Route 146

CORRIDOR MANAGEMENT PLAN

MARCH 2025

PREPARED BY
Vanasse Hangen Brustlin, Inc.
100 Great Meadow Road
Wethersfield, CT

PREPARED FOR
Connecticut Department
of Transportation
Bureau of Policy and Planning

Stony Creek Road in Branford (VHB)

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Executive Summary

The Connecticut Department of Transportation (CTDOT) initiated the Route 146 Corridor Management Plan (CMP) in late 2022 to create a plan to preserve and enhance the 13-mile scenic highway corridor stretching from Route 1 in Branford to Route 1 in Guilford, Connecticut.

This CMP has been prepared by CTDOT as the next study of the Route 146 Scenic Roadway in Branford and Guilford. The previous studies include the 1996 Corridor Management Plan prepared locally and the South Central Connecticut Regional Council of Governments (SCRCOG) *2021 Route 146 Corridor Study Existing Conditions Report*.

This CMP follows the 2021 study, intended as a review of the intrinsic qualities of the corridor, analyzing flooding and projected sea level rise and development of improvement strategies. These recommended strategies strive to balance the corridor's holistic qualities with safety improvements in consideration of climate resiliency.

This CMP was developed for the Route 146 corridor to take a big picture look at the land and community the road travels through, to focus on protecting the qualities and elements—historic and environmental—that make the corridor special, and to produce a community-driven plan. In addition, the CMP for Route 146 is intended to guide the potential future changes to the corridor to make it safer for everyone who travels it, to maintain its infrastructure (roadway, lighting, etc.), and to increase its climate and sea level rise preparedness.

As a CTDOT-designated Scenic Roadway, Route 146 in Branford and Guilford has many varied intrinsic qualities, ranging from impressive coastal views from the roadway and its passage through extensive systems of salt marshes, to the way it bisects and abuts seven different historic districts and includes more than 20 historic sites along its frontage. The roadway is narrow and winding and is intertwined with the Amtrak railroad corridor, which runs through the area around Route 146, and the roadway within the study area passes under the rail corridor four times.

Finally, ledge and stone walls, mature trees and woodlands, and streams and ponds abut many segments of the roadway, creating a scenic travel experience for visitors and residents. Along with the historic districts and sites, the road also passes through the historic town greens of Branford and Guilford, linking the two coastal communities.

Plan Process

The CMP development spanned 24 months and involved several steps to gather data on the plan and build buy-in with the community. The plan development process included 9 meetings with a Corridor Working Group that was made up of

Main Goals of the CMP

- Preserve Route 146's intrinsic qualities
- Involve the community in the planning process
- Protect natural and cultural/historic resources
- Improve bicycle and pedestrian access and safety
- Increase climate and sea level rise preparedness
- Enhance roadway safety
- Maintain corridor infrastructure
- Balance resident and business needs with legal and engineering standards

state, regional, and local staff, as well as resident representatives from the two towns. This group guided the plan development and provided key feedback to shape the final plan. The process also included an update to the *SCRCOG 2021 Corridor Study Existing Conditions Report* to determine if anything major had changed since the end of that process and the beginning of the CMP process.

Public engagement was a critical element of the development of the CMP, and included the following activities:

- Regular Corridor Working Group meetings were held to review progress and documents and the Corridor Working Group took a bus tour of the corridor in May 2023
- Three public information meetings were held in Branford and Guilford, attracting robust attendance and engaging discussions
- A public input survey gathered feedback on potential CMP strategies
- Stakeholder interviews on eight themes related to Route 146 were conducted

Existing Conditions Update

The CMP updated the *SCRCOG 2021 Route 146 Corridor Study Existing Conditions Report* by analyzing safety data, crash occurrences, traffic volumes, and speed data. The report highlighted the scenic, historic, and environmental features of Route 146, including extensive views of the Long Island Sound, historic districts, and natural habitats. Roadside development and known upcoming projects were also identified, along with planning efforts that could have an impact on Route 146.

The CMP provides an overview of the updated corridor study report with the full *Existing Conditions Report* provided in **Appendix I**.

Key Intrinsic Qualities

Spanning 13 miles from Branford to Guilford, Route 146 contains many features that contributed to its designation in 1990 as a state scenic highway from the vicinity of Eades Street in Branford through its terminus in Guilford at Route 1. Key features of this corridor include:

- Coastal views
- Extensive systems of salt marshes
- Four National Register Historic Districts
- One State Register Historic District
- Two Local Historic Districts
- More than 20 historic sites
- Two traditional town greens in Branford and Guilford

One of the National Register Historic Districts is specific to the Route 146 corridor, covering part of the corridor from Stony Creek in Branford to the Guilford Town Center, and encompasses many buildings with historic architecture, two of the stone railroad underpasses, scenic views, ledge, wetlands, and other key intrinsic features. Impressive natural features, coupled with historical and cultural resources, make the Route 146 Corridor distinctive among Connecticut's roadways.

As part of the review of Route 146's intrinsic qualities, the route was divided into eight different segments—five in Branford and three in Guilford—with a deeper

Route 146 is well-known for its sweeping coastal views and marshlands interspersed with a few beaches. In their 1991 work, *A Moveable Shore: The Fate of the Connecticut Coastline*, Peter C. Patton and James M. Kent describe this segment of coastline as "having the smallest percentage of sandy beach, the smallest percentage of glacial till, and the greatest percentage of bedrock." Patton and Kent cite the Thimble Islands, visible while traveling along Route 146, as examples of this bedrock.

dive into the local intrinsic qualities. Roadway features, traffic data, land use and zoning, and flood risk were discussed for each segment.

Branford

- **Branford Town Center:** Route 146 (Main Street) from Route 1 east to South Main Street, South Montowese Street then south to the railroad overpass by the Branford River
- **Indian Neck:** Route 146 (South Montowese Street) south from the railroad overpass to Limewood Avenue
- **Coastal Rural and Residential Branford:** Route 146 along Limewood Avenue, Hotchkiss Grove Road, Elizabeth Street, Pine Orchard Road, north along Blackstone Avenue and Totoket Road then east along Stony Creek Road to its intersection with Thimble Island Road/Leetes Island Road
- **North Stony Creek:** Route 146 (Leetes Island Road) from Stony Creek Road east to Quarry Road
- **Branford/Guilford Coastal Marsh:** Route 146 (Leetes Island Road) in Branford from Quarry Road east past the railroad underpass at the town line to Moose Hill Road/Shell Beach Road in Guilford

Guilford

- **Guilford Coastal Rural and Residential:** Route 146 (Leetes Island Road) from Moose Hill Road to the railroad underpass at Sachem Head Road
- **Guilford Coast Suburban:** Route 146 (Water Street) from Sachem Head Road/Sam Hill Road to River Street in Guilford
- **Guilford Town Center:** Route 146 (Water Street/ Boston Street) from River Street east past the Guilford Green to its east intersection with Route 1

Coastal Resiliency Assessment

A major concern with protecting and enhancing the intrinsic qualities of the Route 146 corridor is the impact that climate change and sea level rise will have on existing structures, roadway access, and natural features that make up the character of the road. Increased flooding, erosion, and washouts from major storms and cumulative effects of climate change and sea level rise will threaten more properties and buildings than in the past. As part of the *SCRCOG Route 146 Corridor Study Existing Conditions Report* that was developed in 2021, coastal flood risk was evaluated across the Route 146 area. The evaluation included a review of water levels, wave, and wind speeds from published sources such as the Federal Emergency Management Agency (FEMA), the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Army Corps of Engineers (USACE). Additionally, approximate locations of future flood zones with increased flood risk near Route 146 were identified. Overall, the analysis showed that while Route 146 is already vulnerable to coastal flooding, these problems will be exacerbated by climate change and future sea level rise.

Strategic Themes

One of the major tasks of developing the CMP was to develop strategies for maintaining and enhancing the intrinsic qualities of Route 146, along with addressing the primary concerns that were investigated for the

Route 146 Existing Conditions Update and through the public outreach. These strategies are meant to provide guidance for CTDOT, SCRCOG, the Towns of Branford and Guilford, and local community members on how to approach aspects of the corridor rather than providing specific details regarding where and how engineering solutions and other actions will be performed. The strategies are listed under seven overarching areas to organize them into similar groups. These areas cover the 24 primary strategies for the CMP.

The strategies for Route 146 have been developed with the overall goal of preserving and protecting the qualities of the Route 146 Corridor in Branford and Guilford. The strategies work to address concerns along the roadway while being aware of the possible impact of potential projects to the qualities that make Route 146 a special place. Changes to the roadway should be made respecting the intrinsic qualities of the road, not at the expense of them.

CMP Strategies

- Flooding and Sea Level Rise Management
- Bicycle and Pedestrian Access and Safety
- Speed Management
- Roadside Safety
- Intersection Safety
- Maintenance Practices
- Environmental and Historic Preservation

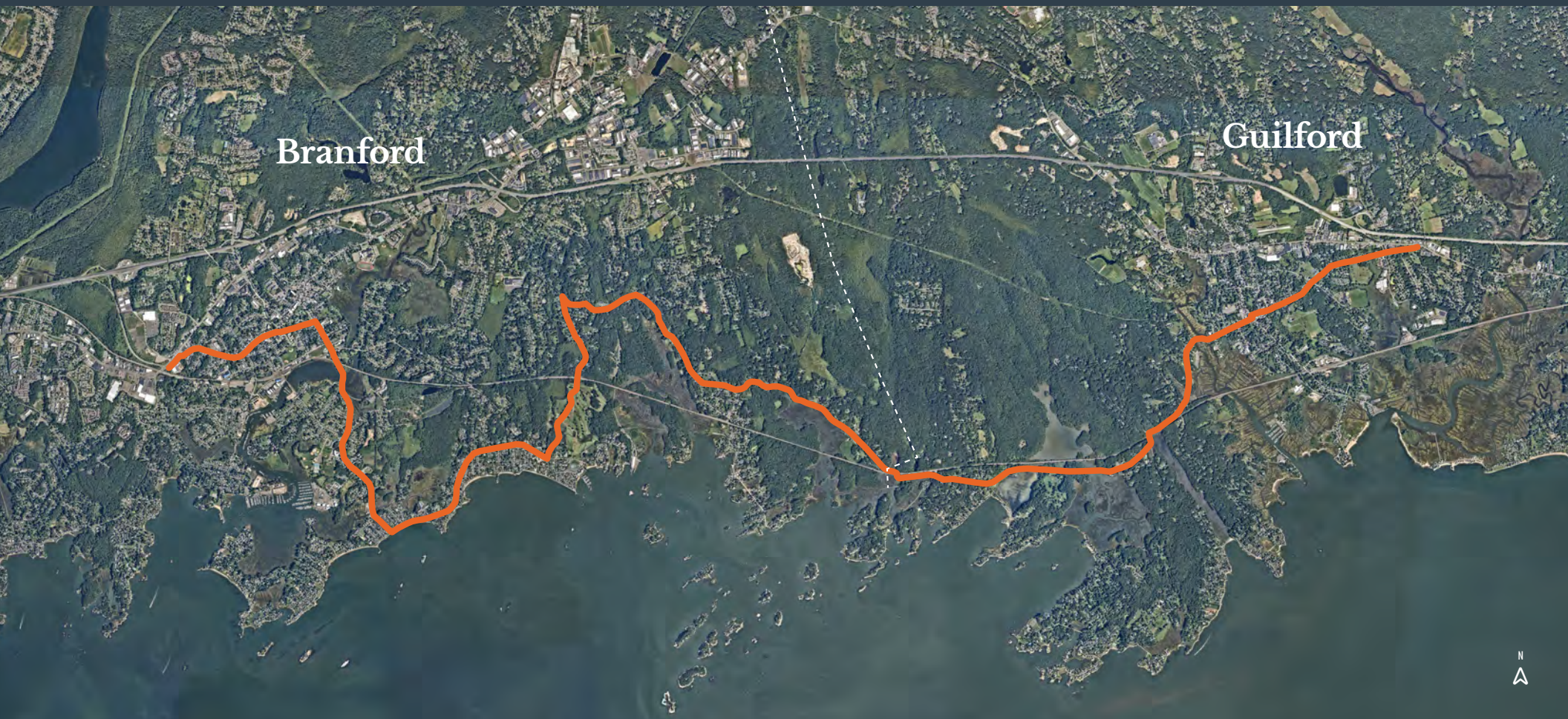
Conclusion

The Route 146 CMP outlines a comprehensive approach to preserve and enhance this scenic roadway while addressing modern safety and environmental challenges. The collaborative, community-driven process will ensure that the intrinsic qualities of Route 146 are maintained for future generations, balancing the needs of various stakeholders.

Route 146
CORRIDOR MANAGEMENT PLAN

SECTION 1

Introduction



Route 146 from Branford to Guilford (Nearmap)

Introduction

In late fall 2022, the Connecticut Department of Transportation (CTDOT) began the process to develop a new Corridor Management Plan (CMP) for Connecticut Route 146 in Branford and Guilford. Route 146 stretches 13 miles from its western intersection with Route 1 (North Main Street) in Branford to its eastern intersection with Route 1 (Boston Post Road) in Guilford. It is a scenic road connecting Branford and Guilford along the coast of the Long Island Sound. In 1990, almost all of the route was designated a State Scenic Road, the second route in the state to receive this designation. The road provides access to many environmental, cultural, and historic resources, and has an important history itself. Visitors traveling the road can see historic homes, wildlife habitats, and scenic views by walking, biking, or driving. The low-speed, winding road offers a pleasant and calming travel experience compared to Route 1 or Interstate 95.

Prior to the development of a new CMP for Route 146, the South Central Regional Council of Governments (SCRCOG) began a Corridor Study that produced an *Existing Conditions Report* in 2021. However, because there was concern from the public that a Corridor Study did not adequately address the intrinsic qualities and characteristics of the roadway, the Corridor Study did not move forward, leading to the start of the CMP process.

The purpose of creating a CMP for Route 146 is to review the existing characteristics of the corridor and develop strategies to protect and preserve its qualities and characteristics. The CMP balances caring for these important characteristics with providing a safe roadway for all travelers and respecting the desires of the community, residents, and local businesses. It also looks at ways to make the corridor more resilient—more prepared for climate risks and sea level rise.

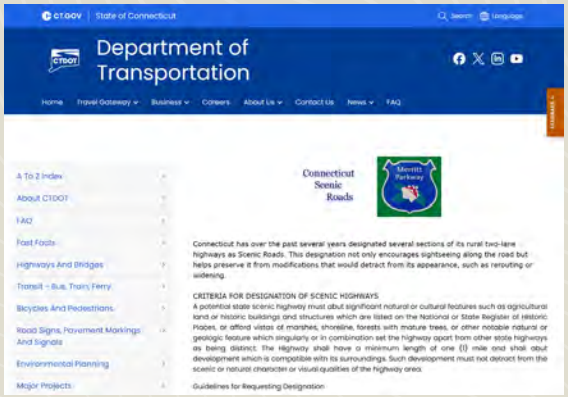
What Is a Corridor Management Plan?

A CMP is a plan that the communities along a scenic highway and the road's owner write together. The plan outlines how to protect and improve the qualities and character of that corridor. A CMP is designed so the community can update it when there are changes to the corridor that affect its intrinsic qualities. Scenic America notes that CMPs are ***"community-based and flexible 'living documents' that outline the goals, strategies, and responsibilities for preserving and promoting the byway [or highway]. CMPs typically address issues such as tourism development, historic and natural preservation, roadway safety, and economic development."*** [1]

An example of another completed CMP in Connecticut is the *Route 169 Corridor Management Plan* for the Towns of Woodstock, Pomfret, Brooklyn, Canterbury, and Lisbon in eastern Connecticut. This CMP was developed by the Northeastern Connecticut Council of Governments.[2]

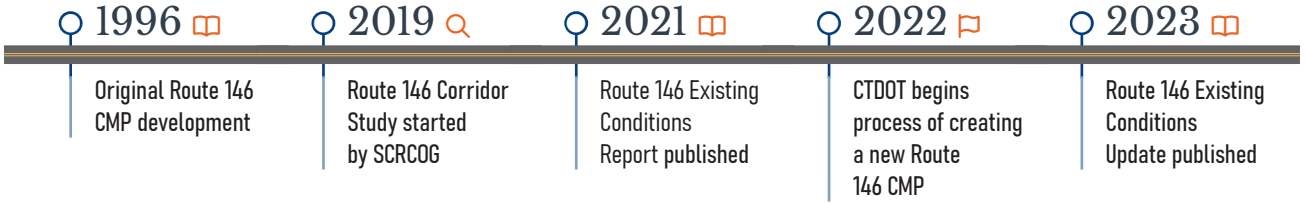
1 https://www.scenic.org/why-scenic-conservation/scenic-byways/corridor-management-plans/
2 https://neccog.org/programs-services/route-169-national-scenic-byway-management-plan-update/

Scenic America Corridor Management Plans



CTDOT Connecticut Scenic Roads

Figure 1.1 | Development Timeline



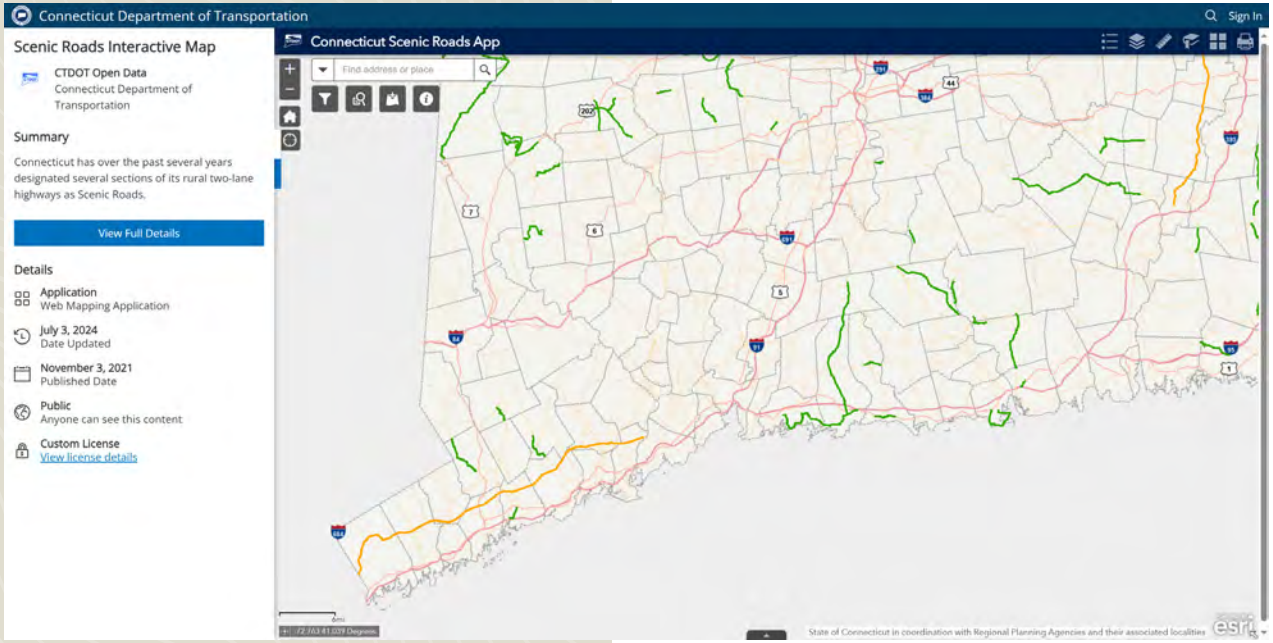
Route 169 Corridor Management Plan

Difference Between a Corridor Management Plan and a Corridor Study

It is important to understand that a CMP is not the same as a corridor study. A corridor study examines a road and the land it travels through and analyzes how safe the road is, how easy it is to access, and how well it accommodates different users. If there are problems, potential solutions are proposed which may result in a project. A CMP is less technical, takes a bigger picture look at the land and community the road travels through, and is community driven. A CMP also focuses more on protecting the intrinsic qualities and elements—historic and environmental—that make the corridor special. The CMP for Route 146 is intended to guide future changes to the corridor to make it safer for everyone who travels it, to maintain its infrastructure (road, lights, etc.), and to better prepare it for climate change and sea level rise.

Why Is a Corridor Management Plan Needed for Route 146?

Recognizing the public's concern for the special qualities of the roadway, a Corridor Study for Route 146 was started by SCRCOG in 2019, and an *Existing Conditions Report* was created in early 2021. During the beginning of the Corridor Study, residents asked for a more comprehensive review of the corridor because of its many historical, cultural, and environmental resources. It was also pointed out that a previous CMP for Route 146 was developed in 1996. The 1996 CMP had a vision to preserve and protect the key intrinsic qualities of Route 146, and these goals remain priorities of the communities today. Because of these comments, SCRCOG and state officials agreed that developing a new CMP was a better way to look at how to protect and enhance Route 146's qualities and character, engage broadly with the public, and also address safety along the roadway.



CTDOT Connecticut Scenic Roads App

describe the process through which roadways can be designated as Scenic Roads, and what qualifies them to be such, and provide the process by which certain changes to these roads must be reviewed before they can be approved. In particular, Section 13b-31e-3 describes ***"Special improvement and maintenance standards for scenic roads,"*** including minimizing widening of the right-of-way or traveled portion of the road; changes of road grade; straightening or removal of stone walls; removal of mature trees; and other key provisions to preserving the character and critical features of scenic roadways. As a State Scenic Road, Route 146 falls under the standards described in the state regulations above to assist in maintaining the characteristics of these roadways to the greatest extent possible.

State Scenic Highways in Connecticut

Almost all of Route 146 was designated a State Scenic Highway in 1990. Highways with this designation must ***"abut significant natural or cultural features such as agricultural land or historic buildings and structures which are listed on the National or State Register of Historic Places, or afford vistas of marshes, shoreline, forests with mature trees, or other notable natural or geologic feature which singularly or in combination set the highway apart from other state highways as being distinct."*** [3] Scenic Highways in Connecticut are afforded certain protections and additional reviews because of their designation. **Sections 13b-31c-1 through 13b-31c-5 and 13b-31e-1 through 13b-31e-4** of the Regulations of Connecticut State Agencies

3 Connecticut Scenic Roads website: https://portal.ct.gov/dot/programs/connecticut-scenic-roads

National Scenic Byways Example Sign (MUTCD, 11th Edition, December 2023)

National Scenic Byways

Byway Plan Framework

Route 146 is a state scenic highway, but is not designated as a National Scenic Byway. However, the overall framework and content for the Route 146 CMP is based on guidance from the National Scenic Byways Program which suggests the following 14 elements should be included in a CMP:

- A map identifying the corridor boundaries and the location of intrinsic qualities and different land uses within the corridor
- An assessment of such intrinsic qualities and their context
- A strategy for maintaining and enhancing those intrinsic qualities
- A schedule and listing of responsibilities for implementation the CMP
- A strategy describing how existing development might be enhanced and new development might be accommodated while still preserving the intrinsic qualities of the corridor
- A plan to ensure ongoing public participation in the implementation of the CMP
- A general review of the road's safety record
- A plan to accommodate commerce while maintaining a safe and efficient level of highway service
- A demonstration that intrusions on the visitor experience have been minimized to the extent feasible
- A demonstration of compliance with all existing local, state, and federal laws on the control of outdoor advertising
- A signage plan
- A narrative explaining how the National Scenic Byway will be positioned for marketing
- A discussion of design standards relating to any proposed modification to the roadway
- A description of plans to interpret the significant resources of the scenic byway

Route 146 Intrinsic Qualities Summary

The intrinsic qualities of Route 146 in Branford and Guilford are varied, ranging from impressive coastal views from the roadway and its passage through extensive systems of salt marshes, to the way it passes through seven different historic districts and includes more than 20 historic sites along its frontage.

Overall, the roadway is narrow and winding C with causeways over watercourses. The path of the roadway is intertwined with the Amtrak railroad corridor, which slices directly through the area around Route 146, and the roadway passes under the rail corridor A four times. At two other locations the road crosses railroad spurs in Branford at grade. By themselves, the railroad underpasses are key historic features along the roadway, as stone bridges more than 150 years old.

Ledge and stone walls B D run alongside segments of the roadway, evidence of the rocky coastline and period of agrarian life in the early days of the roadway. Mature trees and woodlands, streams, ponds, tidal waterbodies, and broad expanses of meadows and marshes create a scenic travel experience for visitors and residents. Along with the historic districts and sites, the road also passes through the historic town greens of Branford and Guilford, linking the two coastal communities.

A Railroad underpass at town line
B Leetes Island Road, Guilford
C Stony Creek Road, Branford
D Blackstone Avenue, Branford

Blackstone Avenue, Branford, July 2024 (VHB)

Goals of the Route 146 CMP

The Route 146 CMP was developed to address nine main goal areas important to the corridor and to follow a community-driven, transparent process. These goals were written to address the National Scenic Byway criteria (***See "Byway Plan Framework" on page 9***), tailored to the specific conditions of the Route 146 corridor and the community needs. As a result, the goals of the Route 146 CMP do not specifically address some of the suggested Byway criteria around outdoor advertising, marketing, and interpretation. It should be emphasized that meeting these goals is not solely the responsibility of CTDOT but must be done in collaboration with other state agencies, the Towns of Branford and Guilford, and the community as a whole.

The goals are included below along with brief descriptions:

GOALS OF THE CMP

Preserve Route 146's Intrinsic Qualities

Find ways to make future changes on Route 146 that protect and enhance the intrinsic qualities of the road and the community and also improve traffic safety, resilience (protection against weather hazards), and road maintenance.

GOALS OF THE CMP

Involve the Community

Improve communication at local, regional, and state levels through public outreach and public meetings to gather feedback on the needs and desires of the public and the communities the corridor passes through.

GOALS OF THE CMP

Protect Natural and Cultural Resources

Identify key environmental, cultural, and historic resources along the corridor, including vistas and viewsheds. Expand on these resources from the *SCRCOG 2021 Route 146 Existing Conditions Report* and any other key documents.

GOALS OF THE CMP

Improve Bike and Pedestrian Access

Develop strategies for giving bicyclists and pedestrians better access to the corridor.

Boston Street, Guilford, July 2024 (VHB)

GOALS OF THE CMP

Increase Climate and Sea Level Rise Preparedness

Identify and recommend improvements to areas of the corridor that frequently flood and areas that could be affected by rising sea levels to provide a resilient roadway for future generations.

GOALS OF THE CMP

Enhance Roadway Safety

Identify and address safety concerns through the corridor to improve public safety for all travelers.

