



COMMUNITY
connectivity program

Norwalk

Calf Pasture Beach Road – Road Safety Audit
July 19, 2016



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Acknowledgements:

OFFICE OF INTERMODAL PLANNING
BUREAU OF POLICY AND PLANNING
CONNECTICUT DEPARTMENT OF TRANSPORTATION

With assistance from AECOM Transportation Planning Group

Contents

- 1 Introduction to Calf Pasture Beach Road, Norwalk RSA..... 6
 - 1.1 Location 6
- 2 Pre-audit Assessment..... 9
 - 2.1 Pre-audit Information 9
 - 2.2 Prior Successful Effort..... 15
 - 2.3 Pre-Audit Meeting 15
- 3 RSA Assessment..... 16
 - 3.1 Field Audit Observations 16
 - 3.2 Post Audit Workshop - Key Issues 18
- 4 Recommendations 19
 - 4.1 Short Term 19
 - 4.2 Medium Term 22
 - 4.3 Long Term..... 24
 - 4.4 Summary..... 26

Figures

Figure 1. Calf Pasture Beach Road, Norwalk.....	7
Figure 2. Study Area – Regional Context.....	8
Figure 3. Crashes that Occurred in 2015 (Connecticut Crash Data Repository)	11
Figure 4. Calf Pasture Beach Road Geometrics.....	13
Figure 5. New Curb Ramps and Faded Crosswalk at Marvin St and Calf Pasture Beach Rd	16
Figure 6. Calf Pasture Beach Road and Marvin St (Looking West)	16
Figure 7. Curb Ramps at Elementary School Exit Driveway.....	17
Figure 8. Repaved Sidewalk North of Elementary School With Utility Pole Obstruction	17
Figure 9. Landscaped Median With Turning Visibility Constraints.....	17
Figure 10. Curb Ramp Without Detectable Warning Strips	18
Figure 11. Example 4-Way Stop Sign With Reflective Post.....	19
Figure 12. Example Bike Pavement Marking.....	20
Figure 13. Example “Cat track” Lane Markings	20
Figure 14. Short-Term Recommendations	21
Figure 15. Striped Crosswalk	22
Figure 16. Pedestrian Signage	22
Figure 17. Medium-Term Recommendations.....	23
Figure 18. Long-Term Recommendations	25

Tables

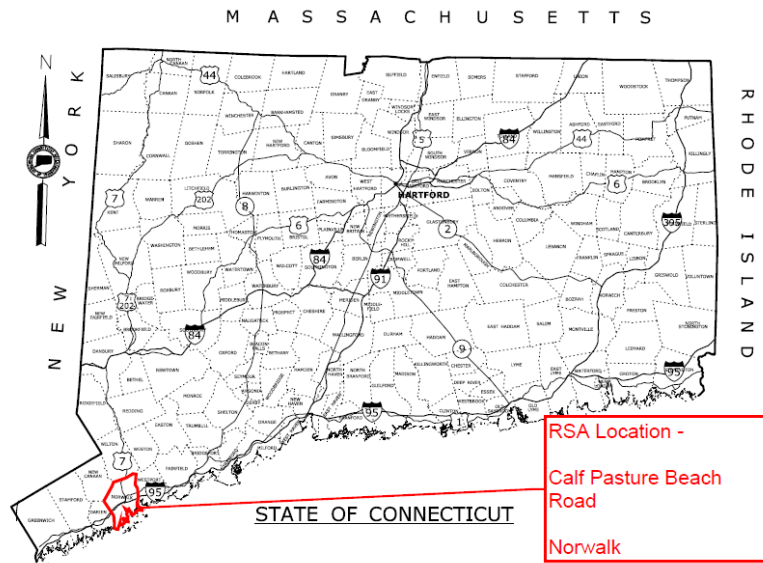
Table 1. Crash Severity 2012-2014.....	10
Table 2. Crash Type 2012-2014	10
Table 3. Street Inventory	14



The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state’s transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this program is conducting Road Safety Audits (RSA’s) at selected locations. An RSA is a formal safety assessment of the existing conditions of walking and biking routes and is intended to identify the issues that may discourage or prevent walking and bicycling. 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 or severity.

The RSA team is made up of CTDOT staff, municipal officials and staff, enforcement agents, AECOM staff, and community leaders. An 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, presence or absence of bicycle lanes or sidewalks, and social influences.

Each RSA was conducted using RSA protocols published by the FHWA. For details on this program, please refer to www.ctconnectivity.com. Prior to the site visit, area topography and land use characteristics are examined using available mapping and imagery. Potential sight distance issues, sidewalk locations, on-street and off-street parking, and bicycle facilities are also investigated using available resources. The site visit includes a “Pre-Audit” meeting, the “Field Audit” itself, and a “Post-Audit” meeting to discuss the field observations and formulate recommendations. This procedure is discussed in the following sections.



1 Introduction to Calf Pasture Beach Road, Norwalk RSA

The City of Norwalk submitted an application to complete an RSA on Calf Pasture Beach Road from Marvin Street to Calf Pasture Beach Park to improve safety for pedestrians and bicyclists travelling along this residential corridor. Calf Pasture Beach Road provides direct access to Calf Pasture Beach Park and attracts a high volume of bicyclists and pedestrians visiting the seasonal recreation areas. There is a lack of sufficient size sidewalks and bike lanes along the corridor and limited pedestrian crosswalks, resulting in an environment with limited pedestrian and cyclist accessibility. This section of roadway also contains the entrance and exit for Marvin Elementary School.

The City of Norwalk’s application contained information on traffic volumes, crash data, and mapping of the corridor. The application and supporting documentation are included in Appendix A.

1.1 Location

The RSA site is the section of Calf Pasture Beach Road between Marvin Street and Calf Pasture Beach Park (Figure 1).

Calf Pasture Beach Road consists of a two travel lanes in each direction, separated by a physical median with breaks that allow U-turns and access to and from cross streets. The median begins approximately 300 feet north of the Marvin Elementary School traffic signal, and continues south for the length of the study corridor. South of Island Drive, the median widens from four feet wide to approximately 12 feet wide and is landscaped. There are no shoulders on either side of the road for the length of the study corridor.

Side streets and major driveways are controlled by side-street stop signs. The intersection at Marvin Street is all-way stop controlled, with a free right-turn lane eastbound. The exit driveway for Marvin Elementary School is signalized, and the Comber Drive intersection at the entrance to the park has stop controls for eastbound and southbound traffic. There are crosswalks at the eastern leg of the Marvin Street intersection and the northern and eastern legs of the Marvin Elementary School intersection. There are no other painted crosswalks in the study corridor.

Figure 2 depicts the RSA study area in its regional context.

