

ENVIRONMENTAL IMPACT EVALUATION

Stamford Transportation Center Parking and Transit Oriented Development Stamford, Connecticut

State Project No. 301-047

*Prepared in accordance with the
Connecticut Environmental Policy Act
Connecticut General Statute 22a-1a to 1h*



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LIST OF ABBREVIATIONS

ACM	Asbestos Containing Materials
ADA	Americans with Disabilities Act
CAAA	Clean Air Act Amendments
CCMA	Connecticut Coastal Management Act
CEPA	Connecticut Environmental Policy Act
CEQ	Council on Environmental Quality
CGS	Connecticut General Statutes
CL&P	Connecticut Light & Power
CTDEEP	Connecticut Department of Energy & Environmental Protection
CTDOT	Connecticut Department of Transportation
CTDPH	Connecticut Department of Public Health
EIE	Environmental Impact Evaluation
EJ	Environmental Justice
EPA	U.S. Environmental Protection Agency
ETC	Estimated Time of Completion
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HAPs	Hazardous Air Pollutants
HEI	Health Effects Institute
HLVs	Hazard Limiting Values
IRIS	Integrated Risk Information System
ITE	Institute of Transportation Engineers
LEED	Leadership in Energy and Environmental Design
LOS	Level of Service
MPO	Metropolitan Planning Organization
MSATs	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NDDB	Natural Diversity Data Base
NEPA	National Environmental Policy Act
NLEV	National Low Emission Vehicle
NU	Northeast Utilities
NWI	National Wetlands Inventory
OLISP	Office of Long Island Sound Programs (CTDEEP)
OSTA	Office of the State Traffic Administration
PARCS	Parking Access and Revenue Control System

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LIST OF ABBREVIATIONS

PM	Particulate Matter
Res DEC	Residential Direct Exposure Criteria
RCRA	Resource Conservation and Recovery Act
SCELS	Stream Channel Encroachment Lines
SIP	State Implementation Plan
STIP	State Transportation Improvement Program
SUT	Stamford Urban Transitway
SWRPA	South Western Regional Planning Agency
TASC	Toxic Air Study in Connecticut
TCDD	Transportation Center Design District
TDM	Travel Demand Management
TOD	Transit Oriented Development
USFWS	U.S. Fish & Wildlife Service
UST	Underground Storage Tank
ULI	Urban Land Institute
VMT	Vehicle-Miles Travelled
WPCA	Water Pollution Control Authority

EXECUTIVE SUMMARY

Introduction

The Connecticut Department of Transportation (CTDOT) is the owner of the Stamford Transportation Center intermodal transportation facility in Stamford, Connecticut. CTDOT is proposing a project to replace the original 727-space parking garage that was opened in 1987 (Original Garage), and to construct new parking facilities for at least 1,000 spaces to replace the Original Garage spaces plus any additional commuter parking spaces needed to replace spaces lost from CTDOT-owned parking as a result of development, and to increase the commuter parking supply. The project will also provide ancillary improvements for vehicular and pedestrian circulation and access along Station Place as well as provide an opportunity for Transit Oriented Development (TOD). Because the project will involve the construction of new parking facilities for 200 vehicles or more and will be financed either in whole or in part with State funds, it is subject to the Connecticut Environmental Policy Act (CEPA) and requires the preparation of an Environmental Impact Evaluation (EIE).

For the purposes of this CEPA document, the TOD component(s) are being considered as part of a “state action” under the Connecticut Environmental Policy Act. Including components is considered by CTDOT to be a discretionary exercise, and the inclusion is not intended to create a precedent or act as a waiver of CTDOT’s discretion to include similar or other components in future CEPA “state actions” analyses for this or other projects.

Project Description

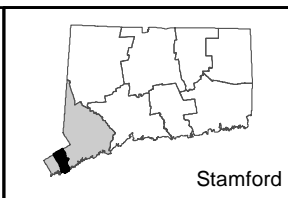
The project involves the replacement of the Original Garage at the Stamford Transportation Center in Stamford, Connecticut (see Figure ES-1 for Project Location Map). The garage is a component of the CTDOT Metro-North train station at Stamford, also known as the Stamford Transportation Center. The existing parking complex, which includes the Original Garage and a parking garage that was opened in 2004 (2004 Garage), is located immediately south of the train station, and is accessed from the station by pedestrian bridges and surface crosswalks. CTDOT also provides a surface lot for commuters north of the tracks on South State Street. Figure ES-2 presents an aerial map of the existing Stamford Transportation Center identifying the Original Garage, the 2004 Garage, and the surface lot.

A key objective of this project is to maintain the existing supply of commuter parking during construction, within a reasonable walking distance, to ensure that potential impacts to transit ridership will be minimized throughout construction. Consequently, the project considers alternatives for providing new and/or temporary parking facilities at other sites that are reasonably accessible to the Stamford Transportation Center in order to provide the same supply of commuter parking supply spaces during construction that currently exist.



0 1,000 2,000 Feet

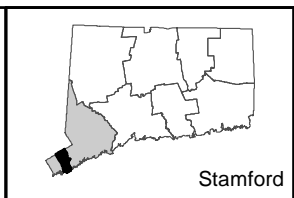
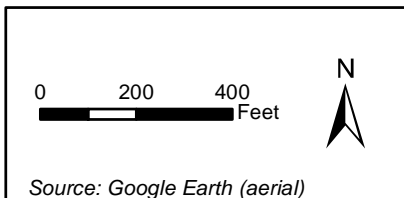
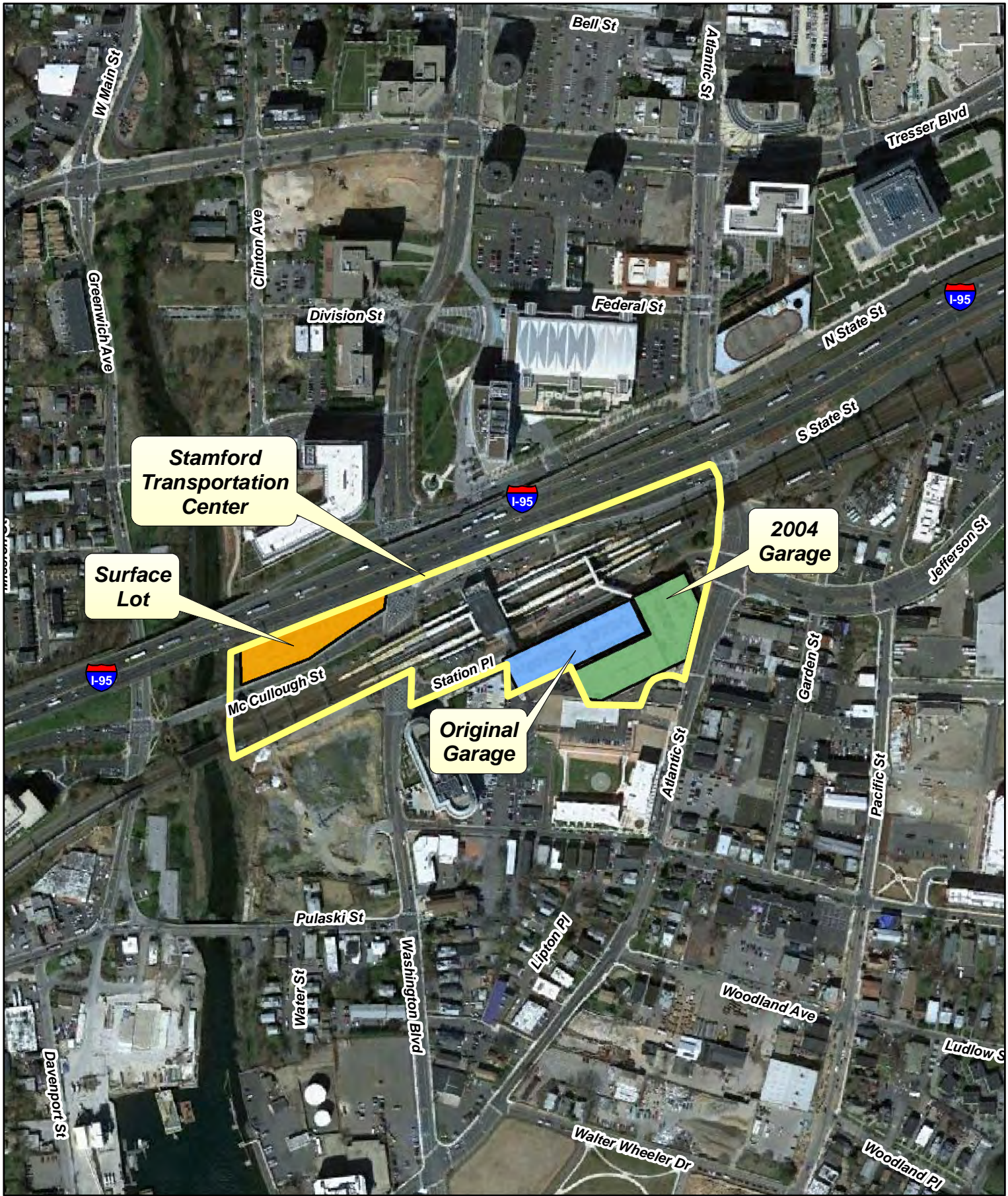
Source: The University of Connecticut Libraries' Map and Geographic Information Center (MAGIC), USGS



Project Location Map

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
 Connecticut Department of Transportation
 State Project No. 301-047
 Stamford, Connecticut

FIGURE ES - 1



Existing Stamford Transportation Center
 STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
 Connecticut Department of Transportation
 State Project No. 301-047
 Stamford, Connecticut

Background

The Stamford Transportation Center is a major stop on the New Haven Line and Amtrak's Northeast Corridor, and is the terminus of CTDOT's Shore Line East express commuter rail service from between New Haven and points east. The Stamford Transportation Center also serves as an intermodal transportation hub in Downtown Stamford, accommodating transfers between commuter rail, bus, and taxi services, and providing parking and other accommodations for motorists, bicyclists, and pedestrians who utilize these services from the center.

In response to a high demand for increased parking in the 1980s, CTDOT proposed the construction of the second garage (referred to herein as the 2004 Garage) to expand the available parking supply. This garage, which is attached to the Original Garage, began construction in late 2002 and opened in 2004. The 2004 Garage contains approximately 1,190 parking spaces, for a total supply of 1,917 spaces in the parking complex.

CTDOT is proposing to demolish the Original Garage at the Stamford Transportation Center and to construct new parking facilities either at the Original Garage site and/or at other sites that are reasonably accessible to the Stamford Transportation Center. The condition of the Original Garage has been a concern since its construction by the City of Stamford. During construction, design deficiencies were discovered and construction was halted prior to completion.

The deficiencies were corrected by constructing additional concrete posts, columns, and shear walls, and adding steel bracing at the ends of beams (Desman Associates, 2006).

Condition assessments of the garage were performed in 1996 and 2006 and degradation of some of the Original Garage's concrete and reinforcing components was found. In addition, non-structural deficiencies were evident in 2006, including fire standpipes and drainage systems that do not meet current requirements and require upgrading (Desman Associates, 2006). CTDOT conducted an updated assessment of the garage condition in 2010 (Desman, 2010), which reaffirmed the previous assessments and supported previous recommendations for replacement of the garage.

PROJECT HISTORY

1987: Opening of Original Garage

2004: Opening of Garage Expansion

2006: Condition Assessment of Original Garage

- Evaluated Repair / Replacement Options
- Recommended Replacement

2010: Updated 2006 Condition Assessment

- Reaffirmed Replacement Recommendation

Purpose and Need

The Purpose and Need for the Proposed Action is three-fold as follows:

1. Replace the aging Original Garage that services the Stamford Transportation Center with low maintenance, long service life facilities that accommodate the number of parking spaces lost during construction plus adds at least 273 new commuter parking;
2. Expand the availability of parking and improve multimodal traffic and pedestrian flow around the Stamford Transportation Center and Station Place; and
3. Minimize the public costs for construction and ongoing operations and maintenance of the parking facilities serving the Stamford Transportation Center by promoting TOD which leverages and enhances the multimodal public transportation services provided by the Stamford Transportation Center.

The purposes of the Proposed Action are consistent with Section 13b-79kk of the Connecticut General Statutes, which encourages TOD near multi-modal transportation facilities, and with CTDOT's continuing commitment to support multimodal, sustainable transportation systems.

Alternatives Considered

The alternatives considered in this EIE are as follows:

- No-Action (baseline, required under CEPA)
- Repair Original Garage
- Replace Original Garage on Existing Site
- Replace Original Garage in conjunction with Transit-Oriented Development (TOD)

Each of these alternatives assumes the continued use of the 1,190-space 2004 Garage.

No-Action

Under the No-Action Alternative, current operations at the Original Garage would remain unchanged, with ongoing, routine maintenance of the parking garage for minor repairs and improvements. Major structural repairs, rehabilitation, or other work requiring significant allocation of State funds would not be performed. The eventual closure of the Original Garage under the No-Action Alternative would result in the loss of approximately 727 parking spaces. Although this alternative would involve no significant near-term investment of State funds and no significant environmental impacts, it would also result in the need to permanently close the facility in the not too distant future without providing long-term parking when this occurs and would not meet the project purpose and need relative to improving the garage condition and expanding commuter parking supply.

Repair Original Garage

This Repair Alternative includes repair of deficiencies in the Original Garage structure. Repairs could be phased, but impacts on parking during construction could result in a temporary 20% to 25% loss of capacity (145 to 180 spaces). The Repair Alternative would extend the service life of the garage by approximately 10 to 15 years. The estimated cost of the Repair Alternative is similar in magnitude to that of the estimated cost for replacing the Original Garage with a minimum 1,000-space new garage on the same site. Although this alternative would address the structural deficiencies of the garage in the near-term, it is not a cost-effective, long-term investment given the limited service life, and it would not expand the availability of parking. As such, this alternative does not meet the project purpose and need relative to expanding parking supply and minimizing public costs, and thus is not analyzed in detail.

Replace Original Garage on Existing Site

This Replacement Alternative includes demolition of the Original Garage and construction of a new, replacement parking garage within the same general footprint. The new garage would contain at least 1,000 commuter parking spaces, which would expand the availability of commuter parking at the Stamford Transportation Center. The estimated service life of this Replacement Alternative is approximately 60 years. Providing adequate temporary parking during replacement of the Original Garage is a key objective of the project to ensure that the number of parking spaces lost during construction will be provided at another site within ¼-mile

of the Stamford Transportation Center. This alternative was determined to not be feasible due to no available sites within ¼ mile and would not meet the project’s purpose and need, and thus is not analyzed in detail.

***Replace Original Garage in conjunction with Transit-Oriented Development (TOD)
(Proposed Action)***

This Replacement with TOD Alternative, which is the Proposed Action in this EIE, similarly involves the demolition of the Original Garage and construction of new parking facilities with a net minimum gain of 273 commuter parking spaces (i.e., construct a minimum of 1,000 new parking spaces to replace the spaces lost by demolition of the Original Garage and to add at least 273 new commuter parking spaces). However, in this alternative, the new parking facilities would be built in conjunction with private-sector TOD, as defined under Section 13b-79kk of the Connecticut General Statutes.

In February 2012, CTDOT requested Statements of Qualifications/Conceptual Proposals (under Request Number STOD22912) from private-sector developers to identify potential opportunities to advance the Proposed Action through a public-private agreement. Based on initial responses to CTDOT’s request, the new parking facilities and TOD under this alternative could take a variety of forms in a variety of locations within a ¼-mile (approximately 5-minute walking distance) of the Stamford Transportation Center.

Ultimately, the characteristics of the new parking facilities, temporary parking facilities, TOD sites, Station Place improvements, and other amenities/features associated with the Proposed Action will be subject to the terms of the public-private agreement between CTDOT and the selected developer. Based on the initial responses from private-sector developers, the potential range of characteristics of the Proposed Action could include:

- **New Parking Facilities:** A minimum of 1,000 new commuter parking spaces could be accommodated in one parking garage located within the approximate footprint of the existing Original Garage structure, or within multiple new parking garages located in the Proposed Action Boundary and within ¼ mile walking distance of the Stamford Transportation Center.
- **Temporary Parking Facilities:** Temporary commuter parking to accommodate any spaces displaced during demolition of the Original Garage and construction of a new parking garage(s). These could be accommodated in one or more off-site locations. These locations could consist of structured and/or surface parking that is within ¼ mile walking distance of the Stamford Transportation Center.
- **Transit-Oriented Development (TOD):** TOD within the Proposed Action Boundary could range from new, small-scale retail opportunities to large mixed-use development (residential units, office, and retail space) contained in towers on one or more sites in the Proposed Action Boundary.

- **Station Place Improvements:** Physical modifications to Station Place could range from streetscape improvements with minor kiss-and-ride and taxi area improvements, to complete reconstruction of the driveway with new pedestrian connections to the station overhead.
- **Other Amenities:** Commuter amenities in and around the Stamford Transportation Center could include pedestrian improvements (such as pedestrian bridges that directly new parking facilities to the station or station platforms); real-time dynamic signage for new parking facilities to inform commuters of parking space availability; bike storage and bike parking facilities; car charging stations; and aesthetic improvements.
- **Parking Access and Revenue Control System (PARCS):** PARCS will be provided for new parking facilities and integrated into the 2004 Garage.

The public contribution to the project will be no more than \$35 million and will be limited for use toward funding of capital improvement costs associated with the public transportation components of the project. The balance of the project costs will be privately financed. The service life of the new parking facilities will be up to 60 years.

Summary of Impacts and Mitigation

The Proposed Action is anticipated to have some adverse environmental impacts as compared to the No-Action Alternative. The impacts will be mitigated using the measures as described in this document and summarized in Table ES-1.

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Land Use, Zoning and Local & Regional Development Plans	<ul style="list-style-type: none"> Some uses of the Proposed Action may be in conflict with existing land use categories. 	<ul style="list-style-type: none"> Site plan approval for development to take place on private property.
<i>Section 3.1.3</i>		
Consistency with State Plan of Conservation & Development	<ul style="list-style-type: none"> Proposed Action is consistent with state and regional plans of conservation and development. 	<ul style="list-style-type: none"> None required
<i>Section 3.2.3</i>		
Traffic & Parking	<ul style="list-style-type: none"> Detailed traffic analysis will be performed as design details are developed. However, the TOD concept is itself part of state and local strategies for creating sustainable relationships between land use and transportation systems, and for managing the transportation impacts of economic development. Localized traffic impacts may be identified at or near the site access locations. 	<ul style="list-style-type: none"> Travel Demand Management Incentives/Programs. Parking Demand Management Strategies Localized intersections improvements for site entry/exit and circulation. Additional mitigation may be required per conditions of Major Traffic Generator Certificate (see Section 8).
<i>Section 3.3.3</i>		
Pedestrian & Bicycle Considerations	<ul style="list-style-type: none"> Relocated parking may increase the walking time for some existing commuters. The TOD component of the Proposed Action will increase the levels of pedestrian and bicycle activity. 	<ul style="list-style-type: none"> Streetscape and amenities to strengthen pedestrian connectivity. Provisions for clear pedestrian pathways. Elevated Pedestrian Bridge to relieve pedestrian crossing congestion at intersections. Enhanced amenities for bicycle parking/storage. Consideration for designating bike lanes on new or reconstructed roadways.
<i>Section 3.4.3</i>		

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Local Transit Considerations	<ul style="list-style-type: none"> Proposed Action would increase the demand on the existing transit services but it is anticipated that there is sufficient reserve capacity in the existing services to support the alternative. 	<ul style="list-style-type: none"> None required
<i>Section 3.5.3</i>		
Air Quality	<ul style="list-style-type: none"> Increased traffic volume on the local traffic network could potentially have a minor effect on mesoscale air quality. Proposed Action has no air quality impacts from stationary sources. Proposed Action has low potential for MSAT effects. Proposed Action has been determined to be in conformity with the Clean Air Act. 	<ul style="list-style-type: none"> Travel Demand Management Incentives/Programs (in conjunction with traffic mitigation strategy).
<i>Section 3.6.3</i>		
Noise	<ul style="list-style-type: none"> Proposed Action is not anticipated to result in significant adverse effects on noise. 	<ul style="list-style-type: none"> None anticipated, although further evaluation may be conducted if components of the Proposed Action are located within 125 feet of sensitive residential and institutional receptors.
<i>Section 3.7.3</i>		
Socioeconomic Resources	<ul style="list-style-type: none"> Proposed Action is not expected to result in significant adverse effects on socioeconomic resources. 	<ul style="list-style-type: none"> None required
<i>Section 3.8.3</i>		
Water Quality	<ul style="list-style-type: none"> Likely will be an increase in impervious land cover associated with the Proposed Action. Potential impacts to surface water quality are not anticipated to impact public water supplies. 	<ul style="list-style-type: none"> Specific measures that will be designed utilizing the <i>2004 Connecticut Stormwater Quality Manual</i> to be determined during future detailed site design.
<i>Section 3.9.3</i>		

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Hydrology & Floodplains	<ul style="list-style-type: none"> Likely increase in impervious land area could have adverse impacts on runoff volume or peak flow rates, with potential impacts to floodplain elevations. 	<ul style="list-style-type: none"> Potential modification of stormwater drainage system and/or storage to be determined during future detailed site design. Obtain applicable certifications (see Section 8).
<i>Section 3.10.3</i>		
Wetlands	<ul style="list-style-type: none"> No wetland or watercourse impacts are anticipated for the Proposed Action. 	<ul style="list-style-type: none"> None required
<i>Section 3.11.3</i>		
Coastal Resources	<ul style="list-style-type: none"> Proposed Action will not have any adverse impacts on coastal resources, decrease any coastal access or recreational opportunities, or impair the visual quality of the shoreline. 	<ul style="list-style-type: none"> Design in accordance with CCMA and permitting regulations. Obtain applicable certifications (see Section 8).
<i>Section 3.12.3</i>		
Endangered, Threatened or Special Concern Species or Habitats	<ul style="list-style-type: none"> No impacts to flora, fauna, or threatened and endangered species are anticipated for the Proposed Action. 	<ul style="list-style-type: none"> None required
<i>Section 3.13.3</i>		
Soils & Geology	<ul style="list-style-type: none"> No impacts to soils or geology are anticipated for the Proposed Action. 	<ul style="list-style-type: none"> None required
<i>Section 3.14.3</i>		
Cultural Resources	<ul style="list-style-type: none"> Further consultation with the CTSHPO will be necessary to assess specific direct and indirect impacts of the Proposed Action within the South End Historic District when details are developed. 	<ul style="list-style-type: none"> Further consultation with the CTSHPO will take place to discuss potential mitigation measures when details are developed.
<i>Section 3.15.3</i>		
Pesticides, Toxic or Hazardous Materials	<ul style="list-style-type: none"> Proposed Action will not require the use of pesticides or herbicides, and building materials will be required to meet current local, state, and federal codes and regulations relative to toxicity and exposure potential. 	<ul style="list-style-type: none"> None required
<i>Section 3.16.3</i>		

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Visual Resources	<ul style="list-style-type: none"> Because the proposed project is consistent with the scale and style of on-going urban redevelopment in the area, no adverse impacts to visual resources are anticipated. 	<ul style="list-style-type: none"> Rules in the Request for Proposals require architecture to blend with surrounding buildings. Specific visual/aesthetic impacts and mitigation, if any, will be evaluated through the applicable permitting processes as specific design details are developed.
<i>Section 3.17.3</i>		
Energy Use & Conservation	<ul style="list-style-type: none"> Proposed Action has the potential to increase the energy use on-site 	<ul style="list-style-type: none"> Parking garage constructed in accordance with <i>Manual for High Performance Buildings</i> Measures to minimize energy impacts of TOD component, such as Energy Star products and design to LEED standards.
<i>Section 3.18.3</i>		
Public Utilities & Services	<ul style="list-style-type: none"> Proposed Action parking component will require similar utility connections as were provided for the 2004 Garage. Proposed Action will likely increase demand on all of the adjacent utility systems serving these sites compared to the existing conditions. 	<ul style="list-style-type: none"> Utility service upgrades and/or new connections as needed for site-specific design. Coordination with NU to maintain clear zones from transmission lines.
<i>Section 3.19.3</i>		
Public Health & Safety	<ul style="list-style-type: none"> Proposed Action will increase employment and may provide new residential units in the area thereby increasing the potential demand for police and fire protection, and health services. 	<ul style="list-style-type: none"> Specific requirements to be determined for site-specific design.
<i>Section 3.20.3</i>		
Construction Related		
<i>Section 3.22.2</i>		
Traffic	<ul style="list-style-type: none"> Impacts are anticipated to traffic flow in and around the Stamford Transportation Center and the TOD area during construction. 	<ul style="list-style-type: none"> Construction phasing with traffic management plan. Access modifications on Station Place.

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Construction Related (continued) <i>Section 3.22.2</i>		
Parking	<ul style="list-style-type: none"> • The construction of the new parking facilities will require the removal of the Original Garage. 	<ul style="list-style-type: none"> • Existing parking supply located within ¼-mile distance. • ADA accessibility of spaces in 2004 Garage. • Detour signing. • Public information system.
Air Quality	<ul style="list-style-type: none"> • Potential construction air quality impacts can occur due to the use of diesel-powered construction vehicles. • Fugitive dust emissions can occur during demolition, ground excavation, material handling and storage, movement of equipment at the site, and transport of material to and from the site. 	<ul style="list-style-type: none"> • Proper operation and maintenance of construction equipment • Dust control and abatement
Noise	<ul style="list-style-type: none"> • Considering the additional noise dampening effect of the intervening structures, the change from ambient levels associated with the construction activities at the site of the Original Garage will not be significant. 	<ul style="list-style-type: none"> • Maintenance of construction equipment. • Notification to sensitive receptors in advance of elevated noise levels. • Special Provision on Noise will be included in Construction Contract.
Stormwater and Water Quality	<ul style="list-style-type: none"> • Construction activities will only minimally increase the potential for erosion of soil and discharge of sediment to receiving waters. • Potential for other contaminated soil or groundwater that has not yet been identified to be encountered during construction. 	<ul style="list-style-type: none"> • Stormwater and dewatering wastewater registration consistent with <i>2004 Connecticut Stormwater Quality Manual</i> • Erosion prevention and sedimentation control measures consistent with <i>Connecticut Guidelines for Erosion and Sedimentation Control</i>.

Table ES-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Construction Related (continued) <i>Section 3.22.2</i>		
Hazardous Materials	<ul style="list-style-type: none"> • Residual petroleum-contaminated soil from the release at 433 Washington Boulevard may be encountered. • Demolition will generate a significant quantity of construction and demolition debris that will require management and disposal. 	<ul style="list-style-type: none"> • Proper characterization and disposal of contaminated soils. • Pre-demolition surveys. • Proper segregation, reuse, recycling and/or disposal of demolition debris. • Proper management of hazardous or toxic construction materials.
Safety	<ul style="list-style-type: none"> • Demolition and construction activities will occur in a dense urban area near roadways, pedestrian routes, and parking areas that will remain partially or completely open during construction. 	<ul style="list-style-type: none"> • Implement safety management measures consistent with State and FHWA guidelines.
Utilities	<ul style="list-style-type: none"> • Planned, temporary electrical outages may be required to connect new construction to existing service. 	<ul style="list-style-type: none"> • Coordination with utility company and customers regarding planned service interruptions .

Conclusion

The Proposed Action will meet the purpose and need of the project by replacing the aging Original Garage with additional parking capacity, improving multimodal traffic and pedestrian flow around the Stamford Transportation Center and Station Place and minimizing the public costs for construction, operation and maintenance by promoting TOD.

The Proposed Action has the potential to result in adverse environmental impacts. However, with mitigation measures in place as identified in Table ES-1, no significant impacts are anticipated to remain as a result of the Proposed Action.

Comments received during the public review period for the EIE will be considered in making a record of decision on the Proposed Action.

Public Involvement

A Notice of Scoping for the Proposed Action was published in the Council on Environmental Quality (CEQ) Environmental Monitor on May 8, 2012 and a Public Scoping meeting was held at the Stamford Government Center on May 24, 2012.

A Public Hearing is scheduled for 7:00 p.m. on Thursday, September 20, 2012 at the Stamford High School at 55 Strawberry Hill Avenue to solicit public comments on the EIE. Written comments on this document and any other pertinent information may be submitted on or before October 5, 2012 via email to:

dot.environmentalplanning@ct.gov

or mailed/delivered to:

Mr. Mark W. Alexander
Transportation Assistant Planning Director
Connecticut Department of Transportation
P.O. Box 317546
Newington, CT 06131-7546

1. INTRODUCTION

The Connecticut Department of Transportation (CTDOT) is the owner of the Stamford Transportation Center intermodal transportation facility in Stamford, Connecticut. CTDOT is proposing a project to replace the original 727-space parking garage that was opened in 1987 (Original Garage), and to construct new parking facilities for at least 1,000 spaces to replace the Original Garage spaces plus any additional commuter parking spaces needed to replace spaces lost from CTDOT-owned parking as a result of development, and to increase the commuter parking supply. The project will also provide ancillary improvements for vehicular and pedestrian circulation and access along Station Place as well as provide an opportunity for Transit Oriented Development (TOD). Because the project will involve the construction of new parking facilities for 200 vehicles or more and will be financed either in whole or in part with State funds, it is subject to the Connecticut Environmental Policy Act (CEPA).

For the purposes of this CEPA document, the TOD component(s) are being considered as part of a “state action” under the Connecticut Environmental Policy Act. Including components is considered by CTDOT to be a discretionary exercise, and the inclusion is not intended to create a precedent or act as a waiver of CTDOT’s discretion to include similar or other components in future CEPA “state action” analyses for this or other projects.

This EIE has been prepared in accordance with the requirements of CEPA, as amended by Public Act 02-121, and where applicable, Sections 22a-1a-1 to 22a-1a-12, inclusive, of the Regulations of Connecticut State Agencies (RCSA). This EIE describes the Purpose and Need for the action, along with the alternatives being considered, and evaluates the direct, indirect, and cumulative impacts associated with the Proposed Action, as well as any adverse environmental effects and proposed mitigation measures. CTDOT is the sponsoring agency for the Proposed Action and this EIE.

1.1. Project Description

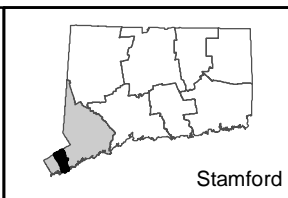
The project involves the replacement of the Original Garage at the Stamford Transportation Center in Stamford, Connecticut (see Figure 1-1 for Project Location Map). The garage is a component of the CTDOT Metro-North train station at Stamford, also known as the Stamford Transportation Center. The existing parking complex, which includes the Original Garage and a parking garage that was opened in 2004 (2004 Garage), is located immediately south of the train station, and is accessed from the station by pedestrian bridges and surface crosswalks. CTDOT also provides a surface lot for commuters north of the tracks on South State Street. Figure 1-2 presents an aerial map of the existing Stamford Transportation Center identifying the Original Garage, the 2004 Garage, and the surface lot.

The project includes demolition of the Original Garage and construction of the new parking facilities. A key objective of this project is to maintain the existing supply of commuter parking during construction, within a reasonable walking distance, to ensure that potential impacts to transit ridership will be minimized throughout construction. Consequently, the project considers alternatives for providing new and/or temporary parking facilities at other sites that are reasonably accessible to the Stamford Transportation Center in order to provide the same supply of commuter parking supply spaces during construction that currently exist.



0 1,000 2,000 Feet

Source: The University of Connecticut Libraries' Map and Geographic Information Center (MAGIC), USGS



Project Location Map

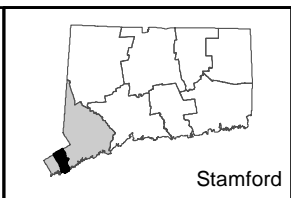
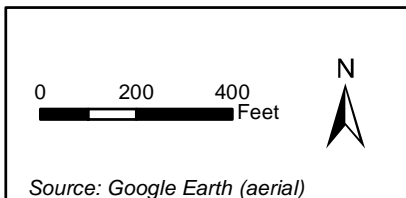
STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE

Connecticut Department of Transportation

State Project No. 301-047

Stamford, Connecticut

FIGURE 1-1



Existing Stamford Transportation Center
 STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
 Connecticut Department of Transportation
 State Project No. 301-047
 Stamford, Connecticut

The project is being undertaken pursuant to section 13b-79kk of the Connecticut General Statutes which authorizes CTDOT to pursue TOD consistent with that statute. Therefore, the project will be undertaken with private participation to achieve the construction of the new parking facilities while providing the opportunity for TOD.

The project also includes replacing the pedestrian bridge that connects the original parking garage to the train station; and providing pedestrian and traffic circulation improvements for Station Place and between the new parking facilities and the train station.

1.2. Background

The Stamford Transportation Center is a major stop on the New Haven Line and Amtrak's Northeast Corridor, and is the terminus of CTDOT's Shore Line East express commuter rail service from between New Haven and points east. The Stamford Transportation Center also serves as an intermodal transportation hub in Downtown Stamford, accommodating transfers between commuter rail, bus, and taxi services, and providing parking and other accommodations for motorists, bicyclists, and pedestrians who utilize these services from the center.

In response to a high demand for increased parking in the 1980s, CTDOT proposed the construction of the second garage (referred to herein as the 2004 Garage) to expand the available parking supply. A Finding of No Significant Impact (FONSI) under CEPA was prepared in 1999 for construction of the second garage (CTDOT, 1999), as was a Categorical Exclusion under the National Environmental Policy Act (NEPA) (Federal Highway Administration, 2000). This garage, which is attached to the Original Garage, began construction in late 2002 and opened in 2004. The 2004 Garage contains approximately 1,190 parking spaces, for a total supply of 1,917 spaces in the parking complex. The parking complex includes entrances from Atlantic Street to the east and Station Place to the north which are readily accessible from Interstate 95 Exits 7 and 8.

CTDOT is proposing to demolish the Original Garage at the Stamford Transportation Center and to construct new parking facilities either at the Original Garage site and/or at other sites that are reasonably accessible to the Stamford Transportation Center. The Original Garage is a five-level, cast-in-place post-tensioned parking structure with a footprint measuring approximately 440 feet by 117 feet, with the long axis oriented northeast-southwest. Each level is approximately 50,000 square feet in area. The bottom floor is used for entry and access to other floors while also containing parking.

PROJECT HISTORY

- 1987: Opening of Original Garage
- 2004: Opening of Garage Expansion
- 2006: Condition Assessment of Original Garage
 - Evaluated Repair / Replacement Options
 - Recommended Replacement
- 2010: Updated 2006 Condition Assessment
 - Reaffirmed Replacement Recommendation

The condition of the Original Garage has been a concern since its construction by the City of Stamford. During construction, design deficiencies were discovered and construction was halted prior to completion. The deficiencies were corrected by constructing additional concrete posts, columns, and shear walls, and adding steel bracing at the ends of beams (Desman Associates, 2006).

Condition assessments of the garage were performed in 1996 and 2006 and degradation of some of the Original Garage's concrete and reinforcing components was found. In addition, non-structural deficiencies were evident in 2006, including fire standpipes and drainage systems that do not meet current requirements and require upgrading (Desman Associates, 2006). CTDOT conducted an updated assessment of the garage condition in 2010 (Desman, 2010), which reaffirmed the previous assessments and supported previous recommendations for replacement of the garage.

1.3. Purpose and Need (Justification for the Action)

The Purpose and Need for the Proposed Action is three-fold as follows:

1. Replace the aging Original Garage that services the Stamford Transportation Center with low maintenance, long service life facilities that accommodate the number of parking spaces lost during construction plus adds at least 273 new commuter parking;
2. Expand the availability of parking and improve multimodal traffic and pedestrian flow around the Stamford Transportation Center and Station Place; and
3. Minimize the public costs for construction and ongoing operations and maintenance of the parking facilities serving the Stamford Transportation Center by promoting TOD which leverages and enhances the multimodal public transportation services provided by the Stamford Transportation Center.

The purposes of the Proposed Action are consistent with Section 13b-79kk of the Connecticut General Statutes, which encourages TOD near multi-modal transportation facilities, and with CTDOT's continuing commitment to support multimodal, sustainable transportation systems.

Specific needs and objectives for the Proposed Action relate to addressing the limited service life and high maintenance costs of the Original Garage; maintaining and expanding parking capacity; improving multimodal accommodations; and meeting financial requirements; as follows:

- Demolish the Original Garage and provide access to temporary parking for the current number of commuter parking spaces within ¼ mile (approximately a 5 minute walk) distance of the Stamford Transportation Center at all times during demolition and construction.
- Replace the elevated pedestrian walkway connection to Stamford Transportation Center that is currently connected to the Original Garage.
- Construct permanent parking facilities within ¼ mile distance of the Stamford Transportation Center.
- Improve the accessibility, circulation, and quality of service on Station Place for vehicular traffic flow, taxi/shuttle and Kiss-and-Ride, and pedestrians and bicyclists.
- Minimize cost to the State:
 - Provide new Parking Access and Revenue Control System (PARCS) for existing and proposed parking facilities at the Stamford Transportation Center.
 - Maximize revenue to the State from State property.
 - Increase the productive and active use of available Stamford Transportation Center property and air rights by encouraging TOD.

- Minimize the State’s financial contribution during design and construction.
- Promote economic development through the opportunity for TOD initiatives that improve land use/transportation synergies and that support State policy goals for improved environmental and energy sustainability.

1.3.1. Garage Condition

In 1996, a condition assessment report of the Original Garage prepared by LZA Group (as reported by Desman Associates, 2006) found spalling, cracking, rust staining, and efflorescence throughout the structure, indicating degradation of some of the structure’s concrete and reinforcing components. Testing performed during the assessment found the Original Garage to be constructed of concrete that is more porous than typical, allowing water and chloride to penetrate, causing corrosion to reinforcing steel. A second assessment prepared by CTDOT in 2002 found increased limits of these deficiencies. CTDOT planned a rehabilitation to rehabilitate the Original Garage as part of the garage expansion project, but this rehabilitation was not performed since the Original Garage was serviceable and the funds allocated for repair were insufficient.

In the most recent condition assessment report for the Original Garage (Desman Associates, 2006), “significant areas of scaling, delamination and spalling of the deck” were reported. Delamination repairs were required on approximately 85,000 square feet of deck at that time, not including spall repairs required on the underside of beams. The depth of concrete cover available over steel reinforcing was found to be ¾-inch as designed or less in some areas. Incidence of cracking appeared to have increased, and evidence of corrosion within structural concrete components was noticed, indicating penetration of moisture. Expansion joints and construction joints that were previously replaced were determined to again be in need of replacement. The garage was also found to have non-structural deficiencies, including fire standpipes drainage systems that do not meet current requirements and require upgrading.

That condition assessment report also outlined the required repairs and potential repair methods and costs. Although rehabilitating the structure would extend its useful service life, with expedited implementation of repairs and proper costly continued maintenance, the structure would only continue to be serviceable for approximately 10 to 15 years. By comparison, it was estimated that the cost of replacing the Original Garage is comparable to the complete repair costs and the anticipated service life of a new replacement structure could be up to 60 years.

CTDOT issued an updated report in 2010 (Desman, 2010), and confirmed the conclusions and recommendations of the 2006 report (Desman, 2006).

1.3.2. Parking Demand

Metro-North’s New Haven Line reached a record ridership of 38.2 million in 2011, which represented an increase of 2.4% from the previous year. Since 2004, ridership on the New Haven Line has increased more than 17% (CTDOT, *Annual Performance Measures Summary Reports*). The fastest growing segment of the New Haven Line is the group of stations from Stamford to New Haven. Average daily weekday ridership at the Stamford station has grown more than 30% over the period 2001-2008. Additionally, Amtrak ridership at the Stamford station has increased at an average rate of more than 5% annually over the period from 2001-2011.

Growth in rail ridership at the Stamford Transportation Center has resulted in a high level of demand for parking. Despite ongoing local and regional efforts to improve public transit options to the Stamford Transportation Center, demand for passenger vehicle parking at the station remains strong. The *2011 Rail Station Parking Study Update* prepared by the South Western Regional Planning Agency (SWRPA, 2011) reports that the waiting list for monthly parking privileges at the station parking garages numbered 1,040 individuals in 2010, and that the estimated time on the wait list is approximately two years.

In the *Congestion Mitigation System Plan – Vision 2020* (SWRPA 2003), SWRPA identified the beneficial role of increased parking at rail stations to the regional transportation system by improving the convenience of train service. This Plan recommended that significant parking expansion be targeted to six regional stations, including Stamford, and that parking expansion at other community-based stations be limited. When the plan was published, the Stamford Transportation Center garage expansion (2004 Garage) was already underway, and the plan stated that the quantity of parking being constructed would not be adequate to meet demand. Since 2004, increasing ridership and the long waiting list for monthly parking privileges continues to underscore the need for additional parking at the station.

1.4. Public Participation and Agency Coordination

A Notice of Scoping for the Proposed Action was published in the Council on Environmental Quality (CEQ) Environmental Monitor on May 8, 2012 (presented in Appendix A), and a Public Scoping meeting was held at the Stamford Government Center on May 24, 2012. Public comments received during the 15-day comment period generally included concerns about:

- Increased walking distance on total commute times.
- Exposure to inclement weather that would be associated with alternative temporary and/or permanent parking locations.
- Effect of TOD on commuter accessibility to the Stamford Transportation Center.
- Opportunities to improve/enhance pedestrian and bicycle access.

A summary of the Public Scoping meeting, frequently asked questions and agency comment review letters are included in Appendix A.

A Public Hearing and the associated 45-day comment period will be conducted upon publication of the EIE. The Public Hearing is scheduled for September 20, 2012 at 7 p.m. at the Stamford High School at 55 Strawberry Hill Avenue and the public is encouraged to submit any comments on or before October 5, 2012.

Additional agency coordination during preparation of the EIE included outreach to various federal and state resource agencies to obtain necessary resource data, as well as contact with officials from the City of Stamford.

2. ALTERNATIVES CONSIDERED

The primary purpose of the project is to replace the Original Garage because of structural and non-structural deficiencies. Secondary purposes of the project are to expand the availability of parking to address increasing ridership and associated parking demands at the train station; to improve multimodal traffic and pedestrian flow around the station and along Station Place; to provide temporary parking during construction; and to minimize public costs for the construction, maintenance, and operations of parking facilities serving the station. The alternatives considered in this EIE are as follows:

- No-Action (baseline, required under CEPA)
- Repair Original Garage
- Replace Original Garage on Existing Site
- Replace Original Garage in conjunction with Transit-Oriented Development (TOD)

Each of these alternatives assumes the continued use of the 1,190-space 2004 Garage.

2.1. No-Action

Under the No-Action Alternative, current operations at the Original Garage would remain unchanged, with ongoing, routine maintenance of the parking garage for minor repairs and improvements. Major structural repairs, rehabilitation, or other work requiring significant allocation of State funds would not be performed. Under the No-Action Alternative, structural components of the Original Garage would continue to deteriorate and the garage structure would eventually become unsafe for use and would be closed. The eventual closure of the Original Garage under the No-Action Alternative would result in the loss of approximately 727 parking spaces.

The No-Action Alternative would not address the structural and non-structural deficiencies of the Original Garage or expand the availability of parking at the Stamford Transportation Center. Although this alternative would involve no significant near-term investment of State funds and no significant environmental impacts, it would also result in the need to permanently close the facility in the not too distant future without providing long-term parking when this occurs and would not meet the project purpose and need relative to improving the garage condition and expanding commuter parking supply.

2.2. Repair Original Garage

This Repair Alternative includes repair of deficiencies in the Original Garage structure. As described in the 2006 condition assessment report, the recommended repairs to reasonably extend the service life of the Original Garage include substantial slab repairs; installation of a waterproof membrane on the slab of the entire garage; reinstallation of bollards and expansion joints; repair of underside deterioration (spalls and cracks); and repair of other parking garage components. Repairs could be phased, but impacts on parking during construction could result in a temporary 20% to 25% loss of capacity (145 to 180 spaces).

The Repair Alternative would extend the service life of the garage by approximately 10 to 15 years. The estimated cost of the Repair Alternative is similar in magnitude to that of the

estimated cost for replacing the Original Garage with a minimum 1,000-space new garage on the same site. Although this alternative would address the structural deficiencies of the garage in the near-term, it is not a cost-effective, long-term investment given the limited service life, and it would not expand the availability of parking. As such, this alternative does not meet the project purpose and need relative to expanding parking supply and minimizing public costs, and thus is not analyzed in detail.

2.3. Replace Original Garage on Existing Site

This Replacement Alternative includes demolition of the Original Garage and construction of a new, replacement parking garage within the same general footprint. The new garage would contain at least 1,000 commuter parking spaces, which would expand the availability of commuter parking at the Stamford Transportation Center. The Replacement Alternative also includes replacement of the existing pedestrian bridge that connects the Original Garage to the train station and minor improvements to pedestrian and traffic circulation on Station Place between the parking garage and the train station. The estimated service life of this Replacement Alternative is approximately 60 years.

Providing adequate temporary parking during replacement of the Original Garage is a key objective of the project to ensure that the number of parking spaces lost during construction will be provided at another site within ¼ mile of the Stamford Transportation Center, and that potential impacts to transit ridership will be minimized throughout construction. CTDOT investigated potential sites to provide temporary parking during construction and initially considered a ¼-mile range from the Stamford Transportation Center (which represents an approximate 5-minute walking distance), but then expanded to a ½-mile range due to the lack of available parking within ¼ mile. A total of 10 candidate sites were identified and evaluated by CTDOT. Primary factors that were considered included current site utilization, pedestrian access, distance from the Stamford Transportation Center, and availability for public access. The initial investigations identified three sites that were considered the most feasible to provide temporary parking; however, these three sites were estimated to accommodate a combined total of 500 spaces – or, a net loss of 227 spaces during construction. The distance of these sites from the Stamford Transportation Center also would require deployment of a shuttle system to mitigate the walking distance. CTDOT’s research of the logistics for providing a system that would be responsive to surges of ridership demand associated with train arrivals and departures concluded that such a shuttle system would not be feasible and would add substantial cost beyond the construction cost of the new garage. Consequently, this alternative was determined to not be feasible, and would not meet the project’s purpose and need, thus not analyzed in detail.

2.4. Replace Original Garage in conjunction with Transit-Oriented Development (TOD) (Proposed Action)

This Replacement with TOD Alternative, which is the Proposed Action in this EIE, similarly involves the demolition of the Original Garage and construction of new parking facilities with a net minimum gain of 273 commuter parking spaces (i.e., construct a minimum of 1,000 new parking spaces to replace the 727 spaces lost by demolition of the Original Garage and to add at least 273 new commuter parking spaces). However, in this alternative, the new parking facilities would be built in conjunction with private-sector TOD, as defined under Section 13b-79kk of the Connecticut General Statutes.

