Upgrade TTC every 15 minutes.
- Set initial taper in direction of traffic travel
 - o Remove taper in opposite direction of traffic travel

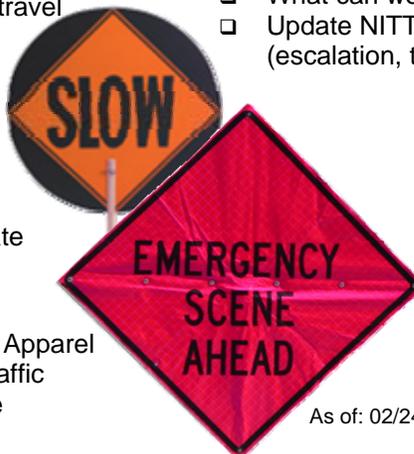


CONSIDERATIONS:

- Time of the incident and amount of traffic congestion
- Can vehicles be moved from roadway? *Steer it. Clear it.*
- Can all lanes remain open?
 - o For Limited Access Highways:
1 minute of lane closure = 1 mile of backup
- Determine emergency vehicle access route(s)
- Will closures create backups on other roadways?
- How quickly can lanes reopen? Minimize on-scene time.
 - o Post incident Recovery:
1 minute of initial delay = 8 minutes to return to normal traffic
- How can we avoid secondary accidents?
- What can we do to make the scene SAFER?
- Update NITTEC periodically and as incident changes (escalation, termination, etc.)

VEHICLES:

- Limit number of responding vehicles
- Stage unnecessary vehicles off roadway
- Park ALL vehicles on same side of roadway
- Position apparatus to protect responders
- Minimize emergency lighting (Go Amber!)
- Create work area large enough to accommodate apparatus and responders SAFELY!



PERSONNEL:

- ALL responders Identifiable & in High Visibility Apparel
- Always: Be alert - Minimize exposure - Face traffic
- Place spotter at point of impact/accident scene

