

Department of Transportation

At a Glance

JAMES REDEKER, Commissioner

Established – October 1, 1969

Statutory authority - p.a. 69-768

Central Office – 2800 Berlin Turnpike, Newington, CT 06131-7546

Authorized number of full-time employees – 3,352

Recurring operating expenditures 2017-2018 ---\$620.1 million

2017-2018 -- \$2.1 billion

Capital Budget 2016-2017 -- \$2.05 billion

Organization structure – Office of Commissioner, Bureau of Finance and Administration, Bureau of Engineering and Construction, Bureau of Highway Operations, Bureau of Policy and Planning, Bureau of Public Transportation, Office of State Traffic Administration

Mission

The mission of the Connecticut Department of Transportation (Department) is to provide a safe and efficient inter-modal transportation network that improves the quality of life and promotes economic vitality for the State and region.

Statutory Responsibility

The agency shall be responsible for all aspects of the planning, development, maintenance and improvement of transportation in the state (Section 13b-3 C.G.S.). The agency serves its customers by providing safe and efficient systems for the movement of people and goods within, to or from the State, whether by highway, air, water, rail or other means (Section 13b-2[I]).

Information Reported as Required by State Statute

The agency shall develop and revise, biennially, a comprehensive long-range transportation plan designed to fulfill the present and future needs of the state and to assure the development and maintenance of an adequate, safe and efficient transportation system (Section 13b-15 C.G.S.). The purpose of the Master Transportation Plan is to provide its customers, the Administration, the General Assembly, local elected officials, and the general public with a comprehensive understanding of the transportation projects and programs that the agency will be pursuing over the next 10 years. The strategic goals of the agency are to ensure safety, maintain the existing system, increase system productivity, promote economic development and provide required capacity.

Affirmative Action Policy

The Department is an Affirmative Action/Equal Opportunity Employer. It is the established policy of the Department to assure equal opportunity and to implement affirmative action programs. All services and programs of the Department are administered in a fair and impartial manner, pursuant to the State Code of Fair Practices and all other relevant state and federal laws and regulations including, but not limited to, C.G.S. 46a-60, Title VI and VII of the Civil Rights Act of 1964, and the Americans with Disabilities Act (ADA). The Department continues to work cooperatively with the Connecticut Commission on Human Rights and Opportunities and other state and federal compliance agencies in conducting various reviews and providing requested information.

The **Commissioner's Office** includes the offices of Communications, Legislative Program & Grants Review, Equal Opportunity & Diversity, Consultant Selection, Security, Legal, Staff Development, Internal Audits, State Traffic Administration and Information Systems. Each office handles a multitude of tasks on behalf of the Commissioner and in support of the operation of the agency.

Of particular note, the Office of Information Systems which is responsible for the daily maintenance and support of the DOT computer network infrastructure, network servers, computers, telecommunications and all computer applications used by more than 180 locations across the State has the following major accomplishments to report for Fiscal Year 2015 to 2016:

- The successful replacement of the 20-year-old cabling on Floors 1, 2 and 3 at the DOT Headquarters Building with no disruption to users. The new cabling in combination with a high speed network backbone has greatly improved the speed and performance required by DOT Engineering and Geospatial applications. The 4th and Ground floor are scheduled for completion during FY17.
- The replacement of the aging phone systems located at seven Maintenance Facilities (East Lyme, Meriden, Middletown, Southington, Farmington, Guilford and Old Saybrook) with little to no disruption of services to staff.
- The replacement of the outdated Synergen Fleet Management System by AssetWorks which has features that will enable the DOT to be more efficient and cost effective with our fleet. We are now able to track all functions related to maintenance of equipment, including repair and preventative maintenance (PM) Work orders
- The replacement of the outdated SIS System used for bridges by Inspectech which has greatly enhanced the process used for bridge inspections, design, and analysis of all bridge types on both new and existing structures.
- The development of a Record Tracking application that allows for efficient tracking and retrieval of hardcopies of memos, contracts and project information filed and stored in the DOT Records Center located at Pascone Place in Newington.

- The development of a Consultant Selection Application to electronically maintain a database of all consultant selections for hundreds of DOT Projects.
- The development of a Work Order application that eliminates paper and, electronically tracks work orders submitted by employees to maintenance staff in the Property and Facilities unit.
- Staff performed a full GIS analysis and created 112 maps for the Bureau of Public Transportation to comply with Title 6 Federal reporting requirements.
- The development of a Payroll Toolkit application for Finance to calculate salary variations when there is a permanent or temporary reassignment of an employee.
- As part of a LEAN Event, DOT Technology Services developed the use of Digital Signatures and associated workflows that had a tremendous efficiency impact for Contracts and Negotiations, Construction Documents and Capital Projects. The use of Digital Signatures will be expanded further throughout the DOT in FY17.
- Development of a Contract and Negotiation document generator which automatically creates a customized document from a list of contract clauses.
- Development of a Performance Measure application for Policy and Planning which provides a database for data from different sources that can be uploaded to a DOT Performance Measures Dashboard. The Dashboard automatically calculates and translates the data into graphs.
(<http://www.ct.gov/dot/cwp/view.asp?a=3815&q=448402>).
- Development of the OSTA 85% application which has eliminated the use of paper by the Office of State Traffic Administration when collecting and calculating the average speed of traffic on Connecticut roadways. The application integrates the data with GIS mapping.
- E-Construction is a federal initiative to eliminate the use of paper and build efficiency for the construction field personnel via the use of mobile devices such as tablets. IT staff have deployed more than 60 Windows tablets to Construction staff with connectivity to DOT applications for increased efficiency and productivity with more deployments planned for FY17.
- Development of the Advanced Traffic Management System for Highway Operations using the ESRI GIS platform. This application assists with “Call Before You Dig” as well as with Rights of Way, Traffic Signal locations and much more. The application is now being used daily by Operations staff.
- The successful migration of our Oversize/ Overweight Permitting application to a web base hosted cloud solution which has resulted in the elimination of all technical hardware

related issues that were being experienced by OS/OW Permits and a significant increase in speed and performance of the application. This has resulted in greater efficiency and productivity of the Permitting staff.

The Bureau of Engineering and Construction continued to manage all programs and projects to maximize federal funds allocated to Connecticut for improvements to all transportation modes. The Bureau continued to advance the Governor’s “Let’s Go CT” initiative in 2017-2018, to include advancing congestion mitigation strategies for the I-95 corridor, progressing the preliminary design process for I-84 Exits 3 through 8 in Danbury, and planning for the replacement of the I-84 / Route 8 interchange in Waterbury.

The Department developed its initial Highway Transportation Asset Management Plan (TAMP), which was certified by FHWA on July 24, 2018. The Highway Transportation Asset Management Plan was created to document the agency’s asset management processes, project future performance of our assets given expected funding, and construct a blueprint for transportation asset management improvements moving forward. It was designed to meet federal requirements (MAP-21 and FAST-Act) that are tied to funding required for our transportation system. A separate document (due in October 2018) is being developed to address the transit assets maintained by CTDOT as mandated by the Federal Transit Administration.

This first Highway TAMP goes beyond the federal mandates and demonstrates the Department’s strong commitment toward achieving a State of Good Repair for our transportation system. An asset management strategy for both National Highway System (NHS) bridges and pavements is included in the TAMP. In addition, the initial TAMP covers all CTDOT maintained bridges, pavements, traffic signals, signs, sign supports and pavement markings. The TAMP contains information on Asset Inventory and Condition, Asset Data Management, Objectives and Performance, Life Cycle Planning, Risk Management, Financial Planning, Investment Strategies and Process Improvements. The TAMP will guide the Department in its endeavor to deliver better asset performance, while also managing risks.

The Bureau of Engineering and Construction has continued to work in cooperation with the Bureau of Highway Operations to implement a Pavement Preservation Program. Strategies to improve Moving Ahead for Progress in the 21st Century (MAP-21) pavement performance metrics (crack percent, smoothness, and rutting) have been employed. These strategies include the use of polymer modified asphalt; surface patching and crack filling of existing pavement prior to paving; and for selected pavement sections, incorporating specifications for improved pavement smoothness and uniformity.

In 2018, Pavement Preservation Projects on expressways and other state roadways include five resurfacing projects valued at \$18 million. The resurfacing projects are located along I-95 NB in Stonington, I-95 in Groton, Route 66 in Middlefield/Middletown, Route 7 in Norwalk, Route 20 in East Granby, and Route 44 in Avon. Another \$2 million in pavement preservation funding is being used to apply rubberized chip seal treatments at several locations including Route 12 in Thompson, Route 184 in North Stonington, Route 354 in Colchester, and Route 616 in Lebanon. These rubberized chip seal treatments offer several advantages over

conventional chip seals, as they are more durable, reduce the amount of loose material that can kick up and stick to vehicles, and use approximately 1,500 tires per mile (based on a 2-lane roadway). Finally, the Bureau of Highway Operations continues to manage the VIP Resurfacing Program (not to be confused with the VIP Pavement Preservation Program), under which eighty (80) pavement sections are being paved in 2018 valued at approximately \$69 million.

In 2017, a regional Transportation Management Plan (TMP) was developed for the Hartford area to coordinate the various roadway and bridge projects in construction and manage potential construction conflicts that might cause safety hazards or unnecessary delays to the traveling public. This regional TMP was developed and implemented in consultation with appropriate stakeholders including utilities, municipalities, business communities, event organizers, emergency responders, and law enforcement in order to serve the safety and mobility needs of the traveling public, construction workers, businesses, and community and promote communication and coordination throughout the Hartford area. Currently there are eight active state projects within the TMP on I-84, I-91, Route 2, and Route 44 (Projects 63-633, 63-653, 63-692, 63-699, 63-705, 63-707, 63-708, and 171-431) and there are multiple future projects scheduled through 2022.

The Bureau of Engineering and Construction continues to place an emphasis on the state's LeanCT initiative. Lean participation includes tracking and reporting progress; and solicitation, selection, and prioritization of topics for the scheduling of upcoming Kaizen events. Past Lean events have resulted in process improvements in targeted areas. Recent Lean events have included improvements to Highway Design's Archaeological Review Process in March 2017; Traffic Engineering's As-Built Signal Plan Process in September 2017; addressing Division of Traffic Engineering Public Inquiries in March 2018; and Traffic Engineering Attraction and Logo Sign Process in May 2018.

The Department is continuing its effort to drive down the number of fatalities and serious injuries of all road users on Connecticut's highways. This effort is detailed in Connecticut's Strategic Highway Safety Plan (SHSP). The SHSP brings together all of Connecticut's safety stakeholders to collaborate on safety efforts and leverage resources. The new SHSP was published in July 2017. Similar safety plans are being prepared for each of the nine Councils of Governments in Connecticut. The first two plans are targeted to be completed in 2018.

The Bureau of Engineering and Construction has established a dedicated staff to run a highway safety program focused on implementing systematic transportation safety improvements. These types of projects focus on providing safety improvements over the entire transportation network, and provide the highest safety benefit for each dollar spent. Systematic safety improvements include:

- A centerline rumble strip initiative. Rumble strips are grooves within the pavement that produce noise and vibration when traveled over, and are a proven safety countermeasure to

reduce lane departure crashes. Approximately 48 miles of centerline rumble strips will be installed in 2018.