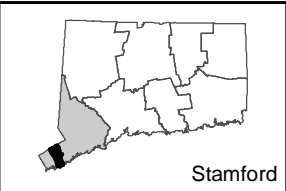
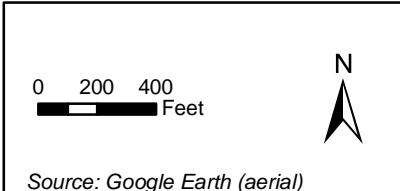
In February 2012, CTDOT requested Statements of Qualifications/Conceptual Proposals (under Request Number STOD22912) from private-sector developers to identify potential opportunities to advance the Proposed Action through a public-private agreement. Based on initial responses to CTDOT's request, the new parking facilities and TOD under this alternative could take a variety of forms in a variety of locations within a ¼-mile (approximately 5-minute walking distance) of the Stamford Transportation Center. Figure 2-1 shows the general limits of the location for the potential new parking garage(s) and TOD sites (Proposed Action Boundary). This figure also shows the general study area boundary used to define the limits for the evaluation of resources under Section 3 of this EIE. The study area boundary is based on a ½-mile radius around the existing Stamford Transportation Center station.

Ultimately, the characteristics of the new parking facilities, temporary parking facilities, TOD sites, Station Place improvements, and other amenities/features associated with the Proposed Action will be subject to the terms of the public-private agreement between CTDOT and the selected developer. The developer will be afforded the opportunity to utilize development rights and other property interests that are available within the Stamford Transportation Center and Station Place, as well as the South State Street surface parking lot, which is generally bounded by I-95 to the north, Washington Boulevard to the east, and the southerly side of the railroad tracks to the south. Depending on what is proposed, local approvals may also be needed. Based on the initial responses from private-sector developers, the potential range of characteristics of the Proposed Action could include:

- **New Parking Facilities:** A minimum of 1,000 new commuter parking spaces could be accommodated in one parking garage located within the approximate footprint of the existing Original Garage structure, or within multiple new parking garages located in the Proposed Action Boundary and within ¼ mile walking distance of the Stamford Transportation Center.
- **Temporary Parking Facilities:** Temporary commuter parking to accommodate any spaces displaced during demolition of the Original Garage and construction of a new parking garage(s). These could be accommodated in one or more off-site locations. These locations could consist of structured and/or surface parking that is within ¼ mile walking distance of the Stamford Transportation Center.
- **Transit-Oriented Development (TOD):** TOD within the Proposed Action Boundary could range from new, small-scale retail opportunities to large mixed-use development (residential units, office, and retail space) contained in towers on one or more sites in the Proposed Action Boundary.
- **Station Place Improvements:** Physical modifications to Station Place could range from streetscape improvements with minor kiss-and-ride and taxi area improvements, to complete reconstruction of the driveway with new pedestrian connections to the station overhead.

- **Other Amenities:** Commuter amenities in and around the Stamford Transportation Center could include pedestrian improvements (such as pedestrian bridges that directly new parking facilities to the station or station platforms); real-time dynamic signage for new parking facilities to inform commuters of parking space availability; bike storage and bike parking facilities; car charging stations; and aesthetic improvements.
- **Parking Access and Revenue Control System (PARCS):** PARCS will be provided for new parking facilities and integrated into the 2004 Garage.

The public contribution to the project will be no more than \$35 million and will be limited for use toward funding of capital improvement costs associated with the public transportation components of the project. The balance of the project costs will be privately financed. The service life of the new parking facilities will be up to 60 years.



Proposed Action Boundary
 STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
 Connecticut Department of Transportation
 State Project No. 301-047
 Stamford, Connecticut

FIGURE
 2 - 1

3. EXISTING ENVIRONMENT AND IMPACT EVALUATION

3.1. Land Use, Zoning and Local and Regional Development Plans

3.1.1. Existing Conditions

3.1.1.1. Land Use

The study area is located within the downtown of the City of Stamford, the fourth largest city in Connecticut. The City is a growing business center with a high number of employment locations within close proximity to the study area. The Proposed Action Boundary is adjacent to two vital transportation links, Interstate 95 and the Stamford Transportation Center, served nationally by Amtrak and regionally by Metro North. The Stamford Transportation Center is a multi-modal transportation facility offering connections between regional and local rail and bus service, located within the study area.

Land use categories within the City, as shown in Figure 3-1, are identified by the *Stamford Master Plan* (RPA, 2002). The Proposed Action Boundary primarily falls within the “Downtown – Collar” category. This category provides a transition between the highly developed Downtown Core and Corridor areas (north of the Proposed Action Boundary) to lower-developed areas. This category is intended to provide a range of development types with pedestrian and mass transit access encouraged. Generally, development in the Downtown – Collar category shall be “at significantly lower density” than the Downtown Core and Corridor, except “at the Transportation Center” (RPA, 2002).



The southeastern area of the Proposed Action Boundary is categorized as “Residential – Medium Density Multifamily”. This land use category serves areas in transition from lower to medium density use, featuring apartments, row houses, or other multifamily housing units. This category also allows for supporting uses, such as schools, houses of worship, and other institutions.

The western limits of the Proposed Action Boundary, adjacent to the Mill/Rippowam River are categorized as “Open Space – Public Parks”. The purpose of this category is to provide and support lands for public use and recreation.


















3.1.1.2. Zoning

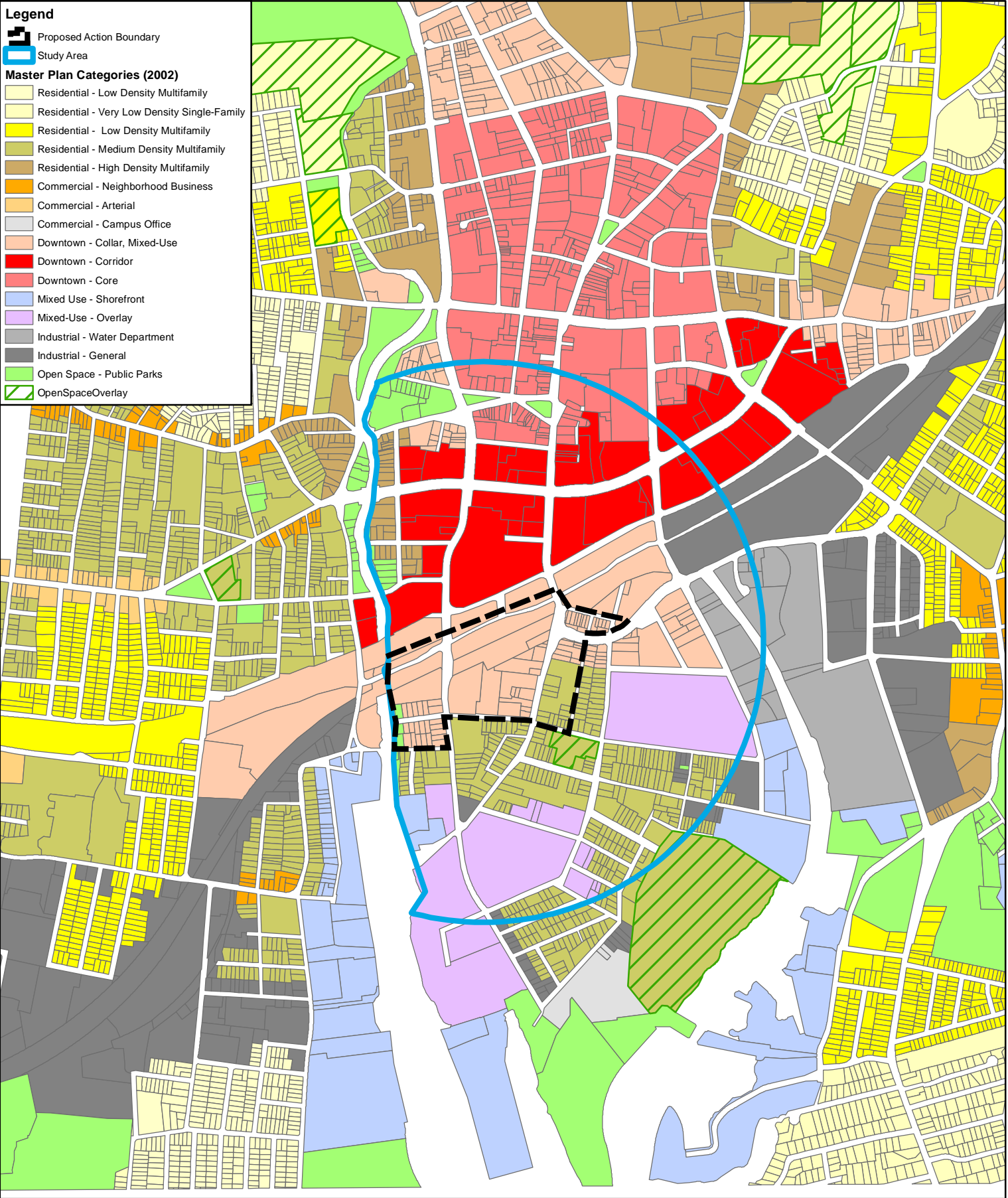
The Proposed Action Boundary, as currently zoned, incorporates pieces of the Transportation Center Design District (TCDD), General Industrial District (M-G), Multiple Family Residence Design (R-MF), and Limited Business (C-L) zones. Adjacent zones include Central City – North (CC-N) to the north and Southend Redevelopment District, North (SRD-N) to the east. Additionally, the Proposed Action Boundary has special zoning regulations for the TCDD and SRD-N that provide for developments meeting their respective criteria within an expanded area (beyond their respective zones) encompassing the entirety of the study area. See Figure 3-2 for a map of existing zoning.

Legend


-  Proposed Action Boundary
-  Study Area

Master Plan Categories (2002)

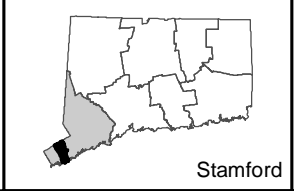
-  Residential - Low Density Multifamily
-  Residential - Very Low Density Single-Family
-  Residential - Low Density Multifamily
-  Residential - Medium Density Multifamily
-  Residential - High Density Multifamily
-  Commercial - Neighborhood Business
-  Commercial - Arterial
-  Commercial - Campus Office
-  Downtown - Collar, Mixed-Use
-  Downtown - Corridor
-  Downtown - Core
-  Mixed Use - Shorefront
-  Mixed-Use - Overlay
-  Industrial - Water Department
-  Industrial - General
-  Open Space - Public Parks
-  OpenSpaceOverlay



0 600 1,200 Feet



Source: City of Stamford



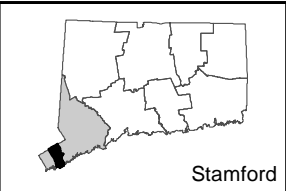
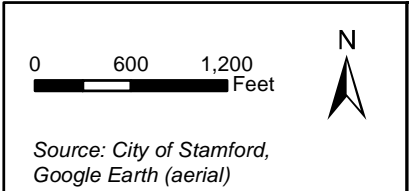
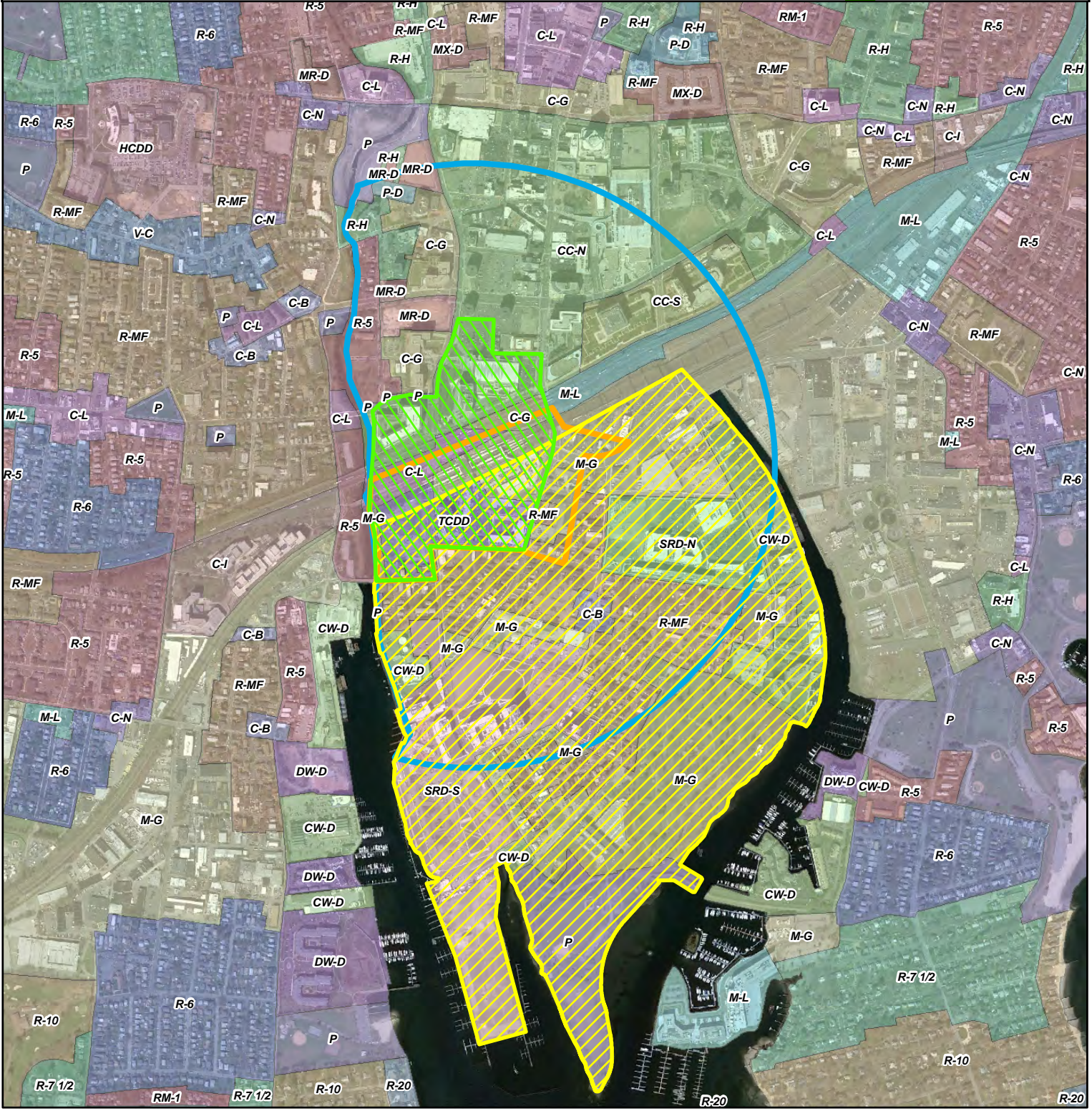
Land Use Categories

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE

Connecticut Department of Transportation
State Project No. 301-047
Stamford, Connecticut

FIGURE
3 - 1

Legend									
	Study Area		RA-1D: One Family Residence		P-D: Planned Development		C-I: Intermediate Commercial		M-G: General Industrial
	Proposed Action Boundary		R-7 1/2: One Family Residence		C-D: Designed Commercial		C-G: General Commercial		V-C: Village Commercial District
	R-10: One Family Residence		R-6: One Family, Two Family Residence		IP-D: Designed Industrial Park		CC-S: Central City South		TCDD: Transportation Center Design District
	R-20: One Family Residence		RM-1: Multiple Family Low Density Design		MX-D: Mixed Use Development		CC-N: Central City North		HCDD: Hospital Complex Design District
	R-10: One Family Residence		R-5: Multiple Family Medium Density Design		CSC-D: Designed Community Shopping Center		CW-D: Coastal Water Dependant		SRD-N: South End Redevelopment District North
	R-20D: One Family Residence		R-MF: Multiple Family Residence Design		C-N: Neighborhood Business		DW-D: Designed Waterfront Development		SRD-S: South End Redevelopment District North
	RA-1: One Family Residence		R-H: Multiple Family High Density		C-B: Community Business		M-D: Designed Industrial		P: Park
	RA-2D: One Family Residence		MR-D: Mill River Design		C-L: Limited Business		M-L: Light Industrial		SRD-N Zoning Tract
									TCDD Zoning Tract



Existing Zoning

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
 Connecticut Department of Transportation
 State Project No. 301-047
 Stamford, Connecticut

FIGURE
3 - 2

It is the State's position that local zoning requirements do not apply to any portion of the project that is located on state-owned land. Any proposed development on private property in the study area must conform and meet the *Zoning Regulations* of Stamford, Connecticut, as adopted November 30, 1951, with subsequent amendments. Existing zoning regulations which may be applicable to the Proposed Action are described below, but do not represent the full zone regulations. See the *Zoning Regulations* available on the City of Stamford website (City of Stamford, 2012), for full zoning regulations for the respective zones.

Development in the M-G zone can contain commercial parking garages, smaller retail and housing. The R-MF zone is predominantly, "high middle density housing in low rise buildings". The northwestern corner of the Proposed Action Boundary includes parcels zoned as C-L, allowing a variety of commercial and higher density housing uses.

However, as mentioned above, the Proposed Action area up to Atlantic Street to the east falls within track TCDD. Areas within the Proposed Action Boundary east of Atlantic Street are contained within the SRD-N tract. Both are further described below. These two tracts allow proposed uses which would be otherwise non-conforming to the existing zoning, providing the development meets the requirements of the tract zone and subject to the Zoning Board approvals process.

The TCDD "is intended to encourage mixed use development of property in the vicinity of the Stamford Transportation Center...". Applicable regulations for the TCDD include allowance of mixed use development (three or more uses), appropriately screened parking floors, Below Market Rate housing not less than 12% of housing units, and maximum building height of 165'. The maximum building height can be increased to 250' subject to meeting four specific criteria.

The SRD-N is intended to provide for large-scale mixed use developments in the South End. Proposed developments should incorporate smart growth principles and enhance pedestrian safety and access to the Stamford Transportation Center and Downtown. For qualification as a SRD-N zoning tract, proposed sites shall be twenty acres or more, provide infrastructure improvements as needed, and meet architectural design criteria for improvement to the South End.

3.1.1.3. Local and Regional Development Plans

The Regional Plan Association (RPA) and Phillips Preiss Shapiro Associates, Inc. completed the *Stamford Master Plan* (RPA, 2002). The *Stamford Master Plan* serves to direct City development interests to regenerate pedestrian friendly development at underutilized parcels throughout the City. The Land Use recommendations of the *Stamford Master Plan* are summarized above in Section 3.1.1.1. Additionally the *Stamford Master Plan* includes specific recommendations for the South End neighborhood, including supporting low income housing, providing housing redevelopment along major corridors (including Atlantic Street and Washington Boulevard in the study area), upgrading industrial districts adjoining residential areas, employment of streetscape policies on major corridors, and promoting neighborhood (pedestrian friendly) shopping fronting the Stamford Urban Transitway (Dock Street). Generally, the *Stamford Master Plan* encourages mixed use and pedestrian friendly development around the Stamford Transportation Center.

The *Stamford Transportation Center Master Plan* (City of Stamford, 2010) recommends replacement of the Original Garage with a modest capacity increase, but not concentrated at one location and improved pedestrian access to the Stamford Transportation Center. Long-term improvement recommendations include TOD development with parking on the site of the Original Garage and improvements to Station Place. The *Stamford Transportation Center Master Plan* recommends providing separate passageways, including grade separated pedestrian crossings, between proposed parking locations and the Stamford Transportation Center. The *Plan* also recommends parking throughout multiple locations throughout the area of the Stamford Transportation Center to spread demand evenly across the transportation system. Further pedestrian recommendations include connections to the Mill River Bikeway and Pedestrian Trail and aesthetic improvements to pedestrian approaches (including landscaping and lighting).

The South Western Region Metropolitan Planning Organization has published the *South Western Region Long Range Transportation Plan 2011-2040 (RLRTP)* “as a “blueprint’ for transportation within the eight municipalities,” including Stamford. The *RLRTP* includes the replacement of the Stamford Transportation Center parking garage in addition to a multi modal development on the Stamford Urban Transitway and recommends coordination with *The 2010 Stamford Transportation Center Master Plan*.

The South Western Regional Planning Agency (SWRPA) undertook the *South Western Region Rail Station Parking Study* (SWRPA, 2009), to evaluate the region’s rail station parking condition and develop recommendations to improve parking conditions. This study identified concerns with the existing capacity and wayfinding within the existing garages. The study discusses the State’s project to reconstruct the Original Garage and raises a concern over maintenance of parking capacity during construction.

The Transportation Strategy Board published the *Map to a Vibrant Economy: Connecticut’s Transportation Strategy - Report and Recommendations of the Transportation Strategy Board* in 2011, as a follow up to their *Moving Forward: Connecticut’s Transportation Strategy - Report and Recommendations of the Transportation Strategy Board*, published in 2007. The report includes a recommendation to “expedite replacement of the Stamford rail station parking garage...” Additionally, the Board recommends that CTDOT take “aggressive action to improve rail station parking on the New Haven line.”

CTDOT published the *Strategic Long-Range Transportation Plan (2009-2035)* in 2009. This *Plan* includes documentation of funding for the construction of the Stamford Transportation Center parking facility and promotes use of TOD around train stations state wide. CTDOT also published the *2011 Master Transportation Plan*, which documents Project No. 301-47, the demolition and replacement of the Stamford Parking Garage. This report recommends exploring public/private partnerships to ensure current capacity is maintained during construction.

3.1.2. Impact Evaluation

The Proposed Action was evaluated for conformance to existing land use, zoning, and local and regional development plans. Further, the Proposed Action was evaluated based on two components: provision of a stand-alone parking garage, and provision of a TOD (which could encompass any number of mixed uses).

3.1.2.1. Land Use

The Proposed Action fits within the existing land use of the majority of the Proposed Action Boundary, the Downtown – Collar land use category, and is consistent with other ongoing redevelopment projects in this area of the City. If non-multi-family housing elements are a feature of the Proposed Action and are to be located in the southeast section of the Proposed Action Boundary, currently categorized Residential – Medium Density Multifamily, then these elements would be inconsistent with the *Stamford Master Plan*. Elements of the Proposed Action fronting Mill/Rippowam River, if proposed, will need to consider conformance issues related to the Open Space – Public Parks land use category.

3.1.2.2. Zoning

It is the State’s position that local zoning requirements do not apply to any portion of the Proposed Action that is located on state-owned land. A parking garage proposed within the General Industrial District (M-G) would be permitted under existing zoning; however mixed use elements of a TOD, including housing, are not permitted under current M-G zoning regulations. The Proposed Action would not be permitted under the current regulations for the Multiple Family Residence Design (R-MF). A parking garage proposed within the Limited Business (C-L) zone would be permitted under existing zoning conditions. A proposed mixed use TOD in the C-L could face restrictions on building height, development density and mix of uses which would be detrimental to the intended design of the TOD. However, the Proposed Action is located within the special zoning tracks TCDD and SRD-N which overlay zones M-G, R-MF and C-L within the Proposed Action Boundary.

As discussed in Section 3.1.1.2, developments in the Proposed Action Boundary could conform to the requirements of these design tracts, rather than the parcel’s existing zone, but locations within the study area may not meet the criteria for having an area of twenty contiguous acres for SRD-N.

3.1.2.3. Local and Regional Development Plans

The No Action alternative is inconsistent with local and regional development plans as it does not increase parking capacity or promote transit-oriented development around the Stamford Transportation Center.

The Proposed Action is consistent with local and regional development plans.

3.1.3. Mitigation

3.1.3.1. Land Use

The Proposed Action is planned to be compatible with the scale and character of the existing Stamford Transportation Center facilities and the on-going redevelopment projects in the vicinity. As such, it is anticipated that the Proposed Action will be consistent with the surrounding land uses. If elements of the Proposed Action are proposed to be located on private property fronting on the Mill/Rippowam River, the design will need to consider conformance with the designated Open Space-Public Park land uses.

3.1.3.2. Zoning

No mitigation is expected to be required for development of the Proposed Action on state-owned land, though the development on private property would need to be approved by the zoning board through the standard zoning process.

Proposal of a parking garage on private property within the General Industrial District (M-G) or Limited Business (C-L) would require a site plan review under Section 7.5 Review of Large Scale Development. A mixed use TOD in either the M-G or C-L zones would likely require a special use exception and would likely require exemptions for building height and floor area ratio (FAR), based on expected development patterns of the proposed action. Development of TOD within the Multiple Family Residence Design (R-MF) zone would likely require special exceptions for use, in addition to special exceptions for building size and FAR, based on expected development patterns.

Alternatively to seeking special exceptions for approvals of use, building size, or any non-conforming issues, the TOD could request designation as a TCDD or a South End Design District (SRD-N) tract. As stated above, the Proposed Action is consistent with the zoning requirements of the TCDD. The area eligible for classification as a TCDD does not extend east of Atlantic Street. As discussed in section 3.1.2.2., for designation as a SRD-N tract the development must contain 20 contiguous acres, as such, a special exception for development size may be required for designation of a SRD-N tract in the study area.

3.1.3.3. Local and Regional Development Plans

No mitigation is required; the Proposed Action is consistent with local and regional development plans.

3.2. Consistency with State Plan of Conservation and Development

3.2.1. Existing Conditions

The *Conservation and Development: Policies Plan for Connecticut (2005-2010) (C&D Plan)* was published by the Office of Policy and Management (OPM). Updates to this document have been delayed by the legislative process, and the present document will remain in effect until the 2013 legislative session. This *C&D Plan* “provides the policy and planning framework for administrative and programmatic actions and capital and operational investment decisions of state government” (OPM, 2005). The *C&D Plan* provides a set of growth management principles which promote redevelopment and revitalization of existing infrastructure, development of mixed affordability housing, and development around transportation nodes.

The Proposed Action Boundary is classified as a “Regional Center” per the Development Locational Guide map, which the *C&D Plan* highlights as specific targets for redevelopment and revitalization, in particular the development of “compact, transit accessible, pedestrian-oriented mixed-use...” development.

The Connecticut State Office of Policy and Management (OPM) published a Public Draft of the *Conservation and Development: Policies Plan for Connecticut (2013-2018)* in 2012. This draft is open for public comment through September 2012, and following this comment period, OPM will progress towards adoption of the *Conservation and Development: Policies Plan for Connecticut (2013-2018)* by the State General Assembly. The current draft maintains the same set of growth management tools as the currently in effect *C&D Plan*, including redeveloping and revitalizing regional centers (of which the Proposed Action Boundary remains classified) and promoting supportive land uses around rail stations.

The *Regional Plan of Conservation and Development, 2006-2015 (RPOCD)* was developed and adopted by the South Western Regional Planning Agency in 2006. The RPOCD “represents the South Western Regional Planning Agency’s vision for the region.” The RPOCD highlights supporting redeveloping and revitalizing regional centers and concentration of development around transportation nodes. These concepts are suggested to be supported by encouraging higher density, mixed use development along transportation corridors, and in commercial centers. Further the implementation of pedestrian and circulation improvements is recommended to facilitate the connections between these multi use developments and the adjacent transportation system.

3.2.2. Impact Evaluation

The No Action alternative is inconsistent with the state and regional plans of conservation and development, as it does not redevelop and revitalize an urban center and does not provide higher density, mixed use development around transportation corridors.

The Proposed Action is consistent with the state and regional plans of conservation and development.

3.2.3. Mitigation

Since the Proposed Action is consistent with the existing and draft future state and regional plans of conservation and development, no mitigation is required.

3.3. Traffic and Parking

This section describes the existing traffic volumes, operating conditions and safety conditions of the transportation system serving the Stamford Transportation Center and the Proposed Action. This analysis is based on a 2013 Base Year, which includes considerations of previously approved land development projects in the area and their approved transportation mitigation improvements. This section also describes the projected future traffic operations for 2016 Estimated Time of Completion (ETC) and 2036 (ETC+20) planning horizons, and provides a qualitative evaluation of the traffic impacts of the Proposed Action in the context of these planning horizons.

This section also describes the evaluation of existing and future parking conditions for the No-Action and Proposed Action alternatives.

3.3.1. Existing Conditions

Determining the characteristics of existing traffic conditions surrounding the proposed site permits an evaluation of locations where traffic problems might already exist and establishes a foundation for comparing future traffic conditions. As part of the assessment of the Base condition, infrastructure improvements that have already been completed or will be completed as part of the Gateway, Harbor Point, Metro Center II, Metro Green Parking Expansion, and Yale & Towne projects have been included within the roadway network that was analyzed.

3.3.1.1. Study Area Roadways

The Stamford Transportation Center is strategically located adjacent to Interstate I-95 and is also accessible from the adjacent urban street network. The following roadways, shown in Figure 3-3, were considered part of the project area network for this study:

- Interstate 95 (I-95)
- Greenwich Avenue
- Washington Boulevard
- Atlantic Street
- Canal Street
- Tresser Boulevard
- North State Street
- South State Street
- Station Place
- Dock Street (a component of the Stamford Urban Transitway)

I-95 is a limited access highway that traverses the City of Stamford along an east-west alignment and is located immediately north of the Stamford Transportation Center. The highway provides access to New York City to the southwest and the cities of Bridgeport and New Haven to the northeast. Within the City of Stamford, *I-95* is three lanes in each direction with entrance/exit interchanges to the local street network located within close proximity to the Stamford Transportation Center. The posted speed limit on the section of *I-95* within the study area is 55 mph.

Greenwich Avenue is a two-lane collector roadway which runs generally north and south through South Stamford. This roadway serves as one of the primary corridors connecting Downtown Stamford and Interstate 95 with the industrial and residential neighborhoods of the southwest section of Stamford. The roadway also serves as a connection to the Town of Greenwich. The limits of Greenwich Avenue are the intersection with West Main Street and Tresser Boulevard to the north (US 1) and the intersection with Selleck Street, Southfield Avenue, and Davenport Street to the south. At its intersection with Pulaski Street, Greenwich Avenue makes a 90 degree turn to the west before turning south again at a sharp horizontal curve just west of Davenport Street.

Washington Boulevard is a principal north-south arterial through Stamford, and is designated as Route 137 north of Tresser Boulevard, and State Route 493 between Tresser Boulevard and Station Place. This roadway provides two lanes in each direction along the majority of its length, with additional turning lanes at key signalized intersections. The roadway currently narrows to a single lane in each direction south of Station Place, and this segment is classified as a minor collector. However, Washington Boulevard will be widened to provide two lanes in each direction from Station Place to Pulaski Street as part of the Gateway development project which is located south of the Stamford Transportation Center and bounded by Washington Boulevard, Pulaski Street and the Rippowam River. Washington Boulevard terminates at Cold Spring Road to the north and at Pacific Street in the Harbor Point area to the south.

Atlantic Street is a north-south roadway classified as a minor arterial having two lanes in each direction between the Stamford Transportation Center and Tresser Boulevard, with localized widening at key intersections to accommodate turn lanes. The one exception to this is a short segment between Manhattan Street and South State Street, where Atlantic Street narrows to one lane in the northbound direction because of the railroad bridge. South of the Stamford Transportation Center parking garage access, Atlantic Street narrows to one lane in each direction and is classified as a collector roadway. Atlantic Street begins at Broad Street to the north and ends at its intersection with Washington Boulevard to the south.

Canal Street is a north-south collector roadway providing two lanes in each direction with widening at the Dock Street intersection to accommodate turn lanes. The segment of Canal Street between Tresser Boulevard and North State Street includes a raised center median/ left-turn lane for northbound left-turns onto Tresser Boulevard. The roadway begins at Tresser Boulevard to the north and ends at Ludlow Street to the south.

Tresser Boulevard (US Route 1) is an east-west roadway classified as a principal arterial providing three lanes in each direction with widening at intersections to accommodate turn lanes. Tresser Boulevard begins at West Main Street and Greenwich Avenue, and terminates at East Main Street and Elm Street (although US Route 1 continues both east and west of these limits).

North and South State Streets are one way roadways that serve as frontage roads along I-95 from Washington Boulevard to Elm Street. Both roadways are classified as minor arterials and are generally three to four lanes wide. North and South State Streets also have an integral function for the Stamford Transportation Center, providing for transit, bicycle and kiss-and-ride access and circulation.

Station Place is a driveway serving the Stamford Transportation Center that connects Atlantic Street and Washington Boulevard. This roadway provides a single lane in each direction, with a limited area of on-street parking and a pull-off area for taxi staging and kiss-and-ride drop offs/pickups. Station Place is also the main point of access to the Stamford Transportation Center parking garages.



Station Place: View looking east, with parking garage (R) and train station (L) components of the Stamford Transportation Center.

Dock Street begins at Atlantic Street opposite Station Place and continues east to Canal Street. This roadway was recently reconstructed as part of the

Stamford Urban Transitway project which is designed to improve multi-modal access to the Stamford Transportation Center in addition to other safety and operations improvements. This collector roadway provides two lanes in each direction, with one lane dedicated for high occupancy vehicles and buses. Turn lanes are provided at the intersections with Atlantic, Pacific and Canal Streets. Bicycle lanes are also provided in each direction. The continuation of the Urban Transitway corridor along Jefferson Street is presently under construction, and future phases of the project will extend this corridor to East Main Street.

3.3.1.2. Study Area Intersections

The traffic operations of key intersections within a roadway network are typically the primary indicators of the quality of traffic operations for the system, as these locations represent the area of greatest interactions of movement between various directional traffic streams (including vehicles, pedestrians and bicyclists). To understand the nature of traffic flow and operations that may be influenced by the Proposed Action, the following key intersections within the study area were identified for evaluation. These intersections are shown in relation to the Stamford Transportation Center on Figure 3-3.

Signalized Intersections

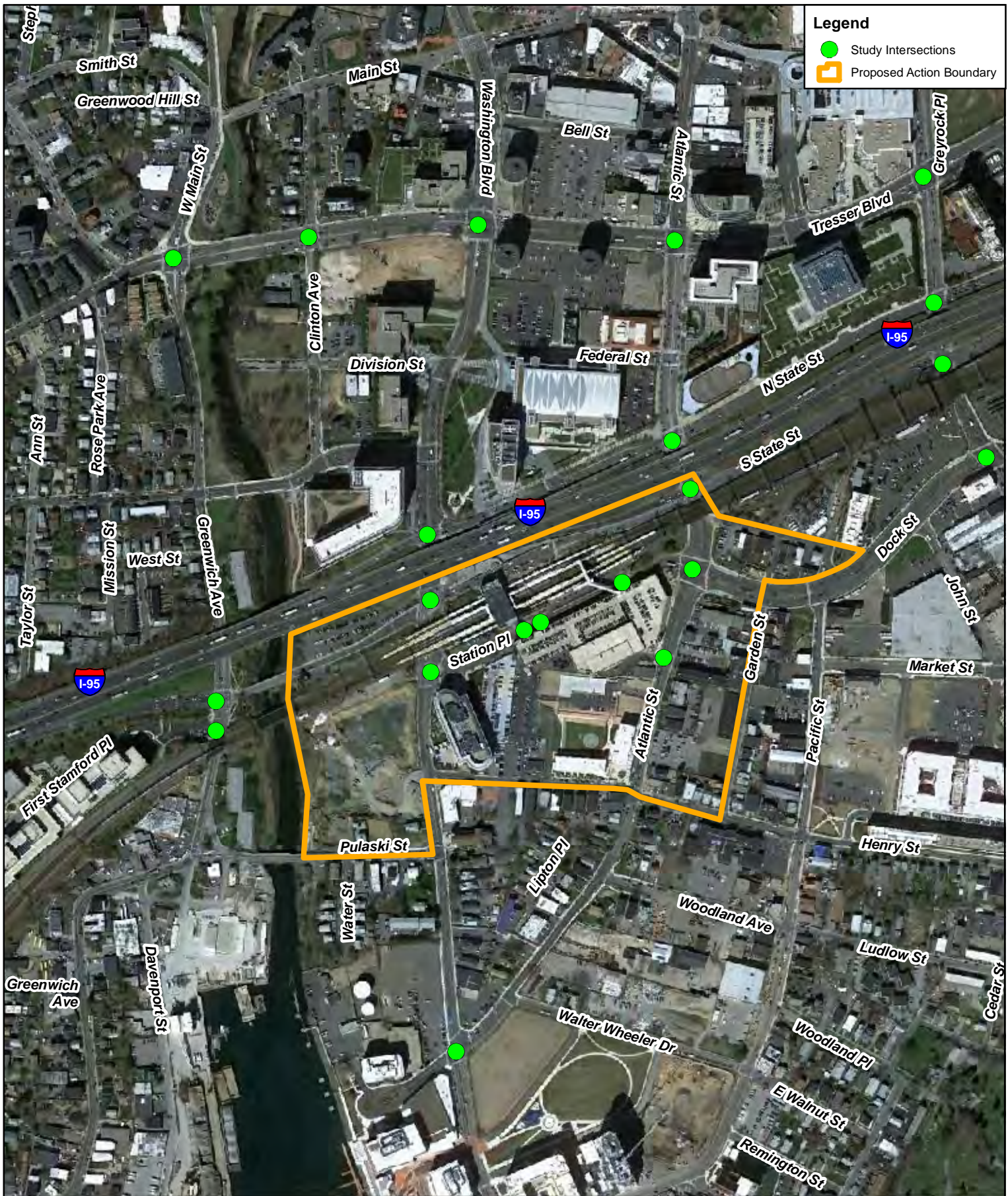
- Washington Boulevard & North State Street/I-95 Southbound On Ramp
- Washington Boulevard & South State Street
- Washington Boulevard & Station Place
- Washington Boulevard & Atlantic Street
- Atlantic Street & North State Street/I-95 Southbound On Ramp
- Atlantic Street & South State Street/I-95 Northbound Off Ramp
- Atlantic Street & Station Place/Dock Street
- Atlantic Street & Garage Access 4
- Canal Street & North State Street

Signalized Intersections (continued)

- Canal Street & South State Street/I-95 Northbound On Ramp
- Canal Street & Dock Street/Jefferson Street
- Tresser Boulevard & Greenwich Avenue/West Main Street
- Tresser Boulevard & Clinton Avenue
- Tresser Boulevard & Washington Boulevard
- Tresser Boulevard & Atlantic Street
- Tresser Boulevard & Canal Street
- Greenwich Avenue & South State Street/I-95 Northbound Off Ramp
- Greenwich Avenue & First Stamford Place

Unsignalized Intersections

- Station Place & Garage Access 1 (West Entrance/Exit)
- Station Place & Garage Access 2 (Middle Entrance-Only)
- Station Place & Garage Access 3 (East Exit-Only)



Legend

- Study Intersections
- Proposed Action Boundary

0 250 500 Feet

Source: Google Earth (aerial)

Stamford

Traffic Study Intersections

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
 Connecticut Department of Transportation
 State Project No. 301-047
 Stamford, Connecticut

FIGURE 3 - 3

3.3.1.3. *Base Year Traffic Volumes*

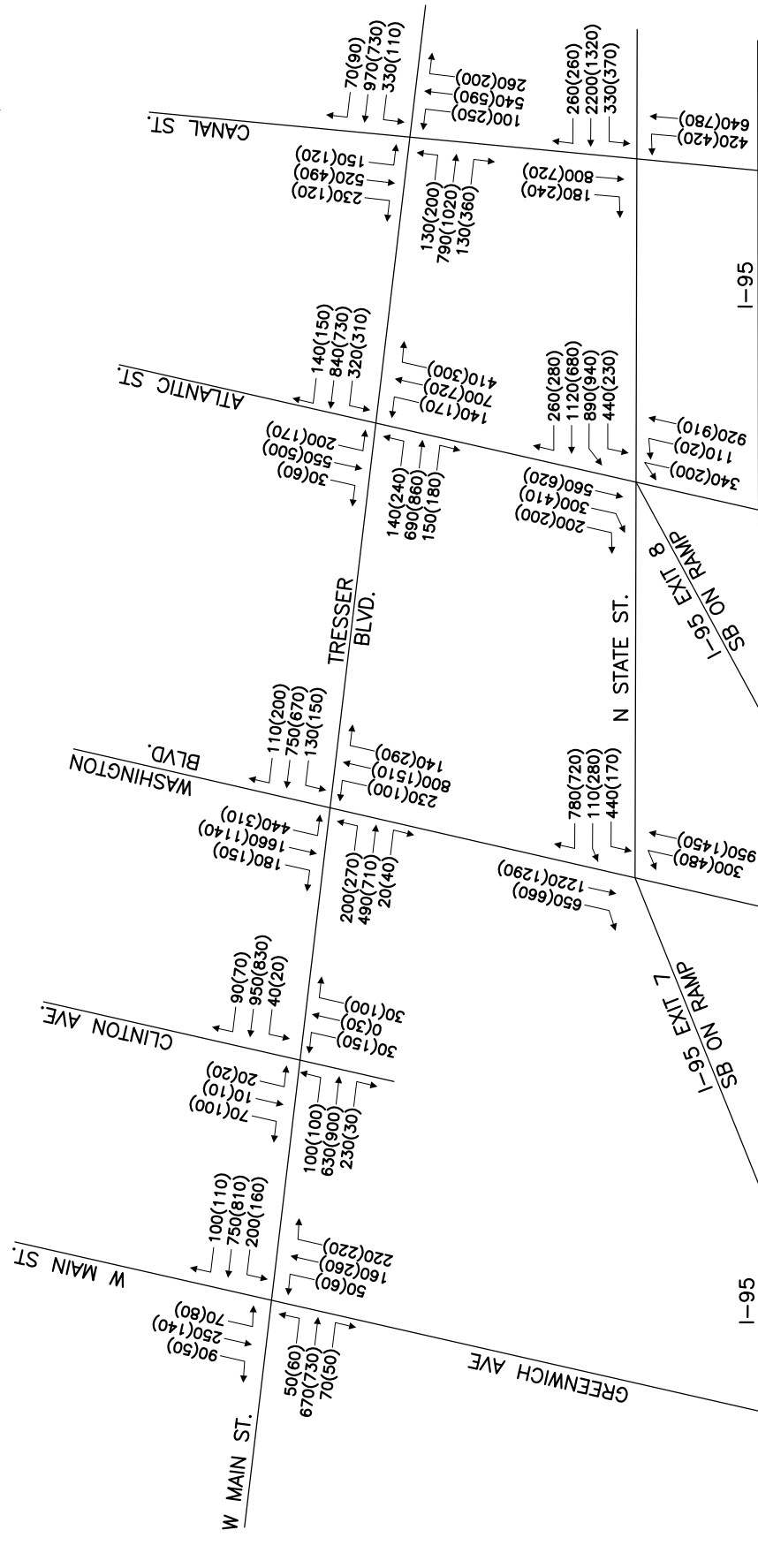
The traffic volumes for the study area intersections were provided by the CTDOT Bureau of Policy and Planning for the 2013 Base Year. These volumes include the traffic anticipated to be generated by the following approved development projects: Gateway, Harbor Point, Metro Center II, Metro Green Parking Expansion, and Yale & Towne. The traffic volumes for the 2013 Base Year also assume the completion of Phase 2 of the Urban Transitway project. Intersection turning movement volumes for the weekday AM and PM peak hours of adjacent street traffic are illustrated on Figures 3-4a and 3-4b, respectively.

3.3.1.4. *Level of Service Analysis*

The operating conditions of transportation facilities are evaluated based on the relationship of existing or projected traffic volumes to the capacity of the road or intersection. Various factors affect capacity including traffic volume, travel speed, roadway geometry, grade, number and width of travel lanes, and type of intersection control (signal, stop sign, etc.). The current CTDOT-approved standards for evaluating capacity and operating conditions are contained in the *Highway Capacity Manual 2000* (Transportation Research Board, 2000), and using Synchro7 analysis software.

Level of Service (LOS) is a term used to describe the operating conditions of transportation facilities as a measure of driver discomfort, frustration, fuel consumption, and lost travel time. LOS is rated on a scale from A to F, where LOS A represents a high freedom of movement and LOS F represents congested operations. In the case of intersection operations, LOS is defined in terms of average vehicle delay, where LOS A is a condition with very low delay (less than 10 seconds per vehicle) and LOS F is a condition with delays exceeding 50 seconds per vehicle at unsignalized intersections and 80 seconds per vehicle at signalized intersections. Descriptions of the specific ranges of delay associated with each LOS for unsignalized and signalized intersections are provided in the Level of Service Analysis Technical Report (see Appendix B for availability).

The LOS analysis for unsignalized intersections is somewhat different than for signalized intersections because through vehicles along the main street do not normally experience delays attributed to movement of traffic to/from the minor street, and are consequently not rated with a level of service. The LOS for unsignalized intersections describes only the operational characteristics of traffic moving from the minor street and the left-turns from the major street onto the minor street.