GOALS OF THE CMP

Maintain Infrastructure

Make repairs to the corridor's infrastructure (road, lights, etc.) to provide a safe and climate-resilient corridor.

GOALS OF THE CMP

Establish Working Group

A Corridor Working Group, which included staff from CTDOT, representatives from Branford and Guilford, and other stakeholders, was created to act as a steering committee for the plan. The Corridor Working Group attended a series of meetings to guide the plan development, which is described in the following sections.

GOALS OF THE CMP

Balance Needs and Requirements

Balance needs and desires of residents and local businesses with legal requirements and engineering design standards.

Planning Process

The Route 146 CMP development began in late 2022 and continued approximately for 24 months to the end of 2024. Over the course of this time period, an *Existing Conditions Report* document was produced that updated information from 2021. Staff from CTDOT and VHB (the CMP consultant) made up the Planning Team and oversaw the process to develop the CMP. A Corridor Working Group was formed to provide guidance and direction on the development of the plan. The Planning Team conducted extensive outreach with stakeholders and members of the public, which led to the development of a range of collaborative strategies and action steps.

Corridor Working Group Members

- **Josh Lecar:** CTDOT, Transportation Planner 2, Statewide Planning
- **Rajat Mathur:** CTDOT, District 3 Traffic Engineer
- **Michael Calabrese:** CTDOT, Division Chief, Highway Design, Bureau of Engineering and Construction
- **John Hoefferle:** Town of Branford, Town Engineer
- **Harry Smith:** Town of Branford, Town Planner
- **Barbara Ricozzi:** Branford Resident
- **David Rood:** Branford Historical Society
- **Janice Plaziak:** Town of Guilford, Town Engineer
- **Anne Hartjen:** Town of Guilford, Town Planner
- **Bob Yaro:** Guilford Resident
- **Karyl Lee Hall:** Route 146 and Route 77 Scenic Roads Advisory Committee
- **Bill Sigmund:** Connecticut Department of Energy and Environmental Protection, Supervisor, Land and Water Resources Division
- **Catherine Labadia:** Connecticut State Historic Preservation Office, Deputy State Historic Preservation Officer and Staff Archaeologist
- **Laura Francis:** South Central Regional Council of Governments, Interim Executive Director
- **Sandy Fry:** Connecticut Bicycle and Pedestrian Advisory Board

Corridor Working Group

The Route 146 CMP Corridor Working Group (CWG) included staff from the Towns of Branford and Guilford, local community members, staff from CTDOT, and other key stakeholders. The CWG met nine times during the plan development and guided the creation of the CMP. This group was instrumental in focusing the final CMP on historic and environmental preservation, traffic safety, locally important landscapes, and community concerns.

Public Engagement

An important part of creating the CMP was local community involvement. While the plan was being created, there were many opportunities for members of the community to share their ideas about the process and final plan. The CWG provided a key opportunity for public engagement as several members were town residents and representatives from local organizations and committees.

Additional general public involvement occurred via three public information meetings, one public input survey, and interviews and focus groups with key stakeholders. Elected officials of both towns also attended the public information meetings. The CWG also participated in a bus/walking tour of several major areas of concern along the corridor. More information on the public engagement efforts conducted can be found on the following pages.

Friends of Route 146 Information Meeting

March 30, 2023, Guilford Community Center

The Friends of Route 146 are a group of community members who advocate for the preservation of Route 146. A brief presentation about the plan going over the goals, schedule, and planned public engagement was given to this group. Members of the Friends of Route 146 provided comments to CTDOT and consultant staff for consideration as the CMP developed. Comments included notes about roadway maintenance, intersection safety, protection of historic and cultural resources as an integral part of the plan, data collection, environmental protection, flooding, and bicycle and pedestrian safety.

Public Information Meeting #1

April 25, 2023, Branford Fire Headquarters

The purpose of this meeting was to provide the community an opportunity to learn about the Route 146 CMP, present the existing conditions, and allow the public to share their views and comments concerning the plan. About 50 people attended this meeting, including the First Selectmen from both Branford and Guilford. After the presentation, questions and comments included concerns primarily about traffic safety and flooding issues along the road. Bicycle and pedestrian safety, as well as speeding and truck traffic, were strong concerns shared by the public.

Railroad underpass at South Montowese Street in Branford (VHB)

Route 146 Bus Tour

May 8, 2023

The CWG took a tour of Route 146 to review specific locations with concern for safety, climate change and sea level rise resiliency, access for pedestrians and bicyclists, and other features. A minibus was commissioned from the Greater New Haven Transit District to provide travel for the CWG members.

Bridge over the West River at Water Street in Guilford (VHB)

Stopping locations included:

- **Branford:** The railroad underpass at South Montowese Street
- **Branford:** The intersection of Leetes Island Road and Stony Creek Road/Thimble Island Road
- **Guilford:** Leetes Island Road at Moose Hill Road
- **Guilford:** Water Street at the bridge over the West River

Public Information Meeting #2

November 14, 2023, Guilford Community Center

The main goal of this meeting was to share with the community the potential strategies to be included in the Route 146 CMP. Around 100 people attended this meeting in the Guilford Community Center, which was also recorded by Guilford Community Television.

The meeting included an overview presentation of the plan and a detailed description of the potential strategies for the Route 146 CMP. The strategies are intended to address corridor issues, including roadside safety, climate change and sea level rise preparedness, bicycle and pedestrian mobility, and speed management, while preserving the historical and environmental qualities of the corridor. Almost 30 people provided questions and comments at the end of the presentation, with most of them identifying the following as the most prevalent concerns for the Route 146 Corridor:

- Speeding
- Bicycle and pedestrian safety
- Flooding and climate change
- Truck traffic
- Impact to historical character

Pedestrians on Boston Street in Guilford Center (VHB)

Public Input Survey—Draft Strategies

A public input survey was released in mid-December 2023 and stayed open until mid-February 2024 to collect feedback on the potential CMP strategies that were also presented at the November 14, 2023, public meeting. The survey was organized around each of the strategy areas, and people responding could comment on any of the strategy areas or strategies listed. There was a weblink in the survey to a document on the CMP website for people to read about the strategies in more detail. Respondents were also given the opportunity to suggest strategies not already identified for consideration.

- 228 total people responded to the survey
- 825 total comments were provided (because respondents could respond to each individual strategy theme area in short answer format)

Overall, there was support for the strategies and a desire to do something about the issues of the corridor sooner rather than later.

Public Information Meeting #3

April 23, 2024, Branford Fire Headquarters

The final public meeting discussed the final strategies to be included in the Route 146 CMP and provided information on the format and style of the draft plan document. About 60 people attended the meeting. The presentation for the meeting also reviewed the public survey responses and how those responses shaped some changes to the final strategies. There were about 23 comments at the end of the meeting, which focused on many of the same themes from the previous two public meetings:

- Bicycle and pedestrian safety
- Speeding
- Historic aspects of Route 146 and potential impacts

There was also a discussion of the need to engage with the local land trusts when it comes to limiting development in the corridor, improving the scenic qualities of the road, and protecting sensitive environmental features along the road.

Stakeholder Interviews

Interviews were conducted with Route 146 stakeholders around eight different themes pertaining to aspects of Route 146 that needed additional information. These themes were identified based on discussions with the CWG members, public comments from the first public information meeting, and the corridor bus tour with the CWG. These themes were:

- Active Transportation
- Economic Development
- Emergency Management
- Environmental—Landscapes
- Environmental Justice
- Historic and Cultural Resources
- Transportation Safety
- Water—Flooding

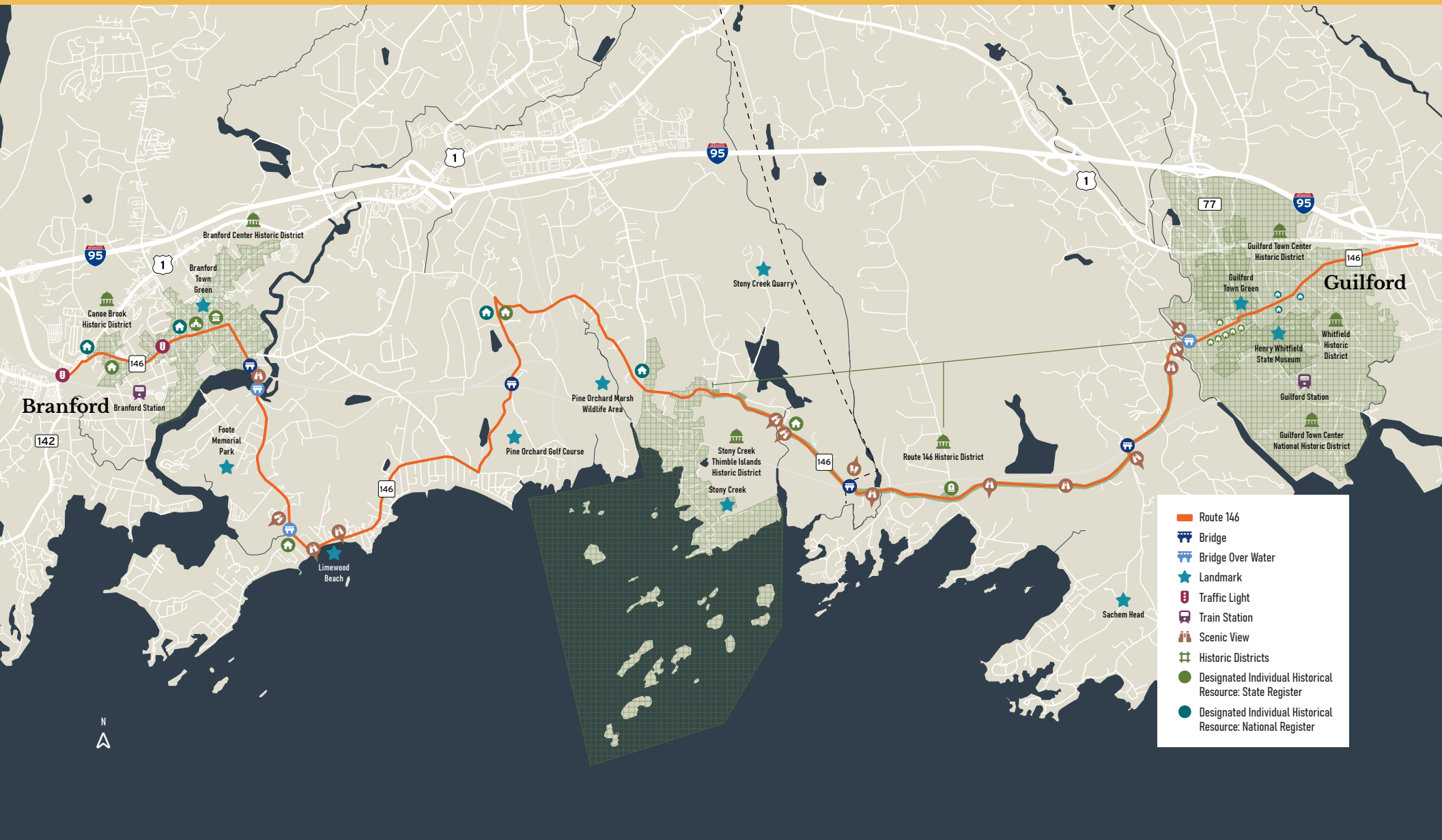
The Planning Team identified individuals and organizations as potential key stakeholders to be interviewed for the CMP. These included people

and organizations that would have critical insight or information about a particular subject due to their status working within that particular subject area or with a specific stakeholder group. For example, the Planning Team identified the police departments of Branford and Guilford as important stakeholders in Transportation Safety since this is a key part of their responsibilities in their respective towns. Community Land Trusts, town committees, local advocacy groups, and town staff with expertise in specific issue areas were included as key stakeholders.

After the Planning Team identified possible candidates for stakeholder interviews, the list was shared with the CWG to confirm that stakeholders with varying viewpoints and expertise were being interviewed and the correct issues were being discussed. After that, the Planning Team reached out to the individuals to set up meetings of 30–60 minutes to discuss various issues identified by the CWG and from the *Route 146 Existing Conditions Update*. The stakeholder interviews were held virtually over the summer of 2023.

Along with the stakeholder meetings, an additional meeting was also held with the Friends of Route 146, an advocacy group concerned with preserving the roadway's intrinsic historical, scenic, recreational, and residential character and ensuring continued public enjoyment of Route 146. Comments and discussion from these meetings helped to inform the draft strategies for the CMP. Detailed notes of each of the interviews can be found in **Appendix II**.

Route 146
CORRIDOR MANAGEMENT PLAN



Route 146
CORRIDOR MANAGEMENT PLAN

SECTION 2

Route 146 Existing Conditions Update

Limewood Avenue seawall and sidewalk (VHB)

Leetes Island Road at Medlyn Farms, Branford (VHB)

Route 146 Existing Conditions Update

As part of the development of the Route 146 CMP, the Planning Team updated the *Existing Conditions Report* document that had been produced for the 2021 Corridor Study that was the precursor to the CMP.

Many aspects of the original *Existing Conditions Report* were updated, including the crash data, traffic volume and speed data, field data, roadside development data, and historic resource information. In some cases, new data was collected, such as for vehicle volumes, speeds, and classification. Information on inland/coastal wetlands and flood risk, as well as land use information, did not need to be updated.

The full Route 146 Existing Conditions Update can be found in Appendix I of the Route 146 CMP. Provided here is a summary of findings and key takeaways from the larger document.

Road Work and Roadside Development Update

Roadway changes and new development since 2021 were identified in both Branford and Guilford as part of the *Route 146 Existing Conditions Update*. This included major roadway projects and smaller-scale infrastructure improvements as well as local land development. The more prominent roadway projects in Branford included the completion of the Limewood Avenue seawall and sidewalk, which involved the replacement of the existing wall, roadway reconstruction, drainage improvements, and pedestrian safety improvements. The Sybil Creek Bridge, which carries Route 146 over the Sybil Creek in Branford, was fully replaced (recently completed in 2024), with improvements to the tide gate at this location as well as new sidewalks on both sides of the bridge, a crosswalk at the southern end of the project limits, and the realignment of Linden Avenue to improve its approach to Route 146. A major affordable housing redevelopment of the Branford Housing Authority Project at Parkside Village was underway at the time of the *Existing Conditions Update* and has been almost fully completed as of early 2025. New sidewalks were installed near Route 146 on Route 1 and recent single-family housing developments along the road in Branford are also reviewed in the *Update*.

In Guilford, the primary changes or developments included new sidewalks on Boston Street/Route 146 near Lovers Lane and repaving on Route 146 through Guilford Center.

Recent Planning Efforts and Proposed Projects

Along with the roadside developments identified on Route 146 since 2021, other planning efforts and proposed projects were identified that activated the community and brought greater focus onto various challenges for Route 146. In 2022, a Road Safety Audit (RSA) was conducted on Route 146 in Branford between the Branford River and Limewood Avenue which recommended new infrastructure for better

Sybil Creek Bridge near Linden Avenue, July 2024 (VHB)

bicycle and pedestrian access. Guilford published a Safe Streets Report in 2022 which similarly recommended infrastructure improvements to create space for people biking and walking within the Town, including on Route 146. CTDOT began a design process to replace Bridge #02677 in Guilford, locally known as the "Crabbing Area," which is immediately west of 229 Leetes Island Road in Guilford. After concerns were raised from the community about the replacement of the structure, CTDOT paused the design process to allow the CMP to be developed and provide additional guidance to the project analysis and a redesign process. Finally, a proposal was put forward for a subdivision in Guilford along Leetes Island Road near the "Crabbing Area" which raised community concerns about the impact of the development to the intrinsic qualities of Route 146. The proposal has since been withdrawn.

Safety Data and Crash Analysis

The original *Existing Conditions Report* reviewed crash data from 2017–2019, the most recent three-year period available at the time. The *Existing Conditions Update* looked at 2020–2022 data and compared the data between the two time periods. In general, there was not a substantial difference in crashes between the two time periods, despite the COVID-19 pandemic around 2020–2022. Major crash locations were the intersections of Route 146 at Route 1 in Branford and Guilford, and Route 146 at Soundview Road and Goose Lane in Guilford, on the very eastern end of the corridor. In general, there were no other intersections along the Route that showed a clear crash pattern, based on the recorded crash data. However, several

Table 2.1 | Overall Route 146 Collision Types

Type of Collision	2017	2018	2019	Total Collisions	Percent	2020	2021	2022	Total Collisions	Percent
Rear End	22	17	13	52	24.90%	17	9	13	39	20.90%
Angle	18	18	17	53	25.40%	15	15	20	50	26.70%
Fixed Object	8	5	10	23	11.10%	13	15	7	35	18.70%
Sideswipe	8	5	8	21	10.00%	8	10	11	29	15.50%
Animal	2	4	3	9	4.30%	3	2	0	5	2.70%
Bicycle	1	3	1	5	2.40%	2	1	1	4	2.10%
Pedestrian	1	1	1	3	1.40%	1	1	0	2	1.10%
Other	17	15	11	43	20.50%	10	6	7	23	12.30%
Total	77	68	64	209	100%	69	59	59	187	100%

Source: UConn Connecticut Crash Data Repository

Table 2.2 | Overall Route 146 Collision Severity

Type of Collision	2017	2018	2019	Total Collisions	Percent	2020	2021	2022	Total Collisions	Percent
Property Damage Only	56	56	55	167	79.9%	55	47	46	148	79.2%
Injury	20	12	9	41	19.6%	14	12	11	37	20.3%
Fatal	1	0	0	1	0.5%	0	0	1	1	0.5%
Total	77	68	64	209	100%	69	59	58	186	100%

Source: UConn Connecticut Crash Data Repository

Table 2.3 | 2023 Existing Weekday Average Daily Traffic Volume Summary

Location	Year	Weekday Average Daily Traffic (ADT)
Route 146, south of Sybil Creek Place	2023	4,799
	2019	9,400
Route 146, east of Pine Tree Drive	2023	1,523
	2019	2,800
Route 146, east of School Street	2023	2,202
Route 146, east of Moose Hill Road	2023	1,810
	2019	3,200
Route 146, near Pearl Street	2023	5,965
	2019	6,300

Source: 2019 ATR counts conducted in July and 2023 counts conducted in February.

Route 146 Traffic Volumes

9,400
Highest Traffic Volume

2,000–5,000
Average Traffic Volume

1,500
Lowest Traffic Volume

intersections were identified during the public outreach over the course of the plan development where people were concerned about crash risk due to limited sightlines, high-speed traffic, lack of bicycle or pedestrian countermeasures, and other observed factors. These intersections include:

Branford

- Route 146: Main Street at Cedar Street
- Route 146: Montowese Street at Meadow Street
- Route 146: Stony Creek Road at Leetes Island Road/Thimble Island Road
- Route 146: Leetes Island Road at Flat Rock Road Extension

Guilford

- Route 146: Leetes Island Road at Moose Hill Road
- Route 146: Water Street at Sam Hill Road
- Route 146: Water Street at Whitfield Street

It should also be noted that at the beginning of the process to develop the Route 146 CMP in November 2022, there was a bicycle crash on Route 146 in Guilford near 444 Leetes Island Road where the bicyclist was seriously injured. During the public outreach for the CMP, bicycle and pedestrian safety and access were frequently brought up as deficiencies of the corridor and this crash was referenced to highlight the public's concern.

Traffic Volumes and Speeds

As part of the *Existing Conditions Update*, additional traffic data was collected in February 2023 and compared with the data collected in the original *Existing Conditions Report*. It was noted that the counts for the *Update* were taken during the winter, while the counts for the original *Existing Conditions Report* were taken during the summer (July 2019), so there were clear differences in the count data, with the 2023 counts being substantially lower in many places by comparison. To account for this, two additional traffic counts were conducted in August 2023 to capture summertime traffic more comparable to the 2019 counts. Two new locations were also counted in response to concerns raised about speeding in certain locations in Branford and Guilford where counts were not collected previously.

Traffic volumes showed substantial seasonal variations, with much higher volumes during the summer than other times of the year. These variations are primarily due to the seasonal nature of many of the residences and commercial areas in Branford and Guilford, with beachgoers at vacation rentals and owners of second homes attracted to the shore during the summer months. In general, however, traffic volumes were not especially high along Route 146, with no location having more than 10,000 vehicles per day recorded. Volumes were as low as 1,500 vehicles per day near Pine Tree Drive in Branford, well away from the denser town center areas. Most volumes were in the 2,000–5,000 vehicle range for the years where traffic counts were collected (2019, 2020, and 2023). The highest traffic areas were around the town centers of Branford and Guilford. This is reflective of Route 146 being less traveled, used more by local residents and those seeking a scenic drive, especially with Route 1 and I-95 being faster and more direct east-west alternatives.

Water Street Bridge over the West River, July 2024 (VHB)

Drivers speeding came up frequently during the public comment, in the stakeholder interviews, and with the CWG. The local police departments of Branford and Guilford noted areas where they had received speeding complaints and often do traffic speed enforcement. Locations with excessive speeding—85th percentile speeds of drivers going at least 10 miles per hour or more over the speed limit—were found South of Sybil Creek Place and east of Pine Tree Drive, both in Branford. The speeding south of Sybil Creek Place was identified as a concern by the public due to the presence of pedestrians around the restaurants and entertainment area of Indian Neck, which lacks a complete pedestrian network. Route 146 east of Pine Tree Drive in Branford has sharp curves, poor sightlines, and narrow paved shoulders which increase the crash risk of speeding. Excessive speeding was also found at the new locations where data was collected, 710 Leetes Island Road in Branford and 444 Leetes Island Road in Guilford, which confirmed the data and observations of the two police departments. These second two locations with excessive speeding were in places with lower densities, straight roadways with limited obstructions, and low turning traffic. See **Figures 2.1 and 2.2** for maps of the locations of speed data collected and where excessive speeding was recorded.

Land Use, Historic Resources, Flood Risk, Scenic Byways Program

The *Existing Conditions Update* looked at other non-transportation elements of Route 146 and whether they needed to be updated from the original *Existing Conditions Report*. In terms of land use, Guilford was in the process of updating its zoning and subdivision regulations.

For Historic Resources, an updated map was created after consulting with historic resource professionals and the State Historic Preservation Office. This map is included in the following section, which discusses the intrinsic qualities of the Route 146 corridor.

The *Existing Conditions Report* evaluated flood risk across the plan area and the impacts of potential sea level rise by 2050. As part of the *Existing Conditions Update*, the Planning Team asked for information from the Towns of Branford and Guilford and reviewed mapping to determine if Federal Emergency Management Agency (FEMA) or wetlands mapping had changed and the analysis needed to be updated. The review showed that no new mapping of this data was available that would require changes to the initial analysis. However, it should be noted that in 2023 CTDOT completed repairs and upgrades to the seawall along Limewood Avenue in Branford to improve resilience to climate change in this area.

No changes have been made to the Connecticut Scenic Roads program. Funding was appropriated in 2021 and 2022 for the National Scenic Byways Program (NSBP) and roadways that are state scenic roads were eligible for this funding as well. Additional funding has been allocated to the NSBP and a Notice of Funding Opportunity for 2024 was recently announced, with grant applications due on December 16, 2024. Eligible Byways are National Scenic Byways, All-American Roads, state scenic byways, and Indian tribe scenic byways. Eligible types of projects include Corridor Management Plans, highway safety improvements, construction of byway facilities, access to recreation, resource protection, tourist and interpretive information, and marketing programs.