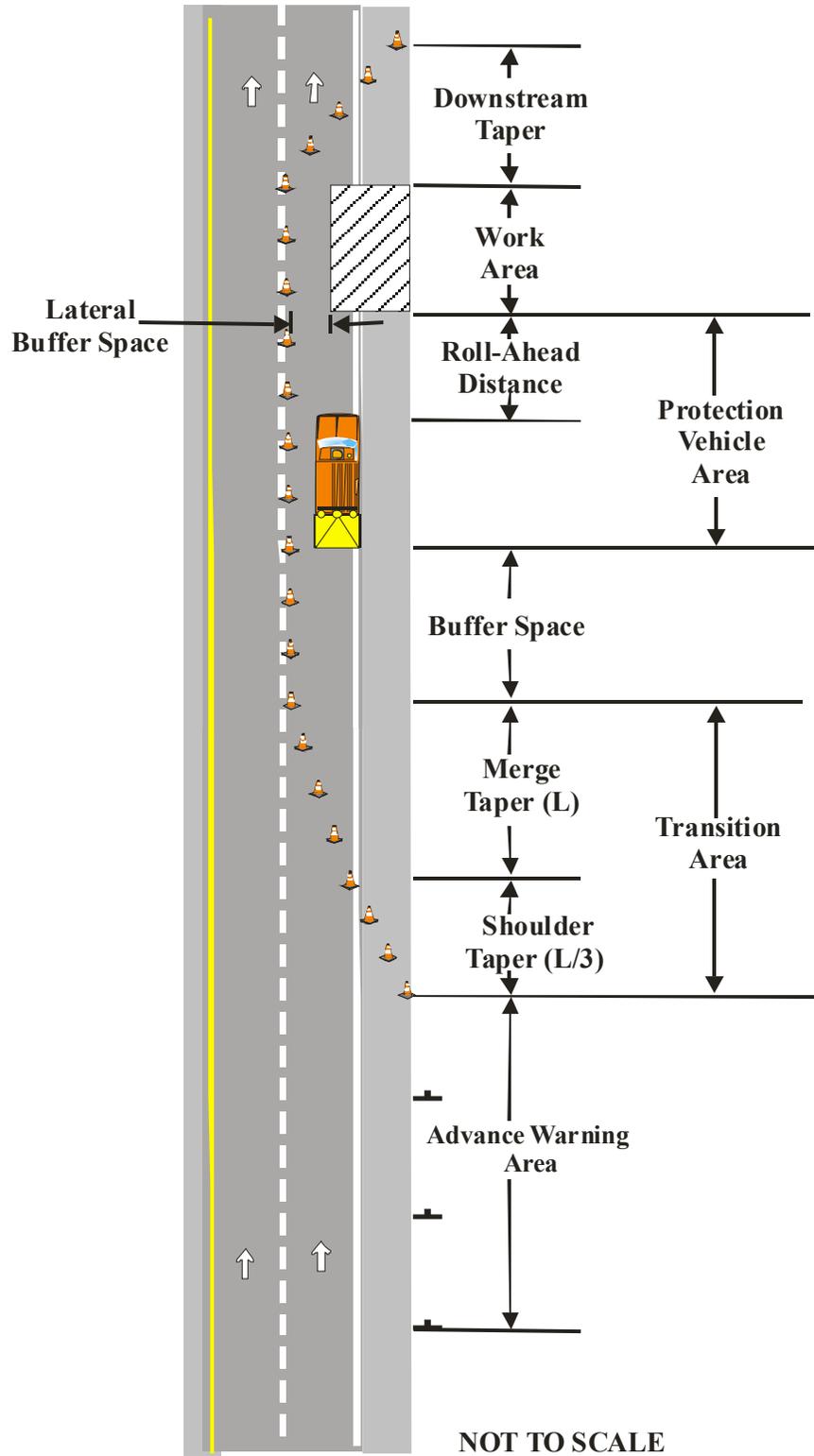


**Niagara International
Transportation Technology
Coalition**

**24 Hr. Operations Center
716.847.2070**

www.nittec.org

NYS DOT - Parts of a Traffic Control Work Zone



NYSDOT Traffic Incident Management Response Trailer



NYSDOT Traffic Incident Management Trailer	
Trailer is typically stocked with the following items	
	Quantity
"Emergency Scene Ahead"	4
"Be Prepared to Stop"	4
"Detour" w/custom overlays	8
Custom Overlays (Arrows)	8
Road Closed Ahead	4
Ramp Closed	2
Ramp Closed Ahead	2
L/R Overlay, Lane Closed 1500'	4
L/R Overlay, Lane Closed 500'	4
L/R Overlay, 2 Lanes Closed 1500'	4
L/R Overlay, 2 Lanes Closed 500'	4
Arrow Panels, (Static)	4
Merge (Left) W3-10D	8
Merge (Right) W3-9D	8
Detour Ahead	4
Sign Stands, DF4503(W/5 foot posting capability)	40
36" Reflective Traffic Cones	300
Warning Flags	20
Safety Vests	8
Also Available for Deployment to Incident Scenes	
Plastic Barrel Drums w/reflective stripes	20
Type 3 Barricades w/engineer grade panels	24

INCIDENT MAGNITUDE		
Magnitude	Duration	Steps To Take
Minor	< 30 Minutes	*Notify NITTEC if incident is on roadway where a minor delay can create a significant traffic impact *Establish Advance Warning and other TTC Components as time/personnel permits
Intermediate	30 Minutes to 2 hours	*Notify NITTEC *Establish TTC Components *Consider DOT Response (Supervisor Only)
Major	2 + hours	*Notify NITTEC *Request DOT Response (Trailer) Early *Establish Full Work Zone (Same as Non-emergency)

DEC SPILL RESPONSE

The DEC requires a spill of any amount of petroleum to be reported within 2 hours of a spill incident. The proposed revision is based on a careful examination of what constitutes a release to the environment based on legal precedent and is within the scope of existing law.

***Petroleum spills meeting all of the following criteria need not be reported to the DEC:**

<u>Criteria</u>	<u>Description</u>
Quantity	The spill must be known to be less than 5 gallons.
Containment	The spill must be contained on an impervious surface or within an impervious structure. (A commercial or residential basement is not to be construed as an impervious structure).
Control	The spill must be under control and not reach a drain or leave the impervious surface.
Cleanup	The spill must be cleaned up within 2 hours of occurrence.
Environment	The spill must not have already entered onto or into the soil, grass, groundwater or surface water.

