New Jersey Police Technical Assistance Program (PTAP)

FINAL REPORT
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16. Abstract

The Police Technical Assistance Program (PTAP), a federal model, was adopted to support the New Jersey Department of Transportation (NJDOT)'s safety mission. Several activities were included in this initiative: conducting assessments, providing technical support on the revision of the New Jersey crash report form, and development of a knowledge-based training curriculum that was designed to target and reduce specified reporting errors. The final results of the project were global acceptance of the revised crash report form by municipal police officers, a significant increase in national (MMUCC) compliance levels of the crash report form, and significant reduction of errors on reports currently being submitted for inclusion in the state sponsored crash data base system.

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EXECUTIVE SUMMARY

The Police Technical Assistance Program (PTAP), a federal model, was adopted to support the New Jersey Department of Transportation (NJDOT)'s safety mission. Several activities were included in this initiative: conducting assessments, providing technical support on the revision of the New Jersey crash report form, and development of a knowledge-based training curriculum that was designed to target and reduce specified reporting errors. The final results of the project were global acceptance of the revised crash report form by municipal police officers, a significant increase in national (MMUCC) compliance levels of the crash report form, and significant reduction of errors on reports currently being submitted for inclusion in the state sponsored crash data base system.

BACKGROUND

In 2002, a team of USDOT experts conducted an assessment of the New Jersey Traffic Data System and made several recommendations. The former Accident Records System Advisory Committee (ARSAC) needed to be re-established and restructured into the Statewide Traffic Records Coordinating Committee (STRCC), which is chaired by the NJDOT. The team confirmed the strong relationship between the statewide data systems and the national system, and offered recommendations for restructuring the existing crash records system. These recommendations included improvement of management coordination efforts, revision of the crash report form, and training of police officers on how to correctly complete the crash record report.

In response to these recommendations, the New Jersey Local Technical Assistance Program (NJ LTAP) was recruited by the Federal Highway Administration – New Jersey Division to provide technical and training services to support the improvement of crash data. A project, known as the Police Technical Assistance Program (PTAP), was developed and the NJ LTAP staff began to work with the STRCC NJTR-1 Subcommittee on many of their efforts that included the development and implementation of training programs for local police departments on completion of the revised crash report form

OBJECTIVES

The purpose of the PTAP project was to promote the New Jersey Department of Transportation (NJDOT)'s safety mission. The federal Local Technical Assistance Program (LTAP) model was modified to support the NJTR-1 Subcommittee in the following manner:

- Research best practices of other states,
- Provide technical support to the NJDOT during the form revision and curriculum development processes,
- Offer technical assistance to local police departments, and
- Implement training on proper completion of the revised crash report form.

INTRODUCTION

According to National Highway Traffic Safety Administration (NHTSA), 43,443 people were killed and 2,699,000 injured, with 4,304,000 crashes occurring on the U.S. roadways in 2005. New Jersey has the highest population density in the country (14.7 times the national average), along with some of the highest number of drivers per miles of road (161, 3.3 times the national average) and vehicles per miles of road (178, 3.3 times the national average). Traffic safety is recognized, by federal and state officials, as a means of improving transportation and the quality of life for Americans.

Many federal agencies, including the Federal Highway Administration (FHWA), the National Highway Traffic Safety Administration (NHTSA), Federal Motor Carrier Safety Administration (FMCSA) and other organizations have invested in national crash data systems that are used for conducting data analysis on crashes, identifying crash prone locations, and determining safety and engineering countermeasures to be implemented to affect crash reductions.

However, the use of accurate data continues to be a national and state concern in determining the causes of crashes. The FHWA (2003) acknowledged that flaws existed in the data due to recording errors that typically occurred at crash scenes or when paper forms were being entered into the crash database. There had been a growing concern about underreporting the severity of injuries when vehicular crashes involved pedestrians and bicycles. Another common error was incorrect assessment of weather conditions.

The New Jersey Department of Transportation (NJDOT), Bureau of Safety Programs is responsible for administration of the statewide traffic records system. Several other state agencies work closely with the NJDOT to support this system. The key members, involved in updating the crash report, included representatives from the Federal Highway Administration – New Jersey Division, New Jersey Department of Health and Senior Services, NJDOT Office of Information Technology, New Jersey State Police, New Jersey Division of Highway Traffic Safety, Motor Vehicle Commission, and the New Jersey Police Traffic Officers' Association.

SUMMARY OF THE LITERATURE REVIEW

A literature review was conducted in 2003 to identify the types of national crash data systems, develop an understanding of the relationship between national and statewide crash data systems, determine successful statewide crash data collection systems, and

create a benchmark for upgrading the crash report form that was being used in New Jersey. National websites (USDOT and NHTSA) were reviewed for descriptions of national crash data systems. Available resources from FHWA and NHTSA were reported on as "best practices". Finally, a preliminary survey was conducted to establish a benchmark for updating the New Jersey Traffic Records-1 (NJTR-1) Form.

National Crash Data Systems

Typically, federal agencies use data collected from local crash report forms for inclusion in their national systems; therefore, the accuracy of data being collected is critical for all users. In order to have an understanding of what data is being used nationally, it is important to identify the types of national systems that exist. The United States Department of Transportation (USDOT) and National Highway Traffic Safety Administration (NHTSA) are the two major sponsors of national databases, which are described in this section.

United States Department of Transportation (USDOT)

The USDOT maintains the Bureau of Transportation Statistics (BTS) that is responsible for publishing a listing of 173 databases and systems, of which 40 databases address transportation crashes. Also, the BTS and the National Transportation Safety Board (NTSB) conducted a major safety study that identified the value of transportation safety data, described the primary crash and incident databases used, made recommendations on deficiencies in the existing data, evaluated governmental efforts to establish quality standards, and ensured compatibility among DOT safety data systems. These findings confirmed that most governmental transportation safety databases were developed to collect information on harmful transportation-related events in addition to property damage, personal injury, or pollution (USDOT, 2003).

The Federal Motor Carrier Safety Administration (FMCSA), an organization within the USDOT, sponsors five crash data systems. They are the Large Truck Crash Causation Study (LTCCS), the Commercial Vehicle Information Systems and Networks (CVISN), the Motor Carrier Management Information System (MCMIS), the Performance and Registration Information Systems Management (PRISM) and the Safety Status Measurement System (SafeStat) (USDOT, 2003). The LTCCS project consists of a 1,000 large truck crash database that addresses the fatalities and injuries of those involved in crashes, while CVISN provides an electronic system for users to collect and transmit data to appropriate networks. MCMIS is a centralized system that houses information on the safety fitness records of motor carriers and hazmat shippers. PRISM contains commercial vehicle registration information for the purpose of improving motor carrier safety. Lastly, SafeStat is a very popular program that identifies the safety status of motor carriers by evaluating crashes, drivers' records, vehicle status, and the overall safety of an organization.

National Highway Traffic Safety Administration (NHTSA)

In 1975, the Fatality Analysis Reporting System (FARS) was established for recording all fatal crashes on public roads in the United States. This information is still collected in states by local police officers, coroners, emergency medical services, and state motor vehicle agency employees. The information is electronically submitted to NHTSA headquarters during the first half of each calendar year, checked for errors, and then forwarded for entry into the FARS system that nets 40,000 yearly fatal crashes. Also, alcohol-related data on driver and occupant Blood Alcohol Content (BAC) levels are submitted and used to supplement this fatal injuries database.

Another NHTSA project, the National Center for Statistics and Analysis (NCSA), is responsible for the National Automotive Sampling System (NASS) that includes two units: the Crashworthiness Data System (CDS) and the General Estimates Systems (GES). The NASS system database contains samples of 400 police crash reports; while the CDS system uses data from a random sample of minor, serious, and fatal crashes. The CDS research database contains 5,000 crashes per year that have been submitted by teams of trained crash investigators, while the GES processes weekly data from 400 police departments that is later combined with FARS to prepare the "Traffic Safety Facts."

The State Data System (SDS) is yet another database system sponsored by NCSA that evaluates data to determine safety problems, identify vehicle and driver countermeasures, evaluate motor vehicle standards, and study crash related issues. A total of eighteen states have been participating in this program where the state coordinating agency receives the Statistical Analysis System (SAS) information that is placed onto the NHTSA Local Area Network (LAN) and made available for data analysis. The participating states are California, Florida, Georgia, Illinois, Indiana, Kansas, Maryland, Michigan, Missouri, New Mexico, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Utah, Virginia, and Washington.

Other specialized systems are the Crash Outcome Data Evaluation System (CODES) and Commercial Vehicle Analysis Reporting System (CVARS) that were developed to capture additional information. The purpose of CODES is to account for the financial and medical consequences associated with crashes. The program links crash and medical data together in order to identify the types of injuries and costs which result from driver, vehicle, and crash characteristics. Also, Commercial Vehicle Analysis Reporting System (CVARS), co-sponsored by NHTSA and FMCSA, was developed to improve the reporting of truck and bus crashes with the data being entered into the newly established Motor Carrier Management Information System (MCMIS). The Commercial Vehicle Analysis Reporting System (CVARS) is similar to the CDS and data is being collected from several states (Louisiana, Ohio, Tennessee, and Virginia) with the intent of adding thirteen additional states to update commercial vehicle crash data.

National Data Collection System Model

This review of the national crash data system confirms the critical need for obtaining accurate crash data from local enforcement officers. Specifically, the quality and timeliness of submissions directly impacts many analytical processes. As a solution for improving state systems, the Federal Highway Administration (2002) has designated the State of Iowa Data Collection System as the national model for highway safety. Their system includes integrated data collection, management, and communication of safety information to the key stakeholders through several new approaches of shortened data collection time and improved quality of the data. Two agencies, Iowa Department of Transportation (DOT) and Iowa Department of Public Safety (DPS), have worked together to develop a computer technology and fiber optics network that moves high volumes of data and images through the system. The results of this effort included the following:
   ♦ Reduction in the effort needed to collect relevant data,
   ♦ Timely electronic data acquisition and dissemination of accurate incident information,
   ♦ Common access among agencies to vital incident information,
   ♦ Data transmission and feedback with the court system, and
   ♦ Advancement in the use of analytical tools.

This integrated set of electronic forms also eliminated duplication of entries and offered immediate transmission to remote locations at both the state and local levels. The forms incorporated crash reports, commercial vehicle inspections, citations, drunken driving reports, and incident reports. Information was transmitted from pen-based computers, portable printers, bar code readers, digital cameras, Global Positioning Systems (GPS), and Geographical Information Systems (GIS), along with other laser measuring and voice recognition devices.

Data Collection Resources

The State Crash Report Forms Catalogue, a depository of crash report forms from all fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands, is sponsored by NHTSA (2002). This resource provides states with a comparative reference of documents. In addition to documents, a list of crash report coordinators and threshold reporting levels had been available to every state. Other supplemental resources, the ANSI-16 Manual on Classification of Motor Vehicle Traffic Accidents and the ANSI D-20, Data Element Dictionary for Traffic Records Systems, were featured as reference tools for supporting the standardization of the crash records industry. ANSI-16 referenced common language for collectors and users of traffic crash data; while ANSI D-20 provided a standard set of element coding instructions on traffic safety, driver licensing, and vehicle registration.

As previously mentioned, FHWA, NHTSA, and the National Association of Governor's Highway Safety Representatives teamed together to develop a guideline for crash data collection. Representatives from law enforcement, Emergency Medical Services, traffic engineering, departments of motor vehicles, education and other private organizations developed the Model Minimum Uniform Crash Criteria (MMUCC). MMUCC was completed in 1998 and continues to serve as a national guideline for collecting crash data and has been endorsed nationally by highway safety agencies. This is a minimum set of crash data elements and standardized definitions on injury control related to traffic safety. According to NHTSA (2004), the responsibility of collecting crash data extends beyond the role of the police officer at crash scenes. Other agencies (Motor Vehicle Commission and EMS) provide additional data through linkages to inventories on injury outcomes and roadway characteristics.

Crash Records System Survey

In 2004, a follow-up study was conducted by NJ LTAP to establish a crash report system benchmark for New Jersey. State representatives, listed in the Crash Data System Catalogue (NHTSA), were contacted and asked to describe their crash records system, specifically the size of their report forms, compliance with MMUCC standards, and capabilities of enforcement officers to electronically transfer crash reports. A total of 22 respondents (45%) represented a cross section of the country, with the majority (40%) of the responses having been received from mid-western states.

In most states (60%), the Department of Transportation was directly responsible for maintaining the crash data collection system; while the Department of Motor Vehicle (4%) was least involved in system administration. The damage threshold for submitting crash reports was between $100 and $1,400, with over half (52%) of the states requiring crash reports to be submitted when property and vehicular damage that amounted to $500 or above. Many of the crash report forms (85%) were one to four pages in length, with Nevada requiring enforcement officers to complete a nine page report. The typical four page document included a double sided (environment) template, a section for recording driver vehicle information, the diagram box, and space for including a descriptive narrative.

The crash forms ranged between 70 and 100% MMUCC compliant, with two agencies not being aware of the process. One crash report (Georgia) was fully compliant, while the other state forms were consistently represented in the 70-79, 80-89, and 90-99 compliant ranges (Figure 1). Nearly 70% of the States reported that enforcement officers were able to electronically complete crash reports, while 25% were still using only hard copy reports, and another five percent of the representatives being unaware of any electronic reporting process used in their state. Over half of the states (52%) reported that enforcement agencies had electronic transmission capabilities to complete the forms, but were unable to transmit them to their appropriate state agencies. Also, they reported that plans were underway to fully establish this option in the future.
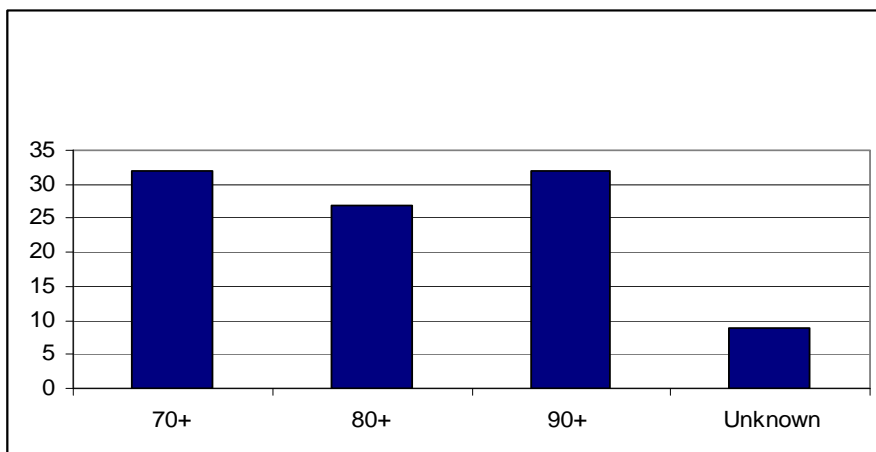
Figure 1. 2004 percentage of reported MMUCC compliance levels

In conclusion, an important means of reducing highway fatalities and crashes is through the use of national crash databases to identify crash types, locations, causation, contributing circumstances, and other related information. Therefore, it is important to establish standardized report forms by using MMUCC standards for compliance, and identifying a "best practice" model program for State systems to copy. The Iowa model is the "ideal" but state agencies may find it difficult to adopt, due to lack of available resources and funding support. Therefore, a sample of other state crash report practices was collected for guidance on revising the New Jersey Traffic Records - 1 (NJTR-1) Form. As a result of the survey, consideration was given to the crash report form remaining at 4 pages in length, the NJTR-1 being established at 62 to 77% MMUCC compliant, and NJDOT promoting the electronic transfer capabilities of local enforcement agencies.