MATCH LINE FIGURE 3-4b

FIGURE 3-4a
 2013 PEAK HOUR VOLUMES
 STAMFORD TRANSPORTATION CENTER
 PARKING AND TOD EIP
 CONNECTICUT DEPARTMENT OF TRANSPORTATION
 STATE PROJECT NO. 301-047
 STAMFORD, CONNECTICUT

LEGEND:
 AM(PM)

MATCH LINE FIGURE 3-4a

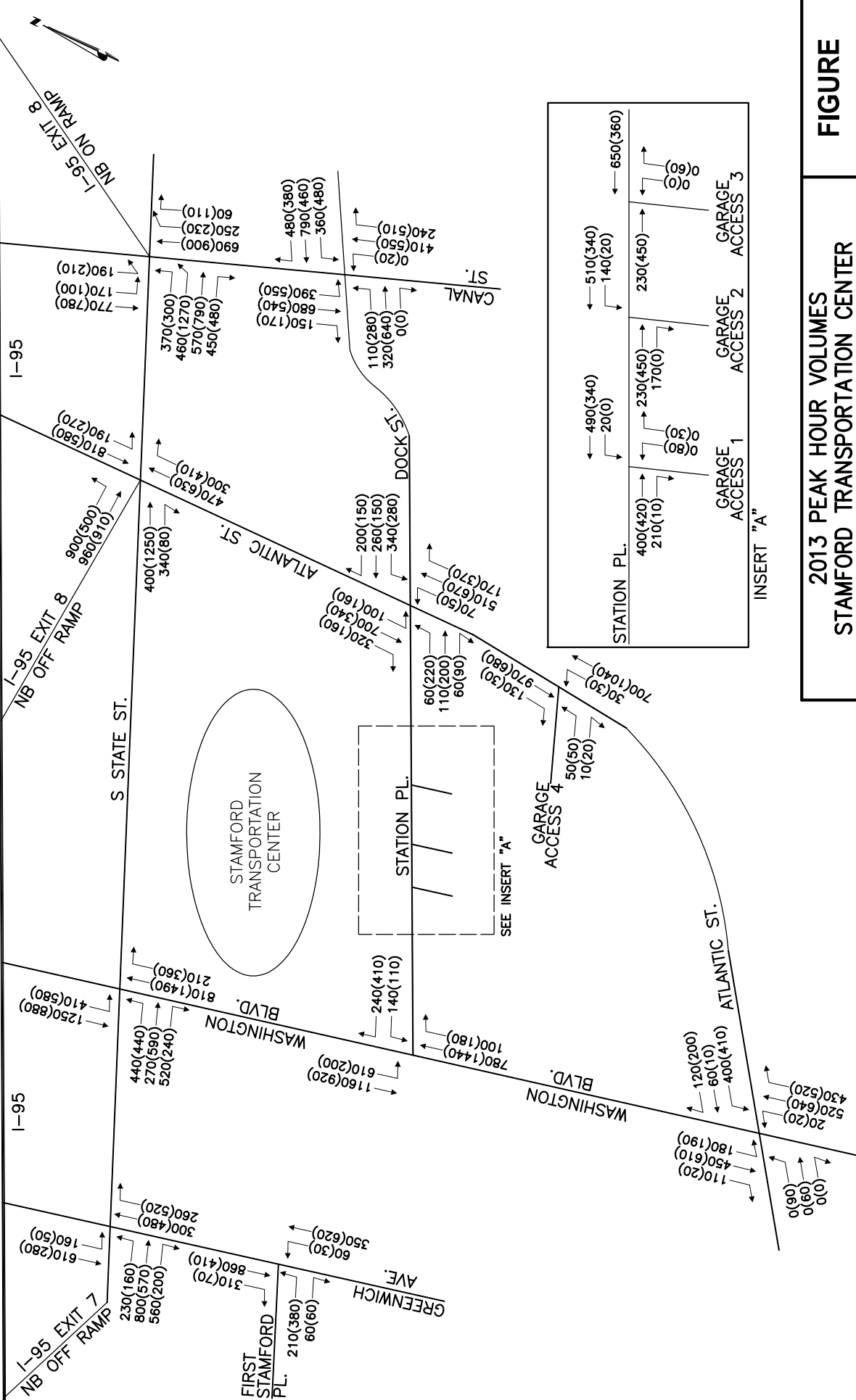


FIGURE 3-4b
2013 PEAK HOUR VOLUMES
STAMFORD TRANSPORTATION CENTER
PARKING AND TOD EIE
 CONNECTICUT DEPARTMENT OF TRANSPORTATION
 STATE PROJECT NO. 301-047
 STAMFORD, CONNECTICUT

LEGEND:
 AM(PM)

The 2013 Base conditions were analyzed in the context of the existing roadway infrastructure, but with the mitigation improvements associated with the four approved land development projects previously mentioned. Existing signal timing and phasing plans obtained from the City Traffic Engineering Department were used as the foundation for the analysis, but the signal timings were optimized to reflect the added capacity of these roadway improvements. However, the overall cycle lengths in the City’s timing plans were kept the same since the study area intersections are a subset of intersections from a larger coordinated signal network.

The results of the LOS analysis for the 2013 Base Condition are summarized in Table 3-1. The Level of Service Analysis Technical Report (see Appendix B for availability) provides a detailed summary of LOS by movement for each intersection, as well as the Synchro analysis reports.

**Table 3-1: 2013 Base Condition LOS Summary
AM and PM Peak Hours**

Signalized Intersections				
Intersection	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
Washington Boulevard & North State Street / I-95 Southbound On-Ramp	F	124.3	F	176.6
Washington Boulevard & South State Street	E	65.4	F	175.2
Washington Boulevard & Station Place	E	56.9	D	46.5
Washington Boulevard & Atlantic Street	C	29.9	D	49.1
Atlantic Street & North State Street/I-95 Southbound On-Ramp	F	213.1	F	109.6
Atlantic Street & South State Street/I-95 Northbound On-Ramp	F	143.0	F	202.6
Atlantic Street & Station Place/Dock Street	D	53.9	D	47.9
Atlantic Street & Garage Access 4	A	5.5	A	5.0
Canal Street & North State Street	F	164.0	F	86.8
Canal Street & South State Street/I-95 Northbound On-Ramp	F	91.3	F	198.0
Canal Street & Dock Street /Jefferson Street	F	91.4	F	156.5
Tresser Boulevard & Greenwich Avenue/West Main Street	C	20.4	C	23.4
Tresser Boulevard & Clinton Avenue	A	7.5	B	17.9
Tresser Boulevard & Washington Boulevard	F	83.9	F	85.0
Tresser Boulevard & Atlantic Street	E	59.8	E	61.1
Tresser Boulevard & Canal Street	D	36.6	C	34.4
Greenwich Avenue & South State Street/I-95 Northbound Off Ramp	D	35.7	C	29.6
Greenwich Avenue & First Stamford Place	E	57.7	C	32.3

**Table 3-1: 2013 Base Condition LOS Summary
AM and PM Peak Hours**

Unsignalized Intersections						
Intersection	Movement	Lane Group	AM Peak		PM Peak	
			LOS	Delay	LOS	Delay
Station Place & Garage Access 1 (West Entrance/Exit)	Westbound	L	A	3.7	A	0.0
	Northbound	LR	A	0.0	C	24.3
Station Place & Garage Access 2 (Middle Entrance-Only)	Westbound	L	A	0.7	A	0.0
	Northbound	LR	A	0.0	C	20.3
Station Place & Garage Access 3 (East Exit-Only)	Westbound	L	A	3.5	A	0.7
	Northbound	R	A	0.0	B	12.5

LOS: Level of Service

Delay: average delay per vehicle (seconds)

As shown in Table 3-1, there are a number of locations within the study area that currently operate at LOS F during one or both peak hours, primarily along North State Street and South State Street. These intersections are as follows:

- Washington Boulevard & North State Street/I-95 Southbound On Ramp
- Washington Boulevard & South State Street
- Atlantic Street & North State Street
- Atlantic Street & South State Street
- Canal Street & North State Street
- Canal Street & South State Street
- Canal Street & Dock Street/Jefferson Street
- Tresser Boulevard & Washington Boulevard

The City’s Traffic Engineering Department employs an ITS-based traffic signal control system to manage and optimize performance of the roadway system and to adjust to the temporal changes in traffic flow.

3.3.1.5. Queue Analysis

Another factor that can affect traffic operations is the nature of queue formation and interactions within the traffic flow. A conventional metric used in this evaluation is the 95th percentile queue, which is a statistical measure indicating the theoretical maximum queue occurring within the peak hour of study. Of particular interest are locations where this 95th percentile queue is longer than the available queue storage, because of the additional impact on traffic flow and delay. Analysis of the existing conditions shows that queue overflow is a generally pervasive issue throughout the study area during peak hours, but particularly at intersection near I-95 and the Stamford Station due to the close intersection spacing. The Level of Service Analysis Technical Report (see Appendix B for availability) provides a detailed summary of the queue analysis and a comparison to available storage space.

Opportunities to address these queue conditions through conventional capacity treatments such as adding lanes or extending turn bays is limited due to the built-up environment of the study area, and such improvements would typically not be consistent with the area's urban form. The City's ITS-based traffic signal control system is used to manage and optimize traffic flow and to adjust to the temporal changes in traffic flow. Another queue management strategy used by the City is "DON'T BLOCK THE BOX" pavement markings and signage. An example of these markings and signage is shown in the Exhibit 3-1.



Exhibit 3-1: Example of "DON'T BLOCK THE BOX" queue management strategy used in the project area.

3.3.1.6. Accident Analysis

Accident data was compiled from summary reports provided by CTDOT for the study area intersections for the years 2007, 2008 and 2009. The accidents are summarized for each location by severity in Table 3-2 and by type in Table 3-3.

More than 75% of the accidents in the study area were property damage only, and there were no fatalities over the three-year period. Pedestrians or bicyclists were involved in less than 3% of the total number of crashes.

The highest frequency of accidents occurred at the following five intersections:

- Washington Boulevard & North State Street/I-95 Southbound On-Ramp
- Canal Street & North State Street
- Tresser Boulevard & Washington Boulevard
- Tresser Boulevard & Atlantic Street
- Tresser Boulevard & Canal Street

Crashes at these five locations constituted more than 60% of the study-area total. These locations are also among the highest traffic volume intersections in the study area and have larger intersection footprints, such that the higher frequency of crashes would not be unexpected. Approximately half of the total accidents involving pedestrians occurred at two intersections along Tresser Boulevard: at Washington Boulevard and at Atlantic Street. A contributing factor for many of these accidents was pedestrians crossing during DON'T WALK phases of the signal. There were no significant pedestrian safety issues evident at study locations within the boundaries of the Proposed Action.

Table 3-2: Accident Severity by Intersection

Intersection	Property Damage Only	Personal Injury	Fatality	Total
Washington Boulevard & North State Street/ I-95 Southbound On-Ramp	53	9	0	62
Washington Boulevard & South State Street	28	8	0	36
Washington Boulevard & Station Place	8	2	0	10
Washington Boulevard & Atlantic Street	3	1	0	4
Atlantic Street & North State Street/ I-95 Southbound On-Ramp	42	10	0	52
Atlantic Street & South State Street/ I-95 Northbound On-Ramp	7	2	0	9
Atlantic Street & Station Place/Dock Street	4	0	0	4
Canal Street & North State Street	78	17	0	95
Canal Street & South State Street/ I-95 Northbound On-Ramp	16	4	0	20
Canal Street & Dock Street /Jefferson Street	18	2	0	20
Tresser Boulevard & Greenwich Avenue/ West Main Street	30	7	0	37
Tresser Boulevard & Clinton Avenue	14	4	0	18
Tresser Boulevard & Washington Boulevard	59	21	0	80
Tresser Boulevard & Atlantic Street	67	29	0	96
Tresser Boulevard & Canal Street	57	21	0	78
Greenwich Avenue & South State Street/ I-95 Northbound Off-Ramp	10	6	0	16
Greenwich Avenue & First Stamford Place	6	1	0	7
Total	500	144	0	644

Table 3-3: Accident Type by Intersection

Intersection	Head On	Right Angle	Rear End	Left Turn	Fixed Object	Overtake*	Sideswipe*	Ped/Bike	Backing	Parking	Total
Washington Boulevard & North State Street/I-95 Southbound On-Ramp		11	22		3	5	17	2	2		62
Washington Boulevard & South State Street		2	8	8	1	13		3	1		36
Washington Boulevard & Station Place			2	2	2	4					10
Washington Boulevard & Atlantic Street		1	1			1		1			4
Atlantic Street & North State Street/I-95 Southbound On-Ramp	1	20	10	3		18					52
Atlantic Street & South State Street/I-95 Northbound On-Ramp		2	3		3				1		9
Atlantic Street & Station Place/Dock Street			1				1		2		4
Canal Street & North State Street		13	23	6	1	51		1			95
Canal Street & South State Street/I-95 Northbound On-Ramp		1	5	6		8					20
Canal Street & Dock Street/Jefferson Street		2	9	1	2	6					20
Tresser Boulevard & Greenwich Avenue/West Main Street		5	15	4	2	10		1			37
Tresser Boulevard & Clinton Avenue		4	3	6	2	1			1	1	18
Tresser Boulevard & Washington Boulevard		6	35	15		17		5		2	80
Tresser Boulevard & Atlantic Street		4	44	15	4	22		4	3		96
Tresser Boulevard & Canal Street	1	19	19	18	3	16			2		78
Greenwich Avenue & South State Street/I-95 Northbound Off-Ramp		2	9		3	2					16
Greenwich Avenue & First Stamford Place		2	2	1		2					7
Total	2	94	211	85	26	176	18	17	12	3	644

* Overtake accidents were categorized as sideswipe-type crashes involving two vehicles traveling in the same direction. Sideswipe accidents were categorized when vehicles were traveling in opposite directions.

3.3.1.7. Parking

Parking for the Stamford Transportation Center is currently provided in two adjacent garages that are interconnected and operate as one combined unit for vehicle access and circulation, and are connected by a pedestrian bridge to the station on the west and to a platform on the east. There is also a State-owned surface lot on South State Street. The total capacity of the parking garage complex is 1,917 spaces including 55 spaces allocated for handicap use. Approximately 750 spaces are allocated for permit spaces and the remainder is available for general daily use. There is also a surface lot located at the intersection of South State Street and Washington Boulevard that contains an additional 117 spaces (including 2 handicap spaces) that are allocated exclusively for permit holders.

Parking data from 2010 published by SWRPA indicates that the overall utilization of the two garages is approximately 80%, which is consistent with an industry standard of 85%. Half of the occupied parking in the garage is by permit holders. The utilization of the permit parking spaces in the surface lot is essentially 100%. The number of people on the wait list for a permit is 1,040 which represents a 15% increase from 2008, and indicates continued strong demand for parking. The current estimated time on the wait list is 20-28 months.

Access to the parking garages at the Stamford Transportation Center is provided at three locations along Station Place and one location on Atlantic Street, as shown in Exhibit 3-2. At the west end of the Original Garage is an entry and exit that is staffed 24 hours a day/7 days a week for monthly and daily parking. Adjacent to the west end entrance/exit is an entrance to the Original Garage for monthly pass holders that is open from 5:00 am to 12:00 pm daily. At the east end of the expanded garage is an exit only that is open from 6:00 am to 1:00 am for monthly pass holders only and is staffed from 8:00 am to 1:00 am Monday through Friday and 8:00 am to 11:00 pm Saturday and Sunday for daily parkers. The entrance/exit at Atlantic Street is open from 5:00 am to 12:00 am for monthly pass holders and is staffed from 3:00 pm to 11:00 pm seven days a week for daily parker exit.

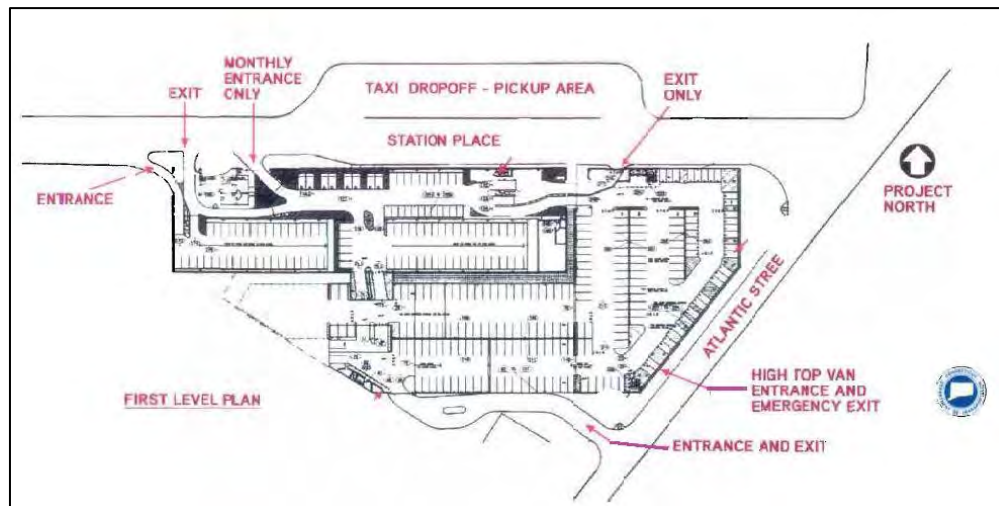


Exhibit 3-2: Stamford Station Parking Access Layout
Source: Connecticut Department of Transportation

Daily entrance and exit data for the parking complex presented in the Gateway Traffic Impact and Access Study (BETA Group, Inc., 2010) indicates that 64 percent of the traffic entering the parking complex over the course of a day enters by 8:00 am, and that the rate of entry is very low for the rest of the day. This data also indicates that the peak hours of traffic entering/exiting the garage are 7-8 am and 6-7 pm.

The Stamford Transportation Center has a Major Traffic Generator Certificate from the State Traffic Commission (which has recently been re-organized as the Office of the State Traffic Administration), which is required for developments with 200 or more parking spaces or in excess of 100,000 square-feet of gross floor area that have the potential to generate traffic on a state highway. The existing number is 394A, which was issued in 2000 for construction of the expansion portion of the 2004 Garage.

3.3.2. Impact Evaluation

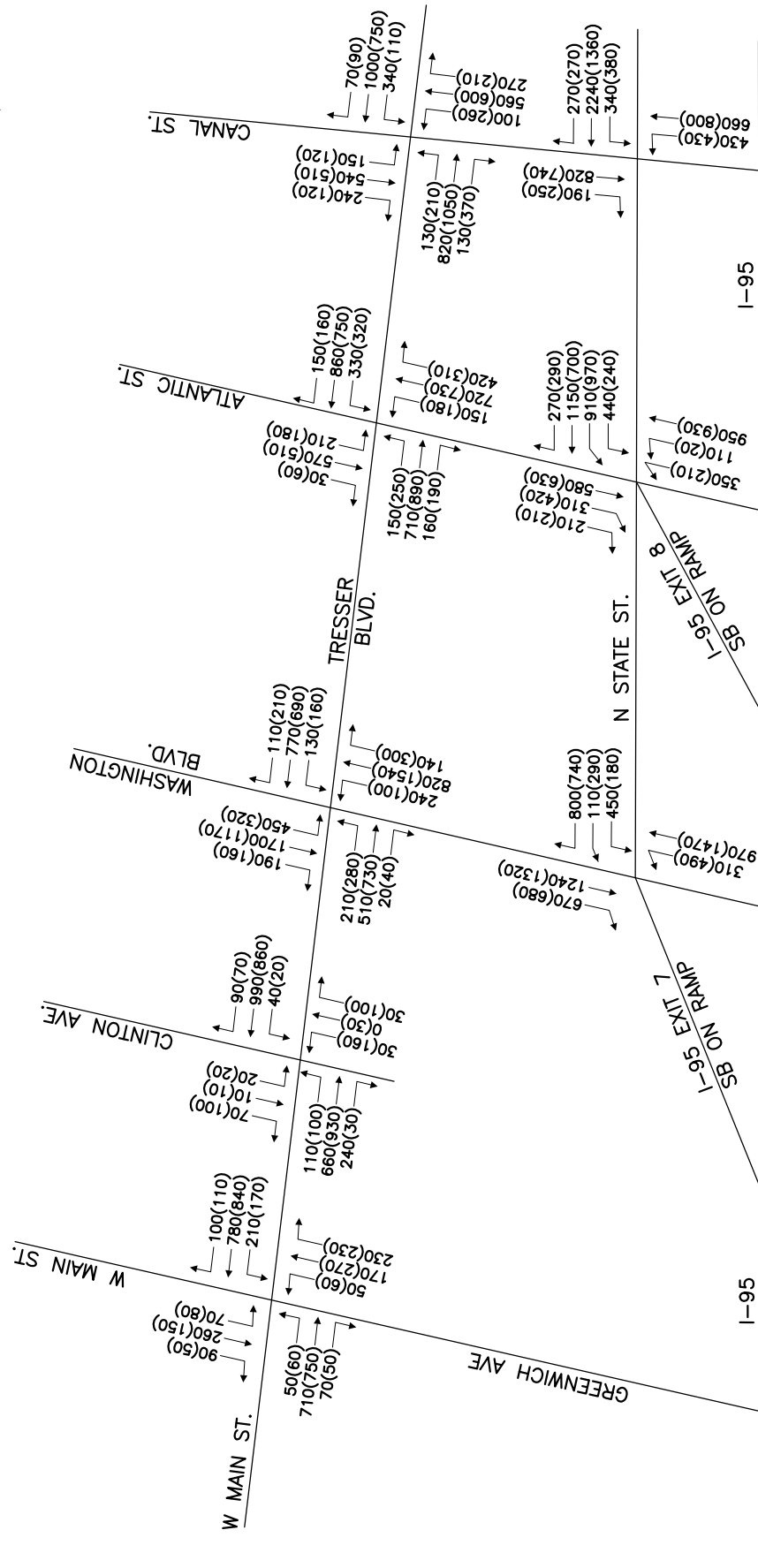
The traffic impact of the Proposed Action was evaluated in the context of projected future volumes for the ETC of the Proposed Action, which is year 2016, and ETC+20 (2036), which reflects a twenty year planning horizon. The traffic operations for these future horizons were analyzed quantitatively for the No-Action condition to provide a context for evaluation of the impacts of the Proposed Action. Since specific site characteristics of the TOD development will be dependent on the outcome of the public-private development agreement, future detailed site design, and local/agency permitting processes, the traffic impacts of the TOD component of the Proposed Action is evaluated qualitatively for the purposes of this EIE.

3.3.2.1. Future No-Action Condition

Background traffic volumes for the 2016 and 2036 years were provided by the CTDOT Bureau of Policy and Planning. These volumes were developed using CTDOT's regional model to forecast growth and traffic impact studies that were completed for other developments in the study area. Background volumes also assume the continued presence of the existing garage rather than closure of the 727-space structure (i.e., all of the current parking supply would continue to be available even though closure of this structure would be the likely long-term outcome in the No-Action alternative).

The 2016 AM and PM peak hour No-Action traffic volumes are illustrated on Figures 3-5a and 3-5b, respectively, and the 2036 AM and PM peak hour No-Action traffic volumes are illustrated on Figures 3-6a and 3-6b, respectively.

The results of the capacity analysis for the overall intersection for the 2016 and 2036 No-Action conditions are shown in Table 3-4 and Table 3-5, respectively. Detailed LOS summaries by individual movement are provided in the Level of Service Analysis Technical Report (see Appendix B for availability).



MATCH LINE FIGURE 3-5b

FIGURE 3-5a
 2016 PEAK HOUR VOLUMES
 STAMFORD TRANSPORTATION CENTER
 PARKING AND TOD EIE
 CONNECTICUT DEPARTMENT OF TRANSPORTATION
 STATE PROJECT NO. 301-047
 STAMFORD, CONNECTICUT

LEGEND:
 AM(PM)

MATCH LINE FIGURE 3-5a

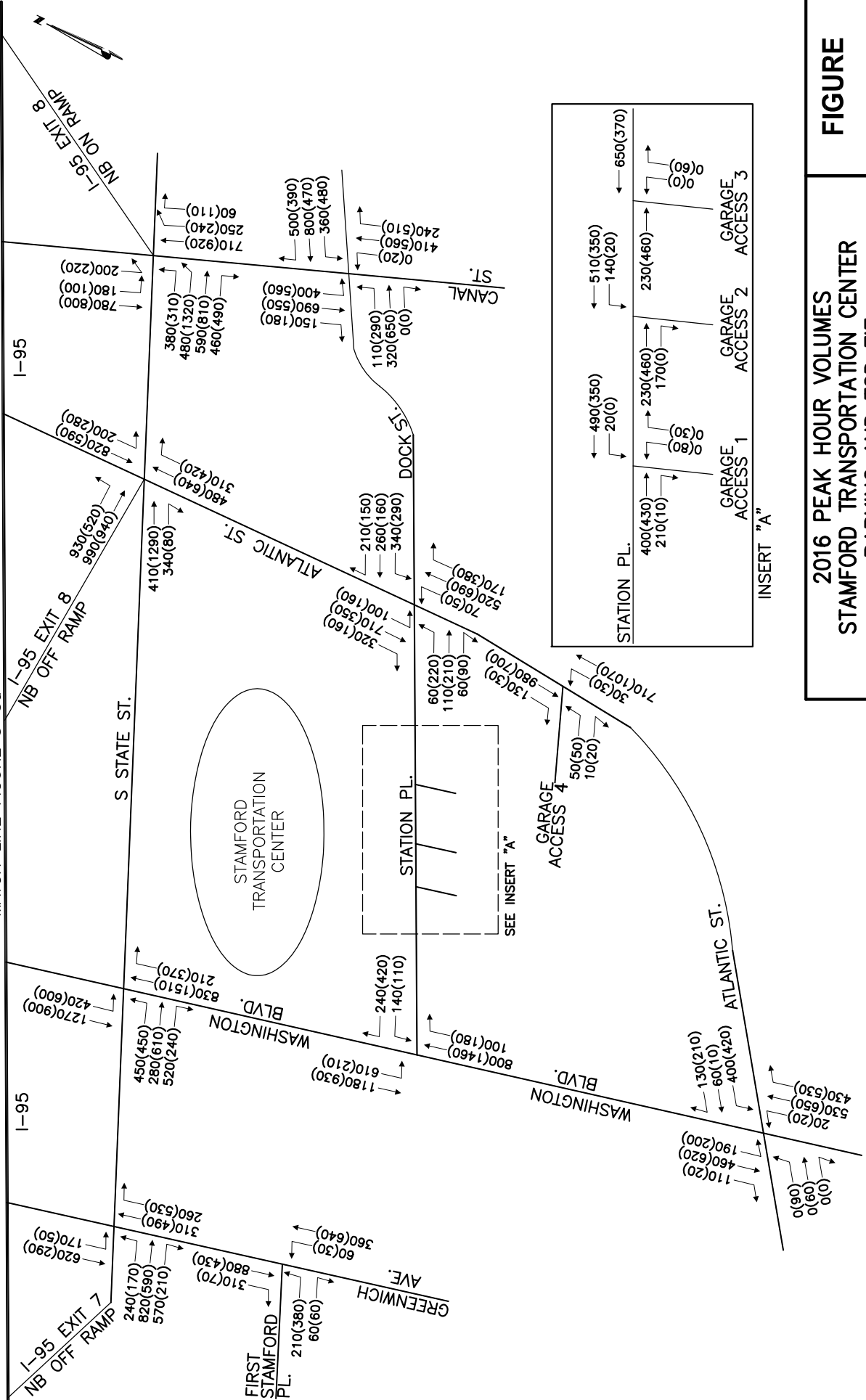


FIGURE 3-5b
2016 PEAK HOUR VOLUMES
STAMFORD TRANSPORTATION CENTER
PARKING AND TOD EIE
 CONNECTICUT DEPARTMENT OF TRANSPORTATION
 STATE PROJECT NO. 301-047
 STAMFORD, CONNECTICUT

LEGEND:
 AM(PM)

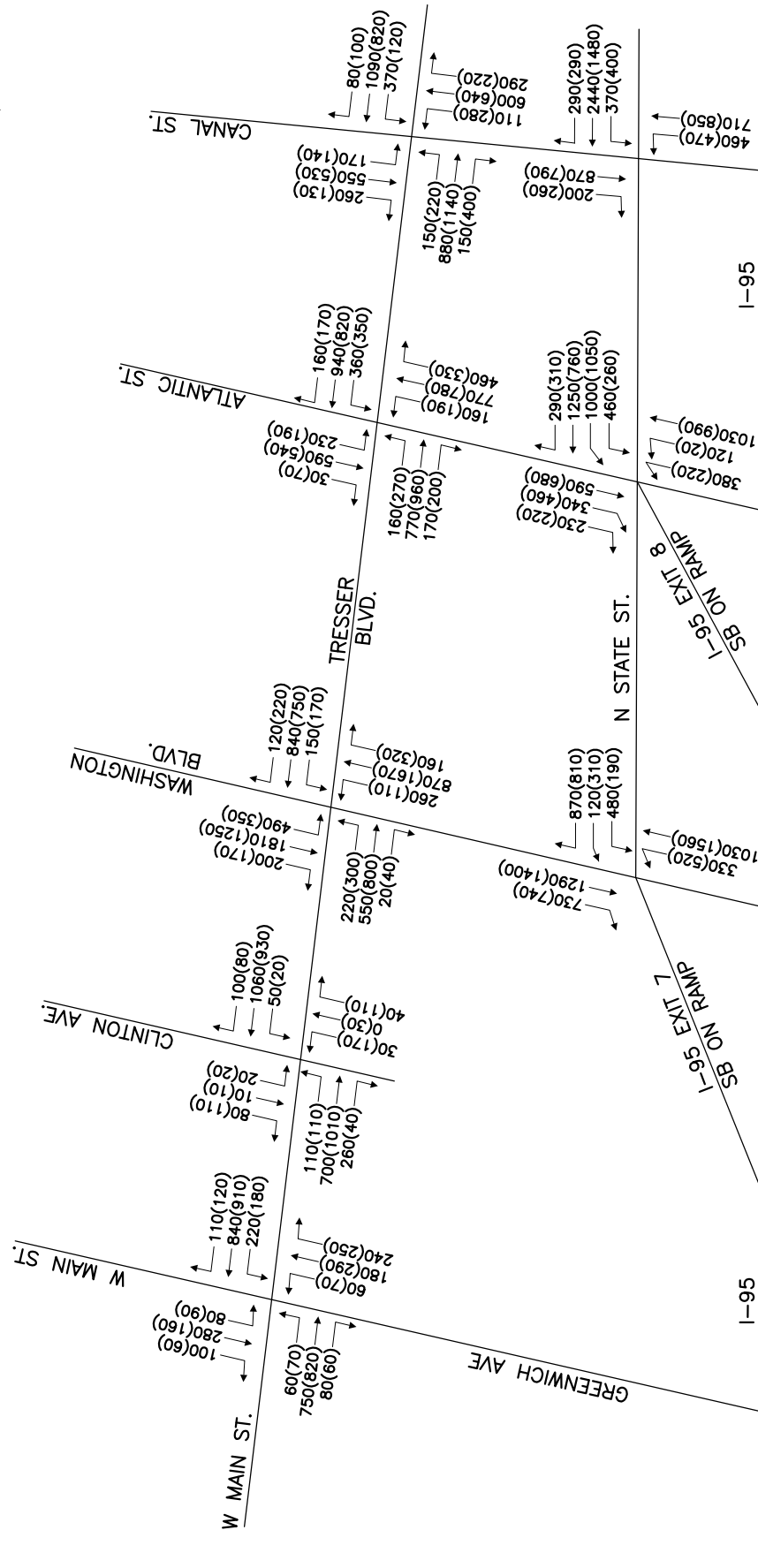


FIGURE 3-6a

MATCH LINE FIGURE 3-6a

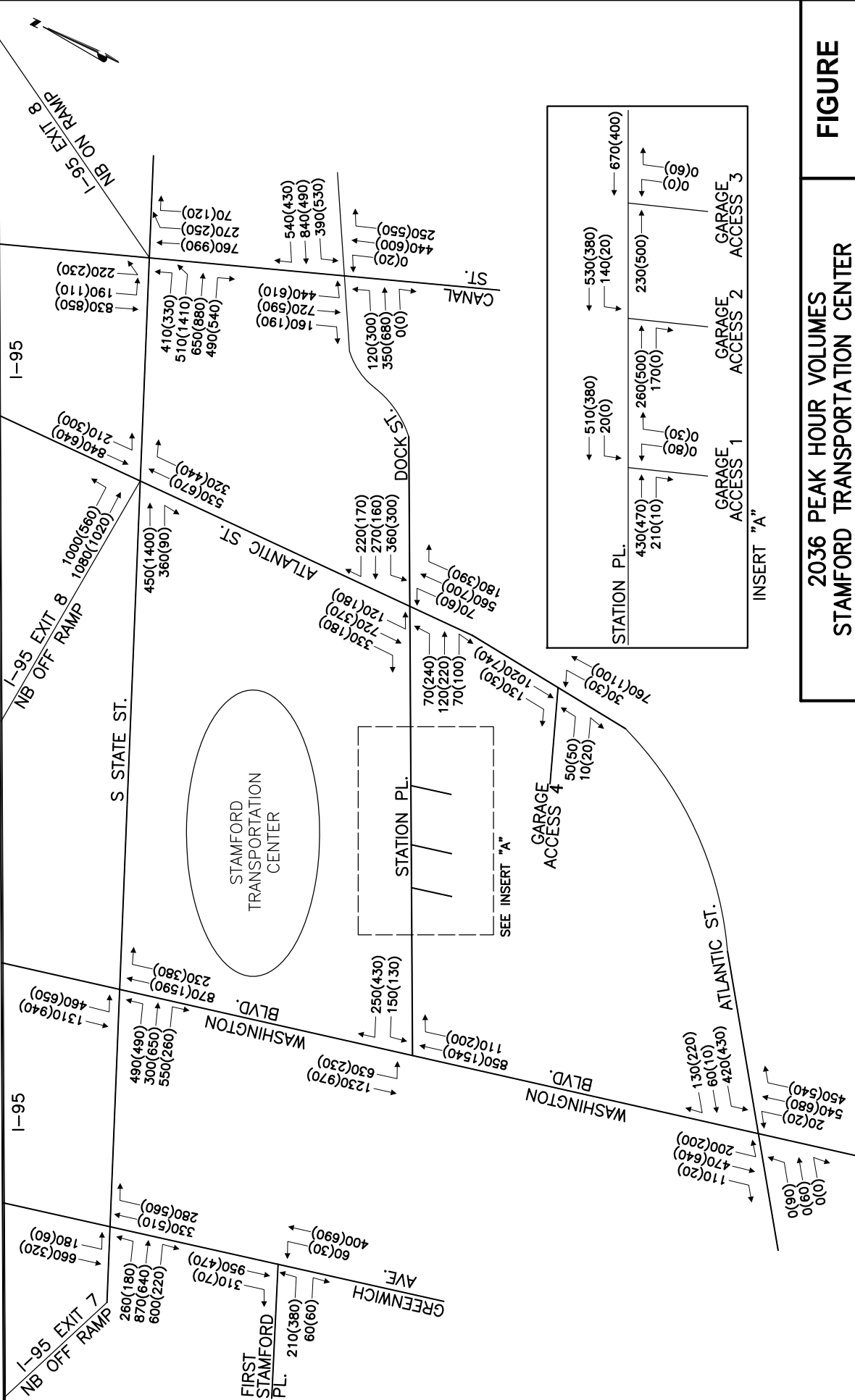


FIGURE 3-6b
2036 PEAK HOUR VOLUMES
STAMFORD TRANSPORTATION CENTER
PARKING AND TOD EIE
 CONNECTICUT DEPARTMENT OF TRANSPORTATION
 STATE PROJECT NO. 301-047
 STAMFORD, CONNECTICUT

LEGEND:
 AM(PM)

Table 3-4: Future No-Action LOS Summary (AM Peak Hour)

Signalized Intersections						
Intersection	ETC (2016)		ETC+20 (2036)			
	LOS	Delay	LOS	Delay		
Washington Blvd & North State St/I-95 Southbound On-Ramp	F	132.6	F	164.2		
Washington Boulevard & South State Street	E	68.2	F	87.8		
Washington Boulevard & Station Place	E	60.6	E	67.8		
Washington Boulevard & Atlantic Street	C	30.8	C	34.6		
Atlantic Street & North State Street/I-95 Southbound On-Ramp	F	228.6	F	274.3		
Atlantic Street & South State Street/I-95 Northbound On-Ramp	F	158.3	F	194.8		
Atlantic Street & Station Place/Dock Street	D	53.5	D	52.1		
Atlantic Street & Garage Access 4	A	5.6	A	5.7		
Canal Street & North State Street	F	175.7	F	224.6		
Canal Street & South State Street/I-95 Northbound On-Ramp	F	104.6	F	131.1		
Canal Street & Dock Street /Jefferson Street	F	96.7	F	128.8		
Tresser Boulevard & Greenwich Avenue/West Main Street	C	21.4	C	22.7		
Tresser Boulevard & Clinton Avenue	A	7.6	A	7.7		
Tresser Boulevard & Washington Boulevard	F	91.9	F	112.5		
Tresser Boulevard & Atlantic Street	E	67.5	F	93.1		
Tresser Boulevard & Canal Street	D	39.6	D	51.4		
Greenwich Avenue & South State St/I-95 Northbound Off-Ramp	D	37.1	D	41.9		
Greenwich Avenue & First Stamford Place	E	62.6	F	87.3		
Unsignalized Intersections						
Intersection	Movement	Lane Group	ETC (2016)		ETC+20 (2036)	
			LOS	Delay	LOS	Delay
Station Place & Garage Access 1 (West Entrance/Exit)	Westbound	L	A	3.7	A	3.7
	Northbound	LR	A	0.0	A	0.0
Station Place & Garage Access 2 (Middle Entrance-Only)	Westbound	L	A	0.7	A	0.7
	Northbound	LR	A	0.0	A	0.0
Station Place & Garage Access 3 (East Exit-Only)	Westbound	L	A	3.5	A	3.6
	Northbound	R	A	0.0	A	0.0

LOS: Level of Service

Delay: average delay per vehicle (seconds)

Table 3-5: Future No-Action LOS Summary (PM Peak Hour)

Signalized Intersections						
Intersection	ETC (2016)		ETC+20 (2036)			
	LOS	Delay	LOS	Delay		
Washington Blvd & North State St/I-95 Southbound On-Ramp	F	195.2	F	241.5		
Washington Boulevard & South State Street	F	190.9	F	222.7		
Washington Boulevard & Station Place	E	56.7	F	81.5		
Washington Boulevard & Atlantic Street	D	52.5	E	58.9		
Atlantic Street & North State Street/I-95 Southbound On-Ramp	F	124.1	F	157.3		
Atlantic Street & South State Street/I-95 Northbound On-Ramp	F	217.2	F	248.5		
Atlantic Street & Station Place/Dock Street	D	51.5	E	56.0		
Atlantic Street & Garage Access 4	A	5.7	A	5.6		
Canal Street & North State Street	F	97.5	F	133.1		
Canal Street & South State Street/I-95 Northbound On-Ramp	F	212.3	F	243.2		
Canal Street & Dock Street /Jefferson Street	F	165.7	F	197.1		
Tresser Boulevard & Greenwich Avenue/West Main Street	C	27.1	C	26.1		
Tresser Boulevard & Clinton Avenue	B	15.5	B	19.3		
Tresser Boulevard & Washington Boulevard	F	92.3	F	118.3		
Tresser Boulevard & Atlantic Street	E	69.2	F	88.4		
Tresser Boulevard & Canal Street	D	35.5	D	39.4		
Greenwich Avenue & South State St/I-95 Northbound Off Ramp	C	29.6	C	29.7		
Greenwich Avenue & First Stamford Place	C	34.5	D	43.4		
Unsignalized Intersections						
Intersection	Movement	Lane Group	ETC (2016)		ETC+20 (2036)	
			LOS	Delay	LOS	Delay
Station Place & Garage Access 1 (West Entrance/Exit)	Westbound	L	D	25.5	D	30.5
	Northbound	LR	C	21.0	D	25.0
Station Place & Garage Access 2 (Middle Entrance-Only)	Westbound	L	A	0.7	A	0.7
	Northbound	LR	B	12.6	B	13.1
Station Place & Garage Access 3 (East Exit-Only)	Westbound	L	A	3.5	A	3.6
	Northbound	R	A	0.0	A	0.0

LOS: Level of Service

Delay: average delay per vehicle (seconds)

As these tables illustrate, the level of congestion within the study area will increase as a result of the projected volume increases in the No-Action condition, with more intersections operating at LOS F, especially at the 20-year planning horizon. The additional locations projected to operate at LOS F during one or both peak hours in the ETC+20 year are as follows:

- Washington Boulevard & South State Street
- Washington Boulevard & Station Place
- Tresser Boulevard & /Atlantic Street
- Greenwich Avenue & First Stamford Place

The expected result of these operations is that the duration of peak hour conditions will expand over time, such that the „peak hour’ operations will occur during more hours of the morning and afternoon than currently happens.

3.3.2.2. Other Area Projects

The Metro-North Railroad (MNR) Bridge Replacement Project is another known project within the study area that will include modifications to the transportation network and traffic patterns. This project will replace three MNR bridges in Stamford and includes roadway and intersection improvements on Atlantic Street, Canal Street, Elm Street, South State Street and US Route 1 (East Main Street). In addition, the I-95 northbound Exit 8 off-ramp will be relocated to touchdown between Atlantic Street and Canal Street. Construction for this project is anticipated to begin in 2015.

While this project is not represented in the analysis of the traffic study network for this EIE because final project details were not available at the time of analysis, it is intended that the MNR Bridge Replacement Project will contribute to improve mobility and traffic circulation in the study area.

3.3.2.3. Trip Generation Potential

3.3.2.3.1. Commuter Parking Trip Generation

The Proposed Action will result in a minimum net increase of at least 273 spaces (for a minimum of 1,000) to the supply of commuter parking for the Stamford Transportation Center. The traffic volumes from the 2013 Base Condition indicate that the existing parking complex, which provides a total of 1,917 parking spaces, generates 760 trips during the morning peak hour of adjacent street traffic and 330 trips during the afternoon peak hour of adjacent street traffic. The peak hour for the station parking does not appear to coincide with that of the adjacent street traffic during the afternoon, which is likely due to the travel time for many commuters from Grand Central Station in Manhattan.

The net additional commuter spaces created by the Proposed Action are expected to generate trips in a similar proportion to the existing parking spaces. It is therefore expected that the additional parking will generate 110 additional trips during the morning peak hour and 50 additional trips during the afternoon peak hour, as shown in Table 3-6.

When considering the directional distributions of entering/exiting traffic and probable origins-destinations, it is concluded that the net new parking will add no more than 25-30 vehicles in the peak hours to any critical traffic movement in the network around the Stamford Transportation Center.

Table 3-6: Expansion Parking Trip Generation

Description	Number of Spaces	AM Peak Hour			PM Peak Hour		
		Entering	Exiting	Total	Entering	Exiting	Total
Existing Garage	1,917	700	60	760	90	240	330
Proposed Action	273	100	10	110	15	35	50
Future Total	2,190	800	70	870	105	275	380

3.3.2.3.2. TOD Trip Generation

The Proposed Action will also generate new traffic associated with the TOD component of the project. Specific site characteristics of the TOD will be dependent on the outcome of the public-private development agreement, future detailed site design, and local/agency permitting processes, as applicable. However, for the purpose of this EIE, the following characteristics are assumed for the TOD based on a conservative upper development range of approximately 1 million square feet with the following mix of potential uses (see also Section 2):

- Residential: 400,000 sq. ft. (estimated 425 units)
- Office: 500,000 sq. ft.
- Retail: 100,000 sq. ft.

This configuration of the TOD includes development at the site of the Original Garage at the Stamford Transportation Center as well as at potential peripheral sites within the boundaries previously shown on Figure 2-1 in Section 2.

The traffic estimated to be developed by the TOD component of the Proposed Action was based on trip generation information contained in the *Trip Generation Manual, 8th Edition* (Institute of Transportation Engineers, 2008). Because the data in this resource is primarily associated with land uses in suburban environments, adjustments were applied to this data to reflect the urban mixed-use characteristics of the TOD, and the proximity of the site to the Stamford Transportation Center and to other downtown activity nodes. These adjustments include considerations for trips that are internally captured from the interactions of the mixed uses within the development, and for shifts in modal choice because of the availability of transit, walking and bicycling alternatives.

The *Trip Generation Handbook, 2nd Edition* (ITE, 2004), provides a framework and methodology for estimating internal capture rates for trips within mixed-use development. Ongoing research by the Federal Highway Administration (FHWA) and others has also contributed to an increased understanding of the effect of mixed-use development and TOD on the amount of internal and external trips generated. This information suggests that internal capture rates are typically in the range of 20-30% but can constitute up to approximately 50% of

the total amount of trips generated by a mixed-use development. However, there are many variables related to overall development size, proportions and types of uses, and site context of a mixed-use development that play a role in the actual amount of internally-captured trips. Consequently, for the purposes of this EIE, a conservatively low internal capture rate of 5% was used, which is consistent with current CTDOT policy for development impact evaluation.

TOD is also specifically intended to take advantage of the proximity to public transportation centers to facilitate and encourage greater use of transit, walking and bicycling alternatives for travel. The Stamford Transportation Center is a major regional node for commuter transit by bus and rail, and it is anticipated that the synergy between this facility and the TOD will be significant, which will reduce the number of trips generated by personal automobile. For the purpose of this EIE, it is estimated that 20% of the external peak-hour trips will be made by alternative modes such as transit (rail and bus), walking and/or bicycling, which is consistent with current CTDOT policy for development impact evaluation. However, the Proposed Action could realize much greater reductions in the amount of vehicle trips generated because of its excellent access to public transportation and its proximity to other mixed land uses.

Based on these considerations of internal capture and mode share, it is estimated that the TOD component of the Proposed Action could generate 775 vehicle trips during the weekday morning peak hour and 970 vehicle trips during the weekday afternoon peak hour. The estimated vehicle trip generation of the TOD component of the proposed action is summarized in Table 3-7.

Table 3-7: TOD Component Trip Generation

Description	ITE Land Use Code	AM Peak Hour			PM Peak Hour		
		Entering	Exiting	Total	Entering	Exiting	Total
Residential	232	25	120	145	100	60	160
Office	710	680	95	775	130	615	745
Retail	820	60	40	100	185	190	375
Internal Trips		35	15	50	20	45	65
Transit, Walk, Bike Trips		145	50	195	80	165	245
Vehicle Trips		585	190	775	315	655	970

It is noted that the TOD concept is itself part of state and local strategies for creating sustainable relationships between land use and transportation systems, and for managing the transportation impacts of economic development. In the case of the Proposed Action, the TOD is estimated to generate 245 fewer vehicle trips in the morning peak hour and 310 fewer vehicle trips in the afternoon peak hour than comparably sized non-TOD.

3.3.2.4. Potential Effect on Traffic Operations

As discussed in Section 3.3.2.2, the traffic generated by the net increase of commuter parking in the Proposed Action is estimated to be no more than 25-30 vehicles for any critical traffic movement around the Stamford Transportation Center during peak hours. This volume of added traffic is not significant and is within a range of what would be typically expected for normal daily and seasonal variation of traffic flow.

The TOD is considered a Major Traffic Generator and will require a Major Traffic Generator Certificate through the Office of the State Traffic Administration (formerly the State Traffic Commission) pursuant to Sections 14-311 and 14-311c of the Connecticut General Statutes. Subsequent detailed traffic analysis will be required for the TOD component, once a preferred public-private development agreement is reached and site details are refined. However, the TOD concept is itself part of state and local strategies for creating sustainable relationships between land use and transportation systems, and for managing the transportation impacts of economic development. In the case of the Proposed Action, the TOD is estimated to generate 245 fewer vehicle trips in the morning peak hour and 310 fewer vehicle trips in the afternoon peak hour than comparably sized non-TOD.

The peak traffic hours in the study area around the Stamford Transportation Center are primarily associated with traffic moving to and from the train station. The hours when these peaks occur are generally prior to 8 am in the morning and after 6 pm in the evening. While the vehicular traffic generated by the TOD is expected to have similar origin/destination and circulation patterns as the existing traffic, the hours when the TOD peak traffic occurs is likely to not overlap these same hours because of a shorter traditional work schedule than is represented by the extended commute to New York City. The basic effect will be to have more hours of the day where traffic levels are higher, but making use of available system capacity during the „shoulder hours’ rather than overburdening the hours when peak traffic congestion already exists.

The vehicular traffic generated by a possible residential component of the site will have origin/destination and circulation patterns that are complementary to the current patterns, with peak traffic leaving the Stamford Transportation Center area in the morning and then returning in the afternoon/evening. This pattern will reduce the negative consequences of added traffic, because of the infill use of available capacity in the off-peak travel direction.

Localized traffic impacts may be identified at or near the site access locations which will be identified and mitigated through the Major Traffic Generator Certification process as the TOD concept is refined.

Both residential and commercial (office and retail) use components of the TOD also have the potential to produce ‚reverse commute’ trip patterns on the rail and bus transit services which would benefit the system by filling in ridership in the off-peak direction of the transit routes.

