

West Haven Road Safety Audit

Route 705 (Ocean Avenue): Route 162 (Jones Hill Road)
to South Street

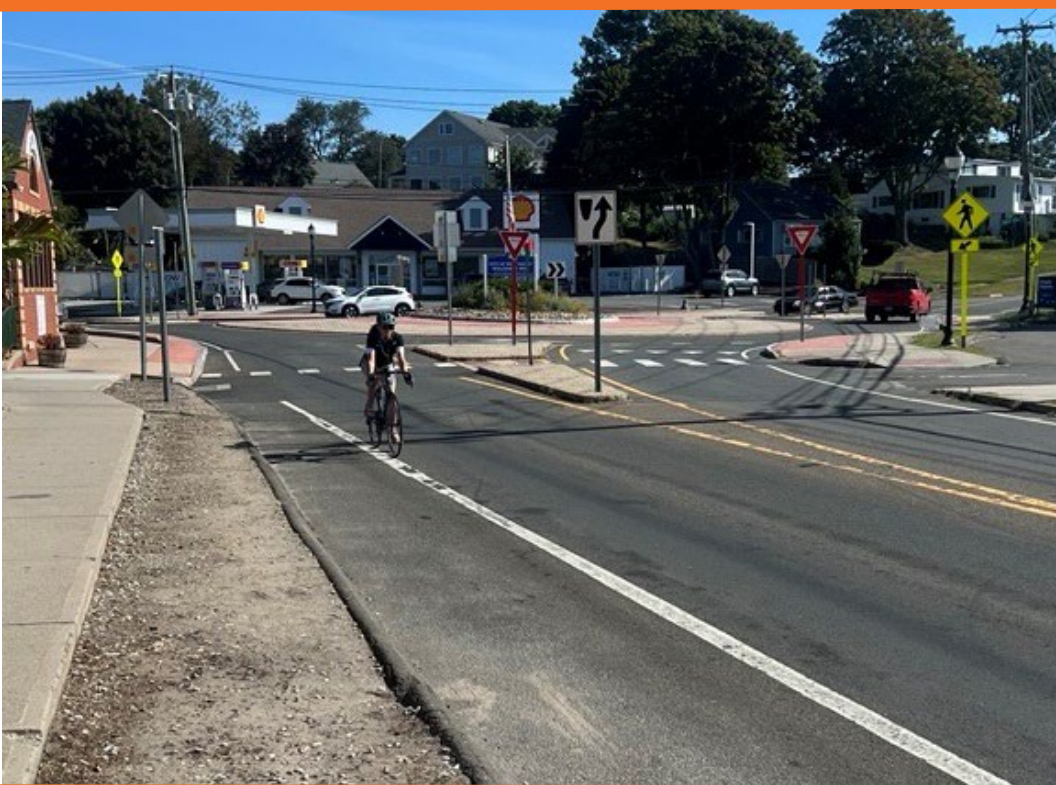


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1 Road Safety Audit Program

1.1 Program Background

The Connecticut Department of Transportation (CTDOT) has created a Road Safety Audit (RSA) Program that focuses on improving the state's transportation network for all users. An RSA is a formal safety assessment of the existing roadway at selected locations. It is a qualitative review by an independent team experienced in traffic, pedestrian, and bicycle operations and design that considers the safety of all road users and proactively assesses mitigation measures to improve the safe operation of the facility by reducing the potential crash risk frequency and/or severity.

RSAs are a collaborative effort led by a team of diverse professionals including CTDOT staff, consultants, municipal officials and staff, municipal police, the Local Traffic Authority (LTA), as well as local stakeholders and community leaders. The RSA team is established for each municipality based on the requirements of the individual location. They assess and review factors that can promote or obstruct safe walking and bicycling routes. These factors include traffic volumes and speeds, topography, roadway geometrics, crash data, roadway inventory (i.e. signage, curbs, bicycle/pedestrian facilities, amenities, safety components), and sidewalks.

Each RSA is conducted using RSA protocols published by the Federal Highway Administration (FHWA). For details on this program, please refer to the CTDOT RSA Program [webpage](#).

Prior to the site visit, area topography, land use characteristics, intersection sight distance concerns, sidewalk locations, parking, and bicycle facilities are examined using available mapping and imagery. The site visit includes a pre-audit meeting, the field audit, and a post-audit meeting immediately following the field audit to discuss the observations and formulate recommendations. This procedure and the summary results are discussed in the following sections.

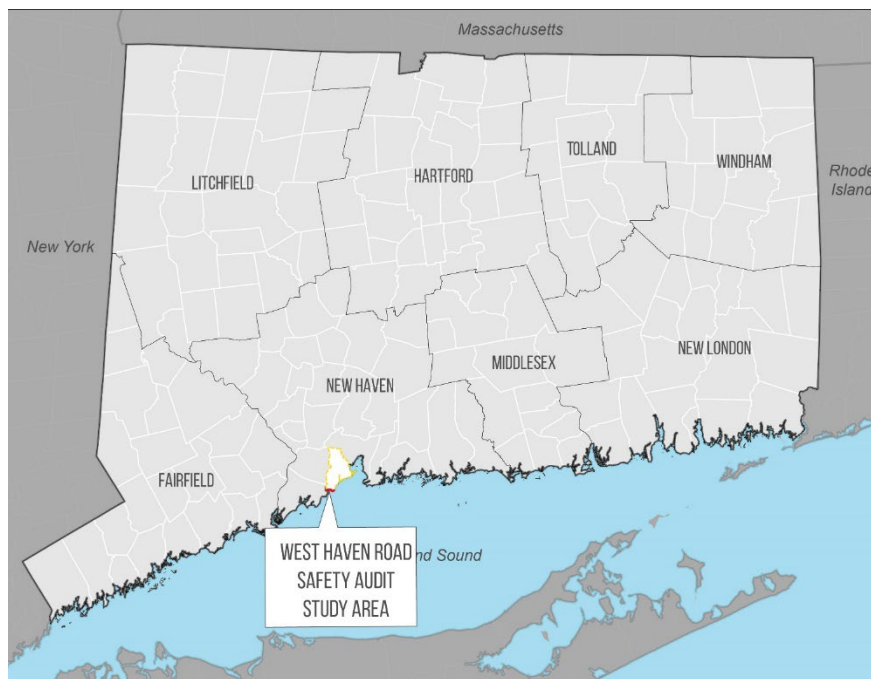
The summary results section of this report, Chapter 5: Recommendations, includes several recommendations and concepts that can be considered for implementation by the municipality, regional planning organization, and/or CTDOT. While many of these recommendations are less complex and easier to implement, many of the more complex ones will require further analysis to ensure that they are feasible to implement.

In addition, many of the more complex recommendations will likely be costly and require longer timeframes for further planning, design, and / or right-of-way (ROW) acquisition. This document does not replace future planning, design, and ROW work that may be necessary for project delivery. The more complex recommendations should be the subject of continued conversations amongst the LTA, regional planning organization, and CTDOT on planning, programming, and funding opportunities. Currently there is no dedicated funding available for construction through the RSA Program. The RSA Program [webpage](#) not only explains the RSA process but also provides information regarding potential State and Federal funding resources and guidance to help municipalities and their COGs implement RSA recommendations in the Final RSA Report.

1.2 West Haven RSA Study Area and Location

CTDOT sponsored an RSA for the City of West Haven on Route 705 (Ocean Avenue). The study area encompasses roughly a 0.9-mile corridor from Route 162 (Jones Hill Road) to South Street. Exhibit 1 shows the study area in context to the State of Connecticut, and Exhibit 2 shows the study area in further detail.

Exhibit 1: West Haven RSA Regional Location



The purpose of the RSA is to observe and document existing concerns followed by recommendations for improvements to safety and operations within the study area, paying particular attention to the

quality of travel for bicyclists and pedestrians. Route 705 in West Haven is a scenic coastal corridor that runs parallel to Route 162 and US Route 1.

Exhibit 2: West Haven RSA Study Area



Route 705 (Ocean Avenue) is a dynamic corridor with many points of interest on the west side of the study area, has several bus stops for bus Route 271 Kimberly Avenue, and is used heavily by bicyclists. The Route 705 study area contains access to businesses, restaurants, residential areas, Seth Haley School, and beaches. Pedestrians and bicyclists use the Route 705 corridor to access the beaches, homes, and businesses in the area. Exhibit 3 displays points of interest located along the corridor.

Exhibit 3: Study Area Points of Interest



Route 705 is classified as a minor arterial roadway, as displayed in Exhibit 4, which is typically used for vehicle trips of moderate distance and slower speeds. The study area intersects with many minor arterial roads. The study area serves a wide variety of network users including pedestrians / bicyclists, bus transit riders, vehicle commuters, business employees and patrons, and delivery drivers. Exhibit 5 displays the roadway geometry.

Average Annual Daily Traffic (AADT) collected in the study area ranges between 6,200 and 8,700 vehicles per day, with the highest volumes seen at the center of the study area between Nichols Street and Berkshire Avenue. Exhibit 6 displays daily traffic in the study area.

The study area contains a roundabout at the western side, a mix of signalized and unsignalized intersections as well as curb cuts and entrances in to and out of property parcels. This RSA focuses on the major roadway segments and intersections where the safety concerns and pedestrian movements are most concentrated.

