



COMMUNITY
connectivity program

Woodbridge

Woodbridge Business District – Road Safety Audit

July 15, 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

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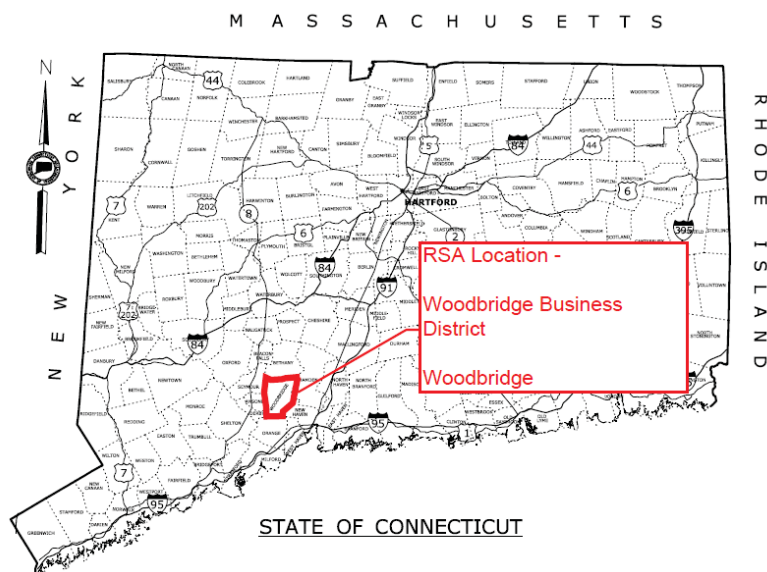
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The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state's transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this 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 Woodbridge Business District RSA

The Town of Woodbridge submitted an application to complete an RSA on the streets within the Woodbridge Business District including Selden Street, Bank Street, Lucy Street, Litchfield Turnpike (State Route 69), Bradley Road, and Amity Road (State Route 63) to improve safety for pedestrians and bicyclists. These streets experience relatively high traffic volumes and speeds in an area with a high density of businesses and destinations. The Town is concerned about the safety and perceived comfort of pedestrians and bicyclists, as well as a lack of adequate facilities to accommodate them. Sidewalks, where provided, are typically on one side of the street and are often discontinuous, forcing pedestrians to walk on the shoulder. Safe pedestrian crossings are limited and are often not up to current standards. The corridor's high speeds and traffic volumes and lack of bicycle facilities create an uncomfortable environment for cyclists. Shoulders lack adequate space and must also be shared with pedestrians in many locations.

The Town of Woodbridge'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 audit corridor (Figure 1) consists of the following streets and associated intersections within the Woodbridge Business District:

- Selden Street north of Bank Street;
- Bank Street;
- Lucy Street;
- The Litchfield Turnpike (Route 69) from Lucy Street to Bradley Road;
- Bradley Road from the Litchfield Turnpike to Amity Road (Route 63);
- Amity Road from Bradley Road to Lucy Street.

The audit corridor streets of Amity Road, Lucy Road, the Litchfield Turnpike, and Bradley Road form a square with an approximately one mile long perimeter. It also includes Bank Street and the northern portion of Selden Street.

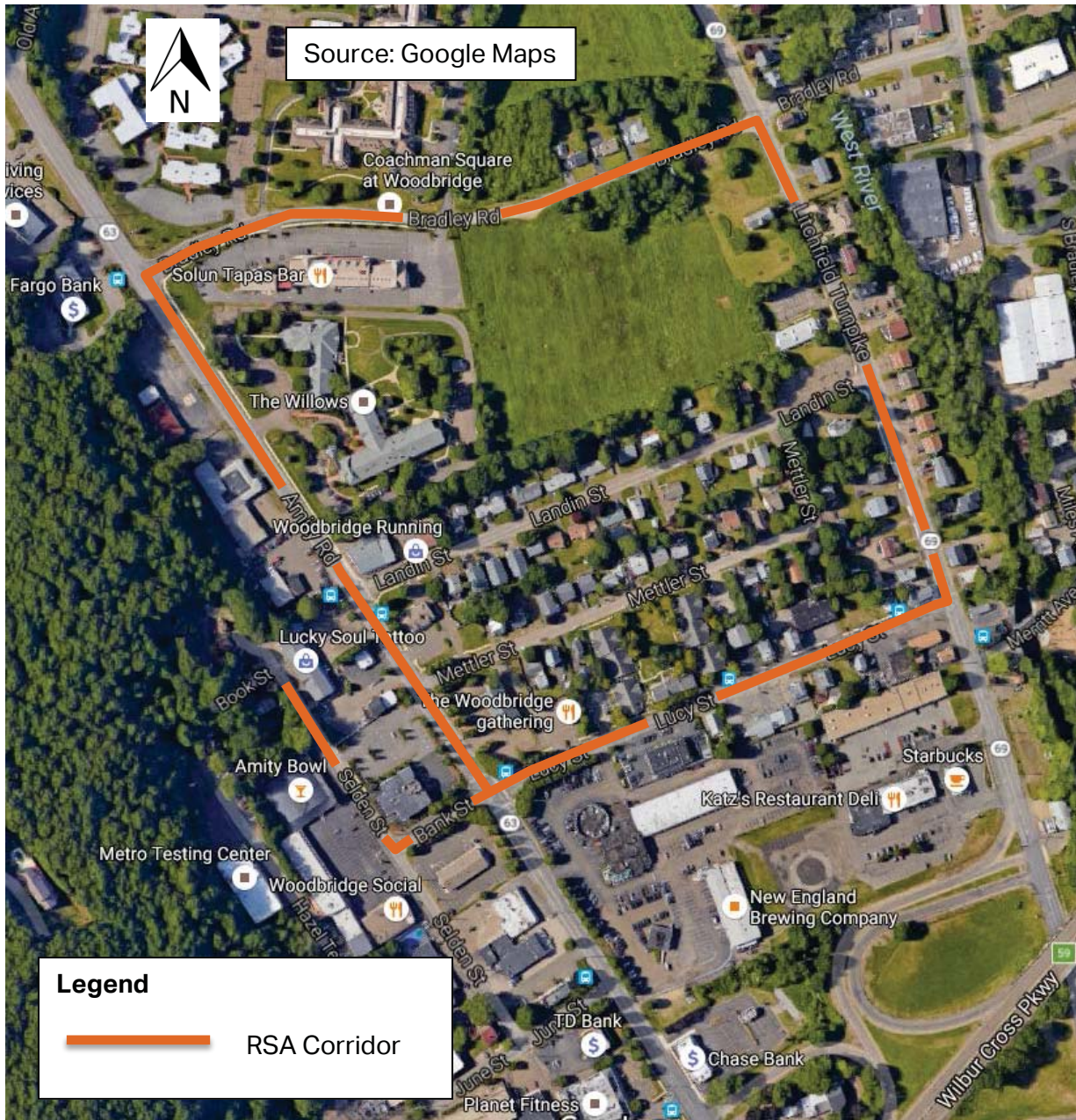


Figure 1. Woodbridge Business District RSA Corridor

The Litchfield Turnpike (Route 69) and Amity Road (Route 63) are north/south roads classified as Principal Arterials. They connect the Woodbridge Business District to the Wilbur Cross Parkway and New Haven to the south; and the rest of Woodbridge and neighboring communities to the north (Figure 2). Traffic volumes are considered moderately high due to proximity to the Wilbur Cross Parkway (Route 15) Interchange. Average Daily Traffic (ADT) is between 7,400 and 16,800 vehicles on the Litchfield Turnpike, and between 14,800 and 18,600 on Amity Road.

Lucy Street and Bradley Road are east/west roads that connect the Litchfield Turnpike and Amity Road. Lucy Street is classified as a state road classified as a local road and Bradley Road is classified as a Collector. Lucy Street has an ADT of 6,400 vehicles.

Selden Street and Bank Road are classified as Local Roads. Selden Street provides access to many local businesses such as Amity Bowl and the Selden Plaza. Bank Street serves as the primary connection between Selden Street and Amity Road/Lucy Street.

