State of Connecticut

Strategic Plan

for

Traffic Records

2016 - 2017

Connecticut - Traffic Records Coordinating Committee
2016 - 2017 Traffic Records Strategic Plan

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Introduction

Traffic records (safety data) systems are critical for highway traffic safety decision makers as they seek to develop and evaluate engineering, enforcement, education and emergency medical services safety countermeasures. The highway safety office manages programs addressing occupant protection, child passenger safety, impaired driving, distracted driving, motorcycle safety, community traffic safety, senior drivers, teenage drivers, pedestrian safety and other traffic safety programs. Program managers use data and analyses to identify problems, assign priorities, allocate resources, and measure program effectiveness. The traffic engineering office incorporates a safety management process to address safety analysis problems in countermeasure selection, economic analysis and project development for the state’s roadway system. As behavioral and engineering safety analyses becomes more comprehensive, it requires datasets that are more integrated.

Integration of Connecticut’s Traffic Records System Components

Integration vs. Interface Linkages

As traffic records system components become more integrated, this benefits the traffic records community. The resulting integrated datasets enable users to conduct analyses and generate insights impossible to achieve if based solely on the contents of any singular data system. The linked components can add detail to the understanding of each motor vehicle crash event, the roadway environment, and the people and vehicles involved. Connecting datasets through integration expands the information available to decision-makers while avoiding the expense, delay, and redundancy associated with collecting the same information separately.

Interface linkages of traffic records system components exist primarily to support key business processes, and are usually accomplished in real-time.

Integrated datasets enable users to conduct in-depth analysis and are usually accomplished at regularly scheduled points in time, such as the end of the calendar year or when all records for a set period are considered final.
Traffic Safety Information System - Improvements - Section 405c Application


Traffic Safety Information System - Improvements - Section 405c Application

CT TRCC Data Linkage

Linkage Work Group

DOT

Agency

DMV

JUD

CSP

LLEA

Interface Linkage

Crash/Driver Interface linkage enables law enforcement officers to validate and verify a driver’s license in the field when filling out a crash report or citation.

Citation/Adjudication Real-time access to individuals’ driving and criminal histories in order to appropriately cite, charge, adjudicate, and impose penalties and sanctions.

Driver/Vehicle Interface linkage - for a customer-centric database, eliminating customer-related data errors.

Injury Surveillance System Relationships within the system that enhance the continuity of patient care, and support system enhancements.

Roadway Interface linkages that can be established between discrete systems within the State’s roadway data component.

Interface Linkage - a seamless, on-demand connectivity and a high degree of interoperability between systems that supports critical business processes.

Multiple Data Systems
Traffic Safety Information System - Improvements - Section 405c Application

Data Integration - a linking of the six-pack components to support in-depth analysis impossible to achieve if based solely on the contents of any singular data system.
Linkage of Data in the Traffic Records Six Pack!

**Linkage of Data in the Traffic Records Six Pack**

**Driver — Vehicle — Roadway — Crash — Injury Surveillance — Citation Adjudication**

**Data Linkage - Efficient Strategy for Expanding the Data Available**

Data linkage is an efficient strategy for expanding the data available, while avoiding the expense and delay of new data collection. State systems that link data from each of the components of the traffic records system provide important new sources of data that can be used by States to identify risk factors, design strategies to address these risk factors, and evaluate these strategies once implemented. In addition to enhancing public health data, linking data systems increases the State’s capacity to understand and analyze motor vehicle crashes, and events associated with those crashes - e.g., pre-crash factors that may have contributed to the event, as well as post-crash actions - e.g., first responder care in providing aid to injured victims.

**Deterministic Linkage (exact matching on a key)**

**Probabilistic Linkage (probability that two records match)**

Understanding the facilitators and barriers to an effective and useful linkage system can optimize the system’s utility for public health and transportation safety.
TRCC / Data Linkage - In meetings of its Data Linkage working group, the TRCC has touted the need to prioritize data linkage. The TRCC has discussed the need for a long-range plan for data linkage coupled with the Committee’s ongoing development of a traffic records inventory as referenced in the Traffic Records Program Assessment Advisory. The following steps have been discussed as possible components of a data linkage plan: 1) Organize collaboration among agencies with a possible stake in traffic records data linkage, 2) Document/catalog all available relevant databases, 3) Map out a long-term plan based on databases to be linked, 4) Determine the availability of variables in existing databases to aid linkage, 5) Determine the method/mechanism for linking the specific databases under consideration, 6) Determine where the linked databases are to be stored, 7) Place importance on common data elements in linked databases conforming to a common schema, 8) Pilot test on a small scale to help find/fix problems, and 9) Expand the efforts from the pilot into a full scale linkage initiative. TRCC website is located at - [http://www.ct.gov/dot/cwp/view.asp?a=2094&q=435916](http://www.ct.gov/dot/cwp/view.asp?a=2094&q=435916)

The Connecticut Transportation Safety Research Center (CTSRC), supported by the State Department of Transportation (ConnDOT), has been successful in linking motor vehicle crash with roadway and traffic volume data. Current CTSRC efforts include establishing a repository for the state’s toxicology lab results to be able to track DUI and drug offenses with relation to crashes, and a citation data repository to aid in the evaluation of state programs on driver behavior. Plans by the CTSRC include opportunities to link other databases, e.g., injury and treatment outcome data to aid in the evaluation of crash outcomes, and the linkage of all related roadway databases into a linear referencing system. Web links for the CTSRC: - [http://www.cti.uconn.edu/connecticut-transportation-safety-research-center](http://www.cti.uconn.edu/connecticut-transportation-safety-research-center) - [https://www.facebook.com/connecticuttransportationsafetyresearchcenter/](https://www.facebook.com/connecticuttransportationsafetyresearchcenter/)

Stakeholders of Connecticut’s system continue to make great strides in their push to implement uniform mobile traffic law enforcement technologies, including citation, crash data collection, and warning tickets. For several years the emphasis on EMS patient care reporting resulted in nearly all EMS providers in the state achieving electronic reporting, using the National Standard ("NEMSIS"). More recently, the focus has been on electronic reporting for a motor vehicle crash as well as traffic citation. Crash reporting has advanced with the adoption of the National MMUCC Guideline, which began in 2015. The State has received best practice awards for citation as well as crash reporting at two of the most recent National Forums on Traffic Records Systems.

The TRCC maintains a constant focus on the need for a management approach to highway traffic safety, which requires data that is timely, complete, accurate, uniform, integrated and accessible. A data-driven approach to reducing traffic fatalities and injuries focuses on many aspects of the highway traffic safety challenge:

- Occupant Protection
- Impaired Driving
- Motorcycle Safety
- Senior Drivers
- Pedestrian Safety
- School Bus Safety
- Bicycle Safety
- Commercial Vehicles
- Rural Roadways
- Rear-End Crashes
- Right of Way Crashes
- Defective Vehicles
- Child Passenger Safety
- Distracted Driving
- Community Traffic Safety
- Teenage Drivers
- Safe Routes to School
- Speeding
- Workzone Safety
- Hazardous Material Cargo
- Intersections
- Single Vehicle Crashes
- Head-On Crashes
- Driver Behavior

Quality data is essential in the ever evolving need to diagnose the contributing factors to motor vehicle crashes and assessment of implemented countermeasures. The data assists in the identification of innovative and targeted strategies in areas that will have the greatest impact on achieving our goals.
The Crash Data Repository is a web-based query and analysis tool designed at the University of Connecticut, in the Connecticut Transportation Institute. The Repository provides unprecedented public and private access to crash data, allowing users to research crash statistics in their neighborhood, town, county, and state. The goal of the Repository is to continually provide members with timely, accurate, complete and uniform crash data. In addition to the Department of Public Safety and Connecticut Department of Transportation databases, a third database was developed in January 2015 to house the new crash data captured by the revised PR-1. Future additions to the Repository will include the integration of other vital data sources such as EMS, roadway geometry, and citation data.

MMUCC Database
This database was developed using the 110 data elements now available on the revised PR-1 crash report. This database is separate from the CT DOT and DPS databases because the new PR-1 form is so radically different from the previous one that was used for the last 20 years. There are entirely different data fields on the new report and it is important that the new crash data is separated to ensure its accuracy.

Hotspot Mapping
The hotspot mapping was developed as an analysis tool for engineers working in the traffic safety community but is also available to and can be truly beneficial to the general public. Users can now view those queried crashes on a heat map or in satellite view and can click on individual crash markers to generate a crash summary box, which details the particulars of that crash. This feature is only available for use with the MMUCC database as latitude and longitude coordinates are not available for previous crash data.

Grant Application Tool
A new feature has recently been added to the repository that is specific to the law enforcement community. Using the crash data available in the repository, officers now have the ability to generate the report page needed for their grant application submission to the Department of Transportation. There are three options: Click It or Ticket, DUI Enforcement, and Speed Enforcement, and the report generated looks identical to the hard copy applications officers have used in the past when applying for funding. Officers can select their town, desired grant report and time period and the data will be auto populated, providing them with the total number of crashes, fatalities and injuries for that particular application. However, because we do not currently have citation data, the total number of arrests for that time period will have to be filled in by officer.
Connecticut’s core of its traffic records system includes crash, driver licensing, roadway, health/injury control, vehicle registration and enforcement/adjudication. Acknowledging significant gains in the State’s traffic records system, many opportunities remain for improving core data systems. The TRCC continues to place a high priority on integrating performance measures with any new proposed system improvements.

The primary performance measure for 2016-2017 is crash timeliness - mean number of days from the date of crash report (by both state and local law enforcement) arrival at ConnDOT to date of crash report entry into the State Crash Records database. The following represent the baseline and current time period for which this performance measure was calculated and compared.

<table>
<thead>
<tr>
<th>Crash timeliness</th>
<th>104 days</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Crash timeliness</th>
<th>9 days</th>
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Other performance measures, which have been compiled and/or submitted, include crash uniformity with the National MMUCC Guideline, linkage of crash, roadway and traffic volume data, citation timeliness (days from the issuance of a citation to database entry into the repository at Judicial), and accessibility of data contained in the Data Center at CTSRC. High marks for accessibility were determined from a survey of principal users of the Data Center, in which users were queried as to their ability to obtain the data they requested, and their satisfaction with the timeliness of the response(s) to their requests.

The TRCC has helped to coordinate efforts with the support of the ConnDOT Highway Safety Office to ensure cooperation with the State’s political subdivisions establishing and implementing a complete and comprehensive traffic records program. The TRCC maintained an active schedule in 2015, and continues in 2016, meeting monthly as a technical advisory committee and interacting with working groups on e-Crash, e-Citation, e-Warning, e-PCR and data integration/linkage.

TRCC representatives have been active in recent National Traffic Records Forums, discussing the development and implementation of e-Citations and e-Crash. At the most recent National Forum in California, Connecticut won a Best Practices award for its multi-year effort to develop and implement the new MMUCC PR-1 crash reporting system that now serves ConnDOT as well as other agencies represented on the TRCC, every police agency in the state, safety advocacy groups, and the safety research community.

Connecticut’s TRCC was also recognized during the California Forum as one of six states in a Noteworthy Practices Guide for TRCCs. Noted in the Guide, Connecticut’s TRCC functions as a single-tier TRCC; Ad hoc subcommittees are formed to address specific projects and initiatives; Over 100 individuals are engaged in the TRCC and their efforts have resulted in updated eCrash and eCitation programs, as well as ongoing data integration projects; Connecticut uses a bottom-up approach - it is the responsibility of the TRCC member to report back to their agency to build buy-in and advocate for TRCC projects; The TRCC builds personal relationships with TRCC members and provides support when stakeholders advocate within and between agencies.
Safety Data Project Funding

2012 – 2013 Projects

Project funding for 7th year 2012 Section 408 application:

- Electronic Crash Reporting Using National Standards (E-Crash) 75,000
- Crash Data Repository (CDR) 200,000
- Electronic Citation Processing System (E-Citation) 75,000
- E-Citation Pilots - State Law Enforcement 100,000
- E-Citation Pilots - Local Law Enforcement 50,000

Total 408 funding for traffic records improvements 500,000

With the shortened time frame to propose, discuss and determine projects for the 2013 - 2014 fiscal year, TRCC stakeholders used the months of December 2012, January and February 2013, together with follow-up communication, using both the TRCC website and e-mail and phone to submit the list of projects for the 8th year application, 2013 – 2014 Section 405 safety data improvements.

2013 – 2014 Projects

Project funding (targeting E-Crash and E-Citation) for the 8th year 2013 Section 405 application.

- Electronic Crash Reporting Using National Standards (E-Crash) 150,000
- E-Crash / 100% Statewide Submission / Assessment and Support 300,000
- E-Citation Processing System / 100% Statewide Submission / Assessment and Support 150,000
- E-Citation Pilots - State Law Enforcement (DPS) 100,000
- E-Citation Pilots - Local Law Enforcement (CRCOG) 50,000
- E-Citation Pilots - Local Law Enforcement (DPS Application) 50,000

Targeted Section 405 funding request for traffic records improvements 800,000

2014 – 2015 Projects

Project funding (targeting Electronic Crash / Citation Processing / Single Charging, and Injury Outcome Data Linkage) for the 9th fiscal year 2014-2015 Section 405c application.

- Electronic Crash Reporting / National Standards 150,000
- Electronic Crash / Citation Reporting – Local Law Enforcement Agencies 400,000
- Electronic Citation / Summons Arrest / Warning Processing 200,000
- Electronic Charging / Citation / Warning / Summons Arrest 150,000
- Electronic EMS Tracking and Reporting System Data Linkage 100,000

Targeted Section 405c funding request for traffic records improvements 1,000,000
Safety Data Project Funding

2015 – 2016 Projects

Project funding (targeting Electronic Crash / Charging and Processing for Citation / Warning / Traffic Stops, Crash Injury Outcome / EMS / Trauma / Processing) for the 10th fiscal year 2015-2016 Section 405c application.

- Electronic Crash - Technology/Software Support for Local Law Enforcement 350,000
- Electronic Citation - Complete Installation Statewide for all Local Law Enforcement 150,000
- Electronic Charging - Citation/Warning/Traffic Stop 150,000
- Electronic Processing - Citation/Warning/Traffic Stop 150,000
- Linking Crash/Injury Datasets - Measure Injury Outcomes Assessed by Health Care Providers 50,000
- Electronic EMS / Trauma Registry - Functionality / Dictionary / Process - Documentation 100,000
- Crash Data Repository - Expand Functionality / Web Query Tools / Hot Spot Mapping 150,000

Targeted Section 405c funding request for traffic records improvements 1,100,000

2016 – 2017 Projects

Project funding (Electronic Crash / Charging and Processing for Citation / Warning / Traffic Stops, Crash Injury Outcome / EMS / Trauma - Processing), Data Linkage Planning for the 11th fiscal year 2016-2017 Section 405c app.

- Electronic Crash - Technology / Software Support for Local Law Enforcement 300,000
- Electronic Charging - Warning / Citation / Traffic Stop 150,000
- Electronic Processing - Warning / Citation / Traffic Stop - Online Disposition System 400,000
- Linking Crash / Injury Datasets - Measure Crash Injury Outcomes - Law Enforcement / Health Care Providers 50,000
- EMS / Trauma Registry - Documentation - Data Dictionaries - Updates - Communication 100,000
- Traffic Records System Data Linkage Roadmap - Long Range Plan 50,000

Targeted Section 405c funding request for traffic records improvements 1,050,000
Program Level Information

State Transportation Safety Data System Contact: Point of contact for questions related to the Strategic Plan or other traffic records-related issues

Name: Joseph T. Cristalli, Jr.
Title: Transportation Principal Safety Program Coordinator
Agency: Connecticut Department of Transportation
Office: Highway Safety Office
Address: 2800 Berlin Turnpike
City, ZIP: Newington, CT 06131
Phone: 860-594-2412
Email: joseph.cristalli@ct.gov

Traffic Records Coordinating Committee (TRCC): The TRCC has continued to track its progress and manage safety project development by posting documents on its TRCC website. The links on the following pages include other websites encompassing core safety data systems relating to Highway Safety, Crash Data Repository, Motor Vehicles, Public Health, Judicial, and Law Enforcement.

DOT - http://www.ct.gov/dot (Department of Transportation)

- Information on Key Highway Safety Laws
- Highway Safety Plans & Reports
- Child Passenger Safety
- Click it or Ticket Enforcement Campaign
- Crash Data Collection Initiatives and Programs (MMUCC PR-1)
- Distracted Driving Prevention
- DUI Enforcement Program
- Motorcycle Safety - Connecticut Rider Education Program (CONREP)
- Police Traffic Services
- Safe Routes to School (direct link to walkitbikeitct.org)
- Traffic Records Coordinating Committee (TRCC)

The Highway Safety Office is represented on its own face book page.


Current Materials ---------------------
- Message to Stakeholders - Read This First
- TRCC Meeting
- TRCC Stakeholders
- TRCC Charter
- TRCC Traffic Records Strategic Plan
- TRCC Data Linkage Subcommittee
- TRCC Traffic Enforcement Data Update
- TRCC Website Links
- Link to MMUCC PR-1 Crash Data Collection Main Page

Reference Materials ------------------

- Traffic Records Program Assessment Advisory 2017
- Traffic Records Assessment 2012
- D16.1 Manual on Classification of Motor Vehicle Crashes
- One-Page MMUCC / D16.1 / D20.1 Standards Comparison
- Traffic Records System Inventory

Crash Data Repository - http://www.ctcrash.uconn.edu

The Crash Data Repository (CDR) at UConn within the Connecticut Transportation Safety Research Center (CTSRC), is easy to use; already has multiple years of crash data, which can be linked to roadway as well as traffic data, and can be accessed anywhere with an Internet connection. A simple registration process provides the CTSRC with who the stakeholders are that are utilizing this valuable state resource. Topics people have focused on using data from the CDR.

- High crash corridors
- Pedestrian crash sites – increasing safety
- Road improvement through traffic signage
- A source of localized statistics to be able to honor police departments
- Study of congestion and motor vehicle crashes
- Study of warning signage – crashes involving animals
- Study of freeways – focusing on speed limits and geometric variables
- Crashes near a bridge replacement project
- Promotion of motorcycle helmet use
- Distracted driving

Refer to page 6 for the latest features of the CDR.

Connecticut Transportation Safety Research Center (CTSRC) - https://www.facebook.com/connecticuttransportationsafetyresearchcenter

The CTSRC at UConn is represented on facebook. Are we addicted to distraction?? In the latest blog post from Marisa Auguste’s Drivers Behaving Badly Blog, Ms. Auguste exams society’s shift into a new age where almost anything and everything can be done online. Where smartphones and computers have become a critical part of communication for society and their value will only increase over time. Because these gadgets have become so ingrained as a part of our lives, people are having a harder and harder time separating them from other important tasks such as...DRIVING!

DMV - http://www.ct.gov/dmv  (Department of Motor Vehicles)

- Online – License Services
- Driver License Suspension Payments
- Check Driver License Status
- Learner’s Permit Test Appointments
- Commercial Driver Self Certification
- Vehicle Services
Authority – The Connecticut TRCC continues to operate under the authority of and by the appointment of the Administrators of the Connecticut Department of Transportation, Connecticut Department of Motor Vehicles, Connecticut Department of Public Health, and the Judicial Branch who represent the core safety data systems: Motor Vehicle Crash, Roadway, Driver License/History, Vehicle Registration, Injury Surveillance/EMS, and Citation/Adjudication.

Letters of delegation (Administrators listed below) are attached to the Section 405c application.

Letters of delegation from these Administrators designate individual(s) to attend and participate on the TRCC, as their representatives.

Crash Data System:
Name: James P. Redeker  
Title: Commissioner  
Agency: Department of Transportation

Driver License / History Data System:
Name: Michael Bzdyra  
Title: Commissioner  
Agency: Department of Motor Vehicles

Injury Surveillance / EMS Data System:
Name: Paul Pino  
Title: Commissioner  
Agency: Department of Public Health

DPH - http://www.ct.gov/dph (Department of Public Health)
- Connecticut Health Database Compendium
- EMS Patient Care Report Database/Trauma Centers
- Injury Prevention

DESPP - http://www.ct.gov/despp (Department of Emergency Services & Public Protection)
Division of State Police


JUD - http://www.jud.ct.gov/ (Judicial Branch)
- Infraction Ticket Processing
  https://www.jud2.ct.gov/cibepay/

CJIS - www.ct.gov/cjis (Criminal Justice Information System)
- Connecticut Information Sharing System (CISS)
Citation / Adjudication Data System:
Name: Joseph D. D'Alesio
Title: Executive Director of Operations
Agency: Superior Court

Vehicle Registration Data System:
Name: Michael Bzdyra
Title: Commissioner
Agency: Department of Motor Vehicles

Roadway Data System:
Name: James P. Redeker
Title: Commissioner
Agency: Department of Transportation

TRCC (Technical Level) – The Connecticut TRCC, supported by the Highway Safety Office, continues an active, full schedule. In its efforts to seek improvements in the State’s traffic records system, as outlined in this Strategic Plan and reflected in both the 2007 and 2012 Traffic Records Assessments, the TRCC’s emphasis has followed the original recommendations from the Section 408/405c process for measures of improvements – completeness, uniformity, timeliness, accuracy, integration and accessibility of the data by stakeholders.

The following vision and mission statements, reviewed during TRCC meetings in 2015 and 2016, continue to support the goals and objectives of the TRCC.

TRCC Vision
A comprehensive Traffic Records System that provides reliable Data critical to the development of policies, and programs that enhance the operation and safety of the Connecticut Highway Transportation (National, State, and Local Roads) System.

TRCC Mission

The Connecticut TRCC shall:

a. Include representatives from highway safety, the highway infrastructure, law enforcement, adjudication, public health, injury control and other State and federal agencies and organizations;

b. Have authority to review the State’s highway safety data and traffic records system and review changes to such systems before the changes are implemented;

c. Provide a forum for the discussion of highway safety data and traffic records system issues and report on such discussions to the agencies and organizations in the State that manage and use highway safety and traffic records system data;

d. Consider and coordinate views of organizations in the State that are involved in the collection, management and use of traffic records system data;
e. Represent the interests of traffic records system agencies and organizations to outside organizations; and

f. Review and evaluate new technologies that have potential application for improving the Timeliness, Accuracy, Completeness, Uniformity and Accessibility of Traffic Records System data.

Participants on the TRCC (2016 roster attached), which meets monthly, include 17 new stakeholders added this past year, while 11 members left due to changing job assignments or retirement. The TRCC is proud of its multidisciplinary membership, including collectors, managers, operators, and users of traffic records data. Representation includes public health and injury control, highway safety, highway infrastructure, law enforcement, adjudication, driver licensing, motor carrier, research, hospital, insurance, regional planning, university, mental health and other interested organizations.

Crash Data Systems – MMUCC Audit: The State continued its documentation of the National Guideline MMUCC data elements that are collected and used within the crash data system. In January 2015, the State transitioned to a completely updated electronic crash reporting system using the 4th Edition of the MMUCC Guideline as the basis for its crash data collection. At the 2015 Traffic Records Forum, during the Best Practices presentation for the new crash reporting system, announcement was made that Connecticut’s new MMUCC PR-1 mapped to the National MMUCC Guideline at over 99%.

The following crash related projects, introduced during the first ten years of the Section 408/405c safety data project funding, relate to the new e-Crash initiative that was implemented.

### Electronic Crash Related Projects
by the Year in Which They Were Funded

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</thead>
<tbody>
<tr>
<td>NexGen ePR-1 State Law Enforcement to DOT</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>NexGen ePR-1 Local Law Enforcement Pilots</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>CRCOG ePR-1 Local Law Enforcement Pilots</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>Crash Data Repository (CDR) – UConn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100% Electronic Crash Submission Initiative</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-Crash MMUCC Compliant Question-Based Initiative</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOT Crash Data Backlog Initiative</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

The new electronic approach for crash reporting has positively impacted the amount of time law enforcement spends reporting motor vehicle crashes, especially crashes resulting in property damage only (PDO). More law enforcement departments converting to electronic crash reporting has translated into more timely submission of crash report data to the new CDR, and availability of data for access and analysis.

A new electronic approach for crash reporting based on National MMUCC Guidelines is helping to improve the uniformity of motor vehicle crash reporting; not only between jurisdictions in the state, but between Connecticut and its neighbors in NHTSA Regions I and II as well as with other states in the U.S. also incorporating the National Guidelines.
A combination of improved access and data query tools for the CDR, together with electronic crash reporting, has resulted in timeliness of access to crash data on the State CDR of 6 to 9 days or less from the date a crash report is received at ConnDOT. Accessibility to the CDR is made available to all authorized stakeholders in the state.

In addition to electronic crash data elements aligning with the National MMUCC Guideline, the focus has also been on editing procedures for capturing motor vehicle crash data. Emphasis for recording data electronically, has focused on various records management systems used by both state and local law enforcement, and most importantly, the existing training and/or emphasis on motor vehicle crash reporting and the records management system tools that law enforcement has incorporated in the past.

As identified in the Introduction, motor vehicle crash statistics help to focus on many of the highway safety challenges:

- Driver Distraction/Other Factors
- Air Bag Technologies in Vehicles
- Occupant Restraints
- Child Passenger Safety
- Roadway Safety/Hazard Elimination

- Vehicle Safety/Motorcycle Safety
- Impaired Driving/Speed
- Teen/Senior Driving
- Pedestrian/Pedal Cyclist Safety
- Commercial Vehicle Safety, Other

The TRCC agreed to the importance of MMUCC compliance following National Guideline recommendations; focusing on the number of MMUCC data elements that are included in the core of a State crash data repository (CDR). With the statewide implementation of the MMUCC 4th Edition, which began in 2015, several adopted data elements will be critical in providing future linkage between the crash and other traffic records files. MMUCC contains many data elements that are required by the Federal Motor Carrier Safety Administration (FMCSA), for reporting commercial motor vehicle crashes.

The TRCC continues its focus on safety data improvement projects that allow measurement of change/impact in the short term. As noted in the 2007 408 application, emphasis was placed on activities like the CVARS project that provided for electronic capture and submittal of commercial vehicle crash data.

**EMS Data Systems – NEMSIS Audit:** For the 2006 Section 408 Application, the Office of Emergency Medical Services documented in a letter to the ConnDOT Highway Safety Office that the existing State paper EMS run report contained a third of the recommended Silver NEMSIS data elements. The use of NEMSIS was mandated beginning January 2007 and all EMS services provided Toughbook laptop computers were required to have Gold Standard NEMSIS compliant software and be trained in the use of this software.

It should be noted, that the number of NEMSIS data elements captured in a Patient Care Report (PCR) depends upon the seriousness of the calls for service. Beginning in June 2008, PCR data collected electronically was submitted to a server located in the Office of Emergency Medical Services. Emphasis in 2016 continues to assure that all PCR data that are collected electronically are Gold NEMSIS compliant. Emphasis in 2016-2017 will be on a conversion to NEMSIS v3.

**Traffic Records Assessment:** Legislation requires that States have performed a Traffic Records Assessment within the past five years for all grant applications after the first year.

As noted in the 2016 Strategic Plan, a NHTSA approved Traffic Records Assessment was conducted in April 2012. A copy of the Assessment is included.
The Traffic Records Assessment provided the following major recommendations, listed below in the first column. Actions taken by the State, as of July 1, 2016, either through the TRCC or separately by an individual agency are listed in the second column.

### 2012 Traffic Records Assessment

<table>
<thead>
<tr>
<th>Recommendations from 2012 Assessment</th>
<th>Action(s) taken by State TRCC / DOT / Other Core Data System Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Finalize and approve the Crash Data Improvement Plan (CDIP) Business Plan.</td>
<td>In late 2011 as 6th Year Section 408 projects started up, a CDIP assessment was conducted; followed by a Business Plan, finalized in mid-2012.</td>
</tr>
<tr>
<td>2. Establish a position for a full time manager of the CDIP process; with a focus on implementing the CDIP Business Plan.</td>
<td>A Data Champion for CDIP was hired in Oct 2012 (start of the 7th Year 408) to focus on the CDIP Business Plan. A roll out of the new MMUCC PR-1 in 2015 necessitated the following Crash-related initiatives.</td>
</tr>
<tr>
<td></td>
<td>- Assuring 2015 reporting levels were comparable to previous years,</td>
</tr>
<tr>
<td></td>
<td>- Assisting with the omission of critical data elements, and bypassing of edits,</td>
</tr>
<tr>
<td></td>
<td>- Working with RMS vendors to install internal edits,</td>
</tr>
<tr>
<td></td>
<td>- Providing Field Coordinator follow up with reporting and data quality issues by Region,</td>
</tr>
<tr>
<td></td>
<td>- Emphasizing key points – avoiding errors, use of Not Applicable, and properly assigning values,</td>
</tr>
<tr>
<td></td>
<td>- Conducting a baseline experience survey with MMUCC PR-1, i.e., time to capture crash data,</td>
</tr>
<tr>
<td></td>
<td>- Providing continuous feedback and training on data quality for the MMUCC PR-1,</td>
</tr>
<tr>
<td></td>
<td>- Updating weekly newsletters, videos, web site resources, outreach to vendors and police depts.</td>
</tr>
<tr>
<td>3. Take advantage of the data sharing effort being led by the Criminal Justice Information System (CJIS) group. The Connecticut Information Sharing System (CISS) offers a structure to further the TRCC’s efforts in data sharing.</td>
<td>CJIS delays from previous year - Indications from recent CJIS updates - could see progress in coming months. Continuation of involvement by the CJIS group supporting E-Crash transfer to the CDR by providing a secure portal through CISS.</td>
</tr>
<tr>
<td>4. Establish a two-tier TRCC consisting of an Executive and Technical Committee.</td>
<td>During the past five years, through the National Traffic Records Forum, and other events/emergencies occurring in the State, administrators from the DOT, DMV, DPH, and Judicial Branch, who represent the core safety data systems in the State, became more involved/aware of the actions of the TRCC. In addition, the Governor was directly involved in 2012 in the production of a video, touting the TRCC and its application to the National TRCC for a Best Practices Award for the State’s E-Citation initiative.</td>
</tr>
</tbody>
</table>

A press briefing was held the previous year, announcing the formation of the new Connecticut Transportation Safety Research Center (CTSRC,
<table>
<thead>
<tr>
<th>Recommendations from 2012 Assessment</th>
<th>Action(s) taken by State TRCC / DOT / Other Core Data System Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Complete the Connecticut Integrated Vehicle and Licensing System (CIVLS) system modernization project.</td>
<td>The DMV has been involved in a multi-year system upgrade/modernization initiative, which has reported delays and other challenges in system implementation.</td>
</tr>
<tr>
<td>6. Continue to promote the use of data within the traffic safety community; exploring the capabilities and uses of each of the traffic records system core components (crash, driver, vehicle, etc.), as well as the availability and use of data.</td>
<td>The Crash Data Repository (CDR) provides web-based query and data analysis capabilities, with public and private access to crash data. Users can analyze crash data/statistics in their own neighborhoods, towns, counties, as well as comparing statewide totals. TRCC Stakeholders continue to focus on the need for a Traffic Records Inventory. Stakeholders continue to discuss/ review descriptive content for each of their respective core areas in the traffic records system; and to possibly share during future TRCC meetings their objectives, uses of the data, challenges, and long-range goals for safety data improvements they may have.</td>
</tr>
<tr>
<td>7. Continue to support the implementation and maintenance of the State EMS database, the trauma registry, and Injury Surveillance System (ISS).</td>
<td>Continued long range focus is for all ISS related data systems, including linking crash, EMS, trauma and hospital information and management exchange data. During the initial years of Section 408, the TRCC supported the elevation of the EMS Patient Care Reporting system to a top priority to be able to receive more funding than any other traffic records project. This resulted in nearly statewide implementation of the electronic data capture of NEMSIS compliant data in the State.</td>
</tr>
<tr>
<td>8. Designate the CDR at the University of Connecticut as the State’s official crash file.</td>
<td>As mentioned above, the 2013 kick-off of the Connecticut Transportation Safety Research Center (CTSRC) at UConn helped to firm up the designation of the Center as the State’s official crash file. The CDR is acknowledged as the official state crash file.</td>
</tr>
<tr>
<td>9. Charge the TRCC with the development of a new TRSP addressing the recommendations in this traffic records assessment.</td>
<td>The TRCC is constantly updating the Traffic Records Strategic Plan (TRSP), with a focus on safety data related issues, identified in other State planning initiatives, i.e., the HSIP, HSP, CVSP and SHSP.</td>
</tr>
<tr>
<td>10. Assure that all TRCC members participate in the development of the TRSP and the selection and priority setting of the projects in the Plan.</td>
<td>While the TRCC distribution of messages, notices, and indicators to review content at the TRCC website totals more than 100 stakeholders; 30 stakeholders participate (on the average) in regular monthly meetings. It is through both the in-person participation during monthly meetings, and the use of the TRCC website, e-mail and phone connections, that members continue to participate at a high level in the development and approval of the TRSP.</td>
</tr>
<tr>
<td>Recommendations from 2012 Assessment</td>
<td>Action(s) taken by State TRCC / DOT / Other Core Data System Agency</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td>11. Implement a MMUCC compliant crash report for the State.</td>
<td>ConnDOT, through its CDIP effort, with TRCC support, began the roll-out in 2015 of an electronic crash reporting system using the MMUCC Guideline 4th Edition as the basis for its crash data collection. As previously mentioned, all 77 of the MMUCC 4th Edition data elements, recommended to be captured at the scene of a crash, are being captured in the new MMUCC PR-1 crash reporting system; 75 of those 77 elements are being uploaded to the State CDR at UConn.</td>
</tr>
<tr>
<td>12. Statewide 100 percent electronic crash data collection.</td>
<td>Refer to previous recommendation.</td>
</tr>
<tr>
<td>13. Digital roadway network (DRN) for state and local roads.</td>
<td>Included under the TRCC’s 7th Year Section 408 application, the State DOT has undertaken a large initiative to achieve this objective for all roadways. Titled, “Integrated Enterprise Base Map and Linear Referencing System” (IEBM - LRS); refer to Appendix for overview.</td>
</tr>
<tr>
<td>14. Roadway inventory system (RIS).</td>
<td>The State DOT, aware of continued developments in FHWA’s Model Inventory of Roadway Elements (MIRE) recommendations, has made the RIS a major component of the IEBM - LRS.</td>
</tr>
<tr>
<td>15. Statewide 100 percent collection of electronic citation data.</td>
<td>Headed by the State’s Judicial Branch, this effort is experiencing a boost with a recent decision by the State Police to implement E-Citation statewide for all troopers. The State has surpassed the 60 percent mark for all citations being submitted electronically.</td>
</tr>
<tr>
<td>16. Electronic versions of a traffic warning as well as a misdemeanor summons.</td>
<td>Included as priority improvements for the Section 405c 10th Year application, the following projects are being included for extensions to continue the focus in these important areas. Electronic Charging as well as Electronic Processing for Citations/Warnings/Traffic Stops/Summons Arrests. 11th Year efforts will focus on the development of an online infraction disposition system.</td>
</tr>
<tr>
<td>17. Add Citation data to the new CTSRC at UConn.</td>
<td>Current CTSRC efforts include establishing a citation data repository to aid in the evaluation of state programs on driver behavior. A push by the State Police to implement DDACTS (Data Driven Approach to Crime and Traffic Safety), should help drive the need to combine motor vehicle crash with citation information layered onto a mapping platform, permitting the mapping of motor vehicle crash and traffic enforcement.</td>
</tr>
</tbody>
</table>
Deficiencies

Legislation requires that states list their system deficiencies and how those deficiencies were determined. As noted in the 2007 and 2012 traffic records assessments, existing deficiencies in the current traffic records system had been previously identified, and became the basis for all of the Section 408 Applications, dating back to 2006-2007.