- A pedestrian warning sign replacement project on local roads. Pedestrian warning signs and associated plaques are being upgraded with a fluorescent yellow background and post delineator to enhance visibility, especially during dawn and dusk periods. The signs will be installed in 2019.
- A statewide clearance interval retiming project. All state owned and maintained traffic signals are being revised to update the yellow and red clearance intervals to be consistent with national best practice. The timings are being calculated and the signal plans are being revised. The actual timing changes are being performed through the Department's maintenance forces.
- A horizontal curve signing project on state and locally-owned roads. Improved horizontal curve delineation is proven to be a cost-effective approach to reducing roadway departure crashes. The locations are being designed in a consistent approach in accordance with national standards with the use of signs. The design plans for Districts 3 and 4 (state roads) will be completed in 2019 and constructed in 2020. Districts 1 and 2 (state roads) will be designed in 2020 and constructed in 2021. The installation of horizontal curve signs on local roads was completed in 2018 and installation will be completed in Districts 1, 2, and 4 in 2019.

The Bureau's Traffic Studies units will be upgrading pedestrian control features at signalized intersections under Accessible Pedestrian Signal (APS) projects, to include: APS design; countdown pedestrian signals; sidewalk ramps; and crosswalks. Intersections included in the projects include those that have the old-style audible buzzers for non-visual cue during an exclusive pedestrian phase. The projects are a result of language included in the 2009 Manual of Uniform Traffic Control Devices. Ninety-eight (98) intersections in various District 1 towns were included as part of three projects. The first project (15 locations) was constructed in 2015. The second project (39 locations) was constructed in 2017. The third project (44 locations) was completed this year. Intersections programmed for APS upgrades in Districts 2, 3, and 4 are presently under design. They are scheduled for the 2019 construction season and will include 49 total intersections (at least 15 in each District).

In addition to the programmed Accessible Pedestrian Signal (APS) traffic signal projects noted above, the Traffic Studies units are also administering and producing traffic signal projects on a yearly basis. Many replacements are addressing outdated equipment, which requires frequent maintenance. Equipment will be updated to current Manual of Uniform Traffic Control Devices (MUTCD) standards, including APS where applicable, in these projects. There are approximately fifteen locations in each of the four districts being designed as well as constructed each year.

The Bureau's Traffic Engineering Project Design unit has recently initiated and completed design of systemic safety projects to upgrade active railroad devices, including gate arms; gate arm mechanisms; warning lights; and bells on multiple rail lines within the state. These projects represent an ongoing program to ensure functionality of system critical components at public railway-highway grade crossings.

In recognition of the fact that much of the signing on limited access roadways in the state has surpassed its effective service life, multiple signing replacement projects are currently in design or construction. These include projects on Route 25; I-395; and the Merritt Parkway, as well as selected sections of I-95; I-84; and Route 8.

The Department continues to manage a more flexible approach to the funding of Bicycle/Pedestrian projects in an effort to close some of the existing statewide gaps. Toward this goal, the Department is facilitating completion of a network of inter-connected, statewide trails under the Multi-use Trail Implementation Plan (Gap Closure Efforts). This program is initially focusing on the East Coast Greenway (ECG). The key is to establish clear priorities that will close the most critical gaps and create long continuous portions of the statewide trail network. The program may include other regional trails that link to the ECG, but the majority of funds and resources will be devoted to completing the ECG. Additionally, the Department is formulating a strategy for the implementation of the “Trail Maintenance” portion of the original LetsGoCT! Multi-use Trail Implementation Plan.

Construction activities are complete on Project No. 51-268, a 2.4 mile section of the ECG in Farmington, and nearing completion on an additional 3.8 miles of the ECG, including projects in Cheshire along the Farmington Canal Heritage Trail (Project No. 25-145), in Manchester along the Air Line Trail (Project No. 76-217), and in Bolton along the Hop River Trail (Project No. 12-96). Three sections of the ECG were recently completed under Project Nos. 25-135 and 25-144 located in Cheshire, and on Project Nos. 42-300/301 located in East Hartford. The construction phase continues to advance for ECG projects in Bloomfield (Project No. 11-152) and Windham (Project No. 163-204).

Design activities are nearing completion on a section of the ECG in New Haven under Project No. 92-621. Design activities are also underway on the following projects all along various segments of the ECG: Project No. 108-189 in Plainfield/Sterling; Project No. 131-203 in Southington; Project No. 30-97 in Columbia; and Project No. 111-124 in Pomfret/Putnam. Design has also commenced on sections of the trail on either side of the Putnam Bridge in Glastonbury and Wethersfield under Project No. 53-192.

The Department and the Capital Region Council of Governments have recently completed a study within the town of Plainville to determine a reasonable alignment for the ECG through that town. A new project is currently being initiated, based on the results of the study, to close the last remaining north/south gap in the ECG in Connecticut. This project will also close the last remaining gap in the Farmington Canal Heritage Trail, connecting New Haven to Massachusetts. Moving forward, the Department will continue to evaluate and initiate new sections of regionally significant trails within budgetary constraints in an effort to close existing gaps in the ECG across the state.

The Bureau’s Highway Design-Local Roads unit continues to oversee the Local Transportation Capital Improvement Program (LOTCIP). LOTCIP allows municipalities to perform capital improvements on smaller, locally-owned roadways that qualify for the Federal Surface Transportation Program – Urban (STP-U) without needing to adhere to Federal Title 23

requirements that many municipalities are unfamiliar with and find burdensome, time consuming, and expensive. LOTCIP has freed up a significant amount of Department resources that have historically been devoted to oversight of municipally-sponsored Federal-aid projects. LOTCIP also allows the portion of federal STP-U monies historically dedicated to improvements on municipally-owned facilities to be utilized by the Department for eligible activities, predominantly on state-owned assets. Since November 2013 when LOTCIP was first implemented, the Department has worked with the regional Council of Governments (COGs) and issued funding commitments for 101 regionally-endorsed municipal projects representing approximately \$190 million in construction. \$34 million in LOTCIP-funded construction projects were awarded in SFY 2018, with \$87 million currently programmed to be awarded in SFY 2019. The Department continues to coordinate with the regional COGs on new location solicitations and enhancing project delivery.

A major Department transportation initiative which started construction in 2015 involves widening and safety improvements on I-84 in Waterbury. The project includes complete reconstruction of the highway for 2.7 miles, replacement of 8 bridges, construction of one pedestrian crossing, and the widening of I-84 in each direction to includes the addition of a 3rd lane. The project also includes the realignment of the Interstate roadway in the vicinity of Harpers Ferry Road to eliminate the existing substandard "S" curve alignment, interchange ramp reconfiguration, relocation of the Mad River and Beaver Pond Brook, and state and local road reconstruction. As a result of the realignment of I-84 and the reconfiguration of the ramps, portions of Hamilton Ave, Harpers Ferry Road, Scott Road, Plank Road, Reidville Drive, Plank Road East, and East Main Street are being reconstructed.

This is a significant and important project because this two-lane section of I-84 cannot accommodate existing peak-period traffic demands. Sustained periods of congestion are routine. This section of I-84 carries an Average Daily Traffic (ADT) volume of 121,800 vehicles, including a significant number of trucks that provide for goods movement through-out the state and region. The project is currently targeting the completion of three continuous lanes of travel through the project limits before the end of the summer of 2018, more than one year ahead of schedule. The anticipated overall project completion date is 2019, more than one year ahead of schedule.

The Department has completed the design for the relocation of I-91 northbound Exit 29 in Hartford to Route 5 North and I-84 East in East Hartford (Project No. 63-703). This exit will be replaced with a major diverge consisting of a two-lane bridge entering the left side of the Charter Oak Bridge. Additional improvements include extending the four-lane section of I-91 northbound from Interchange 27 to Interchange 29, and widening Route 15 northbound to three travel lanes from east of the Charter Oak Bridge to the Silver Lane underpass. Project No. 159-191, which involves pavement rehabilitation of I-91 northbound and southbound beginning in the vicinity of the Elm Street overpass in Wethersfield and terminating at the southerly limit of Project No. 63-703 in the northbound direction with the southbound direction terminating in the vicinity of the left-sided merge with the Route 15 entrance ramp in Hartford, will be combined and advertised with Project No. 63-703 under one contract. The Department is processing the contract documents for both projects in preparation for advertising this fall. Construction is anticipated to begin in the spring of 2019 and is expected to be completed in four years.

The I-84 Danbury Project, Project No. 34-349, is an initiative to improve safety, increase capacity, and improve operations and access between Exits 3 and 8 in Danbury. The eight-mile stretch of I-84 experiences significant congestion and is CTDOT's highest priority for expanded capacity on the I-84 corridor. The project planning process has begun and focuses on public engagement and the development and preliminary assessment of alternatives. Subsequent phases will include environmental documentation, identification of a preferred alternative and preliminary engineering. The project team has been meeting with a variety of stakeholders in Danbury and surrounding towns and has launched a project website (i84danbury.com). The first public forum was held on June 13, 2017 at Western Connecticut State University. The public Scoping Meeting is planned for late 2018 or early 2019. Other public outreach efforts include newsletters and social media updates.

Significant transportation improvements on Route 15, the Merritt Parkway, are in design or under construction as part of the Merritt Parkway Corridor Improvement Plan. This includes construction of a 4.6-mile stretch in Fairfield and Westport, as well as the design of the final 6.1 miles of unimproved parkway in Norwalk, Westport, and New Canaan, completing the improvement program.

State Project No. 158-211/207, currently in its second year of construction, addresses 4.6 miles in both the east and westbound directions of the Merritt Parkway in Fairfield and Westport. Included within the project are eleven (11) historic structures that are a mix of Parkway over and under other travel ways, as well as the Saugatuck River. The Westport structures include Newtown Turnpike, Route 15 over Wilton Road, Route 15 over the Saugatuck River, Clinton Avenue, North Avenue and Bayberry Lane. Fairfield bridges include Route 15 over Cross Highway, Merwines Lane, and Redding Road. Roadway improvements include resurfacing the roadway, correcting roadway cross-slopes, widening existing shoulders to 8 feet (4 feet paved, 4 feet grassed), upgrading guiderail with the standard Merritt Parkway style railing, installing concrete median barrier where appropriate, and rehabilitating the historic landscape in accordance with the Merritt Parkway Landscape Master Plan. Construction started on April 1, 2017, and is predicted to cost \$68 million. A majority of the construction will be completed by the end of 2019, with final paving expected to be completed in early summer 2020.

The last major project in the Merritt Parkway Corridor Improvement Plan is State Project No. 102-296. This project is currently being designed and will extend in both the east and west directions from New Canaan to Westport for a distance of 6.1 miles. The project is comparable in scope and magnitude as previous parkway projects within the corridor improvement program and shares similar proposed improvements. The design of this project is scheduled for completion in fall 2019, with construction expected to begin in spring 2020.