Exhibit 4: Functional Classification



Exhibit 5: Route 705 (Ocean Avenue) Roadway Geometry

From	CT 162 (Jones Hill Rd)		Trumbull St		Holcomb St		Woodruff St	
To	Trumbull St		Holcomb St		Woodruff St		South St	
Distance	0.35 Mi		0.15 Mi		0.14 Mi		0.29 Mi	
Functional Classification	Minor Arterial		Minor Arterial		Minor Arterial		Minor Arterial	
Speed Limit	30 MPH		30 MPH		30 MPH		30 MPH	
Direction	EB	WB	EB	WB	EB	WB	EB	WB
Lanes	1	1	1	1	1	1	1	1
Lane Width	11'	11'	11'	11'	11'	11'	11'	11'
Sidewalk Type	N/A	Concrete	Concrete	Concrete	Concrete	Varies	Varies	N/A
Sidewalk Width	N/A	3-4.5'	3-5'	3-5'	4-5'	4-5'	3.5-5'	N/A
Sidewalk Condition	N/A	Poor-Fair	Poor-Good	Poor-Good	Poor-Good	Poor	Poor-Good	N/A
ADA Ramp Present	N/A	Yes	Yes	Yes	Varies	Varies	Yes	N/A
ADA Ramp Compliant	N/A	Varies	Yes	Yes	Varies	Varies	No	N/A
Curb	Varies	Varies	Varies	Varies	Asphalt	Asphalt	Varies	Asphalt
Parking	No	No	No	No	No	No	No	No
Shoulder	2-5'	2-5'	2-8'	2-5'	5-8'	5-7'	1-6'	3-5'
On CTDOT Bike Network	No		No		No		No	
Notes	'50' of sidewalk on EB side				500' sidewalk gap on EB side, 125' on WB side			

Exhibit 6: Average Daily Traffic Volumes



2 Prior Efforts in Study Area

2.1 West Haven Bicycle and Pedestrian Plan

South Central Regional Council of Government (SCRCOG) recently finished a Bicycle and Pedestrian Plan for the City of West Haven in April 2023. In the plan, Route 705 (Ocean Avenue) was identified as a priority corridor for maximum connectivity to typical bicycle and pedestrian trip generators around the City. The plan identifies strategies to improve pedestrians' and bicyclists' experience in West Haven. These include:

- Improved of bus stop amenities by adding bike amenities;
- Increased bike parking at key destinations; and
- Proposed pedestrian facilities on both sides and striped bike lanes for bicycle facilities from Route 162 (Jones Hill Road) to Nashawena Avenue.

2.2 Route 705 (Ocean Avenue) Milling and Resurfacing

The project consisted of milling and resurfacing 2.63 miles of Route 705 (Ocean Avenue). The work was completed in summer 2021.



3 Pre-audit Meeting

3.1 Pre-Audit Information

The RSA team conducted a pre-audit virtual meeting on Tuesday, September 10th, 2024. The RSA team presented a brief presentation that included an overview of the West Haven RSA goals and purpose, the study area, and key existing conditions findings. Key themes discussed during the pre-audit meeting are presented below.

Speeds: Speed limit on Route 705 is 30 miles per hour (MPH) Route 162 (Jones Hill Road) to South Street. Exhibit 7 displays speed limits in the study area.

Crashes: Based on data retrieved from the Connecticut Crash Data Repository (CTCDR) for the six-year period between January 2017 through December 2022, there were a total of 45 crashes in the study area. Crashes were concentrated mostly at the intersection of Route 705 and Route 162 (Jones Hill Road), with four (4) crashes occurring at this location. Exhibit 8 displays the study area crash summary by year and Exhibit 9 displays a study area crash heatmap.

Crashes by Type: Most crashes were angle and front-to-rear types. Angle crashes are typical in areas with ingress / egress movements at property entrances. Front-to-rear crashes occur most commonly at intersections where cars are queued to make turning movements. Exhibit 10 displays crashes by type and severity. Exhibit 11 displays a map of crashes by location and type in the corridor.

Exhibit 7: Study Area Speed Limits



Exhibit 8: Study Area Crash Summary

Year	No Apparent Injury	Possible Injury	Suspected Minor Injury	Suspected Serious Injury	Total
2017	5	2		2	9
2018	2	2			4
2019	7	3	3		13
2020	3		2		5
2021	6		2		8
2022	5	1			6
Total	28	8	7	2	45

Exhibit 9: Study Area Crash Heatmap



Exhibit 10: Crashes by Type and Severity

Manner of Impact	No Apparent Injury	Possible Injury	Suspected Minor Injury	Suspected Serious Injury	Grand Total
Angle	6	1	1		8
Front to rear	10	3	2	1	16
Not Applicable	5	4	4	1	14
Other	2				2
Rear to side	1				1
Sideswipe, opposite direction	1				1
Sideswipe, same direction	3				3
Grand Total	28	8	7	2	45

Exhibit 11: Crashes by Type



Crash Severity: Most reported crashes (28) were classified as no apparent injury crashes. Of these reported crashes, there were two (2) suspected serious injury crashes. Exhibit 12 displays the severity of crashes and their locations.

Exhibit 12: Crash Severity by Location



Crashes by Involved Person: There was one (1) reported crash involving pedestrians in the six-year period of 2017-2022. In 2024, there were two (2) additional suspected serious injury pedestrian-involved crashes in the eastern portion of the corridor. Exhibit 13 displays the locations of crashes involving pedestrians, including those that occurred in 2024.

Exhibit 13: Crashes Involving Pedestrians (2017 - 2024)



3.2 Pre-Audit Discussion

Immediately following the pre-audit presentation, a short discussion followed where attendees highlighted additional concerns and notes regarding the West Haven RSA study area. There were no comments from the City staff attendees during this meeting.

Sample slides from the pre-audit presentation are shown in Exhibit 14.

Exhibit 14: Slides from Audit Presentation



Agenda

1. Welcome / Introductions
2. RSA Purpose and Goals
3. Study Area Existing Conditions
5. Potential Countermeasures
6. Discussion
7. Next Steps



Pedestrian Safety Countermeasures



Sidewalks

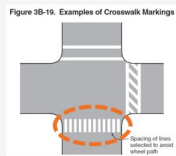


Figure 3B-19. Examples of Crosswalk Markings

Crosswalks



RRFB



Pedestrian refuge islands



Raised crosswalks



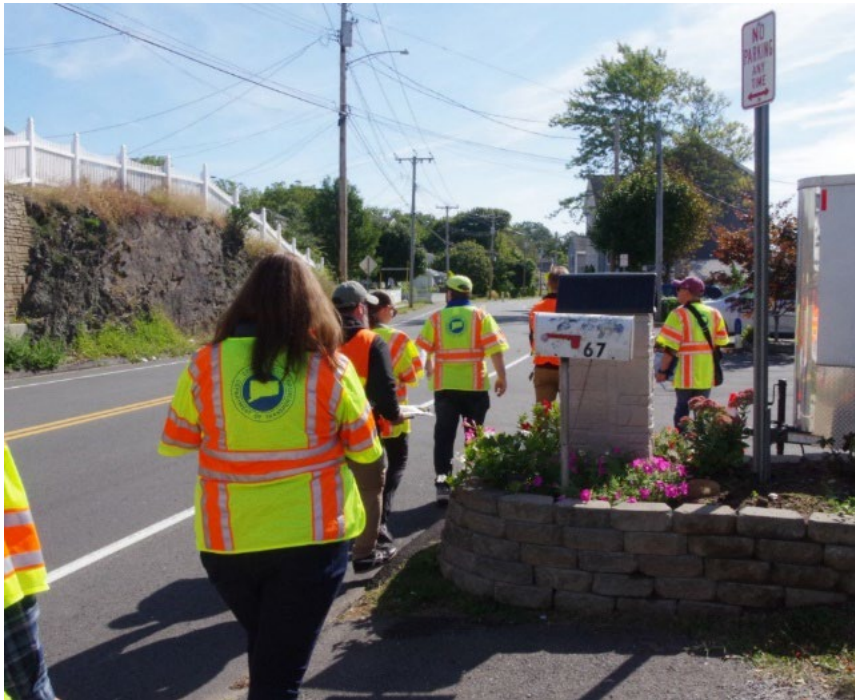
Pedestrian-scale lighting

Some countermeasures may not be appropriate on certain facilities

4 RSA Assessment

A summary of the team's findings from documenting conditions observed in the field, along with comments by stakeholders from the City, is presented below. Many of the issues are corridor wide and are presented first. Observations for specific areas are presented after the corridor wide observations. Exhibit 15 shows RSA participants walking the Route 705 (Ocean Avenue) corridor.

Exhibit 15: Participants Walk Along Route 705 (Ocean Avenue)



4.1 Corridor Wide Observations

- The entire section of Route 705 (Ocean Avenue) contained in this RSA is part of the East Coast Greenway. The East Coast Greenway is a walking and bicycling route designated on both trails and roads from Maine to Florida.
- The RSA team observed many pedestrians and bicyclists in the corridor. The team counted 18 cyclists during the 2.5-hour site visit.
- Vehicular and pedestrian lighting is unevenly spaced and inadequate throughout the corridor.
- High vehicular speeds are a pervasive issue throughout the corridor, particularly in the straight sections of the corridor.
- Vegetation is overgrown in many areas of the corridor creating visibility (all users) and pedestrian comfort issues.
- The sidewalk network is not continuous on either side of the roadway. Sidewalks and curb ramps that exist are often in poor condition and not Americans with Disabilities Act (ADA)-compliant.

4.2 Route 162 (Jones Hill Road) to Annawon Avenue

- The roundabout at Route 162 (Jones Hill Road) was constructed in 2009. The roundabout is not built to the current design standards and could benefit with additional curb on the approaches.
- West Haven Police Department representatives stated that the luminaires at the roundabout do not work.
- Participants stated that pedestrians avoid the elevated sidewalk on the north side of Route 705 (Ocean Avenue) and use the narrow roadway shoulder instead. The team observed this during the site visit. The sidewalk is narrow, not ADA-compliant, and overgrown with vegetation. Exhibit 16 and Exhibit 17 display the elevated sidewalk on the north side of Route 705 (Ocean Avenue).

Exhibit 16: Elevated Sidewalk (View East) on South Side of Route 705



Exhibit 17: Elevated Sidewalk (View East) on South Side of Route 705



- The southern shoulder of Route 705 (Ocean Avenue) narrows when traveling to the east and creates a constraint. Exhibit 18 displays this shoulder.
- There is a sidewalk gap at the gas station driveway near the Route 162 (Jones Hill Road) roundabout. A pedestrian was struck here. Exhibit 19 shows the sidewalk gap walking from the elevated sidewalk on the north side of Route 705 (Ocean Avenue) towards the roundabout.