Figure 2.1

Route 146 Vehicle Speeds

Branford

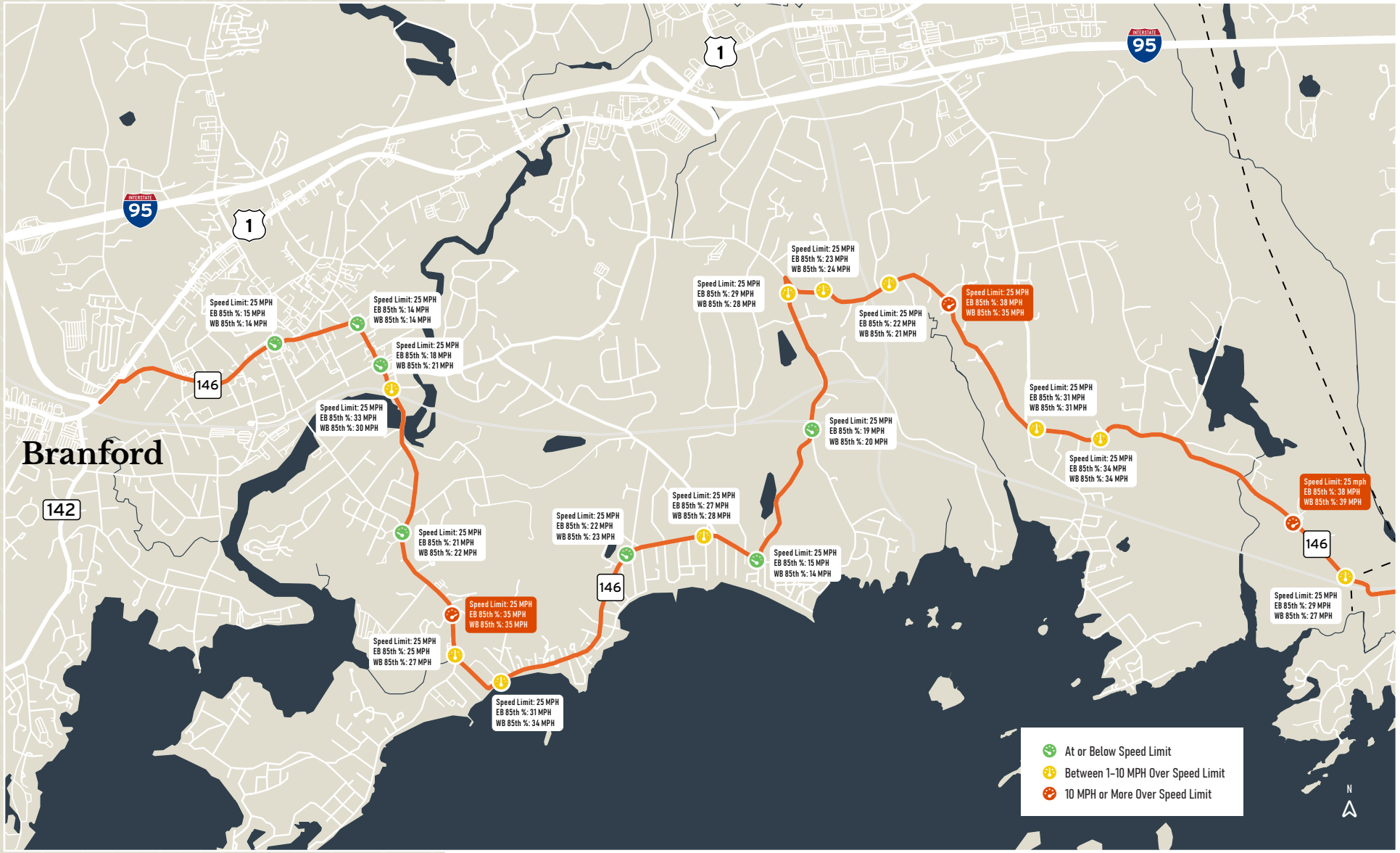
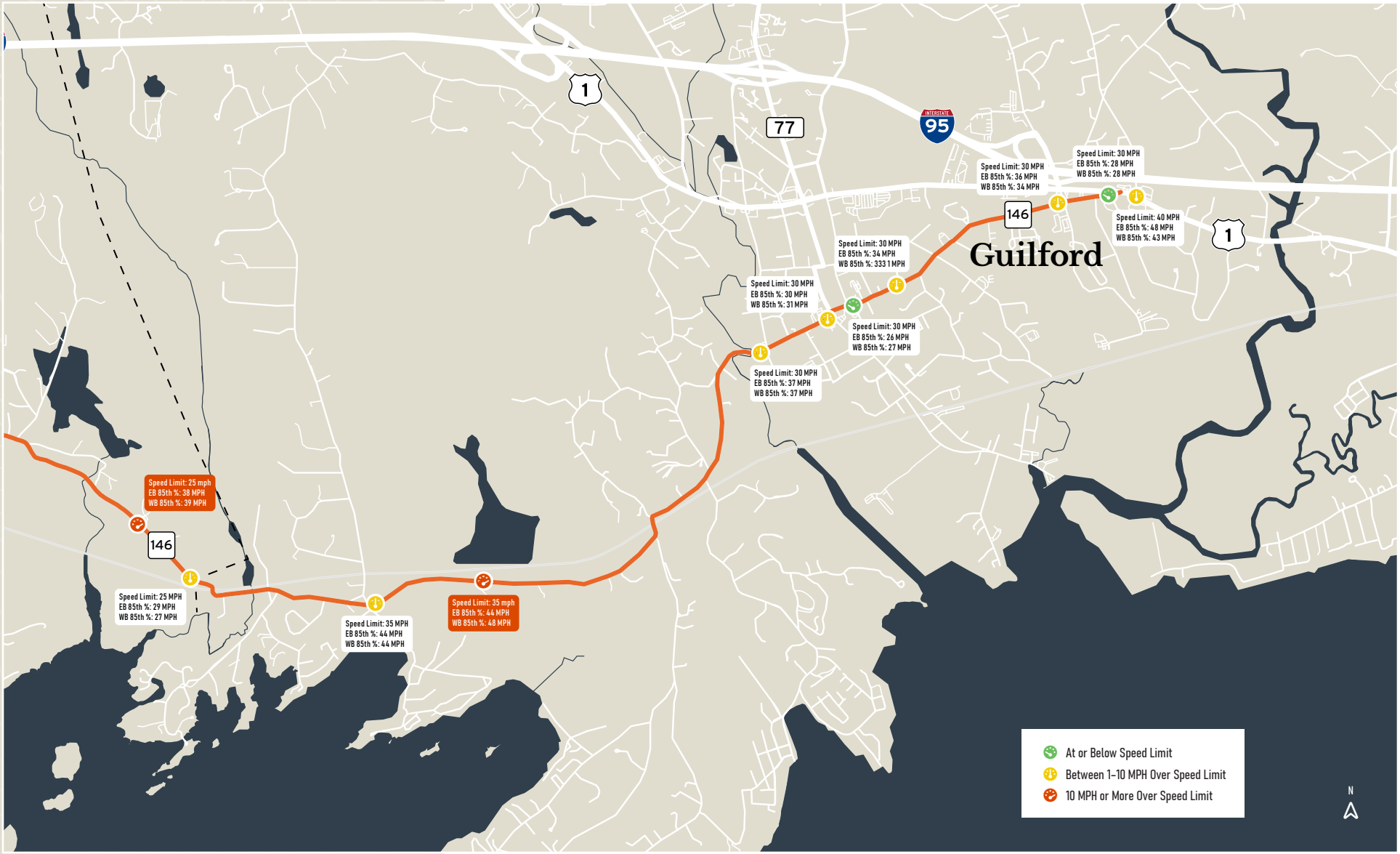


Figure 2.2

Route 146 Vehicle Speeds

Guilford



Route 146
CORRIDOR MANAGEMENT PLAN

SECTION 3

Intrinsic Qualities of the Route 146 Corridor

Leetes Island Road over Jarvis Creek in Branford (VHB)

Intrinsic Qualities of the Route 146 Corridor

Spanning 13 miles from Branford to Guilford, Route 146 contains many features that contributed to its designation in 1990 as a state scenic highway from the vicinity of Eades Street in Branford through its terminus in Guilford at Route 1.

Key features of this corridor include coastal views, extensive systems of salt marshes, four National Register Historic Districts, one State Register Historic District, two Local Historic Districts, more than 20 historic sites, and two traditional town greens in Branford and Guilford.

One of the National Register Historic Districts, discussed in more detail below, is specific to the Route 146 corridor, covering part of the corridor from Stony Creek in Branford to the Guilford Town Center, and encompasses many buildings with historic architecture, two of the stone railroad underpasses, scenic views, ledge, wetlands, and other key intrinsic features. Impressive natural features, coupled with rich historical and cultural resources, make the Route 146 corridor distinctive among Connecticut's roadways.

The following sections provide an overview of the Route 146 corridor in Branford and Guilford. The corridor study area is then broken up into critical sections to describe more specific details of key intrinsic qualities along the corridor.

Roadway Characteristics and Local Context

Route 146 is a predominantly rural, low-speed, winding roadway that provides a scenic alternative to U.S. Route 1 and connects the two historic greens of Branford and Guilford at either end. These two town centers are classified by denser residential, commercial, and retail development that developed during the colonial era and are prime examples of New England coastal towns centered around a main town green. The roads that make up the alignment for Route 146 were constructed well before the modern era and reflect a coastal development pattern that evolved over the eighteenth and nineteenth centuries.

The roadway itself is a single lane in each direction for almost its entire length and varies in width from 47 feet to as narrow as 23.5 feet at the railroad overpasses. It is made up of several connected roadways that at one time were either primarily town roads or were parts of other state routes. Paved shoulders are often narrow, with roadway causeways through tidal wetlands. Some sections of the roadway have older wood post guiderail that have not been updated to current standards and other sections have older stone walls running

Thimble Islands (Adobe Stock)

Shore Line Railroad (Library of Congress, Geography and Map Division)

along the roadside. Remnants of nineteenth-century railbeds and trestle pilings from the 1852 Shore Line Railroad are still clearly visible in the salt marshes toward the western end of the route. Collectively, these characteristics embody an early New England coastal highway corridor that developed over time.

Natural Features

Route 146 is known for its sweeping coastal views and marshlands interspersed with a few beaches. In their 1991 work, *A Moveable Shore: The Fate of the Connecticut Coastline*, Peter C. Patton and James M. Kent describe this segment of coastline as ***"having the smallest percentage of sandy beach, the smallest percentage of glacial till, and the greatest percentage of bedrock."*** Patton and Kent cite the Thimble Islands, visible while traveling along Route 146, as examples of this bedrock.

Additional major natural resources in the corridor include several streams, small ponds, several large tidal inlets, various large and small rock outcrops, and broad expanses of meadows and marshes. In addition to these coastal features, the corridor also includes several substantial, dense tracts of mature woodlands.

Historic and Cultural Features

The Route 146 corridor is also home to many historical and cultural resources such as historic sites, colonial architecture, and cultural institutions important to Branford and Guilford. Multiple locations in communities along the corridor have national, state, and/or local historic designations, and the route runs through or along the following historic districts in Branford and Guilford:

Branford

- Route 146 National Historic District
- Canoe Brook National Historic District
- Branford Center State Historic District
- Stony Creek-Thimble Islands National Historic District

Guilford

- Route 146 National Historic District
- Guilford Town Center National Historic District
- Guilford Town Center Local Historic District
- Whitfield Local Historic District

Figure 3.1 on the following page identifies the locations of these historic districts along the corridor.

The Route 146 Historic District is roughly bounded by Flat Rock Road in Branford to the west and the West River Bridge in Guilford to the east, and includes all the intervening right-of-way of Route 146 between these points for a total of approximately 169 acres over various types of undulating terrain ranging from about 10 to 50 feet in elevation. This section of Route 146 is comprised of portions of Leetes Island Road, Sachems Head Road, and Water Street, along with the fork at the southern end of Moose Hill Road. This Historic District is located outside the Branford and Guilford Town Center Districts and encompasses more rural areas directly along the coast.

A total of 84 buildings adjacent to Route 146 are within the bounds of the Historic District, with many architectural styles represented by contributing

Figure 3.1 | Historic Districts and Resources

The Route 146 Historic District contains several distinctive examples of late eighteenth- through early twentieth-century rural architecture and is a connecting district from Stony Creek Village at its west end and Guilford Town Center at its east end, both listed separately as National Historic Districts.

buildings, including Colonial, Federal, Greek Revival, Italianate, Queen Anne, Bungalow, and Colonial Revival. The characteristics of the district are predominantly residential-rural, with buildings generally dispersed individually or in small clusters, with two properties continuing to function as active farms.

Along the entire 13-mile corridor of Route 146, there are 20 historic buildings or sites which are individually listed on the National Register of Historic Places, 10 in Branford and 10 in Guilford. Below is a list of these historic resources, with the list and map updated in 2023 as part of the *Route 146 Existing Conditions Update.*

Branford

- Swain-Harrison House, 124 West Main Street
- Bradley Chisley House, 69 Home Place
- First Baptist Church of Branford, 975 Main Street
- Branford Town Hall, 1019 Main Street
- Isaac Palmer House, 736–756 Main Street
- Samuel Wilford House, corner of Sybil Avenue and Linden Avenue
- Isaac Hoadley House, 9 Totoket Road
- Residence, 18 Totoket Road
- Edward Frisbie Homestead, 240 Stony Creek Road
- John Rogers House, 690 Leetes Island Road

Boston Street in Guilford Town Center (VHB)

Branford Town Center on Route 146 (VHB)

Guilford

- Simeon Leete Gravestone, corner of Moose Hill Road and Route 146
- David Palmer House, 68 Water Street
- Joseph Parmellee House, 54 Water Street
- Italianate Villa House, 41 Water Street
- Increase Pendelton House, 30 Water Street
- Wyllis Eliot House, 20 Water Street
- Eliot House, 103 Whitfield Street
- Thomas Burgis II House, 85 Boston Street
- Hyland-Wildman House, 84 Boston Street
- Thomas Griswold House, 171 Boston Street

In addition to the Route 146 Historic District, the Route 146 corridor is flanked to the west and east by two historic town centers. The Branford Town Center is a State Historic District featuring more than 550 historic buildings spread across 250 acres. The District is roughly bounded by Route 1, the Branford River, Monroe Street, and Kirkham Street, and is dominated by a park-like Town Green featuring several public buildings demonstrating various nineteenth- and twentieth-century architectural styles. Immediately surrounding the Town Green, residential, commercial and retail areas remain well-preserved and speak to the history of the Town as it evolved from a 1644 agrarian community to a farming and maritime village to an industrial coastal town in the early and mid-twentieth century.

On the eastern end of Route 146, the Guilford Town Center National Historic District features more than 700 structures spread across four miles. The District is roughly bounded by the West River to the west, I-95 to the north, East Creek to the east, and the Long Island Sound to the south. Like the Branford Town Center, Guilford's Town Center is dominated by a 7.7-acre Town Green, which functions as the economic and civic heart of the Town. Commercial, residential, and public buildings surround the Green, and due to the presence of roads leading north, south, east, and west from it, development has followed a compact radial pattern rather than a linear one. Dominant architectural styles in the District include Colonial, Federal, Italianate, Mansard, and Greek Revival. This architectural diversity reflects the Town's development from a 1639 agricultural and fishing village to a booming shipbuilding town in the late eighteenth and early nineteenth century. Unlike Branford, Guilford did not experience substantial industrial development along with the arrival of the Industrial Revolution and has remained a largely suburban residential community since the nineteenth century.

Land Use and Zoning

Throughout the corridor, land use and zoning vary based on the specific area and whether the segment is located in Branford or Guilford. Residences can be found all along Route 146, but commercial areas are generally confined to certain areas, often based around historic village development, such as Indian Neck and Stony Creek. As noted above, the town centers of Branford and Guilford have development and land uses consistent with traditional New England coastal towns, while much of the rest of Route 146 includes small village development and rural coastal character.

The entire Route 146 roadway is within the Coastal Management Area of Connecticut, which brings with it additional regulatory oversight from the state's

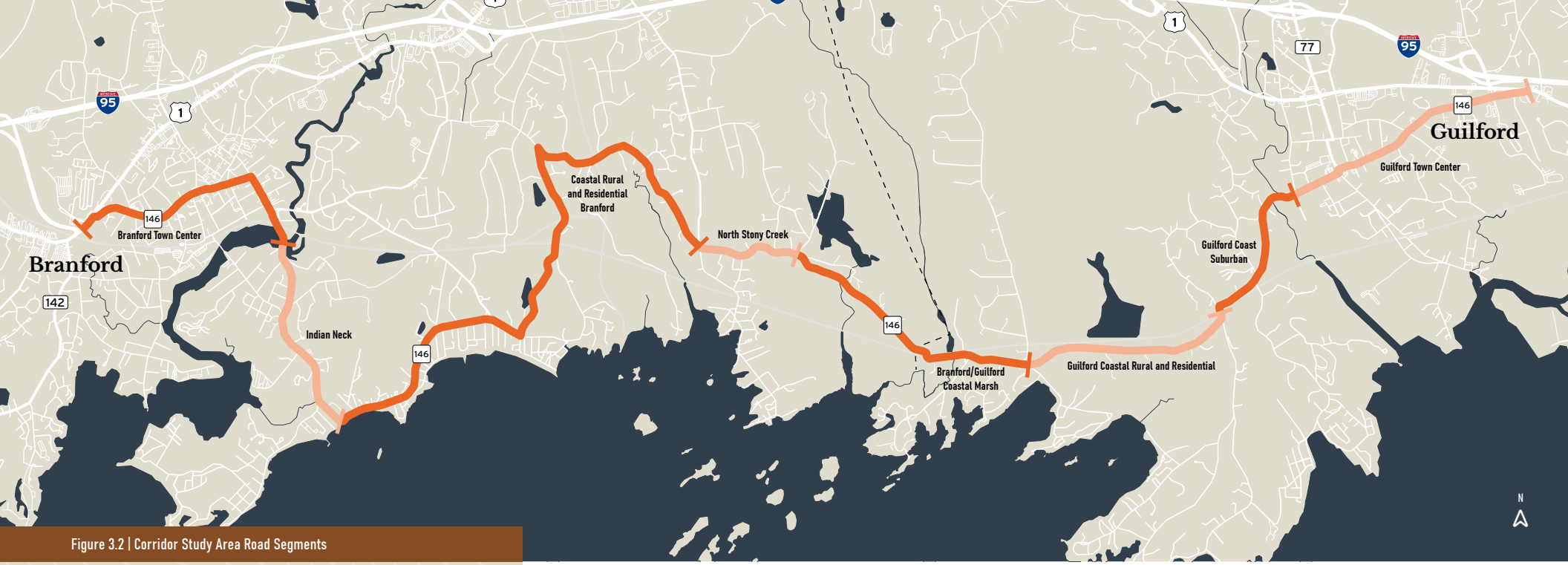


Figure 3.2 | Corridor Study Area Road Segments

Coastal Management Program. The Connecticut Department of Environmental Protection's (CTDEEP) overview notes that the emphasis of the program is on balancing protection of the fragile coastal resources of the Long Island Sound ecosystem with sustainable economic uses of the shoreline. The Coastal Management Program ensures balanced growth along the coast; restores coastal habitat; improves public access; protects water-dependent uses, public trust waters, and submerged lands; and promotes harbor management and facilitates research. Municipal plans and zoning regulations must be consistent with Connecticut's Coastal Management Act:

https://www.cga.ct.gov/current/pub/chap_444.htm

In addition, 20 inches of sea level rise is the projected 2050 planning threshold recommended by the Connecticut Institute for Resilience and Climate Adaption (CIRCA). As referenced in Governor Lamont's Executive Order No. 3, the 2018 Act Concerning Climate Change Planning and Resiliency requires that municipalities and the state use recent forecasts by the National Oceanic and Atmospheric Administration (NOAA) and CIRCA for the 20 inches of sea level rise by 2050 as part of preparing municipal Plans of Conservation and Development and revisions to the state Plan of Conservation and Development. Therefore, this sea level rise needs to be considered in the land use planning of Branford and Guilford.

Section Typologies in the CMP

Understanding that there are variations between many parts of the 13-mile Route 146 corridor with different intrinsic qualities about them, the corridor study area has been divided into eight road segments. These road segments were identified based on commonalities of land use, geographic and natural features, historic development, and roadway characteristics. Though they are divided into these groupings for the purposes of the CMP, the road segments are not hard and fast boundaries meant to separate the roadway. Rather, they are provided to organize the discussion of the intrinsic qualities of the roadway around their historic and cultural features, natural characteristics, roadway characteristics, and potential climate change issues.

The road segments are shown in **Figure 3.2** on the previous page and are listed below:

Branford

- **Branford Town Center:** Route 146 (Main Street) from Route 1 east to South Main Street, South Montowese Street then south to the railroad overpass by the Branford River
- **Indian Neck:** Route 146 (South Montowese Street) south from the railroad overpass to Limewood Avenue
- **Coastal Rural and Residential Branford:** Route 146 along Limewood Avenue, Hotchkiss Grove Road, Elizabeth Street, Pine Orchard Road, north along Blackstone Avenue and Totoket Road then east along Stony Creek Road to its intersection with Thimble Island Road/Leetes Island Road
- **North Stony Creek:** Route 146 (Leetes Island Road) from Stony Creek Road east to Quarry Road
- **Branford/Guilford Coastal Marsh:** Route 146 (Leetes Island Road) in Branford from Quarry Road east past the railroad underpass at the town line to Moose Hill Road/Shell Beach Road in Guilford

Guilford

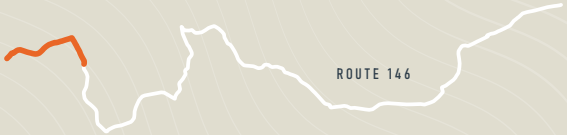
- **Guilford Coastal Rural and Residential:** Route 146 (Leetes Island Road) from Moose Hill Road to the railroad underpass at Sachem Head Road
- **Guilford Coast Suburban:** Route 146 (Water Street) from Sachem Head Road/Sam Hill Road to River Street in Guilford
- **Guilford Town Center:** Route 146 (Water Street/ Boston Street) from River Street east past the Guilford Green to its east intersection with Route 1

The following pages summarize prominent features and land use for each of these roadway segments. Features include the historic sites located within each route segment, along with a summary of distinctive natural features and current land uses. Taken together, these factors contribute to the intrinsic qualities and scenic character of the corridor which highlight it as a distinctive roadway.

Figure 3.3: Branford Town Center Segment

Branford Town Center

This segment includes parts of Route 146 from Route 1 to the west, east to South Montowese Street, and south to the railroad overpass near the Branford River Scenic Area. The Branford Town Center is one of the most compact and walkable sections of Route 146 outside of the Guilford Town Center, and forms the commercial and civic heart of Branford. Route 146 in this segment travels by key historic and civic buildings such as Town Hall and Blackstone Library, and has a downtown streetscape with street lighting, on-street parking, public park spaces, and pedestrian accommodations such as sidewalks and crosswalks. The following sections discuss the different key features of this segment of Route 146.



Historic and Natural Features

Branford Center State Historic District

Branford Center is a State Historic District encompassing roughly 250 acres and 557 structures that contribute to the historical and architectural significance of the District. Originally settled in 1644, this District exemplifies an eighteenth-century Connecticut farming and maritime village that developed into a small coastal town anchored by an industrial economy in the nineteenth century. Of the 557 contributing structures, the following three are located along or adjacent to Route 146:

- First Baptist Church of Branford, 975 Main Street
- Branford Town Hall, 1019 Main Street
- Isaac Palmer House, 736–756 Main Street

These individual structures include examples of early twentieth-century Greek Revival style architecture, as seen in the Branford Town Hall and Court House, nineteenth-century churches, and early nineteenth-century Federal style homes and barns, as exemplified in the Isaac Palmer House. Overall, the District is characterized by eighteenth- to twentieth-century commercial, institutional, and residential structures of various architectural styles popular during these periods.

Perhaps the most dominant feature of the western terminus of the Corridor is the Branford Town Green, a park-like space at the junction of Main and Montowese Streets anchored by the Blackstone Memorial Library, a Beaux-Arts building constructed in 1893. Along the northern edge of the Green, many retail and commercial buildings are present alongside an attractive streetscape with lighting, benches, and brick sidewalks and crosswalks. This area functions as the economic and civic heart of Branford and reflects its rich history as an economic and cultural center for the Town.

Turning south at Montowese Street, the Town's residential character becomes highly visible through a variety of nineteenth- and early to mid-twentieth-century homes along the roadway. Continuing along Montowese Street over the Montowese Street Bridge over the Branford River, the ruins of the early twentieth-century Malleable Iron Works Factory come into view.

Canoe Brook National Historic District

Canoe Brook National Historic District, located near the western end of Route 146, generally includes the following streets: Main Street, Bradley Street, and portions of Home Place, North Harbor Street, and Cherry Hill Road, running through to North Main Street. The area was first settled in the 1680s as an agrarian community that grew to include mariners

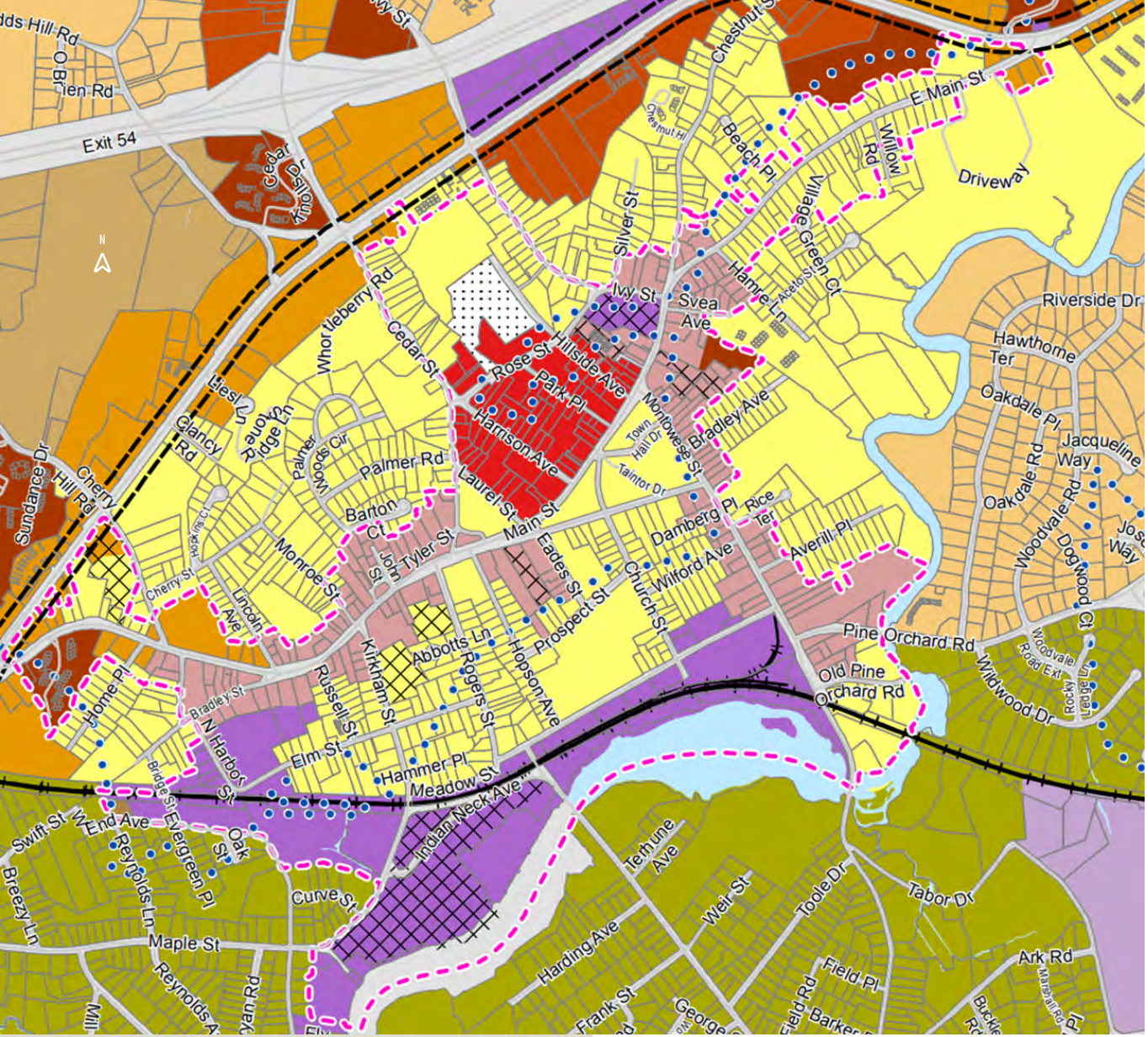


Figure 3.4 | Zoning Districts

- Restricted Business
- Commerce Park
- Local Business
- Multi-Family Residential
- Mixed Use
- Residential 5
- Residential 4
- General Industrial 2
- Residential 3
- General Industrial 1
- Residential 2
- Business Center
- Residential 1

who built homes along what is now called Home Place. This District encompasses more than 200 years of residential development (1724–1940) with 51 historic homes listed as notable structures with architectural styles ranging from Early Colonial, as exemplified by the Swain-Harrison House and Bradley Chisley House, to Tudor Revival, present along Cherry Hill Road. In addition to residential buildings, two schools, a firehouse, two stores, and a funeral home are also listed.

Notable structures along the Route 146 corridor in this District include:

- Swain-Harrison House, 124 West Main Street
- Bradley Chisley House, 69 Home Place

The Swain-Harrison House is a Colonial saltbox constructed in 1724, representative of typical residences during the early eighteenth century and one of Connecticut's oldest remaining homes. Today, the site operates as a historic house museum under the stewardship of the Branford Historical Society. The Bradley Chisley house was constructed in 1762 and relocated in 1960 to its present location.