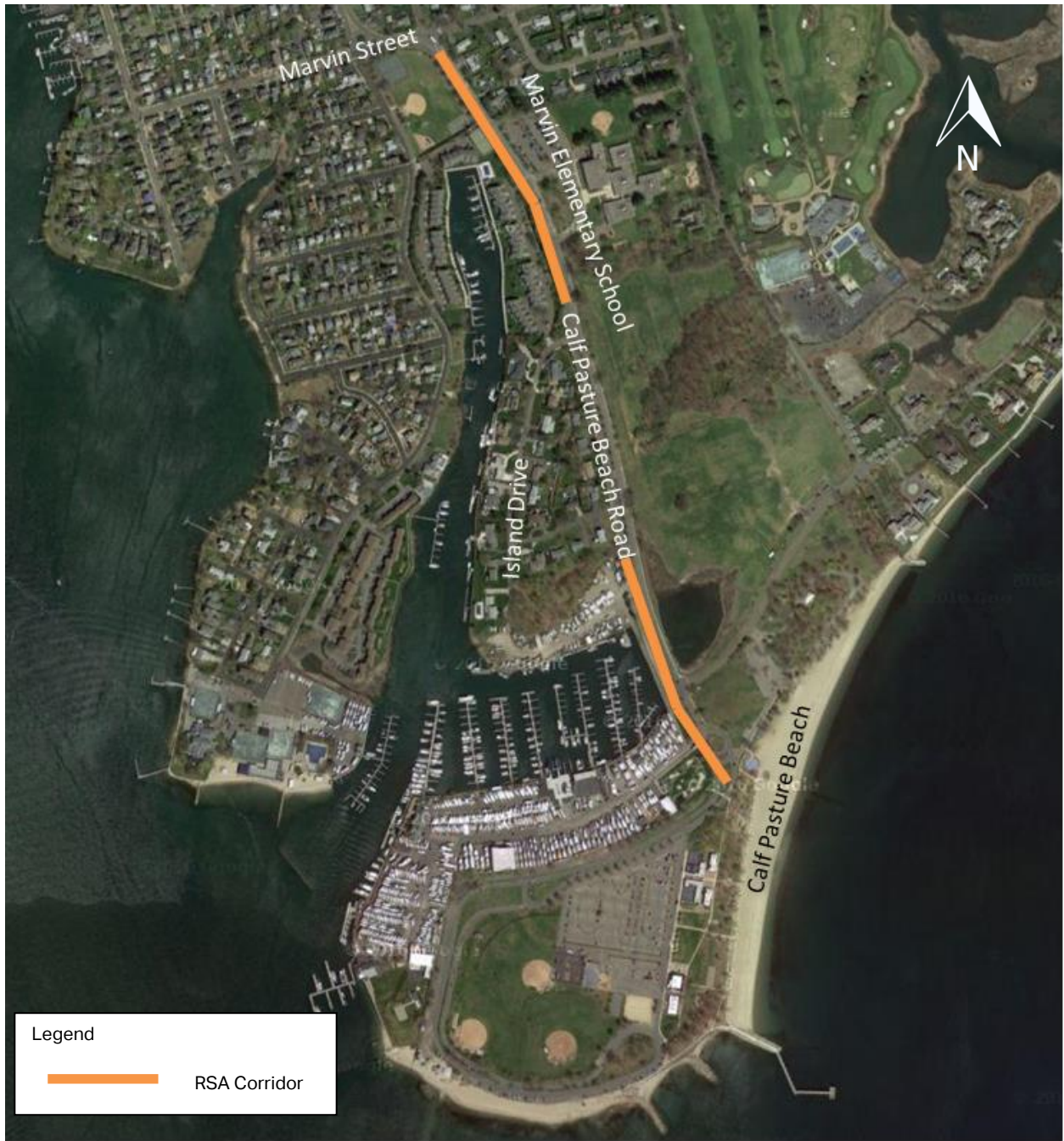


Figure 1. Calf Pasture Beach Road, Norwalk

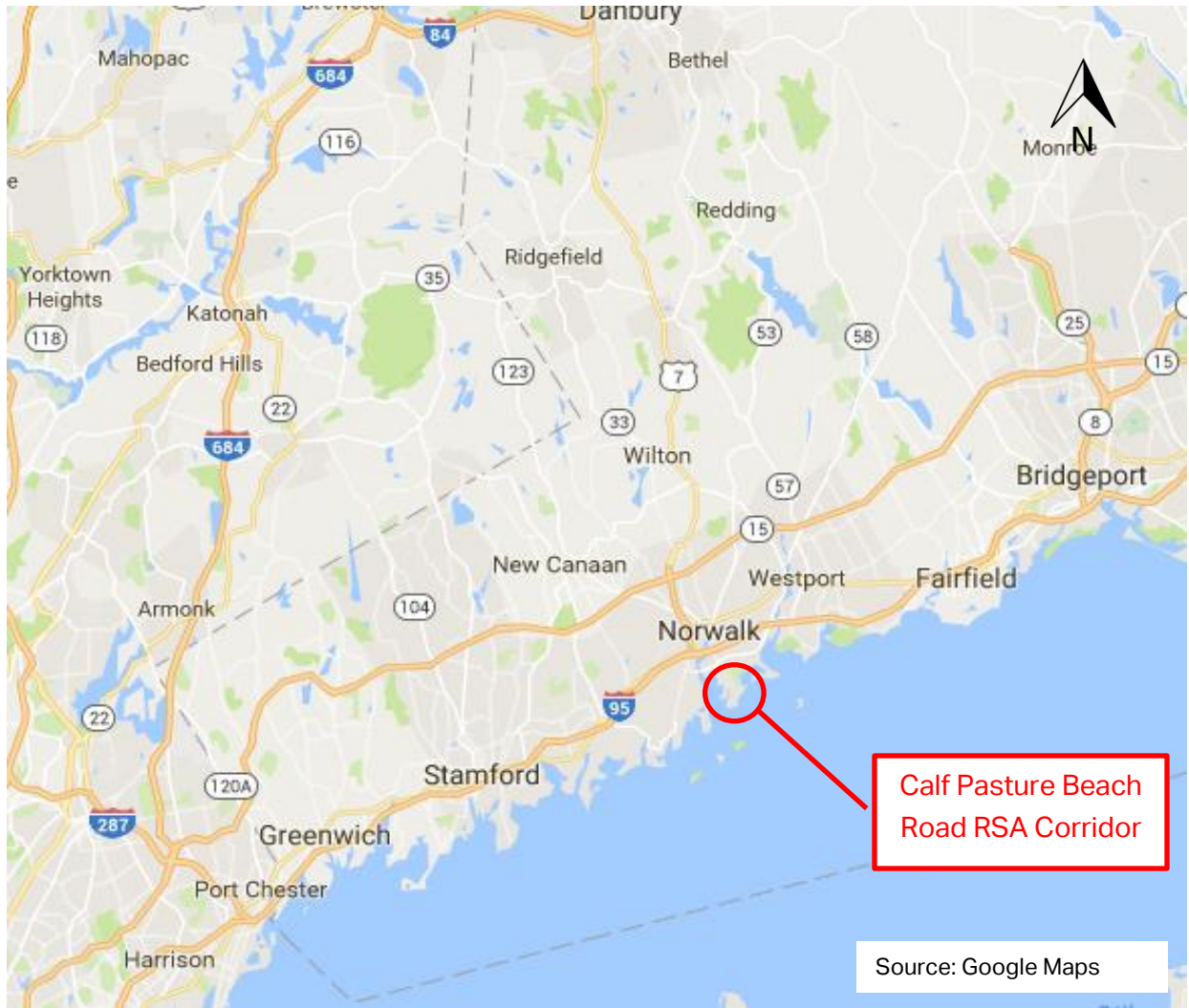


Figure 2. Study Area – Regional Context

2 Pre-audit Assessment

2.1 Pre-audit Information

Average Daily Traffic (ADT) counts were collected and provided by the City of Norwalk. Calf Pasture Beach Road terminates at the beach, and traffic going into the beach is assumed to exit the same day. The southbound daily count along the corridor ranged from 2,971 to 4,873 vehicles. Hourly traffic volume ranged from 188 to 366 vehicles per hour in the AM peak and from 231 to 718 vehicles per hour in the PM peak. The ADT counts are provided in the appendix of this report. The one-way daily traffic along Calf Pasture Beach Road is a moderate volume to be served by two travel lanes per direction.

Table 1 and Table 2, on the following page, display crash statistics from 2012-2014, along the RSA corridor. Table 1 shows the severity of crashes and the associated number of crashes equal to that severity. Table 2 shows the manner of collision with the associated number of crashes.

As seen in Table 1, 60% or nine of the 15 crashes reported from 2012 through 2014 were categorized as property damage only. An injury occurred in one-third or five of the crashes and one crash resulted in a fatality. Table 2 depicts the manner of collision and shows that the largest share of crashes were with a fixed object (33 percent). One crash occurred with a pedestrian and no crashes involved bicyclists. The data shows that, in general, crash rates for vehicles and pedestrians are low along the corridor.

Figure 3 displays the locations of crashes that occurred in the vicinity of the study corridor during 2015. A cluster of crashes is shown at the traffic circle serving Gregory Boulevard, Marvin Street and 5th Street. The traffic circle is located approximately 300 feet west of the northern terminus of Calf Pasture Beach Road, and serves traffic travel to Calf Pasture Beach Road via Marvin Street. There were two crashes along Calf Pasture Beach Road in 2015: one was approximately 500 feet north of the beach entrance gate, and the other was within the park.

Severity Type	Number of Accidents	
Property Damage Only	9	60%
Injury (No fatality)	5	33%
Fatality	1	7%
Total	15	

Table 1. Crash Severity 2012-2014

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	0	0%
Sideswipe-Same Direction	2	13%
Rear-end	1	7%
Turning-Intersecting Paths	1	7%
Turning-Opposite Direction	0	0%
Fixed Object	5	33%
Backing	1	7%
Angle	0	0%
Turning-Same Direction	3	20%
Moving Object	0	0%
Parking	0	0%
Pedestrian	1	7%
Overturn	1	7%
Head-on	0	0%
Sideswipe-Opposite Direction	0	0%
Miscellaneous- Non Collision	0	0%
Total	15	