A series of projects have been initiated that will result in the removal of traffic signals from the Route 9 expressway in Middletown. Associated work includes the construction of sidewalk "bump-outs" on Main Street to shorten the pedestrian crossing distances, and major intersection improvements at St. John's Square, which will begin construction next year. A project to close the at-grade access from Miller Street to Route 9 by upgrading the Bridge Street

railroad crossing, the removal of the stop-controlled on-ramp from Route 17 onto Route 9 northbound and the removal of the traffic signals on Route 9 are currently in design. Previously scheduled for a construction start in 2021, this work has been accelerated at Governor Malloy's request.

Construction of Phase 2 of the Canal Dock Boathouse located in the city of New Haven is progressing, with a certificate of occupancy anticipated to be issued by the end of August 2018. Phase 1 consisted of constructing the platform for the boathouse. This City-administered project is funded by the Federal Highway Administration and the State as part of the I-95 New Haven Harbor Crossing Corridor Program in order to satisfy commitments made to the City of New Haven relative to the demolition of the former Yale (Adee) Boathouse. Upon completion, the new facility will be administered by a non-profit agency and will provide function space, opportunities for public rowing, and other waterfront-related programming. Phase 3 of the project will include wet-lab space for educational purposes that will be privately funded.

The Bureau's Bridge Management Group has currently programmed all the state maintained structurally deficient bridges for rehabilitation or replacement, and all projects are either in design or construction. When a State-maintained bridge becomes structurally deficient or poor, steps are taken to address the deficiency, either by Bridge Maintenance staff performing repairs, or by the Bridge Management Group staff initiating a project to repair or replace the structure. If the bridge is maintained by a town or another entity, the Department notifies the owner of the need to correct the deficiency and provides information regarding funding for qualified bridges. Over the last several years, the number of structurally deficient bridges has been steadily decreasing as the result of availability of additional state funds, additional maintenance staff to perform bridge maintenance work, and additional engineering staff to accomplish bridge capital improvements. The Bridge Management Group is also programming work based on an asset management approach to achieve and maintain established bridge performance targets, as documented in the Department's FHWA certified "*Highway Transportation Asset Management Plan*" (TAMP), dated July 24, 2018. The goal of an asset management system is to systematically and strategically identify and program treatments throughout the bridge's lifecycle, which will, if applied at the appropriate time, result in achieving and sustaining a State of Good Repair.

The Department's Bridge Safety and Evaluation unit continued to inspect, evaluate, and inventory the structural condition of more than 5,000 bridges, 1,800 overhead sign supports, and 900 traffic signal mast arm supports. Signs and traffic signal supports are typically inspected at six -year intervals. Bridges are typically inspected at two-year intervals. However, some bridges are inspected more frequently if warranted due to structural deterioration. This critical function helps to ensure the safety of the traveling public through the identification of deficiencies and needs in a systematic and timely manner. Routine maintenance is also identified to protect the State of Connecticut's multi-billion-dollar capital investment in bridges.

Major bridge replacement/rehabilitation projects active in construction during 2017-2018 include the Moses Wheeler Bridge that carries I-95 over the Housatonic River. The bridge is one of the longest and most heavily traveled bridges in the State of Connecticut. The replacement of the bridge and associated improvements on this section of the I-95 corridor

began in August 2011 at a bid price of \$167 million. This project included the removal and replacement of bridges, and the addition of a new bridge over Naugatuck Avenue. In November of 2016, asbestos was detected in the soils during preliminary design for the Exit 33 project. Work was then halted in the potentially impacted areas of the Moses Wheeler Bridge project. Construction costs to date have totaled \$197 million. Contract time was stopped after substantial completion on December 4, 2016. At this time, all traffic is in final alignment with road surface reconstruction 100% complete.

In March 2018, the Department awarded a \$7.4 million dollar contract, Project No. 138-249. This project packaged all incomplete work items from Moses Wheeler into a new breakout project including the appropriate provisions to address the asbestos contamination. In addition, the Project also included the completion of a new public boat launch and parking lot, removal of the temporary work trestle in the Housatonic River, and the construction of a new parking lot in Stratford. This project is scheduled for completion in the spring of 2019.

Another major project involves the reconstruction of I-95 over the West River in the cities of West Haven and New Haven. The \$134 million project began construction in December 2013 and is expected to be completed in late this year. The project includes full replacement of the bridges carrying I-95 over the West River and Route 10 (Ella Grasso Boulevard) and consolidated the previous I-95 Interchange 44 and 45 “loop” ramps in favor of a new “diamond” interchange which increases safety and improves traffic flow by eliminating the “weaving” operations on the interstate. Overall, the project includes reconstruction of approximately one mile of I-95, along with construction of a new, four-lane extension of Ella Grasso Boulevard which connects with Kimberly Avenue, providing access to West Haven from the new interchange. Additionally, as a result of coordination with local residents, the Department has worked with the City of New Haven to identify and construct traffic calming measures along Sea Street, as well as a connective segment of the Harborside Trail, which benefits multi-modal users in both communities.

A rehabilitation project for the I-84 Hartford Viaduct, which carries I-84 over Amtrak, city streets, and parking lots in Hartford, is currently in construction. The project includes repairs to structural steel, bearing and concrete repairs to the bridge deck and supporting substructure, replacement of the median barrier, and parapet modifications. Similar repairs will also be accomplished to Bridge Nos. 01765 and 01766, located just east of the viaduct along I-84. The three projects are combined into one construction contract. Construction began in the spring of 2017 and will be complete by the fall of 2019.

Planning for the long-term redesign and reconstruction of the I-84 Viaduct continues under the I-84 Hartford Project. The project will address structural deficiencies, improve traffic operations and safety, and improve mobility on the I-84 mainline and its interchanges between Flatbush Avenue and I-91. The Lowered Highway alternative would relocate a portion of the Amtrak rail line, improving rail operations in Hartford; eliminate the viaduct by bringing I-84 down at or below ground level; reduce I-84’s impact on neighborhoods; and, free up as many as 45 acres of land, creating opportunities for development including TOD around a new, multimodal station opposite Union Station. The project will also improve access, safety, and

mobility for bicycles and pedestrians within the project area. A draft Environmental Impact Statement is expected in early 2019.

The Department continues to employ efficient contract delivery methods to maximize contractor innovation and deliver projects more quickly to construction. The success of the Department's first Design-Build construction project replacing 4 bridges on Route 8 in Bridgeport has led to yet another 4 bridge replacement project using this alternate contracting method. The project will also use Accelerated Bridge Construction (ABC) techniques including Prefabricated Bridge Units (PBUs) and Geosynthetic Reinforced Soil–Integrated Bridge System (GRS–IBS) to help reduce bridge construction time and cost. Three of the four bridges are located in the city of East Hartford and carry Route 2 Westbound over I-84 Eastbound, I-84 Exit ramp over I-84 Eastbound, and Route 2 Eastbound over I-84 ramps. The fourth structure located in Willington and carries Potter School Road over I-84 was recently completed on August 24, 2018 in just 61 construction days. The \$23 million project began September 2017 and is scheduled to be completed in the early 2020.

The innovative construction method referred to as Accelerated Bridge Construction (ABC) has been used in several construction projects in Connecticut. ABC is bridge construction that uses innovative planning, design, materials, and construction methods in a safe and cost-effective manner to reduce the onsite construction time that occurs when building new bridges or replacing and rehabilitating existing bridges. ABC improves site constructability, total project delivery time, and work-zone safety for the traveling public. ABC reduces traffic impacts, onsite construction time, and weather-related time delays. Since 2012, 24 projects have been completed using ABC, 8 others are in construction and another 6 are in various stages of design from Pre-design to Contract Processing.

The northbound Gold Star Memorial Bridge, located on I-95 between Groton and New London, is planned for major bridge rehabilitation. The construction phase will be divided into 3 separate construction projects. The first of the three projects, scheduled for advertising in January 2019, will be focused on structural steel strengthening and touch-up painting on the eastern portion of the bridge comprised primarily of deck truss spans. The second of the three projects scheduled for advertising in September 2020 is also focused on structural steel strengthening and touch-up painting on the western two-girder spans of the bridge. The third project phase, scheduled for advertising in November 2022, will include bridge deck replacement. Additional work includes the replacement of the rocker bearings, and replacement of existing structure-mounted sign supports. In Addition, a minor rehabilitation project for the I-95 Gold Star southbound bridge is in construction. This project addresses miscellaneous steel repairs, spot painting, deck patching, and includes installation of a new membrane, pavement overlay and bridge joints. The project commenced in the spring of 2017.

Bridge No. 00037, a two-span structure carrying U.S. Route 1 over I-95 in Stamford, is scheduled for a superstructure replacement. The project's construction cost is estimated at \$20 million, with construction anticipated to start in 2018 and be completed in 2020. The project will use accelerated bridge construction (ABC) techniques to demolish and replace both spans during two weekends using Self-Propelled Modular Transports (SPMTs). This project will be

very similar to the Department's successful I-84 Southington bridge superstructure replacement project that was completed in June 2014.

The I-84/Route 8 Interchange in Waterbury will be rehabilitated to provide additional service life in anticipation of a future interchange replacement. The project will address the mainline I-84 and Route 8 structures and the turning roadways connecting them. The three design projects were awarded as a single \$153 million construction contract in April of 2018 and scheduled for completion in June 2022. The project includes structural steel repair and strengthening, bridge deck repair and resurfacing, and bridge deck replacement on all spans of the Route 8 northbound interchange bridge and 5 spans of the Route 8 southbound bridge.

A preliminary engineering study has been initiated to investigate alternatives for the design and replacement of the I-84/Route 8 Interchange. Survey and traffic data collection, including traffic volumes and origin/destination statistics, have been completed. Models are being prepared in order to project future traffic demand for the Interchange. The scope of the initial study will consist of developing a broad spectrum of alternatives for reconfiguration of the Interchange that will address the needs and deficiencies of the corridor. Fiscally constrained alternatives, including potential near-term measures for improving operational and safety needs, are also being explored to manage and maintain the existing infrastructure.

A project to replace the existing railroad bridge over Atlantic Street in Stamford is currently in construction. The project incorporates accelerated bridge construction techniques. The work is broken down into two phases. Phase 1 relocates the buried utilities and the I-95 NB exit ramp, and reconstructs a portion of South State Street. The Phase 1 construction contract was awarded and work began in the spring of 2016. Phase 2 will replace the railroad bridge using innovative construction techniques such as jump spans and Self-Propelled Modular Transport (SPMT) units. Also, at track level, a new station platform will be constructed on the north side of the station in anticipation of a new Track 7 to be used in the future to service the New Canaan line. The Phase 2 project was awarded in the summer of 2017. The overall construction completion will be early in 2020, with the bridge completed late in 2019. The total construction cost for Phase 1 and Phase 2 including rail overhead catenary improvements and new station rail platform extension is estimated to be approximately \$173.8 million.

The proposed rehabilitation of the Heroes Tunnel, carrying Route 15 through West Rock Ridge in Woodbridge and New Haven, is in the preliminary design stage. The Department is presently considering construction alternatives to correct existing deficiencies, including alternates to construct an additional tunnel barrel to maintain traffic during construction. Currently the Department is preparing an Environmental Assessment in order to document impacts and identify a preferred alternative. Construction is currently anticipated to begin in spring 2022 and be complete by fall 2026, with an estimated construction cost of \$200 million.