Natural Characteristics

The Branford Town Green, described above, is the dominant landscape feature prior to entering the scenic road corridor. Street trees and small forested areas that are part of individual properties along the roadway provide shade and natural environments within the center of Branford. Various properties' landscaping adds to the visual appeal and sense of nature within a compact town center. These areas are most prominent along Main Street, South Main Street, and the northern end of South Montowese Street.

Scenic road sign, South Main Street, Branford (VHB)

Swain-Harrison House, 124 West Main Street, Branford (VHB)

Continuing south, crossing the Montowese Street Bridge, there are expansive views of tidal flats and the Branford River.

Zoning and Land Use

Branford Center is located in the Town Center Village District Overlay Zone. Within this zoning overlay district, uses include Business Center, General Industrial, Restricted Business, Local Business, Commerce Park, Residence R-1, Age-Restricted Housing, and Multi-Family Residential. Residence R-1 districts are characterized by areas built up in years past with single-, two-, and multi-family homes, concentrated primarily around the Town Center District. **Figure 3.4** on the previous page depicts the zoning districts located within the Town Center Village District Overlay.

Land use patterns in this district reflect the varied zoning. The area includes residential areas with single- and multi-family housing, commercial buildings, institutional and government buildings, and open space. These land uses are classic characteristics of historic New England coastal villages.

Transportation Characteristics

Traffic Volumes and Crash History

This segment winds through the Branford Town Center and is one of the more heavily traveled segments of Route 146. Traffic volumes in this segment were higher than most other roadway segments in the Branford section of the study area, with average daily traffic (ADT) ranging from roughly 6,000–8,000 based on 2020 and 2023 data. According to the UConn Crash Data Repository, of the 187 total crashes along the route between 2020–2022, 13 occurred at the intersection of Route 146/Main Street and U.S. Route 1.

Roadway Characteristics

This segment is a two-lane roadway except for its western terminus, where the westbound lane widens to include a dedicated left-turn lane and dedicated right-turn lane at the intersection with Route 1. The roadway is generally characterized by several driveways, wide shoulders, and crosswalks and sidewalks heading east just before North Harbor Street. Sidewalks in this area are a mix of concrete and asphalt and are intermittent, with varying conditions ranging from new to failing. There is a signalized intersection at Route 146, Monroe Street, and Kirkham Street, with crossings along three sides.

Approaching the Town Green, on-street parking is available in sections on both sides of the roadway. Sidewalks are present on both sides, including a brick sidewalk along the westbound side and several marked crosswalks with high-visibility signage. Streetscape elements, including decorative lighting, landscaping, and bus shelters and benches, are present along the Town Green, along with brick crosswalks along Main Street from the intersection with Montowese Street.

Along Montowese Street, sidewalks are continuous along with marked on-street parking on both sides of the roadway. Signed, marked crosswalks are also present along the roadway in addition to several driveways and parking lot entrances. Heading south, a left turn lane is present at the intersection of

Montowese Street and Pine Orchard Road. Heading north, a left turn lane has been installed at Montowese and Meadow Streets.

In general, the presence of a mostly complete sidewalk network in this area, coupled with frequent crossings, allows for greater pedestrian activity in the denser Town Center District. Dense land use patterns and lower-speed traffic also create conditions for local bicycling activity. Where sidewalks are missing or deteriorated in this area, there are opportunities to improve pedestrian connectivity through rehabilitation and/or construction of new sidewalk facilities.

Continuing southeast, leaving the Town Center District, shoulders narrow and sidewalks remain only on the east side of the roadway. The segment ends at the low-clearance Amtrak railroad bridge with a narrow sidewalk on the east side of the roadway. In general, this segment of roadway is flat, with the most notable grade change occurring as the road slopes down approaching the railroad bridge.

Flood Risk

The majority of this segment is located outside a FEMA Flood Zone. Heading southeast, just before reaching the Amtrak Railroad underpass, FEMA Flood Zone AE begins, indicating a 1 percent annual risk of flooding (also known as a 100-year flood zone) and an area of high flood risk. Throughout the public participation process, residents have raised concerns about flooding at this underpass. This underpass experiences sunny day flooding and regular flooding at new and full moon tide cycles. There is no easy answer to address this due to the roadway's elevation, which does not allow for a discharge into the river, and tidal flows in fact come up through the drainage system. Future improvements will need to consider these flooding concerns along this segment of the roadway while remaining sensitive to the proximity to the Branford River. Transportation improvements must account for resiliency as part of future planning efforts.

Roadway and Development Projects

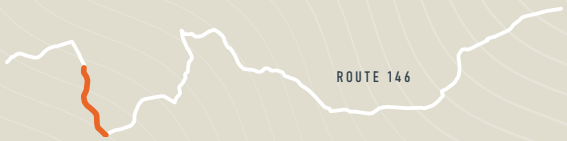
The Town of Branford is currently working on a full-depth reconstruction of Main Street from South Main Street (Route 146) to Chestnut Street, within the existing roadway width from curb to curb. In addition to full-depth reconstruction, the project also includes new sidewalk, lighting, and street furniture upgrades. The Town has completed the Final Design for the reconstruction and expects construction to begin in 2025.

Branford has several Transit-Oriented Development projects recently completed or underway. The Stony Creek Brewery and Branford Landing mixed-use project is a short walk from the Branford train station, and the Mariners Landing housing project is across the street from the station. A nearby mixed-use development project known as Atlantic Wharf has been proposed and has planning approval along Meadow Street between Church Street and Route 146/South Montowese Street. The project is expected to move forward after legal issues with the project were recently resolved. The project, once completed, is expected to include new sidewalks on Route 146 and crosswalks at Pine Orchard Road, among other improvements.

Figure 3.5: Indian Neck Segment

Indian Neck

Continuing south towards the Long Island Sound on South Montowese Street from the railroad overpass by the Branford River, development along the roadway transitions to a more residential character with single-family homes and properties that are further spread out. A key commercial area can be found as the road approaches Linden Avenue, with popular restaurants along the roadway creating an activity node. The road goes south until it reaches Limewood Avenue, where Route 146 turns sharply east and runs along the beach.



Historic and Natural Features

Historical Characteristics

Indian Neck is characterized by its waterfront village feel. In the early to mid-twentieth century, Indian Neck Village was a popular tourist destination, with trolley service running along Sybil and Limewood Avenues to the Village's commercial district. Today, at the triangular intersection of Sybil Avenue/Route 146 and Linden Avenue, several restaurants and a fish market are present, including Lenny's Indian Head Inn and Bud's Fish Market, which have operated since the middle of the twentieth century. The Samuel Wilford House, a Federal-style building constructed in 1839, is listed on the Connecticut State Register of Historic Properties. Today, the building is home to Guacamole's Mexican Cuisine.

In addition to the waterfront village of Indian Neck, residential homes and the Parkside Village property operated by the Branford Housing Authority also populate the area along Route 146. Many of these homes are twentieth-century suburban single-family homes in medium-density neighborhoods along South Montowese Street.

Natural Characteristics

Heading south from the railroad overpass along South Montowese Street, the area is dominated by suburban residential neighborhoods leading into Indian Neck Village. Along South Montowese Street, just south of the railroad overpass, the roadway winds along the Branford River over a bridge, offering sweeping views of the Branford River Scenic Area and Branford Land Trust scenic overlooks. In the commercial district just north of the Linden Avenue/ Sybil Avenue intersection and southern bridge over Sybil Creek, the marsh and tidal flats can be seen behind the restaurant properties. At the southern end of Sybil Avenue, as the roadway turns sharply east to Limewood Avenue, it opens up to offer an expansive view of the Long Island Sound.

Zoning and Land Use

Much of this segment is zoned Residence R-3, apart from the intersection of Sybil and Limewood Avenues in Indian Neck, which carries a local business designation. Residence R-3 districts consist of single-family houses on large lots. The southernmost end of Sybil Avenue just before it turns sharply east is designated as Residence R-1, like the residential density in the Branford Town Center. Land use through this segment is primarily residential, with the exception of the area immediately surrounding the

Low clearance sign, South Montowese Street at Indian Neck Avenue, Branford, summer 2023 (VHB)

Samuel Wilford House, Sybil Avenue at Linden Avenue, Branford (VHB)

intersection of Sybil and Limewood Avenues, where several restaurants, a liquor store, and a fish market are located, many of which have been operating for more than 50 years.

Transportation Characteristics

Traffic Volumes and Crash History

This segment of Route 146 experiences moderate traffic volumes when compared to the Branford Town Center District, with seasonal fluctuations due to increased tourist activity in summer months. 2020 ADT through this segment ranged from roughly 2,400 to over 5,600. In general, traffic volumes reflect the characteristics of the area, with higher volumes concentrated toward the Indian Neck Village and its restaurants. Volumes in the more residential portions of the segment were much lower, reflecting the residential land use of these areas.

This segment was not identified as one of the three highest frequency crash locations along the Route. However, one fatality occurred between 2017–2019, when a vehicle traveling on Indian Neck Road struck a tree after crossing onto Route 146/ South Montowese Street.

Roadway Characteristics

This segment of roadway is characterized primarily by residential development except for the intersection of Sybil and Linden Avenues, where a number of restaurants and markets are present in the Indian Neck Village. Dominant roadway features include the Montowese Street Bridge over the Branford River, a low-lying bridge marked by concrete retaining walls topped with steel box-beam guardrails. Moving south from the bridge, sidewalk facilities end after a short boardwalk on the east side of the roadway terminates at Tabor Avenue. The roadway narrows considerably, with some areas having nonexistent or very narrow shoulders to the intersection of South Montowese Street and Indian Neck Avenue, where sidewalks resume on the eastbound side of the roadway until the Great Oak condominium complex. Further south where the road crosses Sybil Creek, this bridge was recently reconstructed and includes a new tide gate, new sidewalks on both sides of the bridge, and sidewalks into the intersection with Sybil Avenue and Linden Avenue.

In general, this segment lacks marked crosswalks and provides limited space for sidewalk or cycling facilities, forcing pedestrians and cyclists to travel on-road or in the very narrow shoulders present along this segment. The Town of Branford and local residents have raised concerns about pedestrian safety around the commercial district due to the increased activity in this area, and through the public engagement process for the CMP they have requested sidewalks along Route 146. A recently completed Road Safety Audit (RSA) for this segment of Route 146 also identified sidewalks and pedestrian facilities as key needs. Opportunities exist to improve pedestrian crossings at key intersections through installation of crosswalks, particularly in the area near Lenny's and Bud's Fish Market. Dedicated cycling facilities present a greater challenge given the limited right-of-way along this segment, but opportunities for striping do exist to increase awareness of cyclists in the roadway.

Flood Risk

South Montowese Street, from just south of the railroad underpass across the Branford River to just beyond the intersection with Tabor Drive, is in FEMA

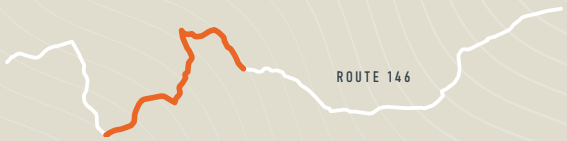
Pedestrian on South Montowese Street northbound near Branford River (VHB)

Flood Zone AE (100-year flood zone). Further south, segments between Pine Orchard Road to Indian Neck Avenue and Limewood Avenue, and the segment of Route 146 known as Limewood Avenue, are expected to transition from Special Flood Hazard Areas (SFHA) to Zone AE, based on data collected for the *2021 Route 146 Corridor Study*. Flood risk is high along this segment and future transportation improvements will need to consider resiliency as a primary concern.

Figure 3.6: Coastal Rural and Residential Branford Segment

Coastal Rural and Residential Branford

Following Limewood Avenue as it travels east, Route 146 continues along several different locally-named streets, including Hotchkiss Grove Road, Elizabeth Street, Pine Orchard Road, Blackstone Avenue, and Totoket Road. Route 146 turns sharply north at Blackstone Avenue and moves away from the coast, then turns east along Stony Creek Road to the intersection with Thimble Island Road and Leetes Island Road. This section is almost entirely residential and passes by the Pine Orchard Golf Course and several neighborhoods of Branford.



Historic and Natural Features

Historical Characteristics

This segment of Route 146 is situated between Indian Neck and Stony Creek, divided between a more suburban development pattern, winding through the Pine Orchard community, and a more rural pattern along Blackstone Avenue, Totoket Road, and Stony Creek Road. Like all Branford communities, Pine Orchard is steeped in history, with three historic sites of significance identified in this segment:

- Isaac Hoadley House, 9 Totoket Road
- Residence, 18 Totoket Road
- Edward Frisbie Homestead, 240 Stony Creek Road

The home at 9 Totoket Road (Issac Hoadley House) is a Colonial-style residence constructed in 1757. This structure is listed on the State Register. Additionally, the Edward Frisbie Homestead is located at 240 Stony Creek Road. This Colonial Revival style home was constructed circa 1790. These two structures embody the rural residential qualities of this segment and further speak to Branford's agrarian roots.

Beyond its residential characteristics, this segment runs along two beaches that carry historical significance for Branford. Limewood Beach's history dates back to its days as a popular summer destination in the 1920s for those visiting Indian Neck, while Hotchkiss Grove Beach is home to a series of cottages dating back to the late nineteenth century. In 1886, Emerson Hotchkiss purchased 100 acres of land and constructed summer cottages, many of which still stand today. Pine Orchard was formed as a borough situated between Indian Neck and Stony Creek in 1838 and developed as a resort community as well. Access to these communities was possible via streetcar lines from New Haven in the early twentieth century. Most homes started as small cottages, and while some houses have been made larger with new additions, some are still very small, reflecting the intrinsic visual and historic character of the area. Many houses are now occupied year-round.

Natural Characteristics

This segment begins at the western edge by snaking along Green Island and the Limewood Beaches before bending north and east through the residential neighborhoods behind Hotchkiss Grove Beach. Heading north on Blackstone Avenue, the landscape transitions to eastern woodlands with deciduous trees in dense forest clusters. The road provides access to the Shoreline Greenway Trail, a multiuse network of trails along the Connecticut Shoreline. Blackstone Avenue also runs through the Pine Orchard Golf Course before crossing under the Amtrak rail line and

Residence at 18 Totoket Road, Branford (VHB)

Isaac Hoadley House, 9 Totoket Road, Bradford (VHB)

transitioning to Totoket Road. Youngs Pond and its park can also be seen from the roadway as it curves to the north. Dense woodland forest with sparse residential development dominates the landscape along this segment, with Damascus Cemetery marking the sharp turn toward Stony Creek Road. The Pine Orchard Marsh Wildlife Area, along Stony Creek Road, encompasses several marshes along Long Marsh Creek and Pine Creek, as well as parts of the marsh on Indian Neck. At the eastern edge of the segment, where Route 146 meets Leetes Island Road, there is a small grouping of early homes, including the Edward Frisbie Homestead, which rest on a slightly elevated site at the triangular intersection.

Zoning and Land Use

Land uses in this segment are varied, ranging from Residence R-2 at Limewood Avenue to Residence R-3 until reaching the Pine Orchard Zoning District and finally transitioning to Residence R-5 at the eastern portion of the segment. Residence R-5 districts are designed to accommodate single-family homes on spacious lots and are reserved for the Town's rural and topographically rugged sections. In general, this segment, from Blackstone Avenue through to Stony Creek Road, is characterized by forest, marsh, and widely spaced single-family residences, reflecting its residential land use.

Pine Orchard itself is an independent borough of Branford with its own taxing and zoning authority granted by the State of Connecticut in 1903, managed by the Pine Orchard Association (POA) Executive Board. As such, it has separate zoning powers from the Town of Branford.

Transportation Characteristics

Traffic Volumes and Crash History

Traffic volumes through this segment are generally light, with the highest weekday ADT along Limewood Avenue reaching 2,469 in 2020. Through the rest of the segment, weekday ADT is generally below 2,000, reflecting the rural characteristics of the area. Specific crash data for this segment was not analyzed for the *Route 146 Existing Conditions Update*, but no intersections within this segment were identified as top crash locations and no fatalities were recorded from 2017–2019 or 2020–2022.

Roadway Characteristics

This segment of Route 146 is characterized by a predominantly narrow right-of-way with narrow shoulders and limited pedestrian amenities. The Limewood Avenue portion of Route 146 contains marked pedestrian crossings to support neighborhood pedestrians in accessing Limewood beaches and the new sidewalk built behind the Limewood Avenue seawall, but otherwise the area lacks sidewalk facilities. Given the proximity to the coast along the eastbound side, additional sidewalk facilities would be challenging, but shoulder widths along the westbound side may support sidewalks or a narrow shared-use path. Given the volume of pedestrian and cyclist traffic attempting to access the beach, opportunities to improve active transportation facilities along this segment should be explored as future projects are developed.

Route 146/Hotchkiss Grove Road and Route 146/ Elizabeth Street feature the same narrow shoulders and more rolling hills as the roadway begins to transition to a more rural environment moving inland

from the coast. Limited crosswalks exist along this segment, and some sidewalk facilities are present near Spring Rock Road and Pine Orchard Road.

Once reaching Blackstone Avenue and continuing onto Totoket Road, the shoulder disappears completely as the roadway narrows substantially as it winds through a rural residential area. This segment also contains an at-grade railroad crossing approximately 800 feet north of the railroad underpass of the main Amtrak line. Pedestrian and cycling infrastructure would represent a major challenge given the limited right-of-way and existing roadway space.

Flood Risk

The portion of Route 146 along Limewood Avenue is located within a FEMA Zone AE (100-year floodplain). Given its proximity to the immediate coast, future improvements will need to account for sea level rise in addition to flooding from extreme weather events as part of an overall resiliency strategy for the corridor.

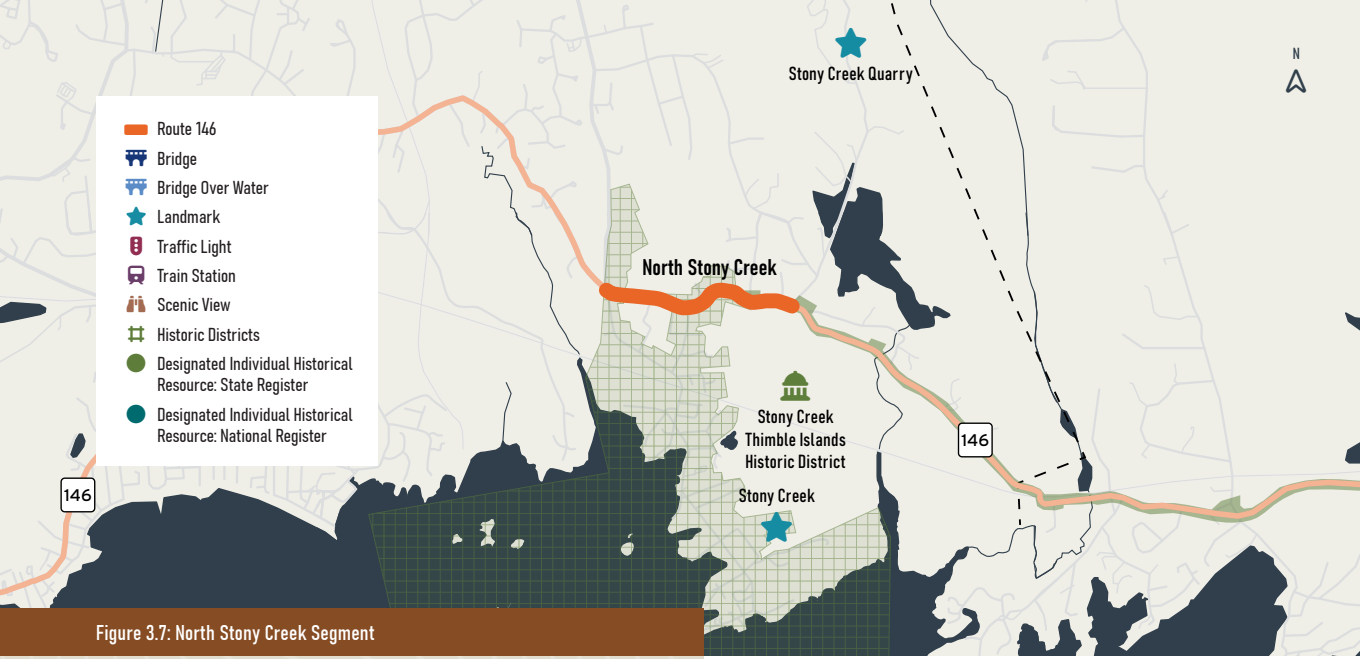
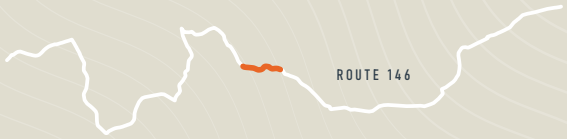


Figure 3.7: North Stony Creek Segment

North Stony Creek

This short segment includes Route 146/Leetes Island Road from Stony Creek Road east to Quarry Road. It is on the northern end of Stony Creek, bordered on the north by the Stony Creek Cemetery, and passes through the small commercial area at the intersection of Leetes Island Road, Stony Creek Road, and Thimble Island Road.



Historic and Natural Features

Historical Characteristics

Stony Creek-Thimble Islands National Historic District

The Stony Creek-Thimble Islands National Historic District is located in the southeastern corner of Branford. Route 146 represents the northeast boundary of the District where Route 146 and Thimble Island Road intersect. While this segment runs through only a small portion of the District, it still contributes to the historical significance of the Route 146 corridor. In total, the District encompasses 1,400 acres, with roughly 200 acres containing the well-preserved nineteenth- and early twentieth-century core of the village of Stony Creek, including 378 major buildings that are considered contributing structures and an additional 34 outbuildings meeting that threshold. Stony Creek is home to the area's largest collection of stick-style houses and summer cottages, along with Colonial, Federal, Greek Revival, Italianate, Second Empire, Gothic Revival, Queen Anne, Shingle, Arts and Crafts, and Colonial Revival buildings. This assortment of architectural styles makes the District one of the more distinctive along the Route 146 corridor and in the region.

This segment of Route 146 is also closely tied to the historic quarrying activity at the Stony Creek quarries, which still operate north on Quarry Road. The first quarry in Branford was opened by Benjamin Green in 1858. Over the next several decades, multiple quarries in the area employed approximately 1,800 people. According to ConnecticutHistory.org, ***"the polished rock that came out of Branford traveled by schooner or rail to points as far as Chicago and New Orleans and made up significant portions of such prestigious structures as the Battle Monument at West Point, the George Washington Bridge, and the buildings of the Smithsonian Institute."*** The quarry area still has late nineteenth- and early twentieth-century quarry worker housing and a mill village typology as its specific features.

Route 146 National Historic District

The Route 146 National Historic District begins at the east end of this segment of Route 146, starting from the intersection of Route 146 and Flat Rock Road and continuing east into Guilford to the intersection of Route 146 and the bridge over the West River. The North Stony Creek segment includes a small segment of the District from Flat Rock Road to Quarry Road. In total, the Route 146 National Register Historic District encompasses 169 acres of coastal highway featuring 74 contributing structures representing Colonial, Federal, Greek Revival, Italianate, Queen Anne, Bungalow, and Colonial Revival architectural styles.

The polished rock that came out of Branford traveled by schooner or rail to points as far as Chicago and New Orleans and made up significant portions of such prestigious structures as the Battle Monument at West Point (Adobe Stock, bottom right), the George Washington Bridge (Adobe Stock, bottom left), and the buildings of the Smithsonian Institute (Adobe Stock, top). — ConnecticutHistory.org

North Stony Creek, Branford (VHB)

Natural Characteristics

At the westernmost edge of the segment, the Stony Creek Cemetery is located along the roadway. This cemetery marks the northernmost edge of the Stony Creek-Thimble Islands National Historic District. This segment of Route 146 is one of the most well-preserved examples of early twentieth-century highway construction under the "State Aid Program" established between the 1920s and 1930s. Being further inland, this segment offers no direct views of the Long Island Sound or wetlands, but mature trees, rock walls, and rolling landscape are present along the roadway. Continuing east, the roadway passes by the eighteenth-century John Rogers farmhouse. Densely forested woodlands dominate the southern side of the route as it passes out of the rural village area.

Zoning and Land Use

The dominant zoning district for this segment is Residence R-5. The westernmost edge of the segment is also included in the Stony Creek Village District Zone. Land use is almost exclusively residential, with large areas of forested, undeveloped land along the segment. The exception to this is a handful of commercial properties at or near the intersection of Leetes Island Road and Stony Creek Road, including a package store, gift shop, and auto service facility.

Transportation Characteristics

Traffic Volumes and Crash History

Traffic volumes in this segment were light, with a weekday ADT of 1,698 east of Thimble Island Road in 2020. This volume reflects the rural residential character of this roadway segment. No intersections were identified as top crash locations in this segment, although concerns have been raised by local residents about the expansive, skewed intersection of Leetes Island Road and Stony Creek Road/Thimble Island Road. Vehicle speeds are also a concern in this segment, with the average speeds being between 1–10 miles per hour (mph) over the posted speed limit for data collected along this segment as part of the *Route 146 Existing Conditions Update.*

Roadway Characteristics

This segment features the same narrow shoulders present in previous segments as the road snakes through a rural residential area. However, asphalt sidewalk facilities are present on the north side of the roadway, separated by a grass median for a portion of the segment, along with a few marked crosswalks. Existing sidewalk facilities could be upgraded in future construction projects along this segment of the route to improve accessibility. Limited right-of-way would make installation of dedicated cycling lanes challenging along this segment without removal of the existing grass median between the roadway and sidewalk or widening the roadway.

Flood Risk

No portions of this segment of Route 146 are designated as within FEMA Flood Zones.