Exhibit 18: Southern Shoulder (View East)



- The vegetation is overgrown, and trimming is needed in several areas, particularly near the Nashawena Avenue intersection.
- The sidewalk on the southern side is discontinuous east of Oyster River Beach. Exhibit 20 shows a pedestrian walking on the shoulder of the road.
- In the westernmost portion of the corridor, the grade of properties and driveways on both sides of Route 705 (Ocean Avenue) will likely be a constraint to constructing a sidewalk. The

roadway elevation is lower than several properties, driveways, and garages.

- The bus stop at the Nashawena Avenue intersection has some amenities including a bench and a trash receptacle. This is a desirable crossing location because of the beach access. Exhibit 21 displays the current bus stop.

Exhibit 19: Pedestrian walking East on Route 705 Shoulder



Exhibit 20: Sidewalk at Shell Gas Station (View West)



Exhibit 21: Bus Stop at Nashawena Avenue



4.3 Annawon Avenue to Woody Crest

- Participants suggested constructing a raised crosswalk at Annawon Avenue. Many cross here and it isn't safe because of driver speeds.
- There is poor visibility at the Holcomb Street crosswalk.
- The vegetation is overgrown and trimming is needed on Route 705 (Ocean Avenue), particularly on the west side of Morris Street. Exhibit 22 displays shrub overgrowth on the sidewalk.
- The left curve sign at Baldwin Street is visibility blocked by a tree. Exhibit 23 displays RSA participants near the tree obstructing the curve sign.

Exhibit 22: Vegetation on Morris Street Sidewalk



- There are unmarked crosswalks at Trumbull Street and Templeton Street.
- There is ambiguity for motorists on where to stop at the stop sign on Morris Street. Drivers at the intersection must creep up to get a better view of oncoming traffic.
- The Morris Street intersection is not ADA-compliant and could benefit from curb ramps and compliant amenities.

Exhibit 23: Tree Blocking Left Curve Sign



- There are missing chevron markings at the curve near Morris Street. The height for the chevron signs is low and not installed to the current design standard. Exhibit 24 shows three left curve signs approaching the curve.
- The south side guiderail is also low, and not installed to the current design standard. Exhibit 25 shows a guiderail that is lower than standard at the curve.
- The dynamic speed limit sign located on the north side of Route 705 (Ocean Avenue) near Trumbull Street is on the shoulder and can be hazardous to bicyclists. Exhibit 26 shows the current placement of the sign.

Exhibit 24: Missing Chevron Sign at Morris Street Curve



- The Roberts Street intersection pedestrian ramps are deteriorated. Exhibit 27 shows the poor conditions of the curb and landing.
- There are no sidewalks on several areas of the corridor in this section including the north side between Woodruff Street and Woody Crest, the south side between Annawon Avenue and Trumbull Street, and the south side between Morris Street and Woodruff Street.
- The crosswalk at Woodruff Street is not ADA-compliant. It needs a curb on the southeast corner and repairs on the southwest corner.

Exhibit 25: Guiderail (View Eastbound) towards Woody Crest



Exhibit 26: Dynamic Speed Limit Sign on Shoulder



Exhibit 27: Curb at Roberts Street



4.4 Woody Crest to South Street

- There are no sidewalks on the north / west side of the road between Woody Crest and South Street.
- The vegetation at Woody Crest is overgrown and needs trimming.
- The sidewalk at Woody Crest is in poor condition, with an uneven surface and multiple cracks with vegetation in the cracks. This is displayed in Exhibit 28.
- Vegetation trimming and a bus pad are needed at the Scott Street bus stop. Exhibit 29 shows the current condition of the bus stop with the signage being covered by tree overhang.
- The South Street intersection is the only signalized intersection in the corridor. There is only one crosswalk at the three-legged intersection, across Route 05 (Ocean Avenue) on the north / east leg. Should sidewalks be proposed on the north side of Route 705 (Ocean Avenue) west of South Street, two additional marked crosswalks should be installed to make the intersection compliant with CTDOT's [2023 Complete Streets Controlling Design Criteria and Justification Process](#).
- The South Street crosswalk push button audible does not work and is not ADA-compliant.

Exhibit 28: Sidewalk near Woody Crest Avenue



Exhibit 29: Bus Stop Sign Obstructed by Tree Vegetation



5 Recommendations

Based on the findings discussed during the RSA, the study team compiled a set of recommendations for the study area. These recommendations are organized into three locations. The RSA team walked the length of the corridor starting at Route 162 (Jones Hill Road) travelling east and north to South Street. The sections below were established to organize the recommendations in a coherent way. Many of the recommendations identified by the RSA team are applicable to any / all intersections or roadway segments in the study area. A conceptual drawing of the roadway segment of Route 705 (Ocean Avenue) between Holcomb and Roberts Street is presented in Exhibit 30. Further details on recommendations are provided in the section below.

All recommendations are categorized by their complexity of implementation:

- **Least Complex Recommendations:** These are typically low-cost recommendations such as striping and signage, and generally do not require extensive engineering or construction costs. More extensive recommendations which have funding previously committed may be included.
- **Moderately Complex Recommendations:** These are improvements that may require more substantial engineering than those generally included as least complex recommendations. These may require establishment of funding in capital improvement plans, or a dedicated funding item. However, these recommendations fall between the least complex and most complex, requiring some level of design and funding, but typically do not include ROW acquisitions, extensive environmental permitting, etc.
- **Most Complex Recommendations:** These are improvements that require substantial study and engineering. These recommendations generally require significant funding for implementation and may require several years of planning to budget.

Any work within the State ROW to be done by non-State forces will require an encroachment permit from the District 3 Permit Office and/or an official request from the municipal LTA.

Exhibit 30: Route 705 Corridor Recommendations

Recommendation	Location			
	Corridor Wide	Route 162 (Jones Hill Road)/Annawon Avenue	Annawon Avenue/Woody Crest	Woody Crest/South Street
Least Complex				
Install pedestrian scale lighting to increase visibility of vulnerable users	•			
Replace missing or broken lighting in luminaires over roadway	•			
Trim overgrown vegetation along existing sidewalk network	•			
Improve visibility of eastbound left curve warning sign near Holcomb Street by trimming overhanging tree branches or relocating sign			•	
Paint speed reduction pavement markings in both directions in advance of curve at Morris Street			•	
Upgrade pedestrian facilities at feasible bus stop locations	•			
Move / regularly change location of dynamic speed limit sign, keeping out of the shoulder to create a safer path for cyclists			•	
Moderately Complex				
Repair / replace sidewalk in areas of disrepair	•			
Install RRFB at Nashawena Avenue bus stop		•		
Install ADA / PROWAG-compliant crosswalks, curb ramps, signal push buttons	•			
Install raised intersection at Annawon Avenue		•	•	
Install raised intersection at Woodruff Street			•	
Install missing chevron signs at curve near Morris Street			•	
Upgrade guiderail at curve near Morris Street			•	
Most Complex				
Add new sidewalk on north side between Woodruff Street and South Street			•	•
Add new sidewalk on south side between Route 162 (Jones Hill Road) and Trumbull Street		•	•	
Evaluate options to achieve ADA compliance on north sidewalk near Route 162 (Jones Hill Road)		•		
Realign intersection at Morris Street and complete sidewalks on both sides of the street in this area			•	

5.1 Corridor Wide

The general recommendations for the length of the Route 705 (Ocean Avenue) corridor focus on creating a safer and more aesthetic experience for non-motorized users. The recommendations aim to increase the visibility for and of drivers and pedestrians, as well as bring several areas into ADA-compliance.

Least Complex Recommendations

- 1) Install pedestrian scale lighting to increase visibility of vulnerable users. Note: CTDOT EB-2024-1 requires roadway lighting at all new pedestrian crosswalks across state roads, in conformance with the Engineering & Construction Directive ECD-2023-8, "Complete Streets Controlling Design Criteria". The goal of crosswalk lighting should be to illuminate with positive contrast to make it easier for a driver to visually identify the pedestrian. This involves placing the luminaires in forward locations to avoid a silhouette effect of the pedestrian.
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
- 2) Replace missing or broken lighting in luminaires over roadway.
 - **Next Step:** LTA to send requests for new illumination to DOT.TrafficEngineering@ct.gov for an illumination study
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
- 3) Trim overgrown vegetation along existing sidewalk network.
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office

- 4) Upgrade pedestrian facilities at feasible bus stop locations in the corridor. Several bus stops can be enhanced with pedestrian / ADA-compliant upgrades.
 - **Next Step:** Coordinate with the [Office of Transit & Ridesharing](#) to identify the location and type of facilities (e.g., landing pad, bus shelter, etc.) that should be provided

Moderately Complex Recommendations

- 1) Repair / replace sidewalk in areas of disrepair.
 - **Next Step:** Municipality to coordinate with adjacent property owners for access management
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
- 2) Install ADA / PROWAG-compliant crosswalks, curb ramps, signal push buttons at intersections. If approved, the municipality must first install ADA-compliant landing areas and sidewalk ramps, address any pedestrian related sightline inadequacies, and address any lighting requirements via an encroachment permit. Once the municipality notifies CTDOT that this work is completed, CTDOT would install the crosswalk pavement markings with appropriate pedestrian crossing warning signing.
 - **Next Step:** Municipality to contact South Central Regional Council of Governments ([SCRCOG](#)) for potential funding sources
 - **Next Step:** Municipality to evaluate crosswalk locations along corridor
 - **Next Step:** LTA to send request to DOT.TrafficEngineering@ct.gov for concurrence

- **Next Step:** Municipality to check available ROW and roadside area for feasibility. Coordinate with CTDOT for feasibility
- **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office

5.2 Route 162 (Jones Hill Road) to Annawon Avenue

Additional recommendations in this section of the corridor focus on sidewalk and crossing improvements.