A major bridge rehabilitation project for the Arrigoni Bridge, Route 66 over the Connecticut River in the towns of Middletown and Portland, is now in final design and is scheduled for advertising in February 2019. The construction project, estimated to require two full seasons, will include structural steel repair and strengthening and the replacement of the bridge decks on both approach spans. The concrete bridge decks of the two 600 foot main

spans over the river were replaced in a prior project completed in 2012. Construction cost for the current project is estimated at \$37 million.

The Rochambeau Bridges, which carry I-84 over the Housatonic River in Southbury and Newtown, are currently in the design process to rebuild new bridges on the existing substructure. The crossing is made up of two separate and unique structures, one carrying eastbound and the other westbound traffic. The design will leverage the separate structures to enable a traffic shift from one structure to the other enabling the replacement of each superstructure without any impact to traffic. The project is currently slated to use approximately \$60 million in Fix-It-First Bridge funds, with the project being advertised in the 2020 to 2021 timeframe.

The East Haddam swing bridge, which carries Route 82 over the Connecticut River, connecting East Haddam and Haddam, is due for a major rehabilitation starting in 2020. This 104 year old structure is a historical landmark that has served the local, state and river traffic communities and industries extremely well. The \$45-\$60 million rehabilitation will include a deck replacement, structural, mechanical, computer and software upgrades to ensure proper opening and closing to accommodate high boat traffic during the peak summer months. The project's design will look at adding a much needed pedestrian sidewalk to serve the existing economic community and help foster future economic plans for both towns. The sidewalk may be built as part of this rehabilitation project, or as part of a future construction project. A federal BUILD application promoting rural economic development and transportation connectivity was submitted by the Towns of Haddam and East Haddam in July of 2018, to hopefully obtain funding for the sidewalk. A decision is expected be announced in the fall of 2018.

A new highway maintenance repair and stores facility is under construction in Rocky Hill and will consolidate the existing repair and stores operations in Wethersfield and the outdated machine shop in Portland. The project involves the construction of an approximately 82,000 SF building, including administrative offices, vehicle repair bays, machine shop, material storage parts room, and employee support and utility spaces. The project also includes the demolition of an existing obsolete building and the construction of a separate 2,450 SF unheated cold storage building for material storage, a new motor fuel island, and site improvements, plus utilities to support the new and existing buildings that are to remain. The construction of this facility started in May 2015 and was completed in August 2018. The final construction cost is estimated at \$41 million.

A new Bus Maintenance Facility serving the Waterbury Area has recently received a Temporary Certificate of Occupancy (TCO), pending the completion of minor code work requested by the State Building and State Fire officials. This 276,000 SF building is a multi-story facility accommodating bus storage, maintenance and administration. Additionally, a trailhead and a multi-use trail were constructed within the project limits to support the Naugatuck River Greenway Trail. This facility is located on a parcel of property in the town of Watertown, adjacent to Frost Bridge Road (SR 262) and the Naugatuck River. The facility replaces the storage and maintenance facility, located in leased space in a former foundry in the Waterville area of Waterbury. The total project cost is approximately \$93 million dollars.

The New Haven Rail Yard (NHRY) Facilities Improvement Program is a comprehensive plan to transform and provide state of the art storage, servicing and maintenance facilities for the New Haven Line fleet, as well as CT Commuter Rail service (Shoreline East and Hartford line). The \$1.178 billion dollar multi-project program is approximately one-third complete. Completed projects at the NHRY include the M8 Acceptance Facility, Diesel Storage Yard, Traction Power Supply Substation, Independent Wheel Truing Facility, and the recently opened Component Change-Out Shop and Maintenance of Way Facility. Active projects at the NHRY include the Central Distribution Warehouse and the Yard Power Upgrade project. Projects currently in design include the East End Connector, Pedestrian Bridge Overpass, and West End Yard. The Pedestrian Bridge project will connect all four Union Station platforms to each other and the proposed 1,000 space public parking garage to be built adjacent to the existing garage. Design has begun for the new garage and the connecting pedestrian bridges.

On June 16, 2018, revenue service began on the *CTrail* Hartford Line. The New Haven-Hartford-Springfield (NHHS) Rail Program added this key rail component to a more robust and vibrant Connecticut multi-modal regional transportation system. Utilizing funding from the new federal High-Speed Intercity Rail Program and state bond funds, the NHHS Rail Program now provides some of the nation's best passenger rail services. As the gateway to New England, the NHHS Rail Programs 17 round trips per day from New Haven to Hartford will also facilitate improved service to Massachusetts, Vermont and, in the future, Montreal. New train service will connect communities, generate sustainable economic growth, help build energy independence, and provide links to travel corridors and markets within and beyond the region.

Over the past year, the majority of the civil construction work was completed, including new track bedding, ballast, and improvements to drainage as well as retaining walls and bridge replacements. The most northerly phase of the work (Phase 3A North) to upgrade the majority of the line to a double track configuration is now under way. This work will result in expanded service options, with up to 17 round trip-passenger trains per day to Hartford and 12 round trips to Springfield. The program also increases freight capacity.

The program included replacing the Amtrak Stations in Berlin, Meriden, and Wallingford. These new stations offer amenities to create an inviting passenger experience to complement rail travel. Five hundred foot long high-level platforms facilitate safe and efficient passenger boarding onto Hartford Line. Connecting the two platforms at each station are stairways, elevators, and an overhead pedestrian bridge to provide safe and convenient access across the tracks. To shelter passengers from inclement weather, overhead canopies cover approximately half of the station platforms. During winter weather events, the new platforms are equipped with a heating system to melt snow and ice. Passenger train information systems provide near-real time service updates including arrival, departure, and track information. Each station is fitted with security cameras and Blue Light emergency call boxes to provide a safe environment for passengers' trips. Existing Stations in Hartford and New Haven State Street underwent upgrades to provide improved service. While the work at Hartford Union Station was completed in the summer of 2016, a new boarding platform was completed this year in time for revenue service at State Street Station. Similar services to improve the customer experience were also provided at these two stations. Planning and design work continues on future phases

of the program including stations in North Haven, Newington, West Hartford and Enfield, along with additional double tracking north of Windsor.

Two significant movable bridges each over 110 years old have been identified for replacement along the New Haven Line. These bridges are key pieces of infrastructure that carry rail commuter and intercity service over two rivers and are vital to the operation of the Northeast Corridor. The Department has started the designs for the replacement of the movable bridge over the Norwalk River, known as the “Walk Bridge”, and the movable bridge over the Housatonic River, known as the “Devon Bridge”. The Walk Bridge program is utilizing the Construction Manager / General Contractor (CM/GC) alternative contracting method. Advance projects for the program, CP243 and Danbury Dockyard, are in construction since 2017 at an estimated construction cost of \$325 million. The Walk Bridge will start construction in 2019 at an estimated construction cost of \$550 million. The Walk Bridge replacement is anticipated to be completed in 2023. The Devon bridge replacement is in the environmental planning phase. The Devon Bridge is anticipated to start construction in 2024 at an estimated cost of \$1.2 billion.

Shore Line East railroad expansion is continuing to progress. The Branford and Guilford stations have been expanded and are now operational from both sides of the tracks and construction is substantially complete. The Clinton Station design is nearing completion and scheduled to advertise in January 2018, with construction beginning in the spring 2018. This project includes the construction of elevators with an up and over pedestrian bridge, and a new platform and parking on the North side of the tracks. The Madison Station Improvements are scheduled to begin design in the winter of 2017. The station upgrades are expected to go into construction in 2019, and a new parking garage will go into construction in 2020.

The project to construct P&W Railroad spur tracks to terminal properties on Waterfront Street in the New Haven Port Area is now complete. Discussions with the New Haven Port Authority regarding surplus properties, owned by the Department in the port area, are ongoing.

The Bureau of Highway Operations provided roadway and roadside maintenance to 5,682 effective two-lane miles of roadway and provided snow removal and other roadway maintenance services to 76 state agencies. With respect to snow and ice control, there were 17 winter storms which required the use of 184,286 tons of sodium chloride and 1,169,170 gallons of liquid magnesium chloride and 0 cubic yards of sand abrasives applied by 634 state trucks assisted by 221 contracted trucks for plowing purposes only. Maintenance of existing roadways included 278 lane miles of vendor-applied bituminous concrete overlay. In addition, 4,886 linear feet of drainage pipe was installed along with 227 drainage structures. During the past year, maintenance repairs were performed on 1040 of the 4,004 state-maintained bridges through the combined efforts of Department personnel and contractors. The total number of state-maintained bridges remained the same as last year. The Traffic Services Units installed 2,019 miles of center lines and lane lines; erected 789 new traffic regulatory, warning and directional signs; renewed or removed 7,436 existing signs; continued maintenance of 2,783 traffic signals and 1,281 miles of highway illumination; and installed 52 new traffic signals and 385 signal revisions.

There were 4,285 highway encroachment permits issued. The Oversize/Overweight Vehicle Permit Unit collected \$3,605,843 for the issuance of 89,485 oversize/overweight permit trips and 51 radioactive permits and 78 industrial permits.

The Department's computerized traffic control signal systems include a total of 956 traffic signals on 53 major arterials in 58 municipalities.

The Operations Centers responded to a total of 4,710 reported incidents on the state's limited access highway system. The Newington and Bridgeport Operations Centers monitor 327 highway cameras and operate 136 variable message signs and 14 highway advisory radio stations. The Department's Connecticut Highway Assistance Motorist Patrol (CHAMP) Program provided highway assistance to a total of 7,948 motorists along the I-95 corridor from the New York state line to the Rhode Island State line. In the Danbury to greater Hartford area the CHAMP Program provided assistance to 7,011 motorists.

The **Bureau of Public Transportation**'s mission is to provide mobility to the residents of the State and to enhance economic development, access to jobs and protect the environment by providing safe, efficient, economical and reliable transportation alternatives. The Bureau is responsible for *CTtransit* and *CTfastrak* bus service, paratransit service, New Haven Line, Hartford Line, Shore Line East rail services and Connecticut River ferry services as well as regulatory oversight of taxi, livery, and household goods companies.

The Bureau is continuing its focus on service quality, reliability and capacity by working with its transportation providers to improve service delivery. The Bureau is also responsible for a statewide capital program to upgrade transit and rail facilities, maintain and purchase new rail cars, locomotives and buses and replace aging supporting infrastructure..

Ridership trends for rail services were mixed in calendar year 2017, the most recent year for which data is available. On the New Haven Line, ridership decreased slightly by 0.5 percent, however, the New Haven Line remained the busiest rail line in the nation with more than 40 million passenger trips in 2017. Shore Line East ridership fell by 5.1 percent in 2017. New *CTrail* Hartford Line service began on June 16, 2018 with 17 weekday roundtrip trains provided by Transit America Services, Inc. and Amtrak. Hartford Line ridership will be reported in next year's report.

On the bus system, *CTtransit* ridership increased to 29,849,525 passenger trips in FY2018, up 0.1% from FY2017. *CTfastrak* ridership increased to 3,445,709 passenger trips in FY2018, up 8.9% from the prior year.