Deficiency Description: This section contains brief descriptions of system deficiencies. The following represents brief statements of traffic records system deficiencies previously identified. Deficiencies are described according to their respective traffic records system core areas with reference to a specific performance area (timeliness, uniformity, completeness, accuracy, accessibility, and integration) that is to be addressed by improving the system deficiency.

Note: In 2006, the NHTSA review team categorized and documented on its web site (43) deficiencies for Connecticut’s traffic records system from the information provided in the 2006-2007 Section 408 Application. The deficiency ID numbers introduced by the NHTSA Team have been maintained for their reference and update; however the deficiencies have been reordered by Core System Area and by priority of safety data improvement projects. Notations have also been made in instances where identified deficiencies were duplicated, such as #3 and #7, which represent the same deficiency.
## Deficiency by Core System Area

### Injury Surveillance – EMS Run Reporting System

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>CT-D-00050</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance Area</strong></td>
<td>Injury Surveillance/EMS</td>
</tr>
<tr>
<td><strong>Basic Description</strong></td>
<td>Specific focus</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>July 1, 2008 OEMS began receipt of electronic EMS PCR data</td>
</tr>
<tr>
<td><strong>Last Update</strong></td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**

Lack of program documentation, including data dictionary; server location used to work with data at OEMS in question at DPH. Non-linkage of EMS and Trauma data. Continued long range focus of OEMS will be all ISS related data systems, including linking the various system components.

### Crash System

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>CT-D-00011</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance Area</strong></td>
<td>Crash</td>
</tr>
<tr>
<td><strong>Basic Description</strong></td>
<td>Specific focus</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Electronic reporting key</td>
</tr>
<tr>
<td><strong>Last Update</strong></td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**

Local road PDO reports were previously not entered into the ConnDOT crash file. Local road PDO crash data was entered into the ConnDOT Crash file for 2007-2010, excluded for 2011, and reinstituted in 2012. Current MMUCC PR-1 system does include local road PDO crash data in the statewide database.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>CT-D-00041</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance Area</strong></td>
<td>Crash</td>
</tr>
<tr>
<td><strong>Basic Description</strong></td>
<td>Specific focus</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Electronic reporting key</td>
</tr>
<tr>
<td><strong>Last Update</strong></td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**

Crash data lacking for Local roads, PDO crashes and all crashes. Current MMUCC PR-1 system includes a broader collection of crash data elements, based on the National MMUCC Guideline, for all reportable crashes in the statewide database. Relates to CT-D-00011.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>CT-D-00012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance Area</strong></td>
<td>Crash</td>
</tr>
<tr>
<td><strong>Basic Description</strong></td>
<td>Specific focus</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Electronic reporting key</td>
</tr>
<tr>
<td><strong>Last Update</strong></td>
<td>7-01-16</td>
</tr>
</tbody>
</table>
Two-thirds of the data elements from all reportable crashes not entered into the ConnDOT crash file. With the implementation of the MMUCC PR-1 crash system, which began in 2015, 75 of the 77 at crash scene/recommended MMUCC 4th Edition data elements are now being entered into the State Crash Data Repository (CDR) at the Connecticut Transportation Safety Research Center (CTSRC).

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>CT-D-00015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Area</td>
<td>Timeliness</td>
</tr>
<tr>
<td>System</td>
<td>Crash</td>
</tr>
<tr>
<td>Basic Description</td>
<td>Specific focus</td>
</tr>
<tr>
<td>Status</td>
<td>Electronic reporting key</td>
</tr>
<tr>
<td>Last Update</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
Delays in obtaining the crash data. This is addressed in several of the main projects submitted through ten years of Section 408/405c applications. With the implementation of the MMUCC PR-1 crash system, which began in 2015, and crash data now being entered into the State CDR at UConn; 11th year safety data improvements funding is being dedicated to support local law enforcement as they adopt electronic reporting and move away from paper, and pdf reporting.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>CT-D-00016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Area</td>
<td>Integration</td>
</tr>
<tr>
<td>System</td>
<td>Crash</td>
</tr>
<tr>
<td>Basic Description</td>
<td>Specific focus</td>
</tr>
<tr>
<td>Status</td>
<td>Crash data repository key</td>
</tr>
<tr>
<td>Last Update</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
Legacy crash data system can't accommodate electronic transmission of crash reports. The State CDR at UConn is now accepting electronic crash reporting from State and local law enforcement. Electronic reporting of the MMUCC PR-1, which began in January 2015, continues to improve, achieving a current timeliness benchmark (# of days from date report is received at ConnDOT to date of entry into the state database) of only 9 days.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>CT-D-00017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Area</td>
<td>Integration</td>
</tr>
<tr>
<td>System</td>
<td>Crash</td>
</tr>
<tr>
<td>Basic Description</td>
<td>Specific focus</td>
</tr>
<tr>
<td>Status</td>
<td>Crash data repository key</td>
</tr>
<tr>
<td>Last Update</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
Legacy crash data system can't accommodate electronic transmission of crash reports. The State CDR at UConn is now accepting electronic crash reporting from State and local law enforcement. Electronic reporting of the MMUCC PR-1, which began in January 2015, continues to improve. Through the CDR, crash data has been linked with roadway and traffic volume data. The CDR is establishing a repository for toxicology lab results and traffic citation data.
### Accessibility

**Crash Specific focus**  
Crash data repository key  
7-01-16

**Deficiency Description**  
Legacy crash data system had poor user access. Refer to description for CT-D-00017. The State CDR is meeting the needs of many users for direct online data query and analysis tools. Refer to page 6 for CDR highlights; provides web based access/analysis tools to research crash statistics by town, county, compared to statewide.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00019</td>
<td>Integration</td>
<td>Crash</td>
<td>Specific focus</td>
<td>Crash data repository key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

### Performance Area

**System**  
Basic Description  
Status  
Last Update

**Deficiency Description**  
Legacy crash data system has no capabilities to link to other systems. Refer to description for CT-D-00017. The State CDR is meeting the needs of many users for linked data involving crash, roadway and traffic volume data for State, Interstate and U.S. Routes. The CDR is establishing a repository for toxicology lab results and traffic citation data.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00020</td>
<td>Completeness</td>
<td>Crash/Vehicle</td>
<td>Specific focus</td>
<td>Electronic reporting key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

### Completeness

**Crash/Vehicle Specific focus**  
Electronic reporting key  
7-01-16

**Deficiency Description**  
Reporting of commercial motor vehicle (CMV) crashes was incomplete and inconsistent. Through funding from the Federal Motor Carrier Safety Administration (FMCSA), the Commercial Vehicle Safety Division (CVSD) of the Department of Motor Vehicles has achieved 100 percent electronic citation and crash reporting, with direct upload to the Federal SafetyNet System.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00035</td>
<td>Timeliness</td>
<td>Crash/Vehicle</td>
<td>Specific</td>
<td>CVARS</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

### Timeliness

**Crash Specific**  
CVARS  
7-01-16

**Deficiency Description**  
The capture and upload of CMV crash data for SafetyNet is now automated.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00036</td>
<td>Timeliness</td>
<td>Crash</td>
<td>Specific</td>
<td>FARS</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**  
FARS-information regarding alcohol or drugs (crash related) can be delayed. TRCC is very supportive of the FARS Office in focusing on this important issue. CDR is dedicating a position to working with law enforcement and ConnDOT FARS to alleviate the recurring delay each year in providing important fatal crash data in a timely manner.
### Deficiency ID: CT-D-00037

<table>
<thead>
<tr>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeliness</td>
<td>Crash</td>
<td>Specific</td>
<td>FARS</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

#### Deficiency Description

Submission of FARS data can be delayed if there are extenuating circumstances such as delays in obtaining BAC data. NHTSA continues to stress this initiative, and the TRCC is very supportive of the Connecticut FARS office in addressing this important issue. Refer to CT-D-00036 - CDR is dedicating a position to working with law enforcement and ConnDOT FARS to alleviate these delays.

### Deficiency ID: CT-D-00001

<table>
<thead>
<tr>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completeness</td>
<td>Crash</td>
<td>General</td>
<td>Electronic reporting key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

#### Deficiency Description

Incomplete reports – this is a general description. It is not targeted specifically in any of the ongoing safety data projects; however, through electronic roadside data capture for the new MMUCC PR-1 crash reporting system (with built in edit and validity checks), this deficiency is being addressed.

### Deficiency ID: CT-D-00002

<table>
<thead>
<tr>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility</td>
<td>Crash</td>
<td>General</td>
<td>Crash data repository key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

#### Deficiency Description

Refer to CT-D-00018, the State CDR is meeting the needs of many users for direct online data query and analysis tools. Refer to page 6 for CDR highlights; provides web based access/analysis tools to research crash statistics by town, county, compared to statewide.

The CDR is becoming more of a one-stop shop for local law enforcement, implementing the new MMUCC PR-1 crash reporting system. The CDR continues to upgrade data query tools as well as canned output reports for local law enforcement and other users.

### Deficiency ID: CT-D-00003

<table>
<thead>
<tr>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uniformity</td>
<td>Crash/Roadway</td>
<td>Specific focus</td>
<td>Electronic reporting with GPS key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

#### Deficiency Description

The crash location is usually determined by reference to the narrative, and if included, GPS coordinates provided on the MMUCC PR-1 by the investigating officer. This deficiency also relates to the Roadway Core System. Future State efforts to establish/implement a GIS base map that can be integrated with electronic reporting is also an important initiative in addressing this deficiency. Parallel efforts by law enforcement to enhance location reporting using the lat/long
of a crash event, and ConnDOT’s effort to establish a State GIS Base Map should help to improve the consistency of location data.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-0004</td>
<td>Completeness</td>
<td>Crash</td>
<td>General</td>
<td>Electronic reporting key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
Alcohol, contributing circumstances, other data often not recorded. Implementation of new MMUCC PR-1 crash reporting system is helping to address this deficiency.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-0005</td>
<td>Uniformity</td>
<td>Crash</td>
<td>Specific focus</td>
<td>MMUCC PR-1 crash reporting</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
Data not compatible/comparable with other states. Implementation of new MMUCC PR-1 crash reporting system, which began in January 2015, is helping to address this deficiency. As previously mentioned 75 out of 77 MMUCC 4th Edition at scene recommended crash data elements are now being entered into the State CDR at UConn.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-0006</td>
<td>Timeliness</td>
<td>Crash/Roadway</td>
<td>Specific</td>
<td>Electronic reporting with GPS key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
Identifying crash location on a State reference map from field information is time consuming. Future State efforts to establish/implement GIS base map that can be integrated with electronic reporting is critical. Refer to CT-D-00003 on the previous page – State GIS base map.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
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<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-0007</td>
<td>Uniformity</td>
<td>Crash/Roadway</td>
<td>Specific focus</td>
<td>Electronic reporting with GPS key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
Location data is inconsistent. This is a repeat of CT-D-00003. Parallel developments involving law enforcement with the new MMUCC PR-1 crash reporting system and the ConnDOT GIS base map development effort.
<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00009</td>
<td>Accuracy</td>
<td>Crash</td>
<td>General</td>
<td>Electronic reporting key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
Copy errors. Being addresses in the new electronic MMUCC PR-1 crash reporting system implemented in January 2015.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00010</td>
<td>Completeness</td>
<td>Crash</td>
<td>General</td>
<td>Electronic reporting key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
Incomplete reports. This is a repeat of CT-D-00001. Being addresses in the new electronic MMUCC PR-1 crash reporting system implemented in January 2015.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
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<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00013</td>
<td>Accuracy</td>
<td>Crash</td>
<td>General</td>
<td>Crash data repository key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
Duplication of data entry at State and Local levels. State CDR accepts data from the new MMUCC PR-1 crash reporting system, alleviating the need for local law enforcement to maintain a duplicate data entry process.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00014</td>
<td>Accuracy</td>
<td>Crash</td>
<td>General</td>
<td>Electronic reporting key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
Transposition errors made in preparing the finished report. Addressed in the new electronic MMUCC PR-1 crash reporting system implemented, January 2015.
<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00021</td>
<td>Completeness</td>
<td>Crash/Citation/Adjudication</td>
<td>General</td>
<td>Electronic reporting key</td>
<td>7-01-16</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deficiency Description</td>
<td>Officers tend not to indicate contributing circumstances or other factors if driver is not cited. Relates to CT-D-00004. Being addressed in the new electronic MMUCC PR-1 crash reporting system, which began in 2015.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deficiency ID</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>CT-D-00044</td>
<td></td>
<td>Crash</td>
<td>General</td>
<td>Training/feedback key</td>
<td>7-01-16</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>Deficiency Description</td>
<td>Feeling by law enforcement that crash reporting is only for insurance purposes and court use. Being addresses in the new electronic MMUCC PR-1 crash reporting system, implemented in 2015.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deficiency ID</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>CT-D-00045</td>
<td>Accuracy/Uniformity</td>
<td>Crash</td>
<td>General</td>
<td>Training/feedback key</td>
<td>7-01-16</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deficiency Description</td>
<td>Confusion at times by law enforcement concerning classification of motor vehicle crashes. Being addressed in the new electronic MMUCC PR-1 crash reporting system, implemented in 2015.</td>
<td></td>
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<td></td>
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<tr>
<td>Deficiency ID</td>
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<td></td>
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<tr>
<td>CT-D-00046</td>
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<td>Crash</td>
<td>General</td>
<td>Training/feedback key</td>
<td>7-01-16</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deficiency Description</td>
<td>Lack of feedback to law enforcement as to the value of and how data is used for highway traffic safety planning. Being addresses in the new electronic MMUCC PR-1 crash reporting system, through online videos and newsletters, and follow-up training initiatives, with the support of the CTSRC at UConn.</td>
<td></td>
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<tr>
<td>Deficiency ID</td>
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<tr>
<td>CT-D-00047</td>
<td></td>
<td>Crash/Citation/Adjudication</td>
<td>General</td>
<td>Training/feedback key</td>
<td>7-01-16</td>
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<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Deficiency Description
Feeling by law enforcement that they are forced to become data entry operators. Being addressed in the new electronic MMUCC PR-1 crash reporting system, which began in January 2015.

Citation/Adjudication System

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00026</td>
<td>Timeliness</td>
<td>Citation/Adjudication</td>
<td>General</td>
<td>e-Citation/CIDRIS</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

Deficiency Description
Too much radio time between dispatch and officer in the field conducting an enforcement stop. Impacts from an electronic citation processing system and Impaired Driver Records Information System (CIDRIS) will continue to have measurable impacts in 2016 – 2017. 11th Year efforts will also focus on the development of an online infraction disposition system.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00027</td>
<td>Accuracy</td>
<td>Citation/Adjudication</td>
<td>General</td>
<td>e-Citation/CIDRIS</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

Deficiency Description

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00032</td>
<td>Accessibility</td>
<td>Citation/Adjudication</td>
<td>General</td>
<td>e-Citation/CIDRIS</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

Deficiency Description
Lack of real time access to critical data “24-7”. Measurable impacts expected in 2016 – 2017. 11th Year efforts will also focus on the development of an online infraction disposition system.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00033</td>
<td>Uniformity</td>
<td>Citation/Adjudication</td>
<td>General</td>
<td>e-Citation/CIDRIS</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

Deficiency Description
Lack of standards to permit better sharing of justice information. Measurable impacts expected in 2016 – 2017. 11th Year efforts will also focus on the development of an online infraction disposition system.
Deficiency ID
CT-D-00034
Performance Area System Basic Description Status Last Update
Uniformity Citation/Adjudication General e-Citation/CIDRIS 7-01-16

Deficiency Description
Delays in obtaining data. Measurable impacts expected in 2016 – 2017. 11th Year efforts will also focus on the development of an online infraction disposition system.

Deficiency ID
CT-D-00054
Performance Area System Basic Description Status Last Update
Accuracy Citation/Adjudication General e-Citation/CIDRIS 7-01-16

Deficiency Description

Deficiency ID
CT-D-00055
Performance Area System Basic Description Status Last Update
Integration Citation/Adjudication General e-Citation/CIDRIS 7-01-16

Deficiency Description

Deficiency ID
CT-D-00056
Performance Area System Basic Description Status Last Update
Completeness Citation/Adjudication General e-Citation/CIDRIS 7-01-16

Deficiency Description
Handwritten reports sometimes difficult to read; copying errors; incomplete reports. Measurable impacts expected in 2016 – 2017. 11th Year efforts will also focus on the development of an online infraction disposition system.

Driver License/History System

Deficiency ID
CT-D-00022
Performance Area System Basic Description Status Last Update
Integration Driver License/History General CIVLS project underway 7-01-16
### Deficiency Description
Lack of a customer account number to tie related driver and vehicle information together. DMV is addressing this with a major system re-design – CIVLS (Connecticut Integrated Vehicle and Licensing System).

### Deficiency ID
<table>
<thead>
<tr>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration</td>
<td>Driver License/History</td>
<td>General</td>
<td>CIVLS Enterprise Modernization Project key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

### Deficiency Description
DMV files are more stand-alone, not linked files. DMV is addressing this in a new system re-design (CIVLS).

### Deficiency ID
<table>
<thead>
<tr>
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<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Driver License/History</td>
<td>General</td>
<td>Electronic field reporting with link to DMV Driver files</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

### Deficiency Description
Data on DL, such as driver address can be outdated. TRCC sponsored E-Citation project and a real-time interface to DMV’s information system for most current customer information on file will ultimately impact this issue.

### Deficiency ID
<table>
<thead>
<tr>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timeliness</td>
<td>Driver License/History</td>
<td>General</td>
<td>CIVLS Enterprise Modernization Project key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

### Deficiency Description
Some processed DMV data not timely. DMV is addressing this in a new system re-design.

### Deficiency ID
<table>
<thead>
<tr>
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<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completeness</td>
<td>Driver License/History</td>
<td>General</td>
<td>CIVLS Enterprise Modernization Project key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>
Lack of DL data on drivers with serious driving offenses from previous state of record. Currently, the Commercial Driver License Information System (CDLIS) provides DMV with the driving history record of a former out of state CDL operator that is seeking a CT credential. The violation information is recorded in DMV's driver history system and is available to law enforcement via DMV's driver history file through the COLLECT system. With regard to non-CDL operators, DMV performs a National Driver Registry (NDR) and Problem Driver Pointer System (PDPS) check prior to issuance. PDPS will record and store open/pending actions on a motorist due to traffic offenses recorded in the other state and where administrative action was taken by that jurisdiction's motor vehicle agency. In addition, DMV will not permit an operator found within that system to obtain a CT credential unless the problem is resolved with the prior state. There is no national electronic system available to DMV for non-CDL operators, such as CDLIS is for commercial drivers, to check for serious offenses in which the operator's credential was restored.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
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<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00049</td>
<td>Completeness</td>
<td>Driver License/History</td>
<td>General</td>
<td>No integration planned between DMV's non-CDL credential/vehicle information and the collection of crash data by law enforcement.</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

Deficiency Description
Lack of driver crash data for driver control and improvement. ConnDOT is the entity responsible for the collection of crash related data. Since DMV is not authorized to collect crash data for non-CDL types of activities there is no integration planned.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
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<tbody>
<tr>
<td>CT-D-00057</td>
<td>Integration</td>
<td>Driver License/History</td>
<td>General</td>
<td>CIVLS Enterprise Modernization Project key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

Deficiency Description
Lack of features incorporated into a real-time system, such as - NMVTIS, an electronic lien system, and integration with the driver system. DMV’s driving history is a record of offenses and violations by an operator and as such, does not record vehicle-related information such as NMVTIS and ELT. However, CIVLS will have a unique customer (i.e., customer centric system) that is planned on linking a customer’s vehicle, title, credential, and sanction-related information.
## Roadway System

<table>
<thead>
<tr>
<th>Deficiency ID</th>
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<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00028</td>
<td>Completeness</td>
<td>Roadway</td>
<td>General</td>
<td>Base map key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

### Deficiency Description
State lacks a standardized location reference system. State efforts initiated to establish and implement GIS base map that can be integrated with electronic field reporting, providing latitude and longitude coordinates. Another State initiative is developing a linear referencing system that will link to other roadway systems.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
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<th>System</th>
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<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00029</td>
<td>Uniformity</td>
<td>Roadway</td>
<td>General</td>
<td>Roadway inventory system</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

### Deficiency Description
Roadway inventory data not standardized or automated for gathering, analysis and dissemination. State initiative to develop a roadway inventory system containing roadway characteristics data has been implemented.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
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<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
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</thead>
<tbody>
<tr>
<td>CT-D-00030</td>
<td>Completeness</td>
<td>Roadway</td>
<td>General</td>
<td>Local data key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

### Deficiency Description
Roadway inventory for local roadways is deficient compared to the inventory of the State’s system. Possible future application for new FHWA MIRE Guideline – Model Inventory of Roadway Elements.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
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<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00031</td>
<td>Accuracy</td>
<td>Roadway/ Crash</td>
<td>General</td>
<td>Crash data repository key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

### Deficiency Description
The State safety improvement programs are linked to upgrading the extant, outdated legacy reporting system. A State Crash Data Repository was implemented at the University of Connecticut, with support from the Department of Transportation.
**Injury Surveillance/EMS System**

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00038</td>
<td>All areas</td>
<td>Injury Surveillance/EMS</td>
<td>General</td>
<td>Priority improvements</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**

There continues to be limited resources for injury surveillance and data analysis including a lack of human resources and funding. Refer to CT-D-00050, lack of program documentation, including data dictionaries; non-linkage of EMS and Trauma data. Continued long range focus will be all ISS related data systems, including linking the various system components.

Past focus was developing an EMS Patient Care Report as well as provision of data for the Crash Outcome Data Evaluation System (CODES).

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00039</td>
<td>All areas</td>
<td>Injury Surveillance/EMS</td>
<td>General</td>
<td>Improvements in other areas key</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**

Dependency on crash, location identification and other traffic record system data require significant improvements. Many other related system improvements are described in the 2006 Strategic Plan.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
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</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00051</td>
<td>Integration</td>
<td>Injury Surveillance/EMS</td>
<td>General</td>
<td>Focus of Department of Public Health</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**

DPH seeking technical assistance with the redeployment of the Trauma Registry and report writer as one of the prerequisites for successful integration of pre-hospital EMS data with hospital data entered into the Trauma Registry.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>Performance Area</th>
<th>System</th>
<th>Basic Description</th>
<th>Status</th>
<th>Last Update</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT-D-00052</td>
<td>Uniformity</td>
<td>Injury Surveillance/EMS</td>
<td>General</td>
<td>NEMSIS data element standard providing momentum</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

**Deficiency Description**
The Patient Name/SSN exists in all databases to track a patient/victim from the scene of a crash through the healthcare system. Availability of these data allows for the use of deterministic linkage between databases. CODES System linkage/data analysis is an excellent tool for promoting patient tracking systems development, but no funding is available for this purpose.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>CT-D-00053</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Area</td>
<td>Accessibility</td>
</tr>
<tr>
<td>System</td>
<td>Injury Surveillance/EMS</td>
</tr>
<tr>
<td>Basic Description</td>
<td>General</td>
</tr>
<tr>
<td>Status</td>
<td>Previously, a CODES Advisory Board - in place</td>
</tr>
<tr>
<td>Last Update</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

Deficiency Description
Lack of access to comprehensive medical and healthcare data files by authorized data partners.

All Core Component Areas - TRCC

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>CT-D-00040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Area</td>
<td>All areas</td>
</tr>
<tr>
<td>System</td>
<td>All systems</td>
</tr>
<tr>
<td>Basic Description</td>
<td>General</td>
</tr>
<tr>
<td>Status</td>
<td>Focus of 408/405c Programs</td>
</tr>
<tr>
<td>Last Update</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

Deficiency Description
Connecticut’s TRCC was recognized during the 2015 National Traffic Records Forum as one of six states in a Noteworthy Practices Guide for TRCCs. Ad hoc subcommittees are formed to address specific projects and initiatives; Over 100 individuals are engaged in the TRCC and their efforts have resulted in updated eCrash and eCitation programs, as well as ongoing data integration projects; Connecticut uses a bottom-up approach - it is the responsibility of the TRCC member to report back to their agency to build buy-in and advocate for TRCC projects; The TRCC builds personal relationships with TRCC members and provides support when stakeholders advocate within and between agencies. Highway Safety Office is fully committed to support of the TRCC.

<table>
<thead>
<tr>
<th>Deficiency ID</th>
<th>CT-D-00042</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Area</td>
<td>All areas</td>
</tr>
<tr>
<td>System</td>
<td>All systems</td>
</tr>
<tr>
<td>Basic Description</td>
<td>General</td>
</tr>
<tr>
<td>Status</td>
<td>Documented in 2006 Strategic Plan</td>
</tr>
<tr>
<td>Last Update</td>
<td>7-01-16</td>
</tr>
</tbody>
</table>

Deficiency Description
The State lacks a Problem ID manual with training. As addressed in the Strategic Plan, State could adopt a “best-practices” approach from another state.
Safety Data Projects

Project Prioritization: (Legislation requires that States document how they prioritized projects).

For the 2006 Section 408 Application, projects were selected and prioritized using a combination of factors. Part 1 of the 2006 Application – Deficiency Analysis and Major Strategies, page 2 – used the criteria defined below. The following program areas were listed based on a ranking of priorities by a two-thirds representation of the TRCC. For detail of each of these program areas, refer to the 2006 Strategic Plan.

1. Crash Data Content – Adopted National MMUCC Guideline data element recommendations
2. Location Reference System (LRS) – ConnDOT’s Integrated Enterprise Base Map and LRS
3. Crash e-Data Capture – MMUCC PR-1 electronic crash reporting system – implemented 2015
4. Crash Data Clearinghouse (CDR) – refer to CTSRC highlights – page 6
5. Crash Report Training – Train-the-Trainer / provided in parallel with new crash system rollout
6. Driver/Vehicle – Modernization project – CIVLS
7. Citation/Adjudication – CIDRIS (Integration efforts between DMV, DCJ, DPS, Judicial)
8. TRCC – Leadership, Financial Assistance, Executive Level Oversight
9. Roadway – Road Inventory major component of new ConnDOT Base Map and LRS initiative
10. CVARS – Commercial Vehicle Safety Division – complete electronic crash and citation reporting
11. FARS – Model system; need for continual emphasis in complete and timely reporting
12. ISS/EMS – Efforts underway to review/strengthen data capture/linkage within ISS/EMS
13. Data Analysis – HSO uses outside support for highway safety planning; as noted above, CDR continually improving data query and analysis capabilities (refer to CTSRC highlights – page 6)

These program areas were reviewed in comparison to the major recommendations of the 2007 and 2012 Traffic Records Assessments, and as previously stated, there did not appear to be any substantive change to the emphases currently being pursued by the TRCC.

Identified in the 2006 Strategic Plan, a challenge for the State has continued to be the lack of a State crash data repository to be able to accommodate/accept the electronic transmission of PR-1 crash reports from law enforcement agencies statewide. Rated high in the Strategic Plan, the planning for a crash data repository received less attention during the 2006 Section 408 Application, after the state was advised to submit projects that could show quick results. This year the TRCC continues to place greater emphasis in this area; Crash Data Repository (CDR) has become a web-based query and data analysis center, with public and private access to crash data. Users can analyze crash data/statistics in their own neighborhoods, towns, counties, as well as comparing statewide totals.

Previously, the focus of the TRCC on safety data improvement projects that would show change/impact in the short term directed it to consider/benefit from the success of CVARS and to implement projects that included electronic crash data collection. The decision was also made to learn from the success of electronic collection of EMS Patient Care Report (PCR) data, already underway. In 2006, the NHTSA review team cataloged seven projects from the information provided in the 2006 Section 408 Application. The project ID numbers have been maintained for reference and update by the NHTSA Team.

In 2016, projects were prioritized, by reviewing, discussing and building on the 2015 application, in which most of the emphasis had been placed on both E-Crash and E-Citation projects. The TRCC determined through consensus to continue this trend into the eleventh year Section 405c applications, to a large degree because a major focus is to strategize how to enhance efforts to go statewide with both of these important and related safety data improvement initiatives.

Note: The same project reference numbering initiated by NHTSA during the first year of the Section 408 funding is still being used for the 2016 applications.
### Section 405c Application - July 2016

<table>
<thead>
<tr>
<th>COST</th>
<th>DURA</th>
<th>COORDINATION</th>
<th>AFFECT PROGRAM GOALS</th>
<th>LIKELIHOOD OF SYSTEM IMPACT</th>
<th>COSTS/RISKS ASSOCIATED W/FAILURE</th>
<th>FOUR-BOX CELL</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Medium</td>
<td>Multiple stakeholder – LEAs in varying states of preparedness (technology/software)</td>
<td>Medium to high depending on the funding received and participation by LEAs</td>
<td>High</td>
<td>Medium</td>
<td>a ~ d</td>
</tr>
<tr>
<td>Medium</td>
<td>Long</td>
<td>Coordination with State and Local LEAs; longer range with Courts</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>d</td>
</tr>
<tr>
<td>Medium</td>
<td>Long</td>
<td>Coordination with State and Local LEAS; DMV; Judicial; Courts</td>
<td>High</td>
<td>High</td>
<td>High</td>
<td>d</td>
</tr>
<tr>
<td>Low</td>
<td>Medium</td>
<td>Coordination with DOT/DPH est. Research agreement</td>
<td>Medium</td>
<td>Medium</td>
<td>Low</td>
<td>b</td>
</tr>
<tr>
<td>Low</td>
<td>Medium</td>
<td>Linking Crash, EMS, Trauma, and CHIME data</td>
<td>Medium to high, pending percentage, etc.</td>
<td>Medium</td>
<td>Low</td>
<td>a</td>
</tr>
<tr>
<td>Low</td>
<td>Medium</td>
<td>Coordination with multiple stakeholder agencies; address confidentiality issues</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
<td>d</td>
</tr>
</tbody>
</table>

#### Cell Rating

1) $500k or less (Low), $500-999k (Med), $1Million or greater (High)
2) Cell - ‘a’ (Low cost – high payoff) – recommended first
3) Key is to build in funding stream
Safety Data Project Selection:

In making project selections for the July 2016 405c submission, input from TRCC stakeholders was obtained during TRCC meetings from January 2016 to June 2016, e-mails and follow-up phone calls focusing on the TRCC website, the emerging Strategic Plan and the importance of reaching consensus for the eleventh year of the Section 405c funding. Other factors included building on the priority of the 2016 Section 405c project selections, a continued focus on the roll out of the MMUCC PR-1 e-Crash system as well as expanding e-Citation statewide, and building a base for linking crash with EMS, trauma, and hospital information. Recommendations from past assessments in 2007 and 2012 were also considered.

The following represent the proposed projects for the July 2016 Section 405c application. From the involvement and influence of representatives from the law enforcement, judicial, public health and research communities, electronic roadside data capture of citation information together with motor vehicle crash, an online infraction disposition system, emergency response and hospital information, strengthening of data repositories and a long-range plan for integrating multiple traffic records data sources are seen as top priority objectives the TRCC seeks to achieve.

Projects being proposed for 11th Year Section 405c funding in the 2016 application include:

- Electronic Crash - Technology / Software Support for Local Law Enforcement
- Electronic Charging - Warning / Citation / Traffic Stop
- Electronic Processing - Warning / Citation / Traffic Stop - Online Disposition System
- Linking Crash / Injury Datasets - Measure Crash Injury Outcomes - Law Enforcement / Health Care Providers
- EMS / Trauma Registry - Documentation - Data Dictionaries - Updates - Communication
- Traffic Records System Data Linkage Roadmap - Long Range Plan
Performance Measures and Goals

In listing performance measures, the same reference numbers that were documented by the NHTSA review team for the 2006 Section 408 application for Connecticut have been included for referencing and update purposes. Some of the measures are duplications (such as 03 and 04). Additional performance measures (18-22) have been included that were proposed for the first year Section 408 funding, but were not recorded.

<table>
<thead>
<tr>
<th>Performance Measures by</th>
<th>Crash</th>
<th>Citation/Adjudication</th>
<th>Driver</th>
<th>Vehicle</th>
<th>Roadway</th>
<th>Injury Control/EMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completeness</td>
<td>01, 16, 22, 06</td>
<td></td>
<td></td>
<td></td>
<td>06</td>
<td>18</td>
</tr>
<tr>
<td>Uniformity</td>
<td>08, 21,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19</td>
</tr>
<tr>
<td>Timeliness</td>
<td>07, 15, 17, 20</td>
<td>02, 09, 10, 11</td>
<td>11</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration</td>
<td>03, 04, 12, 13, 14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessibility</td>
<td>05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The (17) performance measures documented by the NHTSA team from Connecticut’s 2006 Section 408 application are presented using the NHTSA assigned reference numbers. They have been re-ordered, however, to reflect the priority records system improvement efforts pursued by the TRCC beginning with the Injury Control/EMS Core System area.

Measures that relate to Citation/Adjudication are listed together following the Crash and EMS emphasis areas. Measures #11 (Citation/Adjudication and Driver), #20 (Crash and Vehicle), and #6 (Crash and Roadway) represent initiatives that relate to more than one core system area.

For reference to #06 (Crash/CSP – Completeness), #15 (Crash/CAPTAIN – Timeliness), #20 (Crash/CVARS – Timeliness), and #17 (Crash – Timeliness/this performance measure, documented by the NHTSA review team in 2006, and already included in CT-M-00007, CT-M-00015, and CT-M-00020), refer to the 2007 Traffic Records Strategic Plan.

Motor Vehicle Crash – Timeliness – Performance Measure

Connecticut’s 2016 application for **Determination of Measurable Progress** was based on the **timeliness of Motor Vehicle Crash Reporting**, as evidenced by the improvement in the mean number of days from date of crash report (by both State and Local law enforcement) arrival at ConnDOT to entry into the State Crash Records database on April 15, 2015

- ending the period April 16, 2014 to April 15, 2015

| Timeliness of crash reporting | 104 days |

Compared with one year later on April 15, 2016

- ending the period April 16, 2015 to April 15, 2016

| Timeliness of crash reporting | 9 days |
Motor Vehicle Crash – Uniformity – Performance Measure

In 2015, Connecticut’s application for Determination of Measurable Progress was based on:

The uniformity of the Motor Vehicle Crash database improved, as evidenced by the increase from 24 MMUCC-compliant crash data elements reported by both State and Local law enforcement and entered into the crash database for the years leading up to and ending December 31, 2014, to 75 MMUCC-compliant data elements entered into the State CDR (crash database), beginning January 2015.


Connecticut’s April 2014 Determination of Measurable Progress was based on:

The timeliness of the Motor Vehicle Crash database improved, as evidenced by the decrease, from 377 days (backlog of crash report processing) during April-March 2013, to 167 days during April-March 2014, in the number of days from the report of a motor vehicle crash to entry into the ConnDOT database. Because this improvement occurred within the 12 months immediately preceding the FY 2014 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2014, it was determined to be a demonstration of current progress.

Citation/Adjudication – Timeliness – Interim Progress Report

Connecticut’s March 2013 Determination of Measurable Progress was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.

