South Central Regional Metropolitan Transportation Plan 2019-2045

Framing the Region's Transportation Programs and Investments

2nd Draft Submitted January 11th, 2019

SCRCOG
SOUTH CENTRAL REGIONAL COUNCIL OF GOVERNMENTS
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Introduction

The South Central Region of Connecticut (the Region) is an economically diverse region of fifteen municipalities with a total population of approximately 570,000. The fifteen municipalities are: Bethany, Branford, East Haven, Guilford, Hamden, Madison, Meriden, Milford, New Haven, North Branford, North Haven, Orange, Wallingford, West Haven, and Woodbridge.

The South Central Regional Metropolitan Transportation Plan (the Plan) addresses broad goals for the transportation needs of the Region and outlines the ways the Region plans to invest in the transportation system through 2045. Per the federal regulations **[23 CFR 450.324(b)]**, the plan includes both long-range and short-range program strategies/actions that lead to the development of an integrated intermodal transportation system that facilitates the efficient movement of people and goods. Using procedures outline in **23 CFR 450.324(c)** SCRCOG may revise the Plan without the need to extend the horizon year (2045)

The Plan provides direction for the Region on major policy issues on all modes of transportation. The Plan reviews, updates and extends the timeline of the previous plan, ***Framing the Region's Transportation Programs and Investments***. Completed in 2015, that Plan and is available on the South Central Regional Council of Governments (SCRCOG) website.

The South Central Regional Council of Governments (SCRCOG), in consultation

The Plan supports a performance-based approach to planning and the use of performance measures to document expectations for future performance. Using this approach, SCRCOG will work with its member municipalities, the Connecticut Department of Transportation, federal transportation agencies, and other state agencies, has set priorities which are reinforced and expanded by the Plan.

Plan is fiscally constrained. Many of the initiatives, services and infrastructure needs identified herein are beyond the fiscal constraint of the Plan. SCRCOG, in conjunction with its member municipalities, state and federal governments, looks for cooperative efforts to utilize existing and any additional funding sources to prioritize and accomplish the transportation goals and initiatives outlined within the Plan.

This Plan is prepared by SCRCOG in cooperation with the U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and the Connecticut Department of Transportation (CTDOT). The opinions, findings and conclusions expressed in this report are those of the South Central Regional Council of Governments and do not necessarily reflect the official views or policies of other government organizations.

Major Goals of the Plan

Travel Options – The Region has all the makings for a functional, multi-modal, and first class transportation system. Highways, rail, bus, water, and air modes are all operational in the Region. Enhancement and interconnection of these modes to provide more and better travel and movement of freight and goods will be necessary to insure the continued quality of life in the Region. The Plan identifies existing and anticipated needs for additional transportation services, which would improve travel options.

Transportation Funding – The wise use of available funding to bring the most return on investment for the Region is critical. Funding levels continue to be well below documented needs for implementation of identified transportation solutions. Priorities must be established to meet fiscal constraints while identifying needs, which will require significant investment beyond the fiscally constrained portion of the Plan. The goals of the Plan can only be implemented by the provision of additional transportation funding. The Region looks to state and federal agencies to address these funding needs.

Policy Guidance – The adoption of this Plan reaffirms and expands the major policy guidance as outlined in subsequent chapters. All transportation issues must be framed and reviewed within the context of the Plan to insure meeting of the goals noted. Previous study efforts by SCRCOG have produced effective guidelines for the implementation of transportation strategies and solutions.

Regional Solutions – It is clear that transportation issues and opportunities can only be addressed by regional solutions. SCRCOG, supported by its Transportation Committee and Transportation Technical Committee, considers, reviews, and prioritizes proposed projects to insure regional benefits. Monthly meetings and updates provide information from the Region to its member municipalities and state and federal agencies, stressing the importance of interagency communication and cooperation.

Linking Land Use with Transportation – Local land use regulations and decisions have an inseparable link with the regional transportation system and its needs. Land use decisions can dramatically change the impacts on segments of the Region's transportation system. Consultation and cooperation with the local land use agencies will be required to reduce sprawl and increase travel options by working to locate development in those portions of the Region where the transportation infrastructure already exists, or can be enhanced to, support the additional demand.

Aging Infrastructure – Portions of the Region's infrastructure were constructed many years ago. Improvements have been made to the infrastructure but needs for modernization and enhancements remain. The Region must insure that its infrastructure is maintained, upgraded, and enhanced as appropriate. The minimum standard must be a state of good repair for all portions of the infrastructure. Local and state governments are responsible for these maintenance activities. The federal government provides substantial funding. Numerous regional needs exist

for improvement of infrastructure for all modes of transportation. The Plan identifies these needs.

Economic Vitality – The Region's economic health depends upon the efficiency and extent of the Region's transportation system. SCRCOG is committed to policies and solutions that improve the Region's economic outlook. Investment in the policies and improvements outlined in the Plan will be crucial to the Region during the timeline of the Plan and beyond. The current federal transportation act - Fixing America's Surface Transportation Act (FAST Act) - defines economic vitality to include the promoting of consistency between transportation improvements and local, regional or state planned growth and economic development. Regional coordinated efforts will be critical to maintain continued economic vitality.

Congestion Management Process – The FAST Act requires that a congestion management process be a key element of the Plan. Highway congestion is a continuing impediment to the free flow of movement of people and goods throughout the Region due to continued dependency on the automobile and trucks. Increased highway capacity within the fiscal constraints of the Plan can address only some of the Region's congestion locations. Transportation mode shifts and increased utilization and efficiency of existing regional transportation resources will be necessary as part of the process to address congestion issues. SCRCOG must utilize a congestion management process in framing transportation decisions, which may include both transportation demand management (TDM) and transportation supply management (TSM) initiatives. Managing congestion is a key factor in maintaining regional economic vitality and the attractiveness of the Region to residents and businesses while improving overall environmental quality.

Preservation of Existing Transportation Resources – The Region has many options and transportation modes to meet transportation needs. Each of these modes plays an important role in the overall transportation system. Fiscally constrained planning requires a component which maintains all current transportation resources, recognizing the importance of each current mode and service option. The Region can ill afford to lose any service and move backwards. The preservation of the various resources will allow opportunities for the future as regional needs evolve. Transportation needs have not diminished since the preparation of the last Plan update and the importance of maintaining existing transportation resources cannot be ignored. The fiscal constraint imposed by the Plan limits the opportunities to preserve the existing transportation resources. Additional revenue will be needed to guarantee full preservation and continued operation of the current transportation operations and infrastructure.

Climate Change – The Region is mindful of the impacts of transportation on the environment and the environment on transportation. As noted elsewhere in the Plan, the Region encourages wise transportation decisions that reduce emissions of greenhouse gasses and improve coastal resiliency, while providing improved transportation choices throughout the Region. These decisions will reflect the varying character of the Region and will involve different solutions for densely populated and rural sections.

Performance-Based Planning and Programming – The Plan supports a performance-based approach to planning and the use of performance measures to document expectations for future performance. Performance management and performance-based planning and programming increases the accountability and transparency of the Federal-aid Program and offers a framework to support improved investment decision-making by focusing on performance outcomes for national transportation goals.

Land use and transportation needs are linked. Transportation options are necessary to meet the needs of the Region's residents and workforce.

Highway improvements can only address a portion of the transportation needs. Multi-modal solutions will be required to meet the Region's needs over the timeline of the Plan.

Major Policy Directions

Transportation planning policies guide all reviews and decisions made in the Region. Policies adopted in the past by SCRCOG have shaped the decisions while moving the Region closer to its transportation goals. The policies outlined below are specifically noted as necessary to meet the goals previously outlined and the needs of the Region over the timeline of the Plan.

Increase accessibility and mobility – The movement of people and goods is critical to the Region. Individual activities and business successes rely on the ability to access transportation and move about the Region and beyond. Current transportation patterns rely primarily on the highway system to move people and goods. The increasing highway congestion in the Region indicates that this reliance on one primary mode of transportation is not in the best interest of the Region. While highway improvement projects can address some of the congestion, increased accessibility and mobility for both people and goods can only be accomplished by greater utilization of other modes of transportation. Service must be conveniently located, highly reliable, reasonably priced, scheduled to provide timely service and routed to cover the identified corridors of the Region to be responsive to transportation needs and goals. Information technology can increase awareness and provide easy access to transportation system information, providing information on transportation options. Transportation decisions must be framed with these important criteria to increase accessibility and mobility.

Enhance modal integration – Major advances have been made in the Region in improved connections for the integration of rail, pedestrian, and highway modes for the movement of people in the last decade. All CTTRANSIT buses are equipped with bicycle racks and bicycles are allowed on rail lines in the region. Bicycle storage facilities are also available at several rail stations. With the construction of new platforms, The Shore Line East and the Hartford Line trains now connections at the New Haven State Street and Union Train Stations. These stations provide convenient downtown pedestrian access to many work destinations. As new station construction and parking expansions for both rail lines progress, modal integration continues to be a priority. The Region needs to build on these successes by promoting and implementing additional opportunities and projects which improve the movement of people and goods utilizing integrated modes of transportation. Interconnections between modes, such as rail-water and water-highway for freight, and rail-bus for people, are key components in avoiding regional gridlock and reducing ongoing congestion.

Support economic vitality – It is clear that the economic vitality of the Region benefits all the residents of the Region and Connecticut. The economic impacts of transportation decisions are critical factors in transportation planning, especially in times of fluctuating transportation

funding. Business retention and expansion decisions are strongly influenced by the transportation systems available and planned for the Region. The Region must look to insure that all transportation decisions promote economic vitality throughout the Region, and are consistent with local and regional plans of conservation and development.

Performance Measures and Performance Targets – The Moving Ahead for Progress in the 21st Century Act **(**MAP-21) introduced a multi-level performance-based approach to transportation decision-making and development of transportation plans. This approach not only sets goals, but also requires an evaluation of the transportation system in meeting those goals and performance measures. MAP-21 required the establishment of federal performance goals and performance management measures.

Following approval of the FAST Act, FHWA and FTA established the national performance measures and in 2018, CTDOT, in coordination with the Metropolitan Planning Organizations established the Performance targets that were endorsed by the MPO's that same year. The plan fully supports both the performance measures and the targets set by CTDOT.

System Preservation – The goal of preservation of all transportation resources in the Region can only be accomplished with the support of local, state and federal government, as well as the input of the public and private operators which service the Region. Special attention should be paid to the input of these operators to insure that issues which negatively impact the existing service are addressed. Close communication between the operators, all levels of government and the SCRCOG is critical for the future of the transportation system.

Promote system efficiencies – The major infrastructure investment noted in the Plan only meets some of the identified needs for all modes of transportation. It is therefore critical that the available transportation resources are utilized to their highest potential. Regional emphasis must focus on strategies to improve performance and mobility. Funding agencies and public and private operators are encouraged to review their services and work with the Region to identify opportunities. Opportunities may develop after study which can be implemented at minimal cost. Others will be governed by fiscal constraint, requiring further study, demonstration of demand for improvements, identification of funding sources, and strategies to fund the identified needs.

Protect the environment – Connecticut has a long tradition of environmental protection and required mitigation of the impacts of transportation activities on the environment. The FAST Act requires the Region to look at different types of environmental mitigation activities. This overview will identify opportunities for the restoration and maintenance of environmental functions, which could be affected by the components of the Plan. While the environmental permitting for transportation activities remains primarily at the state level, the review by the Region and its municipalities will provide the potential for local input to the state permitting process, working toward the goal of a better environmental outcome for every transportation project.

Linking Land Use and Transportation

The South Central Region Council of Governments recognizes the linkage between land use planning and transportation investments. The coordination among the transportation and land use policies is an important factor in achieving a sustainable, balanced and connected transportation network in the Region. The economic competitiveness of the region can be enhanced by the coordination of the transportation investments as it provides an opportunity to influence the location, intensity and type of new and expanding development. The Region's transportation systems are primarily concentrated in the I-95 and I-91 corridors, where the infrastructure, work destinations, and population densities support these systems. The transportation network is accessible through multiple modes, such as, automobile, transit (bus/rail), and bike.

The Conservation and Development Policies: The Plan for Connecticut 2013-2018 (State C&D Plan) establishes six growth management principles.

1. Redevelop and Revitalize Regional Centers and Areas with Existing or Currently Planned Physical Infrastructure;
2. Expand Housing Opportunities and Design Choices to Accommodate a Variety of Household Types and Needs;
3. Concentrate Development Around Transportation Nodes and Along Major Transportation Corridors to Support the Viability of Transportation Options;
4. Conserve and Restore the Natural Environment, Cultural and Historical Resources, and Traditional Rural Lands;
5. Protect and Ensure the Integrity of Environmental Assets Critical to Public Health and Safety; and
6. Promote Integrated Planning

These principles define the geographies where the associated conservation and development policies may be applicable. These includes defining areas that have further need for transportation investment and incorporating policies that support coordination of transportation and land use planning. State Agency Plans and Action must be consistent with the State C&D Plan, which has incorporated policy statements within each of the six growth management principals to assess consistency. Regional and Local Plans of conservation and Development are required to identify any inconsistencies with the State C&D Plan.

The South Central Region: Plan of Conservation and Development 2018-2028 (Regional POCD) was adopted in the summer of 2018 and was determined by the Office of Policy and Management (OPM) to be not inconsistent with the State C&D Plan. The Regional POCD established policies, goals and strategies around the Human, Natural and Built environments. The Regional Municipal Plans of Conservation and Development are review by SCRCOG for consistency with policies established in the Regional POCD and the State C&D Plan. The outreach, coordination and the established planning process involved with the State, Regional and Local Plans of Conservation and Development have resulted in greater consistency among

the POCDs. The process ensures that investment in transportation improvements is consistent among the POCDs, which lead to increased travel options, better transportation systems, increased economic vitality and containment of urban sprawl.

Sustainability Objectives

There are several challenges facing the region, including housing affordability, traffic congestion, climate vulnerability, economic development, and social inequity. These challenges are rooted in the built environment and must be addressed on several fronts. Alternative strategies to address issues revolve around promotion and support of sustainable communities concepts.

The Regional POCD supports sustainability and recognizes that land use planning and transportation investments significantly influence the economic health of the Region by influencing the location, intensity and type of development. The policies that are incorporated within the Regional POCD and this Plan are furthered through the encouragement of redevelopment and infill development in the Region's strong central corridors. In addition, a balanced transportation system that promotes connectivity through alternative transportation choices will facilitate economic development, promote public health, and help to protect the natural environment.

The Region has participated in the New York-Connecticut Sustainable Communities Consortium, which developed an implementation Plan for Regional Sustainable Development on May 30, 2014. The effort brought together cities, counties, and regional organizations in New York City, Long Island, the Hudson Valley, and southern Connecticut. The Consortium was made possible through the U.S. Department of Housing and Urban Development (HUD) Sustainable Communities Regional Planning Grant. The goal of the grant program was to support local and regional planning that leverages the region's robust transit network and promotes economic opportunity.

The projects that occurred through the Consortium were aligned with the Livability Principles defined by the federal Partnership for Sustainable Communities:

- **Provide more transportation choices**. Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.

- **Promote equitable, affordable housing**. Expand location-and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.

- **Enhance economic competitiveness**. Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services, and other basic needs by workers, as well as expanded business access to markets.

•**Support existing communities**. Target Federal funding toward existing communities—through strategies like transit oriented, mixed-use development, and land recycling—to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.

•**Coordinate and leverage Federal policies and investment**. Align Federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.

•**Value communities and neighborhoods**. Enhance the unique characteristics of all communities by investing in healthy, safe, and walk able neighborhoods—rural, urban, or suburban.

The above Livability Principles have been incorporated as components of both the Plan and the Region's annual Unified Planning Work Program. In addition, the coordination that begun with the New York-Connecticut Sustainable Communities Consortium has continued through the Metropolitan Area Planning (MAP) Forum. As a participating member in the MAP Forum SCRCOG is able to work with NYMTC and surrounding MPOs and councils of government in New York, Connecticut, New Jersey and Pennsylvania to better coordinate planning activities in the multi-state metropolitan region.

The development of this Plan and the Region transportation investments support and consider the following livability strategies identified and supported by FHWA (https://www.fhwa.dot.gov/livability/):

- Enhance integration of multimodal transportation infrastructure and facilities
- Expand opportunities for economic development and revitalization
- Provide safe and adequate accommodations for all users
- Increase community connectivity and cohesion
- Capitalize on the value of existing (context sensitive) community amenities
- Enhance access to jobs, schools, and other services
- Integrate mobility services and automation to help improve overall quality of life
- Decrease overall cost of moving people, goods, and services
- Capture more short trips by walking and biking and improve health

Coordination with Regional Plan of Conservation and Development – Each municipality within the Region participates in the transportation planning process through the SCRCOG approval process. Emphasis on consistency between the Regional Plan of Conservation and Development and transportation actions will insure that those transportation decisions lead to preferred regional growth patterns and continued economic vitality.

Transit Oriented Development (TOD) – Past development in the Region has often resulted in sprawl with population densities which are low and cannot sustain further transit opportunities. Fiscal constraint causes transit providers to strive for significant sustained ridership on all transit

services for wise and efficient utilization of limited funding. Regional growth that includes transit-oriented development will allow for siting of new developments along existing transit routes, thereby allowing better travel options for the residents while allowing for expansion of the ridership of the current services. The potential construction of new bus hubs and the completed and planned construction of new railroad stations on the New Haven/Hartford/Springfield line (**Hartford Line**) within the Region provide opportunities for new TOD projects. TOD can provide the Region with new economic activity while minimizing the impacts of this activity on highway congestion.

