Connecticut

On the Move

Strategic Long-Range Transportation Plan
2009 - 2035

Draft

MESSAGE FROM THE COMMISSIONER

It is my pleasure, as Commissioner of the Connecticut Department of Transportation (Department or CTDOT), to present the State's updated Long-Range Transportation Plan. This plan goes beyond federal mandates and State responsibilities to clearly present our commitment to provide a system that can meet current and future mobility needs. Implementation of this plan will provide more flexibility and options to users of the State's transportation system.

Every effort will be made to improve upon the Department's past achievements and develop a solid plan to overcome obstacles. There are many challenges ahead, and the Department intends to take advantage of the resources available, seek out the assistance of new partners and use innovative technology to address them.

This Department must be one that State residents can be proud of and trust to professionally carry out its statutory responsibilities. This commitment is expressed in the Department's responsibilities, mission, values, goals and actions. CTDOT is fully committed to the guiding principles and strategies adopted by the General Assembly and the Transportation Strategy Board. In addition, the Department is committed to fulfilling the federal mandates for this plan and all of our transportation initiatives. Outlined in this document is a newly established strategic five-point plan prioritizing the Department's goals for meeting the State's transportation needs.

It is no surprise that the Department's highest priorities have been, and will continue to be, preserving and modifying the existing transportation system to ensure the safety of the traveling public and the continued return on our past investments. Hence, to "fix-it-first" is our highest priority. We can then focus on strategic enhancements to our system, including improvements to integration, connectivity, accessibility, mobility and capacity. The Department also takes seriously its role in sustaining and cultivating the State's economic vitality, environmental health and quality of life for its residents and visitors. The Department will strive to reestablish public confidence in our ability to manage and operate the State's transportation system. This will be accomplished by developing performance measures to provide better accountability and continuing to implement changes to make information concerning our services, facilities, projects and business processes more accessible and easier to use.

The Department will continue to face funding challenges. It will take continued advocacy from the Governor, the Connecticut General Assembly, the Connecticut Congressional Delegation and the business community, as well as the support of the public, to bring to fruition transportation initiatives that enhance and expand our transportation system. The Department will work closely with Legislators, both here in Connecticut and in Washington, D.C., to petition for increased funding of transportation programs, new sources of revenue and promotion of a more stable revenue base for supporting our State's transportation systems. In addition, new private and quasi-public partnerships will be explored where such initiatives are prudent and justifiable.

Sincerely,

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Commissioner

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PLAN PURPOSE & OVERVIEW OF CONTENTS

This long-range transportation plan, entitled *Connecticut on the Move*, *Strategic Long-Range Transportation Plan (2009-2035)* (2009 *LRP*), outlines the State of Connecticut's transportation policy. It is the federally recognized transportation plan for the State of Connecticut. This intermodal transportation plan, which is updated every 3 to 5 years, addresses eight federally mandated factors. It will serve as a framework for future, more project-specific transportation plans such as the Department's Master Transportation Plan (MTP) and the State Transportation Improvement Program (STIP).

The 2009 LRP builds on the Department's statutory responsibilities, its own mission, values, principles and the guiding principles and strategies adopted by the Governor and the Connecticut General Assembly. It is consistent with the *Conservation and Development Policies Plan for 2004-2009*. It reflects the transportation initiatives passed by the Governor and the General Assembly in recent years; the recommendations in the Transportation Strategy Board's January 2007 report, *Moving Forward, Connecticut's Transportation Strategy;* and public input received in response to the Department's public outreach efforts for the LRP. This LRP also outlines the Department's strategic five-point action plan for prioritizing investments in the state's transportation system. The components of this action plan are as follows:

- Preservation - Maintain Existing Transportation System in a State of Good Repair
- System Modifications - Safety and Modernization
- System Productivity - Efficiency
- Economic & Environmental Impact - Quality of Life
- Strategic Capacity Improvements

These components were determined after careful consideration of available resources, and federal and State mandates and initiatives. They are overarching in many ways. The ultimate objective of the action plan is to provide the most efficient, safe and secure transportation network for Connecticut residents, visitors and businesses.

This plan also presents the Department's responsibilities, mission statement, vision and values and discusses its commitment to them and to implementing the recommendations of the Connecticut Transportation Strategy Board on behalf of the state's residents. The Department's commitments to continuing and improving interagency coordination and making its services and business processes more transparent are also discussed.

Chapter 1: Influencing Factors and New Directions identifies external influences that affect the administration of the transportation system. Pertinent legislative initiatives and plans for reformation of the Department are discussed. This chapter also highlights the Department's role in shifting paradigms relating to public transportation in Connecticut, infrastructure performance management, responsible growth, transit-oriented development (TOD), and climate change.

Chapter 2: The Planning Process discusses the planning process followed to update this LRP and outlines the federal public participation requirements that CTDOT must meet. More specifically, this chapter discusses the Department's efforts to obtain public input early in the process to assist us in developing the plan. A summary of the public input received and information on other plans and a list of the sources of information that were considered are also included.

Chapter 3: Mandates, Issues and Actions discusses transportation-related issues and needs and identifies actions to be taken by the Department and the State to address them. More specifically, it identifies actions that the Department and the State should take to safely and efficiently meet the mobility needs of people and to move goods within Connecticut, within the metropolitan regions that are principally or partially located in Connecticut, and in a global economy.

Chapter 4: Resource Needs identifies and discusses current and future financial and staffing needs. It graphically illustrates the State's capital investment challenges with respect to transportation programs.

CTDOT is committed to accomplishing the State's transportation objectives; meeting statutory responsibilities and federal mandates; and identifying, encouraging and responding to paradigm shifts. The Department is also committed to improving transparency in the administration and planning of the transportation system. The Department will continue to interact and collaborate with agencies and various stakeholders when undertaking projects and to address current and future transportation-related issues and challenges. The Department recognizes the need to be more communicative, less insular, more responsive, and more open and transparent in all processes. It must be accountable for achieving measurable results and consistent with continuous customer-driven quality improvement; strategic in choosing transportation services and projects; and competitive in advocating for funding for transportation.

The Department supports and complies with the eight federal mandates required by law and used to prepare this LRP. The specific actions necessary to implement the Department's strategic five-point action plan are presented according to these federal mandates. Together, the strategic five-point investment plan and the action statements presented in this LRP are intended to address current and future mobility needs of people and for freight traveling within, to, from or through Connecticut.

CTDOT's COMMITMENT

The Connecticut Department of Transportation's responsibilities, mission, vision and values are clearly defined. Managers and staff are committed to these statements in every aspect of their jobs. The strategies and actions identified in *Connecticut on the Move*, *Strategic Long-Range Transportation Plan (2008-2035)* (LRP) are consistent with the Department's statutory responsibilities and its stated mission, values and principles.

In June 2001 the Connecticut General Assembly passed Public Act 01-5 which created the Transportation Strategy Board (TSB). In 2003 the TSB submitted a recommended strategy that was adopted by the Connecticut General Assembly. Subsequently, the TSB was required to review and, if necessary, revise the transportation strategy. In doing so, the TSB identified eight guiding principles and strategies that serve as the central themes of the revised plan; these are outlined in the TSB's January 2007 report, *Moving Forward – Connecticut's Transportation Strategy*.

CTDOT has continued to work closely with the TSB since its creation in an effort to provide valuable data and facts concerning the state's transportation system, projects and priorities. The Department is committed to implementing the recommendations of the TSB.

It is extremely important to the citizens of Connecticut that all components of the state's transportation system be addressed using a balanced approach to ensure that the system enhances the general quality of life; supports economic development; increases productivity; facilitates and results in energy conservation and improvements in air quality; and moves people and goods in a safe, efficient manner. This LRP is consistent with the guiding principles and strategies highlighted in the TSB's January 2007 report. CTDOT has established a strategic five-point action plan that builds on its responsibilities, mission, vision and values, as well as the guiding principles and strategies adopted by the General Assembly. In this LRP, the Department has identified the major issues and outlined actions necessary to meet the five-point action plan and simultaneously meet the federal mandates set for the Department.

Inter-Agency and Stakeholder Coordination

To function properly, the Department must coordinate effectively with other government agencies, as well as other stakeholders. The Department recognizes that it must work effectively with the Governor, members of the Connecticut General Assembly, other Connecticut state agencies, regional planning organizations and municipal governments in order to effect positive changes to our state and reduce any negative impacts caused by the transportation system on our environment and communities. The Department will pay particular attention to ensuring that all activities, programs and projects implemented by the Department are consistent with the policies established by the:

- Office of the Governor,
- General Assembly, including legislative committees and subcommittees,
- Office of Policy and Management,
- Department of Economic and Community Development,
- Department of Environmental Protection,
- Department of Emergency Management and Homeland Security,
- Department of Public Safety,
- Department of Public Works, and the
- Department of Public Health,
- as well as various other agencies and governmental working groups and commissions in Connecticut.

Given the serious global economic and environmental issues that must be addressed, it has become increasingly important that the Department work effectively with members of Congress and government agencies in other states to address regional and national, as well as state, mobility issues and needs. Continued and improved coordination with our counterparts at the federal, regional and municipal levels is also a high priority. The Department will continue to coordinate, build on existing relationships and expand our network of communication with appropriate federal agencies and agencies, organizations and commissions in the neighboring states of New York, Massachusetts and Rhode Island.

Transparency in Government

Connecticut residents and businesses are looking for transparency in government. Easy access to information will enable them to use services; to participate in processes to plan, design, operate and/or construct government facilities and services; to understand how and why decisions are made; and to evaluate whether they are getting the best value for their tax dollars.

Responsibilities

Section 13b-3 of the Connecticut General Statutes states that the Department "shall be responsible for all aspects of the planning, development, maintenance and improvement of transportation in the state." CTDOT has responsibilities pertaining to airports, highways, highway safety, bus systems, rail systems, port operations, ferries, and facilities for bicyclists and pedestrians.

Our Mission

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

Our Vision

The vision of the Department of Transportation is to lead, inspire and motivate a progressive, responsive team, striving to exceed customer expectations.

Our Values

Measurable Results:	We will endeavor to utilize the latest technology and preserve the integrity of our current assets to provide a safe, efficient, integrated, multimodal, transportation system that offers options for mobility.
Customer Service:	We are committed to consulting with our internal and external stakeholders in an open and transparent decision-making process; and to being responsive by providing timely information on services and programs.
Quality of Life:	We will strive to maintain and enhance the quality of life in the State and the region by maintaining the character of our communities, supporting responsible growth, and by enhancing and being sensitive to the environment.
Accountability & Integrity:	We will prudently manage and invest the human and financial resources entrusted to the Department using sound criteria and efficient, cost-effective methods that put safety and preservation first.
Excellence:	We will demand excellence in all we do to fulfill our mission by being solution-oriented and focused on project delivery.

We will continuously re-evaluate our mission, values, performance and priorities to ensure that the Department and its employees are innovative and responsive to changing needs.

Strategic Five-Point Action Plan

The State of Connecticut Department of Transportation has identified a strategic five-point action plan with the following elements:

- Preservation - Maintain the Existing System in a State of Good Repair
- System Modifications - Safety & Modernization
- System Productivity - Efficiency
- Economic & Environmental Impact - Quality of Life
- Strategic Capacity Improvements

This action plan is the blueprint for prioritizing resources available to the Department for managing the state's transportation system.

Preservation - Maintain the Existing System in a State of Good Repair

The Department has identified preservation and maintenance of the existing system as its highest priority for targeting the limited available resources. This is what many refer to as a "fix-it-first" strategy. The Department must ensure that the State maintains the transportation system that is already in place before expanding or adding new system components.

"A state of good repair" is a condition where all the assets necessary to support the level of service established with respect to each user of the transportation system

- are functioning fully within their design life;
- can be sustained through normal maintenance;
- have regular cyclical replacement of life-expired assets; and
- components with replacement to current use and engineering standards

so that the sustainability and useful life of the system is optimized.

System Modification - Safety & Modernization

Safety is a major concern of the Department. Modification needs identified for improving safety are also a high priority when considering application of staff, funding and equipment. In addition to preserving and maintaining the system to ensure the general safety of the traveling public, the Department will continue to consider areas where system modification could significantly improve safety beyond the constraints of the existing infrastructure's limitations.

System Productivity - Efficiency

System productivity refers to facilitating travel in and between modes by maximizing use of the existing transportation system. This is done by applying improved technologies, coordinating the scheduling of maintenance efforts, and providing real-time travel information to the public. The development and application of new technology and improved construction practices, the continued advancement and expansion of Intelligent Transportation Systems (ITS), and the provision of real time information to users of Connecticut's highway system and public transportation services are critical components of the Department's plan to address the current and future mobility needs of the State's residents, businesses, and visitors. The Department will continue to identify and invest in ways to maximize the use of the existing transportation system. As part of enhancing system productivity, the Department is committed to encouraging commuters to use transit and ridesharing options.

Economic & Environmental Impact - Quality of Life

It is critical to the health of the State and its residents that the transportation system has a positive impact on the state's economy and quality of life. To build working communities where the quality of life is healthy and supportive, it is essential to incorporate and consider the interests of stakeholders such as bicyclists and pedestrians when undertaking projects. A context-sensitive solutions (CSS) approach will be employed with every initiative to ensure active public participation and implementation of designs that are appropriately scaled to both the community and the need. CTDOT must also facilitate the efficient and cost-effective movement of people and freight within and through the state. Additionally, the Department must ensure the security of the transportation system, as this is directly correlated to community health and economic vitality. Ultimately, it is a responsibility of all State agencies to support efforts of sister agencies in stimulating the economy and protecting and enhancing the quality of life of the state's residents; CTDOT is committed to its part in this effort.

Strategic Capacity Improvements

When necessary, the Department will pursue strategic capacity improvements to improve the efficiency of the transportation system. The extent to which a project contributes to achieving greater mobility, accessibility and integration of the various transportation modes will be an important consideration in the decision-making process to evaluate projects designed to enhance, expand or modify limits on system capacity. Any improvements to capacity will only be undertaken after seriously considering the availability of funding and resource allocations, and priority will be given to preservation initiatives.

Federal Mandate

The federal government is a key player in the transportation planning process. The policies, regulations, and mandates established by the federal government determine many of the programs, responsibilities and resources that the Department must follow. This LRP meets the requirements of Section 450.214 of the Code of Federal Regulation (CFR). This section requires each state to develop transportation plans and programs for all areas of the state and to carry out a transportation planning process that provides for consideration of projects and strategies that will:

- emphasize the preservation of the existing transportation system;
- promote efficient system management and operation;
- increase the safety of the transportation system for motorized and non-motorized users;
- enhance transportation security for motorized and non-motorized users;
- protect and enhance the environment, promote energy conservation, and improve the quality of life;
- increase the accessibility and mobility options available to people and for freight;
- enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight; and
- support the economic vitality of the United States, the States, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency.

The Department is committed, through implementation of this plan and its initiatives, to fulfilling the eight mandates set forth by the federal government.

RELATIONSHIP OF CTDOT'S STRATEGIC PLAN TO THE FEDERALLY MANDATED FACTORS IN CHAPTER 3: MANDATES, ISSUES & ACTIONS

Strategic Five-Point Action Plan	Related Federal Mandates Discussed in Chapter 3
Preservation- Maintain the Existing System In a State of Good Repair	Preserving & Maintaining the Existing Transportation System Ensuring Safety on the Transportation System Promoting Economic Vitality with the Aid of the Transportation System
System Modifications- Safety & Modernization	Managing & Operating the Transportation System Ensuring Safety on the Transportation System Improving Accessibility & Mobility within the Transportation System Integrating and Connecting the Transportation System
System Productivity- Efficiency	Managing & Operating the Transportation System Reducing Energy Use and Negative Impacts to Quality of Life & the Environment from the Transportation System Promoting Economic Vitality with the Aid of the Transportation System
Economic & Environmental Impact- Quality of Life	Promoting Economic Vitality with the Aid of the Transportation System Reducing Energy Use and Negative Impacts to Quality of Life & the Environment from the Transportation System Ensuring Safety on the Transportation System Securing the Transportation System
Strategic Capacity Improvements	Managing & Operating the Transportation System Improving Accessibility & Mobility within the Transportation System Integrating and Connecting the Transportation System

The National Surface Transportation Policy and Revenue Commission report states that:

- Vehicle growth has far outpaced the growth in population, employment, and households, more than tripling in the last four decades. Together, these changes have fueled significant growth in mobility.
- On average, the typical American now travels about 14,500 miles annually including 4,900 miles on long-distance trips.
- Personal income influences travel behavior through vehicle ownership, mode choice, trip purpose and number and length of trips.
- The U.S. population over the age of 65 will comprise roughly 21% by 2050; which will double current population levels and impact travel demand for all modes.
- Over 22% of people aged 65 and older report having a transportation disability – meaning that they reduce their travel, need to ask others for rides, or limit driving to daytime.
- America faces the prospect of extensive population growth over the next 50 years. Much of the growth will come about by the immigration of adults of working age rather than by births as in the previous half century, with therefore vastly different transportation demand attributes.

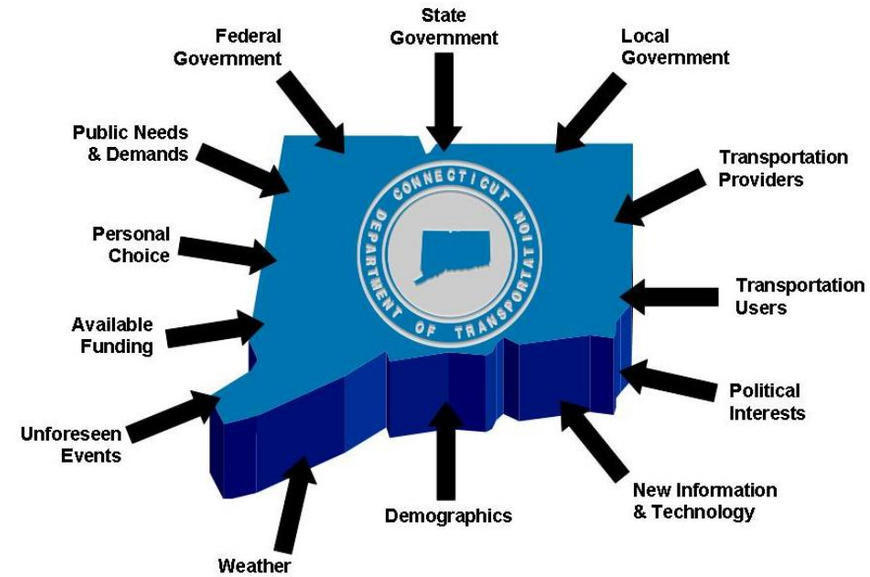
Chapter 1: Influencing Factors & New Directions

External Influences

There are a number of key factors that influence the definition of issues and the selection of actions for addressing them. These external influences can affect how much money is available for transportation projects, what projects are pursued, the scope of projects and the schedule for implementing projects and studies. These influences generally fall into the following categories:

- Federal Government
- State Government
- Local Governments
- Transportation Providers
- Transportation Users
- Political Interests
- New Information & Technology
- Demographics
- Weather
- Unforeseen Events
- Available Funding
- Public Needs & Demands
- Personal Choice

Of these factors, the federal and state governments are the most significant. The laws passed by Congress and the Connecticut General Assembly shape and influence the Department's management of the transportation system. Thus, as shown in the diagram on the following page, these factors are interrelated; each group of factors successively impacts other groups of factors. Generally, federal and state laws and regulations are influenced by the factors, which, in turn, affect the actions of federal and state agencies. Laws passed by Congress dictate the types of projects that are eligible to be paid with federal funds. As a recipient of federal funding, the state must comply with federal



laws, regulations, and executive orders that influence many facets of transportation planning. Some of the significant federal laws that dictate or affect the transportation planning and programming processes are the:

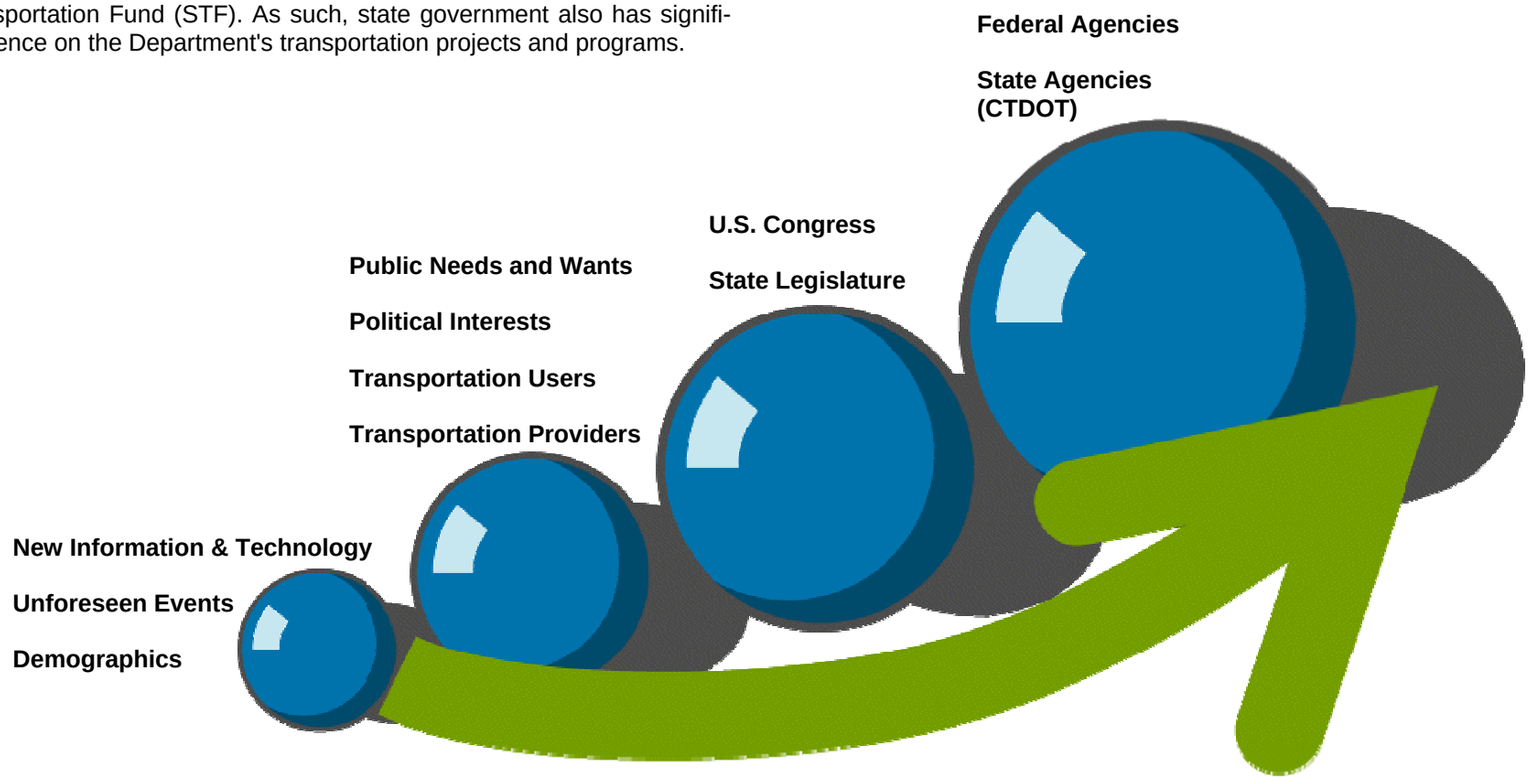
- Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU);
- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA);
- Transportation Equity Act for the 21st Century (TEA-21);
- Clean Air Act (CAA) & Clean Air Act Amendments of 1990 (CAAA);
- Vision 100-The Century of Aviation Act (Vision 100);
- Wendall H. Ford Investment and Reform Act for the 21st Century (AIR-21);
- National Environmental Policy Act (NEPA);

- Americans with Disabilities Act (ADA);
- Title VI of the Civil Rights Act of 1964;
- Environmental Justice Orders;
- Section 109(h) of Title 23 of the United States Code; and
- The Uniform Relocation Assistance and Real Property Acquisition Policies of 1970.
- Title 23, U.S. Code and Title 49, U.S. Code

In addition to receiving money from the federal government, the Department funds transportation projects and services with revenue from the State's Special Transportation Fund (STF). As such, state government also has significant influence on the Department's transportation projects and programs.

In Connecticut and across the nation it has become exceedingly difficult to raise funding resources needed to maintain the transportation system and address safety concerns, let alone to address strategic system enhancement and expansion needs. The Department's highest priority continues to be preservation and maintenance of the existing transportation system (fix-it-first) to ensure the safety of the traveling public.

Beyond preserving and maintaining the existing system, the extent to which the Department can implement the strategies and actions identified in this plan will be determined by the influences discussed here, in particular, available funding and staff resources.



- 19% of new immigrants do not have a household vehicle as compared to 13% of immigrants in the U.S. for 11 or more years. The average percentage of U.S.-born households without a vehicle is just under 8%.
- There are only about 25% of the households in the U.S. with a vehicle deficiency, that is, more adults in the household than vehicles. This may temper future growth in automobile ownership even as personal income levels continue to rise.
- Historic trends show that while work travel has kept pace with the growth in employment, shopping and social/recreational travel has doubled in the last four decades.
- Historically, enhanced communication with distant places has generally led to more travel. Growing Internet services to aid recreational activities, in addition to ticket purchase and travel/sightseeing planning are likely to induce greater recreational travel.
- Commercial Vehicle Miles Traveled (VMT) freight and especially light-duty commercial vehicle travel, is increasing at a faster rate than household VTM. The distribution of e-commerce to households and businesses is poised to create a huge new demand on the transportation system.

Use of and demand for additional bus and rail passenger services in Connecticut has increased as the prices for gasoline and motor fuel have increased.

Public demand for more frequent service and more capacity on existing public transportation services, and demand to expand services will continue to increase if fuel prices continue to rise.

Use of and demand for public transportation may also increase as more people who are age 65 and older remain in the work force longer or re-enter the work force in response to the significant increases in food and fuel costs.

Paradigm Shifts

The State of Connecticut is in the midst of a paradigm shift with respect to the management of its government, particularly its transportation system. At this time, there is significant interest in the condition of the infrastructure, the waning resources available to pay for much needed repairs and improvements, and the altering character and preferences of the traveling public. These factors have resulted in a change in how transportation is perceived not only at the state and local levels, but at the national level as well. Transportation issues are being more broadly defined in terms of how to best meet the mobility needs of people and for freight rather than how to meet transportation needs by means of a specific mode of transportation. This broader focus on mobility needs has resulted in:

- Greater recognition of the importance of the role of land use planning in meeting mobility needs;
- The need for better integration of and connectivity among the various modes of transportation;
- Greater transparency to enable people to get the information they need to meet their mobility needs and to better understand how and why decisions pertaining to transportation investments are made; and
- New partnerships among state agencies, regional planning organizations, local governments, transportation providers, the business community, civic groups and other interested parties.

Transportation issues are being more broadly defined in terms of how to best meet the mobility needs of people and for freight rather than how to meet transportation needs by means of a specific mode of transportation.

Governor's and General Assembly's Legislative Initiatives

The lack of sufficient funding has hampered the Department's ability to fully address the transportation needs and concerns of individuals and businesses. During the past three years, however, the State of Connecticut has made additional financial commitments to addressing these transportation needs and concerns. The state authorized additional funding to supplement the transportation funding that the Department receives from the federal government 's Highway Trust Fund and the State via bonding authority.

In 2005 Governor Rell and the Connecticut General Assembly (CGA) adopted a $1.3 billion major State-funded transportation initiative which authorized funding for following:

- New rail cars for the New Haven Line (NHL) which will be leveraged with MTA/New York State funds;
- New rail maintenance facilities which are critical to providing reliable service, and are essential to handling the ongoing demands to maintain the existing fleet as well as the new rail cars;
- New transit buses;
- Operational improvements and congestion mitigation measures for Interstate 95 between Greenwich and North Stonington; and
- Improvements to other State and interstate roads to help mitigate congestion on other state and interstate highways such as Interstate 84 and Interstate 91.

In 2006 the Governor proposed and the General Assembly passed Public Act 06-136, *An Act Concerning the Roadmap for Connecticut's* Future, which authorized $2.3 billion for transportation initiatives. Of this amount, $1 billion in Special Tax Obligation Bonds for specified projects and studies and initiatives was authorized over a 10-year period and supported by an increase in the amount of Petroleum Gross Receipts Tax revenues transferred from the General Fund to the Special Transportation Fund; an additional $1.3 billion was authorized for the use of GARVEE bonds which are supported by a pledge of future federal highway funds.

This act also requires the Department to implement, initiate and plan for the following projects and studies:

- Commuter rail service on New Haven-Hartford-Springfield (NH-HFD-SPR) line with shuttle bus service to Bradley International Airport;
- New Britain-Hartford Busway state match for federal funding;
- Rehabilitation of rail passenger coaches for use on Shore Line East (SLE), NH-HFD-SPR, and the NHL branch lines;
- Developing a new commuter rail station between New Haven and Milford (i.e. West Haven or Orange);
- Capital improvements on NHL branch lines "not to exceed forty-five million";
- Parking and station improvements on the NHL, SLE and branch lines, "not to exceed sixty-million";
- Completing a rail link to the port of New Haven;
- Funding the local share of the Southeast Area Transit federal pilot project;
- Completing the Norwich Intermodal Transit Hub Roadway improvements;
- Conducting environmental planning and assessment for the I-95 expansion between Branford and Rhode Island;
- Completing preliminary design and engineering for I-84 widening between Waterbury and Danbury;
- Funding the Commercial Vehicle Information System Network (CVSN) at an additional location; and
- Funding the capital costs of the greater Hartford highway infrastructure improvements in support of economic development (i.e. Rentcheler Field road improvements).

The Department must also "evaluate and plan the implementation of" the projects listed below:

- Improving Routes 2/2A in Preston, North Stonington & Montville;
- Upgrading the Pequot Bridge in Montville;
- Evaluating rail links to other ports (i.e. Bridgeport and New London);
- Supporting and encouraging dredging of the state's commercial ports;
- Developing a second rail passenger station between New Haven and Milford (i.e. West Haven or Orange); and
- Expanding Route 9.

The act further requires CTDOT to recommend implementation of additional transportation improvement projects and to conduct the following four studies:

- A report identifying obstacles to improved rail service on Shore Line East;
- A study of the transportation and mobility needs of residents and businesses in eastern Connecticut; (No funding as of 6/15/2008)
- A study of the feasibility of building a fuel cell power station to generate power for the New Haven Line; and
- An assessment and plan for implementing commuter rail service between New London and Worcester, Massachusetts. (No funding as of 6/15/2008)

In 2007 funds were allocated for continuing the Department's effort to upgrade and improve existing rail and bus infrastructure. Additional commitments were also made to fund a grant program for rail freight infrastructure and innovative grant programs to local municipalities and transit districts for bus and bicycle projects and transit-oriented development initiatives.

In adopting a "Fix-it-First" program for State highways and bridges, the Governor and the CGA recognized the importance of maintaining the state's existing highway assets. The "Fix-it-First" program, combined with additional resources for inspection, oversight, and maintenance purposes, will ensure that the state's highway infrastructure remains in a good state of repair.

In 2008 the Governor and the CGA passed Public Act 08-155, *An Act Concerning New and Expanded Bus Transportation Services Throughout Connecticut.* This act establishes the "Buses for 21st Century Mobility Program" to provide new and expanded bus transportation services.

The February 2007 U.S. Bureau of Labor Statistics (BLS) Report 998, *Consumer Expenditures in 2005,* states that consumer spending on transportation increased .3% in 2004 and 7.0% in 2005. This was primarily due to the significant increase in spending on gasoline and motor oil.

As measured by the CPI, in the Northeast region consumer spending on transportation increased 1.4% in 2005. In 2007 and 2008, the increase will be substantially greater due to the dramatic increases in the price of gasoline during this period.

BLS Report 998 states that spending on public transportation, which includes both intracity and intercity mass transit and taxi fares, airline fares, and ship fares, rose 14.5% in 2004 and 1.6% in 2005.

In Connecticut Vehicle Miles Traveled (VMT) increased 32% from 1986 to 2006.

CTDOT's Office of Policy and Systems Information estimated that 4.9 billion total passenger trips occurred in Connecticut in 2007. Approximately 1.5%t of the trips occurred using buses and trains, and 98% with automobiles.

Transit ridership on Connecticut's rail and bus systems has been increasing. In 2006 rail passenger ridership on the New Haven Line was 6.5% higher than it was in 2003. Ridership on trains and buses and trains is continuing to grow as fuel prices increase.

CTDOT is allocating a higher percentage of its operating budget to public transportation. For SFY2009, 57% of CTDOT's operating budget is allocated to public transportation (rail, bus and paratransit); in SFY2007, 47% of the Department's operating budget was spent on public transportation.

CTDOT's Focus on Public Transportation

In response to growing public demand for more options to meet mobility needs, the State has increased its funding for public transportation. The Department is taking actions that will result in major improvements in public transportation in Connecticut. The resources authorized in the 2005 and 2006 legislation are enabling the Department to expand and improve intrastate commuter rail service and improve bus transportation in the state by:

- Purchasing new electric rail cars to replace the aging fleet of rail cars;
- Purchasing new locomotives to support rail and yard service along the New Haven Line (NHL), Shore Line East (SLE) and New Haven-Hartford-Springfield (NH-HFD-SPR) rail lines;
- Purchasing new transit buses to continue the commitment to mass transit;
- Rehabilitating rail coaches for use on the NHL, SLE, and NH-HTF-SPR rail lines;
- Making improvements on the Danbury, Waterbury and New Canaan branches of the NHL;
- Providing additional parking at rail stations in Milford and Stratford and constructing new rail stations and parking in West Haven and Orange;
- Implementing commuter rail service and connecting bus service on the NH-HFD-SPR rail line; and
- Developing the necessary rail infrastructure to include rehabilitation and replacement of rail bridges, concrete rail ties, and replacement of overhead catenary wires.

Governor Rell's and the CGA's authorization for additional funds in 2007, combined with new policy initiatives, is enabling the Department to move forward on a range of important efforts including:

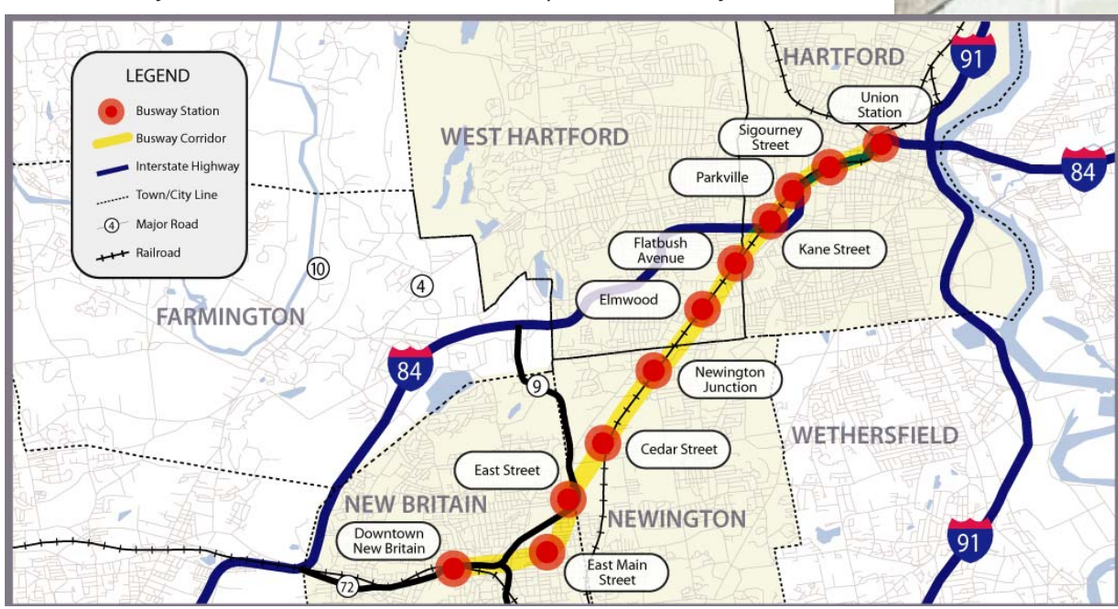
- Provision of subsidies to maintain current bus fares;
- Awarding of grants to local transit authorities for bus purchases for elderly and disabled riders;
- Clean diesel bus retrofits;
- Planning and construction of a bus maintenance and storage facility in Torrington;
- Planning and construction of the Waterbury Intermodal Transportation Facility;
- Purchase of 38 electric cars for use on the New Haven Rail Line (NHL) and Shoreline East Rail line (SLE);
- Implementation of Phase I and Phase II of CTDOT's Shoreline East Rail Report;
- Improvements to NHL rail stations as identified in 2006 New Haven Line Train Station Visual Inspection Report;
- Construction of the Stamford Rail Station parking facility;
- Implementation of the Southeast Tourism Transit System; and
- Implementation of the New Britain-Hartford Bus Rapid Transit line (subject to availability of federal funds).

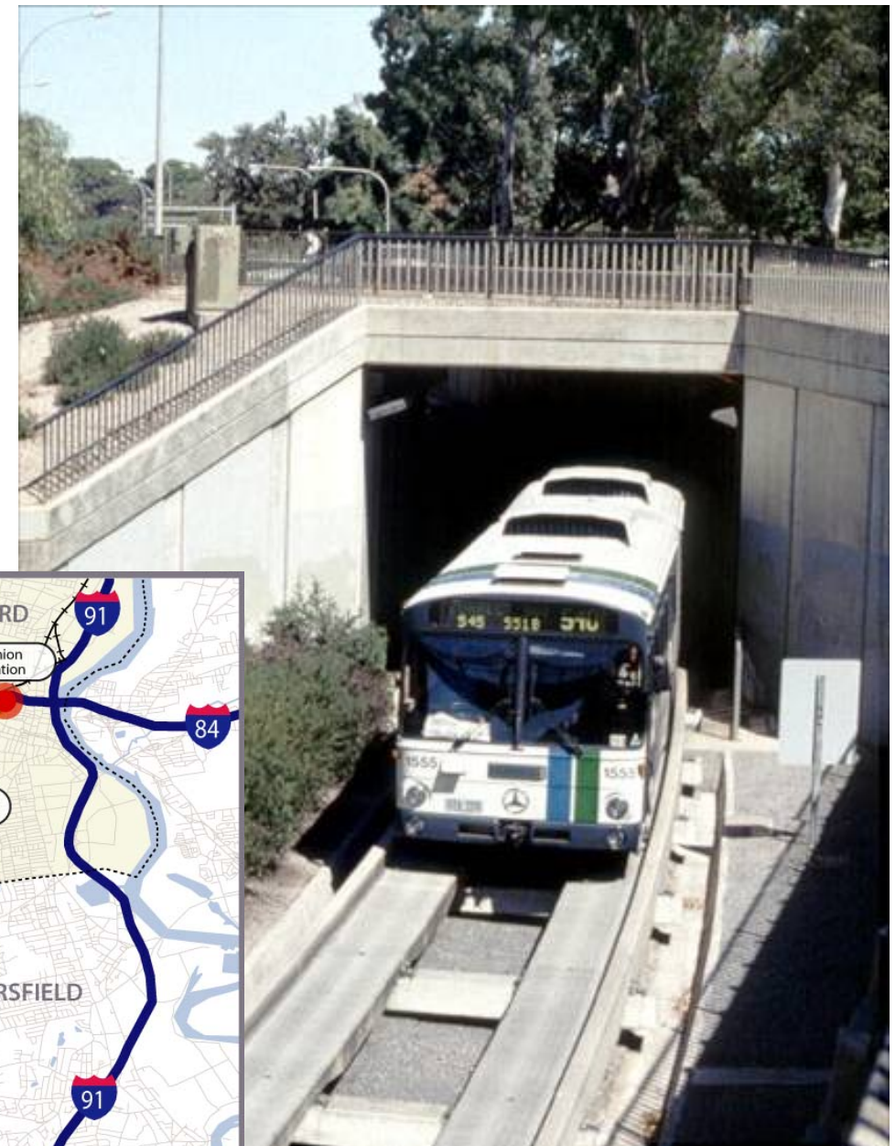
CTDOT is in the process of constructing a new rail maintenance facility in the New Haven Rail Yard. It will include a component changeout shop, a service and inspection shop, a wheel true facility, and other shops equipped to maintain the new M-8 fleet with state of the art equipment and technology.