New Jersey Crash Data System and NJTR-1 Form

According to N.J.S.A. 39-4-131, "Every law enforcement officer who investigates a vehicle accident of which a report must be made as required by this title, or who otherwise prepares a written report as a result of an accident, or thereafter by interviewing the participants or witnesses, shall forward a written report of the accident to the division, on forms furnished by it, within five days after his investigation of the accident." Reports must be submitted to all law enforcement agencies for any reportable traffic crashes that result in injury to or death of a person, or property damage in excess of $500.00. At the scene of crashes, police officers complete the form and submit the information to the appropriate agencies. There is a 12-hour reporting requirement for the State Police, and a 24-hour requirement for submission to the DHTS. The Motor Vehicle Commission (MVC) also shares information between NJDOT and DHTS. Presently, reports cannot be electronically submitted by agencies, and this issue often slows down the process for those who are on field assignments.

The crash reporting process has remained consistent for police officers in New Jersey, but the crash records system experienced many changes that included being privatized

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in 1996. When the company failed to complete development of the data base, FARS used the State Police Incident Reports and the local police report copies for their analysis. During this period, many municipalities held onto their accident investigation reports and didn't forward them to the NJDOT. In 2002, the New Jersey Department of Transportation (NJDOT) assumed responsibility for the system and hired a vendor to scan the NJTR-1 image and input data into the NJDOT Oracle Database.

In order to compensate for the formerly dormant state crash records system, a group of state and local police and safety professionals formed an ad hoc committee and developed the Police Guide for Preparing Reports of Motor Vehicle Crashes. This guide provided directions on completing the revised NJTR-1 Form and highlighted motor vehicle and traffic laws that governed the crash forms. Information was included on the process for using multiple copies of the NJTR-1 Form, Change Reports, fatal crash reporting requirements, recommendations on handling crashes that were not investigated, and insurance requirements. Basic information was also provided in a section entitled, "Most Commonly Asked Questions".

Statewide Traffic Records Coordinating Committee (STRCC)

As a result of a national assessment, the New Jersey Department of Transportation (NJDOT) had reorganized the Accident Records System Advisory Committee (ARSAC) and formed the Statewide Traffic Records Coordinating Committee (STRCC), a partnership of transportation, enforcement, safety, health and education professionals. Two advisory committee levels, executive level and working groups, were created and charged with reviewing high priority functions and making recommendations for improvement of the crash records system. Committee members were then invited to participate in several subcommittees that included: Strategic Plan Development, NJTR-1/Police Officer Training, Electronic Data Transfer, Statewide Data Integration, GIS/GPS Integration, and Directory Development. These subcommittees were designated to work on a variety of tasks that ranged from approving the collection of data elements to ensuring the availability of high quality data for all users.

NJTR-1/Police Officer Training Subcommittee

The NJTR-1/Police Officer Training Subcommittee was organized in September 2003 with Robert Parlow, New Jersey State Police (NJSP) and William Beans (NJDOT), serving as Chairmen. Representatives from the NJDOT, FHWA–NJ Division, New Jersey Office of Information Technology (OIT), New Jersey Division of Highway Traffic Safety, Motor Vehicle Commission, Rutgers University, FMCSA, New Jersey State First Aid Council, and the New Jersey Police Traffic Officers' Association (NJPTOA) formed this twenty member group.

Several crash reporting issues affected the NJDOT crash records system and needed to be resolved. Specifically, officers were incorrectly informed and not releasing fatal

crash reports because they were part of criminal investigations. Also, reports were not being submitted in a timely manner so refresher training was needed to improve the situation. It was important to develop software for newly hired officers to be trained at work. No background existed on the electronic capabilities of police departments, so this information needed to be collected, in addition to updating the NJTR-1 for MMUCC compliance. Several supervisory training and outreach programs had to be developed along with training resource materials.

SUMMARY OF WORK PERFORMED

The scope of services, provided through PTAP, included assessment, product development, and implementation of training and resources. When the NJTR-1 Subcommittee was first established, the role of the NJ LTAP was to conduct survey research to support the revision of the NJTR-1 Form. During the form and guidebook revision process, technical assistance included tracking and reporting on training issues. Afterward, the NJ LTAP team developed a standardized training curriculum and technical resources to reduce reporting errors on the NJTR-1 Form. A series of train-the-trainer and supervisory workshops were conducted throughout the state to update police personnel on the NJTR-1 form changes. Finally, the E-Learning System was developed and launched on the New Jersey State Police, NJ LEARN website.

Phase 1: Assessment

During the Assessment Phase, several activities were conducted by NJ LTAP that provided support the NJTR-1 Subcommittee (Table 1). Information was collected from several sources and used as guidance during the revision and developmental process. Input was obtained, from the NJDOT locator, on common errors being made by police officers on crash reports. Five local enforcement advisory committees reviewed the NJTR-1 draft and supplied recommendations for enhancing the reporting process.

Table 1 - Phase 1: Assessment

Source	Methods
State Agencies	National Crash Report Survey
NJDOT	State Locator Interview
Local Police	Regional Police Technical Advisory Committee Forums

National Assessment: State Crash Report Survey

Although there were many similarities between the crash reports used throughout the country, a benchmark was needed for comparing the NJTR-1 Form and the New Jersey

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crash data system to other state systems. Specifically, this was important for identifying the kinds of improvements that were needed to better coordinate the crash reporting effort.

Table 2 - National state crash report survey results

Item	Status
DOT Sponsor of Crash System	60%
MMUCC Compliance	62 - 77%
Reportable Threshold	$500*
Crash Report	1-4 pages
Electronic Transfer: *Completion of forms vs. transmission*	52%
NOTE: ***Bill has been introduced to increase level to $1,500.***	

Many similarities existed between the New Jersey crash data system and other crash systems (Table 2). NJDOT was the sponsoring agency of the New Jersey Crash Report System, the reportable threshold was $500, and the size of the NJTR-1 Form (3-4 pages) had been the norm being reported by other states. However, MMUCC compliance was unknown and needed to be determined, while electronic completion of forms was available in several municipalities and transfer capabilities were non-existent in 2004.

State Assessment: Locator Interview

During the initial phase of this project, the lead locator was interviewed on typical errors found in crash reports. Most errors resulted from preparer inattention to details during the completion process. Specifically, these errors included driver information having been submitted for parked cars, dead animals were listed as fatalities, poor handwriting, and not following through with reporting of incidents in all of the required categories (e.g. injured persons were identified but not described in the narrative). Also, some errors were caused by lack of knowledge in the following areas:
- Differences between left turn and angle crashes.
- Municipal locations of state roadways.
- Sequence of events.
- Measurement of intersection crashes.
- Location of crashes on ramps.

Local Assessment: Regional Police Technical Advisory Committees

In New Jersey, the geographic and demographic composition is varied, so it is difficult to offer standardized training for police officers without taking the variations into consideration. Often field conditions differed between regions which affected the overall objectivity in completing crash reports. Therefore, it was important to capture these differences from a regional perspective, so five Police Technical Advisory Committees were formed (Figure 2). The North team worked in areas with high volumes of traffic,

while members from the Central region encountered predominantly suburban traffic conditions, and the South region was considered rural. Urban committee members were recruited from large cities and the State Police representatives patrolled mostly highways.

The five committees reviewed and provided feedback on the NJTR-1 based on the following considerations:
- Revise the form so that a police officer, with minimum experience, would be able to complete the form with minimum supervision.
- Simplify the existing guide book.
- Recognize the purposes of the NJTR-1 (investigation and crash data statistics) in training.
- Use the electronic transfer, uniform electronic data collection, and the internet for the benefit of law enforcement.

Once the regional concept was authorized by the NJTR-1 Subcommittee, the NJ LTAP police technical consultant, had selected committee members based on their department's support of traffic enforcement (i.e. dedicated units, crash investigation capabilities, and training history). The task assigned to these groups was to revise and update the NJTR-1 for functionality as an investigative tool and a data collection report. The criteria for reviewing the form included consistency and clarity of format and content, chronological order of data collection based on the investigative process, and practicality related to ease of use in the field.
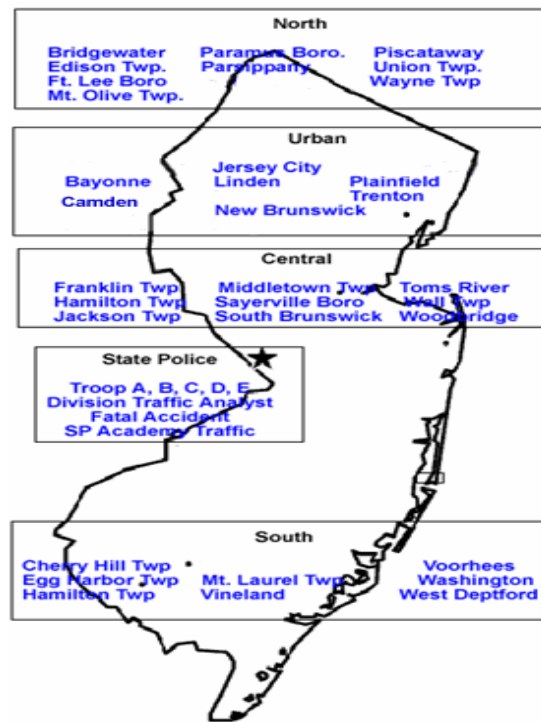
Figure 2. Regional Police Technical Advisory Committees

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A total of 239 recommendations were made by members of the five committees (Figure 3), with 43% percent of them being eliminated due to duplication and lack of applicability to the NJTR-1 form. The 136 recommended changes were presented to the NJTR-1 Subcommittee for review. They accepted 30% of these items and changed the form to improve ease of field use. The majority of changes (32%) included modifying the format and adding information to the boxes. Also, 20% of the recommendations clarified reporting choices and removed obsolete data requests (15%) that were no longer useful for crash investigations.
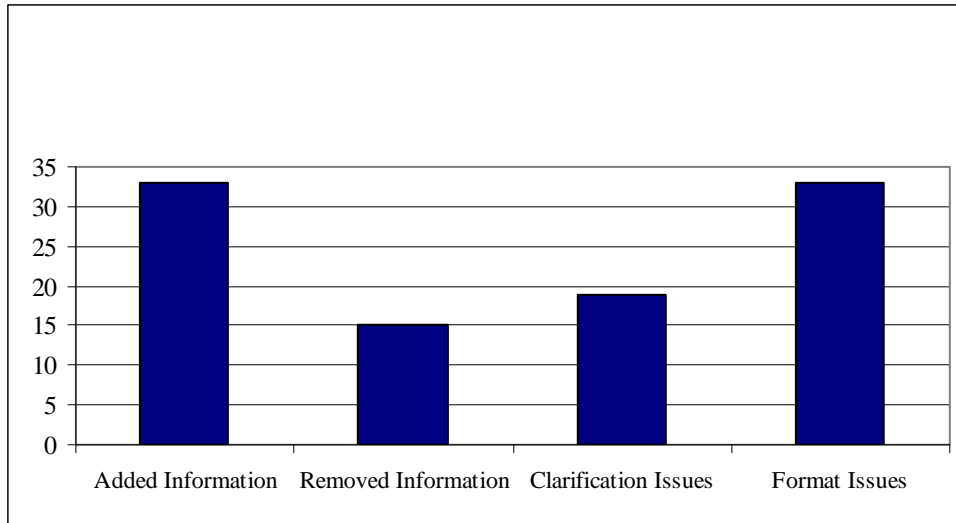
Figure 3. 2004 local recommendations for NJTR-1 changes in percent

The majority of requests for added information resulted from conditions not being captured on the NJTR-1 Form. Recommendations were accepted on adding new vehicle types and road divisions. Other changes included fire hydrants appearing in "Sequence of Events", and adult crossing guard was added to traffic controls. Two items had been identified as Victim's Physical Condition (refused medical attention and not injured). Other requests were to include a pending box in "Alcohol Data", provide a directive (i.e. *explain in the narrative) for "Physical Status" and "Apparent Contributing Circumstances", plus create a "Fraud" box for reporting suspicious activity.

Significantly fewer items were removed from the NJTR-1 Form. The major concerns were "Harmful Event" being too subjective and the relationship of "Weather" to crashes. Recommendations included "smoky" and "cloudy" being removed and "sun glare" added to "Weather Conditions"; while "ICC Carrier No." and "Vehicle Weight (GVW)" needed to be removed because they were not used as a standard. Lastly, "dark clothing/not visible" had to be eliminated as a "Pedestrian Factor" on the report.

The five advisory committees advocated for restructuring of the form so that information on licenses, registration, and commercial vehicles were placed together to reduce collection errors. Boxes were to be made larger for recording data (i.e. driver's license

number), in sequential order and slashes adjusted (removed/added) for ease in entry of information. The Clock Point Diagram size was to be enlarged and grid lines added to increase accuracy in completion. The addendum (NJTR-1A) required the numbers and lines adjusted to match with the NJTR-1. In order to accommodate SUV vehicles, an additional row needed to be added to the "Position In/On Vehicle" box along with additional multiple boxes for "Apparent/Contributing Circumstances".

