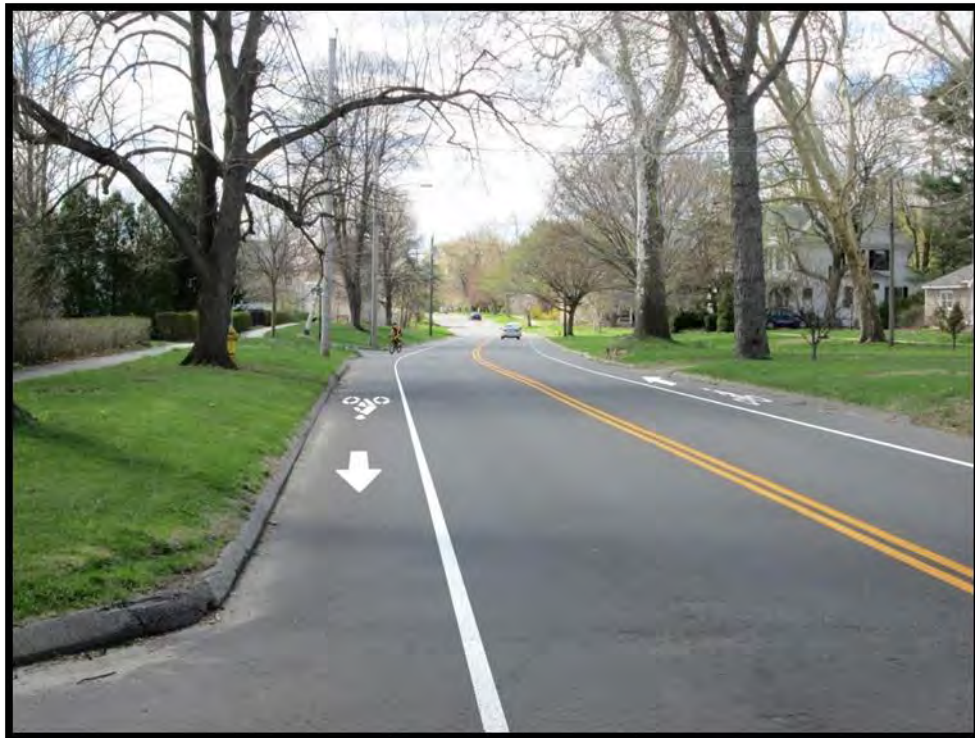


Preliminary Design Report

Stratford Greenway Extension Project

Stratford, Connecticut

December 2016



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Executive Summary

The Town of Stratford initiated the extension of the Stratford Greenway through a public Request for Proposal (RFP) in April 2014. The project request outlined the extension of the existing Greenway from Beacon Point Road, which is adjacent to the water pollution control plant and Birdseye Street boat launching area, along Elm Street to Stratford Avenue, terminating at Stratford Center, a distance of approximately 2.5 miles. This project vision is in accordance with the several planning documents including Stratford Pathways Study and Plan 2008, Waterfront Vision (Greenway) Plan 2004, and Plan of Conservation and Development 2003.

The proposed Greenway Extension begins at the end of Beacon Point Road, where the existing Greenway will transition from an off-road shared use side path to an on-road facility. The Greenway will continue northwest approximately 1,500 feet until it reaches Elm Street. Once reaching Elm Street, the Greenway will continue north approximately 1 mile until it reaches East Broadway, where it will turn west for 600 feet to the intersection with Sutton Avenue. The final segment is an additional 1,500 feet down Sutton Avenue and the unnamed access drive that runs parallel to Interstate 95, where it concludes at Main Street (Route 113). The total distance of the Greenway Extension is approximately 1.7 miles. The project also includes two spurs to provide access to sites identified as places of interest. The first spur is an approximately 0.5 mile loop along Shore Road and around the Shakespeare Theater. The second spur is approximately 0.6 miles and runs west from Elm Street down Broad Street, crosses Main Street, and loops around the Perry House via West Broad Street.

The Committee recognizes that the Greenway Master Plan (Stratford Pathways Study & Plan) outlines a corridor consisting of over 6 miles of additional Greenway in addition to the area contained within this project and the previously constructed Hunter Haven Segment. As a result, the Committee formulated a consensus that the preferred design should strive to minimize impacts and construction costs. The group discussions focused on taking smaller steps early in the overall project scope to complete the greenway. The Committee believed that once the basic framework of the greenway has been constructed that there will be substantial use and public support for it. This would allow the town to revisit portions of the corridor at a later date to investigate implementing more robust improvements such as side path segments or separated bike lanes that may require ROW impacts.

The Committee recognizes that there is a Transit Oriented Development (TOD) and Complete Streets Studies that are being concurrently completed with the Greenway Preliminary Design. As such, the alternatives listed below for Segments 5-8 will not be further analyzed or finalized. Further, these segments are not anticipated to be included as part of the final design of the Greenway Extension until the results of the studies are available for coordination. If the final design for the Greenway Extension proceeds the results from the studies, then the northern terminus for the project will be at the intersection of Elm Street and Broad Street. This location will allow for the construction of the Perry House Spur and in turn would provide a logical terminus for the project at its parking area.

During the design of the Stratford Greenway Extension, the project was divided into segments with similar roadway characteristics. For each segment a tailored design was chosen as the

preferred alternative as listed below. Additional information regarding the various alternatives that were evaluated can be found in Section 4.0 of the report.

- Segment 1 – Birdseye Street Extension - A shared use roadway with sharrow pavement markings and signage was the selected alternative to accommodate bicycle users. Investigation of a pedestrian sidewalk is recommended.
- Segment 2 – Birdseye Street - Due to low speeds and volumes of traffic, a shared use roadway with sharrow pavement markings and signage was the chosen design. Investigation of a pedestrian sidewalk is recommended.
- Segment 3 – Elm Street (Birdseye Street to Stratford Avenue) - The alternative that was selected was a 5 foot dedicated bike lane on both sides of the road since there is adequate roadway width.
- Segment 4 – Elm Street (Stratford Avenue to Broad Street) – A dedicated bike lane was chosen for the northbound traffic and a shared use lane with the use of sharrow pavement markings was chosen for the southbound traffic at the beginning of the segment. Due to roadway width restrictions, after the intersection with Academy Hill both sides of Elm Street will be a shared use roadway by utilizing sharrow pavement markings and signage.
- Segment 5 – Elm Street (Broad Street to East Broadway Street) – The alternative that was chosen was to eliminate on-street parking in the southbound direction and add sharrow pavement markings on both sides of the road for a shared use roadway. *(Final recommendation of segment on hold until study results are available)*
- Segment 6 – East Broadway Street (Elm Street to Sutton Avenue) – The design alternative that was selected is a 5 foot dedicated bike lane for the westbound traffic while maintaining the on-street parking. For the eastbound traffic a shared use facility was chosen. *(Final recommendation of segment on hold until study results are available)*
- Segment 7 – Sutton Avenue – The design alternative that was chosen is a shared use facility that utilizes sharrow pavement markings on both sides of the road, as well as signage. *(Final recommendation of segment on hold until study results are available)*
- Segment 8 – Access Road – *(Final recommendation of segment on hold until study results are available)*
- Perry House Spur – Broad Street – The design that was selected is to have a 10 foot travel lane, a 5 foot dedicated bike lane, and parallel parking for the westbound traffic. A shared use roadway was chosen for the eastbound traffic. After the intersection with Monument Place, an 8 foot wide parallel parking lane was retained to accommodate the bus activity at St. James School.
- Perry House Spur – Main Street Crossing – The preferred alternative provides a dedicated bicycle raised crosswalk and a cycle track for bicycles crossing Main Street. Bicycles would be required to cross Main Street during the dedicated pedestrian signal phase. Upgrades to the signal will be required for bicycle detection and actuation.
- Perry House Spur – West Broad Street – The chosen design has a buffered dedicated bike lane on the right side of the westbound one-way street. At the Perry

House the design has the bicyclists cross the one-way road at a new crosswalk. Bicycles traveling in the eastbound direction towards Main Street will cross the western end of the center green on a dedicated side path until the facility reaches West Broad Street (EB) where the design includes a buffered bike lane on the left side of the roadway. A curb bumpout is part of the design on the eastbound leg to protect the bicyclist from traffic exiting the complex intersection.

- Theater Spur – Shore Road – Due to the low volumes and speeds of vehicular traffic on this road, the implementation of a shared use facility was chosen as the alternative for this segment.
- Theater Spur – Theater Driveway – A one-way traffic loop and dedicated bike lane around the theater was chosen as the preferred design, which would include pavement markings and signage.

Three locations that were selected for potential seating nodes or pocket parks. The seating nodes would provide an area for Greenway users to rest and enjoy scenic vistas along the selected alignment. Amenities such as benches, trash cans, and bike racks would be provided in the seating node areas. Amenities should be coordinated with other Town projects to provide a consistent theme and for ease of maintenance. The locations selected were: Main Street Green, Mac’s Harbor, and Selby Pond.

Future improvements or upgrades of the project corridor would include the elimination of the shared use roadway along portions of the main corridor (Elm Street) by providing continuous dedicated bike lanes. This would require roadway widening in some locations such as from Stratford Avenue to Broad Street and may be included as part of a capital improvement project.

Cost estimates for the preferred alternatives are summarized below. Details regarding cost development can be located in Section 5.0 of the report and detailed cost sheets are included in Appendix E. Since these costs are based on preliminary design data, they must be updated continuously as the project moves forward through the final design phase. These numbers should be used with caution, as they are based on limited information and are intended for budgeting purposes only.

Costs are estimated and may vary greatly depending on items such as the final funding source and associated design process, role of ConnDOT during the final design and construction phases, ROW process / final impacts, and selected intensity of construction inspection and oversight.

Cost Estimate Summary

<i>Estimated Cost of Greenway Improvements</i>	<i>\$224,000</i>
<i>Estimated Cost of Perry House Spur</i>	<i>\$ 95,000</i>
<i>Estimated Cost of Required Sidewalks</i>	<i>\$280,000</i>
Total Estimated Cost of Stratford Greenway Extension Construction	\$619,000

1.0 Introduction

The Town of Stratford initiated the extension of the Stratford Greenway (the “Greenway”) through a public Request for Proposal (RFP) in April 2014. The project request outlined the extension of the existing Greenway from Beacon Point Road, which is adjacent to the water pollution control plant and Birdseye Street boat launching area, down Elm Street to Stratford Avenue, terminating at Stratford Center, a distance of approximately 2.5 miles. This project vision is in accordance with the several planning documents including Stratford Pathways Study and Plan 2008, Waterfront Vision (Greenway) Plan 2004, and Plan of Conservation and Development 2003.

Although not the primary factor for the development of the Stratford Greenway, the Greenway Committee (the “Committee”) recognizes that upon its completion, the Greenway would contribute to the regional bicycle network as it will link with the East Coast Greenway and the Pequonnock River Trail. The East Coast Greenway is an ongoing national project to create a nearly 3,500 mile urban path linking almost 30 major cities of the Atlantic coast of the United States, from Calais, Maine, to Key West, Florida, for non-motorized human transportation. Locally, it will link Boston, Worcester, Providence, Hartford, New Haven, and New York City. Within Connecticut there are six sections of the East Coast Greenway. The East Coast Greenway corridor in the vicinity of Stratford is the Merritt Parkway Trail, which runs north of Stratford. Locally, the Greenway Extension will be a segment of the Housatonic River Greenway Spur, which runs south from the Merritt Parkway Trail, through Stratford, and into the Pequonnock River Trail in Bridgeport.

1.1 Project Background

In preparing this report, BSC reviewed the following projects and reports done by others which are integral to, but separate from, this project:

1. Stratford Pathways Study & Plan, Housatonic River Greenway – Prepared by Greater Bridgeport Regional Planning Agency, dated February 2008.
2. Choices for Stratford: Transit Centered Development Feasibility Study – Prepared by The Cecil Group, Inc., Milone & MacBroom, and TRA Advisors, dated June 2010.
3. Plan of Conservation & Development – Prepared by Peter J. Smith & Company, Inc., dated January 2014.
4. Update to Town Plan of Conservation and Development 2003 – Prepared by Stratford Planning Commission.
5. Update to Town Plan of Conservation and Development 2015 – Prepared by Stratford Planning Commission.
6. Stratford Avenue Honeyspot Road and Lordship Boulevard Streetscape Plan – Prepared by Fitzgerald & Halliday, Inc., dated April 2014.

7. Waterfront Vision Plan – Prepared by Buckhurst Fish & Jacquemart, Inc.

1.2 Project Overview

The proposed Greenway Extension begins at the end of Beacon Point Road, where the existing Greenway will transition from an off-road shared use side path to an on-road facility. The Greenway will continue northwest approximately 1,500 feet until it reaches Elm Street. Once reaching Elm Street, the Greenway will continue north approximately 1 mile until it reaches East Broadway, where it will turn west for 600 feet to the intersection with Sutton Avenue. The final segment is an additional 1,500 feet down Sutton Avenue and the unnamed access drive that runs parallel to Interstate 95 (I-95), where it concludes at Main Street (Route 113). The total distance of the Greenway Extension is approximately 1.7 miles. The project also includes two spurs to provide access to sites that the Town identified as places of interest. The first spur is an approximately 0.5 mile loop along Shore Road and around the Shakespeare Theater. The second spur is approximately 0.6 miles and runs west from Elm Street down Broad Street, crosses Main Street, and loops around the Perry House via West Broad Street.

See Figure 1 for a project location map of the corridor.

1.3 Project Goals and Objectives

The goal of this project included the following components:

- Provide an analysis of existing conditions along potential routes
- Determine the most feasible bicycle facilities based on factors such as cost, public feedback, existing conditions, etc.
- Prepare a conceptual design for the Stratford Greenway Extension Project

2.0 Mapping and Data Collection

Mapping and data collection was conducted to compile and review available information regarding the project route.

2.1 Mapping

Mapping of the project area was gathered from available Town resources, GIS data layers, and publicly-available State of Connecticut resources. This mapping was digitally compiled to provide a base map for feasibility analysis and preliminary design efforts.

BSC compiled available information from the following sources to create the project mapping.

2.1.1 Greater Bridgeport Regional Council (GBRC)

- Geographic Information Systems (GIS) Information – this mapping provides a multitude of information including existing ground features such as roadway edge of pavement, utility poles, existing trees, and more. Also provided in this information was approximate Right of Way (ROW) information. The GIS information provided the bulk of the information used in the project mapping.

2.1.2 Town of Stratford

- Topography – this map provides topographic information for the town that provides perspective on the changes in elevation along the project corridor.
- Historic District Overlay – this map illustrates the Town’s Historic District and differentiates between the original district as well as the expanded district of April 1997.

2.1.3 Connecticut Department of Energy and Environmental Protection (DEEP), Natural Diversity Database (NDDDB)

2.1.4 Federal Emergency Management Agency (FEMA), National Flood Insurance Program, Flood Insurance Rate Map (FIRM)

An environmental review of the project area was conducted to identify areas of special environmental concern such as critical habitats that would affect layout of the greenway options. Connecticut DEEP data residing in a GIS was reviewed to screen for areas of special environmental concern such as wetland soils, flood plains, flood zones and water bodies. This information was also cross referenced with available National Flood Insurance Program, FIRM information.

The southern portion of the project corridor from the intersection with Birdseye Street to about 600 feet north is located within an area designated by DEEP as an area containing “State and Federal Listed Species and Significant Natural Communities.”

Portions of the project corridor are located within flood zones as outlined in the FIRM maps. This will trigger additional coordination and permitting requirements during final design.

The DEEP and FIRM mapping is included in Appendix A.

2.2 Data Gathering

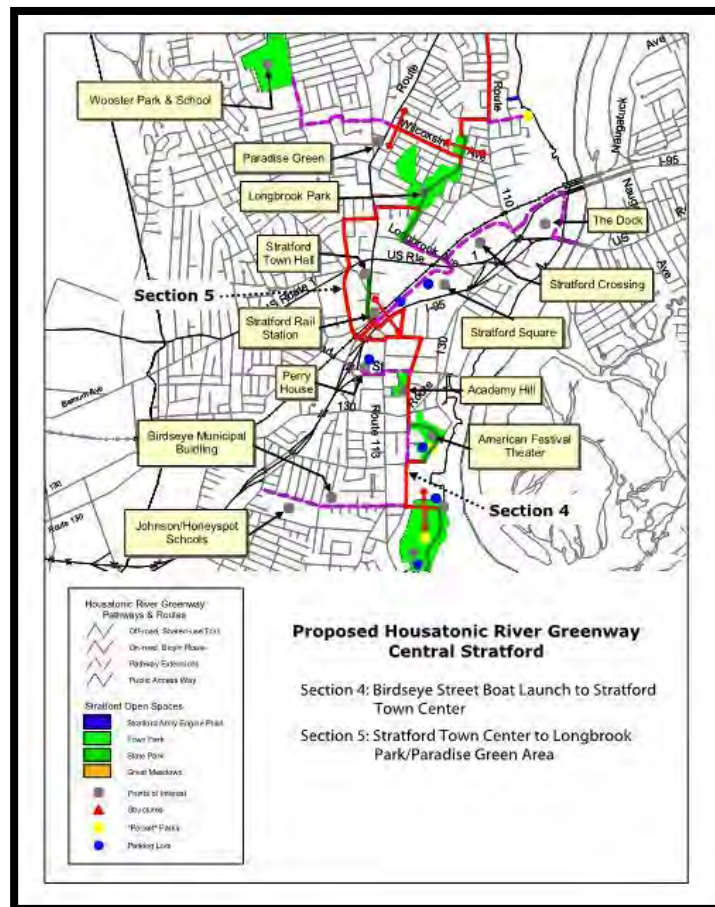
BSC researched and gathered data available from public sources such as Connecticut Department of Transportation (ConnDOT) for traffic data and roadway classification information and the Connecticut Crash Data Repository for accident history data. This information was compiled and analyzed to gain a better understanding of the project corridor. More specific detail as well as a summary of the data can be found in Section 3.0 and Appendix B.

2.3 Field Observations

Several field visits were conducted within the project corridor to observe the physical layout, existing physical features, scale, opportunities, and obvious constraints associated with the Greenway Extension route. These visual assessments were used to generally verify (where possible) digital mapping data such as roadways, buildings, topography, etc. specific to opportunities and obvious constraints that would affect potential greenway layouts. Photographs taken during field observations are included as part of the Existing Conditions Analysis Plans provided in Appendix B. Each of these plans depicts the existing conditions with select photographs of key elements considered with respect to opportunities and obvious constraints that were considered. Additional information gathered during field observations is included in Section 3.0.

3.0 Existing Conditions Assessment

The preliminary design process began with the confirmation of the preferred route as outlined in the Stratford Pathways Study and Report prepared by the Greater Bridgeport Regional Planning Agency, February 2008. Specifically, the preliminary design of this project focuses on Section 4 – Birdseye Boat Launch to Stratford Town Center as shown below.



Proposed Housatonic River Greenway - Central Stratford

An existing conditions assessment was then conducted to understand and identify issues with potential impacts on selection of greenway layout alternatives, identify corridor constraints and points of interest. Assessment of the project route included the on-site examination of the infrastructure and associated improvements. The assessment considered general site topography, roadway widths, available ROW, sidewalk locations, potential utility conflicts, and points of interest.

The project corridor was broken down into segments to aid in the analysis of site conditions. The segments are listed below and specific comparison to project criteria are provided as part of this section:

- Segment 1 – Birdseye Street Extension
- Segment 2 – Birdseye Street
- Segment 3 – Elm Street (Birdseye to Stratford Avenue)
- Segment 4 – Elm street (Stratford Avenue to Broad Street)
- Segment 5 – Elm Street (Broad Street to East Broadway Street)
- Segment 6 – East Broadway Street (Elm Street to Sutton Avenue)
- Segment 7 – Sutton Avenue
- Segment 8 – Access Road
- Perry House Spur
- Shakespeare Theater Spur
- Oyster House Spur

One of the goals of the Greenway Extension, in addition to providing a safe multi-modal route that links destinations, will be to incorporate points of interest along the project route. Below is a short list of some of the identified destinations and points of interest and the corresponding project segment:

- Shakespeare Theater (Shakespeare Theater Spur)
- Perry House (Perry House Spur)
- Town of Stratford War Memorials (Perry House Spur)
- Stratford Town Center (Destination / Northern Terminus)
- Mac’s Harbor (Shakespeare Theater Spur – Shore Road)
- Selby’s Pond (Shakespeare Theater Spur)
- Bond’s Dock and Oyster House (Oyster House Spur)
- Housatonic River Views (Segment 1 / Segment 2 / Shakespeare Theater Spur)

3.1 Segment 1 – Birdseye Street Extension Characteristics

3.1.1 Roadway Classification

This segment of the project corridor is classified as a local road per the ConnDOT Functional Classification map. See Appendix B.

Chapter 6 of the ConnDOT Highway Design Manual, 2003 Edition, states that, “All public roads and streets not classified as arterials or collectors will have a local classification. Local roads and streets are characterized by their many points of direct access to adjacent properties and their relatively minor value in accommodating mobility. Speeds and volumes are usually low and trip distances short. Through traffic is often deliberately discouraged.”

3.1.2 Travel Lane and Shoulder Widths

In order to determine which option to select to incorporate the Greenway Extension facility the travel lane and shoulder widths were analyzed throughout the project corridor.

Birdseye Street Extension, where the proposed facility meets the existing Greenway Extension has a roadway width of approximately 30 feet and lacks a striped centerline or shoulders.

A chokepoint located approximately halfway along the roadway length reduces the road width to approximately 26 feet with utility poles and guiderail on the right and waste water treatment vaults with a fence located on the left. This area will limit potential alternatives and sidewalk construction.

3.1.3 Right-of-Way

The Birdseye Street Extension has an existing ROW of approximately 60 feet.

3.2 Segment 2 – Birdseye Street Characteristics

3.2.1 Roadway Classification

Birdseye Street is classified as a local road per the ConnDOT Functional Classification map. See Appendix B.

3.2.2 Travel Lane and Shoulder Widths

The width of the roadway on Birdseye Street is about 32 feet with centerline stripes but lacks any shoulder striping.

3.2.3 Right-of-Way

Birdseye Street Extension has an existing ROW of approximately 50 feet.

3.3 Segment 3 – Elm Street (Birdseye Street to Stratford Avenue) Characteristics

3.3.1 Roadway Classification

This segment of Elm Street is categorized as a Collector according to the ConnDOT Functional Classification map. See Appendix B.

Chapter 6 of the ConnDOT Highway Design Manual, 2003 Edition, states that, “Collector routes are characterized by a roughly even distribution of their access and mobility functions. Traffic volumes and speeds will typically be somewhat lower than those of arterials. In rural areas, collectors serve intraregional travel needs and provide connections to the arterial system. All cities and towns within a region will be

connected. In urban areas, collectors act as intermediate links between the arterial system and points of origin and destination. Urban collectors typically penetrate residential neighborhoods and commercial and industrial areas. Local bus routes will often include collector streets.”

3.3.2 Travel Lane and Shoulder Widths

The travel lane width of Elm Street in this segment is approximately 31 feet from curb to curb. There are no striped shoulders on this segment of Elm Street.

3.3.3 Right-of-Way

The Right-of-Way on this segment of Elm Street varies significantly. At the beginning of this segment the ROW is approximately 44 feet then it widens to about 68 feet. After Elm intersects with South Avenue the ROW widens to about 111 feet and remains at that width to Stratford Avenue.

3.4 Segment 4 – Elm Street (Stratford Avenue to Broad Street) Characteristics

3.4.1 Roadway Classification

This segment of Elm Street is classified as a local road per the ConnDOT Functional Classification map. See Appendix B.

3.4.2 Travel Lane and Shoulder Widths

The roadway width for this segment of Elm Street is approximately 30 feet. There are currently no shoulders striped on this segment of roadway.

3.4.3 Right-of-Way

The Right-of-Way on this segment of Elm Street starts with a width of 107 feet after the intersection with Stratford Avenue through Academy Hill, where the ROW narrows to about 98 feet after the intersection.

3.5 Segment 5 – Elm Street (Broad Street to East Broadway Street) Characteristics

3.5.1 Roadway Classification

This segment of the project corridor consists of local roads per the ConnDOT Functional Classification map. See Appendix B.

3.5.2 Travel Lane and Shoulder Widths

For this segment of Elm Street, the existing roadway width varies from 35-38 feet with no striped shoulders. There is existing on-street parking on both sides of the roadway.

3.5.3 Right-of-Way

The Right-of-Way varies throughout this segment of the project. The ROW starts at a width of 65 feet and gradually increases to a width of 84 feet towards the intersection with East Broadway Street.

3.6 Segment 6 – East Broadway Street (Elm Street to Sutton Avenue) Characteristics

3.6.1 Roadway Classification

This segment of the project corridor is classified as a collector per the ConnDOT Functional Classification map. See Appendix B.

3.6.2 Travel Lane and Shoulder Widths

The roadway width for East Broadway Street is approximately 33-35 feet and lacks any striped shoulders. There is currently parking on the eastbound side of the roadway.

3.6.3 Right-of-Way

In the vicinity of the intersection of East Broadway and Elm Street the existing ROW is approximately 60 feet in width.

3.7 Segment 7 – Sutton Avenue Characteristics

3.7.1 Roadway Classification

This segment of the project corridor consists of local roads per the ConnDOT Functional Classification map. See Appendix B.

3.7.2 Travel Lane and Shoulder Widths

The width of Sutton Avenue is approximately 30 feet and there are currently no pavement markings. There is currently parking on the both sides of the roadway.

3.7.3 Right-of-Way

On Sutton Avenue the ROW is approximately 50 feet wide.

3.8 Segment 8 – Access Road Characteristics

3.8.1 Roadway Classification

This segment of the project is not classified as a road per the ConnDOT Functional Classification Map. See Appendix B. Historically it has been reported to be used as access to the Main Street commercial plaza and provide access to the I-95 toll plaza that has since been removed.

3.8.2 Travel Lane and Shoulder Widths

The existing pavement width on this Access Road is 12 feet and there are currently no pavement markings. There is currently restricted on-street parking on the northbound side of the road.

3.8.3 Right-of-Way

The Access Road's ROW is undetermined and appears to be owned in part by the Town, State, and Commercial Businesses. More investigation into the ROW will have to be performed. Easements or acquisitions will be required in order for its use by the greenway.

3.9 Perry House Spur (Broad Street) Characteristics

3.9.1 Roadway Classification

This segment of the project corridor is considered a local road per the ConnDOT Functional Classification map. See Appendix B.

3.9.2 Travel Lane and Shoulder Widths

The width of Broad Street varies from 33-41 feet and has no pavement markings. There is a bus loading/unloading zone on Broad Street on the eastbound side of the roadway in front of the St. James Church. On the westbound side of the road there is currently on-street parking.

3.9.3 Right-of-Way

After the intersection with Elm Street the ROW is approximately 80 feet wide, then after the intersection with Monument Place the ROW narrows to approximately 69 feet.

3.10 Perry House Spur (Main Street) Characteristics

3.10.1 Roadway Classification

This segment of the project is classified as a minor arterial per the ConnDOT Functional Classification map. See Appendix B.

3.10.2 Travel Lane and Shoulder Widths

The northbound lane has a 7 foot shoulder and a single 20 foot travel lane. The southbound lane has two 14 foot travel ways with no striped shoulder. There is also a 6 foot raised median island dividing the northbound and southbound traffic.

3.10.3 Right-of-Way

The ROW for Main Street varies from approximately 110-128 feet wide.

3.11 Perry House Spur (West Broad Street) Characteristics

3.11.1 Roadway Classification

This segment of the project corridor is categorized as a minor arterial per the ConnDOT Functional Classification map. See Appendix B.

3.11.2 Travel Lane and Shoulder Widths

On West Broad Street the width of the travel way is approximately 23 feet and has no striped shoulders. There is a large center green that contains several Town of Stratford War Memorials. The green has one-way traffic on either side of it.

3.11.3 Right-of-Way

Each leg of West Broad Street includes a dedicated ROW measuring approximately 55 in width. The center green is a separate parcel owned by the Town.

3.12 Theater Spur Driveway Characteristics

3.12.1 Roadway Classification

This segment of the project corridor is considered a driveway for the Shakespeare Theater.

3.12.2 Travel Lane and Shoulder Widths

The width of the driveway from curb to curb for the Shakespeare Theater is approximately 22 feet wide.

3.12.3 Right-of-Way

This portion of the theater spur is located on the private driveway of the theater. Use of the driveway will require easements in order for its use by the greenway.

3.13 Theater Spur – Shore Road Characteristics

3.13.1 Roadway Classification

This segment of the project corridor is considered a local road per the ConnDOT Functional Classification map. See Appendix B.

3.13.2 Travel Lane and Shoulder Widths

The width of Shore Road varies from approximately 15 feet wide at its narrowest region and varies for the remainder of the road to a maximum width of approximately 33 feet wide.

3.13.3 Right-of-Way

The ROW for Shore Road varies significantly. The ROW begins at approximately 34 feet wide then steadily increases to reach approximately 70 feet wide in the vicinity of the proposed facility intersection from the Shakespeare Theater driveway.

3.14 Oyster House Spur (Shore Road and Stratford Avenue) Characteristics

3.14.1 Roadway Classification

This segment of the project corridor is considered local roads per the ConnDOT Functional Classification map. See Appendix B.

3.14.2 Travel Lane and Shoulder Widths

The width of Shore Road varies from approximately 15 feet wide at its narrowest region to approximately 33 feet wide. Stratford Avenue has a roadway width that varies significantly, ranging from 11 feet to 27 feet.

The roadway in the vicinity of Bond's Dock and the Oyster House is extremely narrow and often becomes flooded during storm events. Existing retaining walls in the area reduce the potential for roadway widening. Significant construction and permitting will be required to improve this area to allow for the integration of the greenway. As such, the Committee determined that the Oyster House Spur may be a future addition to the Greenway Project but would not be pursued further at this time.

3.14.3 Right-of-Way

The ROW for Shore Road varies significantly. The ROW starts out at approximately 34 feet wide then steadily increases to reach approximately 70 feet wide by the time the facility would tie into the Shakespeare Theater Spur Road. The ROW for Stratford Avenue varies from approximately 18 feet at its narrowest section to 53 feet at its widest section.

3.15 Traffic Volumes

Elm Street has an Average Daily Traffic (ADT) count of 4,300 vehicles per day and West Broad Street has an ADT of 10,400. This high volume on West Broad Street, in the vicinity of the Perry House, can most likely be contributed to traffic exiting and entering Interstate 95. On East Broadway Street there is a recorded ADT of 2,800 vehicles per day. At the intersection of Stratford Avenue with Elm Street the ADT is 6,000 vehicles per day. This traffic volume information is according to the ConnDOT ADT Map, see Appendix B.

3.16 Speed Limits

The project corridor includes roads that all have posted speeds that can be considered low speed. Elm Street and Broad Street have posted speed limits of 25 mph. Main Street has a posted Speed Limit of 30 mph.

3.17 Intersections

Roadway intersections present specific design and safety challenges that need to be considered during the selection and design process of the greenway extension. When a greenway facility encounters an intersection, conflict points with vehicles are introduced and need to be mitigated to provide a safe and pleasant user experience.

3.17.1.1 Signalized Intersections

There are three signalized intersections located within the project limits. Changes to signal timings as well as additional detection equipment and/or push button for pedestrian and/or bicycle use will need to be evaluated as part of the final design development. The signalized intersections are located at:

- Elm Street and Stratford Avenue
- Broad Street and Main Street
- West Broad Street and Main Street

3.17.1.2 Un-signalized Intersections

There are a total of 16 unsignalized intersections located within the project corridor. Issues such as intersection sight distance will need to be considered and evaluated during the final design process with respect to the addition of a greenway facility. Locations of the intersections are listed below.

Segment 1 – Beacon Point Road

- Birdseye Street and Birdseye Street Extension – Stop on Birdseye Street Only Extension

Segment 2 – Birdseye Street

- Elm Street and Birdseye Street – Stop on Elm Street Only

Segment 3 – Elm Street (Birdseye Street to Stratford Avenue)

- Elm Street and South Avenue – Stop on South Road Only
- Elm Street and Shore Road – Stop on Shore Road Only
- Elm Street and Macs Harbor Court – Stop on Macs Harbor Court Only
- Elm Street and Rosemary Drive – Stop on Rosemary Drive Only
- Elm Street and Verona Court – Stop on Verona Court Only
- Elm Street and Wells Place – Stop on Wells Place Only

Segment 4 – Elm Street (Stratford Avenue to Broad Street)

- Elm Street and Academy Hill – Stop on Academy Hill Only
- Elm Street and Academy Hill Terrace – Stop on Academy Hill Terrace Only
- Elm Street and Broad Street – 4-Way Stop

Segment 5 – Elm Street (Broad Street to East Broadway Street)

- Elm Street and Judson Place – Stop on Judson Place Only
- Elm Street and East Broadway - Stop on Elm Street Only

Segment 6 – East Broadway Street (Elm Street to Sutton Avenue)

- East Broadway Street and Warwick Avenue – Stop on Warwick Avenue Only
- East Broadway Street and Sutton Avenue – Stop on Sutton Avenue Only

Perry House Spur

- Broad Street and Monument Place – Stop on Monument Place Only

3.18 Utilities

3.18.1 Overhead Utilities

Overhead utilities exist throughout the project corridor. However, the preferred alternative design has no anticipated conflicts with the existing utility poles except for

those potential conflicts associated with the addition of sidewalk facilities within Segment 1 and 2 on Birdseye Street and Birdseye Extension.

3.18.2 Underground Utilities

Although underground utilities exist throughout the project, there are no impacts anticipated by the construction of the Greenway Extension.

3.19 Points of Interest

One of the goals of the greenway extension, in addition to providing a safe multi-modal route that links destinations, will be to incorporate points of interest along the project route. Below is a short list of some of the identified destinations and points of interest.

- Mac's Harbor
- Shakespeare Theater
- Perry House
- Stratford Town Center
- Housatonic River

3.20 Pavement Condition

Overall, the Elm Street pavement condition can be classified as fair to good, indicating it is well into its lifespan, but has not yet reached the end and does not require replacement at this time. The bituminous pavement surface is generally free of significant surface defects and surface deformations. There are some areas of cracking and bumps or depressions. There are curbed portions of Elm Street, and a mix of open and closed drainage is used to collect and convey stormwater. Standard ConnDOT Type "C" and Type "C-L" catch basins are used at various locations on both sides of the roadway. Final verification of bicycle friendly grates will be required during the final design.

3.21 Accident History

The Connecticut Crash Data Repository (CTCDR) is a web tool designed to provide access to select crash information collected by state and local police. This data repository enables users to query, analyze and print/export the data for research and informational purposes. The CTCDR is comprised of crash data from two separate sources; the Department of Public Safety (DPS) and ConnDOT.

The accident data was compiled and analyzed for all the accidents in the project corridor from 2010-2014. Overwhelmingly the majority of the accidents were rear-end type collisions with the main cause of accidents in the corridor being that the driver was following too closely. There were a high number of accidents in the vicinity of the Perry House which is expected due to the poor configuration of the roadway that is confusing for many drivers. To minimize the conflict points for bicyclists the facility avoids this hazardous area by having the facility

cross the center green and continue towards Main Street once the facility on West Broad Street reaches the Perry House.

3.22 Design Criteria and Site Assessment Plans

Design Guidance comes from several sources including but not limited to the following:

- A Policy on Geometric Design of Highways and Streets, AASHTO, 2011, 6th Ed.
- Urban Street Design Guide, NACTO, 2013
- Urban Bikeway Design Guide, NACTO, 2014
- Guide for the Planning, Design, and Operation of Pedestrian Facilities, AASHTO, July 2004
- Guide for the Development of Bicycle Facilities, AASHTO, 2012, 4th Ed.

Utilizing the Design Guidance sources listed above, the following design criteria were established for the project corridor:

- 10' Travel Lane – minimum width
- 5' Bike Lane - minimum width adjacent to curb or barrier
- 4' Bike Lane – minimum width without curb or barrier
- 7' On-Street Parking – minimum width
- Shifting Roadway Centerline vs. Roadway Crownline – acceptable
- Eliminating On-Street Parking is allowable

Minimum Roadway Widths – utilizing the design criteria above, minimum roadway widths were established for use in the existing conditions plans:

- If a Curbed Roadway Width was greater than or equal to 30 feet, then it has sufficient width to support a Dedicated Bike Lane based on the following equation:
 - $5' \text{ bike lane} + 10' \text{ travel way} + 10' \text{ travel way} + 5' \text{ bike lane} = 30'$
- If an Uncurbed Roadway Width was greater than or equal to 28 feet, then it has sufficient width to support a Dedicated Bike Lane based on the following equation:
 - $4' \text{ bike lane} + 10' \text{ travel way} + 10' \text{ travel way} + 4' \text{ bike lane} = 28'$
- If a Curbed Roadway Width includes On-Street Parking on Both Sides and has a width of greater than or equal to 44 feet, then it has sufficient width to support a Dedicated Bike Lane based on the following equation:
 - $7' \text{ parking} + 5' \text{ bike lane} + 10' \text{ travel way} + 10' \text{ travel way} + 5' \text{ bike lane} + 7' \text{ parking} = 44'$
- If a Curbed Roadway Width includes On-Street Parking on only one side of the roadway and has a width of greater than or equal to 37 feet, then it has sufficient width to support a Dedicated Bike Lane based on the following equation:
 - $7' \text{ parking} + 5' \text{ bike lane} + 10' \text{ travel way} + 10' \text{ travel way} + 5' \text{ bike lane} = 37'$

Stratford Greenway Extension Project
Stratford, Connecticut
Preliminary Design Report

BSC developed project site existing condition plans and typical cross section alternatives that combine photo documentation and project mapping information to assess which alternatives could be considered for each segment of the project corridor. Each roadway segment was color coded to illustrate potential design alternatives based on width as well as missing sidewalk segments required to complete the pedestrian network.

See Appendix B for the existing condition plans.

4.0 Future Conditions Assessment

Utilizing the existing condition assessment plans that were prepared as described in Section 3.0, various greenway options and routes were contemplated within the project area. During Greenway Committee meetings each alternative was discussed to determine the preferred alternative for each segment of the project corridor.

The Committee recognizes that the Greenway Master Plan (Stratford Pathways Study & Plan) outlines a corridor consisting of over 6 miles of additional Greenway in addition to the area contained within this project and the previously constructed Hunter Haven Segment. As a result, the Committee formulated a consensus that the preferred design should strive to minimize impacts and construction costs. The group discussions focused on taking smaller steps early in the overall project scope to complete the greenway. The Committee believed that once the basic framework of the greenway has been constructed that there will be substantial use and public support for it. This would allow the town to revisit portions of the corridor at a later date to investigate implementing more robust improvements such as side path segments or separated bike lanes that may require ROW impacts.

Design Goals established for the project corridor:

- Strive to stay within the available right-of-way
- Minimize the number of crossings for facility users
- Minimize utility pole conflicts
- Incorporate points of interest
- Minimize construction costs

Pedestrian accommodations were considered and discussed with the Committee. Project mapping illustrates that dedicated sidewalks already exist for much of the project corridor. As such, the focus of the near term improvements would investigate implementing improved accommodations for bicycles but also close the missing sidewalk gaps for pedestrians. These gaps are noted in the selected alternative section of each segment.

BSC presented the Committee with a full spectrum of available alternatives ranging from a no-build alternative to bicycle boulevards (bicycle only streets). After discussing typical costs, maintenance, and public support, it was determined that three types of bicycle facilities would be feasible for the project corridor: designated bicycle routes, dedicated bicycle lanes, and Separated Side Paths. Bicycle routes and bicycle lanes are dedicated facilities located on the road and share space with motorized vehicles. Separated Side Paths are specialized, off-road facilities that typically accommodate multiple users. Each project segment was investigated to determine which alternatives could be implemented and presented to the Committee for selection of the preferred alternative. See Appendix C – Preliminary Typical Sections.

- Designated Bicycle Routes: They provide the minimum level of route designation and separation from motorized vehicles. Bicyclists share the road with motorized traffic and travel in the same direction as traffic. No special treatments are made at

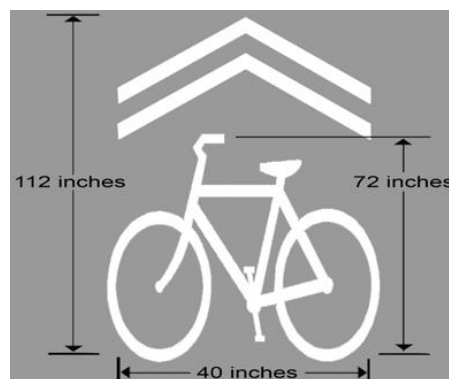
the intersections or where there is on-street parking. These roadways are signed with a standard bicycle route sign and sharrow pavement markings are painted along both sides of the road. The shoulder line is often used to define the bicycle route. There are three bicycle route applications:

1. Shared Use Roadway: The bicyclist uses the same lane as motorized vehicles and are acceptable in low volume, low speed neighborhoods.
 2. Wide Shoulder Lane: The bicyclist uses the curb edge of an outside travel lane that is at least 14 feet wide. This type of facility is more appropriate along low speed, low volume roads. When speed and volumes are high, they do not provide sufficient separation and comfort to bicyclists.
 3. Shoulder Bikeways: The bicyclist uses the paved portion of the road to the right of the edge line. The shoulder lane provides some level of separation between traffic and bicycles because of the edge line. Where bicycle use is relatively high, the shoulder should be maintained with a smooth, clear surface and free of debris. If the shoulder lane is to be designated as a bicycle route, a minimum width of four feet should be provided.
- Dedicated Bike Lanes: Are defined as the portion of the road specifically designated by striping and signing for preferential or exclusive use by bicycles. Bicycle lanes are always one-way facilities and carry bicycles in the same direction as adjacent traffic lanes. The minimum width is five feet, although narrower lanes are acceptable for short sections or where necessary. On-street parking is prohibited in a designated bicycle lane. When designated, the parking lane should be located to the right of the bicycle lane with the bicycle lane between the travel and parking lanes.
 - Separated Side Path: is physically separated from the road and follows an independent right-of-way. Two-way flow is provided and they accommodate a range of users, including bicyclists, pedestrians, wheelchairs, and strollers. These facilities are often referred to as multi-use paths because they are used by more than just bicyclists. Although these paths provide a low stress, safe environment and a place where novice riders and children are separated from motorized vehicles, the mix and volume of users can often create challenges with a variety of potential conflicts. Care and attention needs to be given to the design of the trail and user rules need to be established and enforced. It is the responsibility of all users to know and understand the rules and follow etiquette so that all may enjoy the path.

Separated Side Path / Multi-use paths require special design considerations. The guidelines developed by AASHTO should be used and followed when designing these paths. The guidelines provide a good starting point for multi-use trail design. Although sound engineering judgement should be followed, flexibility in design is essential. The following are the basic design guidelines:

The design alternatives that were selected as feasible alternatives for use are listed in the table below:

Alternative	Description	Positives	Negatives
Paved Shoulder	Striping a shoulder that separates vehicles and bicycles but lacks bike lane markings so cars can also park.	<ul style="list-style-type: none"> Allows bicyclists to have their own space Still allows on-street parking 	<ul style="list-style-type: none"> If there are parked cars in the shoulder then bicyclists would have to navigate around them
Shared Use Roadway	Sharrow pavement markings and signage will alert drivers to share the road with bicyclists.	<ul style="list-style-type: none"> Simple construction Inexpensive to build Visually reminds motorists of bicyclists' right to the street 	<ul style="list-style-type: none"> Still in close proximity to vehicles Not pedestrian friendly
Dedicated Bike Lane	A 5 foot striped lane will delineate a lane for bicyclists in the existing roadway.	<ul style="list-style-type: none"> Safer for user Simple construction Inexpensive to build 	<ul style="list-style-type: none"> Still in close proximity to vehicles Not pedestrian friendly
Separated Side Path	A 10-14 foot facility that is in the existing roadway ROW but is physically separated from vehicles by an open space or barrier.	<ul style="list-style-type: none"> Can accommodate bicyclists and pedestrians Separation from vehicles increases safety 	<ul style="list-style-type: none"> More expensive as it requires building a separate facility May impact ROW Vehicles entering or exiting side roads and driveways present conflict points with side path users



Example of a Shared Lane Marking, Also Known as a “Sharrow”



Example of a Share the Road Sign



Example of a Bike Route Sign

4.1 Segment 1 – Birdseye Street Extension

4.1.1 Design Alternatives

A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of two alternatives for this segment.

1. Alternative 1 – Dedicated bike lane
2. Alternative 2 – Shared Use Roadway

4.1.2 Alternative 1 – Dedicated bike lane

A dedicated bike lane would be established to accommodate one bicycle travel lane in each direction. The recommended width of the bike lane is 5 feet in areas with a vertical obstruction such as curb or guiderail.

4.1.3 Alternative 2 – Shared Use Roadway

A Shared Use Roadway would not separate bike and pedestrian traffic from vehicle traffic. Through the use of pavement markings and signage motorists are alerted that bikes may be encountered and that they should be mindful and respectful of the bicyclist.

4.1.4 Selected Alternative

The existing roadway width of 30 feet is insufficient for a dedicated bike lane. Due to the low speed and volume of the roadway and increased cost of construction, widening for dedicated bike lanes was eliminated.

A Shared Use Roadway with sharrow pavement markings and signage was the selected alternative to accommodate bicycle users.

The final design should investigate the construction of a sidewalk facility to accommodate pedestrian users through this segment and compare it with the estimated cost to construct a Separated Side Path. Detailed topographic survey and determination of available ROW will be required. Analysis of a potential land donation from the waste water treatment facility should be conducted.



Existing Greenway Extension Gateway Treatment

4.2 Segment 2 – Birdseye Street

4.2.1 Design Alternatives

A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of two alternatives for this segment.

1. Alternative 1 – Dedicated bike lane
2. Alternative 2 – Shared Use Roadway

4.2.2 Alternative 1 – Dedicated Bike Lane

A dedicated bike lane would be established to accommodate one bicycle travel lane in each direction. The recommended width of the bike lane is 5 feet in areas with a vertical obstruction such as curb or guiderail.

4.2.3 Alternative 2 – Shared Use Roadway

A Shared Use Roadway would not separate bike and pedestrian traffic from vehicle traffic. Through the use of pavement markings and signage motorists are alerted that bikes may be encountered and that they should be mindful and respectful of the bicyclist.

4.2.4 Selected Alternative

Due to low speeds and volumes of traffic, the Shared Use Roadway with sharrow pavement markings and signage was selected.

The final design should investigate the construction of a sidewalk facility to accommodate pedestrian users through this segment and compare it with the estimated cost to construct a Separated Side Path. Detailed topographic survey and determination of available ROW will be required. Analysis of a potential land donation from the waste water treatment facility should be conducted.

4.3 Segment 3 – Elm Street (Birdseye Street to Stratford Avenue)

4.3.1 Design Alternatives

A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of three alternatives for this segment.

1. Alternative 1 – Dedicated bike lane
2. Alternative 2 – Shared Use Roadway
3. Alternative 3 – Separated Side Path

4.3.2 Alternative 1 – Dedicated Bike Lane

A dedicated bike lane would be established to accommodate one bicycle travel lane in each direction. The recommended width of the bike lane is 5 feet in areas with a vertical obstruction such as curb or guiderail.



Elm Street – Dedicated Bike Lane Alternative

4.3.3 Alternative 2 – Shared Use Roadway

A Shared Use Roadway would not separate bike and pedestrian traffic from vehicle traffic. Through the use of pavement markings and signage motorists are alerted that bikes may be encountered and that they should be mindful and respectful of the bicyclist.

4.3.4 Alternative 3 – Separated Side Path

A Separated Side Path is a multi-modal facility located within the roadway ROW but is physically separated from the roadway, and in turn, motorized vehicular traffic by an open space or barrier. Typical side path widths range from 10 feet to 14 feet and can accommodate two-way use by various user types including bicyclists and pedestrians.

4.3.5 Selected Alternative

After discussions with Committee members and the public, the alternative that was selected was a 5 foot dedicated bike lane on both sides of the road since there is adequate roadway width. A Separated Side Path was discussed but was eliminated since there are already existing sidewalk facilities to accommodate pedestrians, the path

would cross numerous driveways creating multiple conflict points, and available ROW limits the areas available without requiring additional impacts.

The final design should investigate the construction of the missing sidewalk segments to complete the sidewalk network in this segment. The missing sidewalk segments are located in the vicinity of the Elm Street and Birdseye Street intersection, and the South Avenue and Elm Street intersection area.

The greenway crosses Stratford Avenue at a signalized intersection. Upgrades to the signal will be required for bicycle detection and actuation. Final design efforts will be required to determine and coordinate these upgrades.

4.4 Segment 4 – Elm Street (Stratford Avenue to Broad Street)

4.4.1 Design Alternatives

A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of four alternatives for this segment.

1. Alternative 1 – Dedicated bike lane for hill climb and Shared Use Roadway for downhill
2. Alternative 2 – Separated Side Path
3. Alternative 3 – Roadway widening
4. Alternative 4 - Shared Use Roadway

4.4.2 Alternative 1 – Dedicated Bike Lane for Hill Climb and Shared Use Roadway for Downhill

A dedicated bike lane would be established to accommodate one bicycle travel lane in each direction. The recommended width of the bike lane is 5 feet in areas with a vertical obstruction such as curb or guiderail. The Shared Use Roadway would notify motorists to be mindful that bikes could be riding in the road.

4.4.3 Alternative 2 – Separated Side Path

A Separated Side Path is a multi-modal facility located within the roadway ROW but is physically separated from the roadway, and in turn, motorized vehicular traffic by an open space or barrier. Typical side path widths range from 10 feet to 14 feet and can accommodate two-way use by various user types including bicyclists and pedestrians.

4.4.4 Alternative 3 – Roadway Widening

Widening the road would allow for enough room to create a dedicated bike lane on both sides of the street, as well as provide on-street parking.

4.4.5 Alternative 4 – Shared Use Roadway

A Shared Use Roadway would not separate bike and pedestrian traffic from vehicle traffic. Through the use of pavement markings and signage motorists are alerted that bikes may be encountered and that they should be mindful and respectful of the bicyclist.

4.4.6 Selected Alternative

The alternative that was chosen is a dedicated bike lane for the northbound traffic and a shared use lane with the use of sharrow pavement markings for the southbound traffic at the beginning of the segment. Due to roadway width restrictions, after the intersection with Academy Hill both sides of Elm Street will be a Shared Use Roadway by utilizing sharrow pavement markings and signage.

The Committee acknowledged that a roadway widening project to create enough width to accommodate a dedicated bike lane in both directions for the entire segment would be an advantageous near term improvement to the corridor.

The final design should investigate the construction of a sidewalk facility to accommodate pedestrian users through this segment.

4.5 Segment 5 – Elm Street (Broad Street to East Broadway Street)

4.5.1 Design Alternatives

A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of four alternatives for this segment.

1. Alternative 1 – Eliminate on-street parking with a 4 foot dedicated bike lane
2. Alternative 2 – Retain on-street parking on one side of the roadway with a Shared Use Roadway
3. Alternative 3 – Retain on-street parking on both sides of the road with a Shared Use Roadway
4. Alternative 4 – Create a one-way traffic loop with a Shared Use Roadway

This segment of Elm Street currently has parallel parking on both sides of the road. This presents issues trying to preserve the on-street parking since the width of the road is currently only approximately 30 feet wide.



Elm Street – From Broad Street to East Broadway

4.5.2 Alternative 1 – Eliminate On-Street Parking with a 4 foot Dedicated Bike Lane

A dedicated bike lane would be established to accommodate one bicycle travel lane in each direction. The recommended width of the bike lane is 5 feet in areas with a vertical obstruction such as curb or guiderail but a minimum width of 4 feet may be used in areas without obstructions.

4.5.3 Alternative 2 – Retain on-street parking on one side of the roadway with a Shared Use Roadway

Eliminating on street parking from one side of the roadway creates enough available width to accommodate a Shared Use Roadway with travel lane widths measuring approximately 11 feet.

4.5.4 Alternative 3 – Retain on-street parking on both sides of the road with a Shared Use Roadway

Having a Shared Use Roadway on both sides of the road alerts motorists that bikes are allowed to ride in the roadway and to watch out for them. Adding sharrow pavement markings would allow on-street parking to be retained. However, this segment is extremely narrow if on street parking is retained. This alternative was not strongly recommended.

4.5.5 Alternative 4 – Create a One-Way Traffic Loop

Creating a one-way segment for vehicles would eliminate one vehicle travel lane that could then be used to accommodate the Greenway. This alternative was discussed but not strongly supported.

4.5.6 Selected Alternative

Discussions with the Traffic Control Authority, during a public info meeting on July 14, 2016, over the preferred alternative led to the decision to eliminate on-street parking in the southbound direction and add sharrow pavement markings on both sides of the road.

4.6 Segment 6 – East Broadway Street (Elm Street to Sutton Avenue)

4.6.1 Design Alternatives

A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of three alternatives for this segment.

1. Alternative 1 – Eliminate on-street parking with a 5 foot dedicated bike lane
2. Alternative 2 – Retain on-street parking with a Shared Use Roadway on one side and a dedicated bike lane on the other side of the road
3. Alternative 3 – Retain on-street parking with a Shared Use Roadway on both sides of the road

4.6.2 Alternative 1 – Eliminate On-Street Parking with a 5 foot Dedicated Bike Lane

A dedicated bike lane would be established to accommodate one bicycle travel lane in each direction. The recommended width of the bike lane is 5 feet in areas with a vertical obstruction such as curb or guiderail.

4.6.3 Alternative 2 – Retain On-Street Parking with a Shared Use Facility on One Side and a Dedicated Bike Lane on the Other Side

Eliminating on street parking from one side of the roadway creates enough available width to accommodate a Dedicated Bike Lane along the on-street parking.

4.6.4 Alternative 3 – Retain On-Street Parking with a Shared Use Roadway on Both Sides of the Road

A Shared Use Roadway would not separate bike and pedestrian traffic from vehicle traffic. Through the use of pavement markings and signage motorists are alerted that bikes may be encountered and that they should be mindful and respectful of the bicyclist.

4.6.5 Selected Alternative

The design that was decided on for East Broadway Street is a 5 foot dedicated bike lane for the westbound traffic while maintaining the on-street parking on the same side. For the eastbound traffic a shared use facility was chosen as the preferred alternative.

The Committee recognizes that there is a Transit Orientated Study (TOD) that is being concurrently completed with the Greenway Preliminary Design. As such this segment will not be further analyzed until the results of the TOD are available for coordination.

4.7 Segment 7 – Sutton Avenue

4.7.1 Design Alternatives

A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of two alternatives for this segment.

1. Alternative 1 – Eliminate on-street parking with a Shared Use Roadway on both sides of the road
2. Alternative 2 – Retain on-street parking with a Shared Use Roadway on one side of the road

4.7.2 Alternative 1 – Eliminate On-Street Parking with a Shared Use Roadway on Both Sides of the Road

Incorporating a shared use facility allows bicyclists to share the road with motorists while at the same time the sharrow pavement markings alert motorists to watch out for bicyclists that are utilizing the roadway too.

4.7.3 Alternative 2 – Retain On-Street Parking on One Side of the Road with a Shared Use Roadway.

This segment is extremely narrow if on-street parking is retained. As such, this alternative was not strongly recommended.

4.7.4 Selected Alternative

The design alternative that was chosen for Sutton Avenue is a shared use facility that utilizes sharrow pavement markings on both sides of the road, as well as signage.

The Committee recognizes that there is a Transit Orientated Study (TOD) that is being concurrently completed with the Greenway Preliminary Design. As such this segment will not be further analyzed until the results of the TOD are available for coordination.

4.8 Segment 8 – Access Road

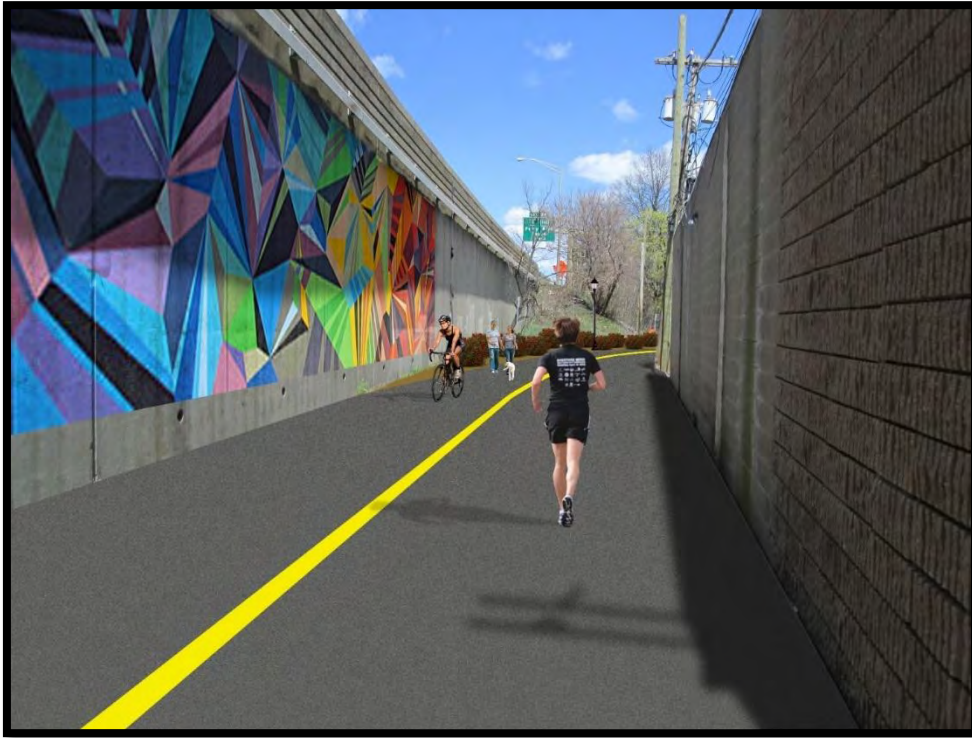
4.8.1 Design Alternatives

The access road is currently used for deliveries to the commercial plaza along Main Street. ROW would have to be acquired to incorporate this area as a permanent part of the Greenway Extension.

The Committee recognizes that there is a Transit Orientated Study (TOD) that is being concurrently completed with the Greenway Preliminary Design. As such this segment will not be further analyzed until the results of the TOD are available for coordination.



Access Road – Gateway Treatment



Access Road – Proposed Design

4.9 Perry House Spur – Broad Street

4.9.1 Design Alternatives

A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of three alternatives for this segment.