All other petroleum spills shall be reported within 2 hours of a spill incident to DEC. The **DEC Spill Hotline remains as 1-800-457-7362.**

For a petroleum release that is not required to be reported, it is strongly recommended that the facts concerning the incident be documented by the spiller and a record maintained for 1 year.

Comments will be accepted on the proposed change to this document for 30 days from publication of this notice. After this time, if no substantive comments are received, the guidance will be issued.

**Contact: DEC
 270 Michigan Avenue
 Buffalo, NY 14203
 (716) 851-7248**

TRAA VEHICLE IDENTIFICATION GUIDE[®]

CLASS 1 • LIGHT-DUTY • (6,000 lbs. or less GVW - 4 tires)*



CLASS 2 • LIGHT-DUTY • (6,001 - 10,000 lbs. GVW - 4 tires)*



Classes 1 and 2 include passenger vehicles, light trucks, minivans, full size pickups, sport utility vehicles and full size vans.

CLASS 3 • MEDIUM-DUTY • (10,001 - 14,000 lbs. GVW - 6 tires or more)*



CLASS 4 • MEDIUM-DUTY • (14,001 - 16,000 lbs. GVW - 6 tires or more)*



CLASS 5 • MEDIUM-DUTY • (16,001 - 19,500 lbs. GVW - 6 tires or more)*



CLASS 6 • MEDIUM-DUTY • (19,501 - 26,000 lbs. GVW - 6 tires or more)*



Classes 3 through 6 include a wide range of mid-size vehicles, delivery trucks, utility vehicles, motorhomes, parcel trucks, ambulances, small dump trucks, landscape trucks, flatbed and stake trucks, refrigerated and box trucks, small and medium school and transit busses.

CLASS 7 • HEAVY-DUTY • (26,001 - 33,000 lbs. GVW - 6 tires or more)*



CLASS 8 • HEAVY-DUTY • (33,001 lbs. and over GVW - 10 tires or more)*



Classes 7 and 8 include a wide range of heavy vehicles, large delivery trucks, motor coaches, refuse trucks, cement mixers, all tractor trailer combinations including double trailers.

Information Needed To Correctly Dispatch Towing and Recovery Units:

- Year, Make and Model of Vehicle to be Towed or Recovered
- DOT Classification (Class 1 – 8 based on GVW)
- Location of Vehicle
- Type of Tow (impound, accident, recovery motorist assist, etc.)
- Additional Vehicle Information
 - 2 wheel drive, 4 wheel drive, all wheel drive
 - damage to vehicle, tire condition
 - vehicle loaded or empty
 - cargo contents
 - does the vehicle have a trailer
 - are the keys with the vehicle

Note: Any vehicle may carry hazardous materials. Advise if placarded.

*** Note:** The Gross Vehicle Weight Rating (GVWR) of the vehicle to be towed or recovered can be found on the identification label on the vehicle's driver's side doorframe. The number of pounds listed on the label can then be compared with the DOT Classification Vehicle Type Chart for the correct DOT class.

Law enforcement communications with towing and recovery operators describing an incident and the vehicles involved can insure quick and efficient clearing of these scenes and less disruption to traffic flow. In an effort to standardize communications, the towing industry is adopting the federal vehicle class standards as outlined herein.

VIN CODES

The year of the vehicle is critical information for towing operators in order for them to reference correct towing procedures. The diagrams on the front are examples of classifications. The following information about vehicle identification numbers affixed to the chassis will help determine the vehicle's year. As noted, the vehicle's year, identified by a letter or number in the VIN sequence, is the eighth character from the right.