In conclusion, these assessment results served as guidance throughout the developmental and implementation phases of this project. Specifically, the national assessment survey results were used as a benchmark for revising the NJTR-1 Form. Also, the locator interview guided the revision of the form and contributed toward the training process. The Regional Police Technical Advisory Committees provided input on the updated form before it was officially adopted for field use.

Phase 2: Development and Revision of Resources

The NJDOT organized the NJTR-1 Subcommittee of transportation safety and enforcement leaders to serve in an advisory capacity during the NJTR-1 Form revision process and created a website of technical resources for local police agencies. Also, the New Jersey Police Traffic Officers' Association (NJPTOA) simultaneously worked with the NJTR-1 Subcommittee as the lead agency for updating the *Police Guide for Preparing Reports of Motor Vehicle Crashes*, a resource on completing the NJTR-1 Form. Additionally, the role of NJ LTAP was to develop the training presentation tool, instructor manual, field manual and E-Learning System. The intent of these products supported the reduction of reporting errors found in the NJTR-1 Form (Table 3).

Table 3 - Phase 2: Development and revision of resources

Sponsor	NJDOT	NJPTOA	NJ LTAP
Resource	NJTR-1 Crash Form Website	Police Guide for Preparing Reports of Motor Vehicle Crashes	Presentation Tool Instructor Manual Field Manual E-Learning System

Crash Form & Guide Revision Process

According to the NJDOT staff, sponsors of the New Jersey Crash Data System, many errors existed in the crash report forms that were being submitted by local police departments. Also, fatal crash reports, involved criminal investigations, and were not being submitted to the NJDOT or other state agencies. In 2003, NJDOT was missing

150 forms, which generated a need to retrain departments in proper reporting procedures. Also, the NJTR-1 Form had to be revised because it was no longer compatible with the field reporting process of police officers.

The NJTR-1 Form review process began in September 2003 and took approximately one year to complete, which included mutually reviewing both the NJTR-1 Form and the *Police Guide for Preparing Reports of Motor Vehicle Crashes.* Also, the form was examined and adjusted to become MMUCC compliant. The major form changes reflected clarification of the differences between left turn and angle crashes, sequence of events, determination of locations on state roadways, measurement of intersections, and defining crash locations on ramps.

MMUCC Compliance

During the early stages of the review process, the NJTR-1 Form was evaluated for compliance with MMUCC standards (Table 4). The report was only determined to be 62% fully or 77% partially compliant with these national standards. A working group was formed to examine the remaining fields and identify which ones should be considered for modification, based on type of data that was needed for enhancing roadway safety programs in New Jersey. The conclusion was that full compliance may result in a larger crash report, similar to Minnesota that used a four-page document in order to be 80% compliant. Also, links to the New Jersey Straight Line Diagram (SLD) were not considered in determining the compliance level, so the rate was likely higher than stated. All "linked" and "available" data elements (16) brought the compliance level up to between 76% and 86% respectively.

Table 4. 2004 NJTR-1 MMUCC compliance review results

Items	Y	N	P	Total
Crash Collected Data Elements	16	2	1	19
Crash Derived Data Elements	9	0	0	9
Vehicle Collected Data Elements	23	6	1	30
Person Collected Data Elements	16	4	8	28
Person Derived Data Elements	1	0	0	1
Person Linked Data Elements	2	4	0	6
Roadway Linked Data Elements	1	16	1	18
Totals	**68**	**32**	**11**	**111**
Source: NJDOT (2004)				
Legend: Y = Yes, N = No, P = Partial				

NJTR-1 Form Revision Process

Serious consideration was given by the Subcommittee not to change the size of the NJTR-1 Form, which was one page with two overlays. Many of the fields were expanded along with another 16 field elements being added to the document (Figure 4). However, the size was not affected because an overlay was added to compensate for needed space. Also, several zero filled codes were added to the form in order to reduce the number of boxes being frequently left blank by the preparers. In order to better understand these adjustments, a brief description appears in the remainder of this section.
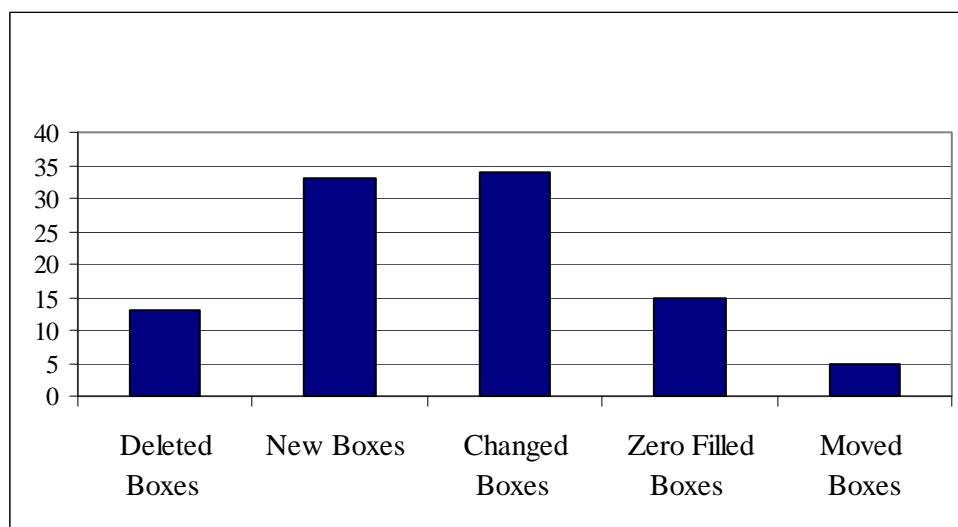
Figure 4. Percentage of adjustments to the NJTR-1 Form

Content

Many of the new fields were added to streamline the reporting process for officers, as well as to accommodate changes in the transportation enforcement industry. "Vehicle Use" and "Special Function" were added to provide additional information in the "Vehicle Type" field. Also, refused medical treatment was a common response at the crash scene, but was not reflected on the form, so it was added to the document. Since airbags had become a standard feature, a new field, "airbag deployment" was added to the form. Accommodations were made to identify new types of vehicles in several of the fields. Additional codes were provided in the following boxes: "Apparent Contributing Circumstances", "Cell Phone in Use by Driver", "Alcohol Drug Test Pending", "Vehicle Model", "Vehicle Impound Disabled," and "Carrier No.". Other form additions included "Hospital Codes", a "Ramp" section, and "Multiple Charges" check boxes.

Several changes were made with boxes being renamed ("Pre-crash Action", "Date of Crash", "Pre-crash Type", "Temporary Traffic Control Zone", "Vehicle Impact Area/Initial

Impact Vehicle", "Hazardous Material Placards", "Commercial Vehicle Weight") in order for the form to become MMUCC compliant. Also, the "Pedestrian Maneuver" field was merged with "Pre-crash Action" for further clarification, while additional codes were added to "Weather", "Victim's Physical Condition", "Physical Status," "Age", and "Vehicle Towed/Driven". "Latitude and Longitude" were changed to decimals. Finally "Summons Number" was recreated as its own box.

Other issues were not as significantly reflected in the revisions but they were equally as important for the purpose of collecting quality data. Some deleted boxes were removed and replaced with other options (e.g."Ambulance Runs" and "ICCC Carrier No."). "Pedestrian Status" was referenced elsewhere, along with the ramp fields. Also, 17 fields reflecting "zero filled codes" ("Road System", "Road Surface Type", "Surface Conditions", "Oversize/Overweight Permit", "Cargo Body", "Direction of Travel", "Victim's Physical Conditions", "Light Conditions", "Road Divided By", etc) were used to ensure that all boxes were being fully entered. Many boxes were moved for ease in completion by the police officers.

Format

After all report fields were thoroughly reviewed, two versions of the NJTR-1 prototype were circulated to the Subcommittee for comment. Version 1 contained half of the mid-page block reserved for Vehicle 1 information, while the remaining space was designated for information on Vehicle 2. The second version separated owner from vehicle information and kept reporting information together (Figure 5). The boxes were renumbered according to the sequential of process and the vehicle box was also made larger because it was hard to include readable information in the previous space. The margins were moved to the outside to accommodate information and this slight change opened up the form to provide extra space for reporting purposes.

Figure 5. 2006 NJTR-1 revised format

During this review process, recommendations were made by the five Regional Police Technical Advisory Committees before the document became finalized. The major issue of concern was for the NJTR-1 Form was to be renumbered in a chronological sequence that reflected the data collection process at the scene of the crash. Also, it was important to have "Case #", "Time", "Date", "License", "Registration", and "Insurance Code" located at the top of the form. There would be fewer errors from new officers if the form was logically arranged. Also, additional room was needed for drawing crashes, possibly the form needed to be printed on legal size paper.

NJDOT Police Resources Website

During this period, the New Department of Transportation Crash Records web page was expanded to include the Police Resources section. This page contains a series of publications and forms for police officers to download and use for guidance in proper completion and submission of crash reports (Table 5). The website initially contained available resources for proper completion of the NJTR-1 Form. As references and forms were developed, the web site expanded to include these resources, plus protocols for implementation of the electronic data transfer process.

Table 5. NJDOT Police Resources website

Resource	Description
Procedures & Guides	• NJTR-1 Distribution Centers • NJTR-1 Protocol • Crash Type Definitions • Survey of Police Records Management Systems • Guide For Preparing 2001 NJTR-1 Reports
Updated Resources	• New 2006 NJTR-1 Form • New 2006 NJTR-1 Field Manual • New 2006 NJTR-1 Police Guide Book • New 2006 NJTR-1 Field Changes • New 2006 NJTR-1 Codes Table
Electronic Data Transfer	• Protocols • Vendor/Agency Contacts • MQ Interface Overview • NJSP-NJDOT Crash EDT Interface Guidelines • NJTR-1 Field Cross edits • Modifications to EDT edits • Modifications/Additions to Electronic Data Transfer

Police Guide for Preparing Reports of Motor Vehicle Crashes and Resources

The 2001 edition of "*Police Guide for Preparing Reports of Motor Vehicle Crashes"* was the first electronic resource to be offered by NJDOT. This publication was developed by a group of fifteen state, local police, and safety professionals on properly completing the NJTR-1 Report (Figure 6). These experts authored an in-depth review of the process used for completing the 122 boxes of the NJTR-1 Report Form. The guide also highlighted motor vehicle and traffic laws that governed the submission of crash reports.
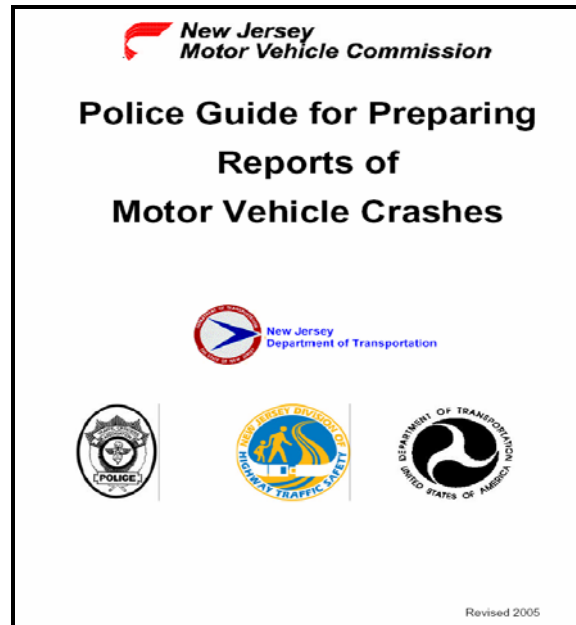
Figure 6. NJTR-1 Form technical resource

During the 2003-04 NJTR-1 Form review process, an electronic copy of this police guide was updated to reflect changes in the reporting boxes. While the subcommittee was awaiting official acceptance of the revised NJTR-1 Form by the New Jersey State Deputy Attorney General's Office, preliminary instructions and other narrative sections were adjusted to reflect changes in the data collection process. These adjustments were made to support a smooth transition when the updated NJTR-1 Form was disseminated on January 1, 2006. Brief descriptions of the adjustments that appear in this publication are provided in the following section.

Preliminary Instruction Guide Section

Four sections of the *Preliminary Instruction Guide Section* were updated by the NJTR-1 Subcommittee. The most important adjustment was the acknowledgment that the revised form had been renumbered for ease in reporting. Special emphasis was also placed on the submission of all crash reports, including fatal crashes, to the NJDOT

through the NJ MVC. A pedalcycle was defined as a vehicle for purposes of crash reporting, except when coding ejection from vehicle (box 85). A pedalcyclist was not coded as being ejected from the cycle if involved in a crash. Also, any person sitting behind the wheel of a parked vehicle should not have their information listed in the "Operator" boxes (26-34, 56-64) but listed in the "Narrative" (box 135). A pedestrian's identification was written in boxes 26 and 56 and the driver's license number was not listed for "Pedestrians" (boxes 32 and 62).Finally, examples of "Crash Type Diagrams" and selected definitions from the *Manual on Classification of Motor Vehicle Traffic Accidents* (ANSI-1996) were provided as additional clarification for reporting purposes.

Box Updates of the Guide

There were some major changes in the text accompanying box 10 "Crash Occurred On", specifically to address when a vehicle leaves the roadway in one jurisdiction and strikes another vehicle or object in another jurisdiction. Also, the "Street Address" box was omitted from the report, since crashes were to be identified using the nearest intersecting road method of plotting locations. Roadway hierarchies were now used for reporting purposes, while alpha order was used for two roadways being reported for the same hierarchy. Other, additions, had appeared in box 10 "Crash Occurred On", included addressing nominal direction of the road, parking lots, plus ramp and jug handles. Descriptions were provided in this guide for boxes 19-20 "Ramp Identification" on the definition of a ramp and jug handle, road hierarchy, and primary road determination.