Table 2. Crash Type 2012-2014

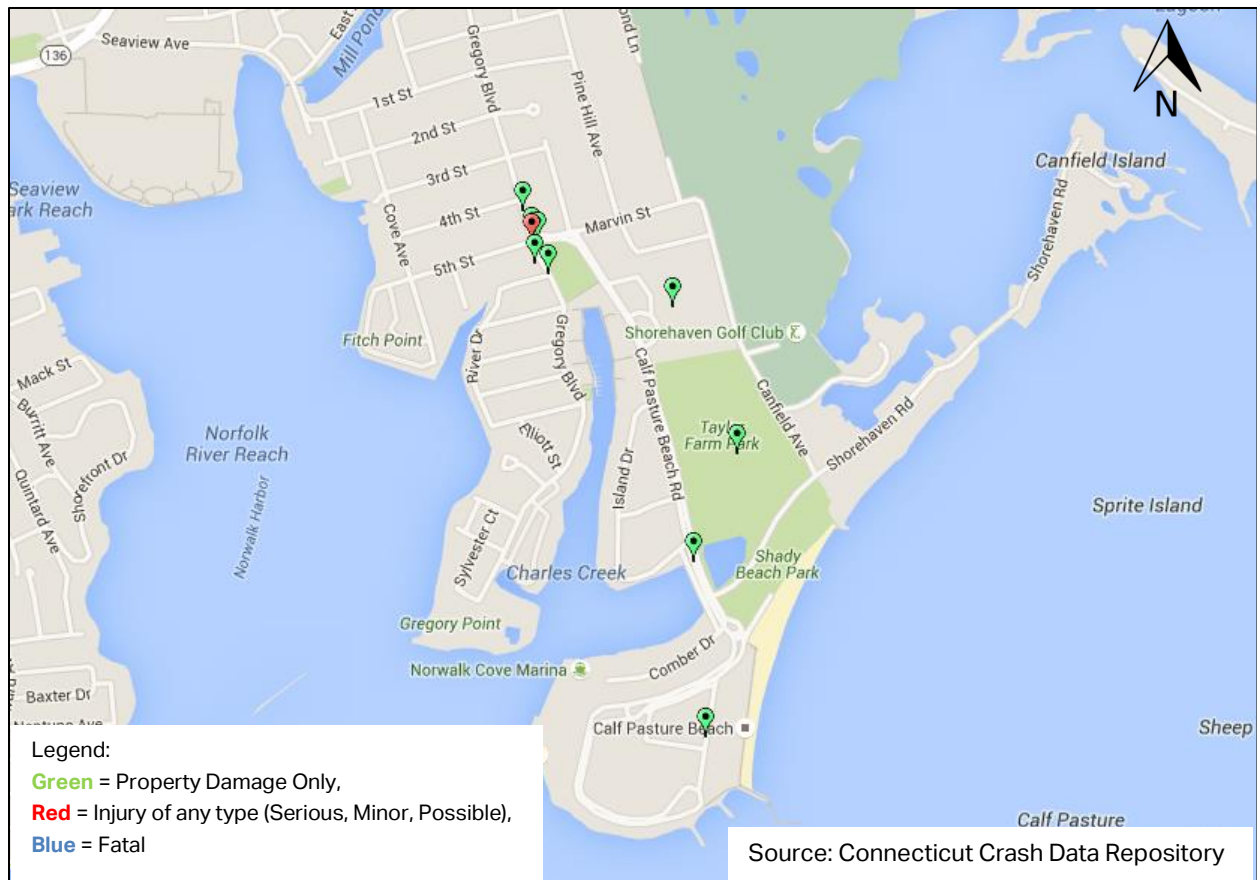


Figure 3. Crashes that Occurred in 2015 (Connecticut Crash Data Repository)

Figure 4 shows the study roadway features and geometry. Roadway geometric data is further described in Table 3. There are sidewalks on both sides of Calf Pasture Beach Road that are in fair to good condition. Many of the sidewalks have newly installed handicap accessible curb ramps. "Share the Road" signage for bicyclists is also provided throughout the length of the corridor.

Sidewalk widths along Calf Pasture Beach Road vary between the northern portion of the road and the southern section. The change in sidewalk type and width occurs at the Marvin Elementary School traffic signal. Along the northern portion of Calf Pasture Beach Road, between Marvin Street and the school exit, the sidewalks are four feet in width and have been recently paved with asphalt. There are also numerous utility poles obstructing the already narrow sidewalks in the northern section. South of the entrance, the sidewalk is between two and three feet in width and is a concrete surface that shows damage in various places.

There are many sections of Calf Pasture Beach Road that have breaks in the center median, to allow for U-turns. South of Island Drive, the large landscaped median obstructs the line-of sight for vehicles trying to make a U-turn. Along this stretch of Calf Pasture Beach Road,

there is a break in the median approximately every 300 feet, amounting to six breaks between Island Drive and the beach entrance. Of these, only two (Island Drive and Canfield Avenue) are providing side street access.



Figure 4. Calf Pasture Beach Road Geometrics

Norwalk – Calf Pasture Beach Road

Street Inventory

Street	Route	Lanes	Ave. Lane Width	Sidewalk				Curb	Parking	Shoulder	Ramps	
				Side	Type	Width	Condition*				Exist	Complaint
Calf Pasture Beach Road between Marvin Street and Marvin Elementary School Exit Driveway		4	10'-14'	E/W	Asphalt	4'	Good	Yes	No	No	No	No
Calf Pasture Beach Road between entrance to Marvin Elementary School and Comber Drive		4	10'-14'	E/W	Concrete	2-3'	Fair	Yes	No	No	Yes	Yes

***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.**

Table 3. Street Inventory

2.2 Prior Successful Effort

Calf Pasture Beach Road in Norwalk generally has sidewalks located on both sides of the street. Existing crosswalks have ladder-style markings for high visibility and advanced warning signs are utilized. These sidewalks continue on Calf Pasture Beach Road from the intersection with Marvin Street to the beach entrance gate, as previously described. Recently the sidewalks on the north portion of Calf Pasture Beach Road were widened from Marvin Street to Marvin Elementary School.

School zone signing is in place for Marvin Elementary School. In addition, the crosswalk at the signalized intersection of Calf Pasture Beach Road and the Marvin Elementary School exit has an exclusive pedestrian signal phase. Prior to the recent repaving, the length of Calf Pasture Beach Road had bike sharrows painted for both directions of travel to accommodate the recreational bike presence on this road. The City of Norwalk installed temporary traffic counters at the time of the audit to determine ADT for Calf Pasture Beach Road. At the time of the audit, striping was not present on Calf Pasture Beach Road and the City plans to install bike lanes along the roadway.

2.3 Pre-Audit Meeting

The RSA was conducted on July 19, 2016. The Pre-Audit meeting was held at 9:00 AM in the Town Hall located at 125 East Avenue in Norwalk.

The RSA Team was comprised of staff from AECOM, staff from CTDOT, representatives from Public Works, Engineering, and WestCOG. The complete list of attendees can be found in Appendix B.

Several items were presented for general information prior to conducting the Audit in the field:

- The City of Norwalk's future goals for Calf Pasture Beach Road focus on creating a more comfortable environment for multi-modal travel with the following goals:
 - Reducing vehicle speeds.
 - Striping four foot bike lanes and ten foot travel lanes.
 - Evaluating potential to reduce to one lane of travel in each direction and provide dedicated bike lanes.
- There are concerns with queueing during peak beach usage.
- There is a recreational bike presence on Calf Pasture Beach Road.
- The City of Norwalk recently widened the sidewalks between Marvin Street and Marvin Elementary School on Calf Pasture Beach Road to about four feet.
- There are utility poles in the middle of the sidewalk. The City of Norwalk is in talks with the power companies to have the utility poles relocated.

- The only established crosswalk on Calf Pasture Beach Road before the beach entrance gate is located at the signalized intersection with the Marvin Elementary School exit.
- Calf Pasture Beach Road has many recreational users and it may be in need of additional midblock crosswalks.
- The Norwalk River Valley Trail is planned to extend to Calf Pasture Beach by way of a pedestrian bridge.
- Marvin Street serves people from local neighborhoods walking to the nearby parks, the beach and dog park.
- The traffic signal at Marvin Elementary School is currently pre-timed while the school driveway is under reconstruction, but will be returned to actuated phases with existing loop detectors once the construction is completed. The intersection was initially installed as a traffic calming measure by detecting vehicle speed.
- The trees and bushes in the median along Calf Pasture Beach Road appear to block visibility for drivers making left turns or U-turns at curb cuts.
- All traffic going to Calf Pasture Beach uses Calf Pasture Beach Road.

3 RSA Assessment

3.1 Field Audit Observations

Intersection of Calf Pasture Beach Road and Marvin Street:

- Only the westbound approach has a striped crosswalk. The paint on this crosswalk is in poor condition (Figure 5). There is no crosswalk for the Ludlow Manor approach. The Calf Pasture Beach Road and west Marvin Street approaches are missing crosswalks and ADA ramps.
- A channelizing island on the northbound approach was recently removed from the intersection.
- This intersection is large and vehicles, bikers and pedestrians may find it challenging to navigate (Figure 6).
- The southwest corner of the intersection has a large turn radius which may encourage vehicles to make the free right turn from Marvin Street onto Calf Pasture Beach Road at higher speeds.



Figure 5. New Curb Ramps and Faded Crosswalk at Marvin St and Calf Pasture Beach Rd



Figure 6. Calf Pasture Beach Road and Marvin St (Looking West)

- The stop sign for the westbound Marvin Street approach is partially blocked by branches on the property of 3 Marvin Street.
- Calf Pasture Beach Road is about 51 feet wide with 14 and 10 foot travel lanes and a 3 foot median.