TOD must be planned through local planning and zoning with input from the Region and transit providers to insure successful development which does not overburden existing facilities or service, or the TOD development will have to provide transportation enhancements necessary to meet the needs of the project. Communication, cooperation and coordination at all levels of government are necessary to address all the impacts of TOD and provide the benefits to the Region.

Travel Forecast Model – Maintaining and updating, as appropriate, the Region's travel forecast model will continue to be a necessary planning activity. The travel forecast model is a tool which estimates the regional travel needs in the future. Coordination with the efforts of the CTDOT in this area is key. Current travel data is entered into the model which then estimates future travel demands on the regional roadway system. CTDOT air quality conformity determinations will govern transportation decisions during the timeframe of the Plan. The travel forecast model can help frame those decisions. As opportunities for transportation mode shifts occur, the travel forecast model can estimate potential benefits and help frame decisions to increase accessibility and mobility, while increasing the potential for environmental benefits.

Context-Sensitive Transportation Solutions – Transportation solutions must not be out of scale or character and must be appropriate for the location. The Region's infrastructure and land use patterns have evolved over many decades. Design of new transportation infrastructure cannot detract from existing development patterns and must integrate with communities to encourage continued beneficial quality of life and the addressing of community concerns. Solutions which meet these goals provide stronger communities and better long range transportation solutions for the Region.

Context-sensitive transportation solutions address these concerns as part of the planning and design process. Public Outreach provides an opportunity for the issues surrounding a specific transportation proposal to be raised. Coordination with the municipality and the Region provide other means to understand the potential impacts of the transportation improvement. Community needs and other site-specific issues are considered and addressed to mitigate any adverse impacts of the proposed transportation improvements. Context-sensitive solutions work with site specifics such as limited available land and existing surrounding development and other limitations to allow transportation improvements to be in scale with the area. When utilized in conjunction with Sustainable Communities and congestion management process initiatives, context sensitive transportation solutions provide substantial benefits to the residents near the transportation project and to the Region in general.

Regional Centers and Priority Funding Areas – Broad identification of areas of the Region which are suggested for future development are noted in the State Plan of Conservation and Development 2013-2018. The specific identification of suitable locations or sites, for development in Regional Centers and Priority Funding Areas should be a priority of the Region. Regional Centers are areas which have regional significance as existing or potential employment centers, have existing or planned infrastructure to support existing and expanded employment and will, therefore, not shift infrastructure and transportation demands to currently undeveloped portions of the Region. Priority Funding areas are Census Blocks that include (1) designation as an Urban Area or Urban Cluster in the 2010 Census; (2) boundaries that intersect a ½ mile buffer surrounding existing or planned mass transit stations; (3) existing or planned sewer service (4) existing or planned water service; and (5) local bus service. Reuse of existing developed sites, expansion of underutilized sites and availability of transportation options for both people and freight are necessary components of these centers. Once identified, these specific sites in Regional Centers and Priority Funding Areas can be added to the Plan and will be important considerations for all transportation decisions.

The Region supports sustainable transportation investments that preserve open space, prime farmland, focus development in the Region's strong central corridors, promote compact mixed use development with access to services, support complete streets, a healthy, safe pedestrian environment, and multi-modal travel options. A balanced transportation system must include transit or rail to reduce dependence on auto usage and reduce highway and road congestion. An emphasis on pedestrian travel as one of those travel options is critical to the goals of quality of life and sense of community. A viable pedestrian network must be included in these initiatives. The areas of the Region suitable for Sustainability/Livability concepts should be identified by each municipality and provisions should be made in local zoning to accommodate this type of development. The success of these initiatives rests upon the communication, cooperation and coordination of all levels of government to provide transportation resources, which serve these communities and become an integral part of the regional transportation system. The coordination of sustainable land use and transportation practices is vital to enhancing the economic vitality and competitiveness of the Region.

Public Outreach

SCRCOG has adopted Public Participation Guidelines and a public outreach process to insure public input into transportation decisions and the Plan. During the 45-day comment period, The Plan is available on the SCRCOG website. In addition, public meeting is held to solicit input from the business community and the general population. This outreach insures that the Plan reflects the transportation needs and goals of the Region. Public comments, offered in writing or summarized by staff, are shared with committees and elected officials and included in the Plan as Appendix A.

Public Participation Guidelines – The Region's "Public Participation Guidelines for Transportation Planning, December 6, 2005" were adopted by SCRCOG on November 16, 2005. Periodic updates to the guidelines have occurred since, the last being January, 2018. The Guidelines outline the many avenues utilized to insure public participation and input. Dissemination of information is accomplished monthly to various stakeholders and parties in the Region and State through the distribution of agendas for the monthly meetings. Regular public attendance at monthly Transportation Committee and SCRCOG meetings demonstrates the success of the outreach.

SCRCOG Website – Outreach through the internet has the greatest potential to provide information and receive input from the various sources within the Region. SCRCOG maintains reports, agendas, data, regional links and other information for website visitors. Communication through the website enhances the ability to transmit information to the SCRCOG members, municipal staff, and the public. This important link will grow in importance over the timeframe of the Plan.

Municipal Chief Elected Official and Staff outreach – Monthly activities of SCRCOG allow for interaction and outreach to all the municipalities in the Region. Transportation Committee and Transportation Technical Committee (consisting of municipal staff) joint meetings review and recommend action on SCRCOG agenda items before full SCRCOG consideration.

Metropolitan Transportation Plan Update – SCRCOG staff outreach to municipalities for this update included specific outreach to chief elected officials and municipal staff to insure that all aspects of the regional transportation system were considered and addressed. Responses have been included to insure that the Plan reflects the specific goals and needs of each municipality.

Information was disseminated to the SCRCOG media distribution list concerning the timeline for adoption of the Plan and the opportunities for public comment.
Copies of the draft Plan were mailed to each chief elected official in the Region and to each appointed member of the Transportation Technical Committee along with correspondence which outlined the schedule for adoption and solicited comments on the draft.

Public work sessions conducted for the development of these plans assist in developing goals, estimates, alternatives, and proposals. These work session also help staff shape options for committee and Council review. Public comments, offered in writing or summarized by staff, accompany relevant agendas and are shared with committees and elected officials. Municipally Sponsored Meetings Council staff, upon request, participate in meetings initiated by chief elected The Transportation Committee and Transportation Technical Committee briefly discussed the draft and the approval process at their February and March, 2019 meetings.

The draft was recommended to SCRCOG for approval on , 2019.

An Informal public meeting was conducted noon on , 2019.

The Plan was adopted by the SCRCOG on , 20195.

Environmental Justice

SCRCOG prepared a report concerning environmental justice, "Environmental Justice Briefing Package, Transportation Planning: 2003-2004 Goals and Outreach", which has been utilized as guidance to address Environmental Justice (EJ) issues. This guidance has helped frame transportation decisions which impact EJ areas. Additionally, SCRCOG maintains a Title VI Policy/Plan and Limited English Proficiency Plan. The following areas are important to insuring the transportation planning process addresses EJ issues.

Accesses to Jobs - Opportunities for accessible employment are critical for EJ areas in particular. Regional initiatives are in place to expand employment opportunities as much as possible. The Plan encourages the continuation of these initiatives and recognizes the importance of consideration of EJ concerns during the transportation planning process.

Transit Service - A higher percentage of residents in EJ identified areas do not have a car available for their use. Transit service, therefore, is critical for access to employment and for meeting other transportation needs of these residents of the Region. The Plan must address the need for maintenance of existing transit services and provide opportunities to seek out additional transit needs and work to meet them. Opportunities for additional capacity at minimal cost, such as the utilization of larger, articulated busses, must be considered. In 2014, SCRCOG, in conjunction with the New Haven Chapter of the NAACP, DataHaven and other partners completed a study on the impacts of public transit and access to jobs. The study highlighted the needs for additional investments. Any modifications to the transit fare structure must consider the impacts of any increases on EJ areas.

Clean Busses - As diesel exhaust has been determined to have a negative health impact on many residents of EJ areas, the utilization of "clean buses", with reduced diesel emissions, must be a part of the Plan. The benefits of initiatives such as this, while primarily benefiting EJ areas, extend throughout the Region and promote the clean air and environmental goals of the Plan.

Truck Routing – Many EJ areas are adjacent to industrial areas and have the burden of significant truck traffic. Regional and local efforts should be continued to insure that the routing of trucks, with the attendant diesel emissions, are minimized through EJ and other residential areas in the Region. Working with the major operators, local police, municipal staff, and neighborhood representatives, revised truck routes can be identified to minimize neighborhood impacts.

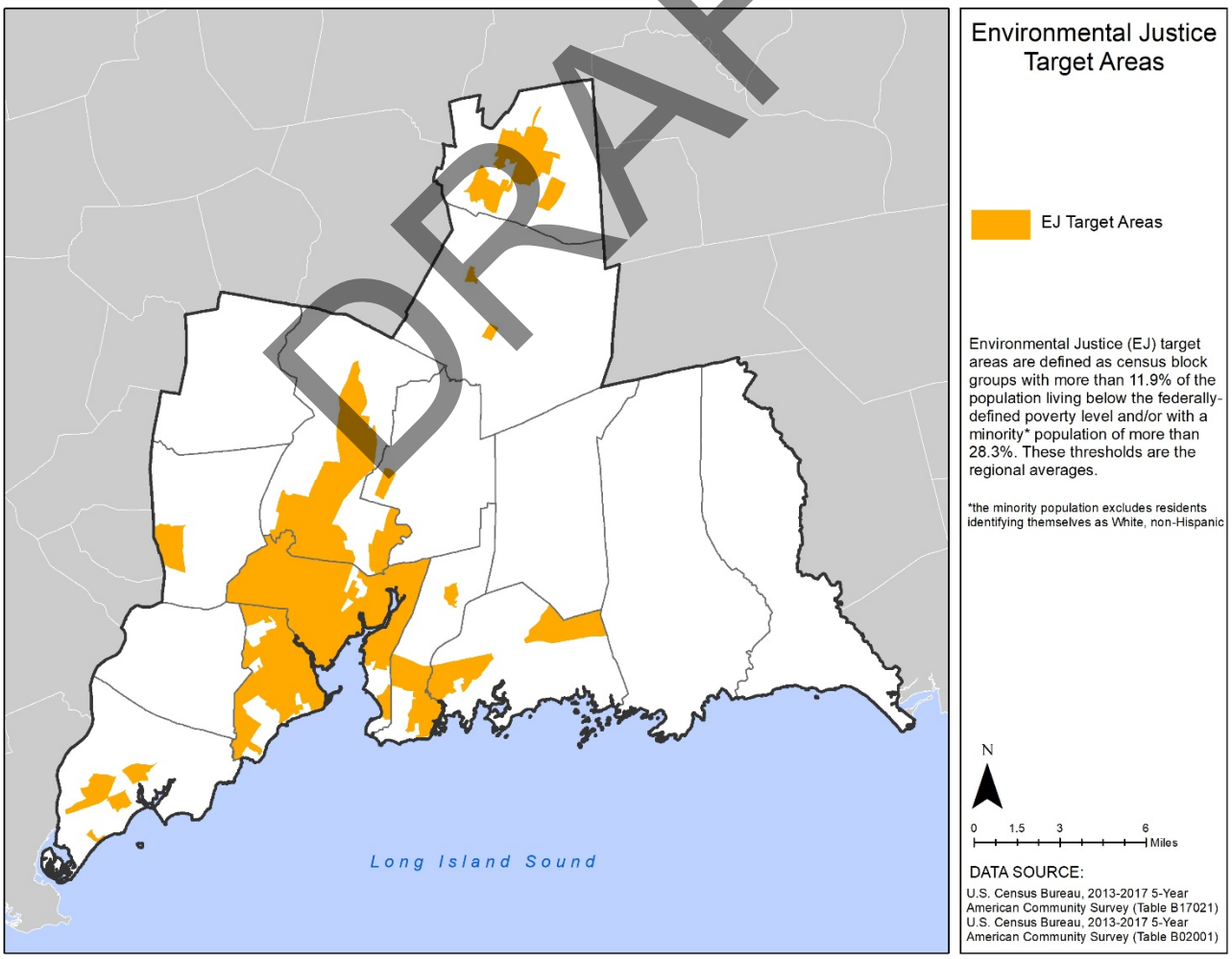
Pedestrian and Bicycle Connections – Access to non-motorized transportation opportunities is especially important as access to autos is not available to many residents of EJ areas. Normal sidewalk networks are often in place and each transportation project should be reviewed carefully to insure maintenance of the existing sidewalk network. The review should also identify and promote any opportunities for improvements or enhancements of the sidewalk network. Bicycle connections are also important, but must be reviewed in accord with a regional plan. SCRCOG undertook a regional bicycle and pedestrian study leading to a final Regional Bicycle and Pedestrian Plan in 2017. Implementation of the recommendations of the completed Regional Bicycle and Pedestrian Plan will further the achievement of EJ goals by providing additional opportunities for non-motorized transportation modes serving these and other portions of the Region

Air Quality – Air quality issues are especially important in EJ areas due to high population densities and congested conditions. Two opportunities for reduced emissions are encouraged by the Connecticut Department of Energy and Environmental Protection (DEEP).

- For large construction projects in urban areas, the use of construction equipment with air pollution control devices is encouraged. The use of particulate filters or "clean fuels" will help to provide the reduction. Contract specifications requiring the use of these pollution reduction measures should be promoted, as they have been in the Pearl Harbor Memorial Bridge improvements.

- DEEP regulations limit the idling of mobile sources to three minutes. However, these regulations are only enforceable by DEEP. It is suggested that all contract provisions for construction include anti-idling restrictions to allow enforcement by the project, thereby improving air quality for the construction area.

The American Community Survey 2013-2017 5-Year data has been reviewed by the Region to update the EJ target areas. Study of these changes noted from the 2010 Census data will lead to potential policy goals and evaluation of EJ areas in transportation planning decisions



Performance Measures and Targets

Performance Measures and Performance Targets – MAP-21 introduced a multi-level performance-based approach to transportation decision making and development of transportation plans. This approach not only sets goals, but requires an evaluation of the transportation system in meeting those goals and performance measures. MAP-21 required the establishment of federal performance goals and performance management measures.

Following approval of the FAST Act, FHWA and FTA established the national performance measures and in 2018, CTDOT, in coordination with the MPO's established the Performance targets that were endorsed by the MPO that same year. The plan fully supports both the performance measures and the targets set by CTDOT.

Performance Measures
FHWA and FTA established the following seven national performance measures for Safety, Transit, Pavement and Bridge Condition, System Reliability, Freight Movement and Air Quality SCRCOG included the following language in the Transportation Improvement Program (TIP)

Safety-Highway Safety is determined by the interaction between drivers, their behavior and the highway infrastructure. The five (5) performance measures for Highway Safety include:

1) The number of fatalities
2) The rate of fatalities
3) The number of serious injuries
4) The rate of serious injuries; and
5) The number of non-motorized fatalities and serious injuries

Transit - The Transit Asset Management (TAM) rule requires that recipients and sub-recipients of FTA funds set annual performance targets for federally established State of Good Repair (SGR) measures. Performance targets will be set for one or more asset classes for asset categories: Rolling Stock, Equipment, Facilities and Guideway Infrastructure.

Pavement and Bridge Condition The four performance measures for Pavement condition are:

1) The percent of the Interstate system in Good condition
2) The percent of the Interstate system in Poor condition
3) The percent of the non-Interstate National Highway System (NHS) in Good condition
4) The percent of the non-Interstate National Highway System (NHS) in Poor condition.

The two performance measures for Bridge condition include:

1) the percent of NHS Bridges in Good condition.
2) the percent of NHS Bridges in Poor condition

System Reliability -Highway travel-time reliability is closely related to congestion and is greatly influenced by the complex interactions of traffic demand, physical capacity, and roadway "events."[1] Travel-time reliability is a significant aspect of transportation system performance. Although there is not a specific system reliability program, reducing congestion and improving system reliability are key factors considered when regional decisions about investments in the transportation system are made.

Freight Movement-This measure considers factors that are unique to the trucking industry. The unusual characteristics of truck freight include:

1) The use of the highway/roadway transportation system during all hours of the day
2) The high percentage of travel in off-peak periods
3) The need for shippers and receivers to factor in more 'buffer' time into their logistics planning for on-time arrivals. [23 CFR 490.607].

Air Quality - US DOT requires that states and MPO's assess the impact of their transportation systems on air quality and specifically the impacts vehicle exhaust emissions. Their performance measure for air quality is based on an assessment of projects selected for funding under the Congestion Mitigation and Air Quality Improvement (CMAQ) program.

Performance Targets

During the first half of 2018, SCRCOG coordinated with CTDOT in establishing statewide performance targets. This plan fully supports the Performance targets set by CTDOT.

These performance targets are;

1) The Percentage of pavements of the Interstate System in Good condition,
2) The Percentage of pavements of the Interstate System in Poor condition
3) The Percentage of pavements of the non-Interstate NHS (National Highway System) in Good condition
4) The Percentage of pavements of the non-Interstate NHS in Poor condition
5) The Percentage of National Highway System Bridges Classified as in Good condition
6) The Percentage of National Highway System Bridges Classified as in Poor condition
7) The Percentage of Person-Miles Traveled on the Interstate that are reliable
8) The Percentage of person-miles traveled on the non-Interstate NHS that are reliable
9) The Truck Travel Time Reliability Index
10) The Total Emissions Reduction

Transit Asset Management Plan (TAMP)

The CTDOT is the sponsoring agency for the development of the Transit Asset Management Group Plans (TAMP) for Tier II transit providers. The TAMP documents asset management processes and policies for Tier II transit providers in Connecticut, summarizes the inventory and condition of transit assets, and prioritizes state of good repair investments. The TAMP is designed to meet FTA's TAM requirements, and builds on past practices and accomplishments in maintaining Connecticut's transportation infrastructure while also emphasizing the importance of implementing a plan to maintain our infrastructure today and in the future. The full TAMP document is available on the SCRCOG Website and fully integrated into the MTP.