1P8ZA1279SZ215470

EXAMPLE 1995 VIN NUMBER: _____



1980.....A	1987.....H	1994.....R	2001.....1	2008.....8
1981.....B	1988.....J	1995.....S	2002.....2	2009.....9
1982.....C	1989.....K	1996.....T	2003.....3	2010.....A
1983.....D	1990.....L	1997.....V	2004.....4	2011.....B
1984.....E	1991.....M	1998.....W	2005.....5	2012.....C
1985.....F	1992.....N	1999.....X	2006.....6	
1986.....G	1993.....P	2000.....Y	2007.....7	

TOW TRUCK/CAR CARRIER CLASSIFICATION

LIGHT-DUTY

TOW TRUCK



CAR CARRIER



MEDIUM-DUTY

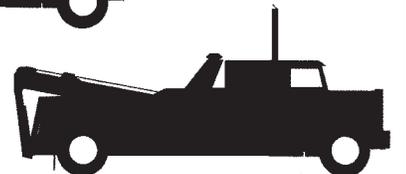
TOW TRUCK



CAR CARRIER



HEAVY-DUTY



LOW BOY TRAILER



Illustrations: © T.T. Publications and Vehicle Identification Guide: © TTRA

Links to Responder Highway Safety Resources

Niagara International Transportation Technology Coalition	www.nittec.org
American National Standard for High-Visibility Safety Apparel ANSI/ISEA107-2004,	http://www.safetysafetyequipment.org/hivisstd.htm
Cumberland Valley Volunteer Firemen's Association	http://www.cvvfa.org/
Emergency Responder Safety Institute - ResponderSafety.com	http://respondersafety.com
Emergency Responder Safety Institute - Model Safe Parking SOP	http://www.respondersafety.com/sops.html
Everyone Goes Home	www.everyonegoeshome.org
Families for Roadside Safety	http://www.familiesforroadsidesafety.org
Fire Department Safety Officer Association	http://www.fdssoa.org
Firefighter Close Calls	http://www.firefighterclosecalls.com
National Fallen Firefighters Foundation	www.firehero.org
National Fire Protection Association	http://www.nfpa.org
National Fire Service Incident Management System Consortium - IMS Model Procedures Guide for Highway Incidents	http://www.ifsta.org/ifsta/pdf/IMSHighway/IMS%20Highway.pdf
National Law Enforcement Officers Memorial - Causes Of Police Deaths (1995-2004)	http://www.nleomf.com/TheMemorial/Facts/causes.htm
National Traffic Incident Management Coalition (NTIMC)	http://timcoalition.org
National Work Zone Safety Information Clearinghouse	http://wzsafety.tamu.edu/
NIOSH Report - Traffic Hazards to Fire Fighters While Working Along Roadways	http://www.cdc.gov/niosh/hid12.html

New York State DOT Work Zone Protection Manual	http://www.dot.state.ny.us/traffic/workzone/workzonemain.html
US DOT Federal Highway Administration	http://www.fhwa.dot.gov/
US DOT Federal Highway Administration – Incident Management Successful Practices – A Cross-Cutting Study	http://www.itsdocs.fhwa.dot.gov/JPODOCS/REPTS_TE/8v001!.PDF
US DOT Federal Highway Administration – Safer Travel – Incident Management Systems	http://www.fhwa.dot.gov/tfhrc/safety/pubs/its/pabroch/safertravel.pdf
US DOT Federal Highway Administration – Traffic Incident Management Site	http://www.ops.fhwa.dot.gov/incidentmgmt/index.htm
US DOT Federal Highway Administration – Manual on Uniform Traffic Control Devices (MUTCD)	http://mutcd.fhwa.dot.gov/
US DOT Federal Highway Administration – Traffic Incident Management Handbook	http://www.itsdocs.fhwa.dot.gov/jpodocs/rept_mis/@9201!.pdf
US DOT Federal Highway Administration – Simplified Guide to the Incident Command System for Transportation Professionals	http://www.myfirecompanies.com/filelock/h10753797751145610313.pdf
US DOT Public Safety Site	http://www.itspublicsafety.net/index.htm
US Fire Administration	http://www.usfa.fema.gov
United States Fire Administration – Emergency Vehicle Safety	http://www.usfa.fema.gov/research/safety/vehicle.shtm#d
VFIS-Volunteer Firemen’s Insurance Services Resources	http://www.vfis.com/eseceg_train/train_main.htm

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