Calf Pasture Beach Road in the vicinity of Marvin Elementary School:

- There is no crosswalk striped across the north exit to Marvin Elementary School (Figure 7).
- Utility poles are located in the middle of the sidewalk, obstructing the path for pedestrians (Figure 8).

Calf Pasture Beach Road near Beach Entrance:

- In the vicinity of the gate entrance the northbound two lanes of travel are a total of 23 feet in width. It was noted that this would allow room for an eight foot bike lane with a buffer and a 15 foot travel lane.
- The median curb cuts on Calf Pasture Beach Road may not give drivers adequate visibility. (Figure 9)
 - The curb cuts invite unnecessary U-turns.
 - The City could close all median curb cuts that do not serve driveways or side streets.
 - Median curb cuts close driveways could be relocated to be aligned with driveways.
 - This can be accomplished with signage and paint in the short term.



Figure 7. Curb Ramps at Elementary School Exit Driveway



Figure 8. Repaved Sidewalk North of Elementary School With Utility Pole Obstruction



Figure 9. Landscaped Median With Turning Visibility Constraints

- Spar Road is a strategic location for an additional crosswalk, to serve the nearby dog park entrance. The crosswalk could be located on north side of Spar Road so pedestrian crossings do not conflict with left turning vehicles from Spar Road. A sidewalk could be installed across the median.
- The sidewalk on the east side of Calf Pasture Beach Road ends abruptly at the beach gate.
- The handicap ramp at Canfield Avenue directs pedestrians at a 45 degree angle into the road instead of towards the other pedestrian ramp. There is no crosswalk on Canfield Avenue.



Figure 10. Curb Ramp Without Detectable Warning Strips

3.2 Post Audit Workshop - Key Issues

1. Due to branches from trees on the property of 3 Marvin Street, the stop sign is partially blocked and may be difficult for driver approaching the intersection of Calf Pasture Beach Road and Marvin Street to see.
2. Curb cuts in the median on Calf Pasture Beach Road invite drivers to make left turns and unnecessary U turns with limited visibility. The limited visibility is caused by the trees and utility poles on the landscaped median.
3. The Marvin Street and Calf Pasture Beach Road intersection lacks crosswalks for three approaches and handicap ramps for two approaches.
4. The wide turn radius and lack of a stop sign for the right turn from Marvin Street onto Calf Pasture Beach Road has a large turn radius. Without a stop sign, vehicles can continue around this turn at high speeds without needing to slow down. This would make it very difficult for pedestrians to cross this approach at this time.
5. The only crosswalks on Calf Pasture Beach Road are at the signalized intersection with Marvin Elementary School and between the beach gate and parking lot. This makes it difficult for pedestrians to access the other side of the street. This restricts pedestrian accessibility on the road and encourages illegal midblock crossings.

6. Other than the previously striped bike sharrows, there is not a true bike facility on Calf Pasture Beach Road. Considering the high recreational biker traffic, a more robust bike facility would benefit riders and improve bicycle accessibility to the beach.
7. The sidewalk on the east side of Calf Pasture Beach Road ends at the beach entrance and does not provide pedestrians a means to continue on a sidewalk. There is no crosswalk leading to the sidewalk on the west side of the road. This may force pedestrians into the road or to walk on the grass.

4 Recommendations

From the discussions during the Post-Audit meeting, the RSA team compiled a set of recommendations that are divided into short-term, mid-term, and long-term categories. For the purposes of the RSA, **Short-term** is understood to mean modifications that can be expected to be completed very quickly, perhaps within six months and certainly in less than a year if funding is available. These include relatively low-cost alternatives, such as striping and signing, and items that do not require additional study, design, or investigation (such as right-of-way acquisition). **Mid-term** recommendations may be more costly and require establishment of a funding source, or they may need some additional study or design in order to be accomplished. Nonetheless, they are relatively quick turn-around items, and should not require significant lengths of time before they can be implemented. Generally, they should be completed within a window of eighteen months to two years if funding is available. **Long-term** improvements are those that require substantial study and engineering, and may require significant funding mechanisms and/or right-of-way acquisition. These projects generally fall into a horizon of two or more years when funding is available.

4.1 Short Term

1. Cut back the tree branches blocking the stop sign on the westbound Marvin Street approach at the intersection with Calf Pasture Beach Road.
2. Replace the stop sign post with a red reflective post so even if branches do not get maintained regularly the stop sign can be more visible to drivers. (Figure 11).
3. Stripe a bike lane on North and South bound Calf Pasture Beach Road with water based paint for



Figure 11. Example 4-Way Stop Sign With Reflective Post

remainder of summer season. Testing a bike lane for the summer could allow for potential single-lane redesign in near-term. (Figure 12).

4. Stripe "cat" track pavement markings (white line extensions) to guide vehicles on the desired paths through the intersection of Calf Pasture Beach Road and Marvin Street. At minimum, a centerline cat track should be striped east to west along Marvin Street. (Figure 13).
5. Use paint and signage to block U turns and left turns at unwanted median curb cuts along the corridor. Curb cuts should be maintained at driveways and side streets.

Figure 14 depicts these recommendations.



Figure 12. Example Bike Pavement Marking



Figure 13. Example "Cat track" Lane Markings



Figure 14. Short-Term Recommendations

4.2 Medium Term

1. Reduce the radius on southwest corner of Marvin Street and Calf Pasture Beach Road by adding a painted buffer and install a stop control for the eastbound right turns. Stripe a crosswalk across south Calf Pasture Beach Road approach (Figure 15).
2. Move the stop sign on the Calf Pasture Beach Road approach to Marvin Street closer to the intersection.
3. Stripe Calf Pasture Beach Road as one lane of travel in each direction with the exception of 50 to 100 feet before the beach entrance gate.
4. New midblock crossings:
 - a. Install a midblock crosswalk across Calf Pasture Beach Road from Spar Road to the dog park entrance. The crosswalk can be placed on the north side of Spar Road in order to not create a pedestrian vehicle conflict with left turn movements. A sidewalk across the median should be provided for pedestrians.
 - b. Install a midblock crosswalk by the gate entrance to solve the discontinuous sidewalk on east side of Calf Pasture Beach Road. Consider rectangular rapid flashing beacon for additional warning (Figure 16).
5. Install curbs in order to fully block off the median curb cuts where vehicles make U turns and left turns. Curb cuts should be maintained at driveways and side streets. Relocate curb cuts to align with driveways better where they are close.
6. Relocate ADA ramps and crosswalk across Canfield Avenue to better direct pedestrians and provide a shorter crossing.



Figure 15. Striped Crosswalk



Figure 16. Pedestrian Signage

Figure 17 depicts some of the recommendations along Main Street.



Figure 17. Medium-Term Recommendations

4.3 Long Term

1. Reconstruct intersection of Marvin Street and Calf Pasture Beach Road to permanently convert the eastbound right turn slip lane to stop-controlled with a standard turn radius. Expand and extend sidewalks and add crosswalks on all approaches to provide continuous pedestrian and bicycle access through the intersection and to Calf Pasture Beach Road.
2. Install a permanent bike facility and convert the majority of Calf Pasture Beach Road to one lane of travel in each direction.
3. Extend sidewalk on the east side of Calf Pasture Beach Road to the beach.
4. Explore the complete removal of the center median on Calf Pasture Beach Road and relocation of utility poles to provide the best opportunity for a complete and multi-modal street.

Figure 18 depicts some of these recommendations.



Figure 18. Long-Term Recommendations

4.4 Summary

This report documents the observations, discussions and recommendations developed during the successful completion of the City of Norwalk RSA. It provides Norwalk with an outlined strategy to improve the transportation network on Calf Pasture Beach Road between Marvin Street and Calf Pasture Beach, particularly focusing on pedestrians and cyclists. Moving forward, Norwalk may use this report to prepare strategies for funding and implementing the improvements, and as a tool to plan for including these recommendations into future development along Calf Pasture Beach Road.



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Appendix A



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Welcome to the Community Connectivity Program Application



Please fill in the following information to provide the Audit team leaders with a comprehensive description of the area contained in this application.

1. Applicant contact information

Name

Title

Email Address

Telephone Number

2. Location information

Address

Description

City / Town

3. Roadway type
(Please select all that apply)

State road

Local road

Private Road

Other (please specify)

4. Zoning
(Please select all that apply)

Industrial

Residential

Commercial

Mixed Use

Retail

N/A (not applicable)

Other (please specify)

5. Approximate mile radius around the location

1/8 mile

Other (Please Specify)

6. Community Sites
(Please select all that apply)

Community Centers

Business Districts

Restaurant/Bar Districts

Churches

Housing Complexes

Proximity to Schools

Tourist Locations (examples – Casino, Malls, Parks, Aquarium, etc...)