1. Alternative 1 – Eliminate On-Street Parking and Create a 5 foot Dedicated Bike Lane on Both Sides of the Road
2. Alternative 2 – Retain on-street parking with a 5 foot dedicated bike lane on one side of the road and a Shared Use Roadway on the other side of the road
3. Alternative 3 – Retain on-street parking with a Shared Use Roadway on both sides of the road

4.9.2 Alternative 1 – Eliminate On-Street Parking and Create a 5 foot Dedicated Bike Lane on Both Sides of the Road

The addition of two 5 foot wide dedicated bike lanes would separate bicyclists from motorists. Eliminating on-street parking also eliminates the hazard of motorists opening their door in the path of bicyclists.

4.9.3 Alternative 2 – Retain on-street parking with a 5 foot dedicated bike lane on one side of the road and a Shared Use Roadway on the other side of the road

Eliminating on-street parking from one side of the roadway creates enough available width to accommodate a Dedicated Bike Lane along the on-street parking area.

4.9.4 Alternative 3 – Retain on-street parking with a Shared Use Roadway on both sides of the road

A Shared Use Roadway would not separate bike and pedestrian traffic from vehicle traffic. Through the use of pavement markings and signage motorists are alerted that bikes may be encountered and that they should be mindful and respectful of the bicyclist.

4.9.5 Selected Alternative

On Broad Street, the design that was selected was to have a 10 foot travel lane, a 5 foot dedicated bike lane, and parallel parking for the westbound traffic. A Shared Use Roadway was chosen for the eastbound traffic. After the intersection with Monument Place, 8 foot wide parallel parking was retained to accommodate the bus drop off at St. James School.

A sidewalk should be considered from Monument Place to Elm Street to complete the pedestrian network in this segment.

4.10 Perry House Spur – Main Street Crossing

4.10.1 Design Alternatives

A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of two alternatives for this segment.

1. Alternative 1 – Offset Crossing with a Cycle Track
2. Alternative 2 – Standard Dedicated Bike Lane Crossing

4.10.2 Alternative 1 – Offset Crossing with a Cycle Track

The proposed alternative provides dedicated bicycle crosswalks and a cycle track for bicycles crossing Main Street. Bicycles would be required to cross Main Street during the dedicated pedestrian signal phase. As part of this alternative, a raised crosswalk was recommended at the West Broad Street (WB) / Main Street intersection to reduce turning vehicle speeds.

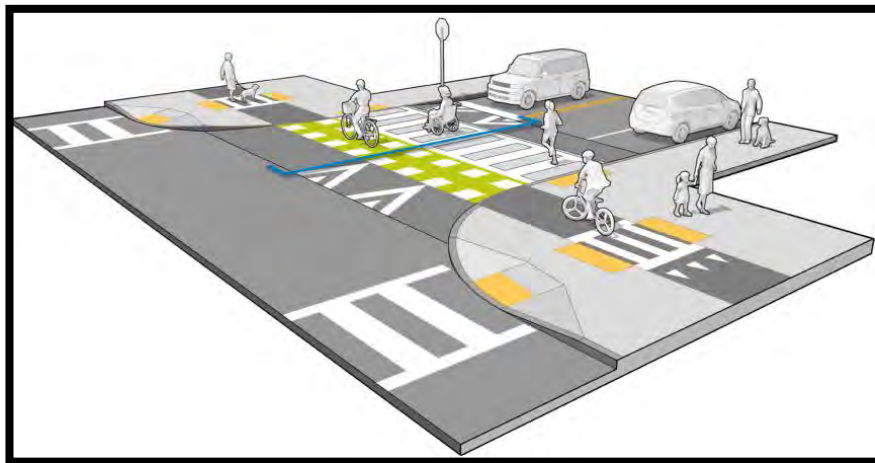
4.10.3 Alternative 2 – Standard Dedicated Bike Lane Crossing

A standard dedicated bike lane crossing was presented and discussed with the Committee. This alternative would require bicycles to follow a similar crossing pattern as motorized vehicles through the intersection. Bicycle phasing would be concurrent with vehicles and require a bicycle travelling eastbound from West Broad Street to travel on Main Street for approximately 200 feet before turning onto Broad Street. This alternative would also require the eastbound bike on West Broad Street to be on the right side approaching the Main Street intersection which contradicts the Committee’s desire to implement a left side bike lane in this area (see discussion below).

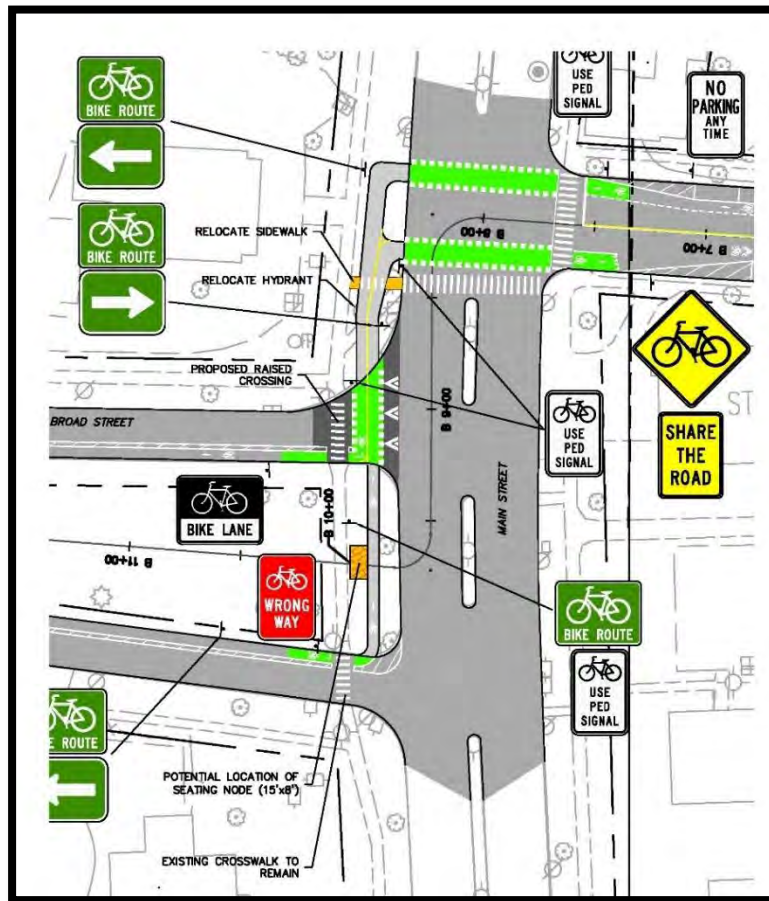
4.10.4 Selected Alternative

Alternative 1 with the Offset Crossing was selected as the preferred alternative as it separates the bicycle movement from motor vehicles and minimizes the distance that a bicycle operates on Main Street. Additionally, this alternative concentrates the bicycle crossing to one location.

The greenway crosses Main Street at a signalized intersection. Upgrades to the signal will be required for bicycle detection and actuation. Final design efforts will be required to determine and coordinate these upgrades.



Proposed Raised Crosswalk for Perry House Spur Crossing of West Broad Street



Proposed Main Street Crossing

4.11 Perry House Spur – West Broad Street

4.11.1 Design Alternatives

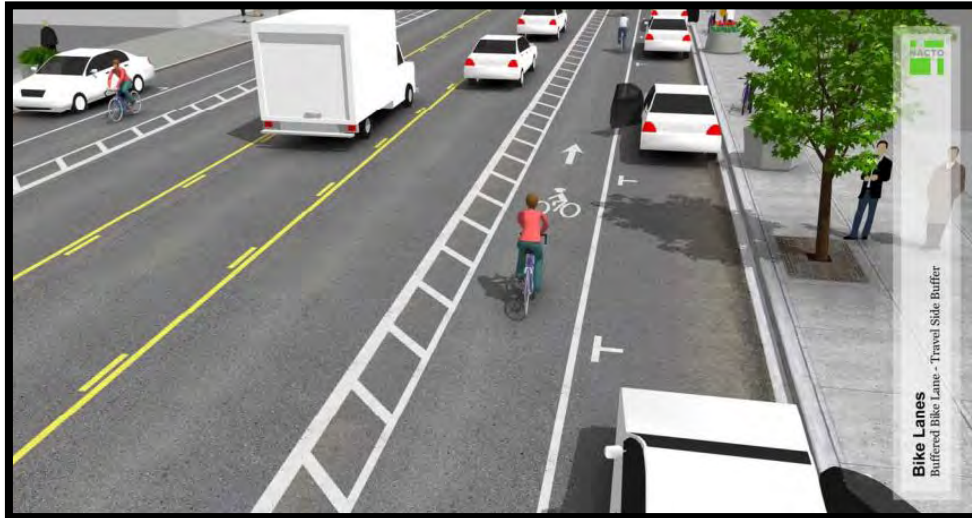
A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of two alternatives for this segment.

1. Alternative 1 – Dedicated bike lane
2. Alternative 2 – Create a Separated Side Path on the Center Green

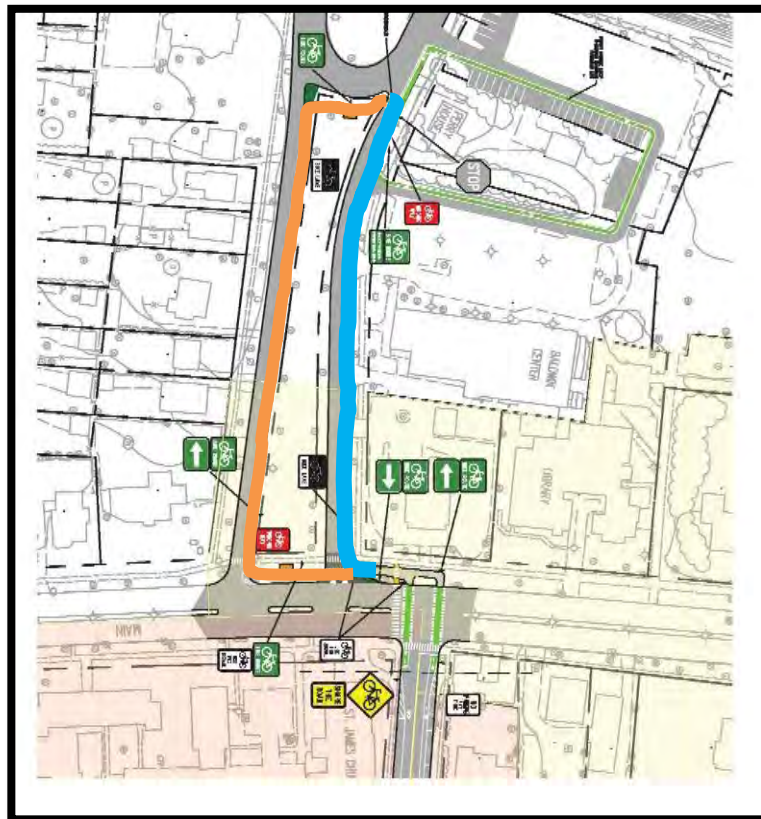
4.11.2 Alternative 1 – Dedicated Bike Lane

A dedicated bike lane would be established to accommodate bicycle travel in each direction. A buffered bike is recommended in this segment due to the speed and volume of vehicular traffic. The existing pavement width supports this initiative and would

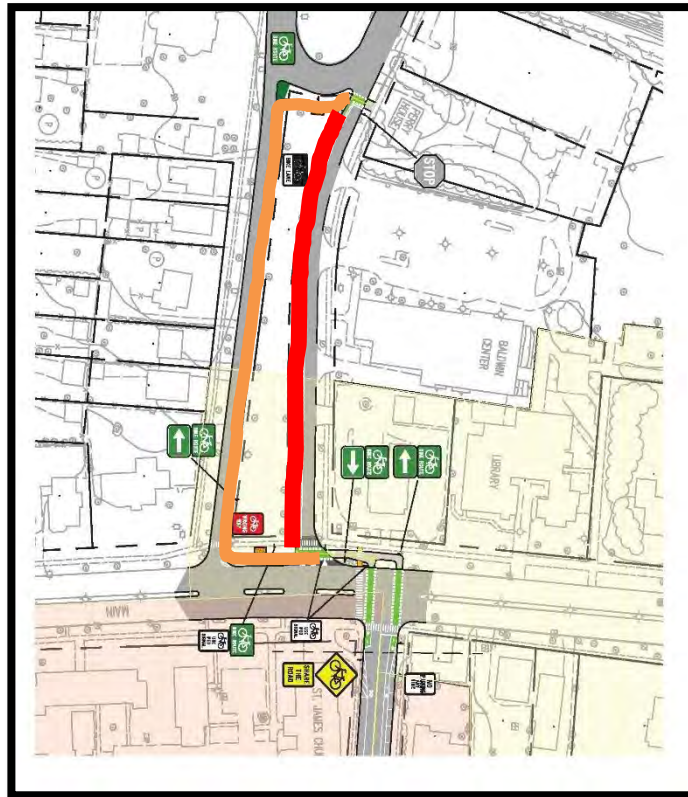
allow for a 5 foot bike lane with 2 foot striped buffer. If required for further emphasis or delineation within the buffer area, the town may consider additional measures such as delineators as a future addition.



Example of a Buffered Bike Lane



West Broad Street – Option 1 for Dedicated Bike Lane on Right



West Broad Street – Option 2 for Dedicated Bike Lane on Left

Options showing a left side and right side bike lane were developed and presented. These preliminary options are shown above for reference as well as in more detail in the attached plan set in Appendix D.

4.11.3 Alternative 2 – Create a Separated Side Path on the Center Green

An alternative creating a Separated Side Path on the center green was presented. This alternative would bring Greenway users in close proximity with the Town War Memorials. There was healthy discussion as to whether this was a positive or negative consequence. The final decision was that the Greenway would detract from the War Memorials and its presence on the green should be minimized.

4.11.4 Selected Alternative

The facility design that was chosen for West Broad Street is Alternative 1 - Option 1 which has a buffered dedicated bike lane on the right side of the westbound one-way street. At the Perry House the proposed design has the bicyclists cross the one-way road at a new crosswalk. Bicycles traveling in the eastbound direction towards Main Street will cross the western end of the center green on a dedicated side path until the facility

reaches West Broad Street (EB) where the proposed design includes a buffered bike lane on the left side of the road.

A right side buffered bike lane was discussed but not pursued since it would require Greenway users to cross West Broad Street (WB) at an uncontrolled location where traffic speeds and accidents were observed to be quite high.

The selected option includes a curb bumpout on the eastbound leg to protect the bicyclist from traffic exiting the complex intersection as well as a raised crosswalk and offset cycle track for the Main Street crossing.

4.12 Theater Spur – Shore Road

4.12.1 Design Alternatives

A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of three alternatives for this segment.

1. Alternative 1 – Retain on-street parking and have a Shared Use Roadway
2. Alternative 2 – Eliminate On-Street Parking and Create a One-Way Traffic Loop to Stratford Avenue with a Contra-Flow Bike Lane
3. Alternative 3 – Create a Separated Side Path

4.12.2 Alternative 1 – Retain On-Street Parking and Have a Shared Use Roadway on Both Sides of the Road

A Shared Use Roadway would not separate bike and pedestrian traffic from vehicle traffic. Through the use of pavement markings and signage motorists are alerted that bikes may be encountered and that they should be mindful and respectful of the bicyclist. This alternative would require minimal change from the existing condition.

4.12.3 Alternative 2 – Eliminate On-Street Parking and Create a One-Way Traffic Loop to Stratford Avenue with a Contra-Flow Bike Lane

This alternative would require improvements to the Bond's Dock / Oyster House area of Shore Road to feasibly create the one-way traffic loop. The Committee determined that this option will be considered more closely as part of future considerations associated with the Oyster House Spur.

4.12.4 Alternative 3 – Create a Separated Side Path

A Separated Side Path would create a dedicated bicycle and pedestrian facility but due to the low vehicular volume and speed was not determined to be feasible due to higher construction costs.

4.12.5 Selected Alternative

Due to the low volumes and speeds of vehicular traffic on this road, the implementation of a shared use facility was selected as the alternative for this segment.

4.13 Theater Spur – Theater Driveway

4.13.1 Design Alternatives

A review of the existing conditions, adherence to the design criteria, and discussions with the Committee members led to the final evaluation of three alternatives for this segment.

1. Alternative 1 – Reinforce a one-way traffic loop around the theater and create a dedicated bike lane that follows traffic flow
2. Alternative 2 – Reinforce a one-way vehicle traffic loop around the theater and create a bike lane and a contraflow bike lane
3. Alternative 3 – Create a side path by widening the existing sidewalk

4.13.2 Alternative 1 – Reinforce a One-Way Traffic Loop Around the Theater and Create a Bike Lane that Follows Traffic Flow

Reinforcing a one-way traffic loop would require motorists to circle the theater in order to exit to Elm Street. This would provide bicyclists and motorists with ample room for a single travel lane and dedicated bike lane. All traffic would be moving in the same direction which reduces conflicts.

4.13.3 Alternative 2 – Reinforce a One-Way Vehicle Traffic Loop Around the Theater and Create a Dedicated Bike Lane and a Contra-Flow Bike Lane

Reinforcing a one-way traffic loop would require motorists to circle the theater in order to exit to Elm Street. Creating a contra-flow bike lane creates a potential conflict with vehicular traffic and requires bicyclists to cross the motor vehicle travel lane to access Shore Road. This alternative was not strongly recommended or supported.

4.13.4 Alternative 3 – Create a Side Path by Widening the Existing Sidewalk

A Separated Side Path would create a dedicated bicycle and pedestrian facility but due to the low vehicular volume and speed was not determined to be feasible due to higher construction costs.

4.13.5 Selected Alternative

Alternative 1 was selected as the preferred alternative. The final design should include additional signing to reinforce the recommended one-way traffic pattern as well as sharrow pavement markings and signage.

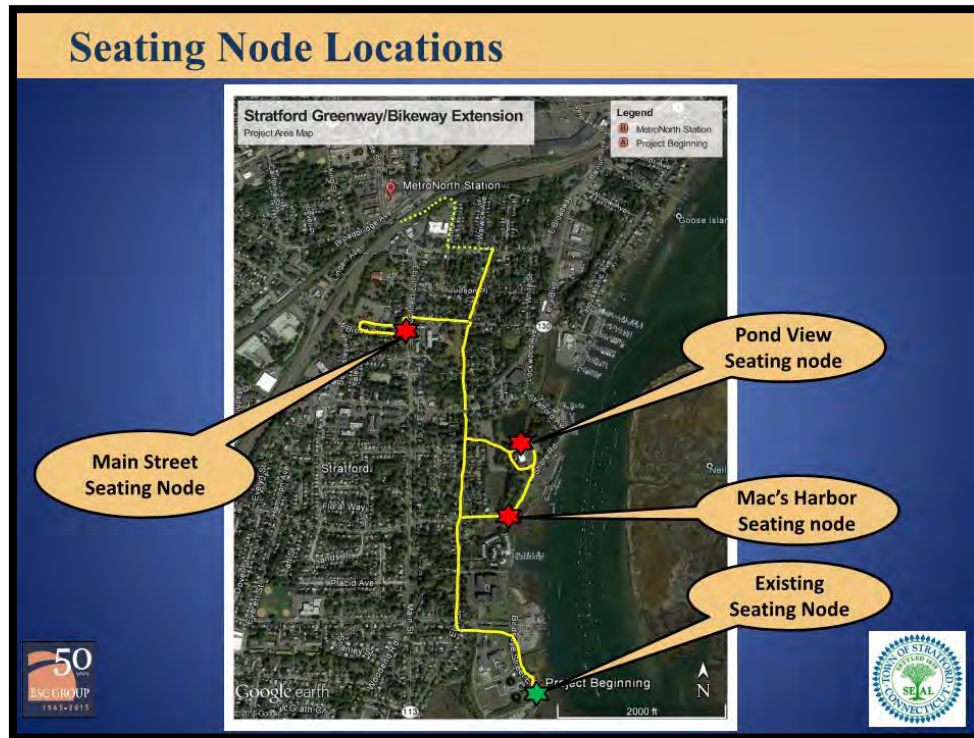
4.14 Oyster House Spur - Shore Road and Stratford Avenue

After a review of the existing conditions, adherence to the design criteria, and discussions with the Trails Committee members led to the final evaluation that this segment would not be included in this design phase of the Greenway Extension trail.

4.15 Seating Node / Pocket Park Design

There are several locations that were chosen as potential seating nodes or pocket parks. The parks would provide an area for Greenway users to rest and enjoy scenic vistas along the selected alignment. Amenities such as benches, trash cans, and bike racks would be provided in the seating node areas. Amenities should be coordinated with other Town projects to provide a consistent theme and for ease of maintenance.

See below for the proposed locations of the seating nodes / pocket parks as well as examples of typical amenities:



Seating Node/Pocket Park Locations



Example Seating Node Rendering



Existing Seating Node



Proposed Mac's Harbor Seating Node



Proposed Pond View Seating Node



Proposed Main Street Seating Node



Example of the Bench and Trash Can for the Pocket Park



Example of the Bike Rack for the Park

4.16 Informational Kiosks and Wayfinding Signage

In order to inform Greenway users of local attractions, informational kiosk and wayfinding signs are proposed in various locations along the Greenway Extension. Signage could describe the history and current usage of the project corridor points of interest as well as graphical route maps of the Greenway.



Proposed Wayfinding Locations



Examples of Wayfinding Signage

4.17 Parking for the Greenway Extension

There are four proposed locations for parking for facility users throughout the corridor. Each of the proposed parking locations have existing parking lots that could be utilized by the facility users. Designated parking spaces for Greenway users was recommended.

The four locations are shown in the figure below:



Proposed Parking Locations

4.18 Public Outreach

A Public Information Meeting was held on January 20, 2016 to present the preliminary design to the public, gather feedback, and gain their support for the project. Following the meeting, an electronic survey was created and posted on the Town's website that allowed the public to voice their opinions. The results of the survey showed that an overwhelming majority of the public are in support of constructing the Greenway Extension in Stratford (94.5% of respondents) and anticipate being a user of the facility (89.1% of respondents).

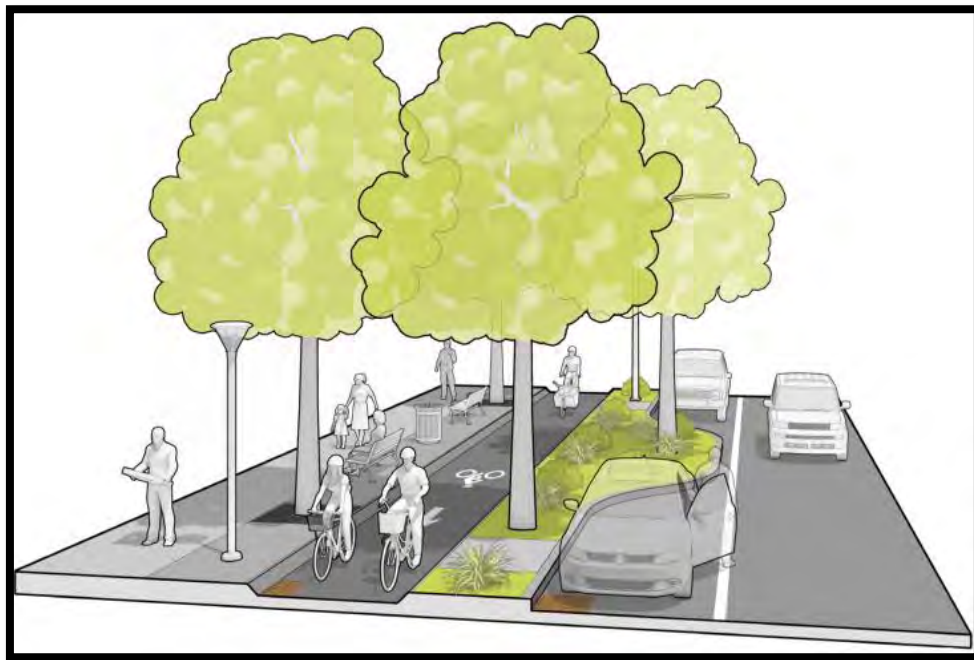
In addition, a Traffic Authority Public Hearing was held on July 14, 2016 to discuss traffic impacts of the recommended design. Following this additional public outreach effort, the preferred alternative for the corridor was finalized as shown in the preliminary plans contained in Appendix D.

4.19 Near and Long Term Improvements

As previously discussed, the Committee intends to complete the Greenway Extension facility with low cost measures in anticipation of completing the entire Greenway framework and this approach is reflected in the Preliminary Design Plans.

Looking ahead to incremental improvements or upgrades of this project segment of the Greenway would include the elimination of the Shared Use Roadway along the main corridor (Elm Street) by providing continuous dedicated bike lanes. This would require roadway widening in some locations such as from Stratford Avenue to Broad Street and may be included as part of a capital improvement project.

The second step would be to evaluate more substantial corridor reconstruction projects following a “Watch and See Approach.” If there is substantial support and use of the greenway then the Committee may be justified to request larger expenditures to create additional spur trails, amenities, or upgrades such as Separated Side Paths or Separated Bike Lanes. The Oyster House Spur would possibly be one of those future upgrades.



Example of a Separated Bike Lane Path

5.0 Cost Estimates

5.1 Cost Estimating Process

The Unit Quantity Method was utilized to develop the cost estimate for each phase. In this method, the work is divided into the various individual operations or items that collectively “build” the end product. Cost estimates were developed in a four-step process:

5.1.1 Develop Project Model

To develop the project model, BSC identified each operations and/or material type anticipated for the preferred alternative and assigned them to appropriate Construction Specifications Institute (CSI) numeric divisions. Identification of these operations or materials (“Items”) was completed based on the alignment and planning-level assumptions regarding the physical content of the phase. Additionally, “Soft Costs” were included to account for design, permitting, and similar professional services. An appropriate unit of measurement was then assigned to each Item based on its specific nature such as linear-foot (“l.f.”), square-foot (“s.f.”), per-item basis (“each”), etc.

5.1.2 Assign Quantities

Once the project model was completed and the content of the preferred alternative was defined, an appropriate unit of measurement was assigned to each Item based on its specific nature. The quantity of each Item was then estimated based on the particular alignment and planning-level assumptions regarding its physical content and incorporated into the model.

5.1.3 Assign Unit Prices

Unit prices were assigned to each of the individual Items in the Project Model. Unit prices were obtained from a variety of sources, including published ConnDOT pricing, recent public projects and direct contractor or supplier inquiries. When no unit cost data was available for a particular item, unit costs were compiled by using Department of Labor rates for labor coupled with actual material costs or lump sum values were assigned based on historical benchmarking, ratio allocation, or anticipated level-of-effort.

5.1.4 Calculation

Once the Project Model was populated with Items, Quantities, and Unit Prices, the cost of the assembled Items was calculated. Construction costs were supplemented with Lump Sum Items such as mobilization and construction layout, which were carried as a percentage of the total cost of the assembled Items. If applicable, lump sum allowances were also included as distinct line items. Since the estimates are for

planning purposes, a contingency was added to account for the variability and uncertainty within each estimate.

5.2 Estimated Cost

Cost estimates for the preferred alternatives are summarized below. Detailed cost sheets are included in Appendix E. Since these costs are based on preliminary design data, they must be updated continuously as the project moves forward through the final design phase. These numbers should be used with caution, as they are based on limited information and are intended for budgeting purposes only.

Costs are estimated and may vary greatly depending on items such as the final funding source and associated design process, role of ConnDOT during the final design and construction phases, ROW process / final impacts, and selected intensity of construction inspection and oversight.

Cost Estimate Summary

<i>Estimated Cost of Greenway Improvements</i>	<i>\$224,000</i>
<i>Estimated Cost of Perry House Spur</i>	<i>\$ 95,000</i>
<i>Estimated Cost of Required Sidewalks</i>	<i>\$280,000</i>
Total Estimated Cost of Stratford Greenway Extension Construction	\$619,000

FIGURES

Figure 1 – Site Location Map

Stratford Greenway Extension

Stratford, Connecticut

Scale = 1:24,000

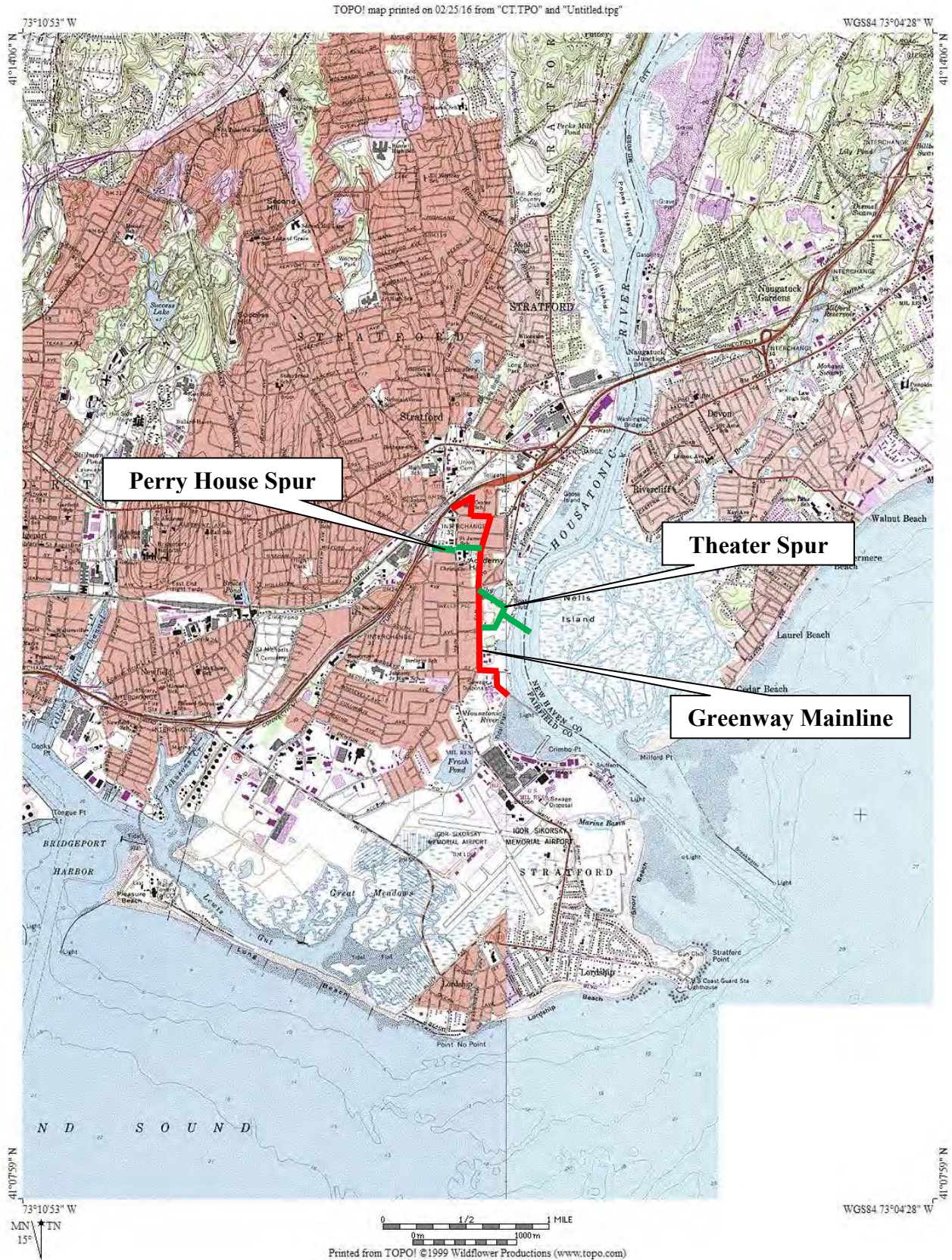
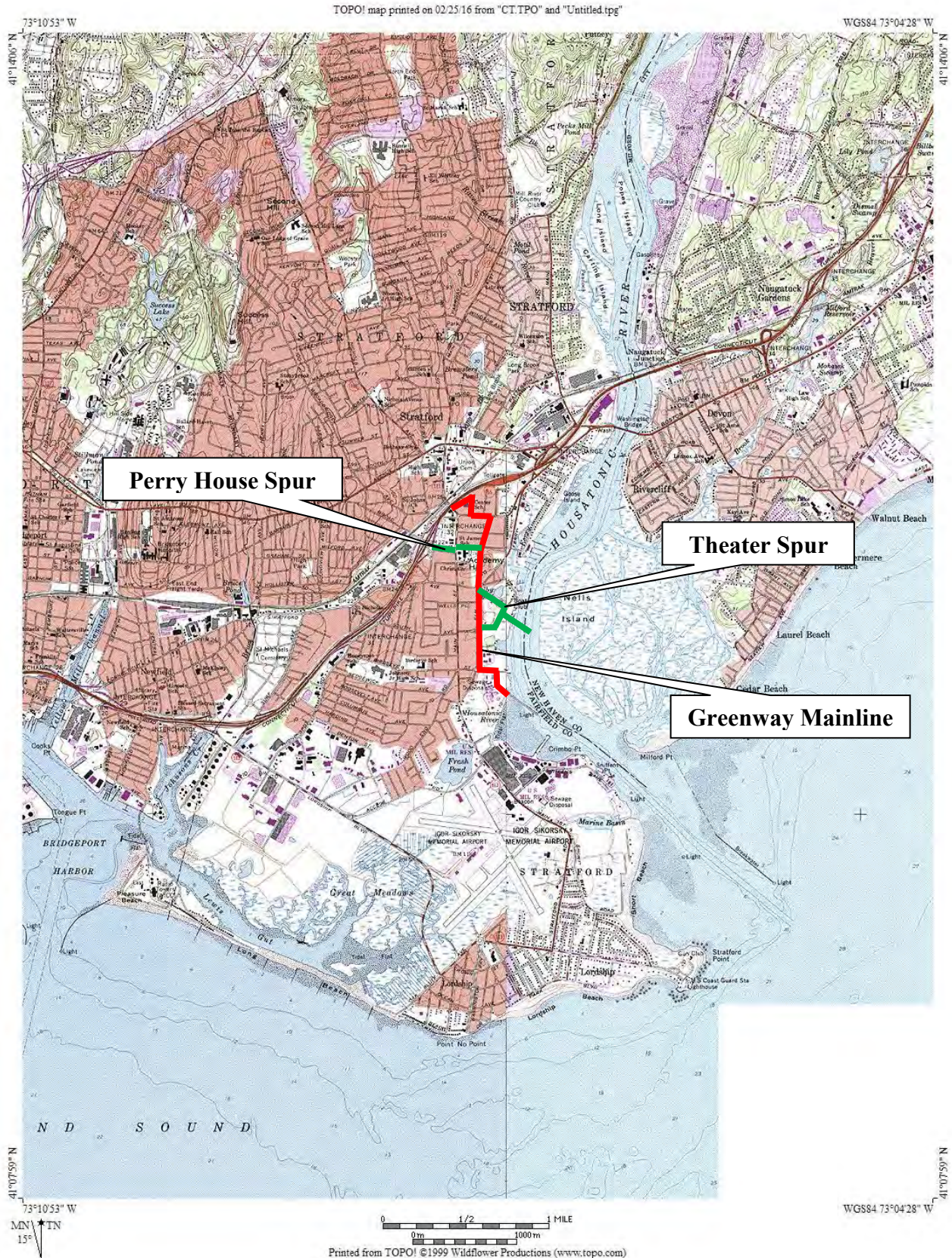


Figure 1 – Site Location Map

Stratford Greenway Extension

Stratford, Connecticut



Scale = 1:24,000



APPENDIX A
PROJECT MAPPING

Natural Diversity Data Base Areas STRATFORD, CT

June 2016

-  State and Federal Listed Species & Significant Natural Communities
-  Town Boundary

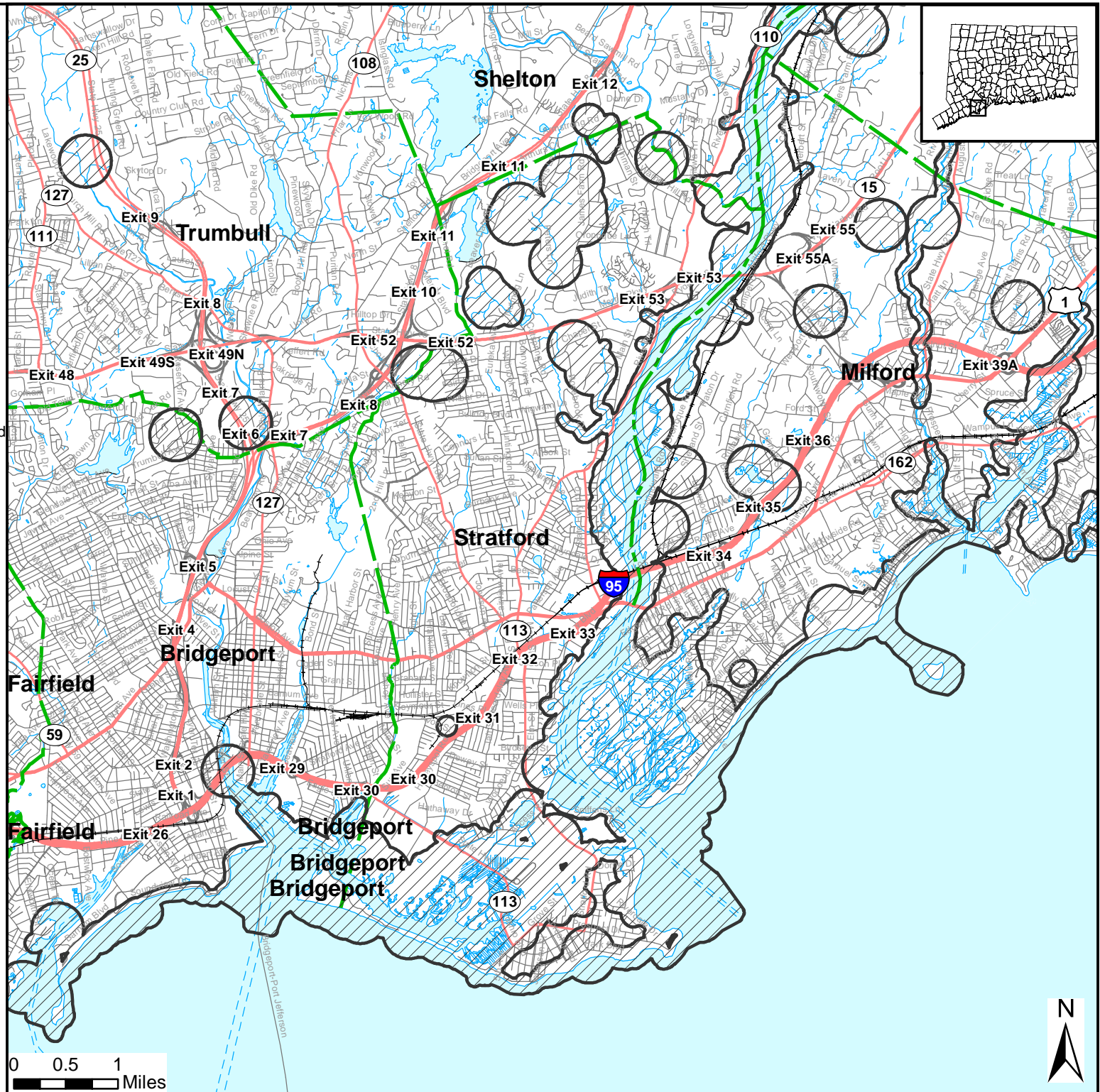
NOTE: This map shows general locations of State and Federal Listed Species and Significant Natural Communities. Information on listed species is collected and compiled by the Natural Diversity Data Base (NDDB) from a number of data sources. Exact locations of species have been buffered to produce the general locations. Exact locations of species and communities occur somewhere in the shaded areas, not necessarily in the center. A new mapping format is being employed that more accurately models important riparian and aquatic areas and eliminates the need for the upstream/downstream searches required in previous versions.

This map is intended for use as a preliminary screening tool for conducting a Natural Diversity Data Base Review Request. To use the map, locate the project boundaries and any additional affected areas. If the project is within a shaded area there may be a potential conflict with a listed species. For more information, complete a Request for Natural Diversity Data Base State Listed Species Review form (DEP-APP-007), and submit it to the NDDB along with the required maps and information. More detailed instructions are provided with the request form on our website.

www.ct.gov/deep/nddbrequest

Use the CTECO Interactive Map Viewers at www.cteco.uconn.edu to more precisely search for and locate a site and to view aerial imagery with NDDB Areas.

QUESTIONS: Department of Energy and Environmental Protection (DEEP)
79 Elm St., Hartford CT 06106
Phone (860) 424-3011

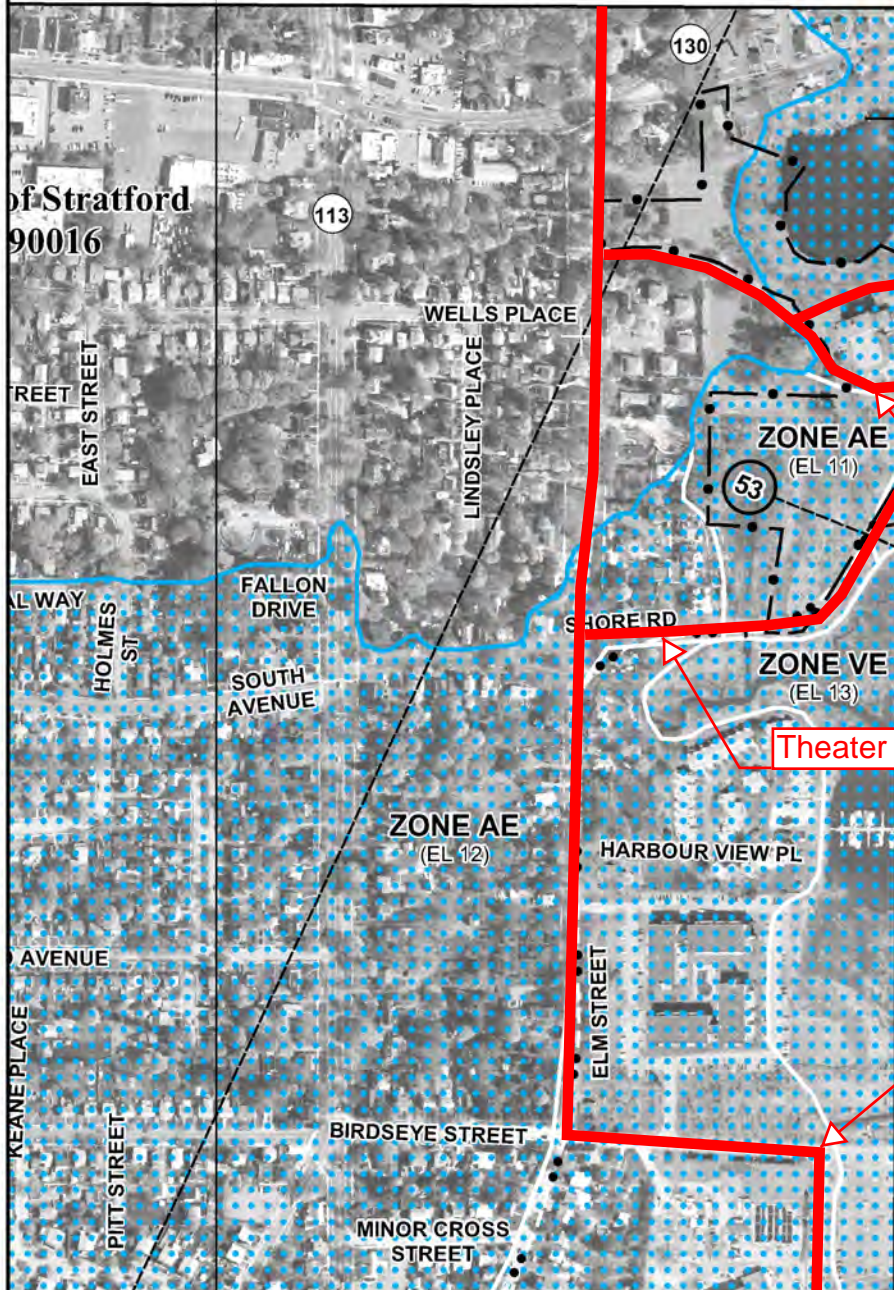


Connecticut Department of
Energy & Environmental Protection
Bureau of Natural Resources
Wildlife Division

895000 FT

73° 07' 30"

41° 11' 15"



of Stratford
90016

113

WELLS PLACE

LINDSLEY PLACE

FALLON DRIVE
SOUTH AVENUE

ZONE AE
(EL 12)

HARBOUR VIEW PL

BIRDSEYE STREET

MINOR CROSS STREET

ZONE AE
(EL 13)

American
Shakespeare
State Park

45° 61' 00" N

ZONE AE
(EL 11)

Theater Spur

ZONE AE
(EL 13)

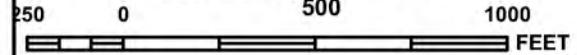
ZONE VE
(EL 13)

Theater Spur

Greenway Route



MAP SCALE 1" = 500'



PANEL 0442G

FIRM

**FLOOD INSURANCE RATE MAP
FAIRFIELD COUNTY,
CONNECTICUT
(ALL JURISDICTIONS)**

PANEL 442 OF 626
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BRIDGEPORT, CITY OF	090002	0442	G
STRATFORD, TOWN OF	090016	0442	G

-NOTE-
THIS MAP INCLUDES BOUNDARIES OF THE COASTAL BARRIER RESOURCES SYSTEM ESTABLISHED UNDER THE COASTAL BARRIER RESOURCES ACT OF 1982 AND/OR SUBSEQUENT ENABLING LEGISLATION.

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

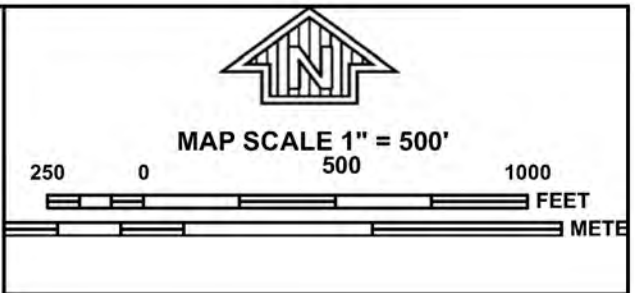
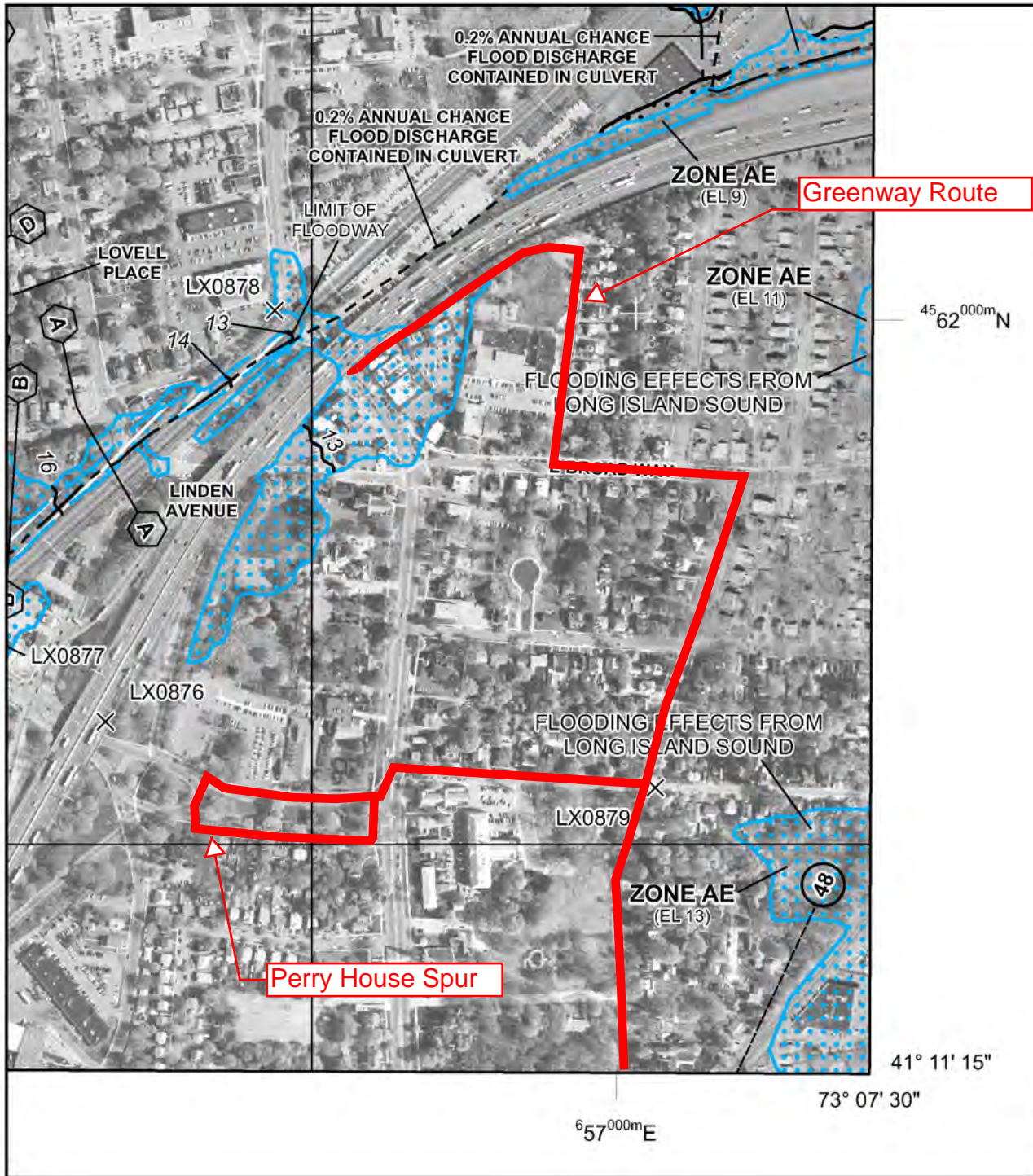


**MAP NUMBER
09001C0442G**

**MAP REVISED
JULY 8, 2013**

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0434G

FIRM

**FLOOD INSURANCE RATE MAP
FAIRFIELD COUNTY,
CONNECTICUT
(ALL JURISDICTIONS)**

PANEL 434 OF 626
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
BRIDGEPORT, CITY OF	090002	0434	G
STRATFORD, TOWN OF	090016	0434	G

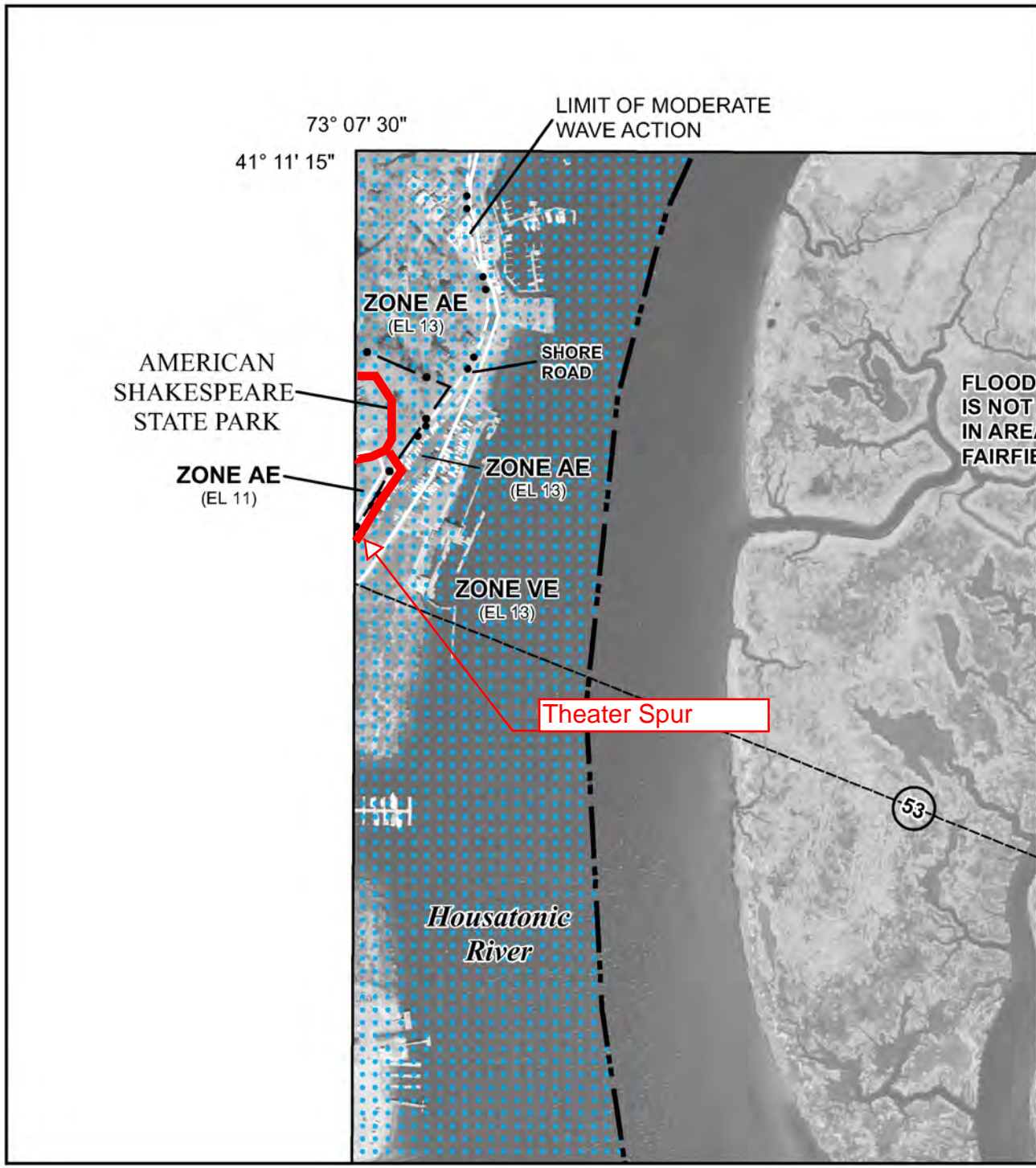
Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
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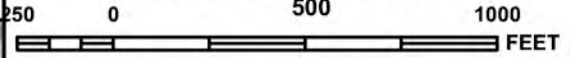
MAP REVISED
JULY 8, 2013

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



MAP SCALE 1" = 500'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0461G

FIRM
FLOOD INSURANCE RATE MAP
FAIRFIELD COUNTY,
CONNECTICUT
 (ALL JURISDICTIONS)

PANEL 461 OF 626
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
STRATFORD, TOWN OF	090016	0461	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

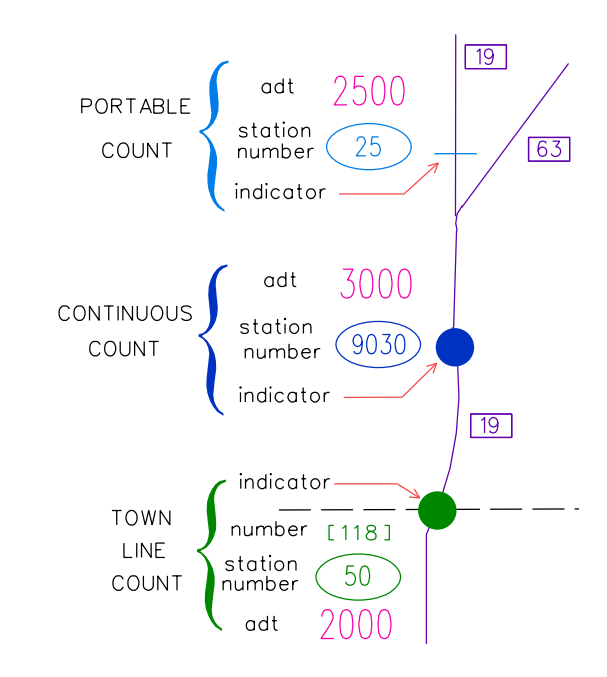
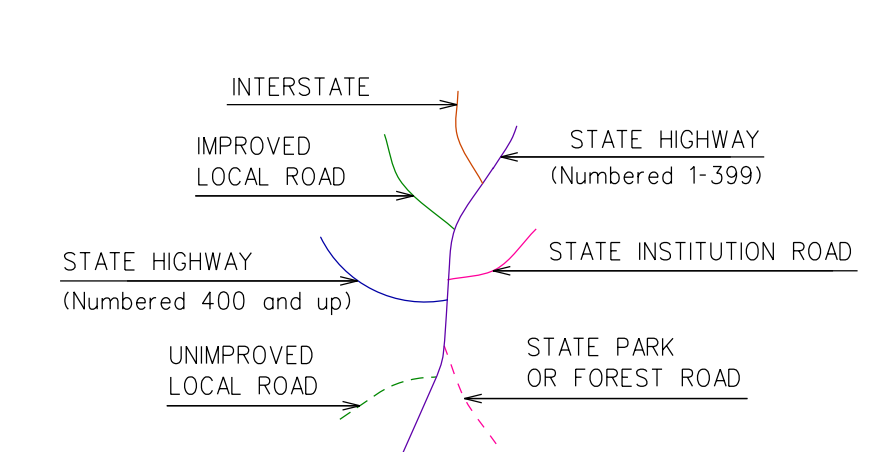
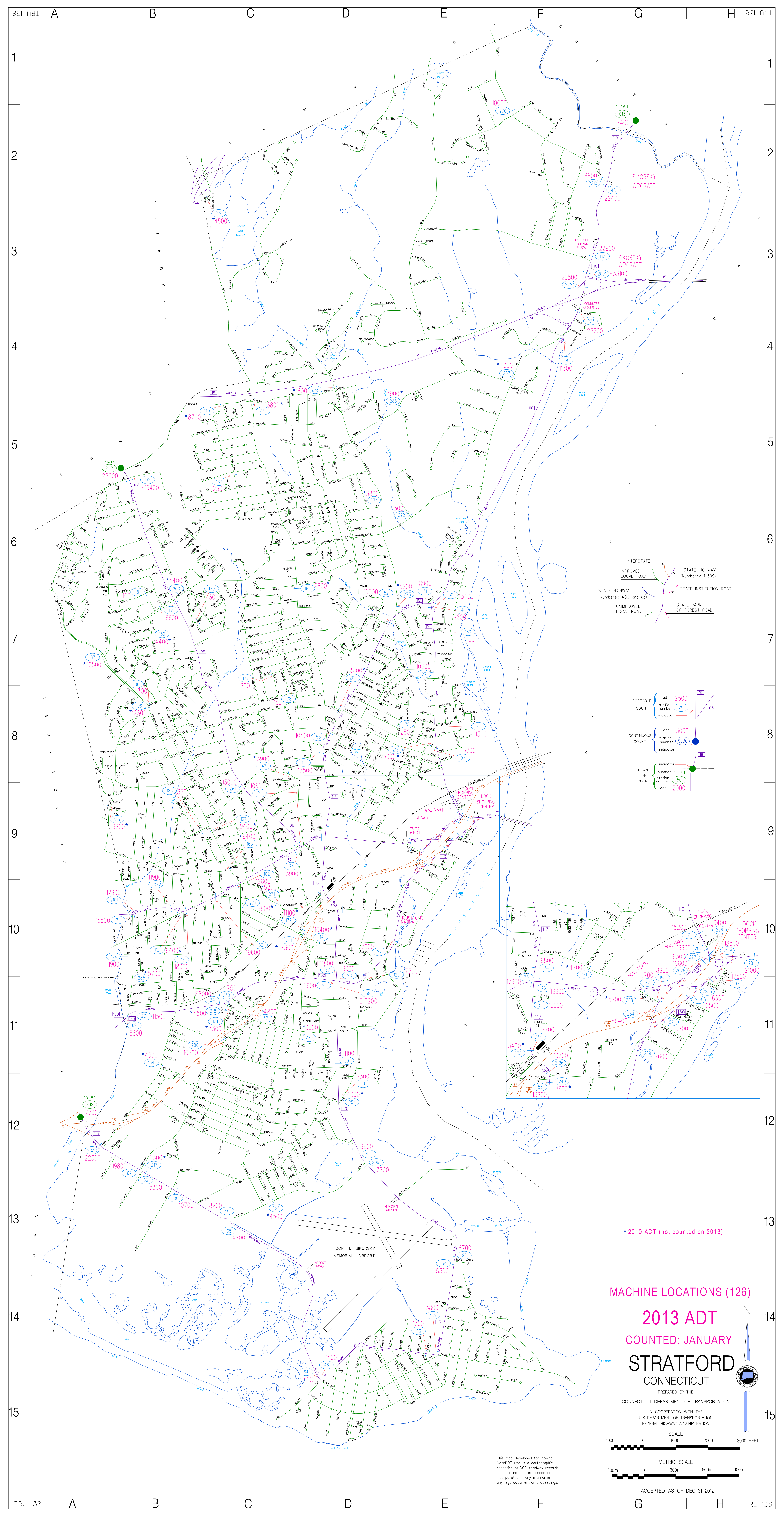


MAP NUMBER
 09001C0461G
MAP REVISED
 JULY 8, 2013

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

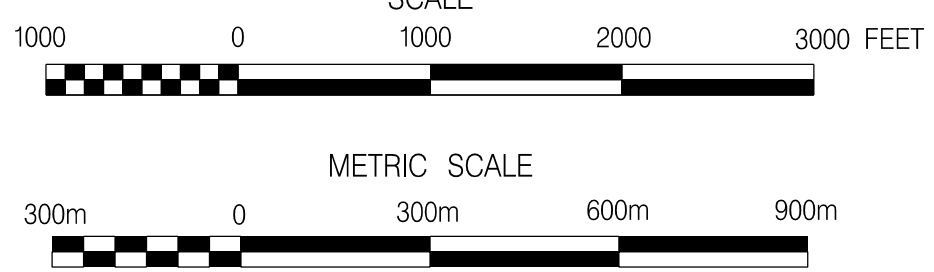
APPENDIX B
EXISTING CONDITIONS ASSESSMENT



* 2010 ADT (not counted on 2013)

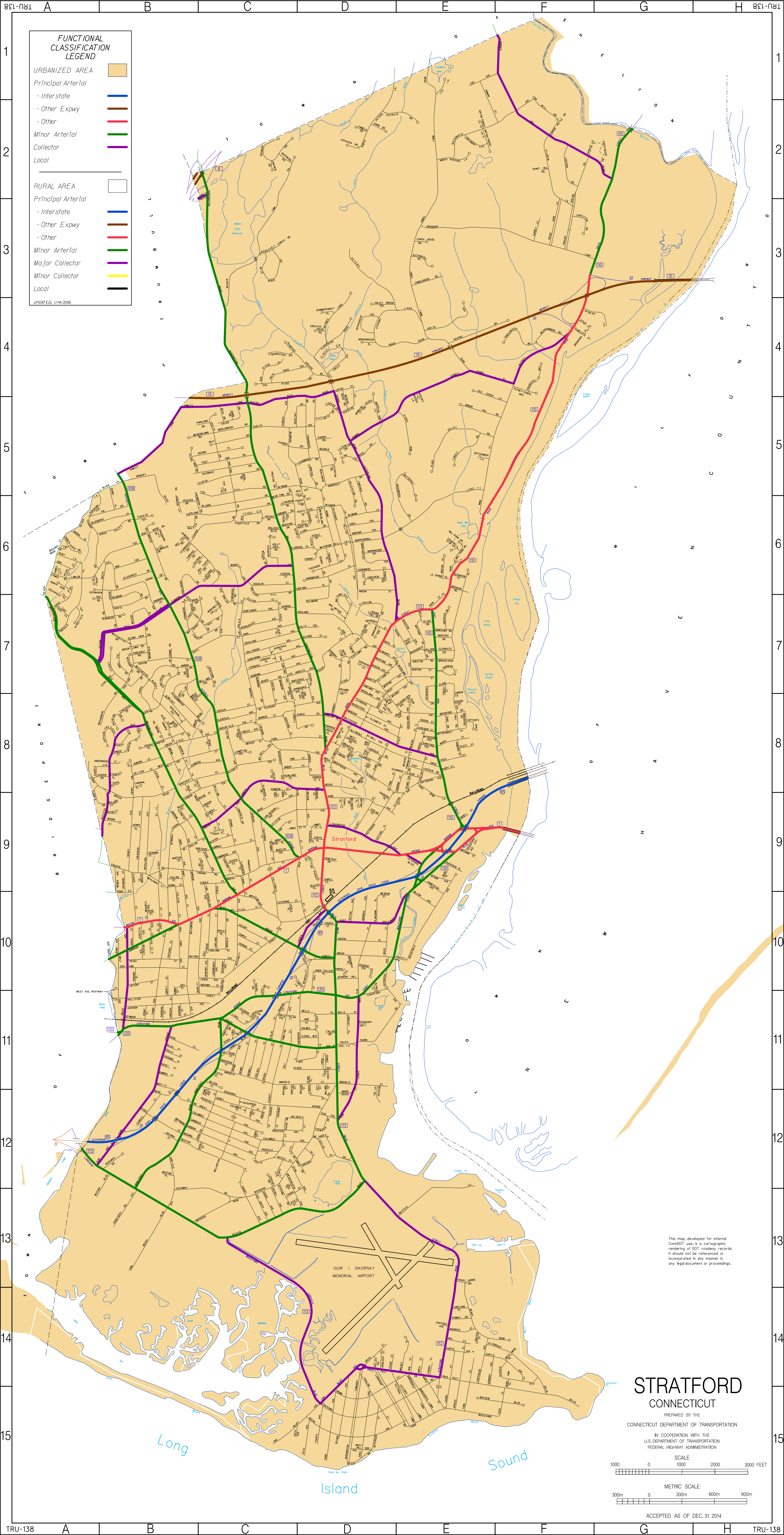
MACHINE LOCATIONS (126)
2013 ADT
COUNTED: JANUARY
STRATFORD
CONNECTICUT

PREPARED BY THE
 CONNECTICUT DEPARTMENT OF TRANSPORTATION
 IN COOPERATION WITH THE
 U.S. DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION



This map, developed for internal Connecticut use, is a cartographic rendering of DOT roadway records. It should not be referenced or incorporated in any manner in any legal document or proceedings.