Map of Major Transportation Components within the South Central Region

Transit

As highway congestion increases throughout the Region, it is clear that transit opportunities are critical to maintaining a functioning and efficient transportation system. With the completion of the I-95 Central Corridor Expansion Project and new investments in commuter rail, most notably the new Hartford Line, the Region's transit system has been improved. Just as clearly, the opportunities over the timeline of the Plan are significant and critical to the Region. Efficient movement of people is a vital component of the long-term economic health and vitality of the Region.

SCRCOG has completed several studies regarding Public Transit Services In 2004 and 2005, the SCRCOG undertook a Regional Transit Development Strategies Study to conduct a comprehensive overview of the transit system for the Region. Subsequent input revised the original recommendation concerning a West Haven or Orange Railroad Station to now recommend construction of stations at both locations. The West Haven station has been completed while the Orange station has not. An additional study of Public Transit Services was undertaken in 2007 and 2008. This study focused on specific recommendations from the previous study and outlined changes to the system and necessary steps for their implementation.

Currently underway is an Alternative Analysis study that focuses on developing and evaluating alternative actions to improve the Regions' transit system. The MOVE New Haven study is being conducted through a partnership with SCRCOG, the City of New Haven, CTDOT, the Greater New Haven Transit District (GNHTD and the FTA. When completed, this study will provide the Region with fundable alternatives designed to improve delivery of bus transit services throughout the area. These could include new routing, improved facilities and enhanced multi-modal coordination.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) required the development of Coordinated Public Transit -Human Service Transportation Plans and in 2007, SCRCOG partnered with the Lower CT River Valley Council of Governments (RiverCOG) to develop the South Central Urbanized Area's Locally Coordinated Public Transit Human Service Transportation Plan (LOCHSTP). LOCHSTP identified gaps in services and recommended strategies to improve access to transportation services for the elderly and persons with disabilities. Specifically, LOCHSTP recommended that Human Service Transportation and Public Transportation information should be made available through a one-stop resource.

In 2013, the SCRCOG in partnership with RiverCOG, completed a Mobility Management Alternatives Study. The study provided information on the needs, resources, best practices, and implementation issues associated with mobility management. SCRCOG, and its regional partners, developed a program to improve access to transportation services for the elderly and persons with disabilities.

In 2014, SCRCOG received funding through the CTDOT to implement a Mobility Management Program for the Region. SCRCOG entered into an agreement with the Kennedy Center to provide these services. With the involvement of regional stakeholders, a website was developed

and the regional Mobility Manager began working to help individuals find the public transit option that works best for him or her.

Current transit services are available from many sources. Service options, identified needs and providers are described below:

Connecticut Transit – CTTRANSIT New Haven provides bus service to the Region with 15 fixed route, one intercity express, and two shuttle services. CTTRANSIT works to maintain existing service, and seeks opportunities to improve service while staying within the fiscal constraint of their annual appropriations. Over the last few years CTRANSIT has improved bus stop signage, added GPS tracking for all buses, replaced fare boxes to allow for more payment options and most recently implemented Smart card with its Go CT. Card. CTTRANSIT has acquired several articulated buses, which allow for increased capacity, with minimal additional operating costs. As with most transit operations, the fares generated do not pay for the operational costs, necessitating operating appropriations. Ridership of CTTRANSIT varies as economic conditions and fuel prices fluctuate. Increased ridership has strained the capacity of several routes in the Region. System and equipment modifications will be required as technology changes and ridership increases in the Region.

CTRANSIT works continuously to improve service delivery while staying within their appropriation. During Service Review Committee meetings, CTRANSIT works with CTDOT to evaluate Rider requests for service changes. As needs are identified, CTTRANSIT, in consultation with the SCRCOG, the municipalities served, CTDOT and local elected representatives of the Connecticut Legislature, must work to make the proposed improvements a reality. Expanded service in one area cannot be accomplished at the expense of service in another, unless ridership declines are evident. The goal of the Region is to maintain and enhance service to meet identified needs.

CTTRANSIT bus service provides route options for this transportation mode. Existing service is vital for many residents of the Region. Enhanced service will help address regional highway congestion, while providing more travel options for riders.

The headways between busses on several routes have been discussed. Headways of ten minutes or less on the major bus lines in the Region have been recommended to provide good service, reduce crowding and encourage mode shifts to transit for reducing highway congestion. Reliable and timely service is a critical component of the attractiveness of bus utilization for potential riders.

CTTRANSIT can only accomplish these goals with the proper facilities and equipment. A new garage and maintenance facility in Hamden opened for New Haven Division use in 2010. This facility provides modern facilities critical for the maintenance of service during the timeline of the Plan. This investment by CTDOT emphasizes the commitment to the health and viability of the regional transit system.

Intermodal connections should be encouraged. All CTTRANSIT buses have bike racks and buses can carry a maximum of two bikes. Bicycle transportation facilities should continue to be part of the overall CTTRANSIT planning and service as noted below.

Ongoing fleet replacement is necessary to ensure reliable and desirable service. Additional equipment may be necessary to meet the reduction desired in headway or to provide additional route capacity. Likewise, bus shelter improvements and replacements are required to provide suitable protection for riders in all weather conditions. These amenities are important to retain riders in all types of weather and reduce highway congestion and weather related delays.

Greater New Haven Transit District - The Greater New Haven Transit District (GNHTD) provides Paratransit services in the Region. The most extensive of these provides services trips within ¾ of a mile of the CTTRANSIT fixed route to individuals with disabilities as mandated by Federal law via the Americans with Disabilities Act. A number of other services are provided for transportation of elderly and/or disabled passengers who may not be eligible for the ADA transportation services. The size of the populations needing the services provided by the District continues to increase. Expanding numbers of elderly and disabled individuals in the Region will drive the need for additional funding and careful planning in order to continue to provide these populations the freedom to travel and to maintain their quality of life.

GNHTD "My Ride" buses

GNHTD also provides transportation for seniors and disabled persons through a municipal grant program funded by the state. This Regional Rides program is funded by the state and provides necessary transportation services for the elderly and disabled, and has been well-utilized. The Region must work with state elected officials to insure that this program continues to have the necessary funding.

GNHTD is in the process of designing and constructing a new facility for its operations. The Region supports this project to ensure that GNHTD has the necessary Facilities and equipment to continue to provide services to the most needy.

Milford Transit District – Milford Transit District provides transportation services for the western portion of the Region. Fixed route service, and ADA service, as well as "dial-a-ride" service, are provided for their service area.

Estuary Transit District – Estuary Transit District provides service in their Region east of the South Central Region. Connections are provided to the CTTRANSIT 201 Route in Madison.

CTRIDES – Under a contract from CTDOT, CTRIDES provides travel alternatives to commuters in the Region that help reduce dependence on the single occupant vehicle. Carpool and vanpool formation, information on the ease of use and benefits of these options, customized work or travel trip planning, promotion of transit usage and other commute trip options are all available for the benefit of the Region's travelers. Commuter outreach efforts raise awareness of the full range of state-sponsored commute alternatives to driving to work alone. As congestion increases, CTRIDES's efforts will continue to be vital to ensure full utilization of all transportation modes, thereby increasing system efficiency, especially during daily peak travel hours.

CTRIDES provides employers and key traffic generators with technical expertise to help design customized Transportation Demand Management (TDM) programs for their employees. While employers can experience bottom-line benefits from adding policies supportive of transportation alternatives to their benefit package, they also help reduce traffic congestion and improve air quality in the Region. CTRIDES supports telecommuting to the worksite by providing design, development and implementation of a telecommute program to area employers. While telecommuting, the employee can completely remove a work trip from the Region's transportation system, reducing transportation related emissions, decreasing energy demands and improving air quality.

Section 5310 Enhanced Mobility for seniors and Persons with Disabilities

SAFETEA-LU required the development of Coordinated Public Transit -Human Service Transportation Plans in order to qualify federal transportation funds. For planning purposes, the CTDOT and MPOs across the state developed a locally coordinated plan (LOCHSTP). This LOCHSTP plan was developed through a process that included representatives of public, private and nonprofit human services transportation providers and participation by the public. Under MAP-21, this Coordinated Plan continues to be a requirement for funding under the new Section 5310 *Enhanced Mobility for Seniors and Persons with Disabilities.*

Under MAP-21, the existing award of cash grants for qualified recipients towards the purchase of wheelchair accessible vehicles is maintained in Category A. In addition, there are three new categories of project types that can now be funded; categories B, C & D. These categories are similar to what was eligible under the former *Section 5317 New Freedom Initiative (NFI) program* which was designed to assist individuals with disabilities with transportation.

The four project categories are as follows:

- 5310A - Public transportation projects planned, designed, and carried out to meet the special needs of seniors and individuals with disabilities when public transportation is insufficient, inappropriate, or unavailable.

- 5310 B - Public transportation projects that exceed the requirements of the ADA.

- 5310 C - Public transportation projects that improve access to fixed route service and decrease reliance by individuals with disabilities on complementary paratransit.

- 5310 D - Alternatives to public transportation that assist seniors and individuals with disabilities with transportation.

On an annual basis, SCRCOG reviews all applications for funding and based on criteria set by CTDOT, SCRCOG prepares a funding priority list. This list is reviewed at the Transportation Committee meeting and then forwarded to area Mayors and First Selectmen for endorsement at the next SCRCOG meeting. The prioritized list of projects will then be submitted to CTDOT. Through this process the Region has supported funding for vehicle purchases, service expansion, a subsidized Taxi Voucher program and the regional Mobility Manager program.

Local Providers – The Region has many municipalities and non-profit agencies that provide travel options for certain segments of the public. These include local senior centers, group homes and nonprofits that provide service for those with disabilities in our communities. Local providers rely on Section 5310 funding for their vehicle acquisitions. Continued funding for vehicle replacement under this program is necessary to insure continuation of these needed and well-utilized travel options.

Commuter Rail Services

Shore Line East – Commuter rail services for municipalities east of New Haven have experienced significant growth and capital investment. Construction of new rail stations, with high-level platforms and good, well-lit parking, has led to increased ridership. Remaining station upgrades are still needed. Many parking lots are utilized to near capacity, requiring planning for further expansion. Solutions could also involve transit service and carpooling to some station locations. Connections at the destination end of the rail trip, by Commuter Connection buses and private shuttles, have increased the viability of using the train and should continue to expand. Service modifications which allow for riders to remain on the same train for service west of New Haven have been well-received. The success of the commuter service and the desire to provide additional rail travel options to reduce congestion and dependence upon the automobile has led to weekend service and proposals for reverse commute service. Due to the success of Shore Line East, the Region has adopted service enhancements and expansions as a continued regional priority. As noted below under Bicycle Transportation Facilities, provision should be made for bicycle facilities both at the stations and on the passenger rail cars.

Guilford Shore Line East Station provides for "up and over" access, allowing service on both tracks and parking on both sides of the railroad.

Regional transportation solutions require the construction of similar "up and over" stations at all Shore Line East stops.

Service enhancements and expansion will provide greater travel options and reduce highway congestion on I-95. Additional infrastructure including parking and access to both tracks will be required and are being provided in stages. Operating agreements with AMTRAK will need to be addressed for reverse commute service. Beyond these enhancements, expansion of Shore Line East with additional service to New London and possibly beyond to Providence, Rhode Island should be considered during the timeline of the Plan. Equipment upgrades should encourage seamless service, allowing riders to travel further without changing trains, utilizing the current successful service continuation west of New Haven as the model. The Plan notes the importance of these additional travel options.

Shore Line East Service Enhancements and Expansion are major goals of the region

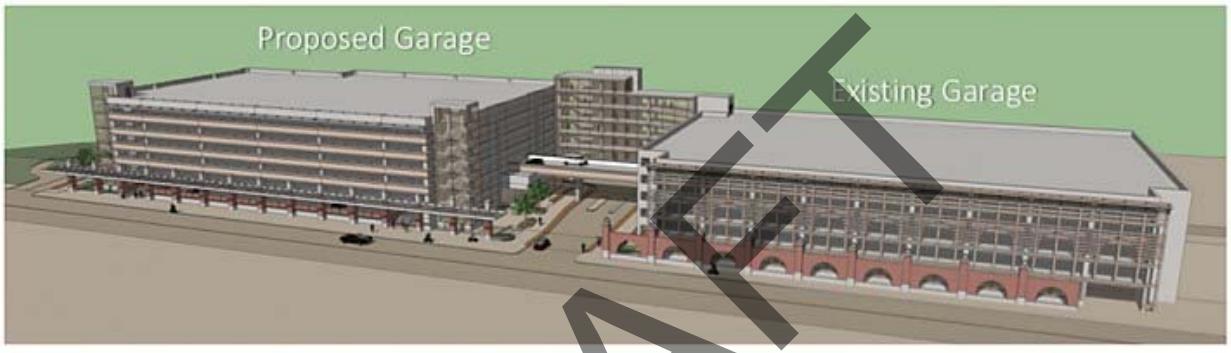
The Hartford Line – Starting operations in 2018, expanded rail passenger service north of New Haven is provided with the Hartford Line. CTDOT has constructed improvements to the corridor infrastructure, including double tracking, capital equipment purchases, station upgrades, new station construction in Meriden, Wallingford and proposed additional locations, as well as parking facility improvements.
Currently this service provides regular round-trip commuter trains on weekdays ending at Union station in Hartford, with some continuing north to Springfield Massachusetts. Amtrak also provides additional New Haven-Springfield round trips. Service is also provided on weekends and holidays.

Shore Line East Station for East Haven – Provision for a station on Shore Line East for East Haven remains a key need. Operational needs identified by AMTRAK for the corridor and potential locations present challenges which must be addressed. Serious discussions and negotiations with CTDOT as service provider, and AMTRAK as operator, must be undertaken to allow for the service expansion and enhancements. As the only town along Shore Line East without a station, residents must travel to either Branford or New Haven, utilizing available parking in either location. In New Haven, the lack of sufficient parking is already an identified issue while the trip to Branford is a reverse trip with parking there already limited, but under expansion. Travel to either station only increases current congestion on the highways. The construction of this station is beyond the fiscal constraint of the Plan but must be viewed as a near-to-midterm need.

Shore Line East Connection to NHHS expanded rail – As commuter rail service is expanded and enhanced, the need for interconnection of these services will be important. In this Region, Shore Line East and Hartford Line service currently meet at Union Station in New Haven. As part of the Plan, an interconnection which bypasses this busy hub may be important in providing timely travel options from one commuter rail to another. Rail connections exist which would bypass New Haven and allow interconnections in North Haven at a new station, and either in Branford or East Haven, if a station is built there.

Union Station Parking, New Haven – The increased utilization of rail service and the lack of transit service in many portions of the Region requires riders to travel to the rail stations. A supply of convenient and easily accessible parking at or near the rail station is necessary to ensure that no impediments to rail use are in place. While progress has been made in improving the frequency and convenience of the rail connections into Union Station from the Region, the current service leaving Union Station provides significantly more options than are available inbound from the Region. Many riders, therefore, travel to Union Station by car to travel by rail beyond the Region.

In 2016, CTDOT announced plans for construction of a second parking garage, on a surface lot adjacent to the existing garage. Once constructed, this $60 Million dollar, seven level, garage could provide 1,015 parking spaces for commuters.



Bird's eye view of Parking Complex

The city of New Haven is working with CTDOT to modify the planned structure to better fit the needs of the community. SCRCOG encourages all parties to work on a revised design that will provide adequate and convenient parking for Union Station needs.

Milford Railroad Station Parking Expansion – Current parking at this location is extremely inadequate. Waiting lists for available parking show a substantial demand for additional parking for commuter utilization of the rail facility. Parking demand which is not met results in additional cars dropping off or picking up commuters at peak hours or additional traffic on highways if the traveler cannot utilize rail opportunities. Those adverse impacts demand that the parking availability at this location be addressed. A study of the parking options entitled "Structured Parking Feasibility Study for the Milford Railroad Station, July 1, 2006" was provided to the Milford Transit District. The study provided recommendations concerning location and preferred alternatives as well as construction costs and operations plans and costs.

The construction of the station in West Haven has not reduced the parking demand. In fact, regional patterns suggest that the parking demand will still continue to outstrip the currently available spaces. Construction of near term solutions in Milford is required. This need is beyond the fiscal constraint of the Plan and additional funding should be sought to address this need.

High Speed to Core Service – High speed service to central New Haven employment areas has been operated by CTDOT busses for many years with varying success. Unfortunately, the regional infrastructure does not support exclusive access, thereby requiring the high speed

service to compete with other commuter peak highway traffic. This competition reduces the viability of the service as congestion increases and commuter peak traffic impacts occur for longer periods of time each morning and evening. Shore Line East and the Hartford Line railroad services should address these needs in the I-95 and I-91 corridors. The "Route 1 Bus Rapid Transit Feasibility Study" completed in 2017 identified the route 1 corridor from Milford to New Haven as an area where Bus Rapid Transit (BRT) could be successful. The plan identified BRT enhancements and their locations through the corridor. The plan supports the development of BRT services in the region to improve access to employment opportunities.

Major Capital Investments – The FAST Act required that all transit major capital investments be evaluated utilizing several criteria. As funding for most initiatives comes from sources outside the Region, it is important that regional decisions meet the criteria of the federal legislation. The criteria are discussed below.