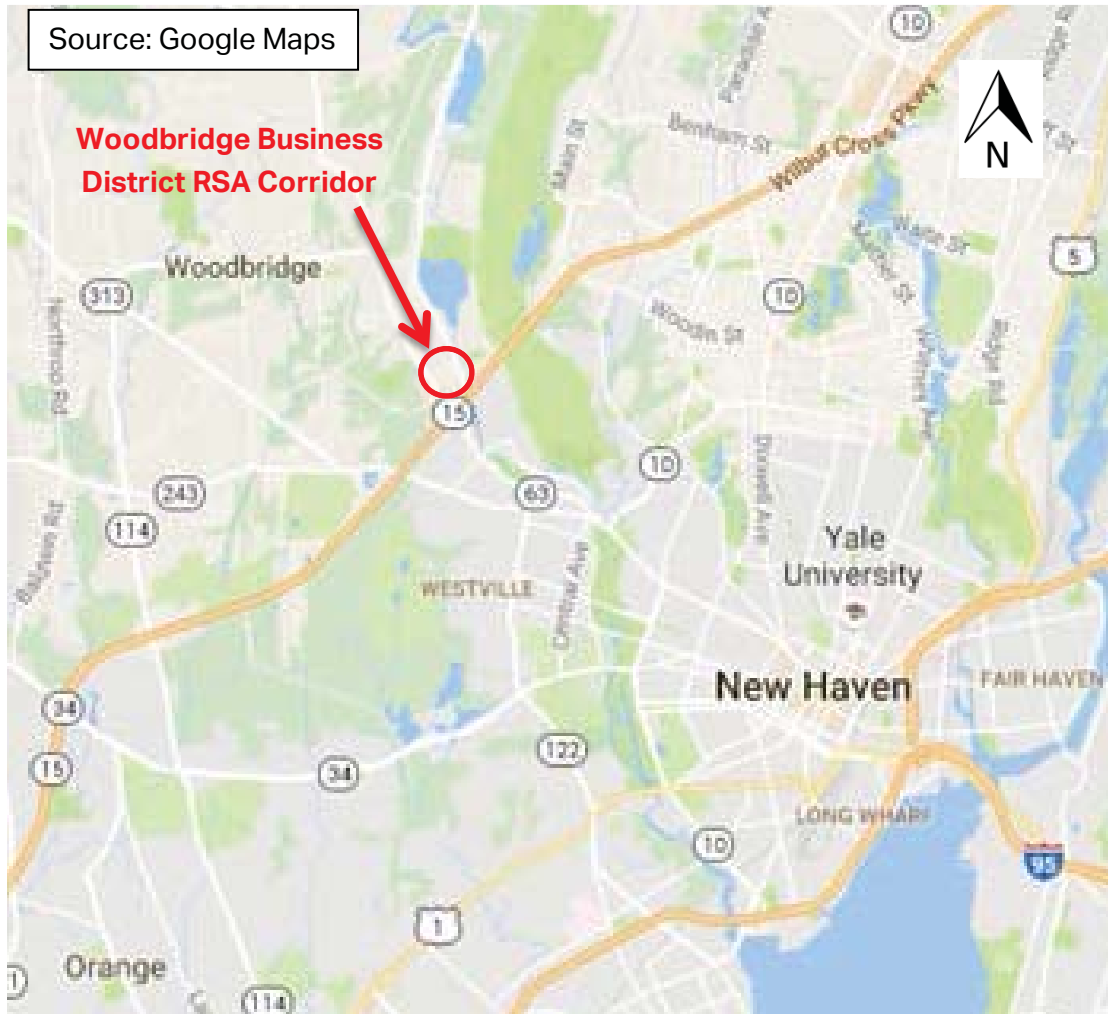


Figure 2. Study Area – Regional Context

2 Pre-audit Assessment

2.1 Pre-audit Information

The crash history in the audit corridor is relatively high with a total of 106 accidents reported between 2012 and 2014 (Table 1). The majority of crashes were classified as property damage only; however 23% resulted in injury. Rear-end collisions were the most common type accounting for 48% of all crashes (Table 2). Rear-end collisions are commonly associated with traffic congestion which is consistent with the corridor's high traffic volumes. Other commonly reported types were Sideswipe-Same Direction and Turning-Intersecting Paths accounting for 10% of crashes each.

Between 2012 and 2014 one crash involving a pedestrian was reported, resulting in a non-fatal injury. There were no reported crashes involving bicyclists.

Severity Type	Number of Accidents	
Property Damage Only	82	77%
Injury (No fatality)	24	23%
Total	106	

Table 1. Crash Severity 2012-2014

Source: UConn Connecticut Crash Data Repository

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	0	0%
Sideswipe-Same Direction	11	10%
Rear-end	51	48%
Turning-Intersecting Paths	11	10%
Turning-Opposite Direction	6	6%
Fixed Object	6	6%
Backing	3	3%
Angle	7	7%
Turning-Same Direction	5	5%
Moving Object	1	1%
Parking	0	0%
Pedestrian	1	1%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	2	2%
Miscellaneous- Non Collision	2	2%
Total	106	

Table 2. Crash Type 2012-2014

Figure 3 displays the crashes that occurred along the corridor during 2015. The majority of crashes are concentrated along the major arterials (the Litchfield Turnpike and Amity Road). The largest cluster of crashes occurred at the signalized intersection of the Litchfield Turnpike and Lucy Street. A relatively high proportion of the accidents that occurred on Amity Road resulted in injuries suggesting higher speeds at this location.

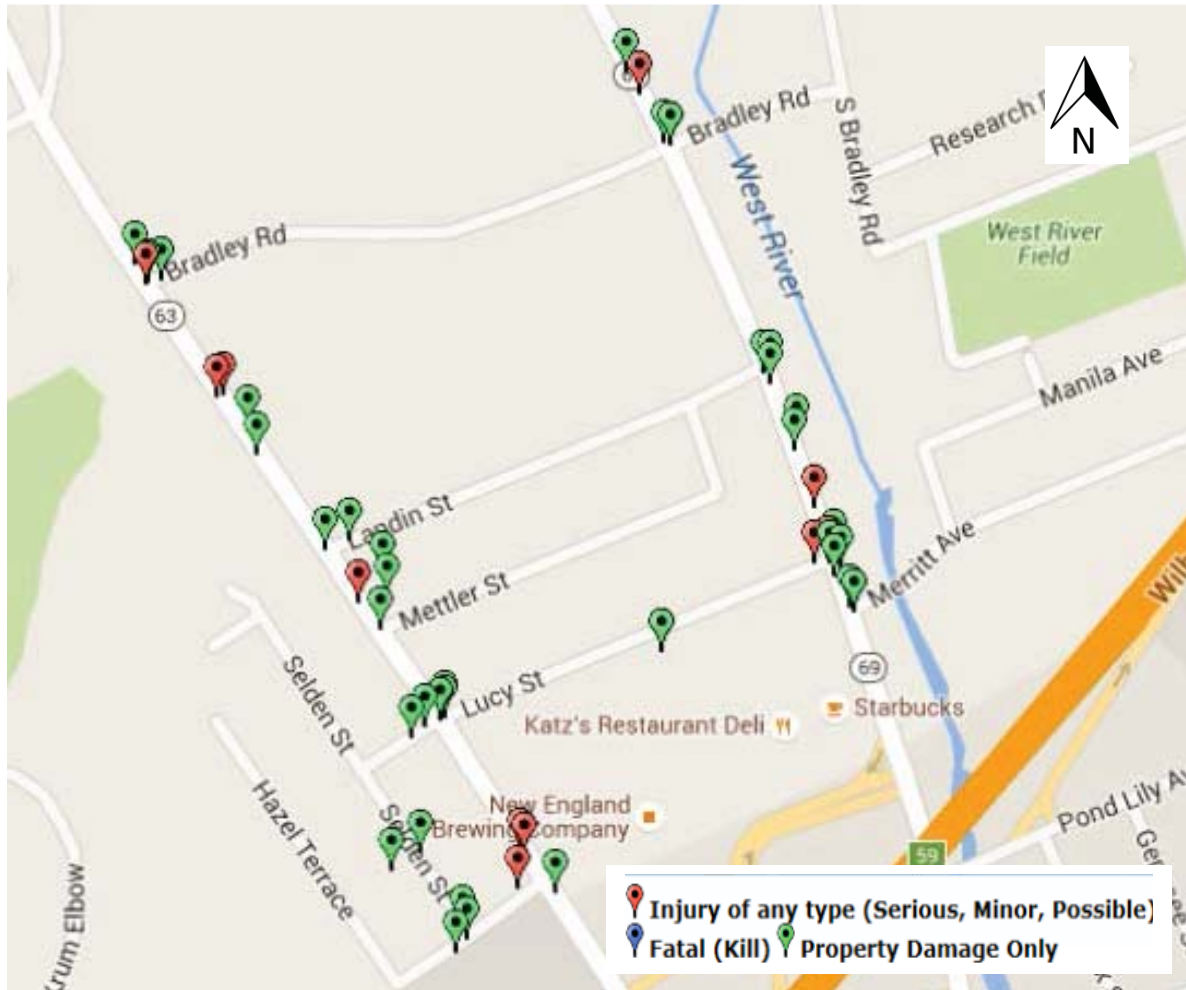


Figure 3. Crashes that Occurred in 2015 (Connecticut Crash Data Repository)

Pedestrian facilities along the audit corridor are incomplete, lacking sidewalks and crosswalk in some locations. Sidewalks currently connect the inside perimeter except for the northeast corner from 245 Bradley Road to Our Lady of the Assumption Church on the Litchfield Turnpike. The corridor consists of three signalized intersections and seven stop controlled intersections.