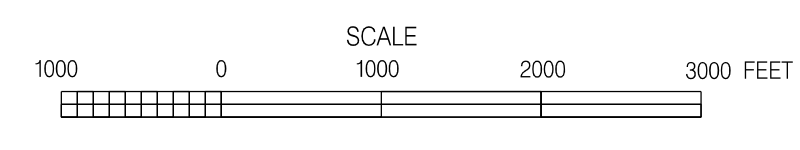
ACCEPTED AS OF DEC. 31, 2012



This map, developed for internal ConnDOT use, is a cartographic rendering of DOT roadway records. It should not be referenced or incorporated in any manner in any legal document or proceedings.

STRATFORD CONNECTICUT

PREPARED BY THE
CONNECTICUT DEPARTMENT OF TRANSPORTATION
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

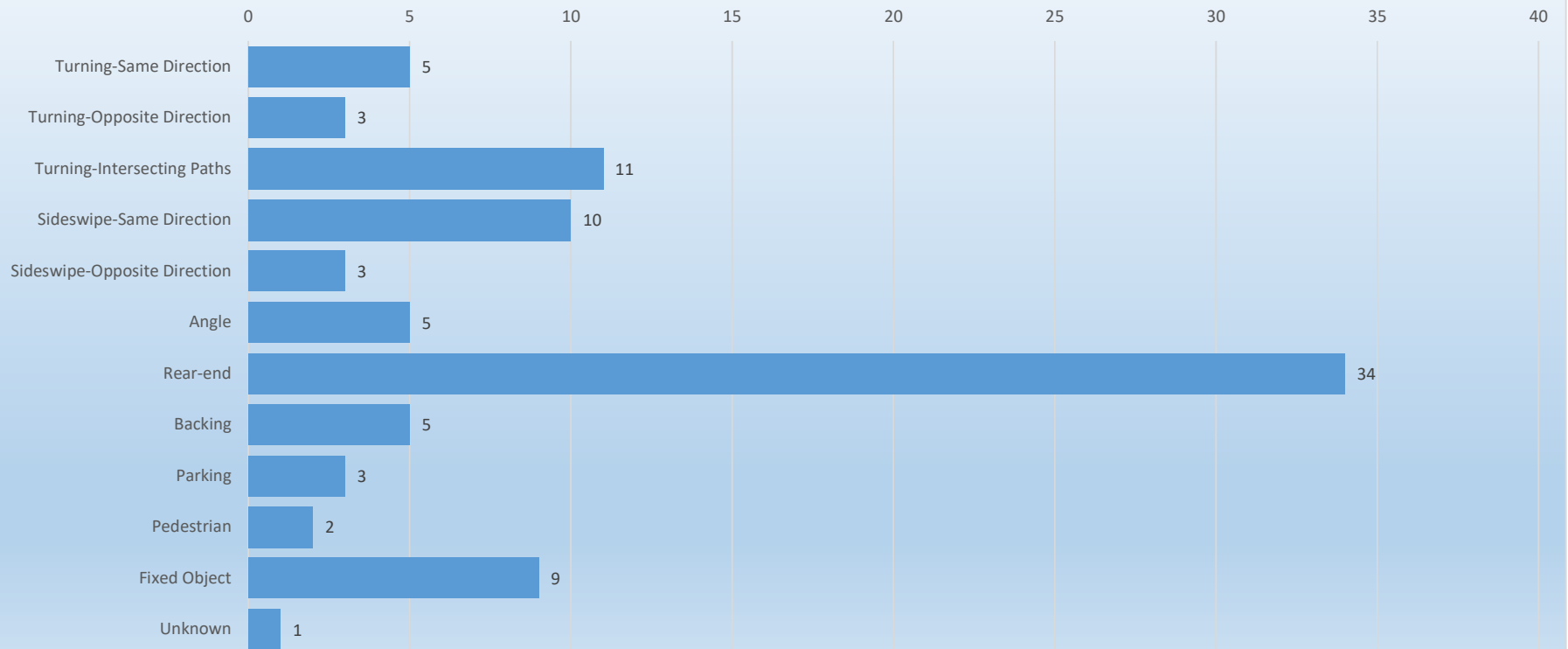


ACCEPTED AS OF DEC. 31, 2014

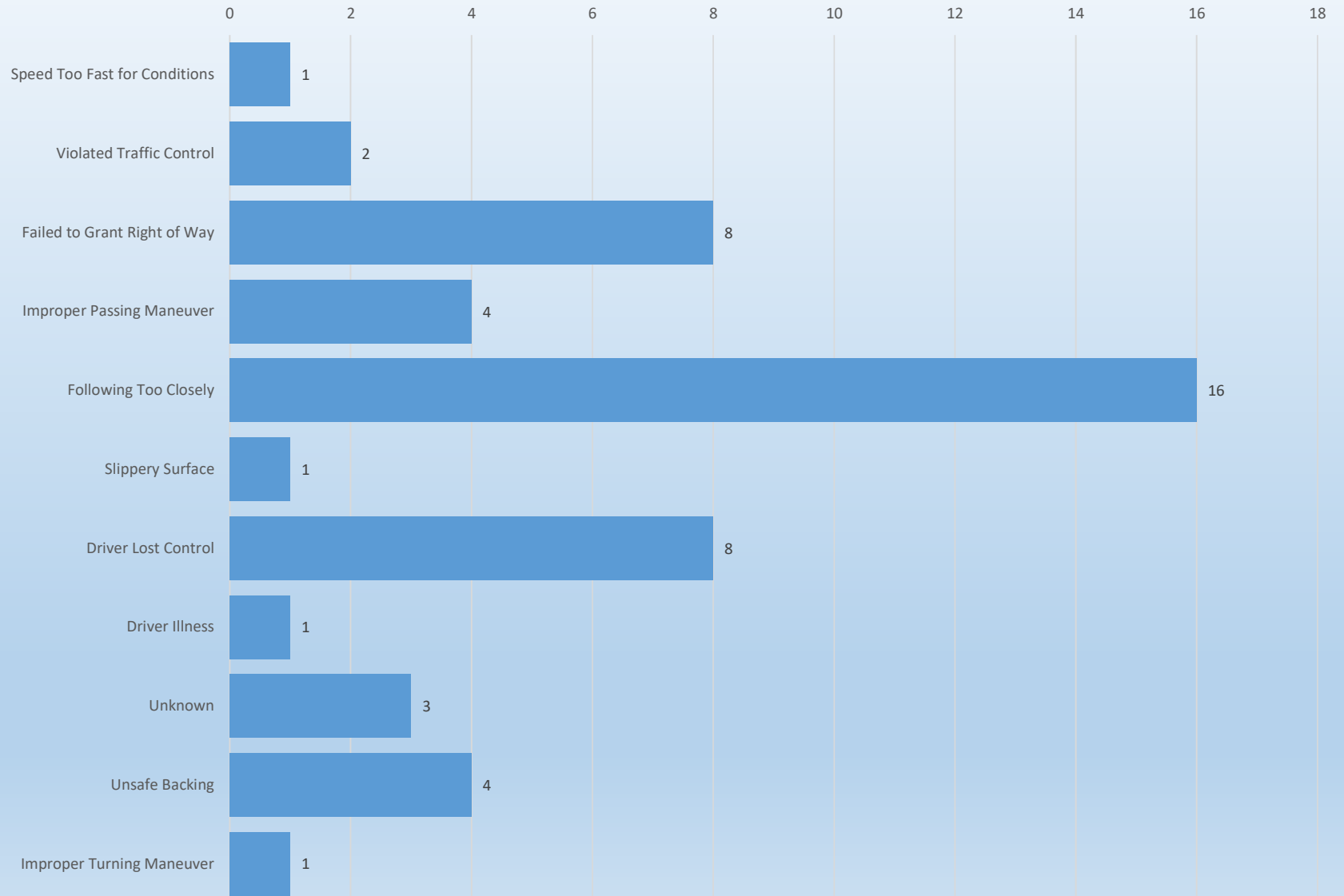
Stratford - Greenway Extension

Crash Data - 2010-2014

Crash Type Summary



Stratford - Greenway Extension
Crash Data - 2010-2014
Contributing Factor Summary



Project 83605.00 Stratford Greenway Extension
Accident Data - 2010 to 2014

Crash ID	DOT Case Number	Date Of Crash	Time Of Crash	Severity	Town	At or Between Intersections	Name of Road that Crash Occurred On	Name or Route Number of Road at which Crash Occurred	Alpha Description of Crash Location	Collision Type	Weather Condition	Road Surface Condition	Light Condition	Contributing Factor
2746777	695553	7/5/2010	11:04:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	ELM ST		ITAO 1698 Elm St.	Sideswipe-Same Direction	No Adverse Condition	Dry	Daylight	Driver Lost Control
2924332	881277	8/21/2012	13:23:00	Property Damage Only	Stratford	Crash occurred AT an intersection	ELM ST	at BROAD ST	at BROAD ST	Rear-end	No Adverse Condition	Dry	Daylight	Driver Lost Control
2943342	8040	10/13/2012	1:43:00	Injury (No fatality)	Stratford	Crash occurred AT an intersection	ELM ST	at BIRDSEYE ST	at BIRDSEYE ST	Fixed Object	No Adverse Condition	Dry	Dark-Lighted	Driver Lost Control
2973428	45782	2/28/2013	14:01:00	Injury (No fatality)	Stratford	Crash occurred AT an intersection	ELM ST	at EAST BROADWAY	at EAST BROADWAY	Turning-Intersecting Paths	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
3007188	82489	8/17/2013	10:24:00	Property Damage Only	Stratford	Crash occurred AT an intersection	ELM ST	at SOUTH AV NO 2 CON	at SOUTH AV NO 2 CON	Turning-Same Direction	No Adverse Condition	Dry	Daylight	Improper Passing Maneuver
3007214	82523	9/6/2013	11:08:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	ELM ST		50 feet North of BROAD ST	Unknown	Unknown	Unknown	Unknown	Unknown
3016279	92129	10/8/2013	19:39:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	ELM ST		50 feet South of JUDSON PL	Sideswipe-Same Direction	No Adverse Condition	Dry	Daylight	Unknown
3016312	92168	10/12/2013	4:39:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	ELM ST		200 feet North of BIRDSEYE ST	Turning-Intersecting Paths	No Adverse Condition	Dry	Dark-Lighted	Unknown
3073453	155911	2/14/2014	3:43:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	ELM ST	JUDSON PL	40 feet South of JUDSON PL	Sideswipe-Opposite Direction	Snow	Snow/Slush	Dark-Lighted	Slippery Surface
3097237	181087	6/8/2014	16:46:00	Injury (No fatality)	Stratford	Crash occurred BETWEEN intersections	ELM ST		1 tenths North of BIRDSEYE ST	Fixed Object	No Adverse Condition	Dry	Daylight	Driver Lost Control
3100337	184376	6/23/2014	17:35:00	Property Damage Only	Stratford	Crash occurred AT an intersection	ELM ST	at BIRDSEYE ST	at BIRDSEYE ST	Turning-Intersecting Paths	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
3104369	188558	7/2/2014	14:35:00	Property Damage Only	Stratford	Crash occurred AT an intersection	ELM ST	at BIRDSEYE ST	at BIRDSEYE ST	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
3134697	220719	10/19/2014	14:55:00	Property Damage Only	Stratford	Crash occurred AT an intersection	ELM ST	at BIRDSEYE ST	at BIRDSEYE ST	Angle	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
2895449	851028	4/17/2012	10:46:00	Property Damage Only	Stratford	Crash occurred AT an intersection	BIRDSEYE ST	at ELM ST	at ELM ST	Angle	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
3124339	209802	9/17/2014	17:26:00	Injury (No fatality)	Stratford	Crash occurred AT an intersection	BIRDSEYE ST	at ELM ST	at ELM ST	Angle	No Adverse Condition	Dry	Daylight	Violated Traffic Control
2996678	71033	7/16/2013	14:33:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	BROAD ST		BROAD ST 2 Tenths W of Broad St	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2704630	652901	2/18/2010	13:11:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	EAST BROADWAY		East Broadway	Rear-end	No Adverse Condition	Dry	Daylight	Driver Lost Control
2756181	705155	8/23/2010	12:49:00	Injury (No fatality)	Stratford	Crash occurred AT an intersection	EAST BROADWAY	WARWICK AV	at WARWICK AV	Angle	No Adverse Condition	Dry	Daylight	Violated Traffic Control
2962612	39013	12/6/2012	12:44:00	Property Damage Only	Stratford	Crash occurred AT an intersection	EAST BROADWAY	at ELM ST	at ELM ST	Angle	No Adverse Condition	Dry	Daylight	Driver Lost Control
2973367	45698	2/6/2013	17:00:00	Property Damage Only	Stratford	Crash occurred AT an intersection	EAST BROADWAY	at WARWICK AV	at WARWICK AV	Turning-Same Direction	No Adverse Condition	Dry	Daylight	Following Too Closely
2996452	70722	5/23/2013	12:23:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	EAST BROADWAY		at 1000 East Broadway	Turning-Intersecting Paths	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
3134710	220736	10/27/2014	16:22:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	EAST BROADWAY		200 feet West of WARWICK AV	Backing	No Adverse Condition	Dry	Daylight	Unsafe Backing
2735880	684565	6/27/2010	21:11:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	SUTTON AV		375 feet N of EAST BROADWAY	Parking	No Adverse Condition	Dry	Dark-Lighted	Driver Lost Control
2737087	685772	6/16/2010	11:40:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	SUTTON AV		323 feet N of EAST BROADWAY	Backing	No Adverse Condition	Dry	Daylight	Unsafe Backing
2899574	855275	5/2/2012	14:03:00	Property Damage Only	Stratford	Crash occurred AT an intersection	SUTTON AV	EAST BROADWAY	at EAST BROADWAY	Backing	No Adverse Condition	Dry	Daylight	Unsafe Backing
2996640	70986	7/17/2013	21:25:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	SUTTON AV		100 meters North of EAST BROADWAY	Backing	No Adverse Condition	Dry	Dark-Lighted	Unsafe Backing
3050693	133522	12/21/2013	12:39:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	SUTTON AV		200 feet North of EAST BROADWAY	Sideswipe-Opposite Direction	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
2702177	650448	2/22/2010	13:33:00	Injury (No fatality)	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		30 feet E of BEARDSLEY AV	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2744423	693198	7/9/2010	16:58:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	WEST BROAD ST	ON WEST BROAD ST-CONNECTOR	Sideswipe-Same Direction	No Adverse Condition	Dry	Daylight	Following Too Closely
2755994	704968	8/22/2010	21:56:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	WEST BROAD ST	at WEST BROAD ST-CONNECTOR	Rear-end	Rain	Wet	Dark-Lighted	Following Too Closely
2765416	714475	9/5/2010	15:23:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	WEST BROAD ST	at WEST BROAD ST-CONNECTOR	Turning-Intersecting Paths	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
2767432	719179	10/21/2010	17:44:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		100 feet E of UNDERPASS I-95	Sideswipe-Same Direction	No Adverse Condition	Dry	Daylight	Improper Passing Maneuver
2771064	722812	10/5/2010	6:08:00	Injury (No fatality)	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		30 feet W of WEST BROAD ST-CONNEC	Fixed Object	Rain	Wet	Dark-Lighted	Driver Illness
2825532	778226	5/23/2011	15:48:00	Injury (No fatality)	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		250 feet W of RT 113-MAIN ST	Rear-end	Rain	Wet	Daylight	Speed Too Fast for Conditions
2887115	842294	3/1/2012	14:58:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	on CON FR BEARDSLEY AV	on CON FR BEARDSLEY AV	Rear-end	Rain	Wet	Daylight	Following Too Closely
2909251	865416	6/15/2012	19:05:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	? on West Broad Street	on West Broad Street	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2933486	891561	9/18/2012	9:56:00	Injury (No fatality)	Stratford	Crash occurred AT an intersection	WEST BROAD ST	t WEST BROAD ST-CONNECTOR	at WEST BROAD ST-CONNECTOR	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2934249	892359	9/22/2012	14:51:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		ON W BROAD ST ROTARY	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2942936	7612	10/6/2012	18:48:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	t WEST BROAD ST-CONNECTOR	at WEST BROAD ST-CONNECTOR	Sideswipe-Same Direction	No Adverse Condition	Dry	Dark-Lighted	Improper Passing Maneuver
2963277	39706	12/10/2012	14:43:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	t WEST BROAD ST-CONNECTOR	at WEST BROAD ST-CONNECTOR	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2963722	40158	12/18/2012	15:37:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		430 feet West of RT 113-MAIN ST	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2979238	52298	2/28/2013	20:46:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		50 feet East of BEARDSLEY AV	Sideswipe-Same Direction	No Adverse Condition	Wet	Dark-Not Lighted	Failed to Grant Right of Way
2979305	52395	3/30/2013	19:07:00	Injury (No fatality)	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		150 feet East of BEARDSLEY AV	Pedestrian	No Adverse Condition	Dry	Daylight	Improper Turning Maneuver
2996522	70807	6/10/2013	15:04:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		On West Broad Street	Rear-end	Rain	Wet	Daylight	Following Too Closely
3010153	85717	10/1/2013	17:28:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		100 feet West of RT 113-MAIN ST	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
3026005	104338	11/3/2013	1:16:00	Injury (No fatality)	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		50 feet East of BEARDSLEY AV	Rear-end	No Adverse Condition	Dry	Dark-Not Lighted	Following Too Closely
3067224	149301	1/31/2014	22:36:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	at WEST BROAD ST-CON	at WEST BROAD ST-CON	Sideswipe-Same Direction	No Adverse Condition	Dry	Dark-Not Lighted	Improper Passing Maneuver
3075829	158404	2/26/2014	16:31:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	at BEARDSLEY AVE-CON	at BEARDSLEY AVE-CON	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
3077047	159670	4/7/2014	8:37:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		100 feet West of CON FR LINDEN AV	Turning-Intersecting Paths	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
3094013	177611	5/26/2014	12:36:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	at BEARDSLEY AVE-CON	at BEARDSLEY AVE-CON	Sideswipe-Same Direction	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
3094029	177631	6/3/2014	15:11:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		300 feet East of CALIFORNIA ST NO	Sideswipe-Opposite Direction	No Adverse Condition	Dry	Daylight	Driver Lost Control
3139034	225401	11/14/2014	18:21:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	WEST BROAD ST		200 feet West of RT 113-MAIN ST	Rear-end	No Adverse Condition	Dry	Dark-Not Lighted	Following Too Closely
3152180	239416	12/3/2014	5:48:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	at BEARDSLEY AV	at BEARDSLEY AV	Rear-end	No Adverse Condition	Wet	Dark-Lighted	Following Too Closely
3158687	262299	12/17/2014	17:39:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	BROAD ST	at BEARDSLEY AVE-CON	Rear-end	No Adverse Condition	Dry	Dark-Lighted	Following Too Closely
3158713	262327	12/24/2014	17:49:00	Property Damage Only	Stratford	Crash occurred AT an intersection	WEST BROAD ST	WEST BROAD STREET	at BEARDSLEY AVE-CON	Rear-end	Rain	Wet	Dark-Lighted	Following Too Closely
2694162	642326	1/6/2010	10:50:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Sideswipe-Same Direction	No Adverse Condition	Dry	Daylight	Improper Passing Maneuver
2694334	642498	1/10/2010	12:39:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	113		27 feet S of WEST BROAD ST(WB)	Parking	No Adverse Condition	Wet	Daylight	Unknown
2712622	660995	3/2/2010	8:30:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at BROAD ST	at BROAD ST	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2718767	667237	4/29/2010	17:58:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	113		50 feet S of WEST BROAD ST(EB)	Sideswipe-Same Direction	No Adverse Condition	Dry	Daylight	Improper Lane Change
2721098	669568	4/11/2010	12:52:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at BROAD ST	at BROAD ST	Turning-Same Direction	No Adverse Condition	Dry	Daylight	Improper Turning Maneuver
2728843	677429	5/5/2010	14:20:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at BROAD ST	at BROAD ST	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2736944	685629	6/9/2010	18:30:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	100 feet S of BROAD ST	100 feet S of BROAD ST	Rear-end	Rain	Wet	Daylight	Following Too Closely
2737532	686217	6/21/2010	16:49:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Fixed Object	No Adverse Condition	Dry	Daylight	Improper Turning Maneuver
2738597	687282	6/10/2010	11:13:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2754632	703606	8/9/2010	14:57:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2760904	709962	9/8/2010	8:29:00	Injury (No fatality)	Stratford	Crash occurred BETWEEN intersections	113		50 meters S of BROAD ST	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2765389	714448	9/1/2010	13:03:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at BROAD ST	at BROAD ST	Turning-Intersecting Paths	No Adverse Condition	Dry	Daylight	Violated Traffic Control
2782138	733888	12/13/2010	11:58:00	Injury (No fatality)	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2782491	734241	12/28/2010	18:31:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	113		50 feet S of WEST BROAD ST(EB)	Fixed Object	No Adverse Condition	Dry	Dark-Lighted	Speed Too Fast for Conditions
2805873	753135	1/18/2011	17:53:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Rear-end	Rain	Wet	Dark-Lighted	Following Too Closely
2835360	788631	6/25/2011	11:53:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Fixed Object	No Adverse Condition	Dry	Daylight	Driver Lost Control
2845134	799002	10/2/2011	1:20:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Fixed Object	No Adverse Condition	Dry	Dark-Lighted	Driver Lost Control
2859285	816762	8/5/2011	15:27:00	Property Damage Only	Stratford	Crash occurred BETWEEN intersections	113		150 feet N of WEST BROAD ST(EB)	Parking	No Adverse Condition	Dry	Daylight	Driver Lost Control

2893971	849490	3/10/2012	16:29:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	from WEST BROAD ST(EB)	from WEST BROAD ST(EB)	Turning-Same Direction	No Adverse Condition	Dry	Daylight	Improper Turning Maneuver
2905109	861055	5/31/2012	18:09:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2917548	874201	7/26/2012	14:10:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113		at WEST BROAD ST(WB)	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2920307	877092	6/24/2012	2:42:00	Injury (No fatality)	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Fixed Object	No Adverse Condition	Dry	Dark-Lighted	Driver Lost Control
2922313	879166	7/3/2012	8:17:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2928288	886117	8/5/2012	20:27:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(WB)	at WEST BROAD ST(WB)	Sideswipe-Same Direction	Rain	Wet	Dark-Lighted	Improper Turning Maneuver
2933046	891108	9/18/2012	10:28:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
2933546	891622	9/28/2012	13:09:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Turning-Intersecting Paths	Rain	Wet	Daylight	Violated Traffic Control
2954833	20340	11/27/2012	17:12:00	Injury (No fatality)	Stratford	Crash occurred AT an intersection	113	at BROAD ST	at BROAD ST	Pedestrian	Rain	Wet	Dark-Lighted	Unknown
2963292	39721	12/4/2012	14:45:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at BROAD ST	at BROAD ST	Turning-Intersecting Paths	No Adverse Condition	Dry	Daylight	Violated Traffic Control
2973358	45686	2/5/2013	11:05:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at BROAD ST	at BROAD ST	Turning-Opposite Direction	Snow	Wet	Daylight	Failed to Grant Right of Way
2973375	45708	2/13/2013	13:03:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at BROAD ST	at BROAD ST	Turning-Opposite Direction	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
2973403	45748	2/11/2013	19:15:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(WB)	at WEST BROAD ST(WB)	Turning-Opposite Direction	No Adverse Condition	Wet	Dark-Lighted	Failed to Grant Right of Way
2979217	52268	2/26/2013	13:58:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	on WEST BROAD ST(EB)	on WEST BROAD ST(EB)	Turning-Same Direction	No Adverse Condition	Dry	Daylight	Improper Turning Maneuver
2996569	70872	6/21/2013	13:00:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Turning-Intersecting Paths	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
3007227	82539	9/12/2013	16:06:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
3063748	137036	1/1/2014	13:03:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Turning-Intersecting Paths	No Adverse Condition	Dry	Daylight	Failed to Grant Right of Way
3064042	143344	1/23/2014	16:53:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
3067217	149294	1/24/2014	11:33:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Turning-Same Direction	No Adverse Condition	Dry	Daylight	Improper Turning Maneuver
3077159	159812	3/4/2014	0:02:00	Injury (No fatality)	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(WB)	at WEST BROAD ST(WB)	Turning-Intersecting Paths	No Adverse Condition	Dry	Dark-Lighted	Violated Traffic Control
3085533	168700	5/1/2014	11:25:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Backing	No Adverse Condition	Dry	Daylight	Unsafe Backing
3104391	188584	7/10/2014	12:04:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
3119519	204687	8/26/2014	14:46:00	Property Damage Only	Stratford	Crash occurred AT an intersection	113	at WEST BROAD ST(EB)	at WEST BROAD ST(EB)	Rear-end	No Adverse Condition	Dry	Daylight	Following Too Closely
3129443	215137	10/1/2014	10:25:00	Injury (No fatality)	Stratford	Crash occurred AT an intersection	113	at BROAD ST	at BROAD ST	Fixed Object	Rain	Wet	Daylight	Driver Lost Control

State of Connecticut Department of Transportation



2014 Traffic Volumes State Maintained Highway Network (Traffic Log)

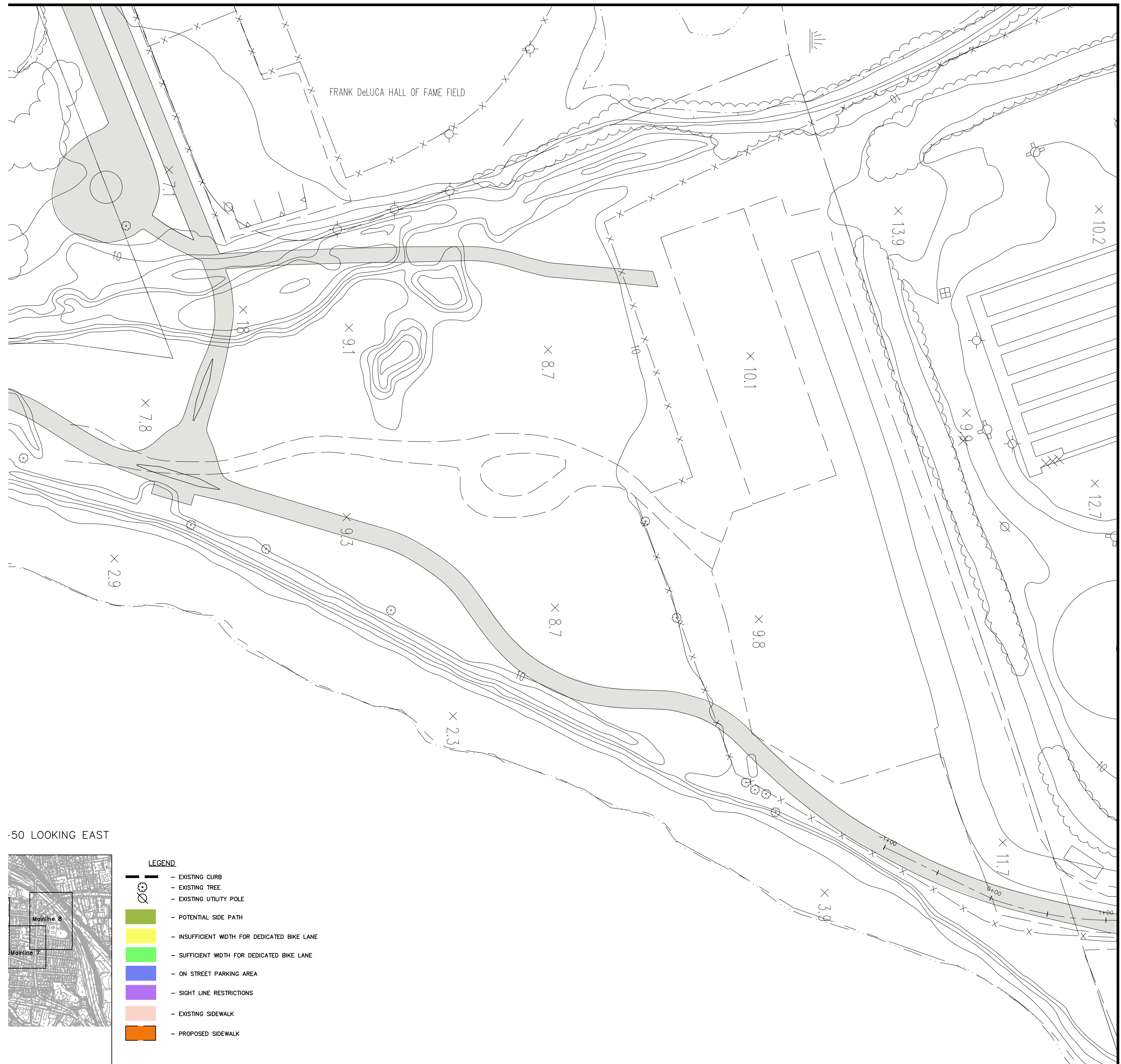
Prepared By
Division of Systems Information, Bureau of Policy and Planning
In Cooperation with U.S. Department of Transportation – Federal Highway Administration

ROUTE - 113
 LOGGED DIRECTION / N

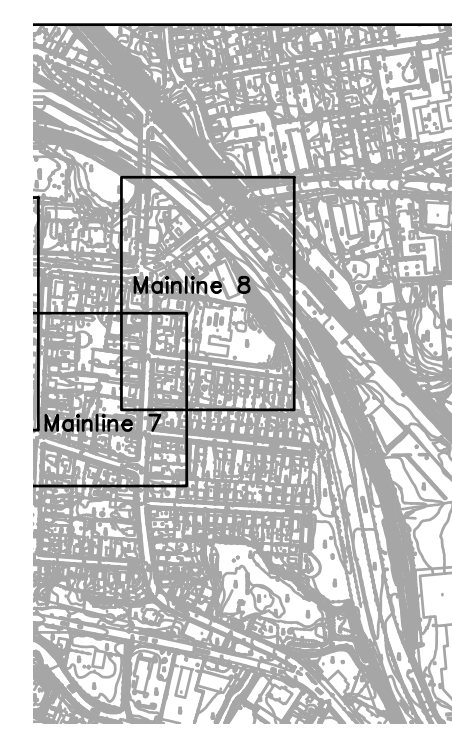
SB I-95 (BRIDGEPORT) TO ROUTE 110 (STRATFORD)

FROM *****	Beg Cum Miles	Exit No	TO *****	End Cum Miles	Exit No	Section Length	2014 ADT
ACC TO SB I-95(100)	0.00		BRIDGEPORT - STRATFORD TL	0.09		0.09	16400
BRIDGEPORT - STRATFORD TL	0.09		EXIT FR NB I-95(101)	0.12		0.03	16400
EXIT FR NB I-95(101)	0.12		SURF AVE	0.25		0.13	22400
SURF AVE	0.25		HONEYSPOT RD	0.49		0.24	19900
HONEYSPOT RD	0.49		GARFIELD AVE	0.72		0.23	15400
GARFIELD AVE	0.72		S JCT WOODEND RD	0.89		0.17	10700
S JCT WOODEND RD	0.89		S JCT ACCESS RD	1.09		0.20	8200
S JCT ACCESS RD	1.09		GREAT MEADOW RD(AIRPORT RD)(WB)	1.63		0.54	4700
GREAT MEADOW RD(AIRPORT RD)(WB)	1.63		S JCT STRATFORD RD	2.33		0.70	4100
S JCT STRATFORD RD	2.33		LORDSHIP RD(SB)	2.72		0.39	1400
LORDSHIP RD(SB)	2.72		PROSPECT DR(DE)	3.10		0.38	1700
PROSPECT DR(DE)	3.10		MAUREEN ST	3.38		0.28	3800
MAUREEN ST	3.38		SHORT BEACH RD(CDS)(AKA DORNE RD)	3.67		0.29	5300
SHORT BEACH RD(CDS)(AKA DORNE RD)	3.67		DR TO SIKORSKY AIRPORT(SIG)	4.24		0.57	6700
DR TO SIKORSKY AIRPORT(SIG)	4.24		N JCT ACCESS RD(EB)	4.50		0.26	7700
N JCT ACCESS RD(EB)	4.50		ELM ST(NB)	4.89		0.39	9800
ELM ST(NB)	4.89		BIRDSEYE ST	5.10		0.21	7300
BIRDSEYE ST	5.10		SOUTH AVE #1	5.32		0.22	11100
SOUTH AVE #1	5.32		RTE 130(STRATFORD AVE)	5.61		0.29	10200
RTE 130(STRATFORD AVE)	5.61		WEST BROAD ST(EB)	5.80		0.19	11800
WEST BROAD ST(EB)	5.80		EAST BROADWAY	6.02		0.22	13300
EAST BROADWAY	6.02		BROADBRIDGE AVE	6.15		0.13	13700
BROADBRIDGE AVE	6.15		NORTH PARADE(ONE-WAY SB)	6.30		0.15	17700
NORTH PARADE(ONE-WAY SB)	6.30		US 1(BARNUM AVE)(NB)	6.48		0.18	16600
US 1(BARNUM AVE)(NB)	6.48		HUNTINGTON RD	7.06		0.58	17200
HUNTINGTON RD	7.06		CUTSPRING RD(SB)	7.91		0.85	10100
CUTSPRING RD(SB)	7.91		RTE 110(EAST MAIN ST)	8.12		0.21	8900

 END ROUTE NO 113



-50 LOOKING EAST



- LEGEND**
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - POTENTIAL SIDE PATH
 - INSUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - SUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - ON STREET PARKING AREA
 - SIGHT LINE RESTRICTIONS
 - EXISTING SIDEWALK
 - PROPOSED SIDEWALK

REPRODUCTIONS OF THIS PLAN ARE INVALID UNLESS THEY BEAR THE EMBOSSED SEAL OF THE UNDERSIGNED PROFESSIONAL. TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HERON.

ROBERT L. PINCKNEY No. 24354

STRATFORD GREENWAY EXTENSION PROJECT

ELM STREET
IN
STRATFORD CONNECTICUT

EXISTING CONDITONS ANALYSIS

AUGUST 5, 2015

REVISIONS:

NO.	DESCRIPTION

PREPARED FOR:
TOWN OF STRATFORD
STRATFORD TOWN HALL
2725 MAIN STREET

BSC GROUP
300 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

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SCALE: 1" = 40'
0 20 40 80 FEET

FILE: 8360500-EXC ANALYSIS.DWG
DWG. NO:
JOB. NO: 83605.00 **EC-1.0**



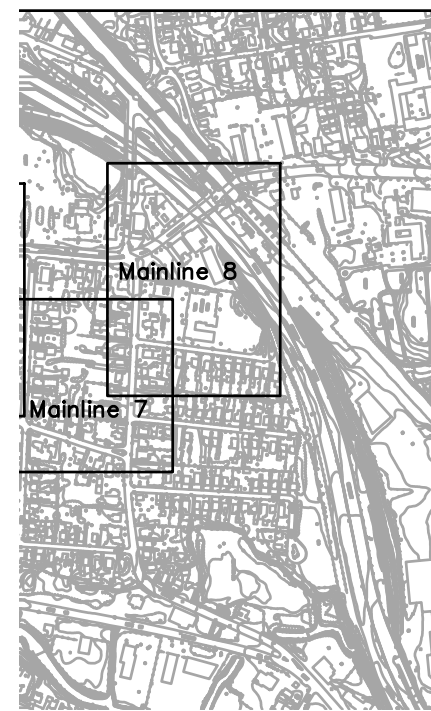
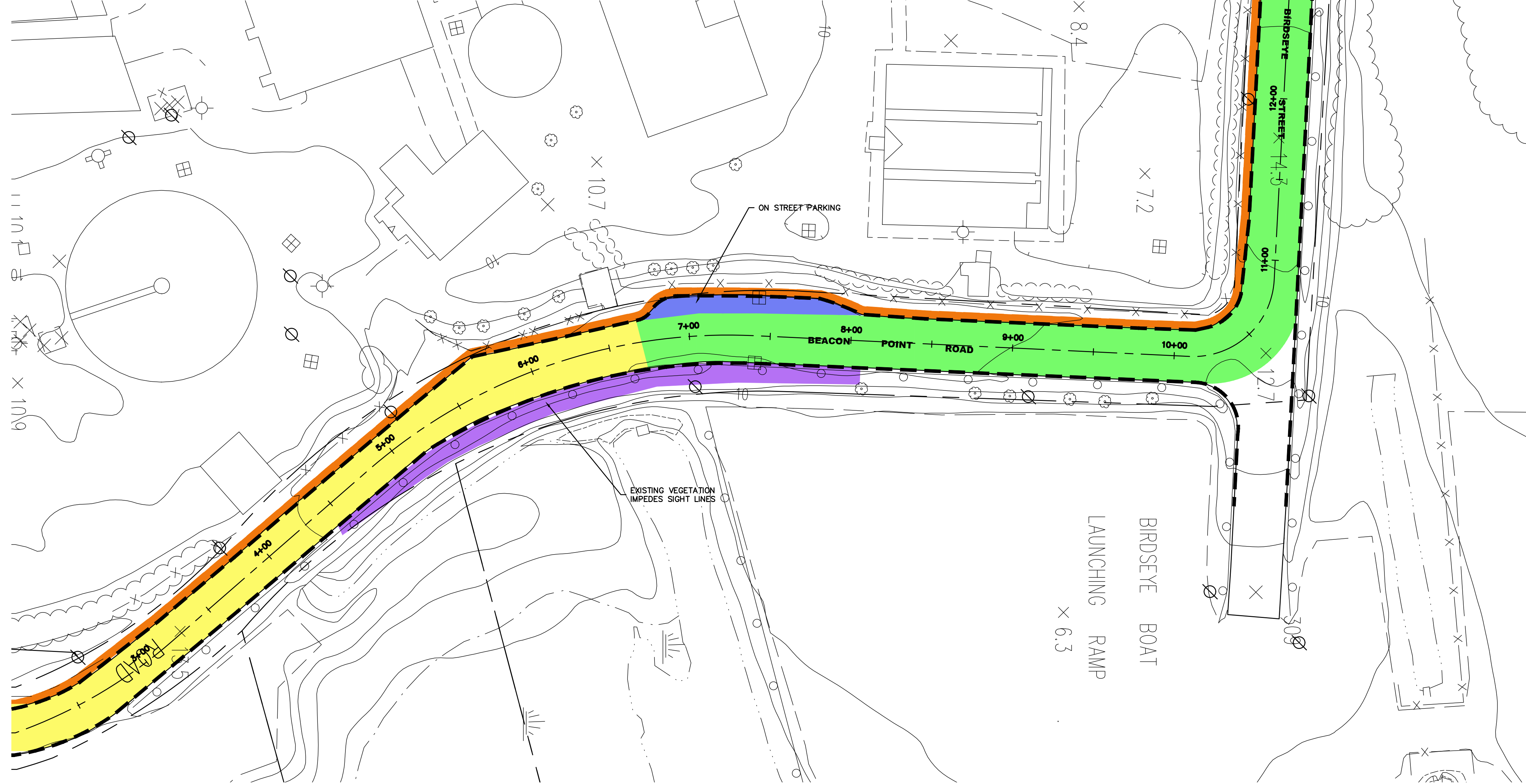
A. 3+00 LOOKING NORTH



STA. 5+50 LOOKING NORTH



STA. 7+50 LOOKING NORTH



- LEGEND**
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - POTENTIAL SIDE PATH
 - INSUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - SUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - ON STREET PARKING AREA
 - SIGHT LINE RESTRICTIONS
 - EXISTING SIDEWALK
 - PROPOSED SIDEWALK



STA. 8+50 LOOKING NORTH



STA. 10+50 LOOKING SOUTH



STA. 11+00 LOOKING WEST

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TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HERON.

ROBERT L. PINCKNEY No. 24354

STRATFORD GREENWAY EXTENSION PROJECT

ELM STREET
IN
STRATFORD CONNECTICUT

EXISTING CONDITIONS ANALYSIS

AUGUST 5, 2015

REVISIONS:

NO.	DESCRIPTION

PREPARED FOR:
TOWN OF STRATFORD
STRATFORD TOWN HALL
2725 MAIN STREET

BSC GROUP
300 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

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SCALE: 1" = 40'
0 20 40 80 FEET

FILE: 8360500-EXC ANALYSIS.DWG
DWG. NO:
JOB. NO: 83605.00 **EC-1.1**



LOOKING WEST



STA. 15+50 LOOKING EAST



STA. 17+25 LOOKING NORTH



STA. 18+75 LOOKING SOUTH

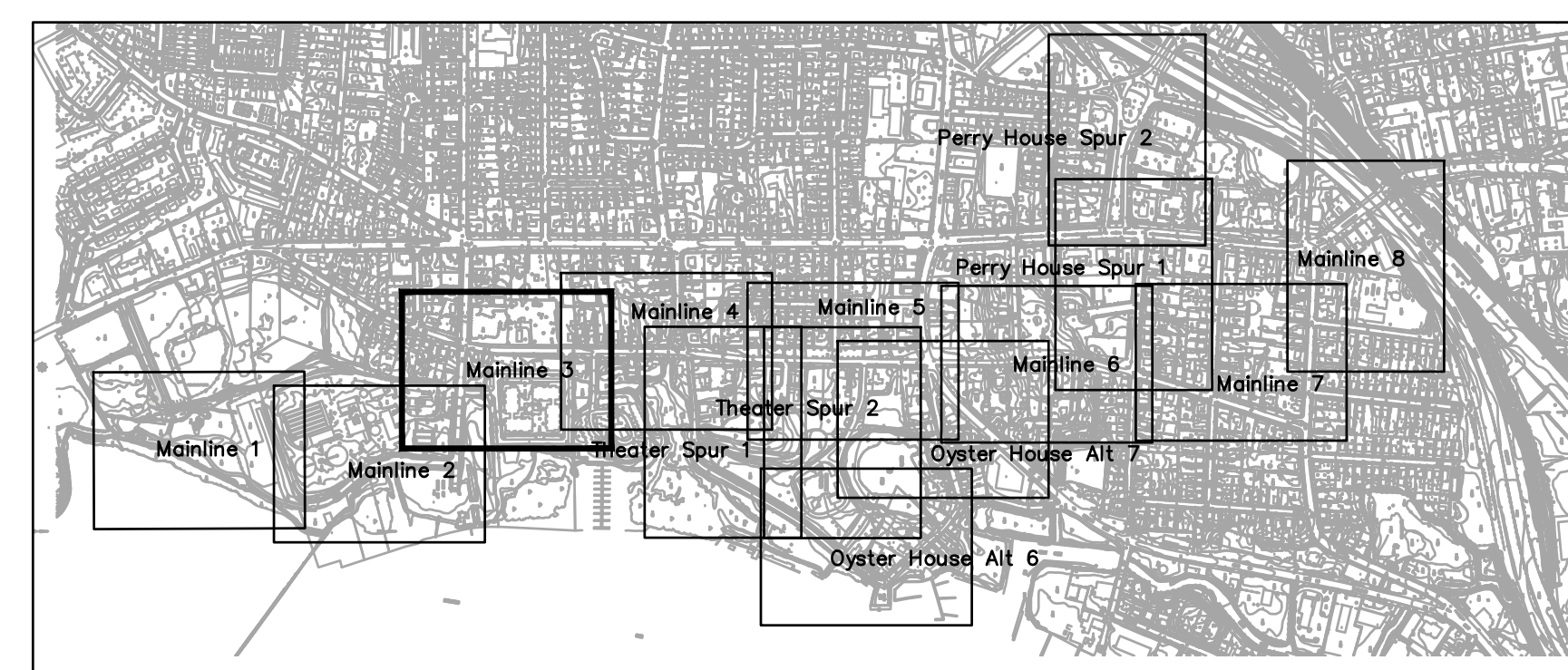


STA. 20+50 LOOKING NORTH



STA. 20+50 LOOKING NORTH

- LEGEND**
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - POTENTIAL SIDE PATH
 - INSUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - SUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - ON STREET PARKING AREA
 - SIGHT LINE RESTRICTIONS
 - EXISTING SIDEWALK
 - PROPOSED SIDEWALK



KEY PLAN
SCALE: 1"=1,000'

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860 652 8227

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0 20 40 80 FEET

FILE: 8360500-EXC ANALYSIS.DWG
DWG. NO.:
JOB. NO: 83605.00 **EC-1.2**



STA. 29+00 LOOKING SOUTH



STA. 29+00 LOOKING NORTH



STA. 30+50 LOOKING EAST



STA. 32+00 LOOKING NORTH

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ELM STREET
IN
STRATFORD CONNECTICUT

EXISTING CONDITIONS ANALYSIS

AUGUST 5, 2015

REVISIONS:

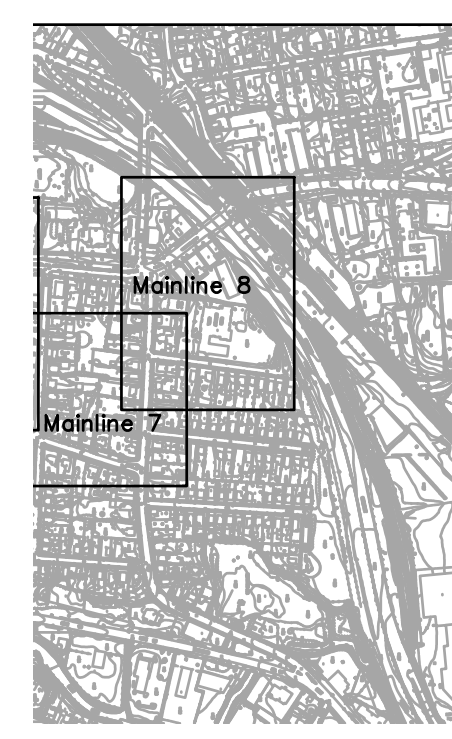
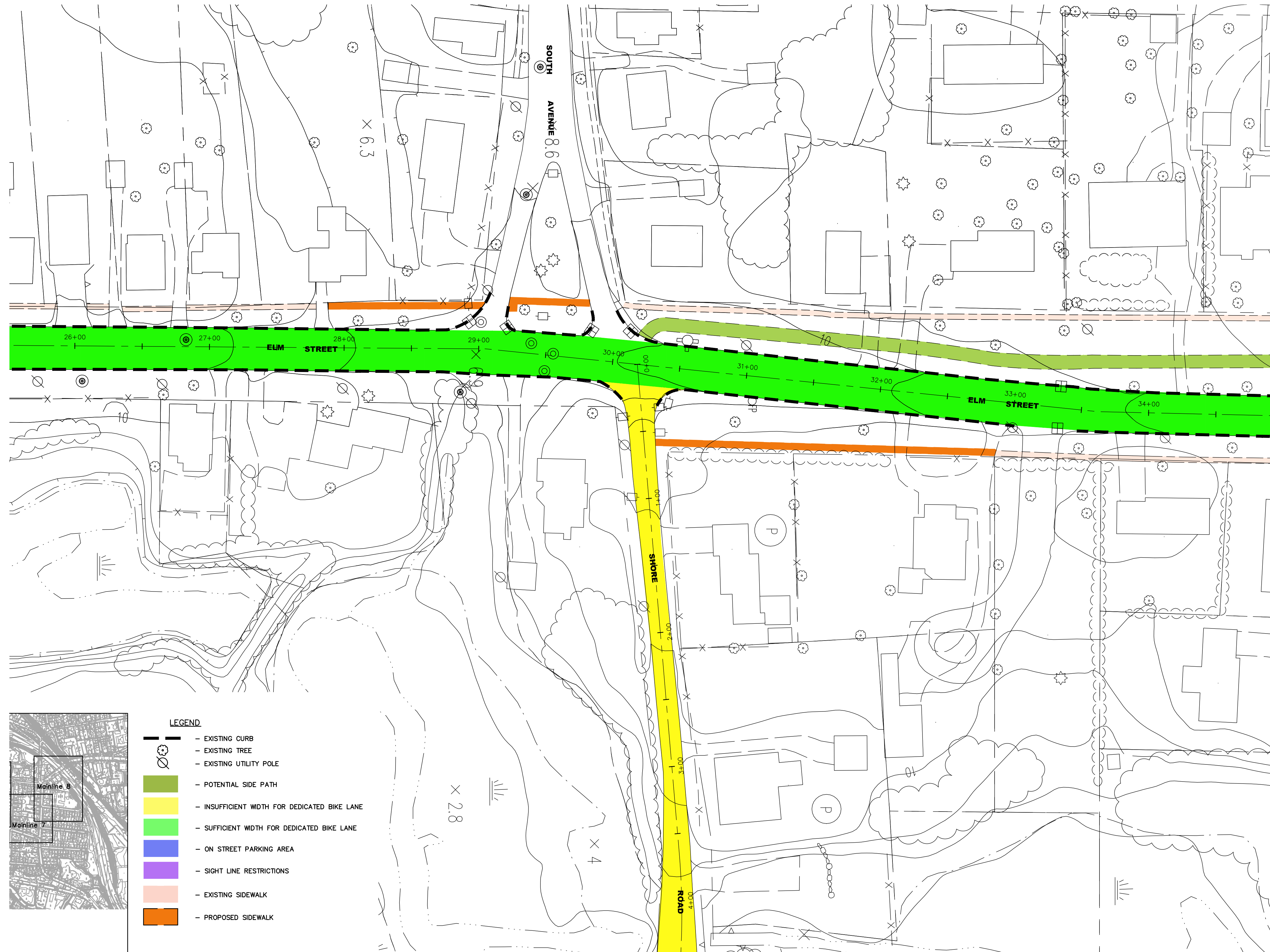
NO.	DESCRIPTION

PREPARED FOR:
TOWN OF STRATFORD
STRATFORD TOWN HALL
2725 MAIN STREET

BSC GROUP
300 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

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SCALE: 1" = 40'
0 20 40 80 FEET

FILE: 8360500-EXC ANALYSIS.DWG
DWG. NO:
JOB. NO: 83605.00 **EC-1.3**



- LEGEND**
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - POTENTIAL SIDE PATH
 - INSUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - SUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - ON STREET PARKING AREA
 - SIGHT LINE RESTRICTIONS
 - EXISTING SIDEWALK
 - PROPOSED SIDEWALK