Crash/Roadway/Traffic Volume Data – Linkage – Interim Progress Report

Connecticut’s July 2013 Determination of Measurable Progress was based on:

Linkage of records in the state crash database (using route and milepost) for State, Interstate and U.S. Routes, with roadway and traffic volume data from the Connecticut Department of Transportation’s (ConnDOT) Roadway Inventory System (RIS) was achieved for calendar years 2002 through 2010 and made publically available in March 2013. This equates to 580,000 crashes or 71.2 percent of the total reported motor vehicle crashes (815,089) for the nine-year time period.

Future improvements anticipated include the linkage of crash data for local roads with data from the roadway database.
Performance Measures by

Performance Area vs. Safety Data Core System

### Injury Surveillance/EMS – Uniformity

**Measure ID:** CT-M-00019

<table>
<thead>
<tr>
<th>Status</th>
<th>Performance Area</th>
<th>System</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1-07 Required EMS PCR software EMS providers to be Gold NEMSIS compliant.</td>
<td>Uniformity</td>
<td>Injury Surveillance/EMS</td>
<td>Increase</td>
</tr>
</tbody>
</table>

**Measurement**

Improve the uniformity of the Injury Surveillance/EMS core system in terms of an increase in the percent of PCRs in compliance with Gold NEMSIS data requirements where the baseline level was zero before first year funding and goal levels are as presented below.

**Measurement Method**

All NEMSIS data is be collected with Gold standard software. In actuality, the number of NEMSIS data elements captured in each case will depend on the seriousness of the 911 call for service.

**Measure Description**

Number and percent of PCRs where NEMSIS data elements are collected recognizing collection of NEMSIS data is dependent upon the seriousness of the 911 call for service.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>400,000/100%</td>
<td>400,000/100%</td>
<td>400,000/100%</td>
<td>400,000/100%</td>
<td>400,000/100%</td>
</tr>
</tbody>
</table>

The TRCC’s second proposed set of safety data project(s) for performance measurement is in the Crash core system area and the performance areas to be addressed include uniformity, and timeliness.

The roll out of the new MMUCC PR-1 crash reporting system began in January 2015. First routed to the crash data base at ConnDOT, the new MMUCC PR-1 data is being entered into the State CDR at UConn. The accessibility as well as the data query/canned output reporting tools continue to improve for the CDR.

### Crash – Uniformity

**Measure ID:** CT-M-00021

<table>
<thead>
<tr>
<th>Status</th>
<th>Performance Area</th>
<th>System</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>On January 1, 2015, the roll out of the new MMUCC PR-1 crash reporting system began. The new MMUCC PR-1 data is being entered into the State CDR at UConn.</td>
<td>Uniformity</td>
<td>Crash</td>
<td>Increase</td>
</tr>
</tbody>
</table>

**Measurement**
Measure the improvement in the uniformity of the Motor Vehicle Crash database, as evidenced by the increase in MMUCC-compliant data elements entered into the State crash data repository (CDR) versus the old repository at ConnDOT. Prior to January 2015, only 24 MMUCC-compliant data elements were added to the ConnDOT crash data base. Beginning in January 2015, the number of MMUCC-compliant data elements increased to 75 in the new State CDR. The focus for this comparison was the (77) data elements recommended in MMUCC for law enforcement to collect at the scene of a crash.

### Measurement Method

Using the basis of the (77) data elements recommended in MMUCC for law enforcement to collect at the scene of a crash, measure totals from the previous PR-1 crash report to the new MMUCC PR-1, implemented beginning in January 2015.

### Measure Description

Number and MMUCC-compliant data elements added to the State crash data base.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24 MMUCC compliant data elements added to ConnDOT database</td>
<td>24 MMUCC compliant data elements added to ConnDOT database</td>
<td>24 MMUCC compliant data elements added to ConnDOT database</td>
<td>75 MMUCC compliant data elements added to State CDR database</td>
<td>75 MMUCC compliant data elements added to State CDR database</td>
<td></td>
</tr>
</tbody>
</table>

---

**Crash/ConnDOT – Timeliness**

Measure ID: CT-M-00001

<table>
<thead>
<tr>
<th>Status</th>
<th>Performance Area</th>
<th>System</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>In January 2015, the roll out of the new MMUCC PR-1 crash reporting system began. The new MMUCC PR-1 data is being entered into the State CDR at UConn.</td>
<td>Completeness</td>
<td>Crash</td>
<td>Increase</td>
</tr>
</tbody>
</table>

### Measurement

Improve the timeliness of the crash system in terms of a decrease in the mean number of days from date of crash report (by both State and Local law enforcement) arrival at ConnDOT to date of crash report entry into the State Crash Records database.

### Measurement Method

Mean number of days from date of crash report (by both State and Local law enforcement) arrival at ConnDOT to date of crash report entry into the State Crash Records database for April 15, 2016, ending a twelve month period, compared to April 15, 2015, ending the same time period a year ago.

### Measure Description

Mean number of days from the date of crash report arrival at ConnDOT to date of crash report entry into the State Crash Records database.

<table>
<thead>
<tr>
<th>Measure</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>377</td>
<td>167</td>
<td>104</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>
### Citation/Adjudication – Timeliness

**Measure ID:** CT-M-00009

<table>
<thead>
<tr>
<th>Status</th>
<th>Performance Area</th>
<th>System</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underway</td>
<td>Timeliness</td>
<td>Citation/Adjudication</td>
<td>Increase</td>
</tr>
</tbody>
</table>

**Measurement**
Improve the timeliness of the citation/adjudication data system in terms of an increase in the percent of citations received by CIB/the courts within 14 days of any electronically issued citation (related to CT-M-00002). 11th Year efforts will focus on the development of an online infraction disposition system.

**Measure Description**
Percent of electronic citations received by the CIB/courts within 14 days.

<table>
<thead>
<tr>
<th>Year</th>
<th>Goal CY</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>99%</td>
<td></td>
</tr>
</tbody>
</table>

### Citation/Adjudication – Integration

**Measure ID:** CT-M-00003

<table>
<thead>
<tr>
<th>Status</th>
<th>Performance Area</th>
<th>System</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underway</td>
<td>Integration</td>
<td>Citation/Adjudication</td>
<td>Increase</td>
</tr>
</tbody>
</table>

**Measurement**
Improve the integration of the citation/adjudication system in terms of an increase in the percent of TCAS citation data linked to DMV license information.

**Measure Description**
Percent of TCAS citation data linked to DMV license information.

### Citation/Adjudication – Integration

**Measure ID:** CT-M-00004

<table>
<thead>
<tr>
<th>Status</th>
<th>Performance Area</th>
<th>System</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underway</td>
<td>Integration</td>
<td>Citation/Adjudication</td>
<td>Increase</td>
</tr>
</tbody>
</table>

**Measurement**
Improve the integration of the citation/adjudication system in terms of an increase in the percent of TCAS citation data linked to CIB. 11th Year efforts will focus on the development of an online infraction disposition system.

**Measure Description**
Percent of TCAS citation data linked to the CIB.
### Citation/Adjudication/Crash – Integration

<table>
<thead>
<tr>
<th>Measure ID: CT-M-00013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
</tr>
<tr>
<td>Underway</td>
</tr>
</tbody>
</table>

**Measurement**

Improve the integration of the citation/adjudication system in terms of an increase in the percent of crash related citation data linked to crash data.

**Measure Description**

Percent of crash related citation data linked to crash data.

### Citation/Adjudication – Integration

<table>
<thead>
<tr>
<th>Measure ID: CT-M-00014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
</tr>
<tr>
<td>Underway</td>
</tr>
</tbody>
</table>

**Measurement**

Improve the integration of the citation/adjudication system in terms of an increase in the percent of vehicular misdemeanors and arrests linked to the criminal record and motor vehicle system (CRMVS). 11th Year efforts will focus on the development of an online infraction disposition system.

**Measure Description**

Percent of vehicular misdemeanors and arrests linked to the CRMVS.

### Citation/Adjudication – Accessibility

<table>
<thead>
<tr>
<th>Measure ID: CT-M-00005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
</tr>
<tr>
<td>Underway</td>
</tr>
</tbody>
</table>

**Measurement**

Improve the accessibility of the citation/adjudication system in terms of an increase in the percent of data and system availability. 11th Year efforts will focus on the development of an online infraction disposition system.

**Measure Description**

Percent of data and system availability.
Considerable emphasis for traffic records system improvements continued to focus on mobile reporting of traffic citation and motor vehicle crash data by law enforcement in the field. Outlined in a recent Business Plan for Law Enforcement Data Systems, safety data improvements for E-Crash and E-Citation are closely tied together. Also important is the incident location for all safety related events, which are better linked through an improved digital roadway network base map.

The projects proposed by the TRCC for the 7th year Section 408 application include:

- Electronic Crash Reporting Using National Standards (E-Crash)
- 100% Electronic Submission of Crash Reports
- Crash Data Repository (CDR)
- Electronic Citation Processing System (E-Citation)
- Electronic Citation Pilots – State Law Enforcement
- Electronic Citation Pilots – Local Law Enforcement
- Digital Roadway Network (DRN)
- Impaired Driver Records Information System (CIDRIS)
- Electronic Patient Care Reporting (EMS/PCR)
- Crash Outcome Data Evaluation System (CODES)
Electronic Crash Reporting Using National Standards (E-Crash)

Project ID: CT-P-00015

Core System:
- Crash

Performance Area:
- Completeness
- Uniformity
- Accuracy
- Timeliness

Project Title: Electronic Crash Reporting Using National Standards (E-Crash)

Lead Agency: Capitol Region Council of Governments

Partner Agencies:
- State Department of Transportation
- State and Local Law Enforcement

Project Director/Primary Contact:
Name: Cheryl Assis
Title: Director of Public Safety
Agency: CRCOG
Office: Headquarters
Address: 241 Main Street
City, ZIP: Hartford, CT 06106
Phone: 860-522-2217, extension 236
Email: cassis@crcog.org

Project Description/Basis:
The application, a part of the CT: CHIEF records management system (RMS) is being developed by the Capitol Region Council of Governments (CRCOG). That system which is browser based will be offered to communities without license fees. No local servers will be required. The application will provide an optional stand-alone Crash module for law enforcement agencies (LEA) to incorporate as a “front end” to their existing RMS systems. CRCOG would provide the stand-alone module to ConnDOT to distribute to the LEAs.

System hosting for the CT: CHIEF RMS is provided on an extensive server suite at the City of Hartford Police Department. The application is being developed using video based help services as well as conventional help text. Project principals will assist on the video preparation and video training. The system will be interfaced with the ConnDOT/UConn Crash Data Repository (CDR) initiative which will back feed the crash records in the legacy PR-1 format to provide a consistent reporting approach as different police departments begin to conduct pilot tests for their jurisdictions. The application will provide a crash report for those involved, a motorist information exchange, and an e-mail notification of the information exchange.
Training for end users will be provided on a train the trainer basis and led by Sergeant Robert Martin of the New Britain Police Department. Sgt. Martin is a certified instructor and is a member of NHTSA’s MMUCC committee.

Finally, the project will develop a series of standard query language (SQL) based management reports dealing with crash location analysis, crash and enforcement matrices, iterative target creation and monitoring, and enforcement activities by user and by police agency.

This project satisfies ConnDOT’s need for an updated crash data collection tool that meets national standards as well as an accelerated means of reporting from local agencies. By linking technology from other resources (COLLECT, CAPTAIN, DMV, Digital maps) it is expected that the added time to collect additional data at higher quality levels will be offset by the ability to import large amounts of crash detail (operator names, vehicles, street names and intersections, event dates and times) rapidly and with modest user intervention. Importantly, the application attempts to conserve valuable police time by only posing questions specifically related to the type of crash under investigation.

Recurring costs associated with the CRCOG approach include a share of the annual maintenance fees and a small contribution to the enhancement fund. In addition, there is a cost associated with the crash diagramming tool and the crash locator tool. The crash locator tool can be licensed once by the State of Connecticut for all law enforcement agencies at a recurring cost of $17,000 annually. The diagramming tool in browser format has a unit cost of less than one hundred dollars with annual maintenance of 18%.

The system presumes that local agencies already have a reasonably up to date personal computer and wireless service for each vehicle and a laser printer in their police stations for printing reports.

There are some savings to the State of Connecticut as well. These include a reduction in the cost of printing paper forms, the entry of data from those reports, and management of an extensive paper records process. The avoidance of these costs can easily fund extensions of the pilot to other regions and support a statewide e-crash effort.

Background:

The existing Connecticut crash reporting system is based on a design formed from paper records. At its base is the accident report, form PR-1. This form has been largely unchanged in the past thirty years. The system flow has been the creation of the paper form by the police accident investigator, printing or copying the actual document followed by mailing the report document to the Department of Transportation for coding and data entry. This legacy system has extensive mainframe based edits that are difficult to enforce in a manual environment and efforts to automate these edits have met with varied levels of success. There is even some anecdotal information that local and state police agencies are frequently compelled to disable the edit facilities in favor of being able to simply complete the document in a timely fashion. The current PR-1 form does not meet the latest national standard for crash data collection entitled, Model Minimum Uniform Crash Criteria. The MMUCC standard is close to its fourth iteration and has gained substantial credence across state highway safety organizations. Moreover, MMUCC data elements have recently been accepted by the National Information Exchange Model (NIEM) program as a national standard.

Only one Connecticut reporting vendor has developed an automated interface to directly update the records of the Department of Transportation. While this vendor has a large market share; there are substantial costs associated with trying to implement such a system from a statewide perspective.

Accordingly, a browser based system that does not have significant licensing fees is an attractive alternative. This would relieve local police agencies of the need to have extensive and expensive server based facilities and staff to operate a stand-alone records management system. Instead, there is a
growing emphasis of resource and service sharing at the local level. Hence, agencies might share a single system with access available by browser rather than by either thick or thin client software. It is in this environment that this proposal recommends a comprehensive crash reporting capability with linkages to electronic citation, DMV records, digital maps, a proven crash diagramming tool, and a nationally certified crash location product.

**Goals and Objectives:**

- To develop a means of timely crash reporting that follows national standards;
- To create an easy to use data collection mechanism that conserves valuable police time while collecting additional mission critical and research critical crash data;
- To integrate the E-Crash facility with the existing E-Citation system so as to enable a spatial relationship between crash locations and enforcement activities;
- To improve the accuracy of crash locations to within a 25 foot radius using coordinate technologies enabled through digital maps and advanced browser technologies;
- To provide management information to traffic safety principals and law enforcement executives on a timely basis; and
- To provide a proof of concept pilot program for the use of browser-based, paperless reporting using smart navigation and data collection systems across a diverse set of law enforcement users and geographies

**Project Milestones:**

<table>
<thead>
<tr>
<th>Tasks/Milestones</th>
<th>Projected Completion Date</th>
</tr>
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<tbody>
<tr>
<td>Submit HS-1 grant application to ConnDOT, Highway Safety Office</td>
<td>9-01-2012</td>
</tr>
<tr>
<td>Select recipient law enforcement agencies in advance and</td>
<td>9-15-2012</td>
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<tr>
<td>Finalize HS1 agreement with the State of Connecticut Highway Safety Office.</td>
<td>10-15-2012</td>
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<tr>
<td>Meet with pilot towns/ agencies and determine the number of officers/ vehicles in each town to participate in the e-crash pilot test</td>
<td>11-15-2012</td>
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<tr>
<td>Provide training in use of e-crash data capture software, and printers.</td>
<td>1-30-2013</td>
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<tr>
<td>Test applications in preparation for pilot towns going live with their e-crash pilots.</td>
<td>2-15-2013</td>
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<tr>
<td>Initiate the pilot and begin to upload collected crash data to the law enforcement server</td>
<td>3-01-2013</td>
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<tr>
<td>Upload crash data from the law enforcement server to the CDR at UConn</td>
<td>3-15-2013</td>
</tr>
<tr>
<td>Continue to provide necessary training and support.</td>
<td>3-30-2013</td>
</tr>
<tr>
<td>Employ a survey instrument for users of the e-crash pilot system:</td>
<td>7-30-2013</td>
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<tr>
<td>• To assess the satisfaction level of the users participating in the pilot;</td>
<td></td>
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<tr>
<td>• To assess their impressions of productivity improvements;</td>
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<tr>
<td>• To assess citizen satisfaction with the system.</td>
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Project Status:

As stated in the 6th year project status, this project is helping to continue the roll out of e-crash systems in law enforcement agencies statewide.

Current progress includes:

- Demonstrations of E-Crash were provided for:
  - User group in November 2012
  - TRCC in December 2012
  - CJIS in January 2013
- Demonstrations:
  - E-Crash is an electronic crash reporting application for collecting and processing traffic accident reports within Connecticut
  - CT:CHIEF is a browser-based RMS that organizes, stores, and transmits secure law enforcement and public safety information
  - CJIS Hosting refers to the work activities necessary to plan, install, and maintain E-Crash and CT:CHIEF applications
- Current baseline uses Bing maps for Crash locations and Easy Street for diagrams
- User Test and Pilot environments readiness
- Fine tuning for Survey/Reference data setup
- Continuing to issue training materials, and user manuals to police departments;
- Participating agencies have the ability to immediately reference motor vehicle statutes; operator license information; integrate DMV operator and registration information into the crash; and forward an electronic copy to CDR at UConn for processing
- e-Crash will speed the crash-recording process, reduce errors in both recording crash data and record-keeping steps, and increase the completeness of collected data
- When the collection of crash data is integrated into the mobile application, timeliness, accuracy and completeness will extend to that procedure as well; towns will have access to the data and be able to make informed decisions about spending funds for safety improvements
- Collected crash data uploaded to the centrally located CRCOG server; crash electronically transmitted along with paper copy to CDR at UConn
- Coordination with pilot towns (New Britain, Hartford, Waterford, Orange, Glastonbury, Windsor, South Windsor, Enfield, East Hartford, and Newington) is helping to expedite e-crash start-up

In addition, an extension of the crash application will be made available to non-CAPTAIN mobile data users via an electronic interface. This will allow the software to be used by more communities without requiring additional custom applications.
Crash Data Repository (CDR)

**Project ID:** CT-P-00003  
**Core System:** Crash  
**Performance Area:**  
Integration  
Completeness  
Timeliness  

**Project Title:** Crash Data Repository (CDR)  
**Lead Agency:** University of Connecticut  
**Partner Agencies:**  
All stakeholder agencies listed on the Traffic Records Coordinating Committee  

**Project Director/Primary Contact:**  
Name: Eric D Jackson PhD  
Title: Assistant Research Professor  
Civil and Environmental Engineering, Connecticut Transportation Institute  
University of Connecticut  
Address: 270 Middle Turnpike Storrs CT Unit 5202  
City, ZIP: Storrs, CT 06269  
Phone: 860-486-8426  
Email:e.jackson@engr.uconn.edu  

**Project Description:**  
The purpose of this project is to enhance the Connecticut Crash Data Repository (CTCDR), data query and analysis toolset created in earlier phases of this study. The overall project goal is to provide members of the traffic-safety community with timely, accurate, complete, and uniform crash data that are integrated with other databases maintained in the state. The Crash Repository designed at the University of Connecticut compiles data from agencies in Connecticut that capture PR-1 accident data and provides users access to these data along with analysis tools. The system is currently designed to allow users access to two individual data repositories. The first repository is collected from the Connecticut Department of Public Safety (DPS) and the second repository is generated from accident data processed by the Connecticut Department of Transportation. Phase 3 efforts are directed to:  

1. Adding additional functionality to the web portal of the repository as directed by the technical advisory committee,  
2. Including performance measures for records assessment and management  
3. Incorporating more local police department crash reports (electronic XML) into the repository and;  
4. Updating the CTCDR to accept and allow query of MMUCC compliant data captured as part of the Capital Region Council of Governments (CRCOG) e-crash pilot project.
**Basis for Project:**

Analysis of highway safety is probably the most data-intensive activity carried out by highway and transportation agencies. It requires more than just archiving police accident reports. To be effective, information recorded on the accident reports must be captured into a searchable database. Furthermore, roadway inventory, traffic volumes and even land use information are all critical for evaluating the safety of any road segment or intersection. These were added as part of phase 3 of the CTCDR. However, other safety analysis exercises require data such as driver history, motor vehicle registration information, and vehicle miles traveled (VMT). Furthermore, other institutional databases such as patient care reporting and treatment received on the scene and at the hospital are important to understanding the full impact of a crash. Due to the sensitive nature of these types of data, discussions need to take place early and often to identify the potential risks and benefits to such an integrated database. These types of discussions will be a key part of phase 3 of the CTCDR; so that a future version of the repository may include such linkages to allow for a complete crash analysis from time of impact to release from hospital for injury crashes.

Phase 1 and 2 of this project established a repository structure which provides users online access to these repositories through a common integrated portal. As part of the Crash Data Improvement Program (CDIP) review performed at ConnDOT in October of 2011, the need for performance measures was identified. These measures would track elements such as timeliness, completeness and accuracy. These tools will be built into the next generation of the CTCDR.

Phase 1 and 2 of this project provided users with access to the crash data. However, the data entered into the repository from ConnDOT is not timely. There is currently a 14 month backlog of paper PR-1 reports at the DOT. Phase 2 established an XML feed from DPS to get data into the repository in a more timely fashion. However, this feed only contains data from the state police. In an effort to get more data submitted electronically local police departments need the ability to submit data via an XML data feed. This will aid in eliminating the PR-1 paper backlog as well as providing users access to more timely data. The research team will pick 5 pilot towns at a minimum to aid in their submission of electronic PR-1 data. This would involve the research team assessing a local PDs current system and creating a custom application to generate an XML feed directly and securely to the crash data repository.

A recent initiative at the DOT is the transition to a 100% MMUCC compliant uniform police report. This initiative also includes an effort to move to 100% electronic reporting. The DOT has funded a pilot project with CRCOG as a proof of concept. As part of their pilot crash data is to be collected with the new browser based tool. However, the DOT is not equipped to receive a MMUCC XML data feed. Therefore the CTCDR is to be updated to accept and process a MMUCC XML file. This change requires a redesign of the CTCDR and the analysis tools. Furthermore, the option of an electronic export to the DOT crash file system is being investigated. This could relieve the DOT in the future from having to enter these reports manually from printed police reports.

Following a Peer-to-peer program with the Connecticut DOT involving the DOT and LSU representatives from the State of Louisiana, Connecticut is looking to pattern much of its University/DOT relationship in a similar fashion to the model developed for the State of Louisiana. The CTCDR (Connecticut Crash Data Repository) is migrating to the CTSRC (Connecticut Transportation Safety Research Center).

The mission of the CTSRC is to support the Department of Transportation in developing and maintaining a state of the art crash data entry, collection, and safety analysis system. Refer below to progress for the most recent month.
Figure 1: Proposed CDR Structure to Include the CRCOG MMUCC Data

As Figure 1 outlines, users are able to query crash records by information contained on the PR-1; in addition, they will be able to query the data based on the physical characteristics of the highway network. The revisions to the repository will establish a MMUCC repository that will be able to accept MMUCC compliant XML files and then make summaries of the data available through the web portal. Select users will have access to the raw data collected from the XML feed from CRCOG.

Vision for the Future:

Future advancements of the established repository will be proposed in subsequent years if funding is available. There are large amounts of non-highway information maintained by other State agencies such as the Department of Motor Vehicles or the Department of Public Health that could populate a fourth or fifth repository at UConn. Future phases of this research could work to link or merge the Patient Care Reporting (PCR) software and DMV driving records to the crash data repository. This would allow users access to not only crash data but limited generalized summaries of injury reports detailing the care provided to and the severity of the injuries to crash victims. Users may also be able to generate summaries of crashes based on a driver’s driving records obtained from the DMV. For example, this type of system would allow for analysis of a driver’s DUI convictions and associated alcohol related crash frequency or potential. However, there are many privacy concerns with this type of data. Significant effort and resources will be needed to meet Health Insurance Portability and Accountability Act (HIPAA) requirements.
Expected Impact:

Completion of Phase 3 of this project will enhance the crash data repository created in Phase 1 and 2. This enhanced repository will provide members of the traffic-safety community with timely, uniform and complete crash data, within 30 days of the crash event, by expanding the data options in the repository established at the University of Connecticut. Furthermore, the integration of local police department xml data feeds will provide users with more timely data and aid in the reduction of the paper PR-1 backlog.

Project Milestones:

<table>
<thead>
<tr>
<th>Tasks/Milestones</th>
<th>Projected Completion Date</th>
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</thead>
<tbody>
<tr>
<td>Submit HS-1 grant application for 7th year Section 408 project</td>
<td>9/15/2012</td>
</tr>
<tr>
<td>Receive approval of the HS-1 and initiate project</td>
<td>10/1/2012</td>
</tr>
<tr>
<td>Establish/confirm the technical advisory committee (TAC) membership to establish user requirements and functionality for Connecticut's Crash Data Repository</td>
<td>10/15/2012</td>
</tr>
<tr>
<td>Identify local PDs that would be willing and interested in being part of the electronic XML pilot</td>
<td>1/20/2012</td>
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<tr>
<td>Design updated crash data repository structure for MMUCC data repository</td>
<td>2/1/2013</td>
</tr>
<tr>
<td>Update design specifications for integration of MMUCC databases into crash repository and analysis structure</td>
<td>4/1/2013</td>
</tr>
<tr>
<td>Update web front application to provide users new options in data query and analysis.</td>
<td>5/1/2013</td>
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<tr>
<td>Crash database repository database modifications complete</td>
<td>6/1/2013</td>
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<td>Web access and analysis programming complete</td>
<td>7/1/2013</td>
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<td>Web front application programming complete</td>
<td>8/1/2013</td>
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<tr>
<td>Pilot application launch available for TRCC and TAC comments</td>
<td>8/1/2013</td>
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<tr>
<td>CDR launched for use in Connecticut</td>
<td>9/30/2013</td>
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Projected Budget by Funding Source:

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<th>Funding Source</th>
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Status/Progress

- **PR-1 Crash Report Backlog Reduction and Removal:** Currently, the CTSRC has 27 undergraduate coders on staff, each working on average, 12 hours a week. The CTSRC has completed February 2012 paper crashes and are halfway through coding March 2012 crashes into the ConnDOT CAS software. Over half of the April 2012 crashes have been scanned and are ready for coding.
Backlog / continued: For the month of January: UConn coded 5,948 police reports. The average coder was able to code 10 reports an hour. With students back on campus full time, it is expected that they should be able to code a minimum of 8,000 crash reports; with the ultimate goal of 12,000 crash reports coded in a month.

Crash Data Repository: Pending a start date for an expected computer programmer position, the CTSRC has borrowed a fulltime programmer from the computer science department to start working on the repository. UConn is working with ConnDOT to develop and define the MMUCC database and XML schema. Plans are to introduce a new user interface for the CDR.

Upgrades to the CDR include: a) the ability to access the DOT photolog images with a single click to show the crash location in the year of the crash, 2) expanded graphing and summary capabilities for query users, 3) GIS mapping for crashes on state routes, 4) GIS display and query capabilities, and 5) new advanced data export tools to allow users to download their query results.

CDR / continued: Performance measures – The team is drafting a real-time dashboard to allow users to see crashes as they are entered into the MMUCC database. This will also track how frequently data are updated to the system and how long files dwell before they are edited and processed into the final repository.

Technical Advisory Committee (TAC): A second TAC meeting is being planned for late March 2013. The TAC advises the CTSRC in many issues ranging from efficient tools for the collection and analysis of crash data, to query capabilities and options for the CDR website.

Crash Data Champion: The Data Champion has continued to work on Crash Data Improvement (CDIP) project tracking and continues to detail his activities and CDIP progress.

E-Crash: The team viewed a demonstration of the E-Crash Software and has met with CRCOG, CJIS and ConnDOT to start discussions of data elements and structure of the MMUCC compliant database necessary to receive pilot crash data.

Established a flow of PR-1 data through the State IT network using the BEST SFPT server. To date 37 XML files, totaling approximately 40,000 electronic PR-1 crash reports have been received by UConn from DPS. The XML files have been used to create a parser to populate a SQL database, which is being incorporated into the repository web tool.

Road inventory data (lane width, pavement, ADT and other roadway data for last 16 years) to be reformatted and incorporated into an SQL database for inclusion in the Web GUI.

The repository can be found at www.ctcrash.uconn.edu
Electronic Citation Processing System (E-Citation)

Project ID: CT-P-00009

Core System:

- Citation/Adjudication

Performance Area:

- Completeness
- Uniformity
- Timeliness

Project Title: Electronic Citation Processing System (E-Citation)

Lead Agency: State of Connecticut Judicial Branch – Court Operations, Centralized Infractions Bureau

Partner Agencies:

- State and Local Law Enforcement Agencies

Project Director/Primary Contact:

Name: Stacey B. Manware
Title: Deputy Director, Centralized Infractions Bureau
Agency: State of Connecticut Judicial Branch
Office: Centralized Infractions Bureau
Address: 225 Spring Street
City, ZIP: Wethersfield 06109
Phone: 860-263-2750
Email: Stacey.Manware@jud.ct.gov

Project Description:

The citation system in Connecticut was a manual system, vulnerable to human error. Information from handwritten tickets was data entered and subsequently transmitted to various entities. Exception processing was time consuming. An electronic method of creating tickets and populating the CIB database is leading to improved processing times and accuracy of the information processed.

This project is dedicated to the continued development of an application that enables the receipt by the Centralized Infractions Bureau (CIB) of electronically captured citation data, automatically populated into the CIB system, leading to a paperless court in Connecticut for processing infractions. The project serves as a complement to all law enforcement citation pilot efforts statewide through ultimately building a back-end process for electronic traffic citations.

- Background - CIB; Unified Court System; 250 LE Agencies; 425,000 Tickets per Year; Lock Box Payment
- Project Focus - Timeliness; Accuracy; Technical Agility to Respond to Public Policy Changes; Better Performance Measures
Goal:

Create an application that enables the Judicial Branch’s Centralized Infractions Bureau (CIB) to electronically receive traffic citation information from law enforcement agencies, automatically store information in the CIB citation database, and electronically process citations.

Objective: Enable the e-citation application to accommodate Commercial Citations.

Objective: Enable the e-citation application to allow electronic viewing and disposition of citations in court locations.

Objective: Enable the e-citation application to provide a “paperless courtroom” with dedicated dockets for citations and enhanced opportunities for electronic “self-pay” options.

Purpose:

- Streamline citation system process through applied technology
- Increase revenue
- Increase uniformity of infractions processing
- Utilize staff more efficiently
- Assist law enforcement initiatives

Tasks/Milestones:

1. Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office;
2. Production of electronic-citation data submitted by law enforcement resulting in automatic population into CIB database;
3. Document volumes and define hardware/software needs;
4. Architecture design;
5. Web services application;
6. Streamlining of CIB workflow; and
7. Longer term enhancements may include absorbing additional jurisdictions and/or the creation of more e-Infractions courts.
Application:

Overview - Software; In-Car Equipment; Data Communications Network; Citation Forms/Zebra Printer

Rollout - # Printers; LE Agencies; Thermal Paper; Train-the-Trainer; Feedback from Pilot

Mgmt Reports; Monthly by Officer; by Violation Type; by Location; Separate Data Set – Map Based Analysis

Preparation for Each Agency; Equipment/Software in Vehicle; Regis ORI with e-Citation; Test System; Train Officers

CRCOG Users/e-Citation; Windows Style e-Citation Interface; Main Menu Functions

New Citation; Citation Search; Print; User Preferences; Clear Search Queues

Process; Demographics; License/Vehicle; Specifics; Infractions/Fines; Notes; Preview; Sign-Save-Print

Successes; User Accepts; App Sharing Across Jurisdictions; Potential for Other Mobile Ticket Apps

Challenges; Budget Limits Broader Rollout; Towns Slow to Rollout “Seed” Units; Long Term Issue of Replacement Costs; Revenue Sharing to Cover Costs - Strong Potential

Projected Budget by Funding Source:

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<th>Funding Source</th>
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</table>

Status:

The Electronic Citation Processing System is creating efficiencies in several areas. The receipt of electronically captured citation data by the CIB, is leading to the data being automatically populated into the CIB automated system.

In Phase One, officer handwriting is being replaced by type-written characters, therefore eliminating entry errors. Fewer entry errors are resulting in less exception processing, which improve the timeliness of downstream processing transmissions to the Courts and the Department of Motor Vehicles.

Phase Two, including activities allowing for direct population of the CIB database, further minimizes data entry, key stroke errors, and exception processing.

Phase Three will allow for the expansion of e-Citation processing, further developing the application to accommodate Commercial Citations, and the electronic viewing and disposition of citations in court locations. This phase will also begin the development of an e-Citation paperless courtroom with dedicated dockets for citations and will enhance the availability of electronic, self-pay opportunities.
Progress:

Activities have been completed and coordinated in conjunction with the Department of Public Safety, CRCOG and CIDRIS initiatives.

As highlighted, in regards to recent pilot-testing involving State and Local law enforcement, progress includes:

- Prototype for e-Citation back-end process/system has been developed
- System being developed as a real-time/web-based application
- CIB still debugging production problems as they occur from the State Police
- CIB beginning development on streamlining the citation workflow. This involves taking the e-Citations received and automatically uploading them into the legacy system
- Currently, CIB is receiving the citations electronically and printing and scanning them, then performing data entry from the now-typed citations
- Continuing to meet with various stakeholders to review adjusted timeline(s), expectations and responsibilities
- e-Pay component, a web-based automated system to electronically accept credit card payments for infractions and certain payable violations, now operational – is targeted for June to be able to allow violators to pay multiple tickets, rather than requiring individual transactions per ticket

Performance Measures

- Total tickets issued: 425,000
- Total tickets issued electronically: 45,000
- Total tickets entered electronically: 2,100
- Pre-Program: Average number of days from issuance to receipt – 28 days
- Pre-Program: Error rate – 11%
- Phase I: Average number of days from issuance to receipt – 4 days
- Phase I: Error rate – 5%
- Phase II: Average number of days from issuance to receipt – 4 days
- Phase II: Error rate – 1.5%
- Phase III: Average number of days from receipt to data entry – 7 per 1,000 tickets (anticipated)
- Phase III: Average number of minutes from receipt to data entry – 120 per 1,000 tickets

Interim Progress Report

Based on an Interim Progress Report, submitted to NHTSA - January 2013 for Section 405 application - Connecticut’s March 2013 Determination of Measurable Progress by Connecticut was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.
E-Citation Pilots - State Law Enforcement

Project ID: CT-P-00010

Core System:

- Citation/Adjudication

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: E-Citation Enhancement for Connecticut State Police

Lead Agency: Department of Public Safety / Division of State Police

Partner Agencies:

- State Judicial Department

Project Director/Primary Contact:

Name: George Battle
Title: Captain
Agency: Department of Public Safety
Office: Bureau of Communications & Technology
Address: 1111 Country Club Rd
City, ZIP: Middletown, CT 06457
Phone: 860-685-8686
Email: george.battle@ct.gov

Project Description:

This project continues the deployment of e-Citation systems for the Connecticut State Police. Mobile data capture software has already been developed for the existing e-Citation effort. Printers, and other required software and/or peripheral devices are being installed in State Police vehicles.