The vehicle traffic generated by the TOD component of the Proposed Action will primarily be automobile, especially during peak hours. Ancillary deliveries to the site for supplies and support services can be expected to include truck traffic, but this would not occur to the extent that would change the vehicle composition or character of traffic in the study area. These types of activities also typically occur during non-peak hours of the day.

3.3.2.5. *Parking*

Under the No-Action Alternative, the current level of available parking will remain at the parking complex until such time that the Original Garage becomes unusable and it is closed. Parking will be reduced from 1,917 spaces to 1,190 spaces which is not consistent with the objectives to support transit ridership.

Under the Proposed Action, a minimum of 273 new parking spaces will be provided. It is possible that these new parking spaces and some of the 727 spaces that are contained in the Original Garage will be located in new parking structures within ¼ mile of the train station. It is also possible that the remainder of the parking will be incorporated with the TOD at essentially the same place as where the Original Garage is located. This Proposed Action does not affect the availability and continued operation of the 2004 Garage.

The Proposed Action will also create additional parking to support the TOD component of the project. The parking supply needed to support the mixed-use TOD scenario considered for this EIE (described in Section 3.3.2.2) was estimated using a shared-use parking model developed by the Urban Land Institute (*Shared Parking, 2nd Edition*, Urban Land Institute [ULI], 2005). This model reflects the variations in the accumulation of parked vehicles by time of day and individual land uses, and the relationships among the land uses that can produce multi-purposed trips from a single vehicle site trip/parking occupancy. For these reasons, modeling the required number of parking spaces is more than adding demand for each land use, but finding equilibrium between the demands for all the proposed land uses.

The ULI Shared Parking Model compiles various land uses with national average parking requirement data and identifies opportunities for shared parking arrangements with compatible land uses. With this model, excessive parking spaces are eliminated by recognizing that land uses in multi-use developments do not require as many spaces as a stand-alone land use because some of the parking spaces can be shared.

To estimate the potential parking demands of the TOD, the size of each land use, the percentage of internal and external trips, and mode share are used for inputs into the Parking Model. Internal trips reduce the parking demand as these trips are assumed to be made by walking between the different land uses within the TOD. The external trips made using other modes such as transit, walking or bicycles instead of cars further reduce the parking demand. These percentages were discussed and presented in Section 3.3.2.2.

The ULI Shared Parking Model also takes into account that a vehicle trip may visit more than one land use but only need to park once, occupying only one space. This is defined through the use of a non-captive ratio. The non-captive ratio is an estimate of the percentage of vehicle trips that are not already counted as a trip to another land use. For example, if a vehicle makes a trip to a mixed-use development for a particular clothing shop, but also decides to get coffee in a nearby coffee shop, that vehicle is a non-captive patron for the clothing shop. In this case, the clothing store and coffee shop both get business but only need one parking space, not two, for this visit that originated for the clothing store.

Without specific information about the land uses that will be in the TOD, general assumptions were made. It is assumed that a non-captive ratio of 100% of the vehicle trips for the residential land uses will be intended for a residence since it is unlikely that a visit will be made to an office or retail land use with a residual visit to a residence. This assumption was also made for the vehicle trips made for employees in an office space. Therefore, 100% of the residential trips and the employee office trips need a parking space. Employees to an office land use are assumed to generally be on business visits with no other purpose. Since some visits by guests may be

personal in nature, or may be made under extenuating circumstances, it was assumed that 10% of the guests will be visiting other land uses as their main reason for the trip. Therefore, a non-captive ratio of 90% is used for guests to an office land use.

TOD retail land uses are much more likely to have patronage from people that did not come to the site for that particular retail space. Residents and commuters in the area may visit shops, but are unlikely to drive specifically to go to the retail use. Office workers will purchase food and supplies from local stores and consumers visiting the site are likely to peruse multiple shops. For this reason, it is assumed that 90% of the retail patronage from external vehicles to the site are not residual visits from another retail space or land use, such as the clothing shop from the example above, while 10% are residual visits. Therefore, a non-captive ratio of 10% is used for retail land uses.

Based on this analysis, there could be an approximately 30% savings in parking spaces using a shared parking arrangement. Table 3-8 summarizes the results of the parking analysis. The shared parking analysis shows that 2,185 parking spaces may be needed to accommodate the TOD component of the Proposed Action. Specific parking requirements for the TOD will need to be confirmed as detailed concepts are developed and permit applications are progressed.

Table 3-8: Estimated TOD Parking Requirement

Land Use	Estimated Parking Demand	
	Weekday	Weekend
Retail		
Customer	25	20
Employee	55	60
Residential		
Rental & Shared Spaces	120	120
Reserved	425	425
Guest	10	10
Office		
Guest	90	10
Employee	1,260	130
Customer/Guest/Shared	245	160
Reserved	425	425
Employee	1,315	190
Subtotal	1,985	775
+10% for Reserve	200	75
Total	2,185	850

3.3.3. Mitigation

TOD is a growth management strategy that provides many social, environmental and financial benefits. Focusing growth around the Stamford Transportation Center produces local and regional benefits that capitalize on the public investments already made at this multimodal transit center, including increased ridership and the associated revenue gains. TOD is also effective in providing relief to traffic congestion, reduced need for investment in roadway infrastructure, and improved safety for pedestrians and bicyclists.

Capacity improvements for the roadway network are generally not feasible for the study area intersections because of its developed urban form. Mitigation strategies for the Proposed Action could include implementation of Travel Demand Management Incentives/Programs and other volume reduction measures that would incentivize carpooling, transit, and walking/bicycling to work and/or encouraging flex work hours or telecommuting. These strategies would allow for better utilization of the existing available capacity of the roadway network. Continued advancements in traveler information and traffic control technologies also present ongoing opportunities to realize greater system efficiencies.

Parking management can also play an important role in an overall mitigation and system management strategy for the Proposed Action. The TOD component of the project provides natural opportunities to reduce reliance on private automobiles for routine commutation because of its proximity to the Stamford Transportation Center. This can be further incentivized through various parking demand management strategies that will not only reduce traffic impacts on the adjacent roadway network but can also reduce the amount of parking supply needed to support the TOD. These parking demand management strategies could include: improved parking pricing methods, unbundled parking, and on-demand car-share and/or bike-share programs.

The specific details of site design and access configuration for the TOD component may also require localized intersection improvements to manage entry/exit to the site and immediate circulation. These impacts and design considerations will be investigated as part of the future application for Major Traffic Generator Certification as the design concept is progressed.

3.4. Pedestrian and Bicycle Considerations

3.4.1. Existing Conditions

3.4.1.1. Pedestrian Facilities

Currently, people who park in the Stamford Transportation Center garages can utilize two overhead walkways as well as marked at-grade crossings to access the train station. Pedestrian access from the Stamford Transportation Center's surface parking lot located at South State Street and Washington Boulevard involves an at-grade crossing of this intersection.

Generally, the intersections surrounding the Stamford Transportation Center include ramps and pushbuttons that meet Americans with Disabilities Act (ADA) guidelines. Exhibit 3-3 below shows an example of an intersection in the study area (Atlantic Street & Station Place/Dock Street) which was recently reconstructed as part of the Stamford Urban Transitway project. While this intersection provides high-contrast crosswalks, refuge islands and ADA-compliant ramps and pedestrian signals, the size of the intersection and volume of traffic can still be intimidating for pedestrians to navigate.



Exhibit 3-3: Atlantic Street & Station Place / Dock Street

There are locations within the study area where some or all of the ramp configurations and/or pedestrian signal buttons do not conform to the current ADA guidelines for accessibility. There are also condition issues at some of these crossings that further diminish accessibility. Additionally, there are sidewalk sections, such as the area along Washington Boulevard depicted in Exhibit 3-4 where signs, poles and other street furniture infringe on the pedestrian zone and can be hazardous for people in wheelchairs and for the visually impaired.



Exhibit 3-4: Restricted pedestrian pathway along Washington Boulevard

At-grade intersection crossings are generally accommodated by WALK/DON'T WALK phases that operate concurrently with vehicular traffic. While this provides the most efficient operation from a vehicle capacity perspective, there are locations where high right-turn volumes of traffic (such as at the intersection of South State Street and Canal Street) where this conflict makes pedestrian crossing difficult. Pedestrians are provided an exclusive signal phase at the intersection of Washington Boulevard and South State Street to cross the street without conflict of moving traffic.

The transportation system includes sidewalks, plaza areas and other pedestrian accommodations throughout the study area. The Walkable Stamford study complete in 2008 (Project for Public Spaces, 2008) noted however that the transportation system in this area is generally dominated by a focus on cars rather than people. To improve the quality of the transportation network for pedestrians, this study identified a variety of landscape and hardscape treatments along roadways such as Washington Boulevard and Atlantic Street and at their key intersections. Possible treatments identified include speed tables/raised crosswalks, widened landscaped refuge medians, and leading pedestrian signal operations to give pedestrians an advance opportunity to start crossing before vehicle traffic is released. Placemaking improvements such as providing more ground-floor retail and convenience services, public art and street furniture were also identified as ways to enhance the accommodations for pedestrians.

The City received a TIGER 3 grant for multimodal improvements in the area around the Stamford Transportation Center in December 2011. These improvements will focus on the following interconnected components: (1) improved accessibility for train and bus riders, (2) expanded station capacity, and (3) enhanced pedestrian safety. Major elements of the TIGER 3 project are to:

- Construct a pedestrian bridge over Washington Boulevard that will provide a direct connection between the west side of Washington Boulevard and the southern train platform.
- Extend the existing east pedestrian bridge over the north tracks and connect to the northern train platform.

Other projects included in the TIGER 3 project are to expand and enhance the amenities at the platform and wait areas, provide real-time traveler information/train status information, provide a direct sidewalk connection to the east end of the south train platform, and improve wayfinding signage.

The City of Stamford has also committed to locally-funded projects in the area to enhance multimodal access and mobility including streetscape/landscape improvements, street lighting, and traffic calming at various locations around the Stamford Transportation Center.

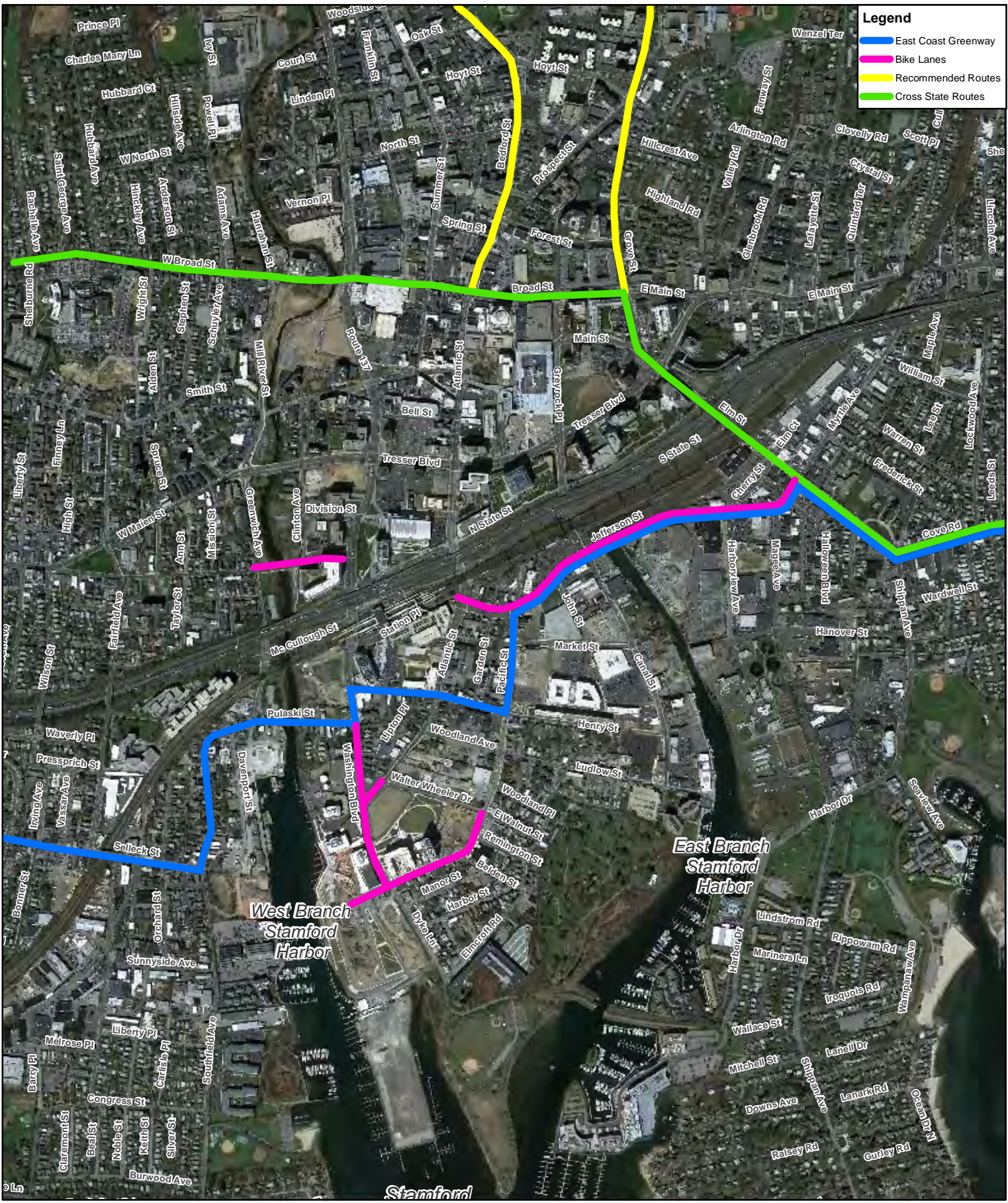
3.4.1.2. *Bicycle Facilities*

There are multiple bike routes and on-road bicycle facilities located throughout the City of Stamford. One of these routes is the East Coast Greenway bicycle route which runs from Canada to Key West, Florida along the eastern seaboard, utilizing on and off-road bicycle facilities. It runs through Stamford, south of the Stamford Transportation Center, along multiple local streets. In addition to this route, there are recommended state routes and bike lanes located throughout the city, including the new Stamford Urban Transitway, that cyclists can utilize to access the Stamford Transportation Center. An example of a bike lane on the Stamford Urban Transitway is shown on Exhibit 3-5. A map of the existing bicycle facilities is provided on Figure 3-7.

The TIGER 3 project for the area around the Stamford Transportation Center also includes planned improvements for bicycle accommodation. These improvements include signage of Bike Routes and signage for shared use of roadways within ½-mile of the Stamford Transportation Center.



Exhibit 3-5: Bike Lane on the Stamford Urban Transitway



Legend

- East Coast Greenway
- Bike Lanes
- Recommended Routes
- Cross State Routes

0 600 1,200 Feet

Source: Google Earth (aerial), CTDOT

Stamford

Existing Bicycle Facilities

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
 Connecticut Department of Transportation
 State Project No. 301-047
 Stamford, Connecticut

FIGURE
3 - 7

Bicycle access to the Stamford Transportation Center from the north, can be somewhat restrictive for inexperienced bicyclists. Generally the roadways to the north do not have bike lanes or shoulders, and bicyclists have to ride in the travel lane with motorists. The high traffic volumes on these roadways, especially around the I-95 ramp intersections, can be intimidating for a bicyclist and may deter them from riding to the Stamford Transportation Center.

Bike racks are provided beneath I-95 at the Stamford Transportation Center and adjacent to the south train platform. All CTTransit buses serving the City of Stamford have bike racks for any riders that ride to a bus stop. Exhibits 3-6 and 3-7 below show the existing bike racks located at the Stamford Transportation Center. Exhibit 3-8 shows CTTransit buses, with attached bike racks, at the Stamford Transportation Center.



Exhibit 3-6: Existing Bike Racks under I-95



Exhibit 3-7: Buses with Bike Racks

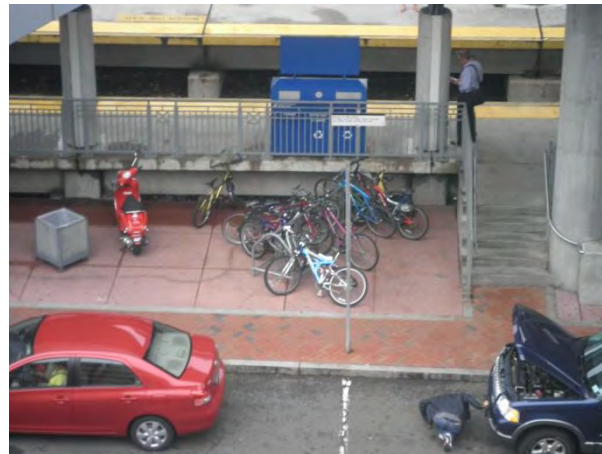


Exhibit 3-8: Existing Bike Racks adjacent to south train platform

3.4.2. Impact Evaluation

Under the Proposed Action, some of the parking spaces contained in the Original Garage may be located in new parking structures within a ¼-mile of the train station, or there is potential for the parking to be incorporated with a TOD at essentially the same location as the Original Garage. While the relocated parking may increase the walking time for some existing commuters, the difference in time is not significant and the average overall walk time will be approximately 5 minutes.

The planned enhancements of pedestrian facilities associated with the TIGER 3 and locally-sponsored projects, including the construction of a pedestrian bridge from the west side of Washington Boulevard to the southern train platform, will also improve the accommodation of pedestrians moving between the commuter parking and the train terminal.

The TOD component of the Proposed Action will increase the levels of pedestrian and bicycle activity in the Proposed Action Boundary, which is consistent with the strategies recommended in the *Walkable Stamford* study to provide activity centers near the Stamford Transportation Center to create a full-service destination for people, and to increase the mobility and accessibility options for pedestrians and bicycles.

3.4.3. Mitigation

Physical objects or other restrictions within walking routes in the area should be relocated or removed where feasible to maintain clear pedestrian pathways to accommodate the increased pedestrian activity associated with the Proposed Action. Any new pedestrian accommodations installed as part of the Proposed Action will be ADA compliant.

As pedestrian activity increases in the area, providing leading pedestrian intervals in the signal timings (allowing pedestrians a few seconds to begin crossing while all vehicular traffic is stopped) or other treatments may also be warranted to improve pedestrian mobility.

To encourage more bicyclists to ride to the Stamford Transportation Center, additional bike racks to accommodate a minimum of 50 bicycles will be provided.

The provision of bike lanes and detectable bike boxes at signalized intersections should be considered if roadways are to be reconstructed or reconfigured as part of the Proposed Action.

3.5. Local Transit Considerations

3.5.1. Existing Conditions

The Stamford Transportation Center acts as a hub for local and regional transit connections in Downtown Stamford. The train station has Metro-North Railroad service on the New Haven Line to New York from New Haven, Danbury and Waterbury, CT. Trains on the New Haven Line make approximately 100 stops in the northbound and southbound directions daily at the Stamford station. CTDOT's Shore Line East is also served at the Stamford Transportation Center; the service provides access to and from Bridgeport and Stamford, Monday through Friday. The train station also has Amtrak service on the Acela Express, Northeast Regional and Vermonter routes, with approximately 20 northbound and 20 southbound trains daily.

The bus terminal at the Stamford Transportation Center acts as a hub to the Stamford system of CTTransit, which serves Stamford, Greenwich, Port Chester, Darien, Norwalk and others. Approximately 15 bus routes serving these towns make a stop at the Stamford Transportation Center on their route. Buses enter and exit the terminal from North State Street; there is also an area designated for smaller shuttle buses on South State Street near Washington Boulevard. CTTransit routes serve all of the study area roadways. Bus shelters are provided along Dock Street and on Tresser Boulevard at the intersection with Canal Street (example shown in Exhibit 3-8). CTTransit currently has no planned transit improvement projects or route changes within the project study area.



Exhibit 3-9: Bus Shelter at Dock Street & Atlantic Street

The Stamford Urban Transitway project (Phase I) included the construction of an improved roadway connection with HOV and bike lanes from Elm Street to the Stamford Transportation Center (Dock Street), to improve traffic operations and encourage multi-modal transportation use. Phase II of the Stamford Urban Transitway project will provide similar improvements along Myrtle Avenue from East Main Street to Elm Street, making the connection to Phase I of the project. Phase II of the Stamford Urban Transitway will begin construction in late 2013 and will be complete by the end of 2015.

3.5.2. Impact Evaluation

The No-Action alternative would not result in any impacts to existing transit services. The Proposed Action with TOD would increase the demand on the existing transit services but it is anticipated that there is sufficient reserve capacity in the existing services to support the alternative.

3.5.3. Mitigation

The Proposed Action is not anticipated to result in adverse impacts to the transit services. No mitigation is necessary or proposed.

3.6. Air Quality

A qualitative assessment of the potential air quality impacts related to the Proposed Action was conducted. This was done by first screening the Base and No Action conditions to comparatively determine the potential impacts of the Proposed Action. This assessment resulted in a determination that no mitigation measures are necessary for air quality impacts. Details of the analysis and assessment follow.

3.6.1. Existing Conditions

The Federal Clean Air Act was passed by Congress in 1970 and signed into law by former President Nixon. It was last amended in 1990. This act requires the Environmental Protection Agency (EPA) to ensure that all Americans have safe air to breathe by (1) reviewing the public health standards for six major air pollutants every five years; (2) updating the standards as necessary to "protect the public health with an adequate margin of safety" based on the most recent studies available; and (3) consider only the public health, not the cost of compliance, when setting air quality standards.

In an effort to achieve the Clean Air Act goals, the EPA promulgated primary and secondary National Ambient Air Quality Standards (NAAQS) in 1971 for six pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), ozone (O₃), sulfur dioxide (SO₂), and particulate matter smaller than 10 micrometers in diameter (PM₁₀). Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Connecticut adopted the national standards and subsequently developed a State Implementation Plan (SIP) to attain and maintain these standards. The NAAQS pollutants and standards as updated through October 2011 are presented in Table 3-9.

3.6.1.1. Mesoscale Analysis

Air monitoring is conducted throughout the state by the Connecticut Department of Energy & Environmental Protection (CTDEEP). Data collected at the monitoring sites help establish background air quality levels.

The State of Connecticut is divided into two air quality districts: the Greater Connecticut district, which includes Hartford, New London, Tolland, Windham and Litchfield counties, and the New York-Northern New Jersey-Long Island (NY-NJ-CT) district. The NY-NJ-CT district includes Fairfield, New Haven and Middlesex counties in southwestern Connecticut, including Stamford and the project site. Each district is assigned an attainment or non-attainment status with respect to the NAAQS listed in Table 3-9.

The entire state is currently in attainment for CO, Pb, NO₂, O₃, SO₂ and PM₁₀ (EPA, 2012b). The state attainment status implies that all regions of the state are in compliance with all standards (i.e., short term and long term; primary and secondary) for each of these particular pollutants.

Non-attainment for an air pollutant is assigned when one or more of the standards for the pollutant have been violated in one or more regions of Connecticut. The non-attainment designation that is subsequently applied to a region can reflect the "degree" of non-attainment

depending upon a number of factors including the air pollution history in the region, previous designation of the region as either attainment or non-attainment, lack of air pollutant monitoring in the region, and inferences made based on pollutant monitoring performed in adjacent or similar regions.

Table 3-9: National Ambient Air Quality Standards

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time		
Carbon Monoxide (CO)	9 ppm (10 mg/m ³)	8-hour (1)	None	
	35 ppm (40 mg/m ³)	1-hour (1)		
Lead (Pb)	0.15 µg/m ³ (2)	Rolling 3-Month Average	Same as Primary	
Nitrogen Dioxide (NO ₂)	0.053 ppm (100 µg/m ³)	Annual Mean	Same as Primary	
	0.100 ppm	1-hour (3)	None	
Particulate Matter (PM ₁₀)	150 µg/m ³	24-hour (4)	Same as Primary	
Particulate Matter (PM _{2.5})	15.0 µg/m ³	Annual Mean (5)	Same as Primary	
	35 µg/m ³	24-hour (6)	Same as Primary	
Ozone (O ₃)	0.075 ppm (2008 standard)	8-hour (7)	Same as Primary	
	0.08 ppm (1997 standard)	8-hour (8)	Same as Primary	
	0.12 ppm	1-hour (9)	Same as Primary	
Sulfur Dioxide (SO ₂)	0.075 ppm	24-hour (10)	0.5 ppm (1300 µg/m ³)	3-hour (1)

Source: EPA National Ambient Air Quality Standards (NAAQS), EPA 40 CFR part 50

(1) Not to be exceeded more than once per year.

(2) Final rule signed October 15, 2008.

(3) To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

(4) Not to be exceeded more than once per year on average over 3 years.

(5) To attain this standard, the 3-year average of the weighted annual mean PM_{2.5} concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m³.

(6) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m³ (effective December 17, 2006).

(7) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (effective May 27, 2008)

(8) a. To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.

(9) a. EPA revoked the 1-hour ozone standard in all areas, although some areas have continuing obligations under that standard ("anti-backsliding").

b. The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is < 1.

(10) 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years

In January 2005, EPA designated both Fairfield and New Haven Counties as nonattainment for PM_{2.5}. CTDEEP submitted a PM_{2.5} State Implementation Plan (SIP) to address the 1997 PM_{2.5} standard in November 2008. CTDEEP will be preparing a SIP to address the 2006 PM_{2.5} standard, which is due in April 2013.

Connecticut PM_{2.5} monitors currently measure levels in compliance with the PM_{2.5} standard (CTDEEP, 2010). However, Fairfield County is currently in non-attainment per the EPA Greenbook. A particulate matter measuring station is located at Bridgeport, which mimics the density of development in the downtown Stamford region, providing an estimate of existing conditions in Stamford. At the Bridgeport site, the 3-year average of the weighted annual mean PM_{2.5} concentration from 2009 to 2011 was 9.4 µg/m³, which does not exceed the 15.0 µg/m³ standard. In addition, the 3-year average of the 98th percentile of 24-hour concentrations from 2009 to 2011 at the Bridgeport site is 25 µg/m³, which does not exceed the 35 µg/m³ standard. Although all Connecticut monitors are showing compliance with the design value for the daily and annual PM_{2.5} NAAQS, Fairfield and New Haven Counties remain designated nonattainment for the annual standard as part of the Greater New York City area and will remain so until a maintenance plan and redesignation request is completed and approved (CTDEEP, 2012(draft)).

Ozone concentrations to be compared to the NAAQS for ozone are calculated by taking the 3-year average of the annual 4th highest daily maximum 8-hour ozone averages. Currently the entire state of Connecticut is designated as non-attainment for ozone based on the 2008 ozone standard of 0.075 ppm (EPA, 2012).

The ambient ozone concentrations at a given location are less dependent on the amount of local emissions than on meteorological conditions, especially wind direction, temperature, and the amount of sunlight. CTDEEP operates an ozone monitoring station located in Greenwich, Connecticut, approximately 5 miles west of Stamford. In 2011, the 3-year average of the annual 4th highest daily maximum 8-hour ozone averages calculated for the Greenwich station was 0.076 ppm, and the three-year average remains above the standard of 0.075 ppm, indicating elevated ozone concentrations in the region (CTDEEP, 2012).

3.6.1.2. *Microscale Analysis*

3.6.1.2.1. Mobile Sources

Mobile sources refer to emission sources that are designed to move from one location to another during normal operations such as automobiles, buses, trucks, etc. Carbon monoxide (CO) and ozone are the criteria pollutants of concern. Carbon monoxide is produced by the incomplete combustion of carbon-containing fuels and can be found in significant concentrations in vehicle exhaust.

Emissions of PM₁₀ and PM_{2.5} are also potential concerns, associated particularly with combustion of diesel engines. The Proposed Action will not be a significant generator of diesel engines except possibly during the construction period. A discussion of the diesel-powered construction equipment impacts during construction is provided in Section 3.22.

Analysis of SO₂ and NO₂ is not warranted, since transportation sources emit a very small percentage of the total emitted SO₂ (due to the relatively small percentage of sulfur in gasoline and diesel fuels) and particulate emissions (compared with the combustion of fossil fuels for space heating and power generation, incineration, industrial processes and construction activities). While NO₂ is emitted by motor vehicles, it is of primary concern due to its role in the formation of photochemical oxidant smog. Smog is typically measured by ozone formation, which is a regional problem and not unique to Connecticut.

Estimated CO concentrations associated with existing conditions in the project area are described as part of the impact evaluation in Section 3.6.2.

3.6.1.2.2. Stationary Sources

There are no major stationary sources of air pollutants associated with the existing parking complex or the Stamford Transportation Center. Other minor stationary sources may exist in the general vicinity associated with back-up generators, fuel burning equipment, or heating, ventilation and air conditioning equipment in surrounding buildings.

3.6.1.3. Mobile Source Air Toxics

In addition to the criteria air pollutants for which there are NAAQS, EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) include 21 air toxics associated with mobile sources that are a subset of the 188 air toxics defined by the Clean Air Act. Of these 21, the EPA has identified six as being priority MSATs, including benzene, formaldehyde, diesel particulate matter/diesel exhaust organic gases, acetaldehyde, acrolein, and 1,3-butadiene. The MSATs are compounds emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as secondary combustion products. Metal air toxics also result from engine wear or from impurities in oil or gasoline.

The EPA is the lead Federal Agency for administering the Clean Air Act and has certain responsibilities regarding the health effects of MSATs. The EPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources, 66 FR 17229 (March 29, 2001). This rule was issued under the authority in Section 202 of the Clean Air Act. In its rule, EPA examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements (FHWA, 2006).

The 2007 EPA rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis using EPA's MOBILE6.2 model, even if vehicle activity (expressed as vehicle-miles of travel, or

VMT) increases by 145 percent as assumed, a combined reduction of 72 percent in the total annual emission rate for the priority MSAT is projected from 1999 to 2050 (FHWA, 2009a).

MSATs are not currently monitored in the project area. However, the CTDEEP conducted a Toxic Air Study in Connecticut (TASC) from 1999-2003 to provide data on ambient levels of toxic air pollutants, also called hazardous air pollutants (HAPs), in Connecticut. This monitoring is the most recent available data and was conducted in the immediate vicinity of six stationary sources of HAPs, and one background site. The closest monitoring location to the project area was approximately 5 miles to the west in Greenwich, Connecticut (CTDEEP, 2005).

The monitoring data showed that for the majority of the air toxics, the levels appear low when compared against Connecticut Department of Public Health proposed annual hazard limiting values (HLVs). The ambient levels for three chemicals (formaldehyde, acetaldehyde and manganese) may be of concern, but were at concentrations similar to those found in other parts of the United States. The study concluded that the carbonyl concentrations (i.e., formaldehyde and acetaldehyde) are likely dominated by motor vehicles, and the same may be true of manganese (NESCAUM, 2005).

3.6.2. Impact Evaluation

Stationary and mobile sources are generators of air pollutants. Greater vehicle volume or increases in vehicle congestion, especially at intersections, have the potential to lead to increased emissions. Mesoscale or regional air quality impacts are assessed through a conformity determination prepared by CTDOT. Microscale analyses are performed on the project level.

The No-Action Alternative would have no impact on mesoscale air quality. However, this alternative would not create additional parking in the short term and in the long-term would reduce the availability of parking for the Stamford Transportation Center because of the eventual closure of the Original Garage. In either case, the No-Action Alternative is not consistent with State or regional goals to reduce vehicle miles traveled, and subsequent emissions, on regional roadways through increased access to transit.

The Proposed Action includes the replacement of the Original Garage with a minimum replacement of 1,000 parking spaces. The Proposed Action also includes a mixed-use TOD component to be constructed by private-sector developers in conjunction with the increased commuter parking supply. Based on a conservative upper range of the potential uses and configuration of the TOD, as described in Section 2, estimates of the peak hour traffic generated by the Proposed Action (including the commuter parking expansion and the TOD) are 885 vehicle trips during the morning peak hour and 1,020 vehicle trips during the afternoon peak hour. These estimates include conservative (low) considerations of the benefits realized by internal trips and a shift to transit and non-motorized travel options based on CTDOT policies for the assessment of land development. This increase of vehicular volume on the local traffic network could have a minor effect on mesoscale air quality due to increased vehicle miles traveled (VMT) in the project area. Further evaluation of mesoscale impacts should be conducted once the specifics of the Proposed Action are finalized.

The 1990 Clean Air Act Amendments (CAAA) require SIPs to demonstrate how states with non-attainment and maintenance areas will meet federal air quality standards. The U.S. EPA issued final rules on transportation conformity (amended as 40 CFR 93 in 1999) which describe the methods required to demonstrate SIP compliance for transportation projects. The Conformity process ensures that transportation projects contained in Long Range Plans of the regional metropolitan planning organizations (MPOs) and State Transportation Improvement Programs (STIPs) meet the goals of the NAAQS by means of each state's SIP. The parking garage replacement at the Stamford Transportation Center is included in the *South Western Region Long Range Transportation Plan 2011-2040* (SWRPA, 2011), and the *Strategic Long-Range Transportation Plan (2009-2035)* (CTDOT, 2009) includes the parking facility and promotes the use of TOD.

In general, the conformity process dictates that a proposed project not cause any new violations of NAAQS for pollutants of concern, or increase the frequency or severity of existing violations, or delays the attainment of NAAQS.

As mentioned above, the entire state, including the NY-NJ-CT district, is in moderate non-attainment for ozone. CTDOT performed an ozone air quality conformity analysis (CTDOT, 2011b). Both CTDOT and SWPRA have determined that projects included in the *South Western Regional Planning Agency Long Range Transportation Plan 2011-2040* and the *South Western Region FFY 2012-2015 TIP* conform to the air quality requirement of 40 CFR 93.

The NY-NJ-CT district is in non-attainment for PM_{2.5}. CTDOT performed a PM_{2.5} air quality conformity analysis (CTDOT, 2011c). Both CTDOT and SWPRA have determined that projects included in the *South Western Regional Planning Agency Long Range Transportation Plan 2011-2040* and the *South Western Region FFY 2012-2015 TIP* conform to the air quality requirement of 40 CFR 93 and were determined to be in conformity by FHWA and FTA on June 20, 2012. In addition, although the Proposed Action is located in a PM_{2.5} non-attainment area, a PM_{2.5} localized or "hot spot" analysis is not required since the project is not of the type listed in 40 CFR 93.123(b)(1).

The Stamford Transportation Center is located in a CO maintenance area and therefore is required to perform a localized or "hot spot" analysis for projects affecting intersections at a LOS D, E or F or that will change to a D, E, or F because of traffic volumes related to the project in compliance with 40 CFR 96.123(a)(1)(ii). The CO microscale analysis used to determine localized impacts is presented in the following section.

3.6.2.1. Microscale Analysis

At the local or microscale level, CO is the transportation-related pollutant of concern. In order to assess local air quality impacts from the Proposed Action, a microscale air quality modeling analysis for CO was conducted. The No-Action Alternative is used as a baseline for comparison.

3.6.2.1.1. Methodology

The traffic impact analysis described in Section 3.3 identified roadway intersections with poor LOS in the existing and future year conditions. Based on the traffic impact analysis results and CTDEEP and EPA air quality modeling guidelines, study signalized intersections listed in Table 3-10 were considered for microscale air quality modeling.

EPA screening procedures in the guidance document *Guidelines for Modeling Carbon Monoxide from Roadway Intersections* (EPA, 1992) was used to select locations for detailed analysis. The EPA guidance specifies that all signalized locations with existing or projected LOS of D or worse should be ranked by total volume and by delay, and that detailed modeling should be conducted for at least the three worst intersections in each ranking.

The traffic volumes and analysis presented in Section 3.3 were utilized in this analysis. The EPA guidance recommends that the top three intersections with the highest volumes and the top three intersections with the highest delay be modeled. As shown in Table 3-10, eleven intersections were shown to have LOS of D or worse for all six modeled scenarios. Three of the five intersections with highest design year delays (AM or PM) ranked within the five intersections with highest volumes. Therefore, a total of six intersections were modeled in the microscale air quality analysis:

- Washington Boulevard at North State Street
- Atlantic Street at North State Street
- Atlantic Street at South State Street
- Canal Street at North State Street
- Canal Street at South State Street
- Tresser Boulevard at Washington Boulevard

Ambient CO concentrations are typically at their highest near street intersections where motor vehicles are idling in a queue or moving at low speeds. The maximum ambient CO concentrations at the subject intersections were estimated using the EPA model CAL3QHC, version 2.0 (EPA, 1995). CAL3QHC is a line source dispersion model and traffic algorithm for estimating vehicular queue lengths at signalized intersections. The CO microscale analysis examined the Base condition (2013), No-Action at opening year (2016) and No-Action at design year (2036) during peak traffic conditions. These scenarios provide a baseline with which to provide a qualitative assessment of the potential significance of air quality impacts of the Proposed Action.

CO concentrations are estimated at specified locations, called sensitive receptors, which are located in the vicinity of the subject intersection where the maximum CO concentrations are likely to occur and where the general public is likely to have access. These receptors are chosen according to the criteria described in the *Guidelines for Modeling Carbon Monoxide from Roadway Intersections* (EPA, 1992). Receptors are generally located within 100 feet of an intersection, where people are waiting to cross the roadway, along sidewalks adjacent to the subject intersections and associated traffic queues. Receptors are generally located at least 10 feet outside of the mixing zone of the free flow and queue links, which is the edge of the roadway.

Table 3-10: Summary of Intersection Volumes and Delay for Air Quality

Intersection ID	Intersection	Base (2013)						No-Action ETC (2016)						No-Action ETC +20 (2036)						Highest Volume	Highest Delay
		AM			PM			AM			PM			AM			PM				
		Volume	LOS	Delay	Volume	LOS	Delay	Volume	LOS	Delay	Volume	LOS	Delay	Volume	LOS	Delay	Volume	LOS	Delay		
1	I-95 NB Off-Ramp & Greenwich Avenue	2920	D	35.7		C	29.6	2990	D	37.1		C	29.6	3180	D	41.9		C	29.7	3180	41.9
2	First Stamford Place & Greenwich Avenue	1850	E	57.7		C	32.3	1880	E	62.6		C	34.5	1990	F	87.3	1700	D	43.4	1990	87.3
3	Washington Boulevard & North State Street / I-95 SB On-Ramp	4450	F	124.3	5050	F	176.6	4550	F	132.6	5170	F	195.2	4850	F	164.2	5530	F	241.5	5530	241.5
4	South State Street & Washington Boulevard	3910	E	65.2	4580	F	175.2	3970	E	68.0	4380	F	190.9	4210	F	87.6	4960	F	222.7	4960	222.7
5	Station Place & Washington Boulevard	3030	E	57.7	3260	D	46.5	3070	E	61.3	3310	E	56.7	3220	E	68.6	3500	F	81.5	3500	81.5
6	North State Street & Atlantic Street	5140	F	213.1	4490	F	109.6	5280	F	228.6	4620	F	124.1	5690	F	274.3	4970	F	157.3	5690	274.3
7	South State Street & Atlantic Street	4370	F	143.4	4630	F	202.6	4480	F	158.7	4760	F	217.2	4790	F	195.2	5120	F	248.5	5120	248.5
8	Station Place & Atlantic Street	2900	D	44.1	2840	D	47.9	2930	D	44.3	2910	D	51.5	3090	D	45.6	3070	E	56.0	3090	56.0
9	North State Street & Canal Street	4830	F	164.0	4110	F	86.8	4950	F	175.7	566	F	97.5	5340	F	224.6	4540	F	133.1	5340	224.6
10	South State Street & Canal Street	3980	F	91.3	5170	F	198.0	4090	F	104.6	5320	F	212.3	4400	F	131.1	5710	F	243.2	5710	243.2
11	Dock Street & Canal Street	3930	F	91.4	4580	F	156.5	3980	F	96.7	4660	F	165.7	4250	F	128.8	4070	F	197.1	4660	197.1
12	Tresser Boulevard & Greenwich Avenue		C	20.5		C	23.5		C	21.4		C	27.1		C	22.4		C	26.1		27.1
13	Atlantic Street & Washington Boulevard		C	29.9	2750	D	49.1		C	30.8	2830	D	52.5		C	34.6	580	E	58.9	2830	58.9
14	Tresser Boulevard & Clinton Avenue		A	7.4		B	17.3		A	7.5		B	14.8		A	6.6		B	18.8		18.8
15	Tresser Boulevard & Washington Boulevard	5150	F	83.9	5540	F	84.9	5290	F	91.9	5700	F	92.2	5690	F	112.9	6150	F	118.2	6150	118.2
16	Tresser Boulevard & Atlantic Street	4310	E	59.8	4390	E	61.1	4460	E	67.5	4530	E	69.2	4800	F	93.1	5270	F	88.4	5270	93.1
17	Tresser Boulevard & Canal Street	4220	D	36.6		C	34.4	4350	D	39.6	4400	D	35.5	4700	D	51.4	4740	D	39.4	4740	51.4
18	Garage Access 4 & Atlantic Street		A	8.2		A	5.0		A	8.2		A	5.7		A	7.1		A	5.6		8.2

LOS: Level of Service
 Delay: average delay per vehicle (seconds)

The maximum modeled CO concentrations are calculated as 1-hour averages and converted to 8-hour average concentrations using a conservative multiplication factor of 0.7. The CTDEEP recommends conservative background ambient CO concentration of 3.0 ppm, which is added to the 8-hour estimates for comparison to the NAAQS.

CAL3QHC requires various meteorological, site, and traffic information as model inputs. EPA-recommended values were used for meteorological parameters including wind speed, stability class, and mixing height. A 360-degree range of wind directions was considered in 10-degree increments. Values of meteorological variables used in the modeling analysis are provided in the Air Quality Analysis Technical Report (see Appendix B for availability).

The lane configurations of the modeled intersections for the No-Action condition were used to obtain free-flow and queue link coordinates and other site-specific input parameters. Signal timing (average red time and signal cycle length), traffic volumes, and other traffic parameters for the Base and No-Action conditions were estimated from traffic volumes and peak hour capacity analyses performed as part of the traffic impact analyses (Section 3.3). Values of traffic and site variables used in the analysis are provided in the Air Quality Analysis Technical Report (see Appendix B for availability).

CO emission factors for idling and moving vehicles, which are required as inputs to CAL3QHC, were calculated using the EPA mobile source emission factor model MOBILE6.2 (EPA, 2003). Emission factors for the subject intersections were calculated for 2013, 2016 and 2036. The MOBILE6.2 model runs were performed using input parameter values typically used by the CTDEEP; values are provided in the Air Quality Analysis Technical Report (see Appendix B for availability). The emission factors associated with Interstate 95 (freeway freeflow), I-95 ramps, local streets, and idling speed of 2.5 mph were selected for use in CAL3QHC (Table 3-11). Input and output files for MOBILE6.2 are included in the Air Quality Analysis Technical Report (see Appendix B for availability).

Table 3-11: MOBILE6.2 Emission Factors

Road Type and Vehicle Speed	Emission Factor		
	2013	2016	2036
Freeway Freeflow @ 55 mph (g/mi)	12.054	10.952	9.675
Local @ 30 mph (g/mi)	11.181	10.166	8.977
Ramp Freeflow @34.6 mph (g/mi)	13.724	12.197	10.602
Idle @ 2.5 mph (g/mi)	63.730	57.300	50.338
Idle Rate (g/hr)	12.054	10.952	9.675

3.6.2.1.2. Analysis Results

Results of the microscale analysis for the subject intersections are summarized in Table 3-12. The table shows the estimated maximum 1-hour and 8-hour CO concentrations for existing (2013) conditions, as well as the No-Action condition for the 2016 opening year and the 2036 design year. The concentrations in the table include the assumed regional background 8-hour CO concentration of 3 ppm. Model results at each receptor location are included in the Air Quality Analysis Technical Report (see Appendix B for availability).

The study area intersections are predicted to experience increased traffic in the design year No-Action scenario. However, the maximum 1-hour and 8-hour CO concentrations at the subject intersections are generally predicted to remain constant or decrease as compared to existing conditions. The steady or decreasing emissions over time is largely due to newer vehicles with lower emission rates replacing older vehicles. Furthermore, the CO concentration estimates are well below the 1-hour and 8-hour CO standards of 35 and 9 ppm, respectively. Estimated maximum 8-hour CO concentrations are generally within 2 to 3 ppm of the assumed ambient 8-hour background CO concentration of 3.0 ppm. The microscale air quality analysis demonstrates that the No-Action scenario will not result in an exceedance of the CO NAAQS. In order to exceed 1-hour CO standards in the opening year, the Proposed Action would have to experience microscale CO concentrations (intersection-generated only, without background) at a minimum of 540% over No-Action levels; a 71% increase would be required to exceed 8-hour standards. These analyses further indicate that the Proposed Action is unlikely to result in an exceedance of CO NAAQS.

Table 3-12: Predicted Maximum CO Concentrations for Base and No-Action Conditions

Air Quality Standard ³	Maximum CO Concentration (ppm) ^{1,2}					
	1-Hour			8-Hour		
	35 ppm			9 ppm		
Intersection	2013	2016	2036	2013	2016	2036
	Base	Opening Year (No-Action)	Design Year (No-Action)	Base	Opening Year (No-Action)	Design Year (No-Action)
Washington Boulevard & North State Street	7.3	6.9	6.7	6.0	5.7	5.6
Atlantic Street & North State Street	7.1	6.8	6.5	5.9	5.7	5.5
Atlantic Street & South State Street	8.0	8.0	7.6	6.5	6.5	6.2
Canal Street & North State Street	8.4	7.9	7.7	6.8	6.4	6.3
Canal Street & South State Street	7.0	6.9	6.5	5.8	5.7	5.5
Tresser Boulevard & Washington Boulevard	6.2	6.0	5.7	5.2	5.1	4.9

¹Maximum of CO concentrations calculated at all receptor locations.

²CTDEEP recommended 8-hour background CO concentration of 3.0 ppm, and a multiplication factor of 0.7 to convert from 1-hour to 8-hour averages.

³Connecticut and National Ambient Air Quality Standards (NAAQS).

3.6.2.2. *Stationary Sources*

There are no major new stationary sources of air pollutants associated with the Proposed Action. Minor stationary sources associated with the Proposed Action include heating, ventilation and air conditioning equipment for the TOD component of the Proposed Action. Back-up generators are also likely to be included for the parking component of the Proposed Action. These minor stationary sources would not create significant new stationary source of air emissions. Therefore, no air quality impacts from stationary sources will result from the Proposed Action.

3.6.2.3. *Mobile Source Air Toxics*

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making within the context of an environmental impact evaluation.

While a basic analysis of the likely MSAT emission impacts of the No-Action Alternative and Proposed Action are included in this document, available technical tools do not enable the prediction of project-specific health. A further discussion of the uncertainty associated with project-specific health impacts due to MSATs is included in Section 3.6.2.3.1.

A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from *Interim Guidance Update of Mobile Source Air Toxic Analysis in NEPA* (FHWA, 2009b).

The FHWA developed a tiered approach for analyzing MSATs, depending on specific project circumstances. The FHWA has identified three levels of analysis:

1. No analysis for projects with no potential for meaningful MSAT effects;
2. Qualitative analysis for projects with low potential MSAT effects; or
3. Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

The Proposed Action has low potential for MSAT effects and therefore the qualitative analysis presented below is justified.