Moderately Complex Recommendations

- 1) Install RRFB at Nashawena Avenue bus stop.
 - **Next Step:** Municipality to contact [SCRCOG](#) for potential funding sources
 - **Next Step:** Municipality to check available ROW and roadside area for feasibility
 - **Next Step:** Municipality to coordinate with CTDOT to confirm RRFB and crossing is recommended
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
- 2) Install raised intersection at Annawon Avenue.
 - **Next Step:** Municipality to contact [SCRCOG](#) for potential funding sources
 - **Next Step:** Municipality to check available ROW and roadside area for feasibility
 - **Next Step:** Municipality to coordinate with CTDOT to confirm raised intersection is recommended

- **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office

Most Complex Recommendations

- 1) Add new sidewalk to south side of Route 705 (Ocean Avenue) between Route 162 (Jones Hill Road) and Annawon Avenue.
 - **Next Step:** Municipality to contact [SCRCOG](#) for potential funding sources
 - **Next Step:** Municipality to check available ROW and roadside area for feasibility
 - **Next Step:** Municipality to coordinate with adjacent property owners for access management
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
- 2) Evaluate options to achieve ADA compliance on north sidewalk near Route 162 (Jones Hill Road).
 - **Next Step:** Municipality to contact [SCRCOG](#) for potential funding sources
 - **Next Step:** Municipality to check available ROW and roadside area for feasibility
 - **Next Step:** Municipality to coordinate with CTDOT ADA-compliance group for guidance
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office

5.3 Annawon Avenue to Woody Crest

Additional recommendations in this section of the corridor focus on sidewalk and crossing improvements. A conceptual drawing of the roadway segment of Route 705 (Ocean Avenue) at Morris Street is presented in Exhibit 3.

Least Complex Recommendations

- 1) Improve visibility of eastbound left curve warning sign near Holcomb Street by trimming overhanging tree branches or relocating sign.
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
- 2) Paint speed reduction pavement markings in both directions in advance of curve at Morris Street.
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
- 3) Move and regularly change location of dynamic speed limit sign, keeping out of the shoulder to create a safer path for cyclists.
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office

Moderately Complex Recommendations

- 1) Install raised intersection at Annawon Avenue.
 - **Next Step:** Municipality to contact [SCRCOG](#) for potential funding sources
 - **Next Step:** Municipality to check available ROW and roadside area for feasibility

- **Next Step:** Municipality to coordinate with CTDOT to confirm raised intersection is recommended
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
- 2) Install raised intersection at Woodruff Street.
 - **Next Step:** Municipality to contact [SCRCOG](#) for potential funding sources
 - **Next Step:** Municipality to check available ROW and roadside area for feasibility
 - **Next Step:** Municipality to coordinate with CTDOT to confirm raised intersection is recommended
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
 - 3) Install missing chevron signs at curve near Morris Street.
 - **Next Step:** LTA to send request to DOT.TrafficEngineering@ct.gov for review of signing.
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
 - 4) Upgrade guiderail at curve near Morris Street. Currently, the guiderail is not constructed to the current design standards.
 - **Next Step:** LTA to send request to DOT.TrafficEngineering@ct.gov for review of guiderail
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office

Most Complex Recommendations

- 1) Add new sidewalk to south side of Route 705 (Ocean Avenue) between Annawon Avenue and Trumbull Street.
 - **Next Step:** Municipality to contact [SCRCOG](#) for potential funding sources
 - **Next Step:** Municipality to check available ROW and roadside area for feasibility
 - **Next Step:** Municipality to coordinate with adjacent property owners for access management
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
- 2) Add new sidewalk on north side between Woodruff Street and Woody Crest.
 - **Next Step:** Municipality to contact [SCRCOG](#) for potential funding sources
 - **Next Step:** Municipality to check available ROW and roadside area for feasibility
 - **Next Step:** Municipality to coordinate with adjacent property owners for access management
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office
- 3) Realign intersection at Morris Street and complete sidewalks on both sides of the street in this area. Exhibit 3 displays a preliminary concept drawing for this redesign.
 - **Next Step:** Municipality to contact [SCRCOG](#) for potential funding sources

- **Next Step:** Municipality to check available ROW and roadside area for feasibility
- **Next Step:** Municipality to coordinate with adjacent property owners for access management
- **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office

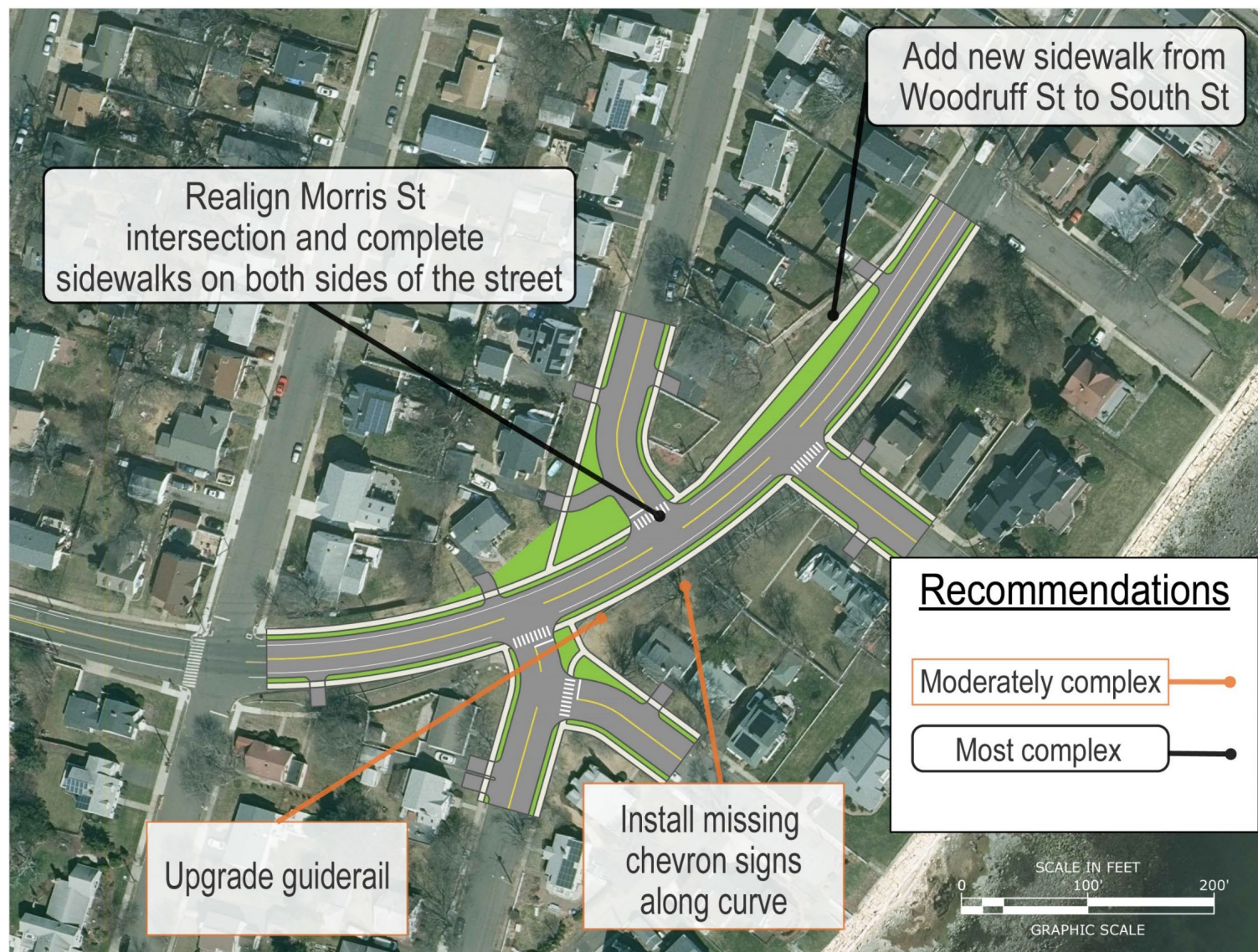
5.4 Woody Crest to South Street

Additional recommendations in this section of the corridor focus on sidewalk and crossing improvements.

Most Complex Recommendation

- 1) Add new sidewalk on north side between Woody Crest and South Street.
 - **Next Step:** Municipality to contact [SCRCOG](#) for potential funding sources
 - **Next Step:** Municipality to check available ROW and roadside area for feasibility
 - **Next Step:** Municipality to coordinate with adjacent property owners for access management
 - **Next Step:** Municipality to consider applying for an [Encroachment Permit](#) through the District permit office

Exhibit 31: Concept for the Morris Street intersection and Curve on Route 705 (Ocean Avenue)



6 Summary

This report documents the observations, discussions, and recommendations developed during the completion of the City of West Haven's RSA. It provides the municipality with an outlined strategy to improve the transportation network for all users in the study area, particularly focusing on pedestrians and cyclists. Moving forward, the City and CTDOT may use this report to prepare strategies for funding and implementing the improvements. This report provides West Haven with a toolkit to plan for including these multi-modal recommendations into future development within the study area.

This RSA Report is an objective review intended for the municipality to use to help assess the existing conditions within a predetermined area selected by the municipality. The conclusions of this report are advisory and intended for general planning purposes to help identify bicycle, pedestrian and non-motorized transportation needs that encourage walking and bicycling, as well as assists in developing recommendations to improve the existing conditions. The contents of this report are not intended to be legally binding, but rather offer recommendations to improve safety in the vicinity of the audit location and create a more appealing transportation alternative.