Selden Street is classified as a Local Road and primarily provides access to various businesses via frequent driveways. It is approximately 30-foot wide and carries traffic in both

directions. There is no painted centerline or shoulder. A short, discontinuous sidewalk exists on the east side of the road for approximately 100 feet.

Bank Street is classified as a Local Road and connects Selden Street to Amity Road and Lucy Street. It is relatively short, running 200 feet from the stop-controlled intersection with Selden Street to the signalized intersection with Amity Road. The eastbound direction begins as one 18-foot lane and widens to two 12-foot lanes at the Amity Road intersection. The westbound direction has one 12-foot lane. Sidewalks and shoulders are not present on either side of Bank Street.

The intersection of Amity Road and Lucy Street/Bank Street is a signalized, four leg intersection, with Amity Road northbound and southbound, Bank Street eastbound, and Lucy Street westbound. All four approaches consist of a through lane and an exclusive left turn lane. Additionally, the Amity Road northbound approach includes an exclusive right turn lane. Crosswalks are provided across each approach with the exception of Bank Street on the west side of the intersection. A sidewalk is provided on the northeast corner only and leads north on Amity Road and East on Lucy Street.

Lucy Street is a state road and has a posted speed limit of 25 miles per hour. It has a signalized intersection with Amity Road and the Litchfield Turnpike. The eastbound direction consists of one 12-foot lane and a 5-foot shoulder. The westbound direction consists of one 9-foot lane and a 5-foot shoulder. Driveways to both commercial and residential properties are relatively frequent. A sidewalk exists on the north side of the roadway for the entire length and varies in width from 4 to 6 feet. There are no sidewalks on the south side of the roadway.

The intersection of the Litchfield Turnpike and Lucy Street is signalized, with three approaches: Litchfield Turnpike northbound and southbound, and Lucy Street eastbound. The northbound approach consists on a thru lane and an exclusive left turn lane. The southbound and eastbound approaches consist on one lane each. Crosswalks are provided across the west side and north sides of the intersection and a pedestrian crossing sign is located on the northeast corner. Sidewalks are provided on the northwest corner only, continuing west on Lucy Street and north on the Litchfield Turnpike. Improvements to this intersection are currently planned under Connecticut Department of Transportation (CTDOT) Project 92-672.

Litchfield Turnpike is classified as a Principal Arterial and has a posted speed limit of 35 miles per hour within the audit corridor. The northbound direction consists of one 12-foot lane and a 2-foot shoulder. The southbound direction consists of one 12-foot lane and a shoulder varying in width from 3 to 6 feet. There is one stop controlled side street (Landin Street) intersecting the Litchfield Turnpike. In addition, there are numerous driveways to residential and commercial properties. A 5-foot sidewalk is provided on the west side of the roadway

beginning at Lucy Street and terminating just to the north of Our Lady of the Assumption Church. Sidewalks are not provided on the east side of the roadway.

The intersection of the Litchfield Turnpike and Bradley Road is signalized, with four approaches: the Litchfield Turnpike northbound and southbound, and Bradley Road eastbound and westbound. All four approaches consist of a single lane. There are no crosswalks or sidewalks at this location.

Bradley Road is classified as a collector and has a posted speed limit of 25 miles per hour. The audit portion of Bradley Road is bound by the signalized intersection with the Litchfield Turnpike on the east end and the stop controlled intersection with Amity Road on the west end. Each direction contains one 11.5-foot lane and a 3-foot shoulder. A 5-foot sidewalk is provided on the south side of the roadway beginning at Amity Road and terminating at 245 Bradley Road. There are no sidewalks on the north side of the roadway.

The intersection of Bradley Road and Amity Road is a T-Intersection. The Bradley street approach is stop controlled and consists of an 11-foot exclusive right turn lane and an 11-foot exclusive left turn lane. The Amity Road approaches are uncontrolled. A sidewalk exists on the southeast corner only running east on Bradley Road and south on Amity Road. There are no crosswalks at this location.

Amity Road is classified as a Principal Arterial and has a posted speed limit of 35 miles per hour within the audit corridor. The northbound direction consists of one 16-foot lane up to the Willows Nursing Home driveway where it widens to two 11-foot lanes. A shoulder is provided along the entire length, varying in width between 1 and 4 feet. The southbound direction consists of one 12.5-foot lane and a shoulder varying in width from 2 to 6 feet. There are two stop controlled side streets (Landin Street and Mettler Street) intersecting Amity Road. In addition, there are numerous driveways to commercial properties. A sidewalk exists on the east side of the roadway for the entire length and varies in width from 4 to 5 feet. There are no sidewalks on the west side of the roadway.

Roadway geometrics for the audit corridor roadways and intersections are shown in Figure 4. An inventory of corridor streets is provided in Table 3.

Woodbridge - Selden & Lucy Sts, Bradley Rd, Rte 69 & 63 btwn Lucy & Bradley



Figure 4. Woodbridge Business District Roadway Geometrics

Woodbridge Business District

Street Inventory

Street	Direction	Lanes ¹	Avg. Lane Width	Sidewalk			Curb	Parking	Shoulder	Ramps	
				Type	Width	Condition				Exist	Compliant
Selden Street	NB	1	15'	Concrete	5'	Incomplete	Asphalt	No	None	Yes	Yes
	SB	1	15'	None	N/A	N/A	None	No	None	No	N/A
Bank Street	EB	2	10'	None	N/A	N/A	Asphalt	No	None	No	N/A
	WB	1	12'	None	N/A	N/A	Asphalt	No	None	No	N/A
Lucy Street	EB	1	12'	None	None	N/A	Asphalt	No	5'	No	N/A
	WB	1	9'	Concrete	4'-6' (Varies)	Fair	Asphalt	No	2'	Yes	No
Litchfield Turnpike (Rte. 69)	NB	1	12'	None	N/A	N/A	Asphalt	No	2'	No	N/A
	SB	1	12'	Concrete	5'	Incomplete	crete/Asp	No	3'-6' (Varies)	Yes	No
Bradley Road	EB	1	11.5'	Concrete	5'	Incomplete	Asphalt	No	3'	Yes	No
	WB	1	11.5'	None	N/A	N/A	Asphalt	No	3'	No	N/A
Amity Road (Rte. 63)	NB	1*	16'	Concrete	4'-6' (Varies)	Fair	Asphalt	No	1'-4' (Varies)	Yes	No
	SB	1	12.5'	None	N/A	N/A	Asphalt	No	2'-6' (Varies)	No	N/A

1. In addition, left turn lanes are provided on Amity Road southbound at the Lucy Street/Bank Street intersection; Lucy Street westbound at the Amity Road/Bank Street intersection; and Bradley Road westbound at the Amity Road intersection.

*Cross section changes to two 11-foot lanes north of The Willows driveway.

Table 3. Street Inventory

*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.

2.2 Prior Successful Effort

Within the Woodbridge business district, Amity Road and Lucy Street have sidewalks throughout on one side of the road. Litchfield Turnpike and Bradley Road have sidewalks on about half of the road on one side. Selden Street has a small portion of sidewalk on one side of the road in the back of People's United Bank. In the future, the Town of Woodbridge will require new developments to install sidewalks.

2.3 Pre-Audit Meeting

The RSA was conducted on July 15, 2016. The Pre-Audit meeting was held at 8:30 AM in the Town Hall located at 11 Meetinghouse Lane in Woodbridge.

The RSA Team was comprised of staff from AECOM, staff from CTDOT, representatives from several Woodbridge departments including Public Works, Local Police, Assistant Administrative Office, and resident cyclists. 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:

- There are no bike routes and only one bike rack in the study area at the People's Bank.
- There is a bus route bus stop on the west side of Amity Road. There are no sidewalks and no convenient crosswalk on Amity Road in the vicinity of the stop. Due to the bus stop location, riders must walk in the shoulder.
 - Employees of the nursing homes that ride the bus must walk and cross the intersection of Amity Road and Bradley Road without a crosswalk, or cross midblock without a crosswalk.
- Sidewalks do not continue south on Amity Road past the intersection with Bank Street and Lucy Street towards the New Haven city line.
- A recent study confirmed that a traffic control signal at the intersection of Amity Road and Bradley Road is not warranted.
- The traffic control signal at the intersection of Amity Road, Bank Street and Lucy Street does not provide an exclusive left turn phase for Bank Street.
- The Town would like to explore the idea of installing a sidewalk on one side of Bank Street.
- The parking lot for Selden Plaza has no curbing and no defined entrance or exit.
- Since there is a bike shop on Selden Street, many bike rides in the study area originate from Selden Street.
- A planning study looked at narrowing Bank Street to allow room for a sidewalk.
- Property owners in the Town of Woodbridge are required to maintain sidewalks.
- Lucy Street is more comfortable to bike on than Amity Road because vehicles travel at lower speeds.
- A gateway project completed previously included trees and day lilies.