Other reporting issues, requiring additional information, included box 91 "Refused Medical Treatment", box 94 "Air Bag Deployment", box 95 "Hospital Code", and box 97 "Temporary Traffic Control Zone"; which were either new or revised boxes used by officers to enhance the existing data set. Several of the "vehicle related" boxes 108 & 109 "Vehicle Type", boxes 110 & 111 "Vehicle Use", and boxes 112 & 113 "Special Function Vehicles" were modified to reflect additional types of vehicles, uses, and functions that were present on New Jersey roadways. Also, officers were instructed to make determinations, in box 118 a & b & box 119 a & b "Apparent Contributing Circumstances", for all crashes including those marked as "Other", which had to be further explained in the narrative (box 135). Additional choices were provided in boxes 120 & 121 "Apparent Physical Status", boxes 124 & 125 "Pre-Crash Action", boxes 126 & 127 "Traffic Controls", and box 128 a through d & box 129 a through d "Sequence of Events". Lastly, an important clarification to note was in box 143 "Reviewed By" where directions were given for officers on the procedures for submitting reports to state agencies including the NJDOT.

After two years, the NJTR-1 Subcommittee had successfully revised of both the NJTR-1 Form and the *Police Guide for Preparing Reports of Motor Vehicle Crashes*. The NJTR-1 Form was modified to be more "user friendly" for officers to capture data during crash investigations. This police guide continued to be the resource for reviewing crash

reporting procedures. These documents also served as the framework for producing a standardized training curriculum that is described in the following section.

Training Curriculum and Development of Companion Resources

The NJ LTAP consultant, a police curriculum development expert, was hired to create the standardized train-the-trainer curriculum. As mentioned, the content was based on input from the NJTR-1 Subcommittee and the Regional Police Technical Advisory Committees, the updated NJTR-1 Form, and the *Police Guide for Preparing Reports of Motor Vehicle Crashes.* The NJTR-1 Subcommittee recommended that the training include a tutorial on preparing the new crash report, an overview of the NJDOT's role in maintaining the crash report database, and address challenges of conducting in-house training programs. The Regional Police Technical Advisory Committees further agreed that these training sessions were to be "train-the-trainer" programs, in order to effectively serve the entire state in a timely manner. The need was great since the updated NJTR-1 Form had been dramatically improved from the previous version. All participants were expected to receive the NJTR-1 Form Instructor Manual, copies of the form, the NJTR-1 Form Field Manual, and a disk of the training resources for duplication. There was also an expressed interest for the NJ LTAP consultant to develop an on-line training resource, as a remedial tool for municipal departments.

Training Curriculum

Both the NJTR-1 Subcommittee and the Regional Police Technical Advisory Committees identified several topics for inclusion in the training sessions, while the MMUCC compliance process generated issues, along with corrective measures for reducing reporting errors (Figure 7). A total of 22 training requests were to be incorporated into the standardized curriculum, with most appearing in the Locate Crash (27%) and Crash Description (23%) sections. The remaining items averaged about one per area, with Driver Identification and Enforcement Action not requiring any modifications.

In the Preliminary Instructions, training recommendations were on clarification of when the Dash (-), Unknown (00), and Other (99) codes were used for reporting purposes. The Locate Crash section was adapted to accommodate Global Positioning Systems (GPS) and the use of milepost markers for standardizing crash locations. Also, changes were requested for reporting crashes relative to the distance of the nearest intersection, as well as the first harmful event and location of run off the road crashes. Owner/Vehicle Identification had evolved into the use of a five-digit system for insurance codes, and Roadway System training addressed the nominal direction, characteristics of the roadway, along with identification of lighting at the scene of the crash. Further clarification was required for the "Alcohol/Drug Test" section to standardize the description of prescription drugs to include both legal and illicit drugs. The USDOT number was to be used for HAZMAT/Commercial Vehicle Information data, instead of the New Jersey code. Vehicle weights over 26,000 had been placed on the side of

trucks and readily available for reporting purposes. Preparers were to be reminded about recording the direction of travel for "Vehicles Involved in the Crash". "Apparent Contributing Circumstances" required discussion on the sequence of events. The *ANSI Manual* was incorporated as a tool for defining crash types, while the pre-crash stage of vehicle travel would help to reduce reporting errors. Further clarification was required for under and over encroachment, u-turns through the median, and the differences between work zones and utility work. Lastly, information was to be highlighted on the Prosecutor's Office allowing partially completed fatal reports to be submitted and later revised with a Change Report.
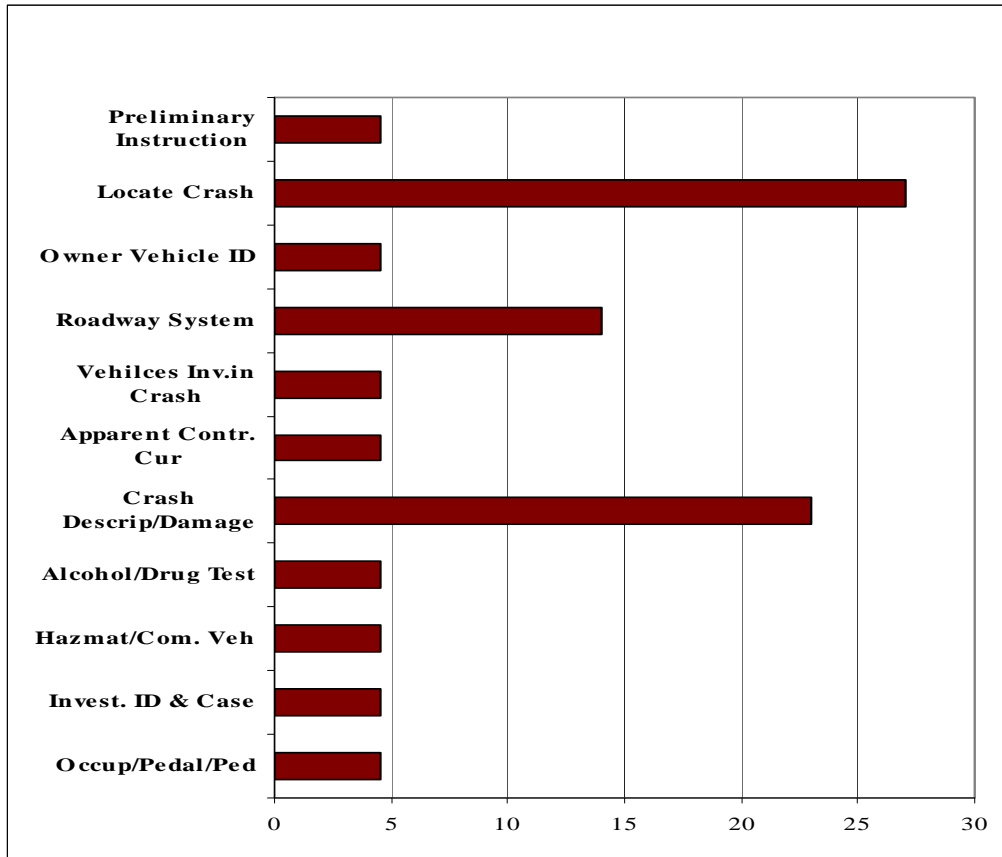
Figure 7. Percentage of NJTR-1 training revision requests

After incorporating the NJTR-1 Subcommittee training requests into the curriculum, the NJ LTAP consultant used content from the *Police Guide for Preparing Reports of Motor Vehicle Crashes* and feedback from the Regional Police Advisory Committee forums, to develop a standardized procedure for completing the NJTR-1 Form. Specifically, the form was segmented into thirteen sections with each one containing an independent key objective and several distinctive performance indicators. The objective behind the training was to promote more accurate data collection and accomplished by segmenting the new form into thirteen sections and standardizing the reporting process. Essentially, a behavioral approach was used in the curriculum design, so errors were able to be

trained out of the reporting process through the tracking of deficiencies in these thirteen training sections.

When examining the key training objectives for the thirteen sections, over half (53%) involved the identification and recording of data; while the remaining sections required officers to assign, list, describe, and locate information (Figure 8). Also, the police had to engage in construction of a crash diagram, an analytical process. Mostly, the reporting process required identification and collection of information about drivers, vehicles, the roadway system and the enforcement actions. Lists were used for describing apparent contributing circumstances of the driver, pedalcyclists, and pedestrians.

Figure 8. Sections of the NJTR-1 Form.

Key Training Objectives and Performance Indicators

An overview of each section is presented below, along with the objective and actions that contributed to the mastery of the data collection function, the measure of knowledge (NHI, 2003). The most comprehensive section, "Occupant", "Pedalcyclist", or "Pedestrian Information", required the collection of data on the vehicle, occupants, injuries, available safety equipment, and the use of hospital codes when applicable (Table 6). All of these actions measure comprehension. The least involved report

sections appeared to be the "Enforcement Action" and "Investigator Identification" and "Case Status" sections, which are knowledge based.

Table 6 - Corresponding key training objectives

Section 1: Locate Crash. The key training objective is to administratively and physically locate the point of impact. This will be accomplished by indicating whether the crash was a fatal, reportable, non-reportable, or change report. A determination is made on the location of the crash along with a list of total killed and injured.

Section 2: Driver Identification. Identification of pedalcyclists(s), driver(s), or pedestrian(s) is the key training objective. Information is to be entered from a legal source on the report.

Section 3: Owner/Vehicle Identification. The key training objective is to identify the owner and vehicle information, which is obtained from a legal source and enter it into the report.

Section 4: Alcohol/Drug Test. It is critical to identify any alcohol and drug use and then transpose any alcohol/drug test procedures and information on to the report.

Section 5: HAZMAT/Commercial Vehicle Information. Similar to Section 3, the key training objective is to identify HAZMAT and Commercial Vehicle Information. This is accomplished by lists of placard numbers, identification of whether substances were spilled or on-board, and recording of standard vehicle information.

Section 6: Occupant, Pedalcyclist, or Pedestrian Information. This section requires the officers to assign occupant, pedalcyclist, or pedestrian information. In addition to personal information, physical status, injuries, medical treatment, availability of safety equipment, and hospital code information is to be recorded for each individual. Also, any fatalities are to be recorded in this section.

Section 7: Roadway System. The key objective is to identify how the roadway had been divided, plus the presence of any traffic controls, light conditions, roadway system, roadway character, surface type, surface conditions, and environmental conditions. This entire section includes listing and identifying the variables related to the key objective.

Section 8: Vehicle Involved in Crash. In addition to the total number of vehicles involved in the crash, it is important to identify their characteristics by listing overweight and oversize characteristics, vehicle type, use, functions, cargo body type, and direction of travel for each vehicle.

Section 9: Apparent Contributing Circumstances. Listing and descriptions are required for the apparent contributing circumstances of the driver, pedalcyclist, or pedestrian involved in the crash. Additionally, this section involves vehicular and

environmental factors. Pre-crash actions and sequence of events are to be addressed, along with identification of the vehicle impact area.

Section 10: Crash Diagram. The key objective is to construct the crash diagram including the north direction. Draw each vehicle, including diagrams where vehicles were moved before police arrival, and indicate the environment. Also, draw pre-crash, crash, and post-crash positions. Diagrams for fatal or serious injury crashes are to be drawn on the NJTR-1B instead of box 134 including north direction.

Section 11: Crash Description and Damage to Other Property. Officers are to describe what occurred and list all other property damage. Three basic segments include physical facts of the crash, statements from operator(s) and the witness(es), and a statement from the investigator that summarizes the result of the investigation. Other issues are to explain asterisk information, understand the use of the NJTR-1A as a continuation page, and listing of all other property damage.

Section 12: Enforcement Action. All motor vehicle enforcement actions are to be identified as the key objective. The process includes listing driver number, identification of the most serious charge, plus multiple charges, and the listing of summons numbers.

Section 13: Investigator Identification and Case Status. The key objective is addressed by identifying investigator by signature and badge number, supervisor's initials and badge number, and the identification of case status.

After the objectives had been developed, slides were produced for each box that contained a pictorial of the form box, a descriptive paragraph based on content from the police guide, and additional examples to clarify reporting procedures. The format was one box per page, plus examples of pdf files and website links when applicable. These slides contained learning objective frames, introductory information, and case studies that were combined to produce the training curriculum products: a presentation tool, instructor's manual, and a field manual for handouts

Presentation Tool

The Presentation Tool was developed using Lectora software, an e-Learning platform with the capability of building web-based training that was requested by the NJTR-1 Subcommittee. Two additional features, "Preliminary Instructions" and "NJTR-1 Exercises", were added to the existing thirteen sections and included in the Presentation Tool. "Preliminary Instructions" contained background information on the NJTR-1 Subcommittee and the Local NJTR-1 Advisory Committee, a copy of the NJTR-1 Form; as well as segments from Title 39 and the Police Guide for Preparing Reports

of Motor Vehicle Crashes. The "NJTR-1 Exercise" served as a review with participants being asked to successfully complete a blank form.

Also, a drop-down index acted as a navigational feature for this instructional program, while a tool bar with buttons for reaching "home", "index", "exit", "back" and "next," was built into each screen. Also, every chapter was framed with a Learning Objective and Section Summary pages to reaffirm the reporting skill sets being addressed in each chapter. Brightly colored (red) outlines identified each box being discussed, while red letters were used to emphasize new text.

Instructor and Field Manuals

The Instructor Manual contained 264 pages that included a printed version of the power point and copies of information from each linked site. Another section, the NJTR-1 Form Field Manual, was included for officers to use during departmental training. This product was actually designed as a field tool, so multiple boxes and descriptive sections were reduced in size and several frames appeared on every page; which significantly reduced the size of this document. The "Preliminary Instructions" section appeared in the back of the text to promote ease of use during field assignments. Finally, the NJTR-1 Form exercises were separated out of the Field Manual and issued independently, for use as a training exercise.

The developmental process produced a NJTR-1 Form that met the needs of both the field officers and technical community. Most importantly, a structured training curriculum and resource tools were created through the segmentation of the NJTR-1 Form, and identification of training objectives. In the future, data system managers will be able to identify reportable errors and a determination can be made on corrective training actions for "training out" the errors. Although speculative, the end result should result in a substantial cost savings for both state and federal governments and enhanced data integrity.

E-Learning System and Training Updates

As noted, the NJTR-1 Subcommittee requested that an on-line training tool be developed as a resource for veteran and new police officers. The intent of this system was not to replace traditional workshops where participants have the opportunity to network and obtain information, but to serve as remedial tool or to be used by employees to build data collection skills, until workshops became available to them. The decision of the Subcommittee was for this learning tool to be located on the New Jersey State Police, NJ LEARN training website, where police regularly visit to receive training.