Grant funds are being requested to purchase at least one hundred (100) mobile printers and other peripheral devices for Connecticut State Police vehicles. Once vehicles have been equipped with the required hardware, and related software/peripherals, State Police personnel use their e-Citation application to electronically upload collected citation data to the State Police server and then to the State of Connecticut’s Judicial Department, Centralized Infractions Bureau (CIB).

Basis for Project:

Automated citation data collection is only available in a few law enforcement jurisdictions. Collection and submission of citation data in the paper (manual) format is largely an inefficient process.

Additionally, the use of the e-Citation software reduces data input errors and improves the completeness of the collected data. In the pilot phase, it has also proven to increase police officer efficiency by reducing the amount of time that officers spend collecting citation data and decrease the time it takes this data to be received by the courts. The law enforcement server interface provides a direct link for law
enforcement officers to query driver licensing and vehicle data as well as provide a secondary linkage to emergency responders (i.e., EMS, fire, etc.).

**Expected Impact:**

Expected impacts include:

- Expand management information and targeted enforcement activities
- Improved timeliness of the availability of citation data to the courts
- Improved accuracy and completeness of collected and submitted citation data

**Project Milestones:**

<table>
<thead>
<tr>
<th>Tasks/Milestones</th>
<th>Projected Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit/Finalize HS-1 grant application to DOT, Highway Safety Office.</td>
<td>10/01/12</td>
</tr>
<tr>
<td>Determine the number of officers/vehicles to be equipped with the e-Citation pilot system.</td>
<td>10/15/12</td>
</tr>
<tr>
<td>Purchase/provide officers with necessary hardware/software applications.</td>
<td>11/01/12</td>
</tr>
<tr>
<td>Install applications in vehicles, including printers and software.</td>
<td>2/15/13</td>
</tr>
<tr>
<td>Provide training in use of e-Citation data capture software, printers.</td>
<td>2/01/13</td>
</tr>
<tr>
<td>Conduct tests to monitor e-Citation applications with increased users / volume.</td>
<td>4/30/13</td>
</tr>
<tr>
<td>Upload collected citation data to the State Police server.</td>
<td>4/30/13</td>
</tr>
<tr>
<td>Upload citation data from the law enforcement server to the Centralized Infractions Bureau.</td>
<td>4/30/13</td>
</tr>
<tr>
<td>Continue to provide necessary training and support.</td>
<td>2/15/13</td>
</tr>
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**Projected Budget by Funding Source:**

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**Status:**

Grant funds are being requested for this 7th Year Section 408 Grant. The DPS will continue the roll out of e-citation systems for the State Police. A law enforcement server interface provides linkage for law enforcement to query driver licensing and vehicle registration data, populating the e-citation. Once the officer has generated an e-citation, it is electronically sent to the Centralized Infractions Bureau’s automated system.
Performance Improvements:

State Police 1200 Troopers; Primary Law Enforcement - all Limited Access Highways

Exclusive Jurisdiction in 61 Largely Rural Towns; Concurrent Jurisdiction in all 169 Towns

Every Troop is assigned a Vehicle with a Mobile Data Computer

Hand Written vs. e-Citations

60% Increase (select Time Period) e-Citations Issued vs. Written

Successes Extraordinarily Efficient (4-7 Minutes per Citation)

Substantial Potential for Revenue Enhancement

Wide Acceptance; Common Approach Sponsored by Judicial

Challenges > 500 Printers Needed

Furnish All Vehicles and Create a Uniform Process

Training - Need to Formalize; Bigger Classes Needed; Budget Issues
E-Citation Pilots - Local Law Enforcement

Project ID: CT-P-00011

Core System:
- Citation/Adjudication

Performance Area:
- Completeness
- Accuracy
- Timeliness

Project Title: E-Citation Pilot for Local Law Enforcement

Lead Agency: Capitol Region Council of Governments

Partner Agencies:
- State Judicial Department
- State Department of Transportation

Project Director/Primary Contact:

<table>
<thead>
<tr>
<th>Name</th>
<th>Cheryl Assis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>Director of Public Safety</td>
</tr>
<tr>
<td>Agency</td>
<td>CRCOG</td>
</tr>
<tr>
<td>Office</td>
<td>Headquarters</td>
</tr>
<tr>
<td>Address</td>
<td>241 Main Street</td>
</tr>
<tr>
<td>City, ZIP</td>
<td>Hartford, CT 06106</td>
</tr>
<tr>
<td>Phone</td>
<td>860-522-2217, extension 236</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:cassis@crcog.org">cassis@crcog.org</a></td>
</tr>
</tbody>
</table>

Project Description/Basis:

This project continues the roll out of e-citation systems in law enforcement agencies. Software has already been procured for the existing e-citation efforts and printers, and other appropriate hardware/software has been installed in police vehicles.

The requested grant funds have been used to purchase mobile printers, and other appropriate hardware for select law enforcement vehicles. Once vehicles are equipped with the required hardware, law enforcement personnel use e-citation software developed under previous year Section 408 initiatives. Citation data is electronically uploaded to the appropriate law enforcement servers. These servers then upload the citation data electronically to the appropriate State of Connecticut agency servers via XML specification standards.

The use of the e-citation software reduces data input errors and improves the completeness of the collected data. It also improves police officer efficiency by reducing the amount of time that officers spend collecting citation data and decreases the time it takes this data to be received by the appropriate State agency.
Background:

Police efficiency is substantially hampered by the inability to cite violators associated with crashes and selective enforcement in an automated fashion. Moreover, this presents a systemic challenge to the enforcement system in that it compels substantial and delayed ticket entry and disposition by the state's judicial system. While improvements can be incremental, an electronic citation system is best accomplished as a cradle to grave ticketing system involving all parties from the outset.

In conjunction with the leadership of the Traffic Records Coordinating Committee, the State of Connecticut Judicial Department initiated a pilot electronic citation program. This program has the support of the Department of Public Safety and the Department of Transportation along with local law enforcement. In the past year, the Judicial Department has resolved issues regarding an electronic citation format and the paper document upon which the citation is printed. Moreover, mobile printers have been identified and tested. While these may seem like small migratory tasks, they are vital steps toward the development of an all-electronic citation system that will provide not only automated ticketing and docketing, but eventually full payment and Department of Motor Vehicles' adjudication of the infractions.

Expected Impact:

Expected impacts include:

- Expand management information and targeted enforcement activities in equipped municipalities
- Improved timeliness of the availability of citation data to the courts
- Improved accuracy and completeness of collected and submitted citation data

Goals and Objectives:

Technical Objectives:

This project builds on prior investments of the State of Connecticut Department of Transportation.

1. The electronic citation applications provide:
   - Ability to reference the motor vehicle statute files maintained by the Connecticut Judicial Department.
   - Swipe or scan operator license information from crash participants or violators.
   - Integrate DMV operator and registration information to the citation.
   - Print a citation for the violator; forward an electronic citation to the Judicial Department’s Central Infractions Bureau; and as an interim step, print a hard copy of the citation.

2. Using existing hardware and communications facilities, this system will provide a GPS reference on all electronic crash records and citations.

Tasks/Milestones:

1. Provide “train the trainer” instruction to selected individuals from participating towns, who will in turn train the police officers in their communities in the operation of the equipment and the full e-citation application.

2. Local law enforcement records management system, being initiated, contains the standard for the XML interface for crash reporting. Select towns will send all of their crash reports through the new system by the end of 2013.
3. As an adjunct to the e-Citation project, a records management system will be made available to any local law enforcement agency, thereby fully encouraging use of the shared resource with access to the ad hoc state crash repository.

4. Pilot communities have been selected for e-citation, reflective of urban, suburban, and rural police agencies.

5. All equipment and services has been acquired using competitive procurements through GSA and/or cooperative procurement approved methods. Once the source had been identified for the ruggedized printers, they were tested by the application developers hired by the Judicial Department.

Activities:

Ruggedized mobile printers have been acquired for selected police traffic and patrol vehicles. The contract software product developed in the fourth year would be connected to the mobile data systems and fully interconnected with the Judicial Department.

Project Milestones:

<table>
<thead>
<tr>
<th>Tasks/Milestones</th>
<th>Projected Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit HS-1 grant application to DOT, Highway Safety Office.</td>
<td>9-01-2012</td>
</tr>
<tr>
<td>Select recipient law enforcement agencies in advance and collect baseline citation data for the months of July and August. This data would enumerate both crash related and non-crash related enforcement actions using the existing manual systems.</td>
<td>9-15-2012</td>
</tr>
<tr>
<td>Finalize HS1 agreement with the State of Connecticut Highway Safety Office.</td>
<td>10-15-2012</td>
</tr>
<tr>
<td>Meet with pilot towns/agencies and determine the number of officers/vehicles in each town to be equipped with the e-citation pilot system.</td>
<td>11-15-2012</td>
</tr>
<tr>
<td>Purchase and provide pilot towns with printers, and e-citation software.</td>
<td>12-15-2012</td>
</tr>
<tr>
<td>Install applications in vehicles, including printers, and software.</td>
<td>1-15-2013</td>
</tr>
<tr>
<td>Provide training in use of e-citation data capture software, and printers.</td>
<td>1-30-2013</td>
</tr>
<tr>
<td>Test applications in preparation for pilot towns going live with their e-citation pilots.</td>
<td>2-15-2013</td>
</tr>
<tr>
<td>Initiate the pilot and begin to upload collected citation data to the law enforcement server.</td>
<td>3-01-2013</td>
</tr>
<tr>
<td>Upload citation data from the law enforcement server to the Centralized Infractions Bureau.</td>
<td>3-15-2013</td>
</tr>
<tr>
<td>Continue to provide necessary training and support.</td>
<td>3-30-2013</td>
</tr>
<tr>
<td>Employ a survey instrument for users of the e-citation pilot system:</td>
<td>7-30-2013</td>
</tr>
<tr>
<td>• To assess the satisfaction level of the users participating in the pilot;</td>
<td></td>
</tr>
<tr>
<td>• To assess their impressions of productivity improvements;</td>
<td></td>
</tr>
<tr>
<td>• To assess citizen satisfaction with the system.</td>
<td></td>
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Projected Budget by Funding Source:

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>2007</th>
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<td>62,500</td>
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</table>

Project Status:

As stated in the 6th year project status, this project continues the roll out of e-citation systems in local law enforcement agencies. For Capitol Region law enforcement agencies the software has already been procured and the system only requires the installation of printers in the police vehicles. After law enforcement in the participating towns is provided the requisite equipment and software, training is then completed.

Current progress includes:

- Continuing to issue printers, software, training materials, and user manuals to police departments; joining New Britain were Enfield, Glastonbury, Orange and East Hartford; towns to be rolled out include Bloomfield, Manchester, Newington, Rocky Hill, Wethersfield, East Hampton and East Windsor

- Participating agencies have the ability to immediately reference motor vehicle statutes; operator license information; integrate DMV operator and registration information into the citation; and print a citation for the violator, and forward an electronic copy to Judicial for processing

- e-Citation speeds the citation-writing process, reduces errors in both citation writing and record-keeping steps, and increases the completeness of collected data

- When the collection of crash data is integrated into the mobile application, timeliness, accuracy and completeness will extend to that procedure as well; towns will have access to the data and be able to make informed decisions about spending funds for safety improvements

- Collected citation data uploaded to the centrally located CRCOG server; citation electronically transmitted along with paper copy to CIB

- Continued review of e-citation data edits/validation checks from Judicial

- Emphasizing importance of meeting with Judicial and other project contributors in demonstrating the e-Citation mobile application together with the e-Citation system link

- Coordination with pilot towns to help expedite e-citation pilot start-up

In addition, an extension of the citation application is being made available to non-CAPTAiN mobile data users via an electronic interface. This will allow the software to be used by more communities without requiring additional custom applications.
Considerable emphasis for traffic records system improvements continues to focus on mobile reporting of traffic citation and motor vehicle crash data by law enforcement in the field; and the need to push these initiatives to full statewide implementation. Outlined in a recent Business Plan for Law Enforcement Data Systems, safety data improvements for E-Crash and E-Citation are closely tied together.

Projects proposed by the TRCC for the 8th year Section 405 application include:

- Electronic Crash Reporting Using National Standards (E-Crash)
- E-Crash / 100% Submission / Assessment and Support
- E-Citation Processing System / 100% Submission / Assessment and Support
- E-Citation Pilots - State Law Enforcement (DPS)
- E-Citation Pilots - Local Law Enforcement (CRCOG)
- E-Citation Pilots - Local Law Enforcement (DPS Application)
Electronic Crash Reporting Using National Standards (E-Crash)

Project ID: CT-P-00015

Core System:
- Crash

Performance Area:
- Completeness
- Uniformity
- Accuracy
- Timeliness

Project Title: Electronic Crash Reporting Using National Standards (E-Crash)

Lead Agency: Capitol Region Council of Governments

Partner Agencies:
- State Department of Transportation
- State and Local Law Enforcement
- Connecticut Police Chief’s Association (CPCA)
- University of Connecticut (UConn)
- Criminal Justice Information System (CJIS)
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:
- Name: Cheryl Assis
- Title: Director of Public Safety
- Agency: CRCOG
- Office: Headquarters
- Address: 241 Main Street
- City, ZIP: Hartford, CT 06106
- Phone: 860-522-2217, extension 236
- Email: cassis@crcog.org

Project Description/Basis:

The E-Crash initiative/pilot project provides the launching point for the move towards 100% electronic submission of E-Crash data in the State of Connecticut. The application, a part of the CT: CHIEF records management system (RMS) is being developed/tested by the Capitol Region Council of Governments (CRCOG). That system which is browser based will be offered to communities without license fees. No local servers will be required. The application will provide an optional stand-alone Crash module for law enforcement agencies (LEA) to incorporate as a “front end” to their existing RMS systems. CRCOG would provide the stand-alone module to ConnDOT to distribute to the LEAs.

The Department of Transportation (ConnDOT) in conjunction with CRCOG and the Criminal Justice Information Systems (CJIS) Board of the Office of Policy and Management developed a Project Charter for hosting E-Crash and E-Citation as initial applications of the CT: CHIEF records management initiative.
Traffic Safety Information System - - - - - - - - - - - - Improvements - - - - - - - - - - - - Section 405c Application

The decision to host under the CJIS initiative, CISS (Connecticut Information Sharing System), represents a critical and progressive step in developing a statewide system that meets national Model Minimum Uniform Crash Criteria (MMUCC) guidelines and expands highway safety information to a broader spectrum of users. The application will provide a crash report for those involved, a motorist information exchange, and an e-mail notification of the information exchange. The proposed deadline for a new MMUCC compliant crash reporting system is January 2015.

Training for end users will be provided on a train the trainer basis and led by Sergeant Robert Martin of the New Britain Police Department. Sgt. Martin is a certified instructor and is a member of NHTSA’s MMUCC committee.

This project satisfies ConnDOT’s need for an updated crash data collection tool that meets national standards as well as an accelerated means of reporting from local agencies. By linking technology from other resources (COLLECT, CAPTAIN, DMV, Digital maps) it is expected that the added time to collect additional data at higher quality levels will be offset by the ability to import large amounts of crash detail (operator names, vehicles, street names and intersections, event dates and times) rapidly and with modest user intervention. Importantly, the application attempts to conserve valuable police time by only posing questions specifically related to the type of crash under investigation.

The system presumes that local agencies already have a reasonably up to date personal computer and wireless service for each vehicle and a laser printer in their police stations for printing reports.

There are some savings to the State of Connecticut as well. These include a reduction in the cost of printing paper forms, the entry of data from those reports, and management of an extensive paper records process. The avoidance of these costs can easily fund extensions of the pilot to other regions and support a statewide e-crash effort.

Background:

The existing Connecticut crash reporting system is based on a design formed from paper records. At its base is the accident report, form PR-1. This form has been largely unchanged in the past thirty years. The system flow has been the creation of the paper form by the police accident investigator, printing or copying the actual document followed by mailing the report document to the Department of Transportation for coding and data entry. This legacy system has extensive mainframe based edits that are difficult to enforce in a manual environment and efforts to automate these edits have met with varied levels of success. There is even some anecdotal information that local and state police agencies are frequently compelled to disable the edit facilities in favor of being able to simply complete the document in a timely fashion. The current PR-1 form does not meet the latest national MMUCC guideline for crash data collection. MMUCC, which has gained substantial credence across state highway safety organizations, has been accepted by the National Information Exchange Model (NIEM) program as a national standard. Beginning in 2015, the State will transition to a completely updated electronic crash reporting system using the MMUCC Guideline as the basis for its crash data collection.

Only one Connecticut reporting vendor has developed an automated interface to directly update the records of the Department of Transportation. While this vendor has a large market share; there are substantial costs associated with trying to implement such a system from a statewide perspective.

Accordingly, a browser based system that does not have significant licensing fees is an attractive alternative. This would relieve local police agencies of the need to have extensive and expensive server based facilities and staff to operate a stand-alone records management system. Instead, there is a growing emphasis of resource and service sharing at the local level. Law Enforcement agencies will be able to share a single system with access available by browser rather than by either thick or thin client software. It is in this environment that this proposal recommends a comprehensive crash reporting
capability with linkages to electronic citation, DMV records, digital maps, a proven crash diagramming tool, and a nationally certified crash location product.

Project Goals:

- Develop a functional application for law enforcement, which can be used to meet ConnDOT standards for a new MMUCC compliant crash reporting system by January 2015;
- Achieve technology standardization and data uniformity through a common set of business & technology requirements;
- Lower technology costs by creating economies of scale and bundled purchase agreements; and
- Increase access to data for the local law enforcement and public safety communities.

Objectives:

- To develop a means of timely crash reporting that follows national standards and guidelines;
- To create an easy to use data collection mechanism that conserves valuable police time while collecting additional mission critical and research critical crash data;
- To integrate the E-Crash facility with the existing E-Citation system so as to enable a spatial relationship between crash locations and enforcement activities;
- To improve the accuracy of crash locations to within a 25 foot radius using coordinate technologies enabled through digital maps and advanced browser technologies;
- To provide management information to traffic safety principals and law enforcement executives on a timely basis; and
- To provide a proof of concept pilot program for the use of browser-based, paperless reporting using smart navigation and data collection systems across a diverse set of law enforcement users and geographies.

As stated, the CT: CHIEF RMS is offered to law enforcement agencies without license fees. The only costs to local agencies will be a share of the annual maintenance fees and a small contribution to the enhancement fund. In addition, there is a cost associated with the crash diagramming tool and the incident locator tool. The ILT can be licensed once by the State of Connecticut for all law enforcement agencies at a recurring cost of $17,000 annually. The diagramming tool in browser format has a unit cost of less than one hundred dollars with annual maintenance of 18%.

Projected Budget by Funding Source:

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<tr>
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As stated in the 7th year project status, this project is the jump start for rolling out of E-crash systems in law enforcement agencies statewide.
Project Milestones:

Submit HS-1 grant application to ConnDOT, Highway Safety Office;

Finalize HS1 agreement with the State of Connecticut Highway Safety Office;

Work with ConnDOT, TRCC, and CPCA in the review of candidate agencies for assistance/technical support to adopt the selected form of E-Crash chosen by the applicant agency;

Meet with pilot towns/agencies and determine the specifics of the selected form of E-Crash to be implemented and the number of officers/vehicles to be trained/equipped on E-Crash;

Provide training in use of E-citation data capture software, and printers;

Upload E-Crash data to the CISS server; which is then transferred to the Crash Data Repository (CDR) at the University of Connecticut (UConn);

Continue to provide programming and technical support for the maintenance as well as the enhanced functionality of E-Crash;

Extend E-Crash to include Fatal Analysis Reporting System (FARS) data capture;

Integrate the following into E-Crash:

- High quality digital statewide map provided by the Connecticut Department of Transportation,
- Use of the browser-based Incident Locator Tool (ILT) developed by Iowa State University to graphically define precise coordinates, and
- Inclusion of the browser based EZ Street Draw crash illustration facility

Integrate the following into E-Crash:

- Current E-Citation project for the purposes of developing crash enforcement management information including thematic maps and selective dashboards for manager, supervisors and end users

Current progress includes:

- Demonstrations of E-Crash provided for User group in November 2012, TRCC in December 2012, and CJIS in January 2013

- Demonstrations:
  - E-Crash is an electronic crash reporting application for collecting and processing traffic accident reports within Connecticut
  - CT:CHIEF is a browser-based RMS that organizes, stores, and transmits secure law enforcement and public safety information
  - CJIS Hosting refers to the work activities necessary to plan, install, and maintain E-Crash and CT:CHIEF applications

- Current baseline uses Bing maps for Crash locations and Easy Street for diagrams

- User Test and Pilot environments readiness

- Fine tuning for Survey/Reference data setup
Participating agencies will have the ability to immediately reference motor vehicle statutes; operator license information; integrate DMV operator and registration information into the crash; and forward an electronic copy to CDR at UConn for processing.

E-Crash will speed the crash-recording process, reduce errors in both recording crash data and record-keeping steps, and increase the completeness of collected data.

When the collection of crash data is integrated into the mobile application, timeliness, accuracy and completeness will extend to that procedure as well; towns will have access to the data and be able to make informed decisions about spending funds for safety improvements.

Collected crash data uploaded to the centrally located CRCOG server; crash electronically transmitted to CDR at UConn.

In addition, an extension of the crash application will be made available to non-CAPTAIN mobile data users via an electronic interface. This will allow the software to be used by more communities without requiring additional custom applications.
E-Crash / 100% Submission / Assessment and Support

Project ID: CT-P-00016

Core System:
- Crash
- Citation

Performance Area:
- Completeness
- Accuracy
- Timeliness

Project Title: E-Crash / 100% Submission / Assessment and Support

Lead Agency: Connecticut Police Chief’s Association (CPCA)

Partner Agencies/Association:
- Connecticut Department of Transportation
- State and Local Law Enforcement
- State Judicial Department
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

Name: Richard Mulhall
Title: Chief
Agency: Newington Police Dept.
Phone: 860-594-6201
Email: RMulhall@newingtonct.gov

Project Description/Basis:
This project encompasses multiple projects each aimed at serving a segment of the law enforcement community in Connecticut. The Connecticut State Police (CSP) uses a major software vendor (NexGen) for crash and other reporting from the field. There are currently eleven law enforcement agencies participating in the Capital Region Council of Governments (CRCOG) E-Crash project to develop field data collection. Other agencies throughout the state have their own systems. One option is that the CRCOG solution could be offered statewide to local law enforcement, with the CSP continuing to use their own software (or also adopting the CRCOG solution). The need for planning and coordination among law enforcement agencies is critical to the success of this effort. Beginning in January 2015, the State will transition to a completely updated electronic crash reporting system using the MMUCC Guideline, 4th Edition as the basis for its crash data collection.

The 100% electronic data collection and transmission initiative will be closely linked to the E-Crash pilot. The system will be interfaced with the ConnDOT/UConn Crash Data Repository (CDR). The use of E-Crash will reduce data input errors and improve the completeness of the collected data. It should also improve police officer efficiency by reducing the amount of time that officers spend collecting crash data and decrease the time it takes this data to be received by the appropriate State agency.
Background:

It is assumed that there are two distinct efforts aimed at electronic submission of crash report data. The first is through UConn and deals with the existing crash report form. The second is a transition utilizing the CRCOG developed E-Crash approach. This project focuses on attaining 100% crash reporting after the completion of the E-Crash pilot. The proposed deadline for a new MMUCC compliant crash reporting system is January 2015. It will involve a transition from current forms and processes to the new focus on electronic crash reporting for all law enforcement agencies in the State.

Tasks/Milestones:

1. Submit HS-1 grant application to ConnDOT, Highway Safety Office
2. Assess law enforcement agencies’ capabilities, current vendors, ability to adopt E-Crash
3. Identify early adopters beyond the State Police and CRCOG to implement E-Crash
4. Identify early adopters’ needs for programming, equipment and other assistance
5. Research/develop funding proposals to support early adopters as needed
6. Coordinate rollout for early adopters, CRCOG agencies and the State Police

7. Identify mid-term adopters among law enforcement agencies and vendors to implement E-Crash
8. Identify mid-term adopters’ needs for programming and other assistance
9. Research/develop funding proposals to support mid-term adopters as needed
10. Roll-out to mid-term adopters
11. Identify late adopters and potential non-adopter law enforcement agencies
12. Develop additional and alternative methods to support E-Crash solutions for late- and non-adopters
13. Research/develop budget and timeline for aiding late- and non-adopter support for E-Crash solutions
14. Implement alternative solutions for the remaining law enforcement agencies

Projected Budget by Funding Source:

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
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<tbody>
<tr>
<td>NHTSA 405</td>
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<td></td>
<td></td>
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<td></td>
<td>300,000</td>
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<td>Total Funds</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>375,000</td>
</tr>
</tbody>
</table>
Project Status:

The need for planning and coordination with the 100% submission / assessment and support initiative for E-Citations will also be critical as efforts to assess law enforcement agencies’ capabilities, their current vendors, and their ability to adopt to E-Citations as well as E-Crash will be interrelated. The following results are from a 2012 survey of local law enforcement agencies (85 towns responded) and the State Police.

Law Enforcement Survey for E-Crash and E-Citation

Results from 85 towns and the State Police, discussed during the March 2012 TRCC meeting.

<table>
<thead>
<tr>
<th>Police Dept</th>
<th>Do you submit the PR-1 electronically now?</th>
<th>If not, do you have the capability to do so?</th>
<th>Do you participate in electronic citation?</th>
<th>If not, do you have the capability to do so?</th>
<th>Obstacles to adopting E-Crash and/or E-Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>85 Towns</td>
<td>7 - Yes</td>
<td>32 - Yes</td>
<td>17 - Yes</td>
<td>20 – Yes</td>
<td>30 - RMS 22 - Funds</td>
</tr>
<tr>
<td>State Police</td>
<td>Yes</td>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Differences by law enforcement in the interpretation of “submitting a PR-1 electronically”

E-mailing in PDF forms?
Completing an electronic PR-1 at the scene; printing and mailing a paper copy to ConnDOT?
Completing a form-based PR-1, where the form is on your laptop?
Completing a paper PR-1, then entering it on your laptop back at the station?
E-Citation Processing System / 100% Submission / Assessment and Support

Project ID: CT-P-00009

Core System:

- Citation/Adjudication
- Crash

Performance Area:

- Completeness
- Uniformity
- Timeliness

Project Title: E-Citation Processing System / 100% Statewide Submission / Assessment and Support

Lead Agency: State of Connecticut Judicial Branch – Court Operations, Centralized Infractions Bureau

Partner Agencies:

- Connecticut Police Chief’s Association (CPCA)
- State and Local Law Enforcement Agencies
- Connecticut Department of Transportation
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

Name: Stacey B. Manware
Title: Deputy Director, Centralized Infractions Bureau
Agency: State of Connecticut Judicial Branch
Office: Centralized Infractions Bureau
Address: 225 Spring Street
City, ZIP: Wethersfield 06109
Phone: 860-263-2750
Email: Stacey.Manware@jud.ct.gov

Project Description:

The citation system in Connecticut was a manual system, vulnerable to human error. Information from handwritten tickets was data entered and subsequently transmitted to various entities. Exception processing was time consuming. An electronic method of creating tickets and populating the CIB database is leading to improved processing times and accuracy of the information processed.

This project is dedicated to the continued development of an application that enables the receipt by the Centralized Infractions Bureau (CIB) of electronically captured citation data, automatically populated into the CIB system, leading to a paperless court in Connecticut for processing infractions. The project serves as a complement to all law enforcement citation pilot efforts statewide through ultimately building a back-end process for electronic traffic citations.

- Background - CIB; Unified Court System; 250 LE Agencies; 425,000 Tickets per Year; Lock Box Payment
• Project Focus - Timeliness; Accuracy; Technical Agility to Respond to Public Policy Changes; Better Performance Measures

• Manual Limitations - Ticket Inventory; Road Conditions; Legislative Change; Legibility; Arithmetic Errors

• Timeframe - Analysis for Ticket Returns

• Ticket Errors - Wrong Amount Due; Wrong Infraction Number; Wrong Amt for Infraction

• Successes - Collaboration; Proof of Concept Widely Accepted; First Utilization of e-Signature; Impetus for e-Pay/Plead

• Challenges - Broaden User Base; Demand for Multi-Uses for Mobile Printer; Crash Info Exchange, Summons, Parking Tickets, Warnings

Goal:
Create an application that enables the Judicial Branch's Centralized Infractions Bureau (CIB) to electronically receive traffic citation information from law enforcement agencies, automatically store information in the CIB citation database, and electronically process citations.

Objective: Enable the e-citation application to accommodate Commercial Citations.

Objective: Enable the e-citation application to allow electronic viewing and disposition of citations in court locations.

Objective: Enable the e-citation application to provide a "paperless courtroom" with dedicated dockets for citations and enhanced opportunities for electronic "self-pay" options.

Purpose:

- Streamline citation system process through applied technology
- Increase revenue
- Increase uniformity of infractions processing
- Utilize staff more efficiently
- Assist law enforcement initiatives

Tasks/Milestones:
1. Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office;
2. Production of electronic-citation data submitted by law enforcement resulting in automatic population into CIB database;
3. Document volumes and define hardware/software needs;
4. Architecture design;
5. Web services application;
6. Streamlining of CIB workflow; and
7. Longer term enhancements may include absorbing additional jurisdictions and/or the creation of more e-Infractions courts.
Additional Tasks/Milestones Coordinating Assessment/Support Efforts with CPCA:

8. Coordinate with CPCA in their assessment of law enforcement agencies’ capabilities, current vendors, ability to adopt E-Citation
9. Identify candidate law enforcement agencies beyond the State Police and CRCOG to implement E-Citation
10. Identify candidate agencies’ needs for programming and other assistance
11. Research/develop funding proposals to support candidate agencies as needed
12. Roll-out to candidate agencies
13. Identify additional candidate law enforcement agencies to implement E-Citation
14. Identify agencies’ needs for programming and other assistance
15. Research/develop funding proposals to support agencies as needed
16. Roll-out to additional candidates
17. Identify late adopters and/or potential non-adopter law enforcement agencies
18. Develop additional and alternative methods to support E-Citation solutions for late- and non-adopters
19. Research/develop budget and timeline for aiding late- and non-adopter support for E-Citation solutions
20. Implement alternative solutions for the remaining law enforcement agencies

Application:

Overview - Software; In-Car Equipment; Data Communications Network; Citation Forms/Zebra Printer

Rollout - # Printers; LE Agencies; Thermal Paper; Train-the-Trainer; Feedback from Pilot

Mgmt Reports; Monthly by Officer; by Violation Type; by Location; Separate Data Set – Map Based Analysis

Preparation for Each Agency; Equipment/Software in Vehicle; Regis ORI with e-Citation; Test System; Train Officers

CRCOG Users/e-Citation; Windows Style e-Citation Interface; Main Menu Functions

New Citation; Citation Search; Print; User Preferences; Clear Search Queues

Process; Demographics; License/Vehicle; Specifics; Infractions/Fines; Notes; Preview; Sign-Save-Print

Successes; User Accepts; App Sharing Across Jurisdictions; Potential for Other Mobile Ticket Apps

Challenges; Budget Limits Broader Rollout; Towns Slow to Rollout “Seed” Units; Long Term Issue of Replacement Costs; Revenue Sharing to Cover Costs - Strong Potential

Projected Budget by Funding Source:

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
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<tbody>
<tr>
<td>NHTSA 408</td>
<td>75,000</td>
<td>75,000</td>
<td>75,000</td>
<td>150,000</td>
<td>100,000</td>
<td>75,000</td>
<td></td>
</tr>
<tr>
<td>NHTSA 405</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>150,000</td>
<td></td>
</tr>
<tr>
<td>Match</td>
<td>19,000</td>
<td>19,000</td>
<td>19,000</td>
<td>37,500</td>
<td>25,000</td>
<td>19,000</td>
<td>37,500</td>
</tr>
</tbody>
</table>
Status:

The Electronic Citation Processing System is creating efficiencies in several areas. The receipt of electronically captured citation data by the CIB, is leading to the data being automatically populated into the CIB automated system.

In Phase One, officer handwriting is being replaced by type-written characters, therefore eliminating entry errors. Fewer entry errors are resulting in less exception processing, which improve the timeliness of downstream processing transmissions to the Courts and the Department of Motor Vehicles.

Phase Two, including activities allowing for direct population of the CIB database, further minimizes data entry, key stroke errors, and exception processing.

Phase Three will allow for the expansion of e-Citation processing, further developing the application to accommodate Commercial Citations, and the electronic viewing and disposition of citations in court locations. This phase will also begin the development of an e-Citation paperless courtroom with dedicated dockets for citations and will enhance the availability of electronic, self-pay opportunities.

Progress:

Activities have been completed and coordinated in conjunction with the Department of Public Safety, CRCOG and CIDRIS initiatives.

As highlighted, in regards to recent pilot-testing involving State and Local law enforcement, progress includes:

- Prototype for e-Citation back-end process/system has been developed
- System being developed as a real-time/web-based application
- CIB still debugging production problems as they occur from the State Police
- CIB beginning development on streamlining the citation workflow. This involves taking the e-Citations received and automatically uploading them into the legacy system
- Currently, CIB is receiving the citations electronically and printing and scanning them, then performing data entry from the now-typed citations
- Continuing to meet with various stakeholders to review adjusted timeline(s), expectations and responsibilities
- e-Pay component, a web-based automated system to electronically accept credit card payments for infractions and certain payable violations, now operational – is targeted for June to be able to allow violators to pay multiple tickets, rather than requiring individual transactions per ticket

Performance Measures

- Total tickets issued: 425,000
- Total tickets issued electronically: 45,000
- Total tickets entered electronically: 2,100
- Pre-Program: Average number of days from issuance to receipt – 28 days
- Pre-Program: Error rate – 11%
- Phase I: Average number of days from issuance to receipt – 4 days
- Phase I: Error rate – 5%
• Phase II: Average number of days from issuance to receipt – 4 days
• Phase II: Error rate – 1.5%

• Phase III: Average number of days from receipt to data entry – 7 per 1,000 tickets (anticipated)
• Phase III: Average number of minutes from receipt to data entry – 120 per 1,000 tickets

Interim Progress Report

Based on an Interim Progress Report, submitted to NHTSA - January 2013 for Section 405 application - Connecticut's March 2013 Determination of Measurable Progress by Connecticut was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.
E-Citation Project - State Law Enforcement (DPS)

Project ID: CT-P-00010

Core System:
- Citation/Adjudication

Performance Area:
- Completeness
- Accuracy
- Timeliness

Project Title: E-Citation Project - State Law Enforcement (DPS)

Lead Agency: Department of Public Safety / Division of State Police

Partner Agencies:
- State Judicial Department
- State Department of Transportation
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

Name: Mark Panaccione
Title: Captain
Agency: Department of Public Safety
Phone: 860-685-8686
Email: Mark.Panaccione@ct.gov

Project Description:

This project will continue to enhance the deployment of e-Citation systems for the Connecticut State Police. Mobile data capture software has already been developed for the existing e-Citation effort. Printers, and other required software and/or peripheral devices will be installed in State Police vehicles.

The requested grant funds will be used to purchase at least one hundred (100) mobile printers and other peripheral devices for Connecticut State Police vehicles. Once vehicles are equipped with the required hardware, and related software/peripherals, State Police personnel will use their e-Citation application to electronically upload collected citation data to the State Police server and then to the State of Connecticut’s Judicial Department, Centralized Infractions Bureau (CIB).