The Department will also be administering, within available budgetary resources, the newly established "Buses for 21st Century Mobility Program." New and expanded services may include the following: 1) expanding existing services when a need has been demonstrated for expansion; 2) providing new services where a need has been demonstrated; 3) new rail shuttle services; 4) express bus commuter services; greater coordination of marketing and web-trip planning of transit service; and 5) other bus transportation programs.

To improve and expand transit services and facilities in Connecticut, the Department completed several transit studies in 2005, 2006 and 2007, and has initiated or planned to undertake others. These efforts have continued with implementation of the following:

- West Haven Rail Station Final Environmental Impact Evaluation;
- New Haven Rail Line Danbury Branch Re-electrification Study (Phase II);
- Eastern Connecticut Mobility Study/New London to Worcester Commuter Rail Implementation Plan;
- Northeast Rail Operations Study;
- Evaluation of the purchase of rolling stock for direct commuter rail service from Connecticut to New Jersey via Pennsylvania Station in New York City;
- Establishment of a Transit-Oriented Development Pilot Program;
- Environmental Assessment for implementing commuter rail service on the New Haven-Hartford-Springfield line; and
- Waterbury and New Canaan Branch Lines Improvement Study.





The New Britain to Hartford Bus Rapid Transit System (BRT) will connect New Britain to Hartford via an exclusive bus-only roadway that will run along 9.4 miles of inactive and active rail corridors in the towns of New Britain, Newington and Hartford. The locations of the 11 transit stops on the BRT are shown on the map. Construction of the BRT is scheduled to begin in 2010; bus service is scheduled to commence in 2013. A busway is shown in the picture to the right of the map.

CTDOT'S report, *Connecticut Department of Transportation on the Move, performance Metrics Report*, January 2009, is available on the Department's website at www.ct.gov/dot under "Publications."

Infrastructure Performance Management

From increased vehicle miles traveled, growing population, and greater congestion to aging infrastructure and escalating operating costs, today's challenging circumstances put greater-than-ever demands on transportation networks. Through the use of management systems, engineering and economic analysis, and other tools, transportation agencies can more comprehensively view the big picture and evaluate collected data before making decisions as to how specific resources or assets should be deployed.

Asset management principles and techniques should be applied throughout the planning process, from initial goal setting and long-range planning to development of the Statewide Transportation Improvement Program and finally through to operations, preservation, and maintenance.

Implementing an asset management program starts with establishing strategic objectives for managing and improving assets, and identifying the specific measurable performance and service levels needed to meet those objectives. An asset management plan can then be developed to cover all transportation-related assets, identifying what is working well, where improvements are needed, and the necessary data that should be collected. It is important to know what assets are in place and their condition and expected performance. It is also important to collect data that is linked to performance measures and that can be used for engineering and economic analysis. Often the necessary data is already available in existing management systems, such as those for pavements, bridges, tunnels, signals, rails, and safety hardware.

A Division of Infrastructure Performance Management was formed within the Department in July of 2006. Organizationally, this division is located in the Bureau of Policy and Planning; however, its staff will interact and provide a key linkage between the various bureaus to ensure that decisions are based on life-cycle cost analysis and data integration from several sources.

The strategy will focus on a variety of topics relevant to asset management including program level facility preservation, performance measurement, performance targets, multimodal analysis, and defining the most cost-effective methods and strategies for the Department's assets. The Division will determine network-level inventory needs so cross-bureau analyses can be generated based on the condition of all Department assets, including but not limited to roadways, structures, capital facilities, rails, bridges, ports, rest areas and commuter lots. This would include:

- tracking the performance/deterioration;
- function and value;
- researching strategic tradeoffs between preservation, operations and capacity expansion;
- choosing materials, construction methods, and preservation/maintenance approaches;
- identifying capital needs and funding capabilities; and
- monitoring the condition to determine, if, when and what type of improvement/repair/ maintenance/replacement activities are necessary to maintain the optimum life of the asset.

As defined by the American Association of State Highway and Transportation Officials (AASHTO):

> Asset Management is a strategic and systematic process of operating, maintaining, upgrading, and expanding physical assets effectively through their life cycle. It focuses on business and engineering practices for resource allocation and utilization, with the objective of better decision-making based upon quality information and well defined objectives.

The goal of an asset management program is to minimize the life-cycle costs for managing and maintaining transportation assets, including roads, bridges, tunnels, rails, and roadside features.

Responsible Growth & Transit-Oriented Development (TOD)

"Responsible growth" refers to development efforts that focus on integrating land use planning with transportation, affordable housing, retail and employment in a manner that discourages sprawl. Often, there is a focus on avoiding urban and suburban sprawl by concentrating growth in the center of a city or suburb where the required infrastructure already exists and advocating for mixed-use residential and commercial developments in areas that are compact, higher density, walkable, bicycle-friendly, transit-oriented and offer a range of housing choices. Taking this concept of responsible growth and coordinated land use development one step further, a "transit-oriented development" (TOD) is a mixed use/compact area that is designed to facilitate use of and maximize access to public transportation. In the Connecticut State Statutes, a "transit-oriented development" is defined as "development within one-half mile of public transportation facilities, including rail and bus rapid transit services, which meets supportive standards for land uses, built environment densities and walkable environments, in order to facilitate and encourage the use of those services." TODs can provide housing and transportation options that enable people to meet their mobility needs in more cost-effective and environmentally friendly ways, reduce the percentage of their household incomes spent on transportation, and hence, improve the quality of their lives and increase their contributions to the economic vitality of an area.

Public demand and legislative support for better and more coordinated land use planning has increased as a result of rising fuel prices and the general consensus among scientists that most of the global warming over the last 50 years is attributable to human activity. These events, coupled with:

- the employment trend of job growth in suburbs as opposed to cities;
- the lack of affordable housing in many areas of the state;
- people's commuting patterns and the public's frustration with growing traffic congestion in Connecticut;
- growing public concern over the negative environmental consequences of sprawl - loss of open space, farmlands, wetlands and animal habitats, and degradation of air quality and water quality;
- growing awareness of the current and long-term economic costs of sprawl; and
- demographic changes such as the increasing average age of the State's population, the projected growth of in the percentage of Connecticut's 65 and over population, and the projected growth of minority and immigrant population groups, many of whom are transit-dependent

are resulting in greater use of public transportation and increased public demand for the State to increase the frequency of, expand, connect and better coordinate bus and rail services within the state and the region and to address the needs of pedestrians, bicyclists and users of other non-motorized means of transportation.

There is a cause-and-effect relationship between transportation and economic development, better coordination of land use planning and transportation at municipal, regional, state and interstate levels. It is necessary to provide more and better options to enable people to meet their mobility needs in order to create communities that enable residents to get to jobs, reduce their transportation costs, find housing that they can afford, reduce their emissions of greenhouse gases, and lead healthy, active lives. TODs provide opportunities to fulfill many of these goals.

Since 2004, Governor Rell and the Connecticut General Assembly have passed the following responsible growth and TOD initiatives:

- P. A. 07-239. An Act Concerning Responsible Growth;
- P. A. 07-7. An Act Authorizing and Adjusting Bonds of the State for Capital Improvements and for Transportation Infrastructure Improvements and Concerning the Connecticut State University Infrastructure Act;
- P. A. 08-101. An Act Concerning the Department of Transportation
- P. A. 08-98. An Act Concerning Global Warming Solutions; and
- P. A. 08-182. An Act Implementing the Recommendations of the Program Review and Investigations Committee Study of Regional Planning Organizations.

In Connecticut, state agencies must implement their plans and actions in a manner consistent with the following growth management principles set forth in the State's Conservation and Development Policies Plan:

- redevelop and revitalize regional centers and areas with existing or currently planned physical infrastructure;
- expand housing opportunities and design choices to accommodate a variety of household types and needs;
- concentrate development around transportation nodes and along major transportation corridors to support the viability of transportation options;
- conserve and restore the natural environment, cultural and historical resources, and traditional rural lands;
- protect and ensure the integrity of environmental assets critical to public health and safety; and
- promote integrated planning across all levels of government to address issues on a state-wide, regional, and local basis.

Key recommendations presented by the Governor's Steering Committee on Climate Change for policy action included:

- double transit ridership by 2020, supported by responsible growth and a vehicle-miles-traveled (VMT) reduction package; adopt California LEV-II vehicle emissions;
- establish a Connecticut clean diesel program;
- participate in a multi-state intermodal freight initiative; implement programs for energy efficiency;
- encourage forest and agricultural land preservation; and
- increase recycling and source reduction 40%.

Climate Change

Since 2001, when the Intergovernmental Panel on Climate Change issued a report concluding that most of the global warming over the last 50 years is attributable to human activity, there has been growing public support for international, federal, state and local policies and initiatives to educate people about the harmful effects of GHG and to implement changes to reduce GHG emissions and counteract the negative effects of global climate change.

For the past eight years the State of Connecticut has been working to develop strategies and take actions to address climate change. In 2001 the New England Governors and Eastern Canadian Premiers (NEG-ECP) adopted a regional climate change action plan to reduce the emissions of GHG. In 2004:

- Connecticut developed a comprehensive climate change action plan and immediately translated it into legislative and administrative proposals for implementation;
- Connecticut was the first state to address the global warming impacts of “black carbon” emissions;
- Governor Rell accepted for immediate implementation 38 of the 55 recommended GHG emissions-reduction actions proposed in the report, *Connecticut Climate Change Stakeholder Dialogue: Recommendations to the Governor’s Steering Committee* (Stakeholders’ report); and
- the Connecticut General Assembly passed legislation adopting the California Vehicle Emissions standard, establishing goals for State purchases of renewable energy and creating other incentives to encourage GHG reduction actions.

The 38 selected actions have the potential to reduce the State's GHG emissions by 4.07 million metric tons of carbon dioxide below projected levels in 2010, a reduction of 8.5 percent. They will enable the State to achieve 52 percent of its overall 2010 goal of stabilizing emissions at 1990 levels, the target established by the NEG-CEP's Climate Change Action Plan of 2001. These recommendations were proposed to reduce emissions attributable to the rapidly growing transportation sector because approximately 40 percent of Connecticut’s CO2 emissions from fossil fuel combustion are attributable to transportation.

The 2004 Stakeholders’ report was the starting point for the *Connecticut Climate Change Action Plan 2005* which was prepared by the Governor’s Steering Committee (GSC) on Climate Change and submitted to the General Assembly in February 2005. This plan is a multi-sector, comprehensive climate change action plan that includes policies and programs needed to reach the state’s 2010 and 2020 goals in reducing greenhouse gas emissions. It is a key component of the State’s efforts to reduce GHG emissions and achieve regional goals set by the NEG/ECP.

Public Act 06-136, The Roadmap for Connecticut’s Economic Future, which was passed in May 2006, includes several transit projects to be programmed, planned or evaluated that will help facilitate the attainment of some of the climate change goals. The following initiatives are included in the public act:

- the rehabilitation of rail passenger coaches and improvements to parking and rail stations;
- enhancing service and ridership along Shore Line East (SLE) and New Haven Branch Lines;
- capital improvements to the Danbury Branch;
- completion of the Norwich transportation hub; and
- the implementation of a freight rail link to the port of New Haven.

The following transit projects that are currently underway or planned also will have a positive impact upon reducing greenhouse gas emissions:

- the design the New Britain-Hartford Busway, the design of a new rail car maintenance facility in New Haven, and
- the undertaking of an Environmental Assessment of the New Haven-Hartford-Springfield Commuter Rail Project.

In November 2006, three divisions of CTTransit began using the mandated cleaner burning ultra-low sulfur diesel fuel, but have added in a 5 percent Biofuel mix, to make the engines even cleaner-burning as well as reducing the dependence on fossil fuels. For more information on Connecticut's climate change efforts, navigate to www.climatechange.com. It is anticipated that provisions to address climate change will be included in the next federal transportation reauthorization legislation.

Chapter 2: The Planning Process

Public Participation

In preparing this 2009 long-range transportation plan (LRP), CTDOT made every effort to:

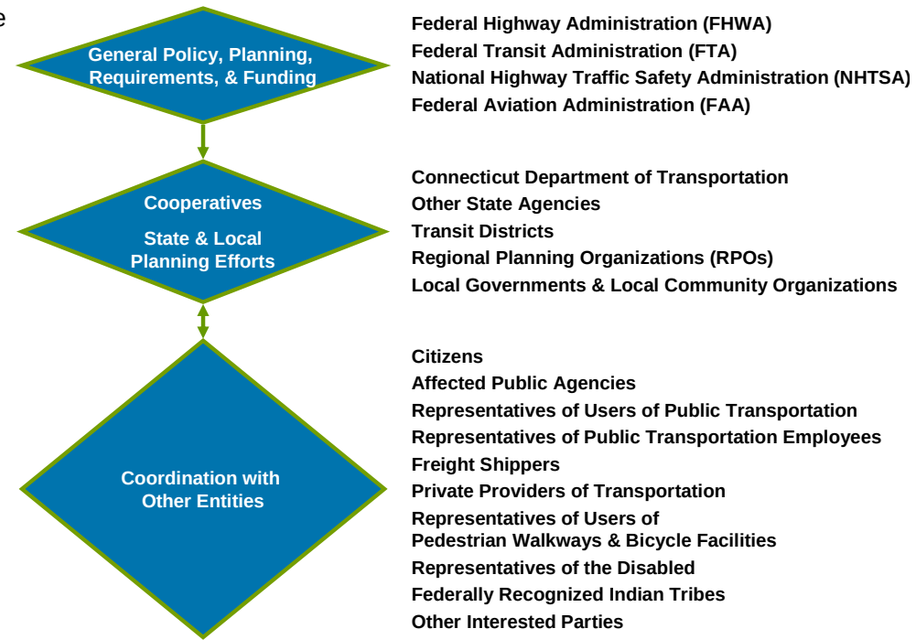
- initiate the public involvement process early and continue to engage the public throughout the process of updating the LRP;
- release information to the community about the LRP update and opportunities for participating in the process in a timely manner;
- provide reasonable public access to information used in the development of the plan and provide materials through readily available avenues;
- provide adequate public notice of and time to engage in activities related to the development of the plan; and
- consider all input provided and establish a process for internally distributing and responding to comments received as part of the public outreach.

Participants in the Process

The various groups and their influence on each other during the transportation planning process are identified in the diagram on this page. In developing the LRP, CTDOT solicited input from these groups prior to and after the development of the Draft 2009 LRP. The Department notified interested parties, including:

- Representatives of groups traditionally underserved by existing transportation systems, such as low-income and minority households;
- Representatives of federally recognized Indian tribal governments in Connecticut;
- Local elected officials representing units of general purpose local government for nonmetropolitan areas; and
- Agencies involved in state-wide trade and economic development planning activities and multi-state planning efforts

of the various opportunities to provide their input.



The characteristics of successful participation are inclusiveness, early involvement, and clear, accurate information.

Listening sessions are open meetings where the public is invited to offer their ideas and opinions on Connecticut's transportation system.

All interested parties, including Connecticut's local and regional businesses, residents, visitors and commuters, were encouraged through press releases, display advertisements, brochures and posters to participate in this process.

The schedule for the pre-draft Listening Sessions was as follows:

Session I: Rural Eastern CT
Monday, November 5, 2007
5:30 P.M. - 8:00 P.M.
Eastern CT State University
Willimantic, CT

Session II: Rural Western CT
Thursday, November 8, 2007
7:00 P.M. - 9:00 P.M.
Sullivan Senior Center
Torrington, CT

Session III: New Haven Area
Thursday, November 15, 2007
7:00 P.M. - 9:00 P.M.
Gateway Community College
Long Wharf Campus
New Haven, CT

Session IV: Southeastern CT
Wednesday, November 28, 2007
7:00 P.M. - 9:00 P.M.
Uncas on Thames Campus
SE Mental Health Authority
Montville, CT

Session V: Greater Hartford Area -
Thursday, November 29, 2007
5:30 P.M. - 8:30 P.M.
Newington Senior and
Disabled Center
Newington, CT

Session VI: Housatonic /
Central Naugatuck Valley Area
Monday, December 3, 2007
7:00 P.M. - 9:00 P.M.
Town Hall
Southbury, CT

Session VII: Bridgeport /
Stamford Area
Tuesday, December 11, 2007
7:30 P.M. - 9:30 P.M.
City Hall
Norwalk, CT

Public Outreach Efforts

CTDOT solicited public input on transportation issues and priorities prior to and during the development of the 2009 LRP.

In Preparation of the Draft

The Department held public listening sessions at seven locations throughout the state. These listening sessions, which were held in November and December 2007, coincided with a public comment period that began on September 20, 2007 and ended December 31, 2007. At each listening session Department staff, prior to opening the floor for public comment, gave a presentation on the process for developing the LRP. In addition, information packages were given to attendees, and a number of pertinent planning documents prepared by the Department were available for viewing.

Press releases were issued and display ads were published in 12 newspapers to notify people of the upcoming listening sessions and to notify them of the time frame and means by which to submit comments. With each release, newspaper, television, and radio organizations and other media organizations throughout the state were notified of the upcoming sessions. As a result, media organizations covered some of the listening sessions.

Interested parties were contacted and updated on the process via electronic mail, direct mailings of informational brochures and posters and at monthly and quarterly meetings of various organizations. Approximately 800 brochures were mailed to interested parties including environmental justice organizations, neighborhood revitalization groups, senior centers, towns, libraries, and media organizations. Brochures were also provided by Department staff as handouts at conferences relating to smart growth, transit-oriented development and transportation. Throughout the public outreach process, items pertinent to the development of the 2009 LRP were posted on the internet.

The Draft Plan

The draft 2009 LRP was made available on the Department's web site to view and download beginning March 17, 2009. On _____2009, a press release was issued to announce the completion of the draft plan; the availability of the document for public review and comment; the dates, times and locations of public information meetings on the document; the time period for submitting comments and information for submitting comments electronically and by mail. In addition, a notice of availability was mailed to municipalities, public and academic libraries, and various regional, State and federal agencies, as well as other interested parties, including individuals who provided their names and mailing addresses during the initial public input period. Also, a large print version of the notice of availability was mailed to senior/disabled centers throughout the state. Four public information meetings will be held in March and April 2009 to present the draft LRP and take public comments on it. The dates, locations and times of these meetings are listed on the following page. The 30-day comment period for reviewing and submitting comments on the draft LRP will end on April 30, 2009.

The Final Plan

The final 2009 LRP will be posted on the Department's web site. In addition, a notice of availability will be mailed to municipalities, public and academic libraries, and various regional, state and federal personnel as well as other interested parties. A press release will be distributed announcing the completion of the 2009 LRP and its availability, both online and in hard copy, upon request. Hard copies of the plan will be sent to the State Library for distribution to depository libraries and made available for review at other selected locations. Once completed, the final 2009 LRP will be submitted to the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

Input & Information Considered

When preparing this LRP, CTDOT staff reviewed various documents, including the State's conservation and development policies plan (C & D Plan), regional long-range plans developed by Connecticut's Regional Planning Organizations (RPOs) and relevant documents and plans prepared by the Department. A list of the documents (other than those produced by the Department) will be included in a document on the planning process for Connecticut's 2009 long-range transportation plan which will be posted on CTDOT's web site.

Public Comments

The Department seriously considered all public comments it received. The listening sessions were attended by a total of approximately 98 people. Prior to the preparation of the draft plan, approximately 47 people provided oral comments at the listening sessions and 49 people submitted written comments during the public comment period. Comments received at the listening sessions and during the public comment period were summarized, made available to appropriate Department staff, and considered and included, where appropriate, when preparing the 2009 LRP. Following is a summary of the general themes relayed to the Department in comments received at the listening sessions and submitted in writing.