Alternatives Analysis – All decisions must include an analysis of alternatives. Viability of alternatives must be evaluated through the weighing of many factors, including existing infrastructure capacity, environmental impacts, overall cost, necessary infrastructure improvements, input received during public outreach, intermodal connections, right of way issues and numerous other factors. The Plan envisions that this analysis will have active participation by the Region in the process and a decision on the preferred alternative by the SCRCOG.

Justification of the Project – Once the needs have been identified, and the alternatives analysis undertaken, sufficient information and data will be available to document the justification for the project. Formal approval action by the SCRCOG will be necessary for the project to proceed.

Local Financial Commitment – Transit activities are primarily funded by State and Federal funds. Any project undertaken will be funded by these sources. Endorsement by the SCRCOG will indicate the Region's desire for the project to proceed. Once funded by these sources, adoption into the Region's Transportation Improvement Program (TIP) will indicate concurrence with the financial commitment by the SCRCOG.

Economic Development Potential – Each regional transit program has an impact on the economic vitality of the Region. Major capital investments will most likely have an impact on the economic development potential of the portions of the Region served by the transit service proposed for major capital investment. SCRCOG staff meets regularly with organizations in the Region concerned with economic vitality, development, and job preservation and growth, such as Regional Economic Xcelleration (REX) Development, regional and local Chambers of Commerce, and municipal economic development staff members. Regular monthly SCRCOG meetings include reports from many of these organizations, as well as agenda distribution to all. Economic impact information can easily be obtained from these sources to insure consideration of the economic factors in the decision-making process.

Reliability of Ridership and Cost Forecasts – Major capital investments must be evaluated utilizing many factors to determine the long term viability of the proposed major capital project. CTDOT, in consultation with AMTRAK and other regional service providers, can provide the information necessary to address reliability of ridership and cost forecasts. SCRCOG staff will participate in the planning process and review CTDOT reports. The SCRCOG will review the information provided by CTDOT as part of the consideration for adoption of the project into the Region's TIP, a necessary step in the actual implementation of the major capital investment.

Improved coordination of the various services offered by numerous providers is an opportunity which will benefit existing users and visitors to the Region. The providers of the services noted in this chapter are encouraged to continue to work for all-inclusive information and coordination which will promote intermodal opportunities, improved transportation options, increased mobility, and regional economic vitality.

Interstates and Limited Access Highways

The final work on the I-95 Central Corridor Expansion projects has been accomplished. These improvements will serve the Region well beyond the timeframe of this plan. Major capacity expansions are completed for I-95 from Exit 54 Cedar Street in Branford, on the north (east) end to Exit 45 on the south (west) end. The expansion included the replacement of the Pearl Harbor Memorial Bridge (Q Bridge) with a new structure and the complete rebuilding of the I-95, I-91, and Route 34 interchange.

Pearl Harbor Memorial Bridge in New Haven

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Over the last few years, the Region has seen an increased funding for transportation infrastructure improvement. Through the Let's Go CT initiative the state has proposed increased funding for rail improvements as well as highways project and transit improvements. While these efforts are applauded, many other portions of this system still suffer from operational and capacity deficiencies. While most of the identified issues are beyond the fiscal constraints of the Plan, there are real impacts of these deficiencies which are felt throughout the Region.

I-95 North (East) of Exit 54 – The CTDOT has investigated the conditions of I-95 from Exit 54 in Branford to the Rhode Island state line. The Southeast Corridor Study concluded that additional capacity was needed and that a third lane should be constructed in each direction for the entire length. An update of this study is underway. This project was included in the CTDOT Long Range plan, TransformCT. Commuter morning and evening peaks, as well as peaks

throughout the weekend confirm the need for additional capacity. SCRCOG endorses additional capacity for that portion of the corridor within this Region as a mid-term construction goal.

I-95 North (East) Interchange improvements – The Southeast Corridor Study also identified several opportunities for interchange improvements. Other opportunities have been identified by the municipalities in this portion of the Region. The interchange opportunities are outlined below.

> *Exit 53* – Current configuration allows for movements oriented to or from the south (west) direction. Potential reconfiguration of the connection of Exit 53 to Route 1 has lead to conceptual plans for a connection to allow for a full interchange in both directions. These additional movements will allow better access to that area of Branford and also allow for economic enhanced development potential, furthering several goals of the FAST Act.
>
> *Exit 59* – The Study proposed near term improvements to allow for safe connection with I-95 and Route 1 at Goose Lane. The concept raises additional concerns as it severely impacts the current CTDOT maintenance facility. Regional growth will further deteriorate the traffic level of service at this interchange and, whether the current concept or another, solutions are necessary. Improvements to Exit 60 as noted below may partially address this issue.
>
> *Exit 60* – Due to its proximity to the former Madison toll station on I-95, Exit 60 was only constructed to have movements to or from the north (east) direction. Original plans called for the south (west) movement to be made from Wildwood Avenue. In fact, these ramps were rough graded but never constructed when the Connecticut Turnpike, the original name for this section of I-95, was built. The Study identified these never completed ramps as a possible near-term improvement.
>
> Further study is necessary for both Exit 59 and Exit 60. As each is in a different municipality, differing concerns surround each modification. There are implications on local streets for access to these areas from nearby residential areas. The Region looks to CTDOT to address these interchange issues in full discussion with both municipalities.

No funding for interchange improvements from Branford to the Rhode Island state line is specifically included in the fiscal constraint of the Plan. SCRCOG encourages CTDOT to continue the process on these interchange issues.

An update to this study has been underway at CTDOT and the region looks forward to implementable solutions.

I-95 South (west) of Exit 45 - CTDOT completed a study of I-95 from New Haven to the New York state line several years ago and continues to consider options for the corridor. The Legislature recognized the difficulty of constructing additional capacity on I-95 due to limited current right of way and intense adjacent development. The solution mandated by the legislative

action was to analyze the transportation needs and develop a plan to reduce the base levels of highway demand by 5% within five years.

Actions of CTDOT included the reduction of highway demand by increasing utilization of other means of transportation. These included increased rail usage, increased ride-sharing/carpool usage, increased vanpool usage, increased full and part-time telecommuting, and increased use of alternative work schedules, increased inter-regional bus ridership, and new ferry ridership. Results reported by CTDOT include success in some of these areas and below goal reductions in others.

CTDOT has completed a pilot study on the imposition of tolling on the corridor from the New York line to New Haven. The results of this study, along with legislative action, will determine future conditions on this section of I-95.

Any additional actions within the Southwest Corridor are anticipated to address transportation demand and not provide increased highway capacity.

I-95 New Haven-West Haven West River Bridge/
I-95 Milford-Stratford Moses Wheeler Bridge
Bridge Repair/Replacement

These projects are completed and have had significant improvements in highway operations in their respective areas as they were completed.

I-91 Interchange Improvements – The interchange issues on I-91 are less significant as the design standards were more stringent for I-91, which was constructed a decade or more after the Connecticut Turnpike (I-95). However, changes in traffic patterns and volumes due to adjacent development cause increased interchange usage, resulting in unsatisfactory interchange operations. Two examples are as follows:

> *Route 68 – Wallingford* - Improvements have been accomplished at the I-91-Route 68 interchange to address substantially increased traffic volumes. The increased capacity has resulted in improved interchange efficiency.
> *Route 80 – New Haven* – Interchange improvements have been identified as necessary for the northbound off ramp. SCRCOG views this project as a near-to- midterm improvement.

The Plan looks to identify opportunities such as these over the timeframe of the Plan to insure efficient and safe operation of all interchanges on I-91 in the Region. Any additional projects are beyond the fiscal constraint and would require additional funding.

I-691 Interchanges - Meriden – The previous Plan identified improvements to the Chamberlain Highway interchange as desirable for the efficiency of the local highway network. A SCRCOG sponsored study was completed in 2008 and a further study in 2014 expanded the review and recommended improvements to interchanges 5, 6, and 7 and circulation on adjacent highways. The Study has been forwarded to CTDOT and the implementation is beyond the fiscal constraint

of the Plan. SCRCOG encourages CTDOT to advance necessary modifications and improvements in cooperation with the City of Meriden and the Region.

Wilbur Cross Parkway – The Wilbur Cross Parkway, Connecticut Route 15, is the only non-interstate limited access highway in the Region. Constructed in the 1930's, the Parkway was constructed for passenger vehicles only and, together with the Merritt Parkway, provides a connection from the New York state line to Hartford. Distinctive and unique designs were used for the bridge structures. The design kept many trees and continues to provide a scenic roadway for travel through the state. Minor improvements have been made since the original construction, but many interchanges have changed little since initial construction. As traffic volumes and speeds have increased, and safety standards have evolved, many of these interchanges require particular study for improved safety while entering and exiting the parkway.

In response to this need, a SCRCOG sponsored Wilbur Cross Parkway Interchange Needs Assessment Study This study was completed in 2009, and focused on seven interchanges and two service areas on the Wilbur Cross Parkway (Route 15) between Milford and Meriden. In close consultation with CTDOT and the involved municipalities, recommendations were made for near, mid and long term improvements to these interchanges.

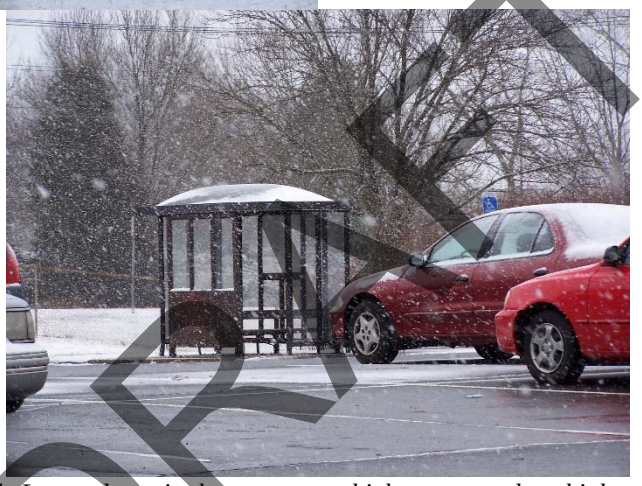
The scenic character of the parkway is a feature which is valued by the residents and motorists and must be maintained. The challenge is to insure safety while maintaining the character of the parkway. The Region remains concerned that the traffic speeds, which currently greatly exceed the posted speed limit in many sections of the parkway, are potentially requiring more substantial improvements than would be required for design speeds reflecting the posted limits. The increased improvements potentially will not only impact the character of the parkway, but also utilize additional limited funding, thereby decreasing the amount of improvements undertaken. Speed limit enforcement needs to be a significant portion of the solution to the safety issues. The Region encourages CTDOT to advance the recommendations in the Study on the interchange issues and provide context sensitive solutions to the identified operational and safety issues.

Rest Area Improvements – In 2009, CTDOT entered into a long term contract with a single statewide operator for improvements and upgrades at service plazas along I-95. The Region notes that the improvements provide more traveler-friendly facilities, with better food choices and improved facilities. The improved rest areas help to promote a better image of Connecticut to the traveling public.

Park and Ride Lots – For many decades, CTDOT has constructed and maintained Park and Ride Lots adjacent to the Region's interstates and limited access highways. Most of these lots have been constructed within the land acquired for the construction of the interstates at interchanges. Most of these lots are well utilized and serve as both informal and formal staging areas for car, van and bus usage. Each lot removes cars from the highway and is an important component of congestion reduction initiatives.

For over 30 years, SCRCOG has conducted quarterly capacity counts for the Region's commuter parking lots. These counts are post on the SCRCOG website and distributed to stakeholders throughout the Region. These counts have shown that highway improvement and expansion projects often affect these well-utilized lots. The Plan encourages CTDOT to work with the

Region to provide additional capacity where needs are identified as part of the regional transportation system.



Park and Ride Lots reduce single occupant vehicle usage, reduce highway congestion and, when suitably located, provide intermodal connections.

Incident Management/Traffic Management – Congestion is evident on certain portions of the interstate system daily. Incidents on the interstates can cause congestion to increase dramatically. Any significant congestion has an adverse impact on local roads, whether through diversion routes or by drivers attempting to avoid delays. CTDOT has installed and maintains infrastructure for video surveillance and communication on the interstates in the Region. These facilities allow for real-time information to be available to CTDOT traffic operations facilities.

Highway Advisory Radio (HAR) is proposed for interstates not currently covered in the Region. Operation of this system will provide information for motorists to utilize in their choice of routes

Variable Message Signs and Highway Advisory Radio provide important travel information for reducing congestion and travel delays due to highway incidents.

Variable Message Signs have also been installed along I-91 and I-95.
Each municipality in the Region which contains a portion of I-91 or I-95 has participated in a process with CTDOT that produced a "Diversion Plan" for that town. These Diversion Plans provide guidance for CTDOT, Connecticut State Police, local police, local emergency responders, local public works and other departments to utilize in the event of a major event on the interstate. These major events displace traffic from the slowed or stopped interstate to local, parallel routes. Diversion Plans provide a mechanism to minimize the impacts of the diverted traffic in each municipality by providing prior assessment and planning.

The Plan views the Diversion Plans as dynamic documents which require timely revision in response to changed conditions and as a result of the experience gained from their utilization in response to interstate incidents. Periodic reviews and updates are required to insure the best response to the challenges of incident management.

Unified Response Manual –SCRCOG, in cooperation with federal and state agencies, coordinated the preparation of a comprehensive, National Incident Management System (NIMS) compliant, multi-disciplined Highway Incident Unified Response Manual (URM) for Connecticut.
The Connecticut Transportation Strategy Board (TSB), in 2003, established a Statewide Incident Management Task Force (SIMTF) which was charged with developing recommendations for improving the efficiency, coordination, and management of the response to and clearance of incidents on the state's highways. In October 2003, the SIMTF presented a White Paper detailing recommendations to the TSB. A high priority recommendation was to develop a URM for statewide use.

SCRCOG, in FY 2007, engaged a consultant for the URM preparation. SIMTF assisted SCRCOG in the review of the consultant draft and administration of the consultant contract. Utilization of the URM will allow for better and improved response to incidents on the highways of the state.

Arterial System

Arterial highways of the Region are key components of the highway system and serve predominantly regional and local traffic. Congestion and operational inefficiencies are immediately observable to the residents of the Region as they regularly utilize this portion of the highway system. Opportunities exist on the arterials of the Region for both large and small scale improvement projects which can provide substantial operational enhancement in the immediate area of the project.
The previous Plan outlined numerous arterial options for study and possible capacity improvements. Corridor studies have been undertaken on several of the highways suggested in the previous Plan. The identified deficiencies still exist and must be addressed.

Arterial Goals – The Plan recognizes that the arterials in the Region must function efficiently for the free flow of traffic and goods throughout the Region. Arterial improvement projects and land use patterns must be advanced which offer improvement in the following areas:

Access and performance – It has been shown that access issues and policies can substantially impact the performance of the arterial. Zoning Regulations which allow multiple curb cuts and little or no required separation contribute to increased turning movements and lowered arterial performance. Crossing and turning traffic increases conflicting movements which, in turn, decreases overall vehicle speed and lane volumes.
Continuity – Optimal operation of arterials requires a consistent lane configuration. Motorists should expect to maintain traffic flow at all intersections and not have turning movements stop the flow of traffic in a travel lane. The opportunities for additional capacity outlined in the table below would address turning movements, providing improved motorist safety and increased arterial capacity with investment of limited available funding.
Traffic Signal Upgrades – Traffic signal control technology has advanced substantially in the past decade. State of the art equipment and control can allow extended section of arterials to be managed and coordinated to give through movement priority while insuring satisfactory side street access without significant delays. Signal upgrades on the CTDOT system have addressed some coordination along arterial sections in the Region. Many more opportunities for coordination and improved efficiency of the regional arterials exist. Locally maintained and controlled traffic signal systems also have opportunities, though often not addressed due to limited local funding. While beyond the fiscal constraint of the Plan, equipment and control upgrades are a critical part of the congestion management process. Additional funding must be a regional priority.
Good design implementation – Many of the arterials in the Region have undergone various improvements which have not addressed underlying conditions such as offset intersections, poorly spaced intersections and similar design considerations. While the addressing of these issues is often complicated due to right of way concerns and other limiting factors, it is clear that improvement projects must address these design considerations to provide long term solutions which optimize performance of the Region's arterials.
Safety – All of the above considerations must address the underlying principle of highway safety. Arterial projects must be considered with emphasis on the potential for improved highway and pedestrian safety. Regional arterials serve many functions,

providing connections throughout the Region and supporting adjacent economic activity which is vital to the regional economy. Access to adjoining properties and businesses must be provided without compromises to vehicular safety. High volume arterials have additional safety considerations. Raised medians can be utilized to improve safety on arterials with numerous curb cuts, eliminating crossing traffic and directing crossing movements to adequately spaced "U-turn" opportunities.

Pedestrian movements must be evaluated to provide cross walks and signal timing that promotes both pedestrian movements and pedestrian safety. Raised medians may also be utilized to provide pedestrian refuge areas.