When comparing MSAT emissions from different alternatives, the amount of MSAT emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT anticipated for the Proposed Action would be higher than that of the No-Action alternative because of the increased capacity of the proposed parking garage and trips generated by the TOD that would not otherwise occur in the area. This increase in VMT means MSAT generated by the Proposed Action would probably be higher than the No-Action alternative in the study area. There could also be localized differences in MSAT from indirect effects of the project such as associated access traffic, or emissions of evaporative MSAT (e.g., benzene) from parked and idling cars.

For both the No-Action and Proposed Action alternatives, emissions are virtually certain to be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by 72% from 1999 to 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future than they are today. Consequently, no adverse impact to air quality resulting from MSAT emissions is anticipated to occur from the Proposed Action.

3.6.2.3.1. Incomplete or Unavailable Information for Project-Specific MSAT Health Impacts Analysis

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The U.S. Environmental Protection Agency (EPA) is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, 2012c). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's *Interim Guidance Update on Mobile source Air Toxic Analysis in NEPA Documents* (FHWA, 2006). Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, 2007) or in the future as vehicle emissions substantially decrease (HEI, 2009).

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts – each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupported assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable. The results produced by the

EPA's MOBILE6.2 model, the California EPA's Emfac2007 model, and the EPA's DraftMOVES2009 model in forecasting MSAT emissions are highly inconsistent. Indications from the development of the MOVES model are that MOBILE6.2 significantly underestimates diesel particulate matter (PM) emissions and significantly overestimates benzene emissions.

Regarding air dispersion modeling, an extensive evaluation of EPA's guideline CAL3QHC model was conducted in "HYROAD Model Formulation" (ICF Consulting, 2002), which documents poor model performance at ten sites across the country - three where intensive monitoring was conducted plus an additional seven with less intensive monitoring. The study indicates a bias of the CAL3QHC model to overestimate concentrations near highly congested intersections and underestimate concentrations near uncongested intersections. The consequence of this is a tendency to overstate the air quality benefits of mitigating congestion at intersections. Such poor model performance is less difficult to manage for demonstrating compliance with NAAQS for relatively short time frames than it is for forecasting individual exposure over an entire lifetime, especially given that some information needed for estimating 70-year lifetime exposure is unavailable. It is particularly difficult to reliably forecast MSAT exposure near roadways, and to determine the portion of time that people are actually exposed at a specific location.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI. As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA (EPA, 2012d) and the HEI have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine a "safe" or "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's approach to addressing risk in its two step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than safe or acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such

assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

3.6.2.4. *Project-Level Conformity Determination*

As discussed above, Federal regulations concerning the CAAA conformity of transportation projects developed, funded or approved by the USDOT and by metropolitan planning organizations (MPOs) are contained in 40 CFR 93. The Proposed Action is within the boundary of SWRPA and the respective Regional Transportation Plan is the *South Western Region Long Range Transportation Plan 2011-2040* (SWRPA, 2011). The Proposed Action is included in the *South Western Region Long Range Transportation Plan 2011-2040*, but is not included in their Transportation Improvement Program (TIP).

In accordance with 40 CFR 93.115(a), the applicable criteria and procedures for determining the conformity of a project which is not from a conforming Transportation Plan *and* TIP are listed in Table 1 of 40 CFR 93.109(b). All of these criteria have been determined to be satisfied for the Proposed Action as follows:

- Transportation Control Measures (TCMs) – This project does not interfere with the implementation of any TCM in the current State Implementation Plan (SIP).
- Currently Conforming Plan and TIP – The *South Western Region Long Range Transportation Plan 2011-2040* and the FY 2012-15 *Statewide Transportation Improvement Program (STIP)*, which incorporates the MPO's current TIP, was determined to be in conformity by FHWA and FTA on June 20, 2012.
- CO, PM₁₀ and PM_{2.5} Hot Spots – The project will not contribute to any new violations of the existing CO standards as demonstrated by the microscale analysis. PM₁₀ and PM_{2.5} hot spot analyses are not required since the project is not of the type included in 40 CFR Part 93.123(b)(1).
- PM₁₀ and PM_{2.5} Control Measures – There are no PM₁₀ or PM_{2.5} control measures in the current approved State Implementation Plan (SIP). However, a revision to the SIP for PM_{2.5} was submitted to EPA on Nov 18, 2008 and EPA has yet to take action on this SIP revision. These control measures consist of the following: (1) Control of sulfur dioxide emissions from power plants and other large stationary sources, Section 22a-174-19a of the Regulations of Connecticut State Agencies (RCSA) (*submitted in part*); (2) VOC reductions from the manufacture and use of adhesives and sealants, RCSA section 22a-174-44; (3) Outdoor wood burning furnace restrictions, Section 22a-174k of the Connecticut General Statutes; and (4) *General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource* (CTDEEP, 2008). The Proposed Action will not interfere with any of the proposed control measures if they are approved as part of the SIP.
- Emissions Budget and/or Interim Emissions – This project is included in the current *South Western Region Long Range Transportation Plan 2011-2040* and therefore has been demonstrated to be consistent with the motor vehicle emissions budgets in the State Implementation Plan as evidenced by (1) *Connecticut Department of Transportation Ozone Air Quality Conformity Determination Report of the 2011 Regional*

Transportation Plans and the FY 2012-2015 Transportation Improvement Programs, revised November 2011; and (2) *Connecticut Department of Transportation PM 2.5 Air Quality Conformity Determination Report of the 2011 Regional Transportation Plans and the FY 2012-2015 Transportation Improvement Programs*, revised November 2011.

In summary, the Proposed Action has been determined to be in conformity with the Clean Air Act, as amended, pursuant to applicable U.S. EPA regulations.

3.6.3. Mitigation

3.6.3.1. Mesoscale and Microscale Analysis

The increased traffic volume on the local traffic network associated with the TOD component of the project could potentially have a minor effect on mesoscale air quality impact, due to an increase in VMT. However, this potential effect is based on consideration of the upper range of potential TOD uses. The Proposed Action will need to mitigate traffic at affected intersections as part of the refinement of the design concept, which will also provide associated air quality mitigation. It is not anticipated that any short or long-term adverse microscale air quality impacts from increased traffic will occur as a result of the Proposed Action. It is noted that the TOD component of the project is itself part of State and regional strategies to improve overall air quality by reducing vehicle miles traveled, and subsequent emissions, on regional roadways through increased access to transit and non-motorized options.

The implementation of travel demand management (TDM), such as programs to provide incentives such as carpooling, transit, flex work hours, telecommuting, and walking/biking should also be implemented to further reduce peak hour congestion, reduce vehicle miles of travel, which will also lower emission levels. Specific strategies for mitigation of the TOD component of the Proposed Action, if necessary, will be dependent on the eventual size and configuration of the TOD resulting from the public-private development agreement, future detailed site design, and local/State agency permitting processes, and should be considered in more detail as this process progresses.

No mitigation measures are necessary to address stationary sources of air pollution since only minor stationary pollution sources are expected as a result of the proposed action, although use of sustainable design practices for the TOD can be used to reduce the air impact of the development. Construction-related air quality impacts and associated mitigation are discussed in Section 3.22.

3.6.3.2. MSAT Mitigation Strategies

No specific mitigation for MSATs is proposed since, under the Proposed Action in the design year (2036), reduced MSAT emissions are expected in the immediate area of the project due to EPA's MSAT reduction programs. On a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will result in substantial reductions in MSAT emissions that, over time, will cause region-wide MSAT levels to be significantly lower than today.

3.7. Noise

3.7.1. Existing Conditions

The Federal Transit Administration (FTA) has an established set of metrics based on land use category for noise impacts from transit projects, as presented in *Transit Noise and Vibration Impact Assessment* (FTA, 2006). These criteria are presented in Table 3-13. While no specific allowable levels of noise are presented, methodology for assessing no impact, moderate impact, and severe noise impacts for the different land use categories are provided based on existing ambient noise conditions (FTA, 2006).

Table 3-13: FTA Land Use Categories and Metrics

Land Use Category	Noise Metric	Description of Land Use Category
1	Outdoor Hourly Equivalent Sound Level Leq (h)	Tracts of land where quiet conditions are essential to the intended purpose of the land. This category includes lands set aside for serenity and quiet, and such land uses as outdoor amphitheaters and concert pavilions, as well as National Historic Landmarks with significant outdoor use. Also included are recording studios and concert halls.
2	Outdoor Day-Night Average Sound Level Ldn	Residences and buildings where people normally sleep. This category includes homes, hospitals and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.
3	Outdoor Hourly Equivalent Sound Level Leq (h)	Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds and recreational facilities can also be considered to be in this category. Certain historical sites and parks are also included.

In support of the 1999 FONSI for the construction of the parking garage expansion, noise monitoring and modeling was performed in 1996. The results reported in the FONSI are summarized in Table 3-14. These results show that noise levels (Leq) at that time were measured or estimated to range from 62 to 65 dBA in the residential areas and 67 to 68 dBA in adjacent commercial areas. The 1999 FONSI also modeled future (2020) noise conditions with and without the 2004 Garage. The results, which are presented in Table 3-14, show a 1 to 2 dBA increase over the 1996 ambient conditions regardless of the construction of the garage expansion, a result which likely reflects the influence of mobile noise sources from the Interstate 95 and rail corridor on ambient sound conditions in the area of the Stamford Transportation Center. The modeled “2020 Build Condition” is expected to provide a conservative proxy of current (2012) ambient noise conditions in the project area.

Table 3-14: Estimated Ambient Noise Levels

Receptor	Location	1996 Noise Levels Leq (dBA)	2020 No-Build Condition with Background Growth Leq (dBA)	2020 Build Condition** Leq (dBA)
A1	Atlantic Street	65 [†]	67	67
A2	Atlantic Street	62*	64	64
A3	Henry Street	64*	64	64
A4	MetroCenter	68 [†]	69	69
A5	Station Place	67*	68	68

*Monitoring results

† Model prediction

**Assumed to provide a conservative proxy of 2012 existing conditions

Source: Finding of No Significant Impact (FONSI) for Stamford Transportation Center Parking Garage Expansion, 1999

3.7.2. Impact Evaluation

In order to determine potential noise impacts resulting from the Proposed Action, the methodology outlined in *Transit Noise and Vibration Impact Assessment* (FTA-VA-90-1003-06, May 2006) was used. The FTA methodology recommends using screening distances to assess impacts to sensitive receptors or land use categories. For a parking facility, the FTA guidance assumes 1,000 operations (i.e., trips into and out of the parking garage) during the peak hour of transit activity. The methodology then establishes screening distances within which sensitive receptors should be identified. Those distances are 125 feet for areas with no obstruction between the source (e.g., parking garage) and the receptor, and 75 feet if there is an intervening building. If potential uses within the sensitive land use categories are identified within the screening distance, additional analysis should be performed to assess the potential level of impacts. If none of these uses are identified, no adverse impacts are expected.

The parking to support the commuter parking and TOD of the Proposed Action is estimated to be provided in one or more parking structures to replace the Original Garage at the Stamford Transportation Center. Considering the conservative upper range of potential TOD, two parking facilities are assumed to be provided, with one located at the site of the Original Garage and the other to be located on a site within the prescribed boundaries of the Proposed Action. The specific site(s) will be determined through the public-private development agreement and future detailed site design.

The estimated maximum traffic generation for the Proposed Action, considering the conservative upper range of TOD, is 1,020 vehicles per hour. When added to the current traffic generated by the Stamford Transportation Center parking complex, the combined maximum traffic generation is estimated to be 1,350 vehicles per hour. However this traffic generation will be distributed over two parking facilities, such that the trips into and out of either garage is anticipated to be below the assumed 1,000 vehicle-per-hour threshold value of the FTA methodology.

Consequently, the 125-foot screening distance provides a conservative estimate since it is based on a higher number of operations during the peak hour than is expected to occur at any of the garage facilities associated with the Proposed Action.

Potential noise receptors were identified from information provided by CTDOT of a field review conducted in 2010, a windshield survey of the area conducted in May 2012, and desktop research. Land uses northwest of the project site are dominated by the Stamford Transportation Center facilities (including the train station and bus transit terminal), the rail line and I-95. There are no FTA Category 1 land uses within proximity of the Proposed Action. Potentially sensitive receptors within FTA Categories 2 and 3 are located east and south of the Proposed Action, and include residences, churches and educational facilities. The nearest of these receptors is located along Atlantic Street, approximately 160 feet from the Stamford Transportation Center parking complex. The closest receptor south of the site is the Metro Green apartments, located approximately 215 feet from the Stamford Transportation Center parking complex. None of the potentially sensitive land uses are located within the FTA screening distance threshold. Since no land uses that may include sensitive receptors are located within the screening distances, based upon the results of the FTA transit screening methodology, no significant noise impacts from the Proposed Action relative to the Original Garage site are anticipated.

The Proposed Action potentially involves development of TOD uses and parking on sites near the Stamford Transportation Center, within the Proposed Action Boundary described in Section 2. This component of the project could have potential for noise impacts to sensitive residential receptor sites located along Atlantic Street, Henry Street and Garden Street.

3.7.3. Mitigation

No mitigation is necessary or proposed to address the elements of the Proposed Action that may be constructed on the Original Garage site because there are no sensitive receptors within the screening limits, and consequently no adverse noise impacts are anticipated on State property.

Elements of the Proposed Action that may be located at other sites within the Proposed Action Boundary could have a potential noise impact if these uses are to be located within 125 feet of sensitive residential or institutional receptors in the area. However, since the traffic generated by the upper range of development considered in this EIE for the Proposed Action is expected to have point sources well below the 1,000 vehicle-per-hour threshold, significant noise impacts are not anticipated.

Potential noise impacts associated with the increased parking or other activities for the TOD component of the Proposed Action may require further study and/or mitigation strategies if these uses are to be located within 125 feet of sensitive residential and institutional receptors located along Atlantic Street, Henry Street or Garden Street.

3.8. Socioeconomic Resources

3.8.1. Existing Conditions

3.8.1.1. Demographics

Stamford is the State’s fourth largest city, with a 2010 population of 122,643, based on U.S. Census data. The population has increased by 4.7 % (5,560 people) since 2000, which is a slightly lower rate than the statewide rate of 4.9 %. Stamford is an urban area with a population density of 3,258 persons per square mile compared to 738 persons per square mile statewide. Notable demographic characteristics of the City are shown in Table 3-15. This table also shows how these characteristics compare to the state as a whole.

Table 3-15: Demographic Characteristics

Category		Stamford	Statewide
Gender	Male (% of population)	49.3	48.7
	Female (% of population)	50.7	51.3
Age	Age 65 and Older (% of population)	13.1	14.2
	Under Age 18 (% of population)	21.6	22.9
	Under Age 5 (% of population)	6.8	5.7
Household	Home Ownership Rate (%)	56.5	69.2
	Number of Persons per Household	2.56	2.52
Income	Per Capita Income (\$)	44,667	36,775
	Median Household Income (\$)	75,579	67,740
	% of Persons below poverty level	11.1	9.2
Travel	Mean travel time to work (minutes)	24.7	24.6

Source: US Census, 2010

3.8.1.2. Environmental Justice

Environmental Justice (EJ) populations are described as minority and low income populations that meet certain demographic thresholds. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority populations and Low Income Populations requires federal agencies to avoid disproportionately high and adverse human health and environmental effects on minority and low income populations. Title VI of the Civil Rights Act of 1964 requires nondiscrimination in any federally funded activities. Development of Statewide Transportation Improvement Program (STIP) requires consideration of EJ populations.

The City of Stamford’s population composition derived from the 2010 Census includes:

- 53.3% White, not Hispanic
- 23.8% Hispanic or Latino origin
- 13.9% Black
- 7.9% Asian
- 0.3% American Indian or Alaska Native
- 0.1% Native Hawaiian or other Pacific Islander

Since 2001, the SWRPA has prepared demographic profiles to assess the Region’s transportation planning programs and products, such as the TIP and Long Range Transportation Plan, for compliance with the guiding principles of Environmental Justice. The South Western Region consists of eight municipalities in southwestern Connecticut that include the cities of Norwalk and Stamford and the towns of Darien, Greenwich, New Canaan, Weston, Westport and Wilton. EJ assessments are completed annually as SWRPA reports to assure that transportation plans and programs do not have an adverse impact on EJ communities of concern; ensure participation by these communities in the transportation decision-making process; and prevent the reduction or denial of transportation benefits for these communities.

Communities of concern are defined as any Census tract meeting or exceeding defined thresholds for the following criteria:

- Percent of minority population (all persons except those identified as White, non-Hispanic)
- Per capita income
- Percent of households receiving public assistance income
- Percent of persons below the poverty level

In Stamford, according to the *2012 SWRPA EJ Assessment*, communities of concern that met all four criteria were identified in nine Census tracts. These tracts are located in the Downtown area, Waterside, South End, and Glenbrook, generally along the U.S. 1 and I-95 corridors. The nine include Census tracts 201, 211, 213, 214, 215, 216, 221, 222, and 223. These tracts encompass the Stamford Transportation Center and the TOD Alternative project area. The Stamford Transportation Center and areas to the south within the ¼ mile project area boundary are located in Census tract 222. Areas immediately to the north of the Stamford Transportation Center and I-95, but within the ¼-mile boundary, are in Census tract 201.

The total population of the nine Census tracts was 50,227 of which 33,698 (67.1%) were minorities. Per capita income was \$33,271 which is far less than the Region at \$65,409. The percentage of the population below the poverty level in these communities of concern was 15.9% compared to the Region at 6.5%. Data specific to Census tracts 201 and 222 in the project area are provided in Table 3-16.

Table 3-16: Census Data

Census Tract	Total Population	Minority Population	Percent Minority	Per Capita Income	Percent Below Poverty Level	Total Households	Percent w/ Public Assistance
201	3,523	1,947	55.27%	\$36,932	25.20%	2,025	10.96%
222	3,186	2,703	84.84%	\$20,263	22.03%	948	2.53%

Source: SWRPA 2012

The *2012 SWRPA EJ Assessment* also considered travel data, commuting patterns and language barriers in communities of concern. It was reported that households within the communities of concern were four times more likely in not having a personal vehicle available than others in the Region. Commutes to work were also shorter than the rest of the Region. Workers in the

communities of concern are more likely to carpool and ride the bus at a 6.1% higher rate than the rest of the Region. Commuters in these communities account for 62.0% of all bus commuters Region wide. Workers also commuted by railroad at a 7.1% lower rate than elsewhere in the Region despite proximity to the Stamford Transportation Center.

Data also suggest that households in these nine communities of concern are likely to be linguistically isolated, accounting for more than one-half of all linguistically isolated households in the Region and are twice as likely to speak Spanish as any other foreign language.

3.8.1.3. *Employment and Income*

In May 2012, the labor force of Stamford was 69,458 persons of which 64,781 were employed, an unemployment rate of 6.7% according to the Connecticut Department of Labor.

Unemployment at the State level for this same period was 8.0%. Since January 2012, the unemployment rate of Stamford has fluctuated between 7.2% in January to 6.2% in April.

Stamford is the business and retail center of Fairfield County and serves as the headquarters for many major U.S. corporations, including Fortune 500 companies. Much of its labor force is employed in the service sector in finance, wholesale and retail trade, insurance, and real estate, but manufacturing and research also contribute to the area's diverse economic base. The cost of housing and other necessities is generally considered to be quite high compared to other areas in the Northeast U.S.

Major employers in Stamford are identified below based on information contained within the City's Annual Financial Report for 2011 (City of Stamford, 2011). The top ten major employers in the City account for approximately 25% of its total employment.

Table 3-17: Major Employers

Relative Position	Major Employers in 2011	Number of Employees	% of Total Employment
1	City of Stamford (including Board of Education)	3,000	4.41%
2	UBS	2,500	3.68%
3	Stamford Towne Center	2,500	3.68%
4	RBS	2,400	3.53%
5	Stamford Hospital	1,920	2.82%
6	General Electric Capital Corp.	1,043	1.53%
7	Pitney Bowes	1,000	1.47%
8	Gartner Group	875	1.29%
9	Starwood Hotels & Resorts	850	1.25%
10	Gen Re Corporation	800	1.18%
Total		16,888	24.84%

Source: *City of Stamford 2011*

The project area is a mix of different land uses surrounding the Stamford Transportation Center, generally a transitional location in land use from the Downtown area. This mix includes business, commercial, transportation and industrial uses with residential neighborhood areas (and communities of concern) extending outward from the Stamford Transportation Center and concentrated beyond the ¼-mile project area, particularly to the west and south.

3.8.2. Impact Evaluation

3.8.2.1. Demographics

It is anticipated that elements of the project, specifically the garage replacement component, will not have a significant effect on the demographics of the area. The garage component(s), regardless of location within the project area, will replace an existing use and add some additional parking capacity for commuters and others in the area. As such, there will be little effect on local demographics.

Depending on the specific mix of uses with the TOD component, there may be some potential for changing demographic characteristics immediately surrounding the project area, particularly if a residential portion of the TOD is significant in terms of housing units which would result in new housing opportunities and an influx of new residents. The potential exists that new residents may be of higher income levels and different demographic characteristics than existing residents in the area.

3.8.2.2. Environmental Justice

Similarly, it is anticipated that elements of the project, specifically the garage replacement component, will not have a significant effect on environmental justice of the area. The garage component(s) regardless of location within the project area will replace an existing use and add some additional capacity for commuters and others in the area.

Temporary impacts during construction and any demolition necessary for the garage and any TOD components will result in some short term effects on local noise, air quality (due to fugitive dust), and possibly some detours to vehicular and pedestrian circulation around the construction areas. These effects will be highly localized and are not anticipated to be significant although appropriate mitigation measures and best management practices will need to be implemented. Outreach to local neighborhoods should be undertaken to communicate project elements, construction schedules and possible issues of concern.

The project is not expected to result in any significant short or long term changes in local neighborhood travel patterns or the displacement of any residences and businesses. On that basis the project is not anticipated to result in disproportionately high and adverse human health and environmental effects on EJ populations. Again, outreach to local neighborhoods should be undertaken to communicate project elements, construction schedules and possible issues of concern.

3.8.2.3. Employment and Income

The project will result in short-term positive effects on employment and income levels during construction, much of which will be beneficial to the Stamford area and South Western Region. Long-term positive benefits on both employment and income will also be realized from the project proportional to the scale of development and in particular due to the TOD component. There is potential for employment opportunities for residents within nearby neighborhoods.

3.8.3. Mitigation

The Proposed Action is not expected to result in significant adverse effects on socioeconomic resources and no mitigation is required, although appropriate mitigation measures and best management practices will need to be implemented during construction to limit localized impacts on neighborhoods.

3.9. Water Quality



3.9.1. Existing Conditions

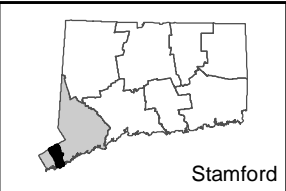
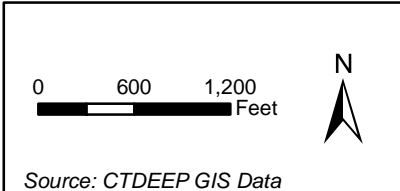
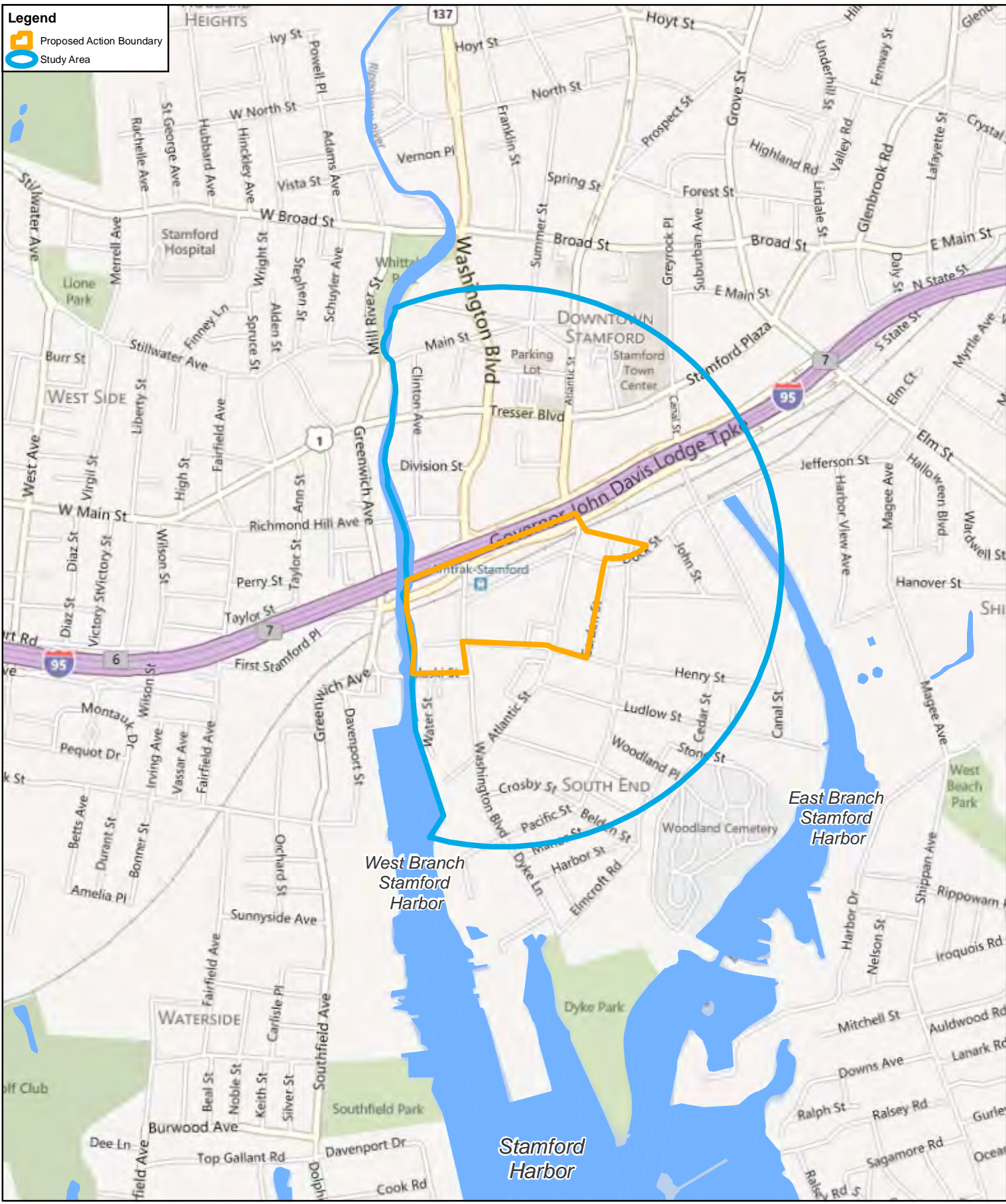
3.9.1.1. Surface Water Quality

Surface waters within the study area include the Rippowam River (also known as the Mill River); the West Branch of Stamford Harbor at the mouth of the Rippowam River; and the East Branch of Stamford Harbor. The main body of Stamford Harbor is located approximately 0.8 miles south of the Proposed Action Boundary. Long Island Sound is located approximately 1.7 miles south at the mouth of Stamford Harbor. The location of these surface waters is shown in Figure 3-8.

Each of these water bodies has been assigned a Water Quality Classification based on Connecticut's Water Quality Standards (CTDEEP, 2011). These classifications define which of several designated uses a waterbody has the capability to support. Table 3-18 and Table 3-19 present the designated uses associated with each surface water quality classification for freshwater and coastal waters, respectively. The water quality classification of each of the surface water bodies near the Stamford Transportation Center are presented in Figure 3-9 and listed in Table 3-20.




Legend

-  Proposed Action Boundary
-  Study Area





Surface Waters
 STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
 Connecticut Department of Transportation
 State Project No. 301-047
 Stamford, Connecticut


Legend

-  Proposed Action Boundary
-  Study Area
-  Aquifer Protection Area (None in Project Vicinity)

Surface Water Quality


-  A
-  SA, SB

Ground Water Quality

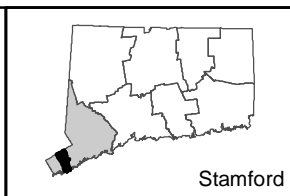
-  GB



0 475 950 Feet



Source: CTDEEP GIS Data



Surface and Groundwater Quality Classifications

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE

Connecticut Department of Transportation

State Project No. 301-047

Stamford, Connecticut

FIGURE 3 - 9

Table 3-18: Inland Surface Water Quality Classifications

Class	Freshwater Designated Use
AA	Existing or proposed drinking water supplies; habitat for fish and other aquatic life and wildlife; recreation; and water supply for industry and agriculture.
A	Habitat for fish and other aquatic life and wildlife; potential drinking water supplies; recreation; navigation; and water supply for industry and agriculture.
B	Habitat for fish and other aquatic life and wildlife; recreation; navigation; and industrial and agricultural water supply.

Table 3-19: Coastal Surface Water Quality Classifications

Class	Coastal Waters Designated Use
SA	Habitat for marine fish, other aquatic life and wildlife; shellfish harvesting for direct human consumption; recreation; industrial water supply; and navigation.
SB	Habitat for marine fish, other aquatic life and wildlife; commercial shellfish harvesting; recreation; industrial water supply; and navigation.

In addition, surface waters in Connecticut are assessed periodically and their condition reported to Congress in the biennial State of Connecticut Integrated Water Quality Report. The latest report was completed in 2010 and approved by EPA in May 2011. Impairments listed in this report occur when a waterbody does not meet one of its designated uses that are associated with its surface water quality classification. Table 3-20 lists the designated uses and impairments for waterbodies within the study area that were identified in the latest Connecticut Integrated Water Quality Report.

Table 3-20: Surface Water Quality Classifications

Waterbody	Water Quality Classification	Impaired Designated Use	Cause	Source
Rippowam River	A	Habitat for Fish, other aquatic life, wildlife	Unknown	Unknown
Stamford Inner Harbor (Both Branches)	SB	Habitat for Marine Fish, Other Aquatic Life, Wildlife	Dissolved Oxygen, nutrients, eutrophication	Urban and municipal non-point source stormwater, atmospheric deposition
Stamford Outer Harbor	SB	Habitat for Marine Fish, Other Aquatic Life, Wildlife	Dissolved Oxygen, nutrients, eutrophication	Urban, municipal and industrial point source discharge, non-point source stormwater, atmospheric deposition
		Shellfish Harvesting for Direct Consumption	Fecal Coliform	Marina/boat Sanitary discharges, Residential districts, waterfowl, stormwater, non-point source
Long Island Sound	SA	Habitat for Marine Fish, Other Aquatic Life, Wildlife	Dissolved Oxygen, Nitrogen, nutrient/ eutrophication	Urban and non-point source stormwater, atmospheric deposition

3.9.1.2. Groundwater Quality

The study area is underlain by glacial till as discussed in Section 3.14. Across Atlantic Street to the east, soils consist of sands and gravels that are likely to be part of a high-yield aquifer of less than 50 feet in thickness (CTDEEP, 2008a). Similar to surface water quality classifications, groundwater in Connecticut is also classified following the Connecticut Water Quality Standards (CTDEEP 1996, revised 2011). Table 3-21 lists the designated uses and discharge restrictions for groundwater. Groundwater below the study area is designated as Class GB (as shown in Figure 3-9). The potential high-yield aquifer area located east of the site is also designated GB, and is not considered to be an area of contribution to a public supply well.

Table 3-21: Ground Water Quality Classifications

Class	Coastal Waters Designated Use and Discharge Restrictions
GAA	Existing or potential public supply of water suitable for drinking without treatment; baseflow for hydraulically connected surface water bodies. Discharges limited to treated domestic sewage, certain agricultural wastes, certain water treatment wastewaters.
GA	Existing private and potential public or private supplies of water suitable for drinking without treatment; baseflow for hydraulically connected surface water bodies. Discharge restricted to GAA and discharge from septage treatment facilities subject to stringent treatment and discharge requirements, and other wastes of natural origin that easily biodegrade and present no threat to groundwater.
GB	Industrial processes water and cooling waters; baseflow of hydraulically connected surface water bodies; presumed not suitable for human consumption without treatment. Discharge restricted to same as GA and certain other biodegradable wastewaters subject to soil attenuation.
GC	Assimilation of discharge authorized by the Commissioner pursuant to Section 22a-430 of the General Statutes. The GC hydrogeology and setting provides the safest backup in case of technological failure. Discharge restricted to potential discharges from certain waste facilities subject to extraordinary permitting requirements.

3.9.1.3. Existing Drainage

As described in Section 3.19, Stamford’s stormwater drainage system is owned and managed by the City of Stamford Water Pollution Control Authority (WPCA). Throughout the Proposed Action Boundary, stormwater runoff is conveyed to trunk line pipes on Atlantic Street and Washington Boulevard. Flows are conveyed south along Atlantic Street to the Dyke Lane pumping station. South of Henry Street, flows along Washington Boulevard are also conveyed south to the Dyke Lane pumping station. All stormwater flows are pumped and the pumping station is automatically turned on based on metering of the stormwater flow amounts. North of Henry Street flows along Washington Boulevard are conveyed north. Drainage from Station Place is split due to the crest in the roadway at the approximate location of the main entrance to the train station. The western end of Station Place drains towards Washington Boulevard; the eastern end drains toward Atlantic Street. The drainage systems on Manhattan Street and Garden Street convey stormwater to Dock Street.

Stormwater runoff from the Original Garage structure is collected in a common drainage system that comingles top deck/roof-level drainage and drainage from the lower interior levels. As documented in the 2006 condition assessment report, it could not be determined whether these drainage discharges were treated, nor whether these discharges are received by the municipal sanitary or storm sewer system. As-built plans for the garage provided by CTDOT indicate that an 8-inch sanitary sewer line from the Original Garage conveys sewage to the east along Station Place, discharging to the sanitary sewer on Atlantic Street. It is assumed that this 8-inch pipe is unlikely to have sufficient capacity to carry stormwater from the top deck and interior levels of the Original Garage.

At the west end of the Original Garage, an 18-inch reinforced concrete pipe (RCP) carries storm drainage below the garage, joins with Station Place drainage in a 24-inch RCP, and continues west toward Washington Street. It is assumed that this pipe receives the drainage from the Original Garage since adequate capacity appears to be available.

Stormwater runoff from the 2004 Garage is managed in several ways. Runoff from the roof level is managed separately from drains provided on the interior levels; it is treated by a grit separator and is then discharged to the City's stormwater drainage system on Atlantic Street. Runoff to floor drains on the interior levels is collected, treated in an oil/water separator, and piped to the City's sanitary sewer system on Atlantic Street. The treatment of stormwater runoff from the expansion garage is consistent with CTDEEP's current requirements for drainage from parking structures (see *Proposed Drainage* under Section 3.9.2 for additional details of CTDEEP's requirements).

3.9.2. Impact Evaluation

No changes in surface water, groundwater or stormwater quality are anticipated under the No-Action Alternative. Potential impacts to surface water, groundwater, and stormwater that are anticipated to result from the Proposed Action are presented below.

3.9.2.1. Surface Water Quality

The Proposed Action will occur in an existing urban area with land cover that is dominated by impervious surfaces. Impervious surfaces serve as accumulation areas for oil, sediment, and other contaminants associated with vehicles; prohibit uptake of pollutants by vegetation; and increase the quantity and rate of stormwater runoff by preventing groundwater infiltration. Since the Proposed Action could include one or more new parking facilities that will provide an overall increase in parking capacity, and potential TOD that will be constructed on or beyond the footprint of the Original Garage site, there will likely be an increase in impervious land cover associated with the Proposed Action. Additionally, the increased parking deck area and increased number of vehicular trips associated with the overall increase in parking capacity at the new parking facilities and potential TOD sites could increase pollutant loads through increased tracking of sediment, leaking vehicle fluids, vehicle brake dust, etc. The extent to which the quantity and quality of runoff could affect surface water quality is currently unknown and will be a function of the impervious areas and stormwater treatment measures that are incorporated into the parking garage, TOD, and associated site designs.

Stormwater drainage systems for new parking structures under the Proposed Action will meet CTDEEP's current water quality treatment requirements (see *Proposed Drainage* under this section for details) and adhere to strategies provided by the *2004 Connecticut Stormwater Quality Manual* (CTDEEP, 2004) and will result in a net improvement in water quality from garage runoff, in comparison to existing conditions for the Original Garage. Potential impacts to surface water quality are not anticipated to impact public water supplies as the study area "does not appear to be in a public water supply source water area," as indicated by CTDPH's June 2012 scoping review letter (Appendix A).

During construction, soil will be exposed on the Original Garage site, and potentially on other sites within the Proposed Action Boundary, increasing the potential for erosion of soil and discharge of sediment to receiving waters. Additionally, vehicular fluid spills from construction equipment could potentially impact surface water quality if the spills occur before the post-construction stormwater management system is in-place. Erosion and sediment control measures will serve as mitigation during the construction period to prevent erosion and sedimentation, as described in Section 3.22.

3.9.2.2. *Groundwater Quality*

The Proposed Action is not anticipated to result in adverse impacts to groundwater quality. The study area is currently a highly urbanized area. Given the historic nature of the area, there is a potential of soil contamination being discovered below the surface of the Original Garage. Stormwater runoff from the new parking facilities, including those located on the Original Garage site and potential TOD sites within the Proposed Action Boundary, will be treated and managed as described under *Proposed Drainage* in this section. If infiltration of stormwater is utilized as a stormwater management measure, as suggested by CTDEEP in their June 2012 scoping comment letter (Appendix A), it would be applicable to stormwater runoff from roof-level parking decks that is subsequently treated to a level appropriate for groundwater infiltration, and runoff from other impervious pavement and building surfaces associated with the new parking facilities and TOD sites.

The *2004 Connecticut Stormwater Quality Manual* does not recommend infiltration of stormwater generated by land uses with potential for higher pollutant loads, but suggests that it may be allowable if appropriate pretreatment is provided. The feasibility of providing adequate treatment for infiltration of stormwater will be considered during future detailed site design. Infiltration measures would be incorporated into the site designs for new parking facilities and potential TODs if the soils are suitable (minimum infiltration rate of 0.3 inches per hour as defined by NRCS) and infiltration is found to be compatible with the underlying Class GB groundwater.

3.9.2.3. *Proposed Drainage*

The proposed drainage systems for new parking facilities under the Proposed Action will be consistent with current requirements for multi-level parking structures as recommended in CTDEEP's June 2012 scoping comment letter (Appendix A). Runoff from exposed, roof-level parking is likely to include large quantities of water with relative low concentrations of pollutants, similar to stormwater runoff from a surface parking area. CTDEEP requires that the first inch of runoff be treated for medium and coarse-grained sediment, as well as oil and grease, in an appropriate treatment system such as a hydrodynamic separator. Treated stormwater from the exposed parking levels can then be discharged to the City's stormwater drainage system. An operation and maintenance plan for the treatment system would be implemented to ensure that it continues to function properly.

CTDEEP also requires that runoff from the interior levels of new parking facilities be collected separately, treated and discharged to the sanitary sewer system. Runoff from the interior levels is likely to include tracked water from vehicles, drippage from the upper levels, and windblown precipitation, and is thus likely to be small in quantity but relatively concentrated. Additionally,

washing of interior levels of new parking facilities will generate washwater that cannot be discharged to surface waters as it is not an allowable non-stormwater discharge. CTDEEP recommends treatment of this water in an oil-water separator with a capacity of at least 1,000 gallons that must be cleaned by a licensed waste oil hauler at least once per year. Washing the floors of the interior levels is eligible for coverage under the *General Permit for Miscellaneous Discharges of Sewer Compatible Wastewater* as building maintenance wastewater, although registration is required if greater than 5,000 gallons per day of washwater are generated.

As discussed under *Groundwater Quality* in this section, infiltration of stormwater from a land use with potential for higher pollutant loads is not recommended by the *2004 Connecticut Stormwater Quality Manual*; although the manual states that it may be performed with implementation of adequate pretreatment. If infiltration measures are incorporated into the site designs for new parking facilities and potential TODs, stormwater discharges larger than the capacity of the infiltration system would be discharged to the City's stormwater drainage system.

Consistency with CTDEEP requirements and provisions for adequate pretreatment for the infiltration of stormwater will mitigate potential adverse impacts to surface and groundwater quality. In general, beneficial effects are likely under the Proposed Action as the new parking facilities and potential TOD sites will provide for improved treatment of stormwater compared to current conditions.

Given the likely increase in impervious land cover associated with the Proposed Action, and the potential for one or more new parking facilities located within the Proposed Action Boundary, it is possible that the volume of stormwater runoff being handled by the City's stormwater drainage system will increase. The magnitude of this increase and the location of the potential impact on the existing storm drainage system will be a function of the future detailed site design for the new parking facilities and potential TOD sites, including the extent and nature of infiltration measures utilized in these designs.

3.9.3. Mitigation

Specific measures and strategies to mitigate potential adverse impacts to surface water quality and stormwater drainage systems following construction will be determined during future detailed site design for the Proposed Action. The types and limits of these measures will be dependent on the eventual size and configuration of the new parking facilities and TOD sites as determined by the public-private development agreement, local/State agency permitting requirements, and other design considerations. All options should be investigated to suit the final design.

Erosion and sediment control measures that are consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control* will minimize potential erosion and sedimentation impacts during construction.

No other mitigation is required or proposed.

3.10. Hydrology and Floodplains

3.10.1. Existing Conditions







The South End of Stamford is located along Long Island Sound and is subject to coastal flooding impacts in certain areas. The East and West Branches of Stamford Harbor have an associated mapped 100-year flood zone as delineated by the Federal Emergency Management Agency (FEMA). The Rippowam River also has an associated 100-year flood zone, with an additional 500-year flood zone extending further landward along much of its length. The Rippowam River upstream of Pulaski Street has associated FEMA floodway and state-designated Stream Channel Encroachment Lines (SCEs). Floodplain and hydrologic features in the study area are illustrated on Figure 3-10.

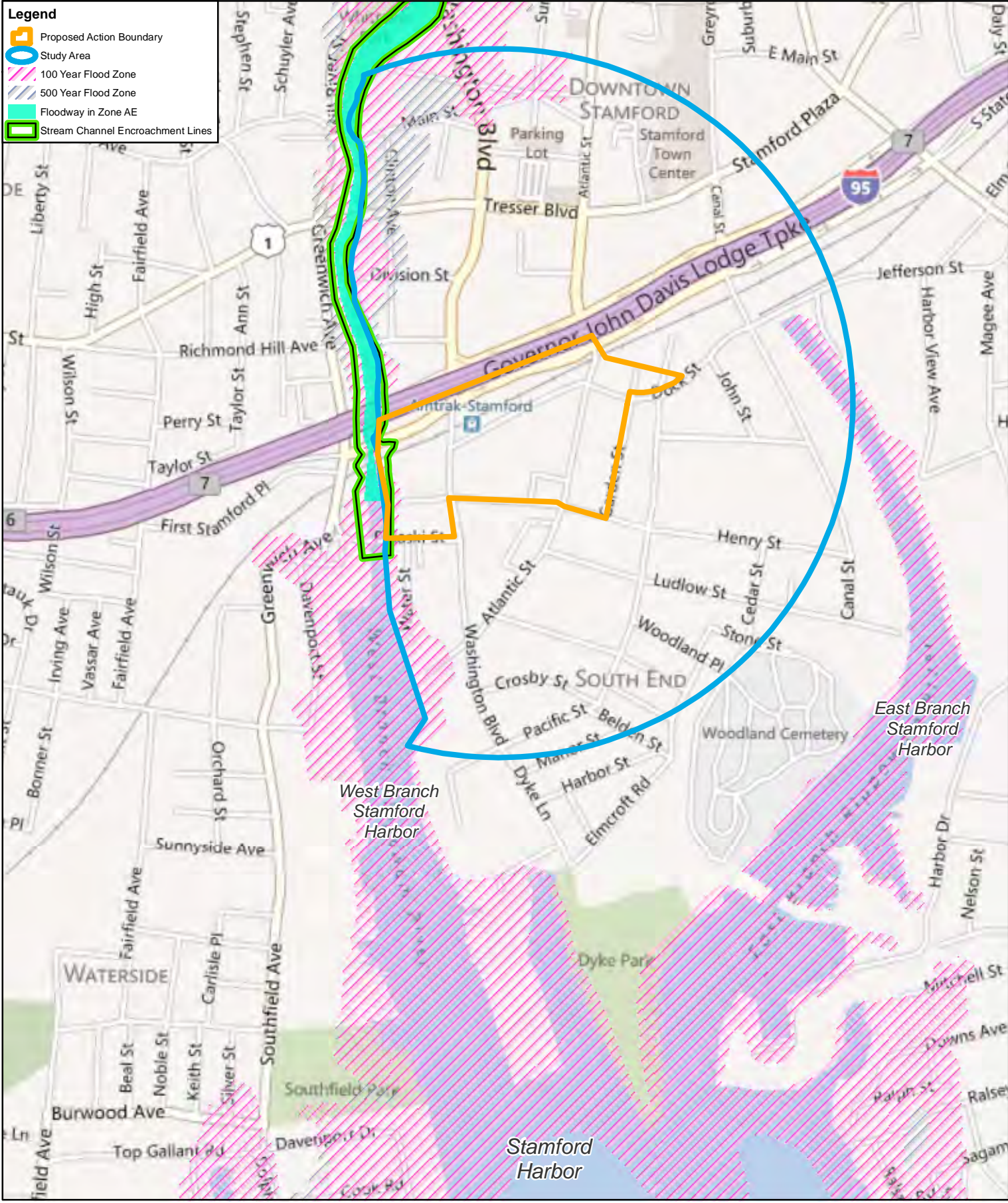
Low-lying areas in the City of Stamford are protected from flooding by the Stamford Hurricane Barrier, which is an Army Corps of Engineers flood control structure. The northernmost portion of the East Branch of Stamford Harbor is protected from flooding by a navigational tide gate that is raised to prevent flood surges from inundating low-lying areas. There is no tide gate for the West Branch since a dike associated with the barrier continues up its eastern edge, keeping flood surges out of inland areas.

Existing stormwater drainage system outfalls that receive drainage from areas below peak flood elevations are equipped with automatic tide gates that prevent backflow into the storm drainage system when water levels in the Long Island Sound would otherwise cause backflow in the storm drainage system. Since closure of the valves prevents interior drainage (stormwater from areas located inland of the hurricane barrier) from discharging, a system of pumps is used during floods to keep inland areas from flooding. An assessment of the drainage system in the area (Milone & MacBroom, 2006) indicates that the majority of the area around the existing Stamford Transportation Center drains to the Dyke Lane Pumping Station at the corner of Dyke Lane and Elmcroft Road, where stormwater flows are metered and pumps automatically turned on based on flow amounts. However, a portion of the Original Garage area, as well as a portion of the drainage from Station Place, drains north by gravity away from the flood control system as shown on the as-built grading and drainage plan for the 2004 Garage (CTDOT, 2004).