The department launched the U-PASS program in August 2017. Fifteen state colleges and universities participated in the program. U-PASS offers students the ability to ride any train or bus (local & express buses, *CTfastrak*, Shore Line East, New Haven Line & branch lines, and on services provided by the transit districts) an unlimited number of times within Connecticut for a fee of \$20 per semester. In 2018, Western Connecticut and Saint Joseph's University joined the program. Between August 2017 and June 2018 there were 1,589,921 one way U-PASS trips

taken on buses and trains combined. U-Pass is now also accepted onboard all Hartford Line trains.

In August 2017, the department initiated a new express bus service between Hartford Union Station and UCONN's Downtown Storrs Center. As of July 31, 2018, the service has carried 112,928 passengers.

In March of 2018, the department concluded its Section 5310 application cycle for FY 2017, having awarded 34 accessible vehicles to provide demand response transportation services to seniors and individuals with disabilities. In coordination with the Regional Councils of Governments, the vehicles were distributed to the successful applicants.

During FY2018 three Transit Districts began developing pilot Micro-Transit programs designed to provide on demand paratransit services to portions of their service area. The Greater New Haven Transit District, Norwalk, and 9 Town Transit in Estuary each began developing new software and service models to improve the quality and quantity of demand response service being provided in Connecticut.

In addition to managing the statewide bus and rail system, the Bureau of Public Transportation, in cooperation with the Bureau of Engineering & Construction, made significant progress in moving its long-term Capital Program forward.

Major activities and achievements during the year include:

- Hartford Line service began on June 16, 2018. The new train service was well received by the public. During opening weekend, almost 22,00 people tried the service and more than 10,000 people used the service in each of the first two weeks. The new train service is provided by TransitAmerica Service, Inc./Alternative Concepts, Inc. under contract to the State of Connecticut and by Amtrak. Hartford Line features a coordinated train schedule and integrated ticket program that allows customers to ride any train with one ticket. New stations were opened at Berlin, Meriden and Wallingford and a new high-level boarding platform was added at both the New Haven State Street Station and Hartford Union Station.

Continued construction of the second phase of a new signal system on the New Haven Line. This segment includes Greenwich to Norwalk and incorporates the changes to implement a new interlocking between Norwalk and Westport to mitigate impacts caused by the construction of the WALK Bridge.

- Continued construction of catenary (electric overhead wire) replacement and bridge rehabilitation from New Haven to the New York state line on the New Haven Main Line.
- Continued inspections and repairs to New Haven Line moveable bridges to extend their life until they can be replaced.
- Continued the track maintenance program, bridge timber replacement program, and railroad bridge maintenance program.

- Assisted the Next Generation Equipment Committee in completing a dual mode (diesel/3rd rail) locomotive specification for future national use.
- Continued oversight of Kawasaki application of Fleet Modification Instructions to the M8 fleet in cooperation with Metro-North Railroad. This process standardizes the equipment and software across the entire fleet to bring it to the highest level of reliability.
- New Haven Line future equipment requirements in cooperation with Metro-North Railroad.
- Continued construction of key facilities in the New Haven Rail Yard. The new Maintenance of Way support facility is now fully operational. Construction continues on a project to create a redundant source of power for trains in the Yard and the new state of the art automated parts warehouse is nearing completion. And, the design of the East End Connector, that will provide increased flexibility for train movements in and out of the Component Change Out Shop has completed design.
- Completed design of a north side platform for the Clinton Railroad Station and continued construction of electrified sidings at the Guilford and Old Saybrook Stations.
- Continued design for additional parking at Union Station in New Haven.
- Completed planning efforts for the Barnum Station in Bridgeport. This project supports ongoing and planned local economic development.
- Continued design and engineering for the rehabilitation of Walk Bridge (over the Norwalk River) on the New Haven Line. Two break-out projects related to the Walk Bridge Program are underway. The first project electrifies the lower Danbury Branch line to allow trains to turn at the Norwalk Station without causing delays on the mainline. The second adds an interlocking where trains can move from one track to another just east of the Norwalk Station.
- Continued conceptual design for the Devon (over the Housatonic River) moveable bridge on the New Haven Line.
- Upgraded the network infrastructure on the New Haven and branch lines to support the future installation of cameras, passenger communication systems and ticket vending machines.
- Continued design and installation of the Positive Train Control (PTC) system, which will allow integrated command, control, communications, and information systems for controlling train movement. The project is on schedule to meet the current federally-mandated deadline of December 31, 2018.
 - The Bureau substantially advanced the **New Haven Line Capacity and**

Speed Analysis Study. The study is focused on a complete assessment of the rail infrastructure, equipment, and service plans to identify opportunities to create a more dynamic rail service, responsive to new customer travel patterns and to improve travel time and the customer experience. The study will include a comprehensive look at both the rail travel market in southwestern Connecticut, and the role and the capability of the New Haven Line to service that market. While new stations have been added, infrastructure improvements constructed, and service changes implemented, the basic structure and delivery of the rail service has remained unchanged for many years. This study is focused on examining the rail infrastructure, facilities, equipment, and services to develop a strategy for infrastructure and equipment investments to better serve.

This study will include the following services: the New Haven Line and its three branches (New Canaan Line, Danbury Line, and Waterbury Line), Shore Line East, Hartford Line, freight rail services. The initial study recommendations are expected in late 2018 with subsequent refinements to the analysis to follow in 2019.

- The Bureau completed work to replace *CTtransit*'s current fare collection system for all divisions (Hartford, New Haven, Stamford, New Britain, Waterbury, Bristol/Meriden, and Wallingford). The Bureau replaced 600+ fareboxes and is in the process of implementing an account based smartcard for transit customers. The new system will improve service reliability and revenue accountability, and will reduce maintenance costs and driver/customer conflicts. New technology will provide currency validation, increase payment options and ease customer use, which will improve the transit-rider's experience resulting in increased ridership. Also, this new fare collection system will continue to collect ridership and revenue data while allowing for quicker fare payment transactions reducing dwell-time and improving on-time performance.
- Construction of the new bus storage and maintenance facility for the *CTtransit* Waterbury division continued and is scheduled to be completed in Fall 2018.
- The Bureau was recently awarded \$1.45M from the Federal Transit Administration (FTA) for the Low or No Emission Vehicle Program (Low-No). The Low-No competitive program provides funding to state and local governmental authorities for the purchase or lease of zero-emission and low-emission transit buses as well as purchase, construction, and installation of required charging equipment. The Department will deploy five (5) 40' Proterra E2 Max battery electric buses in a joint effort with the Hartford Division of the *CTtransit* system and the Greater Bridgeport Transit Authority (GBT), in order to evaluate potential future use in the *CTtransit* fleet.

The **Bureau of Policy and Planning** conducts planning studies and associated activities for the movement of people and goods for all modes of transportation including highway, rail, bus, maritime, and pedestrian/bicycle. Documentation of proposed alternatives with environmental analyses is developed for all proposed projects through a public informational process. The Bureau interacts with Legislative and Congressional members and staff, as well as nationally recognized transportation organizations, on various transportation bills including major authorizations and appropriation bills for surface transportation, and intercity passenger rail.

The Bureau maintains a database for transportation planning related State legislation. All proposed bills that pertain to the Bureau of Policy and Planning are reviewed and input is provided to the Department's Legislative Office when necessary.

The Bureau has implemented a framework for complying with the transportation performance management (TPM) requirements of federal surface-transportation legislation and rulemaking, including reporting on, and setting targets for, 17 national performance measures and associated submittals, including documents and reports, totaling over 100 deliverables. The framework has been used to develop a deliverables tracking mechanism identifying deadlines, roles and responsibilities, and key agency staff for each of the deliverables. Using these tools, the Bureau successfully coordinated the timely establishment, DOT Executive approval, and Metropolitan Planning Organization (MPO) coordination for all 17 performance measures and other deliverables. The Bureau continues to coordinate, to the maximum extent possible, with MPOs in national performance target setting, as these organizations are also required to set corresponding performance targets for their own jurisdictions within 180 of state target establishment. The Bureau has also initiated an effort to reconcile its own performance measures with the national performance measures in order to effectively communicate performance to all stakeholders in our transportation system.

As part of the Department's ongoing performance management initiative, the Bureau continues to publish performance measures and targets for bridge and road conditions, project delivery, highway safety, bicycle and pedestrian accessibility, and rail and bus transit programs. These measures are updated quarterly and placed on the Department's performance-measures web page for public access. The Department has continued to streamline its reporting process and achieved its LEAN targets for "Time to Publish," reduced from an average of 120 days for the four quarters prior to the LEAN to 45 days over the next 4 quarters and 31 days for the latest four (4) quarters, all with reduced resource requirements.

Bureau staff continues to represent the Department at meetings held by the Office of Policy and Management on the implementation of the State's Plan of Conservation and Development (C & D Plan), at Neighborhood Revitalization Zone Advisory Board Meetings and at local and regional Complete Streets steering committee meetings.

The Bureau recently prepared its federally required long-range transportation plan. As part of this effort, Connecticut's tribal nations were engaged and necessary public meetings and notices were given. The Plan supports the Congressional goals outlined in the FAST Act, supports other state agency objectives, and includes four goal areas of Economic Growth, Deliverability, Quality of Life, and Sustainability.

The Bureau continues to administer the “Community Connectivity Program,” an output of Let’s Go CT!, designed to improve conditions for walking and bicycling to and within urban, suburban and rural community centers. The goal of this Program is to make conditions safer and more accommodating for pedestrians and bicyclists, thereby encouraging more people to use these healthy and environmentally sustainable modes of travel. One component of the Community Connectivity Program is to offer Connecticut’s towns and cities assistance to conduct a Road Safety Audit (RSA) at important bike and pedestrian corridors and intersections.

Previously, the Bureau performed 80 RSAs, and their corresponding reports, in just over a year. The reports were provided to all the municipalities that applied and they were posted on the project website. The final report will allow the municipalities to pursue future funding opportunities. Due to pedestrian safety concerns, the Bureau performed an additional RSA in the Town of Watertown on the Main Street Corridor (Route 63) from French Street to Warren Way. A report is being drafted to describe the Community Connectivity Program as a whole and summarize the observations. This report will contain a description of the Program, a summary of the RSA Recommendations and Lessons Learned from the Program.

Another component of the Community Connectivity Program is to administer a Community Connectivity Grant Program (CCGP) to provide funding for targeted infrastructure improvements that are commonly identified through RSA’s, or other transportation planning initiatives. The objective of the CCGP was to provide construction funding directly to Municipalities that would result in smaller scale infrastructure improvements that are aligned with the overall program goals. The Bureau solicited applications for grants directly from Municipalities for grants ranging from \$75,000 to \$400,000. There were 80 towns that submitted applications for a total of approximately \$25 million in needs. Applications were evaluated based on specific criteria such as program goal relevance.