Arterial Improvements – The table below addresses opportunities for arterial improvement. These potential arterial improvements have been identified in the previous Plan. Additional potential improvement projects have been identified by the municipalities in the Region and are noted in Appendix A. The opportunities noted below could be considered as "system improvements" within the fiscal constraint of the Plan. (See Chapter 17 – Financial Plan)

Candidate Arterials

Route	Town	Limits	Distance (feet)	Existing	Option 3 Lanes	4 or 5 Lanes	2005 ADT
Rte 10	Hamden	Washington Ave to Route 40	3500	4		X	16,500
Rte 10	Hamden	Rt 40 to Todd St	9000	4		X	21,900
Rte 10	Hamden	Todd St so to Shepard Ave	3600	2		X	19,700
Rte 10	Hamden	River St to Cheshire TL	6600	2		X	17,500
Rte 122	West Haven	US 1 to Elm St	7200	2	X		18,700
Rte 150	Wallingford	Rt 71 overpass	500	1	X		14,000
Rte 150	Wallingford	South of Old Colony Rd to Rt 68	2750	2	X		14,000
Rte 162	West Haven	Elm St to Greta St	2750	2	X		15,800
Rte 162	Orange	West Haven TL to US 1	1450	variable		X	14,300
Rte 162	Milford	West of Old Gate Ln to Gulf St	4200	2	X		15,700
Rte 162	Milford	Clark St to US 1	3100	2	X		14,000
Rte 17	No. Branford	N & S Rte 22 intersection	2350	2	X		17,600
Rte 63	New Haven/Woodbridge	Dayton St (NH) to Landin St (Wdbg)	6200	variable		X	15,600
Rte 68	Wallingford	Hanover St to No. Main St	5850	2		X	16,000
Rte 69	New Haven/Woodbridge	Rte 63 to Landin St	3000	2		X	18,700
Rte 80	No. Branford	East Haven TL to Doral Farms Rd	6750	2 to 3	X		17,100
Rte 80	No. Branford	Rt 22 to Guilford TL	8500	2	X		
US 1	Branford	East Haven TL to Echlin Rd	8000	4		X	
US 1	Branford	Rt 146 to Cedar St	3800	2		X	17,200
US 1	Branford	Cedar St to East Main	4400	2	X		14,000
US 1	Branford	E. Main to I-95 x55	5100	2	X		19,500
US 1	Branford	I-95 x55 to Leetes Island Rd	5500	2	X		20,500
US 1	West Haven	Campbell Ave to Orange TL	8500	4		X	17,900
US 1	Guilford	State St to Tanner Marsh Rd	6800	2	X		15,700
US 5	Wallingford	S. Orchard St to Ward St	2750	2	X		12,500
US 5	Wallingford	Christian St to Meriden City Line	9800	variable		X	18,900
US 5	Meriden	Wallingford TL to Olive St	9400	variable		X	15,400
US 5	Hamden/No. Haven	Olds St(Hmdn) to Sackett Point Rd	3700	variable		X	15,100

Corridor Studies – Corridor studies undertaken by the Region allow for study of the options available to address near and long range solutions for congested portions of the regional arterial roadway network. Recent studies have been undertaken by the Region through its annual Unified Planning Work Program (UPWP) which utilizes federal and state planning funds available to the Region. Corridor studies undertaken for Route 68 in Wallingford, Route 10 in New Haven and

Hamden, Route 34 in New Haven, and Route 162 in West Haven and Orange have provided options for addressing congestion on these routes.

Route 22 Corridor Study proposed options for the Route 17, Route 22 intersection in North Branford (Northford Center)

The corridor study will provide the basis for future action on corridor improvements. Discussions involving representatives of the municipality, CTDOT and the Region will be the next step in prioritizing and implementing the recommendations contained in the corridor study. The implementation could be considered a "system improvement" within the fiscal constraint of the Plan. The corridor study is a necessary first step in framing the transportation solution for these arterial corridors.

Municipal Roads and Bridges

Local roads comprise the vast majority of the mileage of the highway system in the Region. Traffic volumes can approach those noted on state maintained arterials, with the maintenance needs increasing as traffic volumes rise. Municipal budgets are the main source of funding for roadway maintenance and improvement projects. The many competing demands for the utilization of municipal tax dollars often leads to substantially less money appropriated for local highways and bridges than is needed to provide sufficient funding for proper maintenance, structure preservation, and required improvements.

Several state programs are available which provide limited funding to municipalities for maintenance and improvements of highways and bridges. These are outlined below:

Local Bridge Program – This program provides funding to municipalities based upon a formula which includes the relative wealth of the municipality and the overall condition rating of the bridge structure. Funding ranged from a minimum of 10% to a maximum of 30% of eligible costs. The funding for this program should be a priority of the Legislature and Governor. The program provides assistance to municipalities and the Region by providing another funding source for municipalities to address local bridge needs.

Town Aid for Roads (TAR) – The TAR program has been in existence for many years, providing funding for highway activities, including maintenance, materials, equipment and salaries. Unfortunately, the amount of funding allocated has varied substantially and this fluctuation has caused municipalities to reduce the maintenance and preservation activities which were previously supported. The program will better allow for local road activities by raising and stabilizing the funding level and providing annual adjustments for increased costs of materials and services. This program is well utilized and must be continued.

Local Capital Improvements Program (LOCIP) – LOCIP provides funding based upon a statutory formula for projects identified on a Capital Improvements Program Plan approved by each municipality. The local priorities are determined in the Plan over at least a five-year period. While the program allows for the utilization of LOCIP funds for any capital improvement, many municipalities utilize LOCIP for highway improvements, including repaving. Projects undertaken from the approved Plan are eligible for reimbursement funding under the annual LOCIP allocation. As in the TAR program, the amount of funding has varied substantially, depending upon legislative action. Uncertainty over funding through the minimum period of five years covered by the Capital Plan leads municipalities to be cautious, often delaying needed activities. The program will better serve the municipalities and the Region with an increased and stable funding level with annual adjustments for increased costs of materials and services.

Local Capital Transportation Improvement Program (LOTCIP) –The LOTCIP program has been in operation for several years. Program Guidelines allow municipalities access to state funds for local road projects through SCRCOG. The program provides funding for local needs with reduced timelines and involvement of the Department. LOTCIP has been successfully utilized by many of our member municipalities. SCRCOG looks forward to legislative action to continue the program with steady funding.

STP Urban - Funding is provided for highway improvements in urbanized areas as identified by the most recent census. These federal funds are part of an overall funding formula which provides for project costs to be funded by 80% federal funds, 10% state funds and 10% local funds. The Region is most of the New Haven-Meriden Urban area and is allocated approximately 10 million federal dollars (includes Cheshire and a portion of the River COG Region) annually for these projects.

These funds have in the past provided needed improvements for eligible roads in the Region. The Region will establish regional priorities and work with CTDOT to advance a collaborative program for the use of the funds. This approach is essential for the advancement of appropriate projects to benefit the Region and wisely utilize the limited federal funding.

Municipal Funding - The major source of funding for local highway projects remains the annual local budget. This is often supplemented by special bonded appropriations for specific improvements, especially large reconstructions or bridge projects. Statewide surveys have been conducted in the past identifying the unmet needs for infrastructure maintenance and preservation, with very little new funding made available upon completion of the survey. Each municipality prioritizes and funds their maintenance and improvement plans as each budget allows. This results in differing levels of maintenance and improvement, depending upon the relative financial ability and competing needs in each municipality.

Aging infrastructure and increasing traffic volumes throughout the Region compound the funding problem. The challenges must be met at all levels of government to insure a first class transportation system with adequate funding for system maintenance, preservation and improvement as needed.

Municipal needs for local roads have been identified and are prioritized locally. All are beyond the fiscal constraint of the Plan. Representative responses from SCRCOG outreach to municipalities citing improvements on local roads deemed by the municipality to be important for the Plan are noted below.

Town of East Haven
- New arterial crossing over Amtrak to provide additional north-south connection

City of New Haven
- Several Bridge Replacements
- Pavement Rehabilitation program
- Quinnipiac Avenue improvement project

Town of North Haven
- Valley Service Road re-construction and extension

The Plan is a policy-level regional plan and, as such, will not list or identify each contemplated local project. The examples are shown to emphasize the diversity and range of local projects which are necessary and to emphasize the need to improve local and regional transportation resources. Local roads are critical to a well-functioning regional transportation system. The funding needs remain significantly under-funded and solutions must be found to the funding of local road needs over the timeline of the Plan to address not only the currently-identified needs but also those which will be identified during the remainder of the time covered by the Plan. Many portions of the Region are not served by other transportation modes and the maintenance, preservation and improvement of the primary transportation system of local roads in these areas is vital to the residents and regional economic vitality.

Transportation Alternatives Program

The FAST Act replaced TAP with a set-aside of funds under the Surface Transportation Block Grant Program (STBG). This TA Set-Aside provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities such as historic preservation and vegetation management, and environmental mitigation related to storm water and habitat connectivity; recreational trail projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former divided highways.

With guidance from CTDOT and FHWA, the region, again, worked with local communities to solicited applications for TAP funded projects. With the help of the Transportation Committee, the SCRCOG reviewed these applications and created a prioritized list for submission to the CTDOT. This list included not only new proposals but also requests for additional funding for ongoing projects where needed. Through this process CTDOT approved 2 additional projects to be funded one in Hamden and one in Guilford.

A second program, funded by the State of Connecticut, is **the Community Connectivity Grant Program**. Administered by CTDOT, this grant program provides construction funding directly to municipalities for infrastructure improvements that are aligned with the overall program goals, to make conditions safer for people of all ages to walk, bike, and take transit. In September 2018, two projects in the south central region were approved.

New Haven: Ella T. Grasso Boulevard (Route 10) Pedestrian Connectivity Project (new sidewalk to connect existing sidewalk) and,

Wallingford: Quinnipiac River Linear Trail Phase 38 (Pedestrian Bridge Connection to 380 Main Street)

The SCRCOG will continue to support these programs and assist municipalities in completing these projects.

Bicycle and Pedestrian Regional System

The Region has many opportunities for bicycle infrastructure and pedestrian use. Significant investment has been made in several areas to construct formal facilities. Many other opportunities have been created through efforts of the municipalities and volunteer organizations, often with minimal investment. These efforts have resulted in diverse and scattered opportunities for bicycle and pedestrian activities. Some efforts have spanned several municipalities while others only utilize a portion of one municipality. The challenge for the Region is to utilize the efforts of many individuals and organizations to provide the basis for a regional system. Once the regional system is planned, then specific efforts can be undertaken to connect and enhance the existing network for better connections, utilization and coverage of all portions of the Region.

Regional Bicycle and Pedestrian Plan – As part of the UPWP for FY 2017, SCRCOG engaged a consultant to update this plan. The consultant built upon the 2007 Plan and the 2006 trail mapping project and provided a conceptual framework for increasing the attractiveness and effectiveness of bicycle and pedestrian transportation on a region-wide basis.

Consistent with the FAST Act, a key area for goal-setting and evaluation was safety, with an emphasis on non-vehicular transportation access to schools, enhanced signage and roadway design for pedestrian and bicycle safety, and the role of education and outreach efforts in promoting safer travel behavior for both younger pedestrians as well as adult drivers and cyclists. A framework for a Regional Bicycle and Pedestrian network was provided. The Regional Bicycle and Pedestrian Plan provides guidance for the enhancement of the regional facilities through actions undertaken by the municipalities and various organizations.

Multi-use trails can provide transportation and recreational opportunities for pedestrians and cyclists

Pedestrian Walkways – Demand for pedestrian facilities continues to grow throughout the Region. Evolving lifestyles present an expectation of safe, connected and convenient pedestrian facilities. Connection of residential neighborhoods to existing sidewalk systems is desirable and

requested by residents. Most municipalities require the provision of sidewalks as an amenity with new developments. This requirement often involves interconnections, not just sidewalks within the complex. While the Regional Bicycle and Pedestrian Plan may have specific local connections, the sense of community and quality of life goals of each municipality should shape the local and neighborhood pedestrian network. The Plan encourages each municipality to undertake a local planning process to provide a framework for constructing pedestrian facilities, promoting safety and better communities.

Trails – Numerous organizations have created a vast regional trail system. The trails vary in accessibility, difficulty, size, length and location, providing opportunities for all users throughout the Region. Some trails are part of a system which extends beyond the Region while others start and end within the Region. Local development often impacts the location and connectivity of this trail system. The Plan encourages each municipality to review the impact of development on the trail system and work to maintain connectivity and opportunities for enhancement through the local planning process.
The Region completed a trail mapping project, providing maps to municipalities for distribution to the public showing individual trails. Annual updates are provided, as necessary, to keep the resource current and provide continued mapping availability to encourage and promote trail usage.

Bikeways – There are numerous routes utilized for bicycle travel in the Region. Several of them are formally marked and striped, while most are not. Conflicts between motor vehicles and bicycles on these routes raise significant safety concerns. These safety issues in the past have led to decisions not to formally mark a number of these routes. Exclusive bike routes on highways are often not compatible with on-street parking. The elimination of on-street parking to provide bike routes leads to conflicts with adjoining property owners, who often view on-street parking as essential. In other parts of the country, this conflict has been resolved by the construction of exclusive bikeways off the highway. The adjacent land uses in this Region have made this type of bicycle facility difficult to accomplish.

The Regional Bicycle and Pedestrian Plan provides guidance on the addressing of this issue. The Plan encourages each municipality to review the impact of development on desired bicycle facilities and work to provide connectivity and opportunities for enhancement through the local planning process.

Shoreline Greenways – A major pedestrian and bicycle initiative is the proposed Shoreline Greenways Trail which is envisioned from Lighthouse Point in New Haven to Hammonasset State Park in Madison. Volunteer organizations have been established in each town and an overall organization exists to coordinate the planning for this trail. Funding has been authorized through congressional action for three earmarks to accomplish different portions of the Shoreline Greenway. As requested by the four municipalities, SCRCOG administered a preliminary study for the overall project. The lack of a readily available route has impeded the progress advancing the construction. Some portions have been constructed. The complete construction funding is beyond the fiscal constraint of the Plan and can only occur as the issues and routing are addressed..

Bicycle Transportation Facilities – As part of the intermodal goals of FAST Act, utilization of various modes of transportation by travelers is encouraged. To that end, provisions are encouraged for travelers utilizing bicycles for a portion of their travel and then utilizing another mode. Accommodations are necessary to allow intermodal utilization. These accommodations could include:

Bicycle Racks - Locations to store bicycles for utilization upon the traveler's return are one method of accommodating and encouraging bicycle use. Unfortunately, the value of the bicycle and the relatively poor security often afforded by bicycle racks can lead to underutilization and potential undervaluing of the investment. The conditions vary by location. These factors should be studied and discussions undertaken with bicycle riders prior to the installation of these facilities.

Transit Capabilities – If bicycle racks are not appropriate or utilized, then provisions must be made for the transporting of bicycles on transit modes. The capability to transport bicycles should exist on both rail and bus and progress has been made. The operators and CTDOT are encouraged to continue to include these provisions in both planning and service modifications.

Bike Lockers – Bike lockers have proved successful in other areas of the country. Monthly rental insures availability for regular bicycle users. Provision of bike lockers should be considered in appropriate intermodal locations.

Port of New Haven

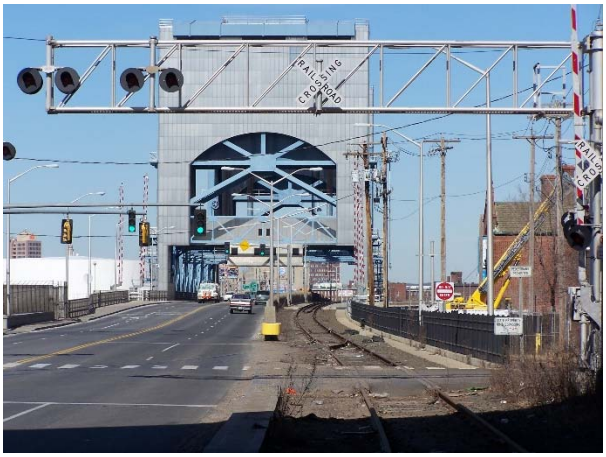
The Region has a substantial asset in the Port of New Haven which contributes to the needs and demands of the regional transportation system. As a significant deep water port, it is an important component in the movement of goods and materials to and from the Region. The New Haven Port Authority has overall responsibility for the operation of the Port. The individual operators work with the Port Authority to demonstrate their needs and work toward coordinated efforts for the benefit of port operations. The recently formed Connecticut Port Authority will also work to advance the enhanced operation of the Port.

Highway Access – The operations of the Port have been intertwined with the surrounding neighborhoods since the settling of New Haven. The construction of the Connecticut Turnpike in the 1950's provided mixed benefits to the port. Access was improved to and from the south (west), but access to and from the north (east) remained on US Route 1. As highway traffic to the port facilities increased and business went through cycles over the ensuing decades, the access became less than ideal.

The reconstruction of the Pearl Harbor Memorial Bridge (Q-Bridge) provided improved access to the Port area. Access and ramps allow re-oriented and dedicated access to the Port area. These improvements, in conjunction with other planned improvements, will improve the overall viability of the Port.

Rail Access – Rail connections were once a key component of the movement of goods to and from the Port. Unfortunately, the long timeline for the planning and reconstruction of the Tomlinson Bridge, which provides the rail link to mainline rail service through New Haven, disrupted those shipping patterns.

The Tomlinson Bridge construction project restored rail connections to the mainline service in New Haven. Older connections within Waterfront Street, primarily abandoned and paved over during the time when rail connections were not available, were insufficient to accommodate newer locomotives and rail cars. New spurs, as they are modernized and re-introduced, will provide better access to the waterfront. The Plan endorses increased rail utilization for freight movement as a means of addressing regional highway congestion.



Rail Service across New Haven Harbor has been restored on the Tomlinson Bridge

Port of New Haven (Courtesy CTDOT)

Truck Parking and Waiting Areas – Due to the compact nature of the port area, truck waiting and parking areas are at a premium. The operators and the Port Authority are encouraged to work together to address these issues to insure the optimal and efficient utilization of the resources of the Port for the benefit of the transportation systems and economic vitality of the Region and Connecticut.