A portion of the ground surface at the Stamford Urban Transitway (SUT) lies below the elevation of peak high tides. Although this area is protected by the Hurricane Barrier, drainage discharges to Stamford Harbor by gravity, and there have been instances of localized flooding of 3 to 4 inches during extreme tide events. The Stamford Transportation Center is located west of this area on slightly higher ground and, as such, it is not likely to be flooded.

Legend

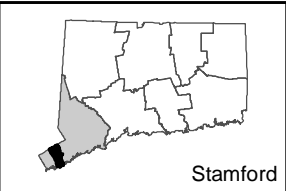
-  Proposed Action Boundary
-  Study Area
-  100 Year Flood Zone
-  500 Year Flood Zone
-  Floodway in Zone AE
-  Stream Channel Encroachment Lines



0 475 950 Feet



Source: CTDEEP GIS Data



Floodplains and Hydrologic Features

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
 Connecticut Department of Transportation
 State Project No. 301-047
 Stamford, Connecticut

FIGURE
3 - 10

3.10.2. Impact Evaluation

The No-Action Alternative includes no changes within the study area such that no impacts are anticipated.

The western extent of the Proposed Action Boundary could encroach on the 100-year and 500-year flood zones associated with the West and East Branches of Stamford Harbor and the Rippowam River, and the regulatory floodway and SCEs for the Rippowam River channel. However, it is not anticipated that fill or obstruction associated with new parking facilities or potential TOD sites within the Proposed Action Boundary will be permitted to occur within the designated flood zone, floodway or SCEs.

Additionally, the likely increase in impervious land area associated with the replacement of the Original Garage with new parking facilities and potential TOD sites could have adverse impacts on runoff volume or peak flow rates, with potential impacts to floodplain elevations. The potential magnitude of the impact will be a function of the future detailed site design for the new parking facilities and potential TOD sites, including the location and nature of mitigation measures for the City's existing stormwater drainage system. The proposed discharge quantity and peak flows in the Proposed Action Boundary will be evaluated with respect to the available capacity of the existing stormwater drainage system to ensure that adequate capacity is provided.

Retention or detention of stormwater is generally not recommended for sites that are located in the lower portion of a watershed to avoid peak flows from the site that could potentially coincide with peak flows from the larger watershed, which could increase the downstream flooding potential. These concerns may be especially relevant for flows received by the pumping station associated with the Stamford Hurricane Barrier, as an increase in peak storm flows received by the pumps could exceed capacity, resulting in localized flooding. The design of the stormwater drainage systems serving the new parking facilities and potential TOD sites should address this concern and evaluate the need for stormwater retention or detention coordinated during design phases.

3.10.3. Mitigation

A portion of the Proposed Action Boundary is located within regulatory flood zones and within the floodway and SCEs of the Rippowam River. During analysis of locations for the new parking facilities and potential TOD sites, the proximity to these constraints will be considered and will be avoided to the greatest extent possible. Regardless of location, the design of the proposed drainage systems for the new parking facilities and potential TOD sites will include an evaluation of the available capacity of the City's stormwater drainage system if changes to the discharge quantity or the existing tie-in locations to the existing system are required. The design will also address the potential for peak flows from the sites to coincide with peak flows from the larger watershed and determine whether on-site stormwater retention or detention is warranted.

A CTDEEP Flood Management Certification may be required for the Proposed Action.

3.11. Wetlands

3.11.1. Existing Conditions

CTDEEP and USFWS-NWI mapping, and USDA-NRCS Web Soil Survey sources were reviewed to determine potential wetland locations in the study area. CTDEEP and NWI mapping indicate that any wetlands within the study area are restricted to the banks of the East and West Branches of Stamford Harbor and the Rippowam River, as shown on Figure 3-11. Additionally, no hydric soils were identified outside of the river corridors.

Field reconnaissance of areas adjacent to the Stamford Transportation Center was conducted for CTDOT by a certified soil scientist from Fuss & O'Neill, Inc. in September 2009 to verify the presence or absence of regulated wetlands and watercourses in the area. Based on the field reconnaissance, no wetland soils or watercourses were identified within this area.











3.11.2. Impact Evaluation

No wetland or watercourse impacts are anticipated for the Proposed Action.

3.11.3. Mitigation


If drainage outlets need to be modified, permits will be obtained during the final design phase.

Legend

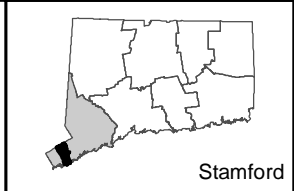
-  Proposed Action Boundary
-  Study Area
- NWI Wetlands**
-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Estuarine and Marine Deepwater
-  Estuarine and Marine Wetland
-  Freshwater Pond
-  Lake
-  Riverine
-  Other



0 475 950 Feet



Source: CTDEEP GIS Data



National Wetlands Inventory

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE

Connecticut Department of Transportation

State Project No. 301-047

Stamford, Connecticut

FIGURE 3 - 11

3.12. Coastal Resources





3.12.1. Existing Conditions

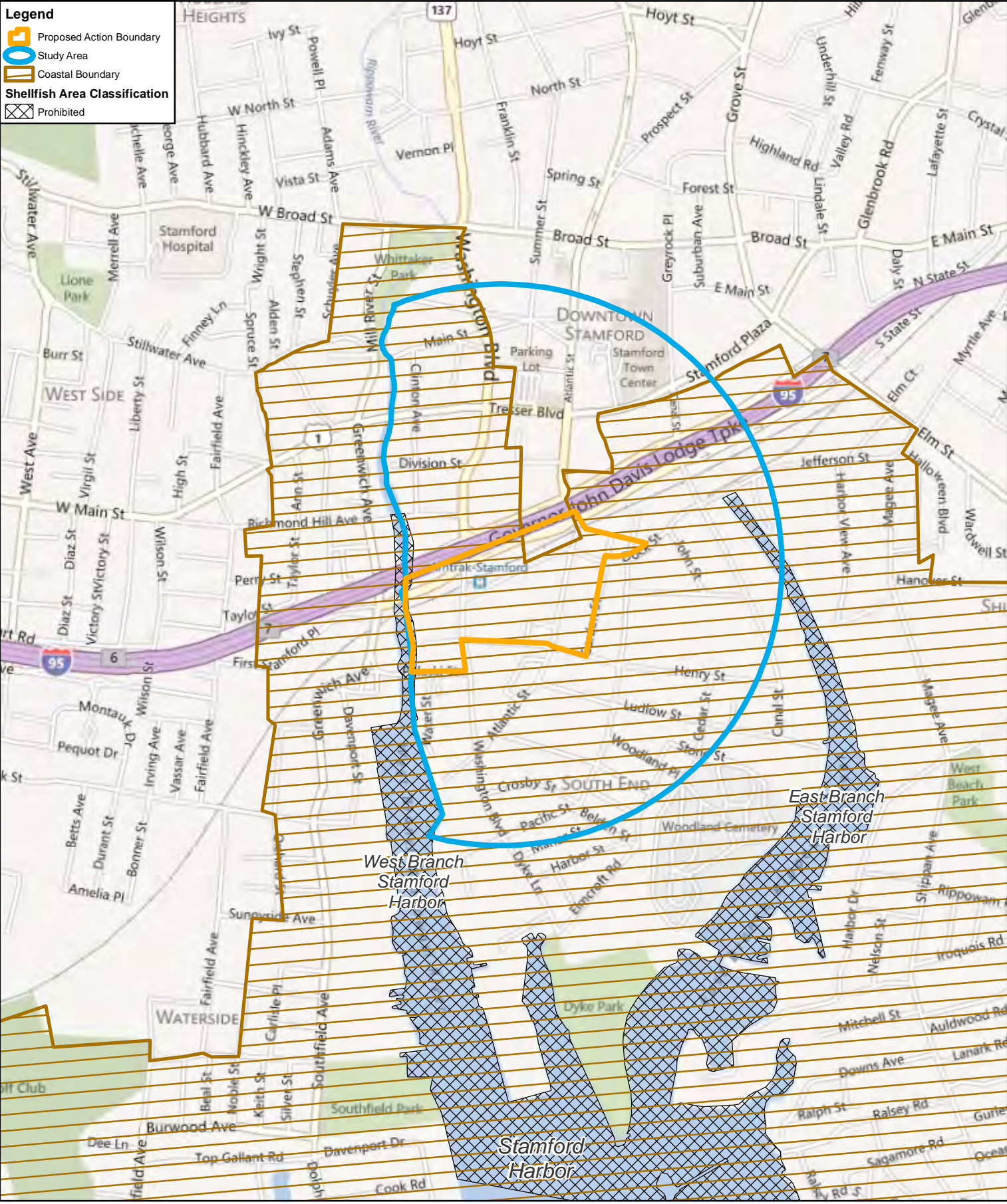
The study area is located within the Connecticut Coastal Area and the Connecticut coastal boundary as shown on Figure 3-12 and defined by section 22a-94 of the Connecticut General Statutes (CGS). These areas are subject to the Connecticut Coastal Management Act (CCMA) in CGS Section 22a-90 through 22a-113. Projects proposed within the coastal boundary must be consistent with the CCMA standards and policies, which is generally administered by municipalities through the planning and zoning process. In the case of an action by a State Agency, such as the proposed project, CTDEEP Office of Long Island Sound Programs (OLISP) performs coastal consistency reviews.

According to the Stamford *Coastal Resources Map* (1987) the majority of the study area is considered Shorelands which are defined by the *Connecticut Coastal Management Manual* (CTDEEP, 2000) as areas within the coastal boundary exclusive of coastal hazard areas, which are not subject to dynamic coastal processes. They contain no tidal wetlands, beaches and dunes, or other sensitive water-dependent resources. They are important as they contribute runoff and sediment to coastal areas, provide scenic views, and are developable. A project in Shorelands is consistent with the CCMA if it avoids adverse impacts to adjacent sensitive coastal resources.

Developed Shorefronts are also located within the study area. Developed Shorefronts are coastal areas that have limited natural resource value, but instead are valued for their economic contribution. These areas serve as transportation and commercial centers, support boating opportunities, and provide cultural and historic value. The Stamford Transportation Center is adjacent to these areas. A project near these areas is consistent with the CCMA if adverse impacts to adjacent sensitive coastal resources are avoided and is consistent with CTDOT's policies of providing efficient and safe use of state facilities. Redevelopment of Developed Shorefront areas themselves should improve public access to coastal resources, and should be reserved for intensive water-dependent uses if possible (CTDEEP, 2000).

Legend

-  Proposed Action Boundary
-  Study Area
-  Coastal Boundary
- Shellfish Area Classification**
-  Prohibited



0 600 1,200 Feet

Source: CTDEEP GIS Data

Stamford

Coastal Resources

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE

Connecticut Department of Transportation

State Project No. 301-047

Stamford, Connecticut

FIGURE 3 - 12

3.12.2. Impact Evaluation

The No-Action Alternative would involve no construction and no direct or indirect impacts on coastal resources.

The Proposed Action is consistent with coastal zone management policies as one of the goals of the action is to enhance and improve existing multimodal public transportation access within the study area [CGS section 22a-92(c)(1)(G)]. Additionally, the Proposed Action will not have any adverse impacts on coastal resources, decrease any coastal access or recreational opportunities, or impair the visual quality of the shoreline as addressed in Section 3.17.

The Proposed Action will remain consistent with policies for Shorelands and avoid impacts to adjacent sensitive coastal resources. Erosion and sediment controls will be implemented during construction to prevent discharges of any pollutants or contaminated soils to adjacent coastal resources, including coastal waters. Following construction, stormwater drainage systems for the new parking facilities will provide improved stormwater treatment measures compared to the existing system for the Original Garage (as discussed in Section 3.9), which will result in a beneficial impact to coastal waters that ultimately receive the discharge. Additionally, the Proposed Action will not result in a loss of public access to the shoreline, impact significant habitat or species, or alter cultural sites.

No navigable waters are within the Proposed Action Boundary so therefore, none will be directly impacted.

3.12.3. Mitigation

Measures to minimize discharge of stormwater pollutants to coastal waters are discussed under *Mitigation* for water quality in Section 3.9.3. A Coastal Zone Consistency Concurrence will be required and a Flood Management Certification from CTDEEP may be required for any necessary changes to the drainage patterns. Permitting through these programs will ensure that potential impacts are appropriately mitigated.

3.13. Endangered, Threatened, or Special Concern Species or Habitats

3.13.1. Existing Conditions

The Proposed Action Boundary is an urban area consisting of an abundance of impervious surfaces, including asphalt, buildings, and concrete. The area provides minimal ecological diversity and wildlife habitat. Existing flora is very limited, generally consisting of landscaping in parking areas and around the perimeter of existing buildings, some limited lawn areas, and weed species in non-maintained areas. Existing fauna in the area includes animal species typical of an urban setting such as squirrels, pigeons, house sparrows, raccoons, and mice.

A review of the USFWS Northeast Region website was consulted to determine if a Section 7 consultation would be required for the project. According to their database, no Federal Threatened or Endangered Species are identified for the City of Stamford and no further coordination is required (Appendix A).

According to CTDEEP's June 2012 scoping comment letter (Appendix A), the Natural Diversity Data Base (NDDDB) does not contain any records of extant populations of Federal or State-listed endangered, threatened or special concern species, pursuant to section 26-306 of the CGS within the Proposed Action Boundary. As shown in Figure 3-13, NDDDB mapping indicates the presence of a Natural Diversity Database Area located in the northeastern study area, approximately one-half mile from the Proposed Action Boundary.




3.13.2. Impact Evaluation

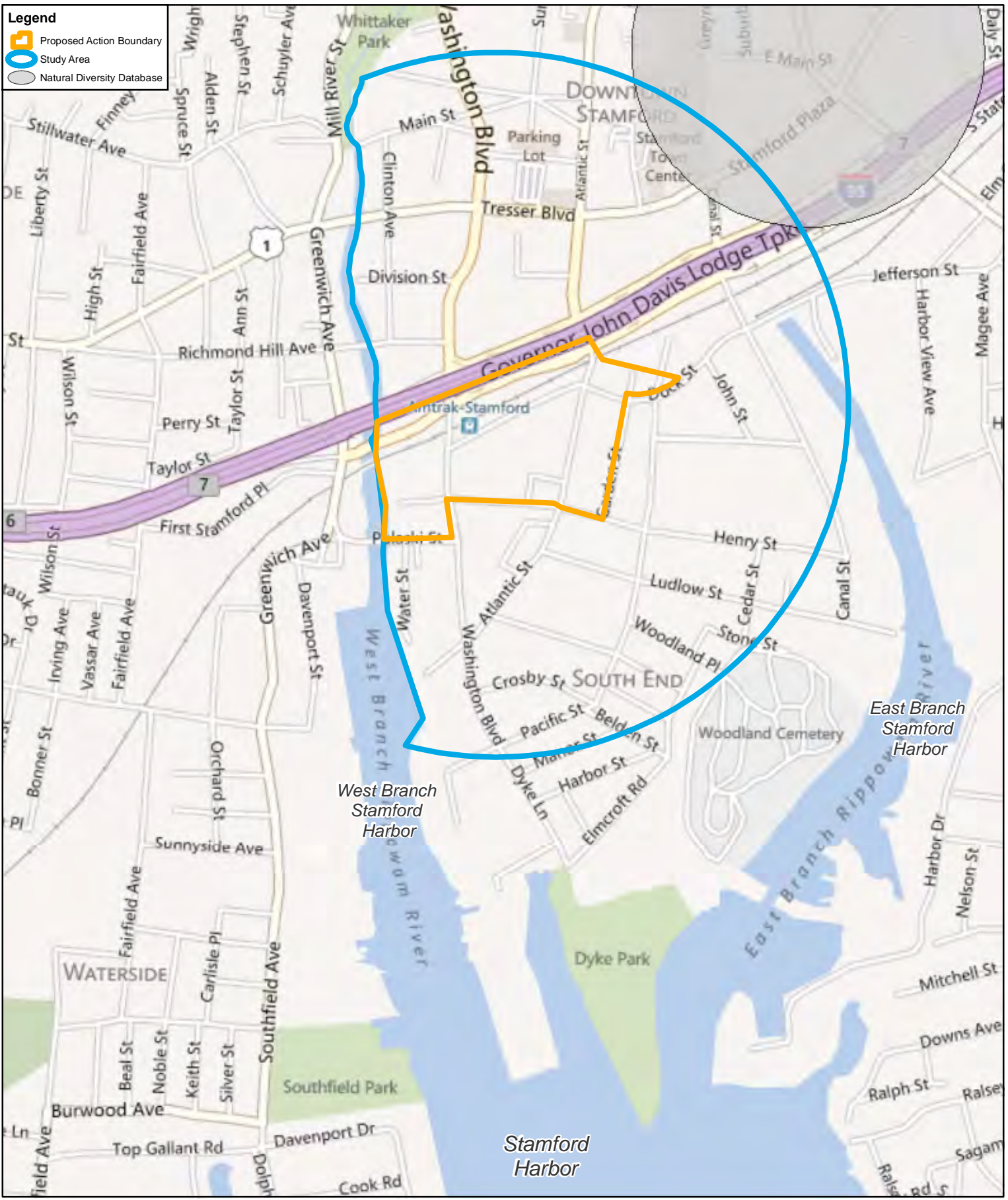
No impacts to flora, fauna, or threatened and endangered species are anticipated for the Proposed Action.

3.13.3. Mitigation


Since no impacts to flora, fauna, or threatened and endangered species are anticipated, no mitigation is required or proposed.

Legend

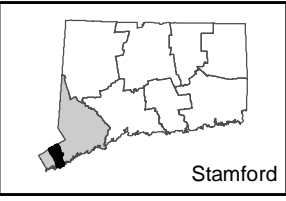
-  Proposed Action Boundary
-  Study Area
-  Natural Diversity Database



0 475 950 Feet



Source: CTDEEP GIS Data



Natural Diversity Database Areas

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE

Connecticut Department of Transportation

State Project No. 301-047

Stamford, Connecticut

FIGURE 3-13

3.14. Soils and Geology

3.14.1. Existing Conditions

The study area is underlain by surficial deposits consisting of thin glacial till, the majority of which has been disturbed through urbanization. The bedrock geology in the area is primarily schist and gneiss (CTDEEP, 1990; reprinted 1996). Soils in the study area are mapped as Urban Land, as shown in Figure 3-14. Urban Land is land mostly covered by streets, parking lots, buildings, and other structures of urban areas (USDA-NRCS, 2011). No Prime Farmland Soils or Soils of Statewide Importance are present within the study area.















3.14.2. Impact Evaluation

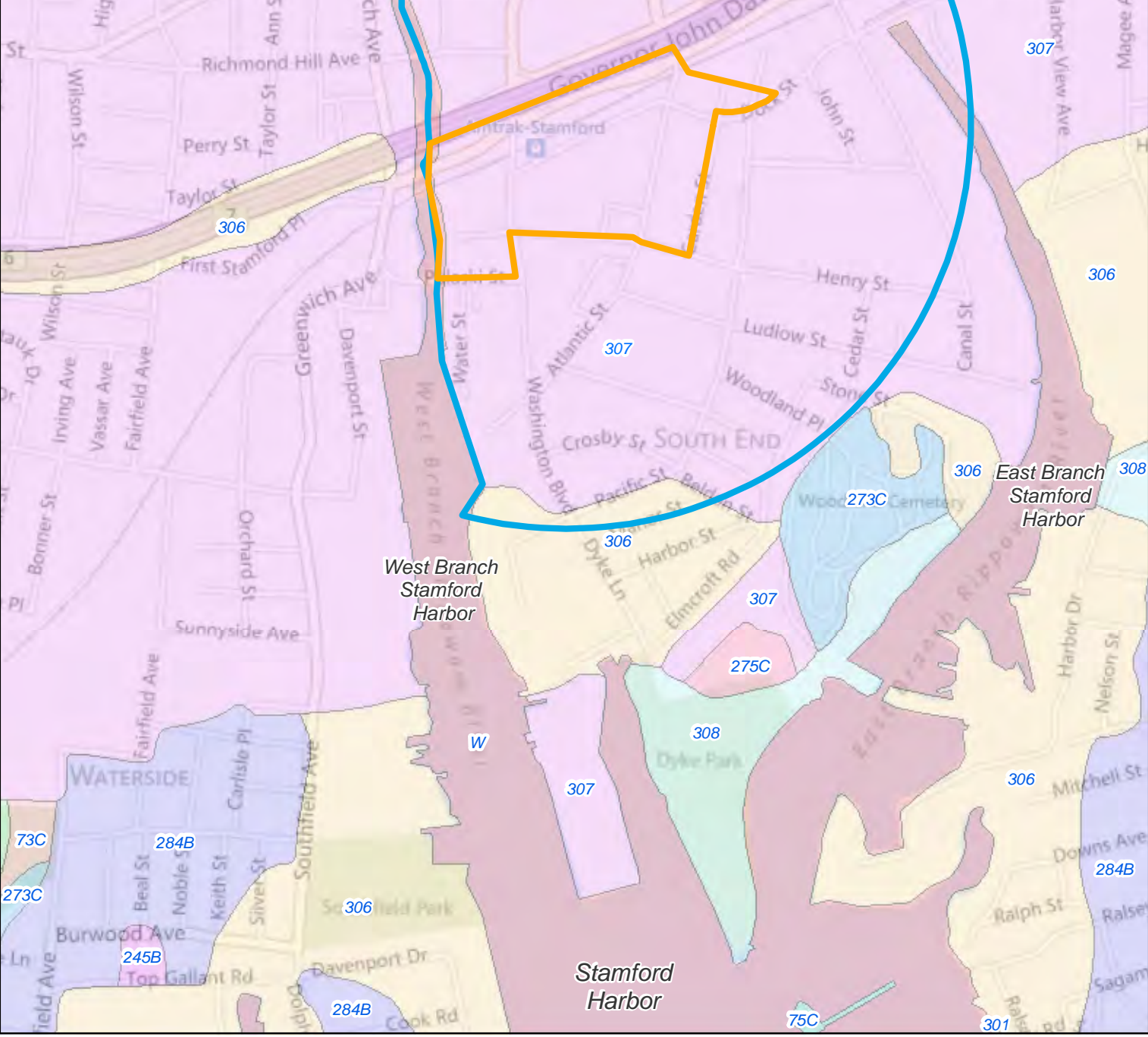
No soils or geologic features of national, state, or local importance are located within the study area. As such, no impacts to soils or geology are anticipated for the Proposed Action.

3.14.3. Mitigation

Since no impacts to soils or geology are anticipated, no mitigation is necessary or proposed.

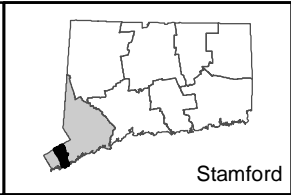
Legend

-  Proposed Action Boundary
-  Study Area
-  13 - Walpole sandy loam
-  245B - Woodbridge-Urban land complex
-  260C - Charlton-Urban land complex
-  273C - Urban land-Charlton-Chatfield complex
-  275 - Urban land-Chatfield complex
-  284 - Paxton-Urban land complex
-  306 - Udorthents-Urban land complex
-  307 - Urban land
-  308 - Udorthents, smoothed
-  73C - Charlton-Chatfield complex
-  75C - Hollis-Chatfield-Rock outcrop complex
-  W - Water



0 475 950 Feet

Source: U.S. Department of Agriculture, Natural Resources Conservation Service



Soils

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
Connecticut Department of Transportation
State Project No. 301-047
Stamford, Connecticut

FIGURE
3 - 14

3.15. Cultural Resources

3.15.1. Existing Conditions

Cultural resources include archaeological sites, historic buildings and structures, and historic districts. Figure 3-15 shows the historic districts and cemeteries within the vicinity of the study area.

3.15.1.1. Archaeological Resources

The study area has been continuously developed over the last 400 years and contains highly disturbed soils. The potential for intact pre-contact or historic period archaeological resources is very low. No known archaeological resources, including historic period or pre-contact sites exist within the Proposed Action Boundary. Additionally, no cemeteries exist within the Proposed Action Boundary.

3.15.1.2. Architectural Resources

A portion of the Proposed Action Boundary overlaps the South End Historic District, which was listed in the State and National Registers of Historic Places in 1986 (Figure 3-15). The historic district encompasses 177.1 acres, and at the time it was listed it included 449 buildings, of which 400 were contributing resources. The District is generally bounded by the former Penn Central Railroad tracks to the north, Woodland Cemetery to the south, John, Market, and Canal Streets and the East Branch of Stamford Harbor to the east, and Washington Boulevard to the west. The South End Historic District is significant for its architecture, which includes numerous examples of Italianate, Victorian Gothic, French Second Empire, Queen Anne, and Colonial Revival houses, its historical association with many ethnic communities, and its association with the development of Stamford as a “walking city” where employees lived in housing constructed near the factories where they were employed. Much of the historic development in this section of Stamford occurred during the late-19th and early-20th centuries in association with the Yale & Towne Lock Works factory. Although the historic district has been adversely affected by previous redevelopment projects, numerous contributing resources remain and the district, as a whole continues to reflect the late 19th and early 20th century development of the South End as a residential and industrial district. Further, the historical association of the South End Historic District with varied ethnic communities is still reflected in the demographics of the present-day residents of this area.

Several streets within the Proposed Action Boundary include buildings contributing to the South End Historic District. Pulaski Street contains one contributing residential building on the north side, surrounded by the construction area for the proposed Gateway Site development. Washington Boulevard contains one contributing residential building on the west side, surrounded by the construction area for the proposed Gateway Site development. The block bordered by Henry Street, Garden Street, Dock Street, and Atlantic Street contains several contributing residential buildings and one contributing factory. The blocks bordered by Dock Street, Pacific Street, Manhattan Street, and Atlantic Street contain several contributing commercial buildings. Figure 3-16 identifies the buildings within the Proposed Action Boundary that are contributing resources to the South End Historic District.

A field review of the study area was conducted on August 2, 2012 jointly by CTDOT and CTSHPO. Buildings that contribute to the South End Historic District were identified within the Proposed Action Boundary. A contributing building is a structure that dates to the District's period of significance, related to its significance, and possesses historic integrity. This project has the potential to impact the South End Historic District directly and indirectly. Direct impacts may include building demolition or property use. Indirect impacts may include visual impacts or other changes to the historic setting of the district. Although the project may affect only a limited portion of the South End Historic District, the impact must be assessed in terms of the effect on the individual resource and the District as a whole, considering the District is recognized as a significant entity in and of itself.





3.15.2. Impact Evaluation

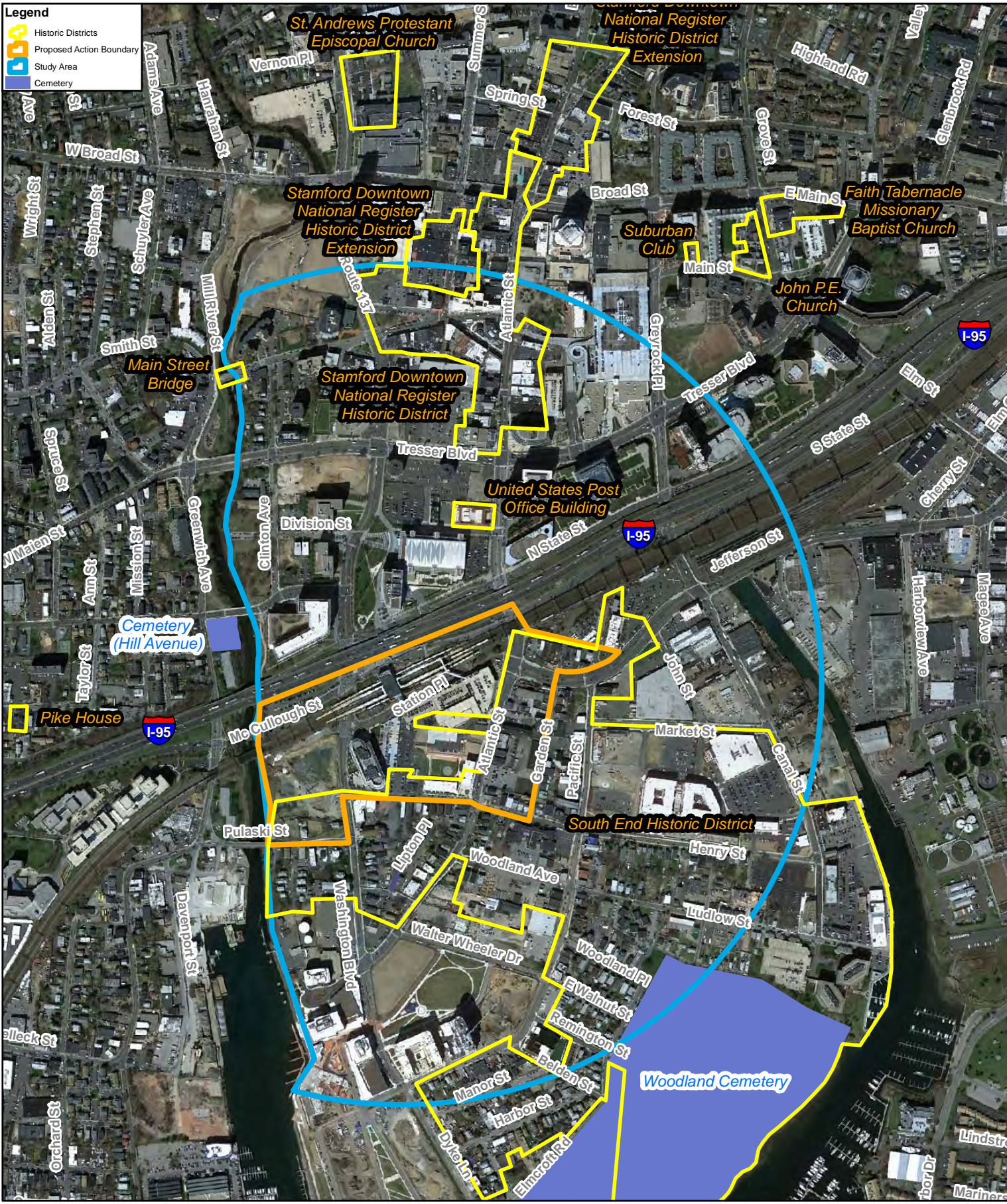
The Connecticut Environmental Policy Act (CGS § 22a-1b and 1c) requires that actions be analyzed in regard to their impact on historic, sacred, and archaeological sites of state or national importance. The South End Historic District has many National Register listed and eligible buildings, though greatly reduced in extent due to recent development. Further consultation with the CTSHPO will be necessary to assess specific direct and indirect impacts of the Proposed Action within the South End Historic District when details are developed.

3.15.3. Mitigation


In order to lessen or compensate for the impact of a project upon a Historic District, measures may be taken to mitigate the effect of a project. Mitigation may include adaptive reuse of historic buildings, documentation of affected historic buildings prior to alteration or demolition, possible relocation of historic buildings to vacant parcels within the Historic District Boundary, and possible support for selective rehabilitation of contributing historic buildings that are located outside the Proposed Action Boundary to offset loss of the District buildings within the Proposed Action Boundary. Further consultation with the CTSHPO will take place to discuss mitigation measures when details are developed. CTSHPO will consult with the Connecticut Trust for Historic Preservation and the Historic Neighborhood Preservation Program, Inc. in the development of appropriate mitigation measures, if warranted, and coordinate further discussions with CTDOT when details are developed.

Legend

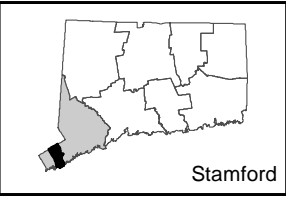
-  Historic Districts
-  Proposed Action Boundary
-  Study Area
-  Cemetery



0 400 800 Feet



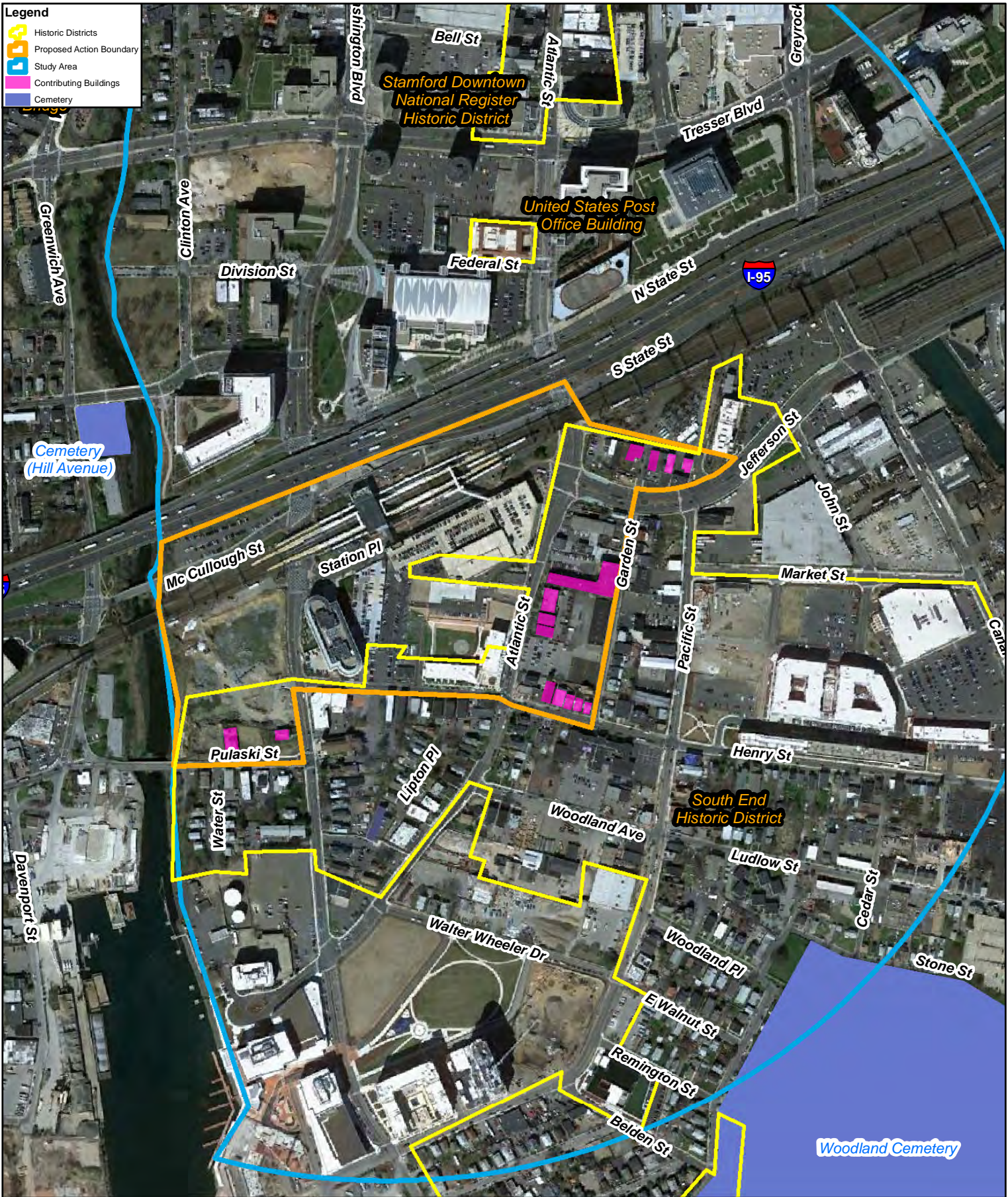
Source: Office of Environmental Planning
Environmental Review - Historical and
Archaeological Resources



Cultural Resources

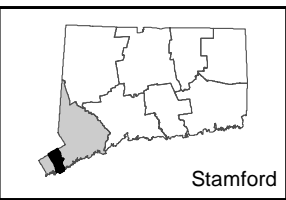
STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
Connecticut Department of Transportation
State Project No. 301-047
Stamford, Connecticut

FIGURE
3-15



0 300 600 Feet

Source: Office of Environmental Planning
Environmental Review - Historical and
Archaeological Resources



**Contributing Resources - South End
Historic District**
STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
Connecticut Department of Transportation
State Project No. 301-047
Stamford, Connecticut

FIGURE
3-16

3.16. Pesticides, Toxic or Hazardous Materials

3.16.1. Existing Conditions

3.16.1.1. Hazardous Materials

A preliminary site assessment for the parcel on which the Original Garage is located and an initial screening for the other parcels located within the Proposed Action Boundary were completed to identify potential environmental concerns and to evaluate the potential for hazardous materials and/or petroleum products to be encountered during future site construction activities.

The 1999 *Connecticut Finding of No Significant Impact (FONSI) for the Stamford Transportation Center and Garage Expansion* (CTDOT, 1999) was reviewed to determine the existing condition of the Original Garage site as well as to identify nearby areas of concern which may have affected the environmental quality of the soil and/or groundwater at the Original Garage site. Additional documents that were reviewed included historical documentation, environmental investigation reports, aerial photographs, Sanborn fire insurance mapping, and records present in State of Connecticut and Federal environmental databases (copies of relevant source documents are included in the Hazardous Materials Documentation Technical Report – see Appendix B for availability). These State and Federal environmental databases included, but are not limited to, the following:

- National Priorities List
- Comprehensive Environmental Response Compensation and Liability Information System (including archives)
- Resource Conservation and Recovery Act (RCRA) Information System Sites
- RCRA Treatment, Storage and Disposal Facilities
- RCRA Generators
- RCRA No Longer Registered
- Federal Brownfield Management System
- Federal Institutional and Engineering Controls
- Emergency Response Notification System
- Tribal Lands
- State/Tribal Contaminated and Potentially Contaminated Sites (including institutional controls, voluntary cleanup programs)
- CTDEEP Emergency Response Actions and Spill Releases
- CTDEEP Active Solid Waste Landfill Facilities
- CTDEEP Leaking Underground Storage Tanks
- CTDEEP Registered Underground Storage Tanks
- State Brownfields
- CTDEEP Property Transfer Program Database

Information obtained from these sources was used to evaluate the potential for hazardous material to be present on the Original Garage site and other locations in the Proposed Action Boundary.

3.16.1.1.1. Original Garage Site

The Original Garage was opened in 1987 on the parcel located at 437 Washington Boulevard in Stamford, Connecticut. Prior to the construction of the existing 5-floor parking garage, the site was a commuter parking lot for the adjacent Stamford Train Station. Based on the previous land use as commuter parking, it is unlikely that an underground storage tank (UST) ever existed on the site. Aerial photographs of the site indicate that the parcel was likely developed after 1970 and prior to the Original Garage construction as features of the Original Garage site are not discernible in the 1970, 1951 or 1949 aerial photographs. The previous aerial photograph from 1934 shows the site as open space that had not yet been developed.

According to historical documentation, an area of soil at the site of the Original Garage was contaminated by a release of petroleum from an adjacent property. The release occurred at 433 Washington Boulevard, also known as 43 Station Place, from a former rental car facility and vehicle paint shop. The release affected soils at the southwest portion of the garage. A total of approximately 468 tons of petroleum-contaminated soil was removed from the adjacent parcel in July 1998. However, two post-remediation soil samples confirmed that soil containing petroleum at concentrations exceeding the Connecticut Remediation Standard Regulations (CT RSRs) remain on the site. This soil was left in place to “maintain the structural integrity of the adjacent parking car garage” (Coneco, 2000), which refers to the Original Garage structure.

According to an environmental investigation performed in 2001 by Coneco, contaminated soil at this location was between 10 and 18 feet below the ground surface. Depth to water gauging during this investigation indicates that the groundwater flow direction in this area is to the west/northwest.

According to the 2006 condition assessment report, floor drains are located throughout the garage structure. Discharges from both roof and lower-level drains of the Original Garage are collected in a common system. It is unknown whether the drain network discharges to municipal stormwater drainage or sanitary systems, although it is believed to discharge to the stormwater drainage system, as discussed in Section 3.9. This should be verified during the design phase of the Proposed Action.

Additionally, two elevators are located in the central portion of the Original Garage and a machine room is located on the first floor of the garage. There is a potential for hydraulic fluid used in elevator operation and maintenance to have impacted the soil beneath the concrete floor of the garage in this area, but there have been no reported spills.

The parcels located at 599, 601-603, 605, 611-613, 639 and 641 Atlantic Street were previously acquired by CTDOT for the 2004 Garage on these properties. A summary of the past uses and contamination potential at these parcels identified in the 1999 FONSI and at adjacent or upgradient parcels that have potential to have impacted soil or groundwater at the project site are presented in Table 3-22 and Table 3-23.

Table 3-22: Current and Historic Uses of Nearby Parcels to Original Garage Site

Address	Current Use	Former Use	Direction from Subject Parcel
599 Atlantic Street	Parking Garage Expansion	Auto. Repair/ Church	East
601-603 Atlantic Street		Photo studio	East
605 Atlantic Street		Beauty Salon	East
611-613 Atlantic Street		Infanti Service Center	East
639 Atlantic Street		Residential/Art Center	East
641 Atlantic Street		Hertz Car Wash	East
655 Atlantic Street	Raphael's Furniture Restoration	Raphael's Furniture Restoration	East
43 Station Place/433 Washington Boulevard	Commuter Lot	Rental Car Lot/Vehicle Paint Shop	Southwest
64 Henry Street	Parking Lot	Residential	South
68 Henry Street		Residential	South
None		Unknown	South
72 Henry Street	Hertz Car Wash & Gas Station	Unknown	South

Table 3-23: Contamination Risk on Potentially Affected Parcels

Property	Potential Source	Risk to Original Garage Site	
599 Atlantic St. – Former automobile repair	USTs (unknown)	Low	It is unknown whether the USTs have been removed from the ground and whether contaminated soils were/are present; however a release to soil would likely have been identified during the construction of the 2004 Garage.
611-613 Atlantic St. – Former Infanti Service Station	USTs (gas & used oil)	Low	It is unknown whether contaminated soils were/are present following closure of the USTs; however a release to soil would likely have been identified during the construction of the 2004 Garage. The former gasoline pump island was located along Atlantic Street.
	Leaking UST	Low	CTDEEP was notified of a leaking UST on March 1, 2011 and cleanup has been initiated. Additional information relating to this incident was not identified.
641 Atlantic St. – Former Hertz Car Wash Facility	UST (gas)	Low	UST was removed in 2009 and there are no records that samples were collected.
655 Atlantic St. – Existing Raphael’s Furniture Restoration	RCRA small-quantity generator of solvents	Moderate	This facility is currently in operation and there is the potential for solvents to be released to groundwater and migrate beneath the subject site.
433 Washington Blvd. (43 Station Place) – Former rental car lot and Former vehicle paint shop	Petroleum contaminated soil	High	A spill/dump of chlorinated volatile organic compounds (VOCs), non-chlorinated VOCs, and/or polychlorinated biphenyls occurred historically at this facility and entered into a voluntary remediation program.

3.16.1.1.2. Sites within Proposed Action Boundary

Currently, sites within the Proposed Action Boundary are utilized as parking lots, residential property, commercial property, or are vacant. Aerial photographs taken between 1949 and 2008 indicate that some of the parcels were not developed during this time period. Some of the parcels were developed in 1949 with residential and/or commercial buildings. A detailed investigation and evaluation of the past uses of specific parcels for the Proposed Action should be completed as part of subsequent environmental site assessments once the details of the new parking facilities and potential TOD sites is determined.

The initial screening of the study area indicated that numerous spills of motor oil, gasoline and diesel fuel have been reported on other sites within the Proposed Action Boundary; however, each of these spills was contained, cleaned and/or removed. Each of these incidents was reported to the CTDEEP and was closed. Additionally, several listed sites/facilities were identified within a ¼-mile radius of the Original Garage site; these sites/facilities are not located immediately adjacent to sites within the Proposed Action Boundary, or they are located hydrologically downgradient relative to sites within the Proposed Action Boundary.

3.16.1.1.3. Summary

This analysis of existing conditions indicates the following potential sources of hazardous material (not including known contamination) and/or contamination either at the Original Garage site, at other sites within the Proposed Action Boundary, or at other nearby locations which may have migrated into these sites:

- Original Garage Site
 - Former use of the site as a paved parking lot – possible motor oil leaks or spills to the ground surface
 - Former use of the site as an automobile repair shop – potential presence of USTs and/or associated contaminated soils
 - Former Infanti service station – possible presence of contaminated soils associated with the closure of USTs and possible presence of a leaking UST and associated contaminated soils
 - Former car wash facility – potential presence of contaminated soil from UST removal
 - Current elevators in the central portion of the garage – potential leaks of hydraulic fluid
 - Floor drains on the lower level of the garage – potential gasoline and/or motor oil leaks from automobiles
- Sites within Proposed Action Boundary
 - Use of the sites as parking lots – possible motor oil leaks or spills to the ground surface
 - 655 Atlantic Street – Raphael’s Furniture Restoration – potential migration of possible solvents in groundwater to the site
 - 433 Washington Boulevard (43 Station Place) – Former rental car lot and former vehicle paint shop – potential soil and/or groundwater contamination and/or migration to the site

It is unlikely that a release of hazardous substances and/or petroleum products to the subsurface has occurred from the Original Garage since its opening in 1987 or from the 2004 Garage based on the reported spill history for the site. There have been no reported spills on the site with the exception of two small (<1 gallon) spills of motor oil to the ground surface in August 2000 and April 2004 (FirstSearch, 2012). The motor oil spill in 2000 was contained and removed, and CTDEEP was notified of this incident. The motor oil spill in 2004 was the result of a container failure and was sanded and removed.

The CTDEEP's policy on upgradient sources of contamination is that a downgradient property owner is not responsible for remediating groundwater contamination flowing onto his or her property from another site, as long as the contamination is present solely as a result of the offsite sources (CTDEEP, 1997).

There is the potential for gasoline and/or motor oil from automobiles parked on the sites within the Proposed Action Boundary to have leaked onto the parking lot pavement. Since cracks in the pavement can provide a pathway for petroleum products to negatively affect the environmental quality of the shallow soil beneath the pavement, the former use of the sites as parking lots is a potential source from which contaminants may have entered the environment.

3.16.1.2. Solid Waste, Pesticides and Toxics

Solid waste that is disposed inside the Original Garage is collected and transferred by a licensed hauler to a licensed disposal facility. The quantity of solid waste generated in the garage is relatively minor and is limited to solid waste collected in on-site trash receptacles located around the facility. Vehicle and railway rolling stock and track maintenance activities are performed at other facilities.

In general, solid waste that is disposed at other sites within the Proposed Action Boundary are collected and transferred by a licensed hauler to a licensed disposal facility. Based on site reconnaissance activities of the sites from the road, it was observed that litter and dumping of solid waste on the vacant parcels/structures has occurred. The litter is considered de minimus and would not pose a significant threat to the environmental integrity of the alternate proposal sites. However, the nature and extent of the dumping could not be determined for the entire sites or within vacant buildings occupying the sites.