Basis for Project:

Automated citation data collection is only available in a few law enforcement jurisdictions. Collection and submission of citation data in the paper (manual) format is largely an inefficient process.

Additionally, the use of the e-Citation software will reduce data input errors and improve the completeness of the collected data. In the pilot phase, it has also proven to increase police officer efficiency by reducing the amount of time that officers spend collecting citation data and decrease the time it takes this data to be received by the courts. The law enforcement server interface provides a
Traffic Safety Information System - - - - - - - - - -  Improvements - - - - - - - - - - - - - - - - - - - - - - - - Section 405c Application

direct link for law enforcement officers to query driver licensing and vehicle data as well as provide a secondary linkage to emergency responders (i.e., EMS, fire, etc.).

Expected Impact:

Expected impacts include:

- Expand management information and targeted enforcement activities
- Improved timeliness of the availability of citation data to the courts
- Improved accuracy and completeness of collected and submitted citation data

Project Milestones:

<table>
<thead>
<tr>
<th>Tasks/Milestones</th>
<th>Projected Completion Date</th>
<th>Actual Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit/Finalize HS-1 grant application to DOT, Highway Safety Office.</td>
<td>10/01/13</td>
<td></td>
</tr>
<tr>
<td>Determine the number of officers/vehicles to be equipped with the e-Citation pilot system.</td>
<td>10/15/13</td>
<td></td>
</tr>
<tr>
<td>Purchase/provide officers with necessary hardware/software applications.</td>
<td>11/01/13</td>
<td></td>
</tr>
<tr>
<td>Install applications in vehicles, including printers and software.</td>
<td>2/15/14</td>
<td></td>
</tr>
<tr>
<td>Provide training in use of e-Citation data capture software, printers.</td>
<td>2/01/14</td>
<td></td>
</tr>
<tr>
<td>Conduct tests to monitor e-Citation applications with increased users / volume.</td>
<td>4/30/14</td>
<td></td>
</tr>
<tr>
<td>Upload collected citation data to the State Police server.</td>
<td>4/30/14</td>
<td></td>
</tr>
<tr>
<td>Upload citation data from the law enforcement server to the Centralized Infractions Bureau.</td>
<td>4/30/14</td>
<td></td>
</tr>
<tr>
<td>Continue to provide necessary training and support.</td>
<td>2/15/14</td>
<td></td>
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</table>

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<td>100,000</td>
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<tr>
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<td></td>
<td>125,000</td>
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<td>125,000</td>
<td></td>
</tr>
</tbody>
</table>

Status:

This project continues the roll out of e-citation systems for the State Police. A law enforcement server interface provides linkage for law enforcement to query driver licensing and vehicle registration data, populating the e-citation. Once the officer has generated an e-citation, it is electronically sent to the Centralized Infractions Bureau’s automated system.
Performance Improvements:

State Police 1200 Troopers; Primary Law Enforcement - all Limited Access Highways

Exclusive Jurisdiction in 61 Largely Rural Towns; Concurrent Jurisdiction in all 169 Towns

Every Troop is assigned a Vehicle with a Mobile Data Computer

Hand Written vs. e-Citations

60% Increase (select Time Period) e-Citations Issued vs. Written

Successes Extraordinarily Efficient (4-7 Minutes per Citation)

Substantial Potential for Revenue Enhancement

Wide Acceptance; Common Approach Sponsored by Judicial

Challenges > 500 Printers Needed

Furnish All Vehicles and Create a Uniform Process

Training - Need to Formalize; Bigger Classes Needed; Budget Issues
E-Citation Project - Local Law Enforcement (CRCOG)

Project ID: CT-P-00011

Core System:
- Citation/Adjudication

Performance Area:
- Completeness
- Accuracy
- Timeliness

Project Title: E-Citation Project for Local Law Enforcement

Lead Agency: Capitol Region Council of Governments

Partner Agencies:
- State Judicial Department
- State Department of Transportation
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

Name: Cheryl Assis
Title: Director of Public Safety
Agency: CRCOG
Office: Headquarters
Address: 241 Main Street
City, ZIP: Hartford, CT 06106
Phone: 860-522-2217, extension 236
Email: cassis@crcog.org

Project Description/Basis:

This project will continue the roll out of e-citation and e-crash systems in law enforcement agencies. Software has already been procured for the existing e-citation efforts and printers, and other appropriate hardware/software will be installed in police vehicles.

The requested grant funds will be used to purchase mobile printers, and other appropriate hardware for select law enforcement vehicles. Once vehicles are equipped with the required hardware, law enforcement personnel will use e-citation software developed under previous year Section 408 initiatives. Citation data will be electronically uploaded to the appropriate law enforcement servers. These servers will then upload the citation data electronically to the appropriate State of Connecticut agency servers via XML specification standards.

The use of the e-citation software will reduce data input errors and improve the completeness of the collected data. It should also improve police officer efficiency by reducing the amount of time that officers spend collecting citation data and decrease the time it takes this data to be received by the appropriate State agency.
Background:

Police efficiency is substantially hampered by the inability to cite violators associated with crashes and selective enforcement in an automated fashion. Moreover, this presents a systemic challenge to the enforcement system in that it compels substantial and delayed ticket entry and disposition by the state's judicial system. While improvements can be incremental, an electronic citation system is best accomplished as a cradle to grave ticketing system involving all parties from the outset.

In conjunction with the leadership of the Traffic Records Coordinating Committee, the State of Connecticut Judicial Department initiated a pilot electronic citation program. This program has the support of the Department of Public Safety and the Department of Transportation along with local law enforcement. In the past year, the Judicial Department has resolved issues regarding an electronic citation format and the paper document upon which the citation will be printed. Moreover, mobile printers and scanners have been identified and tested. While these may seem like small migratory tasks, they are vital steps toward the development of an all-electronic citation system that will provide not only automated ticketing and docketing, but eventually full payment and Department of Motor Vehicles' adjudication of the infractions.

Expected Impact:

Expected impacts include:

- Expand management information and targeted enforcement activities in equipped municipalities
- Improved timeliness of the availability of citation data to the courts
- Improved accuracy and completeness of collected and submitted citation data

Goals and Objectives:

Technical Objectives:

This project builds on prior investments of the State of Connecticut Department of Transportation.

1. The electronic citation application provides the ability to:

   - Reference the motor vehicle statute files maintained by the Connecticut Judicial Department
   - Swipe or scan operator license information from crash participants or violators
   - Integrate DMV operator and registration information to the citation
   - Print a citation for the violator; forward an electronic citation to the Judicial Department’s Central Infractions Bureau; and as an interim step, print a hard copy of the citation

2. Using existing hardware and communications facilities, this system will provide a GPS reference on all electronic crash records and citations.

Tasks/Milestones:

1. Provide “train the trainer” instruction to selected individuals from participating towns, who will in turn train the police officers in their communities in the operation of the equipment and the full e-citation application.

2. Local law enforcement records management system, being initiated, contains the standard for the XML interface for crash reporting. Select towns will send all of their crash reports through the new system by the end of 2013.
3. As an adjunct to the e-Citation project, a records management system will be made available to any local law enforcement agency, thereby fully encouraging use of the shared resource with access to the ad hoc state crash repository.

4. Pilot communities will be selected for e-citation that are reflective of urban, suburban, and rural police agencies.

5. All equipment and services will be acquired using competitive procurements through GSA and/or cooperative procurement approved methods. The source has already been identified for the ruggedized printers. These items have been tested by the application developers hired by the Judicial Department.

Activities:

Ruggedized mobile printers would be acquired for selected police traffic and patrol vehicles. The contract software product developed in the fourth year would be connected to the mobile data systems and fully interconnected with the Judicial Department.

Project Milestones:

<table>
<thead>
<tr>
<th>Tasks/Milestones</th>
<th>Projected Completion Date</th>
<th>Actual Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit HS-1 grant application to DOT, Highway Safety Office.</td>
<td>9-01-2013</td>
<td></td>
</tr>
<tr>
<td>Select recipient law enforcement agencies in advance and collect baseline citation data for the months of July and August. This data would enumerate both crash related and non-crash related enforcement actions using the existing manual systems.</td>
<td>9-15-2013</td>
<td></td>
</tr>
<tr>
<td>Finalize HS1 agreement with the State of Connecticut Highway Safety Office.</td>
<td>10-15-2013</td>
<td></td>
</tr>
<tr>
<td>Meet with pilot towns/agencies and determine the number of officers/vehicles in each town to be equipped with the e-citation pilot system.</td>
<td>11-15-2013</td>
<td></td>
</tr>
<tr>
<td>Purchase and provide pilot towns with printers, and e-citation software.</td>
<td>12-15-2013</td>
<td></td>
</tr>
<tr>
<td>Install applications in vehicles, including printers, and software.</td>
<td>1-15-2014</td>
<td></td>
</tr>
<tr>
<td>Provide training in use of e-citation data capture software, and printers.</td>
<td>1-30-2014</td>
<td></td>
</tr>
<tr>
<td>Test applications in preparation for pilot towns going live with their e-citation pilots.</td>
<td>2-15-2014</td>
<td></td>
</tr>
<tr>
<td>Initiate the pilot and begin to upload collected citation data to the law enforcement server.</td>
<td>3-01-2014</td>
<td></td>
</tr>
<tr>
<td>Upload citation data from the law enforcement server to the Centralized Infractions Bureau.</td>
<td>3-15-2014</td>
<td></td>
</tr>
<tr>
<td>Continue to provide necessary training and support.</td>
<td>3-30-2014</td>
<td></td>
</tr>
<tr>
<td>Employ a survey instrument for users of the e-citation pilot system:</td>
<td></td>
<td>7-30-2014</td>
</tr>
<tr>
<td>• To assess the satisfaction level of the users participating in the pilot;</td>
<td></td>
<td></td>
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<tr>
<td>• To assess their impressions of productivity improvements;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• To assess citizen satisfaction with the system.</td>
<td></td>
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</table>

Project Status:

As stated in the 7th year project status, this project continues the roll out of e-citation systems in local law enforcement agencies. For Capitol Region law enforcement agencies the software has already been procured and the system only requires the installation of printers in the police vehicles. After law enforcement in the participating towns is provided the requisite equipment and software, training is then completed.

Current progress includes:

- Continuing to issue printers, software, training materials, and user manuals to police departments; joining New Britain were Enfield, Glastonbury, Orange and East Hartford; towns to be rolled out include Bloomfield, Manchester, Newington, Rocky Hill, Wethersfield, East Hampton, East Windsor, and Redding.

- Participating agencies have the ability to immediately reference motor vehicle statutes; operator license information; integrate DMV operator and registration information into the citation; and print a citation for the violator, and forward an electronic copy to Judicial for processing.

- e-Citation speeds the citation-writing process, reduces errors in both citation writing and record-keeping steps, and increases the completeness of collected data.

- When the collection of crash data is integrated into the mobile application, timeliness, accuracy and completeness will extend to that procedure as well; towns will have access to the data and be able to make informed decisions about spending funds for safety improvements.

- Collected citation data uploaded to the centrally located CRCOG server; citation electronically transmitted along with paper copy to CIB.

- Continued review of e-citation data edits/validation checks from Judicial.

- Emphasizing importance of meeting with Judicial and other project contributors in demonstrating the e-Citation mobile application together with the e-Citation system link.

- Coordination with pilot towns to help expedite e-citation pilot start-up.

In addition, an extension of the citation application will be made available to non-CAPTAIN mobile data users via an electronic interface. This will allow the software to be used by more communities without requiring additional custom applications.
E-Citation Project - Local Law Enforcement (DPS Application)

Project ID: CT-P-00010

Core System:

- Citation/Adjudication

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: E-Citation Pilots - Local Law Enforcement (DPS Application)

Lead Agency: Local Law Enforcement Agency (Using same RMS vendor as DPS)

Partner Agencies:

- Local Law Enforcement
- Department of Public Safety
- Connecticut Police Chief’s Association (CPCA)
- State Judicial Department
- Connecticut Department of Transportation
- Traffic Records Coordinating Committee

Project Director/Primary Contact:

Name: Andrew Cota
Title: Lieutenant
Agency: Ansonia Police Department
Phone: 203-735-1885
Email: ACota@ansoniact.org

Project Description:

This project provides a continuation and expansion on the earlier efforts of the Ansonia Group, which accomplished the introduction of E-Citations for the following towns (Fairfield, Shelton, Woodbridge, and Ansonia); the deployment of e-Citation systems for the law enforcement agencies in other Connecticut towns using the same vendor as DPS (State Police).

Mobile data capture software has already been developed for the existing e-Citation effort. Printers, and other required software and/or peripheral devices will be installed in law enforcement agency vehicles.

The requested grant funds will be used to purchase mobile printers and other peripheral devices for local law enforcement police vehicles. Once vehicles are equipped with the required hardware, and related software/periipherals, law enforcement personnel will use their e-Citation application to electronically upload collected citation data to the State of Connecticut’s Judicial Department, Centralized Infractions Bureau (CIB).
Basis for Project:

Automated citation data collection is only available in a few law enforcement jurisdictions. Collection and submission of citation data in the paper (manual) format is largely an inefficient process.

Additionally, the use of the e-Citation software will reduce data input errors and improve the completeness of the collected data. In the pilot phase, it has also proven to increase police officer efficiency by reducing the amount of time that officers spend collecting citation data and decrease the time it takes this data to be received by the courts. The law enforcement server interface provides a direct link for law enforcement officers to query driver licensing and vehicle data as well as provide a secondary linkage to emergency responders (i.e., EMS, fire, etc.).

Expected Impact:

Expected impacts include:

- Expand management information and targeted enforcement activities
- Improved timeliness of the availability of citation data to the courts
- Improved accuracy and completeness of collected and submitted citation data

Project Milestones:

<table>
<thead>
<tr>
<th>Tasks/Milestones</th>
<th>Projected Completion Date</th>
<th>Actual Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit/Finalize HS-1 grant application to DOT, Highway Safety Office.</td>
<td>10/01/13</td>
<td></td>
</tr>
<tr>
<td>Determine the number of law enforcement agencies' officers/vehicles to be equipped with the e-Citation pilot system.</td>
<td>10/15/13</td>
<td></td>
</tr>
<tr>
<td>Purchase/provide officers with necessary hardware/software applications.</td>
<td>11/01/13</td>
<td></td>
</tr>
<tr>
<td>Install applications in vehicles, including printers and software.</td>
<td>2/15/14</td>
<td></td>
</tr>
<tr>
<td>Provide training in use of e-Citation data capture software, printers.</td>
<td>2/01/14</td>
<td></td>
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<tr>
<td>Conduct tests to monitor e-Citation applications with increased users / volume.</td>
<td>4/30/14</td>
<td></td>
</tr>
<tr>
<td>Upload collected citation data to the appropriate law enforcement server.</td>
<td>4/30/14</td>
<td></td>
</tr>
<tr>
<td>Upload citation data from the law enforcement server to the Centralized Infractions Bureau.</td>
<td>4/30/14</td>
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<tr>
<td>Continue to provide necessary training and support.</td>
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Projected Budget by Funding Source:

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</table>
Total Funds | 31,250 | 62,500 | 62,500

Status:

This project continues the roll out of e-citation systems for local law enforcement agencies, using the same RMS vendor as the State Police. A law enforcement server interface provides linkage for law enforcement to query driver licensing and vehicle registration data, populating the e-citation. Once the officer has generated an e-citation, it is electronically sent to the Centralized Infractions Bureau’s automated system.

Performance Improvements:

Hand Written vs. e-Citations

60% Increase (select Time Period) e-Citations Issued vs. Written

Successes Extraordinarily Efficient (4-7 Minutes per Citation)

Substantial Potential for Revenue Enhancement

Wide Acceptance; Common Approach Sponsored by Judicial

Challenges > 100s of Printers Needed

Furnish All Vehicles and Create a Uniform Process

Training - Need to Formalize; Bigger Classes Needed; Budget Issues
Project Summaries / 9th Year (2014 – 2015)

Emphasis for traffic records system improvements continues with a focus on mobile reporting of traffic citation and motor vehicle crash data, in addition to electronic linkage of injury outcome data, tracking person specific crash and injury records from a crash event to emergency medical services, trauma, emergency department, and hospital information management and exchange.

Projects proposed by the TRCC for the 9th year Section 405c application include:

- Electronic Crash Reporting / National Standards
- Electronic Crash / Citation Reporting – Local Law Enforcement
- Electronic Citation / Summons Arrest / Warning Processing
- Electronic Charging / Citation / Warning / Summons Arrest
- EMS/ISS Data System Tracking/Linkage
Electronic Crash / Citation Reporting / Local Law Enforcement

Project ID: CT-P-00016

Core System:

- Crash
- Citation

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: Electronic Crash / Citation Reporting / Local Law Enforcement

Lead Agency: Connecticut Police Chief’s Association (CPCA)

Partner Agencies/Association:

- Connecticut Department of Transportation
- State and Local Law Enforcement
- State Judicial Department
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

Name: Richard Mulhall
Title: Chief, Retired
Agency: Newington Police Dept
Phone: 860-594-6201
Email: RMulhall@newingtonct.gov

Project Description/Basis:

Beginning in January 2015, the State will transition to a completely updated electronic crash reporting system using the MMUCC Guideline, 4th Edition as the basis for its crash data collection. This project encompasses multiple projects aimed at serving a segment of the law enforcement community. The development of a pilot E-Crash application by CRCOG has been completed. Other agencies throughout the state have their own systems. The need for planning and coordination among law enforcement agencies is critical to the success of this effort. In addition to E-Crash, this project will continue the rollout of E-Citation systems in local law enforcement agencies.

The E-Crash initiative will be interfaced with the ConnDOT/UConn Crash Data Repository (CDR). The E-Citation effort will focus on the purchase of mobile printers, and other appropriate hardware for select local law enforcement vehicles. Once vehicles are equipped with the required hardware, law enforcement personnel will use E-Citation software developed under previous year Section 408 initiatives. Citation data will be electronically uploaded to the appropriate law enforcement servers, then to the appropriate State servers via XML specification standards. Electronic crash and citation reporting will reduce data input errors and improve the completeness of the collected data. It should also improve police officer efficiency by reducing the amount of time that officers spend collecting crash and citation data and decrease the time it takes this data to be received by the appropriate State agency.
Background:

The existing crash reporting system is based on the accident report, form PR-1, which has been largely unchanged in the past thirty years. The legacy system has extensive mainframe based edits that are difficult to enforce in a manual environment. The current PR-1 form does not meet the latest national MMUCC Guideline, which helped form the initial call for change during a meeting of the TRCC, three years ago.

The proposed deadline for a new MMUCC compliant crash reporting system, January 2015, will involve a transition from current forms and processes to the new focus on electronic crash reporting for all law enforcement agencies in the State.

Police officer efficiency is substantially hampered by the inability to cite violators associated with crashes and selective enforcement in an automated fashion. This presents a challenge to the enforcement system in the form of delayed ticket entry and disposition by the state’s judicial system. While improvement can be incremental, an electronic citation system is best accomplished as a cradle to grave ticketing system involving all of the parties from the outset.

Expected Impact:

- Expand management information and targeted enforcement activities in equipped municipalities;
- Improve timeliness, accuracy, completeness and availability of both crash and citation data; and
- New opportunities for focused policy initiatives that might result in stronger sanctions on recurrent violators and greater attention to locations of frequent crashes and significant injuries.

Activities/Tasks:

1. Submit/finalize HS-1 grant application with ConnDOT, Highway Safety Office;

2. Develop capability for connectivity, enabling parallel flow of crash data to UConn. Diversion of crash data to UConn from the File Transfer Protocol (FTP) site for import into the Crash Data Repository (CDR) at UConn. Building on a model already in place – State Police currently sends electronic files of the PR-1 to UConn and to ConnDOT. Connectivity to be established, allowing UConn to import the data once it is received at the FTP site; giving law enforcement near immediate access to their own data; a strong selling point to motivating agencies to convert to the new reporting system;

3. Purchase of the Incident Locator Tool (ILT), developed by Iowa State University. This locator tool would attract low end PDF towns to come on board with electronic reporting; CT: Chief towns to access the tool on the Newington server; and E-Crash towns whose vendor currently does not offer such a tool. In time, ConnDOT could drop the license fee and ask UConn to provide some level of technical support;

4. Meet with pilot towns/agencies and determine the number of officers/vehicles in each town to be equipped with the E-Citation system. Purchase and provide pilot towns with printers and E-Citation software. Install applications in vehicles;

5. Developing a shared GIS system. Of strategic importance is the availability of a shared geographic information system (GIS) for crime and traffic safety data collection. Integrating E-Crash with E-Citation will enable a spatial relationship between crash locations and enforcement activities. Recently, the DPS revealed in a TRCC meeting, their use of a geographic base, applied in a statewide DDACTS (Data Driven Approach to Crime and Traffic Safety) initiative. Ultimately, the TRCC would like to see a map set formed from federated GIS systems, and maintained and operated as a service by ConnDOT.
6. Create high quality crash location capabilities. The State is currently tied into this initiative, through the ongoing GIS development by ConnDOT, the browser based E-Crash solution and ILT, discussed earlier, and the inclusion of the EZ Street Draw crash illustration facility, which the State has also adopted;

7. Provide “train the trainer” instruction for E-Crash and E-Citation. Link content from the E-Crash and E-Citation initiatives, together with video and other training documentation, to facilitate training for crash and citation reporting;

8. Begin laying the groundwork for incorporating data collection for the Fatality Analysis Reporting System (FARS) within E-Crash. At 0.25 percent of total reported motor vehicle crashes in 2012, the inclusion of electronic fatal crash reporting in the new MMUCC system is expected; however, it could require a mandate by ConnDOT;

9. Continue assessment of law enforcement capabilities to meet state needs for electronic crash reporting, ability to adopt E-Crash, hardware/software needs, funding needed, etc;

10. Upload citation data to the Centralized Infractions Bureau;

11. Identify needs for programming, equipment and other assistance;

12. Research/develop funding proposals to continue support for late term adopters as needed; and

13. Continue support with the coordination of the rollout of E-Crash and E-Citation.

Projected Budget by Funding Source:

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Project Status:

The need for planning and coordination with the 100% submission / assessment and support initiative for E-Citations is also critical as efforts to assess law enforcement agencies’ capabilities, and their ability to adopt to E-Citations as well as E-Crash will be interrelated.

Current outreach efforts include:

- Law enforcement agency technology capabilities surveys;
- Meetings with both State and Local law enforcement agencies;
- Meetings with the Connecticut Police Chief’s Association (CPCA);
- Formation of law enforcement user groups and outreach teams to assist outreach efforts;
- Distribution of outreach message(s) and efforts via e-mails, newsletters and brochures; and
- Scheduling of webinars, demonstrations, and meeting attendance to promote different options for law enforcement agencies to consider for electronic crash and citation reporting.
Electronic Citation / Summons Arrest / Warning Processing

Project ID: CT-P-00009

Core System:
- Citation/Adjudication
- Crash

Performance Area:
- Completeness
- Uniformity
- Timeliness

Project Title: Electronic Citation / Summons Arrest / Warning Processing

Lead Agency: State of Connecticut Judicial Branch – Court Operations, Centralized Infractions Bureau

Partner Agencies:
- Connecticut Police Chief’s Association (CPCA)
- State and Local Law Enforcement Agencies
- Connecticut Department of Transportation
- Traffic Records Coordinating Committee (TRCC)
- Central Connecticut State University (CCSU)

Project Director/Primary Contact:

Name: Stacey B. Manware
Title: Deputy Director, Centralized Infractions Bureau
Agency: State of Connecticut Judicial Branch
Office: Centralized Infractions Bureau
Address: 225 Spring Street
City, ZIP: Wethersfield 06109
Phone: 860-263-2750
Email: Stacey.Manware@jud.ct.gov

Project Description:

Prior to the implementation of Electronic Citation (E-Citation) Processing, Connecticut’s traffic violation citation system was completely manual; vulnerable to human error at many points in the process. Handwritten documents required multiple entry in numerous and varied systems causing inconsistencies and inaccuracies in data. This sometimes led to agencies that relied on the system, such as the Department of Motor Vehicles (DMV), receiving erroneous information, which in some cases resulted in a failure to consistently and accurately apply conviction information to driver history files. In addition to creating opportunities for inaccurate and conflicting data to be entered into the system, reliance upon handwritten citations and multiple points of data entry often resulted in processing delays and time consuming exceptions processing.

A statewide systematic effort was undertaken to address these problems, with the Judicial Branch E-Citation Processing System project developed in coordination with Citation projects involving the Capitol Region Council of Government (CRCOG) and the Department of Public Safety (DPS). This resulted in
the development of a statewide electronic roadside data capture system for the issuing and reporting of traffic citations.

The E-Citation / Summons / Warning project is dedicated to the continued development of an application that enables the receipt / availability of citation, summons and warning data for the courts. The project serves as a complement to all law enforcement e-Charging pilot efforts statewide through ultimately building a back-end process for electronic traffic citations, summons notices, and warning tickets.

- Background - CIB; Unified Court System; 250 LE Agencies; 425,000 Tickets per Year; Lock Box Payment,
- Project Focus - Improved Timeliness; Accuracy; Technical Agility to Respond to Public Policy Changes; Better Performance Measures,
- Manual Limitations - Ticket Inventory; Road Conditions; Legislative Change; Legibility; Arithmetic Errors,
- Timeframe - Analysis for Ticket Returns,
- Ticket Errors - Wrong Amount Due; Wrong Infraction Number; Wrong Amount for Infraction,
- Successes - Collaboration; Proof of Concept Widely Accepted; First Utilization of e-Signature Impetus for e-Pay/Plead, and
- Challenges - Broaden User Base; Demand for Multi-Uses for Mobile Printer; Crash Info Exchange, Parking Tickets.

Goal:

Create an application that enables the Judicial Branch to electronically receive traffic citation, summons notices, and warning data from law enforcement agencies; automatically store, process and supply required information to the courts.

Objective: Design and implement an on-demand, centralized, web-based records management system (RMS) for law enforcement agencies to do the following:

- Query agency-specific data related to the issuance of citations, summons notices and warning tickets,
- Generate various reports related to agency activity in conjunction with the issuance of citations, etc., (e.g., by street, officer, charge and defendant),
- Provide for the management of data, such as approval process for citations, etc., prior to submission to CIB,
- Allow for cross-agency searching on citations, summons notices, and warnings,
- Allow agencies to export data in a variety of formats for use in spreadsheets and/or other applications, and
- Provide a web-service interface for querying of data by other applications.

Objective: Continue efforts to enable the e-citation / summons arrest / warning processing application to allow electronic viewing and disposition of required data in court locations.
Objective: Continue efforts to enable the e-citation / summons / warning application to provide a “paperless courtroom.”

Purpose:

- Streamline citation / summons arrest / warning processing system process through applied technology,
- Increase revenue,
- Increase uniformity of event processing,
- Utilize staff more efficiently, and
- Assist law enforcement initiatives.

Tasks/Milestones:

1. Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office,
2. Production of electronic-citation / summons arrest / warning ticket data submitted by law enforcement resulting in automatic population into Judicial database,
3. Document volumes and define hardware/software needs,
4. Web services application,
5. Continued streamlining of CIB workflow,
6. Creation of more e-Infractions courts,
7. Continue coordination with CPCA in their assessment of law enforcement agencies’ capabilities, current vendors, ability to adopt electronic citation / summons / warning ticket,
8. Continue to identify candidate law enforcement agencies to pilot test / implement electronic citation / summons arrest / warning processing,
9. Identify needs of candidate agencies for programming and other assistance,
10. Research/develop funding proposals to support candidate agencies as needed, and
11. Roll-out to candidate agencies.

Application:

Overview - Software; In-Car Equipment; Data Communications Network; Citation Forms/Zebra Printer; Summons Arrest Forms; Warning Tickets;

Rollout - # Printers; LE Agencies; Thermal Paper; Train-the-Trainer; Feedback from Pilot;

Mgmt Reports; Monthly by Officer; by Violation Type; by Location; Separate Data Set – Map Based Analysis;

Preparation for Each Agency; Equipment/Software in Vehicle; Regis ORI with e-Citation; Test System; Train Officers;

CRCOG Users/e-Citation/e-Summons/e-Warning; Windows Style Interface; Main Menu Functions;

New Citation / Summons / Warning; Event Search; Print; User Preferences; Clear Search Queues;

Process; Demographics; License/Vehicle; Specifics; Infractions/Fines; Notes; Preview; Sign-Save-Print;
Successes; User Accepts; App Sharing Across Jurisdictions; Potential for Other Mobile Ticket Apps; and

Challenges; Budget Limits Broader Rollout; Towns Slow to Rollout “Seed” Units; Long Term Issue of Replacement Costs; Revenue Sharing to Cover Costs - Strong Potential.

Projected Budget by Funding Source:

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<th>Funding Source</th>
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</table>

Status:

The Electronic Citation / Summons / Warning Processing System will build on the Electronic Citation Processing System, which is creating efficiencies in several areas. The receipt of electronically captured citation data by the CIB, is leading to the data being automatically populated into the CIB automated system.

In Phase One, vendors for pilot site law enforcement agencies developed in-car electronic citation systems while the Judicial Branch defined hardware and transmission requirements that would allow information created in police vehicles to be received and processed by the Judicial Branch CIB. Officer handwriting was replaced by type-written characters, therefore eliminating entry errors. Fewer entry errors are resulting in less exception processing, which improves the timeliness of downstream processing transmissions to the Courts and the Department of Motor Vehicles (DMV).

In Phase Two, the Judicial Branch created the interface which allowed for the direct population of the electronic citation transmissions from law enforcement into the CIB automated processing system, further minimizing data entry, key stroke errors, and exception processing.

In Phase Three, the Judicial Branch implemented regional electronic dockets and also included commercial electronic citations, and the electronic viewing and disposition of citations in court locations. This phase also began the development of an e-Citation paperless courtroom with dedicated dockets for citations, enhancing the availability of electronic, self-pay opportunities.

In Phase Four, the Judicial Branch implemented a direct web interface between the CIB and the Cheshire Police Department pilot site.

In Phase Five, the focus shifted to 100 percent statewide integration of E-Citations, including:

- Continued enhancement and expansion of the web interface version to electronically receive traffic citation information from law enforcement agencies,
- Automatic storing of information in the CIB citation database, allowing the electronic production of citations,
- Extracts to law enforcement agencies of citation data to enable in house record keeping and reporting,
- Refined web product to interface with the DMV,
- Enhancements as requested by pilot police departments,
• Informational seminars for police departments on the options for participating in E-Citation Summons / Warning processing initiative,
• Printers for pilot police departments, and
• Scanning equipment and hardware as needed for the receipt of increased numbers of E-Citations at CIB.

Progress:

Activities have been completed and coordinated in conjunction with the DPS, CRCOG and CIDRIS initiatives.

As highlighted, in regards to recent pilot-testing involving State and Local law enforcement, progress includes:

• Prototype for e-Citation back-end process/system has been developed,
• System being developed as a real-time/web-based application,
• CIB still debugging production problems as they occur from DPS,
• CIB beginning development on streamlining the citation workflow. This involves taking the e-Citations received and automatically uploading them into the legacy system, and
• E-Pay component, a web-based automated system to electronically accept credit card payments for infractions and certain payable violations, allows violators to pay multiple tickets, rather than requiring individual transactions per ticket.

Interim Progress Report (submitted for 8th Year Project funding)

Based on an Interim Progress Report, submitted to NHTSA in 2013 for Section 405c application -

Connecticut’s March 2013 Determination of Measurable Progress by Connecticut was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.
Electronic Charging / Citation / Warning / Summons Arrest

Project ID: CT-P-00025

Core System:

- Citation/Adjudication

Performance Area:

- Completeness
- Accuracy
- Timeliness

Project Title: Electronic Charging / Citation / Warning / Summons Arrest

Lead Agency: Capitol Region Council of Governments

Partner Agencies:

- State Judicial Department
- State Department of Transportation (ConnDOT)
- Traffic Records Coordinating Committee (TRCC)
- Connecticut State Police (CSP)
- Central Connecticut State University (CCSU)
- Connecticut Police Chief’s Association (CPCA)

Project Director/Primary Contact:

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Title: Director of Public Safety
Agency: CRCOG
Office: Headquarters
Address: 241 Main Street
City, ZIP: Hartford, CT 06106
Phone: 860-522-2217, extension 236
Email: cassis@crcog.org

Project Description/Basis:

This project proposes to extend previous as well as current efforts on electronic document and data collection. Strategies include weaving paperless data transfer from point of data collection to final repository without intermediate human intervention. Learning from prior experience with ConnDOT’s award winning e-citation collaboration and more recently with e-crash, we will extend field data collection to two additional enforcement means; e-warning tickets and e-summons notices. We believe these are the natural supplement to the prior information technology initiatives. Moreover, they round out the suite of enforcement data collection for the field police officer and relieve those officers of the burden of redundant data entry and the need for manual and multiple sets of forms. Our approach extends beyond the paper-centric notion of a single charging document and instead provides a single charging approach that correctly routes enforcement data to the correct storage and processing facility. In doing so, we propose to move further away from the legacy paper based systems of the prior century and closer to the connected mode of the 21st century.
The software applications developed in this project will reduce data input errors and improve the completeness of the collected data. It should also improve police officer efficiency by reducing the amount of time that officers spend collecting citation, summons and warning data and decrease the time it takes this data to be received by the appropriate State agency.

This project will also result in the development of a Traffic Law Enforcement Policy and Data Model. The introduction of mobile information technology to traffic law enforcement offers new opportunities for focused policy initiatives that might result in stronger sanctions on recurrent violators and greater attention to locations of frequent crashes and significant injuries. Moreover, it may be possible to improve traffic law enforcement by amending violation fees schedules in a way that treats the occasional offender with a modest sanction while the chronic violator might receive a graduated sanction. In addition, it may be possible to define frequent crash zones and increase sanctions for violators in those geographic areas. Finally, given the potential availability of expanded crash and violation data coupled with temporal and spatial analysis tools, the Connecticut General Assembly would have for the first time an innovative means of determining the following:

- Revenue required for administration and operation of the traffic law enforcement and adjudication system;
- Hazardous traffic violation true costs (using epidemiology research);
- Payment history, violator recidivism, and opportunities for improvement;
- Enforcement activity trends based on changes in fee amounts;
- Effectiveness of electronic printers in police vehicles;
- Reduction in crashes and crash severity based on sanction adjustments and investments in focused interventions on a hypothetical basis followed by a pilot program.

Background:

Police efficiency is substantially hampered by the inability to cite violators associated with crashes and selective enforcement in an automated fashion. Moreover, this presents a systemic challenge to the enforcement system in that it compels substantial and delayed ticket entry and disposition by the state’s judicial system. While improvements can be incremental, an electronic citation system is best accomplished as a cradle to grave ticketing system involving all parties from the outset.

In conjunction with the leadership of the Traffic Records Coordinating Committee, the State of Connecticut Judicial Department initiated a pilot electronic citation program. This program has the support of the Department of Public Safety (DPS) and the Department of Transportation (ConnDOT) along with local law enforcement. In the past couple years, the Judicial Department has resolved issues regarding an electronic citation format and the paper document upon which the citation will be printed. Moreover, mobile printers and scanners have been identified and tested. While these may seem like small migratory tasks, they are vital steps toward the development of an all-electronic citation/adjudication system that will provide not only automated ticketing and docketing, but eventually full payment and Department of Motor Vehicles’ (DMV) adjudication of the infractions.