Summary of Comments Received

The written comments closely mirrored many of the issues brought up by attendees at the public listening sessions. A majority of both the written and oral comments expressed the need for improving and expanding bus and rail services and facilities and the need to better address the needs of pedestrians and bicyclists as a means of promoting a more comprehensive and environmentally sustainable transportation network. With respect to highways, comments pertained to suggestions for improving safety and traffic flow on highways and support for or opposition to the construction of specific highway segments. More specifically, comments pertained to:

- The need to provide extended bus service routes, greater frequencies of services, expanded hours of service and better connections between bus and rail services;
- The need to provide and/or increase the frequency of bus service between urban areas and cities such as Hartford and New Haven;
- The need to expand existing bus and rail service between urban core centers and surrounding suburbs;
- In rural areas of the state, the need to expand the hub-and spoke bus system and provide public transportation between outlying towns and urban centers, such as Willimantic, as well as to Hartford and to Bradley International Airport;
- The need to upgrade and improve rail and bus stations, improve amenities and increase parking at rail stations;
- The need for affordable Amtrak intercity rail service from New London to New York;
- The need to improve the appearance of and maintenance at Groton-New London Airport;
- Support for the state's efforts with respect to transit-oriented developments and greater coordination of land use planning and transportation planning;
- Support for incorporating pedestrian-friendly design standards into Department projects, improving access and safety for bicyclists, and simplifying for small rural towns, the process for getting pedestrian crosswalks on State roads;
- Identification of highway safety-related concerns pertaining to enforcement, signage, speed limits, passing lanes, the application of road deicing material, lane configurations at various locations throughout the state; and the use of State police at construction sites;
- Suggestions for reducing the current congestion problems plaguing Interstate 95. Suggestions included implementing electronic tolling and congestion pricing, applying other Intelligent Highway System technology and taking actions to facilitate a shift from moving goods by truck to moving goods by rail freight;
- Strong opposition to plans for constructing "Super 7";
- The need to construct Route 11 to provide an evacuation route from the shoreline;
- The desire that CTDOT recognize, to a greater extent, the environmental impact that highway expansion projects have on communities;
- The desire that CTDOT more fully recognize the fundamental link between transportation and environmental sustainability in Department plans and projects and a suggestion that speed limits be lowered to save fuel; and
- Recommendations that the Department explore alternative funding options for Department priorities and projects, given the increasing public demand for more and better transportation alternatives and upgrades amidst constrained federal and state transportation budgets.

Information on the planning process for the 2009 LRP may be found on CTDOT's web site: http://www.ct.gov/dot under "Publications" "CTDOT Transportation Plans" "Other." The web site is updated with new information as it becomes available. A separate document on the planning process for Connecticut's 2009 Long-Range Transportation Plan will be posted on the web site after the final LRP is published. It will include summaries of comments received and a list of documents, other than CTDOT studies and plans, that were reviewed as part of the process of developing the LRP.

Schedule of Public Meetings on Draft LRP:

Tuesday, March 31, 2009
Conn. Department of Transportation
2800 Berlin Turnpike
Newington, CT
1p.m. - 3 p.m.

Southeastern Conn. Council of Governments
5 Connecticut Ave.
Norwich, CT
7 p.m.- 9 p.m.

Wednesday, April 1, 2009
Chase Municipal Building
236 Grand Street
Waterbury
7 p.m.- 9 p.m.

Thursday, April 2, 2009
Bridgeport City Hall
999 Broad Street
7 p.m.- 9 p.m.

The ultimate objective of the five-point strategic action plan is to provide the most efficient, safe and secure transportation network for Connecticut residents, visitors and businesses.

Fixing the system first, while more cost-effective than allowing the system to fall into disrepair, also provides for improved safety and increases system productivity. Hence, maintaining the system in a state of good repair meets more than just the federally mandated factor. Other components of the action plan also meet multiple federally mandated factors.

Chapter 3: Mandates, Issues & Actions

Overarching Efforts

The components of the Strategic Five-Point Action Plan are overarching in many ways. In many cases, efforts taken to meet one of the eight federally mandated factors that must be addressed in this LRP will similarly complement actions taken to meet the other seven factors – each building upon the next. It is often difficult to separate the issues and the solutions for addressing transportation system needs. The factors are:

- emphasize the preservation of the existing transportation system;
- promote efficient system management and operation;
- increase the safety of the transportation system for motorized and non-motorized users;
- enhance transportation security for motorized and non-motorized users;
- protect and enhance the environment, promote energy conservation, and improve the quality of life;
- increase the accessibility and mobility options available to people and for freight;
- enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight; and
- support the economic vitality of the United States, the States, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency.

This chapter addresses each of the eight federal factors, the Department's mission, values and principles, the five-point strategic action plan and the guiding principles and strategies of the Transportation Strategy Board. Each chapter section pertains to a federal factor and:

- cites the mandated factor,
- discusses the pertinent issues, and
- lists action statements for meeting the mandate.

The Department has identified the following actions as generally applicable and necessary for meeting each and every one of the federally mandated factors:

Articulate to state and federal officials the importance of adequate, stable funding sources and staffing levels.

Identify, develop and support non-traditional programs and solutions that leverage innovation and advances in technologies.

Identify, encourage the formation of, and facilitate public/private partnerships.

Promote maintenance, management and improvement projects through analysis of project performance and cost/benefit.

Encourage efforts to reduce and manage congestion and enhance and provide mobility options.

Make detailed project schedules and information available on the Department's web site.

Consider and comply with the Office of Policy & Management's (OPM) conservation and development policies plan (C & D Plan).

Preserving & Maintaining the Existing Transportation System

Connecticut has 21,294.57 miles of public roadways consisting of town, State and federal roads.

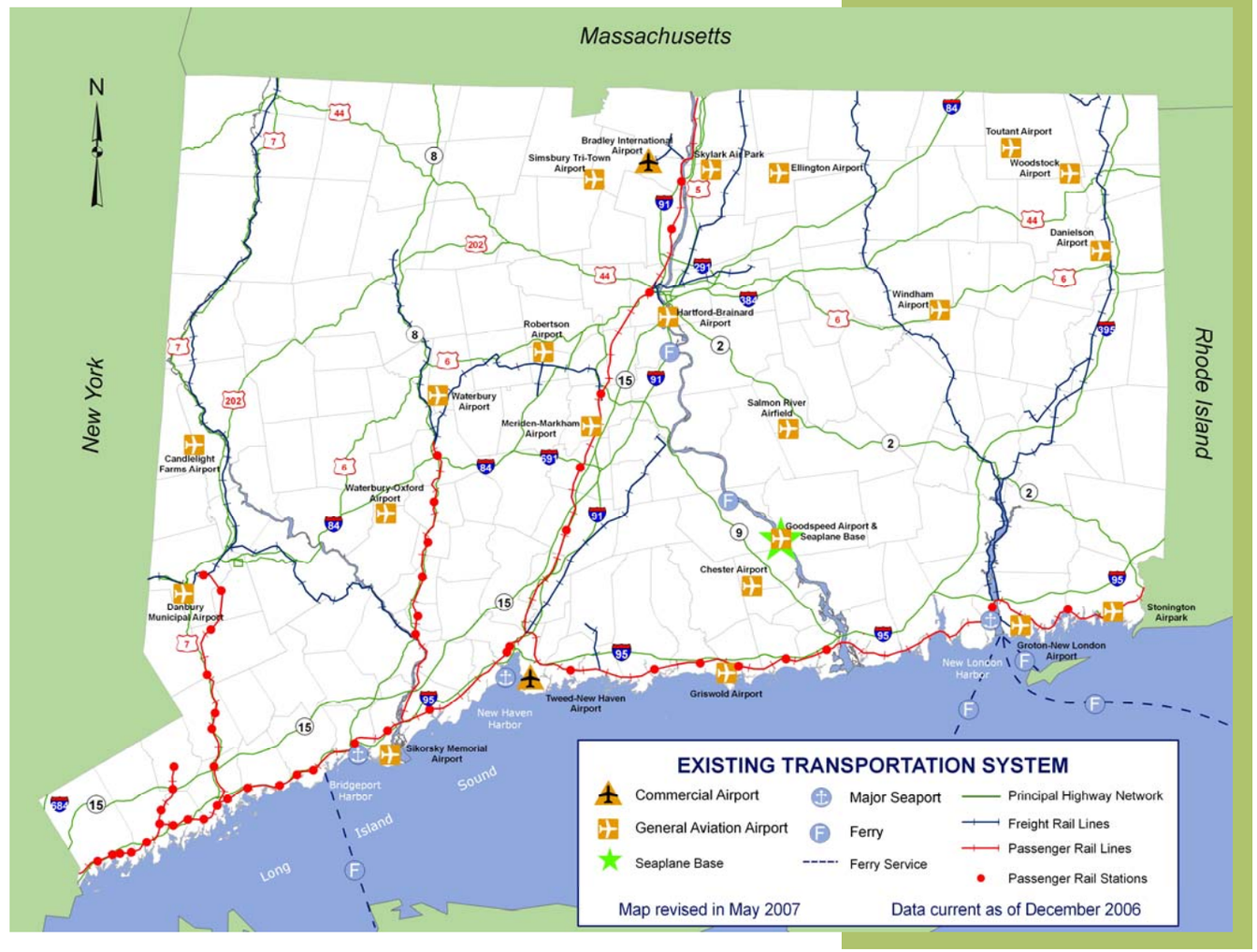
Issues

The State of Connecticut has finite resources to invest in transportation. The Department must establish investment priorities so that available resources are effectively utilized. The Department's highest priority will continue to be to preserve and maintain the existing transportation system. The existing system comprises major transportation infrastructure such as airports, bridges, highways, rail lines, and navigable waterways. The system also consists of many other components that must be maintained. Such components include, but are not limited to, rail cars, buses, rail and bus stations, piers, terminals, depths of channels, guiderail, signs, lighting, rest areas, salt storage sheds and maintenance facilities and equipment. It is usually more cost-effective to continually maintain the transportation system than it is to defer repairs and maintenance until a component of the system deteriorates to the point where it needs to be replaced. Maintaining the system in a state of good repair is necessary to ensure the safety of the traveling public and the efficient movement of freight.

Actions

The Department is committed to making investments to preserve, maintain, address safety issues on, and maximize the use of the existing transportation system before making investments to expand the system.

The highway system is the backbone of the state's and the nation's transportation system. In addition to functioning as infrastructure for operating automobiles, trucks, buses and bicycles, it is also the primary means by which rail and bus services and facilities, airports and ports are accessed. For this reason, even as more and better public transportation options are provided, the highway system will remain the largest and most used component of Connecticut's transportation system.



CTDOT is directly responsible for overseeing all design, construction, maintenance, and improvements for the State-maintained roadways.

CTDOT maintains 3,731.37 miles of roadway consisting of state routes and roads, stubs, bypasses, and ramps. The Department also ensures that the 2,847.20 miles of town-maintained roads (rural and urban) that are classified as either collector or arterial are designed and constructed to the specifications of the American Association of State Highway and Transportation Officials.

CTDOT is also responsible for 9,759.67 through-lane miles (not including ramps) of state roadways. Of the 5,424 bridges, tunnels and buildings over roadways in the State that are either publicly or privately owned, the Department maintains 3,875 structures.

Mandate: Emphasize the preservation of the existing transportation system

Invest first in projects and initiatives that maintain and improve the transportation system in areas where the infrastructure is already in place…

- Correct hazardous or potentially hazardous situations to avoid magnification of associated safety issues.
- Provide for routine maintenance and upgrading of components of:
  - the rail system such as tracks, bridges and structures, power systems, rolling stock, rail stations, etc;
  - the bus transportation system such as rolling stock, bus maintenance facilities, information systems for passengers, revenue collection systems, etc;
  - the highway system including pavement, traffic signals, lighting, guiderail, signs, pavement markings, bridges, commuter parking facilities, highway maintenance facilities, intelligent transportation systems, maintenance equipment and vehicles, etc;
  - the State piers, the Connecticut River ferry vessels and facilities and dredging of ports and navigable waterways;
  - air transportation facilities, equipment and infrastructure to improve safety at and in the vicinity of the airports; and
  - State-owned sidewalks, on-road bicycle facilities, and multi-use trails.
- Work with advocates of the interests of bicyclists and pedestrians and with other stakeholders to maintain and repair existing facilities for bicyclists and pedestrians.

Most of Connecticut's present highway network was constructed between 1920 and 1970; the majority of the interstate highways in Connecticut were constructed in the 1950s and 1960s. All of these pavements have been rehabilitated at one point or another; however, they are continuously subject to increased traffic and heavier loads than they were designed to handle.

Bradley International Airport (BDL) is the state's primary air carrier facility. Hartford-Brainard Airport, a general aviation facility, functions as a reliever airport to BDL. Maintaining the State-owned and municipal airports in Connecticut is increasingly important to the overall economy of the state. The Department recognizes Tweed-New Haven Airport's ability to serve travel needs in Southern Connecticut and to complement Bradley International Airport.

The New Haven Line (NHL) commuter service operates between New Haven, Connecticut and Grand Central Terminal in New York City with connecting branches to New Canaan, Danbury and Waterbury.

Amtrak operates SLE service for CTDOT between New London and New Haven. It also provides intercity rail passenger service in Connecticut along the Northeast Corridor between New York and Boston, and the inland route between New Haven and Springfield, Massachusetts .

The Shore Line East (SLE) commuter service operates between New Haven and New London with two special SLE express trains that operate west of New Haven to Stamford and Bridgeport.

The Connecticut Maritime Commission is the primary body within the State of Connecticut to develop and recommend maritime policy to the Governor and the General Assembly. It is responsible for developing and updating a long-term strategic plan for all ports and waterways in the State of Connecticut with a focus on the three deep water ports.

CTDOT owns and operates Bradley International Airport and the following five general aviation airports:

- Hartford-Brainard Airport,
- Groton-New London Airport,
- Waterbury-Oxford Airport,
- Windham Airport, and
- Danielson Airport.

The Department also distributes funding to four municipal airports: Sikorsky Memorial Airport, Danbury Municipal Airport, Tweed-New Haven Airport and Meriden-Markham Airport .

CTDOT oversees and financially supports the provision of two commuter rail services: the New Haven Line (NHL) and Shore Line East (SLE) services.

The Department oversees and financially supports bus and ridesharing services in Connecticut. The Department owns the CTTransit urban fixed-route bus systems operating in the Hartford, New Haven, Stamford, Waterbury, New Britain, Bristol, Meriden and Wallingford urban areas. In addition to these services, there are seventeen transit districts that operate the remaining urban, rural, and ADA paratransit services in the state.

The Department is responsible for the licensing of Connecticut marine pilots, assisting State Harbor Masters, the planning development and operation of the State Port Complex in New London, and the operation of two ferry services across the Connecticut River between Rocky Hill and Glastonbury and Chester and Hadlyme.

Interagency communications, information sharing, real-time technology, and greater coordination of transportation system planning and land use planning are key components of the State's approach to maintaining and improving the performance of the transportation system.

Diversion plans for incidents on limited access highways (along Interstates 95, 395, 91, 84, and Route 8) were developed in cooperation with local and state police, first elected officials, the permanent Statewide Incident Management Task Force and CTDOT field personnel.

The use of special signs indicating "better roads ahead" are being employed near construction sites to communicate more positively to the public that the Department understands the inconvenience of roadwork but is working to provide system improvements.

Managing & Operating the Transportation System

Issues

Preservation is only one facet of managing and operating a safe and efficient transportation system. Maximizing the use or "productivity" of the system is an equally important component. System productivity refers to the facilitation of travel in and between modes by maximizing use of the existing system. This is achieved by applying new and improved technologies, coordinating the scheduling of maintenance activities, providing real-time travel information to the public and coordinating transportation planning and land use planning.

Actions

It is essential to efficiently plan, manage and implement transportation maintenance and improvement projects to minimize travel delays, maximize the use of the existing transportation system and control future maintenance costs to the State. Critical elements to maximizing the State's ability to maintain a safe and productive transportation system are encouraging consistency of local and regional plans with state transportation system plans, and encouraging interagency coordination at local, state, regional and federal levels.

The Department will continue efforts to maximize the productivity of Connecticut's transportation system by identifying ways to minimize and reduce the frequency of travel delays and enable travelers to easily access up-to-date information on transportation services and facilities. The Department will continue to use new and improved technology to facilitate future efforts to improve performance and address deficiencies in the system. The provision of real-time traveler information to the public and the media will be promoted in order to support a competitive business environment in the region. The Department will support and facilitate the implementation of responsible growth initiatives that encourage development in areas that have transportation infrastructure.

The Department will pursue strategic capacity improvements to improve the efficiency of the transportation system. Improvements to capacity will only be undertaken after serious consideration of available funding and resource allocations, with priority given to "fix-it-first" initiatives. The Department is committed to making investments that result in efficient and cost-effective management and operation of the state's transportation system.

Promote and support appropriate coordinated use, maintenance, and improvement of Connecticut's airports, rail and port facilities as a means of efficiently moving passengers and freight into, through, and out of the State…

- Implement the recommendations outlined in the Department's I-95 Branford to Rhode Island and I-84 Waterbury to Danbury studies.
- Support the operational strategies and tactics adopted by the Bradley Board of Directors and TSB recommendations for Tweed-New Haven Airport.
- Implement the recommendations outlined in the Department's Rail Station Governance Study.
- Implement the recommendations of the Metro North New Haven Rail Commuter Council.
- Address the operational and infrastructure issues identified in the January 2007 study, *Expanding Rail Service on Shore Line East* and in the August 2007 study, *Implementation of Connecticut Rail Service into Penn Station New York.*
- Support the implementation of port land use plans that will result in more efficient port operations, facilitate the use of rail freight, improve security and diversify cargo and product handling, expand and enhance mobility options for moving cargo and for people, and address issues of incompatible land uses within port areas.
- Address concerns expressed by industry about the future transformation of land in and around existing ports to incompatible residential and commercial uses.
- Participate in public/private partnerships that will improve the efficiency of the existing rail freight infrastructure.

CTDOT will strive to maximize the use of the state's existing transportation system by identifying and developing innovative solutions to manage and operate the state's transportation system and identifying and seeking the resources needed to implement them.

Mandate: Promote efficient system management and operation

Institute and maintain a Transportation Infrastructure Management and Performance Measures program to optimize the allocation of resources and ensure cost-effective and properly-timed investments in preservation, maintenance and capital expansion of all infrastructure assets…

- The management program will focus on commonly-recognized asset-management principles including, but not limited to the following: transportation infrastructure inventory, value, condition, and serviceability; performance measures and performance targets; preservation; economic and tradeoff analyses; and, financial and resource allocation.
- Develop or adopt methodologies for measuring, evaluating, and monitoring condition/deterioration of transportation infrastructure assets;
- Coordinate the development of performance expectations (measures) and target values (goals) for key assets including but not limited to roadways, structures, ancillary roadside appurtenances, transit facilities, rails, ports, rest areas and commuter lots;
- Employ appropriate tradeoff analysis and prioritization techniques for budgeting between preservation, operations and capital expansion;
- Evaluate cross-asset analysis techniques to integrate output of highway (pavement) and bridge conditions for the prioritization of rehabilitation and preservation projects;
- Encourage that decisions are based on generally accepted engineering and economic analysis tools such as life-cycle cost, benefit/cost analysis and data integration from multiple resources;
- Develop reporting mechanisms to disseminate information on condition, costs of maintaining assets and predicted future conditions, as well as, scenario reports (e.g., What if budget increased 10%?); and
- Fully utilize the existing Pavement Management System and Bridge Management System (PONTIS).