In order to accomplish this task, the LTAP team partnered with the NJTR-1 Subcommittee to obtain feedback from local police officers on training issues that still needed to be addressed. They identified some inconsistencies with the training

products, while the state representatives reported errors in data being submitted by police officers (Figure 9). A total of 15 issues were identified with almost half being clarifications of training content. In some instances, the data system was unable to accommodate four digit entry codes (i.e. year), so the entry had to be scaled down to two digits. Also, redundant information was presented for coding of Alcohol/Drug Tests that caused confusion; while additional instructions were needed to properly record multiple crashes.
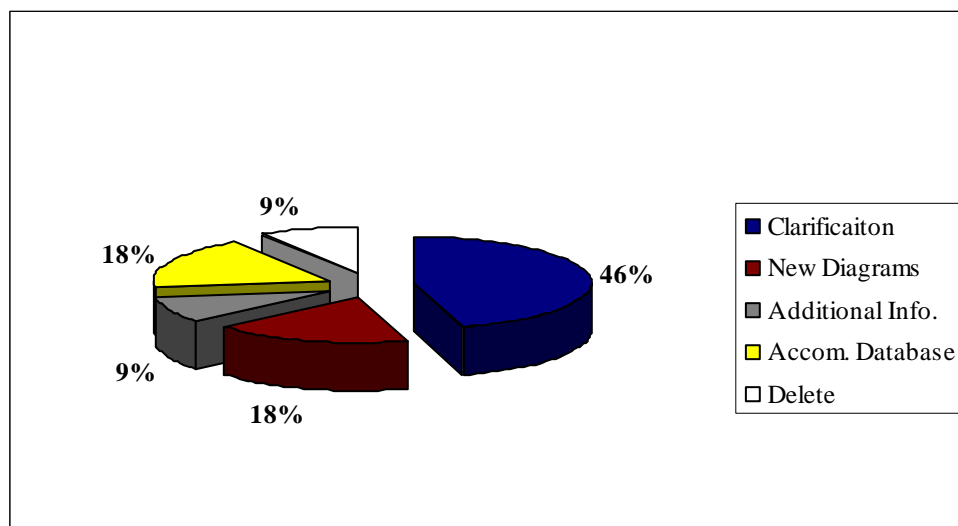
Figure 9. 2006 NJTR-1 training content updates

The NJ LTAP team was then charged with updating the power point instrument, since the E-Learn System was to be built from this product. First, the NJ LTAP consultant reviewed these changes and approved them for consistency with existing content and absence of liability issues. Next, the technical vendor converted the changes into a contrasting colored text, and inserted them into the presentation tool and instructor text. After these adjustments were made, the NJ LTAP team developed a series of "true/false" and "multiple choice" questions (38) for inclusion in the E-Learning System. The review tool maintained one to eight review questions per section. When users answered the questions, both correct and incorrect answers were acknowledged with a brief review of the training material. These questions reinforced the learning objectives and were transformed into interactive exercises from which a randomized final exam (20 questions) was generated at the end of the program. Test scores were based on the pass/fail system and the passage rate was determined at 70 percent.

The NJTR-1 Subcommittee previewed the product and several members volunteered to evaluate each of the thirteen sections (Figure 10). A total of 33 recommendations were compiled by the Subcommittee for the NJ LTAP staff members to research and resolve. Most of these issues were related to the overall training process, while less than half applied directly to the E-Learning System. Nearly half of the E-Learning requests (43%) addressed rewording of questions and changes in the presentation of instructions (29%). The remaining issues equally referenced (14%) adjustments in the format and corresponding links.
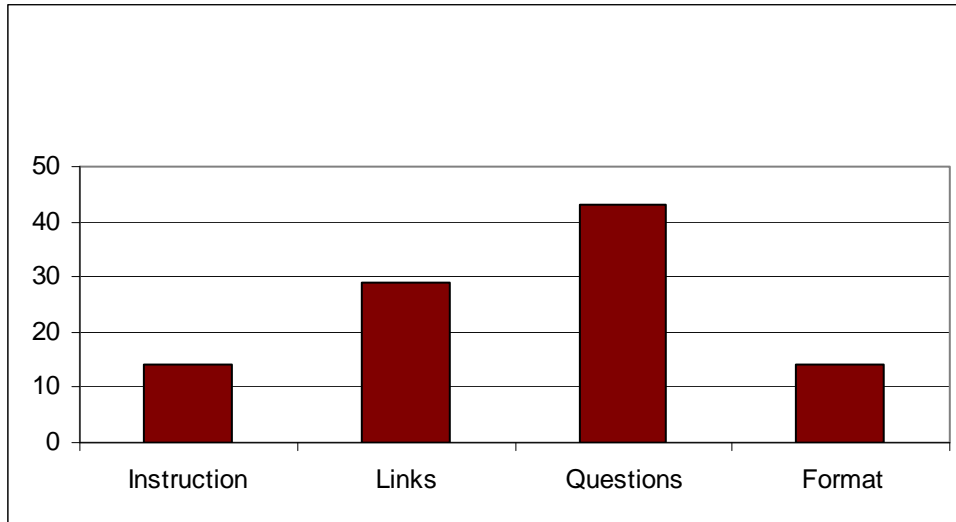
Figure 10. NJTR-1 Subcommittee E-Learning System adjustments in percent

Adjustments were made to the E-Learning System by the technical vendor, in order for this tool to be approved by the NJTR-1 Subcommittee before being accepted into the NJ LEARN network, the statewide training system for enforcement personnel.

Phase 3: Implementation Process

The implementation process occurred in four stages: knowledge based training, evaluation and revision of the training content, presentation of applied learning programs, and launching of the E-Learning System (Table 7). The initial training was dedicated to dissemination of knowledge and resources, while the second stage entailed evaluation and review of the curriculum for use in development of the applied learning program that was schedule one year after the initial knowledge based training. Participants were able to use the training and resource, provided one year earlier, and comment on what worked, what did not work, and what needed to be improved for reduction of crash reporting errors. Lastly, the on-line E-Learning System was developed as a supplement for veteran trainers and a resource for new police officers.

Table 7 - Phase 3: Implementation process

Stage I: Knowledge Based Training	Statewide Training Sessions (13)
Stage II: Revision and Evaluation	• Police Traffic Officers Responses • Review of Crash System Data
Stage III: Applied Learning Training	Statewide Training Workshops (7) • Training and Field Responses • Evaluation Results • Resource Distribution
Stage IV: E-Learning System	• Demonstration • Revisions • Adoption on NJ LEARN Website

After the applied learning workshop series was complete, the E-Learning System was tested by the NJTR-1 Subcommittee members and modified accordingly. Lastly, preparation was made for launching of the E-Learning System on the NJLEARN website. These stages will be addressed in this following section.

Stage I: 2005 Knowledge Based Training

The NJTR-1 Form Train-the-Trainer Program was conducted as crash records management training that introduced the revised NJTR-1 reporting system. The entire series of 13 workshops was instructed by the NJ LTAP consultant (Figure 11). Beginning one month prior to the release of the revised NJTR-1 Form, the programs were held at county police academies in the northern (6), central (5), southern (2) regions of New Jersey.
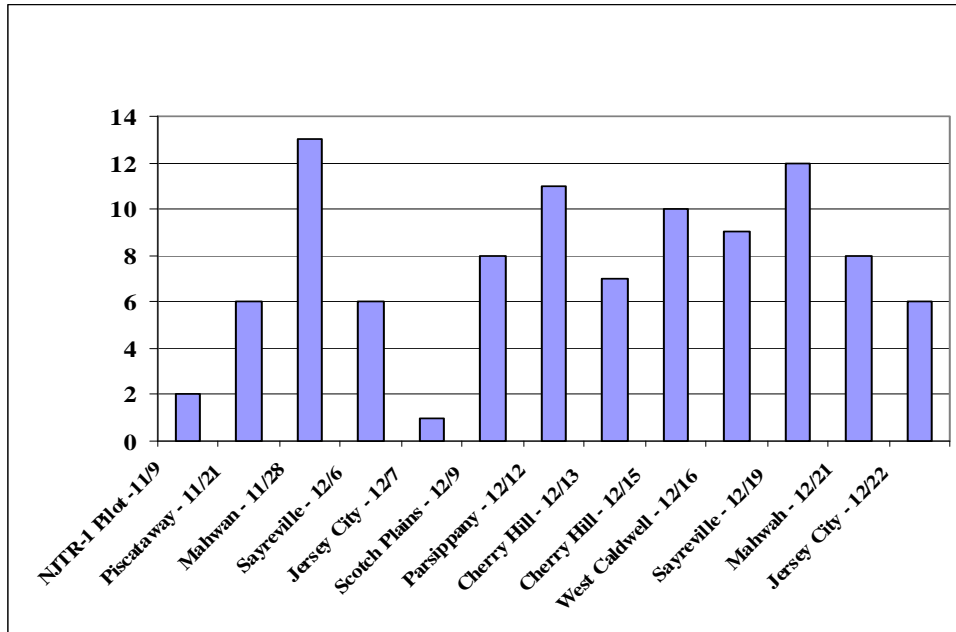
Figure 11. 2005 NJTR-1 Form training enrollments in percent

A total of 504 train-the-trainers participants attended these seven hour sessions, with a targeted audience of municipal police trainers (96%). The program format consisted of an overview of the NJTR-1 Form, discussion of the changes, review of the boxes, question and answer period, lunch break, and practice exercise component. The box review segment included an overview, changes from past practices, and revisions of the reporting requirements for the new form. During the summary, officers prepared and discussed a sample exercise. At the end of the session, each participant received a full training package that included the instructor manual, presentation tool, field manual handout, series of training review exercises, and an updated copy of the NJTR-1 Form.

Stage II: Evaluation and Revisions

As previously noted, the evaluation process was not conducted during training sessions. Instead feedback was solicited from the New Jersey Police Traffic Officers' Association membership, who had been using the training products for a three month period. This group was encouraged to submit comments to the NJTR-1 Subcommittee on the effectiveness of the products and data collection issues that they encountered since the training. Also, feedback was obtained on the data system errors that occurred in conjunction with the use of the updated form. This information was then used, along with input from program registrants to develop a refresher workshop.

Instructors were recruited from the NJTR-1 Subcommittee to work with the NJ LTAP team on developing half-day applied learning workshop. The group collectively identified the targeted audience as being police supervisors, reviewers, and trainers who wanted information on training updates. The course description was developed for the purpose of informing local police supervisors and trainers about changes and procedures for

completion of the NJTR-1 Form. A power point slide presentation and replacement sheets of the existing instructor manual were issued on the fifteen training updates (Figure 12). Each power-point slide presented the original version of the training text and a box with the updated information. Additional workshop information included discussion of data reporting errors and field reporting problems experienced by police officers. Since the revised form had been in use for one year, instructors solicited feedback on reporting issues that officers had experienced using the NJTR-1 Form.
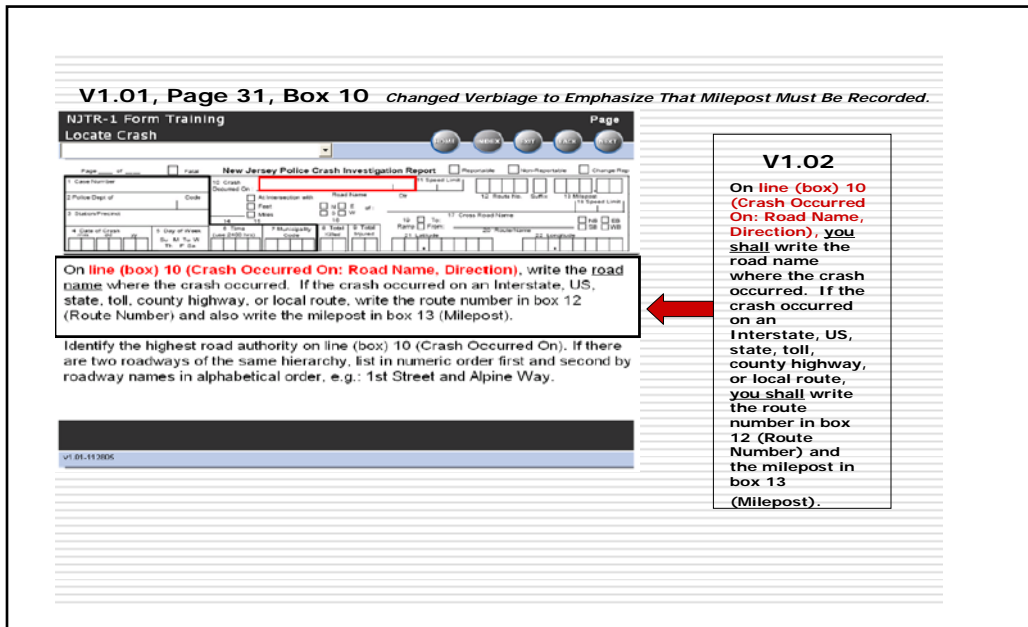
Figure 12. Sample program slide used for 2006 training

Stage III: 2006 NJTR-1 Form Training Supervisors and Trainer Refresher (Applied Learning) Program

A total of seven sessions were held for both supervisors and trainers at county police academies in the northern (2), central (2), southern (3) regions of New Jersey (Figure 13). The majority of the 212 participants (96%) represented local police enforcement agencies, while the remaining individuals represented the NJSP and university campus police.
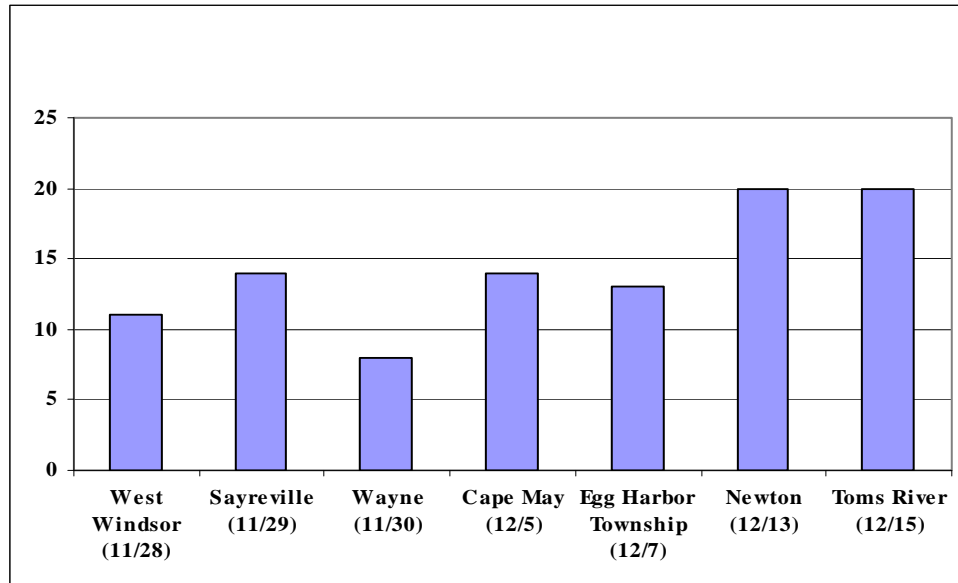
Figure 13. 2006 training participation rates in percent

This standardized program highlighted the importance of Geographic Information Systems (GIS) technology, instructions on parking lot crashes, recording of mileposts, collection of data on ramps, recording of multiple vehicle crashes, entry of data for year, issues related to nominal direction of crashes, and replacement of the Clock Point Diagram with a user friendly version. Five reporting errors were addressed that included "Vehicle Removed To" and "Victim's Physical Condition" not being recorded on the NJTR-1 Form. There were inconsistencies in reporting the use of seatbelts as "Safety Equipment Available". Also, vehicles were not being numbered properly when multiple vehicle crashes were reported.