In addition, the Community Connectivity Program administers the Critical Pedestrian Safety Improvements Initiative. The Bureau is administering the design and construction phases by upgrading the safety of pedestrian crossings with a high risk of motor vehicle crashes involving pedestrians and/or cyclists. These can be crossings with a history of such crashes, or with a high risk of crashes and the potential for serious injuries due to the combination of high vehicle speeds and a high volume of pedestrians or cyclists. Requests for help solving serious pedestrian safety problems often come from communities that recently experienced crashes involving serious injuries or fatalities at pedestrian crossings, or where numerous near misses are reported to town officials or local police. Often these are crossings in community centers, or at major pedestrian activity centers such as schools, and colleges.

Some of the completed RSA’s identified serious safety problems that can be addressed with modest improvements. Current projects are being administered on Route 10 in Cheshire, Bishops Corner in West Hartford, Route 32 in New London, Route 20 in East Granby, and Route 104 in Stamford. In addition, Route 1 in southwestern CT was identified as having the highest number of pedestrian fatalities in the State. The Bureau is conducting a series of RSA’s within 5 towns (Greenwich, Stamford, Norwalk, Darien, and Westport) covering over 22 miles to identify needs and opportunities for improvements that will enhance pedestrian safety along this corridor.

The Bureau is in the final stages of completing the Active Transportation Plan. It will lay out a multi-pronged approach to meet the needs of the non-motorized bicycle and pedestrian population and present projects and policies that will immediately improve the safety, connections, and accessibility for the residents and visitors of Connecticut. The Plan will present construction projects to be undertaken and initiated over the next five (5) years to improve safety and accessibility for cyclists and pedestrians in the most critical locations in the state. Under this Plan, the State Bicycle Map is being complete redone. Once complete, a Interactive Bicycle Map will utilize the latest technology to assist designers in creating bike/ped friendly roadways, where suitable.

The Bureau is assisting with implementing the Complete Streets Policy Department- wide. Complete Streets is a means to provide safe access for all users (pedestrians, bicyclists, transit users and vehicle operators) by providing a comprehensive, integrated, and connected multi-modal network of transportation options. It is the policy of the Department to consider the needs of all users, of all abilities and ages, in the planning, programming, design, construction, retrofit and maintenance activities related to all roads and streets as a means of providing a safe and efficient transportation network that enhances the quality of life and economic vitality. This implementation includes training, design guidance, data collection, and plans to monitor the output through performance measures. Several Complete Streets Standing Committee meetings have already been held.

The Bureau continues to support the Safe Routes to School Program (SRTS). While the formal federal program has expired, the Bureau has a “Champion Toolkit” on the Department’s website that provides information on how to get a SRTS Program up and running.

The Bureau reviewed and provided comments and recommendations related to non- motorized user access for 110 design projects.

The Bureau reviewed 111 Major Traffic Generator submittals for the Office of the State Traffic Administration (OSTA); developed traffic projections for 20 state projects; continued to update the database of the Departments 40 Continuous Count Stations allowing users to manipulate the data based on numerous query opportunities; and continued to identify the locations of all traffic counts from state projects and major traffic generators, to Google Earth for quick and efficient identification.

With the introduction of two new transit services, CTfastrak and the Hartford Line, planning for Transit-Oriented Development (TOD) is a Bureau priority. Bureau staff administers the Office of Policy and Management’s (OPM) 2015 and 2017 TOD Pilot Planning grants and has actively participated in the State’s Transit-Oriented-Development interagency task force to assist municipalities with planning and design technical services. Bureau staff also participates in the Governor’s Interagency TOD Working Group.

Bureau staff engaged in several TOD initiatives through the Department’s Task-based consultant team, including the Hartford Line TOD capacity project. This is a project funded by FTA competitively awarded to the Department to assess TOD potential along the Hartford Line.

The Bureau completed its first multi-modal Statewide Freight Plan, in accordance with federal transportation legislation. The Statewide Freight Plan focuses on economic competitiveness, efficiency, safety, and environmental factors. Without such an effort, Connecticut stands to lose out on economic growth opportunities and hamper the efficiency of the entire New England corridor. The Freight Plan and the Critical Urban and Rural Freight Corridors were submitted and approved by FHWA. To this end, the Bureau coordinates with the other New England freight offices, works regularly with MPOs, State and Federal agencies, and the private sector.

The Bureau continues to provide support for required National and Connecticut Environmental Policy Act (NEPA / CEPA) documentation with several major projects including: The I-84 Hartford Viaduct; I-84, Exits 3-8 in Danbury; the Route 7 and 15 Interchange in Norwalk; the I-91/ I-691 / Route 15 Interchange in Meriden, Heroes Tunnel on Route 15 in Woodbridge; Seaview Avenue in Bridgeport; the Stevenson Dam; and the Saugatuck Swing Bridge in Westport. Additionally, the Bureau has been actively involved with ensuring ongoing compliance with NEPA, CEPA, and Section 106 of the National Historic Preservation Act for the entire Walk Bridge program. All projects within the Department are screened by the Bureau for the appropriate level of documentation under NEPA and CEPA and the Bureau continues to stay informed and comment on legislative and proposed federal rule changes, as well continuing to seek out efficiencies in process, and provide training to the Bureau of Engineering. The Bureau has begun efforts on a NEPA/CEPA Guidance Manual for the Department.

Previous major studies which have been concluded include CEPA documentation for the Union Station Parking Garage, the Re- evaluation of Interchange 33 along Interstate 95 in Stratford and the Merritt Parkway Multi-Use Trail Feasibility Study. Studies which have been closed / cancelled include the Orange Railroad Station and Route 9 signalization project in Middletown.

The Bureau continues to implement and updated the procedures outlined in the Programmatic Agreement between the Federal Highway Administration, the Department, the Connecticut State Historic Preservation Office, and the Advisory Council on Historic Preservation regarding implementation of minor transportation projects. This Programmatic Agreement (PA) has facilitated more efficient methods by which FHWA and the Department review individual undertakings that may affect historic properties and will continue to streamline the process for minor projects that are limited in scope and for which no historic properties will be adversely affected. The First Amended Programmatic Agreement has been finalized and was signed in May of 2018 and will be effective for 5 years.

Through the use of two task-order consultants, the Bureau is also conducting archaeological investigations and historic documentation studies for transportation projects in accordance with State and Federal regulations. The second phase in updating the Department's

Historic Bridge Inventory is now underway. This task re-examines the 388 bridges that were the focus the 1991 study. As of the closing of the 4th quarter of FY2018, approximately 20% of the bridges to be examined have been completed. Completion of this task overall, allows the

Department to streamline the historic review process by exempting 1,220 bridges from Section 106 review. This represents 22% of the total inventory of bridges maintained by the Department.

The Bureau is continuing to coordinate with State and federal regulatory agencies regarding natural resources and listed species issues and also obtains the necessary water resource and Stormwater permits required for all Department initiated projects. Bureau continues to perform inspections of active State controlled construction sites and maintenance projects to ensure compliance with permit conditions, as well as compiles and submits yearly reporting requirements to The Connecticut Department of Energy and Environmental Protection (CTDEEP) for various general permits for minor activities under numerous programs including the Departments Drainage Maintenance Plan and Coastal Maintenance Plan.

The General Permit for the Discharge of Stormwater from DOT Separate Stormwater Sewer Systems (MS4 Permit) was finalized and issued to the Department in 2018. Staff from the Bureau have selected outfall sampling locations, as well as investigated and tested various mapping software in order to successfully determine Department needs for implementing the permit requirements. Environmental Planning is the lead for developing mapping for the statewide stormwater system and will continue to work with various Bureaus to comply with this new permit.

The Bureau has implemented changes in conjunction with the Department's Bureau of Engineering and Construction, to more efficiently share data Department-wide and is transitioning to new tracking systems for workflow.

The Bureau also continues to provide support with revising environmental and cultural resource specifications pertinent to the DOT's Standard Specifications for Roads, Bridges, Facilities and Incidental Construction, Form 817.

The Bureau is in the process of finalizing a Noise Policy for State-funded projects and is also in the process of creating a noise barrier wall inventory and will be working with Asset Management to assess their condition.

The Bureau continues to stay abreast of species listings both by the U.S. Fish & Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). The Bureau commented on the Programmatic Agreement between NOAA NMFS and FHWA, and is implementing changes into permit processes to account for new species listings and processes.

The Bureau continues to lead the coordination efforts under Section 7 of the Endangered Species Act for federally funded projects and projects that require federal permits. The Bureau has been working with design engineers to ensure that the coordination is accomplished to meet project schedules.

The Bureau, through its Task Order Consultants is conducting listed species surveys for various projects. The Task Order Consultants are also conducting wetland mitigation monitoring and

producing required reports for various wetland mitigation sites throughout the State. The Bureau is continuing to conduct site investigations at mitigation sites Statewide to manage and ensure success of these sites, including removal of invasive species.

The Bureau is continuing to work with DEEP and the Department's Bureau of Engineering and Construction to find efficiencies within the permitting processes.

Improvements continue to be made in follow up to several Lean events which took place beginning in 2012 regarding permitting processes. Implementation of efficiencies and processes identified two LEAN events held in 2017 regarding Section 106 of the National Historic Preservation Act compliance as well as Connecticut Environmental Policy Act (CEPA) compliance are actively being carried out.

Significant progress is being made in improving the transportation data gathering and reporting process as well as the development of an E-STIP (electronic STIP) with the cooperation of FHWA/FTA and the MPOs throughout the state.

The Air Quality / Travel Demand (AQ/TD) Unit led a week long LEAN event in March 2018 on the streamlining the Department's procedure for regional transportation conformity process required by the Clean Air Act (Section 176(c) (42U.S.C. 7506(c)). As part of the LEAN event, staff will consolidate the two conformity reports (Ozone and PM2.5) into one condensed document to eliminate redundancy and to facilitate quicker review periods by MPOs, and other state agencies.

- The AQ/TD also prepared an air quality emission reduction analysis for a grant application for twelve electric replacement buses for the New Haven garage division of CTtransit, as well as EPA approved MOVES air quality emission software input files for EPA Periodic Emissions Inventory and National Emissions Inventory 2017 inputs.

The Bureau continues to update the 2018 Statewide Transportation Improvement Program with requested Amendments and Actions. The update of the STIP document is done in coordination with the eight Metropolitan Planning Organizations in the state, in consultation with the Rural Planning Organizations and approved by FHWA and FTA.

The Bureau assisted the Office of Contract Compliance in updating the Title VI Accomplishment Report and the Title VI program review. The Bureau is continuing its efforts to assure that all MPOs are in compliance with Title VI and Environmental Justice (EJ) requirements. The Bureau requested, received and reviewed the MPOs' quarterly reports to verify the Title VI and EJ practices. The Bureau has developed the federally required listing of the 2017 federal fiscal year Obligated and Granted projects for the Public and MPOs use.

The Bureau has initiated a Corridor Study program and expects to select appropriate corridor studies in the summer of 2018. The update of the 1997 procedure manual for payments to consultant and Council of Governments continues. This should be completed by the fall of 2018. The Bureau is coordinating efforts with FHWA to formalize the Ferry Boat Discretionary

Program application process to ensure that all CT eligible entities will receive available federal funds to construct ferry boats and ferry terminal facilities.