Continue to identify, evaluate, support and implement programs, procedures, products projects and technologies to manage traffic congestion and minimize travel delays …

- Expand the applications of Intelligent Transportation Systems and Commercial Vehicle Information Systems and Networks (CVISN) technology;
- Support and encourage ridesharing and telecommuting;
- Fully utilize the Congestion Management System to provide information to decision makers for selecting and implementing cost-effective strategies to manage traffic congestion and enhance mobility;
- Fully develop and utilize the Safety Management System to ensure that all opportunities to improve safety are identified, considered, implemented and evaluated;
- Fully utilize the Traffic Monitoring System to expedite the collection, processing and dissemination of traffic data;
- Implement the recommendations of the Statewide Incident Management Task Force (SIMTF) to enhance accident clearance/highway assistance procedures;
- Continue to use the “weigh in motion” (WIM) and pre-clearance systems to minimize travel delays for commercial vehicles;
- Act as a key facilitator in researching and testing new technology, materials, procedures and processes;
- Continue to develop incident management tools and make available to the public information services such as a “511” transportation information system;
- Focus appropriate resources on the mitigation and management of road congestion throughout the state;
- Construct expressway extension, rehabilitation and replacement projects; and
- Construct speed change lanes on I-95 between Greenwich and North Stonington to facilitate vehicle movement.

An increasing percentage of highways in the State of Connecticut are approaching capacity or are over capacity. This is due to the increasing number of vehicles on the state's highways and the increasing number of miles traveled by these vehicles. In 2025, of the 3,757.40 miles of state-numbered routes in Connecticut, 236.54 miles (6%) will be approaching capacity and 714.96 miles (19%) will be over capacity.

The Department is working to improve ITS functionality across transportation modes. Initially ITS programs were implemented to improve the operation and management of the highway system.

Timely, efficient and coordinated responses by appropriate local, state and federal agencies to accidents on or affecting the state’s transportation system are critical to maintaining safety and minimizing travel delays.

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The Department maintains real-time information on its web site that includes a list of active traffic incidents and video camera images from the Newington and Bridgeport Operations Center systems.

Efforts are underway to expand the system to provide transit-related ITS services. New ITS initiatives will include implementation of a "511" telephone number for obtaining updates on transportation system incidents and the provision of real time traveler information for transit stations.

Support initiatives to improve and facilitate better coordination of transportation planning with land use planning …

- Promote the use of a common data platform to develop and update GIS databases to enable sharing of data by state and local government agencies and transportation providers.
- Encourage transportation and land use planning that is consistent with the Growth Management Principles, Development Area Policies and Conservation Area Policies set forth in Connecticut's Conservation and Development Policies Plan (C & D Plan).
- Prepare agency plans to conform with the C & D Plan.
- Consider the recommendations of the Responsible Growth Task Force.
- Support municipal efforts to develop transit-oriented developments (TODs).
- Implement the recommendations of the Statewide Incident Management Task Force.
- Implement the recommendations of the Maritime Commission with respect to all ports in Connecticut.

Employ the use of context-sensitive solutions, including early solicitation of public input, project coordination and well-planned construction management, for all transportation projects to ensure implementation of designs that are appropriately scaled to the community and to the need.

The Department's Intelligent Transportation System is an integral tool for managing the state's transportation system - it aids in reducing traffic congestion, promoting improved mobility, informing the public and ensuring safety of motorists, pedestrians and bicyclists, as well as roadway construction workers.

As part of this system, the Department operates an employee-based service patrol, known as the Connecticut Highway Assistance Motorist Patrol (CHAMP), variable message signs, highway advisory radio and closed circuit television cameras. The Department's Newington Operations Center and the Operation Center at Troop G in Bridgeport are equipped with a wall-size screen where real-time images of various traffic cameras, Doppler radar, and traffic accident listings can be viewed simultaneously.

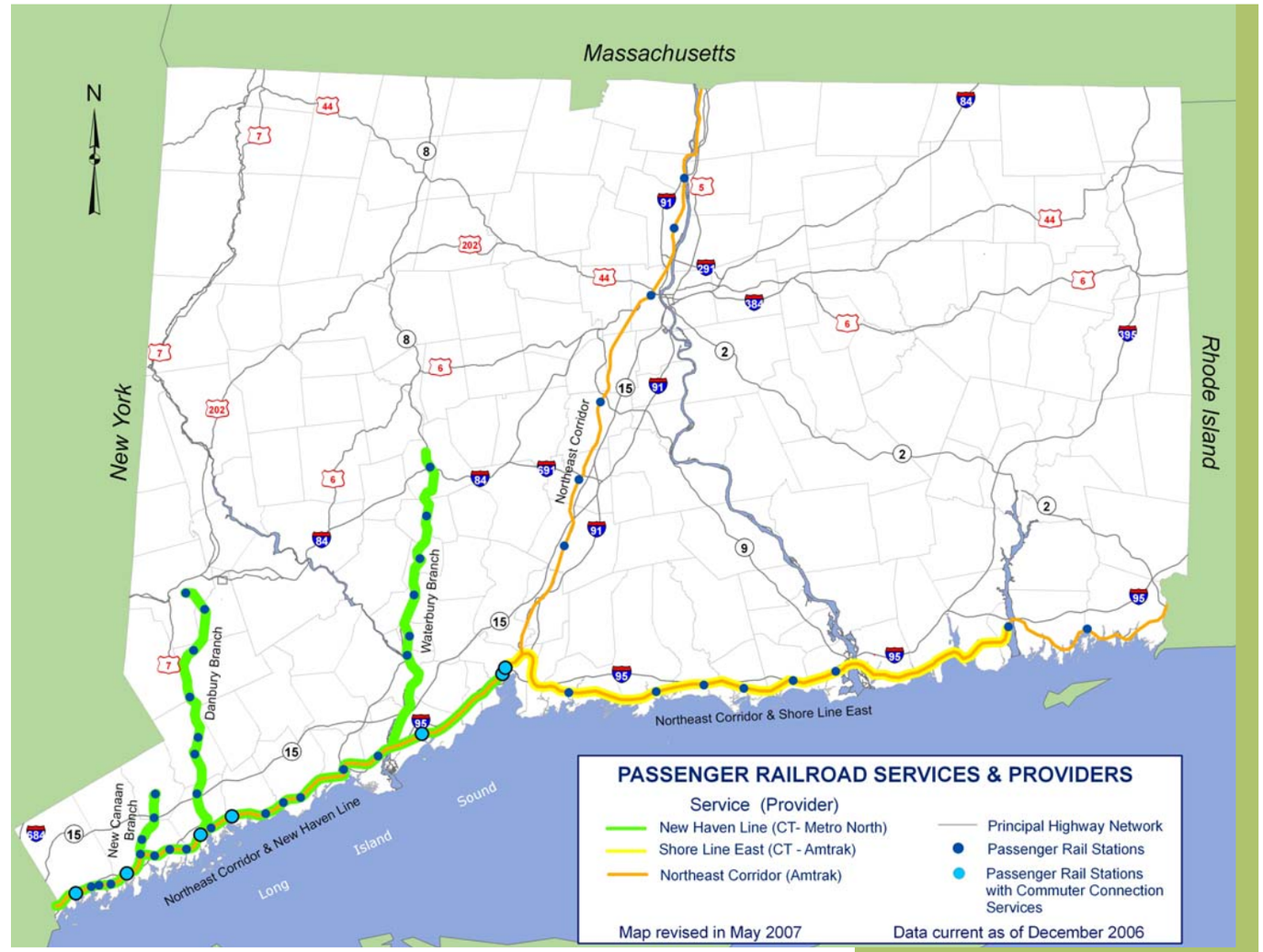
Identify and implement initiatives to make information on the Department's services, plans, projects, procedures and processes more transparent…

- Continue to create accurate, updateable, and expandable geospatial maps showing the road network in Connecticut; the locations of other transportation facilities including rail lines, airports and ports, and bus services; routes, and to support efforts to update GIS databases that can be shared by government agencies and transportation providers.
- Map, review and, with input from stakeholders, identify ways to streamline the Department's business processes and procedures.
- Develop and make available on the Department's website, project schedules for implementing the Governor's and Connecticut General Assembly's transportation initiatives.
- Seek input from Department employees and other stakeholders on ways to make the Department's website more user-friendly to enable them to more easily obtain information on the Department's projects, plans, business practices, and procedures.
- Advocate for the resources (staffing, software, hardware, and funding) required to undertake recommended initiatives to make information on the Department's services, practices, procedures and projects more accessible.

To further develop Connecticut's Regional Transit System, address operational and infrastructure issues that are obstacles to expanding rail service along the NHL and other corridors ...

- Improve Connecticut commuter rail service by addressing the challenges to improved service that are identified in the Department's August 2007 study, *Implementation of Connecticut Rail Service into Penn Station New York.*

- Address obstacles identified in CTDOT's January 2007 report, *Expanding Rail Service on Shore Line East,...*
  - Negotiate and obtain an agreement with Amtrak, the owner of the North East Corridor, to expand service;
  - Amend CTDOT's 2003 Lease Agreement with Amtrak to permit expansion of service before north side rail station platforms are added;
  - Develop an amendment and revised budget tied to increased service for the NEC Access Rights; and
  - Address the operational restrictions identified in the report.



There have been substantial reductions both in fatal and non-fatal injury crashes since the 1970s and 1980s. Nevertheless, alcohol remains a significant component of the overall statewide crash problem.

Fatal crashes and crashes that result in serious injuries have continued to decline throughout the state as have crashes associated with construction devices. However, CTDOT must continue to focus on enforcement of traffic laws, safety in roadway construction/ work zones and the safety of pedestrians, bicyclists and motorcyclists.

Cooperative efforts of CTDOT, Connecticut Department of Motor Vehicles and the State Police to coordinate police traffic services and programs such as the weigh-in-motion (WIM) technology are integral to maintaining safe corridors and deterring aggressive or drowsy driving, driving under the influence, poorly maintained vehicles, unsecured or overweight loads, as well as encouraging appropriate speed control and proper use of passenger restraints.

Ensuring Safety on the Transportation System

Issues

Transportation safety is a complex subject that concerns high risk behaviors; traffic monitoring; system maintenance and inspection; hazard elimination and emergency preparedness. In the cases of hazard elimination and emergency preparedness, safety priorities also become linked with transportation security. Maintaining the existing system in a state of good repair to ensure the safety of the traveling public on and through Connecticut's transportation infrastructure and facilities is the highest priority. Doing so, however, will continue to be increasingly challenging. There are a number of population groups that are particularly susceptible to risk of injury when traveling or working on the transportation system. These include pedestrians, bicyclists, motorcyclists, construction workers, teens, children, elderly and disabled persons. Providing safe passage to these and all other groups is essential to maintaining a high quality of life for Connecticut's residents and visitors.

Actions

The Department is responsible for monitoring and addressing crash trends relating to impaired driving, speeding or operating too fast for conditions, construction or work zones, lack of automobile occupant protection, crashes at rail crossings and other high-risk factors. Key countermeasures for minimizing high risk behaviors within the travel corridors are education on the dangers, and consistent enforcement of laws to discourage persons from disobeying them.

CTDOT is committed to providing a safe transportation system for travelers and a safe working environment for personnel working on transportation maintenance and construction projects. Maintenance of the existing system will be pursued to ensure continued safe traveling on all modes of transportation in Connecticut. The Department will consider system modifications that have been identified as having the potential to significantly enhance transportation safety. The Department will continue to administer programs to promote and enhance the safety motorists, pedestrians, bicyclists and users of public transportation. To meet current and future work zone safety and mobility challenges, the Department developed and has instituted a Work Zone Safety and Mobility Policy and Implementation Plan.

Safety for motorists and non-motorists traveling on the State's roadways and public transportation system is one of the Department's highest priorities.

Mandate: Increase the safety of the transportation system for users of motorized and non-motorized modes

Recognize maintenance of the existing system as a high priority and, in so doing, develop and support various activities and programs for promoting safety through coordinated efforts; the latest available technology, practices and procedures; and optimal application of resources…

- Update and implement
  - the Department's Emergency Response Plans;
  - the Department's principal rail equipment safety document, the *System Safety Program Plan* (SSPP) and other safety-related data;
  - *The State of Connecticut's Highway Safety Strategic Plan* prepared pursuant to the Federal Highway Administration; and
  - the State of Connecticut's *Highway Safety Plan* prepared pursuant to the National Highway Traffic Safety Administration in order to reduce motor vehicle crashes.
- Adhere to timely infrastructure and transportation system component inspection and maintenance schedules.
- Identify, investigate, and set priorities for preventing and correcting hazardous or potentially hazardous situations in a timely manner.
- Promote helmet use to aid in the reduction of injuries sustained during motorcycle crashes.
- Support State laws pertaining to teen driving and promote safer driving techniques through education of parents and teens to reduce the number of accidents involving 16-20 year olds.
- Encourage better driver awareness of pedestrians, bicyclists and motorists on the road network.
- Educate pedestrians and bicyclists on safety measures for crossing roadways.
- Promote State and federal laws pertaining to
  - operating a motor vehicle in a construction zone and educate the public on the associated dangers and penalties;
  - the use of safety belts and educate the public on the associated dangers and penalties; and
  - the use of child restraints and educate the public on the associated dangers and penalties to increase the use of and promote correct installation of child restraint devices.
- Utilize proper roadway signage, use of reflective materials and other safety measures during construction activities.
- Develop a comprehensive traffic records delivery system.

Bridges and similar structures are major system components that require special and regular attention. Bridge inspections are performed on a two-year cycle. The primary goal of the inspection program is to identify deficiencies and recommend repairs; perform rehabilitation measures or replacement in a timely manner; and ensure the safety of the traveling public.

The safety of pedestrians and bicyclists is of particular interest as there is potential for members of these two groups to bear a disproportionate risk of fatality and serious injury if involved in a crash with a motor vehicle.

Since 2006, CTDOT has participated in a national program, Safe Routes to School Program (SRTS) established by SAFETEA-LU.

In addition to being important components to manage traffic congestion for improved systems operations, Intelligent Transportation Systems (ITS) and Commercial Vehicle Information Systems and Networks (CVISN) technology are essential to aiding public safety.

Safety in highway construction or work zones is important to both travelers passing through and personnel working in such zones.

Advocate for transportation safety, including education and marketing to the public for ensuring safe travel practices…

- Promote programs that
  - reduce impaired driving and the number of crashes on Connecticut's roadways; and
  - increase the correct use of automobile occupant protection devices, including child safety seats.
- Support police traffic services and work cooperatively with the Connecticut Department of Motor Vehicles and the State Police.
- Improve the State's Traffic Records Program.
- Continue to implement the Safe-Routes-to-School Program.
- Implement the Connecticut Operation Lifesaver Program to reduce the number of injuries and fatalities associated with at-grade rail crossings and trespassing on railroad right-of-way.
- Implement and revise as appropriate, CTDOT's Work Zone Safety and Mobility Policy and Implementation Plan.
- Develop and implement, in consultation with stakeholders, a statewide "Share the Road" public awareness campaign to educate the public about the rights and responsibilities of motorists and bicyclists using the highways together.

Work with stakeholders to identify and implement projects, programs, practices and procedures to increase the safety of users of the transportation system and workers in highway work zones…

- Work with advocates of the interests of motorcyclists, pedestrians, bicyclists, and elderly and disabled persons to improve or enhance their safety.
- Identify and implement practices, procedures and projects to improve or enhance safety for passengers using buses, paratransit vehicles, and rail cars.
- Design and enhance commuter parking lots, rail parking facilities, rail passenger facilities, airport facilities, highway rest areas and ferry terminal areas to provide safe environments for passengers.
- Support weight and safety inspections of trucks to enforce laws that remove overweight and unsafe vehicles from state highways.
- Address the needs of motor carriers in their compliance with hours of driving rules through improved public and private service areas.
- Work cooperatively with regional planning organizations, municipalities and citizens to address pedestrian mobility needs on State-maintained roads while minimizing impediments to vehicle traffic flow.
- Implement the recommendations of the Highway Work Zone Advisory Council.
- Strive to achieve the goals and implement the strategic actions identified in the Connecticut Statewide Bicycle and Pedestrian Plan Update

Be proactive in creating Runway Safety Areas (RSAs) to enhance the safety of airplanes that undershoot, overrun or veer off runways...

- Develop a plan identifying proposed RSA dimensions, permits and resources necessary for completing RSAs at all State-owned federally obligated airports.
- Coordinate with the federal and State regulatory agencies to obtain permits and funding to provide adequate RSAs at all State-owned airports.
- Encourage Connecticut airports not owned by the State with scheduled commercial service to create RSAs.

Speeding and operating too fast for conditions continue to be highway safety problems in Connecticut. Speeding, following too closely, failure to yield and driver violation of traffic controls account for more than half of Connecticut's crashes.

Securing the Transportation System

Issues

The development of a comprehensive, all-hazards approach to domestic incident response, including the need to ensure the security of Connecticut's transportation system and its users, is a high priority for the Department, the State and the nation. However, doing so is and will continue to be increasingly challenging. Disasters and hazards can threaten the security of our transportation infrastructure, lives, the economy, the environment, buildings and businesses. Natural and homeland security events to which the Department must respond include but are not limited to the following: chemical hazards or accidents, dam failures, fires and wildfires, floods, hazardous materials releases or spills, hurricanes, nuclear power plant emergencies, pandemics, terrorism, thunderstorms, tornados and winter storms.

Actions

Prior to the September 11, 2001, terrorist attacks, the Department had several safety and security-related plans in place. Since the terrorist attacks, however, homeland security has become a high priority at both the national and state levels. In response, the Department instituted a variety of changes to address emergency management procedures and preparedness. It also developed emergency response plans that outline the Department's Homeland Security Advisory System. The plans were established in accordance with the five threat levels of risk established under the Federal Homeland Security Advisory System. These plans, which are based on the responsibilities of each of the Department's bureaus, are continually updated and modified. The Department also created a Homeland Security Task Force to identify, review and address any needs for increased coordination between Department bureaus to enable them to effectively and efficiently respond to any natural and/or homeland security events.

Bradley International Airport was among the first airports in the U.S. to experience implementation of the Federal Transportation Security Administration's Federal Security Director (FSD) program. Since August 2002, Bradley has had the FSD on site and has had a full federal work force of employee passenger screeners in place.

CTDOT has installed security systems at all general aviation airports and at the State Port Complex in New London to help protect the local infrastructure.

On February 28, 2003, President George W. Bush, in Homeland Security Directive No. 5, directed the Secretary of the United States Department of Homeland Security (USDHS) to develop and administer a National Incident Management System (NIMS). In response, Governor Rell issued Executive Order No. 10 on September 19, 2005, which directed all State agencies to implement a NIMS and to adopt the standardized Incident Command System (ICS). This system will be implemented as an extension of the Statewide Incident Management System that is currently in place. The Department is committed to providing a secure transportation network. In the event of a natural disaster or homeland security emergency, the Department is committed to providing an appropriate, timely response that reduces further danger to property or lives.

CTDOT, the Connecticut State Police, and the Office of Emergency Management have jointly developed implementation plans for various natural and homeland security events.

After September 11, 2001, a formal security plan was developed for Connecticut's state-owned bus operations.

Connecticut Transit was the first transit system in the country to receive an FTA-sponsored security review after September 11. The results indicated that the system was generally well-positioned to provide secure environments for employees, customers and assets. Some FTA recommendations have already been implemented, and others will require additional funding such as upgraded communications systems, increased use of security cameras on buses and at facilities, and other site security improvements.

CTDOT's Office of Maintenance and Highway Operations has a *Homeland Security Advisory System Response Plan*. This plan

- outlines protective measures and identifies assets for which maintenance field staff and office staff are responsible at each level, and
- is consistent with the Federal Homeland Security Advisory System.

CTDOT has initiated several projects to enhance security at the rail stations and rail yards in Connecticut, including installation of fencing and Closed Circuit Television Video Cameras (CCTVs) at rail yards and stations. As funding becomes available, the Department will initiate additional security projects.

The Office of Rail has also coordinated efforts with New York and New Jersey transit agencies on the federal Infrastructure Protection Program (IPP). It has applied for federal grant funding to initiate projects to enhance security.

CTDOT continues to work closely with the United States Coast Guard (USCG) on the security of the ports in Connecticut. There has been a concerted effort to develop better communication links, and the USCG is reaching out to local and state entities.

The Department has in place Radiological Response Plans and Procedures using a traffic management plan for a Millstone Nuclear Power Station disaster event.