Prior to the training, registrants were asked to identify training problems that they had experienced in completing the updated NJTR-1 Form. The responses were used to initiate a "Question and Answer" segment of the program. The topics of discussion included the following:

- Documenting identifications of those involved in the crash.
- Recording the administration of the Alcohol/Drug tests.
- Completing diagrams.
- Determining crash locations.
- Coding of machinery in use.
- Reviewing all new boxes.
- Understanding procedures for submitting Self-Report Forms.

Training and Field Responses

Instructors addressed workshop expectations that were identified by participants during introductions. These items (139) were coded into computer, data collection, diagram, reporting/procedural, resources, and training issues (Figure 14).
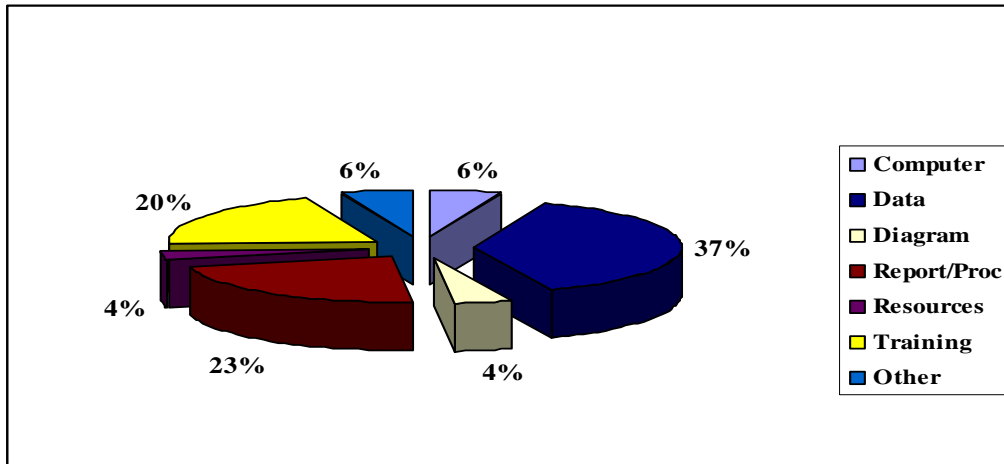
Figure 14. 2006 NJTR-1 training issues

<u>Computer Issues</u>

Since many departments used electronic versions of the NJTR-1 Form, many participants were concerned about their vendors being notified of the changes that affected reporting procedures. In the northern region, officers reported the on the Plan4Safety tool that used the NJTR-1 data to provide reports to municipalities on local crashes. A series of additional issues and concerns to be addressed appears below:

* Procedure for vendors to be notified of the changes in reporting practices.
* Computer programs will not allow bracket entries on form.
* GIS entries are currently impractical for police departments.
* Plan4Safety is a new tool for identifying crash locations.
* Identify different vendors for electronic transfer of data.

<u>Data Collection Issues</u>

Most presenting problems were data collection issues (37%), which included the topics built into the curriculum as well as individual concerns that varied between regions. Collecting data on apparent contributing circumstances, moving of machinery, and work zones were frequently discussed during the programs. Also, ramp issues and parking lots were universally addressed during the programs. The following list includes all of the identified data collection issues:

- Larger boxes are needed on the form.
- "Apparent Contributing Circumstances" is confusing.
- Car type data may be used to identify faults in cars.
- "Snow Plow" and "Construction Equipment in Use" needs to be captured by state agencies.
- Reporting of unlicensed drivers or migrant workers with fraudulent licenses.
- Understanding of hospital codes.
- Calculating crash locations.
- Use of dashes is confusing.
- Noting Private and parking lot crashes.
- Recording out-of-state identifications.
- Identifying air bags and other safety equipment
- Clarification of ramps, intersections, u-turns, and jug handles.
- Work zone data issues.
- Coding of cars as assault weapon, disabled cars, and driverless vehicles.

Diagram Development Issues

Officers shared information on the use computer programs to generate electronic diagrams. Some discussion occurred on the submission process of electronic documents.

- Proper completion of diagrams.
- Use of diagrams to clarify "none" in boxes.
- Electronic reporting of diagrams.

Enforcement Issues

In some regions, officers inquired about crashes being charged to the officer's motor vehicle record, while responding to emergencies. Participants were advised to contact William Beans, NJDOT representative, for further information on the removal process with the Motor Vehicle Commission.

Reporting Procedure Issues

Approximately one third of all participants were reviewers of the crash reports for their municipalities. They sought information on the procedure that the state would be using for returning forms that were not correctly completed. Changes in the use of NLETS were discussed, along with the reporting procedures used for submission of fatal and non-fatal crash records.

- Role of reviewer.
- Submission of fatal/nonfatal crash records.
- NLETS reporting process.
- Hit and run crashes.
- Industrial crashes.
- Older driver crashes.

Resource Issues

Many departments were running out of the printed NJTR-1 Forms, so officers asked about where to obtain these supplies. Most participants expressed appreciation about receiving electronic versions of the course materials for use during their in-house training activities.

- Procedure for obtaining crash report forms.
- Reprints of training materials.
- Power point program.

Title 39 Issues

Some discussion took place on the relationship of Title 39 to the new reporting procedures. Also, one question arose during training on the reporting of dogs involved in crashes

- Relationship of Title 39 to NJTR-1 reporting procedures.
- Title 39 does not require reports on dogs.

Training Issues

Officers appreciated the opportunity to have field questions addressed by subject matter experts and planned to replicate this activity during their in-house training sessions. The power point of the updates would be used to train veteran officers, while workshops on the entire 144 boxes would be conducted for new officers.

- Maintaining quality control for the NJTR-1 Forms.
- Obtained updated Information.
- In-depth review of form.
- Knowledge.
- Answered field questions.
- Provide (local) standardized training.
- Confirm that reports are being completed correctly.

Other Issues

A few items appeared in the "Other" category that included inviting OSHA or PEOSHA to join the NJTR-1 Subcommittee because of industrial crashes being reported in municipalities. Also, issues were raised about reducing the size of the report, along with the need for instituting crash reduction programs in the future.

Program Ratings

Verbal feedback was solicited during first week of the program, while evaluation forms were used for responses beginning in the second week of training. The workshop scores were shared with the instructors. The overall program was rated as 90 percent or greater, while location and facilities ranged between 85 and 89 percent (Figure 15). Comments were also very favorable toward the instructors, training resource, and reaching the targeted audience. Only one complaint was registered about not holding this training during the Police Traffic Officers' Association monthly meetings. Other responses included a request for on-line reporting capabilities in all municipal police departments throughout the state.
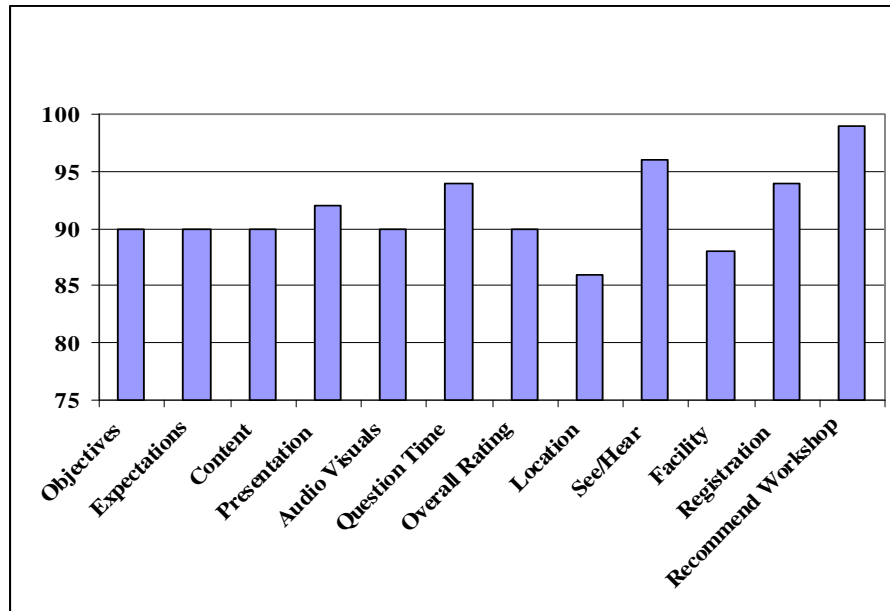
Figure 15. Overall 2006 evaluation scores in percent

In response to scheduling a program for the New Jersey Police Traffic Officers' Association, an abbreviated session was held at their meeting the following month, with 165 training kits distributed to a statewide representation of police traffic officers.

Stage IV. E-Learning System

After the training sessions ended, the NJTR-1 faculty previewed a pilot demonstration of the E-Learning System. These content experts reviewed the training program that included test questions to support the learning objectives for each section. Several changes were recommended during the review process which entailed changing eleven questions. The wording of the questions, visual enhancements, and instructional content adjustments were requested. Afterward, the NJTR-1 Subcommittee members were also recruited to review each section of this tool and provide recommendations on the ease of use and accuracy of the questions.

<u>Revisions</u>

In all, a total of 33 requests were made to NJ LTAP team for further action (Figure 16). The "Driver Identification" category received the most recommendations (15%) that required adjustment of questions and further clarification of the text with coding issues. Another category, "Owner/Vehicle Identification" (11%), addressed clarification of boxes. The "Locate Crash" (11%), section contained questions on GPS items that were not considered significant, while other questions were redundant and some adjustments were sought on parking lot issues. The instructional segment of the tool (E-Learning Instruction, Introduction, User Instructions and Index, and Preliminary Instructions) yielded 30% of all requests for changes, while remaining adjustments were primarily related to individual boxes (33%).
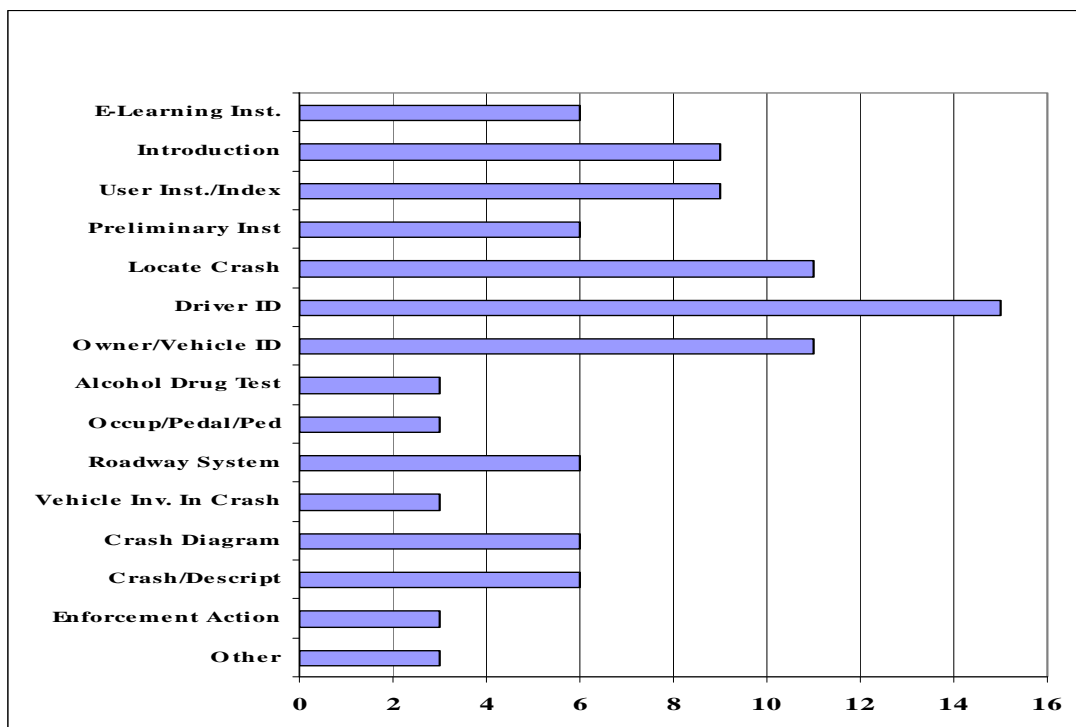
Figure 16. Percentage of E-Learning System revision requests

36

The NJ LTAP team reviewed and classified them into one of the following categories: action, committee action, or no action (Figure 17). The "action" category (39%) included adjustments related to the E-Learning System, whereas many of the "no action" recommendations (46%) directly involved the text that needed to be addressed in the future. Also, 15% of the recommendations required Subcommittee review before any further actions could be taken by the vendor.
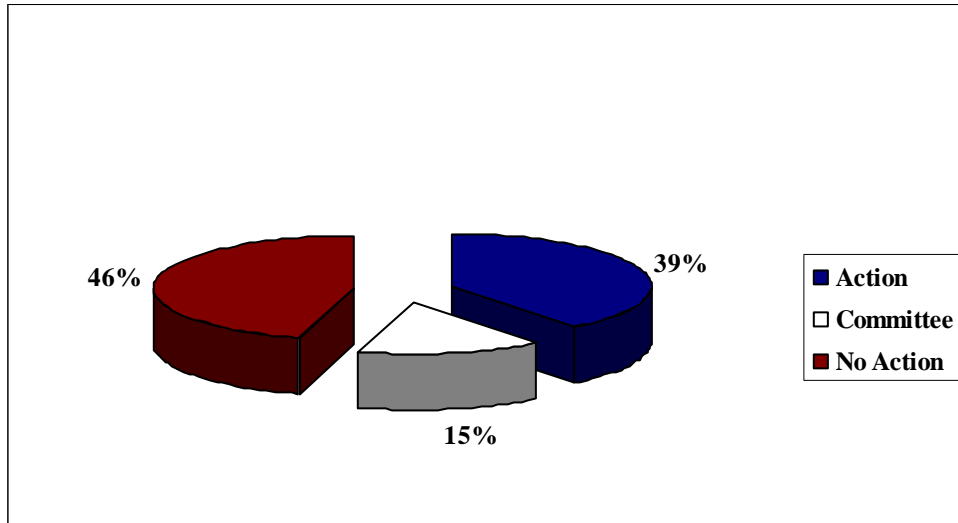
Figure 17. Resolution of E-Learning recommendations in percent

Interestingly, the adjustments to the E-Learning System were eight recommendations with three adjustments having been made on one slide, cosmetic changes, and the creation of designated links to required information. A sample and solution appears on the following page (Figure 18).