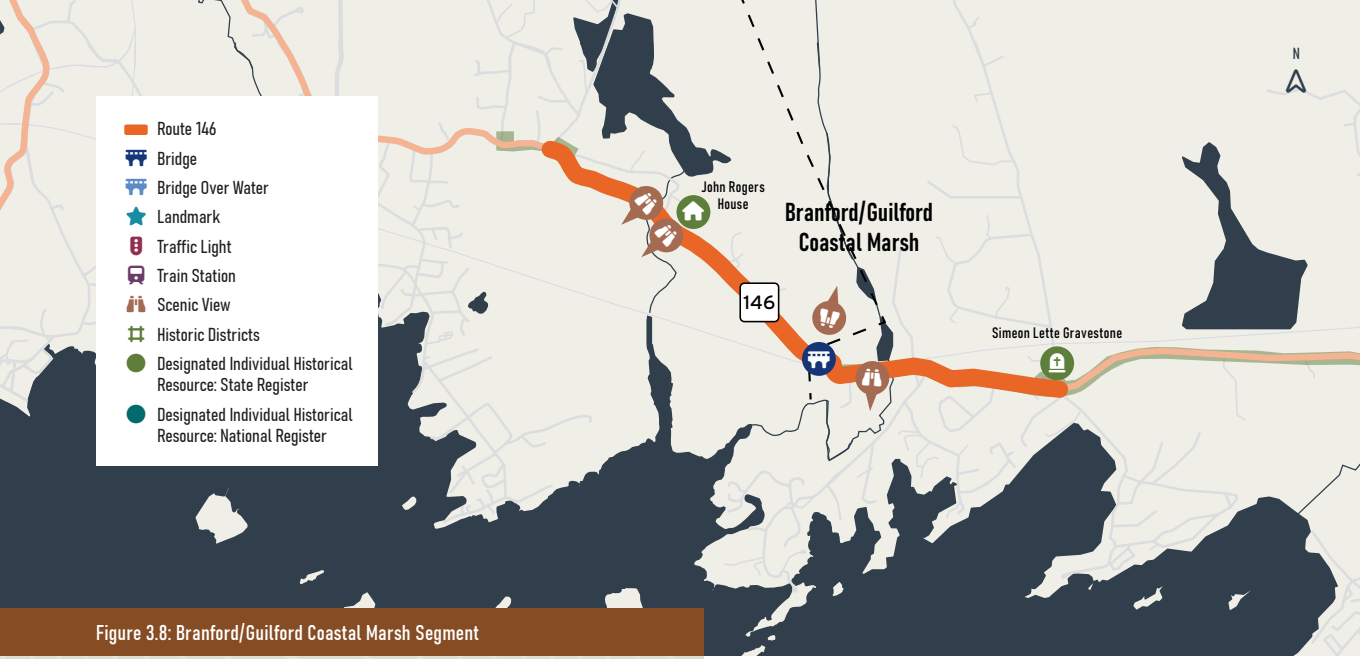
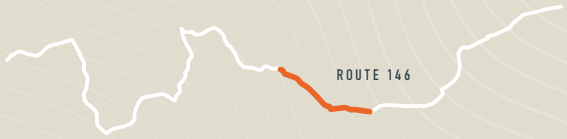


Figure 3.8: Branford/Guilford Coastal Marsh Segment

Branford/Guilford Coastal Marsh

Leaving the Stony Creek area, this segment travels east from Quarry Road over Jarvis Creek, under the railroad overpass at the Branford/Guilford town line, and into Guilford. Route 146 follows Leetes Island Road past wetlands and marshes as it continues to the end of this segment at Moose Hill Road/Shell Beach Road in Guilford.



Historic and Natural Features

Historical Characteristics

This segment is located within the Route 146 National Historic District and crosses the boundary between the Towns of Branford and Guilford. This segment contains two State Register-listed sites of historical significance:

- John Rogers House, 690 Leetes Island Road
- Simeon Leete Gravestone

The John Rogers House is a Colonial-style home constructed circa 1765. It is a contributing structure to the overall Route 146 National Historic District and is listed on the State Register as an individual resource as well as part of a State Register District.

The Simeon Leete Gravestone is located just off Route 146 on Moose Hill Road on the side of the road. It is a single gravestone in a residential area. Simeon Leete was shot by the British in a skirmish at Leetes Island near Guilford on June 19, 1781. He was buried on the Town Green, but Leete's tombstone was later removed to Leetes Island. The pointed rock where Leete was mortally wounded can be found in the front yard at 60 Harbor View Road.

In addition to these sites, this segment also contains the Leetes Island overpass, which carries the Amtrak rail line over the roadway. The overpass features granite blocks supporting a concrete rail bridge overhead.

Natural Characteristics

Route 146/Leetes Island Road winds through marshlands along the eastbound lane. On the westbound side, large boulders are present in certain locations with homes elevated well above the roadway. Areas of dense deciduous forests are also present along the segment, interspersed between marshlands. The roadway crosses Jarvis Creek, which provides expansive coastal marsh views and natural habitats, near Sawmill Road. Just to the north of the Leetes Island railroad overpass, the Branford Land Trust has a small trailhead for the Hoadley Creek Preserve, which provides access to several trails for hikers to view natural features such as marshes, ponds, and boulders.

Zoning and Land Use

Zoning in the Branford portion of this segment is Residence R-5 with sparsely populated residential development throughout the segment. Like much of the roadway, this portion of Route 146 is contained within the coastal boundary management area for the Town of Guilford, indicating that special restrictions are in place related to development to ensure preservation of the coastal wetlands present through the segment. The Guilford portion of this segment includes less dense R-5 and R-6 zoning districts and is

Leetes Island Road west of railroad underpass at town line, December 2022 (VHB)

John Rogers House, 690 Leetes Island Road (VHB)

located within a Coastal Management Area Boundary Overlay District. The Coastal Overlay District places special regulations and requirements on development in this area to comply with the Connecticut Coastal Management Act. Land use is almost exclusively residential through this section.

Transportation Characteristics

Traffic Volumes and Crash History

Traffic volumes along this portion of Route 146 are relatively low, with a weekday ADT of less than 1,500 for traffic at the Guilford Town Line in 2020. Crash data from 2017–2019 and 2020–2022 does not identify any fatalities along this segment or identify any intersections as having high crash frequencies. Traffic volumes and crash data reflect the low-volume, residential character of this portion of the route.

While crash frequencies are low through this segment, there are safety concerns related to vehicle speeds. The *Route 146 Existing Conditions Update* shows that 85 percent of vehicles traveling through this segment averaged between 1–10 mph over the posted speed limit of 30 mph. Given the residential nature of this segment, excessive speeds present a concern.

Roadway Characteristics

As with segments to the immediate west, the roadway remains narrow with limited shoulder area and no dedicated pedestrian or cycling facilities. Residents have identified the intersection of Moose Hill Road and Shell Beach Road as a safety concern due to higher vehicle speeds and pedestrians crossing the road to access the beach located to the south. The road is generally flat and low lying, passing through several marshes. In general, the rural character of this segment, coupled with limited right-of-way and numerous wetlands, would make construction of dedicated pedestrian facilities particularly challenging. On-road cycling facilities could be accommodated, but additional safety analysis would be required, given the winding nature of the roadway.

Flood Risk

A large portion of this segment of Route 146 is located immediately adjacent to FEMA Zone AE boundaries, and two small segments are within a FEMA Zone AE. Existing signage along this road warns motorists of possible flooding, but as the state begins to plan for improvements to this segment of the roadway, design must account for resiliency and sea level rise, particularly through this segment. Although challenging, considerations must be given to improving climate change and sea level rise resiliency while also protecting the area's marshlands, which serve as important coastal habitats. This is critical because of the roadway's proximity to the Long Island Sound and environmentally sensitive areas.

Frequent flooding at the bridge over Jarvis Creek has been identified as a major concern of local residents for access and egress to their properties, and for others traveling along Route 146. When flooding occurs, travelers often use Sawmill Road, which allows them to get around the immediate flooding on Route 146; however, Sawmill Road is extremely narrow (around 15 feet wide) and is not suitable to be used for two-way traffic to divert around the area.

Flooding is also a concern at the railroad overpass at the Branford/Guilford town line due to its proximity to the marsh areas on both sides of the underpass. This overpass experiences periodic flooding as the tides back up through the drainage system, similar to the overpass on South Montowese Street.

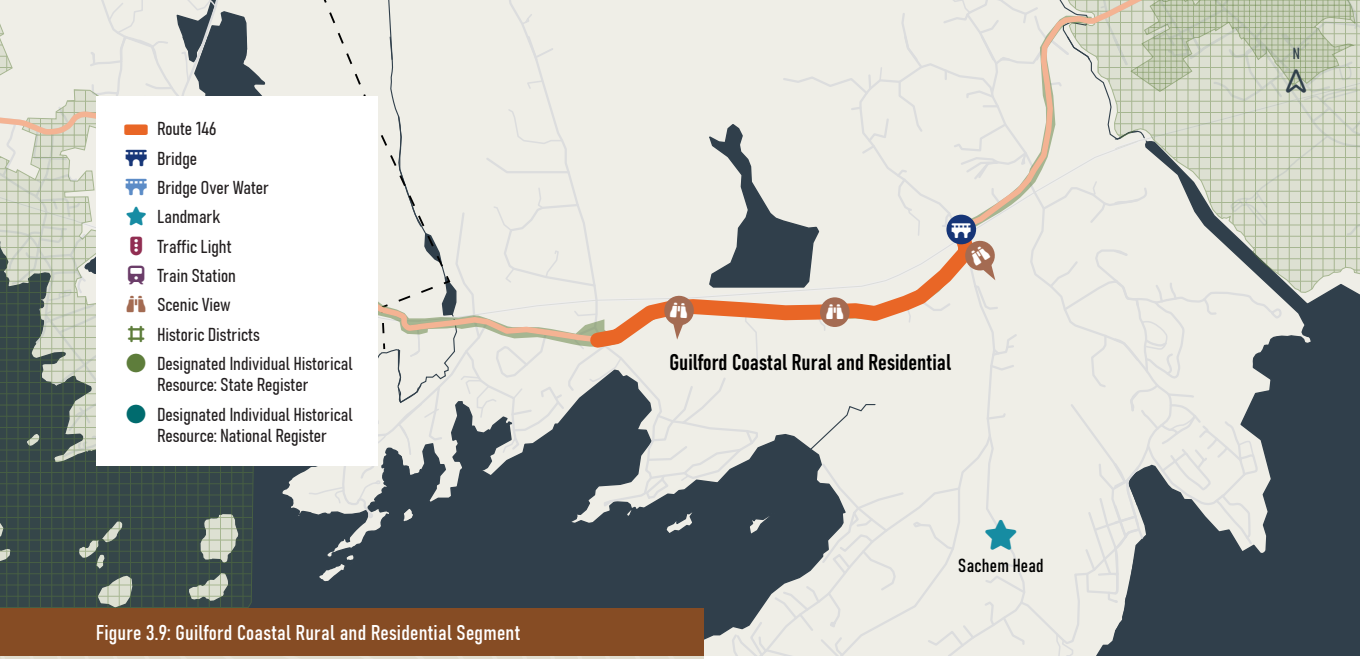
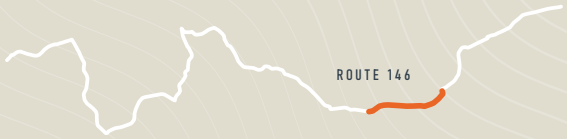


Figure 3.9: Guilford Coastal Rural and Residential Segment

Guilford Coastal Rural and Residential

This segment of Route 146/Leetes Island Road extends from Moose Hill Road through a sparsely populated rural area to the railroad overpass at Sachem Head Road and Water Street. Some of the route's most prominent scenic vistas and views can be found along this segment as it winds down from higher elevation near Moose Hill Road to a lower elevation along the coastline. Substantial rock outcroppings are also directly adjacent to the road in many locations in this segment.



Historic and Natural Features

Historical Features

This segment winds through the Route 146 National Historic District and is primarily characterized by its rural features. Farmhouses and barns dot the landscape, alongside stone walls, along this segment where the roadway crosses marshlands or tidal areas. While there are no National Register- or State Register-listed properties along this segment, it exemplifies many of the historical qualities of the Route 146 National Historic District.

Natural Characteristics

This section of Route 146/Leetes Island Road winds through a rural residential area, featuring clusters of dense deciduous forest, glacial boulders, and ledge predominantly along the westbound lane, and marshland and tidal ponds along the eastbound lane. A notable landscape feature along the route is a causeway locally known as the "Crabbing Area," a popular destination for summer crabbing. This causeway has particularly impressive views of coastal marshes to the south and is a key local feature of Route 146. However, the crabbing activity along the causeway contributes to safety concerns as there is no pedestrian infrastructure and limited parking along the roadway.

Zoning and Land Use

This segment runs through a Coastal Area Management Boundary in the Town of Guilford and is zoned as R-5 and R-6 residential, with less density than other residential zoning in the Town. Land uses are almost exclusively residential, with wide stretches of undeveloped areas and one small woodworking business present adjacent to Route 146.

Transportation Characteristics

Traffic Volumes and Crash History

Traffic volumes are generally light through this segment, with weekday ADT east of Moose Hill Road at 3,200 in 2019. Crash history does not show any portion of this segment as a high-frequency location, but vehicle speeds were generally between 1–10 mph over posted speed limits at the locations where speed was measured in the *Existing Conditions Update*, indicating a safety issue for motorists, pedestrians, and cyclists.

Roadway Characteristics

This segment of roadway is similar to the Branford-Guilford Coastal Marsh segment, with limited shoulders, winding turns, and generally low elevations throughout. This segment also passes through marsh and open water. Given these roadway width constraints, sidewalk infrastructure or separated

Leetes Island Road Causeway near Beattie Pond, Guilford (also known as the "Crabbing Area") (VHB)

Water Street at Sachems Head Road underpass, Guilford, July 2024 (VHB)

bicycle infrastructure would likely be infeasible without widening the roadway, but on-road cycling striping could potentially improve safety and access for cyclists.

One of the more notable transportation features is the "Crabbing Area" causeway. Along this causeway, shoulders are extremely limited and vehicles are separated from the water by post and cable guiderail structures. This location is a popular spot for crabbing and often sees a lot of pedestrian activity. There is a small informal pull-off that people use to park near the western end of the causeway, but there are no pedestrian facilities to access the causeway and locations where people crab. CTDOT is planning a replacement of the causeway and the undersized culvert to address flooding and improve water flow from one side of the causeway to the other. CTDOT has temporarily paused the project pending completion of this CMP. Design considerations will need to remain sensitive to protecting the surrounding tidal wetlands and the recreational uses of the causeway while ensuring that the new structure is resilient.

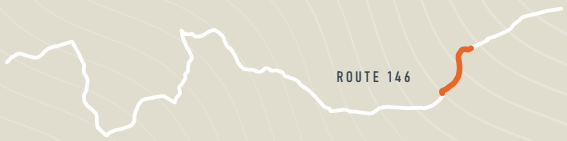
Flood Risk

This segment of Route 146 is designated as an Evacuation Route based on existing signage and according to the Town's Emergency Management maps, and several sections are located within FEMA Flood Zone AE. Roadway improvements will need to account for this flooding risk and should seek to incorporate resiliency measures where possible. Flooding at the Sachem Head Road railroad underpass is an issue that residents have frequently raised as a safety concern since access along Route 146 is essentially cut off during periods of flooding.

Figure 3.10: Guilford Coast Suburban Segment

Guilford Coast Suburban

This segment runs along Route 146/Water Street from Sachem Head Road/Sam Hill Road, passing by neighborhoods along Mulberry Point Road, Sam Hill Road, and Wildrose Avenue and winding eastward to the West River. Marshes and coastal areas are directly adjacent to the roadway, and the road passes next to the Guilford Boat Yards. The segment ends at River Street after crossing the bridge over the West River.



Historic and Natural Features

Historical Characteristics

This segment is located within the Route 146 National Historic District but does not contain any individual sites listed on either the National or State Registers. It is characterized by features and architectural styles similar to those described in other segments of Route 146.

Natural Characteristics

This segment of the corridor winds through wetlands and woodlands, much like previous segments. Housing is a bit denser in this segment than in the Guilford Coastal Rural and Residential segment, but lot sizes remain relatively large. Heading east toward the Guilford Town Center, housing density increases and homes are located closer to the roadway, reflecting a more suburban community. Notable natural features include the entrance to the Guilford Land Trust's Westwoods natural area, located at the intersection of Route 146 and Sam Hill Road. Westwoods features over 32 miles of trails and is the largest recreational area in the Town, running adjacent to the Long Island Sound. At the eastern end of the segment, the roadway crosses the West River.

Zoning and Land Use

Land use through this segment remains largely rural, with R-5, R-6, and R-3 zoning districts present. R-3 zoning begins as the route approaches River Street and the Town Center, with housing density increasing in this area. This segment is located outside the Coastal Area Management Boundary.

Transportation Characteristics

Traffic Volumes and Crash History

Traffic volumes begin to increase along this segment as Route 146 approaches the Guilford Town Center, with weekday ADT in 2019 exceeding 4,200 vehicles. This area was not identified as having high crash frequencies. There was one recorded traffic fatality in this segment in 2022, when a driver traveling on Route 146 overturned their vehicle near Sam Hill Road.

Roadway Characteristics

Along the western portion of this segment, Route 146 features narrow shoulders and winds through densely forested areas and marshlands. At the eastern end of this segment, as the road continues toward the Guilford Town Center, the roadway begins to widen, and sidewalks are present along both eastbound and westbound lanes and separated from the shoulder by grass medians from the West River bridge to River Street. Shoulders are wider and could accommodate

Entrance to Westwoods, Guilford (VHB)

Water Street at West River, Guilford, May 2023 (VHB)

cyclist traffic when future improvements are programmed for this portion of Route 146 without needing to widen the road.

Flood Risk

A large portion of this segment of Route 146 is also located within FEMA Flood Zone AE.

Frequent flooding of the bridge over the West River has been documented by the Town of Guilford and local residents, with flooding occurring as often as on a monthly basis with full moon high tides. Intense rainfall also leads to bridge flooding and prevents access across the bridge, requiring diversion up to Route 1 along narrow residential streets. Future improvements will need to account for the increased flooding risk and incorporate design elements to mitigate flood risk while remaining sensitive to protecting surrounding natural wetlands and coastal resources.

Figure 3.11: Guilford Town Center Segment

Guilford Town Center

This segment runs along Route 146/Water Street/Boston Street from River Street to the intersection with Route 1, through Guilford's Town Center and past the historic Guilford Green. Similar to Branford's Town Center, compact land development reflects the colonial land patterns of when the Town was first settled, and considerable pedestrian traffic around the Green makes for a very different experience from that of the rest of the corridor. Many historic structures can be found and the central core of Guilford's commercial area is within the Town Center.

Historic and Natural Features

Historical Characteristics

Guilford Town Center National Historic District

The Guilford Town Center National Historic District encompasses approximately four square miles, bounded on the west by the West River, on the north by I-95, on the east by East Creek, and on the south by the Long Island Sound. East-west traffic travels through the District on Boston Street/Route 146. There are more than 700 structures in the District, with both residential and commercial uses and spanning various ages and designs. Among these contributing structures are:

- David Palmer House, 68 Water Street
- Joseph Parmellee House, 54 Water Street
- Italianate Villa House, 41 Water Street
- Increase Pendelton House, 30 Water Street
- Wyllis Eliot House, 20 Water Street
- Eliot House, 103 Whitfield Street
- Thomas Burgis II house, 85 Boston Street
- Hyland-Wildman House, 84 Boston Street
- Thomas Griswold House, 171 Boston Street

Originally settled in 1639, Guilford had an economy, much like Branford's, that was primarily centered around agriculture and fishing until the mid-twentieth century. Unlike Branford, however, the Industrial Revolution did not lead to substantial development within Guilford. The focal point of the District is Guilford Green, a 7.7-acre open space which has historically served as the center of the Town. Land use surrounding the Green is diverse, with several civic buildings, including the Town Hall and Public Library, several churches, shops, professional offices, and single- and multi-family homes all intermixed. Dominant architectural styles include Colonial, Federal, Greek Revival, Italianate, and Mansard.

Today, the community remains largely suburban, with many of the architectural styles still present and many of the homes still intact. The Town Green has remained virtually unaltered since its original construction in 1639, contributing to the historical significance of the Town.

Local Historic Districts

The Town of Guilford also contains two Local Historic Districts (LHDs). LHDs are established by municipalities in accordance with standards set by the Connecticut Historical Commission and Connecticut State Law.

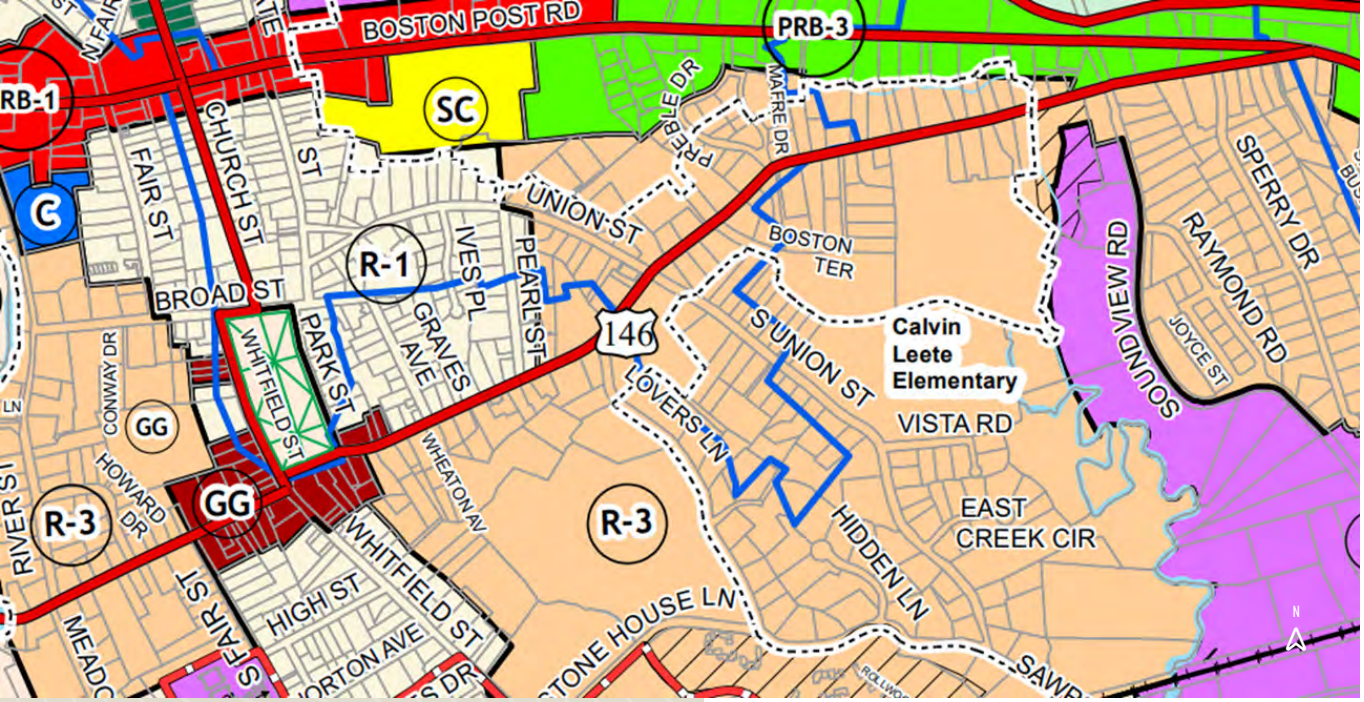


Figure 3.12 | Guilford Town Center Zoning Districts

- Commercial (C)
- Guilford Green (GG)
- Marine Commercial (MC)
- Post Road Business 1 (PRB-1)
- Post Road Business 2 (PRB-2)
- Post Road Business 3 (PRB-3)
- Post Road Business 4 (PRB-4)
- Shopping Center (SC)
- Business Mixed Use (BMU)
- State Street North District (SSN)
- Industrial (I)
- Residential-1
- Residential-2
- Residential-3
- Residential-4
- Residential-5
- Residential-6
- Residential-7
- Residential-8
- RS-1
- Sachems Head Assn
- Old Quarry Assn

- **Guilford Town Center Historic District.** This LHD includes the Guilford Town Green and its surrounding properties. It includes Boston Street, Park Street, Whitfield Street, Broad Street, State Street, Church Street, Fair Street, and a single property on Market and North Streets, as well as one on Conway Drive. Route 146 passes through this LHD along Boston Street.
- **Whitfield Local Historic District.** This LHD encompasses most of Whitfield Street south of the Town Green and a segment of Old Whitfield Street, along with South Fair and High Streets. This neighborhood is situated south of the Town Center and is also listed as part of the National Historic District. The District is home to the Henry Whitfield House, the oldest structure in the District, which is also designated as a National Historic Landmark.

While Route 146 does not pass directly through this District, it is still a contributor to the overall historical character of the corridor.

Natural Characteristics

The dominant natural feature of this segment is the Guilford Green, a 7.7-acre park-like space in the center of the Guilford Town Center District. Moving east past Guilford Green, historic stone walls, open fields, and the Alder Brook cemetery mark the dominant natural features of the roadway through this segment. Finally, just before the intersection with Route 1, a small section of post and cable guardrail are still present along a small wetland area adjacent to the westbound lane.

Zoning and Land Use

Zoning through this segment is varied, ranging from R-3 just west of River Street to South Fair Street, to the Guilford Green and Post Road Business-3 districts at the eastern terminus of Route 146. Much of the segment is contained within the Guilford Town Center District, which features residential and commercial land uses, as well as the Gateway Overlay District across from Guilford Green. A portion of Route 146 through this segment also runs through the Coastal Area Management Boundary, from roughly Lovers Lane to just past Mafre Drive. This segment of the corridor features the most diverse zoning, reflecting its denser land uses and functions as an economic and civic core for the Town. **Figure 3.12** depicts the zoning districts located within the Guilford Town Center.

Route 146 over West River in Guilford, January, 2024 (Claudia Bartlett)

Thomas Griswold House, 171 Boston Street, Guilford (Josh Lecar/CTDOT)

Transportation Characteristics

Traffic Volumes and Crash History

Traffic volumes in Guilford Town Center were the highest along the corridor. Data collected near Pearl Street in 2019 showed a weekday ADT of 6,300 while data in 2023 collected in the same location showed a volume of 5,965 vehicles. Counts in 2019 were conducted in July, while 2023 counts were conducted in February, which likely explains the difference in volume, as summer-season tourists were not present.

Two of the three highest crash frequency intersections along the corridor are located in this segment:

- Route 146 at Soundview Road and Goose Lane (Soundview Road Extension)—14 crashes
- Route 146 at Route 1-Guilford—13 crashes

Roadway Characteristics

Like the Branford Town Center, the roadway in the Guilford Town Center features sidewalks of various materials, including concrete and cobblestone, along with several crosswalks, some striped and some made of brick or cobblestone. The roadway is wide, accommodating parking along both sides of the street immediately surrounding the Town Green. Several driveways and parking lots are present along the segment as well. Within the Green, decorative lighting and streetscape amenities such as benches are present. Passing the Green and continuing east toward Route 1, the sidewalk narrows and is contained to only the north side of the road in some sections, and shoulders narrow. New sidewalks on the north side of the road were recently built east of Alder Brook Cemetery. They cross to the south side of the road after about 500 feet then continue all the way up to Route 1, except for a small gap that remains at a creek crossing that the Town of Guilford is working to address.