Appendices

A: Pre-Audit Presentation

B: Walk Audit Materials

West Haven Road Safety Audit

Route 705 (Ocean Avenue): Jones Hill Road to South Street





Welcome / Introductions

Project Team

- Connecticut Department of Transportation (CTDOT) is sponsoring
- City of West Haven is applicant
- FHI Studio is assembling and writing Road Safety Audit report



Agenda

1. Welcome / Introductions
2. RSA Purpose and Goals
3. Study Area Existing Conditions
5. Potential Countermeasures
6. Discussion
7. Next Steps



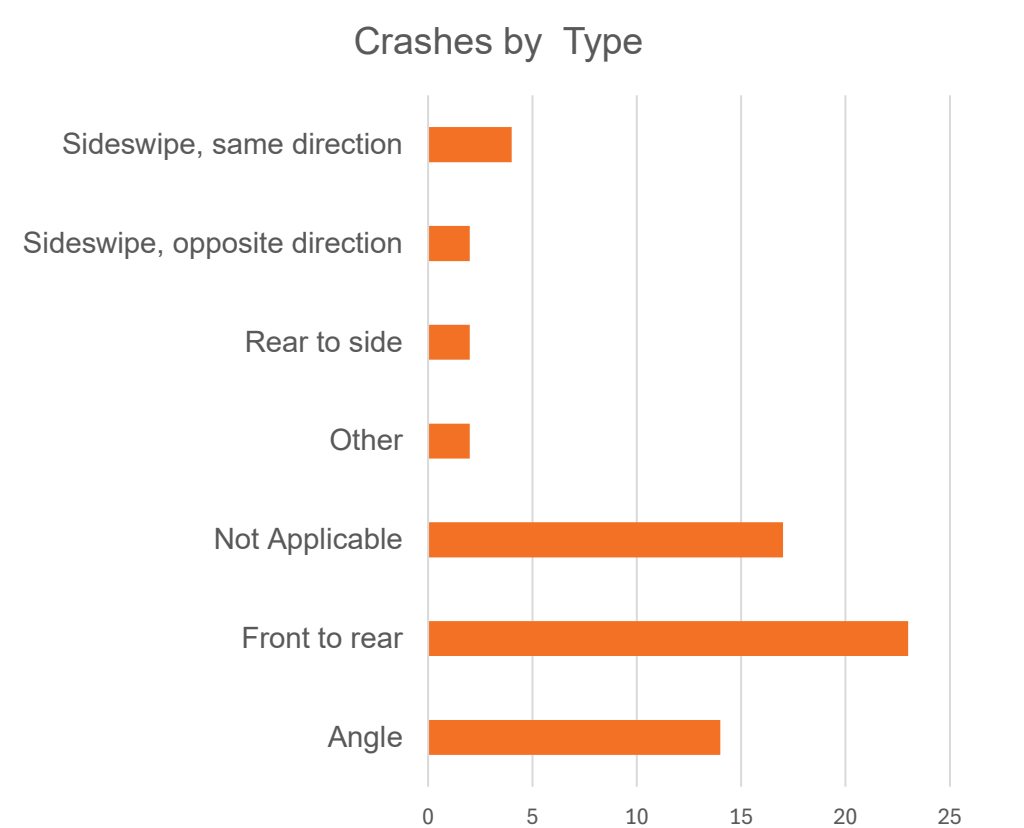
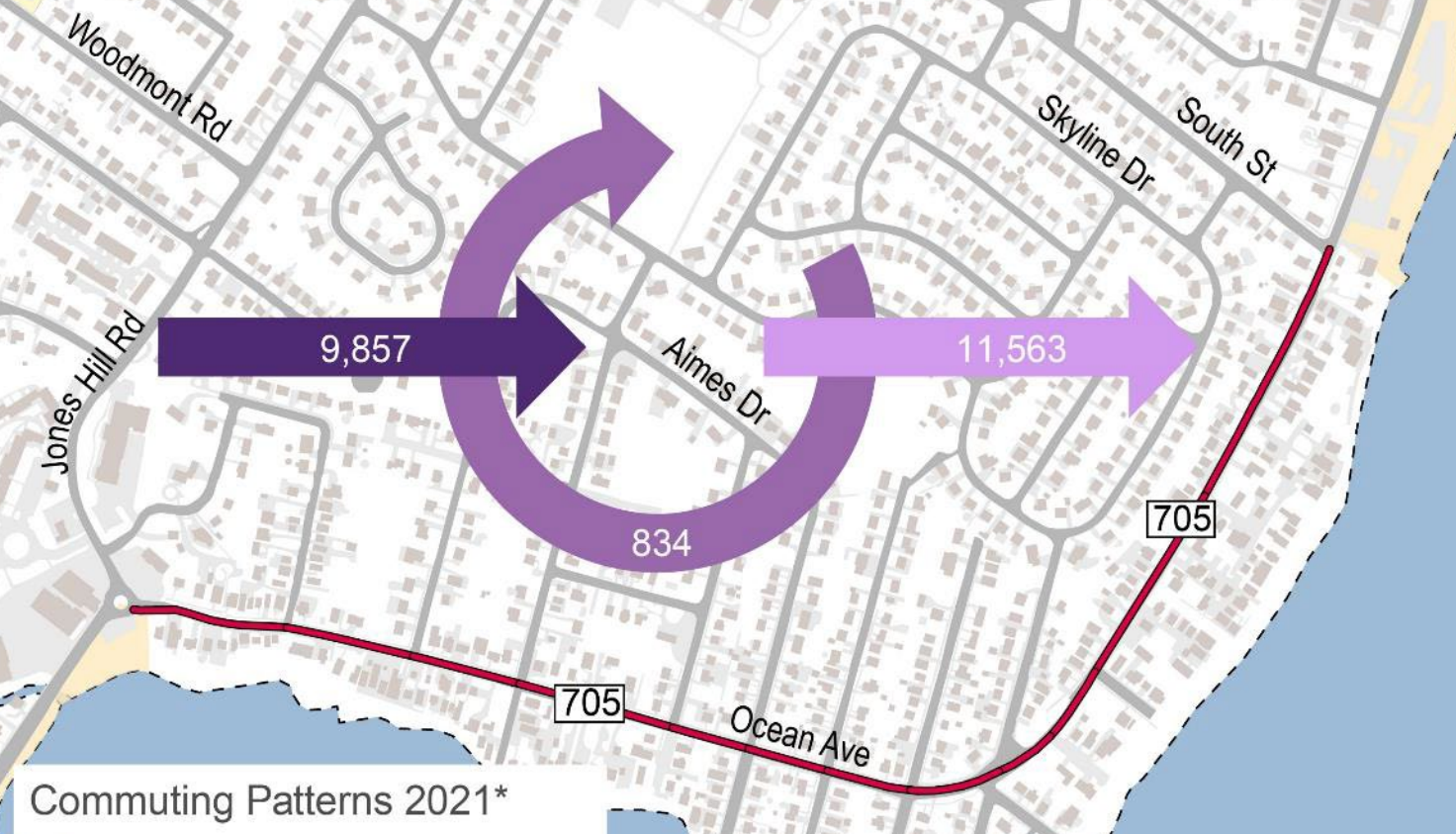


RSA Purpose and Goals



Purpose and Goals

- Safety assessment of existing walking and biking routes
- Improve transportation network for all users by making conditions safer and more comfortable for pedestrians and bicyclists
- Identify the issues that may discourage or prevent walking and bicycling
- Identify next steps, evaluate feasibility of proposed improvements, and potential funding sources.



Study Area Existing Conditions

Study Area

- Route 705
(Ocean Av)
- Jones Hill Rd to
South St



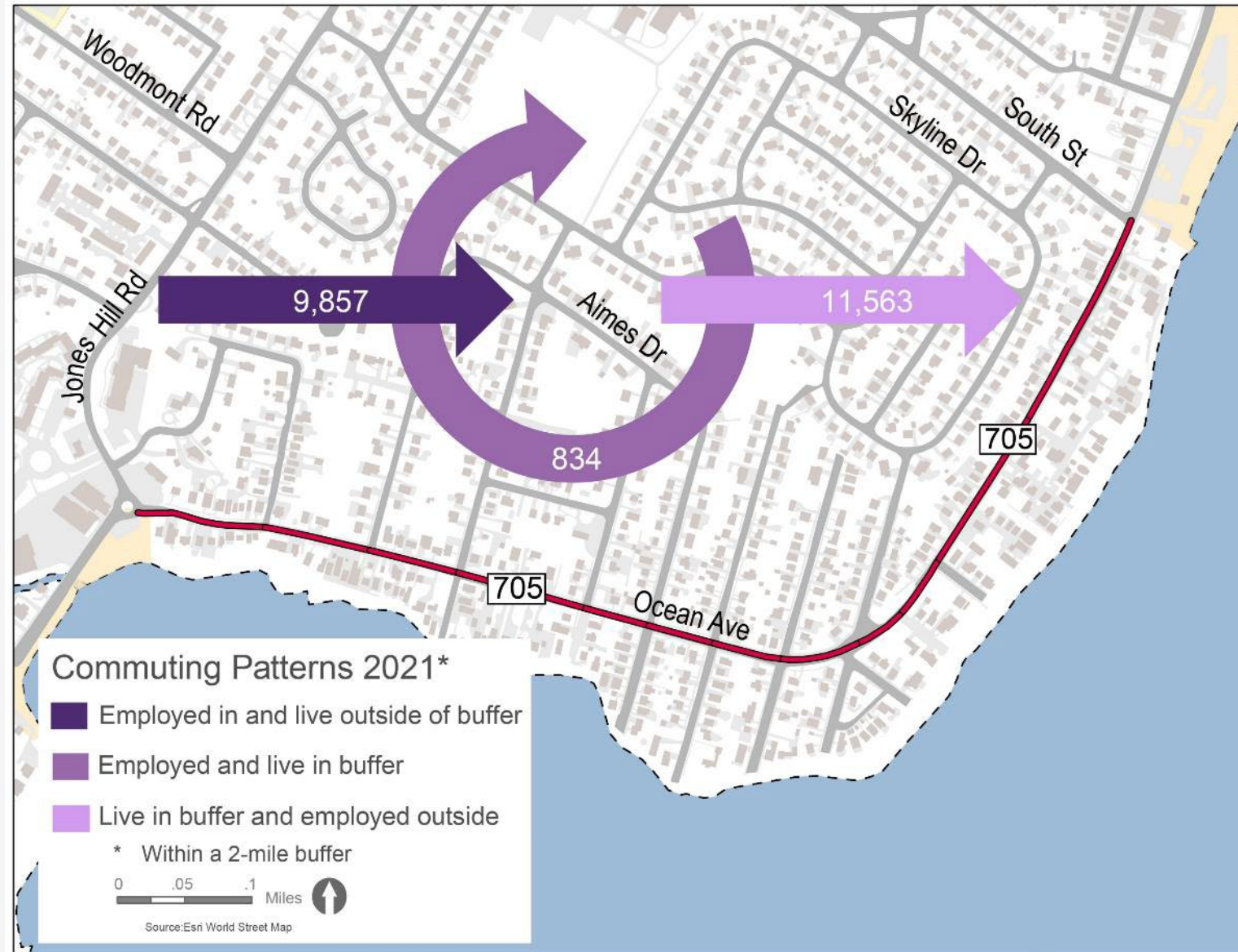
Points of Interest

- Restaurants
- Seth Haley School
- Offices
- Beaches
- Bus stops
- Residential



Employment and Commuter Patterns

- Greater share of people live in neighborhood and commute out for work
- Few people both live and work in 2-mile buffer from study area