Feeder Barge Service – There have been numerous discussions over the possibility of a feeder barge service utilizing the Port of New Haven. The Port of New Haven is uniquely situated to have a feeder barge service that would accomplish several regional benefits:

Removal of truck traffic from I-95 west of New Haven – Significant truck traffic exists in the corridor west of New Haven. Feeder barge service would remove portions of this truck traffic, thereby reducing congestion and improving interstate highway efficiency from New Haven to New York.

Rail connections – As noted above, rail connections to the Port provide shippers with rail options for freight movements. The rail operator, Providence and Worcester, a division of Genesee and Wyoming, has indicated a desire to increase rail movements to the Port. Connections primarily exist in north and east directions for increased rail freight movement due to out of state limitation in the rail network.

Utilization of I-91 North or I-95 east – The junction of two interstates at New Haven gives shippers highway options for the movement of goods.

Increased economic activity – Increased utilization of the Port is good for the economic vitality of the Region. Additional support businesses are anticipated if the Feeder Barge Service is established. Container content breakdown and distribution could be an additional activity for the Region if the service comes to fruition.

Channel improvements/Dredging – The viability of the Port depends upon the maintenance of the federally defined and maintained channel. The Army Corps of Engineers is responsible for maintenance and is dependent upon Congressional appropriations for the funding of dredging projects. Funding levels have not been sufficient to meet all needs in a timely fashion in recent years.

SCRCOG endorses the proper maintenance of the New Haven Harbor and channel to maintain the viability of the Port as an important contribution to the regional transportation system, as well as the continued economic vitality of the Region.

Tweed New Haven Airport

Tweed New Haven Airport has served as a regional airport for many years. Commercial carriers and general aviation users provide transportation services for both people and goods. Connections are available for travelers to other portions of the country. Commercial carriers have changed as the industry and passenger demand has evolved. The Tweed New Haven Regional Airport Authority has adopted a Master Plan for the Airport. Implementation of the Master Plan has been limited to the improvement of Runway Safety Areas and Taxiways. Implementation of any further phases of the Master Plan will require additional action by the Authority and the Legislature of the State of Connecticut. The existing passenger service provides air travel options for the Region and is an important component of the regional transportation system.

The State of Connecticut has prepared a Connecticut Aviation Plan and the region looks to continue the important role of the Tween New Haven Airport in the region in the meeting both the transportation needs and maintaining and maintaining and improving economic vitality.

Freight Movement System

Freight movement in the Region is a vital part of the transportation system and a key component of regional economic health. For most of the twentieth century, rail was the predominant mode of freight transportation. As the interstate system was completed, freight movement transitioned to delivery predominantly by truck. Congestion on the interstates and stabilization of the rail industry is starting to once again make rail a viable option for the movement of freight and goods.

CTDOT has prepared a statewide freight plan and the Region participated in that process to provide regional input to bolster the success of the plan. As the statewide plan is advanced, the Region will work with the Department to provide data and other information relevant to assist in the addressing of regional and statewide freight issues. These issues could include movements of freight within urban environments, freight bottlenecks, height/weight restrictions, truck parking issues, intermodal connections and other issues critical to freight movement that enhances the economic vitality of the Region and state.

As noted previously, the Region has many modes of freight transportation available. Rail, water, truck, and air all contribute to the vital movement of freight.

Air – As Tweed New Haven is a smaller regional airport, freight movements by air account for a small part of the movement of goods in the Region. Nonetheless, options for shippers are important for economic vitality and it is important to maintain existing service. A recent SCRCOG study provided a focus on the opportunities for increasing the value of the airport in freight movement for theregion.

Water – The Port of New Haven provides opportunities for substantial movement of goods. Petroleum products are important to the regional economy. Other freight movements provide world-wide water connections to the global marketplace. Feeder Barge Service would increase the movement of freight by water with minimal infrastructure investment.

Rail – As passenger rail traffic increases, the capacity for freight movements on the existing rail network decreases. The positive news is that the existing rail freight network has underutilized capacity which could be utilized with minimal investment, even with some additional passenger service. Many former rail connections have been lost due to the previous instability of the rail industry. Freight movement predominantly by truck has resulted in less operating revenue for infrastructure maintenance, exacerbating prior poor connections to the national rail network. Opportunities exist for increased rail freight movements which require operator and rail bed owner cooperation and marketing. Increased use of existing rail sidings and the construction of new sidings will reduce truck utilization and potentially increase regional economic activity. Feeder Barge Service could also provide additional rail freight. The Plan encourages increased rail freight utilization as a means of reducing congestion on regional highways and improving air quality in the region..

Truck – As the predominant method of moving freight, trucks contribute to the regional economy, but also to regional highway congestion. Truck routing can also have adverse impacts on neighborhoods and Environmental Justice (EJ) portions of the Region. State and local legislative changes may be required to address congestion, routing, delivery timing, and truck parking and idling concerns. A balance must be sought which allows for the movement of goods but does not cause congestion which negatively impacts the economic vitality of the Region.

The marketplace governs the selection of the mode of transportation utilized for goods. Infrastructure improvements can help influence these choices and improve the efficiency of the freight transportation systems. Marketing and operator actions can influence the means of goods transportation. The Plan encourages freight movement by underutilized modes wherever possible to optimize the economic health of the Region by the utilization of all modes of freight transportation.

Freight movement is a critical component of the regional transportation system. Increased rail utilization will remove trucks from the Region's highways and help reduce highway congestion.

Security and Safety

Increased threats to the security and safety of the United States have led to increased emphasis on the potential threats to regional transportation systems. Planning is underway at all levels of government and in the private sector to address these concerns. The FAST act requires increased focus on both security and safety.
Transportation Security refers to both personal and homeland security, with the latter reflecting attention to vulnerability to intentional attack or natural disasters, and the associated evacuation procedures.
Safety refers to reducing the number of crashes and accidental deaths or injuries associated with the operation of surface modes.

Security – Security issues can be best addressed after a comprehensive review of the vulnerability of regional transportation systems. Each transportation mode has two vulnerable security components – the operating conveyance and the infrastructure on which it operates. Responsibility may rest with two different entities for each component who must exchange information to adequately address the threats. Issues associated with each mode for consideration are as follows:

> *Air* – Security on airplanes is under the jurisdiction of the federal government and the operators. Security for the Airport is shared by the operators, Tweed New Haven Regional Airport Authority and the federal government.
>
> *Rail* – Passenger rail security is handled by AMTRAK and Metro North. AMTRAK, Metro North, CTDOT, and other rail bed owners handle infrastructure security. The operators that serve the Region handle freight security.
>
> *Water* – Security for the Port is handled by the New Haven Port Authority, the port operators and the vessel operators, as well as by the United States Coast Guard.
>
> *Highway* – Depending upon the control of the highway, security is handled by the Connecticut State Police, CTDOT, local police, or municipal government.

For many years, each municipality in the Region has prepared its own emergency plan, normally administered by the Emergency Management Director and other municipal staff. Terrorist attacks on targets at home and abroad have focused attention at all levels of government on expanded security planning for homeland security and the threats from both intentional attack and natural disaster. The Connecticut Division of Emergency Management and Homeland Security (DEMHS) is responsible for the coordination of local efforts and those of state agencies to respond to these threats. Several initiatives are underway to address coordination and full and efficient utilization of available resources. One initiative is the preparation of the Statewide Evacuation and Shelter Plan.

> *Evacuation and Shelter Plan* – DEMHS has divided the State into regions for homeland security and emergency management. SCRCOG municipalities have been placed in DEMHS Region 2. Each DEMHS region is staffed by a minimum of a Regional

Coordinator and an Emergency Preparedness Program Specialist. These positions are augmented by others when needed to address threats. DEMHS Region 2 has prepared a draft Evacuation and Shelter Plan which guides the evacuation and sheltering of the residents of the DEMHS 2 Region when such measures are necessary.

When fully implemented, the Evacuation and Shelter Plan will outline the coordinated evacuation procedures, traffic control, utilization of transit resources and other facets necessary to assist and protect the residents of DEMHS Region 2 if evacuation and sheltering are deemed necessary by the Governor of the State of Connecticut.

Safety – Reduction in crashes and related injury is the goal of operators of all transportation systems, whether car, bus, truck, ship, or rail. Each operator is responsible for safe operation and prevention of injury. Each mode operates under specific statutory requirements which impose varying requirements.

Safety issues can most be impacted and addressed in highway projects in the Region.

Highway Safety – The FAST Act requires the Region to conform to the Connecticut Strategic Highway Safety Plan (SHSP). The SHSP, prepared by CTDOT and updated with annual safety plans, lists a number of goals and strategies, all related to improving highway safety and reducing personal injuries and fatalities. The SHSP addresses the following data driven emphasis areas:

- Traffic Reports and Information
- Roadway Departure
- Pedestrians and Bicycles
- Work Zones
- Driver Behavior (Alcohol, Occupant Protection, Speeding)
- Motorcycle Safety
- Commercial Vehicles
- Incident Management

In general, each category outlines the pertinent issues, specific strategies, and goals to enhance CTDOT's safety program by ensuring roadway systems are as safe as possible through the 4Es – Education, Engineering, Enforcement, and Emergency Medical Services.

Implementation of the goals and strategies of the SHSP will improve safety of all residents of the Region. The Plan encourages CTDOT to work cooperatively with the municipalities and the Region to meet these goals.

Local Accident Reduction Program – CTDOT provides limited funding for highway improvements which will reduce accidents through this program. This program has provided funding for the correction of numerous safety concerns statewide. Proposals are solicited as funds are available for ranking by CTDOT based upon several criteria, including the frequency of accidents at the location. The continuation of this program is important to the Region.

Special Policies and Programs

The FAST Act requires several special policies which have been considered in the preparation of the Plan. These special policies address coordination and integration with other initiatives and legislative priorities.

Metropolitan Planning Organization (MPO) Coordination –SCRCOG is one of seven MPOs in the State. It is clear that inter-regional cooperation is critical in a State the size of Connecticut. Many projects and issues extend beyond the boundaries of the Region and must be addressed together with other regions. The Plan reaffirms the importance of communication and inter-regional cooperation in improving accessibility, mobility and travel options for the Region and the State.

Air Quality Conformity – The Region is part of the New York-New Jersey-Long Island NY-NJ-CT Ozone and PM2.5 (Fine Particular Matter) Nonattainment Area. Transportation Conformity is the process established by the USDOT and United States Environmental Protection Agency (USEPA) to ensure that transportation improvements will contribute to improved air quality in areas where concentrations of certain pollutants exceed national air quality standards. CTDOT undertakes the analysis for air quality conformity for Connecticut. The transportation investments outlined within the fiscal constraint of this Plan have been reviewed by CTDOT. The following documents, prepared by CTDOT, outline the air quality conformity for the Region:

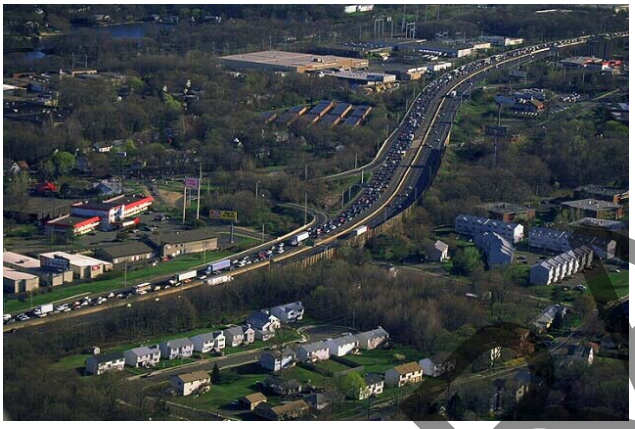
- Connecticut Department of Transportation - *PM 2.5 Air Quality Conformity Determination of the 2019 Regional Transportation Plans and the FY 2015-2018 Transportation Improvement Programs for the Connecticut portion of the NY-NJ-CT PM 2.5 Nonattainment Area, March, 2015.*
- Connecticut Department of Transportation - *Ozone Air Quality Conformity Determination of the 2015 Regional Transportation Plans and the FY 2015-2018 Transportation Improvement Programs for the Connecticut portion of the NY-NJ-CT Ozone Nonattainment Area and the Greater Connecticut Ozone Nonattainment Area, March 2015.*

Additional programs established by the Department of Energy and Environmental Protection (DEEP) will help improve air quality in the Region. The Anti-idling initiative, which seeks to reduce idling through the enforcement of DEEP's 3 minute anti-idling limit regulation, will reduce ozone and particulate matter. DEEP's diesel retrofit program seeks to reduce diesel emissions through the retrofitting of emission controls on diesel truck and bus fleets. The utilization of these and other programs to improve air quality will be important to the health of the residents of the Region.

Congestion Management Process – Highway congestion impacts many locations within the Region. The numerous negative impacts of congestion noted within the various components of the Plan and FAST Act require a process for the management of congestion.

The Congestion Management Process for the regional transportation system must include consideration of congestion issues in each transportation decision made for the Region. Municipal and SCRCOG staff have reviewed the impacts on congestion as part of the normal review process. The Plan endorses this review and suggests that it is a critical for consideration of funding priorities, project timing, project scope, and legislative requests for transportation funding of any mode.

Recent SCRCOG congestion-related activities concentrate on providing data for monitoring congestion. Regional congestion chokepoints were identified and associated morning and afternoon peak hour related average speeds were documented. Congestion choke points were classified by interstate, arterial and core congestion impacts. Volume and operational impacts are key components of the observed congestion. Goals were established for minimum speeds in the congested sections based upon the roadway classification. As performance measures are adopted, goals for reduced congestion will be determined.



Congestion adversely impacts the Region's economic vitality

The worst performing portions of the corridors are those associated with the I-95. The Pearl Harbor Memorial Bridge projects and West River Bridge replacement addressed many segments of that congested corridor. In addition to those areas of the Interstate system noted in previous section of the Plan, the portion of I-91 from North Haven to the intersection with I-95 in New Haven can experience significant congestion during morning and afternoon peak travel times. Similarly, the I-95 corridor in the vicinity of Exit 54 to 56 in Branford now experiences significant congestion during the peak travel times on a regular basis. Short to medium term improvements may be necessary to address these issues. Other corridors have been or are programmed for corridor studies under the annual Unified Planning Work Program (UPWP) undertaken by SCRCOG. The corridor studies will identify opportunities for congestion mitigation within the corridor.

Corridor studies represent the first step of framing potential solutions to congestion. The study process involves public outreach, a key step to a successful and viable study recommendation. Public participation allows input into the planning process which often leads to a recommendation which is more closely aligned with the goals of safety, context-sensitive design, livable communities, and regional economic vitality.

The I-95 corridor in the New Haven area was not reviewed during the ongoing construction projects. Now that the projects are completed, operations review of those components will resume.

Updates of the Congestion Management System Report will be undertaken periodically to provide a current framework for the prioritization of congestion solutions.

Demand Management Policy – Regional congestion can be addressed either with supply-side tactics or demand-side tactics. It is important to note that neither of these tactics necessarily envisions reducing the number of trips undertaken in the Region. On a policy level, supply-side tactics include increasing roadway capacity, increasing transit capacity, and better managing highway incidents and accidents. Demand-side tactics are designed to reduce or manage the number of persons or vehicles traveling during peak periods, or change the mode or length of the trip. These include flexible employer work schedules, telecommuting, pricing and market-oriented strategies, land use policies and local growth management policies.

SCRCOG recognizes that congestion is best addressed through both supply-side and demand-side tactics. Supply-side efforts include additional highway capacity projects programmed through the SCRCOG TIP approval process, the Regional Transit Study, regional planning recommendations, and SCRCOG-led Unified Response Manual (URM) preparation to improve incident and accident response. Demand-side efforts include CTRIDES' efforts to reduce dependence upon the single occupant vehicle, the pursuit of housing strategies which reduce trip generation, and the update of the Regional Plan of Conservation and Development (POCD), with an emphasis on land use policies which encourage livable communities, control of sprawl, and the preservation of open space.

Intelligent Transportation System (ITS) Policy and Opportunities – The Region's *Intelligent Transportation System Strategic Deployment Plan, New Haven Meriden Metropolitan Area (1999)* frames ITS policy. While primarily identified with highways, ITS is a useful tool for the major modes of transit, highway and pedestrian travel. Transit ITS opportunities include:

- *Improved information on available parking* – Monitoring of parking in high demand areas can make available information on currently unoccupied parking.
- *Improved on-time performance* – Additional data collected on operations and adherence to schedule can be utilized to implement adjustments to route, timing or schedules to improve on-time performance, making transit options more reliable for riders.
- *Improved coordination of transit services* – The ability to readily obtain information on various transit options in the Region is limited. Coordinated information would provide options to the traveler in the event of delays and missed connections to other providers.
- *Improved planning of transit services* – Coordination of schedules among the various providers is hampered by the number of operating agencies. Additional coordination would enhance the interconnection of the various transit options.
- *Improved information availability* – Better interchange of information from the operators will enhance the traveler's experience with a goal of increasing ridership and service utilization.
- *Real-time information* – Information available to the traveler could be enhanced with real-time information on each route or service.
- *Cost effective transit* – Through the use of ITS strategies, a review of the various services could be undertaken to optimize service, while minimizing the costs of providing the service.

Consultation with other agencies – The FAST Act requires better coordination and communication with other agencies, specifically regarding environmental protection, tribal government, wildlife management, land management, and historic preservation. The Act looks to establish a minimum level of contact with these other agencies. In Connecticut, we are fortunate that the existing permitting process has many of these coordination processes in place. Opportunities for improved coordination and communication always exist and the Plan recognizes the need for a high level of coordination and communication. In cooperation with FHWA, CTDOT, FTA, and other necessary agencies, SCRCOG will seek input from other agencies to provide the Region with better transportation projects.