Based on the available information, there has been no known use of herbicides, pesticides, or toxic materials at the Original Garage site or at other sites within the Proposed Action Boundary. There is the potential that maintenance along the existing railroad right of way has involved the use of herbicides.

3.16.2. Impact Evaluation

3.16.2.1. Hazardous Materials

Under the No Action alternative, existing conditions relative to hazardous materials would remain unchanged.

Under the Proposed Action, residual petroleum-contaminated soil from the release at 433 Washington Boulevard may be encountered during demolition and construction activities, as well as the potential encounter with asbestos containing materials (ACMs). Potential construction-period impacts are addressed in Section 3.22.

Following construction, the quantity of hazardous or regulated waste generated in the new parking facilities is anticipated to be similar to that of the existing conditions for the Original Garage.

3.16.2.2. Solid Waste, Pesticides and Toxics

Under the No Action alternative, existing solid waste generation, pesticide use, and toxic material conditions would remain unchanged.

The Proposed Action is anticipated to result in increased amounts of solid waste generated as compared to existing conditions as a result of the expanded parking capacity (through more trash receptacles) and the potential new TOD land uses. Solid waste will continue to be disposed by a licensed waste hauler at a permitted facility. The Proposed Action will not require the use of pesticides or herbicides, and building materials will be required to meet current local, state, and federal codes and regulations relative to toxicity and exposure potential.

3.16.3. Mitigation

3.16.3.1. Hazardous Materials

No impacts relative to hazardous materials are anticipated following construction of the Proposed Action. Therefore, no mitigation is necessary or proposed. Construction-period mitigation measures are discussed in Section 3.22.

3.16.3.2. Solid Waste, Pesticides and Toxics

No impacts relative to hazardous materials are anticipated following construction of the Proposed Action. Therefore, no mitigation is necessary or proposed. Construction-period mitigation measures are discussed in Section 3.22.

3.17. Visual Resources

3.17.1. Existing Conditions

The Stamford Transportation Center is located in an area of Stamford's downtown that is undergoing a transformation associated with substantial mixed-use urban redevelopment projects. Some of these redevelopment projects, such as the Harbor Point project located south of the Stamford Transportation Center, include buildings that are 10 or more stories tall. I-95 and the Metro-North railroad corridor located along the north side of the Stamford Transportation Center are elevated, which limit the views to and from the north, especially at ground level. North of the I-95/Metro-North railroad corridor, the views consist of Stamford's downtown business district.

Views of the Stamford Transportation Center and the surrounding area comprising the Proposed Action Boundary are limited at street level by the elevated I-95/Metro-North railroad corridor, the surrounding built environment, and tree-lined streets.



Exhibit 3-10: View looking south from Stamford Transportation Center Parking Garage, showing Metro Green Apartments (foreground) and Harbor Point development under construction (background).



Exhibit 3-11: View looking north from Stamford Transportation Center Parking Garage, with train station and I-95 (foreground) and Stamford downtown buildings (background).

3.17.2. Impact Evaluation

The commuter parking and Station Place improvements of the Proposed Action will not have an adverse impact on the visual resources of the area, as these elements of the project will be similar in scale and character to the existing Stamford Transportation Center facilities. Further, these improvements will be integrated with the TOD components of the Proposed Action to create an attractive environment for commuters, residents and visitors, and to enhance the visual character of the area. The TOD component of the Proposed Action may have a visual impact on the City's skyline, as building heights of up to 250 feet are possible based on the City's zoning regulations. However, these potential building heights are consistent with the building heights in surrounding new development projects, such that potential changes to the visual character of the area associated with the TOD component of the Proposed Action would be consistent with the planned growth of the City.

3.17.3. Mitigation

The Proposed Action with TOD is planned to be compatible with the scale and character of the existing Stamford Transportation Center facilities and the emerging on-going redevelopment projects surrounding the Stamford Transportation Center. As such, it is anticipated that the Proposed Action will have a positive impact on the visual character and aesthetic quality of the area.

CTDOT's performance requirements contained in the RFP for the garage improvements give guidance to the visual integrity of the Proposed Action.

Specific visual/aesthetic impacts and mitigation, if any, will be evaluated through the applicable permitting processes as specific design concepts are advanced.

3.18. Energy Use and Conservation

3.18.1. Existing Conditions

Energy use at the Stamford Transportation Center parking complex primarily consists of electricity to illuminate the parking facility and operate the elevators.

3.18.2. Impact Evaluation

Under the Proposed Action, the replacement garage(s) will be designed and constructed in conformance with the requirements of the *Compliance Manual for High Performance Buildings* (OPM, 2009). The largest energy use associated with the replacement garage(s) will be lighting. CTDOT's performance requirements require LED, energy efficient fixtures.

The TOD component of the Proposed Action has the potential to increase the energy use on-site due to the fact there may be residential, office and/or commercial facilities related to the TOD in addition to the new parking garage(s). At this time, the increase in demand cannot be anticipated due to the fact that the individual components that drive energy usage are not known. This increase in load may require additional improvements such as upgrades to transformers or conductors or gas system line or appurtenances to handle the increased load on the system; however, potential improvements by the utility providers will not be known until such time as specific phases of the development come forward.

The nature and characteristics of TOD induce greater use of mass transportation systems and would therefore reduce the consumption of fossil fuel by reducing the vehicle miles traveled on regional roadways.

3.18.3. Mitigation

The construction of the parking garage component of the Proposed Action will be subject to the energy standards outlined in the State's *Compliance Manual for High Performance Buildings* (OPM, 2009). While the TOD component may not be subject to the same standards, it is desired that this project minimize any increased load to the system. The following are anticipated mitigation measures that would allow the project to minimize its impacts on energy use.

3.18.3.1. Early Coordination with Energy Utility Providers

Coordination with utility providers will be conducted during initial design and at key stages of the development to assure that the necessary infrastructure is in place to support the project.

3.18.3.2. Use of Energy Star Products and Fixtures

The use of the EPA's Energy Star rated products and fixtures could be a primary component to assist in minimizing the energy demand placed on the system by the proposed development. These products have demonstrated over time real energy savings. It is anticipated that these rated products will be provided for the residential units as a base level fixture with the opportunity for residents to upgrade to a higher level fixture if they so desire. It is anticipated that Energy Star rated major appliances and permanent lighting fixtures can be provided in conjunction with the residential development. Additionally, Energy Star rated permanent

lighting fixtures can be provided for/by commercial tenants. Commercial food service establishments will be encouraged to use Energy Star rated commercial appliances.

3.18.3.3. Use of LEED Rating Systems

The TOD component of the Proposed Action could utilize the Leadership in Energy and Environmental Design (LEED) Neighborhood Development and New Construction rating systems as the a basis for benchmarking sustainable design within the project. This rating system considers the sustainability of the design at the planning level, not on a building-by-building basis. This rating system categorizes sustainability in the following categories:

- *Smart Location and Linkage* - This section of categories places emphasis on locating projects in city centers, where mass transit and utilities exist.
- *Neighborhood Pattern and Development* - This section of categories focuses on providing a highly walkable neighborhood, reuse of historic structures and use of creative stormwater management techniques as some of the major benchmarking tools.
- *Green Construction and Technology* - This section of categories places emphasis on district-wide energy efficient technologies, renewable energy, limiting site disturbance and construction activities.

The LEED for New Construction rating system could be used as the basis for the development of individual buildings. This system looks at and rates sustainability at the building/site level. The rating system includes these overarching sustainability categories:

- *Sustainable Sites* - This category focuses on the site location, development density, smart transportation system, stormwater management and roofing choice to reduce the heat island effect.
- *Water Efficiency* - This section evaluates the selection of water efficient fixtures, native and water efficient landscaping, and innovative water reuse technologies and systems.
- *Energy and Atmosphere* - This category focuses on the energy efficiency of the building envelope and HVAC systems, renewable energy sources, and building commissioning.
- *Materials and Resources* - This section focuses on the procurement of locally sourced and manufactured materials, recycled materials, building and building component re-use and low emitting materials.
- *Indoor Environmental Quality* - This category evaluates the natural ventilation and daylighting, thermal and electrical control systems, and the storage and use of harmful chemicals within the building.

The final determination on project certification will be based on tenant and building owner goals and funding.

3.19. Public Utilities and Services

Information regarding the nature and extent of existing utilities within the Proposed Action Boundary was compiled from mapping provided by the respective utility companies and the City of Stamford.

3.19.1. Existing Conditions

3.19.1.1. Potable Water

Water service in Stamford is provided by Aquarion Water Company. The drinking water supply is mostly surface water drawn from a network of five reservoirs, including Laurel and North Stamford reservoirs in Connecticut, and Mill, Trinity, and Siscowit reservoirs in New York. Water is also drawn from Aquarion's Southwest Regional Pipeline, which is supplied from the Canal Street and Coleytown well fields in Westport and Hemlocks Reservoir in Fairfield, Connecticut. Additionally, water is sometimes drawn from the Mianus surface supply in Greenwich and Wire Mill Well in Stamford (Aquarion, 2008).

Mapping information provided by Aquarion shows the distribution system within the Proposed Action Boundary includes 12" mains serving Atlantic Street, Washington Boulevard and Dock Street and 8" mains serving Station Place (including the Original Garage), Manhattan Street, and Garden Street. Upgrades are planned in coordination with the Stamford Urban Transitway from Atlantic Street eastward to Elm Street.

Water usage at the Original Garage site is generally limited to regular employee lavatory use (sinks, toilets) and periodic garage washdown.

3.19.1.2. Sanitary Sewer

Sanitary sewer service in Stamford is owned and managed by the City of Stamford Water Pollution Control Authority (WPCA). Sanitary sewer services in the Proposed Action Boundary generally convey flows to the WPCA pump station on Harborview Avenue, east of the project area. Based on mapping acquired from the City, the sanitary sewer system serves Washington Boulevard, Atlantic Street, Station Place, Dock Street, and Manhattan Street. Available mapping shows a gap in service along Washington Boulevard from north of I-95 to south of Station Place. The WPCA reported no planned upgrades for the sanitary sewer system.

Sanitary sewer service to the Original Garage site is provided via an 8" main along Station Place. Sanitary sewage from the site is likely limited to domestic wastewater from an employee lavatory.

3.19.1.3. Stormwater Drainage

The stormwater drainage system in Stamford is owned and managed by the City of Stamford WPCA. Throughout the Proposed Action Boundary, stormwater runoff is conveyed to trunk line pipes on Atlantic Street and Washington Boulevard. Flows are conveyed south along Atlantic Street to the Dyke Lane pumping station. South of Henry Street, flows along Washington Boulevard are also conveyed south to the Dyke Lane pumping station. North of Henry Street flows along Washington Boulevard are conveyed north. Drainage from Station Place is split due to the crest in the roadway at the approximate location of the main entrance to the train station.

The western end of Station Place drains towards Washington Boulevard, the eastern end drains toward Atlantic Street. The drainage systems on Manhattan Street and Garden Street convey stormwater to Dock Street.

Existing stormwater drainage from the Original Garage is discussed under *Existing Drainage* in Section 3.9.1.

The WPCA reported no planned upgrades for the stormwater drainage system.

3.19.1.4. Electricity

Electric service in Stamford is provided by Connecticut Light & Power (CL&P), a subsidiary of Northeast Utilities (NU). Much of the Proposed Action Boundary is served by underground conduits located on Washington Boulevard, Atlantic Street, and Manhattan Street. Garden Street is served by overhead wires running along the east side of the street. Currently there is no conduit servicing Station Place; electricity to the existing garages is branched off the Atlantic Street conduit. CL&P reported no planned upgrades within the Proposed Action Boundary. In addition to local service, CL&P maintains a 115 kV transmission line which runs parallel to and on the south side of the railroad tracks. Two poles which support this line are located along Station Place. This transmission line serves a substation located at the intersection of Garden Street and Pacific Street. In turn, this substation feeds the previously discussed distribution lines for the Proposed Action Boundary.

3.19.1.5. Gas

Natural gas service in Stamford is provided by Yankee Gas, a subsidiary of NU. Yankee Gas maintains gas mains on Washington Boulevard (16"), Atlantic Street (20"), Manhattan Street (16"), and Garden Street (6"). According to mapping provided by Yankee Gas, there is no gas service currently on Station Place. Programmed gas main upgrades in the vicinity of the Stamford Transportation Center include main replacements to Atlantic Street and Canal Street, in conjunction with CTDOT railroad viaduct projects and main replacement on Pulaski Street, in conjunction with potential upgrades by the City of Stamford.

3.19.1.6. Data

Data services include telephone and cable television. Telephone service in Stamford is provided by AT&T. AT&T provides service through the Proposed Action Boundary primarily through underground conduits located on Atlantic Street, Washington Boulevard, Manhattan Street. Service is provided aurally along Garden Street. According to mapping provided by AT&T, there is no telephone service conduit along Station Place, however the existing parking garage is connected to the telephone network via Atlantic Street, and the Stamford Transportation Center is connected to the telephone network via South State Street.

Cable television service is provided by Cablevision. Throughout the Proposed Action Boundary, residences and businesses are served by a mixture of buried conduits and aerial wires. Atlantic Street, Manhattan Street and Garden Street are fully served. Washington Boulevard has a service gap from a utility pole approximately 250' north of Henry Street to a utility pole at the intersection with North State Street. There is currently no service along Station Place; however the Stamford Transportation Center is served via conduit connecting to Henry Street.

3.19.2. Impact Evaluation

It is assumed that new parking facilities constructed within the Proposed Action Boundary would require similar utility connections as were provided for the 2004 Garage at the Stamford Transportation Center. These connections would include: water, sanitary sewer, stormwater drainage, electric, telephone and cable services. It is assumed that the potential TOD component of the Proposed Action will include a mix of uses that will require connections to water, sanitary sewer, stormwater drainage, electric, gas, telephone, and cable services.

Mapping provided by the City of Stamford indicates there could be a gap in sanitary sewer service on Washington Boulevard between I-95 and Station Place. There is currently no gas, electric, telephone or cable service provided from Station Place. However, existing buildings on Station Place are connected to these systems through connections to Washington Boulevard, Henry Street and Atlantic Street.

Proposed development/redevelopment of the Original Garage site and of other vacant or underutilized sites within the Proposed Action Boundary will likely increase demand on all of the adjacent utility systems serving these sites compared to the existing conditions. The increased demand for these services will be associated with increasing the overall parking capacity of the new parking facilities and providing for potential, higher-density TOD sites in the Proposed Action Boundary. The degree to which the individual utility services will have to be improved to accommodate increased demand or to provide new service to a location not currently serviced by existing infrastructure, will be determined during future detailed site design for the new parking facilities and potential TOD sites.

3.19.3. Mitigation

According to the City of Stamford *Zoning Regulations*, required infrastructure improvements – including utility service upgrades – should be provided by the developer, as needed. Further coordination with the City of Stamford and the respective utility companies will be required as detailed site design for the new parking facilities and potential TOD sites progresses and as increased demands on the respective systems can be quantified.

Utility connections may be needed to various components of the Proposed Action for electric, gas and telephone service. Gaps in service are discussed in 3.19.1.

Mitigation considerations for potential impacts to the stormwater drainage system are discussed under Mitigation in Sections 3.9.3 and 3.10.3.

Coordination with NU to maintain adequate clear zone distances from the 115 kV transmission lines will be conducted.

3.20. Public Health and Safety

3.20.1. Existing Conditions

3.20.1.1. Public Safety Services

The Stamford Police Department provides law enforcement for the City of Stamford with headquarters downtown, north of the study area, and satellite sub-stations supporting four patrol districts. The study area falls within District 2, which includes two sub-stations: one on Henry Street adjacent to the Proposed Action Boundary, and one on Atlantic Street just north of the study area.

The Stamford Fire & Rescue Department provides fire protection and rescue services for the City of Stamford. The Department consists of nine stations throughout the City, each supporting a number of career personnel. Station #2 (South End Station), located at the intersection of Washington Boulevard and Atlantic Street in the study area, is the station closest to the Stamford Transportation Center. Additionally, Stations #1 (Headquarters), #3 (West Side), #4 (Shippan Point), and #5 (Woodside) are all located in close proximity to the study area.

The locations of the Stamford police and fire stations are illustrated in Figure 3-17.

3.20.1.2. Health Services

Stamford Hospital is located approximately 1.3 miles northwest of the Stamford Transportation Center and provides a full range of health services, including a Level II Trauma Center that is equipped to handle life-threatening injuries, 24 hours a day. Stamford Hospital's immediate care center is provided at Tully Health Center, located approximately 1.9 miles northeast of the Stamford Transportation Center. The locations of Stamford Hospital and Tully Health Center are illustrated in Figure 3-17.

Emergency ambulatory care services are provided by Stamford Emergency Medical Services, a non-profit, private organization. All ambulance calls in the area bring their patients to Stamford Hospital's trauma center.

The City of Stamford Department of Health and Social Services has the responsibility of protecting the City's public health and environment. The Department performs inspections of schools, restaurants, and sewer and septic systems; and provides general public health related functions and education.

3.20.2. Impact Evaluation

The Proposed Action, which will include expanded parking facilities and new mixed use TOD (including potential office, retail, and residential uses) within the Proposed Action Boundary, will increase employment and may provide new residential units in the area thereby increasing the potential demand for police and fire protection, and health services currently provided by the City of Stamford. The potential for adverse impacts on existing City services resulting from the TOD component of the Proposed Action will be dependent upon the density and mix of uses that ultimately occupy the sites, which are unknown for this assessment; consequently, impacts will need to be further considered during subsequent site plan reviews. It is anticipated that the

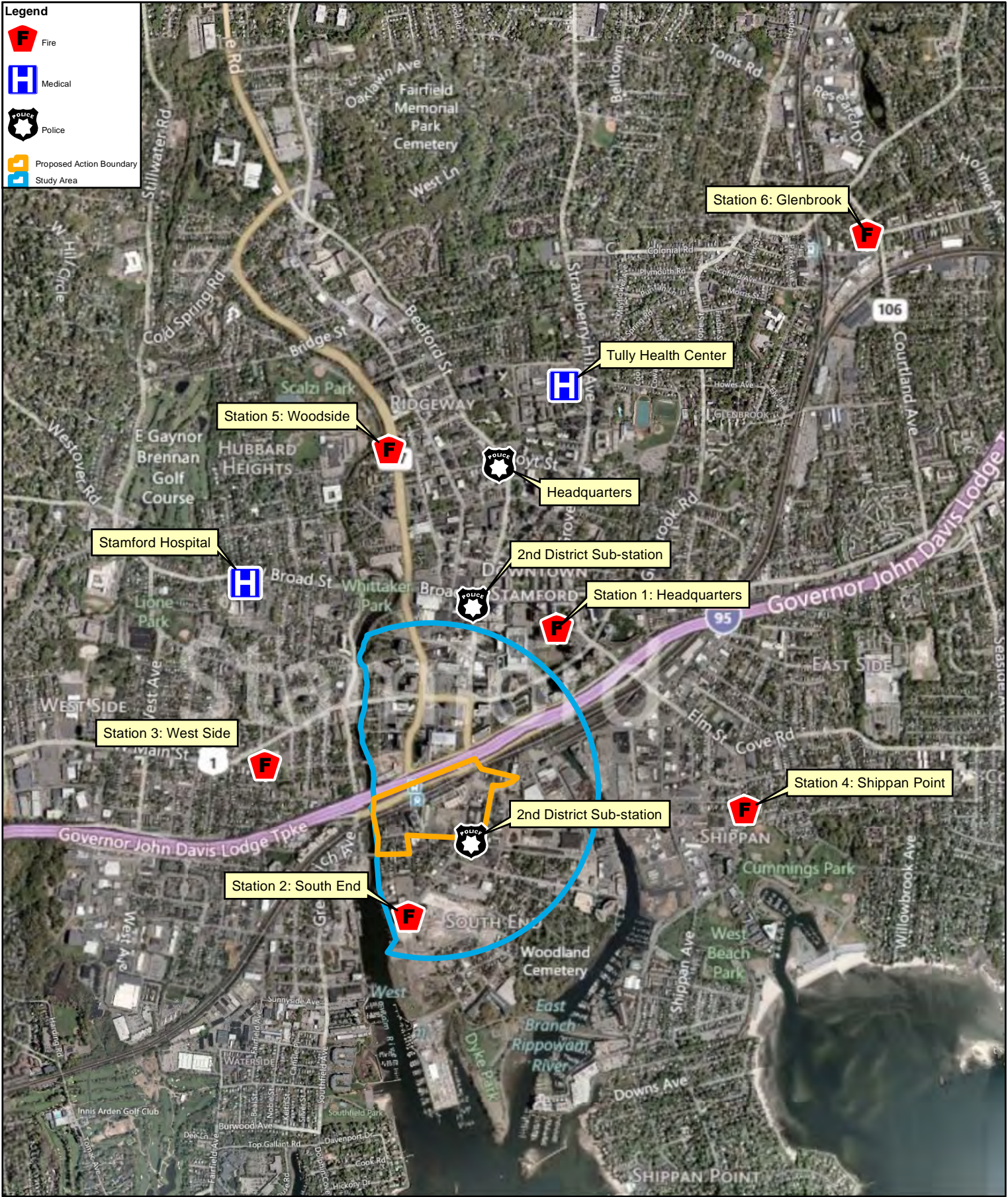
increase in potential demand will be accommodated by the existing service providers such that there will be no significant or adverse impact on these services.

3.20.3. Mitigation


Specific mitigation requirements for potential adverse impacts on existing public health and safety services will likely be determined through the applicable approval processes for the Proposed Action. For this assessment, no mitigation measures are proposed since it is anticipated that no significant or adverse impacts will result from the Proposed Action.

Legend

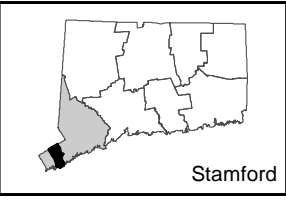
-  Fire
-  Medical
-  Police
-  Proposed Action Boundary
-  Study Area



0 1,000 2,000 Feet



Source: CTDEEP GIS Data, CTDOT



Health & Safety Services

STAMFORD TRANSPORTATION CENTER PARKING & TOD EIE
 Connecticut Department of Transportation
 State Project No. 301-047
 Stamford, Connecticut

FIGURE 3-17

3.21. Secondary and Cumulative Impacts

Secondary or indirect impacts as a result of the Proposed Action are expected to be largely beneficial, providing improved mobility and accessibility, and creating development patterns consistent with local and regional land use plans and growth policies.

3.21.1. Methodology

CEPA regulations require that the sponsoring agency evaluate the indirect and cumulative impacts of a project's actions, in addition to direct impacts.

Secondary impacts are impacts caused by the Proposed Action that occur further in time or distance, but are still considered foreseeable. Secondary impacts may include induced growth and other effects related to changes in land use, population density or growth rate, and related effects on air, water and other natural resources.

The baseline for evaluating potential secondary impacts is the existing and reasonably foreseeable expected environment, which is described as part of the No-Action Alternative. Cumulative impacts are the environmental resources being impacted as a result of the incremental effect of the project when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

3.21.2. Impacts

3.21.2.1. Secondary Impacts

Since the specific sites and configuration of the new parking facilities and TOD component of the Proposed Action are not finalized, the geographic extent of secondary impacts may be subject to change once a final scenario is determined. Secondary impacts are anticipated to be largely beneficial and occur as a result of the TOD component of the Proposed Action. Successful TOD can result in increased human activity around the Stamford Transportation Center during commuting and non-commuting hours and promote a vibrant economic climate within which businesses and residents want to relocate. Such impacts can include improved community development and sustainability, employment opportunities and improvements to the local economy. These types of benefits are consistent with community planning visions and goals to create a vibrant pedestrian-oriented environment connecting the Stamford Transportation Center area with other parts of the downtown (Walkable Stamford, 2008). Other beneficial impacts relative to TOD can include overall improvements to air quality as a result of reduced automobile dependency.

Effects relative to induced growth of rail travel at the Stamford Transportation Center will be limited to the capacity constraints of the railroad system. Given that no additional platforms or tracks are planned, significant rail capacity growth is not anticipated as a result of the Proposed Action, although commercial elements of the TOD could leverage available "reverse-direction" system capacity.

The range of potential scenarios for the TOD component of the Proposed Action indicate that the traffic generated could be substantial with a corresponding impact on traffic delay and level of service. Localized traffic improvements may be implemented as part of the application for Major Traffic Generator certification and other State/local agency plan reviews and permitting. However, the Proposed Action traffic can also have synergies with existing traffic patterns by extending into the hours around the peak hours and using capacity in the non-peak direction to better utilize existing system capacity. The characteristics of TOD are also conducive to fostering travel demand management strategies that incentivize carpooling, transit, and walking/bicycling to work and/or encouraging flex work hours, or telecommuting to more effectively utilize the existing available capacity of the roadway network. These management strategies at the TOD could also catalyze similar strategies for other areas of the downtown.

Adverse secondary impacts of the Proposed Action are anticipated to be primarily associated with construction activities which are discussed in Section 3.22. Such impacts can include:

- Temporary detours and lane closures;
- Temporary effects on local water quality as a result of erosion and sedimentation;
- Temporary effects on local air quality as a result of dust created by demolition and construction; and,
- Temporary effects on noise as a result of construction equipment operation.

Such impacts will be mitigated through the adoption of construction best management practices including an erosion and sedimentation control plan, dust control, construction hours and noise abatement procedures. Adherence to the *2004 Connecticut Stormwater Quality Manual* (CTDEEP, 2004) will result in improved water quality from stormwater runoff.

Other potential construction-phase secondary impacts include planned, temporary disruption of utility service (electric, telecommunications, ITS, etc.) to areas around the Stamford Transportation Center during the demolition of the Original Garage structure and/or during specific phases of the construction that involve connection of public utilities to new facilities. These potential impacts will be addressed through coordination with the public utility providers.

3.21.2.2. Cumulative Impacts

The projected impacts of the Proposed Action on traffic are based on the data generated by CTDOT's Travel Demand Model. The Travel Demand Model considers reasonably foreseeable activities when future demand calculations are made. Therefore, any cumulative impacts relative to anticipated land use and committed projects have already been taken into account in the analysis of impacts, relative to traffic and ridership demand.

The Proposed Action is consistent with and supported by local and regional plans including the Stamford Master Plan. These plans seek to preserve neighborhood character while creating a vibrant and pedestrian-friendly downtown core oriented around the Stamford Transportation Center where supportive multimodal transportation infrastructure is readily available. To the extent that the Proposed Action will be developed with such land use management strategies in mind, a long-term beneficial cumulative effect can be expected to occur.

The Proposed Action is also consistent with other transportation projects in the area that are oriented to enhance multimodal transportation options in the area, improve mobility, support smart growth and enhance livability. These other transportation projects include the Stamford Urban Transitway Project, the MNRR Bridge Replacement Project, TIGER 3-funded pedestrian and commuter enhancements at the Stamford Transportation Center (see Section 3.4 – Pedestrian and Bicycle Considerations), and City-funded traffic calming enhancements.

The Stamford Urban Transitway Project, as mentioned in previous sections of this EIE, is an improved roadway corridor south of the railroad tracks that will improve traffic operations, safety and efficiency of the network that also serves the Stamford Transportation Center. The multimodal features of this corridor are also intended to encourage public transportation, ridesharing and non-motorized modes of transportation to address current and future traffic needs. Phase II of this project is estimated to be completed in 2015.

The MNRR Bridge Replacement Project will replace three MNRR bridges in Stamford and includes roadway and intersection improvements on Atlantic Street, Canal Street, Elm Street, South State Street and US Route 1 (East Main Street). In addition, the I-95 northbound Exit 8 off-ramp will be relocated to touchdown between Atlantic Street and Canal Street. Construction for this project is anticipated to begin in 2015.

Adverse cumulative impacts for the Proposed Action are not expected to be substantial; development is anticipated to be reasonably consistent with local land use policies and regulations for the adjacent area. Thus, the cumulative impacts of growth on community and natural resources when added to the Proposed Action would be offset by such land use management actions for reasonably foreseeable future development.

3.22. Construction-Related Impacts

The Proposed Action will include demolition of the Original Garage at the Stamford Transportation Center, and construction of new parking to service commuters and to support the activities of the TOD. The Proposed Action will also involve construction activities for the TOD land uses. An evaluation of the associated construction-phase impacts and mitigation measures are described in this section. The existing conditions at the site are not applicable to this section. Additionally, the No-Action Alternative includes no construction and is therefore not discussed.

3.22.1. Impact Evaluation

3.22.1.1. Traffic

Impacts are anticipated to traffic flow in and around the Stamford Transportation Center and the TOD area during construction as a result of construction vehicles circulating through the network, and because of temporary lane closures or detours associated with the construction sequencing. These impacts will contribute to temporary increases in travel delay for vehicles circulating through the area.

Construction activities at the site of the Original Garage will involve temporary changes in access to the 2004 Garage (remaining in service during construction). These changes may include directing traffic to use the Atlantic Street access or to provide temporary access routes during construction. Internal circulation of the garage structure currently occurs via independent, internal ramps in both the Original Garage and the 2004 Garage, such that the 2004 Garage can function independently from the Original Garage when the Original Garage is removed.

It will be necessary to modify existing traffic patterns and provide temporary traffic control measures on Station Place for certain periods of time as construction dictates. These measures could include partial or full closure of one or more travel lanes on a temporary basis; and temporary modifications to existing drop-off and taxi accommodations. Temporary traffic control measures on Station Place should not significantly impact vehicular access to the 2004 Garage, as all vehicles entering the garage will be required to use the Atlantic Street driveway. However, certain measures could result in temporary travel delays for commuters and station patrons, including traffic delays at adjacent intersections along South State Street, if Station Place traffic and taxi operations are temporarily diverted.

Installation of Intelligent Transportation System (ITS) components is planned for the existing parking complex under the Stamford Transit Way. ITS components, which include display screens that show train schedules and traffic alerts, will be located in both the Original Garage and 2004 Garage. It is anticipated that installation of these measures will not occur until after the Original Garage is replaced, in which case, no impacts to the ITS components will occur. There is the potential that installation of the ITS components will occur prior to demolition of the structure. In this case, the affected ITS components, will be removed during the construction period and replaced following completion of construction.

3.22.1.2. Parking

The construction of the new parking facilities will require the removal of the Original Garage. This parking will be accommodated at other locations within the project boundary to be provided as part of the Proposed Action prior to demolition of the Original Garage, such that there will be no loss of commuter parking supply during construction.

Some of the ADA accessible parking spaces (26 of a total of 55 spaces) in the existing parking complex are located in the Original Garage. As such, demolition of the Original Garage will result in a need for temporary relocation of these ADA spaces during construction.

3.22.1.3. Pedestrians and Bicyclists

During the interim construction period, the west pedestrian overpass between the Original Garage and the train station concourse will be removed as a result of the demolition of the Original Garage. This will create unavoidable inconveniences compared to existing conditions for those pedestrians walking between the garage and the train station concourse during this construction period when the west overpass connection is out of service. Pedestrian access between the parking garage and the train platforms will be generally unaffected because the east overpass will remain in service. Pedestrian and bicycle access from the adjacent roadways to the Stamford Transportation Center and within the Proposed Action Boundary will be accommodated throughout construction.

3.22.1.4. Local Transit

Rail, bus, taxi, and livery service will be maintained throughout the construction period, therefore no significant impacts to local transit are anticipated during the construction period.

3.22.1.5. Air Quality

Potential construction air quality impacts can occur due to the use of diesel-powered construction vehicles. Diesel air emissions include carbon monoxide, hydrocarbons, nitrogen oxides, and particulate matter (PM₁₀ and PM_{2.5}). Emissions from construction equipment are anticipated to be significantly less than the total emissions from other industrial and transportation sources in the region, and therefore, are expected to be insignificant with respect to compliance with the NAAQS. However, potentially localized air quality impacts could occur as a result of diesel exhausts from construction equipment in the vicinity of the project site.

Roadway traffic disruption due to lane closures, detours, and construction vehicles accessing the site can cause congestion which can increase motor vehicle exhaust emissions. These impacts will be mitigated by implementing appropriate traffic management techniques during the construction period.

Fugitive dust emissions can occur during demolition, ground excavation, material handling and storage, movement of equipment at the site, and transport of material to and from the site. Fugitive dust is most likely to occur during periods of intense activity and would be accentuated by windy and/or dry weather conditions.

3.22.1.6. Noise

Construction activities are a potential source of short-term noise impacts, which can include both continuous and intermittent noise being received by nearby receptors. It is difficult to reliably predict the sound levels that may occur at a particular receptor or group of receptors as a result of construction activity. Heavy construction equipment is the principal source of noise during construction activity, and the pattern of heavy equipment use is constantly changing as a construction project progresses. Table 3-24 presents noise levels generated from selected construction equipment that may be present as part of the proposed project (FTA 2006).

Table 3-24: Typical Noise Levels from Construction Equipment

Equipment	Typical Noise Level (dBA) 50 Feet from Source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Mobile	83
Dozer	85
Generator	81
Jack Hammer	88
Loader	85
Rock Drill	98
Saw	76
Shovel	82
Spike Driver	77
Truck	88

In general, sources of noise grouped close together constitute a point source, which have been shown to attenuate by approximately 6 dBA for each doubling of distance (FTA, 2006).

The closest residences to the Original Garage are located on Atlantic Street (450 feet) and the Metro Green development (400 feet). In both cases, there are intervening structures that will mitigate the effect of the demolition and construction noise. The intervening structure for the Atlantic Street residents is the 2004 Garage that is to remain in service, and the intervening structure for the Metro Green development is their associated parking garage located south of the Stamford Transportation Center. Nonetheless, the distance between these closest residences and the Original Garage site is greater than three doublings of the 50-foot noise measurement distance presented in Table 3-24, or equivalent to a 18 dBA reduction in noise level. At this distance, the loudest impulse noise, the rock drill, is reduced from 98 to 80 dBA, and continuous noise, such as a truck, is reduced from 88 dBA to 70 dBA. Considering the additional noise dampening effect of the intervening structures, the change from ambient levels associated with the construction activities at the site of the Original Garage will not be significant.

Construction of the TOD component of the Proposed Action will also generate noise from similar sources at other locations within the general boundaries of the Proposed Action, dependent on specific TOD configuration and site characteristics resulting from the public-private development agreement, site design and State/local agency permitting, as applicable. These locations and the specific means and methods of construction may have additional construction-period impacts to surrounding land uses; however, construction noise is exempt under 22a-69-1.8(g) of the Connecticut Regulations for Control of Noise due to the temporary nature of construction-related noise.

3.22.1.7. Stormwater and Water Quality

Activities that result in the disturbance of stabilizing groundcover, including pavement, buildings, landscaping, and natural vegetation, can leave soil exposed and subject to erosion. Soil erosion resulting in discharges to and sedimentation in adjacent receiving waters is associated with adverse impacts to water quality and aquatic habitat.

During the Proposed Action, soils may be exposed following demolition of the Original Garage and associated site work in its immediate vicinity, and at other construction sites associated with alternative parking structures and/or the TOD. Since the project location is within a generally built-up urban area surrounded by roadways, sidewalks, and other structures, each of which must remain in service during construction, exposure of soil will be limited to proposed structure footprints and the area immediately surrounding it. Construction activities will only minimally increase the potential for erosion of soil and discharge of sediment to receiving waters. Additionally, any vehicular fluid spills from construction equipment would be mitigated by Best Management Practices (BMPs).

3.22.1.8. Solid Waste, Toxics, Pesticides, and Hazardous Materials

During construction of the Proposed Action, residual petroleum-contaminated soil from the release at 433 Washington Boulevard may be encountered during demolition and reconstruction. Additionally, there is the potential for other contaminated soil or groundwater that has not yet been identified to be encountered during construction, such as during connection to buried utilities. Regulatory requirements may necessitate reporting conditions encountered at this site to a State or Federal regulatory agency. Possible State or Federal regulatory requirements are discussed under *Mitigation* in Section 3.22.2, along with permits for the handling and transport of potentially contaminated soils at the site.

Additionally, although the Original Garage was opened in 1987, the potential exists for ACMs to be present. If disturbed, ACMs can release asbestos fibers that could be inhaled by workers or the public near the site during construction or released to soil or groundwater where an ongoing risk of exposure to the public could remain. Other hazardous and regulated materials could potentially be present, including solvents, lights, ballasts, thermostats, and other similar items.

Demolition of the Original Garage and other structures that may be affected by the TOD sites within the boundary of the Proposed Action will generate a significant quantity of construction and demolition debris that will require management and disposal.

Construction machinery, fuels, maintenance fluids, paints, solvents, and other hazardous or toxic construction materials may be present at the site during construction period, with potential for exposure to workers and the public.

3.22.1.9. Safety

The Proposed Action will include demolition and construction activities in a dense urban area near roadways, pedestrian routes, and parking areas that will remain partially or completely open during construction. Demolition and construction activities will require heavy equipment operation for construction and material handling, resulting in potential safety impacts to traffic and pedestrians in the surrounding area.

3.22.1.10. Utilities

Adequate utility service is available in the project area to facilitate construction activities. Planned, temporary electrical outages may be required to connect new construction to existing service. It is not currently anticipated that sewer, water, or gas service lines would need to be relocated to accommodate construction, although temporary disruptions could occur if relocation is required.

3.22.2. Mitigation

3.22.2.1. Traffic

Impacts to traffic and parking during construction will be mitigated through implementation of a traffic management plan, including construction phasing to minimize disruptions to traffic, establishing haul routes and staging areas, permissible hours of work, signage, detours, and uniformed officers and/or other traffic controls to direct traffic and assist with pedestrian street crossings.

Temporary modifications of access from Station Place to the 2004 Garage that is to remain in service throughout construction may be required. Details regarding access to the 2004 Garage during construction will be established during design and will ensure operation occurs as smoothly as can be provided in the context of site constraints.

ITS components that could be affected by demolition will be removed during the construction period and replaced following completion of construction.

3.22.2.2. Parking

As discussed in Section 2.4, adequate parking will be made available within a 1/4 mile of the Stamford Transportation Center prior to demolition of the Original Garage so that the current parking supply will be maintained throughout construction. This parking will either be in temporary facilities or through staged-construction of the final plan. Specific facility locations and pedestrian amenities and logistics to link the parking to the Stamford Transportation Center during construction will be established from the specific public-private development agreement, site design and State/local agency permits, as applicable.

It is important to note that ADA accessibility to the Stamford Transportation Center from the alternative parking locations may not be preferred. As such, the ADA parking spaces in the Original Garage that will be temporarily lost during demolition and construction should be provided in the 2004 Garage structure that will remain, or in other accessible areas on the Stamford Transportation Center grounds. If provided in the 2004 Garage, the replacement ADA spaces will require temporary conversion of approximately 1.5 standard spaces per ADA space in 2004 Garage, such that replacing the 26 lost ADA spaces will require conversion of approximately 39 standard spaces. This additional deficit of 13 standard spaces lost through conversion is small and can be accommodated in the new parking created as part of the project. The locations of the spaces will be determined during the detailed design process.

It will be necessary to provide detailed detour route signage providing drivers with guidance to the new parking facilities, as they may not be located immediately adjacent to the station. Signage will be required for the duration of the project on the local streets. Construction-phase parking mitigation measures should also be included in a traffic management plan for the project.

A public information program should be implemented to advise of major project progress and changes to parking access/circulation.

3.22.2.3. Air Quality

Potential air quality impacts from diesel exhausts will be addressed through the proper operation and maintenance of construction equipment, and prohibition of excessive idling of engines. Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies limits the idling of mobile sources to three minutes.

Potential air quality impacts from fugitive dust will be addressed through the following mitigation measures:

- Reducing exposed erodible earth area to the extent possible through appropriate construction phasing. Stabilization of exposed earth with grass, pavement, or other cover as early as possible.
- Application of stabilizing agent (i.e., calcium chloride, water) to the work areas and haul roads.
- Covering, shielding, or stabilizing stockpiled material as necessary.
- Use of covered haul trucks.
- Limiting dust-producing construction activities during high wind conditions.
- Rinsing of construction equipment with water or any other equivalent method to minimize drag-out of sediment by construction equipment onto the adjacent roads.
- Street sweeping of roads within construction areas.

3.22.2.4. *Noise*

Potential noise impacts during construction will be addressed through the following mitigation measures, which may be incorporated into the contract specifications for the project:

- Proper maintenance of equipment, and advance notification of nearby sensitive receptors of activities that may produce excessive sound levels.
- The Connecticut Department of Transportation standard specification for noise pollution (Form 814A, Section 1.10.05), which states that the maximum allowable level of noise at the residence or occupied building nearest to a project site shall be 90 decibels on the "A" weighted scale (dBA).

3.22.2.5. *Stormwater and Water Quality*

Development and redevelopment projects which disturb one or more total acres of land are required to register with CTDEEP under the General Permit for the Discharge of Stormwater and Dewatering Wastewater from Construction Activities. This permit requires that the applicant develop a Stormwater Pollution Control Plan. The plan requires the implementation of measures to prevent pollution in discharged stormwater to be consistent with the Connecticut Guidelines for Soil Erosion and Sediment Control. Appropriate implementation of controls in accordance with this general permit and the guidelines will prevent construction-period impacts to stormwater and water quality. A local permit for stormwater discharges may also be required for construction activities on privately-owned land.

3.22.2.6. *Solid Waste, Toxics, Pesticides, and Hazardous Materials*

The Connecticut Remediation Standard Regulations (CT RSRs) are likely the appropriate criteria to guide remediation activities at the site.

The environmental quality of the soil in the southwestern corner of the Original Garage site was determined during soil investigation and remediation at the adjacent (433 Washington Blvd.) parcel and it is known that soil containing petroleum concentrations above the Residential Direct Exposure Criteria (Res DEC) exists in this area. To protect human health by limiting exposure to hazardous material, petroleum contaminated soil excavated during construction activities should be properly characterized and disposed of off-site at a permitted facility. An environmental professional should oversee excavation activities in Areas of Environmental Concern (AOECs) as determined by pre-construction subsurface investigations. Mitigation will consist of the excavation and off-site disposal of contaminated soil or re-use in accordance with applicable regulations. The environmental professional will observe the excavation of contaminated soil using visual observation, field screening results, and laboratory results from soil samples.

Excavated contaminated soil should be stockpiled on polyethylene sheeting. At the end of each work day the soil stockpile should be covered with polyethylene sheeting and the ends of the sheeting secured. In order to characterize the polluted soil for waste characterization and disposal purposes, soil samples should be collected from the soil stockpile per the sampling frequency specified by the disposal facility.

Plans and specifications will be developed for the project to address potentially-contaminated soil encountered during construction. The plans and specifications will include provisions for the sampling, analysis, stockpiling, transportation, and disposal of contaminated soil. Management of contaminated soils should be performed in accordance with the CTDEEP General Permit for Contaminated Soil and/or Sediment Management (Staging and Transfer). If de-watering is anticipated to occur during the excavation in a designated Ground Water AOEC, a General Permit for the discharge of wastewater should be applied for. It is unknown whether groundwater at the subject site has been impacted by hazardous material and/or petroleum products.

Pre-demolition and post-demolition surveys will be performed for asbestos containing materials (ACMs) prior to demolition. Written notice will be submitted to the Connecticut Department of Public Health (CTDPH) prior to demolition in accordance with RCSA Section 19a-332a-3 for buildings involving more than 10 linear feet of more than 25 square feet of ACM.

Demolition activities will generate a significant quantity of construction and demolition debris. The material will be segregated on-site and reused or recycled to the extent possible and the remainder disposed in a landfill. Disposal of ACM or other regulated wastes generated during demolition and construction activities may also require a CTDEEP Special Waste or Asbestos Disposal Authorization.

Construction machinery, fuels, maintenance fluids, paints, solvents, and other hazardous or toxic construction materials may be present at the site during construction periods. These materials will be managed following appropriate best management practices, regulatory programs, and manufacturer recommendations to prevent significant impacts.

3.22.2.7. Safety

Measures will be undertaken by CTDOT and the project contractor to avoid or reduce safety hazards to the extent practicable during the construction period. Potential measures, adopted from FHWA (2001) may include:

- Using backup alarms on construction equipment.
- Providing police details for directing traffic around construction equipment.
- Providing safety cones and barrels indicating temporary roadway hazards.
- Providing alternative routes for traffic and pedestrians.
- Providing a continuous, accessible path of travel around or through construction.
- Placement of effective barriers.
- Keeping the pedestrian zone free of potentially dangerous equipment.
- Ensuring that curb ramps remain accessible to crosswalks.
- Ensuring that people with vision impairments can detect and avoid construction areas.
- Providing scaffolding canopies for pedestrians if pedestrian routes will be maintained immediately adjacent to overhead construction areas.

3.22.2.8. *Utilities*

If planned electrical outages are required, the contractor will coordinate with the electrical utility and affected customers to minimize disruptions. If necessary, existing utilities will be relocated, maintained, and/or protected from disturbance or damage during construction in accordance with the requirements of each utility company. Street hardware will be adjusted as required to meet finished grade.

4. UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS

The Proposed Action includes the redevelopment of an existing developed area of the Stamford Transportation Center that is currently used for commuter parking. Additionally, the Proposed Action includes objectives for environmental and energy sustainability through improved land use/transportation synergies that are consistent with State, regional and local goals to maintain economic vitality and to reduce regional traffic congestion by encouraging alternative modes of transportation. Therefore, the unavoidable adverse impacts of the Proposed Action will be limited and are predominantly associated with increased traffic circulating through the station area; additional long-term use of utilities and services; and temporary construction-related impacts. Specifically, the unavoidable adverse impacts of the Proposed Action are anticipated to include the following:

Transportation

- Increased traffic volumes on area roadways.
- Probable extension of the duration of peak-hour-like traffic operations at intersections in the study area, depending on the specific design details of the TOD component of the Proposed Action.
- Increased walking distance for some commuters transferring between parking facilities and the train station during construction and possibly during final operations.

Air Quality

- Increased emissions associated with increased traffic activity, although mitigation measures have been identified, such as travel demand management strategies to reduce peak-hour vehicle trips. The TOD element of the Proposed Action is also an integral strategy for reducing the air quality impacts associated with vehicle traffic.

Utilities

- Increased use of potable water and sanitary sewer systems.

Solid Waste

- Increased generation of solid waste materials.

Energy

- Consumption of energy for new parking facilities and the TOD.

Construction

- Temporary construction-related impacts associated with increased noise and reduced air quality from construction equipment and activities; increased construction traffic; temporary traffic detours and lane closures; and handling of hazardous materials.

Where practical, the Proposed Action also includes appropriate mitigation measures to offset potential adverse impacts, as summarized in Section 6.

5. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible and irretrievable commitment of resources associated with the Proposed Action consists of resources that remain committed to a project through its lifespan (i.e., irreversible commitment) or those that are consumed or permanently impacted during project construction and operation as a result of the Proposed Action (i.e., irretrievable commitment).