Mandate: Increase the security of the transportation system for users of motorized and non-motorized modes

Develop the Security Planning program at the Department to provide a central resource to Department management and staff on matters relating to the security of the transportation system…

- Review, monitor and provide assistance analyzing potential implications of developments in homeland security planning efforts.
- Review, monitor and provide assistance analyzing potential implications of current and proposed best practices in the field of homeland security.
- Facilitate the coordination of transportation security projects involving multiple Department offices with Department of Emergency Management and Homeland Security and other outside agencies.
- Review, monitor and advise Department managers on the availability, related deadlines and eligibility requirements of grant programs and other funding.

See something? Say something.

TRANSITWATCH

Amtrak, Metro-North Railroad and CTDOT have been excellent partners in exchanging information. CTDOT has joined with the surrounding tri-state transportation agencies in New York and New Jersey to develop regional partnerships to support homeland security initiatives and program operations. This tri-state group has worked to apply a collaborative approach to ensure the safety and security of rail passengers. All aspects of security issues pertaining to commuters and intercity trains are being addressed. Periodic meetings are held among representatives from both the railroads and CTDOT to review any unusual incidents, upcoming special train movements and potential security issues.

Partner with the Department of Emergency Management and Homeland Security, along with our Federal partners, to articulate to state and federal officials the importance of adequate, stable funding sources and staffing levels to ensure the Department's capability and readiness with respect to all-hazards domestic incident response and transportation security…

- Communicate directly with legislators in Washington, D.C. on emergency preparedness and incident response funding and staffing needs.
- Communicate directly with legislators at the state capital on emergency preparedness and incident response.
- Identify, develop and support non-traditional programs and solutions to address emergency preparedness and transportation security needs.

The National Incident Management System (NIMS) is a tool for coordinating a national response when a situation arises that is interstate in nature, such as the nation experienced on September 11, 2001, and after the hurricanes of 2005. Such emergency or disaster responses may be of a natural or terrorist nature but may be of a scale that requires assistance from multiple disciplines and jurisdictions.

Implement the National Response Framework (NRF) and continue to implement the National Incident Management System (NIMS)…

- Update and implement the Department's Emergency Response Plans.
- Identify, investigate, and set priorities for preventing and correcting hazardous or potentially hazardous situations in a timely manner.
- Support the Transportation Security Administration (TSA) and Federal Aviation Administration-recommended safety improvements at airports in Connecticut.
- Continue to develop the Department's planning and operational capability with respect to all-hazards domestic incident response and transportation security.

Reducing Energy Use and Negative Impacts to Quality of Life & the Environment from the Transportation System

Issues

The movement of people and goods can be costly in terms of money, use of natural resources and environmental well-being. In recent years the cost of fossil fuels has increased significantly. There is concern about the nation's dependence on oil from other countries and the long-term availability of fuel for the United States due to growing demands for fuel by developing countries. Development associated with the changing travel and growth patterns has resulted in urban and suburban sprawl that has resulted in loss of farmland, open spaces, wetlands and animal habitats, degradation of air quality and water quality, and flooding. Connecticut's greenhouse gas (GHG) emissions from non-renewable fuel consumption are contributing to the global climate change. All of these factors have necessitated changes in approaches to transportation at the federal, state and local levels. There is now a focus on providing mobility options through better coordination of land use planning with transportation, better integration and coordination of transportation services, and designing and improving facilities to encourage and facilitate use by individuals using non-motorized, as well as motorized means of transportation. There is also greater public demand and legislative support for improving and expanding public transportation, both bus and rail, so that it becomes a mode of choice. Demand has also increased for transportation projects and programs that improve safety and access for pedestrians and bicyclists and for intermodal connections and options that reduce the costs, delays and environmental impacts of moving freight. These and other demands indicate that more people and businesses are willing to change their behaviors to reduce their fuel costs and address environmental issues such as climate change issues. The State must respond by taking actions to provide the mobility options to enable people to do so.

Actions

The Department is committed to protecting and enhancing the environment, promoting conservation, and improving quality of life as well as promoting consistency between transportation improvements and state and local planned growth and economic development patterns. The Department has implemented and will continue to implement policies and actions to conserve energy, reduce fuel consumption and reduce greenhouse gas emissions attributable to transportation. The Department will support and facilitate the implementation of federal and State initiatives such as transit-oriented developments (discussed previously), projects that facilitate use of the transportation system by users of non-motorized means of transportation, and projects and initiatives that facilitate and reduce the environmental impacts and costs of moving freight within and through Connecticut. When identifying and evaluating options to improve mobility, the Department will seek input from stakeholders early in the project planning and design process and consider their needs and concerns in selecting, designing and implementing projects.

Urban growth and more dispersed travel patterns have resulted in increased energy use, demands to make transportation's carbon footprint smaller and increasing demands on existing transportation systems.

Daily Vehicle Miles Traveled (VMT) in Connecticut grew steadily from 1983 to 2007. However, this growth trend could change in future years if motor fuel prices remain high and people continue to change their driving habits and make lifestyle changes to reduce their travel costs.

The average number of vehicles available per household has been increasing. This trend is expected to continue, but the types of vehicles owned will change in response to high fuel prices and the need to reduce CO^2 emissions.

The Biodiesel fuel used by the Department of Transportation is a combination of diesel fuel and 20% virgin Soy or a comparable vegetable oil derived from plant materials. Overall use of Biodiesel fuel by the Department of Transportation at several of its maintenance yards has exceeded 1,000,000 gallons per year since 2007.

CTTransit now uses 4 million gallons of 5% biodiesel fuel annually in buses and space heating; this is about 200,000 gallons of biodiesel fuel per year.

Flexible Fuel vehicles can burn either gasoline or the E-85 fuel. E-85 is a blend of 85% Ethanol and 15% gasoline. Ethanol is domestically produced and is made from plant material such as corn. This fuel is currently available at two DOT-operated facilities. The Department uses over 30,000 gallons per year of E-85.

When the use of ultra-low sulfur diesel fuel in buses is combined with continuously regenerating traps which filter out particulate matter, the resultant particulate emissions are 90% lower than a comparable late model bus.

Mandate: Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns.

Consider potential impacts of global warming on transportation infrastructure and services, particularly along the coast, when designing, constructing and prioritizing investments in transportation infrastructure…

- Design and construct projects to minimize and withstand the impacts of more frequent storms and flooding.
- Encourage research to explore innovative solutions for responding to changing land and water patterns, including flooding and loss of coastline caused by increased frequency and severity of meteorological events.
- Identify, investigate, and set priorities for preventing and correcting hazardous or potentially hazardous situations in a timely manner.
- Update and implement the Department's Emergency Response Plans.
- Fully implement the newly created Department's Transportation Security Planning program.
- Assist the Governor's Steering Committee on Climate Change in assessing the impact of climate change on the state's transportation infrastructure.

Support programs that reduce negative impacts to the quality of our air, water, other natural resources and overall quality of life by encouraging and supporting approaches to land use and development that link land use planning objectives with transportation systems planning in a manner that is consistent with the Growth Management Principles, Development Area policies and Conservation Area Policies set forth in the *Conservation and Development Policies Plan for Connecticut, 2005-2010*…

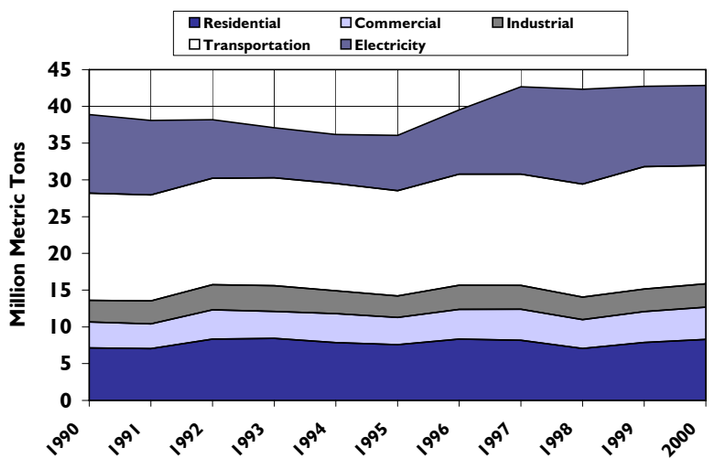
- Encourage and support responsible growth efforts that focus on integrating land use planning with transportation, affordable housing, retail and employment in a manner that discourages sprawl, provides and expands non-motorized mobility options, and facilitates the use of public transportation options.
- Incorporate elements into Department initiatives that support the permanent protection of public and quasi-public land dedicated for open space.
- Incorporate elements into Department initiatives that protect significant resource, heritage, recreation, and hazard-prone areas by avoiding structural development, except as directly consistent with the preservation value.
- Incorporate elements into Department initiatives that plan for the long-term management of lands that contribute to the state's need for food, water and other resources and environmental quality by ensuring that any changes in use are compatible with the identified conservation value.
- Incorporate elements into Department initiatives that protect the rural character of these areas by avoiding development forms and intensities that exceed on-site carrying capacity for water supply and sewage disposal, except where necessary to resolve localized public health concerns.
- Encourage transportation projects that support and preserve the community character, especially in rural centers and historic areas, through the use of context-sensitive design practices and support of federal Enhancement Program funding for streetscapes and recreation trails.

Public demand for programs and improvements to make roads safer for pedestrians and bicyclists has been growing as traffic volumes on local and state-maintained roads have increased.

- Update the Connecticut Statewide Bicycle and Pedestrian Transportation Plan and strive to achieve the goals and implement the action strategies identified in the plan.
- Encourage practices and policies that shorten delivery time and provide alternatives for goods movement through environmentally friendly methods that reduce fuel consumption, such as coordinated intermodal transport and improved use of the maritime highway.
- Support efforts to implement the recommendations in the Connecticut Climate Change Action Plan.
- Continue efforts to streamline and coordinate processes for obtaining water resources, dredging and storm water discharge permits while ensuring environmental issues are addressed comprehensively.

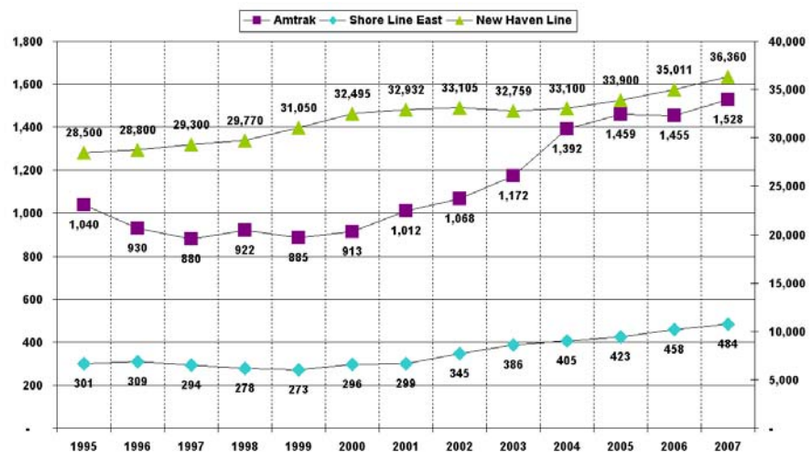
Investments that make transit a more attractive travel option support a responsible growth agenda; they provide a means to manage congestion and air pollution. An analysis of Connecticut's Greenhouse Gas Emissions Inventory revealed that approximately 40 percent of Connecticut's annual CO_2 emissions are attributable to transportation.

Total CO^2 Emissions from Fossil Fuel Combustion



Source: Connecticut Greenhouse Gas Emissions Inventory 1990-2000, August 2003.

Annual Connecticut Rail Ridership
(Thousands of Passengers)



Source: ConnDOT Bureau of Public Transportation and Amtrak. Graphic revised as of February 2008.

Data on driver behavior indicates that since the significant increases in fuel prices in 2008, more people are making vehicle and lifestyle choices to reduce the amount of money they spend on fuel.

- Demand for smaller, more fuel efficient cars, for hybrid vehicles and for scooters has been increasing;
- Ridership on buses and trains is continuing to increase;
- More people are making trips for multiple purposes or making fewer trips; and
- Some cyclists are seeking auto-free routes for commuting as well as for recreational use.

Motor fuel oil consumption may decline in future years due to increases in the fuel-efficiency of vehicles, the growing availability and use of alternative-energy vehicles, and the choices people make to meet their mobility needs.

Light-emitting diode (LED) traffic signals reduce electrical consumption, increase reliability, and reduce maintenance needs.

Continue to evaluate and mitigate the effects of transportation projects on the natural environment and quality of life, including air quality, noise, ecological resources, water resources, environmental justice, and cultural and archaeological resources…

- Implement energy performance standards for State transportation facilities, promote green building design on major capital projects, purchase environmentally preferable products, and use electronic media.
- Complete the installation of new light-emitting diode (LED) traffic signals statewide to reduce electrical consumption, increase reliability, and reduce maintenance needs.
- Develop and use transportation demand management tools to encourage commuters to use alternative rideshare options such as carpooling, vanpooling, telecommuting, compressed work weeks, and flextime.
- Continue to integrate Connecticut's air quality goals into the State's transportation planning to mitigate the effects of transportation projects on air quality.
- Continue air quality conformity reporting for major transportation projects, including consideration of climate modeling data when planning and designing repairs, replacement and expansion of transportation infrastructure.
- Work with municipalities to develop noise abatement plans and compatible land uses in areas surrounding airports.
- Continue to investigate the potential for improvements to the state's transportation system that will reduce greenhouse gas emissions.

Support programs and efforts that focus on minimizing fuel consumption, black carbon emissions, and single-occupancy vehicle trips as well as address the environmental and health costs associated with non-renewable fuel emissions…

- Encourage transportation research and projects that explore innovative solutions to reduce GHG emissions.
- Continue to use cleaner burning ultra-low sulfur diesel, E-85 and other biofuels in transit buses and Department vehicles.
- Continue to implement a model program to incorporate diesel emissions reduction strategies into a highway construction project, requiring on-road and off-road equipment to meet fuel and emissions reduction mandates.
- Continue to participate on the Governor's Steering Committee on Climate Change and support the Committee's efforts to implement recommendations for reducing harmful greenhouse gas (GHG) emissions generated by the state's transportation system.
- Establish a framework for bold actions through *Connecticut's Energy Vision* to reduce energy consumption and create additional incentives for renewable energy.
- Establish a goal through *Connecticut's Solid Waste Management Plan* to increase the amount of recycling and source reduction to a significantly higher level.
- Continue to implement major capital investments to make the use of public transportation and marine highway options more viable.
- Coordinate with northeastern states on regional strategies to incorporate greenhouse gas emissions strategies into regional transportation plans.

Improving Accessibility & Mobility within the Transportation System

Issues

A fully functional transportation network must efficiently and cost-effectively meet the mobility needs of individuals and businesses in Connecticut, other states and other parts of the world. It must be intermodal and provide connections and transportation services that enable and facilitate the efficient movement of people and freight on land, air and water. People must be able to access centers for education, medical care, employment, and affordable housing, as well as retail, cultural and recreational facilities, regardless of their age, disabilities, ethnic group, language barriers, income or education levels. Businesses that ship and receive freight need a multimodal transportation network that has adequate airport-land and seaport-land access as well as technology, systems and procedures to minimize travel delays when transporting goods within and through Connecticut.

To provide a fully functional network, it is necessary to continue to identify and provide innovative, convenient, safe and cost-effective mobility options that are easily accessible and attractive to pedestrians and users of both motorized and non-motorized forms of transportation, including persons with disabilities. The current and anticipated future funding from traditional sources of revenue is not sufficient to adequately address all of these demands. New partnerships with regional and municipal governments, transportation providers and users, businesses and other stakeholders will be required to identify, select, prioritize, finance and implement solutions to the state's mobility needs.

Actions

The Department is committed to increasing and improving the mobility options available to people and for moving freight. It will continue to work with the TSB, the OPM, members of the state legislature, other state agencies, the regional planning organizations, the business community, and citizens to meet the mobility needs of individuals and businesses in Connecticut. It will strive to provide a dynamic transportation system that is balanced and responsive to people's current and future mobility needs. It will also facilitate, support and encourage the provision of incentives to promote greater coordination of land use planning and transportation among State agencies, regional planning organizations, municipalities, port authorities and other interested parties and support transportation projects and initiatives that enable people to better address their mobility needs through their lifestyle choices.

Accessibility and mobility within a transportation network are determined by factors, such as presence and design of transportation infrastructure and facilities, the availability of transportation services, an individual's ability to use transportation services and facilities, the location and destination of a traveler, and land use policies. Other factors such as travel delays resulting from congestion, accidents, maintenance and construction work; and the convenience, safety and cost of transportation options affect access and mobility within a transportation network.

Statistics indicate that minority populations are the fastest growing populations in Connecticut; that populations with Limited English Proficiency are growing and that Connecticut's Hispanic and black populations have lower graduation rates from high school and college. These statistics have implications for meeting future work force needs.

Trends in disparate educational levels and rising transportation costs, coupled with the lack of affordable housing, the growing number of children being born to younger parents - many without degrees, only further accentuates the need for access to educational institutions and employment centers. A growing concern is access to educational institutions, both high school, technical and college degree programs, to open doors to jobs offering health benefits and paying higher than the minimum wage.

Historic trends show that while work travel has kept pace with the growth in employment, shopping and social/recreational travel has doubled in the last four decades. It is anticipated that public demand to improve and provide public transportation to accommodate these types of travel trips will increase.

Since 2006, the Department has participated in a national Safe Routes to School Program (SRTS) established by SAFETEA-LU. The objectives of this program are

- to enable and encourage school children in grades K-8, including those with disabilities, to walk and bicycle to school;
- to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and
- to facilitate the planning, development, and implementation of projects and activities within a two-mile radius of a school that improve safety and reduce traffic, fuel consumption, and air pollution.

Mandate: Increase the accessibility and mobility of people and freight

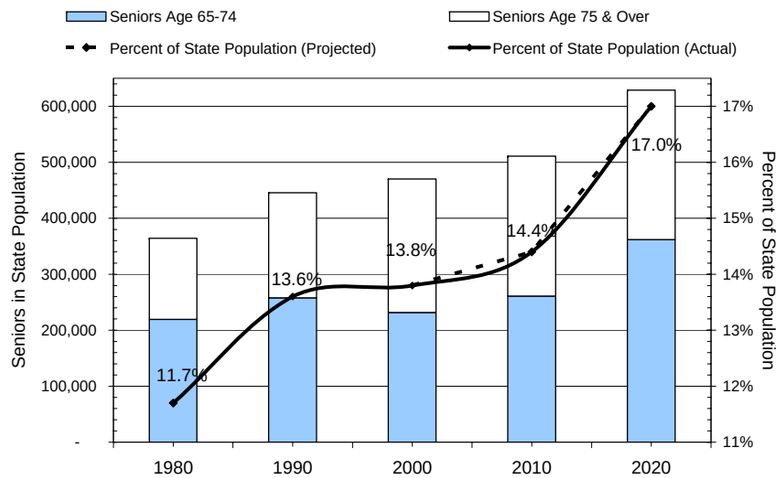
Encourage the use and development of new technology, equipment, materials and practices that would increase accessibility and mobility through easily implemented and cost-effective methods, especially for construction and maintenance practices, to reduce and minimize travel delays.

Support and facilitate efforts to expand mobility options through better coordination of land use planning and transportation planning…

- Encourage and facilitate efforts to develop a common statewide GIS database for use in delivering transportation services, planning trips, planning capital projects, and locating services and facilities in areas where transportation infrastructure already exists.
- Promote and participate in information sharing, partnerships, and coordinated efforts with all levels of government, the business sector, transportation providers and other stakeholders, with respect to transportation planning.
- Incorporate elements into Department initiatives, where feasible, that promote concentration of mixed-use development such as municipal facilities, employment, shopping, and residential uses within a village center setting in a manner consistent with the Plan of C & D Development Area Policies regarding Rural Community Centers.
- Support and facilitate municipal efforts to develop TODs by providing technical assistance in the planning, environmental analysis and design of TOD areas.