Environmental mitigation – The FAST Act requires review for the restoration and maintenance of environmental functions that could be impacted by the activities in the Plan. The Connecticut Department of Energy and Environmental Protection (DEEP) permitting requirements are met as part of the design, review, approval, and construction process. Transportation projects and services must address environmental impacts and mitigation has been utilized in numerous instances to address unavoidable project impacts while reducing or eliminating overall long-term adverse environmental impacts.
Opportunities for environmental mitigation could include:

- Inland or tidal wetland restoration
- Wetland creation
- Stormwater control facilities
- Stormwater quality facilities
- Alternate pavement treatments
- Streambed or channel restoration
- Pollution remediation
- Clean fuel for construction equipment improving air quality

Each project is evaluated to address the environmental impacts and assess the opportunities for environmental mitigation, in light of the specifics of the project and proximity to environmental resources. Specific mitigation activities are then proposed or evaluated and, as pertinent, incorporated into the design. SCRCOG encourages the continuation of this important environmental review.

Tourist and Visitor Welcome Centers and Information Access – Tourism is an important component of the economic vitality of the Region. Transportation alternatives and information are vital to the promotion of the Region as a destination, and the reduction of transportation trips through the Region to other destinations. Strategically placed facilities, in locations such as Union Station, New Haven, Tweed –New Haven Airport, and at the I-95-I-91 interchange, can provide regional attraction and travel information which will benefit travelers and regional economic vitality.

Financial Plan

The Plan is required by federal guidelines to be fiscally constrained. As a metropolitan transportation plan, the fiscal constraint must be based upon the estimates of the available revenue for transportation needs over the timeframe of the Plan.

CTDOT estimates level anticipated highway funding for the timeframe of the plan, adjusted for inflation. These estimates are allocated to the major categories of system preservation and system improvements. The allocation of funding for preservation versus improvement is determined by weighting factors which include vehicle miles of travel, congested vehicle miles of travel and lane miles. These figures are are provided in the following tables.

	SYSTEM IMPROVEMENTS	SYSTEM PRESERVATION
DISTRIBUTION	WEIGHTS	
Vehicle miles of travel	0.25	0.25
Volume of capacity	0.75	0
Lane mile	0	0.75

Table 1Weighting Factors

SYSTEM IMPROVEMENTS	$1,958,758,671
SYSTEM PRESERVATION	$2,197,972,654
MAJOR PROJECTS OF STATEWIDE SIGNIFICANCE	$502,196,808
TOTALS	$4,658,928,134

Table 2Allocation of Anticipated FHWA Funds

In addition, CTDOT has prepared a five-year capital plan.

The lists of projects in this plan is not a complete list of projects and priorities of concern to the Region. The Region continually reviews the regional priorities for transportation improvements. It is clear that there is not sufficient funding for all identified needs. Regional priorities may not always align with CTDOT priorities and the Region will work to advance its priorities from the projects noted in the Plan.

Non-highway revenue for other modes of transportation is required for operating costs, system improvements and system preservation. Funding is available for rail and bus operations and capital is programmed by CTDOT and, per CTDOT guidance, is sufficient to maintain existing service and for system preservation during the timeline of the Plan. Maintaining existing service and system preservation are the fiscally constrained portions of the Plan.

New sources of funding must be provided for service improvements and related operating costs and are beyond the fiscal constraint of the Plan.

Near Term (2018-2021) Fiscally Constrained Projects

Near term (2018-2021) projects are currently programmed for both highways and transit. These projects are included within the fiscal constraint of the Plan and are noted in Appendix B.

A favorable bidding climate has helped advance several projects. It is expected that costs will increase modestly. CTDOT current policy on estimating addresses these increases to the estimated time of construction. While always an inexact method of estimating, this has led to increased confidence that adequate funding is programmed for the projects. Fiscal constraint always requires the adjustment of anticipated project schedules into future funding allocations. The Region responds to the funding adjustments with the appropriate amendments to the TIP and looks forward to reprogramming any available funds to help implement the long list of in-progress, but not yet fully-funded, projects

Mid to Long Term Projects

Mid to long term projects (2021-2045) are outlined in Table 3 on the following page.

The chart provides Project numbers as available or noted as to be determined (TBD) if not. Project route numbers and a brief description are also included. Projects will be funded as they are prioritized in the future and may utilize highway system improvement funds noted above or additional revenue provided in the future. As such, these needed improvements can be utilized to program the system improvement funds. Subsequent plans and revisions will frame evolving needs and priorities, while meeting the requirements of fiscal constraint.

MPO	Project #	Town	Route/Street Number	Project Description	Funding Source	Air Quality Code	Network Year
SCRCOG	TBD	Branford	146	Roundabout at Min,Eades and Laurel	LOTCIP	X7	
SCRCOG	TBD	Branford	1,146, SR 794	Relocation of Branford Connector and 146	TBD	X7	
SCRCOG	0059-0157	CT 146	GUILFORD	Replace Br 02677 o/ Stream	FED	X6	
SCRCOG	0079-0240	I-91 / I-691 / RT 15	MERIDEN	I-91 / I-691 / Rt. 15 Operational Improvements	FED	PD	2025
SCRCOG	0092-0657	Grand Ave.	NEW HAVEN	Rehab Br 03810 o/ Quinnipiac River	FED	X6	
SCRCOG	0100-0179	CT 40	NORTH HAVEN	NHS - Rehab/Replace Br 03410 & 03411 o/ Amtrak	FED	X6	
SCRCOG	0106-0108	RT 1	ORANGE	Operational Lane from Milford to CT 114	FED	X7	
SCRCOG	0167-0108	RT 15	WOODBRIDGE / NEW HAVEN	Rt. 15 Heroes Tunnel Rehab	FED	X7	
SCRCOG	TBD	I-95	BRANFORD	I-95 Northbound Widening from Branford Exit 54 to Exit 56	FED	NM	2045
SCRCOG	TBD	RT 15	WOODBRIDGE / NEW HAVEN	Rt. 15 Reconstruction and Reconfiguration of Exit 59	FED	X7	
SCRCOG	TBD	I-691	MERIDEN/SOUTHBURY	I-691 RBC Project - Meriden/Southbury - MP 1.9 to MP 4.85	FED	X6	
SCRCOG	TBD	I-95	MILFORD	I-95 Ramp Reconfiguration at Exit 38 (Milford Connector)	FED	X7	
SCRCOG	TBD	I-95	MILFORD	I-95 Interchange Reconfiguration Between Exits 39 and 40	FED	X7	
SCRCOG	TBD	CT Transit	NEW HAVEN	Bus Maintenance Facility Improvements - New Haven SOGR	FTA	X6	
SCRCOG	TBD	CT Transit	VARIOUS	New BRT-Like Service - Greater New Haven	FTA	PD	
SCRCOG	TBD	All Transit Distrcits	STATEWIDE	Bus Fleet Overhauls & Replacements - All Other Buses	FTA	X6	
SCRCOG	TBD	Statewide Bus	STATEWIDE	Systemwide Technology Upgrades for Buses	FTA	X6	
SCRCOG	TBD	All Transit Distrcits	STATEWIDE	Bus Maintenance Facility Improvements - All Other Bus Facilities SOGR	FTA	X6	
SCRCOG	TBD	Statewide Bus	VARIOUS	Bus Fleet Expansion in Urban Areas	FTA	X6	
SCRCOG	TBD	STATEWIDE	STATEWIDE	Multimodal Fare Technology Improvements	FTA	X6	
SCRCOG	TBD	NHL	VARIOUS	NHL - Rail Yard Improvements Statewide	FTA	X6	
SCRCOG	TBD	NHL	VARIOUS	NHL - Fixed Bridge SOGR	FTA	X6	
SCRCOG	TBD	NHL	VARIOUS	NHL - Communications / Signal Upgrades SOGR	FTA	X6	
SCRCOG	TBD	NHL	VARIOUS	NHL - Track Improvements SOGR	FTA	X6	
SCRCOG	TBD	NHL	VARIOUS	NHL - Catenary SOGR / Power Upgrades	FTA	X6	
SCRCOG	TBD	NHL	VARIOUS	NHL - Stations/Parking - Systemwide Technology Upgrades for Rail at Stations	FTA	X6	
SCRCOG	TBD	NHL	VARIOUS	NHL - Stations/Parking - Station Improvement Program	FTA	X6	
SCRCOG	TBD	NHL	VARIOUS	NHL - New Rail Maintenance Facility and Yard for Intercity Rail Service	FTA	X6	
SCRCOG	TBD	NHL	VARIOUS	NHL - Full Capacity New Haven Line Service	FTA	X6	
SCRCOG	TBD	NHL	VARIOUS	NHL - Future Station Improvements for More Efficient Express Service to NYC	FTA	X6	
SCRCOG	TBD	CT Transit	STATEWIDE	CT Transit System wide - Admin Capital / Misc. Support	FTA	X6	
SCRCOG	TBD	CT Transit	STATEWIDE	Bus Fleet Overhauls & Replacements - CTTransit	FTA	X6	
SCRCOG	0170-2296	HTFD LINE	WALLINGFORD	Hartford Line - Existing Stations - Wallingford	STATE	CC	2018
SCRCOG	0170-2296	HTFD LINE	MERIDEN	Hartford Line - Existing Stations - Meriden	STATE	CC	2018
SCRCOG	0301-0049	NHL	NEW HAVEN	NHL - Stations/Parking - New Haven Union Station Parking Garage	STATE	X6	
SCRCOG	0310-0060	SLE	MADISON	SLE - Madison Rail Station / Garage Improvements	STATE	NRS	
SCRCOG	0320-0003	HTFD LINE	NEW HAVEN	Hartford Line - Existing Stations - New Haven State Street	STATE	X6	2020
SCRCOG	0320-0012	HTFD LINE	NORTH HAVEN	Hartford Line - Future Stations - North Haven -	STATE	CC	2030
SCRCOG	TBD	NHL	ORANGE	NHL - New Stations/Parking - Orange -	STATE	CC	2030
SCRCOG	TBD	Rail Freight	STATEWIDE	Rail Freight Network Annual Funding Program (SOGR)	STATE	X6	
SCRCOG	TBD	CTRAIL	VARIOUS	Rail Fleet - Coaches	STATE	X6	
SCRCOG	TBD	CTRAIL	VARIOUS	Rail Fleet - Locomotives	STATE	X6	
SCRCOG	TBD	CTRAIL	VARIOUS	Systemwide - New Rail Shop for Diesel / Dual Power Locomotives & Coach Repairs	STATE	X6	
SCRCOG	TBD	NHL	VARIOUS	NHL - Electric Fleet Mid-Life Overhauls & Replacements	STATE	X6	
SCRCOG	TBD	SLE	VARIOUS	SLE - Stations/Parking SOGR	STATE	X6	
SCRCOG	TBD	SLE	VARIOUS	SLE - Various Track Improvements	STATE	X6	
SCRCOG	TBD	SLE	VARIOUS	SLE - Extension of Rail Service to Rhode Island	STATE	NM	2045

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	*Project Name*	*Funding*	*Phase*	*Year*	*Federal*	*State*	*Local*
Branford							
0014-0177	**Replace Bridge 02675 over Sybil Creek**	STPA-B	CON	2019			
		STPA-B	CON	2019		$25	
		STPA-B	CON	2019	$100		
		STPNH	CON	2020	$2,140		
		STPNH	CON	2020		$2,675	
		STPNH	CON	2020			
0014-0185	**Replace Bridge 00196 which carries I95 Over Rte 1**	NHPP-B	CON	2018	$500		
		REP Stat	CON	2018		$307	
		REP	CON	2018	$1,228		
		NHPP-B	CON	2018		$56	
		NHPP-B	CON	2019	$9,874		
		NHPP-B	CON	2019		$1,097	
		STPNH	CON	2020	$5,000		
		STPNH	CON	2020		$556	
District 1							
0171-0402	**Traffic Control Signals in District 1**	STPA	CON	2018	$3,570		
0171-0413	**CROMWELL/MEI-91 CCTV INSTALLATION**	CMAQ	FD	2018	$257		
		CMAQ St	CON	2018		$887	
		CMAQ	CON	2018			
		CMAQ St	FD	2018		$29	
		CMAQ	CON	2018	$7,980		
		CMAQ St	CON	2019		$333	
		CMAQ	CON	2019	$3,000		
0171-0414	**SOUTHINGTON I-691 CCTV INSTALLATION**	CMAQ St	FD	2018		$29	
		CMAQ	FD	2018	$257		

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0171-0414	**SOUTHINGTON I-691 CCTV INSTALLATION**	CMAQ	CON	2018	$10,140		
		CMAQ St	CON	2018		$1,127	
		CMAQ	CON	2019	$3,000		
		CMAQ St	CON	2019		$333	
District 3							
0173-0451	**OSTA TRAFFIC SIGNALS IN DISTRICT 3**	STPA	CON	2018	$3,550		
0173-0461	**TRAFFIC CONTROL SIGNALS IN DISTRICT 3**	STPA	CON	2018	$3,290		
0173-0486	**Replace Traffic control Signals @ 11 locations**	STPA	ROW	2019	$110		
		STPA	FD	2019	$259		
		STPA	CON	2019	$3,538		
East Haven							
0043-0129	**Bike/Ped East Haven Shoreline Greenway Trail**	HPP-Loc	FD	2019			$22
		HPP	FD	2019	$90		
		HPP	CON	2020	$288		
		HPP-Loc	CON	2020			$242
0043-0131	**Rehab BR 00186 Over lake Saltonstall**	NHPP-B	FD	2019		$47	
		NHPP-B	FD	2019	$423		
		NHPP-B	CON	2020	$6,930		
		NHPP-B	CON	2020		$770	
Guilford							
0059-0164	**Intersection Improvements at US 1 & CT 22**	STPA St	FD	2018		$70	
		STPA	FD	2019	$280		
		STPNH	CON	2019		$320	
		STPNH	ROW	2019	$40		
		STPNH	ROW	2019		$10	
		STPNH	CON	2019	$1,280		

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
Hamden							
0061-0153	**Walkable Sidewalk Ped/Bike Improvements**	TAPNH	PD	2018	$208		
		TAPNH-L	PD	2018			$52
		TAPNH-L	ROW	2019			$10
		TAPNH	ROW	2019	$40		
		TAPNH-L	FD	2019			$52
		TAPNH	FD	2019	$208		
		TAPNH	CON	2020	$1,723		
		TAPNH-L	CON	2020			$431
0427-XXXX	**GNHTD- ADMIN CAPITAL/SUPPORT EQUIP/SCV PRO**	5307C	OTH	2018	$400		
		5307C St	OTH	2018		$100	
		5307C	OTH	2019	$480		
		5307C St	OTH	2019		$120	
		5307C	OTH	2020	$600		
		5307C St	OTH	2020		$150	
		5307C	OTH	2021	$600		
		5307C St	OTH	2021		$150	
0427-XXXX1	**GNHTD- PARATRANSIT VEHICLES**	5307C St	OTH	2018		$375	
		5307C	OTH	2018	$1,500		
		5307C St	OTH	2019		$460	
		5307C	OTH	2019	$1,840		
		5307C St	OTH	2020		$500	
		5307C	OTH	2020	$2,000		
		5307C	OTH	2021	$2,000		
		5307C St	OTH	2021		$500	
0427-XXXX2	**GNHTD- NEW FACILITY**	5307C	CON	2018	$20,000		
		5307C St	CON	2018		$5,000	

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0427-XXXX3	**GNHTD ADA OPERATING**	9-N/A	OTH	2018		$303	
		9-N/A	OTH	2019		$303	
		9-N/A	OTH	2020		$303	
		9-N/A	OTH	2021		$303	
0427-XXXX4	**GNHTD- DIAL A RIDE**	9-N/A	OTH	2018		$148	
		9-N/A	OTH	2019		$148	
		9-N/A	OTH	2020		$148	
		9-N/A	OTH	2021		$148	
Madison							
0075-0130	**Shoreline Greenway Trail in Madison**	HPP	CON	2019	$560		
		HPP-Loc	CON	2019			$140
Meriden							
0	**MERIDEN COMMUTER**	9-N/A	OTH	2018		$224	
		9-N/A	OTH	2019		$224	
		9-N/A	OTH	2020		$224	
		9-N/A	OTH	2021		$224	
0079-0212	**Rehab Br# 04185 Center st o/Harbor Brook**	HPP-Loc	CON	2020			$2,192
		REP-Loc	CON	2020			$38
		HPP	CON	2020	$1,398		
		REP	CON	2020	$152		
0079-0229	**NHS- Replace br 01081 O/Sodom Brk**	STPNH	CON	2018	$4,800		
		STPNH	CON	2018		$1,200	
0079-0241	**Traffic Signal Modernization**	CMAQ	FD	2019	$300		
		CMAQ	CON	2020	$2,609		
0079-0244	**RESURFACING, BRIDGE REHAB & SAFETY IMPROVE**	NHPP	PD	2019	$1,350		
		NHPP St	PD	2019		$150	
		NHPP St	CON	2020		$2,732	