STA. 35+50 LOOKING NORTH



STA. 38+00 LOOKING SOUTH



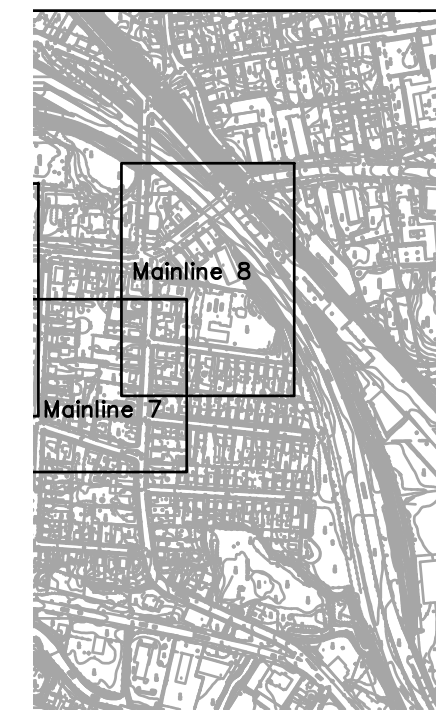
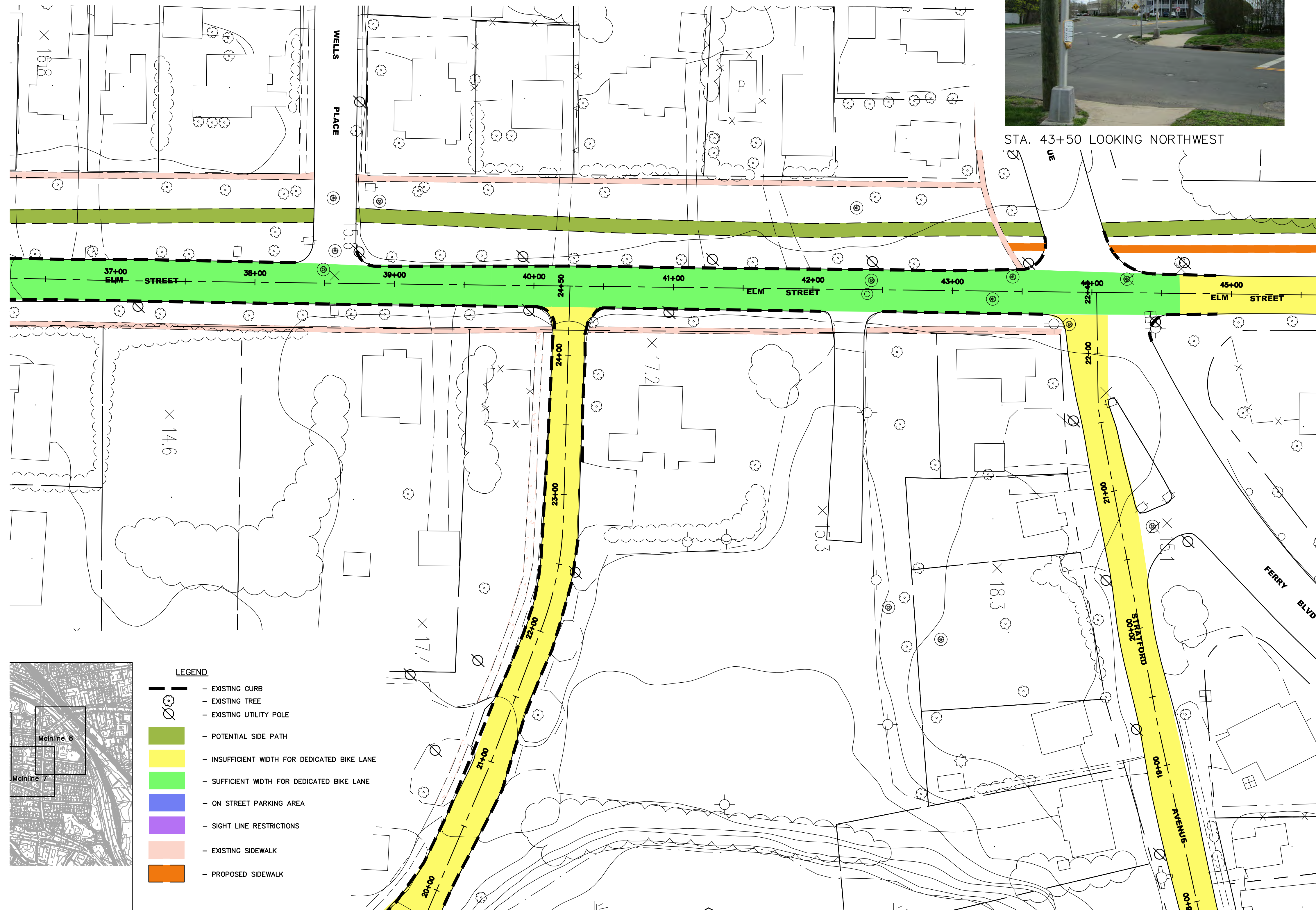
STA. 38+50 LOOKING NORTH



STA. 43+50 LOOKING NORTH



STA. 43+50 LOOKING NORTHWEST



- LEGEND**
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - POTENTIAL SIDE PATH
 - INSUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - SUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - ON STREET PARKING AREA
 - SIGHT LINE RESTRICTIONS
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 - PROPOSED SIDEWALK

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STRATFORD GREENWAY EXTENSION PROJECT
ELM STREET
IN
STRATFORD CONNECTICUT

EXISTING CONDITIONS ANALYSIS

AUGUST 5, 2015

REVISIONS:

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2725 MAIN STREET

BSC GROUP
300 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

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SCALE: 1" = 40'
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FILE: 8360500-EXC ANALYSIS.DWG
DWG. NO:
JOB. NO: 83605.00 **EC-1.4**



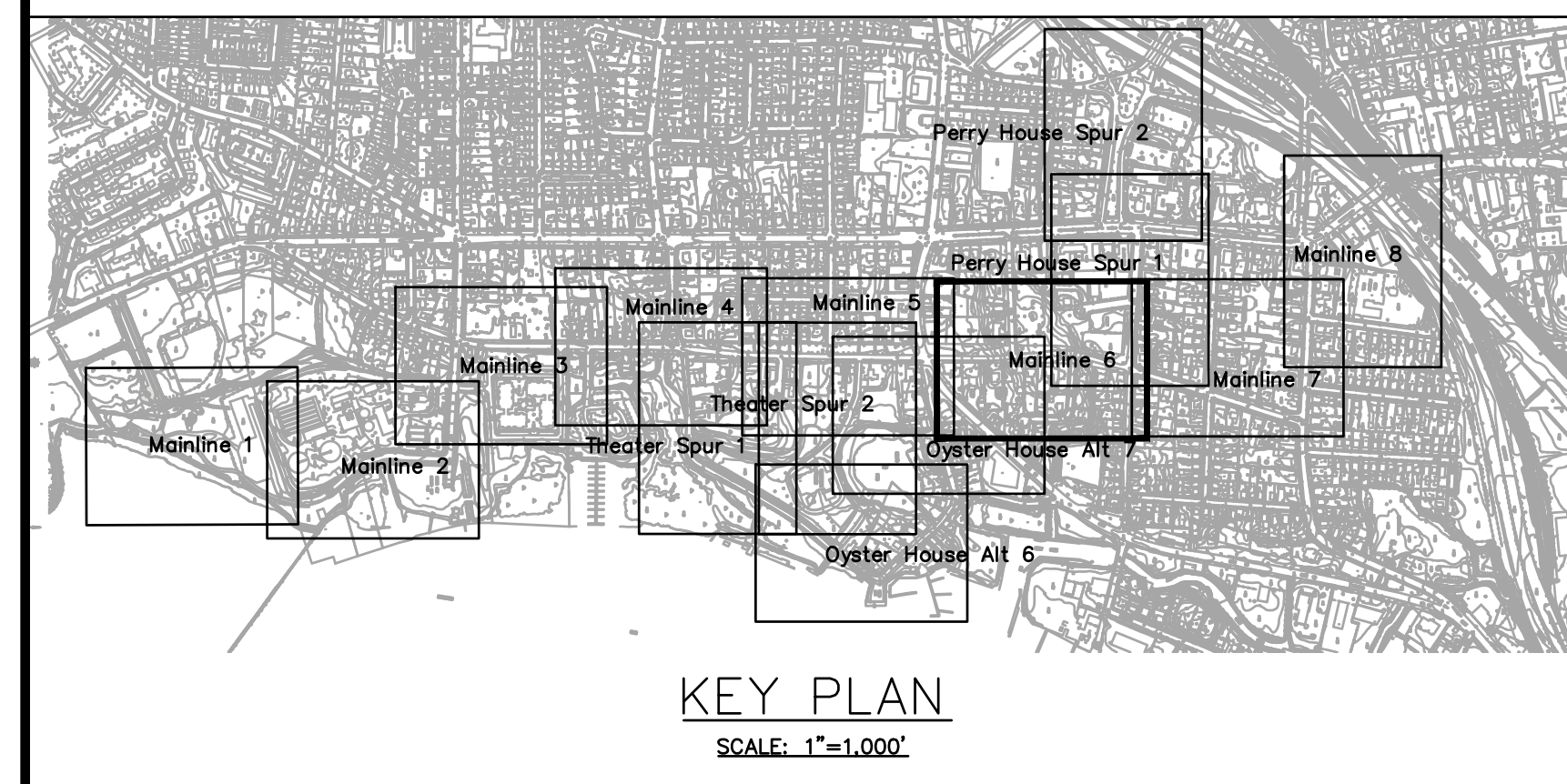
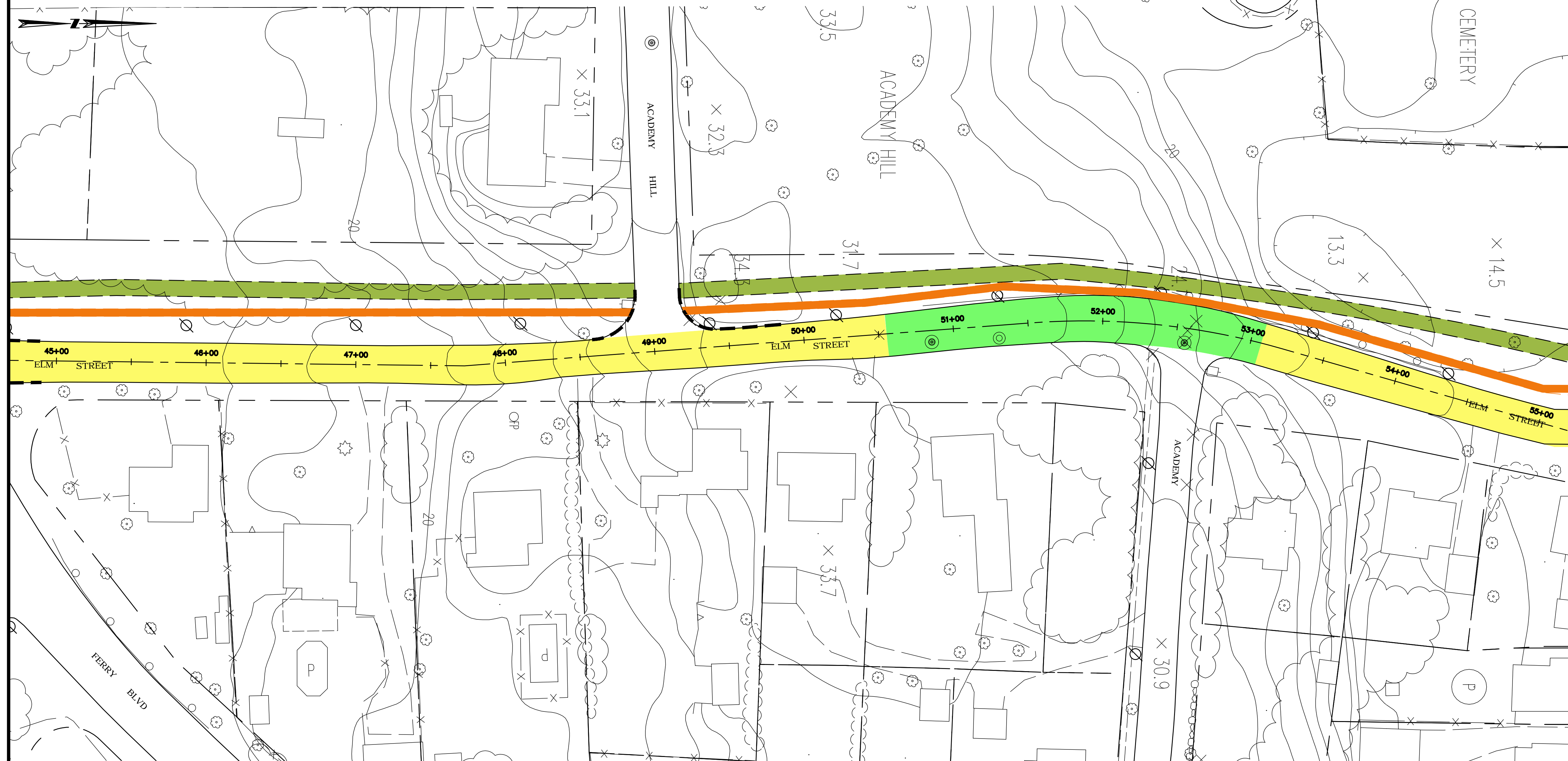
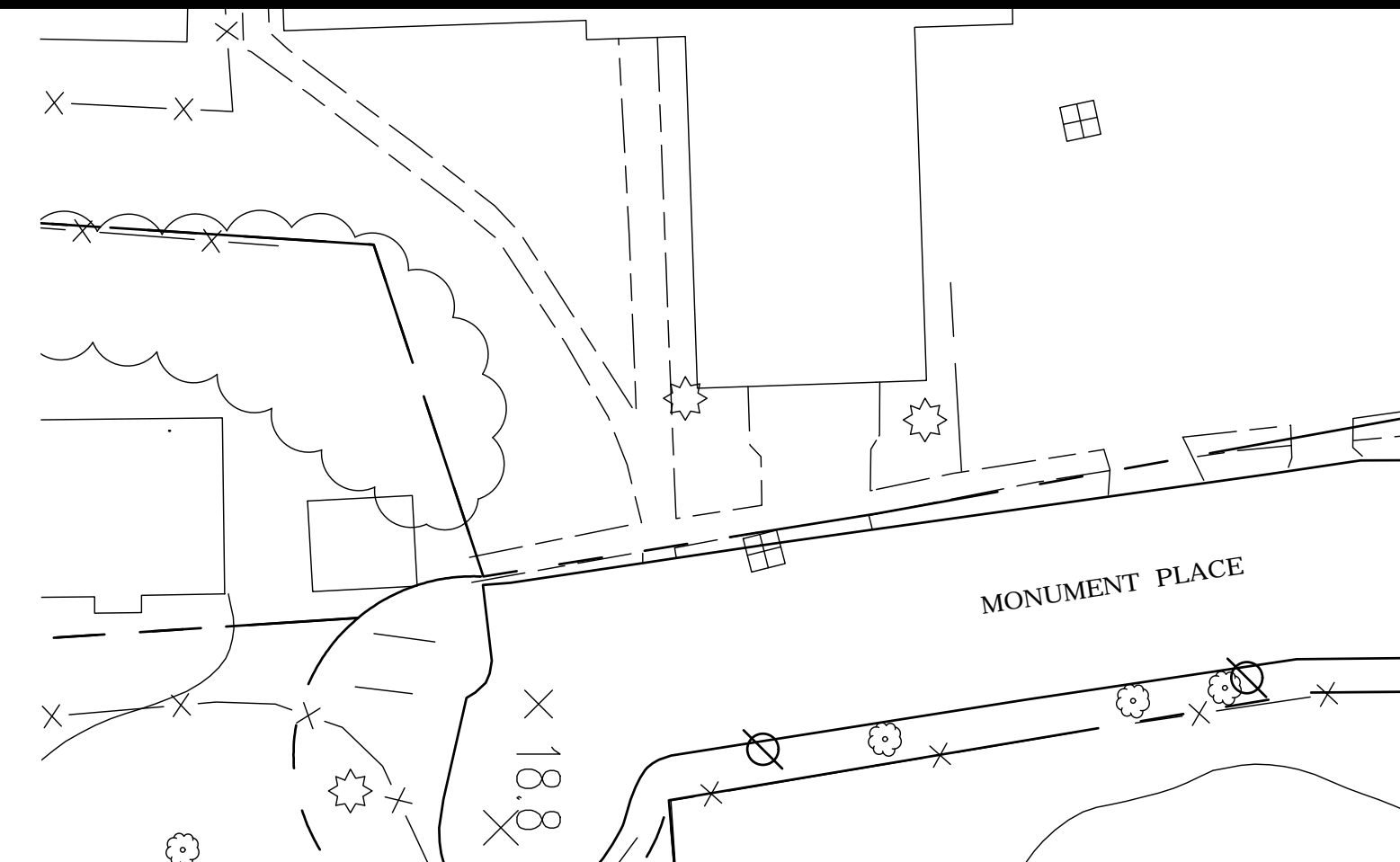
STA. 47+00 LOOKING SOUTH



STA. 48+75 LOOKING NORTH



STA. 50+50 LOOKING NORTH



- LEGEND**
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - POTENTIAL SIDE PATH
 - INSUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - SUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - ON STREET PARKING AREA
 - SIGHT LINE RESTRICTIONS
 - EXISTING SIDEWALK
 - PROPOSED SIDEWALK



STA. 55+50 LOOKING SOUTH



STA. 55+50 LOOKING NORTHEAST



STA. 55+50 L



STA. 57+75 LOOKING NORTHEAST



STA. 58+25 LOOKING NORTHEAST



STA. 64+00 LOOKING NORTHEAST



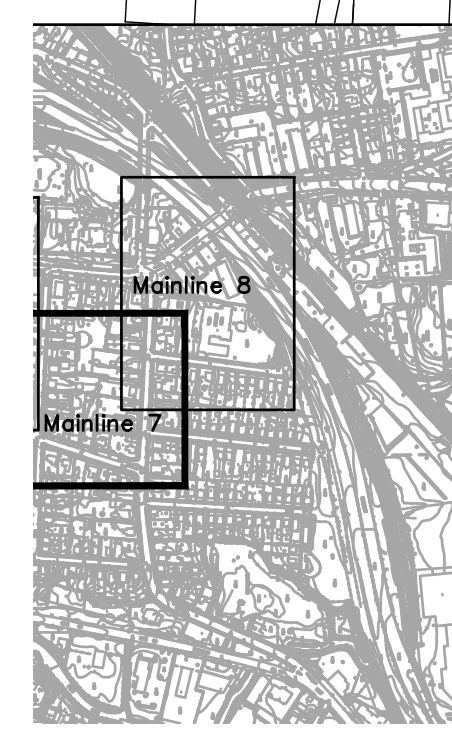
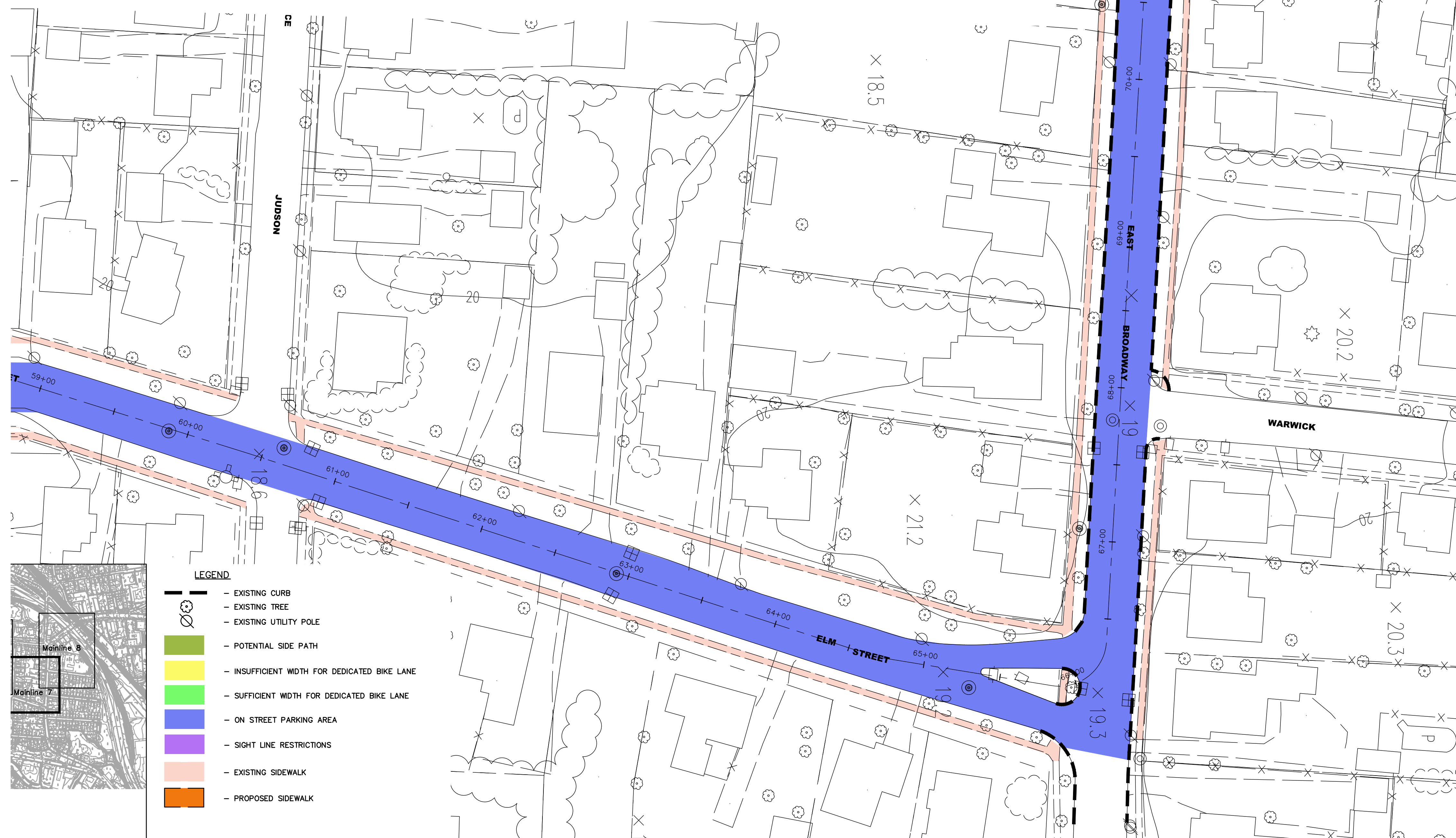
STA. 66+00 LOOKING WEST



STA. 67+50 LOOKING WEST



STA. 72+00 LOOKING EAST



- LEGEND**
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - POTENTIAL SIDE PATH
 - INSUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - SUFFICIENT WIDTH FOR DEDICATED BIKE LANE
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STRATFORD GREENWAY EXTENSION PROJECT
 ELM STREET
 IN
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EXISTING CONDITIONS ANALYSIS

AUGUST 5, 2015

REVISIONS:

PREPARED FOR:
 TOWN OF STRATFORD
 STRATFORD TOWN HALL
 2725 MAIN STREET

BSC GROUP
 300 Winding Brook Drive
 Glastonbury, Connecticut 06033
 860 652 8227

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 SCALE: 1" = 40'

FILE: 8360500-EXC ANALYSIS.DWG
 DWG. NO:
 JOB. NO: 83605.00 **EC-1.6**



STA. 75+00 LOOKING NORTH



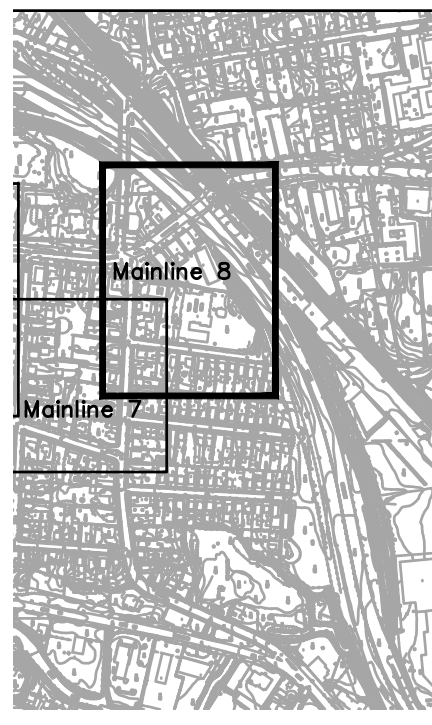
STA. 80+00 LOOKING EAST



STA. 85+50 LOOKING SOUTHWEST



STA. 87+00 LOOKING NORTHWEST



- LEGEND**
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - POTENTIAL SIDE PATH
 - INSUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - SUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - ON STREET PARKING AREA
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ELM STREET
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AUGUST 5, 2015

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860 652 8227

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SCALE: 1" = 40'
0 20 40 80 FEET

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DWG. NO:
JOB. NO: 83605.00 **EC-1.7**



STA. 7+50 LOOKING NORTHEAST



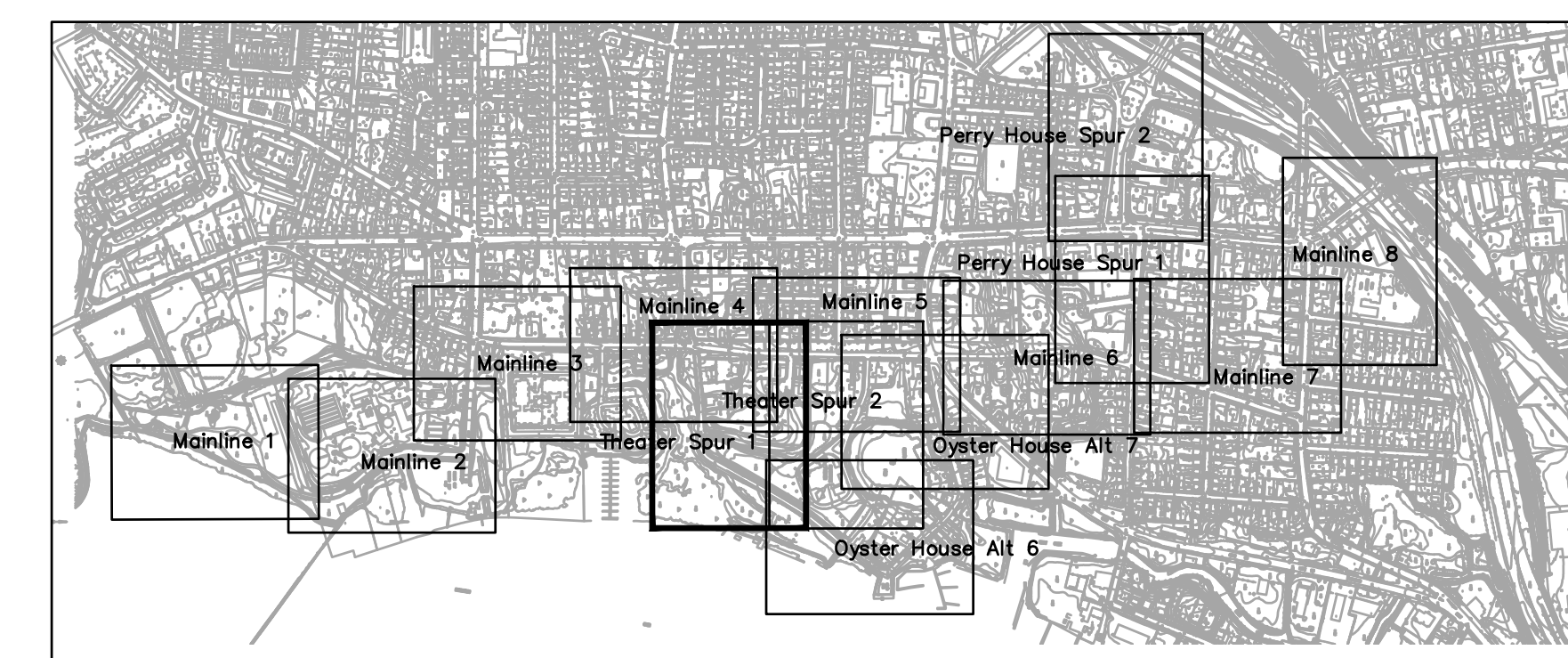
STA. 5+50 LOOKING NORTHEAST



LOOKING WEST



STA. 3+00 LOOKING EAST



KEY PLAN
SCALE: 1"=1,000'

LEGEND

- EXISTING CURB
- EXISTING TREE
- EXISTING UTILITY POLE
- POTENTIAL SIDE PATH
- INSUFFICIENT WIDTH FOR DEDICATED BIKE LANE
- SUFFICIENT WIDTH FOR DEDICATED BIKE LANE
- ON STREET PARKING AREA
- SIGHT LINE RESTRICTIONS
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FILE: 8360500-EXC ANALYSIS.DWG
DWG. NO:
JOB. NO: 83605.00

EC-2.0



STA. 1+00 LOOKING EAST



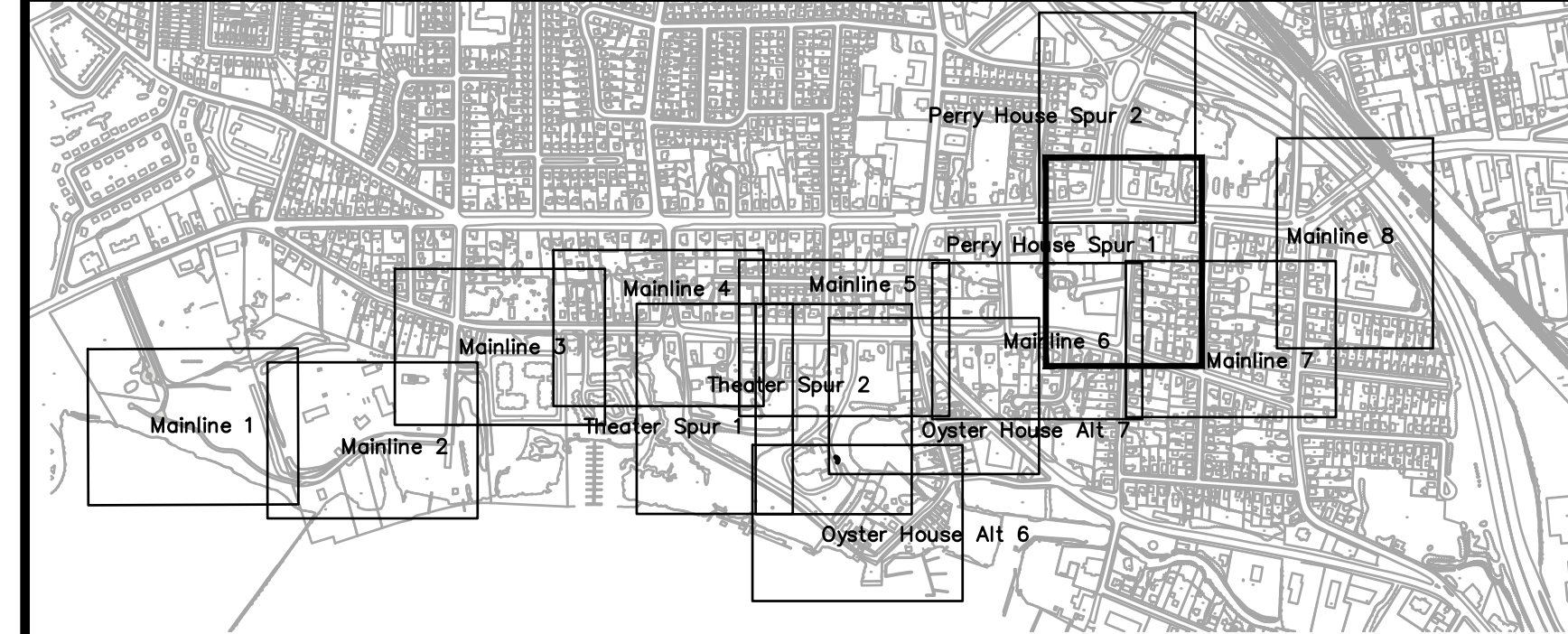
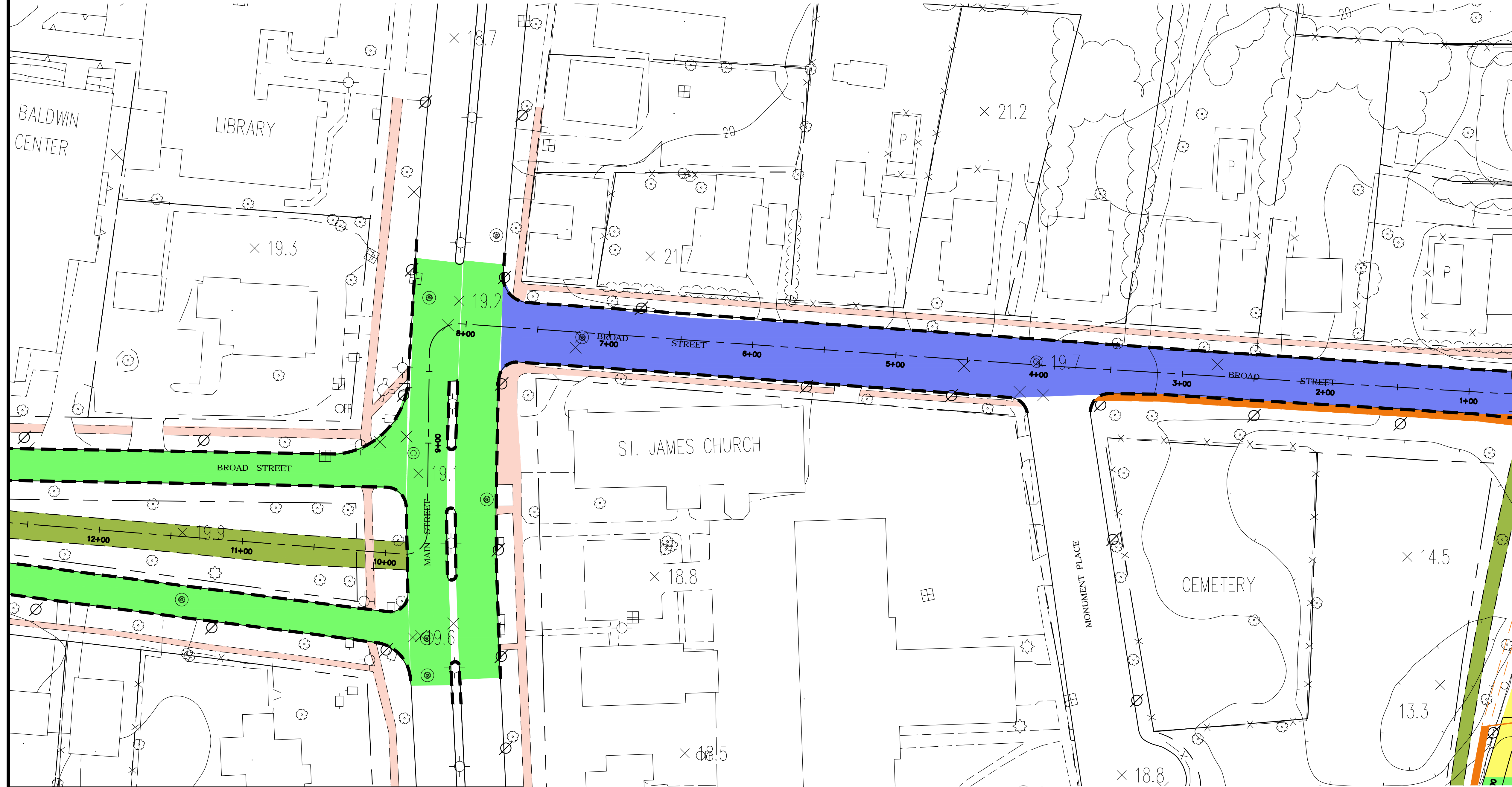
STA. 1+00 LOOKING WEST



STA. 4+00 LOOKING WEST



STA. 5+00 LOOKING EAST



KEY PLAN
SCALE: 1"=1,000'

LEGEND

- EXISTING CURB
- EXISTING TREE
- EXISTING UTILITY POLE
- POTENTIAL SIDE PATH
- INSUFFICIENT WIDTH FOR DEDICATED BIKE LANE
- SUFFICIENT WIDTH FOR DEDICATED BIKE LANE
- ON STREET PARKING AREA
- SIGHT LINE RESTRICTIONS
- EXISTING SIDEWALK
- PROPOSED SIDEWALK



STA. 7+75 LOOKING SOUTH



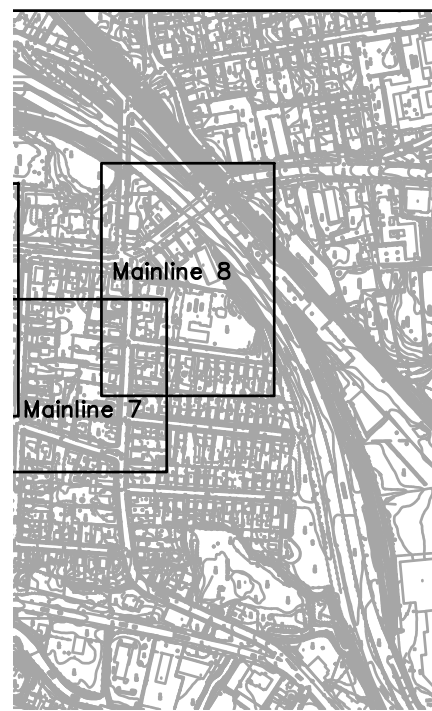
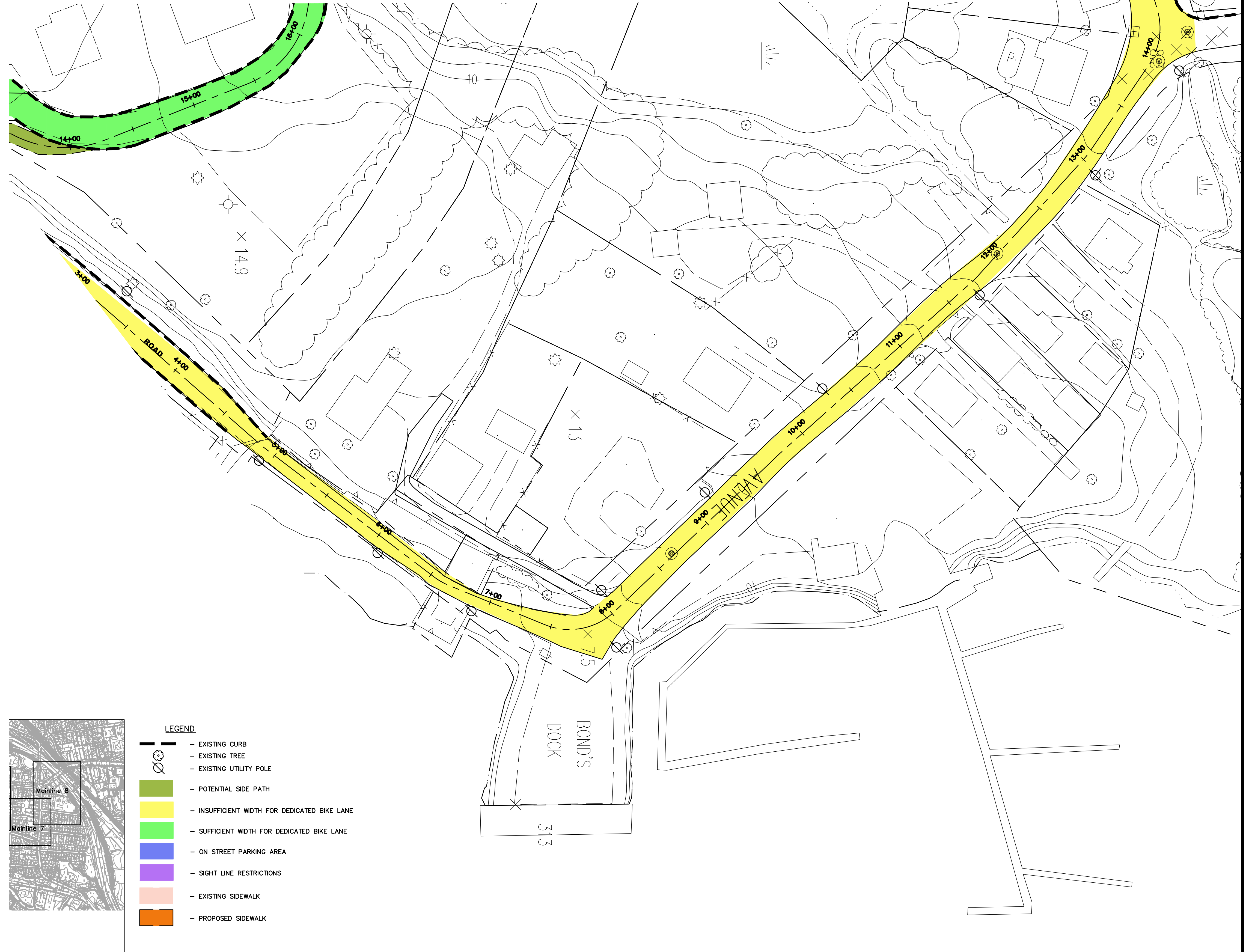
STA. 7+75 LOOKING NORTH



STA. 7+75



STA. 9+00 LOOKING WEST



- LEGEND**
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - POTENTIAL SIDE PATH
 - INSUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - SUFFICIENT WIDTH FOR DEDICATED BIKE LANE
 - ON STREET PARKING AREA
 - SIGHT LINE RESTRICTIONS
 - EXISTING SIDEWALK
 - PROPOSED SIDEWALK

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ELM STREET
IN
STRATFORD CONNECTICUT

EXISTING CONDITIONS ANALYSIS

AUGUST 5, 2015

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NO.	DESCRIPTION

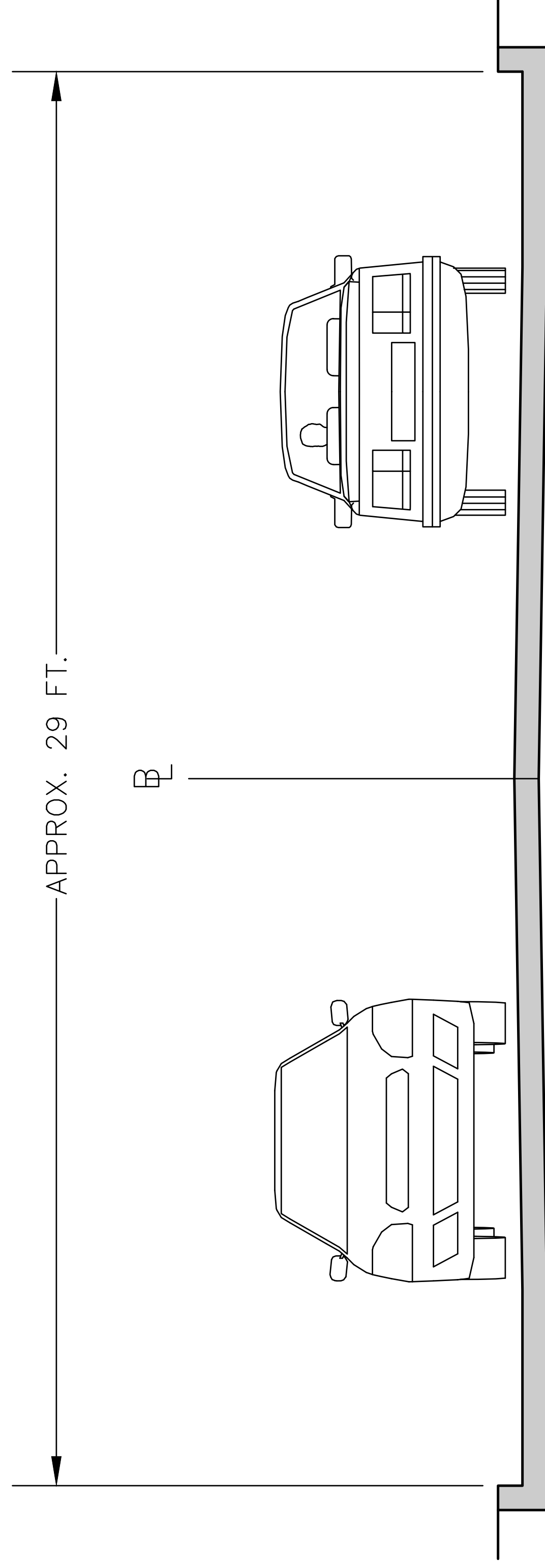
PREPARED FOR:
TOWN OF STRATFORD
STRATFORD TOWN HALL
2725 MAIN STREET

BSC GROUP
300 Winding Brook Drive
Glastonbury, Connecticut 06033
860 652 8227

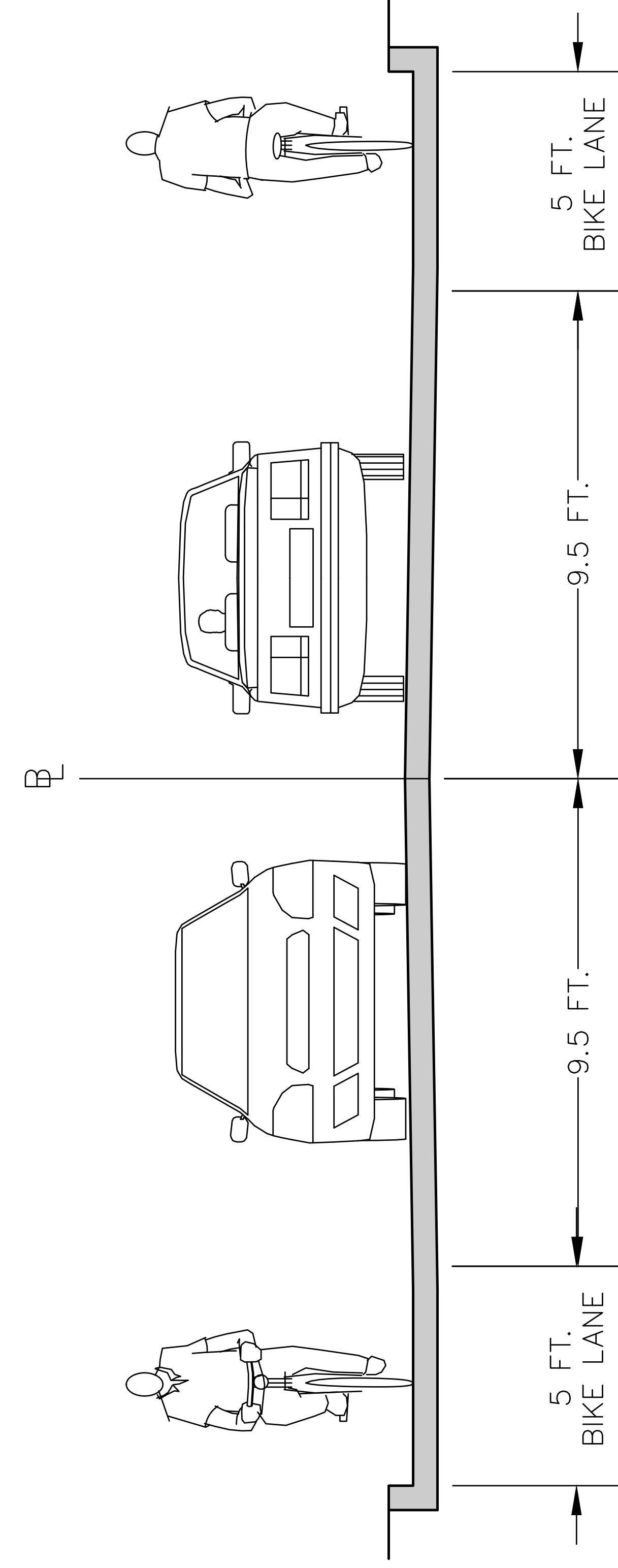
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SCALE: 1" = 40'
0 20 40 80 FEET

FILE: 8360500-EXC ANALYSIS.DWG
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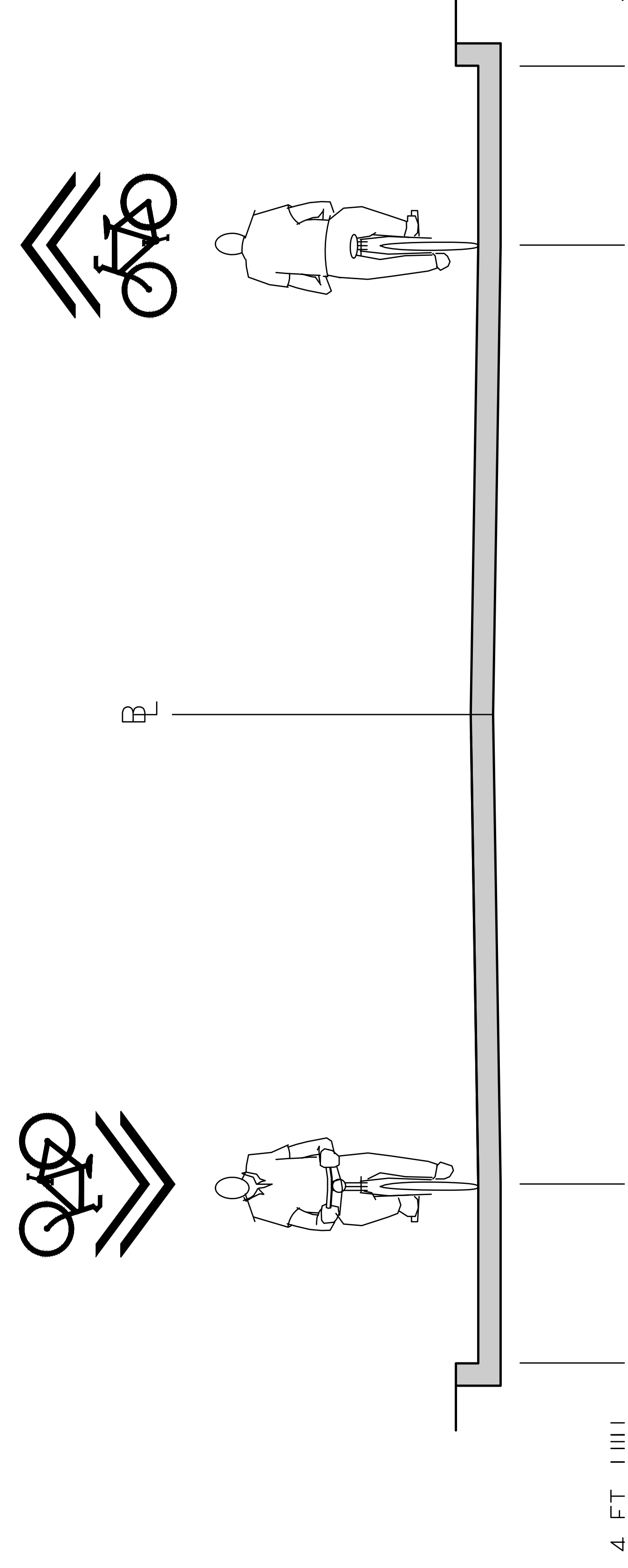
APPENDIX C
PRELIMINARY TYPICAL SECTIONS



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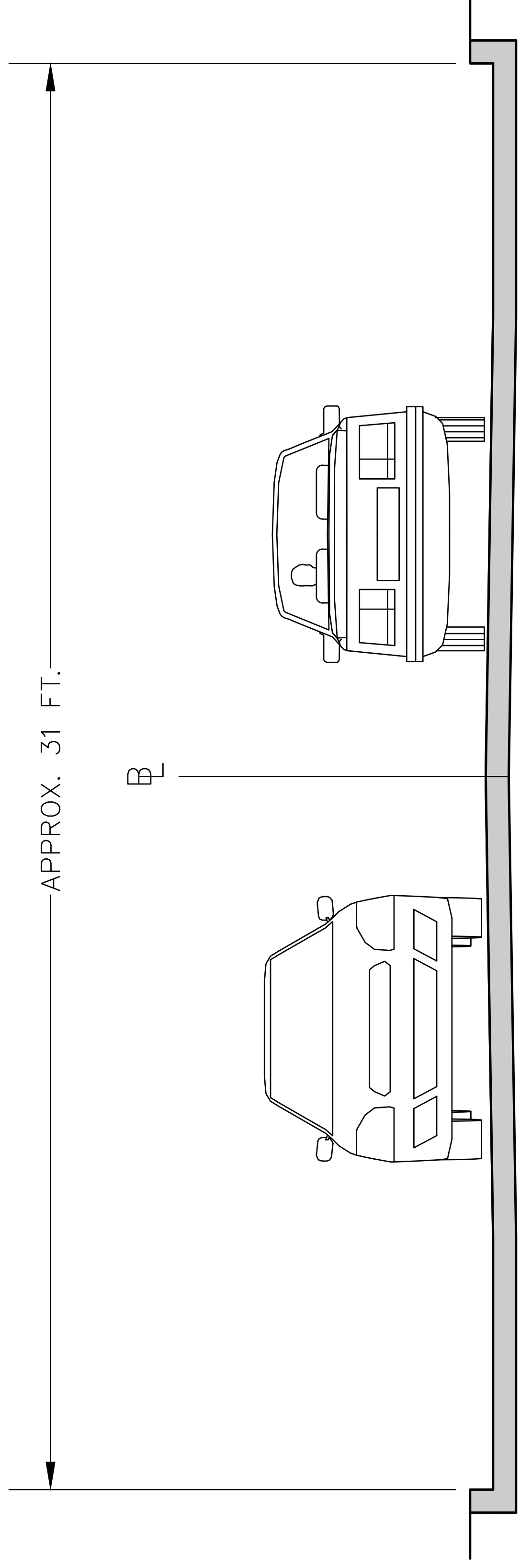


TYPICAL TWO-WAY BIKE LANE
WITH NO ON STREET PARKING

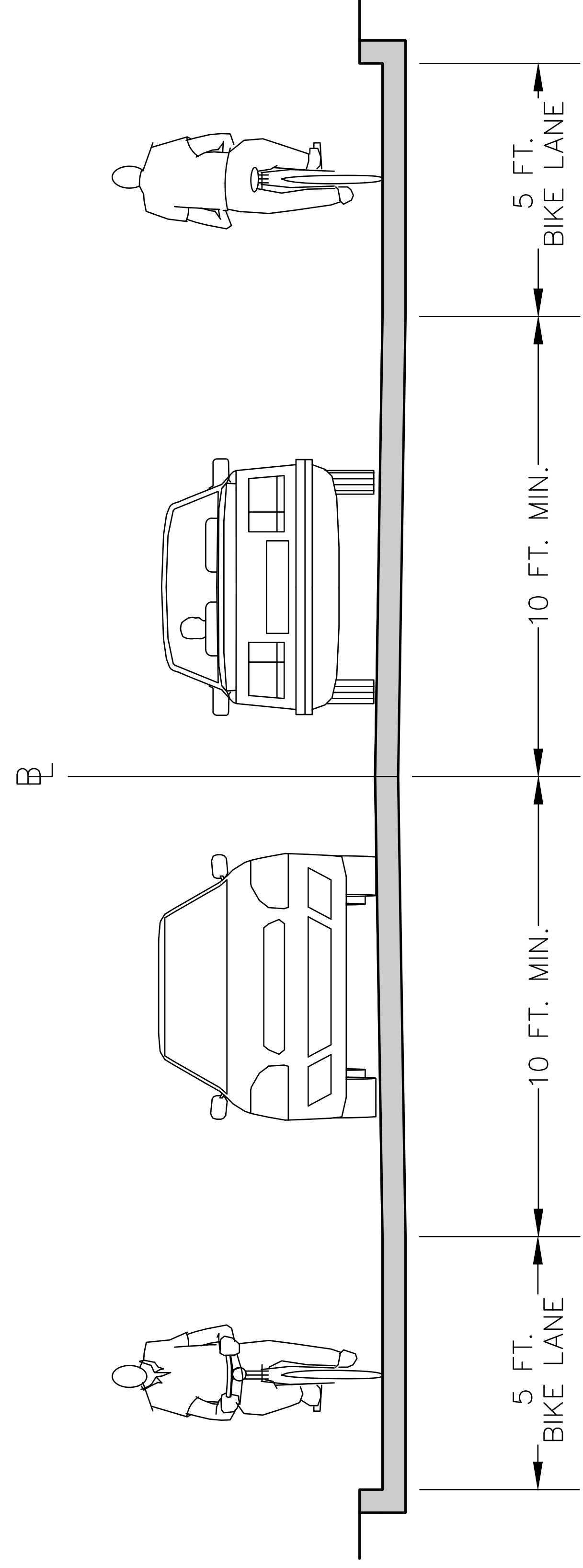


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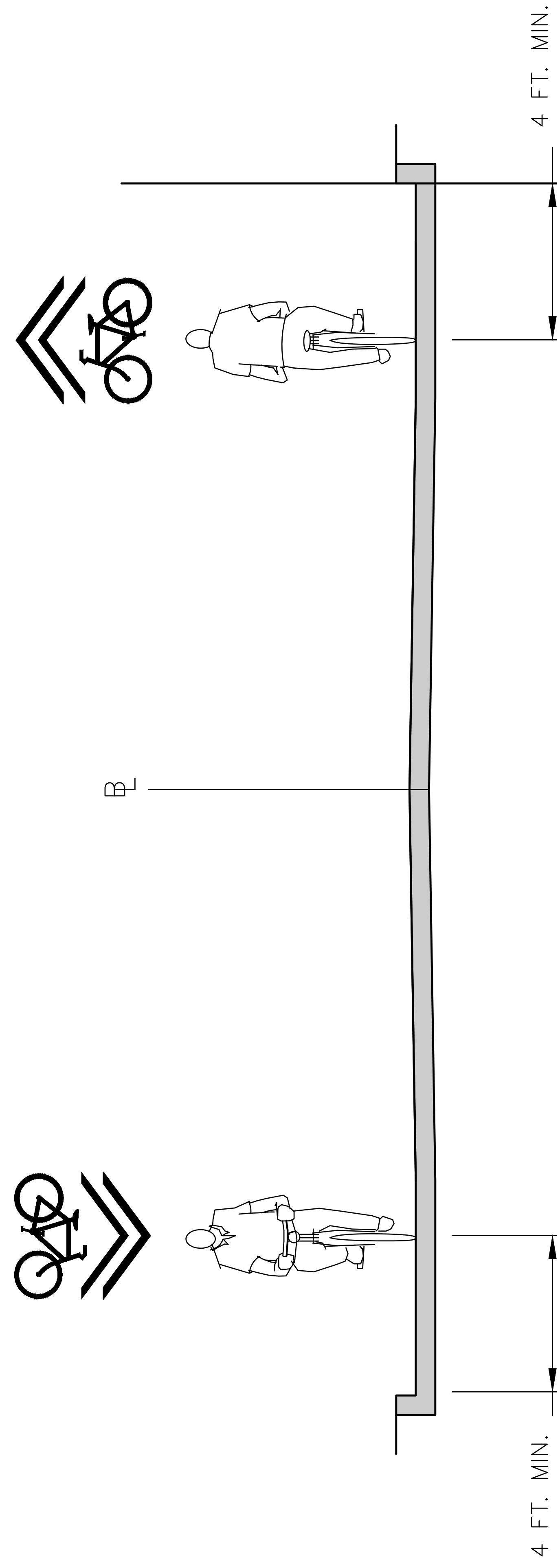
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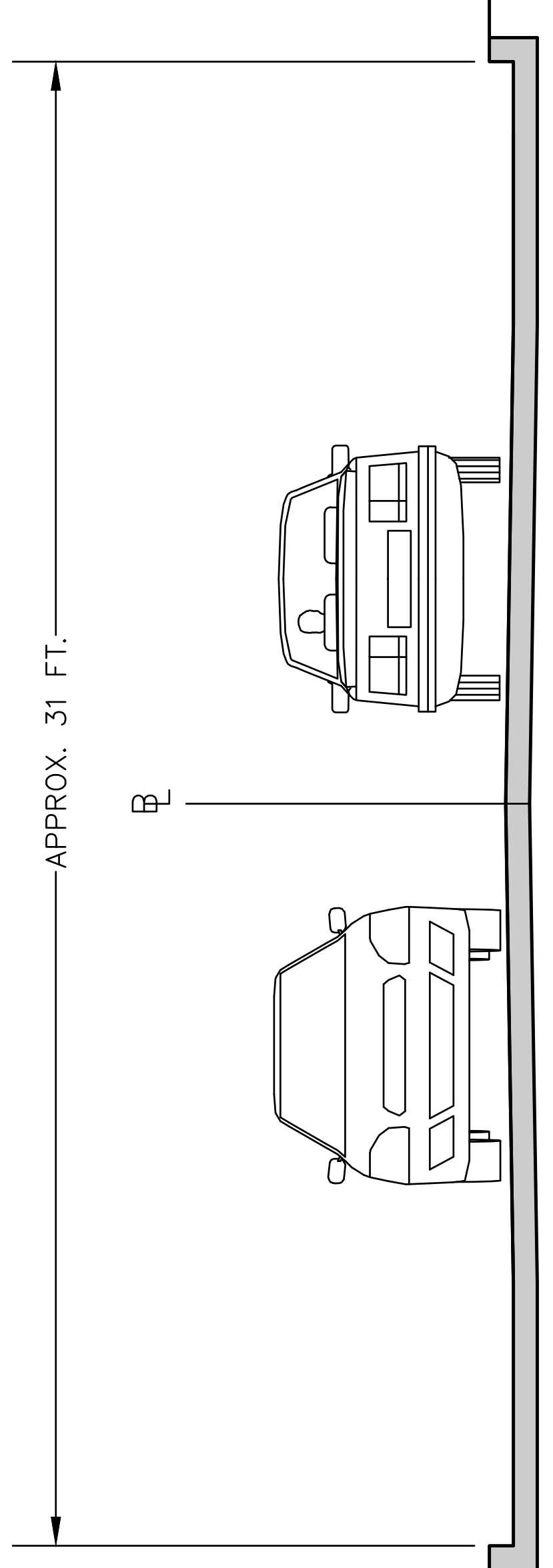