Much like the Branford Town Center, the presence of a mostly complete sidewalk network in this area, coupled with frequent crossings, allows for greater pedestrian activity, while more dense land use creates more appealing conditions for cycling.

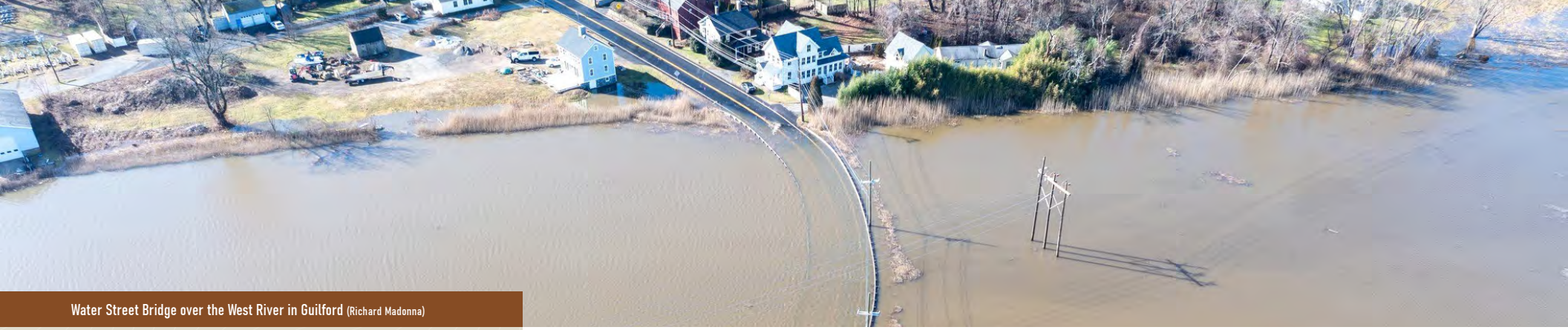
Flood Risk

The western portion of this segment along Water Street/Route 146 is located in FEMA Flood Zone AE (100-year flood zone), which encompasses much of the Guilford Town Center District. Moving east on Boston Street past the Guilford Green, the roadway crosses over a tidal creek near Soundview Road/Goose Lane which is another area of frequent flooding. Future roadway projects and land development projects within the Guilford Town Center will need to consider resiliency measures to mitigate the area's vulnerability to flooding, both from coastal sea level rise as well as extreme weather events.

CTDOT Route 146
CORRIDOR MANAGEMENT PLAN

SECTION 4

Coastal Flooding and Resiliency Assessment



Water Street Bridge over the West River in Guilford (Richard Madonna)

Coastal Flooding and Resiliency Assessment

A major concern with protecting and enhancing the intrinsic qualities of the Route 146 corridor is the impact that climate change and sea level rise will have on existing structures, roadway access, and natural features that make up the character of the road. Flooding from major storms and cumulative effects of sea level rise will threaten more properties and buildings than in the past.

As part of the *Route 146 Corridor Study Existing Conditions Report* that was developed in 2021, coastal flood risk was evaluated across the Route 146 area. The evaluation included a review of water levels and wave and wind speeds from published sources such as the FEMA, NOAA, and USACE. Additionally, approximate locations of future flood zones with increased flood risk near Route 146 were identified.

The analysis from the *2021 Existing Conditions Report* looked at the 100-year storm frequency for the area. A 100-year storm event has a 1 percent chance of occurring in any given year. This is an important metric for FEMA, because it uses the 100-year event to produce its Flood Insurance Rate Maps (FIRM).

The analysis also reviewed the potential impacts of 20 inches of sea level rise, as this is the projected 2050 planning threshold recommended by the Connecticut Institute for Resilience and Climate Adaption (CIRCA). CTDEEP has adopted this threshold for the purposes of reviewing municipal evacuation plans and hazard mitigation plans. Additionally, as referenced in Governor Lamont's Executive Order No. 3, the 2018 Act Concerning Climate Change Planning and Resiliency requires that municipalities and the state use recent forecasts by NOAA and CIRCA for the 20 inches of sea level rise by 2050 as part of preparing municipal Plans of Conservation and Development and revisions to the state Plan of Conservation and Development. There are 20 FEMA transects across the Route 146 corridor study area. A transect is a line taken perpendicular to the shoreline. FEMA uses cross-shore transects that are placed at specific intervals along the shoreline of the open coast area to predict the extent of floodwaters over land. To determine the future flood zones and elevations across the study area, these 20 transects were re-analyzed with 20 inches of sea level rise. A desktop coastal engineering analysis was performed to help predict the extent and depth of the future flood risk.

Data from the 2021 analysis of flood risk from 20 inches of sea level rise was used as part of the CMP effort to produce more detailed maps of areas along Route 146 that would become more inundated in the future. Potential countermeasures for the increased flood risk were also reviewed in this effort. The detailed maps are included in this section and the Existing Conditions Report can be found in **Appendix I**.

A "bathtub" model showing stillwater flooding was produced to show how 20 inches of sea level rise could impact the road in more frequent, major and minor storm events. The model shows the inundation from the combination of the astronomical tide and

design event storm surge, not including wave impacts. **Figures 4.1–4.10** show the stillwater flood events that were modeled.

This analysis showed that while Route 146 is already vulnerable to coastal flooding, these problems will be exacerbated by future sea level rise.