Past / Current Work

West Haven Bike/Ped Plan

- Identifies improvement of bus stop amenities
- Increasing bike parking at key destinations
- Proposed pedestrian facilities on both sides and striped bike lanes for bicycle facilities are mentioned from Jones Hill Rd to Nashawena Av

Milling and resurfacing on Route 705

- Completed in 2021



Traffic Volumes

Average Annual Daily Traffic (AADT):

- Highest volume on New Haven Av approaching roundabout
- Next highest volume is on Ocean Av between Jones Hill Rd and Scott St



Traffic Speed Limits

- Route 705 (Ocean Av) is 30 miles per hour (MPH) through study area
- 85th percentile speeds at Route 705 South of South St are 41.0 MPH
- 85th percentile speeds at Route 705 east of Route 162 are 35.8 MPH



Functional Classification

- Minor arterial
- Mainly local roads intersect with Route 705
- Major collector at Woodmont Rd





Roadway Geometry

SR 705 (Ocean Av) Street Inventory

From	CT 162 (Jones Hill Rd)		Trumbull St		Holcomb St		Woodruff St	
To	Trumbull St		Holcomb St		Woodruff St		South St	
Distance	0.35 Mi		0.15 Mi		0.14 Mi		0.29 Mi	
Functional Classification	Minor Arterial		Minor Arterial		Minor Arterial		Minor Arterial	
Speed Limit	30 MPH		30 MPH		30 MPH		30 MPH	
Direction	EB	WB	EB	WB	EB	WB	EB	WB
Lanes	1	1	1	1	1	1	1	1
Lane Width	11'	11'	11'	11'	11'	11'	11'	11'
Sidewalk Type	N/A	Concrete	Concrete	Concrete	Concrete	Varies	Varies	N/A
Sidewalk Width	N/A	3-4.5'	3-5'	3-5'	4-5'	4-5'	3.5-5'	N/A
Sidewalk Condition	N/A	Poor-Fair	Poor-Good	Poor-Good	Poor-Good	Poor	Poor-Good	N/A
ADA Ramp Present	N/A	Yes	Yes	Yes	Varies	Varies	Yes	N/A
ADA Ramp Compliant	N/A	Varies	Yes	Yes	Varies	Varies	No	N/A
Curb	Varies	Varies	Varies	Varies	Asphalt	Asphalt	Varies	Asphalt
Parking	No	No	No	No	No	No	No	No
Shoulder	2-5'	2-5'	2-8'	2-5'	5-8'	5-7'	1-6'	3-5'
On CTDOT Bike Network	No		No		No		No	
Notes	'50' of sidewalk on EB side				500' sidewalk gap on EB side, 125' on WB side			

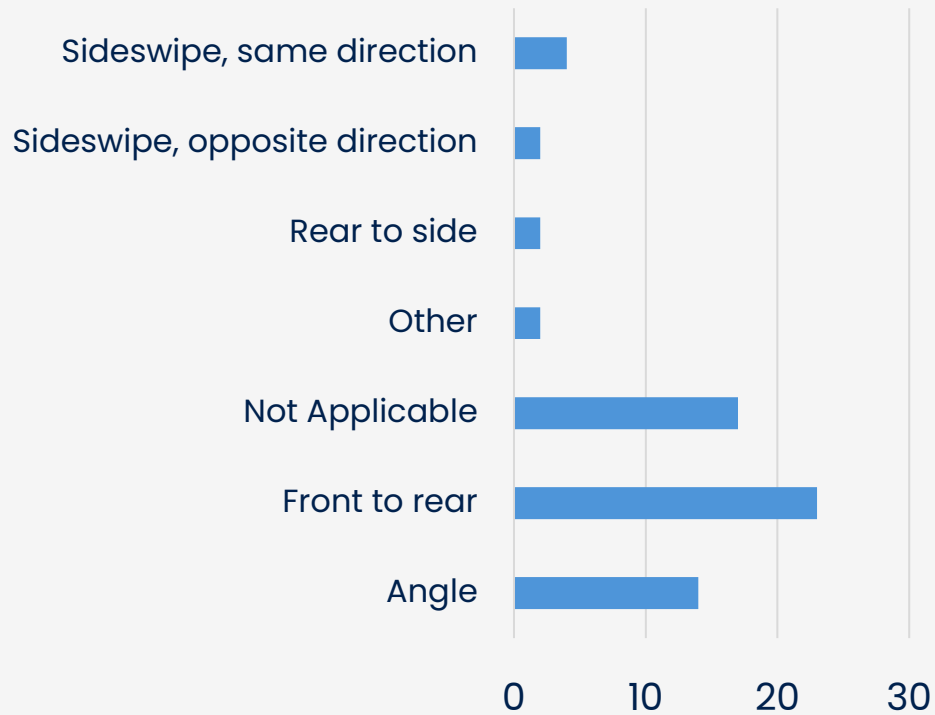
*Condition - "Good" is Serviceable Condition that meets current design standards. "Fair" is generally serviceable, but may need minor repairs, or may not completely align with current design standards. "Poor" is not serviceable, and generally inadequate for continued long-term use.

Highlighted cells indicate values which may warrant further investigation



Crash Analysis (2017-2022)

Crash Types Manner of Impact



45 total crashes over 5-year period



Crash Severity (2017 – 2022)

45 Total Crashes:

- 28 no apparent injury crashes
- 8 possible injury crashes
- 7 suspected minor injury crashes
- 2 suspected serious injury crashes





Crashes Involving a Pedestrian

45 Total Crashes:

- 28 no apparent injury crashes
- 8 possible injury crashes
- 7 suspected minor injury crashes
- 1 involved a pedestrian
- 2 suspected serious injury crashes

  2 ped crashes in 2024





Crash Hotspots (2017 – 2022)

45 Crashes Total

- Route 705 and Jones Hill Rd
 - 4 crashes
- Route 705 and Nashawena Av
 - 3 crashes
- Route 705 and Anawon Av
 - 3 crashes
- Route 705 and Trumbull St
 - 3 crashes
- Route 705 and Harding St
 - 3 crashes

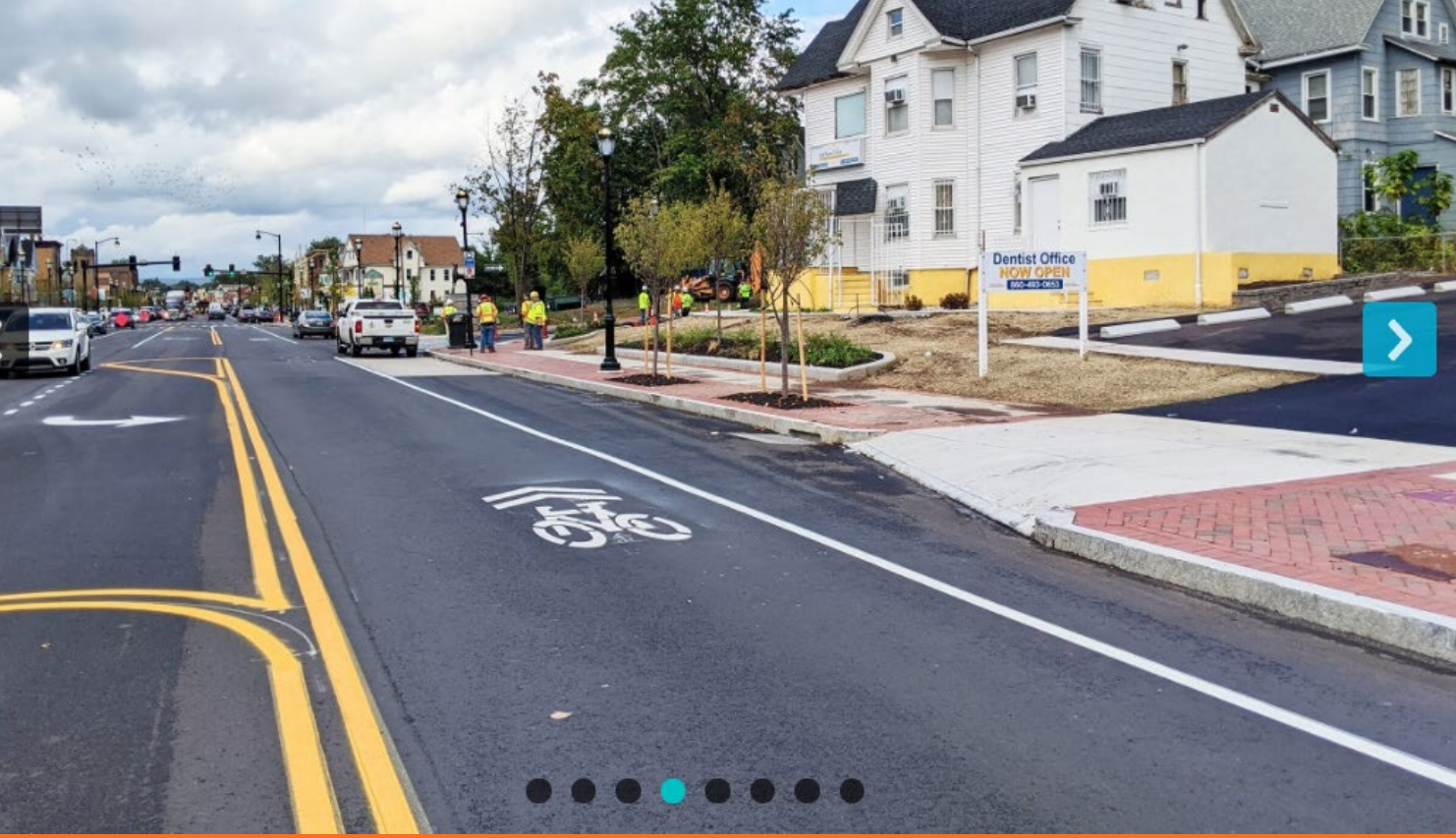


Existing Conditions Findings

Route 705 between Jones Hill Rd and South St:

- Many points of interest on west portion of study area
- Regional and local traffic
 - Route 162, Route 1 and I-95 are parallel to Route 705
- Bus 271, several bus stops



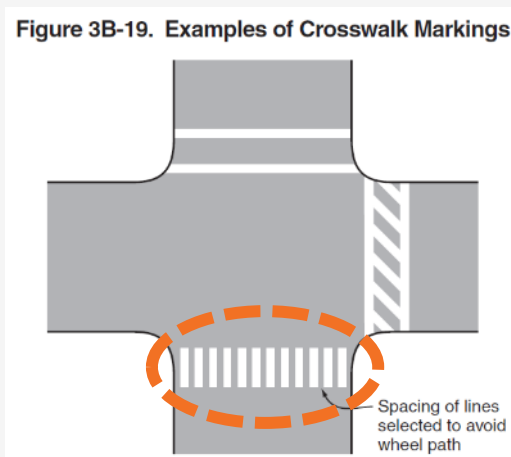


Potential Countermeasures

Pedestrian Safety Countermeasures



Sidewalks



Crosswalks



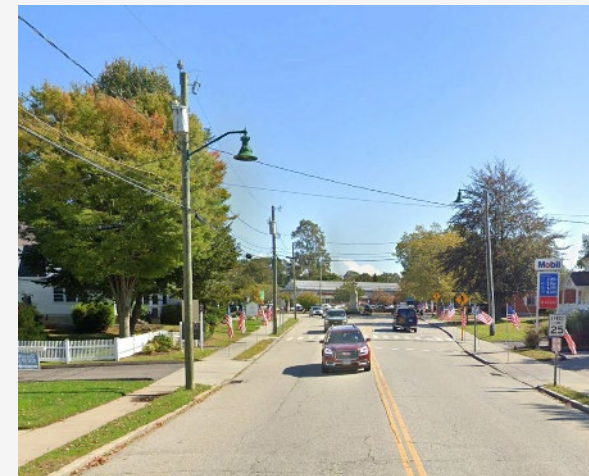
RRFB



Pedestrian refuge islands



Raised crosswalks



Pedestrian-scale lighting



Sharrows



Bike lanes



Buffered bike lanes



Sidepaths

Some countermeasures may not be appropriate on certain facilities



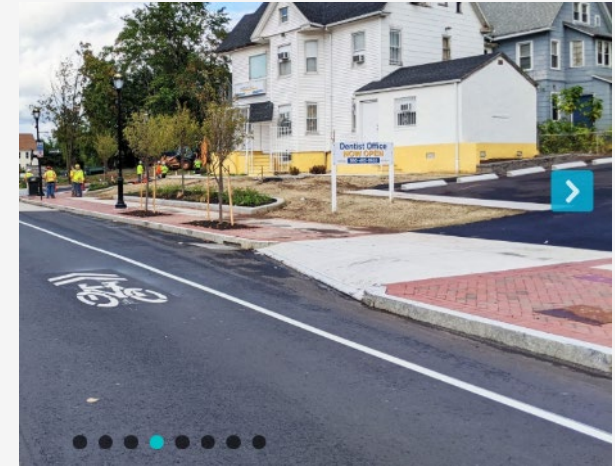
Speed Countermeasures



Lane narrowing



Signal timing



Streetscape



Median island



Street trees



Dynamic speed signs

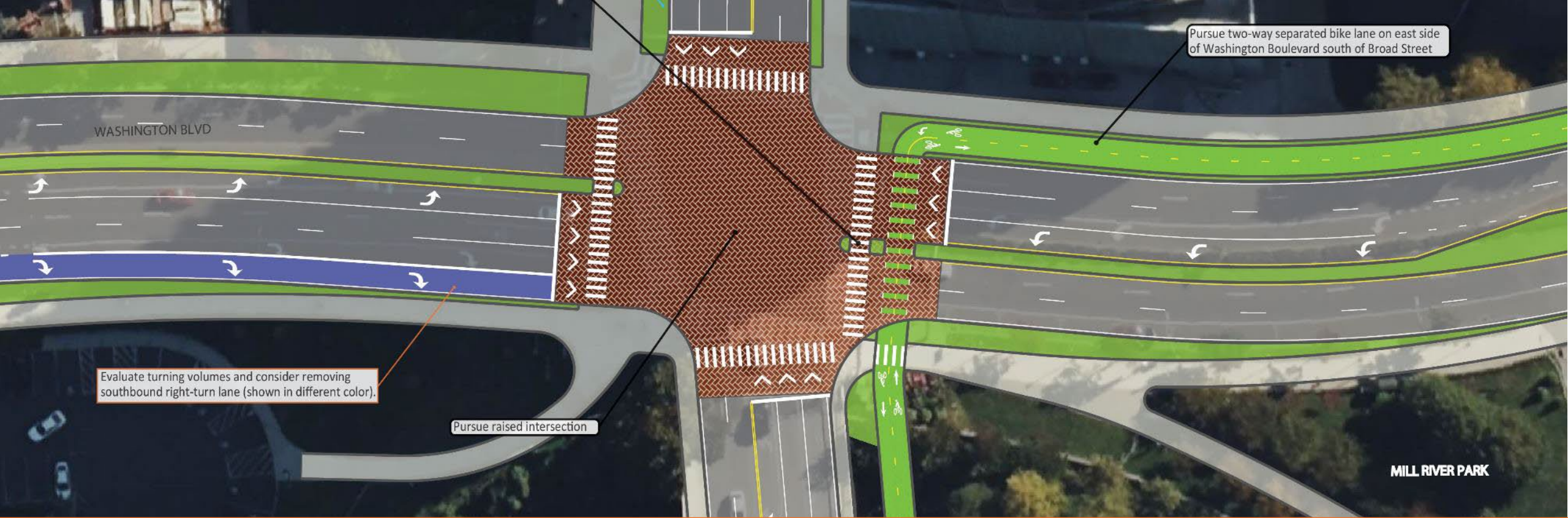
Some countermeasures may not be appropriate on certain facilities



Short medians / lateral shift



Roundabout



Discussion



Next Steps

Tomorrow's Site Visit

- Meet at designated location
- Review safety protocols, reflective vests, etc.
- Walk study area corridor
 - Assess existing conditions
 - Identify potential countermeasures
- Recap findings at post-audit discussion immediately following

Thank you!

West Haven Road Safety Audit

Site Walk / Visit

West Haven, CT Route 705

September 11th, 2024 @ 10 AM

AGENDA

- 1. Welcome and Introductions**
- 2. Route Review**
- 3. Safety Reminders**
- 4. Site Walk**
 - Distribute and discuss field packets
 - Suggestions for adding feedback
 - Identify issues and improvement opportunities (all participants)
- 5. Post-Audit Recap**
 - Discuss observations and potential improvements
 - Next steps

Participant Expectations

All participants should plan to be actively involved during the entire RSA process. Participants are encouraged to share their ideas, concerns, and comments with the study team at the pre-audit meeting and during the site visit. In addition, after the RSA site visit, participants will be asked to review and comment on the draft report to assure it is reflective of the RSA completed by the multidisciplinary team. Stakeholders' opinions are key elements to the success of the RSA.