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0079-0244	**RESURFACING, BRIDGE REHAB & SAFETY IMPROVE**	NHPP	CON	2020	$51,908		
0432-XXXX	**MERIDEN/WALLINGFORD ADA OPERATING**	9-N/A	OTH	2018		$699	
		9-N/A	OTH	2019		$699	
		9-N/A	OTH	2020		$699	
		9-N/A	OTH	2021		$699	
0432-XXXX1	**MERIDEN - FIXED ROUTE**	9-N/A	OTH	2018		$866	
		9-N/A	OTH	2019		$866	
		9-N/A	OTH	2020		$866	
		9-N/A	OTH	2021		$866	
Milford							
0083-0263	**Replace BR 06755 Rte 162 over Turtle Creek**	STPA-B	CON	2019		$25	
		STPA-B	CON	2019			
		STPA-B	CON	2019	$100		
		STPBS	CON	2020	$2,220		
		STPBS	CON	2020			
0083-0264	**Replce Bridge 01446 over SR 796**	STPA-B	CON	2019	$6,400		
		STPA-B	CON	2019		$1,600	
0083-0267	**Rehab Bridge 00327 Over Housatonic River**	NHPP-B	PD	2018	$680		
		NHPP-B	PD	2018		$170	
		NHPP-B	FD	2019		$200	
		NHPP-B	ROW	2019	$40		
		NHPP-B	ROW	2019		$10	
		NHPP-B	FD	2019	$800		
		NHPP-B	CON	2022	$13,680		
		NHPP-B	CON	2022		$3,420	
0424-XXXX	**MILFORD TD ADMIN CAPITAL/SUPPORT EQUIP/SCV**	5307C St	OTH	2018		$75	
		5307C	OTH	2018	$300		

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0424-XXXX	**MILFORD TD ADMIN CAPITAL/SUPPORT EQUIP/SCV**	5307C	OTH	2019	$300		
		5307C St	OTH	2019		$75	
		5307C	OTH	2020	$320		
		5307C St	OTH	2020		$80	
		5307C St	OTH	2021		$85	
		5307C	OTH	2021	$340		
0424-XXXX1	**MILFORD TD PARATRANSIT VEHICLES**	5307C St	OTH	2018		$100	
		5307C	OTH	2018	$400		
		5307C	OTH	2019	$480		
		5307C St	OTH	2019		$120	
		5307C	OTH	2020	$520		
		5307C St	OTH	2020		$130	
		5307C St	OTH	2021		$130	
		5307C	OTH	2021	$520		
0424-XXXX2	**MILFORD TD- FACILITY IMPROVEMENTS**	5307C St	CON	2018		$57	
		5307C	CON	2018	$228		
		5307C	CON	2019	$80		
		5307C St	CON	2019		$20	
		5307C	CON	2020	$120		
		5307C St	CON	2020		$30	
		5307C	CON	2021	$120		
		5307C St	CON	2021		$30	
0424-XXXX3	**MILFORD TD FIXED ROUTE**	9-N/A	OTH	2018		$717	
		9-N/A	OTH	2019		$717	
		9-N/A	OTH	2020		$717	
		9-N/A	OTH	2021		$717	
0424-XXXX4	**MILFORD TD- ADA OPERATING**	9-N/A	OTH	2018		$294	
		9-N/A	OTH	2019		$294	

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0424-XXXX4	**MILFORD TD- ADA OPERATING**	9-N/A	OTH	2020		$294	
		9-N/A	OTH	2021		$294	
0424-XXXX5	**MILFORD TD- DIAL A RIDE**	9-N/A	OTH	2018		$39	
		9-N/A	OTH	2019		$39	
		9-N/A	OTH	2020		$39	
		9-N/A	OTH	2021		$39	
0424-XXXX6	**MILFORD TD- WHEELER COMMUTER SHUTTLE OPE**	9-N/A	OTH	2018		$95	
		9-N/A	OTH	2019		$95	
		9-N/A	OTH	2020		$95	
		9-N/A	OTH	2021		$95	
0424-XXXX7	**MILFORD TD- COASTAL LINK OPERATING**	9-N/A	OTH	2018		$138	
		9-N/A	OTH	2019		$138	
		9-N/A	OTH	2020		$138	
		9-N/A	OTH	2021		$138	
New Haven							
0092-0614	**Conversion of Rte 34 Phase 3**	HPP-Loc	ROW	2019			$22
		HPP	ROW	2019	$88		
0092-0621	**FARMINGTON CANAL GREENWAY.**	HPP-Loc	CON	2018			$31
		HPP	CON	2018	$126		
		HPPS	CON	2019	$5,519		
		HPP	CON	2019	$126		
		HPP-Loc	CON	2019			$31
		REP-Loc	CON	2019			$88
		HPPS-Lo	CON	2019			$1,380
		REP	CON	2019	$350		
0092-0657	**REHAB Bridge 03810 Grand Ave o Quinnipiac Rv**	REP-Loc	CON	2019			$19,758
		REP	CON	2019	$3,617		

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0092-0657	**REHAB Bridge 03810 Grand Ave o Quinnipiac Rv**	STPNH	CON	2020		$325	
		STPNH	CON	2020			
		STPNH	CON	2020	$1,300		
0092-0672	**Minor intersection/Ped improve near Rt 15 Exit 59**	STPNH	CON	2018	$4,000		
		STPNH	CON	2018		$1,000	
0092-0675	**Rehab BR 03094 over Amtrak**	NHPP-B	CON	2018	$7,020		
		NHPP-B	CON	2018		$780	
0092-0681	**Intersection Improvement @ SR 745 and Kimberly Ave**	STPNH	CON	2020	$3,520		
		STPNH	CON	2020		$880	
0092-0682	**Traffic Signal Modernization at Various Locations**	CMAQ	FD	2018	$114		
		CMAQ	CON	2020	$1,572		
0092-0684	**Wayfinding Sign System Phase 2**	REP	CON	2019	$1,141		
		REP-Loc	CON	2019			$285
0092-0685	**Replace Bridge 03998 Over AMTRAK**	NHPP-B	PD	2018	$240		
		NHPP-B	PD	2018		$60	
		NHPP-B	ROW	2019	$40		
		NHPP-B	FD	2019	$240		
		NHPP-B	ROW	2019		$10	
		NHPP-B	FD	2019		$60	
		NHPP-B	CON	2022	$3,360		
		NHPP-B	CON	2022		$840	
0092-XX34	**Conversion of Route 34**	TIGER	CON	2018	$20,000		
		TIGER-L	CON	2018			$5,000
0300-XXXX	**NEW HAVEN LINE TRACK PROGRAM**	5307C St	CON	2018		$1,400	
		5337	CON	2018	$9,600		
		5307C	CON	2018	$5,600		
		5337 Sta	CON	2018		$2,400	
		5337 Sta	CON	2019		$2,400	

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0300-XXXX	**NEW HAVEN LINE TRACK PROGRAM**	5307C St	CON	2019		$2,400	
		5307C	CON	2019	$9,600		
		5337	CON	2019	$9,600		
		5337 Sta	CON	2020		$2,400	
		5307C St	CON	2020		$2,400	
		5337	CON	2020	$9,600		
		5307C	CON	2020	$9,600		
		5307C	CON	2021	$9,600		
		5307C St	CON	2021		$2,400	
		5337 Sta	CON	2021		$2,400	
		5337	CON	2021	$9,600		
0300-XXXX1	**NHL-NETWORK INFRASTRUCTURE UPGRADE**	5337	CON	2019	$16,000		
		5337 Sta	CON	2019		$4,000	
0301-0138	**New Haven Rail Yard-West End Yard FY18**	5307P St	CON	2018		$16,400	
		5307P	CON	2018	$65,600		
0301-0182	**EastEnd Connection (EEC) FY18**	5307P	CON	2018	$38,400		
		5307P St	CON	2018		$9,600	
0301-XXXX	**NHL-SIGNAL SYSTEM REPLACEMENT**	5307C	CON	2019	$20,000		
		5307C St	CON	2019		$5,000	
		5337 Sta	CON	2020		$875	
		5307C St	CON	2020		$5,000	
		5337	CON	2020	$3,500		
		5307C	CON	2020	$20,000		
0402-XXXX	**Connecticut Transit-New Haven**	9-N/A	OTH	2018		$28,665	
		9-N/A	OTH	2019		$28,665	
		9-N/A	OTH	2020		$28,665	
		9-N/A	OTH	2021		$28,665	
0452-XXXX	**OLD SAYBROOK/NH/HARTFORD COMMUTER**	9-N/A	OTH	2018		$868	

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0452-XXXX	**OLD SAYBROOK/NH/HARTFORD COMMUTER**	9-N/A	OTH	2019		$868	
		9-N/A	OTH	2020		$868	
		9-N/A	OTH	2021		$868	
North Haven							
0100-0174	**Valley Service Road Extension**	HPP	CON	2019	$1,100		
		HPP-Loc	CON	2019			$976
0100-0175	**Sackett Point Bridge Replacement**	STPNH	CON	2019			
		STPA St	CON	2019		$438	
		HIPNH	CON	2019	$2,111		
		STPA	CON	2019	$3,500		
		HIPNH S	CON	2019		$264	
		STPA-Lo	CON	2019			$438
		STPNH	CON	2020	$6,869		
		STPNH	CON	2020		$859	
		STPNH-L	CON	2020			$859
Orange							
0106-0108	**US 1: Milford City Line to Rt 114 Widening**	NHPP	CON	2022	$10,520		
		NHPP St	CON	2022		$2,630	
0106-0128	**Interchange 58 Improvements on Rte 15 @ Rte 34**	NHPP St	FD	2018		$84	
		NHPP	FD	2019	$336		
		NHPP	CON	2019			
		NHPP	CON	2019	$800		
		NHPP St	CON	2019		$200	
		STPNH	CON	2020			
		STPNH	CON	2020	$4,000		
		STPNH	CON	2020		$1,000	
Regional							

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0170-XXXX	**5310 ENHANCED MOBILITY OF SENIORS/DISABLED**	5310E-L	OTH	2018			$101
		5310E	OTH	2018	$402		
		5310E-L	OTH	2019			$104
		5310E	OTH	2019	$414		
		5310E-L	OTH	2020			$107
		5310E	OTH	2020	$427		
		5310E	OTH	2021	$440		
		5310E-L	OTH	2021			$110
Statewide							
0170-3411	**SF Bridge Insp- NHS Roads(9/1/16-8/31/21)**	NHPP-B	OTH	2018	$2,962		
		NHPP-B	OTH	2018		$741	
		NHPP-B	OTH	2019		$785	
		NHPP-B	OTH	2019	$3,141		
		NHPP-B	OTH	2020	$3,330		
		NHPP-B	OTH	2020		$832	
0170-3412	**SF Bridge Insp- Non NHS Roads (9/1/16-8/31/21)**	STPA-B	OTH	2018			
		STPA-B	OTH	2018	$2,288		
		STPA-B	OTH	2018		$572	
		STPA-B	OTH	2019		$606	
		STPA-B	OTH	2019	$2,426		
		STPA-B	OTH	2020		$643	
		STPA-B	OTH	2020	$2,571		
0170-3413	**CE Bridge Insp- Non NHS Roads (9/1/16-8/31/21)**	NHPP-B	OTH	2018	$15,208		
		NHPP-B	OTH	2018		$3,802	
		NHPP-B	OTH	2019		$4,030	
		NHPP-B	OTH	2019	$16,120		
		NHPP-B	OTH	2020		$4,272	

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0170-3413	**CE Bridge Insp- Non NHS Roads (9/1/16-8/31/21)**	NHPP-B	OTH	2020	$17,088		
0170-3414		STPA-B	OTH	2018		$1,668	
		STPA-B	OTH	2018	$6,672		
		STPA-B	OTH	2019		$1,768	
		STPA-B	OTH	2019	$7,072		
		STPA-B	OTH	2020	$7,496		
		STPA-B	OTH	2020		$1,874	
0170-3415	**CE Sign Support Insp-NHS Roads(9/1/16-8/31/21)**	NHPP-B	OTH	2018			
		NHPP St	OTH	2018		$234	
		NHPP	OTH	2018	$934		
		NHPP	OTH	2019	$934		
		NHPP St	OTH	2019		$234	
		NHPP St	OTH	2020		$584	
		NHPP	OTH	2020	$2,336		
0170-3416	**CE Sign Support Insp-Non NHS Roads(9/1/16-8/31/21)**	STPA	OTH	2018			
		STPA St	OTH	2018		$50	
		STPA	OTH	2018	$200		
		STPA St	OTH	2019		$50	
		STPA	OTH	2019	$200		
		STPA St	OTH	2020		$150	
		STPA	OTH	2020	$600		
0170-3417	**Mast Arm & Span Pole Insp Statewide 9/1/16-8/31/21**	STPA	OTH	2018			
		STPA St	OTH	2018		$200	
		STPA	OTH	2018	$800		
		STPA St	OTH	2019		$100	
		STPA	OTH	2019	$400		
		STPA St	OTH	2020		$100	
		STPA	OTH	2020	$400		

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0170-3439	**Federal Eligible PE: TA Program**	STPA St	PD	2018		$132	
		STPA	PD	2018	$528		
		STPA	PD	2018			
		STPA	PD	2019	$528		
		STPA St	PD	2019		$132	
		STPA St	PD	2020		$132	
		STPA	PD	2020	$528		
		STPA St	PD	2021		$132	
		STPA	PD	2021	$528		
0170-3444	**Pavement management and data collection**	STPA St	PL	2018		$134	
		STPA	PL	2018	$534		
		STPA	CON	2018			
		STPA	PL	2019	$354		
		STPA St	PD	2019		$89	
0170-3455	**Champ Safety Service Patrol**	SIPH	OTH	2018	$4,083		
		SIPH-Lo	OTH	2018			$454
		SIPH-Lo	OTH	2019			$454
		SIPH	OTH	2019	$4,083		
0170-3495	**Fy18: Statewd Trans Demand Mgmnt NY,NJ,CT Moder**	CMAQ	OTH	2018	$2,456		
		CMAQ St	OTH	2018		$614	
0170-XXXX1	**Transit Capital Planning FY18**	5307C	OTH	2018	$360		
		5307C St	OTH	2018		$90	
0170-XXXX2	**Transit Capital Planning FY19**	5307C St	OTH	2019		$100	
		5307C	OTH	2019	$400		
0170-XXXX3	**Transit Capital Planning FY20**	5307C St	OTH	2020		$110	
		5307C	OTH	2020	$440		
0170-XXXX4	**Transit Capital Planning FY21**	5307C St	OTH	2021		$120	
		5307C	OTH	2021	$480		

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0400-XXXX	**CTTRANSIT SYSTEMWIDE BUS REPLACEMENTS FY1**	5339	OTH	2018	$3,552		
		5339 Sta	OTH	2018		$888	
0400-XXXX2	**CTTRANSIT SYSTEMWIDE BUS REPLACEMENTS FY1**	5307C	OTH	2019	$15,000		
		5339	OTH	2019	$3,641		
		5307C St	OTH	2019		$3,750	
		5339 Sta	OTH	2019		$910	
0400-XXXX6	**CTTRANSIT SYSTEMWIDE BUS REPLACEMENTS FY2**	5307C	OTH	2021	$12,000		
		5339	OTH	2021	$3,825		
		5307C St	OTH	2021		$3,000	
		5339 Sta	OTH	2021		$956	
0400-XXXX8	**CTTRANSIT FACILITY IMPRVMNTS/MISC ADMN CAPIT**	5307C St	OTH	2018		$2,400	
		5307C	OTH	2018	$9,600		
0400-XXXX9	**CTTRANSIT FACILITY IMPRVMNTS/MISC ADMN CAPIT**	5307C	OTH	2019	$6,600		
		5307C St	OTH	2019		$1,650	
0400-XXXX93	**CTTRANSIT Systemwide Bus Replacements FY16**	5339P	OTH	2018	$5,360		
		5339P St	OTH	2018		$1,340	
0400-XXXX94	**CTTRANSIT Systemwide Bus Replacements FY17**	5339P	OTH	2018	$5,360		
		5339P St	OTH	2018		$1,340	
0400-XXXXX	**CTTRANSIT Systemwide Bus Replacements FY18**	5307P	OTH	2018	$8,000		
		5307P St	OTH	2018		$2,000	
		5339P	OTH	2018	$5,360		
		5339P St	OTH	2018		$1,340	
Wallingford							
0148-0208	**Hall Avenue Pedestrian Improvements**	RT	CON	2018	$4		
		TAPNH-L	CON	2018		$269	
		TAPNH	CON	2018	$1,077		
		RT State	CON	2018		$1	

Near Term (2018 - 2021) Fiscally Constrained Projects

Project Number	Project Name	Funding	Phase	Year	Federal	State	Local
0148-0209	**Rehab Br #06537 carrying SR 702 O/ Wharton Brook**	STPNH	CON	2021	$680		
		STPNH	CON	2021		$170	
0433-XXXX	**WALLINGFORD - FIXED ROUTE**	9-N/A	OTH	2018		$193	
		9-N/A	OTH	2019		$193	
		9-N/A	OTH	2020		$193	
		9-N/A	OTH	2021		$193	
West Haven							
0156-0178	**Sidewalk and Bike Path Streetscape**	HPP	FD	2018	$125		
		HPP	CON	2019	$724		
0156-0180	**I-95 Resurfacing, Bridge and Safety Improvements**	NHPP St	FD	2018		$35	
		NHPP	FD	2018	$315		
		NHPP St	CON	2019		$900	
		NHPP	CON	2019	$8,100		
		NFRP	CON	2019			
Woodbridge							
0167-0107	**Rehab Br# 02151 carries Route 15 O/Race Brook Rd**	NHPP St	CON	2019		$320	
		NHPP	CON	2019	$1,280		
0167-0108	**Tunnel Improvement on Route 15**	NHPP-B	CON	2020			
		NHPP-B	CON	2022		$13,500	
		NHPP-B	CON	2022	$54,000		
Total Funds					**$762,123**	**$287,815**	**$33,377**