N/A (not applicable)

Other (please specify)

7. Employment Facilities
(Retail, Industrial, etc...)

Yes

No

If Yes please describe (please specify)

8. Educational facilities
(Please select all that apply)

Public, Parochial, Private Schools (more than 1 school within a ½ mile)

University / Community Colleges

N/A (not applicable)

Other (please specify)

9. Transit facilities
(Please select all that apply)

Bus

Rail

Ferry

Airport

Park and Ride Lot

N/A (not applicable)

Other (please specify)

10. Safety Concerns
(Please select all that apply)

Traffic (volumes & speed)

Collisions

Sidewalks

Traffic Signals

Traffic Signs

Parking Restrictions / Additions

Drainage

ADA Accommodations

Agricultural & Live Stock crossing

Maintenance issues (cutting grass, leaves, snow removal)

N/A (not applicable)

Other (please specify)

11. Are there any past, current or future transportation/economic development projects near this location (i.e. Federal, State or local projects)?

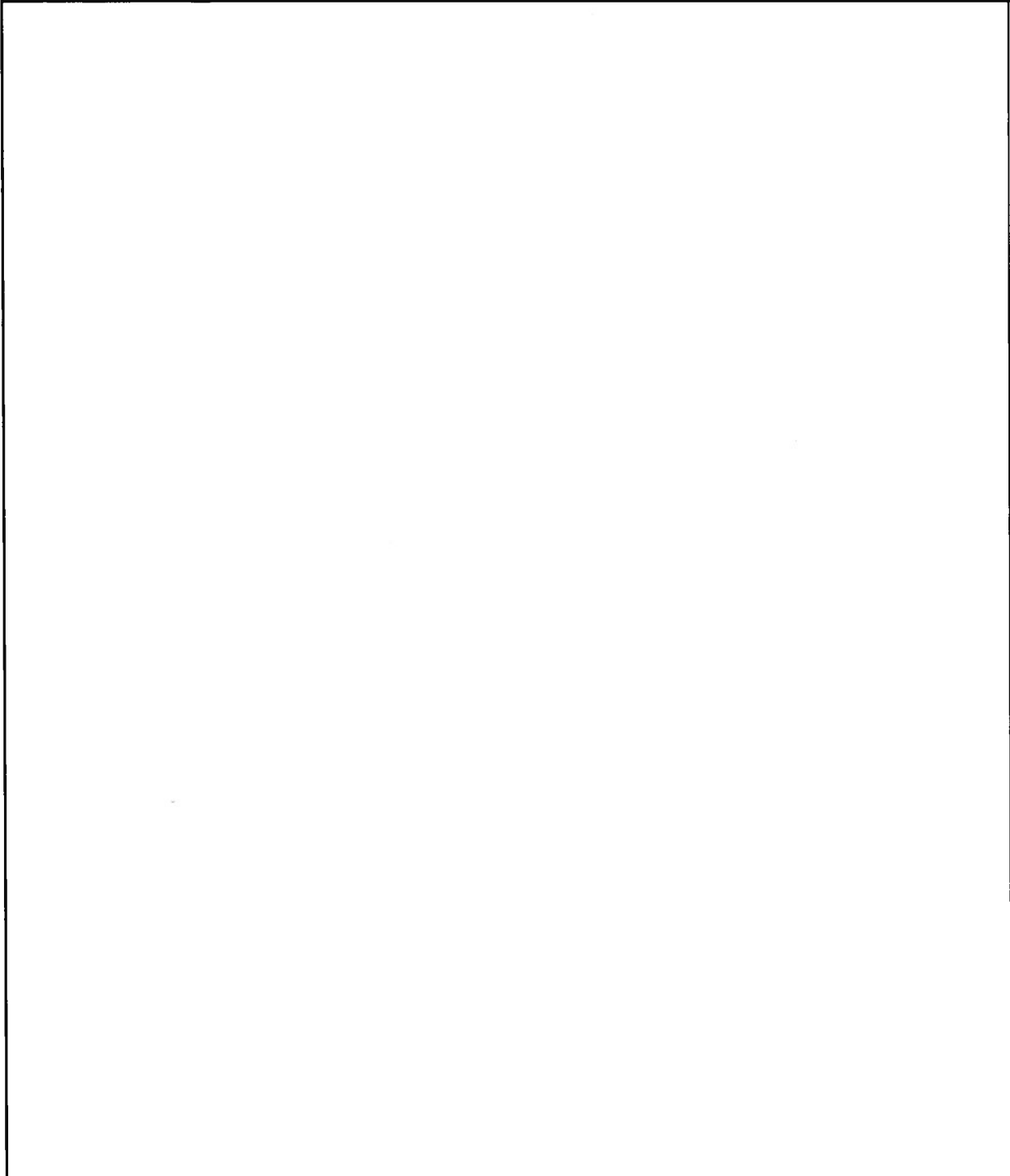
No

If Yes please describe and list all projects.

12. Environmental Concerns:

Waterway (rivers, lakes, ocean, etc...)

If Yes please describe and list.



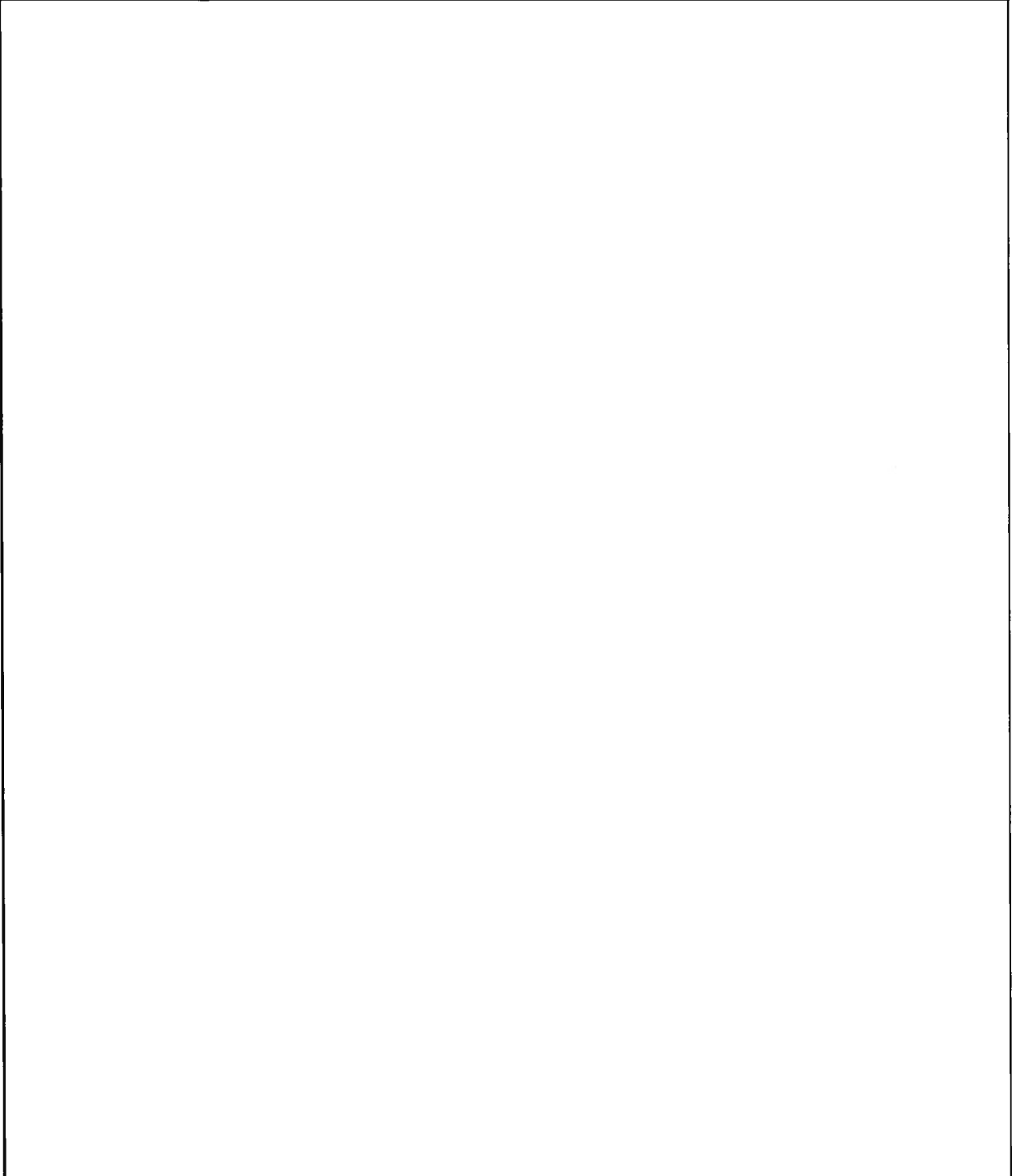
13. Please explain why this location should be considered for an RSA

In the summer time, there is a high volume of bicyclists and pedestrian visiting the area and there is a lack of sufficient size walks and bike lanes