The Bureau has continued working with CTDEEP to develop 2016 Emissions Modeling Platform and 2017 MOVES input files to support DEEP's analysis method in the Periodic Emissions Inventory (PEI) requested by EPA. New Motor Vehicle Emission Budgets were approved by EPA for the Greater Connecticut Ozone Nonattainment area, effective June 15, 2017. Air quality regional conformity model runs were also completed in 2017 for various transportation projects and to demonstrate conformity to the new Ozone Motor Vehicle Emission Budgets.

The Bureau, working with a consultant, has continued to work on the development of a new state-of-the-practice Travel Demand Forecasting Model in order to meet the increasing demand for more complex and finer detailed travel demand, and air quality. A model base year of 2010 was provided by the consultant at the end beginning of 2018. Staff is developing an additional twelve future model years with a horizon year of 2050 for use in transportation conformity analyzes and corridor alternative analysis studies. These new networks will be viewable in GIS rather than the current "stick" format and provide data for four separate time periods, reflecting two peak periods, the mid-day period between the peaks and night time. The consultant is also working on developing a rail sub model in order to predict more accurate and detailed rail boardings by station and direction.

The Statewide Household Travel Study has been completed and the final report, regional handouts and all appendices were published on the Department's inter and intranet sites. Copies of "scrubbed" survey datasets were transmitted to the Metropolitan Planning Organizations for their use upon request.

The Bureau provided rail ridership boardings estimates for the Niantic Rail Study and as well as opening year ridership estimates by station for the CTRail – Hartford line.

The Bureau participated in an EPA TEAM GHG Tool Study by providing several local scenarios for study as well as creating input data sets from the statewide travel model as part of the TEAM GHG tool testing. The study results were published by EPA in "Applying TEAM for the Northeast States for Coordinated Air Use Management", dated December 8, 2017.

The Bureau developed targets for the Congestion Mitigation Air Quality (CMAQ) Performance Measures as requested by FHWA for May 2018.

The Bureau continues to augment and enhance development of a new comprehensive digitized road network which includes over 21,000 miles of state and local roadways. This network and associated new Linear Reference System (LRS) supports asset and data integration for the entire Department including critical areas such as: HPMS reporting, MIRE, FMIS, capital projects, VIP paving, snow routes, pavement condition, performance management, crash location, and roadway attribution, guiderail, pavement markings, sign, sign supports, signal work areas and traffic volume data reporting.

- In conjunction with this effort, the Bureau continues to assist with the Department's new Traffic Asset Management Plan which is developing policies to ensure Department location and attribution data which is collected will be properly maintained, governed and stewarded to ensure efficient data access and availability. Workflows are being conceptualized on an asset by asset basis, stewards are being identified and centralization of data access is being developed.

In addition, the Bureau maintains the State's traffic counting program, crash data system and an inventory of the highway system. This data, as well as future land use and employment projections, is used to estimate future travel demand, identify current and future capacity deficiencies, analyze alternate highway and transit improvement, and is used in environmental studies.

The Bureau has continued to further build upon its investment in the latest in 3D Photolog technology with the upgrade and purchase of its Photolog ARAN Van fleet. This new technology now supports more efficient data collection and reporting of pavement geometry and condition to the Federal Highway Performance monitoring

The System (HPMS) Report. It is also currently being integrated with the official LRS. Also Ongoing is the review of business workflows with The Pavement Management Section intended to provide efficiency and improved data quality.

The Division of Research led the administration of several transportation studies related to the Northeast Autonomous Vehicle Summit; Impacts of CTFastrak on Real Estate and Urban Economic Development; Enhancing Connecticut's Crash data Collection; Sustainability Strategies for Connecticut's Public Transportation System to Minimize Carbon Footprint; Connecticut Pedestrian Safety Study and Strategic Plan Development; Adaptation of 3D Scanning Technology for Bridge Inspection; Development and Execution of Statewide Household Travel Survey; Development of the Pavement Design Handbook & Interactive Guide; Development of CTDOT Specification Requirement for Minimum Asphalt Requirements; Implementation of 3-D Sensing Technology for Automated Pavement Data Collection; and, Development of Quality Management Plan for Pavement Condition Data..

The Highway Safety Office (HSO) has continued to provide leadership in the field of distracted driving prevention and mitigation. A combination of education and enforcement initiatives has been executed during the past year. These education initiatives include partnering with state and corporate partners as well as funding educational programs for high school students.

The Department has continued to partner with the Connecticut Children's Medical Center on a community awareness project focused on pedestrian and bicyclist safety. The 'Watch for Me CT' media campaign continued in its second year with an expanded statewide outreach effort to engage advocates, highway safety professionals, municipalities and law enforcement to raise awareness of all road users. Combined with an ongoing media campaign, 'Watch for Me CT'

continues to gain leverage throughout Connecticut in an effort to reduce crashes and fatalities related to non-motorized road users.

The Department continued to partner with Kramer International's 'Save a Life Tour' to build on the success of the Connecticut high school distracted driving program developed over the past several years. For the fourth consecutive year this program visited 60 Connecticut high schools. The Department continued to partner with AT&T to feature their highly acclaimed distracted driving documentary, 'From One Second to the Next', which is shown to the students during the assembly portion of the program. Following the video, the students were given the opportunity to use distracted driving simulators to experience the potential consequences of the dangerous practice in a safe setting.

The Department also brought back Chris Sandy's powerful 'Choices Matter' program to 56 high schools in Connecticut during the 2017-2018 school year. When Chris was 22 years old he was charged and convicted on two counts of vehicular homicide by DUI and spent eight and a half years in prison for his crime. In prison he committed himself to preventing anyone else from repeating his mistakes, and his story has since been the inspiration for a book and award-winning documentary. Chris is considered one of the most talented speakers in the youth industry and continues to share his dynamic live presentation at locations in Connecticut and throughout the country.

The relationship with the Governor's Prevention Partnership also continued during the 2017-2018 school year. Their 'E3: Encourage, Empower, Engage Program' was administered in the fall and spring academic semesters and a new group of youth facilitators were trained across a diverse collection of students, schools and organizations. The program helped students maintain their protective norms around not driving while impaired. The peer-led approach, with interactive activities and games, has been well received by the facilitators and the youth participants in the program.

The HSO continued its partnership with the Connecticut Transportation Safety Research Center at UConn. The Center is the host of the Connecticut Crash Data Repository. The CTSRC deployed new crash dashboards in the Crash Data Repository. In 2018, there were over 29,000 queries submitted for crash data averaging 315 data exports each month. The CTCrash.uconn.edu site now has over 2,000 registered users. CTSRC and the CTDOT are also partnering on a projects for driver behavior, they are listed below:

Driver Simulator Project

- Driving Simulator Installed. The driving simulator was installed the first week in June and training was complete on the third week in June. The simulator is now installed and fully functional. CTSRC staff is working to build scenarios and incorporate observed pedestrian behavior into testing scenarios.
- UConn is working with 2 major simulation software manufacturers which we already have contracts with to develop autonomous and connected vehicle driving simulations. This would allow for UConn and the CTDOT to pilot future technologies without doing

so in the real-world. This could be perception and adoption of autonomous technologies, human and car interface, connected signals, connected vehicles, emerging safety features such as lane assist, collision avoidance, automated braking, pedestrian detection and their impacts on driver distraction, reliance, and cognitive workload.

Pedestrian Observation Project

- Field Data Collection. The CTDOT has completed video data collection at 9 intersections and is we are currently waiting to collect data at 2 more. The remaining intersections will be collected in July. Field data collection is scheduled to be complete before July 27th. Data collection via video review for the 9 intersections is 75% complete. Students are working over the summer to complete the final 2 intersections. Data collection and observations should be complete by July 30, 2018. CTSRC Staff have selected 4 intersections to conduct onsite observations and document driver distraction as well as pedestrian behavior.
- Behavioral and Safety Analysis. A database of pedestrian activity has been generated for the 9 sites reviewed over 5,000 pedestrians have already been observed and analyzed. Preliminary analysis of this data has started and full analysis will start in August once data from all sites are collected.
- Non-Motorist Strategic Safety Plan. UConn will not call our document a “Strategic Plan” but call it a “Pedestrian Safety Guide.” This will avoid any confusion with other plans being developed at the CTDOT. UConn and the CTDOT met to review the project and preliminary plan documents. This meeting was held on May 22nd at 10 am at the CTDOT. The meeting focused on methods for intersection selection and reviewed segments the CTDOT has identified as high crash locations as part of their pedestrian plan. The plans differed because UConn is focus on intersections and the CTDOT is focused on segments (typically 2-3 miles in length). Only 2 of our intersections overlapped with the CTDOT’s segments. The differences and reasons for the discrepancies will be noted in the final report from UConn.

Channel 3 Kids Camp

- CTDOT and UConn have planned a two-hour program on distracted driving and distracted pedestrians. The first 45 minutes will be an interactive stage presentation on the brain and how we process data and the dangers of distraction. It will have interactive videos, “Brain Games”, an MC/DJ and Jonathan the husky will be there. The second half of the day will involve letting the kids write their own song of jingle about safety and distraction. We will use a song all the kids will know and then let them change the lyrics or write their own. Then they can perform the song for the rest of the camp or record their song. Kids will receive a t-shirt, draw string bag, and wrist band.

CPTV Distracted Driving Update

- June 7th was the screening of “3 seconds behind the wheel” and the documentary aired on June 21st. Clips and podcasts can be accessed at www.3seconds.org CPTV has asked for a list of Driver Education Schools in the state to have them show this film to their students. It is 1 hour and follows 10 drivers for 6 months via in car cameras and interviews on their behavior. The film also looks at the reason we are distracted and how technology is being developed to improve safety.

Autonomous Vehicle Summit

- The Northeast Autonomous and Connected Vehicle Summit was hosted by the Connecticut Department of Transportation and the Federal Highway Administration on June 12th and 13th, 2018 at the Windsor Hartford Marriott. This event provided an open forum for stakeholders in northeast to network, share, and discuss a wide range of topics related to the future of transportation and infrastructure. Through 30 different speakers the summit provided direct access to both public and private experts who are currently developing and testing this technology. Presentations at this summit covered safety and technology acceptance, impacts of the technology on transit and other areas, policy, planning, pilot programs, data and security, connectivity, issues that are unique to the northeast and partnerships. Many of the pilot programs that were presented have made dramatic advancements since the last year's summit and there are a growing number of pilot programs that are getting underway. Connecticut and Rhode Island presented two pilot programs that will kick off in 2018. Conference attendees were surveyed before and after the summit to gain a perspective of key topics, issues, and action items that resulted from this summit. They are documented and reported as the findings and conclusions in this report.
- Many of the survey respondents after the summit were surprised how fast this technology was moving and that there were pilot programs up and running. One respondent noted: "This was the first conference I've attended where the tone was 'This is what we've done and this is what we learned' rather than 'this is what we're planning to do.'" The overall takeaways from the summit can be summarized as collaboration is key to successful and efficient deployment, testing, and knowledge transfer. That as a collective whole, much more can be learned and achieved than if each state is working independently. Moreover, autonomous and connected vehicle needs must be integrated into a long-range plan, and technology capabilities are just one or many elements. States should use education to foster user acceptance and integration of these technologies into our transportation culture. Furthermore, highly specialized and focused discussions across state agencies and strategic partners must continue, and these partnerships need to be fostered. States should start by developing strategic plans with a clear vision for the future. Plans must be living documents that will need to be flexible, adaptable, and updated on a regular basis. Technologies and policies are evolving too rapidly to create a document that is presumed to be static. States should be active, engaged, and willing to participate in collaborative efforts as the scope and impacts are too large to go it alone.