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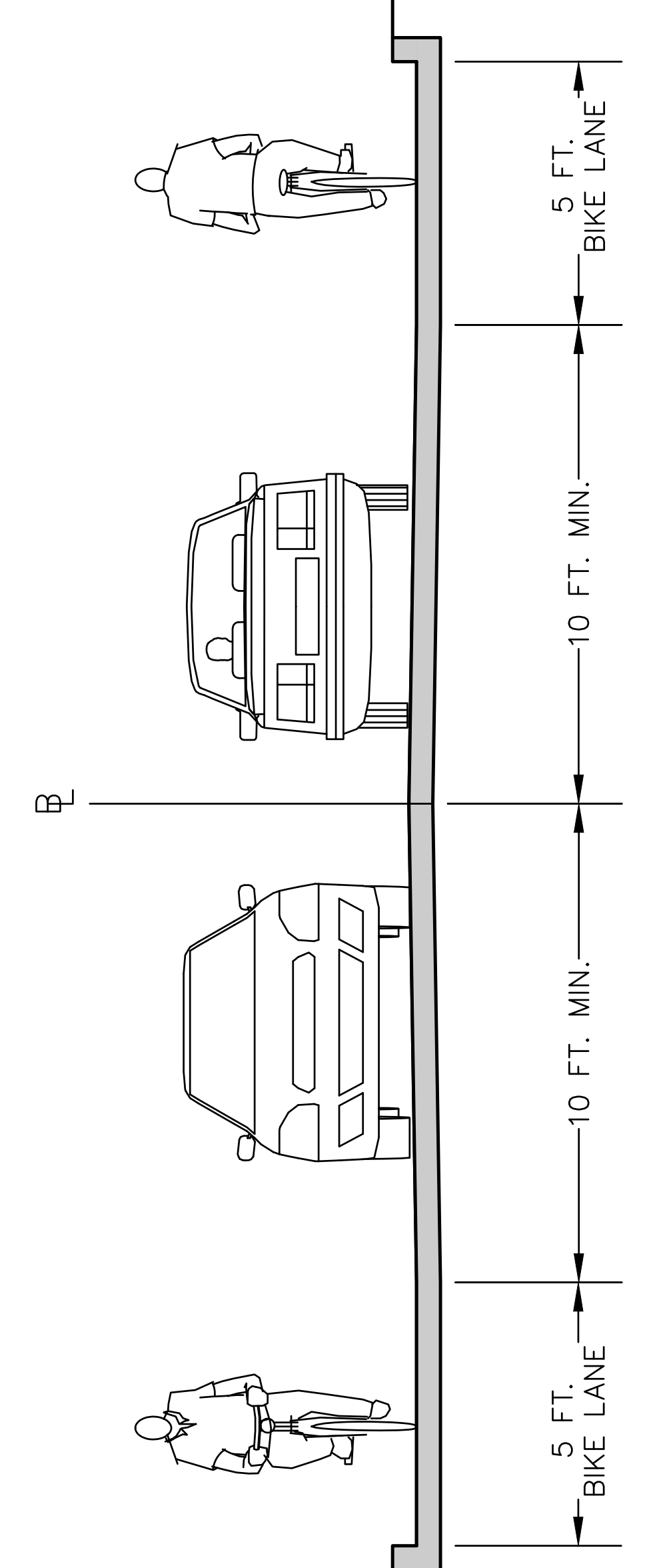


TYPICAL TWO-WAY BIKE LANE WITH NO ON STREET PARKING

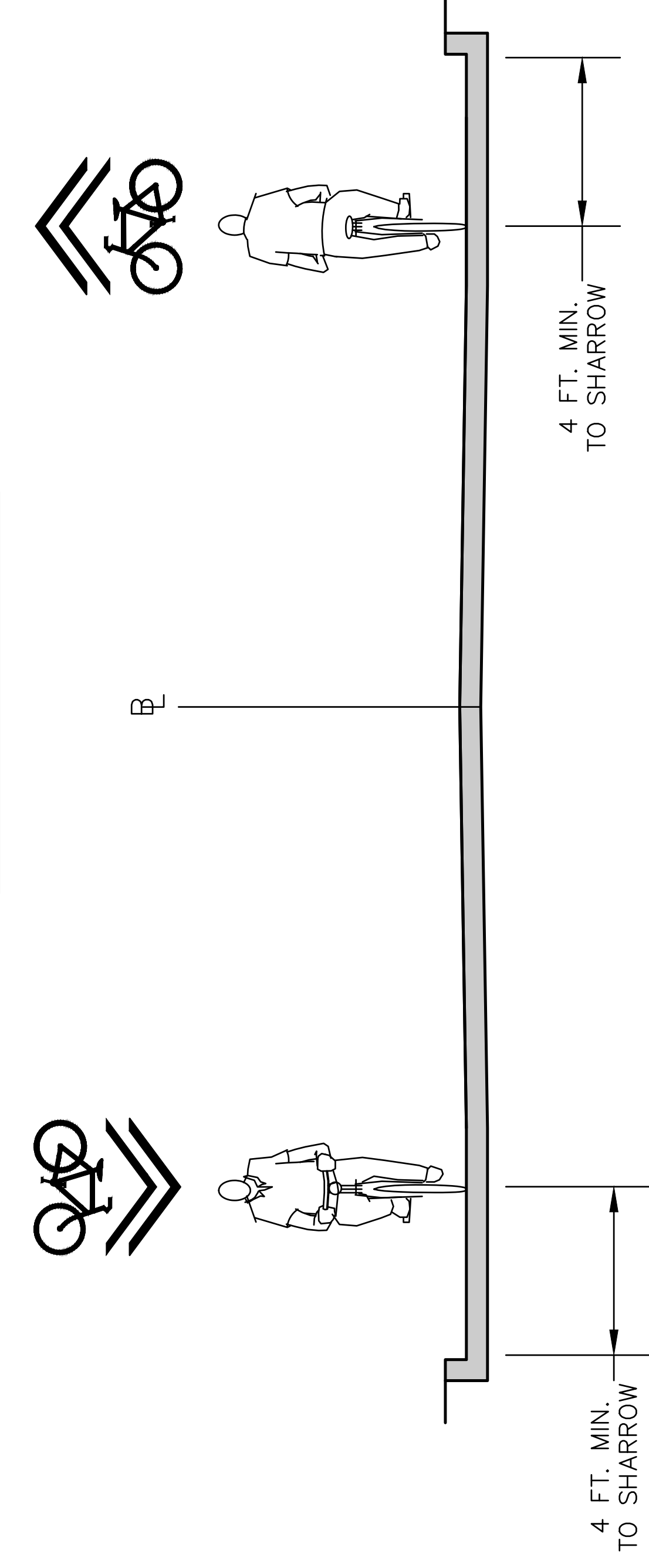




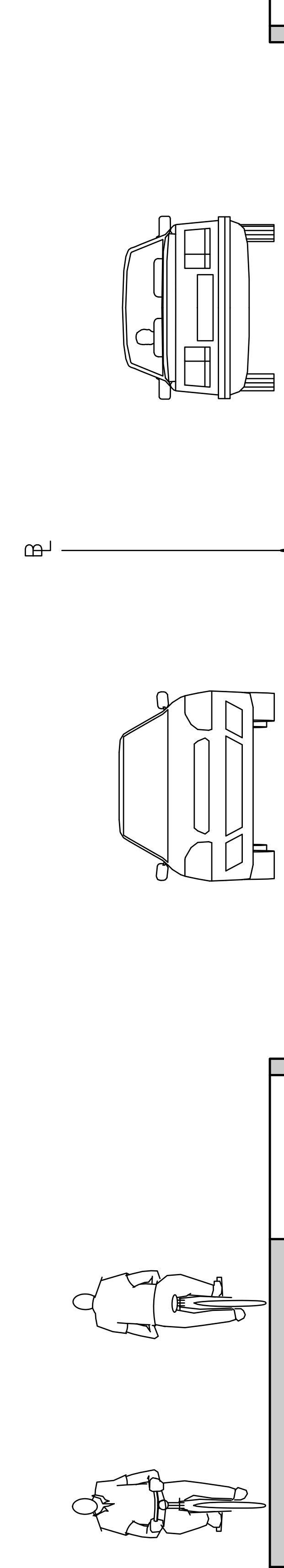
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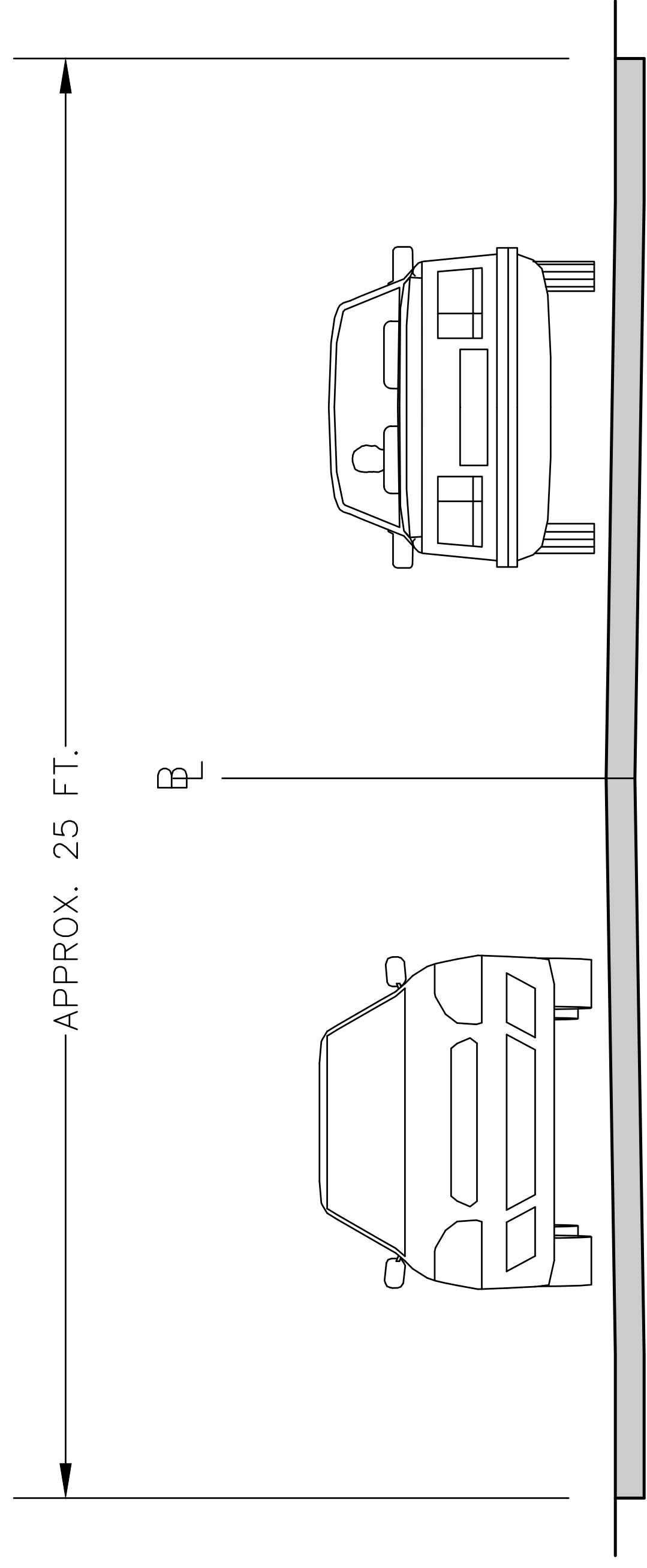


TYPICAL TWO-WAY BIKE LANE WITH NO ON STREET PARKING

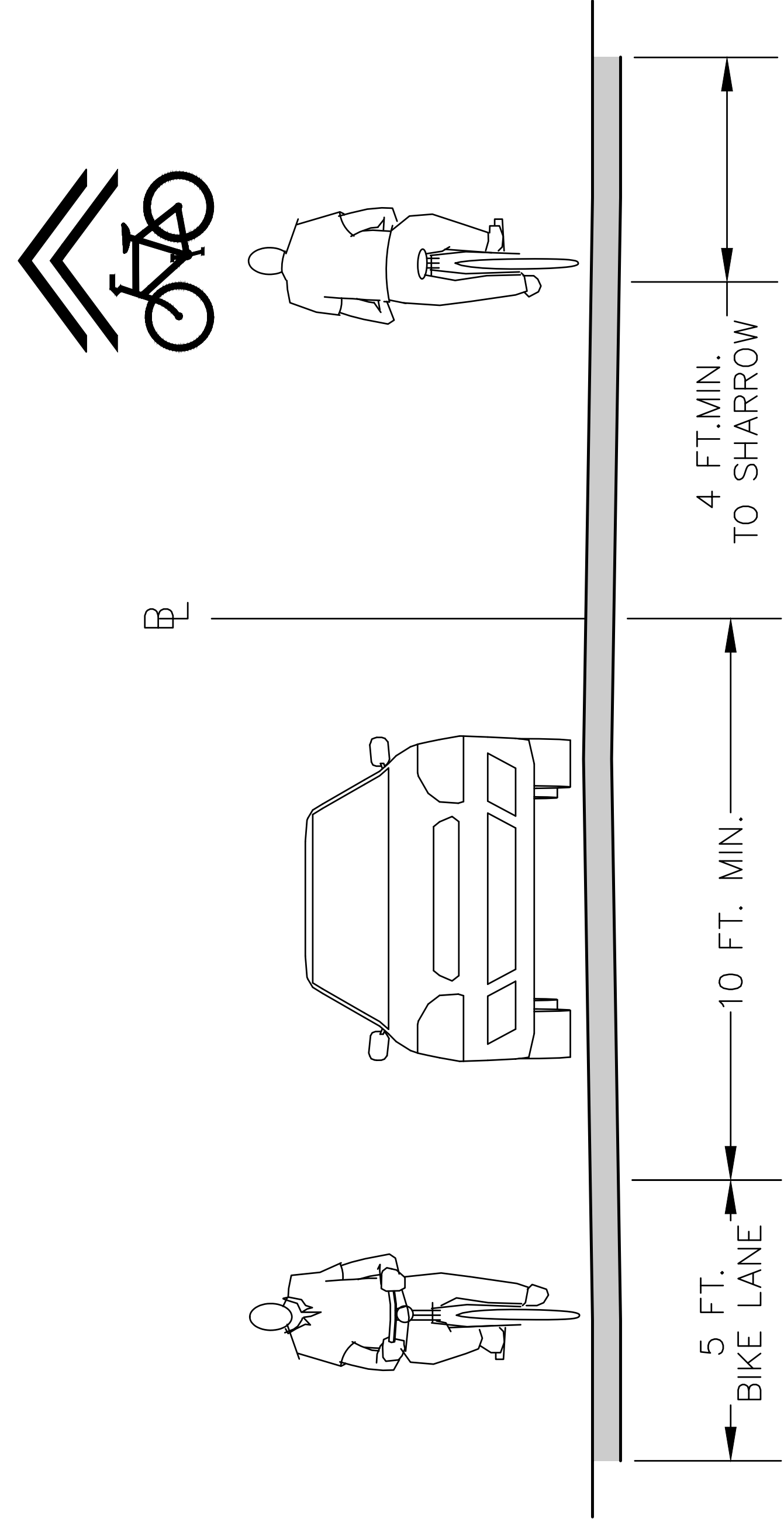


TYPICAL SHARED USE LANE MARKING WITH NO ON STREET PARKING

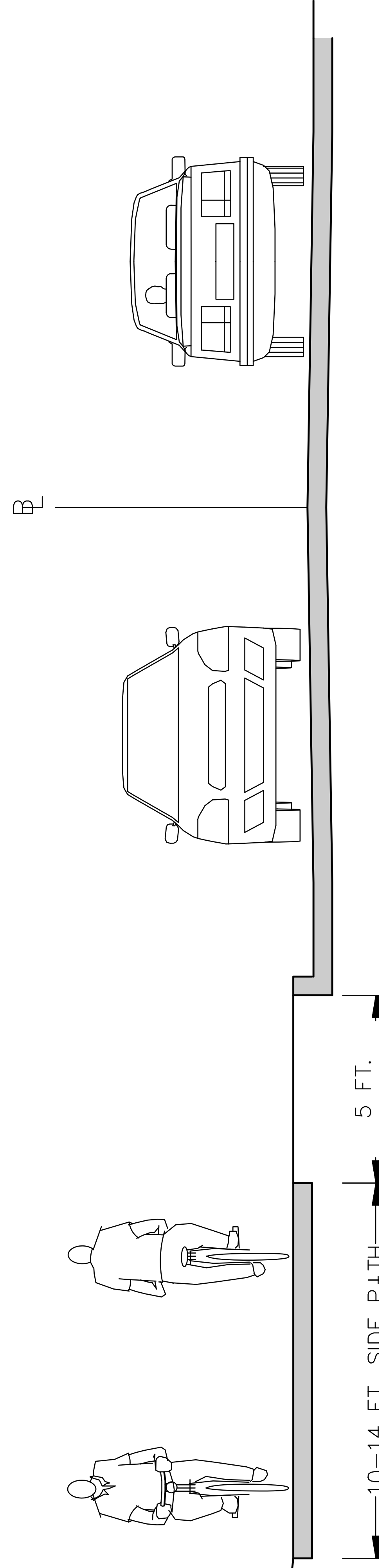


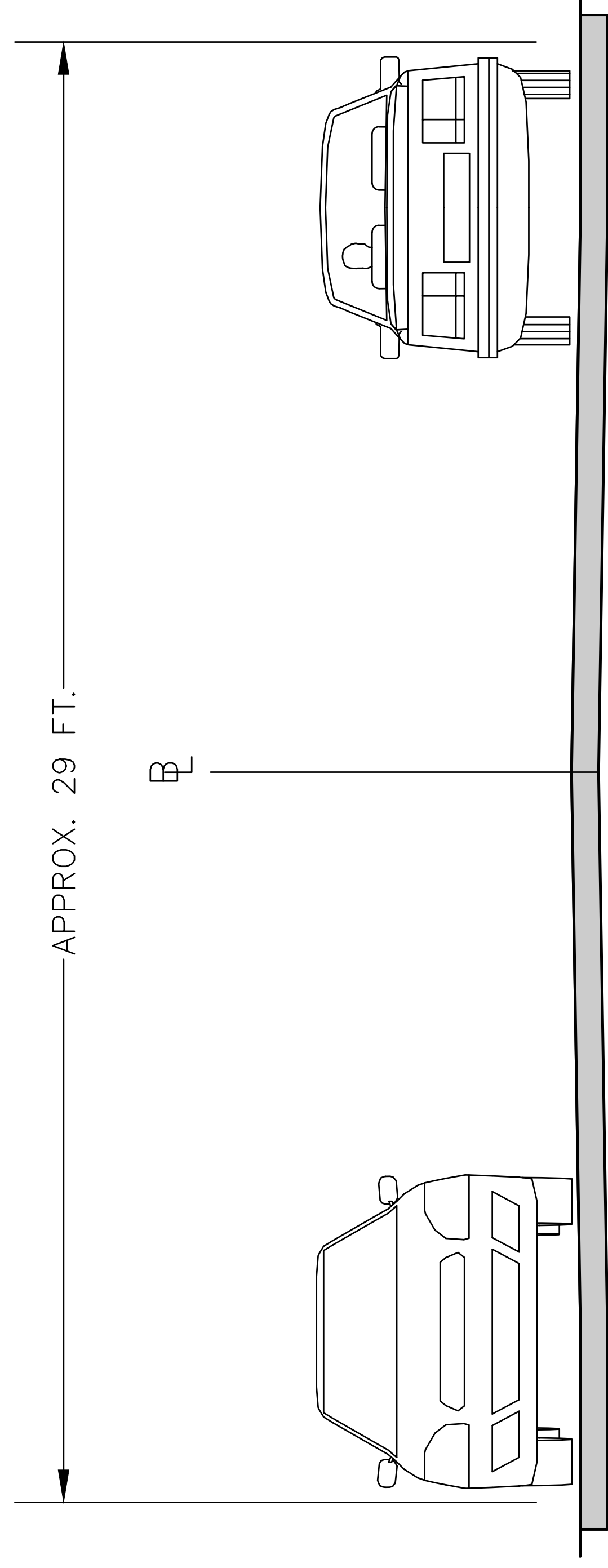


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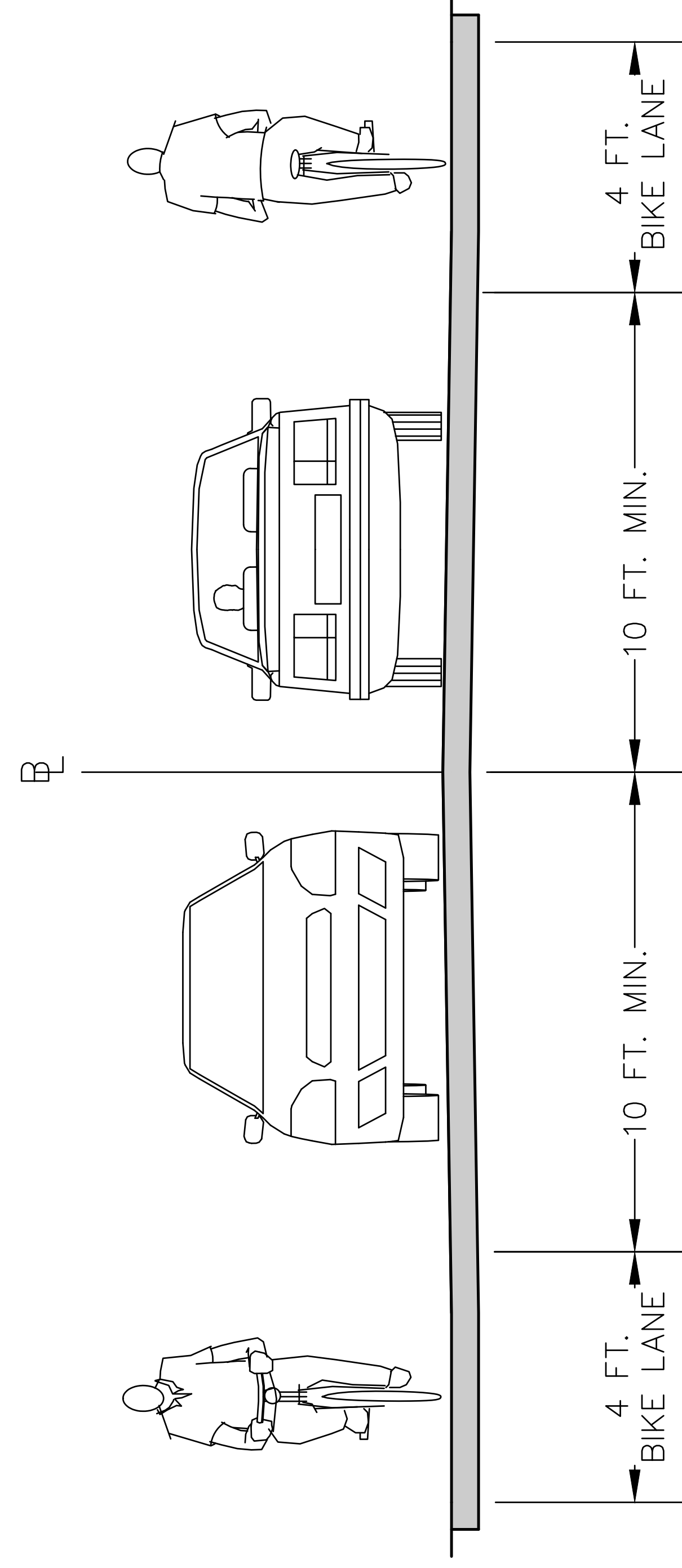


TYPICAL BIKE CLIMBING LANE AND SHARED USE LANE MARKING

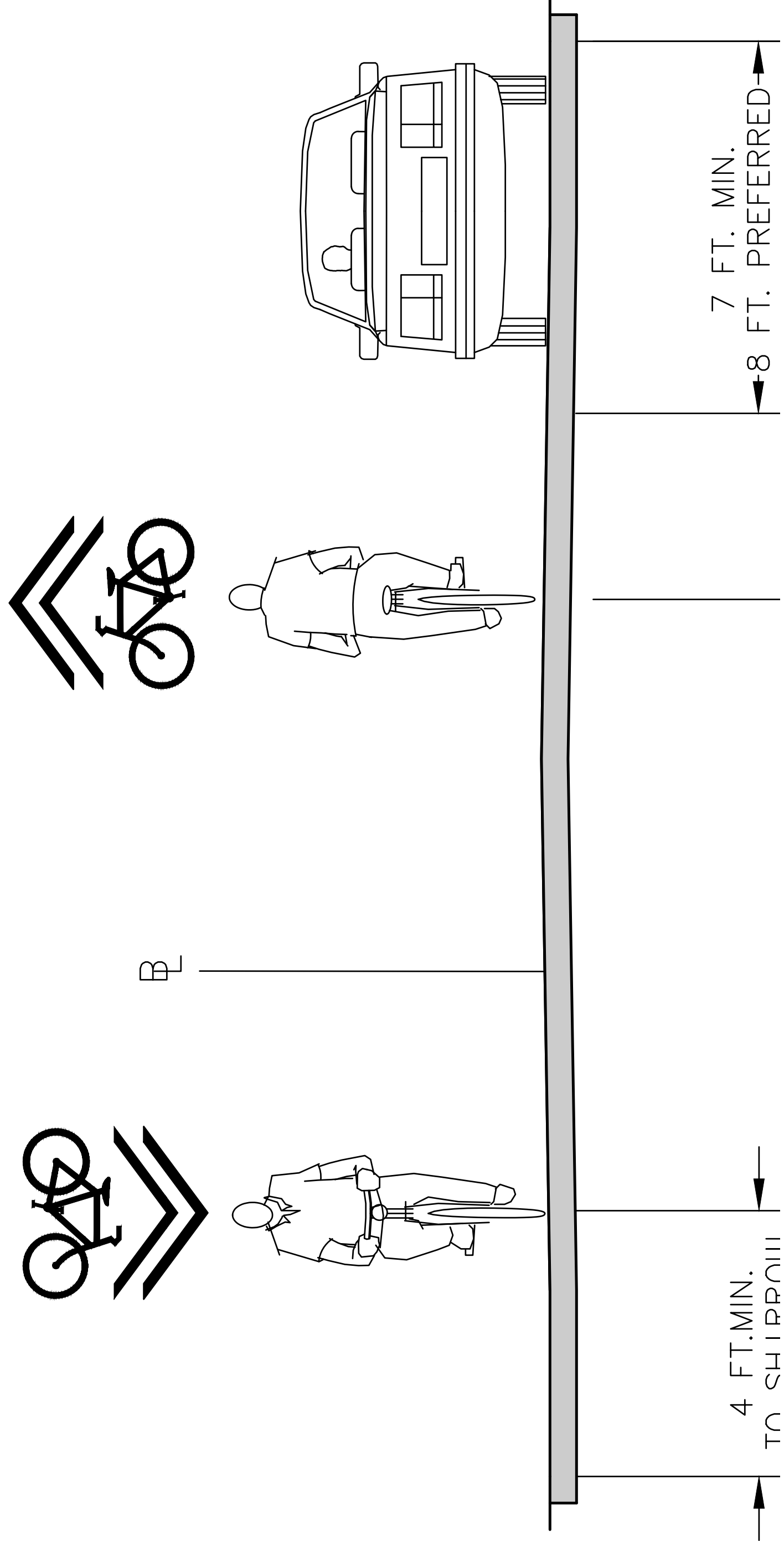


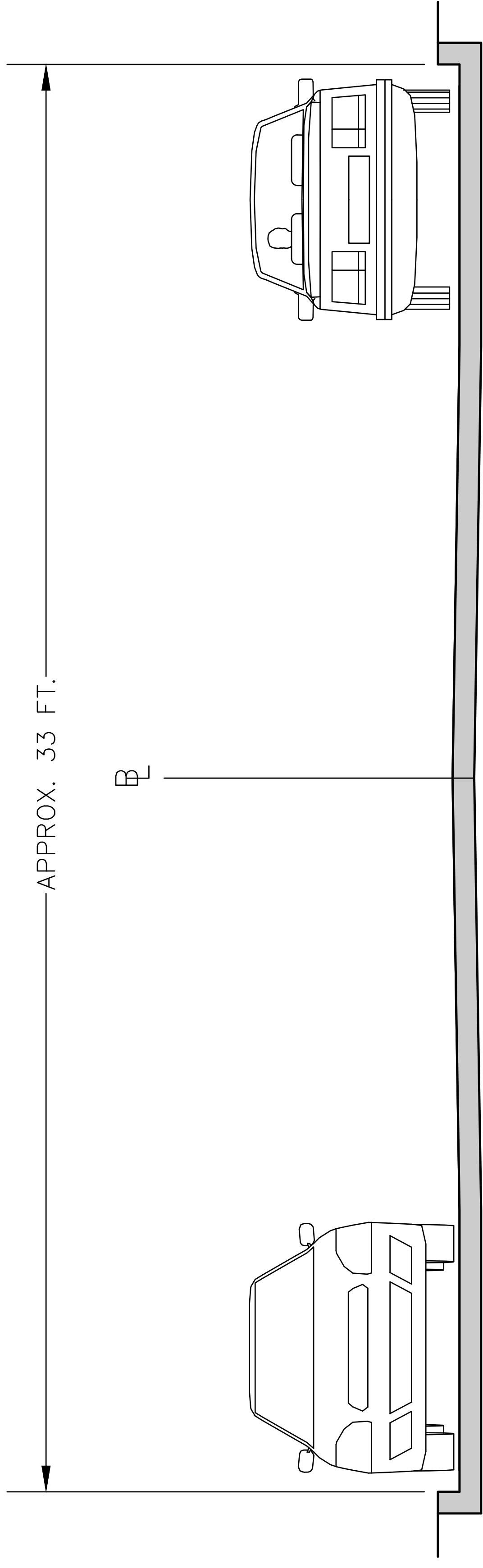


EXISTING SECTION
UNCURBED WITH
ON STREET PARKING BOTH SIDES

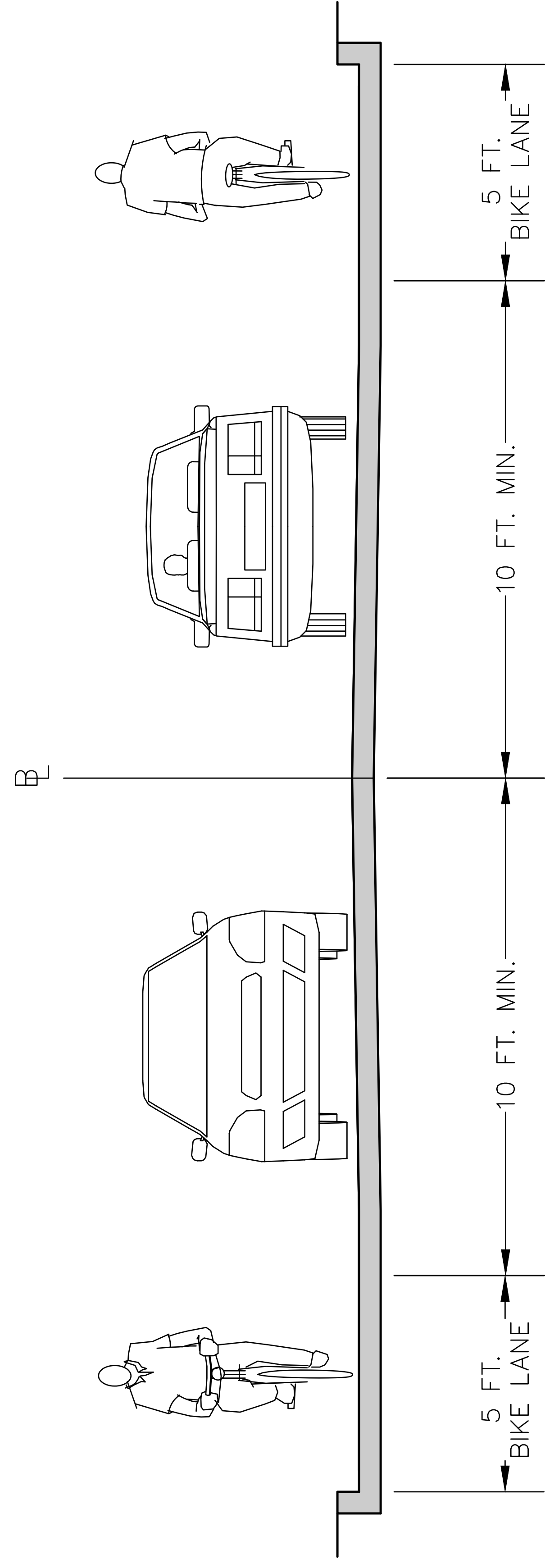


TYPICAL TWO-WAY BIKE LANE
WITH NO ON STREET PARKING

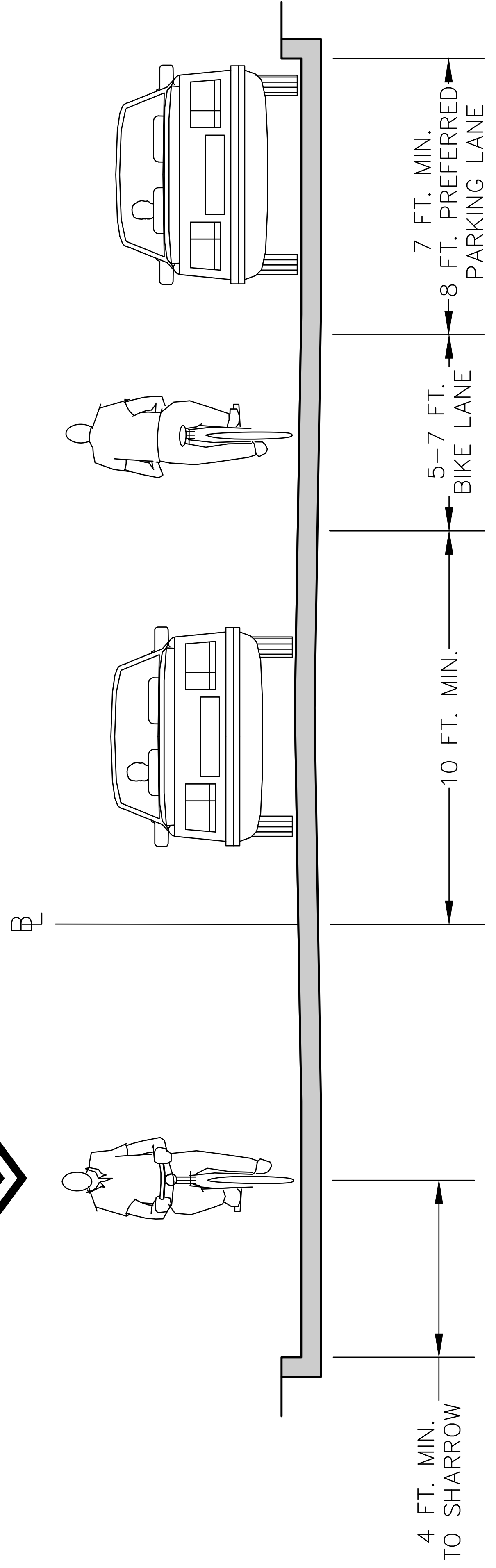
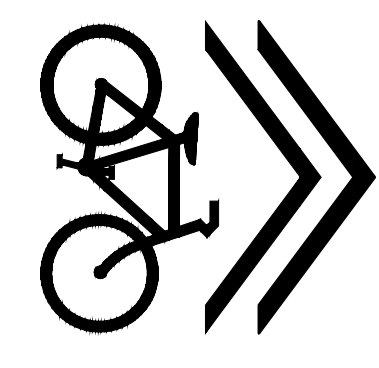




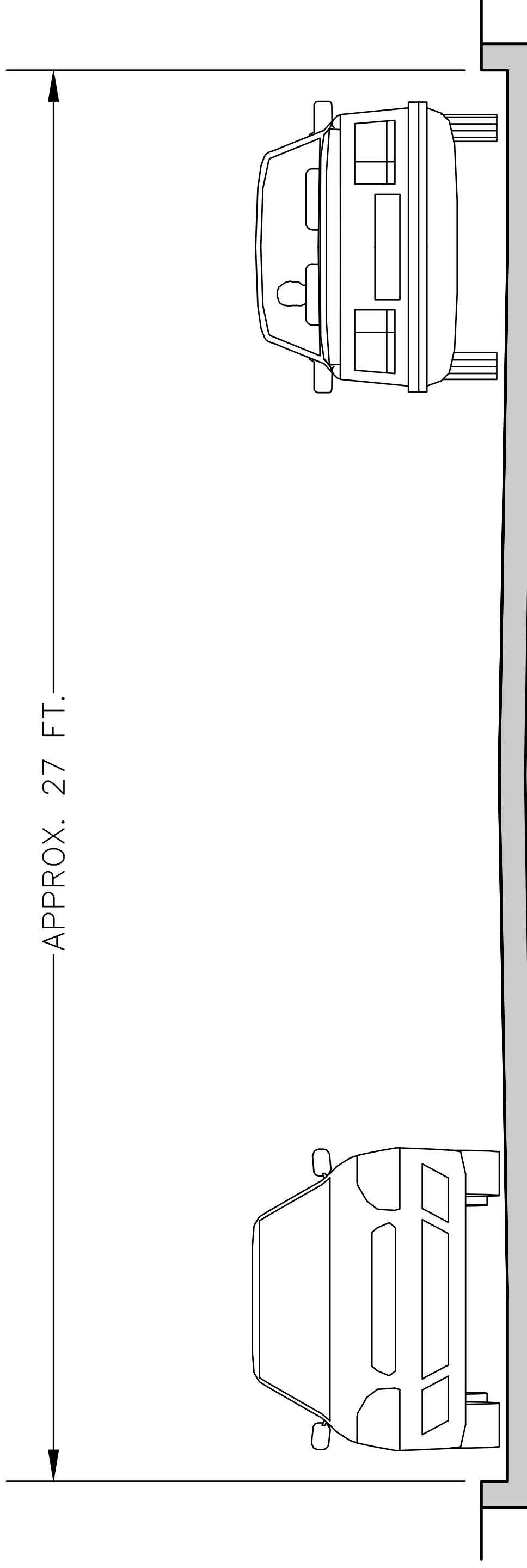
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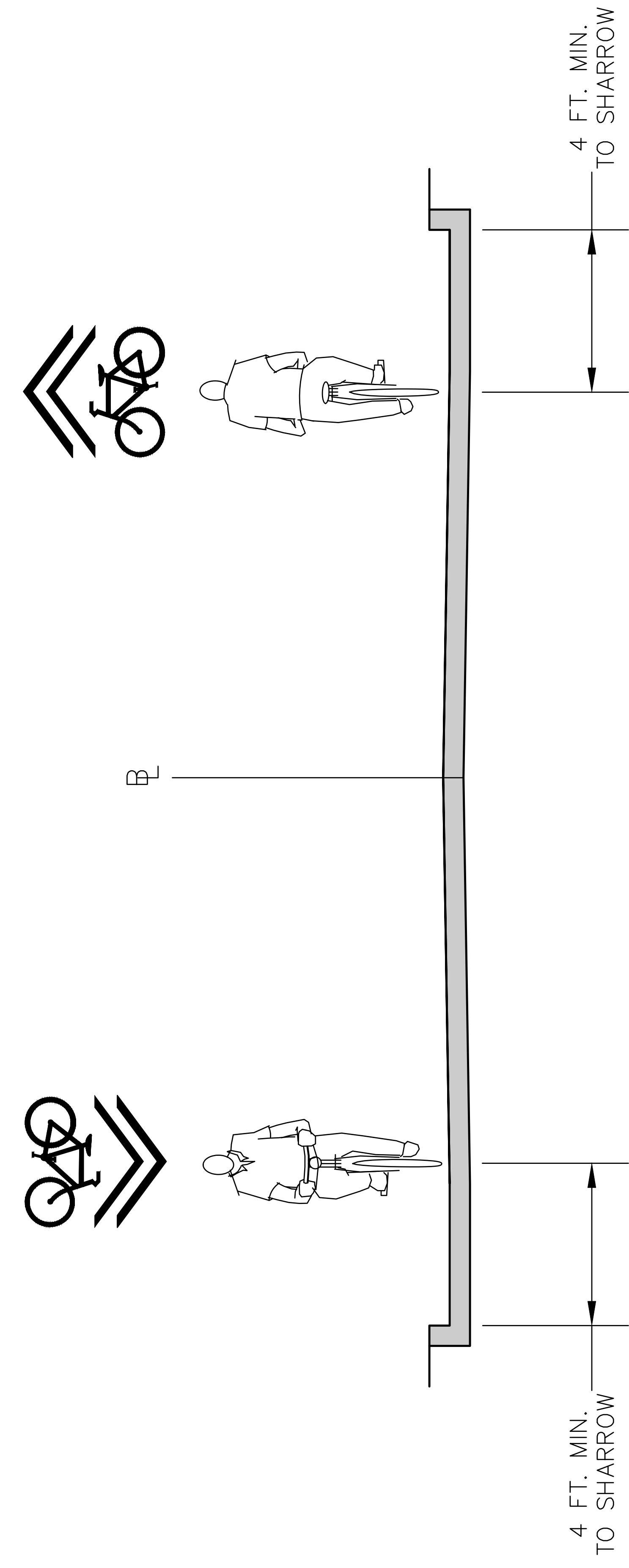
TYPICAL TWO-WAY BIKE LANE WITH NO ON STREET PARKING



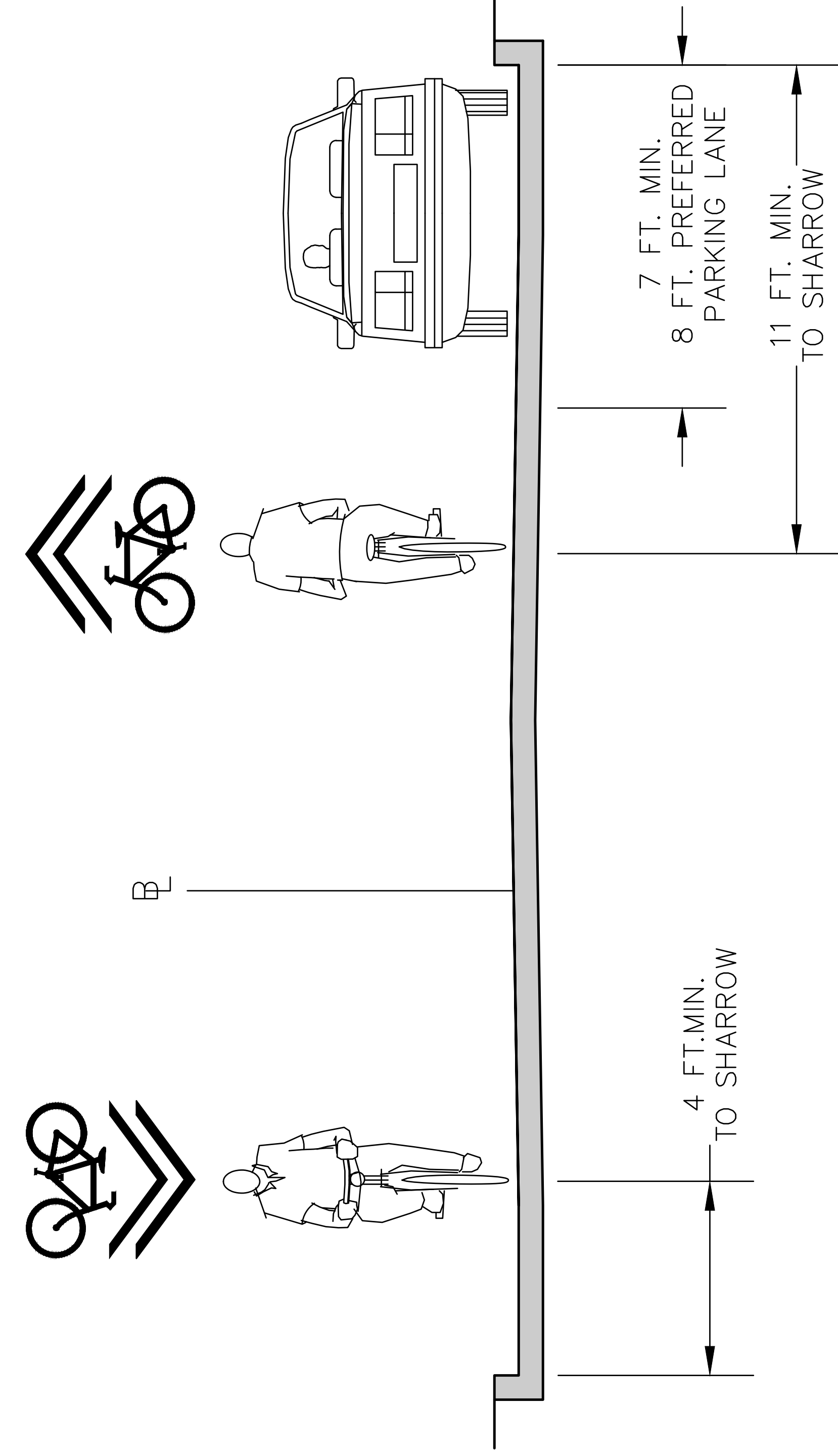
TYPICAL SHARED USE AND BIKE LANE



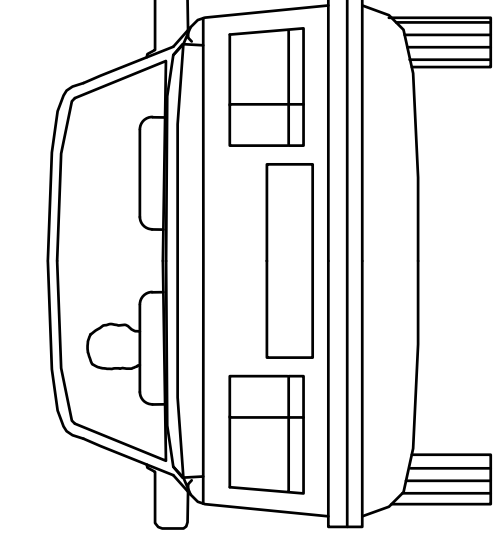
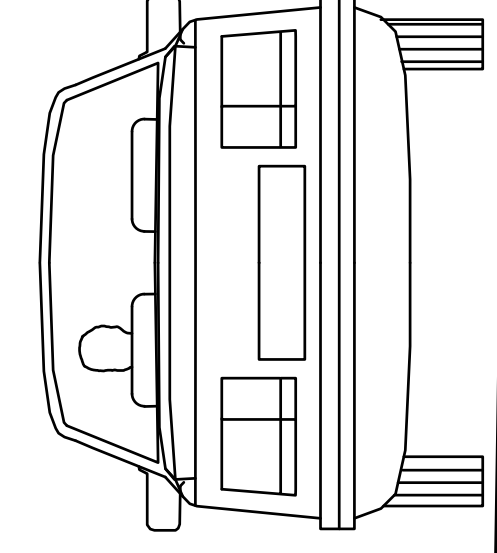
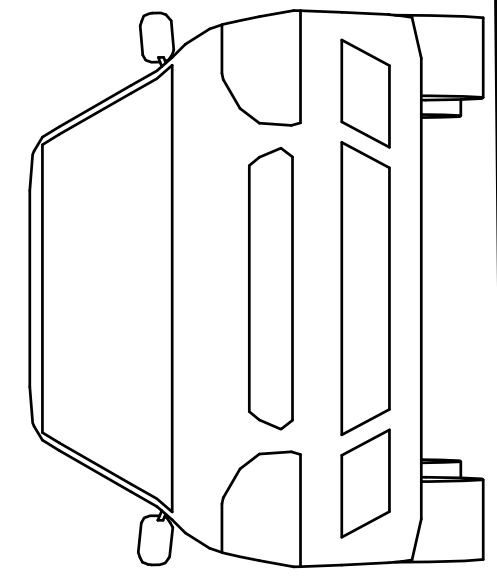
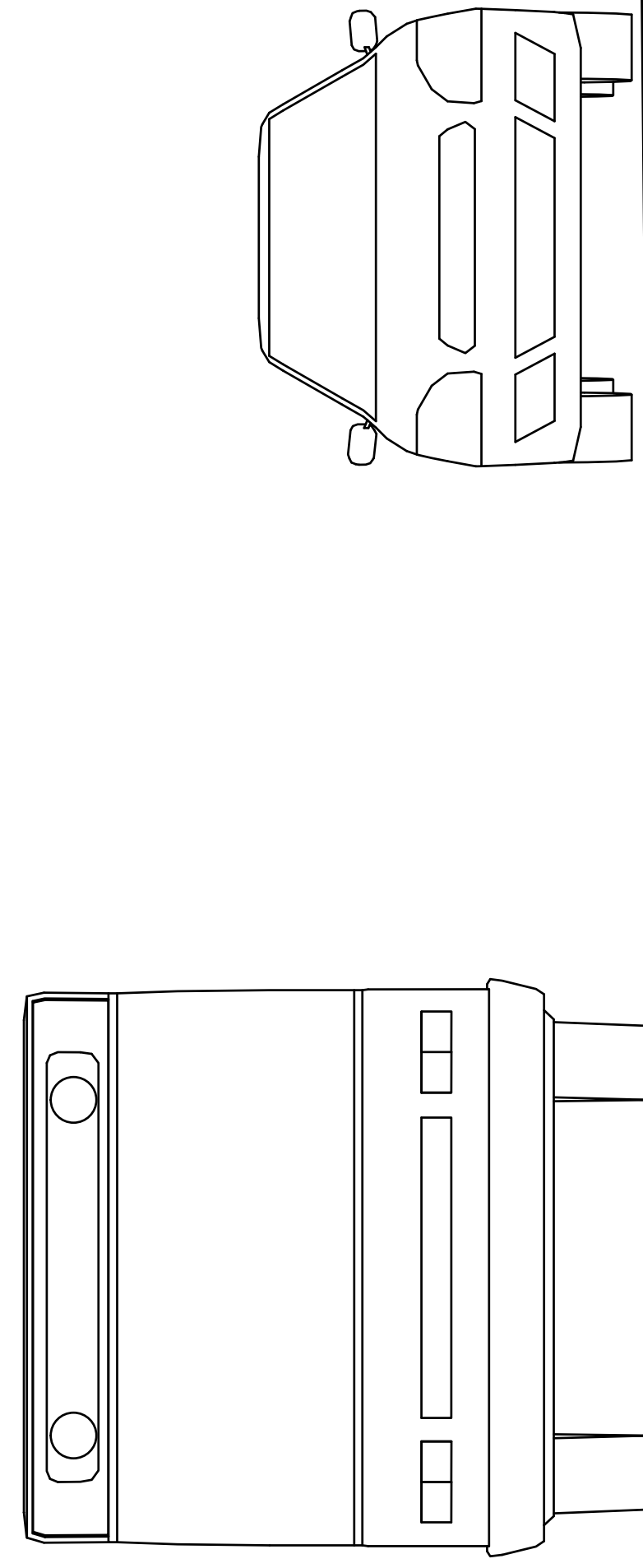
EXISTING SECTION



TYPICAL SHARED USE LANE MARKING
WITH NO ON STREET PARKING

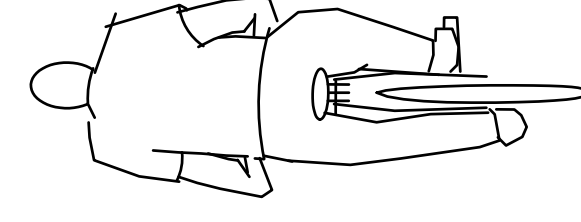
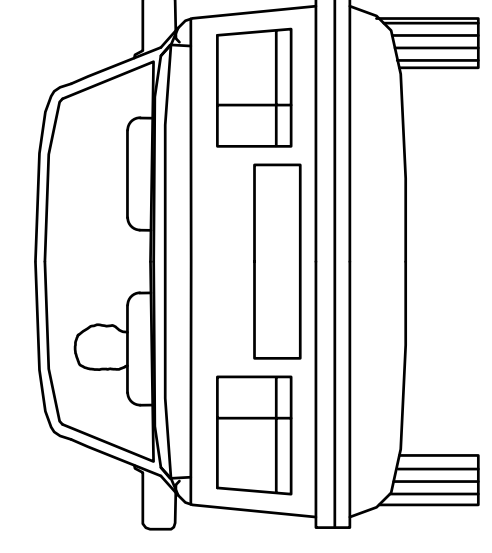
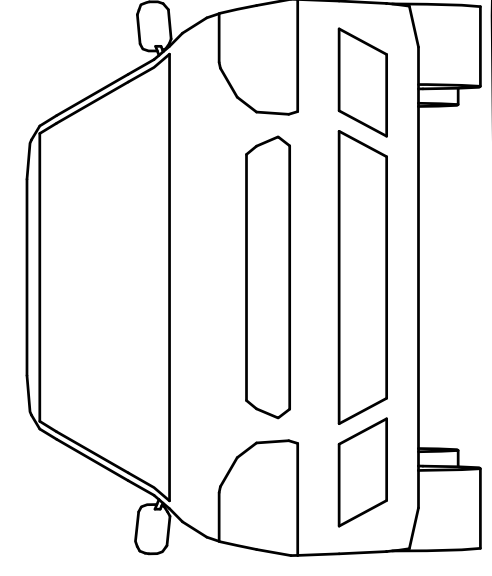
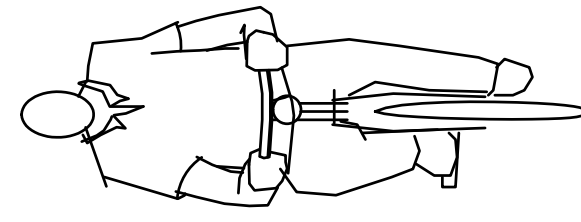
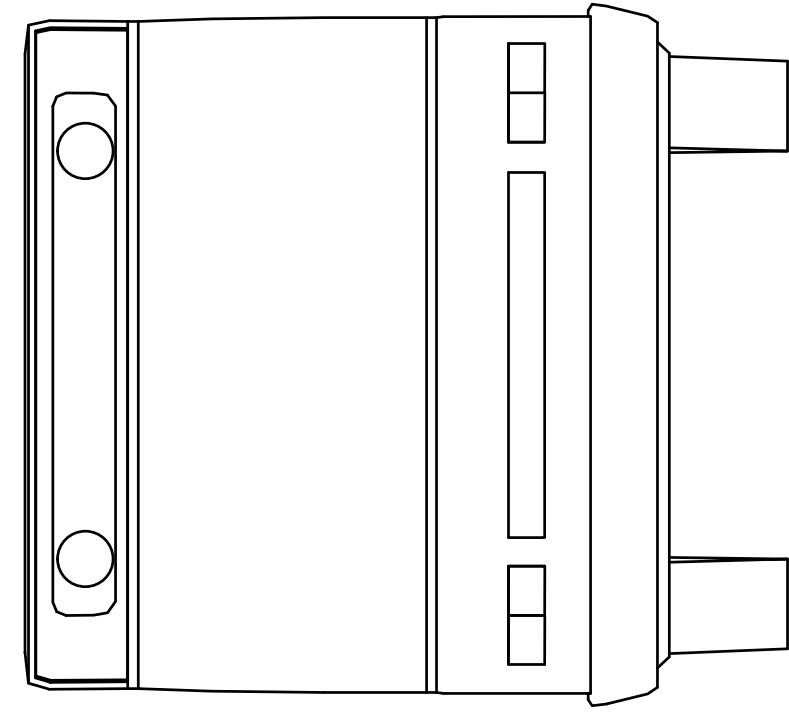


APPROX. 42 FT.