- Public road standards for the town needs updating.

3 RSA Assessment

3.1 Field Audit Observations

Selden Street and Bank Street:

- There is no defined exit or entrance to Selden Plaza. Vehicles can enter or exit anywhere along Selden Street because there is no curb cut. (Figure 5).
 - At night, visitors to the town center will use this lot for parking after business hours.
- It may be possible to move the curb on the south side of Bank Street back in order to make room for a sidewalk.
 - The Town would like to maintain the tree line on the south side of Bank Street.
- The width of Bank Street varies between 30 and 36 feet (Figure 6).
- The Town would like to install lighting along Bank Street to lead people back to their cars on Selden Street.



Figure 5. No Driveway Curb Cut



Figure 6. Existing Bank Street Cross-section

Intersection of Bank Street, Amity Road and Lucy Street:

- There is no crosswalk at the Bank Street approach.
- The three ramps provided are not ADA compliant and missing pedestrian detectable warning strips (Figure 7).



Figure 7. Ramp Missing Detectable Warning Strips/no Sidewalk Connection at Ramp Landing

- Crosswalk for south Amity road approach:

- This crosswalk has the only pedestrian signal heads at the intersection.
- This pedestrian signal does not have a countdown display during the walk phase. It only provides walk and don't walk displays.
- The walk phase does not appear to be long enough to meet the current crosswalk standards.
- Both sides of the crosswalk leave pedestrians on a ramp landing with no sidewalk connection (Figure 7).

- Evaluate a left turn signal for the Bank Street approach.
- The west side of Amity Road would be preferred for a sidewalk south of Bank Street (Figure 8).

Lucy Street:

- The sidewalks are four feet wide and parts are experiencing heaving.
- Travel Lane widths: Five-foot westbound shoulder, nine-foot westbound lane, twelve-foot eastbound lane and two foot eastbound shoulder.
- The sidewalk is discontinuous at the driveway to Woodbridge Gathering Restaurant. The pedestrian path is interrupted by the restaurant's sign. The sign appears to be within the right-of-way (Figure 9).
- The driveway to Progressive is 55 feet wide with a steep slope and a non-conforming crosswalk most likely installed by the property owner.
- The hedges at 29 Lucy Street are overgrown and block some of the sidewalk (Figure 10).
- Sidewalk width increases to six feet at M&M Heating and Cooling.



Figure 8. Potential for Sidewalk on West (left) Side of Amity Road

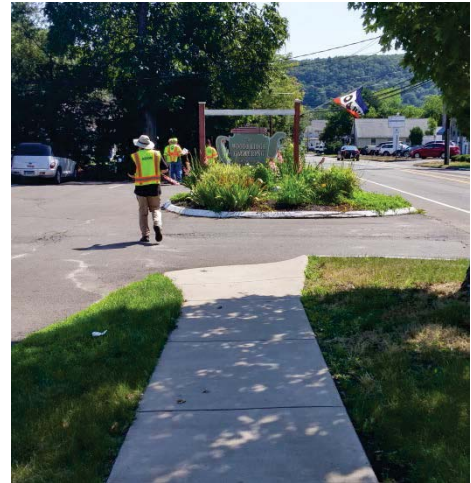


Figure 9. Sidewalk interrupted by Restaurant Sign



Figure 10. Overgrown Hedges

Intersection of Lucy Street and Litchfield Turnpike:

- There are two “push button for green” pedestals for pedestrians.
- There is no exclusive pedestrian phase.
- There is only one traffic signal for pedestrians, but no pedestrian signal.
- The paint on both crosswalks is worn out (Figure 11).
- Only the northwest corner has an ADA ramp and it is not compliant to the current standard.
- The ramps and crosswalks lead to destinations with no sidewalk, ramps or landing areas for pedestrians (Figure 13).



Figure 11. Worn Crosswalk Paint/ crosswalk Does Not Lead to Ramp Landing (northeast corner)



Figure 12. Sidewalk Ends

Litchfield Turnpike:

- There is currently no sidewalk south of the intersection with Lucy Street, but it is planned as part of a state project.
- The sidewalk at Landin Street does not have a painted crosswalk.
- The sidewalk on Litchfield Turnpike ends on the north end of the Our Lady of the Assumption Church. Figure 12 shows the RSA group walking in the shoulder when continuing north on Litchfield Turnpike.



Figure 13. No Pedestrian Facilities

Intersection of Litchfield Turnpike and Bradley Road:

- There are no crosswalks, sidewalks or pedestrian signals at this intersection (Figure 13).
- There are two “push button for green” pedestals.



Figure 14. Handicap Ramp at South Corner of Bradley and Amity Road

Bradley Road

- There are sidewalks between 245 Bradley Road and the intersection with Amity Road.
- The sidewalk is five feet wide.
- The travel lanes are 11.5 feet wide.

Intersection of Bradley Road and Amity Road:

- Ramp at the south corner of Bradley Road and Amity Road (Figure 14):
 - Detectable warning strip is not ADA compliant and is damaged.
 - The ramp directs people into the intersection.
 - The ramp does not lead to a crosswalk, sidewalk or ramp.



Figure 15. Handicap Ramp at The Willows

Amity Road:

- The Willows driveway has a handicap ramp with no detectable warning strip or crosswalk (Figure 15).
- At Mettler Street the north ramp has a detectable warning strip but it does not direct pedestrians toward the ramp on the south side of the street. The south ramp does not have a detectable warning strip. (Figure 16)
- In front of Monro Muffler the sidewalk narrows to four feet.
- Landin Street has detectable warning strips, ADA ramps and a crosswalk. The ADA ramps do not direct pedestrians across the crosswalk.



Figure 16. Handicap Ramp at Mettler Street

3.2 Post Audit Workshop - Key Issues

- There is essentially no access management to the Selden Plaza. There is no curb cut and no defined entrance or exit. Vehicles can drive straight into or out of a front row of parking spaces at the edge of the parking lot and street. Normally this design would not be allowed, but was grandfathered when the town ordinance was developed. It is not currently a priority to modify the access.
- There is no sidewalk on Bank Street; however, the Town would like to construct a sidewalk on one side of Bank Street with sidewalk lighting.
- The sidewalk on Amity Road ends at the intersection with Lucy Street and Bank Street. The sidewalk does not continue south towards the New Haven City Line. Pedestrians do not have a walking connection between Woodbridge and New Haven.
- The pedestrian facilities at the intersection of Amity Road, Bank Street and Lucy Street are incomplete. The Bank Street approach does not have a crosswalk. Three crossings do not have a pedestrian signal; therefore, pedestrians cannot call for a pedestrian phase and may not know when they can cross. One corner is missing a pedestrian landing despite having a crosswalk leading to it. The signal equipment including the one pedestrian signal is out of date.
- On Lucy Street, the sign for Woodbridge Gathering Restaurant is located on an island that appears to be within the right-of-way, and that interrupts the path of the sidewalk. Pedestrians must walk around the island in the middle of the restaurant driveway either in the shoulder or behind the landscaped island. This may be especially difficult for sight impaired users to navigate.
- The pedestrian facility is also incomplete at the signalized intersection of Litchfield Turnpike and Lucy Street. There is no exclusive pedestrian phase and no pedestrian signal which communicates to pedestrians that they can cross. There is only one sidewalk on the northwest corner. This intersection is planned to be improved as part of a project on Litchfield Turnpike by the CTDOT that will include a signal upgrade along with sidewalks on both sides of Litchfield Turnpike.
- There is no sidewalk on a 350-foot portion of Litchfield Turnpike between Our Lady of Assumption Church and Bradley Road. There is also no sidewalk on a 700-foot portion of Bradley Road between Litchfield Turnpike and 245 Bradley Road. This is a large gap in pedestrian facilities in the Woodbridge Business District. The proposed development on Bradley Road was recently canceled. If there were sidewalks along these stretches of Bradley Road and Litchfield Turnpike then a sidewalk loop surrounding the study area would be complete.

- There are multiple access driveways and intersections in the study area that do not have correctly aligned pedestrian ramps and are lacking crosswalks and detectable pedestrian warning strips.