Provide, expand and improve mobility options for pedestrians, bicyclists and users of other non-motorized means of transportation…

- Include areas for bicycles and pedestrians when creating a layout for a state highway or relocating a state highway.
- Work with regional planning organizations, municipalities and advocates of the interests of bicyclists and pedestrians to address the mobility needs of pedestrians and bicyclists.
- Continue to reevaluate and update the Connecticut Statewide Bicycle and Pedestrian Transportation Plan.
- Support municipal efforts to create TODs that provide access to and facilitate the use of transit facilities and services.



Source: 1980 Census, 1990 Census, and 2000 Census. Projections are Modified OPM Projections. Data for years following 2000 is projected. Graphic revised as of May 2006.

By 2020 the population of persons over 65 is projected to increase to 17 percent of the total state population. The largest increase will be during the period 2010 to 2020. Of this group, by 2020, the proportion of persons 75 and older will increase to 7.2 percent.

Ridership on public transportation and requests for paratransit and other on-call services have been increasing and are anticipated to increase as the percent of Connecticut's population over 75 years of age increases.

A relatively large number of Connecticut's residents who are over 75 maintain their drivers licenses and want to lead active, independent lives. This trend is mirrored nationally. Because it is common for persons age 75 and older to have some limitations that affect their ability to drive, it is becoming increasingly important to identify and implement practical solutions to meet the mobility needs of this segment of the population.

Work with stakeholders to identify and support programs, projects and initiatives to address the needs of targeted population groups for accessible public transportation to major employment centers, and medical, educational, cultural, retail and recreational facilities and for improved functionality of the transportation system (i.e. signage, traffic signal timing, audible signals at crosswalks, and audible messages on public transportation)…

- Support and facilitate implementation of strategies outlined in the Coordinated Public Transit Human Services Transportation Plans.
- Participate in and encourage partnerships and initiatives to coordinate services and develop land use and transportation strategies to address the mobility needs of transit-dependent individuals, and elderly, disabled, and low income individuals.
- Continue to support the purchase of vehicles specially equipped to accommodate people with disabilities including persons using wheel chairs.
- Work with stakeholders to develop a plan for requiring that a percentage of taxicabs be handicapped accessible.
- Work with stakeholders to identify and meet the mobility needs of low-income and/or minority populations that need access to educational facilities during the times that classes are offered.

Rail passenger service may become an increasingly attractive option for persons who have tended to fly to some destinations, particularly destinations within the Northeast Corridor, because, in general, travel by air is now taking longer than it did 10 or 20 years ago.

This is due to congestion in the sky, congestion at the airport due to planes taking longer to taxi on runways and the fact that some newer, more-efficient planes fly slower than older models. Travelers must also allot additional time to go through airport security checks and for delays that might be encountered when traveling via highways or rail to and from airports.

Public transportation is one of the most effective means for providing improved access to and mobility within the transportation network to all population groups. Dependable public transportation service with convenient schedules and frequencies that provide flexibility and the opportunity to move about the system to go to work (whether to one or multiple jobs), school, home or play is essential.

The "Buses for 21st Century Mobility Program" which was established in 2008, is one of the ways in which the State of Connecticut is expanding public transportation to address people's mobility needs.

Support, when efficient and effective, expanded and improved rail passenger services, bus services, rail parking facilities and rail stations, rail freight and improved access to airports and ports…

- Undertake the bus and rail capital projects and provide the transportation services for which the Governor and the Connecticut General Assembly have authorized funding.
- Promote and provide improved fixed route and demand-responsive public transportation service and connections between rural areas and major urban/suburban centers.
- Implement the recommendations outlined in the Department's New Haven Line Fleet Configuration Analysis, Danbury Electrification Study, the New Haven - Hartford - Springfield Commuter Rail Study and the recommendations of the Statewide Bus Study and Hartford East Bus Rapid Transit Study.
- Take and facilitate actions to implement Connecticut rail service into Penn Station in New York.
- Take and facilitate actions to expand rail service on Shore Line East.
- Implement, when efficient and effective, the recommendations of the Connecticut Public Transportation Commission.
- Advocate for funding for, and provide grant programs that assist municipalities and transit providers in meeting local and regional transportation needs.
- Coordinate with appropriate local, regional, state and federal entities and other stakeholders to maintain and improve water and landside access to Connecticut's airports and seaports.
- Work with the Governor, appropriate Connecticut state agencies, Connecticut's Congressional Delegation, other states in the Northeast Corridor, Amtrak and other stakeholders to negotiate changes in the services and costs of intercity rail service to make this service more affordable and more convenient for people traveling to, from and within locations in Connecticut.
- Develop a plan for expanding rail freight in CT and the surrounding region, including the state's commercial ports.
- Support strategies and tactics adopted by Bradley Airport Board of Directors to strengthen passenger and freight service.
- Implement the recommendations of the Connecticut Maritime Commission with respect to all ports in Connecticut.
- Work with stakeholders to identify and prioritize needs, and advocate for funding and other resources required to support accessibility and mobility improvement projects across transportation modes for people and for freight to address the needs.
- Identify and explore opportunities to enter into public/private partnerships to identify ways to improve transportation services and facilities and to fund such projects and initiatives.

The decentralization of major employment centers from urban to suburban centers, and the lower level of public transportation service to such areas make it difficult or impossible for low-income urban residents to commute to jobs in some of these areas.

Integrating & Connecting the Transportation System

Issues

Connecticut's residents, businesses and local and regional governments continue to identify and request that the Department address integration and connectivity issues within the State's transportation system. They want improved public transportation connections, travel alternatives for single-occupancy vehicles, and actions to minimize peak time traffic congestion and delays. They also want smooth transitions between modes of transportation to enable them to easily move from vehicle, bicycle or other non-motorized means of transportation to public transportation options, and to facilitate the efficient movement of goods from barge and aircraft onto rail and into trucks. There is also growing demand, particularly in light of volatile fuel prices, for more mixed use developments where employment, affordable housing, retail, cultural and recreational facilities are within walking distance and served by efficient and frequent public transportation services that meet their mobility needs.

To cost-effectively meet the current and future mobility needs of residents, businesses and visitors, Connecticut must maximize the use, efficiency and productivity of its existing transportation system, make strategic improvements to the system and better coordinate land use planning with transportation planning to provide and facilitate access to bus and rail passenger facilities, rail freight ports and airports. The State must also connect, integrate and maximize the productivity and efficiency of its public transportation services and facilities and improve access to these facilities. To compete in a global market place and meet current and future labor force needs, the State must facilitate interstate passenger travel and the transport of goods within the state and between metropolitan areas.

Integration and connectivity solutions are closely linked to options for meeting mobility and accessibility needs. Given the complex nature of our existing transportation network in Connecticut, intermodal hubs provide the most cost-effective and easily implemented solution for achieving better integration and improved connectivity.

Actions

CTDOT is committed to enhancing integration and connectivity of the State's transportation system to address the mobility needs of people and for freight. The Department recognizes that coordinated service schedules and increased service frequencies will greatly assist people in fluidly moving between non-motorized transport, bicycles, ferries, buses, rail cars and airplanes. Intermodal transportation hubs located at critical points in the state's transportation network have been identified for improvement and/or expansion to further integrate and provide efficient connections for the movement of people and freight between modes. When maintaining the existing system, the Department will identify and consider, in a collaborative effort with stakeholders, opportunities to enhance mobility options by integrating existing transportation services and creating and improving intermodal connections for people and freight.

Consider and comply with the State's conservation and development policies plan (C & D Plan)…

- Ensure consistency with the C & D Plan when:
  - The acquisition costs for real property are in excess of $200,000;
  - Development or improvement of real property costs are in excess of $200,000;
  - The acquisition costs for public transportation equipment or facilities are in excess of $200,000; and/or
  - The authorization of any state grant is in excess of $200,000 for the acquisition, development, or improvement of real property or for the acquisition of public transportation equipment or facilities.

Promote competitive passenger movement options between high-density population centers by promoting, advocating for resources for and implementing transportation projects that will support inter-modal connection of water, rail, bus and highway systems in cooperation with the transportation industry, utilizing public-private resources.

Research conducted by the Connecticut Housing Commission and Connecticut Department of Labor indicated that many Connecticut residents must work multiple jobs to afford the statewide fair market rent for a modest two-bedroom apartment. To meet their mobility needs, public transportation services must be integrated and connected and run at frequencies and during hours that enable them to get to their destinations within reasonable timeframes.

Convenient access to the interstate highway system to and from the State's three deep water ports is necessary to facilitate cost-effective use of ships to transport freight. It is equally as important that there be rail freight connections to the seaports to make transporting of freight over long distances by rail a cost-effective alternative to transporting it by truck. At this time, the State-owned port complex in New London is the only Connecticut seaport that has rail access directly through the Northeast States to Canada from a finger pier.

It is essential that Connecticut's major airports offer easy travel connections to other transportation modes for people moving in and through Connecticut whether for business or pleasure.

The percentage of Connecticut's work force commuting to employment sites outside their towns of residence is increasing, and is affecting the amount of time it takes commuters to make trips, their travel patterns during trips, and their choice of mode. This trend is contributing to the need to 1) integrate transportation systems through efficient and easily accessed connections; and 2) expand the geographical coverage of services.

Mandate: Enhance the integration and the connectivity of the transportation system, across and between modes throughout the state, for people and freight

When reconstructing roadways, identify and consider opportunities to enhance mobility options and improve or create intermodal connections for people and for freight.

Continue to support programs that use advanced technology and coordinated efforts to maximize the efficiency of the existing system and improve intermodal connections, with particular attention to highly congested corridors.

Promote state, regional and municipal planning efforts that support existing transportation infrastructure and services and make improvements that provide greater integration and connectivity both between modes and within modes ...

- Support statewide programs that provide low-cost incentives to encourage people and businesses to locate in areas accessible by existing public transportation services.
- Improve intermodal connections at locations with high-density, mixed-use development.
- Support transit-oriented development and encourage developers to implement facility designs that are accessible to public transportation.
- Support initiatives to increase rail station parking, expand shuttle services to/from rail stations, and extend rail commuter lines, where feasible.
- Expand bus services in the state to connect urban areas and to provide connections to existing transportation services and facilities in Connecticut and in adjacent states.
- Encourage and facilitate integration and coordination of route planning for public transportation both between modes and among providers.
- Support development that is consistent with commodity movement needs at and surrounding the airports, seaports, and rail system within the state.
- Provide technical assistance to and participate in partnerships with businesses, transportation providers and local and regional governments on transportation planning.

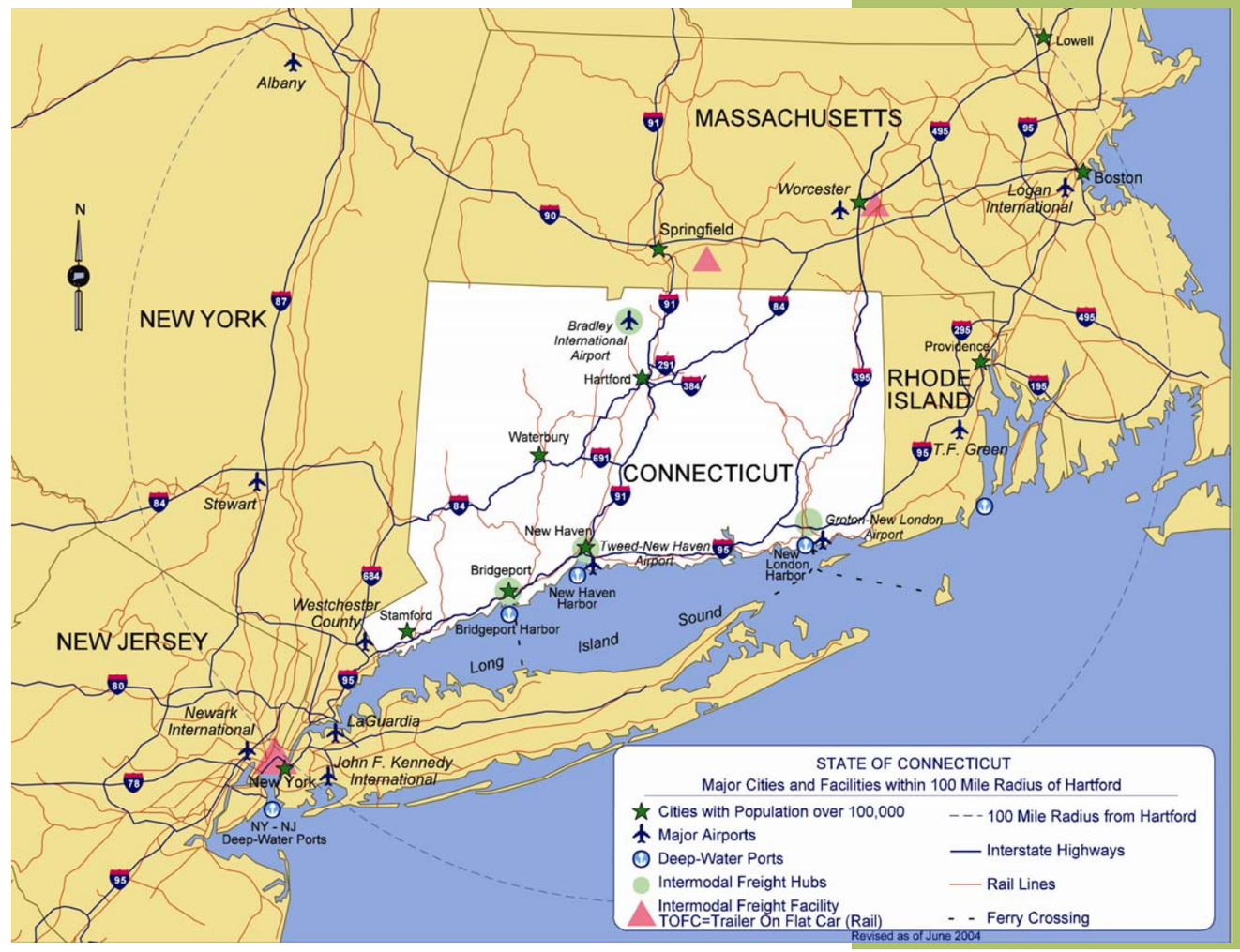
- Incorporate integration and connectivity components into projects being pursued by the Department to further enhance the cost-effectiveness of the project, as well as the mobility and accessibility options available to travelers.
- Support the development of a GIS database and map showing all transportation facilities and services in the state on a common data platform that can be shared and updated by all transportation providers and accessed by the public to identify connecting services.
- Upgrade the CTTransit farebox and revenue collection system to a system that supports "smart card" technology that would enable the implementation of a regional bus and rail fare card system within Connecticut and surrounding states.

Promoting Economic Vitality with the Aid of the Transportation System

Issues

The transportation network is the foundation for local, state, regional and national economies. The State of Connecticut's economic vitality is tied to its ability to meet state, regional and national mobility needs. Mobility needs have changed. There have also been changes in the operational and trade patterns of the Northeast. These changes have occurred as a result of new trading blocs in North America, new global trading relationships, major advances in technology, and mergers and alliances within the air, trucking, rail and sea transportation that took place in the 1990s.

As discussed in *Connecticut Strategic Economic Framework: A Report of the Connecticut Regional Institute for the 21st Century,* the Northeast, in a continental context, is now defined by a new and integrated set of continental corridors. Metropolitan regions now function as the foundation units of economic activity and hubs in the global transportation and communications network. Connecticut is located in the center of five metro economic regions. Three of the five regions –the New York metro region, the Hartford/Springfield metro region and the Southern Coastal area metro region which includes the New London, Norwich and Mystic area and part of Rhode Island– are either partially or principally located within Connecticut; transportation corridors linking the New York, Boston, Albany metro areas run through Connecticut. Many of Connecticut's residents and businesses are within 100 miles of labor markets and major passenger and freight facilities in New York, New Jersey and Massachusetts.



Mandate: Support the economic vitality of the United States, the states, nonmetropolitan areas, metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency

Actions

The State must maintain and improve its transportation system, particularly highway access to ports, airports and rail freight intermodal facilities, to enable companies to ship and receive goods as quickly and efficiently as possible. It must also coordinate land use planning and transportation planning to provide mobility options that are convenient, affordable, cost-effective and environmentally friendly and that can accommodate the economic growth that is projected to occur within the next 20 to 50 years. Because it often takes 10 to 20 years to plan, design and construct transportation projects, it is critical to advocate now for the resources to address these needs.

To assist Connecticut companies in competing effectively in global, national and regional markets, Connecticut must take strong, decisive and synchronized actions to maximize the benefits of its proximity to these major markets and transportation hubs and to cost-effectively address mobility needs that are the result of:

- increasing demands on the highway, rail, air and water transportation systems in Connecticut and in the United States;
- demographic changes;
- current and future labor force needs; and
- rising fuel prices, and federal and state actions to reduce greenhouse gas emissions, conserve energy, curb sprawl, and control infrastructure costs.

The rail freight, air and water transportation facilities and networks in Connecticut and in adjacent states are integral to maintaining Connecticut's connection to regional and global markets; they provide the ability to send and receive goods that otherwise would not be cost-effective or feasible to transport from greater distances by truck.

Data released from the Connecticut Department of Labor and Department of Economic and Community Development identified the major export partners for the Connecticut as Canada, Germany, France, the United Kingdom, Mexico, Singapore, Japan, China, Korea and the Netherlands.

A significant percentage of the goods originating in or destined for Connecticut is handled at intermodal facilities in adjacent states and transported to or from Connecticut locations by truck. This is due to the close proximity of Connecticut businesses and industries to major container ports and intermodal rail yards in northern New Jersey, major intermodal freight yards in Massachusetts, major international airports in New York, and the fact that Connecticut does not have a direct rail freight connection to the western and southern Unites States.

CTDOT operates the State Port Complex, located immediately south of I-95 in the upper portion of New London Harbor in New London, Connecticut. Two 1,000-foot long cargo piers are located approximately 3.8 miles up river from the deep waters of Long Island Sound via the main navigational channel. The facility boasts a 53,000-square-foot warehouse (World Cargo Building) and a new 48,000-square-foot warehouse equipped with truck and rail car loading capabilities. The State Piers have both the advantage of a railroad connection that extends as far as Canada and easy access to I-95, making the complex one of Connecticut's many valuable assets for competing in regional and global markets for freight.

Consider and comply with the State's conservation and development policies plan (C & D Plan)…

- Incorporate elements into Department initiatives that redevelop and revitalize the economic, social, and physical environment of the state's traditional centers of industry and commerce in a manner consistent with Development Area Policies regarding Regional Centers.
- Incorporate elements into Department initiatives that promote infill development and redevelopment in areas that are at least 80% built up and have existing water, sewer, and transportation infrastructure to support such development in a manner consistent with Development Area Policies regarding Neighborhood Conservations Areas.
- Incorporate elements into Department initiatives that support staged urban-scale expansion in areas suitable for long-term economic growth that are currently less than 80% built up, but have existing or planned infrastructure to support future growth in the region in a manner consistent with Development Area Policies regarding Growth Areas.

Partner with the State Department of Economic and Community Development and other stakeholders to assist in meeting the state's labor force needs…

- Support efforts to provide mobility options that enable residents of Connecticut to reduce the percentage of their household income that is spent on transportation.
- Coordinate with regional planning organizations to identify the locations and transportation needs of transit dependent populations, especially low income minority populations, and provide public transportation to educational facilities at frequencies and during hours that would enable them to take courses to further their education.
- Expand, integrate and connect the public transportation systems to provide mobility within metropolitan areas in Connecticut, between metropolitan areas in the state and between metropolitan areas in Connecticut and adjacent states.

Facilitate economic growth for the state and the Northeast region through continued maintenance and improvement of the state's and the region's transportation facilities and services through proper planning, funding and coordination of efforts…

- Collaborate with other Northeast states on measures to reduce air and seaport congestion to move goods efficiently and effectively and to address regional transportation issues.
- Support efforts to implement a multi-state intermodal freight initiative.
- Collaborate with other states in the Northeast to make investments in a robust public transportation network.
- Develop partnerships with the states of New York, Rhode Island and Massachusetts to identify and implement actions to facilitate interstate passenger travel and goods movement and minimize travel delays.
- In conjunction with stakeholders, identify, prioritize and seek funding for projects and initiatives that improve and expand mobility.
- Work with state agencies, municipalities, port authorities and other stakeholders to provide incentives to retain and attract new shipping companies at Connecticut ports.
- Implement the recommendations presented in the *Connecticut Statewide Airport System Plan June 2006.*
- Support and facilitate the implementation of recommendations presented in the master plans for state-owned and municipal airports.
- Implement the recommendations of the Bradley Board of Directors.
- Consider and implement the recommendations of the Connecticut Maritime Commission as they relate to all ports in Connecticut.
- Collaborate with stakeholders to increase the authorized project depths of Connecticut ports to accommodate or respond to expanding economic development, needs of larger vessels, changes in technology, and factors related to safety and security.
- Participate in discussions related to expanding and strengthening the north-south rail freight lines on the Eastern seaboard.