℞

EXISTING SECTION



℞

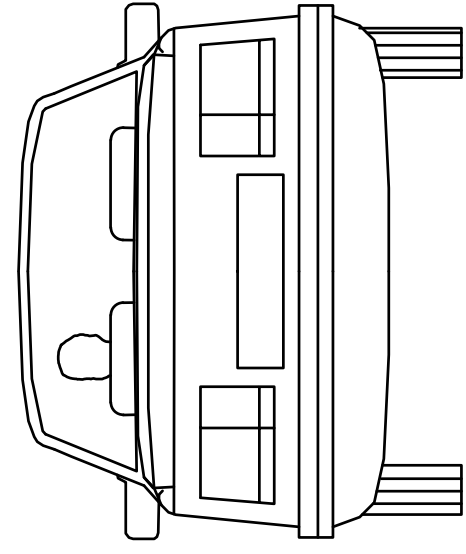
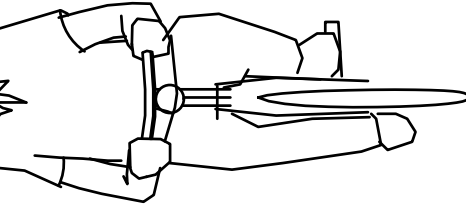
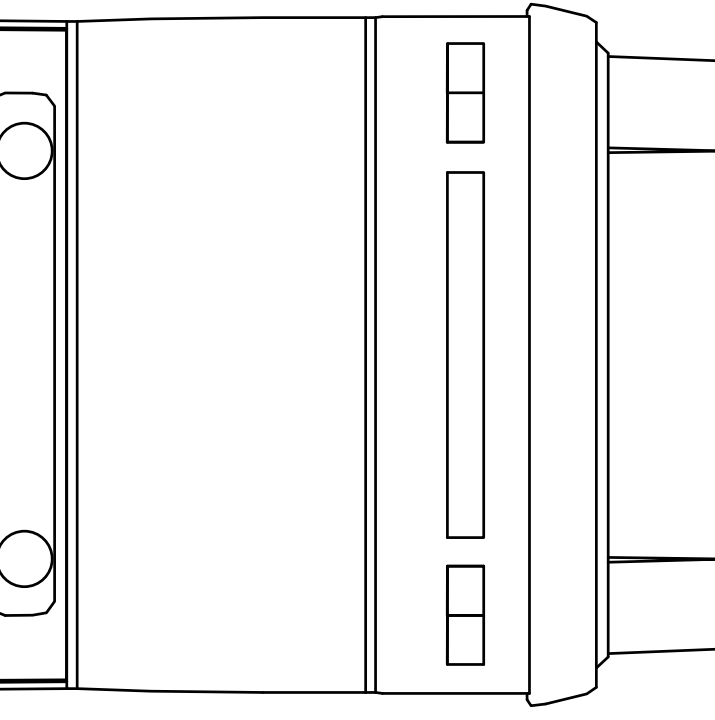
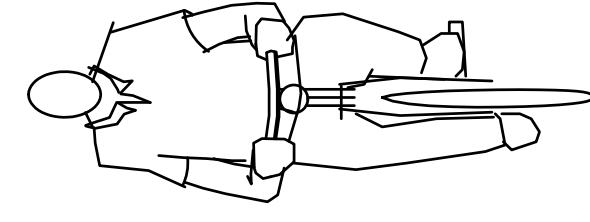
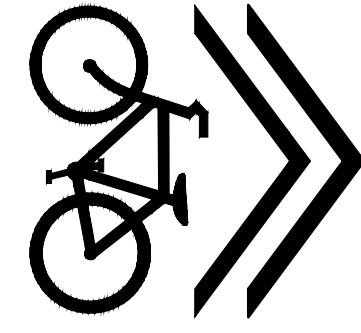
7 FT. MIN.
8 FT. PREFERRED
PARKING LANE

5 FT.
BIKE LANE

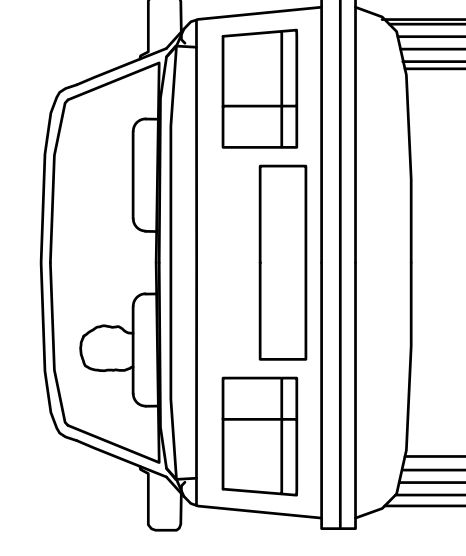
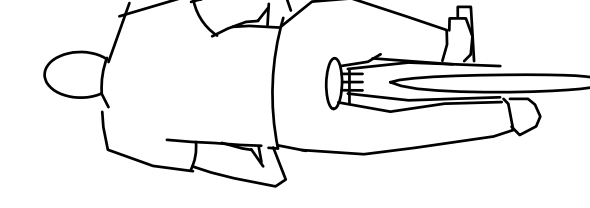
10 FT. MIN.

10 FT. MIN.

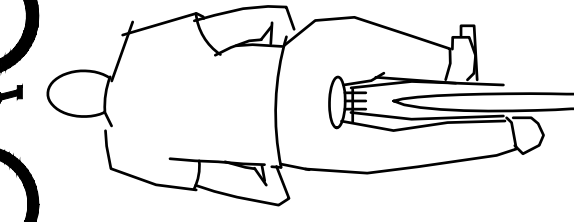
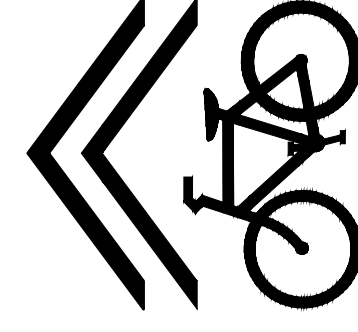
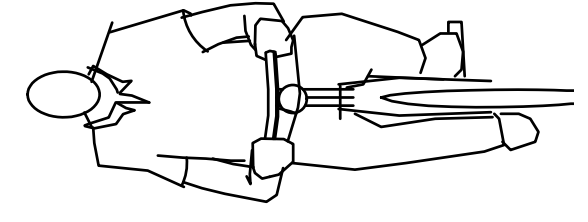
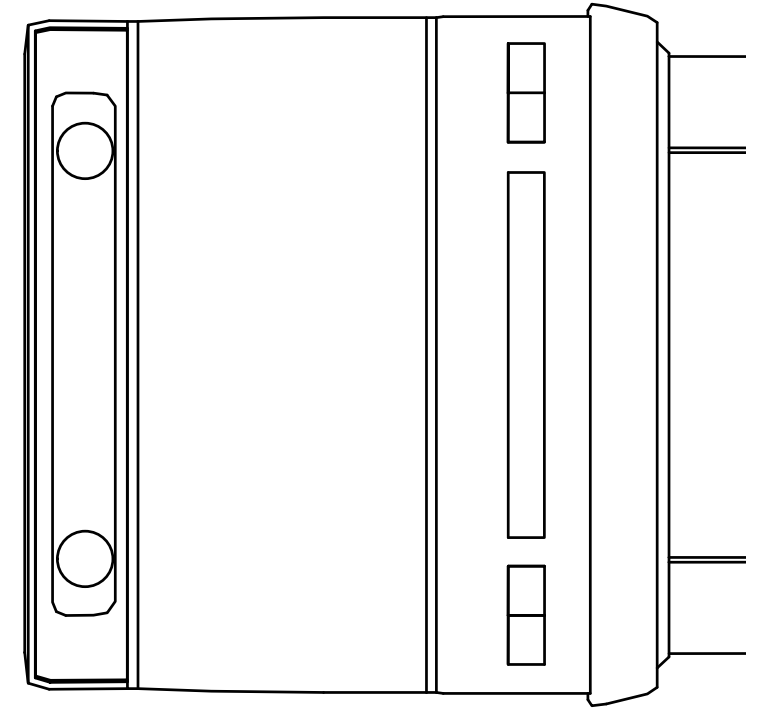
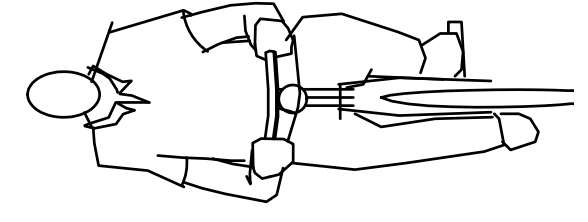
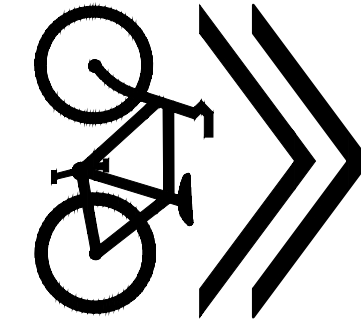
5 FT.
BIKE LANE



℞



7 FT. MIN.
8 FT. PREFERRED
PARKING LANE



℞

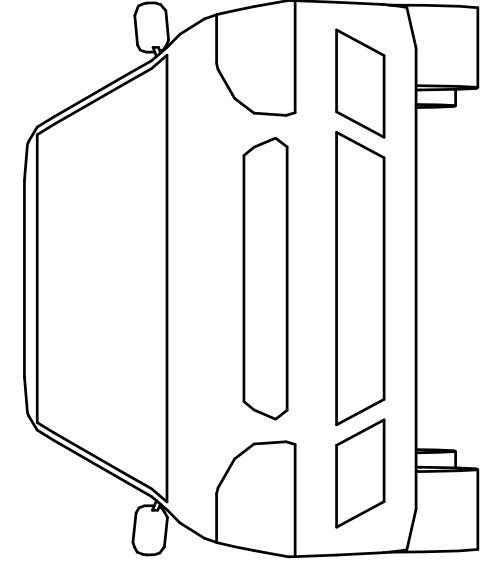
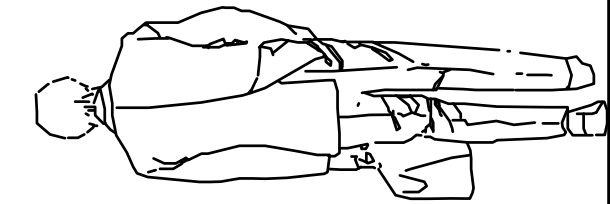
10 FT. MIN.

5 FT.
BIKE LANE

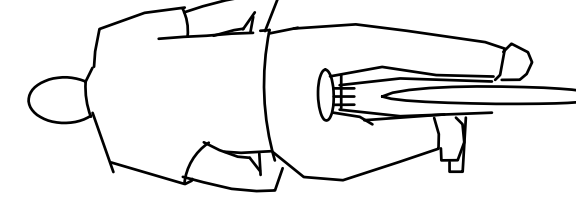
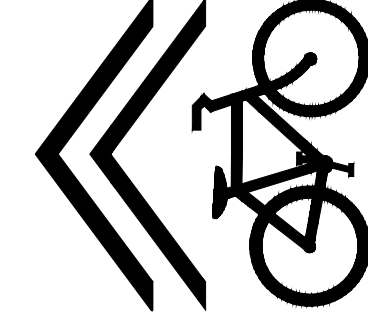
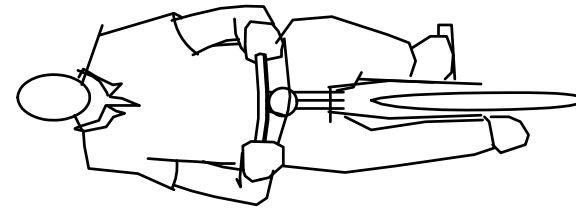
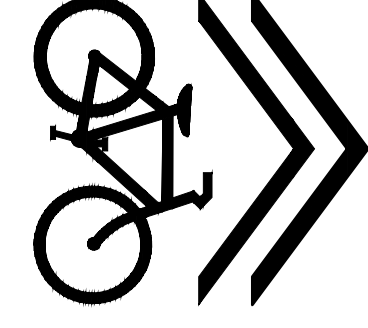
7 FT. MIN.
8 FT. PREFERRED
PARKING LANE

5 FT. SIDEWALK

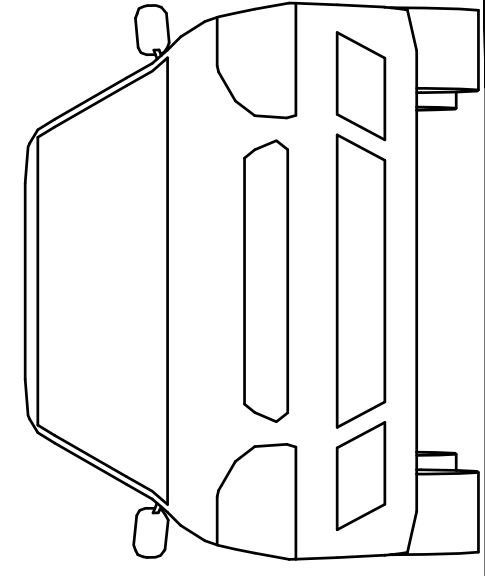
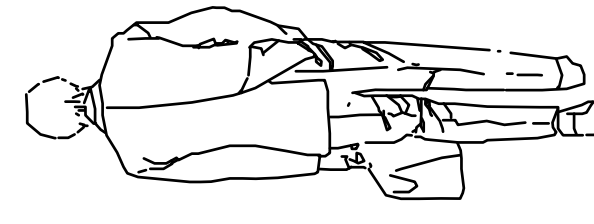
APPROX. 24 FT.



EXISTING SECTION



B



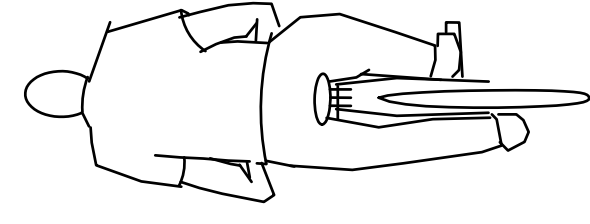
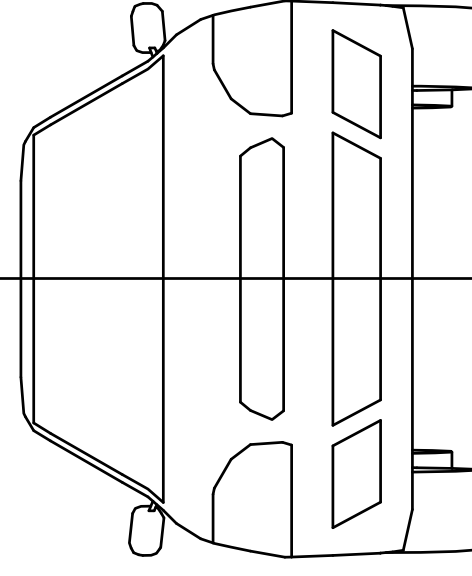
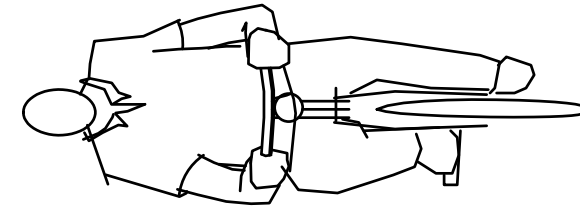
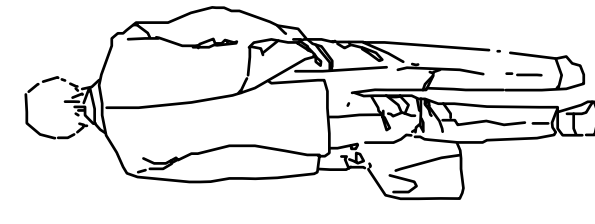
TYPICAL SHARED USE LANES WITH
ON STREET PARKING - 1 SIDE

7 FT. MIN.
8 FT. PREFERRED
PARKING LANE

11 FT. MIN.
TO SHARROW

4 FT. MIN.
TO SHARROW

B

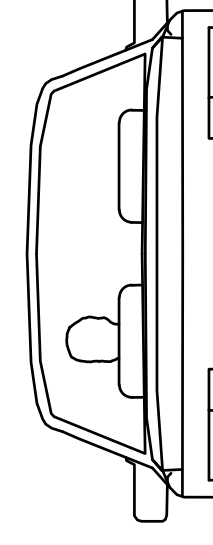
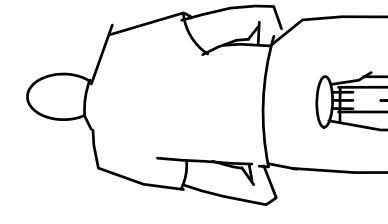
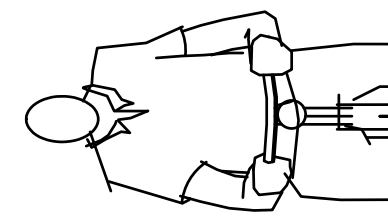


TYPICAL ONE-WAY TRAFFIC LANE
WITH TWO-WAY BIKE LANES

5 FT.
BIKE LANE

5 FT.
BIKE LANE

B

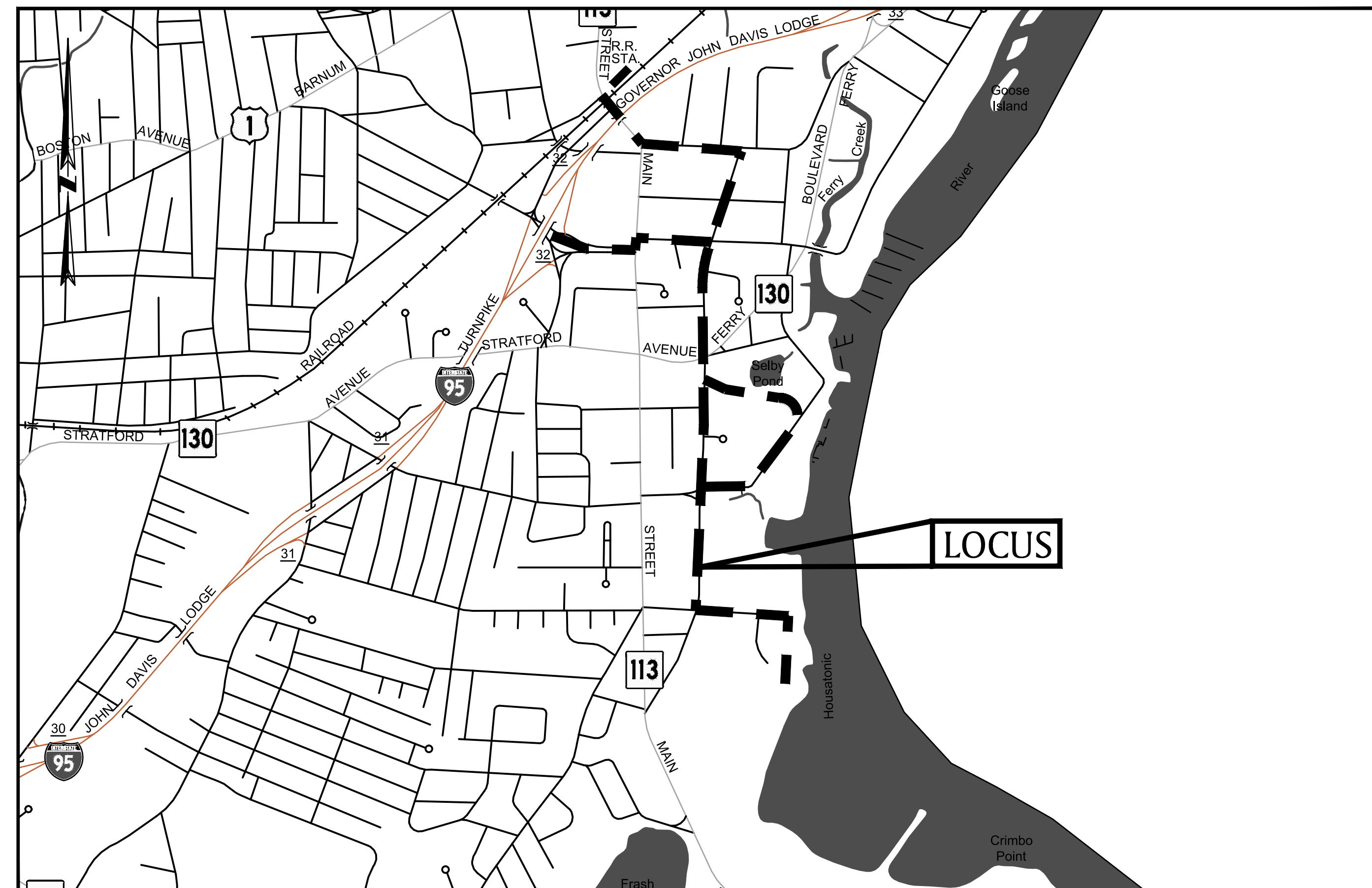


APPENDIX D
PRELIMINARY DESIGN PLANS

STRATFORD GREENWAY EXTENSION PROJECT

STRATFORD, CONNECTICUT

DECEMBER 2, 2015



- T-1.0
- I-1.0
- C-1.0
- C-1.1
- C-1.2
- C-1.3
- C-1.4
- C-1.5
- C-1.6
- C-1.7
- C-2.0
- C-2.1
- C-3.0
- C-3.1
- C-4.0

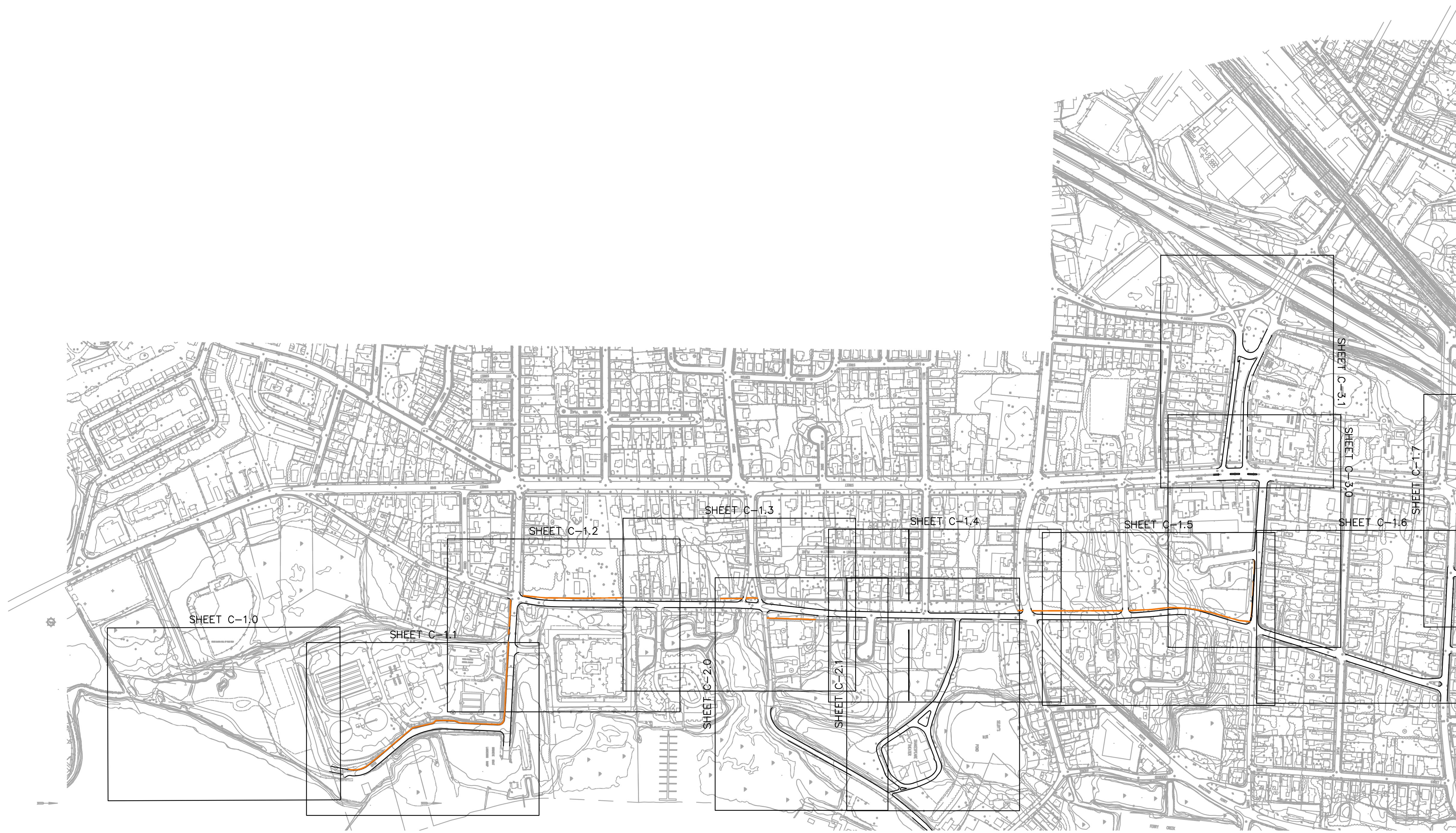
LOCUS MAP

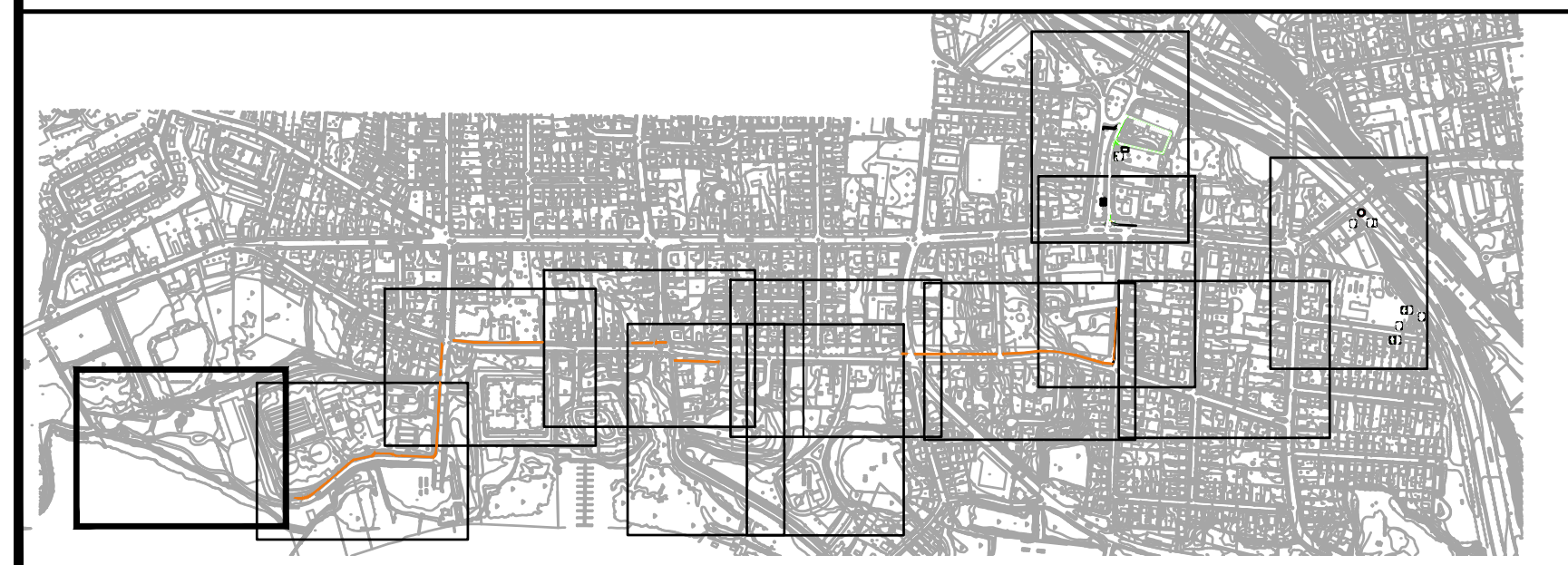
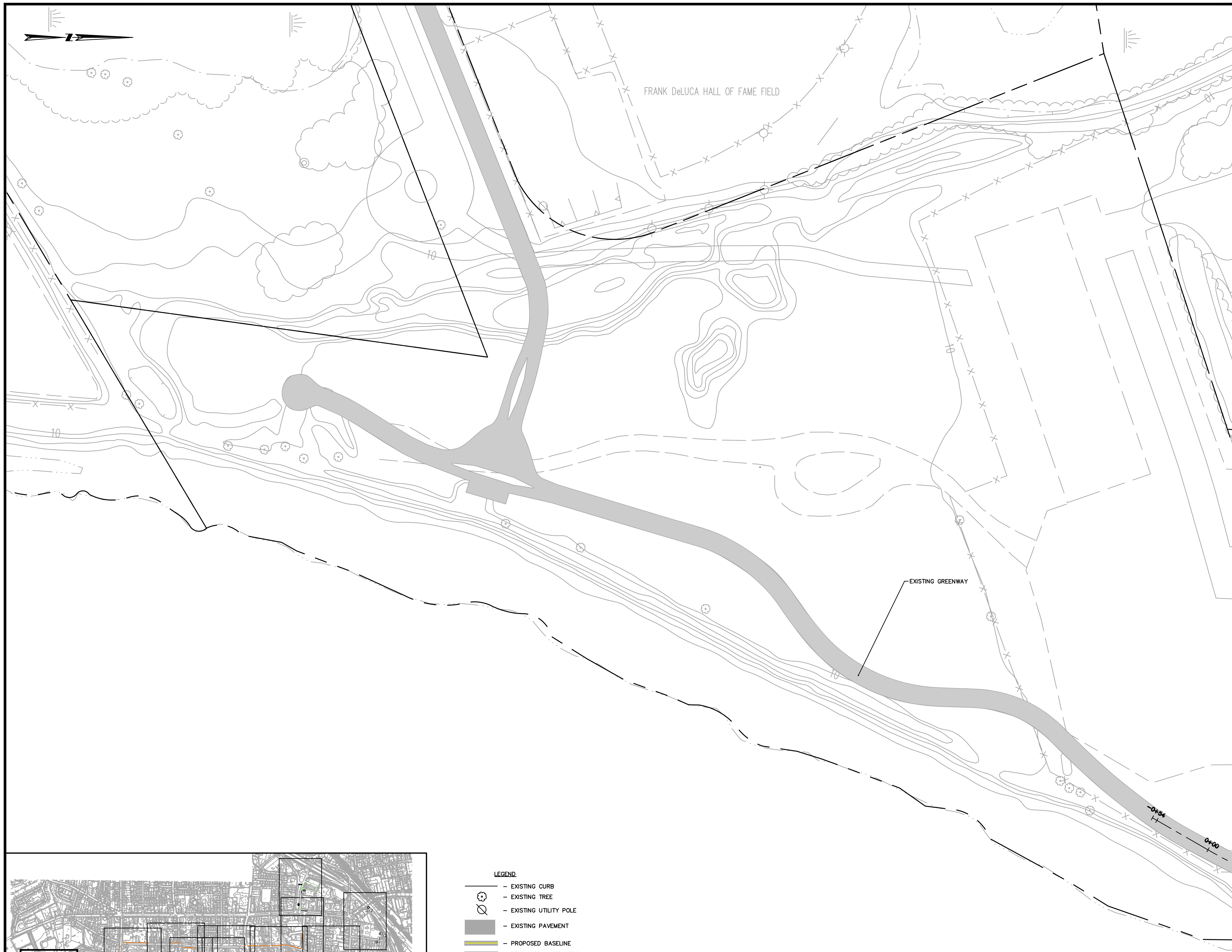


SCALE: 1" = 1000'±

PREPARED FOR:

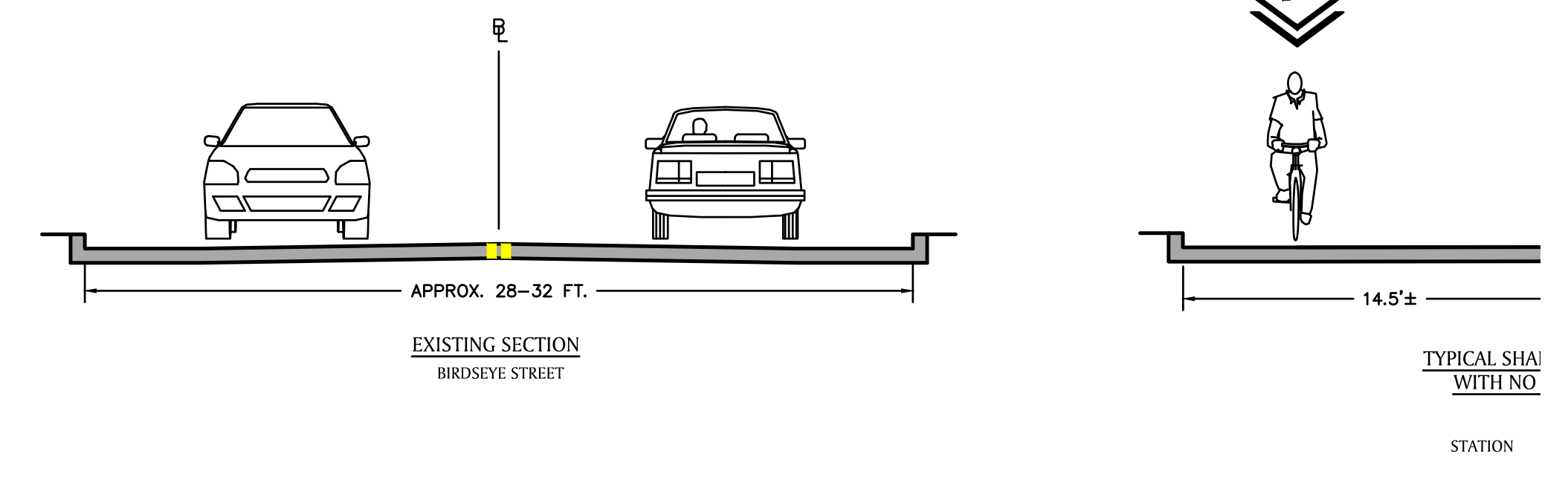
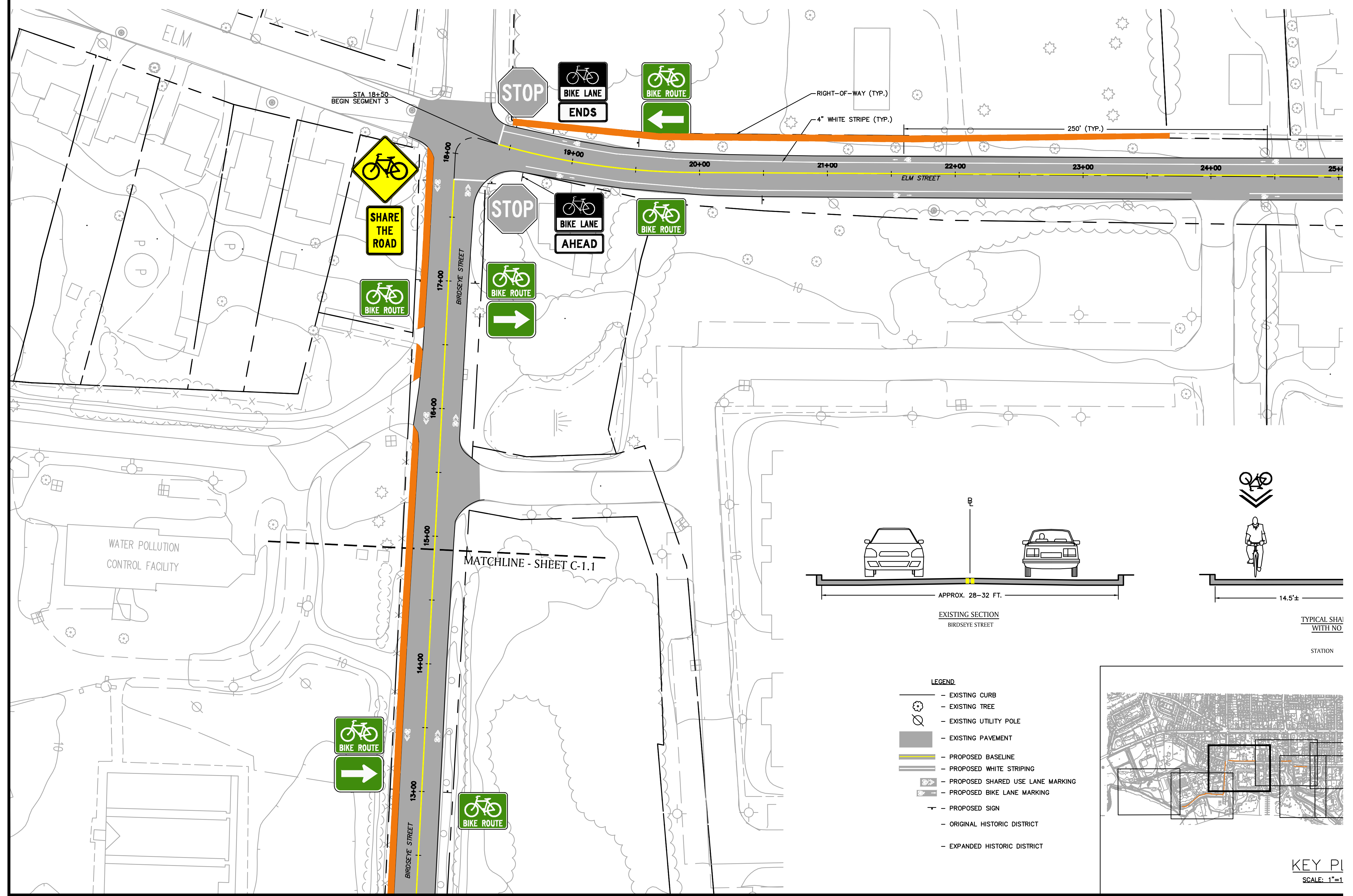
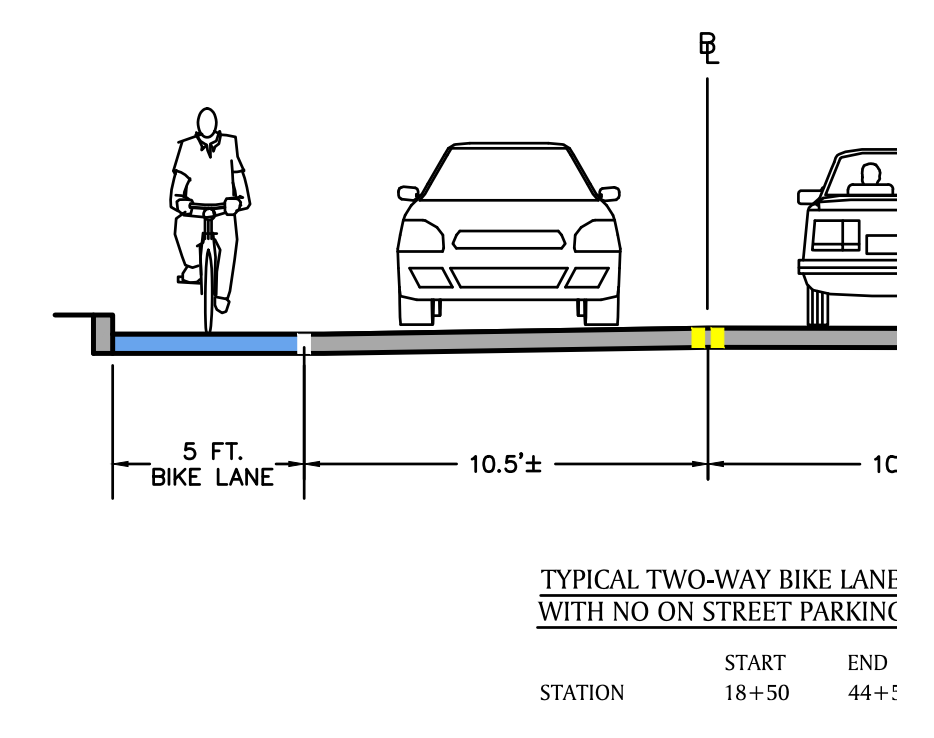
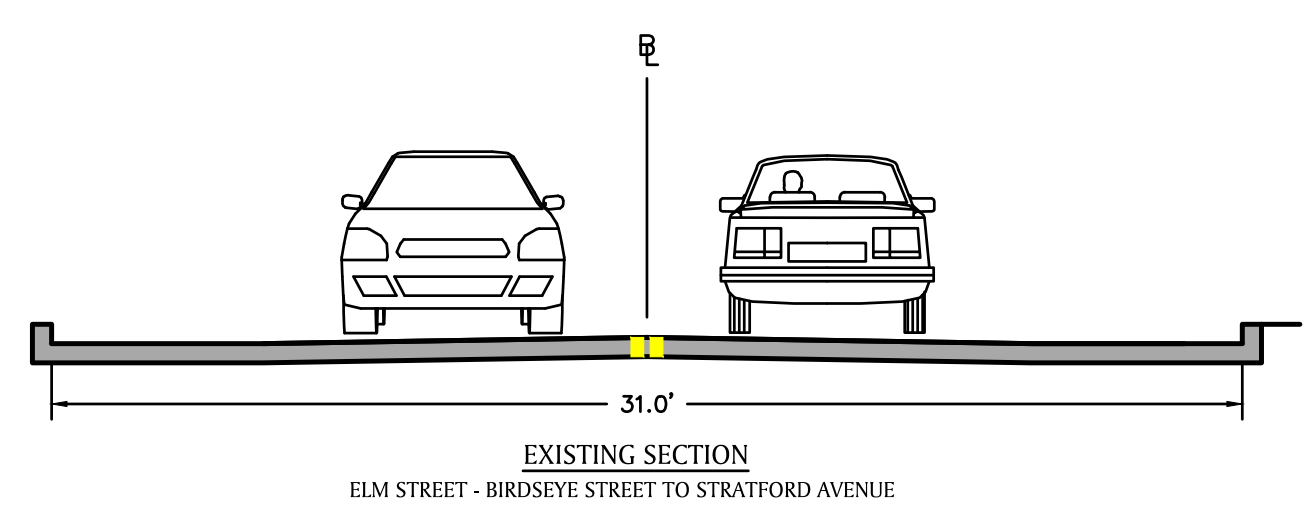
TOWN OF STRATFORD
2725 MAIN STREET
STRATFORD, CT 06615



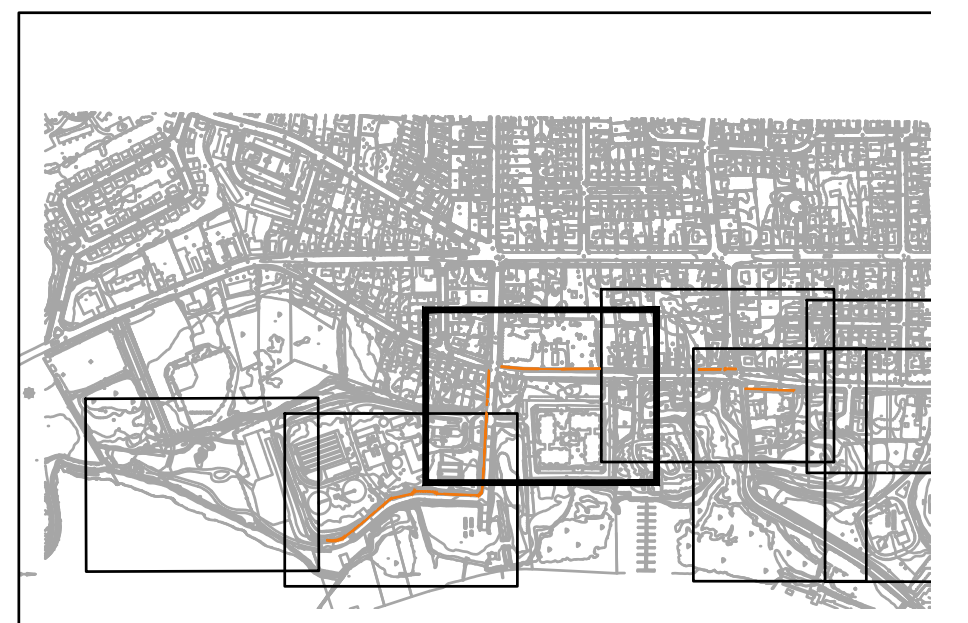


KEY PLAN
SCALE: 1"=1,000'

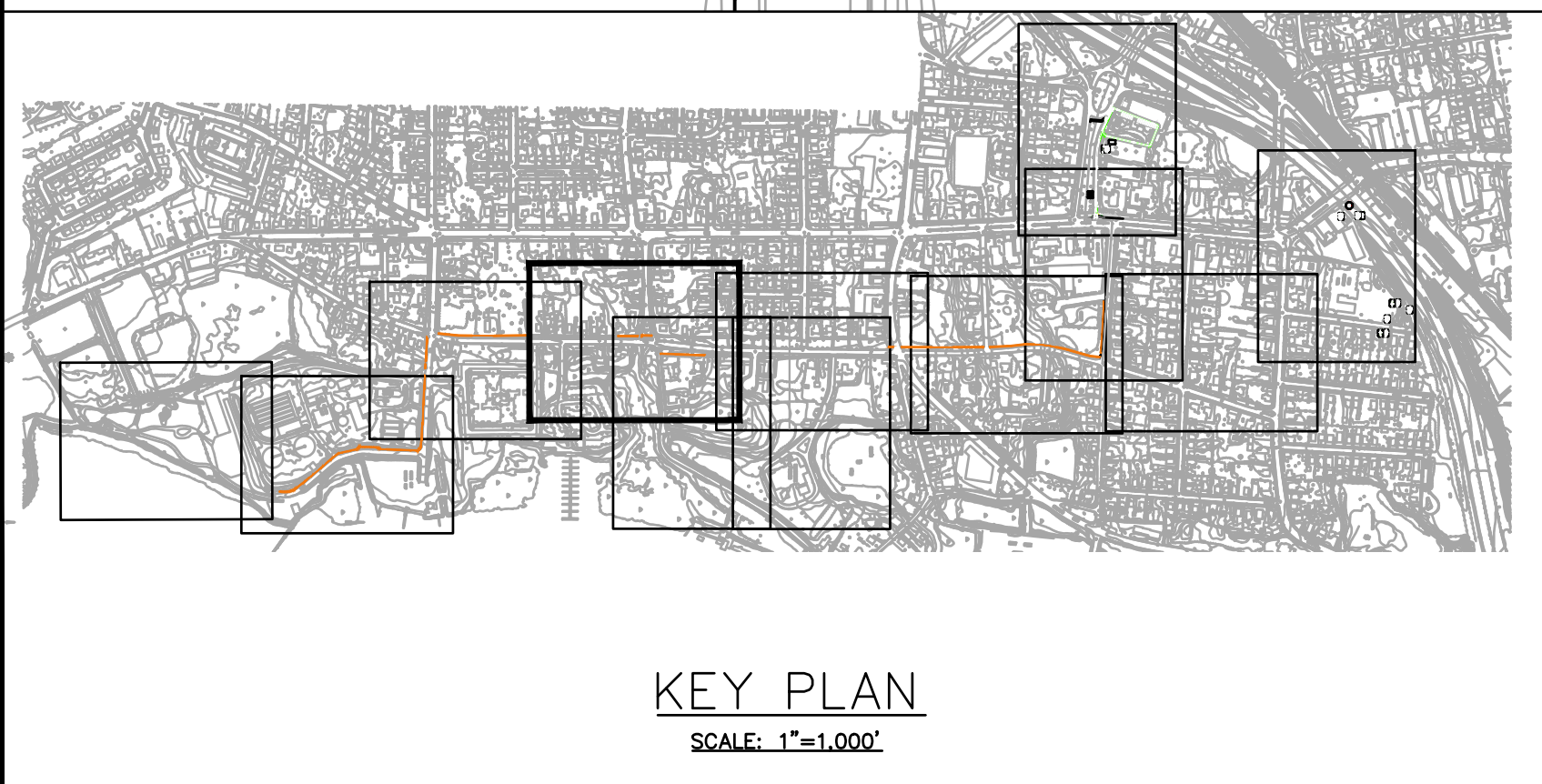
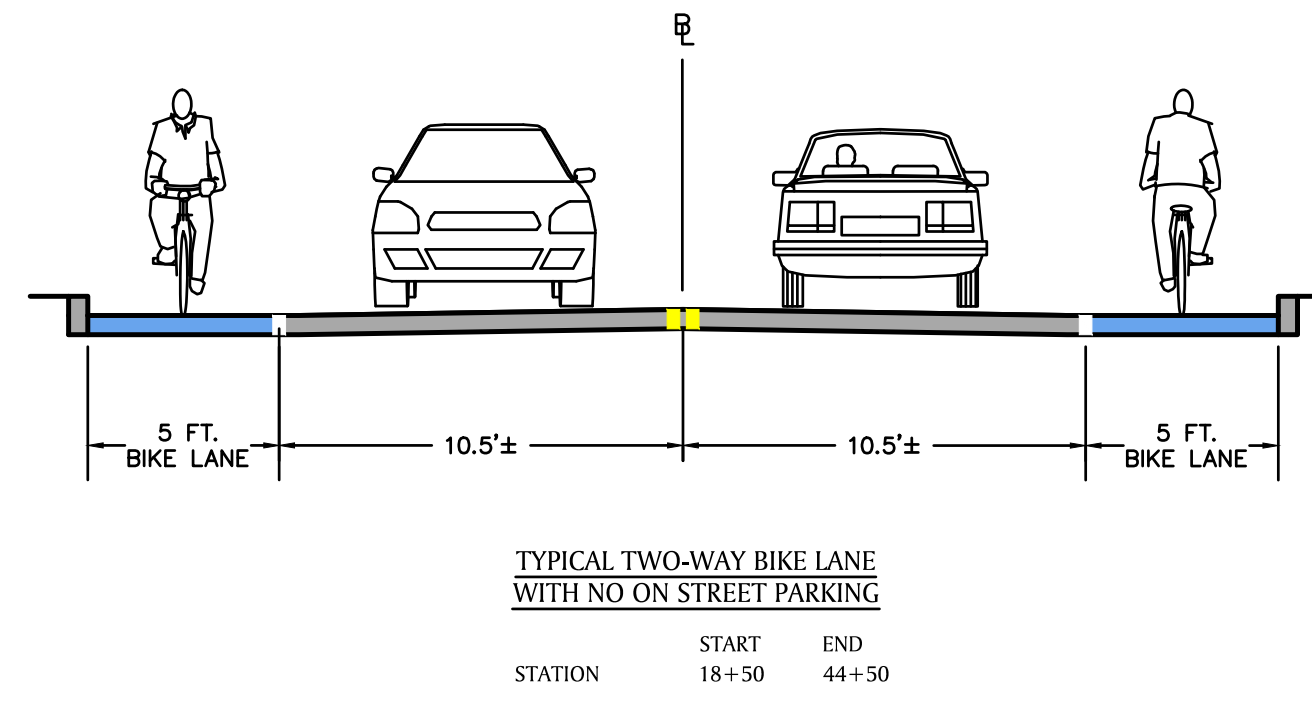
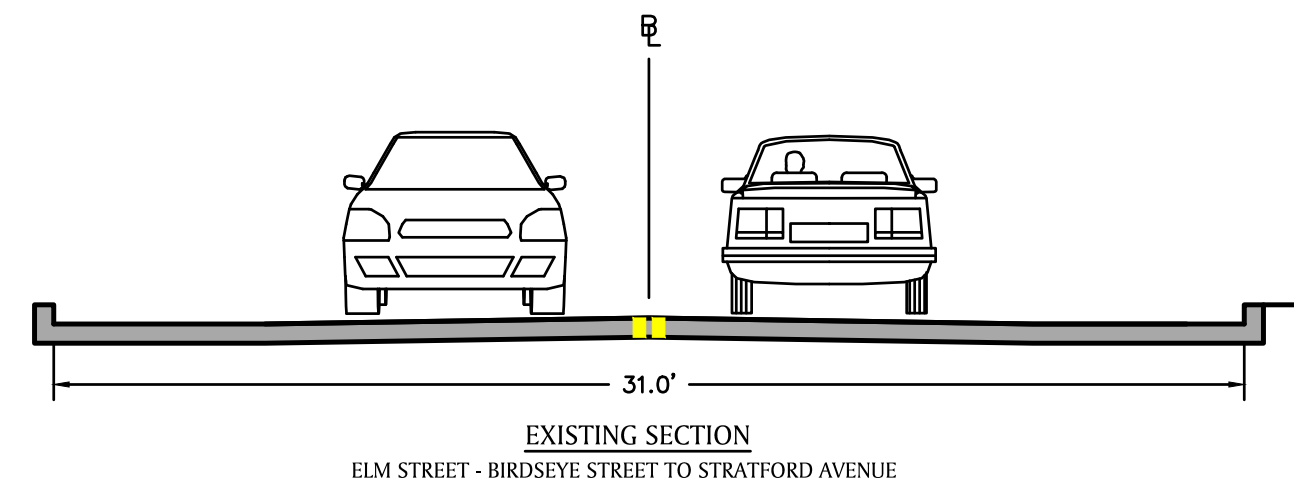
- LEGEND**
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - EXISTING PAVEMENT
 - PROPOSED BASELINE
 - PROPOSED WHITE STRIPING
 - PROPOSED SHARED USE LANE MARKING
 - PROPOSED BIKE LANE MARKING
 - PROPOSED SIGN
 - ORIGINAL HISTORIC DISTRICT
 - EXPANDED HISTORIC DISTRICT



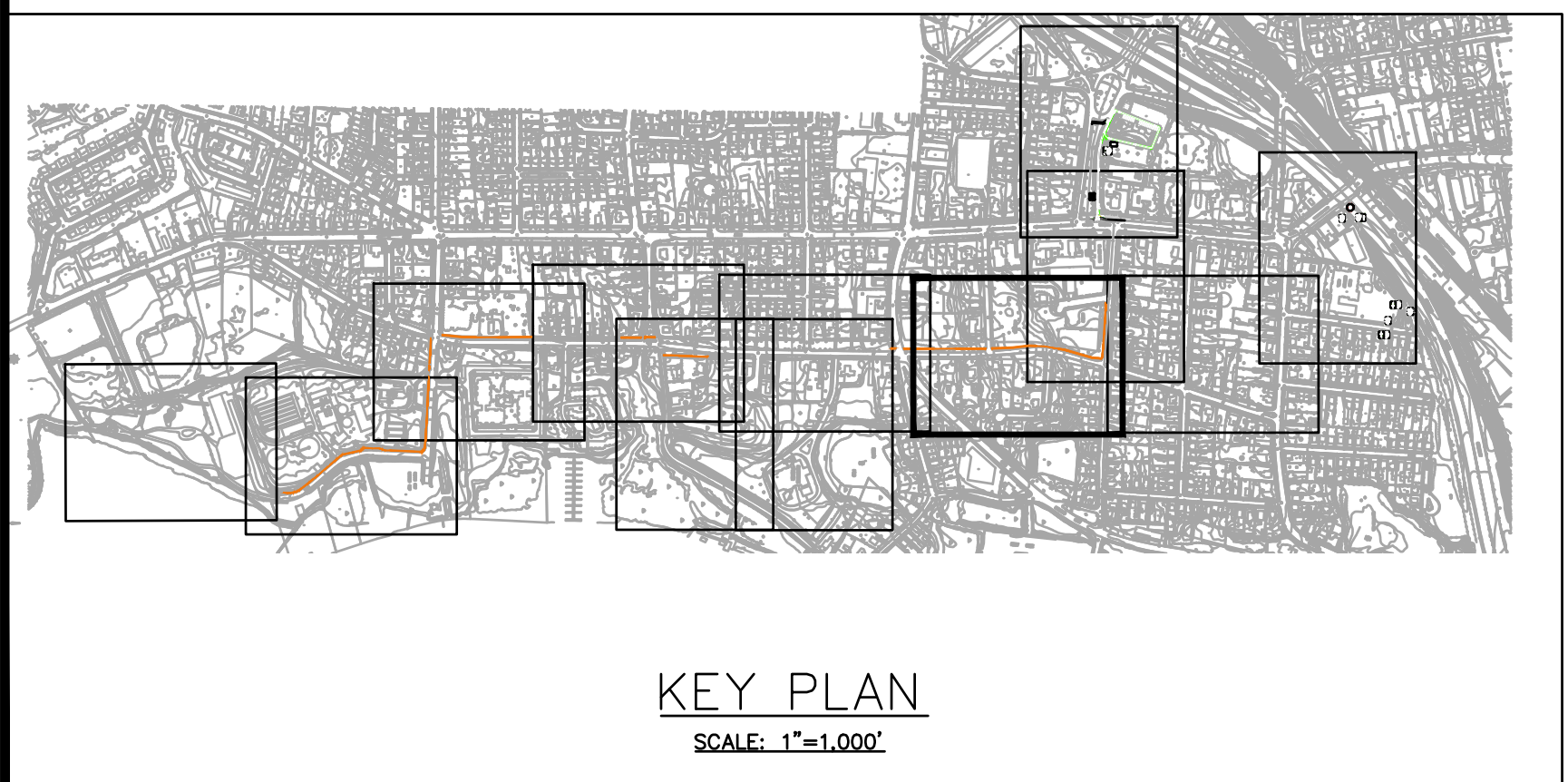
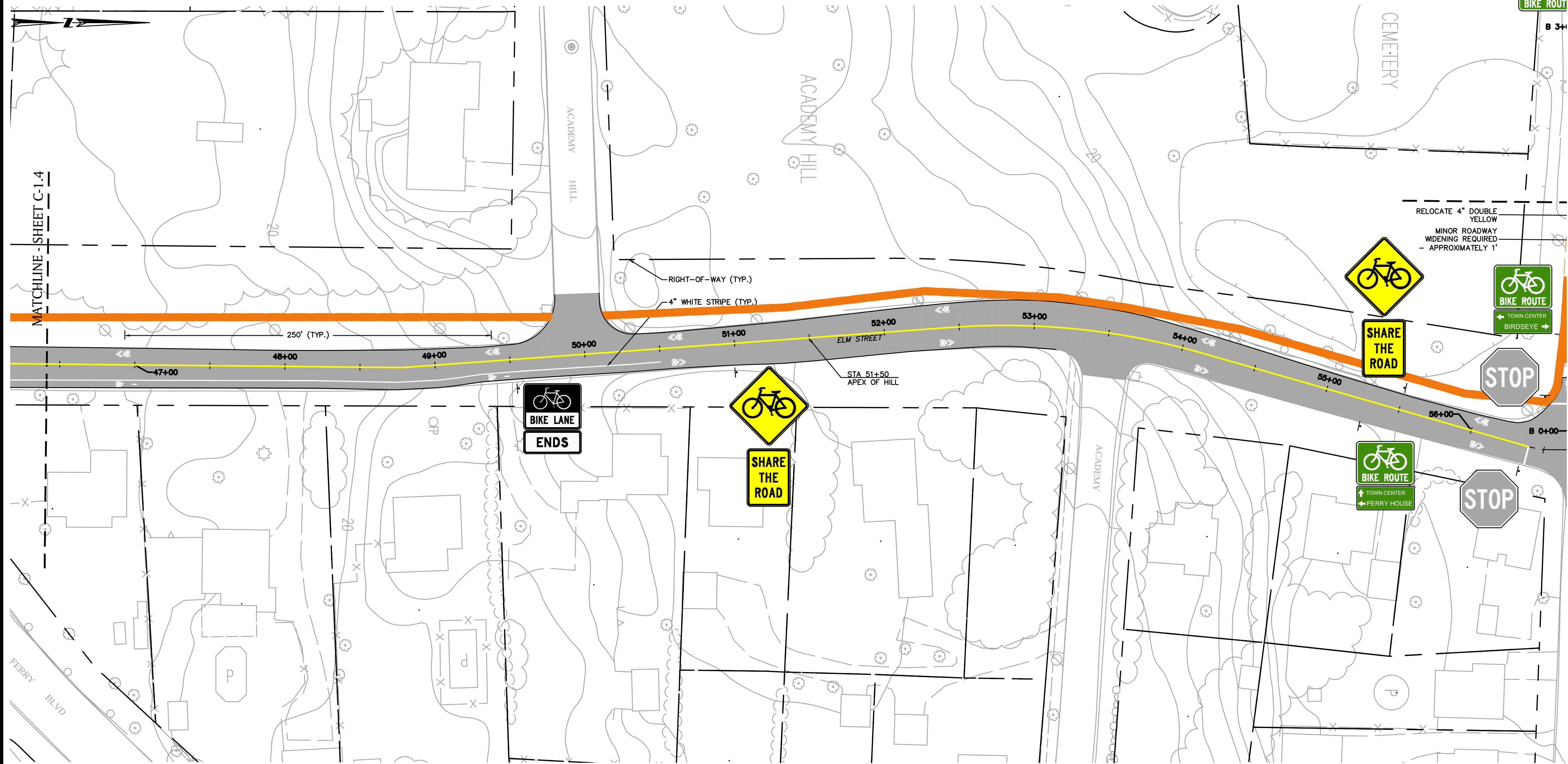
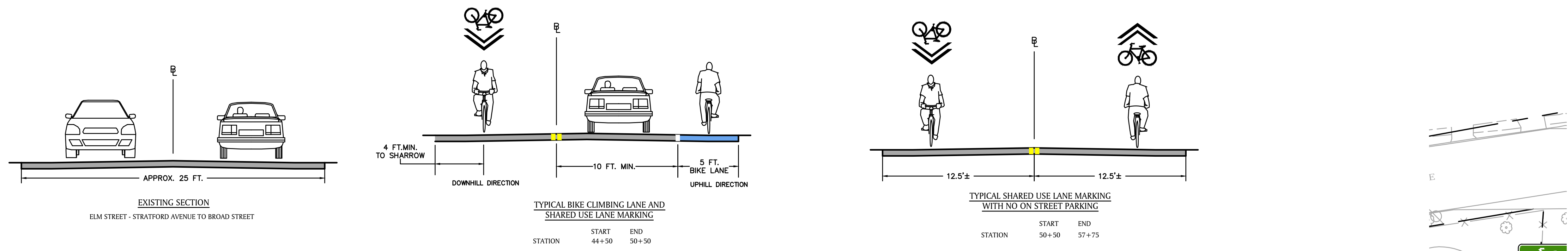
- LEGEND
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - EXISTING PAVEMENT
 - PROPOSED BASELINE
 - PROPOSED WHITE STRIPING
 - PROPOSED SHARED USE LANE MARKING
 - PROPOSED BIKE LANE MARKING
 - PROPOSED SIGN
 - ORIGINAL HISTORIC DISTRICT
 - EXPANDED HISTORIC DISTRICT