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. Inform the owner of the Woodbridge Gathering Restaurant that they must modify or remove their sign on the landscaped island within the right-of-way.
2. Inform the owner of 29 Lucy Street that there is a town ordinance requiring them to maintain their vegetation so that it does not encroach on the sidewalk.
3. The Local Traffic Authority (LTA) of Woodbridge should contact the Office of State Traffic Administration (OSTA) about receiving a pedestrian facility upgrade at the signalized intersection of Litchfield Turnpike and Bradley Road.
4. The LTA should contact CTTransit to request improvements at bus stops.
5. The LTA should contact CTTransit about relocating the bus stop on Amity Road to the Bradley Plaza in order to avoid having pedestrians crossing Amity Road.

6. The LTA can contact OSTA and request sharrow pavement markings on Lucy Street (Figure 17).
7. The Town of Woodbridge can update the standards of their public roads.



Figure 17. Sharrow Striping

Figure 18 depicts these recommendations.



1. Remove or modify Woodbridge Gathering Restaurant sign

2. Request that 29 Lucy Street maintain vegetation

3. LTA to contact OSTA about pedestrian facility upgrade

5. LTA to contact CT Transit about relocating Amity Road bus stop on Amity Road to Bradley Plaza

6. LTA to request sharrows on Lucy Street

1. Intersection of Amity Road, Bank Street and Lucy Street;
Figure 18. Short Term Recommendations Map

- b. Update pedestrian signal equipment; and
 - c. Evaluate a left turn phase for Bank Street.
2. Upgrade the "push for green" buttons at the intersection of Litchfield Turnpike and Bradley Road.

Figure 19 depicts the recommendations along Main Street.



Figure 19. Medium Term Recommendations Map

4.3 Long Term

1. On Bank Street:

- a. Reduce the width of the roadway to make room for a sidewalk (five foot minimum);
 - b. Reduce Bank Street to one travel lane in each direction except for the approach to the intersection with Amity Road;
 - c. Install a sidewalk on the south side of the street; and
 - d. Install lighting on the south side of the street.
2. Construct a sidewalk on the west side of Amity Road south of the intersection with Lucy Street and Bank Street to provide a pedestrian connection to New Haven.
3. If a new developer plans construction on the property at the corner of Litchfield Turnpike and Bradley Road:
 - a. Coordinate with the developer to build a sidewalk that connects the existing sidewalk on Litchfield Turnpike and Bradley Road.
 - b. Coordinate with the developer about upgrading the signalized intersection at the intersection of Litchfield Turnpike and Bradley Road with full pedestrian facilities.
4. CTDOT to restripe Litchfield Turnpike and Amity Road to 11-foot lanes and widen shoulders in order to provide more room for bike accommodation.
5. The State will evaluate policy on driveway aprons for changing from bituminous to concrete surfaces.

Figure 20 depicts these recommendations.

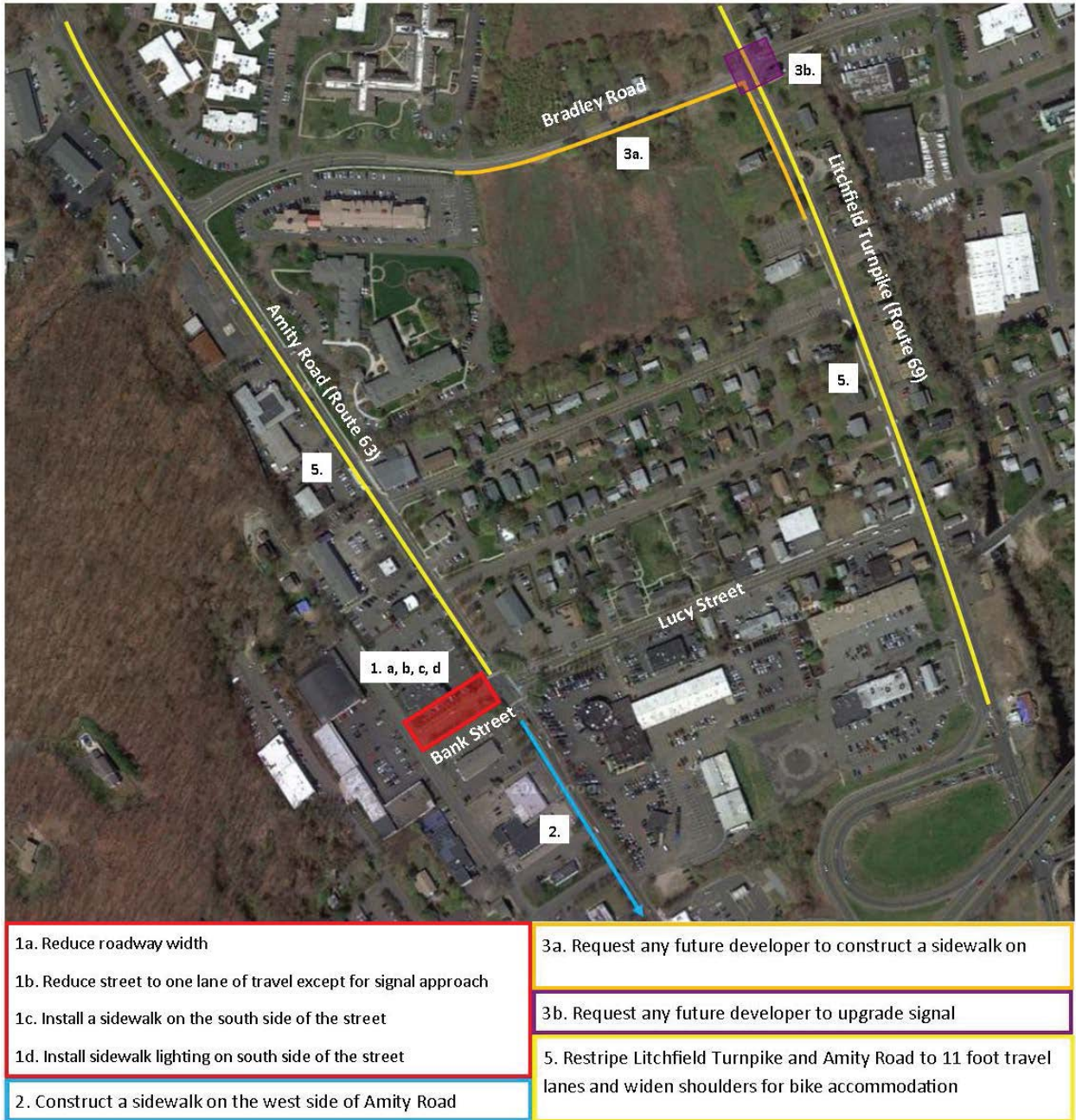


Figure 20. Long Term Recommendations Map

4.4 Summary

This report documents the observations, discussions and recommendations developed during the successful completion of the Town of Woodbridge RSA. It provides Woodbridge with an outlined strategy to improve the transportation network for all road users on Selden Street, Bank Street, Lucy Street, Litchfield Turnpike, Bradley Road and Amity Road within the business district, particularly focusing on pedestrians and cyclists. Moving forward, Woodbridge 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 in the Woodbridge Business District.



COMMUNITY
connectivity program

Appendix A



AECOM
Built to deliver a better world

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

Greater than a ½ mile

Other (Please Specify)

A one mile loop

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)

Includes 3 of the Town's largest employers: Crest Lincoln car dealer and 2 assisted living complexes. There are also many retail shops, offices and restaurants and it is very close to the Town's industrial area.

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)?

Yes

If Yes please describe and list all projects.

The state DOT has plans to reconfigure the area near Exit 59 off Route 15. This will include the potential widening of Route 69 from the south-bound on-ramp to Lucy Street.

The Town's Economic Development Commission is working to eventually install wayfinding signs in the area.

There is an approved project to install active adult housing on the corner of Bradley and Route 69.

The sidewalks in the area were completed thanks to state and federal funding.

12. Environmental Concerns:

If Yes please describe and list.

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

Traffic in this area is highly congested. The Town has installed some sidewalks (the westerly side of Route 69 to Lucy; the north side of Lucy to Route 63 and the eastern side of Route 63 to Bradley Road) with state and federal grants. However, more sidewalks and more infrastructure to support bicyclists and pedestrians in the area would encourage drivers to get out of their cars. It would also support the businesses in the area.

The Q bus runs from New Haven into Woodbridge and stops along Lucy Street then travels up Route 63 to the JCC where it turns around to return to New Haven. We believe that if the area was more bike- and pedestrian-friendly more residents and commuters would see the bus as a safer option. Currently, bus riders who get off at stops along Route 63 south have to walk along the shoulder of a highly trafficked and fast road.