Figure 4.1

Sea Level Rise Model

Mean Higher High Water = EL. +1.2' NAVD88

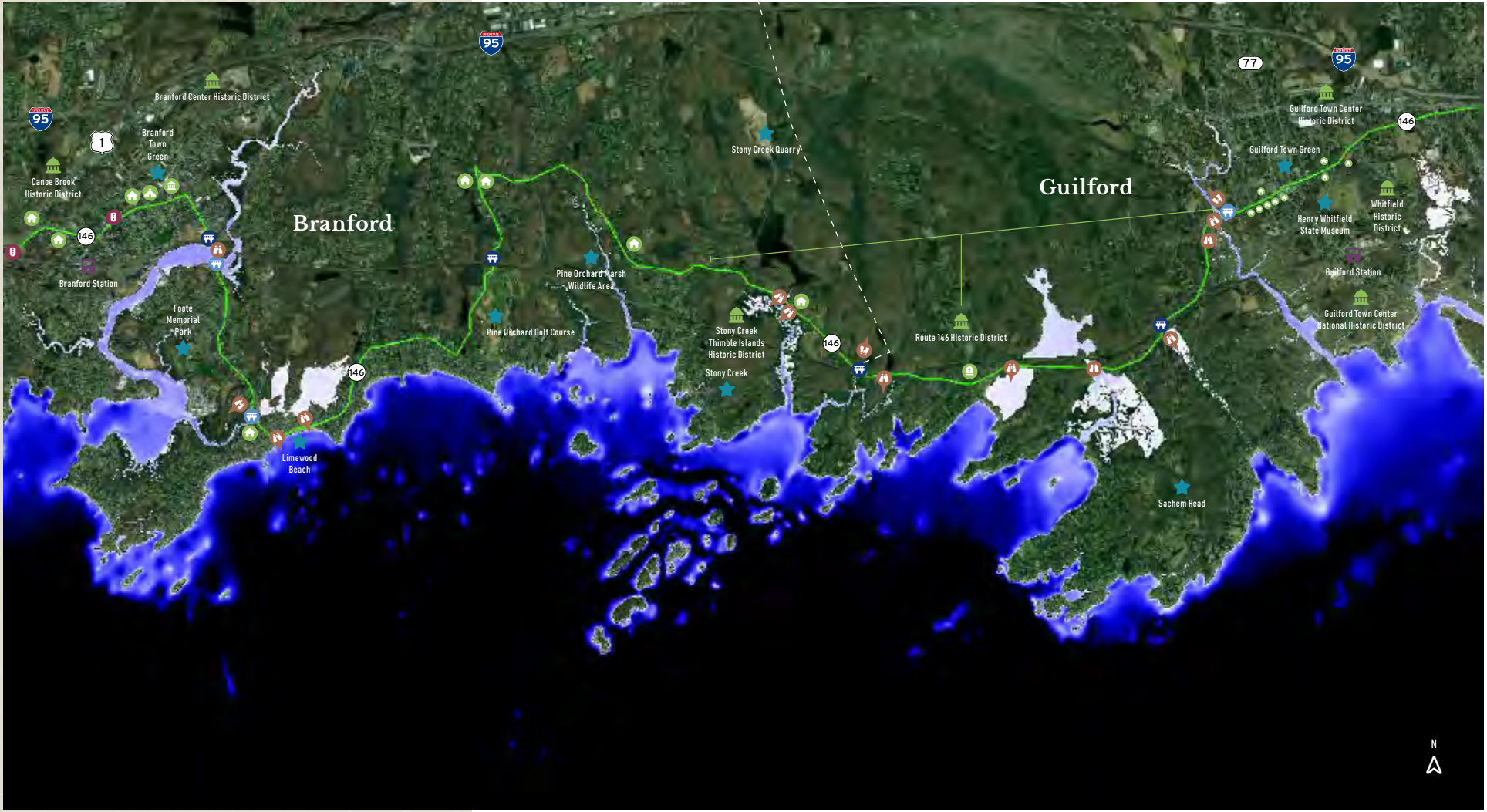


Figure 4.2

Sea Level Rise Model

Mean Higher High Water +20" Sea Level Rise = EL. +2.9' NAVD88

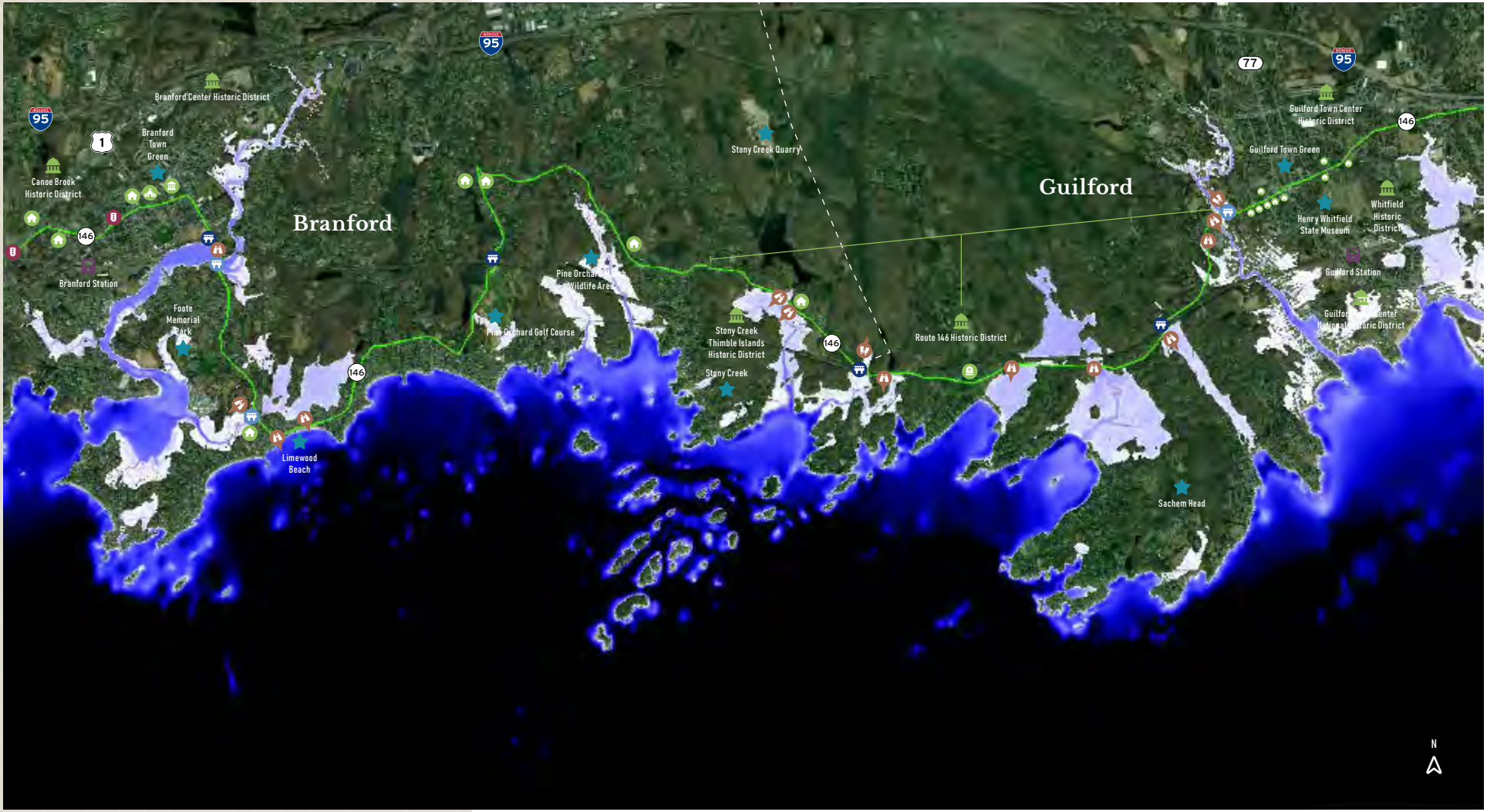


Figure 4.3

Sea Level Rise Model

1-Year Storm Water Level = EL. +4.3' NAVD88

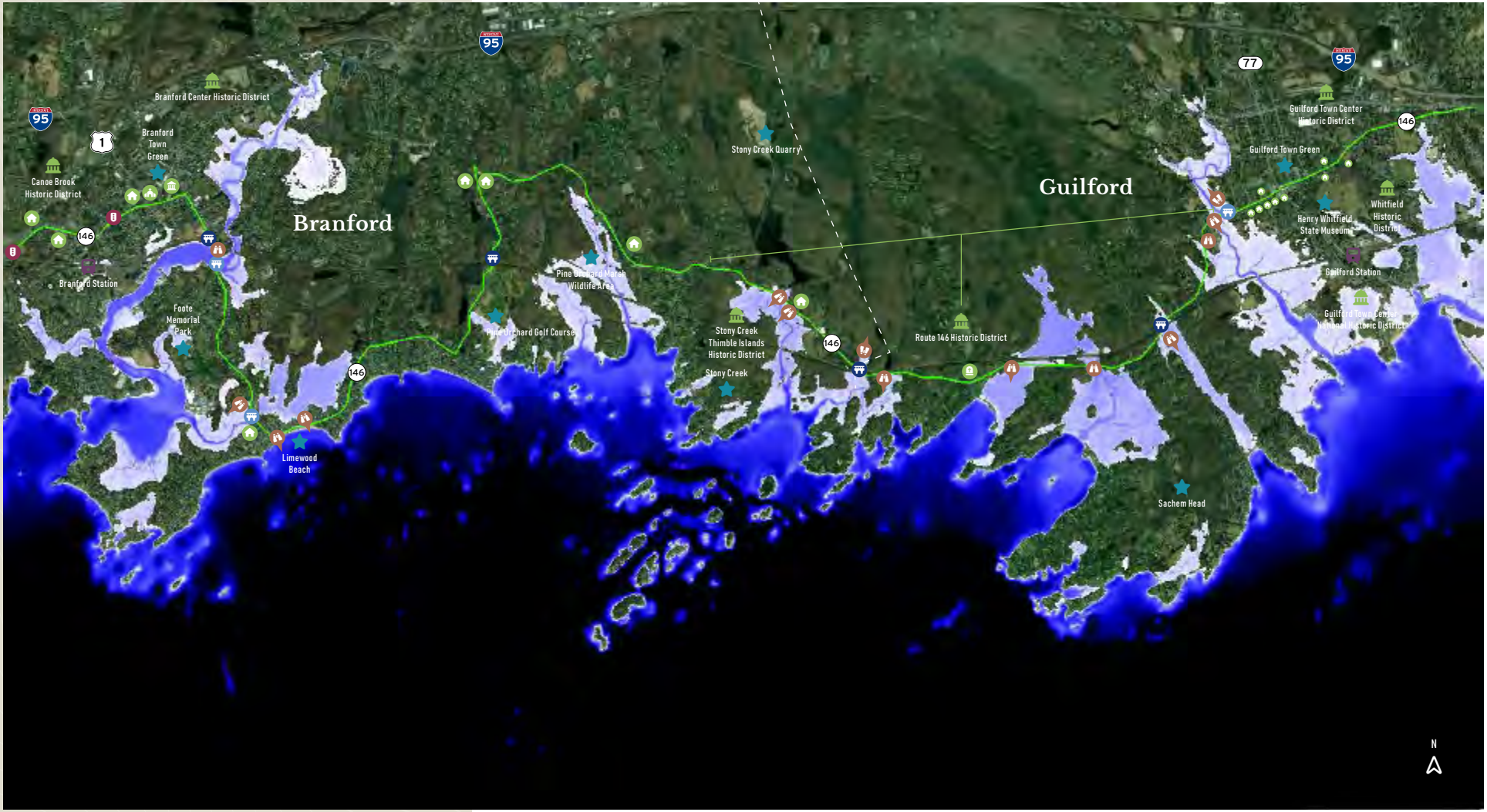


Figure 4.4

Sea Level Rise Model

1-Year Storm Water Level +20" Sea Level Rise = EL. +6.0' NAVD88

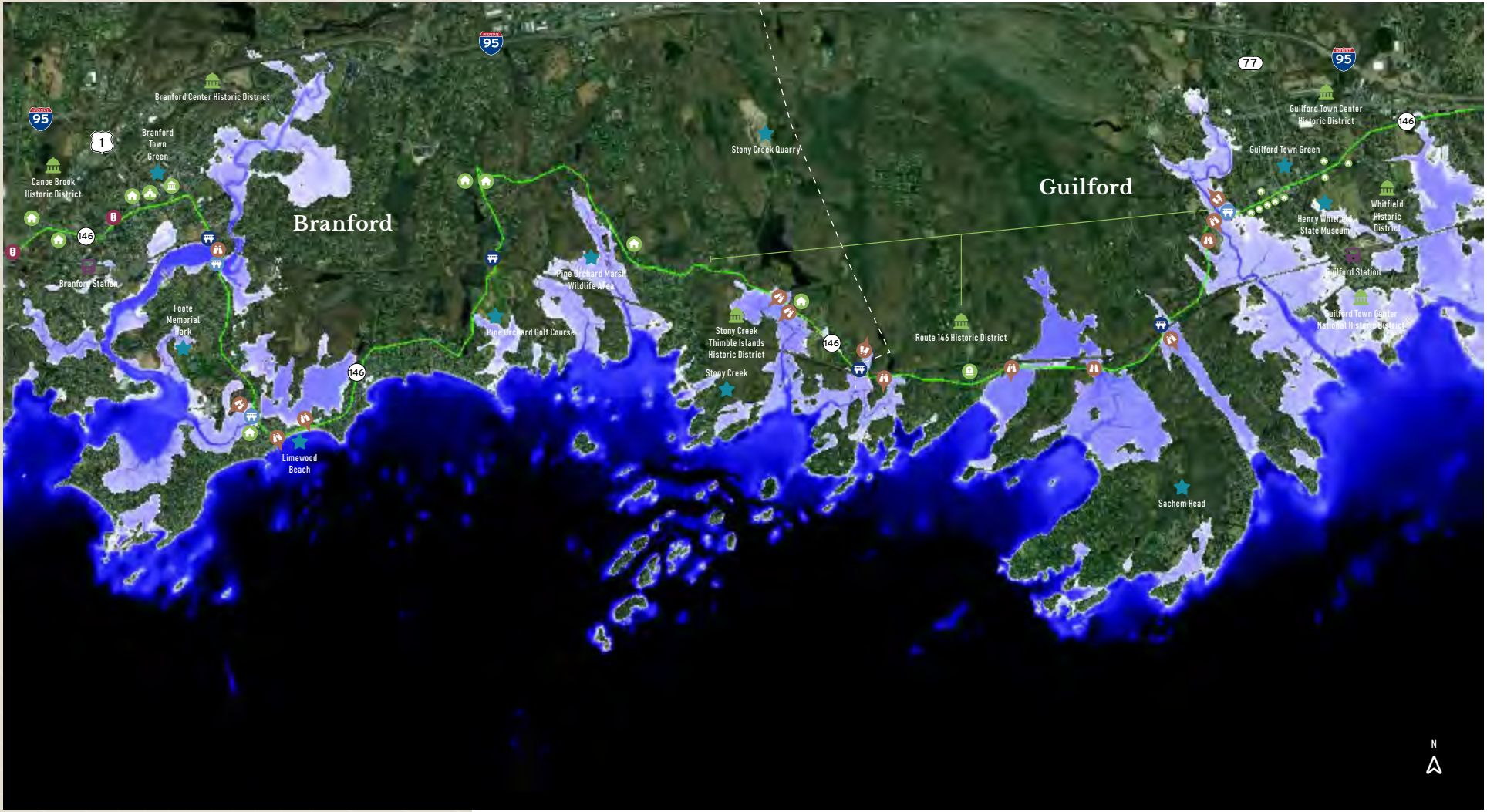


Figure 4.5

Sea Level Rise Model

10-Year Stormwater Level = EL. +6.1' NAVD88

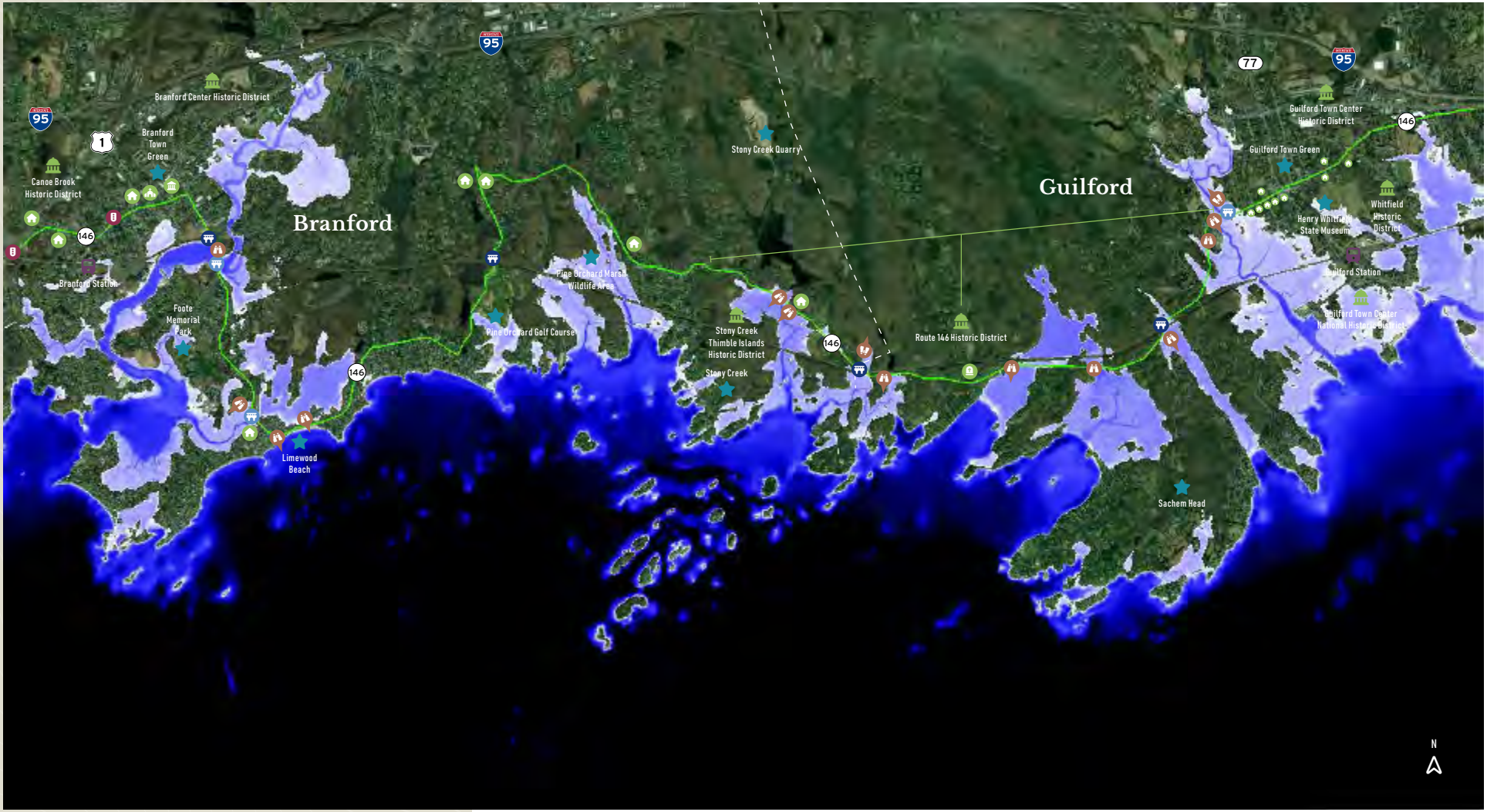


Figure 4.6

Sea Level Rise Model

10-Year Stormwater Level +20" Sea Level Rise = EL. +7.8' NAVD88

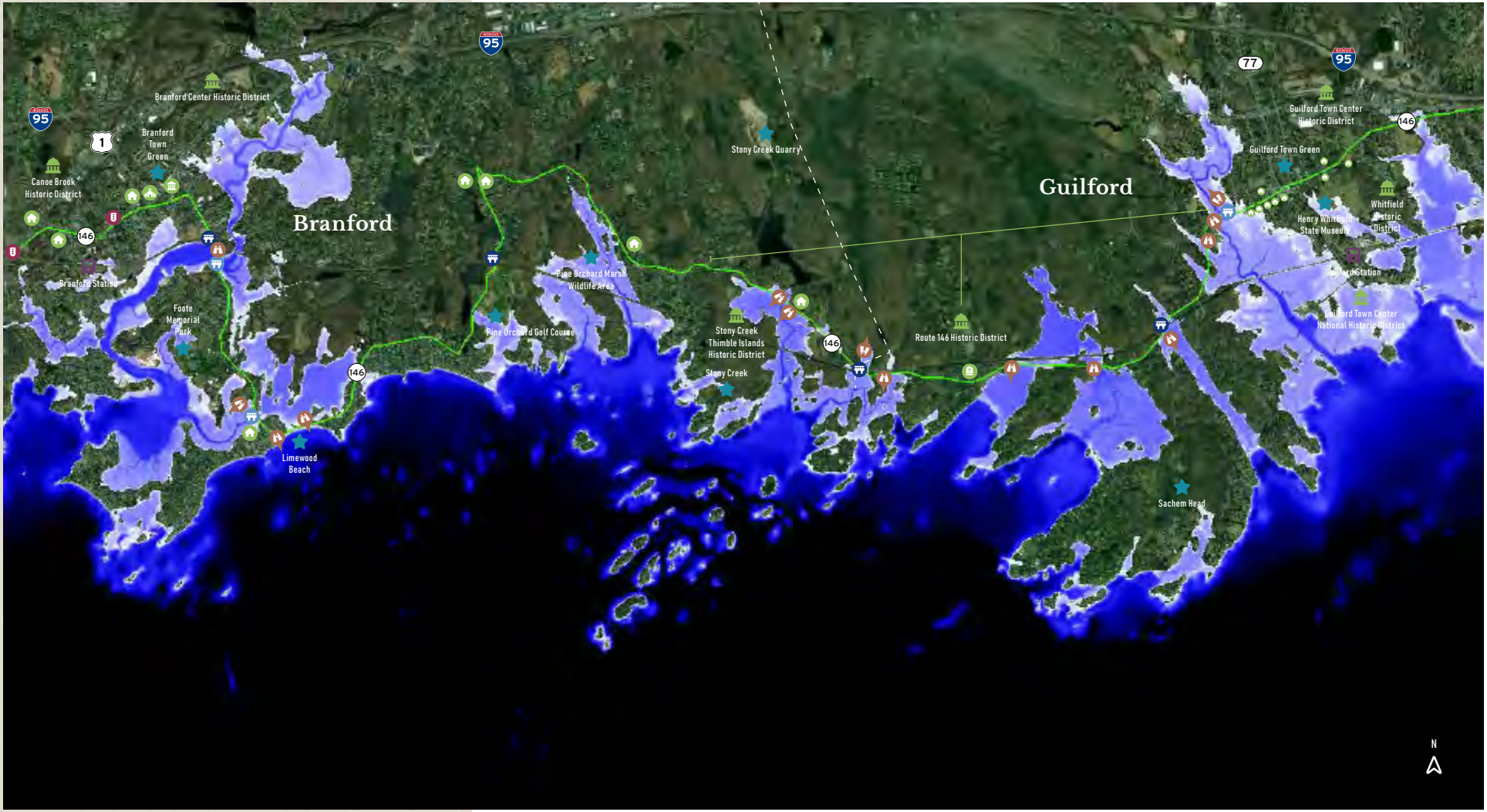


Figure 4.7

Sea Level Rise Model

50-Year Stormwater Level = EL. +8.0' NAVD88

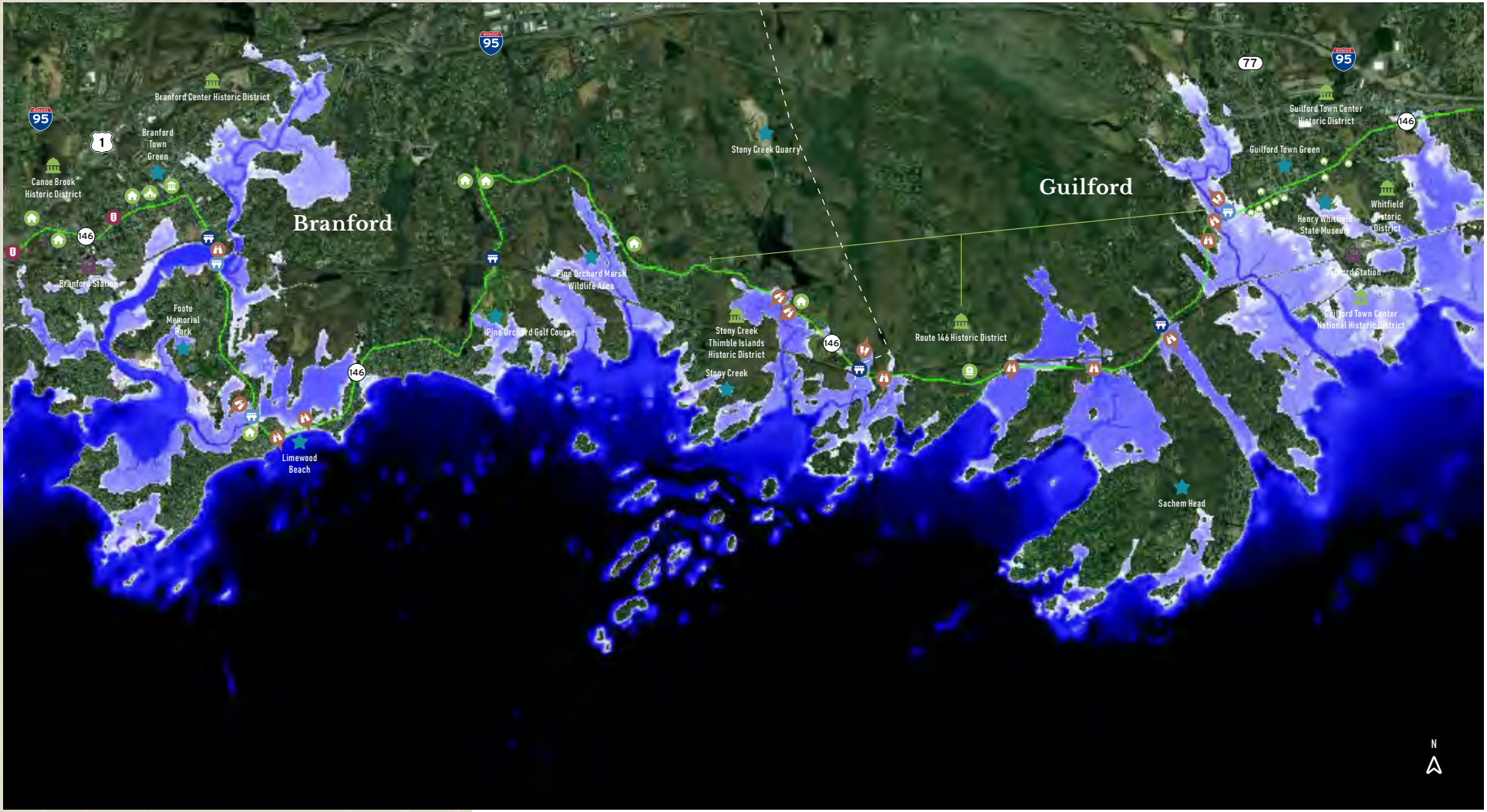


Figure 4.8

Sea Level Rise Model

100-Year Stormwater Level = EL. +9.1' NAVD88

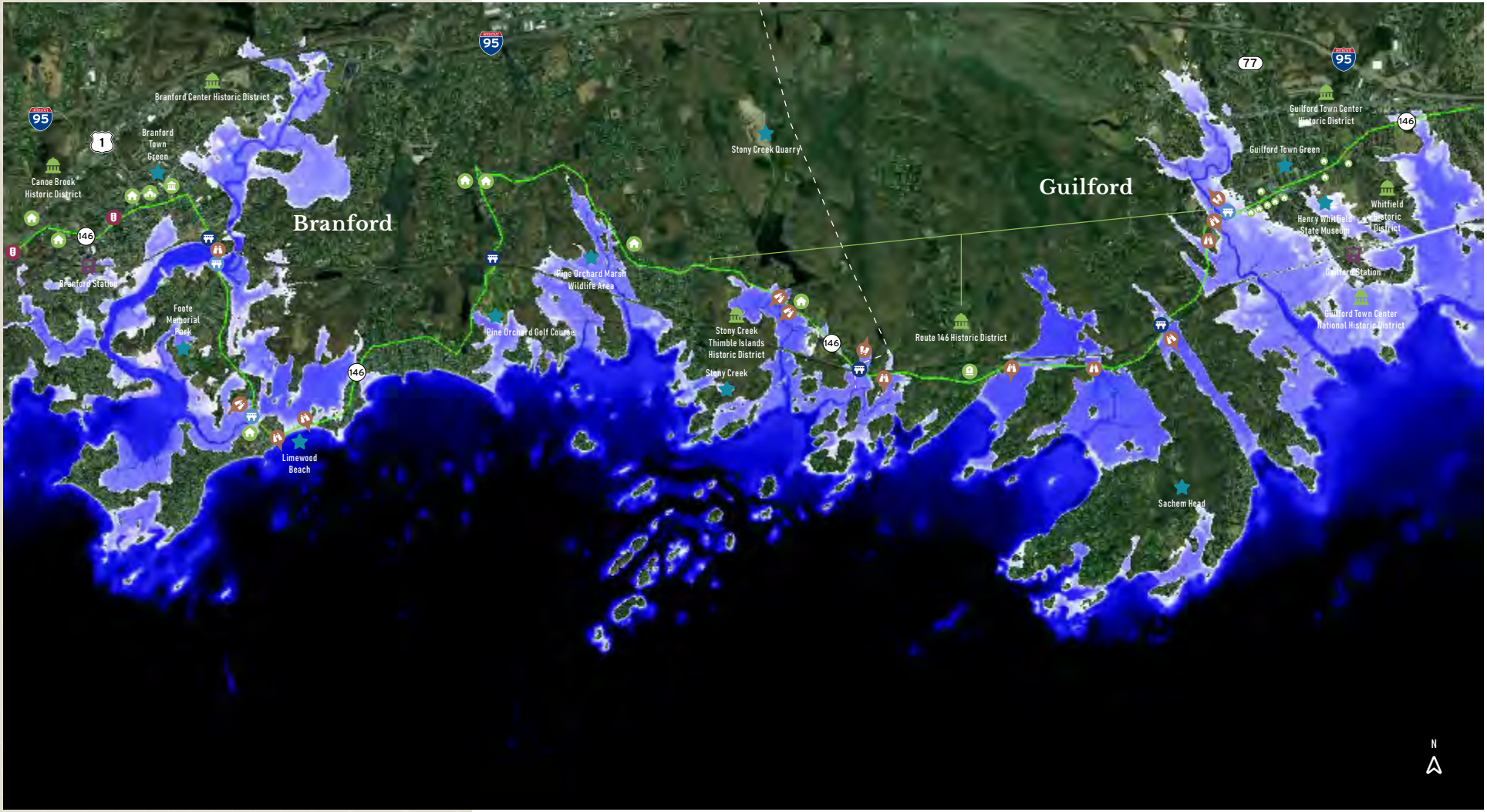


Figure 4.9

Sea Level Rise Model

50-Year Stormwater Level +20" Sea Level Rise = EL. +9.7' NAVD88

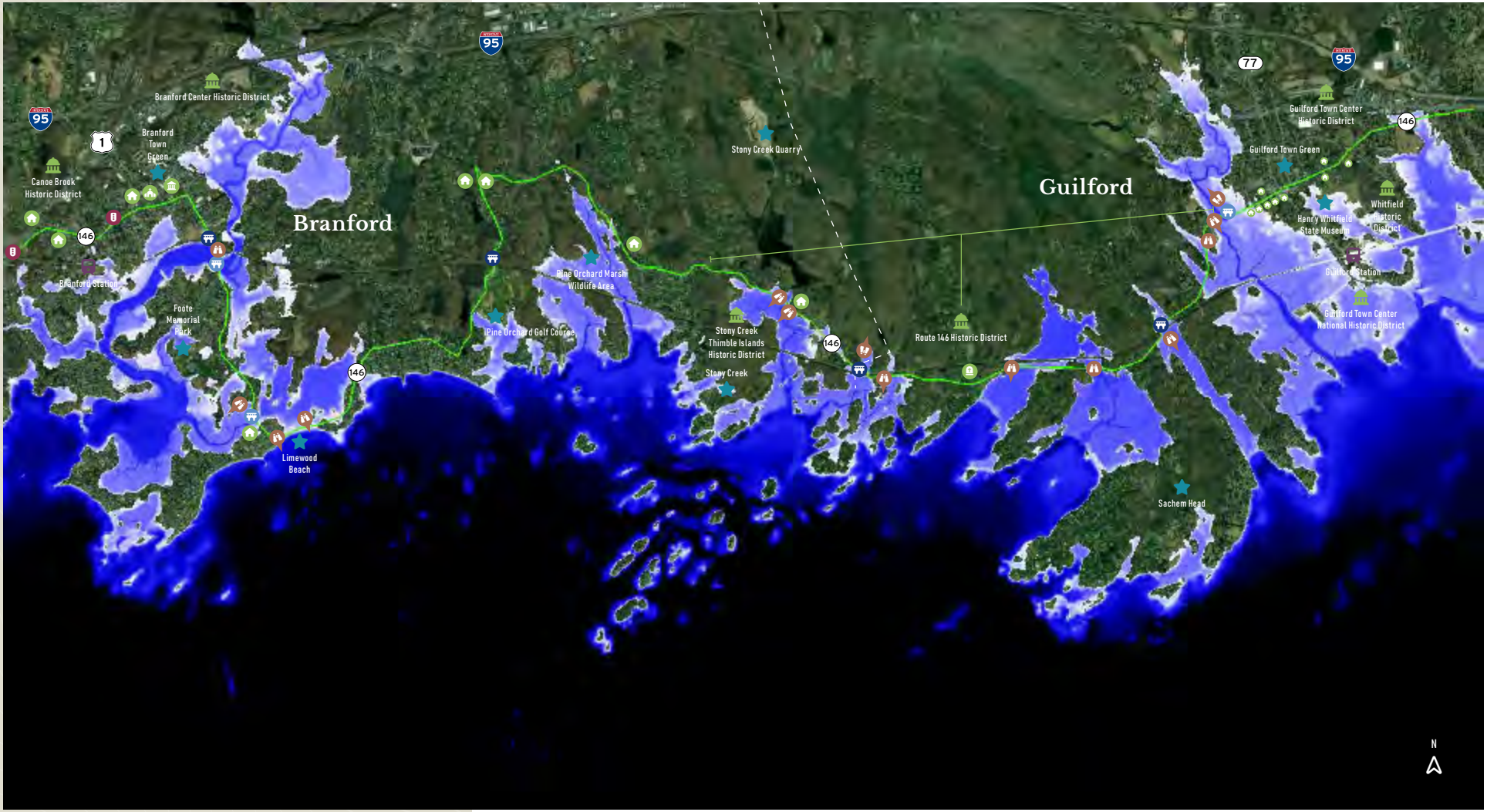
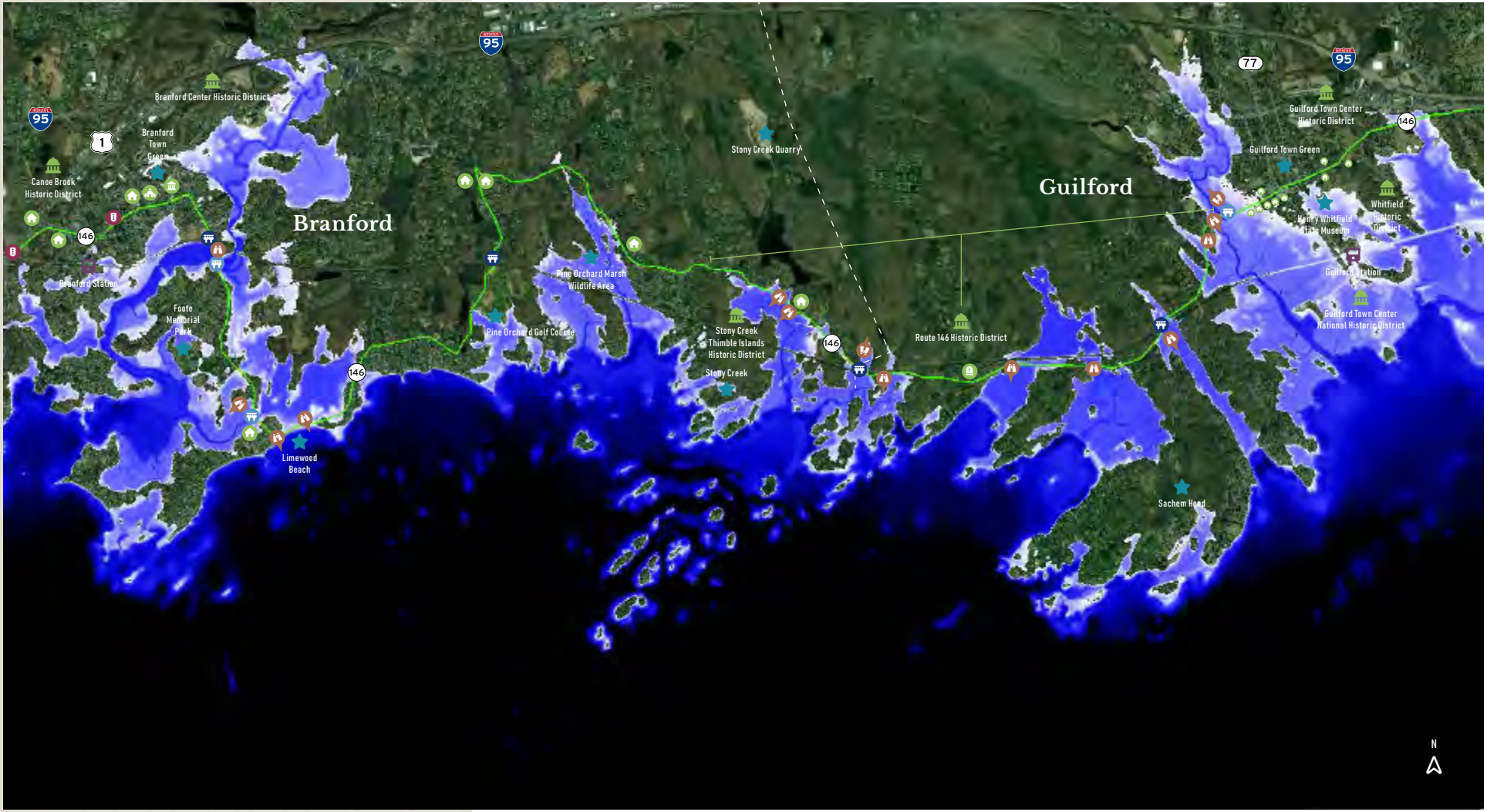


Figure 4.10

Sea Level Rise Model

100-Year Stormwater Level +20" Sea Level Rise = EL. +10.8' NAVD88



CTDOT Route 146
CORRIDOR MANAGEMENT PLAN

SECTION 5

Strategies for Preserving the Corridor

Route 146 Public Information Meeting, November 14, 2023 (VHB)

Strategies for Preserving the Corridor

One of the major tasks of developing the Corridor Management Plan (CMP) was to develop strategies for maintaining and enhancing the intrinsic qualities of Route 146, along with addressing the primary concerns that were investigated for the *Route 146 Existing Conditions Update* and through the public outreach.

These strategies are meant to provide guidance on how to approach aspects of the corridor rather than provide specific details regarding where and how engineering solutions and other actions will be performed. The strategies are listed under overarching areas to organize them into similar groups. There are seven strategy areas covering the 24 primary strategies for the CMP.

What Do We Mean by Strategies?

A strategy is a plan of action or policy to achieve a major or overall aim. Strategies are being used in the context of the CMP as a way to describe an approach to future projects so that they incorporate specific goals and considerations as the projects are developed. However, the strategies are not meant to advance specific projects, rather to guide how those potential projects may develop. They also involve ways to address existing and future conditions. For example, the strategies related to flooding are meant to address future challenges along the corridor from climate change and position the corridor to be more resilient to sea level rise, erosion, and washouts during storms that are predicted to worsen along the Connecticut coastline.

Overall Goal of the Strategies

The strategies for Route 146 have been developed with the overall goal of preserving and protecting the intrinsic qualities of the Route 146 corridor in Branford and Guilford. These intrinsic qualities include, as described elsewhere:

- The narrow, undulating, and curving roadway
- Scenic vistas from the road to the Long Island Sound, coastal marshes, ponds, and rivers
- Proximity to water bodies
- Historic architecture fronting the roadway
- Rural farmland and agricultural uses adjacent to the road
- Geologic features, including ledge and rock outcroppings
- Stone, rock, and other historical walls
- Mature trees along the roadway that shade and present a wooded roadway corridor.

Strategies will address issues such as flooding and bicycle and pedestrian access while being aware of the possible impact of potential projects to the qualities that make Route 146 a special place. Changes to the roadway should be made respecting the intrinsic qualities of the road, not at their expense.

Strategy Areas and Goals

The strategies for Route 146 are split into overarching themes of seven areas identified as A through G below. Within these areas are the 24 primary strategies for the plan. On the following pages, each area begins with an overview and explanation to orient the reader and provide contextual information on how the strategies were developed and key considerations that went into their creation.

Areas

- **A** Flooding and Sea Level Rise Management
- **B** Bicycle/Pedestrian Access and Safety
- **C** Speed Management
- **D** Roadside Safety
- **E** Intersection Safety
- **F** Maintenance Enhancements
- **G** Environmental and Historic Preservation

Goals

- Preserve Intrinsic Qualities
- Involve the Community
- Protect Natural and Cultural/ Historic Resources
- Improve Bicycle and Pedestrian Access and Safety
- Increase Climate and Sea Level Rise Preparedness
- Enhance Roadway Safety
- Maintain Infrastructure
- Balance Needs and Requirements

The above goals are supported by the strategies outlined in the following sections. Each strategy area includes a reference to the specific plan goals that it supports with a further description of how they are supported. This helps tie back these key strategies to the purpose of the plan and shows how they were developed with the goals in mind.

A. Flooding and Sea Level Rise Management

This section covers flooding, sea level rise, drainage, and climate change resiliency along Route 146. The strategies in this area support the plan goals to:

- Enhance Roadway Safety
- Protect Natural and Cultural/ Historic Resources
- Maintain Infrastructure
- Increase Climate and Sea Level Rise Preparedness

Flooding and drainage issues are frequent occurrences along the roadway, especially at low-lying areas under the railroad underpasses and near marshes and watercourses. Undersized culverts along the roadway are also known to have flooding issues. Flooding prevents people from getting to their homes, blocks evacuation routes, and isolates neighborhoods. With sea level rise expected to increase the water level by 20 inches in the next 30 years, and stronger storms as a result of climate change, impacts of flooding (from regular flooding occurrences and storm-related flooding) are expected to increase and affect more properties. Sea level rise may also impact the ecology of the coastal areas as well as community infrastructure, such as wells, housing, businesses, and travel along the coastline.

Railroad underpasses create special challenges due to their constrained horizontal and vertical clearance, and three of the four underpasses are known to flood regularly (the only one that has not been observed or reported to have the same level of flooding as the others is the bridge over the Totoket Road section of Route 146 near the Pine Orchard Golf Club). Given the rare opportunities to make any modifications to the bridges, these structures will continue to limit modifications to roadway width and vertical clearance and be constraints along the corridor for many years.

Some issues around flooding may be addressed within the right-of-way, while other flooding may be a result of water entering the roadway from outside the right-of-way, so there must be coordination between CTDOT and the Towns and property owners.

The following strategies A.1–A.4 relate to flooding and sea level rise management.

STRATEGY A.1

Review flooding area locations for site-specific context to determine most appropriate flood mitigation improvements.

Flood mitigation improvements may include raising a road section, providing a pumping station, or taking another approach, depending on the context. Consideration may also be given to retreating from frequently flooded areas or cutting off a road section to through traffic in certain areas where flooding is a continuous problem and expected to become worse. This would be a decision discussed with the community and emergency services, especially as it may affect specific properties and evacuation routes set up along Route 146.

STRATEGY A.2

Review evacuation route strategy to find safe routes to avoid flooded areas, such as developing more north/south access to Route 1 or designating other existing roads to be evacuation routes.

This can include working with SCRCOG and CTDOT on evacuation route planning. Some areas along Route 146 may not have good options for going north to Route 1, and in places where routes are available but are not designated as evacuation routes, they may not be appropriate for this purpose in their current condition. Better communication of safer evacuation/ flood avoidance routes is needed, as noted in public

Evacuation route sign, Guilford, summer 2023 (VHB)

Water on road at Leetes Island Road, Guilford, March 2024 (VHB)

comments on the strategies. This may include a more robust flood warning system to give advanced notice to drivers of flooded areas and routes they can take well before approaching areas that are flooded.

STRATEGY A.3

Identify issues at bridges and culverts to understand local flooding and review need for raised bridges, larger culverts, and structures.

This may include not just Route 146 being overseen by CTDOT, but also privately owned culverts under driveways that are adjacent to the road.

STRATEGY A.4

Review railroad underpass strategies that are specific to these bridges.

A.4.1

Evaluate the current state of the underpasses—how old are the bridges, are they in a state of good repair, when may they be replaced—to determine a timeline for potential changes/improvements.

This is the first step to understanding when there may be opportunities to adjust the design of the bridges, as the best time to make changes is when the bridges will need to be replaced or modified to serve a new rail use.

A.4.2

Review the potential for long-term solutions for addressing the low clearance/narrow bridges and flooding problems.

It is acknowledged that raising the bridges is infeasible in the foreseeable future; therefore, any other solutions should be identified with Amtrak and CTDOT.

B. Bicycle and Pedestrian Access and Safety

The goals of this strategy area are safety and connectivity for people biking and walking. This strategy area supports the plan goals to:

- Improve Bike and Pedestrian Access
- Enhance Roadway Safety
- Involve the Community
- Balance Needs and Requirements

Bicycle and pedestrian concerns have come up regularly with members of the public, the CWG, and stakeholders interviewed for the plan as well as during a review of documents related to the corridor and in field reviews. From field observations and discussions with stakeholders, people frequently bicycle on the road to experience the beauty of the roadway and enjoy the closeness to the coast.

In addition, CTDOT created a designated bicycle route system as part of the 2009 Active Transportation Plan as a means to prioritize and coordinate investments to facilitate long distance cycling, which included Route 146. The 2019 update to the Active Transportation Plan removed the long-distance route map and instead shifted focus to the overall bicycle network map. This change represents a shift in policy to support short to moderate distance connections between destinations that cyclists want or need to get to on a regular basis, as opposed to recreational or leisure long-distance cycling.

In lieu of a state-specific long-distance map, Connecticut has started coordinating with the American Association of State Highway and Transportation Officials (AASHTO), in partnership with Adventure Cycling, to establish true long-distance interstate cycling routes. Connecticut has two long-distance cycling routes registered with Adventure Cycling:

- U.S. Bike Route 7, a north-south route traversing the western side of the state
- The currently undeveloped corridor U.S. Bike Route 301, which stretches from New Haven to the Rhode Island border through coastal Connecticut.

Due to lack of road network connectivity in some parts of coastal Connecticut, it is likely that at least a portion of Route 146 will be included in U.S. Bike Route 301.