Pre-Audit Meeting Existing Conditions Highlights

Study Area

- Route 705 Ocean Avenue from Jones Hill Road to South Street

Average Daily Traffic Volumes in 2019

- Average Daily Traffic (ADT) in the study area is highest on New Haven Av approaching the roundabout
- Next highest volumes are on Ocean Av between Jones Hill Road and Scott St



Crash Summary Heat Map

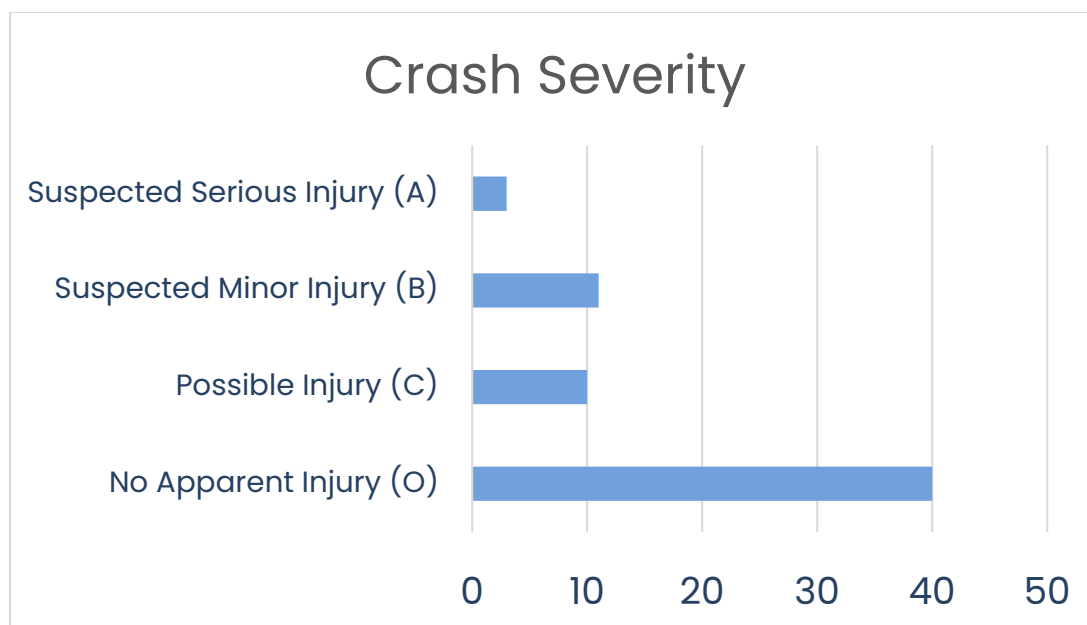
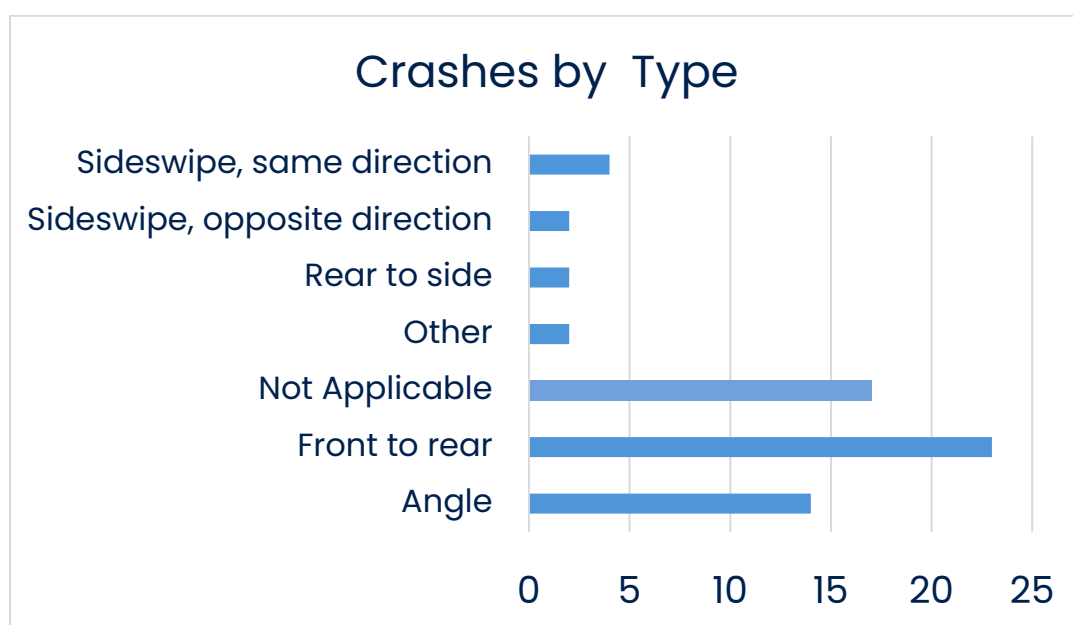
- Route 705 (Ocean Ave) and Jones Hill Rd– **4 crashes**
- Route 705 (Ocean Ave) and Nashawena Av – **3 crashes**
- Route 705 (Ocean Ave) and Anawon Av – **3 crashes**
- Route 705 (Ocean Ave) and Trumbull St – **3 crashes**
- Route 705 (Ocean Ave) and Harding St – **3 crashes**

Pedestrian Crash Summary - Years: 2018 – 2022

	No Apparent Injury (O)	Possible Injury (C)	Suspected Minor Injury (B)	Suspected Serious Injury (A)	Grand Total
Pedestrian			1		1

Crashes by Type

Most crashes are not applicable followed by angled.



RSA Field Sheet

Location 1: Route 705 and Jones Hill Rd

For each noteworthy feature that you observe along the walking route, write a number at the location on the map below.
Write a brief description of your observation for that number under the Notes section. See the attached RSA Field Considerations list for suggested items to observe.

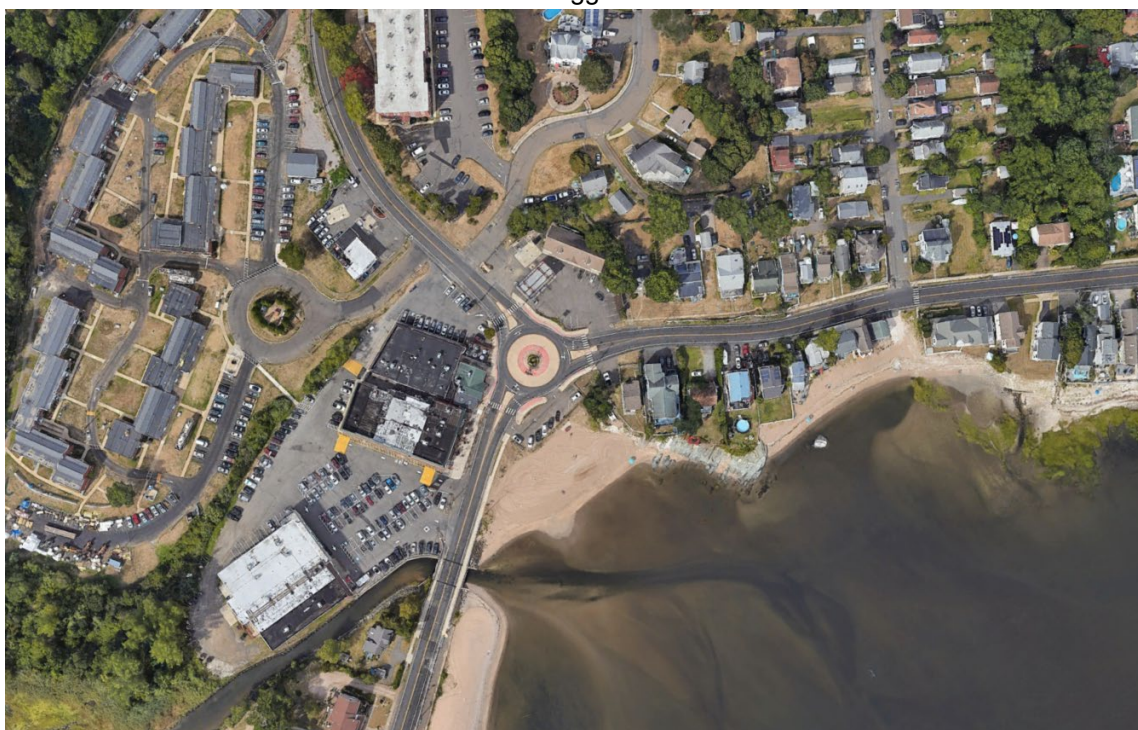


Image Credit: Google Earth Pro, accessed on 9 September 2024

Notes:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____
- 7) _____
- 8) _____
- 9) _____
- 10) _____
- 11) _____
- 12) _____

RSA Field Sheet

Location 2: Route 705 and Moris St/Harding St

For each noteworthy feature that you observe along the walking route, write a number at the location on the map below. Write a brief description of your observation for that number under the Notes section. See the attached RSA Field Considerations list for suggested items to observe.



Image Credit: Google Earth Pro, accessed on 9 September 2024

Notes:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____
- 7) _____
- 8) _____
- 9) _____
- 10) _____
- 11) _____
- 12) _____

RSA Field Sheet

Location 3: Route 705 and South Street

For each noteworthy feature that you observe along the walking route, write a number at the location on the map below. Write a brief description of your observation for that number under the Notes section. See the attached RSA Field Considerations list for suggested items to observe.



Image Credit: Google Earth Pro, accessed on 9 September 2024

Notes:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____
- 6) _____
- 7) _____
- 8) _____
- 9) _____
- 10) _____
- 11) _____
- 12) _____

RSA Field Considerations

Pedestrian Accommodations

- Sidewalks (width, grade, condition, drainage, buffer, etc.)
- Lighting
- Amenities (benches, trash receptacles, etc.)

Pedestrian Crossings

- Sufficient crossing time
- Signage
- Pavement markings
- Detectable warning devices (signal)
- Adequate sight distance
- Wheelchair accessible ramps (grades, orientation, tactile warning strips, etc.)
- Pedestrian refuge at islands

Bicycle Accommodations

- Bicycle facilities / design
- Separation from traffic
- Conflicts with on-street parking
- Pedestrian conflicts
- Bicycle signal detection
- Visibility
- Roadway speed limit
- Bicycle signage / markings
- Shared lane width
- Shoulder condition / width
- Traffic volume
- Heavy vehicles
- Pavement condition
- Debris

Road Facilities

- Access points
- Drainage
- Tapers and lane shifts
- Roadside clear zone / slopes
- Guide rails / protection systems
- Capacity issues

Road Surface Condition

- Pavement (excessive roughness or rutting, potholes, loose material)
- Edge drop-offs
- Drainage issues

Intersections

- Geometry
- Sight distances
- Traffic control devices
- Safe storage for turning vehicles

Signals

- Proper visibility
- Proper operation
- Efficient operation
- Safe placement of equipment
- Proper sight distance
- Adequate lane capacity

Signage

- Correct use
- Clear messaging
- Good placement for visibility
- Adequate retro-reflectivity

Pavement Markings

- Correct and consistent with MUTCD
- Adequate visibility
- Condition
- Snow storage
- Edgelines provided

Driver Behavior

- Compliance with speed limits
- Sight distance adequacy
- Safe passing opportunities
- Distractions
- Unaware of pedestrians / cyclists

Miscellaneous

- Weather impacts