14. Are there plans to expand the area?

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

Yes

As mentioned above, the lot at Bradley and Route 69 has been approved to be developed into a high-density housing complex which would bring more potential pedestrians and cyclists to the area as well as more traffic.

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)



Submit Application



COMMUNITY
connectivity program

Appendix B



AECOM
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Road Safety Audit

Town: Woodbridge
RSA Location: Business District (Rte 63, Rte 69, Lucy St., Selden St., Bradley Rd.)
Meeting Location: Woodbridge Town Hall
Address: 11 Meetinghouse Lane
Date: 7/15/2016
Time: 8:00 - 1:00

Participating Audit Team Members

Audit Team Member	Agency/Organization
Lorenzo Varone	AECOM
Jeff Maxtudis	AECOM
Warren Connors	Public Works Department
Chief Frank Cappiello	Local Police
Jon Gorham	Resident/Cyclist
Jason Morrill	Resident /Cyclist
Betsy Yagla	Assistant Administrative Officer
Terry Gilbertson	Town of Woodbridge
Melanie Zimyeski	CTDOT Planning
Peter Talarico	CTDOT - PDV
Caswell Smith	CTDOT
Tod Ingarra	CTDOT - District 3



COMMUNITY
connectivity program

Appendix C



AECOM
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Road Safety Audit – Woodbridge

Meeting Location: Woodbridge Town Hall
Address: 11 Meetinghouse Lane
Date: 7/15/2016
Time: 8:30 AM

Agenda

- Type of Meeting:** Road Safety Audit – Pedestrian Safety
- Attendees:** Invited Participants to Comprise a Multidisciplinary Team
- Please Bring:** Thoughts and Enthusiasm!!
- 8:30 AM** **Welcome and Introductions**
- Purpose and Goals
 - Agenda
- 8:45 AM** **Pre-Audit**
- Definition of Study Area
 - Review Site Specific Data:
 - Average Daily Traffic
 - Crash Data
 - Geometrics
 - Issues
 - Safety Procedures
- 10:00 AM** **Audit**
- Visit Site
 - As a group, identify areas for improvements
- 12:00 PM** **Post-Audit Discussion / Completion of RSA**
- Discussion observations and finalize findings
 - Discuss potential improvements and final recommendations
 - Next Steps
- 2:30 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	



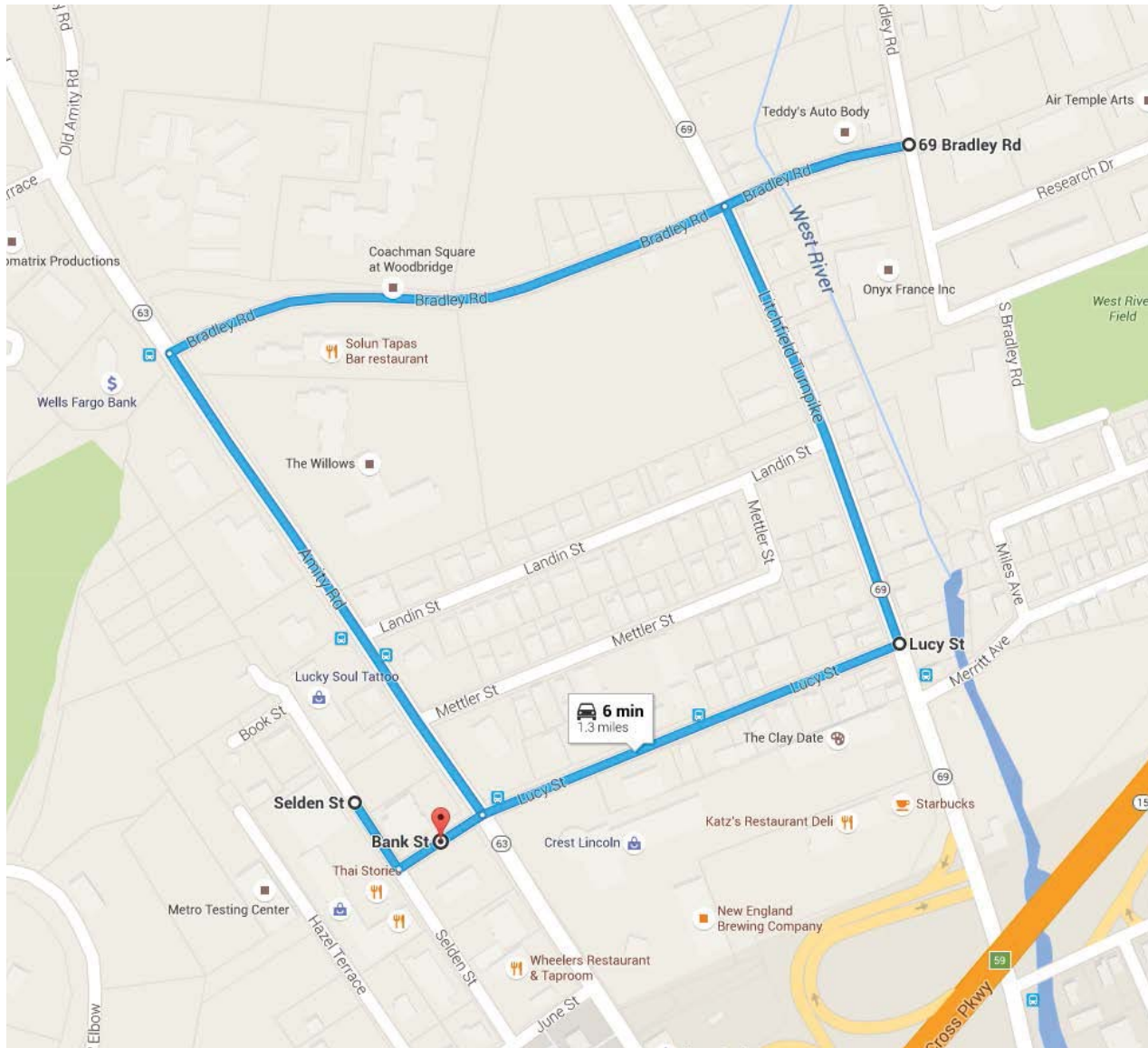
Bicycles <ul style="list-style-type: none">• Bicycle facilities/design• Separation from traffic• Conflicts with on-street parking• Pedestrian Conflicts• Bicycle signal detection• Visibility• Roadway speed limit• Bicycle signage/markings• Shared Lane Width• Shoulder condition/width• Traffic volume• Heavy vehicles• Pavement condition• Other	
--	--