14. Are there plans to expand the area?

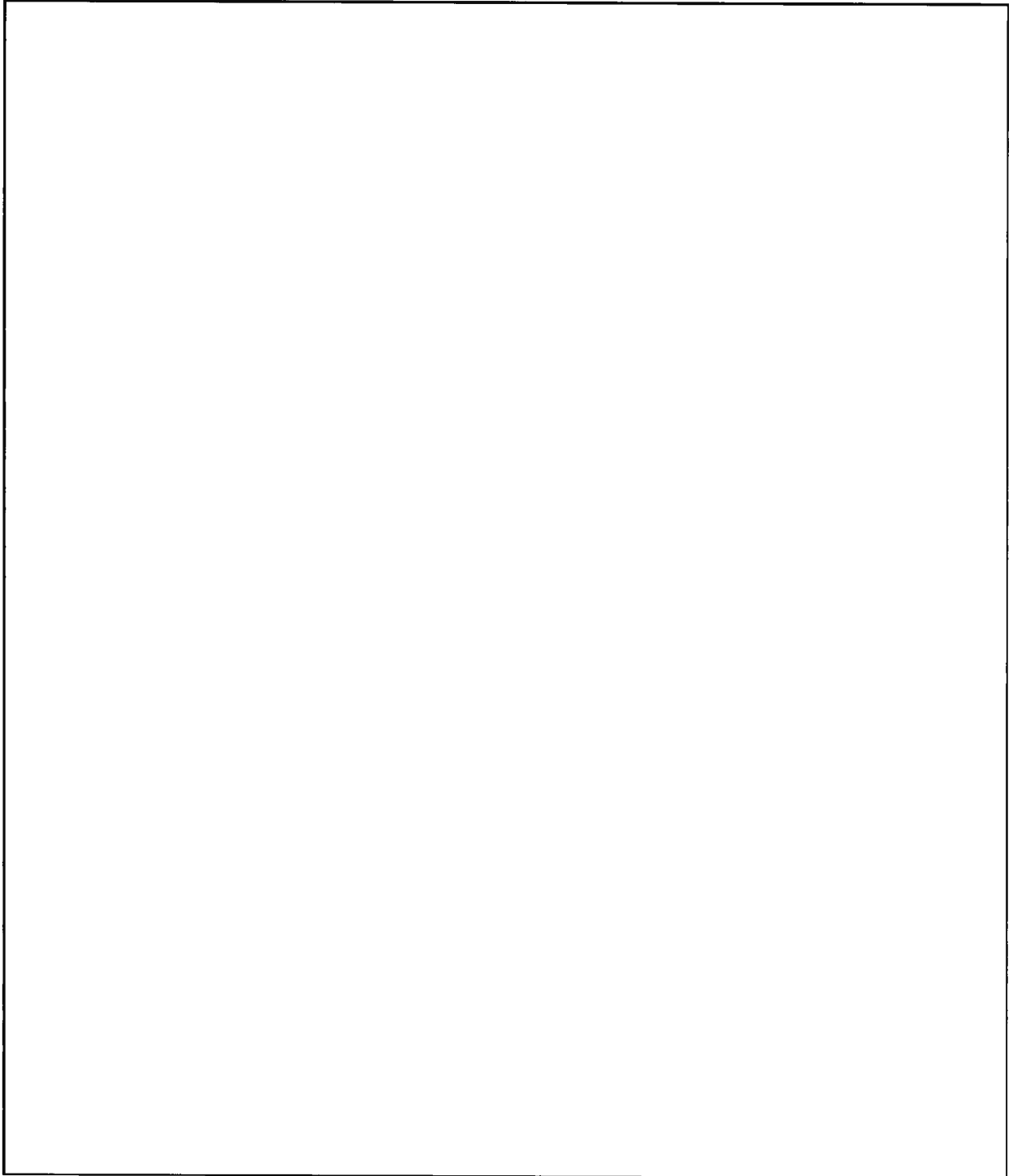
(Transportation Oriented Development, Economic Development, housing, etc...)

No



15. Any other pertinent information that is unique to this location?

No

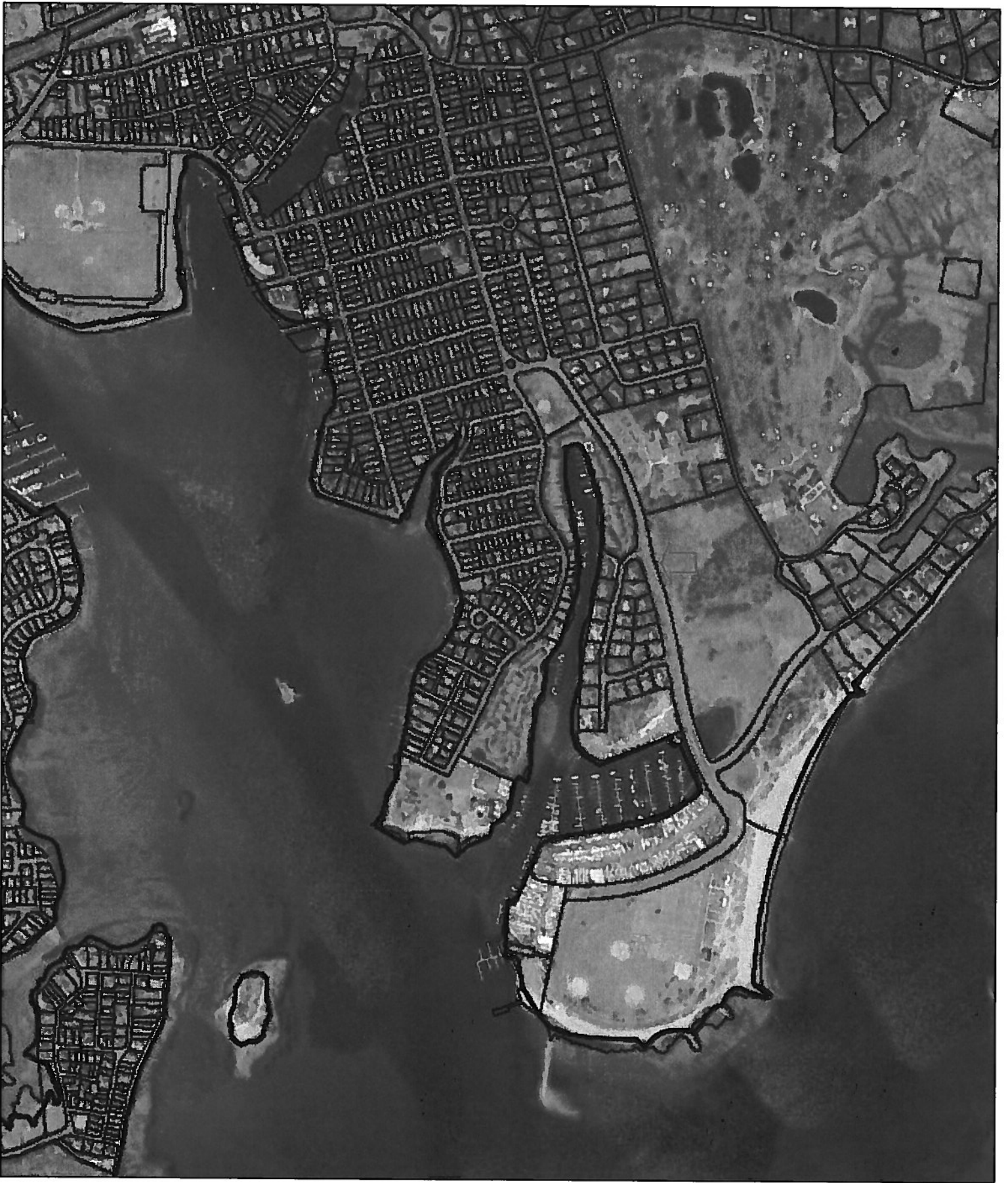


Thank you for completing the Community Connectivity application.