ROADWAY SYSTEM - Challenge Zone 1

Concern: Correct answer is False. Other road surface codes can be used.

SUGGESTED REWORDING:

Only concrete, blacktop, gravel, steel grid, or dirt shall be described in box 101 (Road Surface Type). All other information in relation to road surface type shall be described in box 135 (Crash Description).

Correct answer would still be "True", and reference would remain the same.

Figure 18. E-Learning System adjustment sample

Once all adjustments were made to the E-Learning System by the technical vendor, the NJ LEARN administrator was approached on linking this tool to their website.

Linkage to the NJ LEARN Website

After the NJTR-1 Form Training E-Learning System was successfully linked to the website, the notification process was completed. Confirmations are sent directly to users who have successfully completed the training. Certificates will be issued on-line after successful completion of the course. Results will be tracked during the upcoming year, in order to establish the effectiveness of this product.

CONCLUSION AND RECOMMENDATIONS

It is important to identify the outcomes resulting from the PTAP project that are often not measurable. The first important outcome is the global acceptance of the revised form by the enforcement community, which had not been the case in the past. To the credit of the NJTR-1 Subcommittee, they considered national "best practices", feedback from the NJDOT technical staff, and recommendations of the Regional Police Technical Advisory Committee when revising the NJTR-1 Form to reflect field reporting conditions. Furthermore, the involvement of NJDOT staff members and local police officers, who worked directly with the form, improved the functionality of this tool. Also, the interaction between state and local personnel contributed to a mutual understanding and respect of how and why the form changes had occurred.

NJ LTAP staff was involved in the MMUCC compliance effort by identifying the compliance levels of other states and communicate to local officers a better understanding of the value that compliance had on the quality of data being collected in New Jersey for national purposes. Again, the outcome was support from police officers on collecting additional data required of the revised form. The adjustments, approved by the NJTR-1 Subcommittee, increased the compliance level of the revised NJTR-1 Form by approximately 16 % from the previous version.

Most importantly, behavioral objectives, used in the curriculum design of the knowledge based training program, had produced the outcome of training errors out of crash reports. The revised NJTR-1 Form was segmented into thirteen sections with each one containing an independent key objective and several distinctive performance indicators. This targeted approach to training also has enabled local police departments to retrain employees in an efficient manner to further improve the accuracy of forms being entered into the NJDOT Crash Records System.

According to the State Office of Information Technology and NJTR-1 Subcommittee representative, the number of errors per form had significantly decreased during the year to two errors per form, which reflects a 98% accuracy level for the submissions. When considering the outcomes identified as global acceptance of the revised NJTR-1 Form, engaging in additional data being collected, and training errors out of the NJTR-1 Form, it is difficult to determine if one or all of these actions have contributed to the dramatic increase in accuracy of the NJTR-1 Form that is currently being submitted to the NJDOT. Although not measured in this study, accuracy in reporting may have a

significant impact on the reduction of crash data coding time and staffing hours assigned to this type of task.

Since training and development are considered a cyclical process driven by the assessment of the environment, it appears that the next steps for the partnership between the NJTR-1 Subcommittee and the NJ LTAP team are to formally address the training issues identified during the 2006 training as a "Frequently Asked Questions" document for inclusion on the NJDOT sponsored Police Resource website. The police academy representatives have expressed an interest in revising the Presentation Tool for use in the police academy curriculum. Also, it was suggested that both the *NJTR-1 Form Field Manual* and the *Police Guide for Preparing Reports of Motor Vehicle Crashes* need to be combined into one document for field use. Lastly, the E-Learning System requires a minimum of oversight and monitoring of participants who have successfully complete the on-line training program. In conclusion, on-going work needs to be done on behalf of the NJDOT Crash Records Data System.

IMPLEMENTATION AND TRAINING

The PTAP project objectives were measured by the distribution of resources and the participation in training activities (Table 8). A total of 2,313 training resources had been distributed to local police trainers, reviewers, and supervisors. Nearly half of the resources (1,432) were in an electronic format for ease of duplication and local dissemination. In addition to being cost effective, there was a stronger likelihood that these electronic resources would be disseminated and used throughout the entire enforcement community. Also, the NDOT supported the distribution of a companion Field Manual by hosting it at their website for officers to download. Lastly, the NJ LTAP offered the NJTR-1 Training Kits as a "free for the asking" resource in their monthly newsletter.

Table 8 – PTAP training and distribution results

NJTR-1 Resources Distributed	Presentation Tool, V1	504
	Instructor Manual, V1	504
	Field Manual, Version V1	504
	Training Update Power Point	212
	Presentation Tool, V2	212
	Instructor Manual Updates, V2	212
	Training Kits	165
	Total	**2,313**
Participants Trained	Knowledge Based Programs (13)	504
	Applied Learning Programs (7)	212
	NJPTOA Update (1)	165
	E-Learning System (to be determined)	
	Total	**881**

Additional actions were taken to enhance training efforts and reach a wider audience than the 716 participants that attended the training programs. After the second training series was conducted, an abbreviated version of the program was presented to the New Jersey Police Traffic Officers' Association meeting, where a total of 165 officers were present. Since the NJTR-1 faculty belonged to this organization, they will continue to serve as in-house experts. Also, the eight (8) regional representatives were supplied with training kits that had been distributed during their local membership meetings. Lastly, the E-Learning System will continue to fill the void for new or veteran officers who require training or retraining on specialized sections.

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APPENDICES

2004 National Crash Report Status Survey				
State	**Reporting Agency**	**Report Size**	**% of MMUCC**	**Electronic Transfer**
Alabama	Alabama Dept. of Public Safety	Main report form- max of two units. Supplemental sheet for additional narrative, victims, diagram. Truck/bus supplement	70% compliance in 2000. New version is being tested and expected to be 100% compliant.	There is electronic transfer of crash data to Public Safety from investigating agencies.
Connecticut	Department of Transportation	One double-sided page with two overlays		All paper
Delaware	State of Delaware		51 out of 75 on crash form	
Georgia	Department of Motor Vehicles	One page (front and back)	All of the 196 fields are within MMUCC requirements, while some MMUCC fields are not collected	None. A project is scheduled in 2005 to accept electronic crash data.
Indiana	State Police Records Division		80-90%	1/3rd of reports are electronically received
Iowa	Iowa DOT, Office of Driver Services	1 page front & back plus code sheet	97-98% compliant for both data and coding elements	61% of crash reports are sent electronically
Kansas	Department of Transportation	7 pages long	80-90% of MMUCC guidelines	None.
Kentucky	Kentucky State Police	4 pages	97.7% MMUCC compliant	49% of agencies

Louisiana	Dept of Transportation & Development	4 pages	80%	40%
Maryland	State Police	1 page	85%	Pilot from police agencies to MSP in 1 county
Michigan	State Police	1 page	70%	Receive electronic data but agencies are not ready to send
Minnesota	Department of Public Safety	4	90%	25%
Montana	Highway Patrol	1 page (front back & supplements)	Unknown	None
Nebraska	Department of Rods	2 pages	80%	None
Nevada	Department of Transportation	9 pages	92%	In the process of adopting PDA or laptop computers and housed at Dept. of Public Safety
New Mexico	Department of Transportation	4 pages	92%	Implementing TraCS in July 2005
Ohio	Department of Public Safety	3 pages	90-95%	Beginning the process
Rhode Island	Department of Transportation	Multiple pages (varies)	70% of data collected at scene or is derived from that information	All departments are transmitting data
Texas	Department of Public Safety	2 pages	73% compliant	XML and web portal will be available in late 2005
Vermont	Agencies of Transportation	4 pages	75%	Contract underway for electronic

				crash interface project. Enforcement fills out reports and sends to DMV, which forwards them to Engineering and they are entered into the data base for analysis and reporting.
West Virginia	Division of Highways, Traffic Engineering	4 pages, including witness statements, narrative, & diagram	75% compliant with MMUCC elements.	None
Wisconsin	Department of Transportation, Traffic Accidents Section	4 pages	80%	None, but are working on it

2003 New Jersey Police Accident Report Categories	
Box Title	**Box Title**
# 1. Pedestrian Maneuver	#55,56,57, &58. Distance From Nearest Cross Street
# 2 & 3. Traffic Controls	#59,60,61, & 62. Ramp Identification
#4. Road System	#63 & 64. Latitude and Longitude
#5. Road Character	#65. Policy Number
#6. Road Surface Type	#66. Insurance Company Number
#7. Road Surface Condition	#67 & 90. Driver's Name
#8. Weather	#68 & 91. Number and Street
# 9 & 10. Oversize/Overweight Permit	#69 & 92. City, State and Zip code
#11 & 12. Vehicle Type	#70 & 93. Driver's License Number
#13 & 14. Cargo Body Type	#71 & 94. State
#15. Road Divided By	#72 & 95. Date of Birth
#16. Is Road Under Construction	#73 & 96. Eyes
#17. Which Vehicle Occupied	#74 & 97. Sex
# 18. Position In/On Vehicle	#75 & 98. Owner's Name
# 19. Victim's Physical Condition	#76 & 99. Number and Street
#20. Ejection From Vehicle	#77 & 100. City, State, and Zip Code
#21. Age	#78 & 101. Make and Model and Color
#22. Sex	#79 & 102. Year
#23. Location of Most Severe Physical Injury	#80 & 103. Plate Number
#24. Type of Most Severe Physical Injury	#81 & 104. State
#25 & 26. Safety Equipment Available and Used	#82 & 105. Vin Number
#27. Ambulance Run Number	#83 & 106. Vehicle Removed To
#28 & 29. Apparent Contributing Circumstance	#84 & 107. Authority To Remove Vehicle
#30 & 31. Number of Axles	#85. Areas Damaged
#32 & 33. Direction of Travel	#86. Posted Speed
#34. Light Conditions	#87. Accident Diagram
#35, 36, & 37. Physical Status	#108. Alcohol Data
#38 & 39. Pre-Accident Vehicle Action	#109. Hazardous Material
#40a-41d. Sequence of Events	#110. US DOT Carrier Number
#42. Collision Type (W/Other Motor Vehicle)	#111. ICC Carrier Number
#43. Case Number	#112. Vehicle Weight
#44. Police Department	#113. Carrier Name

#45. Station/Precinct	#114. Accident Description
#46. Date of Collision	#115. Damage to Property
#47. Day of Week	#116 & 117. Charge-Summons Number
#48. Time	#118. Officer's Signature
#49. Municipality Code	#119. Badge Number
#50. Total Killed	#120. Reviewed By
#51. Total Injured	#121. Status
#52. Accident Occurred on (Road/Street Address)	#122. Number of Vehicles
#53 & 54. Route Number & Milepost	

NJDOT Changes from the Old to the New NJTR-1 Form			
	OLD NJTR-1	**NEW NJTR-1**	
Field Name	**Item No.**	**Item No.**	**Comments**
Fatal Checkbox			New Field
Reportable Checkbox			
Non-Reportable Checkbox			
Change Report Checkbox			New Field
Pedestrian Maneuver	1		Field merged with *Pre-Crash Action*
Traffic Controls/ Veh. 1	2	126	Moved to right-hand side
Traffic Controls/ Veh. 2	3	127	Moved to right-hand side
Road System	4	99	Codes now zero-filled
Road Character	5	100	Codes now zero-filled
Road Surface Type	6	101	Codes now zero-filled
Surface Condition	7	102	Codes now zero-filled
Weather	8	103	Field name changed to *Environmental Condition;* Codes now zero-filled
Oversize Permit/Veh. 1	9	106	Codes now zero-filled
Oversize Permit/Veh. 2	10	107	Codes now zero-filled
Vehicle Type/Veh. 1	11	108	
Vehicle Type/Veh. 2	12	109	
Vehicle Use/Veh. 1		110	New Field
Vehicle Use/Veh. 2		111	New Field
Special Function Vehicles/Veh. 1		112	New Field
Special Function Vehicles/Veh. 2		113	New Field
Cargo Body Type/Veh. 1	13	114	Codes now zero-filled
Cargo Body Type/Veh. 2	14	115	Codes now zero-filled

Road Divided By	15	96	Codes now zero-filled
Is Road Under Construction?	16	97	Field name changed to *Temporary Traffic Control Zone;* Codes now zero-filled
Which Vehicle Occupied	17a-e	83a-e	
Position In/On Vehicle	18a-e	84a-e	
Victim's Physical Cond.	19a-e	86a-e	Codes now zero-filled
Ejection from Vehicle	20a-e	85a-e	Codes now zero-filled
Age	21a-e	87a-e	May now code infants under 2 years old in months (ex.: 14M)
Sex	22a-e	88a-e	
Location of Most Severe Physical Injury	23a-e	89a-e	
Type of Most Severe Physical Injury	24a-e	90a-e	Codes now zero-filled
Refused Medical Treatment		91a-e	New Field
Safety Equipment Available	25a-e	92a-e	
Safety Equipment Used	26a-e	93a-e	
Airbag Deployment		94a-e	New Field
Ambulance Run Number	27a-e		Replaced by field below
Hospital Code		95a-e	
Apparent Contrib. Circumstances/Veh. 1a	28	118a	
Apparent Contrib. Circumstances/Veh. 1b		118b	New Field
Apparent Contrib. Circumstances/Veh. 2a	29	119a	
Apparent Contrib. Circumstances/Veh. 2b		119b	New Field
	30		Field deleted