Long Island Sound could be used, as it once was, for the movement of both persons and goods.

Coordinated marketing of the capacity of Connecticut's deep-water ports to expand niche connections with cargo sources is a critical link to the Sound.

The creation of inter-modal sea-land transportation hubs that enable congested sections of I-95 to be bypassed will support the overall transportation strategy of the State.

The National Surface Transportation Policy and Revenue Commission report states that:

- The demand for freight rail service has grown steadily over the last decades and is projected to increase 69 percent by tonnage and 84 percent by ton-miles between 2005 and 2035;
- The possible shift of Asian imports from West Coast to East Coast due to increased trade with India would place additional demands on eastern ports and congested freight facilities;
- Recent cargo projections for container ports anticipate a doubling or tripling of throughput growth in the next 15 to 20 years; and
- Air freight is growing rapidly as U.S. businesses seek timely delivery of valuable goods, creating greater demand for truck and intermodal services as well.

Support and encourage responsible growth efforts that focus on integrating land use planning with transportation, affordable housing, retail and employment; improving and expanding mobility options for pedestrians and users of non-motorized means of transportation; coordinating and integrating bus and rail services and improving the intermodal connections at and operating efficiency of Connecticut's ports and airports…

- Promote coordination among state agencies to foster comprehensive long-term planning.
- Support efforts to promote the economic, environmental and social benefits of transit-oriented-development (TOD).
- Promote and facilitate TOD on the busway from New Britain to Hartford and the commuter rail line from New Haven to Springfield.
- Support the implementation of port land use plans that improve the efficiency of port operations, improve security and diversify cargo and product handling.
- Periodically evaluate, and revise the State's overall airport policy.
- Encourage projects that improve airport-land access immediately adjacent to all airports located in Connecticut and continue to advocate for funding to support these airports according to approved airport master plans.
- Support projects that improve seaport-land access and promote water-dependent land uses immediately adjacent to ports in Connecticut.
- Support regional coordination by encouraging projects of regional significance.
- Work to meet the recommended state actions and associated benchmarks of the Responsible Growth Task Force.

Encourage innovative solutions to mobility issues that balance the needs of people and freight to promote improved regional and state economic sustainability…

- Continue to seek public input early in the transportation planning process, and employ context-sensitive solutions to preserve the character of neighborhoods, urban, suburban and rural village centers, as well as natural and historic resources.
- Support funding for programs and projects that address needs for accessible transportation to sites of major employment and medical, educational, cultural, retail and recreational facilities.
- Support municipal efforts to provide and expand mobility options for people and for freight through coordination of transportation planning and land use planning.
- Support funding for programs and projects that address preservation of existing freight rail corridors through coordination with other regional stakeholders, state agencies and municipalities.

Fully functional and timely connections from bus and rail terminals to the State's airports and to airports in adjacent states are necessary to improve the integration and connectivity of transportation services and to expand mobility options for people. Dredging needs at the deep water ports must be addressed to improve commodity flow between land and water modes. Coordinated land use planning around airports, ports and rail facilities is necessary to minimize environmental impacts, such as noise and traffic, that can result in restrictions on the use or expansion of these facilities.

Chapter 4: Resource Needs

Issues

CTDOT's ability to successfully meet its statutory responsibilities and implement the strategic actions outlined in this 2009 LRP is dependent on having sufficient resources to do so. The federal and State money that CTDOT will receive will not be sufficient to maintain the state's transportation system in a state of good repair or to expand bus and rail services to meet the growing public demand. Additional state funding will be required to make the additional capital investments and to meet operational needs.

In 2008 the Department analyzed the state's transportation infrastructure needs and determined that the State of Connecticut's expected available funding to maintain transportation infrastructure will not be sufficient to meet the projected needs for the next ten years because of:

- increasing use of the transportation system infrastructure and system components;
- the substantial investment required to maintain the state's aging infrastructure;
- significant increases in construction costs due to the rising prices of materials such as steel, concrete, asphalt and land and increases in the costs of fuel used to transport materials and operate construction equipment; and
- the projected decrease in the amount of transportation funding that Connecticut will receive from the federal government

The availability of federal and state funding to pay for transportation services and facilities in Connecticut are critical issues and concerns that must be addressed. Obtaining sufficient financial resources to effectively manage and maintain the transportation system in a state of good repair, not to mention providing funding for capacity enhancements, continues to be a challenge. As the infrastructure continues to age, the demand for financial resources will continue to increase.

Actions

Additional sources of revenue must be identified and provided at both the federal and state levels in order for CTDOT to fulfill its mission: to provide a safe and efficient intermodal transportation network that improves the quality of life and promotes economic vitality for the state and the region. The Department will work with the Governor, the Connecticut General Assembly, Connecticut's Congressional Delegation and with other states to advocate for developing a means to provide a consistent level of funding for transportation that is sufficient to enable the Department to protect the state's substantial investments in its transportation system and services to meet current and future mobility needs. CTDOT will also work cooperatively with stakeholders to identify and implement ways to maximize the use of its available funds. The Department will also strive to maximize its available funding by reviewing its business processes and identifying and proposing ways to reduce the costs of projects by reducing the average amount of time it takes to construct projects, and, where appropriate, entering into public/private partnerships.

Connecticut relies heavily on federal funding to pay for its transportation programs. More than half of Connecticut's money for transportation capital projects comes from the Federal government.

Most states, particularly those outside of the Northeast, use a much larger portion of state monies to fund transportation.

A significant percent of the revenue for Connecticut's Special Transportation Fund (STF) (44% in SFY2009) comes from state motor fuel taxes and comes from motor vehicle receipts (20% in SFY2009).

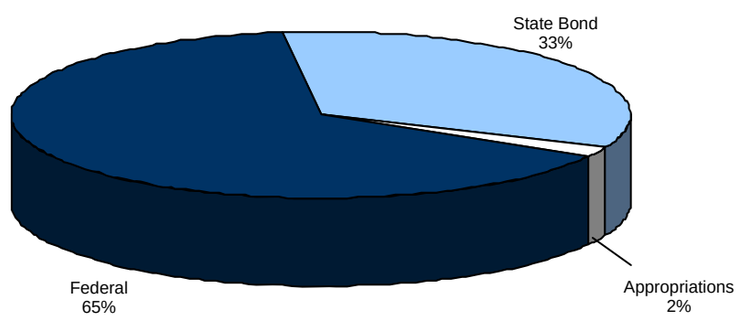
Funding

Transportation programs in Connecticut are financed primarily from state, federal and local sources. Federal and state funds are the primary sources of funding. Federal surface transportation funds are normally provided through a congressional procedure that culminates in the passage of a comprehensive, multi-year surface transportation act. This act authorizes the maximum funding limits, establishes programs, and determines fund eligibility and distribution. Federal highway acts are generally passed every four to six years. Actual spending limits (ceilings) are set through the passage of annual appropriations acts. State transportation programs are funded from the Special Transportation Fund (STF), which receives revenues from transportation-related taxes, fees and revenues as well as from the proceeds of Special Tax Obligation Bonds.

The chart, Sources of CTDOT's Funding for Capital Projects, shows the sources of Connecticut's transportation funding for capital projects. For SFY2009 it is estimated that 65 percent of the State's funding will come from the federal government. In SFY2007, 62 percent came from the federal government.

Sources of CTDOT's Funding for Capital Projects

Budget (SFY2009) Total = $ 960 Million

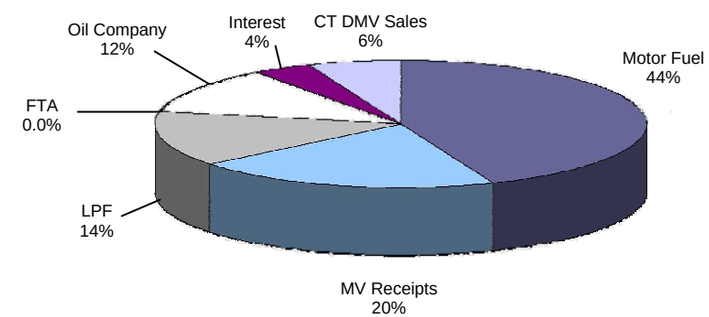


Source: Bureau of Finance & Administration. Data based on State Fiscal Year. These figures do not include the governor's transportation initiatives of 2005 & 2006. Graphic revised in August 2008.

The chart, Sources of Special Transportation Fund Revenue, shows the sources of estimated revenue for the STF and expenditures from the STF in SFY2009. It shows that STF revenues are generated by transportation-related taxes, licenses and permits, as well as Special Transportation Obligation (STO) Bonds. It shows that for SFY2009, it is anticipated that 44 percent of the estimated revenue will come from state motor fuel taxes and almost 20 percent will come from motor vehicle receipts. This could change, however, if the Connecticut General Assembly changes the gas tax or the motor vehicle-related fees. As more people switch to more fuel-efficient vehicles and make other changes in their lives to reduce their fuel costs, revenues from both the state and federal motor fuels tax could decrease. Also, if the fuel tax, which is typically levied on a per gallon basis, fails to keep pace automatically with rising construction costs, which has been the case in recent years, the real purchasing power of the trust fund revenues could actually decline. Indexing of the fuel tax to some measure of inflation could offset any loss of funds due to inflation.

Sources of Special Transportation Fund Revenue

SFY 2009 Estimated Revenue = $1,157 Million

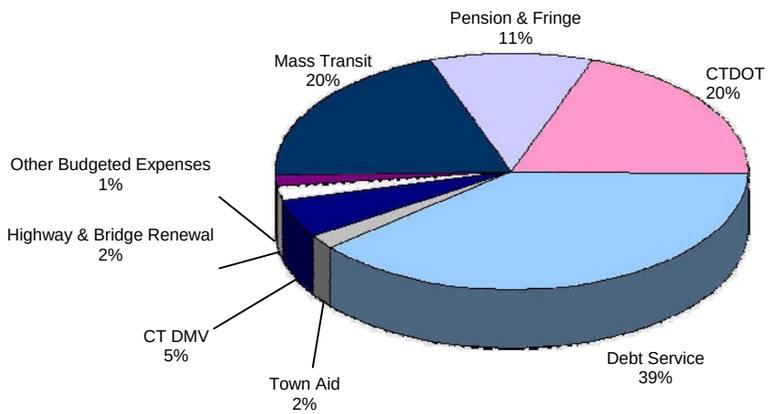


Source: Bureau of Finance & Administration. Data based on State Fiscal Year. Graphic revised in June 2008.

The chart, Expenditures from Special Transportation Fund, presents a break-out of STF estimated expenditures. STF funds are used to pay for debt service, pension and fringe, and operations of the Department and some of the operations of the Department of Motor Vehicles. A relatively smaller portion of the STF is allocated to provide aid to municipalities. For SFY2009, 39 percent of the STF is allocated to pay debt on transportation projects paid for with bonds, 20 percent is allocated to CTDOT operations, 20 percent is allocated to Mass Transit and 2 percent is allocated to highway and bridge renewal.

Expenditures from Special Transportation Fund

SFY2009 Estimated Expenditure = $1,154.2 Million

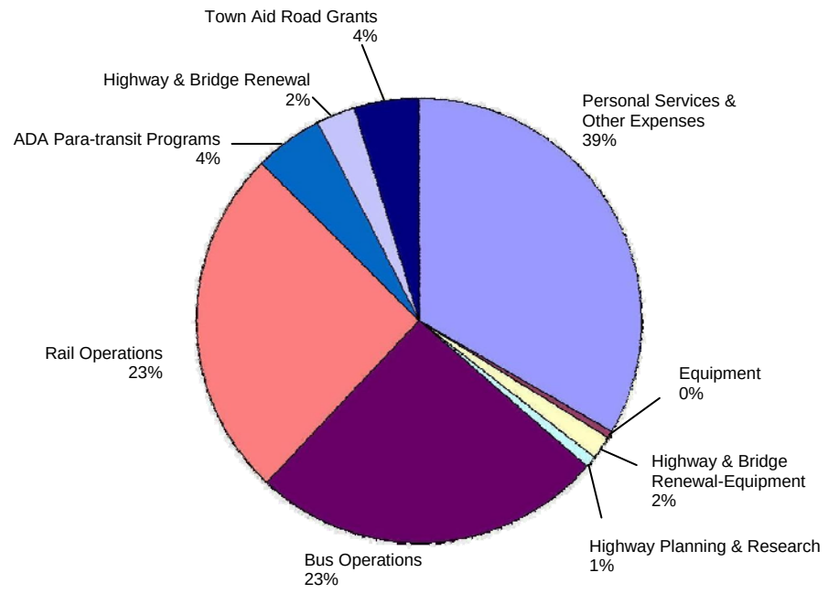


Note: The amount shown is the next appropriation for the STF and reflects the subtraction of $11 million for the estimated lapse from the gross appropriations of $1,165.2 million (which is reflected in the amounts shown for each category).
Source: Bureau of Finance & Administration. Data based on State Fiscal Year Graphic revised in October 2008.

The chart, CTDOT's Operating Budget for SFY2009, shows that 57 percent of the Department's $507.2 million operating budget is allocated to public transportation subsidies for both bus and passenger rail. In SFY2007, 47 percent was allocated to public transportation. The increase in funding for public transportation is in response to the growing public demand. It is anticipated that demand for investments in public transportation will continue to grow if fuel prices continue to increase.

CTDOT's Operating Budget for SFY2009

SFY2009 Operating Budget = $507.2 Million



Source: Bureau of Finance & Administration. Data based on State Fiscal Year Graphic revised as of June 2008

Resource Needs

The graph, Available Funding vs Projected Needs, shows anticipated available funding versus projected needs for preservation, maintenance and improvements (i.e., state of good repair), and versus capacity expansion. The lower line in this graph represents the anticipated revenue from 2008 through 2017 for transportation capital projects (highways and public transportation).

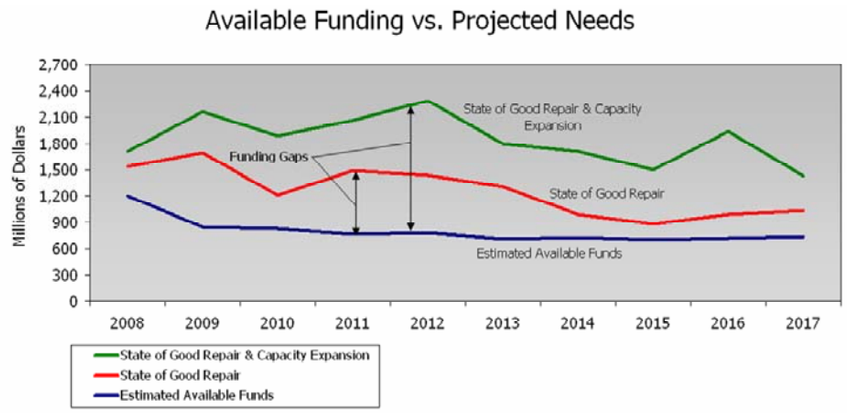
A significant percent Connecticut's STF funds (39% in SFY2009) is used to pay the debt on transportation projects paid for with bonds.

Increases or decreases in the state gas tax affect the Department's ability to maintain and expand transportation services and facilities in Connecticut.

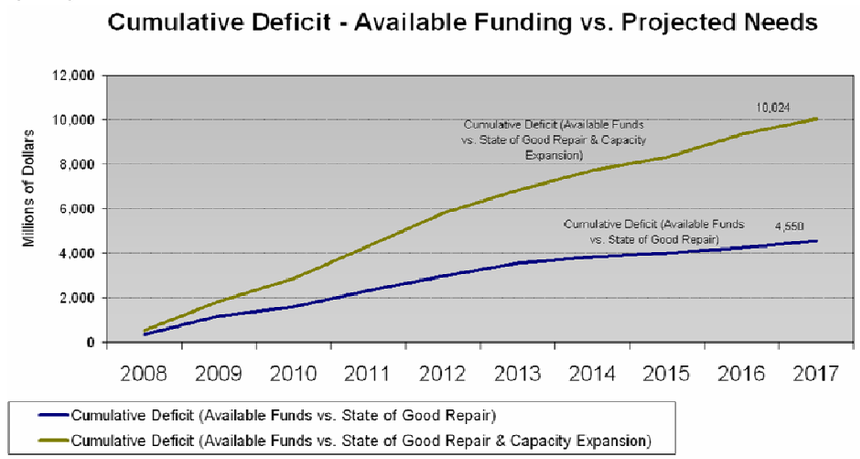
National Surface Transportation Policy and Revenue Study Commission study states that the federal fuel tax, which typically is levied on a per-gallon basis, fails to keep pace automatically with rising construction costs unless it is indexed to some measure of inflation as is done in several States. While highway construction costs are not expected to increase as quickly in the future as they did between 2004 and 2006, unless cost increases are taken into account when forecasting needed revenues, funding shortfalls will persist.

The National Surface Transportation Policy and Revenue Study Commission determined that:

- A limitation of the federal fuel tax is that it is not responsive to increasing construction costs when levied on a per gallon basis.
- Raising the federal fuel tax could generate about $1.9 billion nationally for each 1-cent increase. Indexing the fuel tax or converting to a gasoline sales tax would allow revenues to increase with rising highway construction costs.



The middle line represents the projected level of funds needed to preserve, improve and maintain the existing transportation system in Connecticut. The difference between the two lower lines is termed the "state of good repair" funding gap; it indicates the anticipated funding shortfall to preserve the existing network. The upper line in the graph represents the projected funding needed for preservation, improvements and capacity enhancements. The difference between the upper and lower lines is the "overall funding gap" between the anticipated revenue and the projected preservation, improvement and capacity enhancement needs.



The graph, Cumulative Deficit—Available Funding vs Projected Needs, illustrates the cumulative funding gaps for the state of good repair expenditures only (lower diagonal line) and the total funding gap (upper diagonal line).

The Department estimates that ten years from today, in year 2017, the total cumulative difference between anticipated revenue and projected needs will be $10 billion.

Some of the projected funding shortfall is due to the significant increase in construction costs and delays in constructing projects. According to the National Surface Transportation Policy and Revenue Study Commission (NSTPRSC), between 2004 and 2006 the cost of building highways and streets, as measured by the FHWA's Bid Price Index (BPI), increased by approximately 43 percent. The impact of delays in constructing projects is discussed in the NSTPRSC report. This report states that from 2002 to 2005, the average project development time was more than 10 years, although it fell somewhat in 2006. In light of the rapid increase in construction costs over the past several years, delays in completing projects have become very expensive. The report further states that

> Using the average increase in highway and bridge construction costs since 1997, if the average project development time for highway projects could be reduced from 13 years to 6 years, the cost of the project could be reduced by almost 40 percent. This savings could then be applied to other projects, substantially reducing overall funding needed for highway construction programs.

The Department is working to minimize delays in constructing projects by reviewing and revising its internal operations, when appropriate, and coordinating with regulatory agencies to further streamline elements of the process for implementing projects. The Department is also committed to building the public's confidence in its ability to wisely and cost-effectively spend taxpayers' dollars to meet current and future mobility needs. One of the first steps in building this trust is to develop performance measures and establish goals and objectives to meet them. The next step is for the Department to demonstrate that it can meet its agreed upon goals and objectives. Greater public confidence in CTDOT's abilities to objectively and cost-effectively determine, prioritize and address the state's mobility needs should lead to greater collaboration and agreement among stakeholders on ways to shorten the process for implementing projects, minimize construction delays and, hence, reduce project costs.

Strategic Long-Range Transportation Plan (2008-2035)

http://www.ct.gov

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