Expected Outputs:

- Electronic warning ticket data collection and in-vehicle printing of notice to operators;
- Electronic summons process for serious motor vehicle violations and selected misdemeanor offenses and in-vehicle printing of the formal summons to the offender;
- Enhancement of e-citation data collection to include local ordinances so that the utility of the process for citing violators can be extended to assist municipal officers in meeting their local enforcement obligation; and
- All enforcement media will be fully integrated into the e-crash application.
Expected Impact:

Expected impacts include:

- Expand management information and targeted enforcement activities in equipped municipalities;
- Improved timeliness of the availability of citation, summons and warning data to the courts;
- Improved accuracy and completeness of collected and submitted data; and
- New opportunities for focused policy initiatives that might result in stronger sanctions on recurrent violators and greater attention to locations of frequent crashes and significant injuries.

At the end of this 9th year initiative, the baseline enforcement suite will be complete based on existing state policies. Assuming that ConnDOT is successful in its efforts to develop a functional geographic information system for the Connecticut user community, the state should be able to connect the dots of crash location and enforcement so that education and engineering improvements may be better targeted and planned. Collaboration and partnering must continue in order for our success to mature into an expectation rather than mere potential. The table will be set for improving those policies in ways that were not even possible just a few years ago. A connected Connecticut crash and enforcement system will mean a safer Connecticut.

Goals and Objectives:

Technical Objectives:

This project builds on prior investments of the State Department of Transportation (ConnDOT).

1. The electronic citation application provides the ability to:
   - Reference the motor vehicle statute files maintained by the Connecticut Judicial Department,
   - Swipe or scan operator license information from crash participants or violators,
   - Integrate DMV operator and registration information to the citation, and
   - Print a citation for the violator; forward an electronic citation to the Judicial Department’s Central Infractions Bureau; and as an interim step, print a hard copy of the citation.

2. Using existing hardware and communications facilities, this system will provide a GPS reference on all electronic crash records, citations, summons arrests, and warnings.


Critical path tasks for this project include:

1. Authorization and executive support to enable e-Summons and e-Warning from the Judicial Branch and the Department of Motor Vehicles;
2. Definition of functional requirements for each product via a Delphi approach involving subject matter experts;
3. Management reporting and application quality and integrity controls based on common or State cloud hosting;
4. Integration with existing applications including e-Citation and e-Crash;
5. Application architecture and detail design with options for connected and unconnected services;
6. Solicitation and selection of pilot communities as early adopters coupled with detailed gap analysis and product remediation; and
7. Development of real-time video based training coupled with availability of structured train the trainer sessions for each participating agency.
Traffic Law Enforcement Policy and Data Model:

Recruit/involve an experienced operations specialist to develop a Traffic Law Enforcement Policy and Data Model in conjunction with:

- Graduate students selected based on the following disciplines -
  - Traffic engineering
  - Criminal Justice
  - Operations Analysis
  - Geographic Information Systems
  - Public policy or public administration

- An oversight committee to provide leadership to the model development consisting of representatives from the following -
  - Central Connecticut State University Policy Group
  - Regional Police Chief’s Association
  - Regional Planning Agency
  - Epidemiologist (Yale, Health/EMS)
  - NHTSA or FHWA (national crash data and associated costs)
  - GIS analyst for location analysis and costs per location
  - ConnDOT for crash causes by location
  - Judicial (CIB) for current trends in fines and payments
  - Law Enforcement (state and local) for impediments and inducements to citation enforcement
  - DMV for license based sanctions
  - Division of Criminal Justice for prosecutorial sensitivities
  - An ad hoc representative(s) from the General Assembly

- The outputs of the Policy and Data Model development would be in four (3 month) phases -
  - Phase one: Detailed mission and function of the group
  - Phase two: Design and specification of the model and its components
  - Phase three: Model development, testing, and tuning
    - Descriptive and prescriptive data output/products
    - Mini-pilot using New Britain and Hartford
  - Phase four: Training of model users and policy makers

Projected Budget by Funding Source:

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<tr>
<th>Funding Source</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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</table>

Strategic Benefits: While extending the efforts from previous electronic document and data collection for both e-citation and e-crash, this initiative represents a new approach to enhance electronic field data collection for e-warning tickets and e-summons notices. The strategic benefits of the connected strategy for data collection and retrieval are significant. Errors are radically reduced, supervisory review is simplified and more easily facilitated, activity metrics can be near current, and data transfer is real time. This reduces the overall costs and increases system efficiency for the agencies upstream from the law enforcement organizations. In addition, the presence of real time data for charging violators and offenders opens the door to advanced policy options including stepped sanctions based on violator history or even by geographic location based on crash history. It may be possible to extend beyond mere electronic charging (citation, summonses arrest, warning) to “smart charging” by hot spots based on spatial and temporal crash metrics.
Connecticut EMS Tracking and Reporting System Data Linkage

Project ID: CT-P-00018

Core System:

- Injury Control

Performance Area:

- Integration

Project Title: Connecticut EMS Tracking and Reporting System Data Linkage

Lead Agency: Department of Public Health (DPH)

Partner Agencies:

- Department of Transportation (ConnDOT)
- Transportation Safety Research Center (TSRC)
- Connecticut Hospital Association

Project Director/Primary Contact:

Name: Jean C. Speck
Agency: Department of Public Health
Office: Office of Emergency Medical Services (OEMS)
Address: 410 Capitol Ave, MS# 12-EMS
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Phone: 860-509-7829
Email: jean.speck@ct.gov

Project Description:

The focus of the Connecticut EMS Tracking and Reporting System Project is to establish the basis for linking motor vehicle crash, pre-hospital EMS, trauma and Connecticut Hospital Information and Management Exchange (CHIME) data leading to one record for each patient from the point of injury to the point of hospital discharge.

The CEMSTARS DL Project will lay the foundation for an integrated system that avoids unnecessary duplication of costs and personnel administration. By linking the records of the different agencies for each patient encounter, a complete picture can be created. Identifying priority needs based on this complete picture will enable better analysis of patient outcome in terms of mortality, injury, severity, and health care cost.

Basis for Project:

Previously, the Crash Outcome Data Evaluation System (CODES) Project had been working on similar goals but DPH has moved away from this project. The CEMSTARS DL Project will be used:

- To identify priority needs for improving pre-hospital care and patient outcomes;
- To support public health and traffic safety decision makers;
- To support public health and traffic safety legislation; and to educate the public.
Expected Impact:

Impact of linking Crash, EMS, Trauma and CHIME databases includes:

- Creating a complete picture of each patient encounter in one database;
- Increasing the use of integrated data to identify traffic safety problems, support traffic safety decision makers, support traffic safety legislation, and educate the public (previously a CODES Project goal); and
- Increasing accessibility to integrated data for DPH personnel and CEMSTARS DL Project partners to perform data analysis for public health and traffic safety.

Goals/Objectives:

The CEMSTARS DL Project’s primary objective is to provide a basis for data linkage between Crash, EMS, Trauma, and CHIME databases.

CEMSTARS DL will be designed to foster and cultivate the integration of multi-agency databases, and facilitate participation in the CEMSTARS DL Project. NHTSA and DPH/OEMS will work together to:

1. Develop, implement and manage an integrated multi-stakeholder system leveraging necessary resources (time, money, personnel, and equipment) as needed;
2. Support the integration of multiple data sets to for public health and traffic safety using state-of-the-art software, equipment, and training;
3. Establish a foundation for data sharing with key stakeholders – NHTSA, DPH/OEMS, FARS, Highway Safety Office, TRCC, and other potential data users;
4. Create greater demand for CEMSTARS DL data by continuing to educate State government officials on the power, benefit and application of the CEMSTARS DL efforts in a “real world” context; and
5. Assess the medical and economic impact of injuries to develop State best practices and policy changes.

Tasks/Milestones:

- Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office;
- Identify agency stakeholders;
- Develop memorandums of understanding (MOU) from all agency stakeholders;
- Provide further detail for project timeline;
- Assess need for/acquire software development support;
- Develop and maintain a written general data release policy for use of the CEMSTARS DL data that is compatible with State confidentiality and data access policies;
- Develop and maintain written documentation of the linkage processes;
- Participate in special studies designed by NHTSA by contributing data specific to the study as coordinated by NHTSA; and
- Contribute, when feasible, by serving as mentors, trainers, and technical support to others in the CEMSTARS DL Project.

Projected Budget by Funding Source:

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>2009</th>
<th>2010</th>
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</table>
Project Status:

The following information was contained in an Interim Progress Report, submitted in March 2011 for the Section 408 application—Health care system databases linked to the crash database by the Department of Public Health (DPH).

Performance Measure used to track Improvements: Number and years of health care system databases linked to the crash database by the Department of Public Health (DPH) Crash Outcome Data Evaluation System (CODES) Project.

Improvements achieved or Anticipated: Integration of the crash database to hospitalization and emergency department visit databases from 10 data years of linked data as of June 2010 to include an additional data year for hospitalization data and emergency department visit data as of March 2011.

Specification of how Measure is calculated: Number(s) of data years for hospitalization and emergency department visits linked through the CODES 2000 software.

Date and Baseline Value for the Measure:

Number of data years for hospitalization and emergency department visits linked as of June 2009

<table>
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<tr>
<th>Dataset integrated with crash</th>
<th>Years linked</th>
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<tr>
<td>Hospitalization</td>
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<td>Emergency department visit</td>
<td>2002-2006</td>
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Date and Current Value for the Measure:

Number of additional data years for hospitalization and emergency department visits linked as of March 2011

<table>
<thead>
<tr>
<th>Dataset integrated with crash</th>
<th>Year linked</th>
<th># of data years</th>
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<tr>
<td>Hospitalization</td>
<td>2007</td>
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<td>Emergency department visit</td>
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<td>1</td>
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Note: The DPH CODES Project has made progress in integrating hospitalization and emergency department visit data to the crash data. More data years are expected to be integrated. Additionally, the CODES Program is expected to add the integration of mortality data and emergency medical services (EMS) data to the crash data in future years.
Emphasis for traffic records system improvements continues with a focus on mobile reporting of traffic citation and motor vehicle crash data, in addition to electronic linkage of injury outcome data, tracking person specific crash and injury records from a crash event to emergency medical services, trauma, emergency department, and hospital information management and exchange.

Projects proposed by the TRCC for the 10th year Section 405c application include:

- Electronic Crash - Technology / Software Support for Local Law Enforcement
- Electronic Citation - Complete Installation Statewide for Local Law Enforcement
- Electronic Charging - Citation / Warning / Summons Arrest
- Electronic Processing - Citation / Warning / Summons Arrest
- Linking Crash / Injury Datasets - Measure Injury Outcomes Assessed by Health Care Providers
- Crash Data Repository (CDR) / Expand Functionality - Query Tools / Canned Output Reports
- Electronic EMS Tracking and Reporting System
Electronic Crash - Technology / Software Support for Local Law Enforcement

Project ID: CT-P-00016

Core System:
- Crash
- Citation/Adjudication

Performance Area:
- Completeness
- Accuracy
- Timeliness
- Uniformity
- Linkage
- Accessibility

Project Title: Electronic Crash - Technology / Software Support / Local Law Enforcement

Lead Agency: Capitol Region Council of Governments

Partner Agencies/Association:
- Connecticut Department of Transportation
- State and Local Law Enforcement
- State Judicial Department
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

Name: Cheryl Assis
Title: Director of Public Safety
Agency: CRCOG
Office: Headquarters
Address: 241 Main Street
City, ZIP: Hartford, CT 06106
Phone: 860-522-2217, extension 236
Email: cassis@crcog.org

Project Description/Basis:

In January 2015, the State began the transition to a completely updated electronic crash reporting system using the MMUCC Guideline, 4th Edition as the basis for its crash data collection. This project encompasses multiple initiatives aimed at serving a segment of the law enforcement community. The focus is to help local police departments acquire public safety equipment. Some departments don’t have computers or mobile data terminals (MDTs) in their vehicles, hindering their abilities for selective enforcement. Better tools/resources, including technology as well as software support where warranted, would enable local police departments to better implement new E-Crash investigation and enforcement initiatives.
Equipment as well as software support will be provided to support local law enforcement agencies in implementing E-Crash MMUCC PR-1. Equipment/software support will be specifically awarded to those agencies requesting assistance for the purchase and installation of computers, printers, or other mobile technology, as well as software applications. Evaluating applications and making award decisions will be based on established criteria.

The need for planning and coordination among law enforcement agencies is critical to the success of this effort. This E-Crash support initiative will be interfaced with the ConnDOT/UConn Crash Data Repository (CDR). Electronic crash and citation reporting will reduce data input errors and improve the completeness of the collected data. It should also improve police officer efficiency by reducing the amount of time that officers spend collecting crash and citation data and decrease the time it takes this data to be received by the appropriate State agency.

**Background:**

The crash reporting system existing prior to January 2015 was based on the accident report form PR-1, which had been largely unchanged for more than twenty years. The legacy system had extensive mainframe based edits which were difficult to enforce in a manual environment. The old PR-1 form did not meet the recommendations of the National MMUCC Guideline.

**Expected Impact:**

- Expand management information and targeted enforcement activities in equipped municipalities;
- Improve timeliness, accuracy, completeness and availability of both crash and citation data; and
- Provide new opportunities for focused policy initiatives that might result in stronger sanctions on recurrent violators and greater attention to locations of frequent crashes and significant injuries.

**Projected Budget by Funding Source:**

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**Project Status:**

The need for planning and coordination with the 100% submission / assessment and support initiative for E-Citations is also critical as efforts to assess law enforcement agencies' capabilities, and their ability to adopt to E-Citations as well as E-Crash will be interrelated.
Electronic Citation - Complete Installation Statewide for Local Law Enforcement

Project ID: CT-P-00009

Core System:

- Citation/Adjudication
- Crash

Performance Area:

- Completeness
- Accuracy
- Uniformity
- Timeliness

Project Title: Electronic Citation - Complete Installation for Local Law Enforcement

Lead Agency: State of Connecticut Judicial Branch – Court Operations, Centralized Infractions Bureau

Partner Agencies:

- Connecticut Police Chief’s Association (CPCA)
- State and Local Law Enforcement Agencies
- Connecticut Department of Transportation
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

Name: Stacey B. Manware
Title: Deputy Director, Centralized Infractions Bureau
Agency: State of Connecticut Judicial Branch
Office: Centralized Infractions Bureau
Address: 225 Spring Street
City, ZIP: Wethersfield 06109
Phone: 860-263-2750
Email: Stacey.Manware@jud.ct.gov

Project Description:

The citation system in Connecticut was a manual system, vulnerable to human error. Information from handwritten tickets was data entered and subsequently transmitted to various entities. Exception processing was time consuming. An electronic method of creating tickets and populating the CIB database is leading to improved processing times and accuracy of the information processed.

This project is dedicated to completing the installation of e-Citation statewide for all local law enforcement agencies; and to begin phase-out of ticket books as P.D.s switch to the electronic format.

- Background - CIB; Unified Court System; 250 LE Agencies; 425,000 Tickets per Year; Lock Box Payment;
- Project Focus - Timeliness; Accuracy; Technical Agility to Respond to Public Policy Changes; Better Performance Measures;
Traffic Safety Information System - - - - - - - - - - Improvements - - - - - - - - - - - - - - - - Section 405c Application

- Manual Limitations - Ticket Inventory; Road Conditions; Legislative Change; Legibility; Arithmetic Errors;
- Timeframe - Analysis for Ticket Returns;
- Ticket Errors - Wrong Amount Due; Wrong Infraction Number; Wrong Amount for Infraction;
- Successes - Collaboration; Proof of Concept Widely Accepted; First Utilization of e-Signature Impetus for e-Pay/Plead; and
- Challenges - Broaden User Base; Demand for Multi-Uses for Mobile Printer; Crash Info Exchange, Summons, Parking Tickets, Warnings.

Project Tasks:

1. Identify additional candidate law enforcement agencies to implement E-Citation;
2. Identify agencies’ needs for programming and other assistance;
3. Research/develop funding proposals to support agencies as needed;
4. Roll-out to additional candidates;
5. Identify late adopters and/or potential non-adopter law enforcement agencies;
6. Develop additional and alternative methods to support E-Citation solutions for late- and non-adopters;
7. Research/develop budget and timeline for aiding late- and non-adopter support for E-Citation solutions; and
8. Implement alternative solutions for the remaining law enforcement agencies.

Application:

Overview - Software; In-Car Equipment; Data Communications Network; Citation Forms/Zebra Printer;
Rollout - # Printers; LE Agencies; Thermal Paper; Train-the-Trainer; Feedback from Pilot;
Mgmt Reports; Monthly by Officer; by Violation Type; by Location; Separate Data Set – Map Based Analysis;
Preparation for Each Agency; Equipment/Software in Vehicle; Regis ORI with e-Citation; Test System; Train Officers;
CRCOG Users/e-Citation; Windows Style e-Citation Interface; Main Menu Functions;
New Citation; Citation Search; Print; User Preferences; Clear Search Queues;
Process; Demographics; License/Vehicle; Specifics; Infractions/Fines; Notes; Preview; Sign-Save-Print;
Successes; User Accepts; App Sharing Across Jurisdictions; Potential for Other Mobile Ticket Apps; and
Challenges; Budget Limits Broader Rollout; Towns Slow to Rollout “Seed” Units; Long Term Issue of Replacement Costs; Revenue Sharing to Cover Costs - Strong Potential.
Projected Budget by Funding Source:

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Status:

The Electronic Citation Processing System is creating efficiencies in several areas. The receipt of electronically captured citation data by the CIB, is leading to the data being automatically populated into the CIB automated system.

In Phase One, officer handwriting was replaced by type-written characters, therefore eliminating entry errors. Fewer entry errors are resulting in less exception processing, which improve the timeliness of downstream processing transmissions to the Courts and the Department of Motor Vehicles.

Phase Two, including activities allowing for direct population of the CIB database, further minimizes data entry, key stroke errors, and exception processing.

Phase Three will allow for the expansion of e-Citation processing, further developing the application to accommodate Commercial Citations, and the electronic viewing and disposition of citations in court locations. This phase will also begin the development of an e-Citation paperless courtroom with dedicated docket for citations and will enhance the availability of electronic, self-pay opportunities.

Performance Measures

- Total tickets issued: 425,000
- Total tickets issued electronically: 45,000
- Total tickets entered electronically: 2,100
- Pre-Program: Average number of days from issuance to receipt – 28 days
- Pre-Program: Error rate – 11%
- Phase I: Average number of days from issuance to receipt – 4 days
- Phase I: Error rate – 5%
- Phase II: Average number of days from issuance to receipt – 4 days
- Phase II: Error rate – 1.5%
- Phase III: Average number of days from receipt to data entry – 7 per 1,000 tickets (anticipated)
- Phase III: Average number of minutes from receipt to data entry – 120 per 1,000 tickets
Interim Progress Report (submitted for 8th Year Project funding)

Based on an Interim Progress Report, submitted to NHTSA - January 2013 for Section 405 application - Connecticut’s March 2013 Determination of Measurable Progress by Connecticut was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.
Electronic Charging / Citation / Warning / Summons Arrest

Project ID: CT-P-00025

Core System:
- Citation/Adjudication

Performance Area:
- Completeness
- Accuracy
- Timeliness

Project Title: Electronic Charging / Citation / Warning / Summons Arrest

Lead Agency: Capitol Region Council of Governments

Partner Agencies:
- State Judicial Department
- State Department of Transportation (ConnDOT)
- Traffic Records Coordinating Committee (TRCC)
- Connecticut State Police (CSP)
- Central Connecticut State University (CCSU)
- Connecticut Police Chief’s Association (CPCA)

Project Director/Primary Contact:

Name: Cheryl Assis
Title: Director of Public Safety
Agency: CRCOG
Office: Headquarters
Address: 241 Main Street
City, ZIP: Hartford, CT 06106
Phone: 860-522-2217, extension 236
Email: cassis@crcog.org

Project Description/Basis:

This project proposes to extend previous as well as current efforts on electronic document and data collection. Strategies include weaving paperless data transfer from point of data collection to final repository without intermediate human intervention.

Learning from prior experience with ConnDOT’s award winning e-citation collaboration and more recently with e-crash, and e-traffic stop, we will extend field data collection to two additional enforcement means; e-warning tickets and initiate a framework for an entry in to the juvenile justice arena with e-juvenile summons notices. We believe these are the natural supplement to the prior information technology initiatives. Moreover, they round out the suite of enforcement data collection for the field police officer and relieve those officers of the burden of redundant data entry and the need for manual and multiple sets of forms.
Our approach extends beyond the paper-centric notion of a single charging document and instead provides a single charging approach that correctly routes enforcement data to the correct storage and processing facility. In doing so, we propose to move further away from the legacy paper based systems of the prior century and closer to the connected mode of the 21st century.

Benefits of a connected strategy for data collection and retrieval:

- Errors are radically reduced,
- Supervisory review is simplified, and more easily facilitated,
- Activity metrics can be near current,
- Data transfer is real time,
- Overall costs are reduced,
- System efficiency is increased for agencies upstream from the law enforcement organization,
- Provides real time data for charging violators and offenders, and
- Opens the door to advanced policy options, including stepped sanctions based on violator history, or by geographic location based on crash history.

It may be possible to extend beyond mere electronic charging (warning, citation, summons arrest) to “smart charging” by hot spots based on spatial and temporal crash metrics in much the same way as work zone violations.

Given the potential availability of expanded crash and violation data coupled with temporal and spatial analysis tools, the Connecticut General Assembly would have for the first time an innovative means of determining the following:

- Revenue required for administration and operation of the traffic law enforcement and adjudication system;
- Hazardous traffic violation true costs (using epidemiology research);
- Payment history, violator recidivism, and opportunities for improvement;
- Enforcement activity trends based on changes in fee amounts;
- Effectiveness of electronic printers in police vehicles;
- Reduction in crashes and crash severity based on sanction adjustments and investments in focused interventions on a hypothetical basis followed by a pilot program.

Background:

Police efficiency is substantially hampered by the inability to cite violators associated with crashes and selective enforcement in an automated fashion. Moreover, this presents a systemic challenge to the enforcement system in that it compels substantial and delayed ticket entry and disposition by the state’s judicial system. While improvements can be incremental, an electronic citation system is best accomplished as a cradle to grave ticketing system involving all parties from the outset.

In conjunction with the leadership of the Traffic Records Coordinating Committee, the State of Connecticut Judicial Department initiated a pilot electronic citation program. This program has the support of the Department of Public Safety (DPS) and the Department of Transportation (ConnDOT) along with local law enforcement. In the past few years; the Judicial Department has resolved issues regarding an electronic citation format and the paper document upon which the citation will be printed. Moreover, mobile printers and scanners have been identified and tested. While these may seem like small migratory tasks, they are vital steps toward the development of an all-electronic citation/adjudication system that will provide not only automated ticketing and docketing, but eventually full payment and Department of Motor Vehicles’ (DMV) adjudication of the infractions.
Expected Outputs:

- Electronic warning ticket data collection and in-vehicle printing of notice to operators,
- Enhancement of e-citation data collection to include local ordinances so that the utility of the process for citing violators can be extended to assist municipal officers in meeting their local enforcement obligation,
- All enforcement media fully integrated into the e-crash application,
- Certain application enhancements to e-Crash as requested by the user community, and
- Design of the juvenile summons procedure in electronic form with eventual extension to criminal summons procedure in conjunction with the Judicial Branch.

Assuming that ConnDOT is successful in its efforts to develop a functional geographic information system for the Connecticut user community, the state should be able to connect the dots of crash location and enforcement so that education and engineering improvements may be better targeted and planned. Collaboration and partnering must continue in order for our success to mature into an expectation rather than mere potential. The table will be set for improving those policies in ways that were not even possible just a few years ago. A connected Connecticut crash and enforcement system will mean a safer Connecticut.

Technical Objectives:

This project builds on prior investments of the State Department of Transportation (ConnDOT).

1. The electronic citation application provides the ability to:
   - Reference the motor vehicle statute files maintained by the Connecticut Judicial Department,
   - Swipe or scan operator license information from crash participants or violators,
   - Integrate DMV operator and registration information to the citation, and
   - Print a citation for the violator; forward an electronic citation to the Judicial Department’s Central Infractions Bureau; and as an interim step, print a hard copy of the citation.

2. Using existing hardware and communications facilities, this system will provide a GPS reference on all electronic crash records, citations, summons arrests, and warnings.

3. Development of a Traffic Law Enforcement Policy and Data Model

Critical path tasks for this project include:

1. Authorization and executive support to enable e-Warning from the Judicial Branch and the Department of Motor Vehicles (approved);
2. Authorization and executive support to design the e-Summons procedure for juvenile matters from the judicial Branch;
3. Definition of functional requirements for each product;
4. Management reporting and application quality and integrity controls based on common or State cloud hosting;
5. Integration with existing applications including e-Citation and e-Crash;
6. Application architecture and detail design with options for connected and unconnected services; and
7. Further development of real-time video based training and support products associated with the CAPTAIN mobile data system, the CT:CHIEF records management crash, citation, e-warning, racial profiling, and potential e-juvenile summons procedure.
Projected Budget by Funding Source:

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**Strategic Benefits:** While extending the efforts from previous electronic document and data collection for both e-citation and e-crash, this initiative represents a new approach to enhance electronic field data collection for e-warning tickets and initiates a framework for an entry into the juvenile justice arena with e-juvenile summons notices.
Electronic Processing - Citation / Warning / Summons Arrest

Project ID: CT-P-00009

Core System:
- Citation/Adjudication
- Crash

Performance Area:
- Completeness
- Uniformity
- Timeliness

Project Title: Electronic Processing - Citation / Warning / Summons Arrest

Lead Agency: State of Connecticut Judicial Branch – Court Operations, Centralized Infractions Bureau

Partner Agencies:
- Connecticut Police Chief’s Association (CPCA)
- State and Local Law Enforcement Agencies
- Connecticut Department of Transportation
- Traffic Records Coordinating Committee (TRCC)
- Central Connecticut State University (CCSU)

Project Director/Primary Contact:
Name: Stacey B. Manware
Title: Deputy Director, Centralized Infractions Bureau
Agency: State of Connecticut Judicial Branch
Office: Centralized Infractions Bureau
Address: 225 Spring Street
City, ZIP: Wethersfield 06109
Phone: 860-263-2750
Email: Stacey.Manware@jud.ct.gov

Project Description:

Prior to the implementation of Electronic Citation (E-Citation) Processing, Connecticut’s traffic violation citation system was completely manual; vulnerable to human error at many points in the process. Handwritten documents required multiple entry in numerous and varied systems causing inconsistencies and inaccuracies in data. This sometimes led to agencies that relied on the system, such as the Department of Motor Vehicles (DMV), receiving erroneous information, which in some cases resulted in a failure to consistently and accurately apply conviction information to driver history files. In addition to creating opportunities for inaccurate and conflicting data to be entered into the system, reliance upon handwritten citations and multiple points of data entry often resulted in processing delays and time consuming exceptions processing.
A statewide systematic effort was undertaken to address these problems, with the Judicial Branch E-Citation Processing System project developed in coordination with Citation projects involving the Capitol Region Council of Government (CRCOG) and the Department of Public Safety (DPS). This resulted in the development of a statewide electronic roadside data capture system for the issuing and reporting of traffic citations.

This project is dedicated to the continued development of an application that enables the receipt / availability of citation, juvenile summons notices, and warning data for the courts. The project serves as a complement to all law enforcement e-Charging pilot efforts statewide through ultimately building a back-end process for receiving and processing electronic traffic citations, juvenile summons notices, and warning tickets.

- **Background** - CIB; Unified Court System; 250 LE Agencies; 425,000 Tickets per Year; Lock Box Payment,
- **Project Focus** - Improved Timeliness; Accuracy; Technical Agility to Respond to Public Policy Changes; Better Performance Measures,
- **Manual Limitations** - Ticket Inventory; Road Conditions; Legislative Change; Legibility; Arithmetic Errors,
- **Timeframe** - Analysis for Ticket Returns,
- **Ticket Errors** - Wrong Amount Due; Wrong Infraction Number; Wrong Amount for Infraction,
- **Successes** - Collaboration; Proof of Concept Widely Accepted; First Utilization of e-Signature Impetus for e-Pay/Plead, and
- **Challenges** - Broaden User Base; Demand for Multi-Uses for Mobile Printer; Crash Info Exchange, Parking Tickets.

**Goal:**

Create an application that enables the Judicial Branch to electronically receive traffic citation, juvenile summons notices, and warning data from law enforcement agencies; automatically store, process and supply required information to the courts.

**Objective:** Design and implement an on-demand, centralized, web-based records management system (RMS) for law enforcement agencies to do the following:

- Query agency-specific data related to the issuance of citations, juvenile summons notices and warning tickets,
- Generate various reports related to agency activity in conjunction with the issuance of citations, etc., (e.g., by street, officer, charge and defendant),
- Provide for the management of data, such as approval process for citations, etc., prior to submission to CIB,
- Allow for cross-agency searching on citations, summons notices, and warnings,
- Allow agencies to export data in a variety of formats for use in spreadsheets and/or other applications, and
• Provide a web-service interface for querying of data by other applications.

Objective: Continue efforts to enable the e-citation / juvenile summons arrest / warning processing application to allow electronic viewing and disposition of required data in court locations.

Objective: Continue efforts to enable the e-citation / juvenile summons / warning application to provide a “paperless courtroom.”

Purpose:

• Streamline citation / juvenile summons arrest / warning processing system process through applied technology,
• Increase revenue,
• Increase uniformity of event processing,
• Utilize staff more efficiently, and
• Assist law enforcement initiatives.

Tasks/Milestones:

1. Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office,
2. Production of electronic-citation / juvenile summons arrest / warning ticket data submitted by law enforcement resulting in automatic population into Judicial database,
3. Document volumes and define hardware/software needs,
4. Web services application,
5. Continued streamlining of CIB workflow,
6. Creation of more e-Infractions courts,
13. Continue coordination with CPCA in their assessment of law enforcement agencies’ capabilities, current vendors, ability to adopt electronic citation / juvenile summons / warning ticket,
14. Continue to identify candidate law enforcement agencies to pilot test / implement electronic citation / juvenile summons arrest / warning processing,
15. Identify needs of candidate agencies for programming and other assistance,
16. Research/develop funding proposals to support candidate agencies as needed, and
17. Roll-out to candidate agencies.

Application:

Overview - Software; In-Car Equipment; Data Communications Network; Citation Forms/Zebra Printer; Summons Arrest Forms; Warning Tickets;

Rollout - # Printers; LE Agencies; Thermal Paper; Train-the-Trainer; Feedback from Pilot;

Mgmt Reports; Monthly by Officer; by Violation Type; by Location; Separate Data Set – Map Based Analysis;

Preparation for Each Agency; Equipment/Software in Vehicle; Regis ORI with e-Citation; Test System; Train Officers;
CRCOG Users/e-Citation/e-Summons/e-Warning; Windows Style Interface; Main Menu Functions;

New Citation / Juvenile Summons / Warning; Event Search; Print; User Preferences; Clear Search Queues;

Process; Demographics; License/Vehicle; Specifics; Infractions/Fines; Notes; Preview; Sign-Save-Print;

Successes; User Accepts; App Sharing Across Jurisdictions; Potential for Other Mobile Ticket Apps; and

Challenges; Budget Limits Broader Rollout; Towns Slow to Rollout “Seed” Units; Long Term Issue of Replacement Costs; Revenue Sharing to Cover Costs - Strong Potential.

Projected Budget by Funding Source:

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Status:

The Electronic Citation / Juvenile Summons / Warning Processing System will build on the Electronic Citation Processing System, which is creating efficiencies in several areas. The receipt of electronically captured citation data by the CIB, is leading to the data being automatically populated into the CIB automated system.

In Phase One, vendors for pilot site law enforcement agencies developed in-car electronic citation systems while the Judicial Branch defined hardware and transmission requirements that would allow information created in police vehicles to be received and processed by the Judicial Branch CIB. Officer handwriting was replaced by type-written characters, therefore eliminating entry errors. Fewer entry errors are resulting in less exception processing, which improves the timeliness of downstream processing transmissions to the Courts and the Department of Motor Vehicles (DMV).

In Phase Two, the Judicial Branch created the interface which allowed for the direct population of the electronic citation transmissions from law enforcement into the CIB automated processing system, further minimizing data entry, key stroke errors, and exception processing.

In Phase Three, the Judicial Branch implemented regional electronic dockets and also included commercial electronic citations, and the electronic viewing and disposition of citations in court locations. This phase also began the development of an e-Citation paperless courtroom with dedicated dockets for citations, enhancing the availability of electronic, self-pay opportunities.

In Phase Four, the Judicial Branch implemented a direct web interface between the CIB and the Cheshire Police Department pilot site.
In Phase Five, the focus shifted to 100 percent statewide integration of E-Citations, including:

- Continued enhancement and expansion of the web interface version to electronically receive traffic citation information from law enforcement agencies,
- Automatic storing of information in the CIB citation database, allowing the electronic production of citations,
- Extracts to law enforcement agencies of citation data to enable in house record keeping and reporting,
- Refined web product to interface with the DMV,
- Enhancements as requested by pilot police departments,
- Informational seminars for police departments on the options for participating in E-Citation, Juvenile Summons / Warning processing initiative,
- Printers for pilot police departments, and
- Scanning equipment and hardware as needed for the receipt of increased numbers of E-Citations at CIB.

Progress:

Activities have been completed and coordinated in conjunction with the DPS, CRCOG and CIDRIS initiatives.

As highlighted, in regards to recent pilot-testing involving State and Local law enforcement, progress includes:

- Prototype for e-Citation back-end process/system has been developed,
- System being developed as a real-time/web-based application,
- CIB still debugging production problems as they occur from DPS,
- CIB beginning development on streamlining the citation workflow. This involves taking the e-Citations received and automatically uploading them into the legacy system, and
- E-Pay component, a web-based automated system to electronically accept credit card payments for infractions and certain payable violations, allows violators to pay multiple tickets, rather than requiring individual transactions per ticket.

Interim Progress Report (submitted for 8th Year Project funding)

Based on an Interim Progress Report, submitted to NHTSA in 2013 for Section 405c application -

Connecticut’s March 2013 Determination of Measurable Progress by Connecticut was based on:

The timeliness of the Citation/Adjudication database improved, as evidenced by the decrease, from 19.03 days during July-September 2012, to 15.61 days during October-December 2012, in the average number of days from citation issuance by the Connecticut State Police to entry of the citation record into the Centralized Infractions Bureau database. Because this improvement occurred within the 12 months immediately preceding the FY 2013 due date for applications for State Traffic Safety Information System Improvements Grants in FY 2013, it was determined to be a demonstration of current progress.
Linking Crash / Injury Datasets – Measure Injury Outcomes Assessed by Health Care Providers

Project ID: CT-P-00020

Core System:
- Crash
- EMS/Injury

Performance Area:
- Uniformity
- Accuracy
- Linkage

Project Title: Linking Crash / Injury Datasets – Measure Injury Outcomes Assessed by Health Care Providers

Lead Agency: Yale-New Haven Hospital

Partner Agencies:
- State Department of Transportation (ConnDOT)
- State and Local Law Enforcement
- University of Connecticut (UConn)
- Department of Public Health
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:
- Name: Pina Violano
- Title: RN, Injury Prevention
- Agency: Yale-New Haven Hospital
- Phone: 203-688-3260
- Email: Pina.Violano@ynhh.org

Project Description/Basis:
The focus of this project is to integrate crash and injury data to derive more precise injury outcomes. In question – is the disparity between officer assessments of personal injury as recorded on the previous PR-1, prior to 2015; the new MMUCC PR-1 crash reporting system, which began on January 1, 2015 and actual outcomes assessed by health care providers. Project explores a data integration solution that provides more accurate injury severity information for persons involved in crashes. Steps include acquiring disparate datasets, performing linking functions, managing the resulting dataset, and conducting in-depth analyses on the linked data.