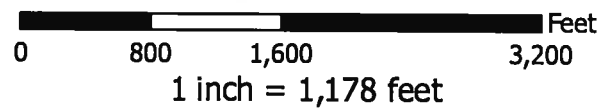
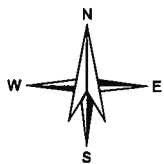
Please click on the "submit button" below and include the following attachments

- 1 Location map (google, GIS) **(Required)**
- 2 Collision data (If available)
- 3 Traffic data (ADT or VMT) (If available)
- 4 Pedestrian/bicycle data (If available)





Calf Pasture Beach Road





Peter Libre <librepeter@gmail.com>

Beach Road serious crashes 1973-present: 4 fatalities; 8 near tragedies (roll overs/stone wall crashes/ utility pole crashes)

2 messages

Peter Libre <librepeter@gmail.com>

Thu, Feb 25, 2016 at 8:29 PM

To: Michelle Maggio <michelle@maggiofamily.com>, John Kydes <johnkydes4norwalk@gmail.com>

<https://news.google.com/newspapers?nid=1916&dat=19760815&id=mucgAAAIBA&sjid=CG4FAAAAIBA&pg=6061,657822&hl=en>
1973 car flipped, 6 seriously injured, 2 dead

<http://ct-norwalk.civicplus.com/archives/159/TA%20Agenda%209-12.pdf>
1979 one teen crashed into gate, died

<https://news.google.com/newspapers?nid=1916&dat=19890329&id=niliAAAIBA&sjid=fXQFAAAAIBA&pg=6236,4869521&hl=en>
1989 18 year old rollover into Marvin School wall, survived

✓ <https://news.google.com/newspapers?nid=1916&dat=19900202&id=hyBJAAAIBA&sjid=bQYNAAAIBA&pg=4218,198813&hl=en>
1990 VW Rabbit broke utility pole in two, two 20 year olds survived

<https://news.google.com/newspapers?nid=1916&dat=19960517&id=hjBJAAAIBA&sjid=rgYNAAAIBA&pg=2879,2141581&hl=en>
1996 spin out against utility pole; critical injuries for two teens

<http://connecticut.news12.com/news/drag-racing-may-be-cause-of-norwalk-car-crash-1.8228840>
2007 rollover, non-fatal

http://www.thehour.com/news/norwalk/former-dpw-worker-injured-in-norwalk-rollover/article_6f5a275e-3c59-5a10-9319-c86c0c4e5581.html
2011 rollover, non-fatal

<http://patch.com/connecticut/norwalk/teen-crashes-car-into-dome-wall-at-marvin-school-entrance>
2013 17 year old crashed into Marvin School stone wall, survived

<http://accidentdatacenter.com/us/connecticut/new-york-ny/norwalk/14/10/03/john-soyland-27-dies-car-accident-beach-road-norwalk-ct>
2014 rollover, fatal



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Appendix B



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Road Safety Audit

Town: Norwalk
RSA Location: Calf Pasture Beach Road
Meeting Location: Norwalk Town Hall - Room 225 (Main Conference Hall)
Address: 125 East Ave. Norwalk, CT 06851
Date: 7/19/2016
Time: 9:00AM

Participating Audit Team Members

Audit Team Member	Agency/Organization
Kevin Tedesco	CT DOT
Mike Wulforst	AECOM
Lorenzo Varone	AECOM
Mike Yeosock	Norwalk DPW
Amy Taber	Norwalk DPW
Fred Eshraghi	Norwalk DPW
Bruce Chimento	Norwalk DPW
Rob Sachnih	WestCOG



COMMUNITY
connectivity program

Appendix C



AECOM
Built to deliver a better world



Road Safety Audit – Norwalk

Meeting Location: Norwalk Town Hall – Room 225 (Main Conference Room)
Address: 125 East Ave, Norwalk, CT 06851
Date: 7/19/2016
Time: 9:00 AM

Agenda

- Type of Meeting:** Road Safety Audit – Pedestrian Safety
- Attendees:** Invited Participants to Comprise a Multidisciplinary Team
- Please Bring:** Thoughts and Enthusiasm!!
- 9:00 AM** **Welcome and Introductions**
- Purpose and Goals
 - Agenda
- 9:15 AM** **Pre-Audit**
- Definition of Study Area
 - Review Site Specific Data:
 - Average Daily Traffic
 - Crash Data
 - Geometrics
 - Issues
 - Safety Procedures
- 10:30 AM** **Audit**
- Visit Site
 - As a group, identify areas for improvements
- 12:30 PM** **Post-Audit Discussion / Completion of RSA**
- Discussion observations and finalize findings
 - Discuss potential improvements and final recommendations
 - Next Steps
- 3:00 PM** **Adjourn for the Day – but the RSA has not ended**

Instruction for Participants:

- Before attending the RSA, participants are encouraged to observe the intersection and complete/consider elements on the RSA Prompt List with a focus on safety.
- All participants will be actively involved in the process throughout. Participants are encouraged to come with thoughts and ideas, but are reminded that the synergy that develops and respect for others' opinions are key elements to the success of the overall RSA process.
- After the RSA meeting, participants will be asked to comment and respond to the document materials to assure it is reflective of the RSA completed by the multidisciplinary team.



Audit Checklist

Pedestrians and Bicycles	Comment
<p>Pedestrian Crossings</p> <ul style="list-style-type: none">• Sufficient time to cross (signal)• Signage• Pavement Markings• Detectable warning devices (signal)• Adequate sight distance• Wheelchair accessible ramps<ul style="list-style-type: none">○ Grades○ Orientation○ Tactile Warning Strips• Pedestrian refuge at islands• Other	
<p>Pedestrian Facilities</p> <ul style="list-style-type: none">• Sidewalk<ul style="list-style-type: none">○ Width○ Grade○ Materials/Condition○ Drainage○ Buffer• Pedestrian lighting• Pedestrian amenities (benches, trash receptacles)• Other	



Bicycles <ul style="list-style-type: none">• 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• Other	
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Roadway & Vehicles	
<ul style="list-style-type: none">• Speed-related issues<ul style="list-style-type: none">○ Alignment;○ Driver compliance with speed limits○ Sight distance adequacy○ Safe passing opportunities	
<ul style="list-style-type: none">• Geometry<ul style="list-style-type: none">○ Road width (lanes, shoulders, medians);○ Access points;○ Drainage○ Tapers and lane shifts○ Roadside clear zone /slopes○ Guide rails / protection systems	

<ul style="list-style-type: none">• Intersections<ul style="list-style-type: none">○ Geometrics○ Sight Distance○ Traffic control devices○ Safe storage for turning vehicles○ Capacity Issues	
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<ul style="list-style-type: none">• Pavement<ul style="list-style-type: none">○ Pavement Condition (excessive roughness or rutting, potholes, loose material)○ Edge drop-offs○ Drainage issues• Lighting Adequacy	
<ul style="list-style-type: none">• Signing<ul style="list-style-type: none">• Correct use of signing• Clear Message• Good placement for visibility• Adequate retroreflectivity• Proper support	
<ul style="list-style-type: none">• Signals<ul style="list-style-type: none">○ Proper visibility○ Proper operation○ Efficient operation○ Safe placement of equipment○ Proper sight distance○ Adequate capacity	
<ul style="list-style-type: none">• Pavement Markings<ul style="list-style-type: none">○ Correct and consistent with MUTCD○ Adequate visibility○ Condition○ Edgelines provided	
<ul style="list-style-type: none">• Miscellaneous<ul style="list-style-type: none">○ Weather conditions impact on design features.○ Snow storage	



4th St

Marvin St

5th St

Cove Ave
Seaside Pl

Alden Ave

River Dr

Norwalk Cove
Marina

Marion Ave

Elliot St

Canfield Ave

Canfield Crossing

Shoreh...