Irreversible and irretrievable resources that would be committed to the Proposed Action include:

- Construction Materials – Natural, synthetic, and processed materials will be used for construction of the Proposed Action.
- Solid Waste Disposal Capacity – Disposal of construction debris and increased generation of solid waste will occupy capacity in landfills, and/or solid waste disposal facilities.
- Energy – Energy will be used for project construction and for ongoing site operation and activity.
- Financial – The expenditures required for the Proposed Action represent funds that, once committed, are no longer available for other purposes and once spent, cannot be regained.

6. SUMMARY OF MITIGATION MEASURES

The Proposed Action is anticipated to have some adverse environmental impacts as compared to the No-Action Alternative. The impacts will be mitigated using the measures as described in this document and summarized in Table 6-1.

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Land Use, Zoning and Local & Regional Development Plans	<ul style="list-style-type: none"> Some uses of the Proposed Action may be in conflict with existing land use categories. 	<ul style="list-style-type: none"> Site plan approval for development to take place on private property.
<i>Section 3.1.3</i>		
Consistency with State Plan of Conservation & Development	<ul style="list-style-type: none"> Proposed Action is consistent with state and regional plans of conservation and development. 	<ul style="list-style-type: none"> None required
<i>Section 3.2.3</i>		
Traffic & Parking	<ul style="list-style-type: none"> Detailed traffic analysis will be performed as design details are developed. However, the TOD concept is itself part of state and local strategies for creating sustainable relationships between land use and transportation systems, and for managing the transportation impacts of economic development. Localized traffic impacts may be identified at or near the site access locations. 	<ul style="list-style-type: none"> Travel Demand Management Incentives/Programs. Parking Demand Management Strategies Localized intersections improvements for site entry/exit and circulation. Additional mitigation may be required per conditions of Major Traffic Generator Certificate (see Section 8).
<i>Section 3.3.3</i>		

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Pedestrian & Bicycle Considerations	<ul style="list-style-type: none"> Relocated parking may increase the walking time for some existing commuters. The TOD component of the Proposed Action will increase the levels of pedestrian and bicycle activity. 	<ul style="list-style-type: none"> Streetscape and amenities to strengthen pedestrian connectivity. Provisions for clear pedestrian pathways. Elevated Pedestrian Bridge to relieve pedestrian crossing congestion at intersections. Enhanced amenities for bicycle parking/storage. Consideration for designating bike lanes on new or reconstructed roadways.
<i>Section 3.4.3</i>		
Local Transit Considerations	<ul style="list-style-type: none"> Proposed Action would increase the demand on the existing transit services but it is anticipated that there is sufficient reserve capacity in the existing services to support the alternative. 	<ul style="list-style-type: none"> None required
<i>Section 3.5.3</i>		
Air Quality	<ul style="list-style-type: none"> Increased traffic volume on the local traffic network could potentially have a minor effect on mesoscale air quality. Proposed Action has no air quality impacts from stationary sources. Proposed Action has low potential for MSAT effects. Proposed Action has been determined to be in conformity with the Clean Air Act. 	<ul style="list-style-type: none"> Travel Demand Management Incentives/Programs (in conjunction with traffic mitigation strategy).
<i>Section 3.6.3</i>		
Noise	<ul style="list-style-type: none"> Proposed Action is not anticipated to result in significant adverse effects on noise. 	<ul style="list-style-type: none"> None anticipated, although further evaluation may be conducted if components of the Proposed Action are located within 125 feet of sensitive residential and institutional receptors.
<i>Section 3.7.3</i>		
Socioeconomic Resources	<ul style="list-style-type: none"> Proposed Action is not expected to result in significant adverse effects on socioeconomic resources. 	<ul style="list-style-type: none"> None required
<i>Section 3.8.3</i>		

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Water Quality	<ul style="list-style-type: none"> • Likely will be an increase in impervious land cover associated with the Proposed Action. • Potential impacts to surface water quality are not anticipated to impact public water supplies. 	<ul style="list-style-type: none"> • Specific measures that will be designed utilizing the <i>2004 Connecticut Stormwater Quality Manual</i> to be determined during future detailed site design.
<i>Section 3.9.3</i>		
Hydrology & Floodplains	<ul style="list-style-type: none"> • Likely increase in impervious land area could have adverse impacts on runoff volume or peak flow rates, with potential impacts to floodplain elevations. 	<ul style="list-style-type: none"> • Potential modification of stormwater drainage system and/or storage to be determined during future detailed site design. • Obtain applicable certifications (see Section 8).
<i>Section 3.10.3</i>		
Wetlands	<ul style="list-style-type: none"> • No wetland or watercourse impacts are anticipated for the Proposed Action. 	<ul style="list-style-type: none"> • None required
<i>Section 3.11.3</i>		
Coastal Resources	<ul style="list-style-type: none"> • Proposed Action will not have any adverse impacts on coastal resources, decrease any coastal access or recreational opportunities, or impair the visual quality of the shoreline. 	<ul style="list-style-type: none"> • Design in accordance with CCMA and permitting regulations. • Obtain applicable certifications (see Section 8).
<i>Section 3.12.3</i>		
Endangered, Threatened or Special Concern Species or Habitats	<ul style="list-style-type: none"> • No impacts to flora, fauna, or threatened and endangered species are anticipated for the Proposed Action. 	<ul style="list-style-type: none"> • None required
<i>Section 3.13.3</i>		
Soils & Geology	<ul style="list-style-type: none"> • No impacts to soils or geology are anticipated for the Proposed Action. 	<ul style="list-style-type: none"> • None required
<i>Section 3.14.3</i>		
Cultural Resources	<ul style="list-style-type: none"> • Further consultation with the CTSHPO will be necessary to assess specific direct and indirect impacts of the Proposed Action within the South End Historic District when details are developed. 	<ul style="list-style-type: none"> • Further consultation with the CTSHPO will take place to discuss potential mitigation measures when details are developed.
<i>Section 3.15.3</i>		

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Pesticides, Toxic or Hazardous Materials	<ul style="list-style-type: none"> Proposed Action will not require the use of pesticides or herbicides, and building materials will be required to meet current local, state, and federal codes and regulations relative to toxicity and exposure potential. 	<ul style="list-style-type: none"> None required
<i>Section 3.16.3</i>		
Visual Resources	<ul style="list-style-type: none"> Because the proposed project is consistent with the scale and style of on-going urban redevelopment in the area, no adverse impacts to visual resources are anticipated. 	<ul style="list-style-type: none"> Rules in the Request for Proposals require architecture to blend with surrounding buildings. Specific visual/aesthetic impacts and mitigation, if any, will be evaluated through the applicable permitting processes as specific design details are developed.
<i>Section 3.17.3</i>		
Energy Use & Conservation	<ul style="list-style-type: none"> Proposed Action has the potential to increase the energy use on-site 	<ul style="list-style-type: none"> Parking garage constructed in accordance with <i>Manual for High Performance Buildings</i> Measures to minimize energy impacts of TOD component, such as Energy Star products and design to LEED standards.
<i>Section 3.18.3</i>		
Public Utilities & Services	<ul style="list-style-type: none"> Proposed Action parking component will require similar utility connections as were provided for the 2004 Garage. Proposed Action will likely increase demand on all of the adjacent utility systems serving these sites compared to the existing conditions. 	<ul style="list-style-type: none"> Utility service upgrades and/or new connections as needed for site-specific design. Coordination with NU to maintain clear zones from transmission lines.
<i>Section 3.19.3</i>		
Public Health & Safety	<ul style="list-style-type: none"> Proposed Action will increase employment and may provide new residential units in the area thereby increasing the potential demand for police and fire protection, and health services. 	<ul style="list-style-type: none"> Specific requirements to be determined for site-specific design.
<i>Section 3.20.3</i>		

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Construction Related		
<i>Section 3.22.2</i>		
Traffic	<ul style="list-style-type: none"> • Impacts are anticipated to traffic flow in and around the Stamford Transportation Center and the TOD area during construction. 	<ul style="list-style-type: none"> • Construction phasing with traffic management plan. • Access modifications on Station Place.
Parking	<ul style="list-style-type: none"> • The construction of the new parking facilities will require the removal of the Original Garage. 	<ul style="list-style-type: none"> • Existing parking supply located within ¼-mile distance. • ADA accessibility of spaces in 2004 Garage. • Detour signing. • Public information system.
Air Quality	<ul style="list-style-type: none"> • Potential construction air quality impacts can occur due to the use of diesel-powered construction vehicles. • Fugitive dust emissions can occur during demolition, ground excavation, material handling and storage, movement of equipment at the site, and transport of material to and from the site. 	<ul style="list-style-type: none"> • Proper operation and maintenance of construction equipment • Dust control and abatement
Noise	<ul style="list-style-type: none"> • Considering the additional noise dampening effect of the intervening structures, the change from ambient levels associated with the construction activities at the site of the Original Garage will not be significant. 	<ul style="list-style-type: none"> • Maintenance of construction equipment. • Notification to sensitive receptors in advance of elevated noise levels. • Special Provision on Noise will be included in Construction Contract.
Stormwater and Water Quality	<ul style="list-style-type: none"> • Construction activities will only minimally increase the potential for erosion of soil and discharge of sediment to receiving waters. • Potential for other contaminated soil or groundwater that has not yet been identified to be encountered during construction. 	<ul style="list-style-type: none"> • Stormwater and dewatering wastewater registration consistent with <i>2004 Connecticut Stormwater Quality Manual</i> • Erosion prevention and sedimentation control measures consistent with <i>Connecticut Guidelines for Erosion and Sedimentation Control</i>.

Table 6-1: Summary of Impacts and Potential Mitigation Measures

Resource Category	Impacts	Mitigation
<i>Section Reference</i>		
Construction Related (continued)		
<i>Section 3.22.2</i>		
Hazardous Materials	<ul style="list-style-type: none"> Residual petroleum-contaminated soil from the release at 433 Washington Boulevard may be encountered. Demolition will generate a significant quantity of construction and demolition debris that will require management and disposal. 	<ul style="list-style-type: none"> Proper characterization and disposal of contaminated soils. Pre-demolition surveys. Proper segregation, reuse, recycling and/or disposal of demolition debris. Proper management of hazardous or toxic construction materials.
Safety	<ul style="list-style-type: none"> Demolition and construction activities will occur in a dense urban area near roadways, pedestrian routes, and parking areas that will remain partially or completely open during construction. 	<ul style="list-style-type: none"> Implement safety management measures consistent with State and FHWA guidelines.
Utilities	<ul style="list-style-type: none"> Planned, temporary electrical outages may be required to connect new construction to existing service. 	<ul style="list-style-type: none"> Coordination with utility company and customers regarding planned service interruptions .

7. COST BENEFIT ANALYSIS

The public cost of the Proposed Action will be limited to \$35 million and can provide funds for demolition of the Original Garage; construction of new parking facilities; construction of Station Place improvements; temporary commuter parking supply during construction; and implementation of other public transportation components of the Proposed Action. The balance of the project costs over the \$35 million, which will include construction of the TOD component and any supporting features, will be privately financed by the selected developer.

While the funds expended for construction are a cost to the State of Connecticut and the selected private developer, this expenditure will result in short-term benefits for the local and regional construction industry by creating demand for construction-related jobs, resources, and products. Other tangible benefits of the Proposed Action will include:

- Improving the service life of parking facilities for the Stamford Transportation Center up to 60 years by addressing the high maintenance of the Original Garage;
- Expanding the availability of parking supply for the Stamford Transportation Center by at least 273 spaces;
- Minimizing public costs by involving private-sector participation in the project;
- Providing tax revenues with TOD; and
- Creating new permanent (non-construction) jobs and employment opportunities through expanded parking facilities and TOD.

In addition, intangible benefits of the Proposed Action could include:

- Increasing transit use by expanding commuter parking; providing multimodal access and circulation improvements in the station area; and creating TOD; and
- Catalyzing other private development and redevelopment initiatives consistent with the City of Stamford's Master Plan.

8. POTENTIAL CERTIFICATES, PERMITS AND APPROVALS

The following certificates, permits, and approvals may be required for the construction and operational phases of the Proposed Action. This list will be refined during the project design phase. The developer of the Proposed Action will be responsible for complying with any and all environmental permits and government approvals. It is the State's position that local zoning requirements and approvals do not apply to any portion of the Proposed Action that is located on state-owned land.

Table 8-1: Certificates, Permits, and Approvals

Agency	Certificate/Permit/Approval	Section Reference
Federal		
	None Currently Anticipated	Not Applicable
State		
CTDEEP	OLISP Coastal Zone Consistency Concurrence	Section 3.12
CTDEEP	Flood Management Certification	Sections 3.10 and 3.12
CTDEEP	General Permit for the Discharge of Stormwater and Dewatering Wastewater from Construction Activities	Section 3.22
CTDEEP	General Permit for Contaminated Soil and/or Sediment Management	Section 3.22
CTDEEP	General Permit for Miscellaneous Discharges of Sewer Compatible Wastewater	Section 3.9
CTDEEP	Special Wastes or Asbestos Disposal Authorization	Section 3.21
CTDEEP	General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource	Section 3.6
Office of the State Traffic Administration	Major Traffic Generator Certificate	Section 3.21
Local (For project elements being constructed on private property)		
City of Stamford	Site Plan Approval	Section 3.1
City of Stamford	Zoning Board Approval	Section 3.1
City of Stamford	Various Building Department Permits	Not Applicable

9. EIE DISTRIBUTION LIST

The following state and local agency offices received a copy of this EIE for review and for availability to the public:

- **Connecticut State Representatives (House Districts 144-149)**
Michael Molgano (144)
Patricia Billie Miller (145)
Gerald M. Fox, III (146)
William Tong (147)
Daniel J. Fox (148)
Livvy R. Floren (149)
Legislative Office Building
Hartford, CT 06106-1591
- **Connecticut State Senators (Senate Districts 27 & 36)**
Carlo Leone (27)
Scott L. Frantz (36)
Legislative Office Building
Hartford, CT 06106-1591
- **Michael Pavia**
Mayor, City of Stamford
888 Washington Boulevard
Stamford, CT 06901
- **Clerk, City of Stamford**
888 Washington Boulevard
Stamford, CT 06901
- **City Engineer, City of Stamford**
888 Washington Boulevard
Stamford, CT 06901
- **City Traffic Engineer, City of Stamford**
888 Washington Boulevard
Stamford, CT 06901
- **Land Use Bureau Chief, City of Stamford**
888 Washington Boulevard
Stamford, CT 06901
- **Connecticut Department of Energy and Environmental Protection**
Mr. David Fox
79 Elm Street
Hartford, CT 06106
- **Connecticut Department of Public Health**
Dr. Jewel Mullen
410 Capitol Avenue
Hartford, CT 06134

- **Council on Environmental Quality**
Ms. Barbara C. Wagner, Chair
79 Elm Street
Hartford, CT 06106
- **Connecticut Department of Construction Services**
Donald DeFronzo, Acting Commissioner
165 Capitol Avenue
Hartford, CT 06106
- **Connecticut Office of Policy and Management**
Mr. Benjamin Barnes
450 Capitol Avenue
Hartford, CT 06106
- **CT Commission on Culture and Tourism/State Historic Preservation Office**
One Constitutional Plaza, Second Floor
Hartford, CT 06103
- **Connecticut Office of the State Traffic Administration**
Connecticut Department of Transportation
2800 Berlin Turnpike
Newington, CT 06131
- **Connecticut Department of Economic and Community Development**
505 Hudson Street
Hartford, CT 06106
- **Connecticut State Library**
Mr. Kendall Wiggin
231 Capitol Avenue
Hartford, CT 06106
- **Connecticut Department of Transportation, Office of Communications**
2800 Berlin Turnpike
Newington, CT 06131
- **Connecticut Rail Commuter Council**
PO Box 4256
Camp Avenue Station
Stamford, CT 06907
- **The Ferguson Library**
One Public Library Plaza
Stamford, CT 06904
- **South Western Regional Planning Agency**
888 Washington Boulevard
Stamford, CT 06901

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APPENDIX A

Public Scoping Notice and Related Material

Scoping Notice

Public Scoping Meeting Summary

Stamford Parking Garage – Frequently Asked Questions

Agency Scoping Review Letters



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- [What is Scoping?](#)
- [What to Expect at a Scoping Meeting](#)
- [How to Request a Public Scoping Meeting](#)
- [Guide to the State Lands Transfer Process](#)
- [CEQ HOME](#)



May 8, 2012

Special Notice

1. **NEW!** State Conservation and Development Policies: A Plan for Connecticut, 2013-2018 (State C & D Plan) - Draft Available

Scoping Notices

1. **REVISED!** 20 North Water Street, Norwalk
2. **NEW!** Quinebaug Regional Technical Park, Putnam
3. **NEW!** Stamford Transportation Center, Stamford

Post-Scoping Notices: Environmental Impact Evaluation Not Required

1. **NEW!** Thames Shipyard Improvements, New London

Environmental Impact Evaluations

1. **NEW!** The Villages, Montville
2. **NEW!** New Haven - Hartford - Springfield Line High Speed Intercity Passenger Rail Project

State Land Transfers

No State Land Transfer Notices have been submitted for publication in this edition.

The next edition of the Environmental Monitor will be published on **May 22, 2012**.

[Subscribe to e-alerts](#) to receive an e-mail when The Environmental Monitor is published.

Special Notice

The following notice is published at the request of the Office of Policy and Management to provide notice of the availability of the revised draft of *Conservation and Development Policies: A Plan for Connecticut, 2013-2018*. There is a strong link between this plan and CEPA.

1. Conservation and Development Policies: A Plan for Connecticut, 2013-2018 (State C & D Plan)

The Office of Policy and Management (OPM) has published a revised draft of *Conservation and Development Policies: A Plan for Connecticut, 2013-2018* (the State C&D Plan), in accordance with CGS Section 16a-28 (b). The Draft State C&D Plan, including the Draft Locational Guide Map, can be viewed at: <http://www.ct.gov/opm/cwp/view.asp?a=2990&q=467686>.

OPM, in cooperation with Regional Planning Organizations (RPOs), will schedule, publicize, and conduct formal public hearings on the Draft State C&D Plan in each of the state's 14 planning regions between the months of May and September 2012. Written comments from the public are welcomed and will be accepted until the close of business on October 5, 2012.

Written comments from the public are welcome and will be accepted until the close of business on: **October 5, 2012**.

Written comments should be sent to:

Name: Daniel Morley
Agency: Office of Policy and Management
Address: 450 Capitol Avenue, MS #540RG
Hartford, CT 06106-1379
Fax: 860-418-6486
E-Mail: Daniel.Morley@ct.gov

Scoping Notices

"Scoping" is for projects in the earliest stages of planning. At the scoping stage, detailed information on a project's design, alternatives, and environmental impacts does not yet exist. Sponsoring agencies are asking for comments from other agencies and from the public as to the scope of alternatives and environmental impacts that should be considered for further study. Send your comments to the contact person listed for the project by the date indicated.

The following Scoping Notices have been submitted for review and comment.

1. Notice of Scoping for 20 North Water Street, Norwalk

Address of Possible Project Location: 20 North Water Street, Norwalk

Project Description: The City of Norwalk in conjunction with North Water Street LLC (c/o Spinnaker Real Estate Partners LLC) is proposing the redevelopment of the former Norwalk Company site located at 20 North Water Street, Norwalk, CT. Redevelopment activities include: environmental assessment, remediation and monitoring of the 1.895 acre site; demolition of the existing 56,720 square foot brick building; and new construction of a 130,000 square foot mixed-use development consisting of 107 residential rental units and 18,000 square feet of ground floor commercial space. State funds are proposed for environmental assessment, remediation, abatement and monitoring.

Project Maps: Click here to view a [location map](#) of the project area. Click here to view a [USGS Quadrangle map](#) of the project area.

Written comments from the public are welcomed and will be accepted until the close of business on: May 17, 2012

There will be a Public Scoping Meeting for this project at:

DATE: **May 9, 2012**

TIME: 10:00 AM

PLACE: Norwalk City Hall, Room 128 (Community Room), 125 East Avenue, Norwalk, CT 06851

Written comments should be sent to:

Name: Mark Hood
Agency: Department of Economic and Community Development
Address: 505 Hudson Street
Hartford, CT 06106
Fax: 860-270-8157
E-Mail: mark.hood@ct.gov

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Mark Hood
Agency: Department of Economic and Community Development
Address: 505 Hudson Street
Hartford, CT 06106
Phone: 860-270-8089
Fax: 860-270-8157
E-Mail: mark.hood@ct.gov

2. Notice of Scoping for the Quinebaug Regional Technical Park

Municipality where proposed project might be located: Putnam

Address of Possible Project Location: Land adjacent to I-395 on the west bank of the Quinebaug River

Project Description: The Town of Putnam, as part of its long-range planning to develop additional land for industrial purposes, has identified land to the west of the Quinebaug River, south of the Town's wastewater treatment plant and north of the Wheelabrator Ash Landfill as a site for key industrial park development. The Quinebaug Regional Tech Park (Park), comprising approximately 230 acres, is envisioned to be developed into approximately 11 separate development lots. Generally, lot sizes will be on the order of 15 acres and support up to 90,000 sf of light industrial, research or technology manufacturing.

The Park will be served by a new upgraded paved central roadway substantially on the foot print of the existing paved road accessing the current land fill. The major change in the access to the park will be the construction of a new two-lane bridge which is currently proposed to tie directly to Interchange 95 off of I-395 and Kennedy Drive. An existing one-lane bridge that currently provides limited access to the site will be retained to provide pedestrian and bicycle access to the site and will tie into the town's existing River Trail.

The first phase of the Park will consist of a 40,000 sf Regional YMCA, which will be constructed on one of the eleven proposed park lots, and development of enhanced access to the wastewater treatment plant to the north. As part of the project it is envisioned that major utilities (water, wastewater, electric and telephone) be incorporated into the proposed access right of way to be immediately available to each proposed development lot.

In 2006, the state Department of Economic and Community Development (DECD) circulated a Stage 1 Environmental Assessment to determine CEPA obligations for the proposed project. Based on this review, a recommendation was made by DECD to conduct an Environmental Impact Evaluation (EIE) Study. Since the overall scope of the project has changed, another scoping notice is being published to seek state agencies and public comments before the scope of services for the EIE is finalized.

Project Map: Click here to view a [Location Map](#) of the project area.

Written comments from the public are welcomed and will be accepted until the close of business on: **June 8, 2012**

Any person can ask the sponsoring agency to hold a Public Scoping Meeting by sending such a request to the address below. If a meeting is requested by 25 or more individuals, or by an association that represents 25 or more members, the sponsoring agency shall schedule a Public Scoping Meeting. Such requests must be made by **May 18, 2012**.

Written comments and/or requests for a Public Scoping Meeting should be sent to:

Name: Mark Hood
Agency: Department of Economic and Community Development
Address: 505 Hudson Street
Hartford, CT 06106
Fax: 860-270-8157
E-Mail: mark.hood@ct.gov

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Mark Hood
Agency: Department of Economic and Community Development
Address: 505 Hudson Street
Hartford, CT 06106
Phone: 860-270-8089
Fax: 860-270-8157
E-Mail: mark.hood@ct.gov

3. Notice of Scoping for the Stamford Transportation Center Parking and Transit Oriented Development

Municipality where proposed project might be located: Stamford, CT

Address of Possible Project Location: Stamford CT, within a 1/2 mile radius of the Stamford Transportation Center

Project Description: The Connecticut Department of Transportation (Department) is proposing to replace the Department's original parking garage located at the Stamford Transportation Center in Stamford, CT through a public-private partnership agreement that will include Transit-Oriented Development (TOD). Up to \$35 million dollars in bond proceeds are available from the State of Connecticut relative to the replacement garage. The original garage at the Stamford Transportation Center provides some 727 spaces and was constructed in the 1980's, while a second garage provides an additional 1,200 parking spaces and will

remain. The public-private partnership will include demolition of the original multi-level parking garage and the creation of 1,000 (minimum) commuter parking spaces within a 1/4 mile of the Stamford Transportation Center, possible improvements to the Stamford Transportation Center, improvements to Station Place, and the construction of TOD components within a 1/2 mile of the Stamford Transportation Center. Prior to demolition of the original garage, at least 727 parking spaces will be provided in the vicinity.

Project Maps: [Click here to view maps of the project area.](#)

Written comments from the public are welcomed and will be accepted until the close of business on: **June 8, 2012**

There will be a Public Scoping Meeting for this project at:

DATE: May 24, 2012

TIME: 7:00 pm

PLACE: Stamford Government Center, 4th Floor Cafeteria, 888 Washington Boulevard, Stamford, CT

NOTES: The meeting location is accessible to persons with disabilities. Deaf and hearing impaired persons wishing to attend this meeting and requiring an interpreter may make arrangements by contacting the Department's Office of Communication at 860-594-3062 (voice only) at least five days prior to the meeting.

Written comments should be sent to:

Name: Mr. Mark W. Alexander - Transportation Assistant Planning Director

Agency: State of Connecticut Department of Transportation

Address: 2800 Berlin Turnpike, Newington, CT 06131

Fax: 860-594-3028

E-Mail: Mark.W.Alexander@ct.gov

If you have questions about the public meeting, or other questions about the scoping for this project, contact:

Name: Ms. Jessica DiLuca

Agency: State of Connecticut Department of Transportation

Address: 2800 Berlin Turnpike, Newington, CT 06131

Phone: 860-594-2135

Fax: 860-594-3028

E-Mail: Jessica.DiLuca@ct.gov

The agency expects to release an Environmental Impact Evaluation for this project, for public review and comment, in July/August 2012

Post-Scoping Notices: Environmental Impact Evaluation Not Required

This category is required by the October 2010 revision of the [Generic Environmental Classification Document](#) for State Agencies. A notice is published here if the sponsoring agency, after publication of a scoping notice and consideration of comments received, has determined that an Environmental Impact Evaluation (EIE) does not need to be prepared for the proposed project.

The following Post-Scoping Notice has been submitted for publication in this edition.

1. Post-Scoping Notice for the Thames Shipyard Improvements

Municipality where project will be located: New London

CEPA Determination: On November 22, 2011 the Department of Economic and Community Development (DECD) published a [Notice of Scoping](#) to solicit public comments for this project in the *Environmental Monitor*. The DECD has taken those comments into consideration and has concluded that the project does not require the preparation of Environmental Impact Evaluation under CEPA. The agency's conclusion is documented in a [Memo of Findings and Determination](#) and an [Environmental Assessment Checklist](#).

If you have questions about the project, you can contact the agency at:

Name: Mark Hood

Agency: Department of Economic and Community Development

Address: 505 Hudson Street
Hartford, CT 06106

Phone: 860-270-8089
Fax: 860-270-8157
E-Mail: mark.hood@ct.gov

What happens next: The DECD expects the project to go forward. This is expected to be the final notice of the project to be published in the *Environmental Monitor*.

E I E Notices

After Scoping, an agency that wishes to undertake an action that could significantly affect the environment must produce, for public review and comment, a detailed written evaluation of the expected environmental impacts. This is called an [Environmental Impact Evaluation](#) (EIE).

The Following Environmental Impact Evaluation notices have been submitted for review and comment in this edition.

1. Notice of E I E for The Villages

Municipality where project is proposed: Montville

Address of Possible Project Location: Norwich - New London Turnpike (Rte. 32), Montville, CT 06382

Project Description: Mutual Housing Association of South Central Connecticut, Inc. (MHA) proposes to construct a 120-unit apartment community complex ("The Villages") on approximately 12.2 acres of undeveloped wooded land located on the west side of the Norwich New London Turnpike (Route 32) in the Uncasville section of Montville. The proposed project (the Proposed Action) would address the demand for affordable housing and rental housing in Montville and the surrounding communities, as well as provide easy access to and from the Mohegan Sun Casino and surrounding commercial areas, and access to the region's public transportation system.

The Proposed Action consists of the development of affordable housing units and associated infrastructure in Montville, Connecticut. The proposed housing complex consists of twenty multi-story units, providing one-bedroom, two-bedroom and three-bedroom apartments. The garden-style multifamily residential buildings range from two to three stories in height and house four to eight units per building. The proposed development also includes construction of a new access road off Route 32 and infrastructure development, surface, a community building, playscape areas, and a maintenance building.

This combined EIE/EA has been prepared for the Proposed Action on behalf of DECD and HUD, the CEPA sponsoring agency and the Federal lead agency, respectively. This document has been prepared in accordance with CEPA, NEPA, and HUD's implementing regulations at 24 CFR 50. The EIE/EA provides a description of the Proposed Action and its purpose and need, an evaluation of the direct, indirect, and cumulative effects of the No Action Alternative and the Proposed Action, and proposed mitigation measures to eliminate or minimize adverse environmental effects.

Project Map: Click here to view a [site map](#) of the project area.

Comments on this EIE will be accepted until the close of business on: **June 22, 2012**

The public can view a copy of this EIE at: The Montville Town Clerk, 310 Norwich-New London Tpk., Uncasville, CT 06382

The Raymond Library, 832 Raymond Hill Rd, Oakdale, CT 06370

There is no public hearing scheduled for this EIE. The agency will hold a public hearing if 25 or more persons or an association that has at least 25 members requests a hearing. A public hearing request must be made no later than **May 18, 2012**.

To Request a Public Hearing contact:

Name: Nelson Tereso, Project Manager
Agency: Office of Financial & Technical Review
State of Connecticut
Department of Economic & Community Development
Address: 505 Hudson Street
Hartford, CT 06106-7106
E-Mail: nelson.g.tereso@ct.gov

Send your comments about this EIE to:

Name: Mark Hood
Agency: Department of Economic and Community Development
Address: 505 Hudson Street

Hartford, CT 06106

E-Mail: mark.hood@ct.gov

If you have questions about the public hearing, or where you can review this EIE, or similar matters, please contact:

Name: Mark Hood

Agency: Department of Economic and Community Development

Address: 505 Hudson Street, Hartford, CT 06106

E-Mail: mark.hood@ct.gov

Phone: (860) 270-8089

2. Notice of EIE for the New Haven - Hartford - Springfield Line High Speed, Intercity Passenger Rail Project

Municipalities where project is proposed: New Haven, North Haven, Hamden, Wallingford, Meriden, Berlin, Newington, West Hartford, Hartford, Windsor, Windsor Locks, Enfield, and Springfield

Address of Possible Project Location: Rail Corridor from New Haven-Hartford-Springfield

Project Description: The proposed rail service enhancement in the NHHS rail corridor would provide for up to 25 daily round-trip trains (up to 50 one-way trips per day) by 2030. The proposed service plan would provide one-seat or cross-platform transfers on service from Washington, D.C., and New York to Springfield, Boston and the Knowledge Corridor, as well as bi-directional, 30-minute peak-hour service and hourly midday service in the NHHS rail corridor. Related operational improvements include an increase in the capacity of the line to accommodate additional trains, an increase in the maximum train speed to 110 miles per hour (mph), service to future new regional train stations in North Haven, Newington, West Hartford, and Enfield (to be constructed with Federal Transit Administration (FTA) funding), and reduced scheduled travel times. These operational improvements, in turn, require rail infrastructure improvements. Therefore, Connecticut has proposed the NHHS Rail Program, a program of capital projects to support enhanced passenger rail service in the NHHS rail corridor. The proposed project's infrastructure improvements in the NHHS rail corridor consist of:

- restoration of sections of track;
- construction of new passing sidings;
- construction of a layover and light maintenance facility;
- at-grade crossing upgrades;
- facility-specific bridge and culvert rehabilitations, replacements and removals;
- installation of new crossovers and signal upgrades;
- improvement or relocation of existing passenger rail platforms for Amtrak intercity service, as well as additional station parking and improved station access;
- improvements to platforms, track configuration and sidings in the Springfield Terminal area; and construction of future FTA-funded new regional rail stations in North Haven, Newington, West Hartford, and Enfield.

Project Map: [Click here to view a map of the project area.](#)

Comments on this EIE will be accepted until the close of business on: **June 22, 2012**

The public can view a copy of this EIE at: This document is available for public inspection at the Connecticut Department of Transportation, Bureau of Policy and Planning, 2800 Berlin Turnpike, Newington, CT; the City or Town Clerk's Office and the Public Libraries in the affected municipalities along the rail corridor, the South Central Regional Council of Governments, the Central Connecticut Regional Planning Agency, the Capitol Region Council of Governments, and the Pioneer Valley Planning Commission. The document is also available at www.nhhsrail.com.

There are three public hearings scheduled for this EIE on:

DATE: Thursday, June 7, 2012

TIME: 7:00 PM

PLACE: Torp Theatre, Davidson Hall, Central Connecticut State University, 1615 Stanley Street, New Britain, CT

DATE: Wednesday, June 13, 2012

TIME: 7:00 PM

PLACE: Asuntuck Community College, 170 Elm Street, Enfield, CT

DATE: Thursday June 14, 2012

TIME: 7:00 PM

PLACE: North Haven High School, 221 Elm Street, North Haven, CT

NOTES: All hearing locations are accessible to persons with disabilities. Deaf and hearing impaired persons or persons speaking a language other than English wishing to attend a hearing and requiring an interpreter may make arrangements by contacting the Department's Office of Communications at (860) 594-3062 (voice only) at least five days prior to the hearing.

The study team will be available at each hearing from 6:00pm-7:00pm to discuss the proposed improvements. The hearing presentations will begin at 7:00pm.

Additional information about this project can be found online at: www.nhhsrail.com

Send your comments about this EIE to:

Name: Mr. Mark W. Alexander - Transportation Assistant Planning Director
Agency: State of Connecticut Department of Transportation
Address: 2800 Berlin Turnpike, Newington, CT 06131
E-Mail: Mark.W.Alexander@ct.gov

If you have questions about the public hearing, or where you can review this EIE, or similar matters, please contact:

Name: Mr. Stephen V. Delpapa - Transportation Supervising Planner
Agency: State of Connecticut Department of Transportation
Address: 2800 Berlin Turnpike, Newington, CT 06131
E-Mail: Stephen.Delpapa@ct.gov
Phone: 860-594-2941

State Land Transfer Notices

Connecticut General Statutes [Section 4b-47](#) requires public notice of most proposed sales and transfers of state-owned lands. The public has an opportunity to comment on any such proposed transfer. Each notice includes an address where comments should be sent. [Read more about the five-step process.](#)

No State Land Transfer Notices have been submitted for publication in this edition.

The Adobe Reader is necessary to view and print Adobe Acrobat documents, including some of the maps and illustrations that are linked to this publication. If you have an outdated version of Adobe Reader, it might cause pictures to display incompletely. To download up-to-date versions of the free software, click on the Get Acrobat button, below. This link will also provide information and instructions for downloading and installing the reader.



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Access.Adobe is a tool that allows blind and visually impaired users to read any documents in Adobe PDF format. For more information, read the [product overview at Adobe.com](#).

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Stamford Transportation Center Parking Garage

STATE PROJECT NO. 301-047

Public Scoping Meeting Summary

Session Date: Thursday, May 24, 2012

Session Time: 7:00 p.m. to 7:30 p.m.

Session Location: Stamford Government Center
4th Floor Cafeteria
888 Washington Boulevard
Stamford, CT

Attached:

- Proof of Publication - Notice of Public Scoping Meeting
- Sign-in Sheet
- Presentation
- Comment form

Session Set-up:

A welcoming and reception station was staffed at the session's entrance along with sign-in sheets and comment forms. Attendees were encouraged by technical staff to submit written comments at the meeting. As an alternative, comments could be mailed to CTDOT by June 8, 2012. Display boards were set up providing summary information of the project. Attending staff from CTDOT and CHA (CTDOT's consultant) were available to provide information and answer questions during the session.

A presentation was given by Mark Alexander (CTDOT) and Jeff Parker (CHA) which explained the project history, the purpose and need, site criteria, the CEPA process and schedule, and provided contact information including an address for those sending in written comments (this contact information is also contained on the comment form). After the presentation, the meeting was opened to public comment.

Session Results:

The Public Scoping Meeting was attended by five people, as indicated on the attached sign-in sheet. Verbal comments given at the meeting are summarized as follows:

State Representative Gerald Fox (District 146):

- Commented that a previously proposed plan to replace the garage was eventually halted due to anticipated issues with construction phasing and parking displacement.

State Representative Gerald Fox (District 146), *continued*:

- Commented that temporary parking during construction is a major concern to commuters using the train station, and these construction impacts should be evaluated.
- Commented that commuter parking located ¼-mile from the station is generally perceived as being too far away.
- Commented that additional notification of the project scoping should be provided beyond the notice in the Environmental Monitor to notify that comments can be submitted until June 8, 2012.
- Commented that he thought that a 2-year construction duration was too long.

Jim Cameron (CT Rail Commuter Council):

- Expressed disappointment that the Scoping Meeting was not more broadly advertised. Suggested that information and solicitation for comments be posted on the CTDOT website.
- Commented that the CT Rail Commuter Council considers parking at the train station to be a crucial planning issue affecting over 1000 regular commuters.
- Suggested that CTDOT's evaluation of TOD alternatives give preference to developer proposals that keep the commuter parking adjacent to the train station.
- Commented that the anticipated parking displacement during construction is a significant concern.
- Commented that the impacts of construction staging and the construction activities on traffic operations is also a major concern, particularly relating to taxi and kiss-and-ride services.
- Questioned the decision to proceed with scoping when there is not yet a clear development plan for specific parcels, and considering the large radius of potential TOD/parking sites.
- Commented that the public/private partnership for the Fairfield transportation center did not work because the private sector participation did not meet expectations, and questioned what would be different for this project to overcome those issues.
- Noted that \$35 million bonding had been approved in 2006 to fund this project, and questioned how the project would be financed if these funds are not sufficient.



Jeffrey Parker, PE
Project Manager

DCK/



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General

Stamford Parking Garage - Frequently Asked Questions

1. What does the garage replacement project involve?

The original Stamford Parking Garage has 727 spaces and will be replaced with new facilities. A second garage, attached to the original garage, was constructed in 2004 and provides an additional 1,200 parking spaces and will typically remain in use. The new parking facilities will contain a minimum of 1,000 parking spaces for commuter parking. Station Place will be upgraded to include better pedestrian and bicyclist access. After the original garage has been replaced, commuter parking for more than 2,200 cars will be provided.

2. Why can't the original garage simply be repaired instead of replaced?

The original garage is aging and requires extensive and costly maintenance. A [2006](#) report, updated in [2010](#) found that a new garage would be more cost effective than maintaining the original garage and would have a much longer useful life.

3. Where do I park during construction?

The 2004 Garage will typically remain open with 1,200 of the 1,927 commuters continuing to park there. Prior to demolition of the original garage, temporary parking will be identified and will be made available during all phases of construction so that there will be at least the same total number of commuter parking spaces that are currently available.

4. Where will new parking be located?

The specific site(s) for both new and temporary parking during construction is yet to be determined, but the goal is to locate such parking such that it will be within easy walking distance of the train station.

5. How long is construction going to take?

The goal is to keep disruption to the commuter to a minimum. We estimate a yearlong design phase will be followed by a 2 year construction phase.

6. How will handicapped parking and access be affected during construction?

The same number of handicapped parking spaces currently located within the original garage structure will be added to the adjacent 2004 garage structure.

7. How will pedestrians and bicyclists be affected during construction?

The Contractor will be required to maintain safe access to the train station for pedestrians and bicyclists at all times during construction.

8. What are the next steps for the project?

As currently planned, a public hearing will be conducted this Fall to receive comments on the Environmental Impact Evaluation (EIE) for the proposed project. This public hearing process will include a public comment period and the DOT will address all comments and incorporate any needed mitigation into the document. CTDOT will be moving forward with the development of plans for the new parking facilities upon completion of the EIE.

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STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF ENVIRONMENTAL REVIEW

79 ELM STREET, HARTFORD, CT 06106-5127

To: Eugene Colonese - Administrator of Rail Operations
DOT - Bureau of Public Transportation, 2800 Berlin Turnpike, Newington

From: David J. Fox - Senior Environmental Analyst **Telephone:** (860) 424-4111

Date: July 3, 2008 **E-Mail:** david.fox@ct.gov

Subject: Parking Garage at Transportation Center, Stamford

The Department of Environmental Protection has received the Notice of Scoping announcing preparation of an Environmental Impact Evaluation for construction of a 1000-space parking garage at the Stamford Transportation Center. The following commentary is submitted for your consideration.

The proposed project is within Connecticut's coastal boundary as defined by section 22a-94 of the Connecticut General Statutes (CGS) and is subject to the provisions of the Connecticut Coastal Management Act (CCMA), sections 22a-90 through 22a-112. In accordance with CGS section 22a-100, state actions within the coastal boundary that may significantly affect the environment must be consistent with the standards and policies of the CCMA. The EIE should discuss the project's consistency with any applicable CCMA standards and policies. One coastal management concern which should be addressed in future phases of the planning process is the provision of adequate controls to mitigate potential stormwater impacts.

Stormwater management for parking garages typically should involve two separate collection systems designed to treat the runoff from different types of parking areas. Any exposed parking levels will produce a high volume of runoff with relatively low concentrations of pollutants. Runoff from such areas should be directed to the storm sewer system and the collection system should include controls to remove sediment and oil or grease. A hydrodynamic separator, incorporating swirl technology, circular screening technology or engineered cylindrical sedimentation technology, is recommended to remove medium to coarse grained sediments and oil or grease. The treatment system should be sized such that it can treat stormwater runoff adequately. The Department recommends that the treatment system be designed to treat the first inch of stormwater runoff. Upon installation, a maintenance plan to remove sediment and oil or grease should also be implemented. The feasibility of infiltrating post-treatment runoff from the exposed parking levels, utilizing rain gardens or infiltration chambers, should also be explored.

Interior levels of the garage will produce a low volume of runoff with relatively high concentrations of pollutants. In addition, the need for cleaning of the garage must be considered and floor washwater cannot be directed to a stormwater sewer system. Runoff from interior areas should be directed to the sanitary sewer system, again with appropriate treatment. An oil

separator tank with a capacity of at least 1000 gallons is required. A licensed waste oil hauler must clean the tank at least once a year. A list of certified haulers can be obtained from the Bureau of Materials Management & Compliance Assurance at (860) 424-3366. The discharge of floor washwater is covered under a *General Permit for Miscellaneous Discharges of Sewer Compatible Wastewater* as building maintenance wastewater. Registration is required for discharges greater than 5000 gallons per day. For further information concerning stormwater management, contact the Permitting & Enforcement Division at (860) 424-3018. A fact sheet describing the permit and the registration form may be downloaded at:

http://www.ct.gov/dep/cwp/view.asp?a=2709&q=324212&depNav_GID=1643#MiscellaneousGP.

In addition to typical mitigation measure to minimize impacts to air quality during construction, the Department also recommends the use of construction equipment with air pollution control devices or the use of "clean" fuels. Equipment, such as diesel oxidation catalysts or particulate filters, or the use of ultra-low sulfur fuel (15 ppm sulfur) can be effective in reducing exhaust emissions. "Clean" fuels, including compressed natural gas or emulsified fuels (e.g., Purinox, approved by the California Air Resources Board) can also be effective in reducing exhaust emissions. It would be appropriate, at this urban location, that contract specifications contain provisions of DOT's diesel vehicle emissions control language requiring certain non-road construction equipment to be retrofitted with emission control devices

The Natural Diversity Data Base, maintained by DEP, contains no records of extant populations of Federally listed endangered or threatened species or species listed by the State, pursuant to section 26-306 of the CGS, as endangered, threatened or special concern in the project area. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultation with the Natural Diversity Data Base should not be substituted for on-site surveys required for environmental assessments. The extent of investigation by competent biologist(s) of the flora and fauna found at the site would depend on the nature of the existing habitat(s). If field investigations reveal any Federal or State listed species, please contact the Environmental & Geographic Information Center at (860) 424-3540.

Development plans in urban areas that entail soil excavation should include a protocol for sampling and analysis of potentially contaminated soil. Soil with contaminant levels that exceed the applicable criteria of the Remediation Standard Regulations, that is not hazardous waste, is considered to be special waste. The disposal of special wastes, as defined in section 22a-209-1 of the RCSA, requires written authorization from the Waste Engineering and Enforcement Division prior to delivery to any solid waste disposal facility in Connecticut. If clean fill is to be segregated from waste material, there must be strict adherence to the definition of clean fill, as provided in Section 22a-209-1 of the RCSA. In addition, the regulations prohibit the disposal of more than 10 cubic yards of stumps, brush or woodchips on the site, either buried or on the surface. A fact sheet regarding disposal of special wastes and the authorization application form may be obtained at:

http://www.ct.gov/dep/cwp/view.asp?a=2709&q=324202&depNav_GID=1646.

The Waste Engineering & Enforcement Division has issued a *General Permit for Contaminated Soil and/or Sediment Management (Staging & Transfer)*. It establishes a uniform

set of environmentally protective management measures for stockpiling soils when they are generated during construction or utility installation projects where contaminated soils are typically managed (held temporarily during characterization procedures to determine a final disposition). Temporary storage of less than 1000 cubic yards of contaminated soils (which are not hazardous waste) at the excavation site does not require registration, provided that activities are conducted in accordance with the applicable conditions of the general permit. Registration is required for on-site storage of more than 1000 cubic yards for more than 45 days or transfer of more than 10 cubic yards off-site. A fact sheet describing the general permit, a copy of the general permit and registration forms are available on-line at:

http://www.ct.gov/dep/cwp/view.asp?a=2709&q=324210&depNav_GID=1643#ContSoilSedMgmtGP.

Thank you for the opportunity to review this project. If there are any questions regarding these comments, please contact me.

cc: Robert Kaliszewski, DEP/OPPD
Robert Hannon, DEO/OPPD
Kristal Kallenberg, DEP/OLSIP
Nisha Patel, DEP/PED

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH



Jewel Mullen, M.D., M.P.H., M.P.A.
Commissioner

Dannel P. Malloy
Governor
Nancy Wyman
Lt. Governor

Drinking Water Section

June 5, 2012

Mark Alexander
Transportation Assistant Planning Director
State of Connecticut
Department of Transportation
2800 Berlin Turnpike
Newington, CT 06131

Re: Notice of Scoping for the Stamford Transportation Center Parking and Transit Oriented
Development

Dear Mr. Alexander:

The Drinking Water Section of the Department of Public Health has reviewed the above-mentioned project for potential impacts to any sources of public drinking water supply. This project does not appear to be in a public water supply source water area; therefore, the Drinking Water Section has no comments at this time.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eric McPhee'.

Eric McPhee
Supervising Environmental Analyst
Drinking Water Section



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FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
<http://www.fws.gov/newengland>

January 17, 2012

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

(<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm>)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Mr. Anthony Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

APPENDIX B

List of Technical Reports

These Technical Reports are available for public review and can be requested from the Connecticut Department of Transportation:

Level of Service Analysis Technical Report

- Level of Service Criteria
- Level of Service Tables
- Queue Tables
- Capacity Analysis Worksheets

Air Quality Analysis Technical Report

- Microscale Analysis

Hazardous Materials Documentation Technical Report

- Environmental Database Report