The order of these fields has been reversed

Axles/Veh. 1			
Axles/Veh. 2	31		~~Field deleted~~
Direction of Travel/Veh. 1	32	116	Codes now zero-filled
Direction of Travel/Veh. 2	33	117	Codes now zero-filled
Light condition	34	98	Codes now zero-filled
Physical Status/Veh. 1	35	120	Field Name altered; Codes now zero-filled
Physical Status/Veh. 2	36	121	Field Name altered; Codes now zero-filled
Physical Status/Ped	37		~~Field deleted~~…use appropriate field above for Physical Status of Pedestrian
Cell Phone In Use By Driver/Veh. 1		122	New Field
Cell Phone In Use By Driver/Veh. 2		123	New Field
Pre-Acc Vehicle Action/Veh. 1	38	124	Field Name altered to Pre-Crash Action
Pre-Acc Vehicle Action/Veh. 2	39	125	Field Name altered to Pre-Crash Action
Seq. of Events/1st Event/Veh. 1	40a	128a	
Seq. of Events/2nd Event/Veh. 1	40b	128b	
Seq. of Events/3rd Event/Veh. 1	40c	128c	
Seq. of Events/4th Event/Veh. 1	40d	128d	
Seq. of Events/1st Event/Veh. 2	41a	129a	
Seq. of Events/2nd Event/Veh. 2	41b	129b	
Seq. of Events/3rd Event/Veh. 2	41c	129c	
Seq. of Events/4th Event/Veh. 2	41d	129d	
Collision Type (w/Other MV)	42	105	Field Name altered to Crash Type; Codes now zero-filled
Case Number	43	1	
Police Department Of	44	2	
Department Code	44	2	Field now has codes…See Codes Tab

Field Name altered to ~~Direction of Travel of Vehicle~~

50

Station/Precinct	45	3	
Date of Collision	46	4	Field Name altered to Date of Crash
Day of Week	47	5	
Time	48	6	
Municipality Code	49	7	
Total Killed	50	8	
Total Injured	51	9	
Accident Occurred On	52	10	Field Name altered to Crash Occurred On
Route No.	53	12	
Route Suffix	53	12	
Milepost	54	13	
Milepost Tenths	54	13	Shortened to 2 decimal places
Distance to Cross Street	55	14	
Distance to Cross Street-Units	56	15	
Direction to Cross Street	57	16	
Road Name of Cross Street	58	17	
Posted Speed of Cross Street		18	New Field
Ramp?		19	Field changed from YES/NO to TO/FROM
Ramp From Route No.	59		Fields replaced by two fields below
Ramp From Direction	60		
Ramp To Route No.	61		
Ramp To Direction	62		
Ramp Route/Name		20	New Field
Ramp Direction		20	New Field
Latitude	63	21	Changed from Degrees/Minutes/Seconds to Decimal
Longitude	64	22	
Vehicle No./Veh. 1		23	
Policy No./Veh. 1	65	24	
Insurance Code/Veh. 1	66	25	
Parked Checkbox/Veh. 1			
Ped Checkbox/Veh. 1			

Bicyclist Checkbox/Veh. 1			
Resp to Emergency Checkbox/Veh. 1			
Hit & Run Checkbox/Veh. 1			
Driver's First Name/Initial/Last Name/Veh. 1	67	26	
Driver Number and Street/Veh. 1	68	27	
Driver City/Veh. 1	69a	28a	
Driver State/Veh. 1	69b	28b	
Driver Zip Code/Veh. 1	69c	28c	
Driver License Expiration/Veh. 1	69d	34	
Driver License Number/Veh. 1	70	32	
Driver License State/Veh. 1	71	31	
Driver DOB/Veh. 1	72	33	
Driver Eye Color/Veh. 1	73	30	
Driver Sex/Veh. 1	74	29	
Same as Owner Checkbox/Veh. 1		35a	
Owner's Name/Veh. 1	75	35	
Owner Number and Street/Veh. 1	76	36	
Owner City/Veh. 1	77a	37a	
Owner State/Veh. 1	77b	37b	
Owner Zip Code/Veh. 1	77c	37c	
Vehicle Registration Expiration/Veh. 1	77d	45	
Vehicle Make and Model/Veh. 1	78a	38	Field has been split…see below
Vehicle Model/Veh. 1		39	New Field
Vehicle Color/Veh. 1	78b	40	

52

Vehicle Year/Veh. 1	79	41	
Vehicle Plate No./Veh. 1	80	42	
Vehicle Registration State/Veh. 1	81	43	
Vehicle VIN/Veh. 1	82	44	
Vehicle Removed To/Veh. 1	83	46	
Vehicle Towed/Driven Checkbox/Veh. 1	83a	46a	Field altered to include Leave at Scene
Vehicle Impound/Disabled Checkbox/Veh. 1		46b	New Field
Vehicle Removed By Authority/Veh. 1	84	47	
Vehicle Impact Area/Initial Impact/Veh. 1	85a	130	Field Names altered and moved to bottom right-hand side
Vehicle Impact Area/Principal Damage/Veh. 1	85b	131	
Vehicle Impact Area/Initial Impact/Veh. 1	85c	132	
Vehicle Impact Area/Principal Damage/Veh. 1	85d	133	
Posted Speed	86	11	Moved up by *Crash Occurred On...* Name altered to Speed Limit
Vehicle No./Veh. 2		53	
Policy No./Veh. 2	88	54	
Insurance Code/Veh. 2	89	55	
Parked Checkbox/Veh. 2			
Ped Checkbox/Veh. 2			
Bicyclist Checkbox/Veh. 2			
Resp to Emergency Checkbox/Veh. 2			
Hit & Run			

Checkbox/Veh. 2			
Driver's First Name/Initial/Last Name/Veh. 2	90	56	
Driver Number and Street/Veh. 2	91	57	
Driver City/Veh. 2	92a	58a	
Driver State/Veh. 2	92b	58b	
Driver Zip Code/Veh. 2	92c	58c	
Driver License Expiration/Veh. 2	92d	64	
Driver License Number/Veh. 2	93	62	
Driver License State/Veh. 2	94	61	
Driver DOB/Veh. 2	95	63	
Driver Eye Color/Veh. 2	96	60	
Driver Sex/Veh. 2	97	59	
Same as Owner Checkbox/Veh. 2		65a	
Owner's Name/Veh. 2	98	65	
Owner Number and Street/Veh. 2	99	66	
Owner City/Veh. 2	100a	67a	
Owner State/Veh. 2	100b	67b	
Owner Zip Code/Veh. 2	100c	67c	
Vehicle Registration Expiration/Veh. 2	100d	75	
Vehicle Make and Model/Veh. 2	101a	68	Field has been split…see below
Vehicle Model/Veh. 2		69	New Field
Vehicle Color/Veh. 2	101b	70	
Vehicle Year/Veh. 2	102	71	
Vehicle Plate No./Veh. 2	103	72	
Vehicle	104	73	

Registration State/Veh. 2			
Vehicle VIN/Veh. 2	105	74	
Vehicle Removed To/Veh. 2	106	76	
Vehicle Towed/Driven Checkbox/Veh. 2	106a	76a	Field altered to include Leave at Scene
Vehicle Impound/Disabled Checkbox/Veh. 2		76b	New Field
Vehicle Removed By Authority/Veh. 2	107	77	
Alcohol Data-Test Given/Veh. 1	108a	48a	
Alcohol Data-Type of Test/Veh. 1	108b	48b	
Alcohol Data-Test Results/Veh. 1	108c	48c	
Alcohol/Drug Test Pending Checkbox/Veh. 1		48d	New Field
Alcohol Data-Test Given/Veh. 2	108d	78a	
Alcohol Data-Type of Test/Veh. 2	108e	78b	
Alcohol Data-Test Results/Veh. 2	108f	78c	
Alcohol/Drug Test Pending Checkbox/Veh. 2		78d	New Field
Alcohol Data-Test Given/Ped	108g		Fields deleted...use appropriate fields above for Pedestrian Alcohol data
Alcohol Data-Type of Test/Ped	108h		
Alcohol Data-Test Results/Ped	108i		
Hazardous Material-On Board/Spill Checkbox/Veh. 1	109	49	
Hazardous Material-Placard Number/Veh. 1	109	49	Field name altered to *Name or Placard No.*

Hazardous Material-On Board/Spill Checkbox/Veh. 2	109	79	
Hazardous Material-Placard Number/Veh. 2	109	79	Field name altered to *Name or Placard No.*
USDOT Carrier No./Veh. 1	110		Fields being replaced by four new fields below
USDOT Carrier No./Veh. 2	110		
ICC Carrier No./Veh. 1	111		
ICC Carrier No./Veh. 2	111		
Carrier No.-USDOT/Other Checkbox/Veh. 1		50	New Field
Carrier No./Veh. 1		50	New Field
Carrier No.-USDOT/Other Checkbox/Veh. 2		80	New Field
Carrier No./Veh. 2		80	New Field
Vehicle Weight (GVW)/Veh. 1	112	51	Field renamed to *Commercial Vehicle Weight* and converted from actual weight to Checkboxes with ranges of weight
Vehicle Weight (GVW)/Veh. 2	112	81	
Carrier Name/Veh. 1	113	52	
Carrier Name/Veh. 2	113	82	
Damage to Other Property	115	136	
Operator			
Charge 1	116	137	
Multiple Charges Checkbox 1		137	New Field
Summons Number 1	116	138	Field now has it's own Box & Number (was part of Charge)
Operator			
Charge 2	117	139	
Multiple Charges Checkbox 2		139a	New Field
Summons Number	117	140	Field now has it's own Box & Number (was

2			part of Charge)
Officer's Signature	118	141	
Reporting Officer's Badge Number	119	142	
Reviewing Officer's Initials/Badge Number	120	143	
Case Status Checkbox	121	144	
Number of Vehicles	122	104	Moved to left-hand side

NJTR-1 Train-the-Trainer Learning Objectives		
NJTR-1 Section	**Key Training Objective**	**Performance Indicators**
Locate Crash	To administratively and physically locate the point of impact	♦ Indicate whether the crash is a fatal, reportable, non-reportable or change report ♦ Determine location of the crash ♦ List total killed and injured
Driver Identification	To identify the driver(s), pedalcyclist(s) or pedestrian(s).	♦ Enter driver, pedalcyclist or pedestrian information into the report ♦ Transpose driver, pedalcyclist or pedestrian information taken from a legal source into the report
Owner/Vehicle Identification	To identify the owner and vehicle information	♦ Identify owner and vehicle information ♦ Transpose the owner and vehicle information, taken from a legal source, into the report
Alcohol/Drug Test	To identify any alcohol or drug use	Transpose any alcohol/drug test procedure and information to the report
HAZMAT/Commercial Vehicle Information	To identify HAZMAT and Commercial Vehicle Information	♦ List any HAZMAT by placard number ♦ Identify whether spilled or on-board ♦ Identify vehicle by carrier number, weight, and name
Occupant, Pedalcyclist, or Pedestrian Information	To assign occupant, pedalcyclist, or pedestrian information	♦ Identify vehicle occupied ♦ Determine position in/on vehicle ♦ Determine if ejected from vehicle ♦ List victim's physical condition ♦ List age and sex of each occupant ♦ Indicate the location of the most severe injury ♦ Indicate the type of most severe injury ♦ Note any refusals for medical treatment ♦ Identify all safety equipment

		• available
		• Document air bag deployment
		• Document hospital by code number
		• Write the name and address of each occupant in the unnumbered box to the right of box 95
		• Write the name and time of death of any fatality in the unnumbered box to the right of box 95
Roadway System	To identify how the roadway is divided, any temporary traffic controls, light conditions, roadway system, roadway character, surface type, surface conditions, and environmental conditions	• List how the roadway is divided • List any temporary traffic control zone • Identify light conditions • Identify roadway system • List roadway character • Identify roadway surface type and condition • List the environmental conditions
Vehicle Involved In Crash	To identify the total number of vehicles involved in the crash and their characteristics	• Identify the total number of vehicles and crash type • Identify any oversized/overweight vehicles • List the vehicle type • List the vehicle use • Identify any special function vehicles • List the cargo body type for any commercial vehicle • Identify the direction of travel for each vehicle
Apparent Contributing Circumstances	To list and describe the apparent contributing circumstances of the driver, pedalcyclist, or pedestrian	• Identify driver, pedalcyclist or pedestrian factors • List vehicle factors • List any road or environmental factors • Identify the driver's , pedalcyclists's, or pedestrian's apparent physical status • List any cell phone use • List any vehicle, pedalcyclist or pedestrian actions and pre-

		crash actions ♦ Identify traffic controls ♦ List the sequence of events with no more than four for each vehicle ♦ Identify the vehicle impact area
Crash Diagram	To construct the crash diagram and include north direction	Draw each vehicle (including a diagram where vehicles were moved before police arrival) and indicate the roadway boundaries, crossings, pavement markings, traffic controls, view obstructions and intersections related to the crash Draw pre-crash, crash, and post-crash positions Draw diagram for fatal or serious injury crash on NJTR-1B in lieu of box 134 including north direction
Crash Description and Damage to Other Property Learning Objectives	To describe what occurred and list all other property damage	♦ Describe what occurred in a minimum of three basic segments ♦ Describe "first" physical facts in crash ♦ Describe "second" statements from operator(s) and witness(es) ♦ Describe "third" statement by investigator summarizing the result of the investigation ♦ Explain asterisk information ♦ Understand the use of the NJTR-1A as a continuation page ♦ List all other property damage and include owner's name and address
Enforcement Action	To identify all motor vehicle enforcement action	♦ List the driver number in the operator's box ♦ Identify most serious charge by statute number ♦ Identify multiple charges to be listed in box 135 ♦ List the summons number

Investigator Identification & Case Status	To identify the investigator and supervisor and the status of the case	• Identify investigator by signature and badge number • Identify supervisor by initials and badge number • Identify the case status