Taylor Farm

Calf Pasture Beach Rd

Island Dr

Sylvester Ct
Gregory Blvd

Shore and
Country Club

Norwalk Harbor

Comber Dr

Norwalk Sailing School

Calf Pasture
Beach Park

Sunset
Grille

Round Beach

...ptune Ave
...Park Ln

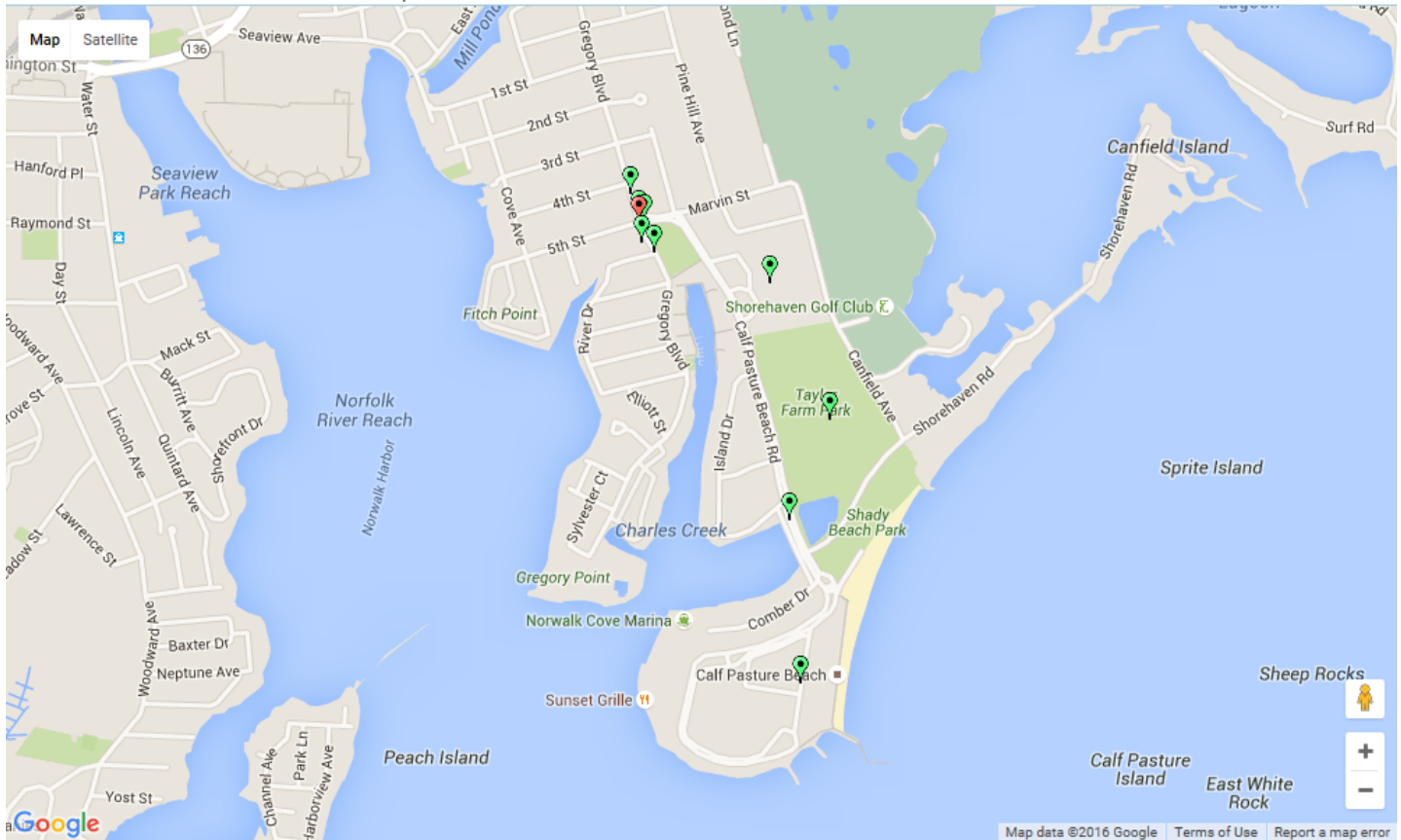
2015 Crashes

UConn

Connecticut Crash Data Repository

Search Criteria:

Dataset: mmucc
Towns: Norwalk
Crash Severity: Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only
Case Status: Complete



Markers Heatmap Crashes By Route Select & Query

Query Selection

Injury of any type (Serious, Minor, Possible)
 Fatal (Kill) Property Damage Only

Route Segment Scale
0 0

Select All
Deselect All

This web site is exempt from discovery or admission under 23 U.S.C. 409.

Connecticut Crash Data Repository [User Guide](#) [Contact Us](#)



Road Safety Audit – Norwalk

Crash Summary

Data: 3 years (2012-2014)

One crash involved a pedestrian that resulted in an injury (no fatality).

One crash involved a cyclist that resulted in an injury (no fatality).

There was one fatal crash involving a Single Unit Truck.

Severity Type	Number of Crashes	
Property Damage Only	9	60%
Injury (No fatality)	5	33%
Fatality	1	7%
Total	15	

Manner of Crash / Collision Impact	Number of Crashes	
Unknown	0	0%
Sideswipe-Same Direction	2	13%
Rear-end	1	7%
Turning-Intersecting Paths	1	7%
Turning-Opposite Direction	0	0%
Fixed Object	5	33%
Backing	1	7%
Angle	0	0%
Turning-Same Direction	3	20%
Moving Object	0	0%
Parking	0	0%
Pedestrian	1	7%
Overturn	1	7%
Head-on	0	0%
Sideswipe-Opposite Direction	0	0%
Miscellaneous- Non Collision	0	0%
Total	15	



Weather Condition	Number of Crashes	
Snow	0	0%
Rain	0	0%
No Adverse Condition	15	100%
Unknown	0	0%
Blowing Sand, Soil, Dirt or Snow	0	0%
Other	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	15	

Light Condition	Number of Crashes	
Dark-Not Lighted	0	0%
Dark-Lighted	1	7%
Daylight	14	93%
Dusk	0	0%
Unknown	0	0%
Dawn	0	0%
Total	15	










Road Surface Condition	Number of Crashes	
Snow/Slush	0	0%
Wet	0	0%
Dry	15	100%
Unknown	0	0%
Ice	0	0%
Other	0	0%
Total	15	



Time		Number of Crashes	
0:00	0:59	0	0%
1:00	1:59	0	0%
2:00	2:59	0	0%
3:00	3:59	0	0%
4:00	4:59	0	0%
5:00	5:59	0	0%
6:00	6:59	0	0%
7:00	7:59	0	0%
8:00	8:59	0	0%
9:00	9:59	0	0%
10:00	10:59	0	0%
11:00	11:59	1	7%
12:00	12:59	0	0%
13:00	13:59	0	0%
14:00	14:59	1	7%
15:00	15:59	1	7%
16:00	16:59	5	33%
17:00	17:59	6	40%
18:00	18:59	0	0%
19:00	19:59	0	0%
20:00	20:59	0	0%
21:00	21:59	0	0%
22:00	22:59	1	7%
23:00	23:59	0	0%
Total		15	



Legend

-  Sidewalk
-  Stop Controlled Intersection
-  Signalized Intersection
-  Pedestrian Crossing Sign
-  Crosswalk
-  One Way Street
-  On-street Parking
-  Bike Route Signage
-  Median

Norwalk - Calf Pasture Beach Road

DRAFT



Road Safety Audit – Norwalk

Fact Sheet

Functional Classification:

- Calf Pasture Beach Road is classified as a Local road

ADT

- There is no recorded ADT on Calf Pasture Beach Road

In the vicinity:

- ADT on First Street is 3,900
- ADT on Gregory Boulevard is 11,200 – 11,400
- ADT on Route 136 is 5,500 – 11,600
- ADT on Van Zant Street is 7,100

Population and Employment Data (2014):

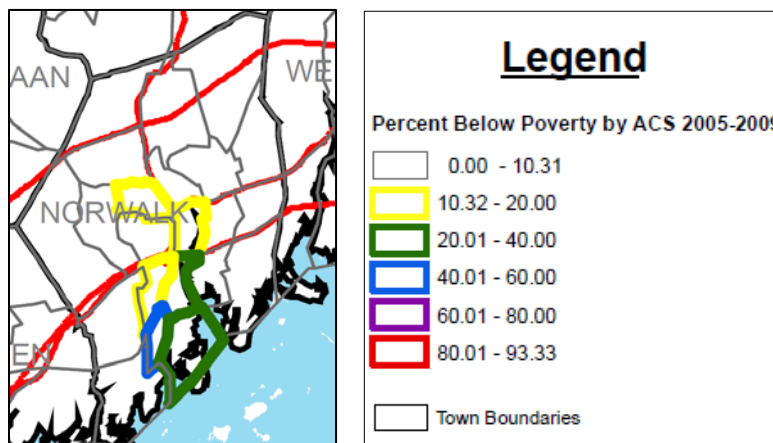
- Population: 87,214
- Employment: 45,063

Urbanized Area

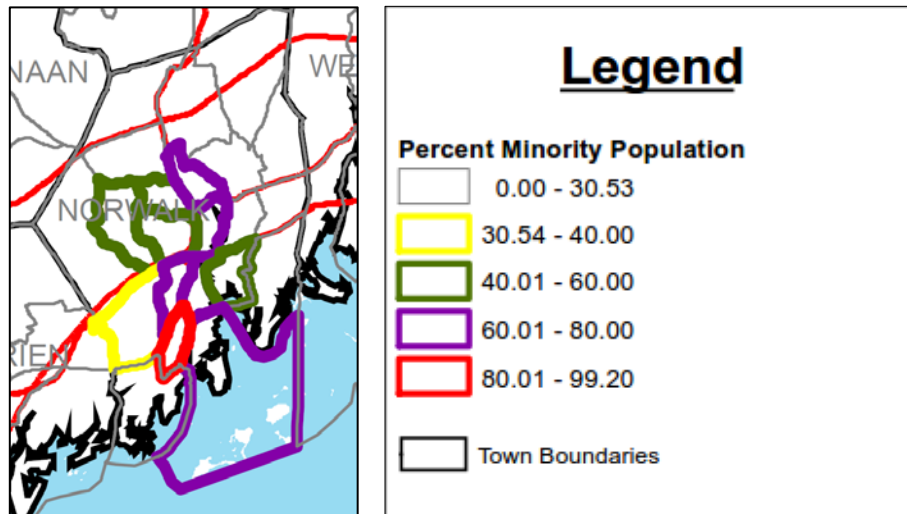
- Norwalk is in the Bridgeport-Stamford Urbanized Area

Demographics

- The statewide average percentage below the poverty line is 10.31%. In the vicinity of Calf Pasture Beach Road up to 40% of residents are below the poverty line.



- The statewide average percentage minority population is 30.53%. Within the vicinity of Calf Pasture Beach Road up to 80% of residents are minorities.



Air Quality

- Norwalk's CIPP number 113
- Norwalk is within the NY/NJ/CT Marginal Ozone Area and PM_{2.5} Attainment/Maintenance Area
- Norwalk is within a CO Maintenance Area