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	
--	--



<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	

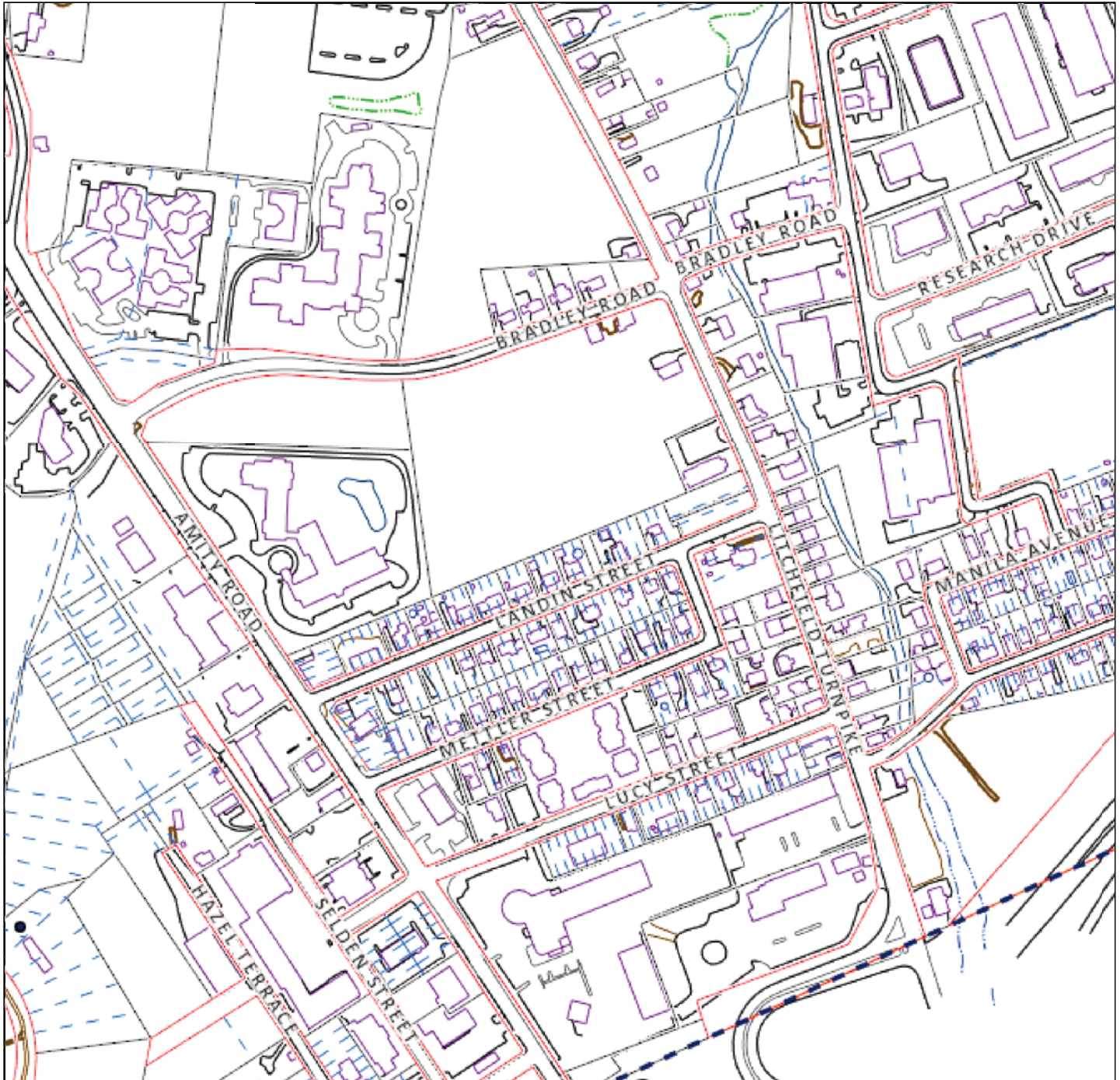


Town of Woodbridge

Geographic Information System (GIS)



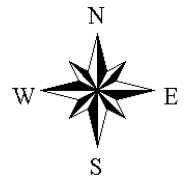
Date Printed: 2/26/2016



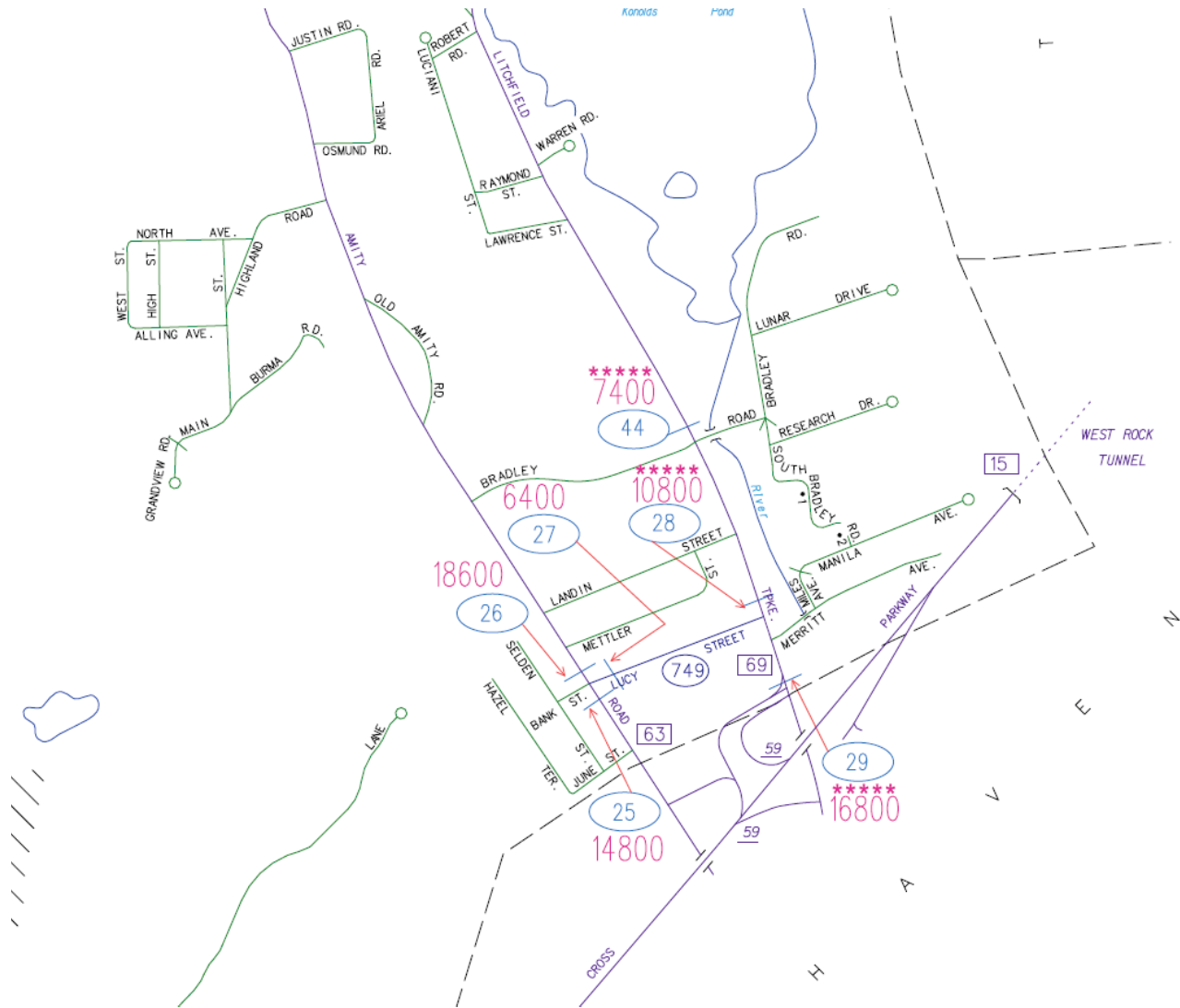
MAP DISCLAIMER - NOTICE OF LIABILITY

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The Town of Woodbridge and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 400 feet



Average Daily Traffic (ADT)



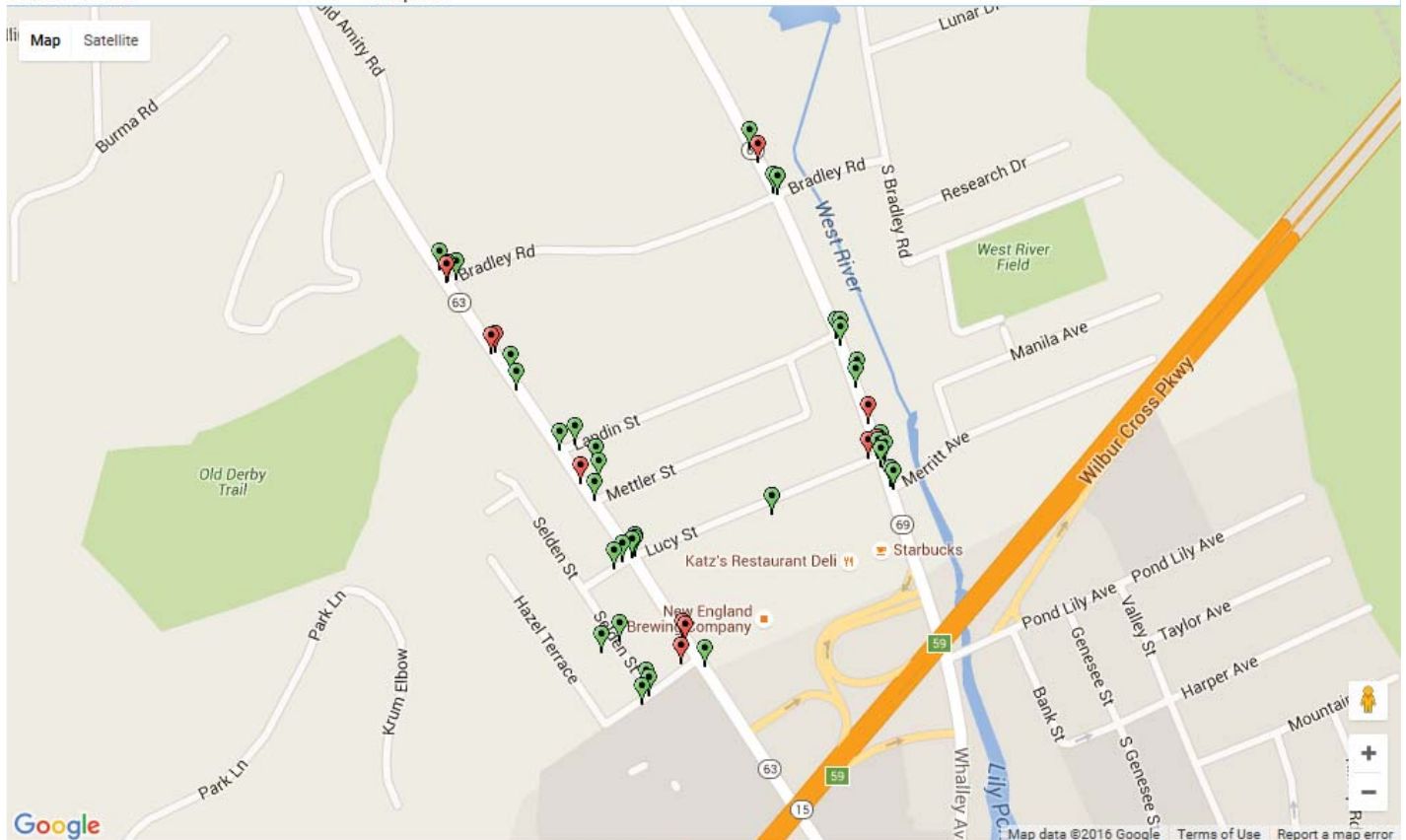
2015 Crashes

UConn

Connecticut Crash Data Repository

Search Criteria:

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



Google

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 – Woodbridge

Crash Summary

Data: 3 years (2012-2014)

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

There were no crashes involving bicyclists.