Officers using the PR-1 crash report, prior to 2015, recorded typical injury assessment based on the KABCO scale, a measure of the functional injury level of the victim at the crash scene.
Codes were selected based on the on-site judgment of the investigating police officer completing the crash report PR-1. Small explanations were provided in the Investigator’s Guide for A, B and C – injuries.

(K) Fatal Injury,
(A) Incapacitating Injury (Prevents Return to Normal Activity)
(B) Non Incapacitating Evident Injury
(C) Possible Injury (Claim of Non-evident Injury)
(O) Property Damage Only

The D16.1 Classification Manual of Motor Vehicle Traffic Accidents - was available, and also provided guidance using the KABCO scale, but it is unknown whether any law enforcement agencies in Connecticut ever used the D16.1 Manual. The following is an example of the detail provided by the D16.1 Manual for an (A) Injury, also referred to as an Incapacitating Injury.

(A) Incapacitating Injury: An incapacitating injury is any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred.

Inclusions: Severe laceration, broken or distorted limb, skull or chest injury, abdominal injury, unconsciousness at, or when taken from the accident scene, unable to leave the accident scene without assistance.

The MMUCC Guideline 4th Edition – was adopted by the State and has formed the basis for the development of the new MMUCC PR-1 crash reporting system. This new system was rolled out and began replacing the legacy PR-1 on January 1, 2015.

One of the areas the MMUCC Guideline emphasized in the update in 2012 from the previous Third Edition of MMUCC, was a revision to the KABCO attributes and definitions for Fatal, as well as A, B, and C injury types. Here is the comparable example of the detail provided in the MMUCC Guideline for an (A) Injury, referred to as a Suspected Serious Injury.

A Suspected Serious Injury is any injury other than fatal which results in one or more of the following:

- Severe laceration resulting in exposure or underlying tissues/muscle/organisms or resulting in significant loss of blood
- Broken or distorted extremity (arm or leg)
- Crush injuries
- Suspected skull, chest or abdominal injury other than bruises or minor lacerations
- Significant burns (second and third degree burns over 10% or more of the body)
- Unconsciousness when taken from the crash scene
- Paralysis
Projected Budget by Funding Source:

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Activities/Tasks:

- Submit / finalize HS-1 grant application with ConnDOT, Highway Safety Office;
- Meet with Highway Safety Office to finalize details of crash/injury integration/research efforts;
- Meet with/seek input from Data Integration Subcommittee of the TRCC;
- Determine which datasets to pursue, including previous legacy PR-1 crash data; new 2015 MMUCC PR-1 crash data; appropriate injury surveillance system (ISS) data;
- Sign appropriate research agreements to be able to protect/acquire appropriate data;
- Acquire disparate datasets;
- Make determinations of approach to linking different datasets;
- Perform data linkage between datasets;
- Manage the resulting dataset(s);
- Conduct in-depth analyses on the linked data;
- Present preliminary findings to TRCC/Highway Safety Office;
- Present findings/seek feedback to representatives of DPH/ISS system;
- Present findings/seek feedback to representatives from law enforcement;
- Present final assessment/findings to Highway Safety Office
Crash Data Repository (CDR) / Expand Functionality – Query Tools / Canned Output Reports

Project ID: CT-P-00003

Core System: Crash

Performance Area:
Timeliness
Completeness
Accuracy
Uniformity
Integration
Accessibility

Project Title: Crash Data Repository (CDR) / Expand Functionality – Query Tools / Canned Output Reports

Lead Agency: University of Connecticut

Partner Agencies:
All stakeholder agencies listed on the Traffic Records Coordinating Committee

Project Director/Primary Contact:
Name: Eric D Jackson PhD
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Agency: University of Connecticut
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Phone: 860-486-8426
Email: e.jackson@engr.uconn.edu

Project Description:
Expand CDR functionality, query tools/canned output reports for individual departments; trends/ranking in the state/crash factors; add functionality including GIS tools, allow for retrieval of geospatial data for DDACTS/other applications.

Basis for Project:
Analysis of highway safety is probably the most data-intensive activity carried out by highway and transportation agencies. It requires more than just archiving police accident reports. To be effective, information recorded on the accident reports must be captured into a searchable database. Roadway inventory, traffic volumes and even land use information are all critical for evaluating the safety of any road segment or intersection. These were added as part of phase 3 of the CTCDR. However, other safety analysis exercises require data such as driver history, motor vehicle registration information, and vehicle miles traveled (VMT).
Other institutional databases such as patient care reporting and treatment received on the scene and at the hospital are important to understanding the full impact of a crash. Due to the sensitive nature of these types of data, discussions need to take place early and often to identify the potential risks and benefits to such an integrated database. These types of discussions will be a key part of phase 3 of the CTCDR; so that a future version of the repository may include such linkages to allow for a complete crash analysis from time of impact to release from hospital for injury crashes.

Phase 1 and 2 of this project established a repository structure which provides users online access to these repositories through a common integrated portal. As part of the Crash Data Improvement Program (CDIP) review performed at ConnDOT in October of 2011, the need for performance measures was identified. These measures would track elements such as timeliness, completeness and accuracy. These tools will be built into the next generation of the CTCDR.

Phase 1 and 2 of this project provided users with access to the crash data. However, the data entered into the repository from ConnDOT is not timely. There is currently a 14 month backlog of paper PR-1 reports at the DOT. Phase 2 established an XML feed from DPS to get data into the repository in a more timely fashion. However, this feed only contains data from the state police. In an effort to get more data submitted electronically local police departments need the ability to submit data via an XML data feed. This will aid in eliminating the PR-1 paper backlog as well as providing users access to more timely data. The research team will pick 5 pilot towns at a minimum to aid in their submission of electronic PR-1 data. This would involve the research team assessing a local PDs current system and creating a custom application to generate an XML feed directly and securely to the crash data repository.

A recent initiative at the DOT is the transition to a 100% MMUCC compliant uniform police report. This initiative also includes an effort to move to 100% electronic reporting.

Vision for the Future:

Future advancements of the established repository will be proposed in subsequent years if funding is available. There are large amounts of non-highway information maintained by other State agencies such as the Department of Motor Vehicles or the Department of Public Health that could populate a fourth or fifth repository at UConn. Future phases of this research could work to link or merge the Patient Care Reporting (PCR) software and DMV driving records to the crash data repository. This would allow users access to not only crash data but limited generalized summaries of injury reports detailing the care provided to and the severity of the injuries to crash victims.

Users may also be able to generate summaries of crashes based on a driver’s driving records obtained from the DMV. For example, this type of system would allow for analysis of a driver’s DUI convictions and associated alcohol related crash frequency or potential. However, there are many privacy concerns with this type of data. Significant effort and resources will be needed to meet Health Insurance Portability and Accountability Act (HIPAA) requirements.

Expected Impact:

Completion of Phase 3 of this project will enhance the crash data repository created in Phase 1 and 2. This enhanced repository will provide members of the traffic-safety community with timely, uniform and complete crash data, within 30 days of the crash event, by expanding the data options in the repository established at the University of Connecticut. Furthermore, the integration of local police department xml data feeds will provide users with more timely data and aid in the reduction of the paper PR-1 backlog.
Projected Budget by Funding Source:

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Electronic EMS Tracking and Reporting System

Project ID: CT-P-00018

Core System:
- Injury Control

Performance Area:
- Integration

Project Title: Electronic EMS Tracking and Reporting System

Lead Agency: Department of Public Health (DPH)

Partner Agencies:
- Department of Transportation (ConnDOT)
- Transportation Safety Research Center (TSRC)
- Connecticut Hospital Association

Project Director/Primary Contact:

Name: Ann Kloter, Epidemiologist
Agency: Department of Public Health
Office: Office of Emergency Medical Services (OEMS)
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City, ZIP: Hartford, CT  06134
Phone: 860-509-7431
Email: Ann.Kloter@ct.gov

Project Description:

The Connecticut EMS Tracking and Reporting System project will focus on the basis for linking motor vehicle crash, pre-hospital EMS, trauma and Connecticut Hospital Information and Management Exchange (CHIME) data, laying the foundation for an integrated system, avoiding unnecessary duplication of costs and personnel administration. By linking the records of different agencies for each patient encounter, a complete picture can be created (one record for each patient from the point of injury to the point of hospital discharge). Identifying priority needs based on this complete picture will enable better analysis of patient outcome in terms of mortality, injury, severity and health care costs.

Basis for Project:

Previously, the Crash Outcome Data Evaluation System (CODES) Project had been working on similar goals. This basis for this project will be to:

- Identify priority needs for improving pre-hospital care and patient outcomes,
- Support public health and traffic safety decision makers, and
- Support public health and traffic safety legislation; and to educate the public.
Project Impact:

Impact of linking Crash, EMS, Trauma and CHIME databases includes:

- Creating a complete picture of each patient encounter in one database;
- Increasing the use of integrated data to identify traffic safety problems, support traffic safety decision makers, support traffic safety legislation, and educate the public (previously a CODES Project goal); and
- Increasing accessibility to integrated data for DPH personnel and partner agencies to perform data analysis for public health and traffic safety.

Goals/Objectives:

Objective is to provide a basis for data linkage between Crash, EMS, Trauma, and CHIME databases.

Project will be designed to foster and cultivate the integration of multi-agency databases, and facilitate participation in the project. NHTSA and DPH/OEMS will work together to:

1. Develop, implement and manage an integrated multi-stakeholder system leveraging necessary resources (time, money, personnel, and equipment) as needed;
2. Support the integration of multiple data sets for public health and traffic safety using state-of-the-art software, equipment, and training;
3. Establish a foundation for data sharing with key stakeholders – NHTSA, DPH/OEMS, FARS, Highway Safety Office, TRCC, and other potential data users;
4. Create greater demand for linked data by continuing to educate State government officials on the power, benefit and application of project efforts in a “real world” context; and
5. Assess the medical and economic impact of injuries to develop State best practices and policy changes.

Tasks/Milestones:

- Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office;
- Identify agency stakeholders;
- Develop memorandums of understanding (MOU) from all agency stakeholders;
- Provide further detail for project timeline;
- Assess need for/acquire software development support;
- Develop and maintain a written general data release policy for use of the project data that is compatible with State confidentiality and data access policies;
- Develop and maintain written documentation of the linkage processes;
- Participate in special studies designed by NHTSA by contributing data specific to the study as coordinated by NHTSA; and
- Contribute, when feasible, by serving as mentors, trainers, and technical support to others in the linkage project.
Projected Budget by Funding Source:

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Project Status:

The following information was contained in an Interim Progress Report, submitted in March 2011 for the Section 408 application – Health care system databases linked to the crash database by the Department of Public Health (DPH).

**Performance Measure used to track Improvements:** Number and years of health care system databases linked to the crash database by the Department of Public Health (DPH) Crash Outcome Data Evaluation System (CODES) Project.

**Improvements Achieved or Anticipated:** Integration of the crash database to hospitalization and emergency department visit databases from 10 data years of linked data as of June 2010 to include an additional data year for hospitalization data and emergency department visit data as of March 2011.

**Specification of how Measure is calculated:** Number(s) of data years for hospitalization and emergency department visits linked through the CODES 2000 software.

**Date and Baseline Value for the Measure:**

Number of data years for hospitalization and emergency department visits linked as of June 2009

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<th>Years linked</th>
<th># of data years</th>
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**Date and Current Value for the Measure:**

Number of additional data years for hospitalization and emergency department visits linked as of March 2011

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<tr>
<th>Dataset integrated with crash</th>
<th>Year linked</th>
<th># of data years</th>
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</tr>
<tr>
<td>Emergency department visit</td>
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Note: The DPH CODES Project made progress in integrating hospitalization and emergency department visit data to the crash data.
Project Summaries / 11th Year (2016 – 2017)

Emphasis for traffic records system improvements continues with a focus on mobile reporting of traffic citation and motor vehicle crash data, in addition to electronic linkage of injury outcome data, tracking person specific crash and injury records from a crash event to emergency medical services, trauma, emergency department, and hospital information management and exchange.

Projects proposed by the TRCC for the 11th year Section 405c application include:

- Electronic Crash / Citation - Technology / Software Support for Local Law Enforcement
- Electronic Charging - Warning / Citation / Traffic Stop
- Electronic Processing - Warning / Citation / Traffic Stop - Online Disposition System
- Linking Crash / Injury Datasets - Measure Crash Injury Outcomes - Law Enforcement / Health Care Providers
- EMS / Trauma Registry - Documentation - Data Dictionaries - Updates - Communication
- Traffic Records System Data Linkage Roadmap - Long Range Plan
Electronic Crash / Citation - Technology / Software Support for Local Law Enforcement

**Project ID:** CT-P-00016

**Core System:**
- Crash
- Citation/Adjudication

**Performance Area:**
- Completeness
- Accuracy
- Timeliness
- Uniformity
- Linkage
- Accessibility

**Project Title:** Electronic Crash / Citation - Technology / Software Support / Local Law Enforcement

**Lead Agency:** Capitol Region Council of Governments

**Partner Agencies/Association:**
- Connecticut Department of Transportation
- State and Local Law Enforcement
- State Judicial Department
- Traffic Records Coordinating Committee (TRCC)

**Project Director/Primary Contact:**
- **Name:** Cheryl Assis
- **Title:** Director of Public Safety
- **Agency:** CRCOG
- **Office:** Headquarters
- **Address:** 241 Main Street
- **City, ZIP:** Hartford, CT 06106
- **Phone:** 860-522-2217, extension 236
- **Email:** cassis@crcog.org

**Project Description/Basis:**

The State has made significant progress in implementing uniform mobile traffic law enforcement technologies over the past six years. These include citation, crash data collection, and warning tickets. Both the electronic citation application and the transition to a completely updated electronic crash reporting system using the MMUCC Guideline won best practices awards at two of the most recent National Traffic Records Forums.

This project encompasses multiple initiatives aimed at serving a segment of the law enforcement community. The focus is to help local police departments acquire public safety equipment. Some departments don’t have computers or mobile data terminals (MDTs) in their vehicles, hindering their abilities for selective enforcement. Better tools/resources, including technology as well as software
support where warranted, would enable local police departments to better implement new mobile traffic law enforcement technology initiatives.

Equipment as well as software support will be provided to support local law enforcement agencies. Equipment/software support will be specifically awarded to those agencies requesting assistance for the purchase and installation of computers, printers, or other mobile technology, as well as software applications. Evaluating applications and making award decisions will be based on established criteria.

The need for planning and coordination among law enforcement agencies is critical to the success of this effort. This mobile technology support initiative will be interfaced with the ConnDOT/UConn Crash Data Repository (CDR). Electronic crash and citation reporting will reduce data input errors and improve the completeness of the collected data. It should also improve police officer efficiency by reducing the amount of time that officers spend collecting crash and citation data and decrease the time it takes this data to be received by the appropriate State agency.

**Expected Impact:**

- Expand management information and targeted enforcement activities in equipped municipalities;
- Improve timeliness, accuracy, completeness and availability of both crash and citation data; and
- Provide new opportunities for focused policy initiatives that might result in stronger sanctions on recurrent violators and greater attention to locations of frequent crashes and significant injuries.

**Projected Budget by Funding Source:**

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<tr>
<th>Funding Source</th>
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**Project Status:**

The need for planning and coordination with the 100% submission / assessment and support initiative for E-Citations is also critical as efforts to assess law enforcement agencies' capabilities, and their ability to adopt to E-Citations as well as E-Crash will be interrelated.
Electronic Charging / Warning / Citation / Traffic Stop

Project ID: CT-P-00025

Core System:
- Citation/Adjudication

Performance Area:
- Completeness
- Accuracy
- Timeliness

Project Title: Electronic Charging / Warning / Citation / Traffic Stop

Lead Agency: Capitol Region Council of Governments

Partner Agencies:
- State Judicial Department
- State Department of Transportation (ConnDOT)
- Traffic Records Coordinating Committee (TRCC)
- Connecticut State Police (CSP)
- Central Connecticut State University (CCSU)
- Connecticut Police Chief’s Association (CPCA)

Project Director/Primary Contact:
- Name: Cheryl Assis
- Title: Director of Public Safety
- Agency: CRCOG
- Office: Headquarters
- Address: 241 Main Street
- City, ZIP: Hartford, CT 06106
- Phone: 860-522-2217, extension 236
- Email: cassis@crcog.org

Project Description/Basis:
This project proposes to extend previous as well as current efforts on electronic document and data collection. Strategies include weaving paperless data transfer from point of data collection to final repository without intermediate human intervention.

Learning from prior experience with ConnDOT’s award winning e-citation collaboration and more recently with e-crash, and e-traffic stop, we will extend field data collection to two additional enforcement means; e-warning tickets and make user requested changes to several critical applications. We believe these are the natural supplement to the prior information technology initiatives. Moreover, they round out the suite of enforcement data collection for the field police officer and relieve those officers of the burden of redundant data entry and the need for manual and multiple sets of forms.
Our approach extends beyond the paper-centric notion of a single charging document and instead provides a unified approach to field data collection that correctly routes enforcement data to the correct storage and processing facility. In doing so, we propose to move further away from the legacy paper based systems of the prior century and closer to the connected mode of the 21st century.

Benefits of a connected strategy for data collection and retrieval:

- Errors are radically reduced;
- Supervisory review is simplified, and more easily facilitated;
- Activity metrics can be near current;
- Data transfer is real time;
- Overall costs are reduced;
- System efficiency is increased for agencies upstream from the law enforcement organization;
- Provides real time data for charging violators and offenders;
- Helps Judicial in its efforts to establish an online infraction disposition system; and
- Opens the door to advanced policy options, including stepped sanctions based on violator history, or by geographic location based on crash history.

It may be possible to extend beyond mere electronic charging (warning, citation, traffic stop) to “smart charging” by hot spots based on spatial and temporal crash metrics in much the same way as work zone violations.

Given the potential availability of expanded crash and violation data coupled with temporal and spatial analysis tools, the Connecticut General Assembly would have for the first time an innovative means of determining the following:

- Revenue required for administration and operation of the traffic law enforcement and adjudication system;
- Hazardous traffic violation true costs (using epidemiology research);
- Payment history, violator recidivism, and opportunities for improvement;
- Enforcement activity trends based on changes in fee amounts;
- Effectiveness of electronic printers in police vehicles; and
- Reduction in crashes and crash severity based on sanction adjustments and investments in focused interventions on a hypothetical basis followed by a pilot program.

Background:

Police efficiency is substantially hampered by the inability to cite violators associated with crashes and selective enforcement in an automated fashion. Moreover, this presents a systemic challenge to the enforcement system in that it compels substantial and delayed ticket entry and disposition by the state’s judicial system. While improvements can be incremental, an electronic citation system is best accomplished as a cradle to grave ticketing system involving all parties from the outset.

In conjunction with the leadership of the Traffic Records Coordinating Committee, the State of Connecticut Judicial Department initiated a pilot electronic citation program. This program has the support of the Department of Public Safety (DPS) and the Department of Transportation (ConnDOT) along with local law enforcement. In the past few years; the Judicial Department has resolved issues regarding an electronic citation format and the paper document upon which the citation will be printed. Moreover, mobile printers and scanners have been identified and tested. While these may seem like small migratory tasks, they are vital steps toward the development of an all-electronic citation/adjudication system that will provide not only automated ticketing and docketing, but eventually full payment and Department of Motor Vehicles’ (DMV) adjudication of the infractions.
Expected Outputs:

- Electronic warning ticket data collection and in-vehicle printing of notice to operators;
- Electronic insurance interchange among drivers involved in crashes;
- Enhancement of e-citation data collection to include local ordinances so that the utility of the process for citing violators can be extended to assist municipal officers in meeting their local enforcement obligation;
- All enforcement media fully integrated into the e-crash application;
- Certain application enhancements to e-Crash as requested by the user community;
- Development of a small but timely set of management reports for the user towns; and
- Changes to the mobile data application to include a pilot “speech to text and text to audio” capability.

Assuming that ConnDOT is successful in its efforts to develop a functional geographic information system for the Connecticut user community, the state should be able to connect the dots of crash location and enforcement so that education and engineering improvements may be better targeted and planned. Collaboration and partnering must continue in order for our success to mature into an expectation rather than mere potential. The table will be set for improving those policies in ways that were not even possible just a few years ago. A connected Connecticut crash and enforcement system will mean a safer Connecticut.

Technical Objectives:

This project builds on prior investments of the State Department of Transportation (ConnDOT).

1. The electronic citation application provides the ability to:
   - Reference the motor vehicle statute files maintained by the Connecticut Judicial Department;
   - Swipe or scan operator license information from crash participants or violators;
   - Integrate DMV operator and registration information to the citation;
   - Print a citation for the violator; forward an electronic citation to the Judicial Department’s Central Infractions Bureau; and as an interim step, print a hard copy of the citation; and
   - Build on the timeliness in the citation/adjudication process, in concert with the development of an online disposition system.

2. Using existing hardware and communications facilities, this system will provide a GPS reference on all electronic crash records, citations, and warnings.

3. Development of a Traffic Law Enforcement Policy and Data Model

Critical path tasks for this project include:

1. Authorization and executive support to enable e-Warning from the Judicial Branch and the Department of Motor Vehicles (approved);
2. Definition of functional requirements for each product;
3. Management reporting and application quality and integrity controls based on common or State cloud hosting;
4. Integration with existing applications including e-Citation and e-Crash;
5. Application architecture and detail design with options for connected and unconnected services; and
6. Further development of real-time video based training and support products associated with the CAPTAIN mobile data system, the CT: CHIEF records management crash, citation, e-warning, racial profiling, and potential e-juvenile summons procedure.
Projected Budget by Funding Source:

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</table>

**Strategic Benefits:** While extending the efforts from previous electronic document and data collection for both e-citation and e-crash, this initiative represents a new approach to enhance electronic field data collection for e-warning tickets and initiates a framework for an entry into the juvenile justice arena with e-juvenile summons notices.
Electronic Processing - Warning / Citation / Traffic Stop - Online Disposition System

Project ID: CT-P-00009

Core System:
- Citation/Adjudication
- Crash

Performance Area:
- Completeness
- Uniformity
- Timeliness

Project Title: Electronic Processing - Warning / Citation / Traffic Stop - Online Disposition System

Lead Agency: State of Connecticut Judicial Branch – Court Operations, Centralized Infractions Bureau

Partner Agencies:
- Connecticut Police Chief’s Association (CPCA)
- State and Local Law Enforcement Agencies
- Connecticut Department of Transportation
- Traffic Records Coordinating Committee (TRCC)
- Central Connecticut State University (CCSU)

Project Director/Primary Contact:

Name: Stacey B. Manware
Title: Deputy Director
Agency: State of Connecticut Judicial Branch
Office: Centralized Infractions Bureau (CIB)
Address: 225 Spring Street
City, ZIP: Wethersfield 06109
Phone: 860-263-2750
Email: Stacey.Manware@jud.ct.gov

Project Description:

Prior to the implementation of Electronic Citation (E-Citation) Processing, Connecticut’s traffic violation citation disposition system was completely manual; vulnerable to human error at many points in the process. Handwritten documents required multiple entry in numerous and varied systems causing inconsistencies and inaccuracies in data. This sometimes led to agencies that relied on the system, such as the Department of Motor Vehicles (DMV), receiving erroneous information, which in some cases resulted in a failure to consistently and accurately apply conviction information to driver history files.

The paper driven manual process for adjudicating traffic violations is labor intensive. Recipients of traffic infractions respond either with payment or a not guilty plea. Some do not respond at all. A not guilty plea received at the CIB can either result in a nolle (decision by the state’s attorney to not prosecute the infraction), or a transfer to the court of jurisdiction. Once at the court, the case may be reviewed and nolled or scheduled for an infraction hearing. Once scheduled, outcomes are varied and can include payment, substitution of charges, charitable contributions, nolles, and dismissals, etc.
In addition to creating opportunities for inaccurate and conflicting data to be entered into the system, reliance upon a system based on paper and multiple points of data entry often results in processing delays and time consuming exceptions processing.

A statewide systematic effort was undertaken to address these problems, with the Judicial Branch E-Citation Processing System project developed in coordination with Citation projects involving the Capitol Region Council of Government (CRCOG) and the Department of Public Safety (DPS). This resulted in the development of a statewide electronic roadside data capture system for the issuing and reporting of traffic citations.

Building on the E-Citation initiative, Judicial is proposing an on-line disposition system whereby the recipient of an infraction could elect to have their case reviewed and adjudicated on-line. This would allow prosecutors to review most, if not all not guilty pleas entered by defendants and reach resolution without the necessity of the recipient coming to court. If the defendant requests a trial, those cases would be heard in the court of jurisdiction.

This combined project is dedicated to the continued development of an application that enables the receipt / availability of citation, warning, and traffic stop data, and an online disposition system to help streamline the backend.

- **Background** - CIB; Unified Court System; 250 LE Agencies; 400,000 Tickets per Year; Lock Box Payment;
- **Project Focus** - Improved Timeliness; Accuracy; Technical Agility to Respond to Public Policy Changes; Better Performance Measures;
- **Manual Limitations** - Ticket Inventory; Road Conditions; Legislative Change; Legibility; Arithmetic Errors;
- **Timeframe** - Analysis for Ticket Returns;
- **Ticket Errors** - Wrong Amount Due; Wrong Infraction Number; Wrong Amount for Infraction;
- **Successes** - Collaboration; Proof of Concept Widely Accepted; First Utilization of e-Signature Impetus for e-Pay/Plead; and
- **Challenges** - Broaden User Base; Demand for Multi-Uses for Mobile Printer; Crash Info Exchange, Parking Tickets.

**Goal:**

Create an application that enables the Judicial Branch to electronically receive traffic citation, warning and traffic stop data from law enforcement agencies; automatically store, process and supply required information to the courts. An on-line disposition system replaces the manual labor intensive backend process.

**Objective:** Design and implement an on-demand, centralized, web-based records management system (RMS) for law enforcement agencies to do the following:

- Query agency-specific data related to the issuance of citations, warning tickets, and traffic stops;
- Generate various reports related to agency activity in conjunction with the issuance of citations, etc., (e.g., by street, officer, charge and defendant);

- Provide for the management of data, such as approval process for citations, etc., prior to submission to CIB;

- Allow for cross-agency searching on citations, warnings, and traffic stop data;

- Allow agencies to export data in a variety of formats for use in spreadsheets and/or other applications; and

- Provide a web-service interface for querying of data by other applications.

Objective: Continue efforts to enable the e-citation / warning / traffic stop processing application to allow electronic viewing and disposition of required data in court locations.

Objective: Continue efforts to enable the e-citation / warning / traffic stop application to provide a “paperless courtroom.”

Objective: Enhance the backend process through the development of an online disposition system.

Purpose:

- Streamline citation / warning / traffic stop processing system through applied technology;
- Increase revenue;
- Increase uniformity of event processing;
- Utilize staff more efficiently;
- Assist law enforcement initiatives; and
- Work in conjunction with the Office of the Chief State’s Attorney in implementing an online disposition system.

Tasks/Milestones:

1. Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office;
2. Production of electronic-citation / warning / traffic stop data submitted by law enforcement resulting in automatic population into Judicial database;
3. Document volumes and define hardware/software needs;
4. Web services application;
5. Continued streamlining of CIB workflow;
6. Creation of more e-Infractions courts;
7. Continue coordination with CPCA in their assessment of law enforcement agencies’ capabilities, current vendors, ability to adopt electronic citation / warning ticket / traffic stop data;
8. Continue to identify candidate law enforcement agencies to pilot test / implement electronic citation / warning / traffic stop processing;
9. Identify needs of candidate agencies for programming and other assistance;
10. Research/develop funding proposals to support candidate agencies as needed;
11. Roll-out to candidate agencies; and
12. Design, develop and implement the online disposition system / run in pilot test mode during the first year of this expanded project initiative.
Application:

Overview - Software; In-Car Equipment; Data Communications Network; Citation Forms/Zebra Printer; Summons Arrest Forms; Warning Tickets;

Rollout - # Printers; LE Agencies; Thermal Paper; Train-the-Trainer; Feedback from Pilot;

Mgmt Reports; Monthly by Officer; by Violation Type; by Location; Separate Data Set – Map Based Analysis;

Preparation for Each Agency; Equipment/Software in Vehicle; Regis ORI with e-Citation; Test System; Train Officers;

CRCOG Users/e-Citation/e-Summons/e-Warning; Windows Style Interface; Main Menu Functions;

New Citation / Juvenile Summons / Warning; Event Search; Print; User Preferences; Clear Search Queues;

Process; Demographics; License/Vehicle; Specifics; Infractions/Fines; Notes; Preview; Sign-Save-Print;

Successes; User Accepts; App Sharing Across Jurisdictions; Potential for Other Mobile Ticket Apps; and Challenges; Budget Limits Broader Rollout; Towns Slow to Rollout “Seed” Units; Long Term Issue of Replacement Costs; Revenue Sharing to Cover Costs - Strong Potential.

Projected Budget by Funding Source:

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Status:

The Electronic Citation / Warning/ Traffic Stop and On-line Disposition Processing System will build on the Electronic Citation Processing System, which is creating efficiencies in several areas. The receipt of electronically captured citation data by the CIB, is leading to the data being automatically populated into the CIB automated system.

In Phase One, vendors for pilot site law enforcement agencies developed in-car electronic citation systems while the Judicial Branch defined hardware and transmission requirements that would allow information created in police vehicles to be received and processed by the Judicial Branch CIB. Officer handwriting was replaced by type-written characters, therefore eliminating entry errors. Fewer entry errors have resulted in less exception processing, improving the timeliness of downstream processing transmissions to the Courts and the Department of Motor Vehicles (DMV).
In Phase Two, the Judicial Branch created the interface which allowed for the direct population of the electronic citation transmissions from law enforcement into the CIB automated processing system, further minimizing data entry, key stroke errors, and exception processing.

In Phase Three, the Judicial Branch implemented regional electronic dockets and also included commercial electronic citations, and the electronic viewing and disposition of citations in court locations. This phase also began the development of an e-Citation paperless courtroom with dedicated dockets for citations, enhancing the availability of electronic, self-pay opportunities.

In Phase Four, the Judicial Branch implemented a direct web interface between the CIB and the Cheshire Police Department pilot site.

In Phase Five, the focus continues the drive for 100 percent statewide integration of E-Citations, including:

- Continued enhancement and expansion of the web interface version to electronically receive traffic citation information from law enforcement agencies;
- Automatic storing of information in the CIB citation database, allowing the electronic production of citations;
- Extracts to law enforcement agencies of citation data to enable in house record keeping and reporting;
- Refined web product to interface with the DMV;
- Enhancements as requested by pilot police departments;
- Informational seminars for police departments on the options for participating in E-Citation, Warning, and Traffic Stop processing initiative;
- Printers for pilot police departments; and
- Scanning equipment and hardware as needed for the receipt of increased numbers of E-Citations at CIB.

Enhancement to the system this next year will focus on the development of an on-line disposition system. Benefits include:

- **Timeliness** - Each step in the current process contributes to a delay in the adjudication of the infractions, and therefore a delay in the attachment of relevant disposition information to a driver’s history and subsequent availability to law enforcement. An on-line disposition system could significantly reduce the number of days from issuance to adjudication, and placement when appropriate on the driver’s history;
- **Uniformity** - Currently, infractions are reviewed by prosecutors in 15 different locations. The ability for a smaller group of prosecutors to review on a global scale all infractions could yield more uniformity in dispositions. The ability to communicate large scale enforcement efforts such as “Click it or Ticket” would be enhanced;
- **Personnel** - Due to recent staff reductions, there are less employees to dedicate to the current labor intensive, manual paper driven process. Conceptually, infractions could be processed at any time of day, and would not be limited to traditional court dockets of 10am and 2pm. Less individuals coming to the courts could alleviate security issues that arise when a large number of people are assembled; and
- **Public Convenience** - The public would be able to be heard on matters without taking time off from work (unless they opted to come to court or elected a trial). The new system would be synced with the current e-pay system, allowing individuals the convenience of paying on-line in a contemporaneous fashion. Those who receive alternative dispositions could print or have the results emailed, eliminating the need and expense of paper notices.
Linking Crash / Injury Datasets - Measure Crash Injury Outcomes - Law Enforcement / Health Care Providers

Project ID: CT-P-00020

Core System:

- Crash
- EMS/Injury

Performance Area:

- Uniformity
- Accuracy
- Linkage

Project Title: Linking Crash / Injury Datasets – Measure Injury Outcomes Assessed by Health Care Providers

Lead Agency: Yale-New Haven Hospital

Partner Agencies:

- State Department of Transportation (ConnDOT)
- State and Local Law Enforcement
- University of Connecticut (UConn)
- Department of Public Health
- Traffic Records Coordinating Committee (TRCC)

Project Director/Primary Contact:

Name: Pina Violano
Title: Injury Prevention, Research
PhD, MSPH, RN-BC, CCRN, CPS-T
Agency: Yale-New Haven Hospital

Phone: 203-688-3260
Email: Pina.Violano@ynhh.org

Project Description/Basis:

A much higher emphasis has been placed on using serious injuries as a metric for highway safety. Research is ongoing nationally as to how best to define a serious injury as well as how to measure serious injuries in motor vehicle crashes.

In Connecticut, injury severity decisions in motor vehicle crashes are made by law enforcement officers using the KABCO scale, based on conditions they observe at the scene of a crash. In their reporting, officers indicate a measure of the functional injury level of the victim as either an A, B, or C injury. Prior to the adoption of the Model Minimum Uniform Crash Criteria (MMUCC) Guideline in the new MMUCC PR-1 Crash Reporting System in January 2015, the Investigator’s Guide for the old PR-1 instructed officers using KABCN, where “N” represented “not injured.” Small explanations were provided in the Investigator’s Guide for A, B and C – injuries.
According to the KABCN Scale used for the legacy PR-1, the guidance an officer received for an "A" injury, was -

(A) Incapacitating injury (prevents return to normal activity)

The MMUCC Guideline 4th Edition was adopted by the State, forming the basis for the development of the new MMUCC PR-1 crash reporting system. This new system was rolled out and began replacing the legacy PR-1 in January 2015. The new MMUCC PR-1 provides greater detail/examples for an officer to review in determining whether a crash victim’s injury is serious or not.

Serious Injury according to the MMUCC Guideline -

(A) Suspected Serious Injury is any injury other than fatal which results in one or more of the following:

- Severe laceration resulting in exposure or underlying tissues/muscle/organisms or resulting in significant loss of blood;
- Broken or distorted extremity (arm or leg);
- Crush injuries;
- Suspected skull, chest or abdominal injury other than bruises or minor lacerations;
- Significant burns (second and third degree burns over 10% or more of the body);
- Unconsciousness when taken from the crash scene; or
- Paralysis.