The diversity of land uses and population density along the corridor create different demands for biking and walking traffic, which will necessitate different strategies, depending on the area. For example, the town centers cannot be looked at the same way as the more rural, lower-density areas in the middle of the Route 146 corridor. Identifying specific issues and contextual elements at these different locations, and their constraints, is important to determining what approach should be taken. In addition, there is a desire to encourage pedestrian and bicycle activity, particularly around the town centers of Guilford and Branford.

Speeding has been brought up as a major concern for people bicycling and walking in the corridor. High automobile traffic speeds discourage bicycling and walking because of the real and perceived concerns about traffic safety from high-speed traffic. Traffic calming measures (***See "C. Speed Management" on page 74***) would need to be implemented to create safer conditions for biking and walking, especially where separated facilities cannot be provided.

As of 2023, CTDOT now requires a Complete Streets Controlling Design Criteria and Justification Process to improve safety and mobility for people walking, biking, and using public transportation:

- **https://portal.ct.gov/DOT/CTDOT-Press-Releases/2023/CTDOT-Announces-New-Complete-Streets-Design-Criteria-to-Improve-Roadway-Safety-and-Enhance-Mobility**

Main Street, Branford, parking and pedestrian, July 2024 (VHB)

The Complete Streets Controlling Design Criteria are being incorporated on all future state roadway projects in a statewide effort to create bicycling and pedestrian facilities along state roadways and state-funded projects.

The following strategies B.1–B.5 relate to bicycle and pedestrian access and safety.

STRATEGY B.1

Review connectivity along the road for walking and biking to improve overall access for bicyclists and pedestrians.

Connectivity of pedestrian and bicycle facilities along the roadway includes developing and maintaining infrastructure to provide safe access for these modes of transportation. However, it may not be possible to provide this infrastructure in all parts of the corridor due to constraints from intrinsic features listed at the start of this document, such as wetlands, narrow right-of-way, slopes, and rock outcrops. Historic properties and structures are very close to the roadway in several locations, limiting the opportunities for dedicated walking and bicycling facilities. This strategy is to review where infrastructure may be needed and if it can be accommodated in the context-specific locations.

STRATEGY B.2

Review alternative routes for bicyclists and pedestrians in the most constrained sections for access.

Where pedestrian and bicycle infrastructure to increase safety cannot be implemented, safer alternative routes should be considered, with wayfinding signage to direct users. It is understood that some parts of the Route 146 corridor do not have good or feasible options for providing alternative routes.

STRATEGY B.3

Reduce vehicle speeds to improve bike and pedestrian safety (covered mainly under Speed Management section).

If dedicated infrastructure cannot be implemented, reducing automobile and truck speeds is another strategy that can be considered to make the corridor safer for people biking and walking. More detail about this is provided in the Speed Management strategy area section.

Route 146, Boston Street, Guilford, people in crosswalk (VHB)

STRATEGY B.4

Review pavement/shoulder space available along the road to provide space for biking and walking, especially in constrained areas.

Many parts of the corridor lack adequate shoulder space for people walking and biking, including areas without sidewalks. This strategy focuses on areas of the corridor where steep slopes and tight curves create special hazards for people biking and walking in the roadway, and where creating paved shoulder would have safety benefits.

STRATEGY B.5

Evaluate railroad underpasses for bicycle/pedestrian improvements and access, such as modifying bridges during replacement, an alternative pedestrian tunnel, or any short-term improvements (see also railroad underpass strategies under the Flooding and Sea Level Rise Management section).

Any major changes to the current state of the railroad bridges have a long timeline, but when they happen, bicyclists and pedestrians should be considered in a replacement. Short-term improvements, where possible, could be reviewed as part of conversations with Amtrak on the future of the bridges.

C. Speed Management

The intent of this strategy area is to manage travel speeds on Route 146 to stay at or below the posted speed limit. Keeping speeds low is critical to reducing the frequency and severity of crashes. This strategy area supports the plan goals to:

- Improve Bike and Pedestrian Access
- Enhance Roadway Safety

Over the course of the public outreach early in the plan development, speeding along Route 146 was brought up frequently by community participants, elected officials, and both the Branford and Guilford police departments. High speed traffic creates unsafe conditions along the roadway, and large vehicles produce road and traffic noise that is a quality of life issue for residents. Traffic data collected by the Planning Team supports concerns that drivers are speeding in several areas of the corridor. In addition, as discussed in the Bicycle and Pedestrian Access and Safety section, speeding discourages bicycle and pedestrian activity (***See "B. Bicycle and Pedestrian Access and Safety" on page 71***). In some locations where right-of-way is most limited, speed management for roadway traffic may be more attainable and effective than dedicated bicycle and pedestrian infrastructure.

Posted speed limits along Route 146 differ between Branford and Guilford. In Branford, the speed limit is signed for 25 mph along its entire stretch. In Guilford, the speed limit varies from 25 mph to 35 mph depending on location. Based on community feedback, it is desirable to lower the speed limit to 25 mph in Guilford to discourage speeding and mirror the speed limit in Branford. Reducing the speed limit to 20 mph may be appropriate in the more dense, urban areas of the corridor such as the Branford Green and Guilford Green and could be implemented by applying to designate these areas as pedestrian safety zones. The process established in CT General Statute 14-307a—Establishing a Pedestrian Safety Zone—must be followed to revise speed limits under this method, and it may be necessary to implement traffic calming measures to slow speeds in conjunction with speed limit changes, as speed limit signs themselves do not change the road environment in a way that requires drivers to reduce their speeds.

The Office of the State Traffic Administration (OSTA) has authority over setting speed limits in the state. It is important to understand its process for setting speed limits in discussing speed management. In general, it follows these steps:

- The Local Traffic Authority (LTA)—usually the local police department—requests revisions to the speed limit.
- OSTA conducts an investigation and makes a recommendation on the speed limit.
- The LTA can agree or disagree with the recommendation. OSTA produces a Traffic Investigation Report (TIR) that explains the process and the final recommendations.

Additional information about the OSTA speed limit setting process can be found in the document *"Guidelines for Establishing Speed Limits in Connecticut"* that can be found on CTDOT's website.[4]

To address speeding on a roadway, traffic calming measures can be used to modify drivers' perception of the area and expectations of appropriate travel speed. "Traffic calming" refers to various design measures—mainly physical measures—that are used to reduce the negative effects of motor vehicle use, alter driver behavior, support the livability and vitality of residential and commercial areas, and improve conditions for people bicycling and walking. This is accomplished by slowing down and/or reducing traffic speed along a single street or street network. These measures

4 https://portal.ct.gov/dot/osta/speed-limit-certificates-and-listings

Sybil Avenue, Branford, speed feedback sign, summer 2023 (VHB)

can include horizontal and vertical features such as speed humps, raised crosswalks, road narrowing, chicanes, curb extensions, and other physical and psychological interventions in the road layout. Other key goals of traffic calming include reducing collision frequency and severity, reducing the need for police enforcement, and reducing cut-through motor vehicle traffic.[5] While vertical traffic calming measures have not historically been used on state highways, the recent city installation of a raised crosswalk on State Route 337 adjacent to a school in New Haven represents a new flexibility in CTDOT's policy. CTDOT's Complete Streets Controlling Design Criteria will require greater consideration of pedestrian and bicycle safety for future projects. Therefore, traffic calming measures may be considered as a critical part of the toolkit to respond to speeding concerns on Route 146.

Enforcing existing speed limits should continue to be a priority for the roadway, especially in areas where speed data has identified occurrences of excessive speeding. Efforts of local police departments in Branford and Guilford via on-the-ground enforcement and use of speed feedback signs are critical to addressing immediate speed issues while potential geometric changes via traffic calming are still being developed. While this type of speed enforcement may work for just short-term behavior change, it is an important part of the speed management toolbox.

Another option for addressing speeding is automated speed enforcement, which was recently permitted by new state legislation. Public Act 23-116 required CTDOT to develop guidance for municipalities that wish to use automated traffic enforcement safety devices, such as red light and speed safety cameras, in their communities.[6] The Automated Traffic Enforcement Safety Device (ATESD) Program is meant to improve public safety, change driver behavior, and save lives. CTDOT released guidelines on automated speed enforcement zones at the beginning of 2024 which outline where they can be applied, the process for approvals, and annual reporting. To participate in the program, municipalities are required to prepare a plan, create an ordinance, hold a public hearing, and submit the final plan to CTDOT for approval prior to the use an automated traffic enforcement safety device. It is up to the individual municipality/LTA to complete the process and define the locations where speeding issues should be addressed.

State grant opportunities to support enforcement efforts are available through the Highway Safety Office.

The following strategies C.1–C.3 relate to speed management.

STRATEGY C.1

Work with the LTA on speed limit revisions to submit to OSTA.

As noted above, requests for speed limit revisions need to be supported and submitted by the LTA to CTDOT for state roads. Residents or Town officials who are concerned about speeding issues along Route 146 can start the review process by discussing it with their LTA.

5 See https://www.ite.org/technical-resources/traffic-calming/ and https://highways.dot.gov/safety/speed-management/traffic-calming-eprimer
6 https://portal.ct.gov/dot/programs/automated-traffic-enforcement-safety-device?language=en_US

STRATEGY C.2

Review applicability of appropriate traffic calming devices in areas of concern that could be considered using the Federal Highway Administration (FHWA) traffic calming toolbox.

Traffic calming to slow vehicle speeds can be accomplished with many different engineering countermeasures. The FHWA Traffic Calming ePrimer provides examples of different countermeasures that could be considered. The ePrimer can be found at:

https://highways.dot.gov/safety/speed-management/traffic-calming-eprimer

STRATEGY C.3

Review applicability of recent legislation allowing for automated speed enforcement.

Automated speed enforcement, approved by legislation in mid-2023, could be used in certain areas of Route 146. It would require setting up speed zone areas where speed cameras would be installed. The LTAs of Branford and Guilford may review guidance from CTDOT to implement this on Route 146.

D. Roadside Safety

This strategy area supports the plan goals to:

- Enhance Roadway Safety
- Maintain Infrastructure
- Balance Needs and Requirements
- Preserve Intrinsic Qualities

The traffic safety goal of this strategy area is to prevent vehicles from running off the roadway and hitting objects in the clear zone of the roadway. Most of the existing barrier protection along Route 146 such as the wood post and wire guiderail does not meet current standards.

Roadside guiderail is necessary for barrier protection along portions of the Route 146 corridor. Many locations are challenging due to the presence of steep slopes, mature trees, ledge outcroppings, retaining walls, and water bodies along the roadway. These roadside features that require protection are also part of the intrinsic character of the roadway and enhance the scenic quality of the road.

Modifying and/or relocating these roadside features to eliminate the need for barrier protection in the roadway clear zone can be difficult in many locations. As a result, the guiderail alternatives for these locations should consider roadway safety and scenic quality of the road.

The types of guiderail that can be used along Route 146 are limited by CTDOT standards, and in keeping with the context of the road. Proximity to salt marshes and damp air results in wooden materials degrading and weakening more quickly. As a result, a type of guiderail such as the Merritt Parkway guiderail is not appropriate for Route 146 for this and other reasons, including the maintenance issues that come with the impacts of coastal weather on materials, the limited right-of-way along the road, and the lack of crashworthy end terminals. In addition, the Merritt Parkway guiderail is made only for that specific roadway as described in the *CTDOT Highway Design Manual.*

Although guiderail options are limited, alternatives to the standard CTDOT guiderail (W-beam barrier protection) can be considered. It is understood that the standard CTDOT guiderail is not preferred as a roadside barrier product by the local communities because public comment and CWG members raised concerns that it detracts from the scenic and historic nature of the road.

The following strategies D.1 and D.2 address approaches to other types of roadside safety barriers that could be considered for Route 146.

STRATEGY D.1

Review alternatives to standard CTDOT guiderail (W-beam barrier protection) that can be considered. These include:

D.1.1 Box Beam Rail

This type of barrier protection is used widely by New York State DOT, and CTDOT has done some recent box beam rail installations along scenic roads in Connecticut. Examples include Lake Quonnipaug in Guilford and around Lake Waramaug in northwestern Connecticut. Box beam rail is more aesthetically pleasing than traditional W-beam rail and matches better with the character of a road like Route 146. However, it is constrained by site conditions and may not be appropriate at all locations along the corridor.

Box beam rail at Lake Quonnipaug in Guilford (VHB)

D.1.2 Cable Guiderail with Steel Posts

This type of guiderail is approved for usage by CTDOT and looks similar to the existing wood post and wire guiderail that currently is in place in some parts of the corridor. There is potential for it to be used on Route 146 if there is available right-of-way for the 12-foot deflection required to prevent a driver from running off the road. It is also more expensive to maintain than other kinds of guiderail.

D.1.3 Other alternative guiderail products as they become available in the future

The types of guiderail described above in D.1.1 and D.1.2 are examples of current barrier protection products that meet state and federal safety standards and are acceptable to CTDOT. From an aesthetic standpoint, based on conversations with the CWG, public comments, and the public survey, they are preferable to the standard W-beam barrier protection. However, these may not be the only alternative options available in the future. There may be a barrier protection option that becomes available that matches more with the character of the roadway while providing the safety standards required. As other options become available, they should be explored.

STRATEGY D.2

Consider development of a roadway-specific guiderail detail for Route 146.

It is possible that a roadway-specific guiderail detail that matches best with Route 146, as a New England coastal highway, could be created for use by the Towns of Branford and Guilford. Note that this barrier protection would still have to meet the same stringent safety standards of modern barrier protection to be approved for use. As such, use of a barrier protection that is already approved and tested by CTDOT will be more practical and economical for use on Route 146. If the Towns wish to explore a specific guiderail treatment it must be done in collaboration with CTDOT. Other types of possible barrier protection must be approved by CTDOT and must go through Manual for Assessing Safety Hardware (MASH) crash testing.[7]

7 https://highways.dot.gov/safety/rwd/reduce-crash-severity

E. Intersection Safety

This strategy area supports the plan goals to:

- Enhance Roadway Safety
- Involve the Community
- Improve Bike and Pedestrian Access

Pedestrian crossing at Moose Hill Road intersection, July 2024 (VHB)

The plan goals are supported by addressing the safety of all road users, with specific focus on improving safety culture, increasing stakeholder collaboration, and considering the human element in crash severity reduction. During the public outreach process, several road intersections along Route 146 were noted as having safety concerns that could be reviewed to improve safety for people walking, biking, and driving. The locations include but are not limited to:

Branford

- Route 146/Main Street at Cedar Street
- Route 146/Montowese Street at Meadow Street
- Route 146/Stony Creek Road at Leetes Island Road/Thimble Island Road

Guilford

- Route 146/Leetes Island Road at Moose Hill Road
- Route 146/Water Street at Sachem Head Road/ Sam Hill Road
- Route 146/Leetes Island Road at Old Quarry Road
- Route 146/Water Street at River Street
- Route 146/Boston Street at Union Street

To address these areas, the LTA of the municipality can contact CTDOT Traffic Division to perform a review of intersection safety concerns on state roads when the safety concerns are supported by the LTA. There are a variety of proven effective strategies for mitigating intersection-related fatalities and serious injuries. Intersections should be evaluated based on existing traffic control and the predominant severe crash type to identify potential treatments.

For intersections around the Guilford Green, the Town of Guilford is conducting a Guilford Green Transportation Study with assistance from SCRCOG. This study will review safety and circulation around the Town Green and provide recommendations to make the Green safer and more accessible for all users. The Route 146/Water Street at Whitfield Street intersection will be included in this study.

It is recognized that there may be overlapping strategies between Intersection Safety, Speed Management, and Bicycle and Pedestrian Access and Safety.

The primary strategy includes the following.

STRATEGY E.1

Review intersection characteristics such as sightlines, pedestrian crossing distances, crashes, turning radii, speeding, origins and destinations of bicycle/pedestrian travel, and other operational issues of concern.

Solutions may involve improvements to bicycle and pedestrian access (i.e., landing/refuge areas prior to crossing an intersection), traffic calming, widening for improvements, or narrowing intersections to make pedestrian crossings shorter. Again, these will be context-specific to the intersection and should be reviewed with the input of the community.

F. Maintenance Practices

This strategy area supports the plan goals to:

- Enhance Roadway Safety
- Maintain Infrastructure
- Protect Natural and Cultural/ Historic Resources
- Preserve Intrinsic Qualities
- Improve Bike and Pedestrian Access
- Balance Needs and Requirements

Maintenance of the corridor comes in many forms—not simply maintaining the roadway and right-of-way of the corridor. The aesthetic and scenic qualities of the road are also impacted by how well adjacent property owners maintain their properties. Addressing broad-based issues, such as invasive plant species that impact large parts of the Connecticut coast and have no regard for property lines, may require systemic approaches well beyond the confines of the Route 146 roadway corridor. Maintenance of scenic areas and vistas is a critical part of maintaining the corridor and is shared between CTDOT (the road owner) and the Towns and local property owners.

For the corridor itself, CTDOT Maintenance conducts mowing along the roadway twice a year within the State-owned transportation right-of-way. Other agencies, such as CTDEEP or local governments and nonprofit organizations, may develop projects for invasive plant removal and management and other natural resource protection efforts outside of the State transportation right-of-way. These projects should be consistent with the goals of the CMP but are not feasible for CTDOT to undertake within its ongoing roadway maintenance program.

Maintenance of the pavement width is important for keeping in line with the historic use of the road as a narrow coastal highway. However, this must be balanced with other needs, such as bicycle/pedestrian access, intersection safety, and flooding issues. In 2023, CTDOT resurfaced Route 146 in Guilford between Sachem's Head Road and Route 1. As part of this resurfacing, some of the vegetation was cut back to expose more of the shoulder and the pavement markings were redone with narrower 11-foot-wide travel lanes. Keeping the road shoulder clear and demarcating as wide a shoulder as possible is an important part of ensuring that there is space along the road for people biking and walking where no dedicated infrastructure exists. Narrowing lanes during resurfacing also helps to slow vehicle traffic and mark space to pull off in an emergency.

Utility work in the right-of-way by utility companies should also be coordinated with CTDOT and avoid excessive clearing of vegetation along the roadway. This is to help preserve the natural scenic quality of the road.

The following strategies F.1–F.5 relate to maintenance of the corridor.

STRATEGY F.1

Review right-of-way boundary lines during necessary maintenance projects to determine the extent of CTDOT property.

Many parts of the Route 146 corridor are considered "unbounded" by CTDOT, meaning that right-of-way documentation is not available or is not clear in some areas to give a firm determination of the true extent of the corridor right-of-way. During spot maintenance projects, the right-of-way can be investigated at that location to assist with clarifying the limits of the project.

Leetes Island Road, Branford, phragmites and flooding, March 2024 (VHB)

Japanese knotweed (Adobe Stock)

STRATEGY F.2

Continue to follow maintenance best practices for natural resource preservation and management involving activities such as mowing, vegetation management, and snow clearing within the CTDOT transportation right-of-way.

This includes maintaining the roadway in accordance with the 2024 CTDOT Vegetation Management Guidelines and Scenic Roadway legislation.

STRATEGY F.3

Review maintaining historical and environmental elements along the roadway, including stone walls, rock outcroppings, ledge, and other historic structures, consistent with scenic highway regulations.

As a State Scenic Road, Route 146 already has protections that limit the degree to which key historical and environmental features can be changed or impacted through roadway projects (See **Sec. 13b-31e-3** of the Regulations of Connecticut State Agencies and the **Environmental and Historic Preservation** strategy area). If potential changes are proposed for the roadway that may impact one of these features, justification must be made for impacting that feature. Historic design and usage of different structures along the roadway (including bridges) should be reviewed to keep in line with the intrinsic qualities of the corridor if they need to be replaced or repaired.

STRATEGY F.4

Maintain mature trees along the roadway within the right-of-way in accordance with the latest CTDOT Vegetation Management Guidelines.

The tree canopy, provided by the mature trees along the roadway, is one of the intrinsic qualities of the road. Protections are in place for mature trees through the scenic road legislation and local notification and noted in the 2024 CTDOT Vegetation Management Guidelines. However, it is understood that trees that are dead, dying, or present a public safety hazard may need to be removed to ensure the safety of the traveling public.

STRATEGY F.5

Review potential for improved invasive plant management with CTDEEP.

This can be through special projects or other ways that CTDEEP can work with the communities to preserve and protect the corridor, including the scenic views and sensitive ecology of the coastal area. Invasive plants such as phragmites and Japanese knotweed block the scenic views and encroach upon the roadway but are difficult to contain.

G. Environmental and Historic Preservation

This strategy area supports the plan goals to:

- Maintain Infrastructure
- Protect Natural and Cultural/ Historic Resources
- Preserve Intrinsic Qualities
- Involve the Community
- Balance Needs and Requirements

Protection of natural resources, scenic vistas, and the historic nature of the corridor are critical as they make up much of the intrinsic qualities of the roadway. The undulating roadway, mature trees, rock walls, scenic vistas, marshes, adjacent architecture, and other elements come together to create the scenic roadway that people treasure and want to protect. Protecting the Route 146 corridor and maintaining its key intrinsic and scenic qualities is a shared responsibility with the Towns of Guilford and Branford, property and business owners, residents, and CTDOT, which owns the roadway.

As a State Scenic Road, Route 146 is granted additional protections through state regulations, including review of proposed changes or improvements to scenic roads by the State Scenic Road Advisory Committee and special improvement and maintenance standards for scenic roads (**Sec. 13b-31e-3** of the Regulations of Connecticut State Agencies). **These regulations limit:**

- Widening of the right-of-way
- Widening of the traveled portion of the road
- Changes to the road grade
- Straightening or removal of stone walls
- Removal of mature trees

Additionally, the Towns of Branford and Guilford have zoning and historic district regulations that seek to protect community character, environmental resources, and the adequacy of public infrastructure. Zoning regulates land use, building setbacks and dimensions, and impervious surface coverage (paving), and limits or prohibits certain activities, such as major new commercial or industrial development, logging, quarrying, and major soil removal/excavation. There are also National Registered Historic Districts in both Towns and a substantial part of the Route 146 corridor in Branford and Guilford that seek to preserve the historic character in those areas. The Stony Creek Architectural Review Board and the Guilford Design Review Committee review changes or additions to the built environment to make sure they are consistent with the historic character of their districts. There is potential for greater protection of the Route 146 corridor and the areas outside the right-of-way through town regulatory mechanisms.

The following strategies G.1–G.4 relate to environmental and historic preservation of the corridor.

STRATEGY G.1

The Towns of Branford and Guilford may consider enhancing zoning overlays or other land use regulations to further protect the Route 146 roadway from development that is out-of-character with the scenic road.

Because of Route 146's status as a State Scenic Road, it is granted certain protections through state regulation and processes that must be followed prior to making road changes. The National Registered Historic Districts provide additional review of proposed modifications to the corridor and its intrinsic qualities.

However, local land development regulations play an important role in preserving and protecting the corridor. Although both Towns have robust zoning regulations to ensure development matches the character and context of their communities, additional

View of wetlands, Leetes Island Road, Branford (VHB)

reference to the Route 146 National Registered Historic District as a key preservation corridor could enhance the already strong protections of the corridor.

STRATEGY G.2

The Towns of Branford and Guilford may consider revitalizing their local Scenic Roads Advisory Committee.

The Scenic Roads Advisory Committee was established to advise on the implementation of the original Scenic Byways Corridor Management Plan for Routes 77 and 146. The Committee still plays an important role at the local level by advocating for the preservation of Route 146, disseminating information to the community, and promoting the Corridor Management Plan.

STRATEGY G.3

Enhance intrinsic qualities of the roadway, including expanding the attractiveness of the roadway corridor and scenic areas, and increasing awareness of the scenic highway.

The scenic vistas and views of the corridor, along with its other intrinsic qualities, are a key part of what makes Route 146 a special place for all. Increasing awareness of the scenic highway is also important to bring greater appreciation for the roadway. For example, additional scenic road signs may be helpful in promoting and raising awareness about the roadway and its scenic designation. Village Area Gateway signs in areas to make note of specific historic sites and scenic areas could also be considered.

STRATEGY G.4

Collaborate with CTDEEP, Towns of Guilford and Branford, and Guilford and Branford Land Conservation Trusts on preservation of key open spaces along Route 146.

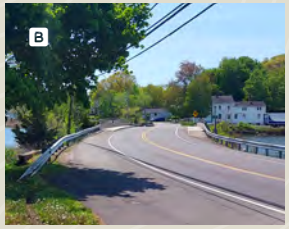
Potential open spaces include areas around the causeway locally known as the “Crabbing Area” in Guilford, south of Beattie Pond, and Jarvis Creek in Branford, for example. This would require the local communities to address preservation issues that are outside the Route 146 right-of-way but impact the intrinsic qualities of the corridor in how they shape the landscape around the road.

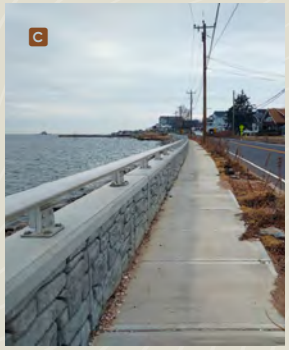
Conclusion

The Route 146 corridor has many historic and natural intrinsic qualities that make it a special and scenic corridor in Connecticut. Protecting these qualities as much as possible must be considered as part of any changes to the roadway, whether to make more space for walking and bicycling or to make the corridor more resilient to climate change.

The Route 146 CMP outlines a comprehensive approach to preserve and enhance this scenic roadway while addressing modern safety and environmental challenges. The collaborative, community-driven process ensures that the intrinsic qualities of Route 146 will be maintained for future generations, balancing the needs of various stakeholders. Implementation of the plan should be led by the Towns and the community.

Although Route 146 is a state road, CTDOT's responsibility is limited to the roadway right-of-way itself. Collaboration with the surrounding community and landowners to preserve the scenic and historic quality of properties along the corridor is critical to making the CMP successful. With state, regional, and local stakeholders working together, Route 146 will continue to be a scenic New England coastal highway for years to come.





A Leetes Island Road (VHB)
B South Montowese Street (VHB)
C Limewood Avenue (VHB)
D Water Street Bridge (Madonna)

CTDOT Route 146
CORRIDOR MANAGEMENT PLAN

Appendix I

1996 Corridor Management Plan Routes 77/146

SCRCOG Route 146 Corridor Study Existing Conditions

Route 146 Updated Existing Conditions Report

Cultural and Historical Resource Information

FHWA Traffic Calming Primer

Route 146
CORRIDOR MANAGEMENT PLAN

Appendix II

Public Engagement Information