Severity Type	Number of Crashes	
Property Damage Only	82	77%
Injury (No fatality)	24	23%
Fatality	0	0%
Total	106	

Manner of Crash / Collision Impact	Number of Crashes	
Unknown	0	0%
Sideswipe-Same Direction	11	10%
Rear-end	51	48%
Turning-Intersecting Paths	11	10%
Turning-Opposite Direction	6	6%
Fixed Object	6	6%
Backing	3	3%
Angle	7	7%
Turning-Same Direction	5	5%
Moving Object	1	1%
Parking	0	0%
Pedestrian	1	1%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	2	2%
Miscellaneous- Non Collision	2	2%
Total	106	



Weather Condition	Number of Crashes	
Snow	4	4%
Rain	5	5%
No Adverse Condition	96	91%
Unknown	0	0%
Blowing Sand, Soil, Dirt or Snow	1	1%
Other	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	106	0%

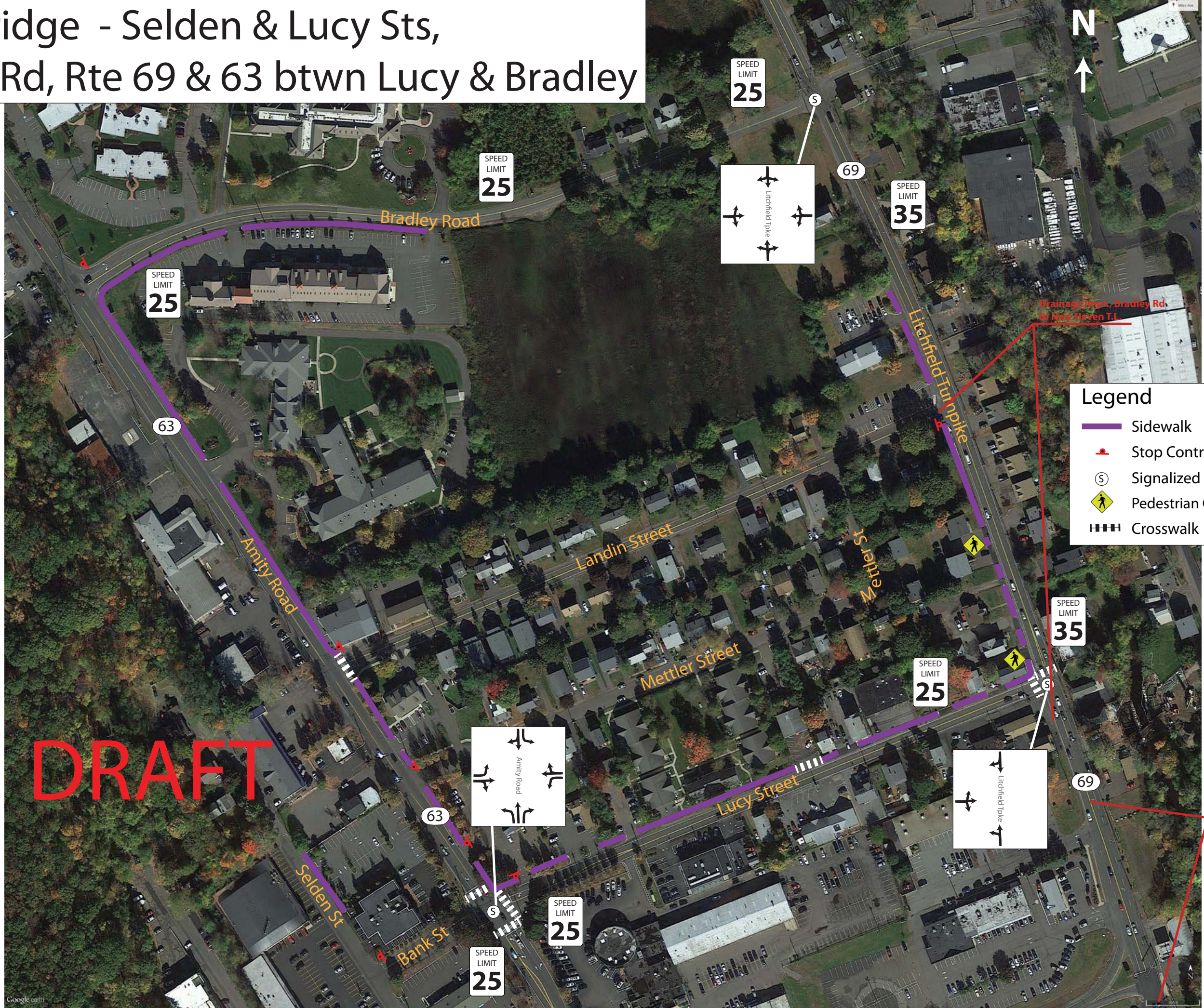
Light Condition	Number of Crashes	
Dark-Not Lighted	8	8%
Dark-Lighted	15	14%
Daylight	83	78%
Dusk	0	0%
Unknown	0	0%
Dawn	0	0%
Total	106	

Road Surface Condition	Number of Crashes	
Snow/Slush	3	3%
Wet	11	10%
Dry	90	85%
Unknown	0	0%
Ice	2	2%
Other	0	0%
Total	106	



Time		Number of Crashes	
0:00	0:59	0	0%
1:00	1:59	2	2%
2:00	2:59	1	1%
3:00	3:59	0	0%
4:00	4:59	0	0%
5:00	5:59	1	1%
6:00	6:59	1	1%
7:00	7:59	1	1%
8:00	8:59	11	10%
9:00	9:59	11	10%
10:00	10:59	6	6%
11:00	11:59	5	5%
12:00	12:59	8	8%
13:00	13:59	7	7%
14:00	14:59	8	8%
15:00	15:59	11	10%
16:00	16:59	11	10%
17:00	17:59	11	10%
18:00	18:59	3	3%
19:00	19:59	3	3%
20:00	20:59	2	2%
21:00	21:59	1	1%
22:00	22:59	1	1%
23:00	23:59	1	1%
Total		106	

Woodbridge - Selden & Lucy Sts, Bradley Rd, Rte 69 & 63 btwn Lucy & Bradley



Legend

- Sidewalk
- Stop Controlled Intersection
- Signalized Intersection
- Pedestrian Crossing Sign
- Crosswalk

DRAFT

New Haven/Woodbridge
Minor intersection
& ped improvements



Road Safety Audit – Woodbridge

Fact Sheet

Functional Classification:

- Route 69 is classified as a Principal Arterial
- Route 63 is classified as a Principal Arterial
- Selden Street is classified as a Local Road
- Lucy Street is classified as a local road
- Bradley Road is classified as a Collector

ADT

- ADT on Route 69 is 7,400 – 16,800
- ADT on Route 63 is 14,800 – 18,600
- ADT on Lucy Street is 6,400

Population and Employment Data (2014):

- Population: 8,969
- Employment: 3,913



Urbanized Area

- The area is located within the Bridgeport-Stamford Urbanized Area.

Demographics

- The statewide average percentage below the poverty line is 10.31%. There are no areas in Woodbridge that exceed the state's average.
- The statewide average percentage minority population is 30.53%. There are no areas in Woodbridge that exceed the state's average.

Air Quality

- Woodbridge's CIPP number 527
- Woodbridge is within the NY/NJ/CT Marginal Ozone Area and a PM_{2.5} Attainment/Maintenance Area
- Woodbridge is within a CO Maintenance Area