Improving Data Linkage Systems

NGA Learning Lab on Improving Data Linkage Systems to Reduce Traffic Injuries and Fatalities. This is a six-month project ending in July of 2018 focused on getting state agencies to share and link data being led by the National Governors Association and Center for Disease Control. CT was one of the initial five states selected, five additional states joined later in 2018 due to high demand and they will finish their 6 month projects in October 2018. A report will be developed by the end of July by NGA and a letter will be sent to Governor Malloy from NGA detailing the action items, progress made and future direction of data linkage in CT. UConn is standing up a data repository in a secured portal that can be linked and analyzed.

At UConn we have/need:

- Crash data from CTDOT (2 M records),
- Citation data from CIB (1.5 M records),
- 2015 Chime Data from DPH (1.7 M records),
- Toxicology data for FARS is being received from OCME,
- Awaiting 2007-2016 data from Judicial (MOU is under review with UConn now),
- Need DMV driver and vehicle data,
- Need ER and Trauma data from DPH,
- Need to complete Tox data from State Forensics lab

The Highway Safety Office continues to work in partnership with Central Connecticut State University (CCSU) and the Institute for Municipal and Regional Policy (IMRP) to analyze the current racial profiling law and make recommendations to the Connecticut General Assembly to better align the statute to legislative intent and current best practices. This initiative includes collecting, maintaining, and providing public access to traffic stop data and evaluation of the results of such data. Currently, data collection by all law enforcement agencies in the State with the ability to make traffic stops is mandated by law. Agencies are collecting data and submissions to the Office of Policy and Management via the Criminal Justice Information System are made on a monthly basis. Multiple training sessions have been held for law enforcement agencies to educate them about the law and options for data collection and submission. Training sessions on fair and impartial policing have also been given at multiple law enforcement agencies. Similarly, a public awareness campaign is underway to educate the public about the project and their rights during a traffic stop. IMRP has released a full report on traffic stop data analysis and most recently released another six months of data on the CT Data collaborative website. For more information about this project, visit www.ctrp3.org

The HSO is responsible for processing crash reports received from state and local police departments. The process involves locating the crash to a specific Route or Road and a milepoint as well as identifying errors with the data and correcting the errors. For fiscal years 2017-2018, we processed over 225,000 crash reports. The unit established a data quality procedure for serious injury “A” crashes to obtain the best possible quality of these most serious crashes. The crash data is sent electronically to the National Highway Safety Traffic Safety Administration (NHTSA) for the Fatality Analysis Reporting System (FARS), the UCONN Crash Repository and the CT Department of Motor Vehicle for use in the Safety Net program.

Connecticut’s seat belt use rate increased to an all-time high of 90.3 percent in 2017. This is the first time that the state’s compliance rate has reached over 90 percent, which puts Connecticut at the highest compliance rate in all of New England. The Highway Safety Office (HSO) has been working diligently with state and local law enforcement and our traffic safety partners to move the needle and this increase is significant. In 2016 Connecticut’s was 89.4 percent and the national average was 90.1 percent. The current national rate is 89.7 percent.

The Click It or Ticket (CIOT) enforcement campaigns in May and November are the key tool in public awareness and enforcement for seat belt use. The campaigns aimed at reaching motorists and raising awareness about the dangers of driving without buckling up. The HSO also created a Seatbelt Working Group to discuss methods to increase belt use and decrease unrestrained

fatalities in Connecticut. The Working Group is represented by state and local law enforcement, data research groups, safety advocates, media consultants, other state agencies, hospital doctors, hospitals injury prevention departments and the HSO. Connecticut joined law enforcement agencies across the eastern half of the United States in mobilizing the CIOT “Border to Border” operation to reinforce the message across state lines that driving or riding unbuckled will result in a ticket. The HSO also continued year round social norming campaign during non-CIOT periods. Law enforcement partners were encouraged to continue extra enforcement beyond the Click It or Ticket campaign, and social norming messaging was used to keep seat belt use awareness in the news.

During peak riding months, the HSO partnered with the Connecticut Rider Education Program to promote a “Share the Road” awareness message to remind the public that motorcycles are everywhere and to “Look Twice and Save a Life”. This messaging was distributed across Connecticut utilizing electronic and static billboards. A 30 second radio spot was also launched to remind drivers to “Share the Road”; this messaging was broadcasted on major radio stations during peak drive times.

The HSO is currently implementing another year of a comprehensive Speed and Aggressive Driving enforcement campaign. High visibility enforcement (HVE) is running July 1 – September 5, 2018 with Hartford Police Department starting in March due to the increase in speed and aggressive driving fatalities earlier in the year. This will be accomplished through a speed enforcement campaign combining HVE and the strategic use of media outlets on Connecticut’s roads. Local and State Police are grant participants and were chosen based on the major contributing factors. The factors include crashes as a result of aggressive driving, following too close, and failure to yield the right of way. Additionally, areas with high population, high traffic volumes and roadways with low posted speed limits led to the selection of urban areas and larger cities as the most likely areas where speed enforcement can impact the greatest number of speed related crashes. Historically, strong high visibility enforcement efforts integrated with targeted media campaigns have proven to be most effective.

Under the HSO Impaired Driving Program, a total of 76 law enforcement agencies were awarded grants for the Comprehensive DUI Enforcement program for FY 2018. An additional five law enforcement agencies are participating in the Underage Alcohol Enforcement program. Project activities have resulted in over 400 DUI arrests during the October 2017–March 2018 time period and will continue through September 2018. A total of twelve Connecticut participants successfully completed a Connecticut Drug Recognition Expert (DRE) training class held in FY 2018. The twelve DRE class participants are now all certified DREs. Quarterly Impaired Driving Task Force meetings continue to be held throughout the year.

Under the Child Passenger Safety (CPS) Program, in 2018, the number of fitting stations decreased from 89 to 86. Printed literature, car seat recommendations and educational supplies were provided to assist in supporting the fitting stations. There are 430 CPS Certified Technicians of which 28 are Child Passenger Safety Certified Instructors. These CPS Instructors are available to teach certification classes for those interested in becoming a car seat technician.

The “Look Before You Lock, Where’s Baby” Education Campaign emphasized child passenger safety by delivering safety messages to increase awareness of the issue of hot cars and to provided tips for parents and caregivers. A press event was held in July to kick-off this event. Safety tips included how not to forget children or leave them in a motor vehicle unattended. The campaign utilized radio, billboards, newspapers, online media, social media, community education, and outreach to businesses to deliver the safety messages. A pre-recorded radio interview aired on 4 radio stations, plus associated iStream stations and 2 digital billboards ran over 17 weeks.

The **Bureau of Finance and Administration** is responsible for the following functions within the Department: Finance, Operations and Support, External Audits, Human Resources, and Contract Compliance, Contracts, and Agreements. The bureau provides the fiscal and support services necessary for the development and implementation of the department's programs. In addition, the bureau administers fuel distribution for most state agencies and oversees the operation of the twenty-three service plazas on the Governor John Davis Lodge Turnpike and the Merritt and Wilbur Cross Parkways.

The following is a summary of some of the key initiatives being undertaken in the Bureau:

A project closeout team was formed in October 2008 to address a backlog of Federal Highway Administration (FHWA) funded projects that were completed, but had not been closed. From October 2008, through June 2018, the Department closed 3,293 FHWA-funded projects and released over \$200 million of unused state and federal funding for obligation on new projects. The backlog of FHWA-funded projects awaiting closeout has been eliminated and the Department's focus now has shifted to closing out 100% state-funded projects. During SFY 2015, a formal closeout process was developed for state-funded projects, and resources were dedicated to tackling the backlog of projects requiring closeout. Since that time, over 2,500 state-funded projects have been closed out, with 834 of those being done in SFY 2018. In the coming years, as permitted within the constraints of limited staffing, the Department plans to continue to address the backlog as well as adhering to a timely closeout process for newly completed projects. Timely closeouts of both federal and state projects result in unutilized funds being released from projects sooner and being available for obligation on new projects.

Unexpended balances of federal highway funds continue to be a focus for the FHWA. In 2009, Connecticut’s federal inactive funding balances ranked second worst in the nation. In November 2009, FHWA and the Department entered into a Memorandum of Agreement (MOA) to reduce the federal inactive percentage from 14 percent to 5 percent by the end of FFY 2010. Through mutual efforts by the FHWA and the Department, a percentage of inactive federal funds below 5 percent was achieved by June 2010. The number of projects considered inactive shrank by over 275 projects. In June 2011, the FHWA lowered the goal of maintaining an inactive percentage to at or below 4 percent and required a 10 percent reduction in the number of inactive projects. Both statistics were achieved and maintained for the remainder of 2011, during 2012 and through 2013. In December 2013, the FHWA again changed procedures, eliminated some reporting exemptions and lowering the goal even more. This current requirement is to maintain an inactive percentage at or below 2 percent, measured on a 4 quarter rolling average. The

Department continues ongoing efforts with monthly monitoring to ensure the goal is achieved and maintained. We have met the 2% goal each year, and in the most recent year (FY 2018), a 4 quarter rolling average of .9% was achieved. Steady progress continues on reducing the number of inactive projects from a peak of 650 in 2008 to maintaining below 250 since March 2015 with an average of 129 inactive projects in SFY 2018.

The Department has established a performance target for its Contracts unit to award construction projects within 60 days of the Department's receipt of bids. During this 60-day period, the Contracts unit reviews all bids for accuracy, status of contractor qualifications, ensures that environmental permits and rights of way requirements are in order, verifies project funding is in place and ensures the proper federal approvals have been received. Performance against this target is assessed regularly through self-reporting by the unit and this structure has served the Department well. In FY 2007 seven percent and in FY 2008 nine percent of all of the Department's awards met this target. As a result of this initiative, the percentage of contract awards meeting the target continues to remain high. FY 2018 was 98 percent and rivaled the best performance of 96.5 percent achieved in FY 2016.

The Department of Transportation (DOT) and Connecticut Employees Union Independent (CEUI) partnered with the Office of State Comptroller to establish a Diabetes Prevention Program at the DOT as part of an ongoing commitment to maintaining a healthy, productive workforce. The goal of this initiative is to provide DOT licensed CDL operators the opportunity to volunteer to participate in a Diabetes Prevention lifestyle change program. Approximately 100 employees attend informational sessions designed to teach employees how to make healthy lifestyle changes focused on diet modification, managing stress, improved exercise and adopting healthy habits to delay and even prevent the progression of the condition to Type 2 diabetes. Employees are given resources by dedicated, trained lifestyle coaches who understand the challenges faced by DOT's work environment, schedule and hours of work. The program is the first of its kind and will serve as a model for other state agencies.