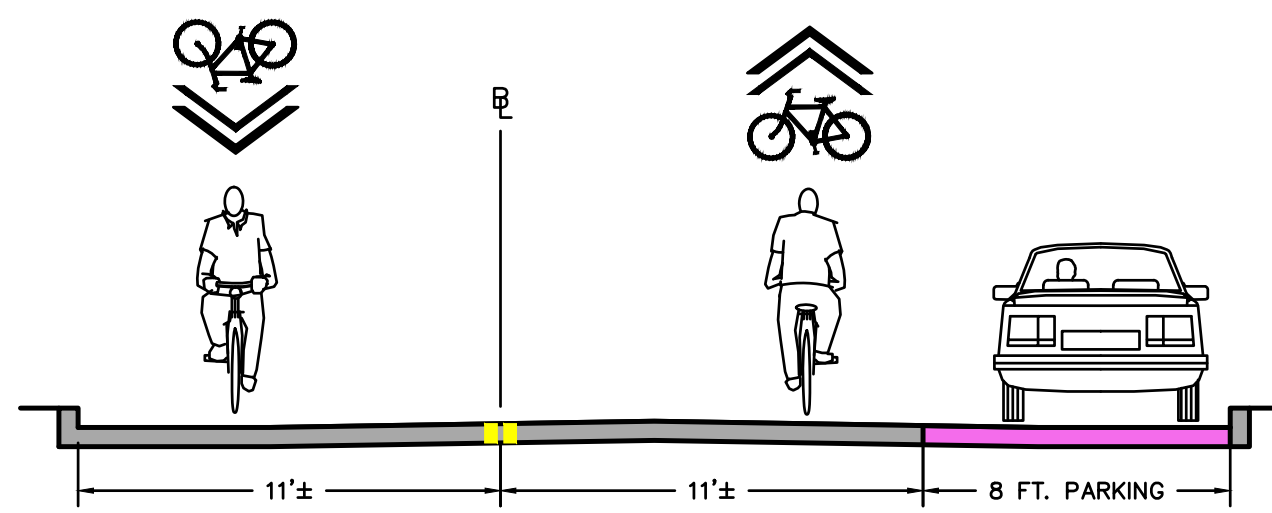
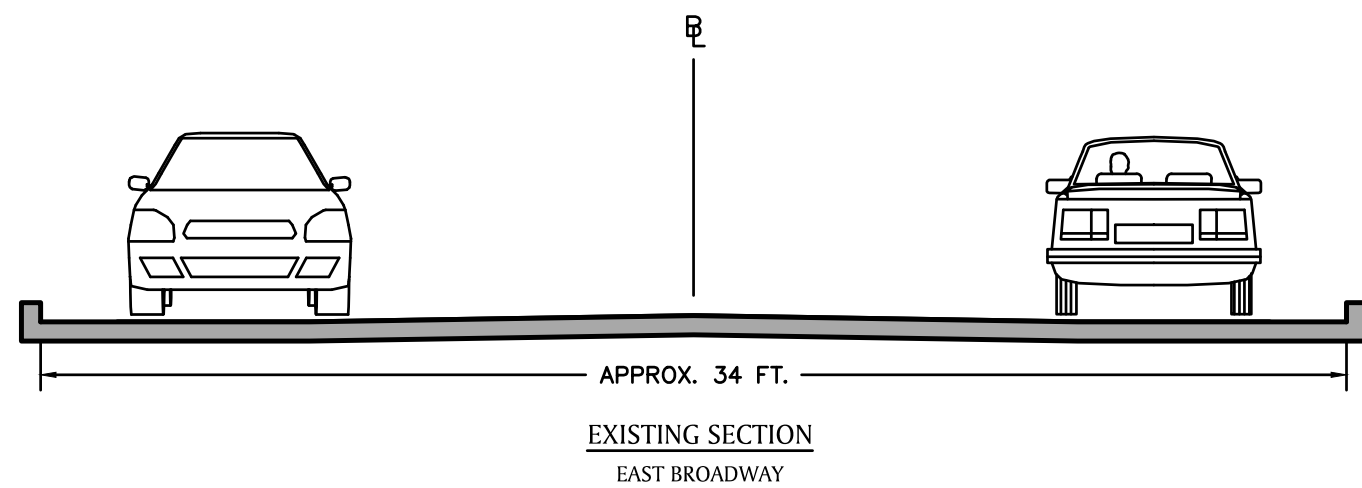
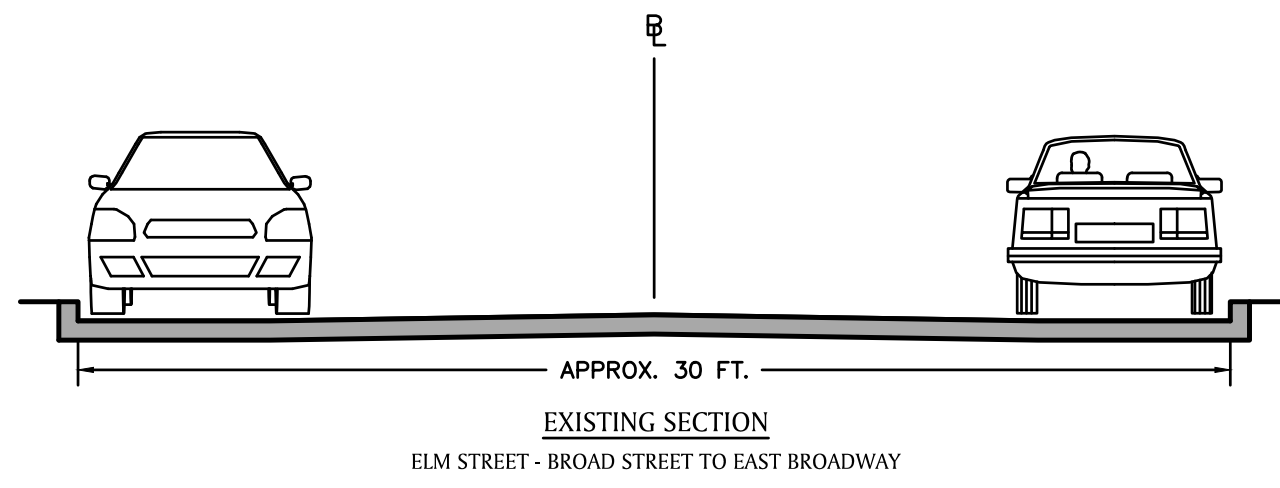
SCALE: 1"=1'



- LEGEND
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - EXISTING PAVEMENT
 - PROPOSED BASELINE
 - PROPOSED WHITE STRIPING
 - PROPOSED SHARED USE LANE MARKING
 - PROPOSED BIKE LANE MARKING
 - PROPOSED SIGN
 - ORIGINAL HISTORIC DISTRICT
 - EXPANDED HISTORIC DISTRICT

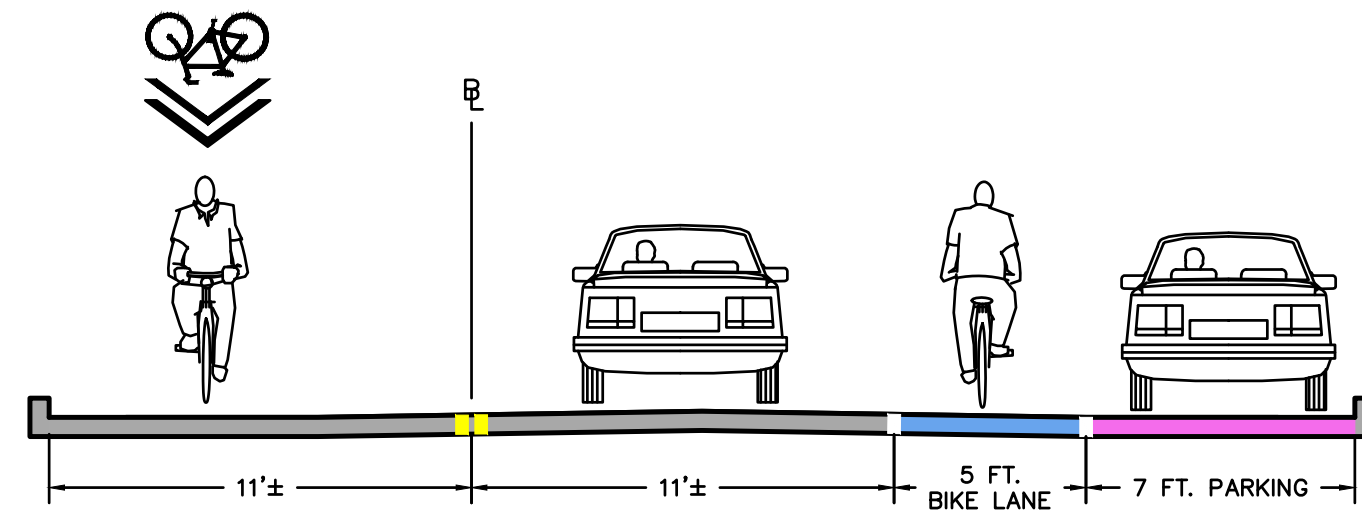


- LEGEND**
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - EXISTING PAVEMENT
 - PROPOSED BASELINE
 - PROPOSED WHITE STRIPING
 - PROPOSED SHARED USE LANE MARKING
 - PROPOSED BIKE LANE MARKING
 - PROPOSED SIGN
 - ORIGINAL HISTORIC DISTRICT
 - EXPANDED HISTORIC DISTRICT



TYPICAL SHARED USE LANE WITH
ON-STREET PARKING ONE SIDE

STATION	START	END
57+75	57+75	66+75

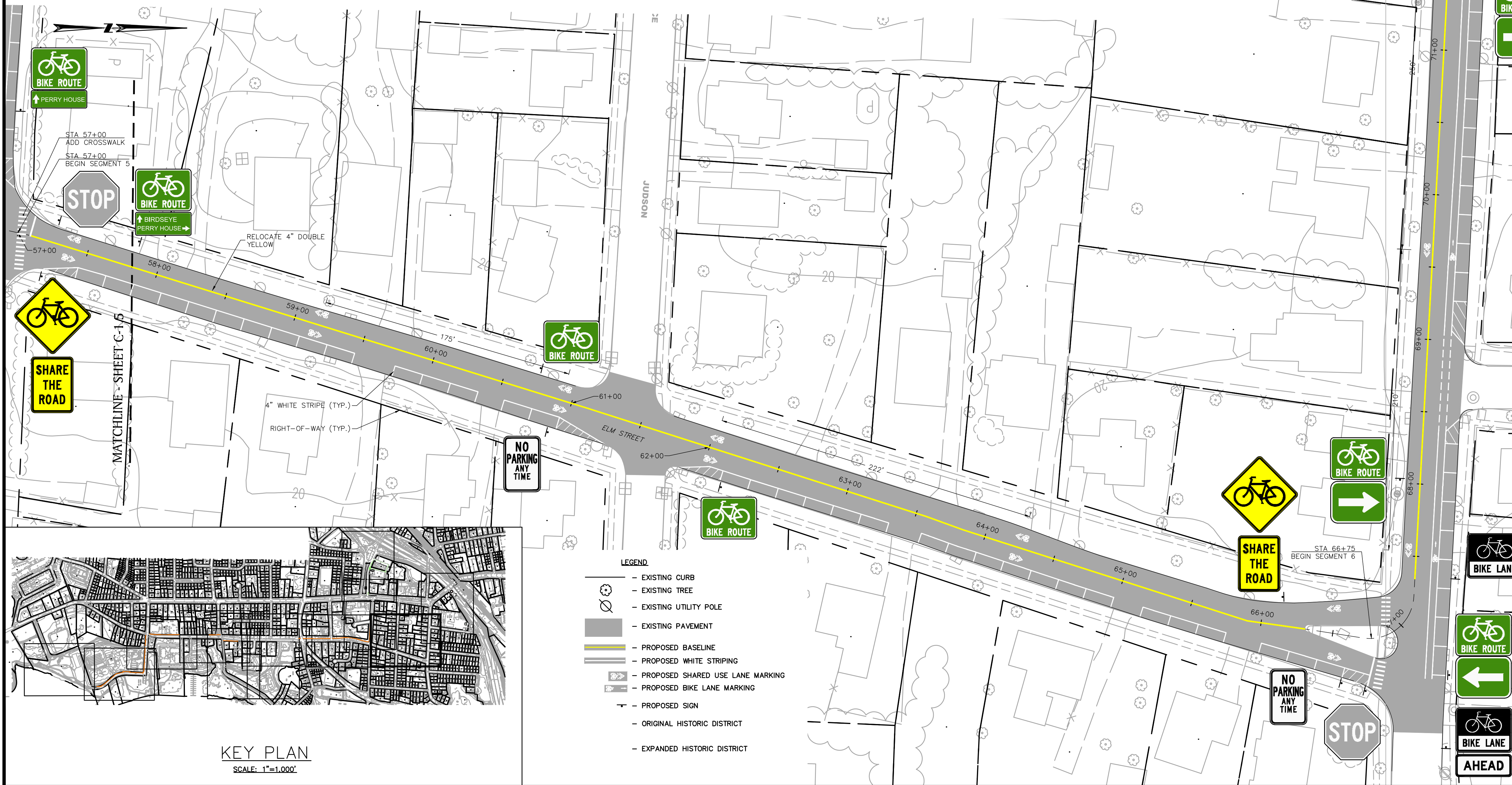


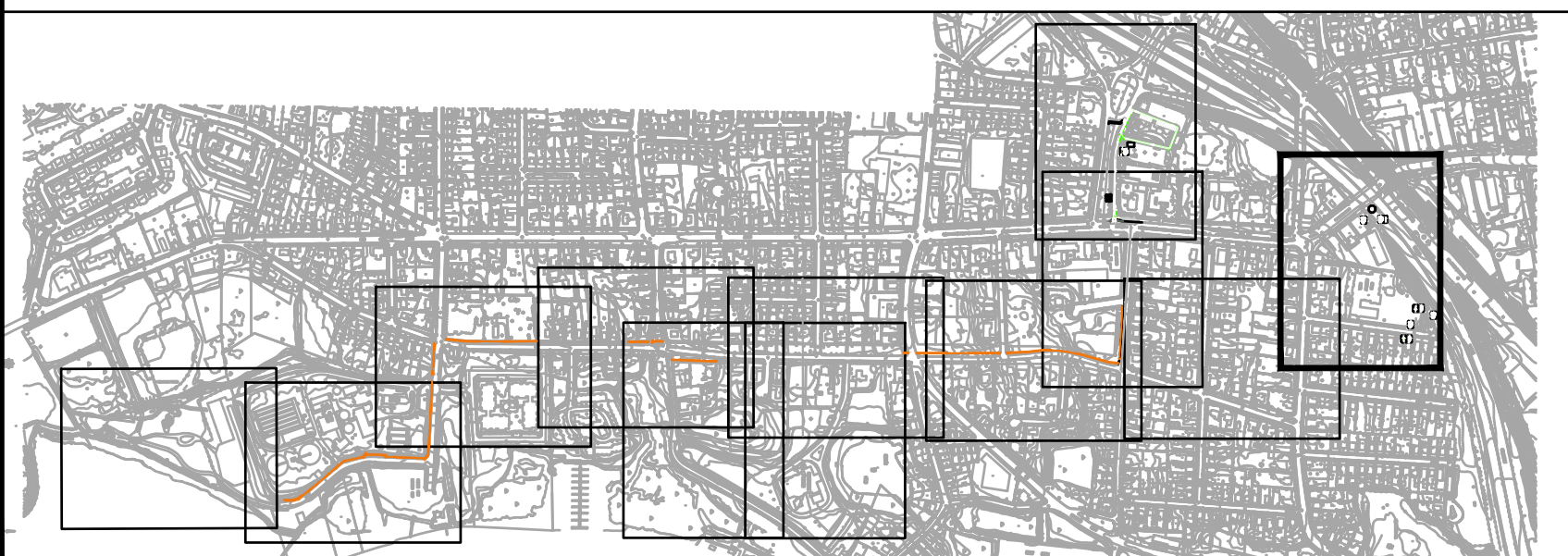
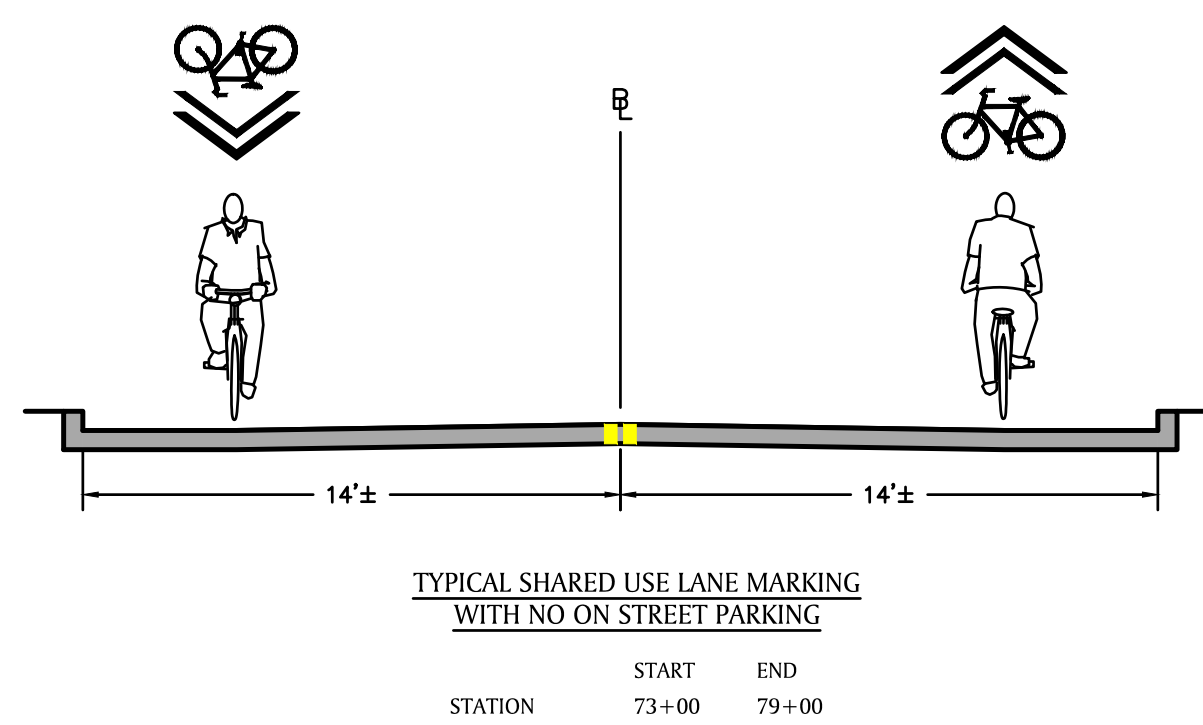
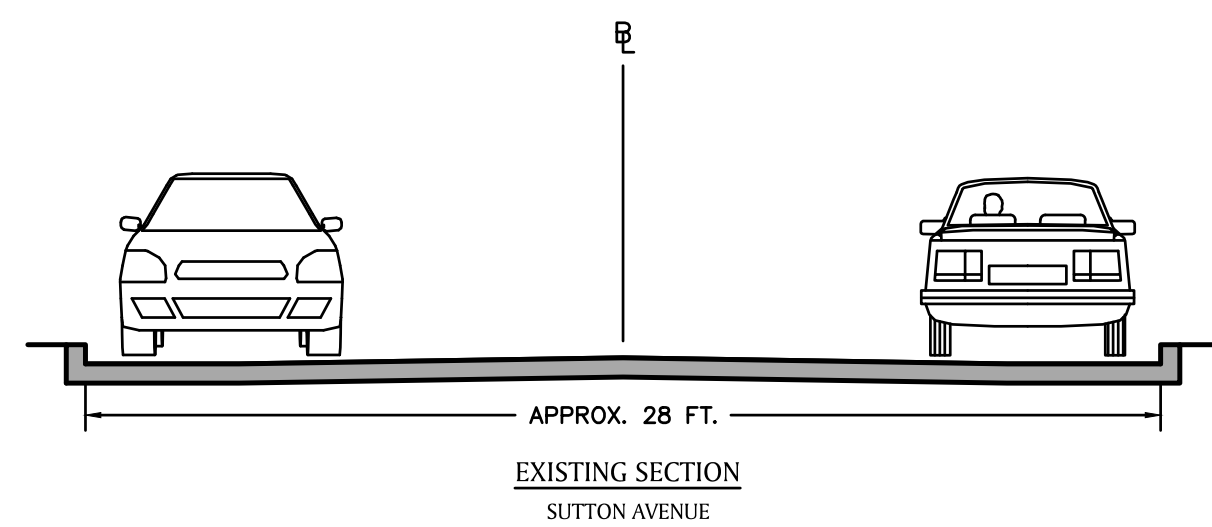
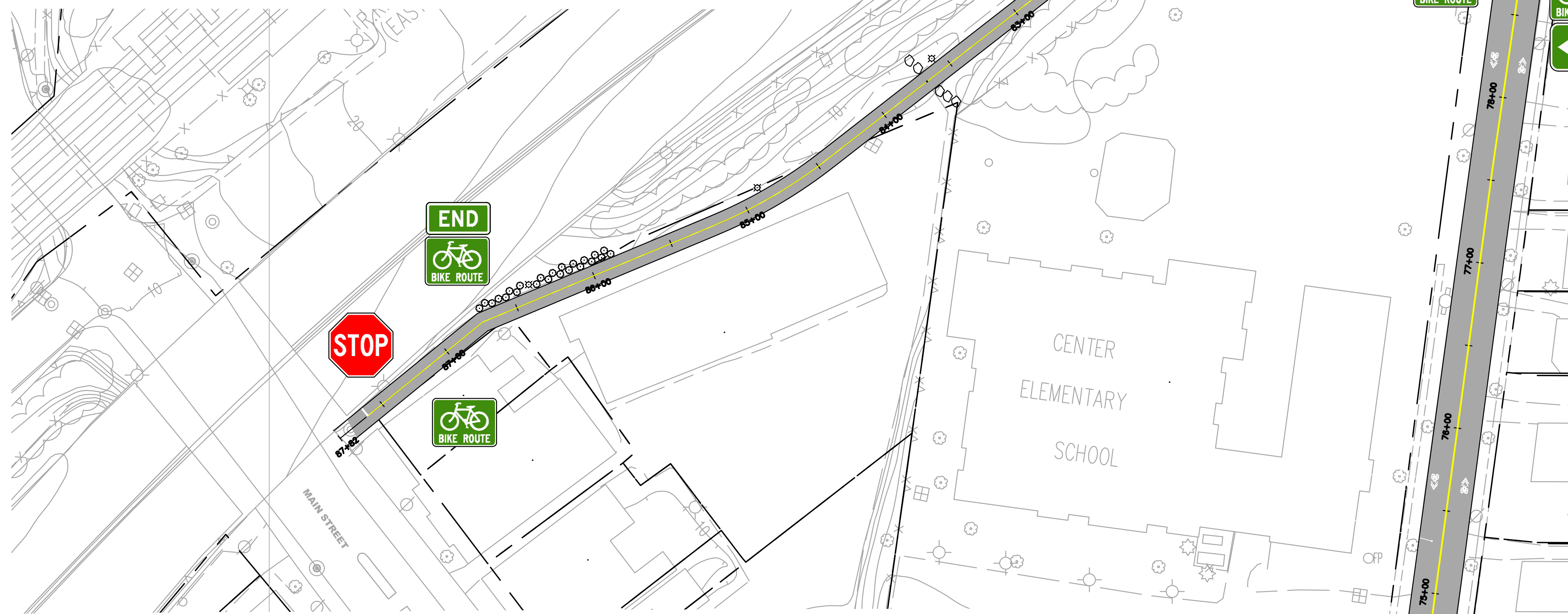
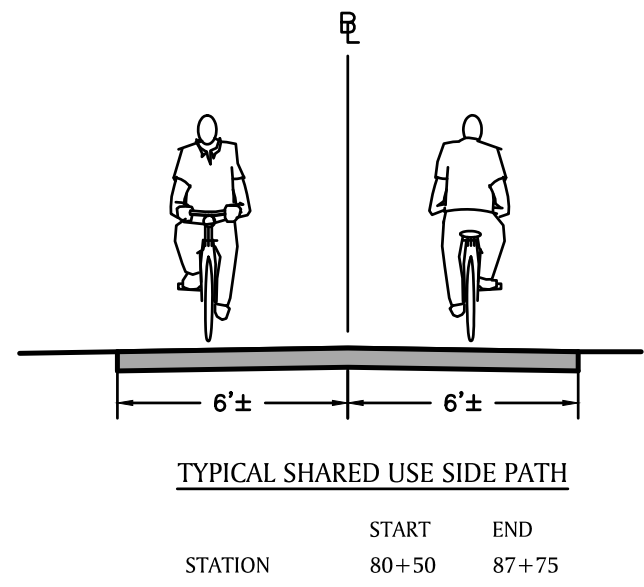
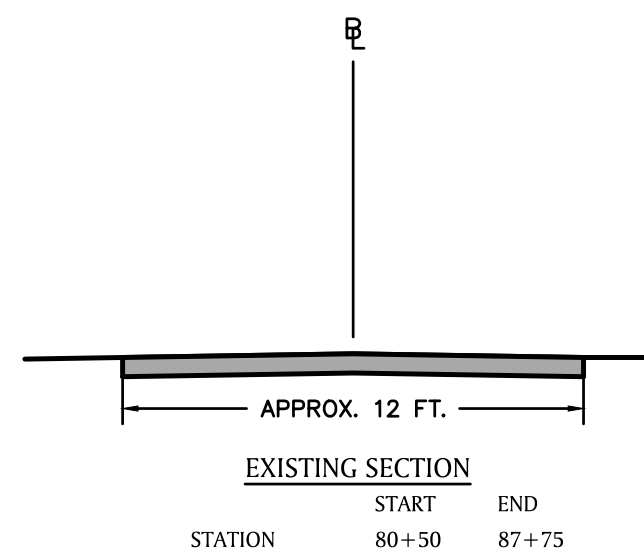
TYPICAL ONE-WAY BIKE LANE WITH
ON-STREET PARKING ONE SIDE

STATION	START	END
66+75	66+75	72+50



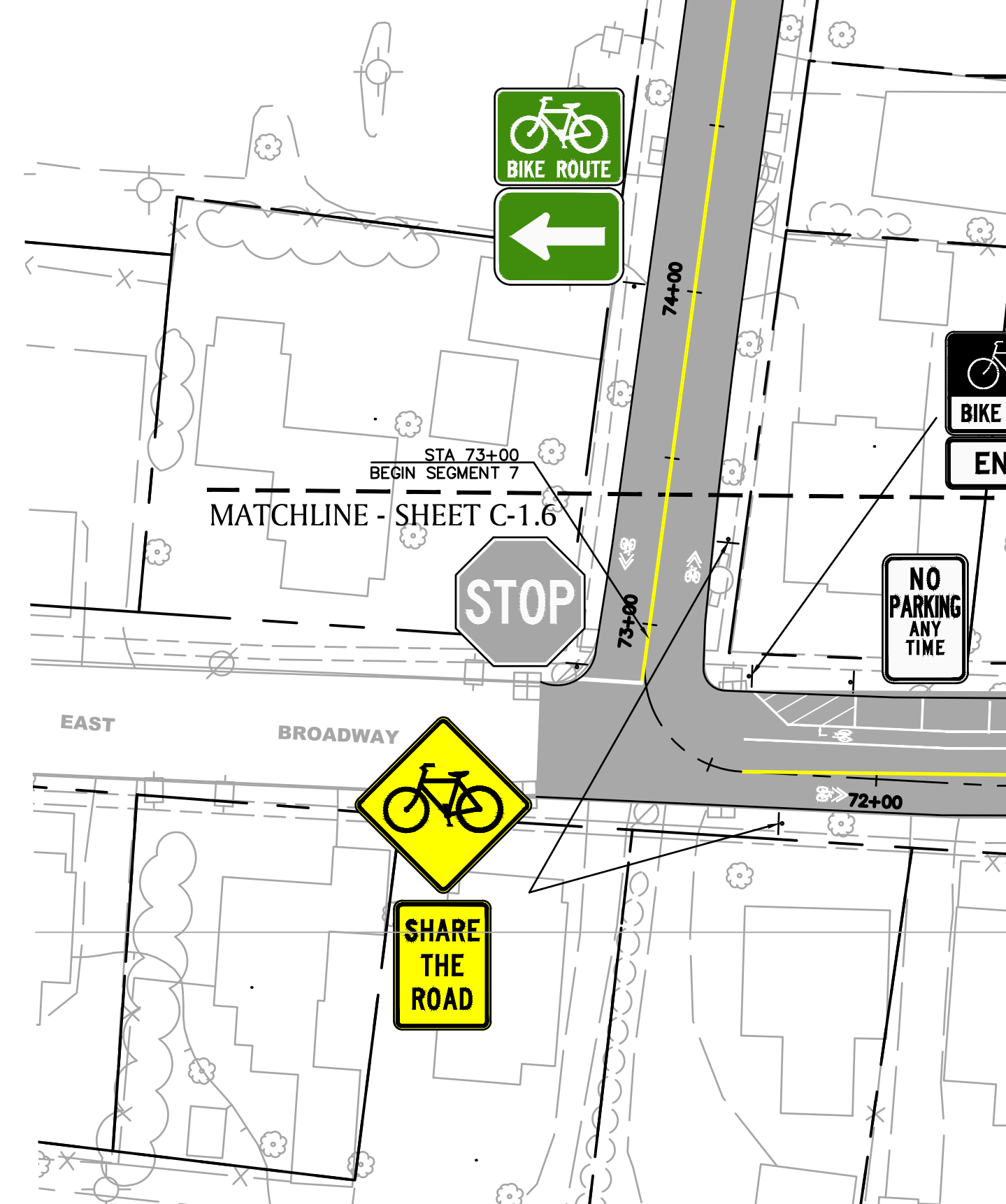
SHARE THE ROAD

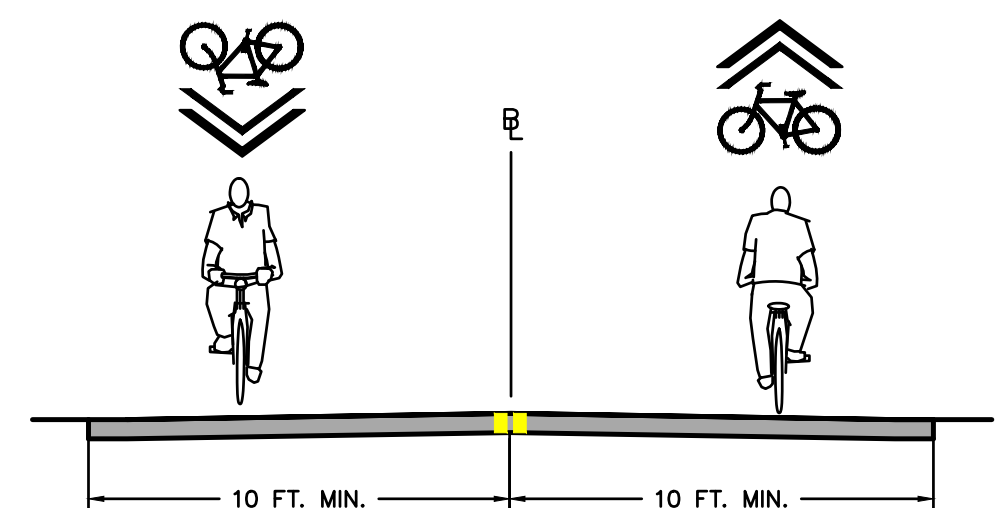
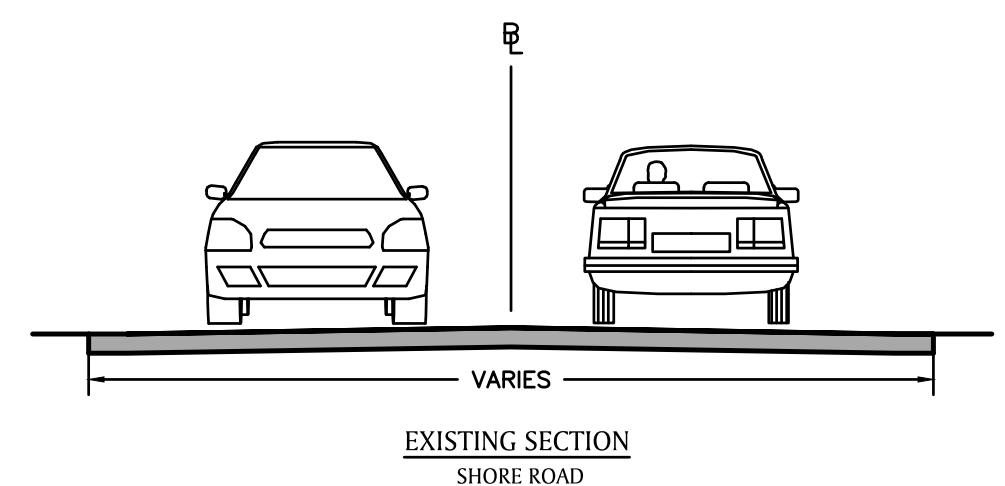




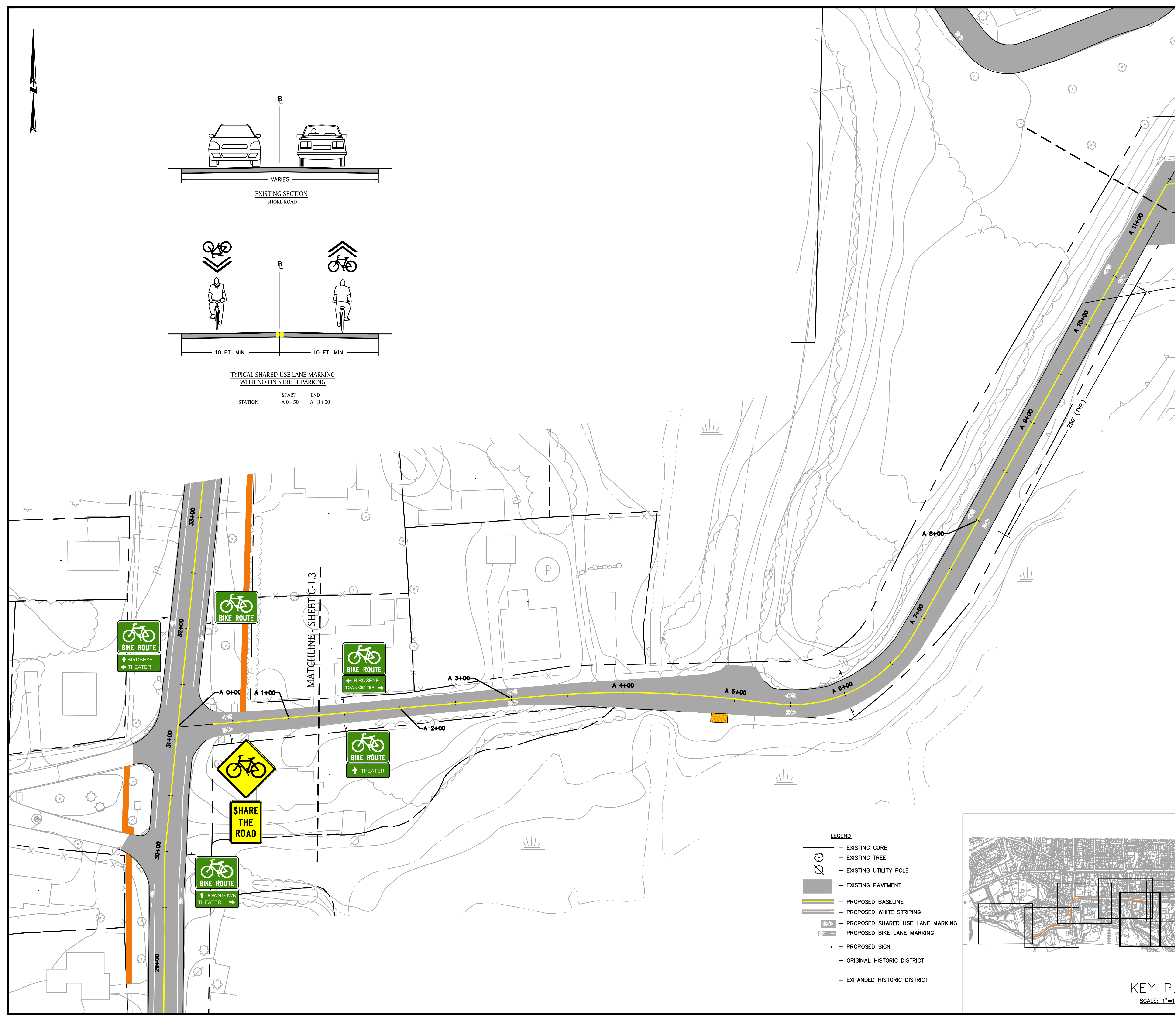
KEY PLAN
SCALE: 1"=1,000'

- LEGEND
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - EXISTING PAVEMENT
 - PROPOSED BASELINE
 - PROPOSED WHITE STRIPING
 - PROPOSED SHARED USE LANE MARKING
 - PROPOSED BIKE LANE MARKING
 - PROPOSED SIGN
 - ORIGINAL HISTORIC DISTRICT
 - EXPANDED HISTORIC DISTRICT

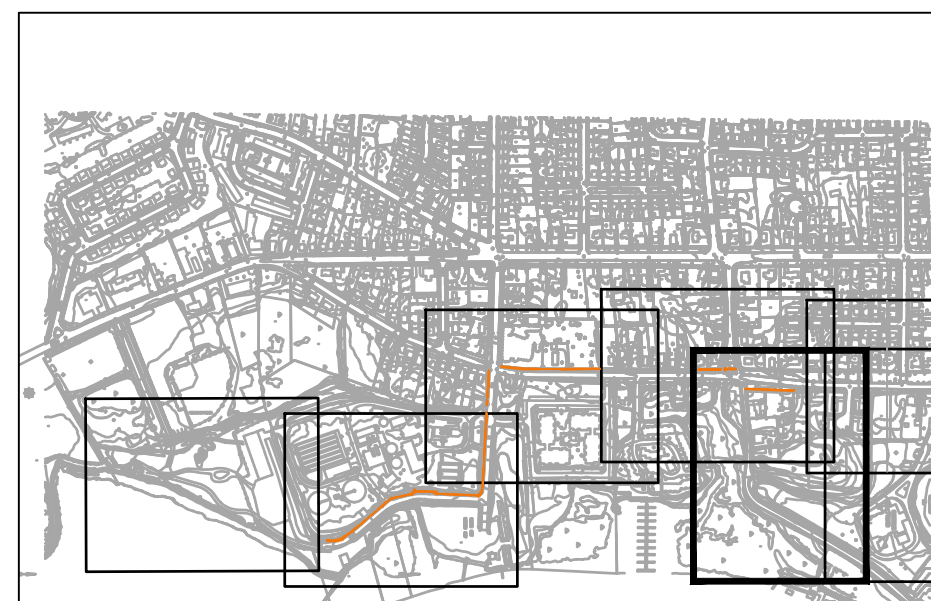




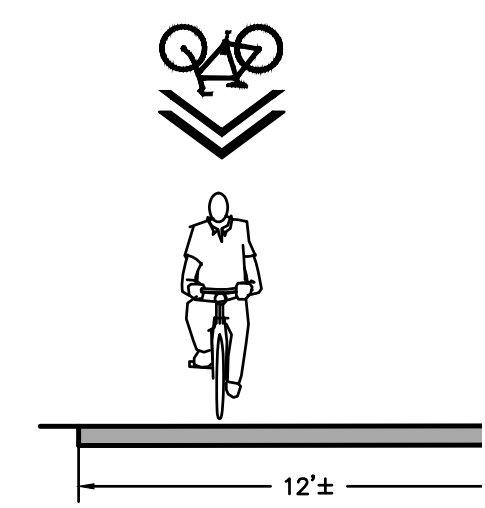
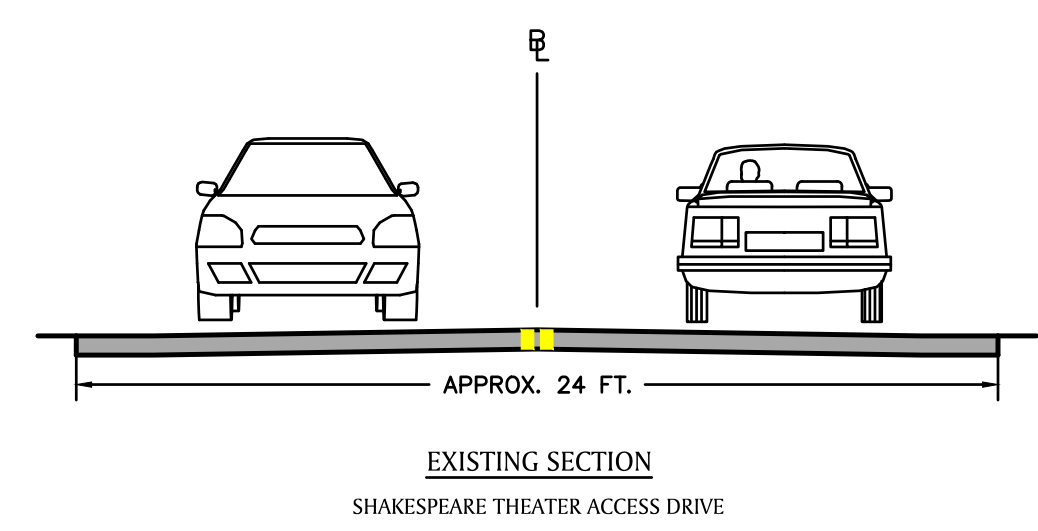
STATION	START	END
	A 0+50	A 13+50



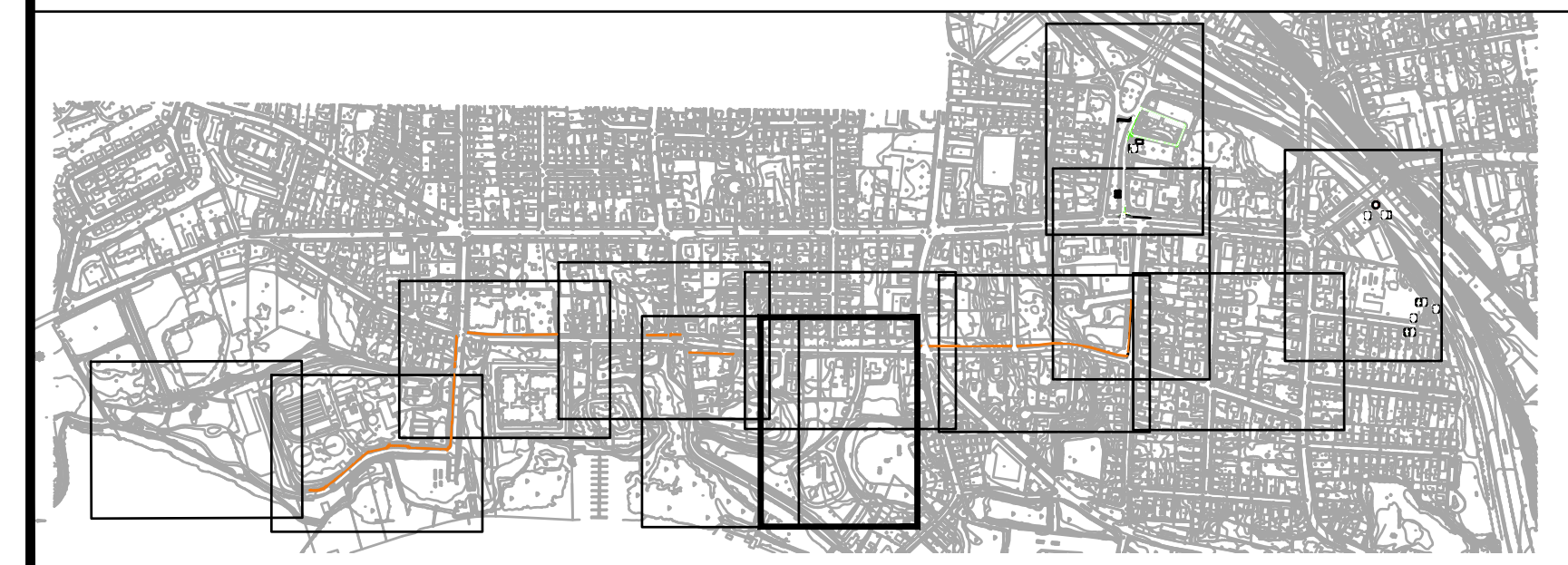
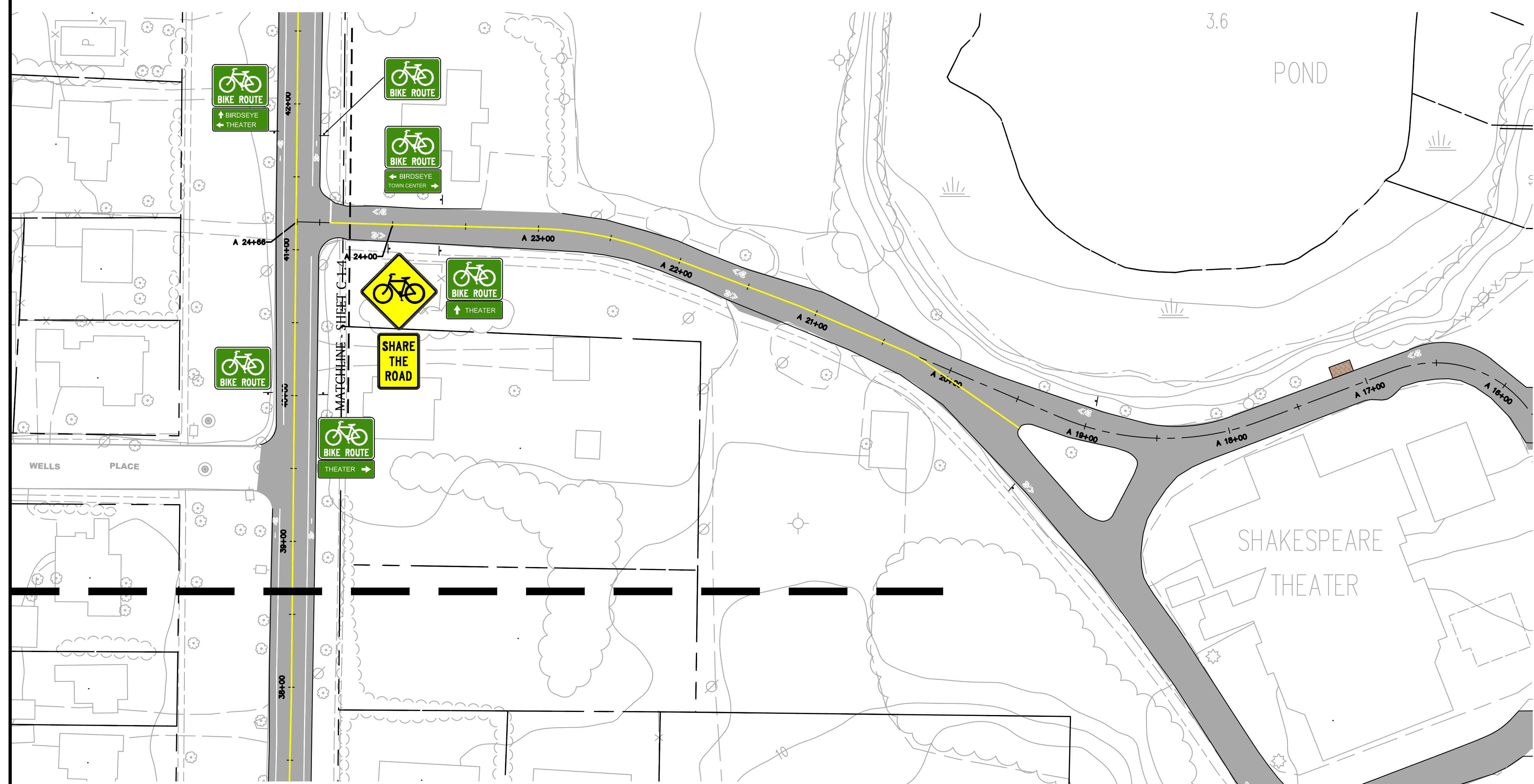
- LEGEND
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - EXISTING PAVEMENT
 - PROPOSED BASELINE
 - PROPOSED WHITE STRIPING
 - PROPOSED SHARED USE LANE MARKING
 - PROPOSED BIKE LANE MARKING
 - PROPOSED SIGN
 - ORIGINAL HISTORIC DISTRICT
 - EXPANDED HISTORIC DISTRICT



KEY PLAN
SCALE: 1"=1'