The D16.1 Classification Manual of Motor Vehicle Traffic Accidents - was available in Connecticut prior to the MMUCC Guideline, and also provided guidance using the KABCO scale, but it is unknown whether any law enforcement agencies in Connecticut ever used the D16.1 Manual. The following is an example of the detail provided by the D16.1 Manual for an (A) Injury, also referred to as an Incapacitating Injury.

(A) Incapacitating Injury: An incapacitating injury is any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred.

Inclusions: Severe laceration, broken or distorted limb, skull or chest injury, abdominal injury, unconsciousness at, or when taken from the accident scene, unable to leave the accident scene without assistance.

Health Care Professionals assessing injury severity of crash victims –

The Abbreviated Injury Scale (AIS) is used for coding injury types and injury severity, based upon an in-hospital clinical assessment.

In hospital administrative databases, injuries are coded using the International Classification of Disease (ICD) classification system. Connecticut, like many other states is in transition between using ICD-9 and a newer revision, ICD-10.
Project Objective:

The focus of this project is to integrate crash and injury data to be able to derive more precise injury outcomes. In question – is the disparity between officer assessments of personal injury as recorded on the previous PR-1, prior to 2015; the new MMUCC PR-1 crash reporting system, which began in January 2015 and actual outcomes assessed by health care providers. Project explores a data integration solution that provides more accurate injury severity information for persons involved in crashes. Steps include acquiring disparate datasets, performing linking functions, managing the resulting dataset, and conducting in-depth analyses on the linked data.

Initial efforts in 2016, focus on a subset of crash and injury data for New Haven, Connecticut. Crash data integrated with Yale-New Haven Hospital Trauma Registry data will be used to compare crash victim injury assessments by law enforcement with health care professionals.

One assumption is that if patterns can be documented of over reporting or under reporting of injury severity along with the actions by officers in select motor vehicle crash types, e.g., fender benders, and pedal cyclist and pedestrian crashes, enhanced guidance to MMUCC can be provided to officers in improving their injury severity assessments of motor vehicle crash victims.

Ultimately, if a permanent linkage could be established between motor vehicle crash, emergency medical services and hospital trauma data, this could possibly lead to a reduction in the amount of time officers would spend in determining injury severity of motor vehicle crash victims, and at the same time provide better injury status assessment data on the State Crash Data Repository (CDR).

Projected Budget by Funding Source:

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<tr>
<th>Funding Source</th>
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<th>2016</th>
<th>2017</th>
</tr>
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</tr>
<tr>
<td>Total Funds</td>
<td>62,500</td>
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<td></td>
</tr>
</tbody>
</table>

Activities/Tasks:

- Submit / finalize HS-1 grant application with ConnDOT, Highway Safety Office;
- Meet with Highway Safety Office to finalize details of crash/injury integration/research efforts;
- Meet with/seek input from Data Integration Subcommittee of the TRCC;
- Determine which datasets to pursue, including previous legacy PR-1 crash data; new 2015 MMUCC PR-1 crash data; appropriate injury surveillance system (ISS) data;
- Sign appropriate research agreements to be able to protect/acquire appropriate data;
- Acquire disparate datasets;
- Make determinations of approach to linking different datasets;
- Perform data linkage between datasets;
- Manage the resulting dataset(s);
- Conduct in-depth analyses on the linked data;
- Present preliminary findings to TRCC/Highway Safety Office;
- Present findings/seek feedback to representatives of DPH/ISS system;
- Present findings/seek feedback to representatives from law enforcement; and
- Present final assessment/findings to Highway Safety Office.
EMS / Trauma Registry - Documentation - Data Dictionaries - Updates - Communication

**Project ID:** CT-P-00018

**Core System:**
- Injury Control

**Performance Area:**
- Integration

**Project Title:** EMS / Trauma Registry - Documentation - Data Dictionaries - Updates - Communication

**Lead Agency:** Department of Public Health (DPH)

**Partner Agencies:**
- Department of Transportation (ConnDOT)
- Transportation Safety Research Center (TSRC)
- Connecticut Hospital Association

**Project Director/Primary Contact:**
- **Name:** Ann Kloter, Epidemiologist
- **Agency:** Department of Public Health
- **Office:** Office of Emergency Medical Services (OEMS)
- **Address:** 410 Capitol Ave, MS# 12-EMS
- **City, ZIP:** Hartford, CT  06134
- **Phone:** 860-509-7431
- **Email:** Ann.Kloter@ct.gov

**Project Description:**

Injury surveillance system (ISS) data from emergency medical services (EMS), hospital emergency departments, hospital discharge, trauma registries, insurance claims and mortality files can be used with roadway and motor vehicle crash data for prevention and cost control evaluation of motor vehicle crashes. Data collection systems documentation and integration of reporting mechanisms are needed in order to link data for analyses and outcome evaluation, for making public policy and for appropriately allocating resources that effect best practices in prevention and health care cost reduction.

The State Trauma Registry database collected hospital data from 2007 through 2011. In June of 2012, the data portal for hospitals was closed to the participating trauma centers. Trauma registry system updates and a report writer were created but have not been moved to production. No formal reports have been made to hospitals or other stakeholders, nor is aggregated trauma data currently accessible by either the trauma centers or the Office of EMS.

The lack of data reports to stakeholders and non-linkage of EMS and Trauma data were cited in the 2013 Office of EMS assessment by NHTSA. In a State EMS Plan for 2015-2020, data collection was identified as a critical area; but the Plan stated that, "although a statewide data collection system for both EMS and trauma exists, the ability of the lead agency and stakeholders to utilize those systems for evaluation purposes is greatly limited due to insufficient resources."
Project Focus:

The State requests technical assistance with redeployment of the Trauma Registry and report writer as one of the prerequisites for successful integration of pre-hospital emergency medical services (EMS) data with hospital data entered into the Trauma Registry.

Technical Challenges/Objectives:

- Department of Public Health (DPH) access to the Trauma Registry is not currently operational;
- Location of data previously collected is unknown; import from hospitals needs to be repeated;
- Lack documentation of processes for collecting, correcting, and reporting data;
- Lack a complete Trauma data dictionary;
- Need to identify fields to be able to link EMS to Trauma data;
- Hospitals have no access to Trauma Registry or ability to submit trauma data;
- Identify all processes needed to redeploy, use and evaluate Trauma Registry and report writer;
- Determine if newer updates should be implemented;
- Determine whether a new update includes required ICD10 fields;
- Identify all maintenance steps and costs needed for specific DPH-IT and BEST activities;
- Create a timeline of activities and deliverables for redeployment and maintenance;
- Create a realistic timeline for training hospitals and the Office of EMS; and
- Complete EMS data dictionary which includes linkage fields (linkage to Trauma data).

In addressing the above objectives, additional steps will include:

- Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office;
- Meet with Highway Safety Office to finalize details of project;
- Meet with/seek input from EMS Data Quality Committee;
- Meet with/seek input from Trauma Stakeholder Committee; and
- Meet with/seek input from TRCC Committee.

Projected Budget by Funding Source:

<table>
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<tr>
<th>Funding Source</th>
<th>2015</th>
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<th>2017</th>
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</tr>
<tr>
<td>Total Funds</td>
<td>125,000</td>
<td>125,000</td>
<td></td>
</tr>
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Status of Previous (Related) Project:

The following information was contained in an Interim Progress Report, submitted in March 2011 for the Section 408 application – Health care system databases linked to the crash database by the Department of Public Health (DPH).

Performance Measure used to track Improvements: Number and years of health care system databases linked to the crash database by the Department of Public Health (DPH) Crash Outcome Data Evaluation System (CODES) Project.

Improvements Achieved or Anticipated: Integration of the crash database to hospitalization and emergency department visit databases from 10 data years of linked data as of June 2010 to include an additional data year for hospitalization data and emergency department visit data as of March 2011.

Specification of how Measure is calculated: Number(s) of data years for hospitalization and emergency department visits linked through the CODES 2000 software.

Date and Baseline Value for the Measure:

Number of data years for hospitalization and emergency department visits linked as of June 2009

<table>
<thead>
<tr>
<th>Dataset integrated with crash</th>
<th>Years linked</th>
<th># of data years</th>
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</thead>
<tbody>
<tr>
<td>Hospitalization</td>
<td>2002-2006</td>
<td>5</td>
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<tr>
<td>Emergency department visit</td>
<td>2002-2006</td>
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Date and Current Value for the Measure:

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<tr>
<th>Dataset integrated with crash</th>
<th>Year linked</th>
<th># of data years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalization</td>
<td>2007</td>
<td>1</td>
</tr>
<tr>
<td>Emergency department visit</td>
<td>2007</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total = 2</td>
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</tbody>
</table>

Number of additional data years for hospitalization and emergency department visits linked as of March 2011

Note: The DPH CODES Project made progress in integrating hospitalization and emergency department visit data to the crash data.
Traffic Records System Data Linkage Roadmap - Long Range Plan

Project ID: CT-P-00003

Core System:

- Crash
- Driver
- Vehicle
- Roadway
- Citation/Adjudication
- Health/Injury Control

Performance Area:

- Integration

Project Title: Traffic Records System Data Linkage Roadmap - Long Range Plan

Lead Agency: UConn/ConnDOT - Connecticut Transportation Safety Research Center (CTSRC)

Partner Agencies:

- All Stakeholder Agencies on the TRCC

Project Director/Primary Contact:

Name: Eric D Jackson, PhD
Title: Director, CTSRC
Assistant Research Professor
Civil and Environmental Engineering, Connecticut Transportation Institute
University of Connecticut
Address: 270 Middle Turnpike Storrs CT Unit 5202
City, ZIP: Storrs, CT 06269
Phone: 860-486-8426
Email: e.jackson@engr.uconn.edu

Project Background:

Data linkage is an efficient strategy for expanding the data available, while avoiding the expense, delay and redundancy associated with collecting the same information separately. State systems that link data from each of the components of the traffic records system provide important new sources of data that can be used to identify risk factors, design strategies to address these risk factors, and evaluate the strategies once implemented. Understanding the facilitators and barriers to an effective and useful linkage system can optimize the system’s utility for public health and transportation safety.

Interface linkages of traffic records system components represent a seamless, on-demand connectivity and a high degree of interoperability between systems that support critical business processes.

Data integration linkages of the six-pack components of a traffic records system support in-depth analysis impossible to achieve if based solely on the contents of any singular data system (examples of each of these linkage types – pages 2 & 3 in the Introduction).
In meetings of its Data Linkage working group, the TRCC has touted the need to prioritize data linkage among all of the components of a traffic records system. The TRCC has discussed the need for a long-range plan for data linkage coupled with the Committee’s ongoing development of a traffic records inventory as referenced in the Traffic Records Program Assessment Advisory.

The Connecticut Transportation Safety Research Center (CTSRC), supported by the State Department of Transportation (ConnDOT), has been successful in linking motor vehicle crash with roadway and traffic volume data.

The State Department of Public Health (DPH), was successful in linking hospitalization and emergency department visit data to crash data for calendar years 2002 - 2007, through the CODES Project, using probabilistic linkage.

Current CTSRC efforts include establishing a repository for the state’s toxicology lab results to be able to track DUI and drug offenses with relation to crashes, and a citation data repository to aid in the evaluation of state programs on driver behavior. Plans by the CTSRC include opportunities to link other databases, e.g., injury and treatment outcome data to aid in the evaluation of crash outcomes, and the linkage of all related roadway databases into a linear referencing system.

While the TRCC has discussed ultimately linking all of the component datasets of a traffic records system, only the above three, crash, roadway, and health/injury control have seen measurable success. As the next section points out, challenges exist to reaching the next level of achievement for improving the State’s traffic records system through data linkage.

Project Challenges/Benefits:

As pointed out in the Traffic Records Program Assessment Advisory, data integration/linkage of traffic records datasets can be challenging for many reasons, including high costs, legislative restrictions, potential liabilities, and custodial resistance. Compounding the challenges, advantages to integration are not always clear and the methods of integrating datasets may be unfamiliar to data managers and decision-makers. The effectiveness of decision-making, however, can depend on high-quality and accessible analysis that is enhanced when enriched through integrating multiple traffic records data components. Benefits of integrated or linked data include:

- Lower costs to achieve a desired level of data content and availability;
- Support for multiple perspectives in data analysis and decision-making;
- Expanded opportunities for data quality validation and error correction;
- Additional options for exposure data to form rates and ratio-based comparisons;
- Enhanced accuracy and completeness of data describing crash events, the roadway environment, and the involved people and vehicles;
- Increasing the relevance of information available for legislative and policy analysis; and
- Increased support for advanced methods of problem identification, countermeasure selection, and evaluation of program effectiveness.

Roadmap to Linked Traffic Records Data - Project Plan (proposed steps)

1. Organize collaboration among agencies;
2. Document/catalog all available relevant databases;
3. Incorporate existing/established data linkages;
4. Map out a long-term plan based on databases to be linked;
5. Determine the availability of variables in existing databases to aid linkage;
6. Determine the method/mechanism for linking the specific databases under consideration;
7. Determine where the linked databases are to be stored;
8. Place importance on data elements in linked databases conforming to a common schema;
9. Pilot test on a small scale to help find/fix problems; and
10. Expand the efforts from the pilot into a full scale linkage initiative.

Tasks/Milestones:

- Submit/finalize HS-1 grant application to ConnDOT, Highway Safety Office;
- Meet with/seek input from TRCC Committee;
- Consider the formation of a separate Data Linkage Workgroup;
- Develop Data Linkage Plan; and
- Provide further detail for project timeline.

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</table>
Other Project Summaries

Add Citation Dataset to the Crash Data Repository

Add Citation dataset to the Crash Data Repository (CDR); create query and summary report capabilities for authorized users; effort and agreements would be needed to ensure that data is transferred. As mentioned earlier, the CTSRC has undertaken this initiative.

Allow for the Inclusion of All Fields of the MMUCC PR-1 to be sent to the CDR

Establish security levels at the CDR to allow for the inclusion of all fields on the MMUCC PR-1 to be sent to the CDR to provide the potential to link with other traffic records files; establish criteria for authorized access to sensitive data; dependent on cooperation of others.

Feasibility of Enforcement Technologies in Mobile Applications

Pilot project testing the feasibility of tablets and other technologies to improve the efficiency of traffic law enforcement capabilities for mobile data communications focusing on citations, warnings, crash data collection, and other potential in field events with the specific purpose of reducing processing times.

Laptops and Printers Linked to Software Applications of E-Crash and E-Citation

Purchase of laptops and printers linked to integrating e-crash and e-citation in the same vendor's software. Currently only two of the major eight vendors in the State appear to have this functionality.

Pilot Project with CIB to Fund Jurisdictions to Add E-Citation to their Software Applications

A pilot project with the CIB to fund selected vendors to add e-citation functionality to their software. Any project that funds a single agency only to upgrade its software would represent an inefficient use of Federal funds and an opportunity for any vendor to exploit the needs of a single agency.

Integrated Enterprise Base Map and Linear Referencing System

The Connecticut Department of Transportation (ConnDOT) has embarked on replacement of its Roadway Inventory System (RIS) with a more versatile integrated road network database that provides a common enterprise-wide spatial base map for mapping and GIS, and a common linear referencing system to track assets and performance along the network.

In Phase I, GIS, RIS, and Photolog network data were integrated and loaded into the Exor database, along with local road data from the federal government’s TIGER data set.

The integrated enterprise base map and linear referencing system (IEBM-LRS) is needed to efficiently support core business applications. This integrated system (when completed) will have immediate business benefits for the roadway inventory, safety management, and design and construction branches, with significant future benefits for maintenance.
Phase II will provide an integrated statewide base map and linear referencing system that provides network location information for the State’s motor vehicle crash data, generates mileage reports for state and local roads, provides a prototype RIS replacement system, and provides a recommendations report for Phase III. Phase II objectives include:

- Review and update data model for state maintained and local road network centerlines;
- Automate the match of local road information in RIS with TIGER and GIS spatial data;
- Load local road data currently stored in the RIS database into Exor database and match it to spatial data from TIGER or other spatial data sources;
- Create connectivity to state route where practical and without manual editing;
- Configure data model for key RIS road attribute and asset information; and
- Load road attribute and asset data from RIS into Exor database.

Phase III will replace the current RIS functionality, including Highway Performance Monitoring System (HPMS) reporting and integration with the ConnDOT ProjectWise environment. One of the considerations in the RIS upgrade is the Model Inventory of Roadway Elements (MIRE) guideline, promoted by the Federal Highway Administration (FHWA). At the completion of Phase III, RIS will be fully replaced by the new Exor system which will become the system of record for all information previously stored in RIS.

After Phase III, subsequent phases will include interfaces to bridge, crash, sign, maintenance, and other business areas. The integrated enterprise base map and linear referencing system (IEBM-LRS) project will give the State a highly detailed, accurate location coding method that could be used to integrate all roadway features and spatially codable events (e.g., crashes, citations, etc.) that happen on the roadways. This project will be beyond a simple shared base map, but serves that need as well – a way to locate spatially any event and then be able to link the data about that event with any other source of data that has been located on the same network.

There are several points of coordination between the IEBM-LRS project and other projects related to new or upgraded field data collection systems for law enforcement and analytic systems making use of linked roadway and law enforcement data. These include the Crash Data Repository (CDR), Data Driven Approach to Crime and Traffic Safety (DDACTS), and other projects undertaken by both State and Local law enforcement involving E-Crash and E-Citation data collection.

**Impaired Driver Records Information System**

**Core System:**

- Citation/Adjudication

**Performance Area:**

- Accuracy
- Uniformity
- Completeness
- Timeliness

**Lead Agency:** Criminal Justice Information System

**Partner Agencies:**

- State and Local Law Enforcement
- Department of Transportation (DOT)
Traffic Safety Information System - - - - - - - Improvements - - - - - - - - - - - - - - - - - Section 405c Application

- Department of Motor Vehicles (DMV)
- Department of Public Safety (DPS, now DESPP)
- Department of Information Technology (DOIT, now DAS-BEST)
- Division of Criminal Justice (DCJ)
- Judicial Branch
- National Highway Traffic Safety Administration (NHTSA)

Project Description/Basis:

Current planning for the Connecticut Impaired Driver Records Information System (CIDRIS) includes electronic roadside data capture of traffic citations, integration/interface of Judicial and DMV information, integration/interface with offender-based data, and a data mart decision support system. The CIDRIS project will lead to more timely and accurate driver, vehicle and enforcement-adjudication data and a records management and tracking system enabling law enforcement, licensing and criminal justice agencies and others to better enforce, adjudicate and impose sanctions against impaired driving offenders.

Objectives:

1. Design and implement a comprehensive, statewide information technology system;
2. Facilitate the immediate, seamless and comprehensive sharing of information between all state agencies, departments, boards and commissions;
3. Appropriately identify, charge, and sanction intoxicated drivers, based on their driving history;
4. Manage impaired driving cases from arrest through the completion of court and administrative sanctions; and
5. Identify/target impaired driver populations and trends, address driving control system flaws, and evaluate countermeasures.
Current OUI Process

The implementation phase of CIDRIS, which began with the State Police, is expanding to include integration with local and municipal law enforcement. Efforts will be directed to installing the CIDRIS application on local RMS systems and creating an interface with the State’s Criminal Information Sharing System (CISS). Priorities for integrating local systems with CIDRIS are based on local RMS system capabilities, number of DUI crashes and arrests, and past performance in high visibility DUI enforcement programs.

The quantity, as well as the accuracy, of “Operating under the Influence” (OUI) messages is steadily improving. Department of Emergency Services and Public Protection (DESPP) troopers and administrative clerks have been largely responsible for these initiatives. Future plans include use of the CJIS Forms Viewer, which will give authorized CIDRIS stakeholders the ability to view, retrieve, and print agency documents. Expansion of the CIDRIS program to the Division of Criminal Justice (DCJ) involves the creation of a project charter to define the scope of work, necessary resources, and schedule to organize and execute CIDRIS program objectives.

The goal is to be able to manage impaired driving records so that stakeholders can access DUI information in real-time to reduce recidivism in impaired driving offenses.
Required Functionality

- Identify, charge, and sanction all impaired driving offenders;

- Manage impaired driving cases from arrest through the completion of court and administrative sanctions;

- Recognize geographic areas and trends, evaluate countermeasures, and identify problematic components of the overall impaired driving control system;

- Provide law enforcement and court personnel offender information to properly respond to offenses;

- Reduce administrative costs and increase efficiencies for dealing with impaired driving and at the same time address drivers with other types of impairments;

- Manage the workflow of all roadside citations issued from encounter through disposition;

- Maintain a full "chain of custody", including an audit trail, for all citation data captured. Need to be able to view changes to citations, by whom, when, and why citation was changed;

- Centralized decision support environment to track citation statistics and metrics for users such as Court Operations, CPCA, ConnDOT, DPS, and DMV; and

- Real-time based and 24x7 so that entries made at the roadside or desk are immediately available to all CIDRIS users.
Connecticut Integrated Vehicle and Licensing System (CIVLS)

Critical needs supporting DMV Mission being addressed – Solution will:

- **Improve timeliness and responsiveness** to Connecticut’s citizens and DMV Stakeholders and Business Partners
- **Help streamline** the agency’s business processes
- **Standardize and integrate** business and systems processes
- **Improve DMV operational efficiency** in performing key business processes and transactions
- **Modernize (all) agency-wide systems** and supporting technologies
- **Standardize** the agency’s data

Proven solution, proven benefits, proven vendors

- Building on other states’ experiences
- MOTS approach reduces risk, accelerates realization of benefits – Revenue improvements, Cost Savings, Benefits to all Constituents: Public, Stakeholders, State

Fixed price contract – approximately $30M

Payback within 7-10 years (extremely conservative ➔ based on Registration/Title only)

Schedule – 2010 – 2015

- Implementation addresses agency-wide needs
- Release 1 – Completed
  - Infrastructure (hardware, software, environments, network)
  - Customer Database
  - License/Manage Regulated Businesses
  - Certain Fiscal Functions
- Release 1A – Completed
  - Web-based infrastructure
- Release 2 – Registration and Title-related business scheduled for deployment in the fourth quarter 2014
- Release 3 – Credentialing and Sanctioning-related business scheduled for deployment in 2015

CIVLS Benefits

- Real time processing
- Internet and web portal for self service
  - Provide the customer the ability to “self-help” and check compliance issues at home
- Lead through processing (on-line) to reduce training requirements
- Enterprise-wide and integrated
- **One** customer centric database that will eliminate customer-related data errors
Connecticut DMV’s Out of State Compact Notice Scanning and Data Entry System

Problem

The Department of Motor Vehicles (DMV) receives around 3,000 Compact notices to Connecticut licensed drivers issued out-of-state each week. These Compact notices are sent via regular mail, on paper and in the format that is particular to the jurisdiction. This could be a single format used by an entire state or multiple formats for a single state going down to the county or court district level. In order to include these Compact notices on Connecticut driver records, each slip provided by states or jurisdictions needed to be reviewed and the data manually entered by DMV staff. This required a great deal of manual labor and often backlogs were experienced in this area.

Solution

DMV developed an application whereby document imaging, Optical Character Recognition (OCR) and a manual review of data reduced the labor required greatly, eliminated the backlog and improved data entry accuracy. The application was developed by internal staff and uses an inexpensive imaging program along with inexpensive Kodak scanners. The programming of interfaces and the full process of receiving/scanning/reviewing/applying each Compact notice provided the greatest challenges to the project. Once that was complete, “zoning” each different infraction form became an ongoing process. By zoning, DMV can determine which data on the particular form should be recognized, extracted and populated in data fields. Each form has its own properties and requires individual attention. Once complete, however, this form is automatically recognized at any time in the future. Currently, the OCR system is programmed to receive the following states' Compact-related agreement notices: Delaware, Florida, Illinois, Hawaii, Iowa, Kentucky, Maryland, Michigan, New Jersey, New York, Ohio, Pennsylvania, Texas, Virginia, and Wisconsin.
Data Driven Approach to Crime and Traffic Safety (DDACTS)

- Initiative spearheaded by the Department of Emergency Services and Public Protection (DESPP)

Hot Spot Map – Traffic Stops vs Motor Vehicle Crashes

- High intensity criminal enforcement program coupled with aggressive motor vehicle enforcement for the purposes of reducing crime and improving the quality of life within a specified area
- Focus for State and Local law enforcement agencies
- Utilize license plate reader technology
- Impact – large scale multi agency operation with a focus on motor vehicle contacts
- Priority – public support
- Priority – support from municipal and county elected officials
- Measure improvements in the data being collected and the timeliness of reporting accurate information
- Measure results – assaults, burglaries, vandalism, thefts from motor vehicles, larcenies, drug and narcotic violations, DUI arrests, motor vehicle crashes

CAD/RMS / E-Citation / E-Crash / DMV Commercial Vehicle Safety Division

The Commercial Vehicle Safety Division (CVSD) of the Department of Motor Vehicles (DMV) now utilizes electronic (e) citation and (e) crash reporting for all incidents involving commercial vehicles. Funded through the Federal Motor Carrier Safety Administration (FMCSA), the new system incorporates a computer aided dispatch and records management system (CAD/RMS). Previously, the CVSD relied on manual data entry (such as commercial vehicle-related citation information). This manual, non-automated process negatively impacted the quality and timeliness of commercial data being transmitted within the State’s systems, e.g. Judicial, and ConnDOT. Although the CVSD has attained, and strives to maintain, a high quality data ranking by FMCSA, all divisions within the DMV continue to improve and enhance this quality to ensure timeliness and accuracy of all its data.
Focusing on e-citations, the CVSD estimates that the implementation, which included an e-citation printer for all sworn personnel in August 2013, saves the division $50,000-60,000 per year in administrative costs. The added time savings for sworn personnel allows them additional time to perform enforcement activities. Accuracy of the e-citations is much better as the person and vehicle information comes from the computer files; statutory charges and fine amounts are accurate as they are pulled from a table provided by Judicial and addition errors are eliminated; e-citations arrive at Judicial in a timely manner and the legibility over the manual citations is much improved. In the first few months of implementation.

Driver License Bar Code Pilot

The Connecticut Driver License contains bar coded information. Provision to law enforcement of bar code scanning equipment and software would greatly facilitate collection of driver license data as well as improve the accuracy of the collected data. Use of this hardware and software would also improve the efficiency of the law enforcement officer collecting the data.

Regional Technology Conference

A day and a half Conference would provide the opportunity for TRCC stakeholders, including Executive Management to become better informed about the traffic records efforts in other states. Participants would have opportunities to attend sessions about existing and emerging technologies, including “best practices” from other states concerning traffic safety data collection, management and access. States have generally become more restrictive regarding out-of-state travel; and for traffic safety data collectors, managers and users, the Conference likely would be their only opportunity to become more up-to-date regarding methods and technologies that can improve the traffic records safety data system in Connecticut.

Other Project Suggestions

Crash/Citation/Incident law enforcement location analysis software accessible by each community

Public policy endorsement of adding e-mail addresses on DMV records for registrations and licenses

Data analysis software/all stakeholders
Acronyms used in Strategic Plan

AAMVA  American Association of Motor Vehicle Administrators
AASHTO  American Association of State Highway Transportation Officials
AADT  Annual Average Daily Traffic
ADT  Average Daily Traffic
ALS  Advanced Life Support
ANSI  American National Standards Institute
ASCII  American Standard Code for Information Exchange
ATSIP  Association of Transportation Safety Information Professionals (National TRCC)
BAC  Blood Alcohol Concentration
BLS  Basic Life Support
CAD  Computer Aided Dispatch
Captain  Capitol Region Total Access Information Network
CARE  Critical Analysis Reporting Environment
CAST  Connecticut Accident Summary Tables
CDC  Centers for Disease Control and Prevention
CDIP  Crash Data Improvement Program
CDLIS  Commercial Driver License Information System
CDR  Crash Data Repository
CEMSTARS  Connecticut EMS Tracking and Reporting System
CHA  Connecticut Hospital Association
CHIME  Connecticut Hospital Information and Management Exchange
CIB  Central Infractions Bureau
CIDRIS  Connecticut Impaired Driver Records Information System
CISS  Connecticut Information Sharing System
CIVLS  Connecticut Integrated Vehicle Licensing System
CJIS  Criminal Justice Information System
CMV  Commercial Motor Vehicle
CODES  Crash Outcome Data Evaluation System
COGCNV  Council of Governments of the Central Naugatuck Valley
COLLECT  Connecticut Online Law Enforcement Communications Teleprocessing
ConnDOT  Connecticut Department of Transportation
CPCA  Connecticut Police Chief’s Association
CRCOG  Capitol Region Council of Governments
CRMVS  Criminal Record and Motor Vehicle System
CSAO  Chief State’s Attorney’s Office
CSP  Connecticut State Police
CT: Chief  Records Management System
CTI  Connecticut Transportation Institute
CVARS  Commercial Vehicle Analysis Reporting System
CVISN  Commercial Vehicle Information Systems Network
CVSD  Commercial Vehicle Safety Division
CVSP  Commercial Vehicle Safety Plan
DAS BEST  Department of Administrative Services Bureau of Enterprise Systems and Technology
DCJ  Division of Criminal Justice
DDACTS  Data Driven Approach to Crime and Traffic Safety
DESPP  Department of Emergency Services & Public Protection
DLN  Driver’s License Number
DMV  Department of Motor Vehicles
DoIT  Department of Information Technology
DOT  Department of Transportation
DPS  Department of Public Safety
DPH  Department of Public Health
DRN  Digital Roadway Network
DUI  Driving Under the Influence
ED   Emergency Department
EMS  Emergency Medical Services
EMT  Emergency Medical Technician
FARS Fatality Analysis Reporting System
FDE  Fundamental Data Elements
FHWA Federal Highway Administration
FIPS Federal Information Processing Standard
FMCSA Federal Motor Carrier Safety Administration
FTP  File Transfer Protocol
GHSA Governor’s Highway Safety Association
GIS  Geographic Information System
GPS  Global Positioning System
GSA  General Services Administration
GVWR/GCWR Gross Vehicle Weight Rating/Gross Combination Weight Rating
HIPAA Health Insurance Portability and Accountability Act
HPMS Highway Performance Monitoring System
HSO  Highway Safety Office
HSP  Highway Safety Plan
HTML Hypertext Markup Language
IDRIS Impaired Driver Records Information System
ILT  Incident Location Tool
IPR  Interim Progress Report
ISS  Injury Surveillance System
IT   Information Technology
JAD  Joint Application Development
JIS  Judicial Information System
JUD  Judicial Branch
LEA  Law Enforcement Agency
LEL  Law Enforcement Liaison
LRS  Linear Reference System
MAP-21 Moving Ahead for Progress in the 21st Century Act
MCMIS Motor Carrier Management Information System
MCSAP Motor Carrier Safety Action Program
MDT  Mobile Data Terminal
MIRE Model Inventory of Roadway Elements
MMUCC Model Minimum Uniform Crash Criteria
MOTS Modified Off the Shelf
MOU  Memorandum of Understanding
NCIC National Crime Information Center
NCSA National Center for Statistics and Analysis
NDR  National Driver Register
NHTSA National Highway Traffic Safety Administration
NIEM National Information Exchange Model
NEMSIS National Emergency Medical Services System
NLETs National Law Enforcement Telecommunications System
NMVTIS National Motor Vehicle Title Information System
NOLLE Decision by the State's Attorney to not Prosecute the Infraction
OBTS Offender Based Tracking System
OCR  Optical Character Recognition
OEMS Office of Emergency Medical Services
OPM  Office of Policy and Management
OUI  Operating Under the Influence
PCR  Patient Care Reporting
PDF  Portable Document Format
PDO  Property Damage Only
PDPS Problem Driver Pointer System
PDE Public Information & Education
PR-1 Police Crash Report
PR-2 Supplemental Report for Fatal Crashes
PRISM Performance and Registration Information Systems Management
PSDN Public Safety Data Network
RMS Records Management System
RPO Regional Planning Organization
SAFETEA Safe, Accountable, Flexible and Efficient Transportation Equity Act
SHSP Strategic Highway Safety Plan
SLOSSS Suggested List of Surveillance Study Sites
SPR State Planning and Research
SQL Structured Query Language
SSN Social Security Number
SWRPA South Western Regional Planning Agency
TAC Technical Advisory Committee
TASR Traffic Accident Surveillance Report
TAVS Traffic Accident Viewing System
TCAS Traffic Citation Adjudication System
TRA Traffic Records Assessment
TRAAS Traffic Records Assessment Advisory
TraCS Traffic and Criminal Software System
TRIPRS Traffic Records Improvement Program Reporting System
TRS Traffic Records System
TRSP Traffic Records Strategic Plan
TRCC Traffic Records Coordinating Committee
TSIS Traffic Safety Information System
TSRC Transportation Safety Research Center
UAR Uniform Arrest Record
UConn University of Connecticut
VIN Vehicle Identification Number
VMT Vehicle Miles Traveled
WWW World Wide Web
XML eXtensible Markup Language
Endnotes – Users of traffic crash information; participants in National Traffic Records Forum; TRCC stakeholders; National Crash Reporting (MMUCC) Guideline; PR-1 data element review; uploading electronic PR-1s to the ConnDOT crash server; uploading of electronic commercial vehicle crash data to Safety Net; EMS services utilizing NEMSIS data; CARE data analysis software; Crash data repository and the National Information Exchange Model.

1 National Emergency Medical Services Information System (NEMSIS)

2 Model Minimum Uniform Crash Criteria (MMUCC)

3 TRCC stakeholders include representatives, who remain fairly active in attending meetings and participating in the decision making of the committee, and advisors, whose input to the TRCC is vital, but who are unable to participate as actively as others.

4 Use of the MMUCC Guideline is voluntary. The 3rd Edition of the Model Minimum Uniform Crash Criteria (MMUCC) Guideline was updated in 2008.

5 The State TRCC adopted the 4th Edition (2012) of the MMUCC Guideline as the basis for transitioning to a completely updated electronic crash reporting system beginning in January 2015.

6 Refer to performance measure on Crash Report Timeliness – pages 7 and 37.

7 Much of the crash data collected by State and local law enforcement agencies is stored on local servers. Whether the data are collected in hard copy or electronically, hard copies of the report are mailed or faxed to ConnDOT. One of the most important objectives of the TRCC is the development and implementation of a procedure that allows PR-1 crash reports to be electronically uploaded from local and CSP servers to the ConnDOT crash file server.

8 Commercial Vehicle Analysis Reporting System (CVARS) project – In 2006, the Connecticut State Police (CSP) began the electronic capture and transfer of PR-1 crash reports to the Commercial Vehicle Safety Division (CVSD) within the Department of Motor Vehicles for subsequent upload to Safety Net.

9 The Gold Compliance rating means that all EMS services must use the 400+ elements in the NEMSIS 2.2.1 Data Dictionary, with full XML compliance built into the software.

10 Refer to page 6 highlights of the Crash Data Repository, as presented on Facebook.

11 CHIME – Connecticut Hospital Information and Management Exchange data

12 The concept of a Crash Data Repository was proposed by the TRCC in 2006 and in 2007; however, due to the lack of a sponsoring agency each year, the proposal failed. In 2009, the Department of Public Safety (DPS) offered to serve as the lead agency for the development of a Crash Data Repository, but then had to decline.

13 Note: Actual “Yes Memo” was attached to the March 2013 Section 405 Application.

14 Beginning in 2015, the Connecticut State Police began the use of the D16.1 Classification Manual in their motor vehicle crash report training.