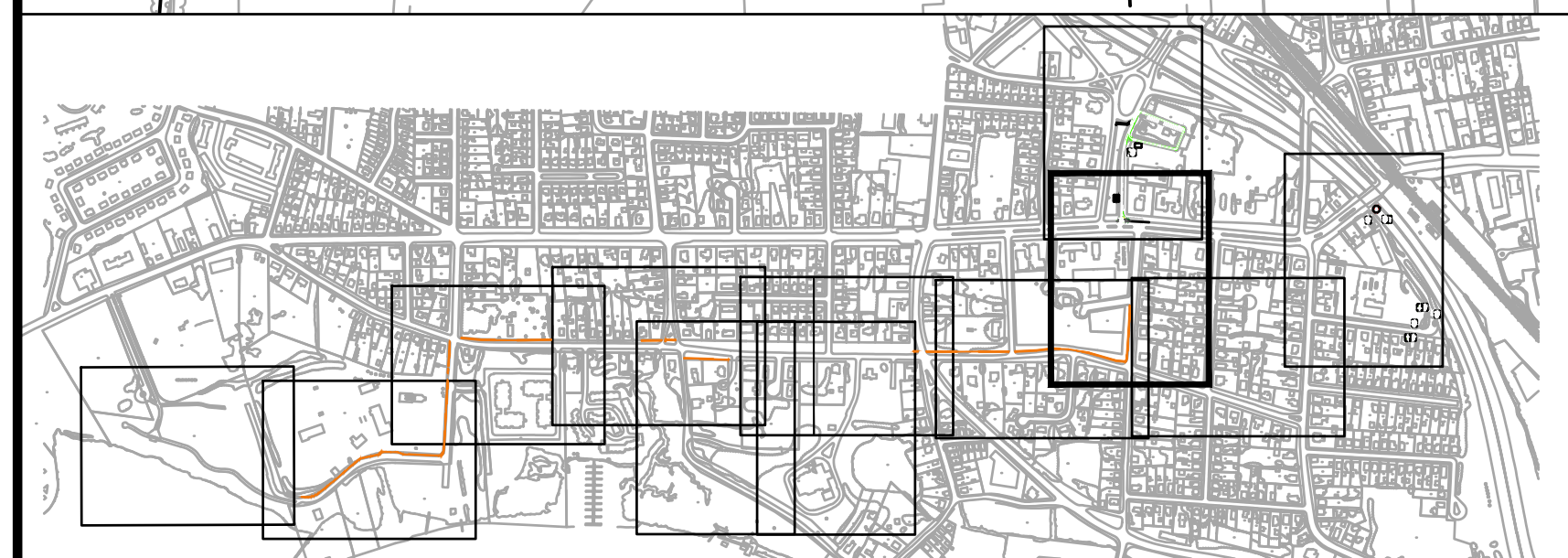
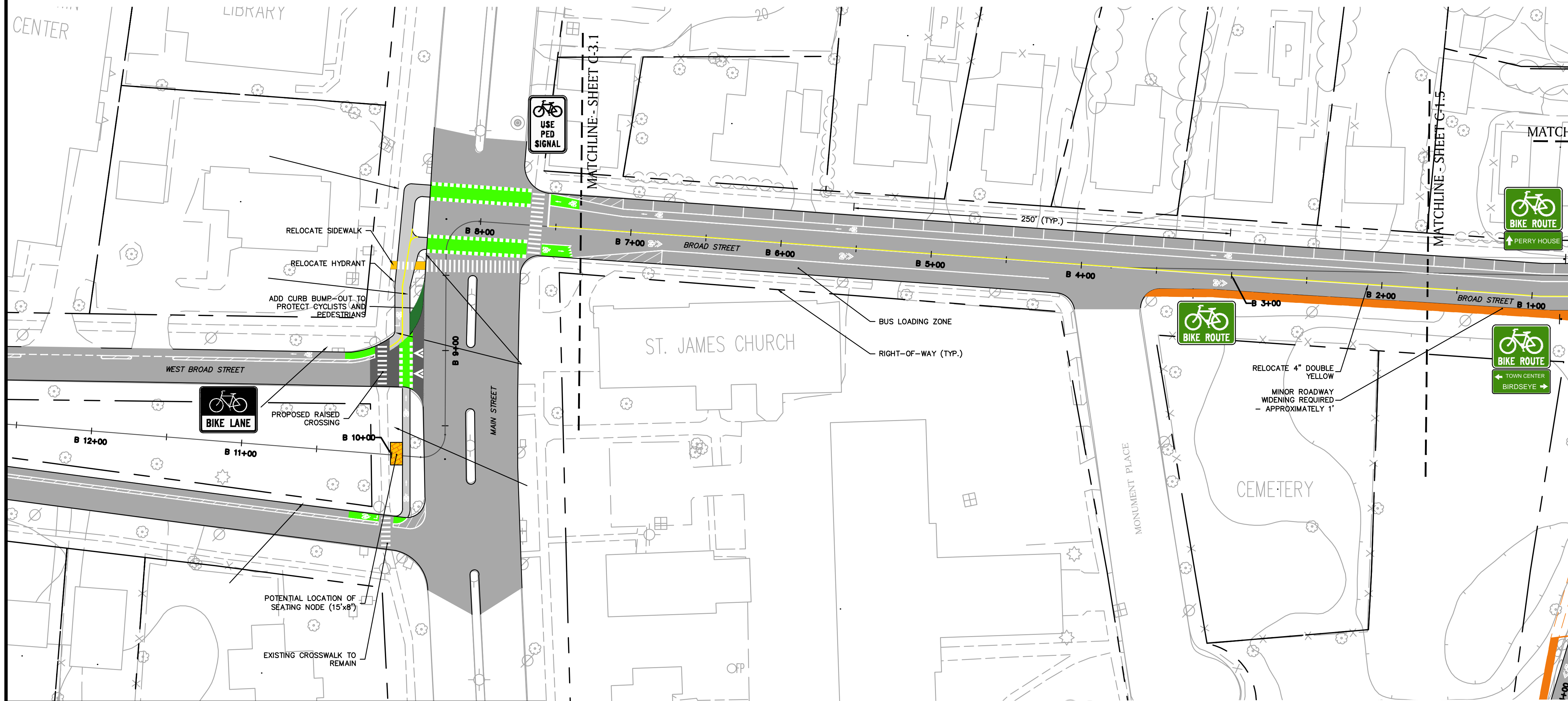
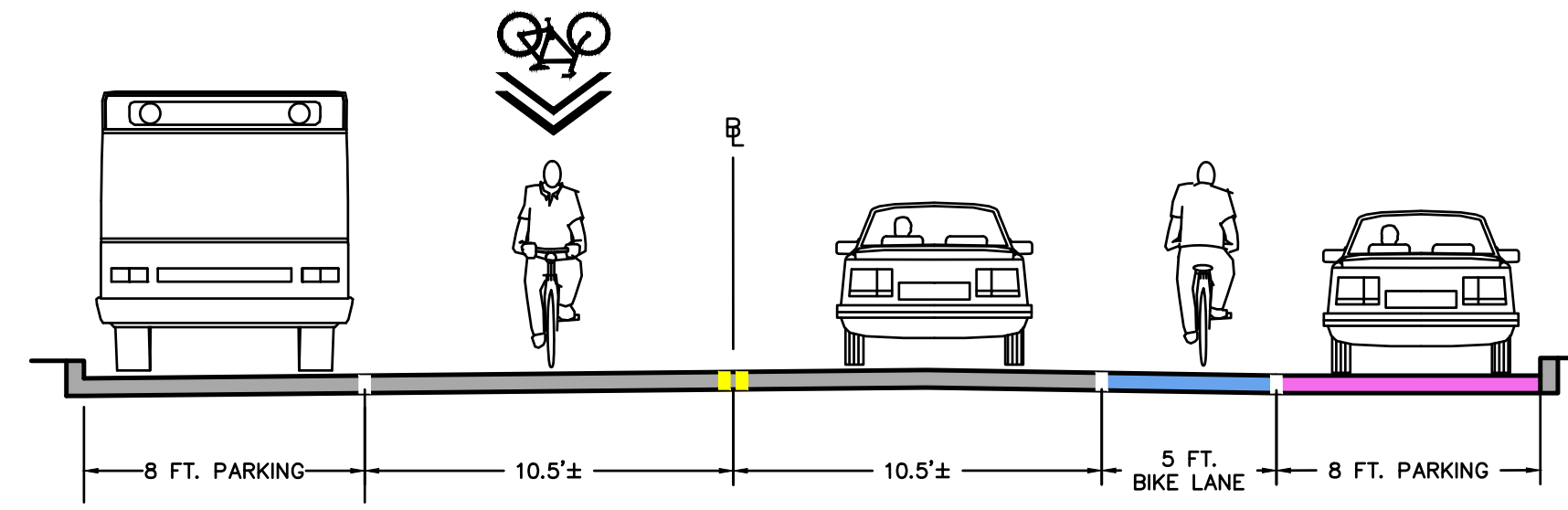
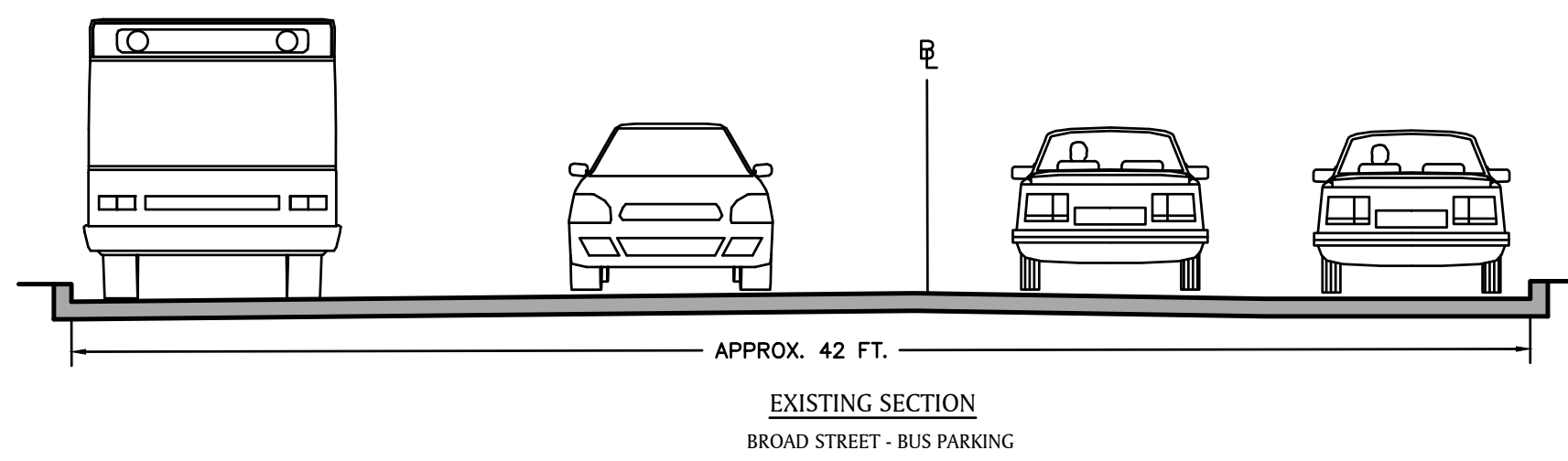
TYPICAL SHARED LANE WITH NO SHARED SPACE
STATION



KEY PLAN
SCALE: 1"=1,000'

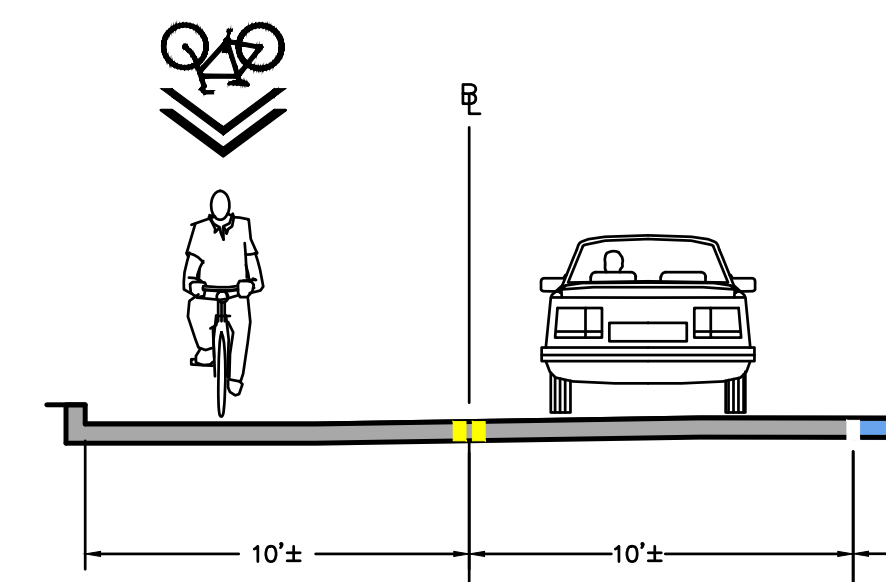
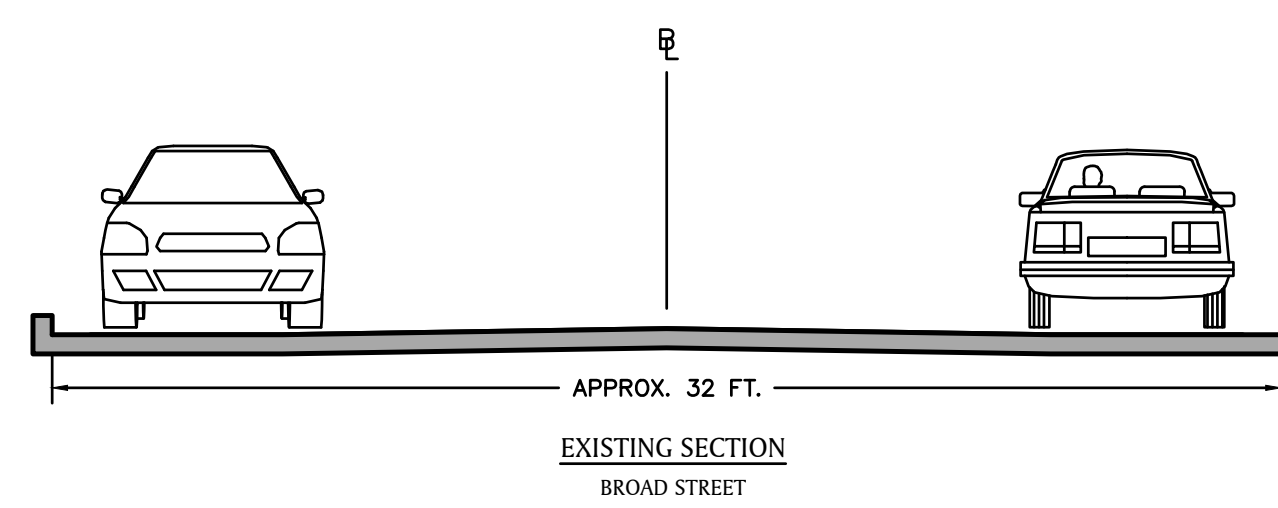
- LEGEND
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - EXISTING PAVEMENT
 - PROPOSED BASELINE
 - PROPOSED WHITE STRIPING
 - PROPOSED SHARED USE LANE MARKING
 - PROPOSED BIKE LANE MARKING
 - PROPOSED SIGN
 - ORIGINAL HISTORIC DISTRICT
 - EXPANDED HISTORIC DISTRICT

MATCHLINE - SHEET C-20



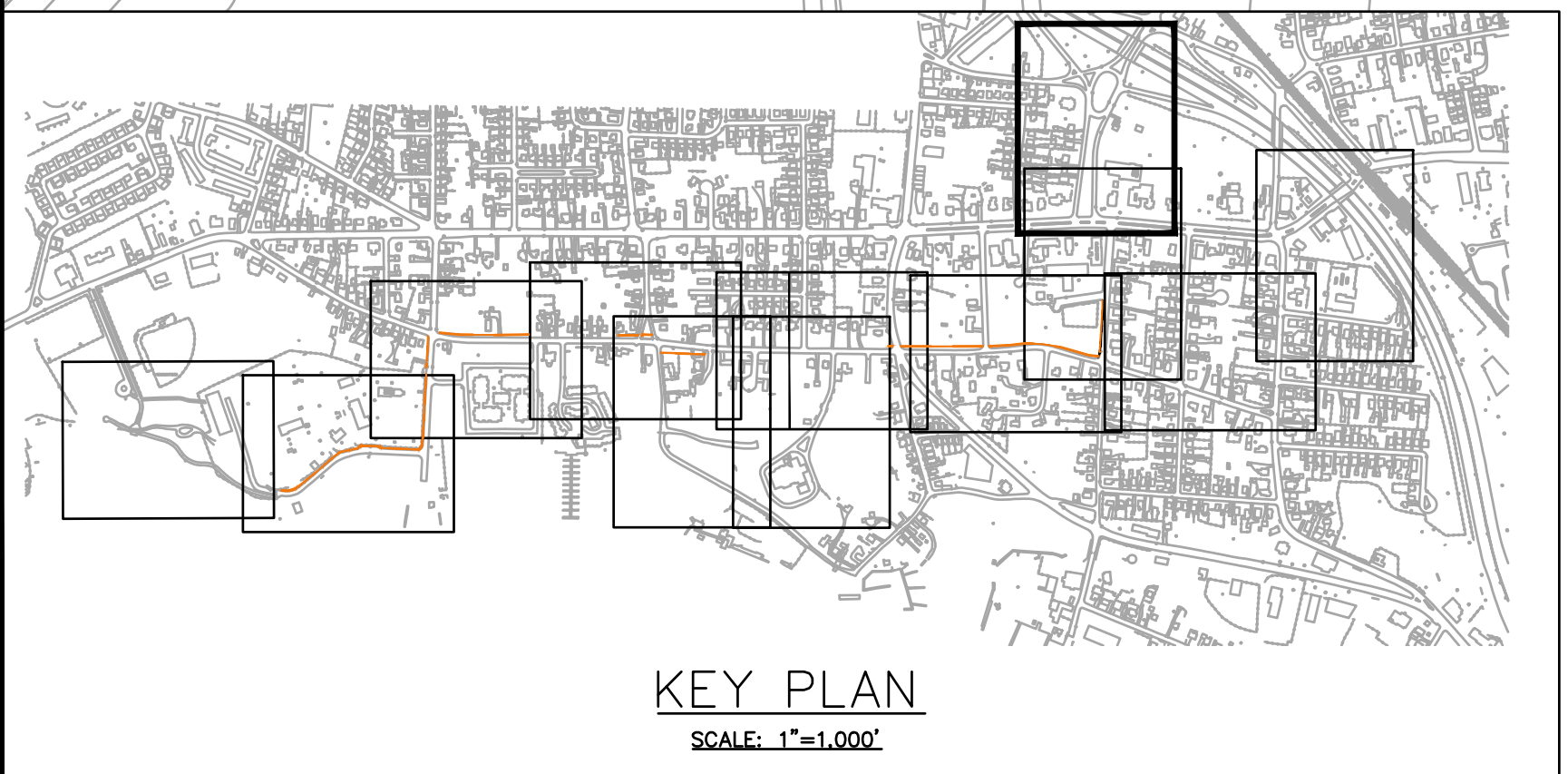
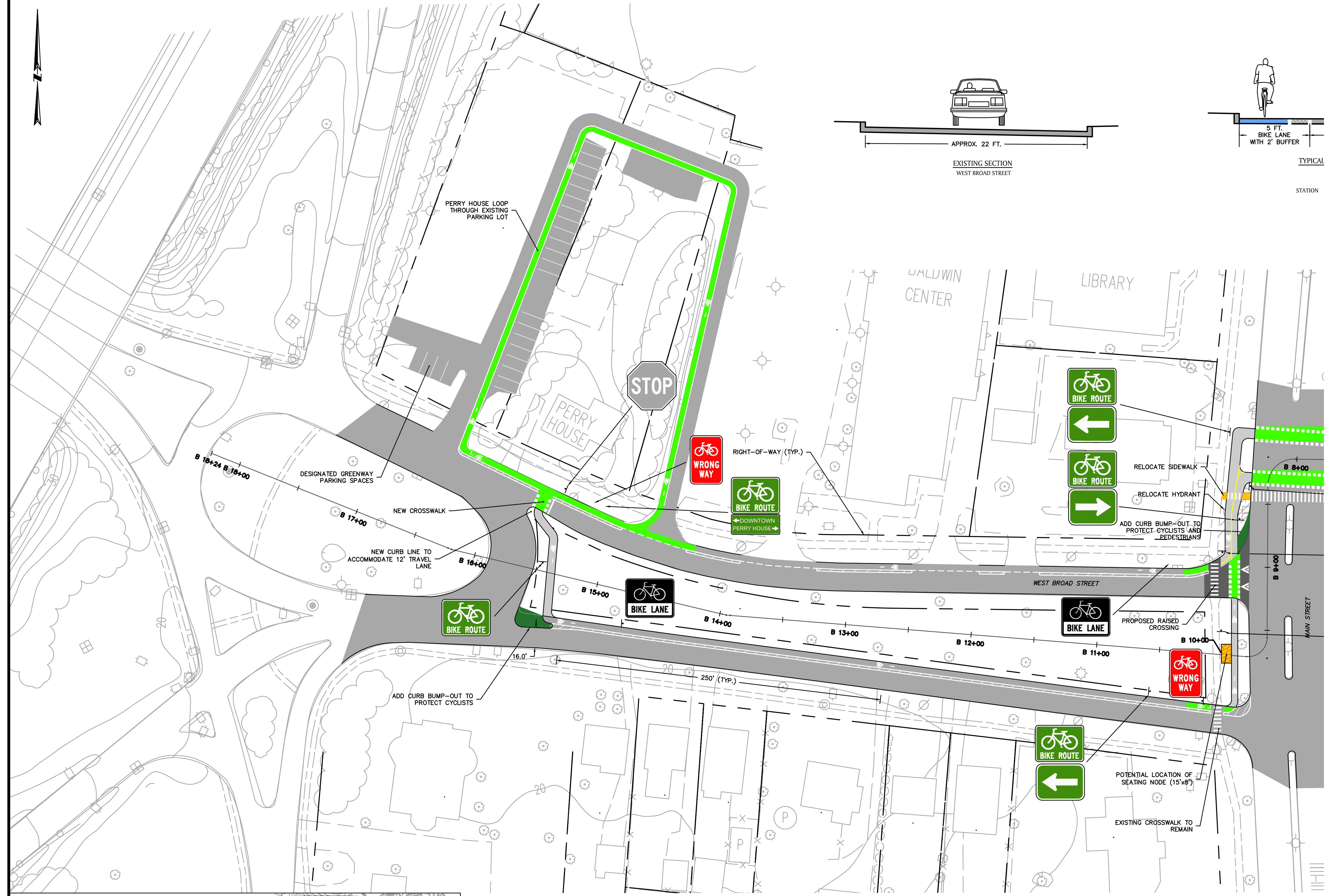
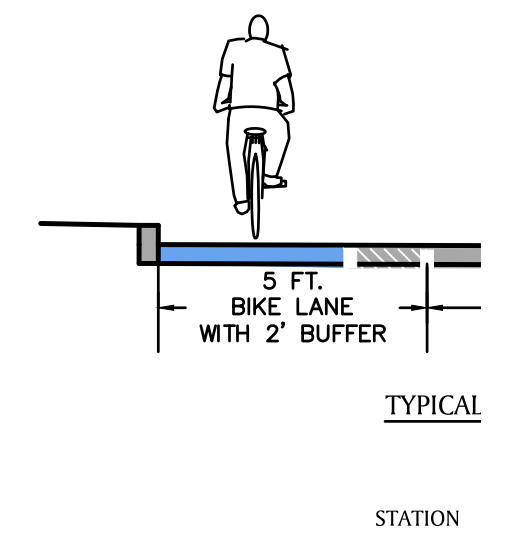
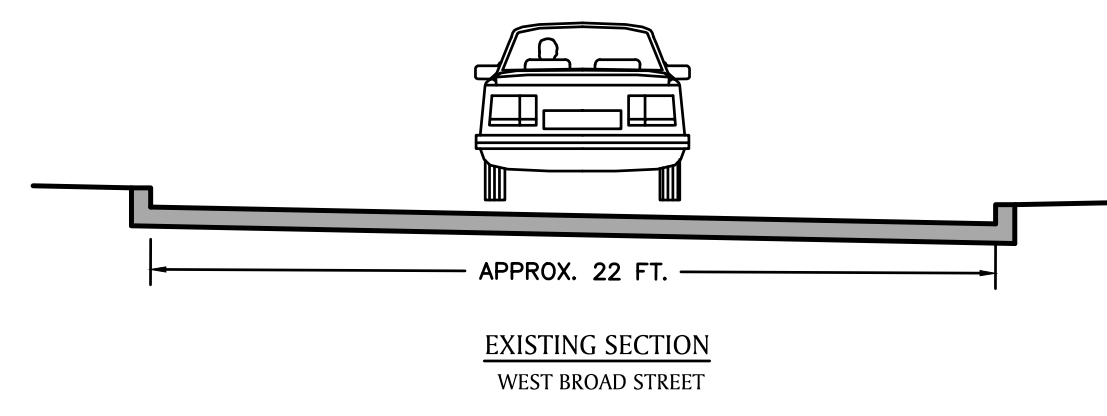
KEY PLAN
SCALE: 1"=1,000'

- LEGEND
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - EXISTING PAVEMENT
 - PROPOSED BASELINE
 - PROPOSED WHITE STRIPING
 - PROPOSED SHARED USE LANE MARKING
 - PROPOSED BIKE LANE MARKING
 - PROPOSED SIGN
 - ORIGINAL HISTORIC DISTRICT
 - EXPANDED HISTORIC DISTRICT

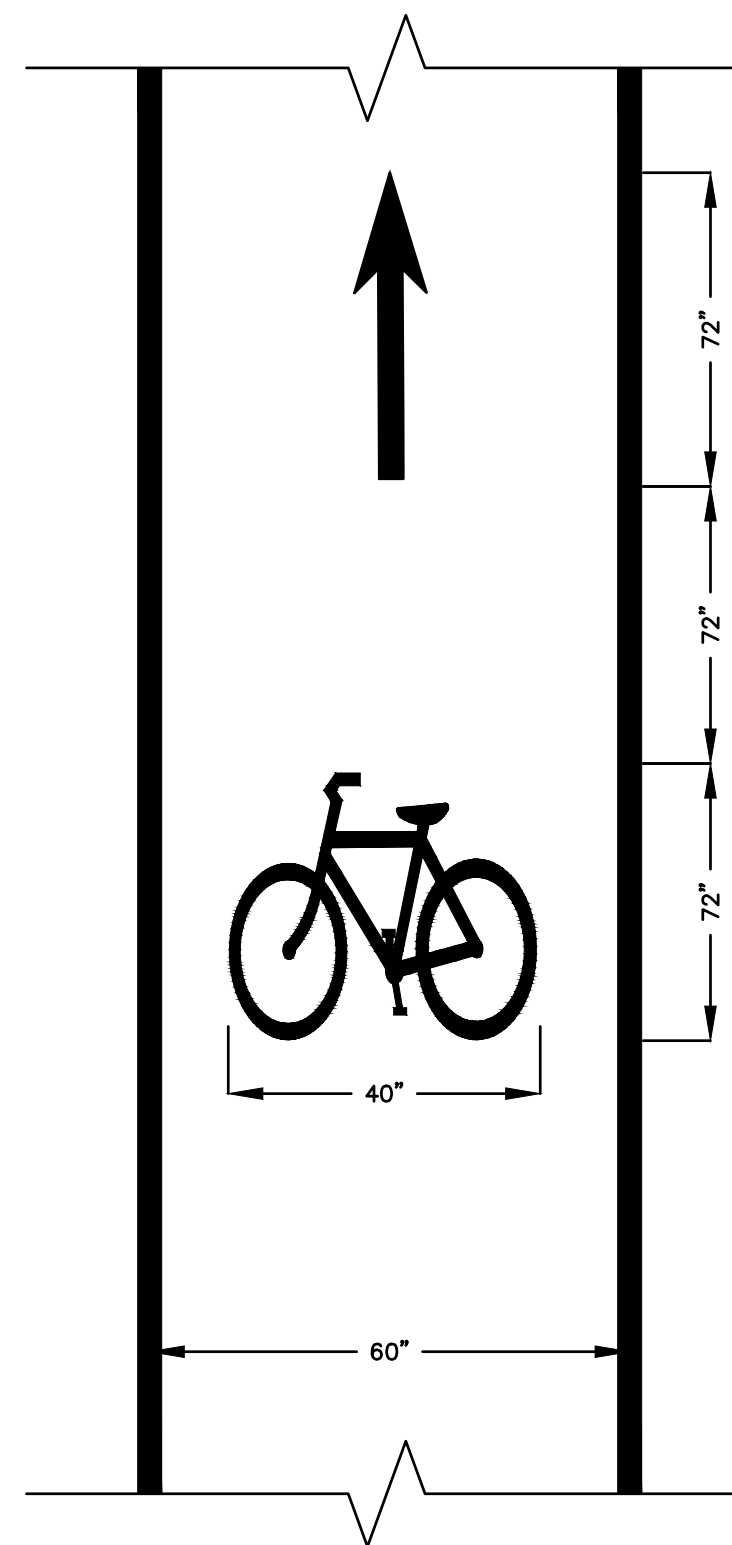


TYPICAL ONE-WAY BIKE LANE WITH
ON-STREET PARKING ONE SIDE

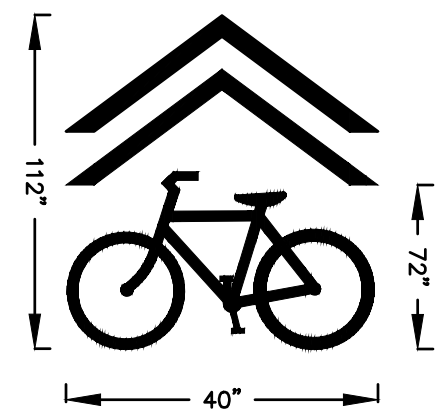
STATION	START	END
B 0+50	B 0+50	B 3+50



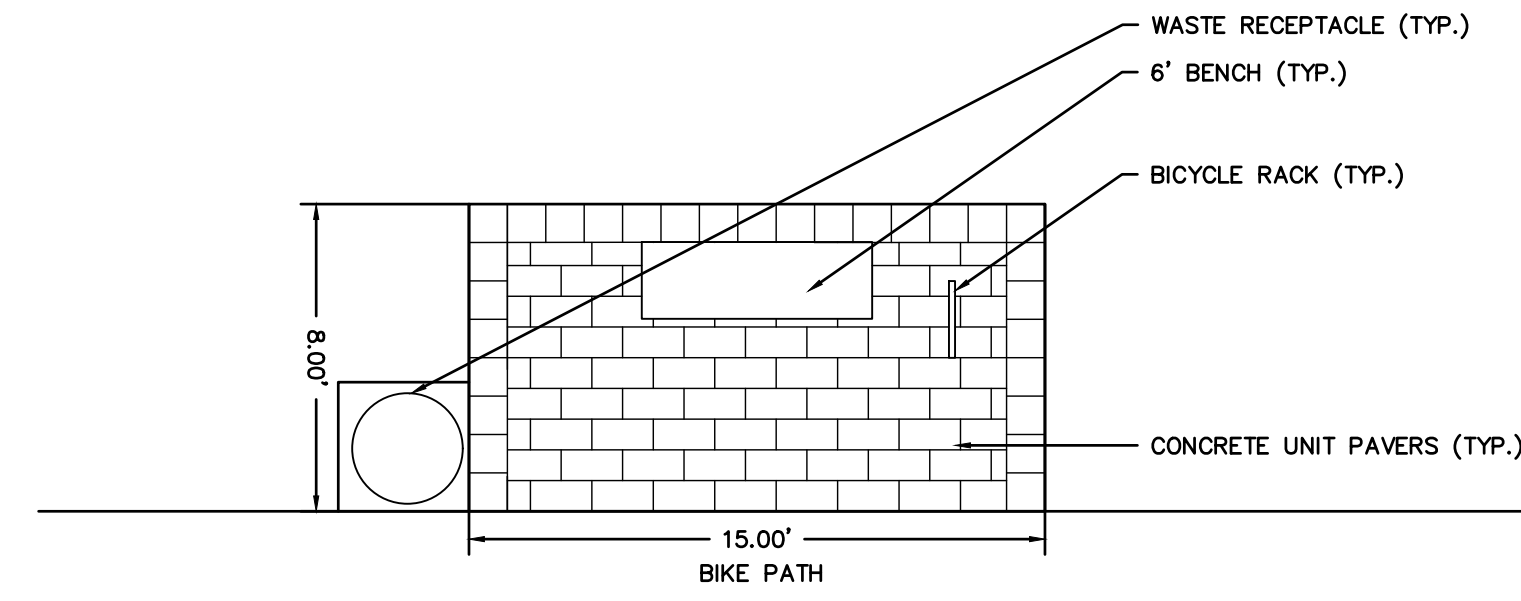
- LEGEND
- EXISTING CURB
 - EXISTING TREE
 - EXISTING UTILITY POLE
 - EXISTING PAVEMENT
 - PROPOSED BASELINE
 - PROPOSED WHITE STRIPING
 - PROPOSED SHARED USE LANE MARKING
 - PROPOSED BIKE LANE MARKING
 - PROPOSED SIGN
 - ORIGINAL HISTORIC DISTRICT
 - EXPANDED HISTORIC DISTRICT



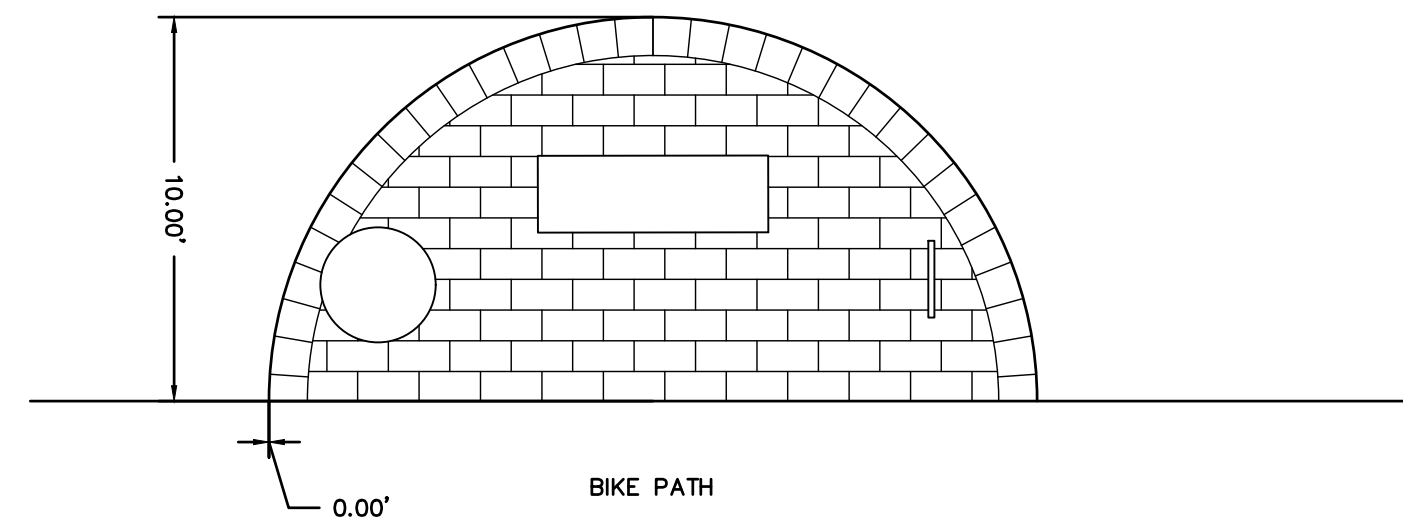
TYPICAL BIKE LANE MARKER



TYPICAL SHARED USE (SHARROW) LANE MARKER

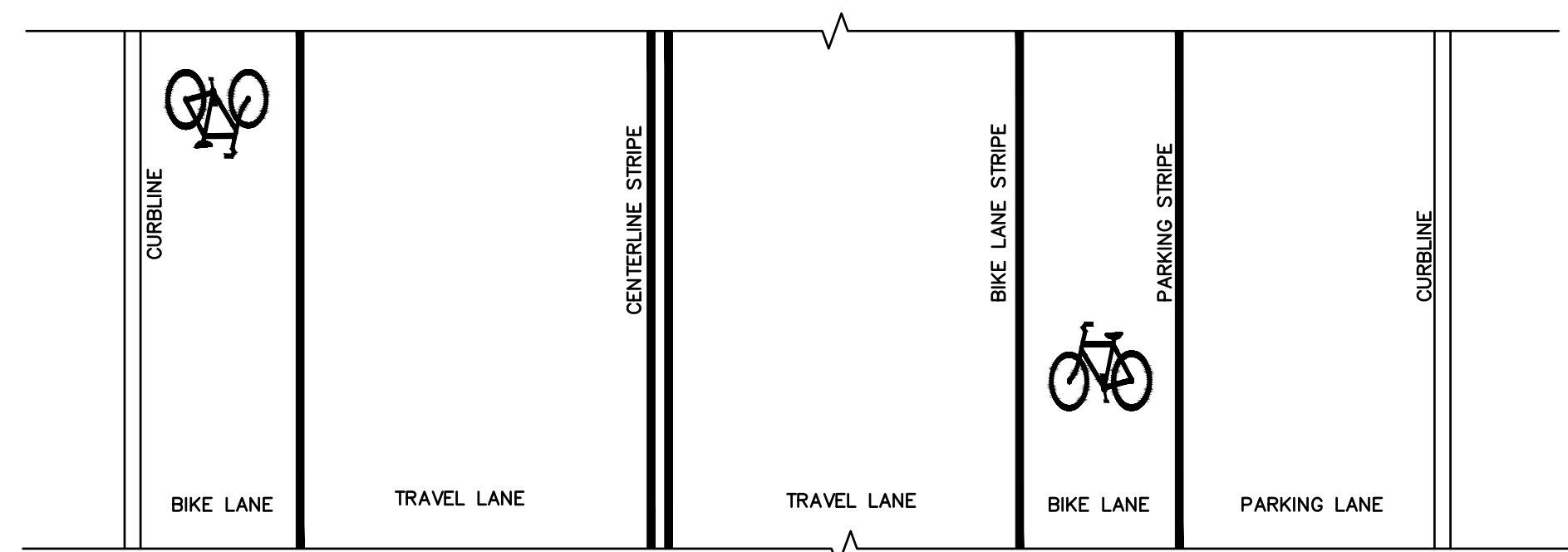


OPTION 1 SEATING NODE



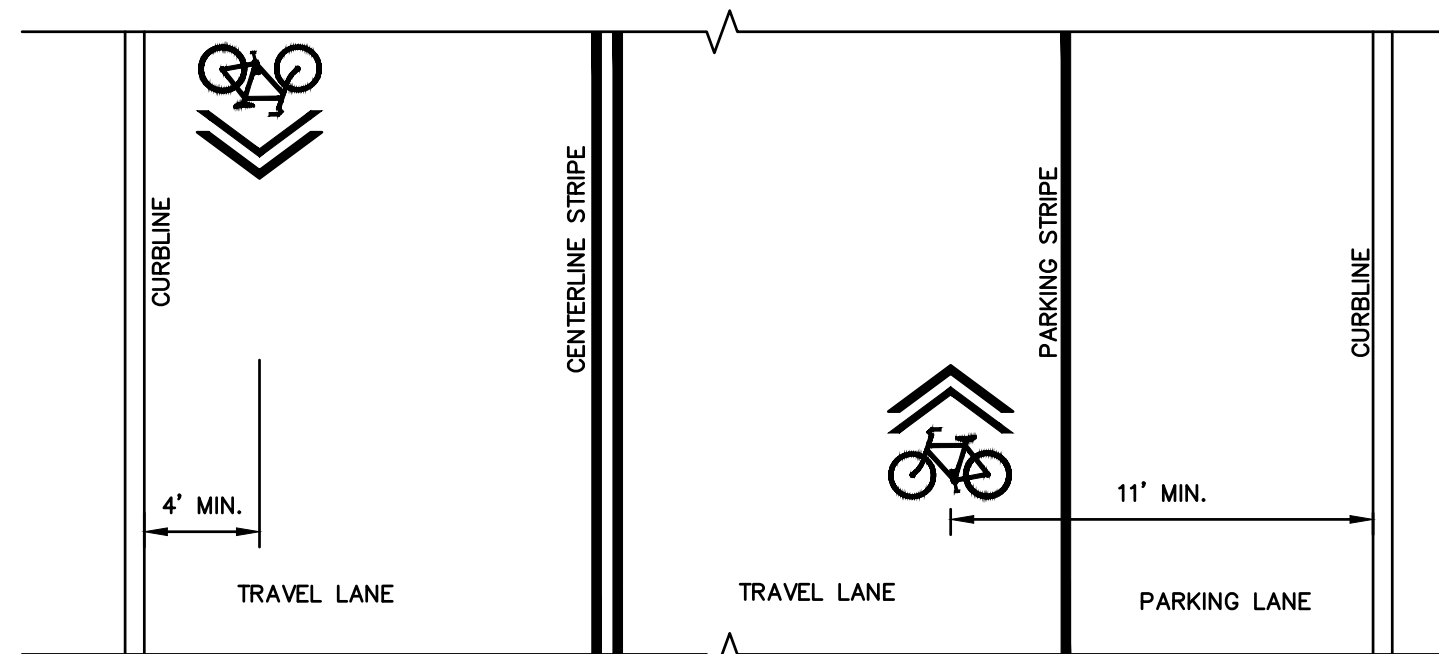
OPTION 2 SEATING NODE

TYPICAL SEATING NODE



MARKING LOCATION IN AREA WITHOUT PARKING

MARKING LOCATION IN AREA WITH ON-STREET PARALLEL PARKING



MARKING LOCATION IN AREA WITHOUT PARKING

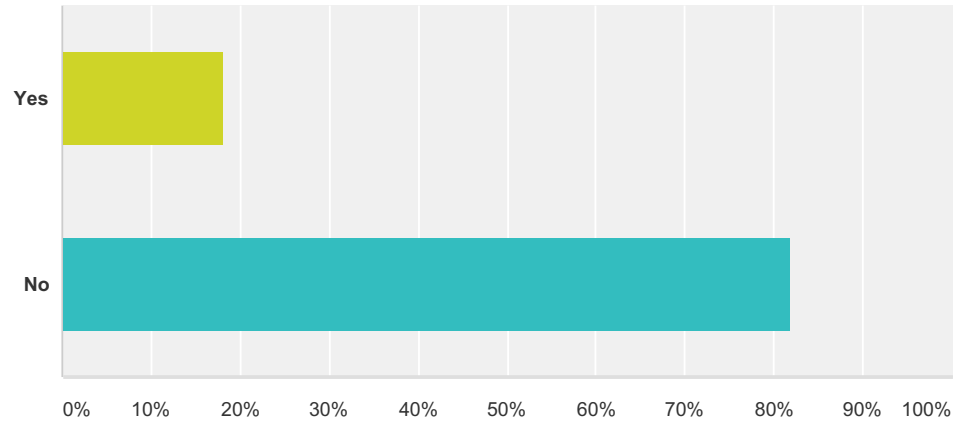
MARKING LOCATION IN AREA WITH ON-STREET PARALLEL PARKING

SIGN TABLE

MUTCD #	SIGN	MUTCD #	SIGN	MUTCD #
R1-1		D1-2b		R7-1
R3-17		R3-17a R3-17b		R5-1b
D11-1		W11-1		R5-3
M7-1R		W16-1		R9-5

Q1 I attended the Public Information Meeting on January 20, 2016?

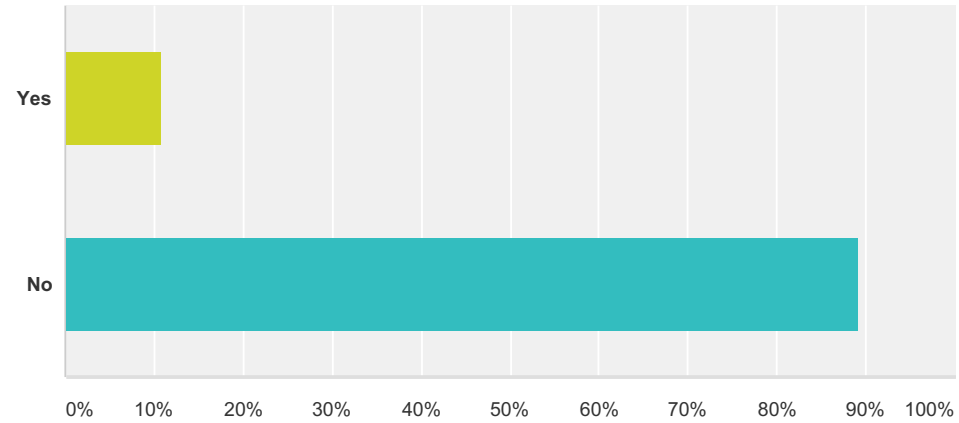
Answered: 55 Skipped: 0



Answer Choices	Responses	
Yes	18.18%	10
No	81.82%	45
Total		55

Q2 I was able to watch the BSC presentation on local access TV?

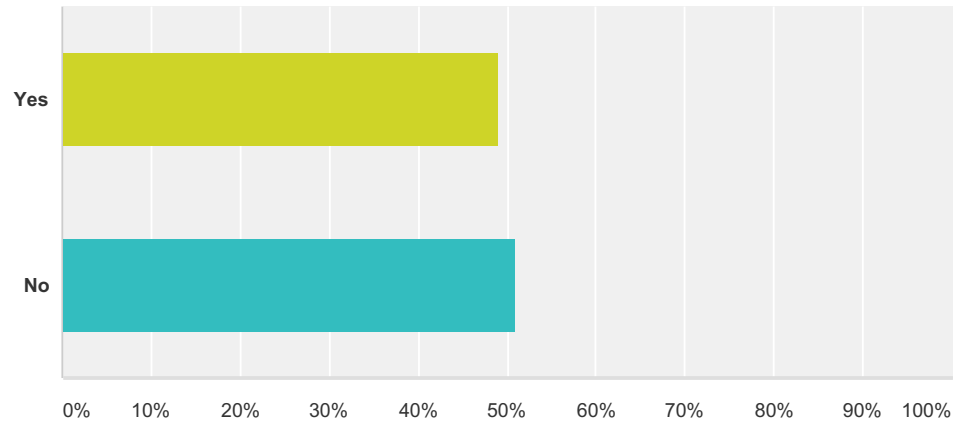
Answered: 55 Skipped: 0



Answer Choices	Responses	
Yes	10.91%	6
No	89.09%	49
Total		55

Q3 I reviewed the project presentation located on the Town of Stratford website (www.townofstratford.com)?

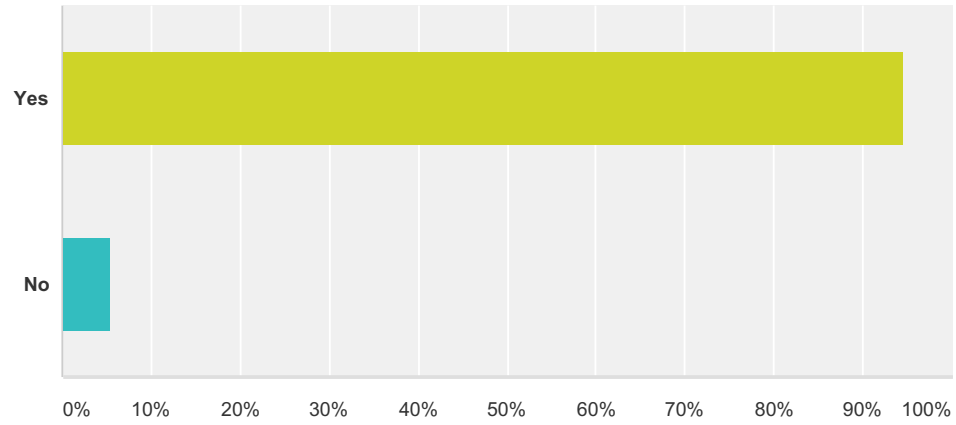
Answered: 55 Skipped: 0



Answer Choices	Responses	
Yes	49.09%	27
No	50.91%	28
Total		55

Q4 Do you support the Stratford Greenway Project?

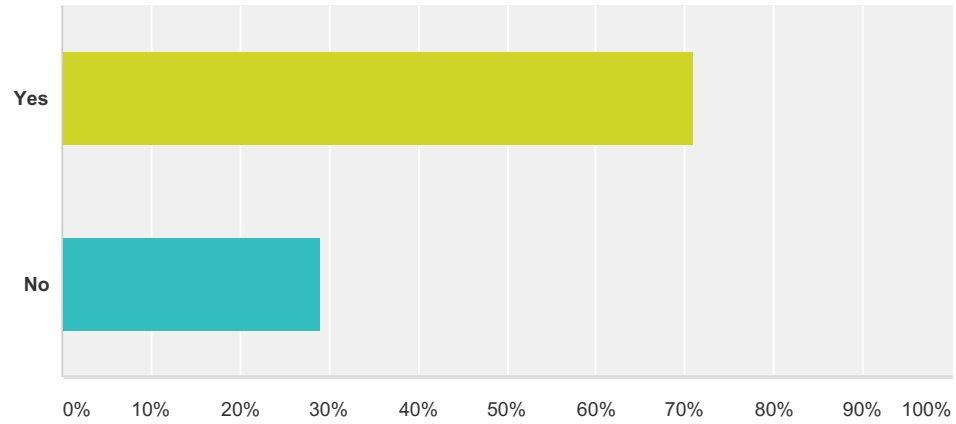
Answered: 55 Skipped: 0



Answer Choices	Responses
Yes	94.55% 52
No	5.45% 3
Total	55

Q5 Did you realize that the portion of the Stratford Greenway Project discussed at the meeting was just one part to a larger planned greenway system?

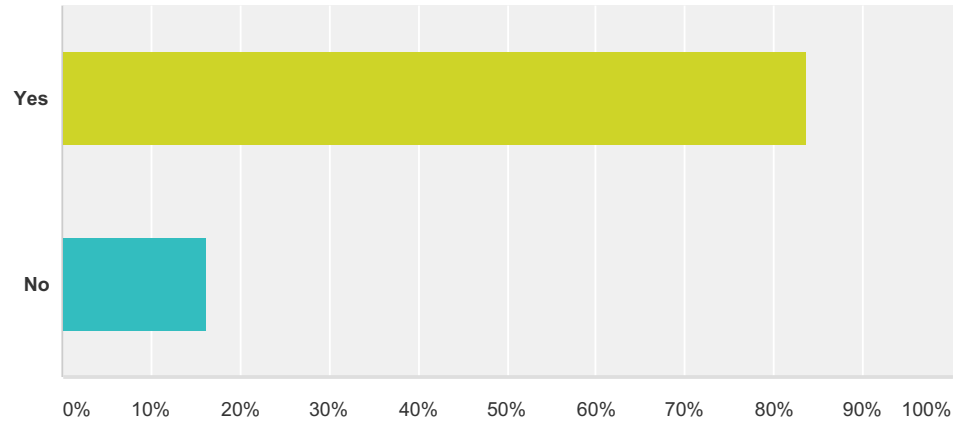
Answered: 55 Skipped: 0



Answer Choices	Responses	
Yes	70.91%	39
No	29.09%	16
Total		55

Q6 Have you used the existing portion of the Stratford Greenway located near DeLuca Stadium?

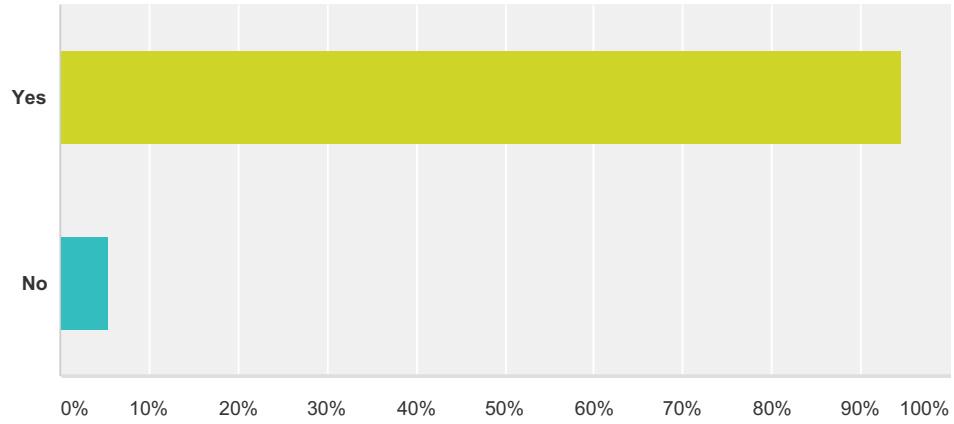
Answered: 55 Skipped: 0



Answer Choices	Responses	
Yes	83.64%	46
No	16.36%	9
Total		55

Q7 Are you a Stratford resident?

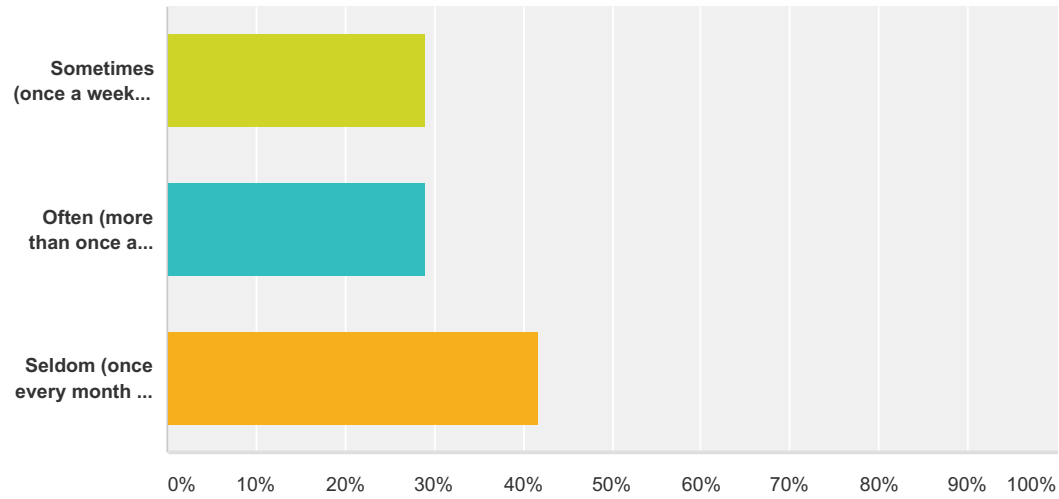
Answered: 55 Skipped: 0



Answer Choices	Responses	
Yes	94.55%	52
No	5.45%	3
Total		55

Q8 How often do you ride a bike?

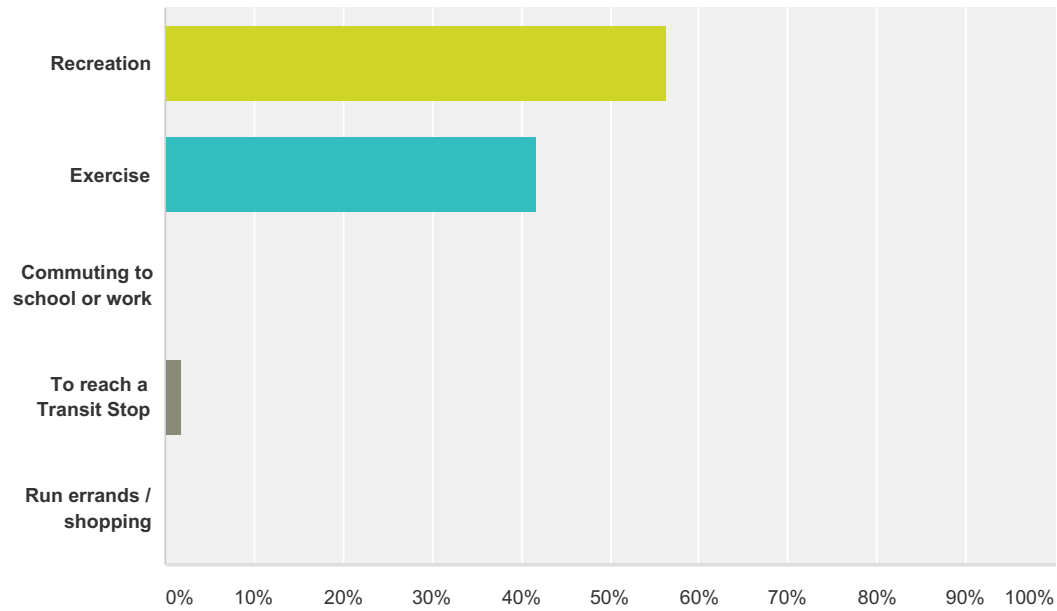
Answered: 55 Skipped: 0



Answer Choices	Responses	
Sometimes (once a week or less)	29.09%	16
Often (more than once a week)	29.09%	16
Seldom (once every month or less)	41.82%	23
Total		55

Q9 When I ride, I ride for:

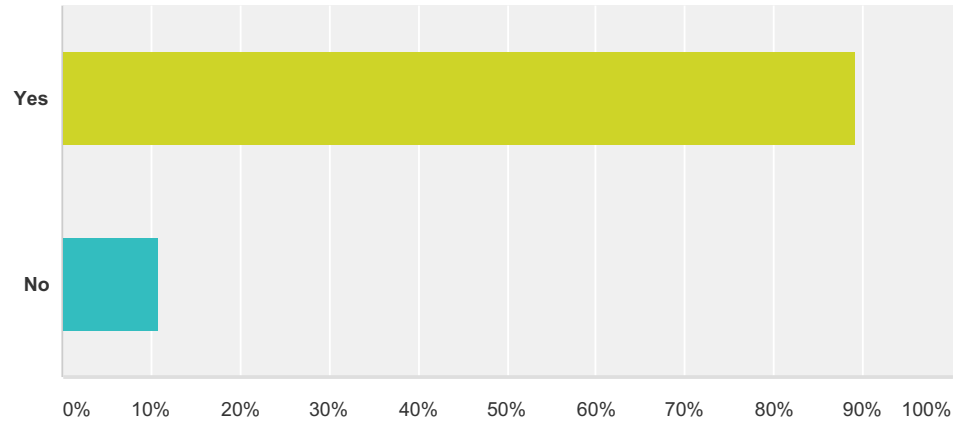
Answered: 55 Skipped: 0



Answer Choices	Responses	Count
Recreation	56.36%	31
Exercise	41.82%	23
Commuting to school or work	0.00%	0
To reach a Transit Stop	1.82%	1
Run errands / shopping	0.00%	0
Total		55

Q10 I would use my bike more if Stratford had improved bicycle facilities?

Answered: 55 Skipped: 0



Answer Choices	Responses	
Yes	89.09%	49
No	10.91%	6
Total		55

APPENDIX E
COST ESTIMATES

Town of Stratford
Greenway Extension
Total Project Corridor
OPINION OF PROBABLE CONSTRUCTION COST

Project: Greenway Extension
 Project #: 83605.00
 Location: Stratford, CT

Computed By: MRS
 Checked By: RLP
 Date: 12/19/16

Item Description	Birdseye Street	Elm Street Segment 1	Elm Street Segment 2	Elm Street Segment 3	Elm Street Segment 4	East Broadway	Sutton Avenue	Broad Street	Perry House Loop	Theater Loop/Shore Road	Shared Use Path	Total	Units	Unit Price	Cost
Division 32 - Exterior Improvements															
BIT. WALKWAY, 2" BIT.+ 8" SUBBASE	0	0	0	0	0	0	0	0	231	0	148	379	s.y.	\$22.50	\$8,527.50
RAISED CROSSWALK	0	0	0	0	0	0	0	0	1	0	0	1	l.s.	\$3,000.00	\$3,000.00
CONCRETE SIDEWALK + SUBBASE	7389	2466	2174	5678	0	0	0	1594	55	0	0	19356	s.f.	\$14.00	\$270,984.00
PAVEMENT MARKINGS - WHITE, EPOXY RESIN, SHARROW MARKING	16	0	0	11	12	3	6	4	0	20	0	72	ea.	\$75.00	\$5,400.00
PAVEMENT MARKINGS - WHITE, EPOXY RESIN, BIKE LANE MARKING AND ARROW	0	10	12	3	0	3	0	6	0	2	0	36	ea.	\$150.00	\$5,400.00
PAVEMENT MARKINGS - YEILD CHEVRONS	0	0	0	0	0	0	0	0	3	0	0	3	ea.	\$75.00	\$225.00
PAVEMENT MARKINGS - LINEAR YEILD LINE CROSSING ("SHARK TEETH")	0	0	0	0	0	0	0	10	0	0	0	10	l.f.	\$10.00	\$100.00
PAVEMENT MARKINGS - 4" WIDE STRIPE, WHITE, EPOXY RESIN	0	2300	2433	503	1093	1402	0	2021	3483	0	0	13235	l.f.	\$0.50	\$6,617.50
PAVEMENT MARKINGS - 2' X 2' DOTTED LINE, WHITE, THERMOPLASTIC	0	0	0	0	0	0	0	0	360	0	0	360	l.f.	\$12.50	\$4,500.00
PAVEMENT MARKINGS - PAINTED BIKE LANE (GREEN)	0	0	0	0	0	0	0	304	6717	0	0	7021	s.f.	\$2.00	\$14,042.00
4" YELLOW PAINTED PAVEMENT MARKINGS	0	0	0	0	922	506	0	721	0	0	0	2149	l.f.	\$0.40	\$859.60
PAVEMENT MARKINGS - STOP BAR, WHITE, 1 FOOT WIDE	46	17	16	26	35	0	19	40	13	16	6	234	l.f.	\$12.50	\$2,925.00
WHITE, 8-FOOT WIDE CROSSWALK	0	0	97	0	94	0	0	45	129	20	0	385	l.f.	\$40.00	\$15,400.00
SIGN FACE - SHEET ALUMINUM (TYPE III REFLECTIVE SHEETING)												350	s.f.	\$30.40	\$10,640.00
TRAFFIC SIGNAGE, SINGLE, 3LB POST, TYPE 2 BREAKAWAY MOUNT	12	7	7	6	9	8	5	7	13	12	5	91	ea.	\$125.00	\$11,375.00
TRAFFIC SIGNAL MODIFICATIONS	0	0	0	1	0	0	0	0	1	0	0	2	l.s.	\$30,000.00	\$60,000.00
LIGHTING - LIGHT STANDARD AND LUMINAIRE-PEDESTRIAN	0	0	0	0	0	0	0	0	0	0	5	5	ea.	\$7,800.00	\$39,000.00
LANDSCAPE IMPROVEMENTS	0	0	0	0	0	0	0	0	0	0	1	1	l.s.	\$20,000.00	\$20,000.00
RELOCATE HYDRANT	0	0	0	0	0	0	0	0	1	0	0	1	ea.	\$2,000.00	\$2,000.00
SEATING NODE	0	0	0	0	0	0	0	0	1	2	0	3	ea.	\$6,500.00	\$19,500.00

A. MAJOR ITEMS COST: \$500,495.60

B. LUMP SUM ITEMS (% OF "MAJOR ITEMS" AS INDICATED)

Item Description	Quantity	Units	Percentage	Cost
MOBILIZATION AND PROJECT CLOSEOUT	1	l.s.	6.5%	\$32,532.21
CONSTRUCTION STAKING	1	l.s.	1.0%	\$5,004.96

LUMP SUM ITEMS COST \$37,537.17

SUBTOTAL A+B: \$538,032.77

C. CONTINGENCY (15% OF SUBTOTAL A+B) \$80,704.92

TOTAL PROJECT COST: \$618,737.69

\$619,000

Legend

s.y. = Square Yard ea. = Each
 c.y. = Cubic Yard l.f. = Linear Foot
 s.f. = Square Foot l.s. = Lump Sum