



COMMUNITY
connectivity program

Litchfield

White's Woods Road from South Lake Street to
Mattatuck Trail at the Morris Town Line – Road Safety
Audit

November 8, 2016



AECOM

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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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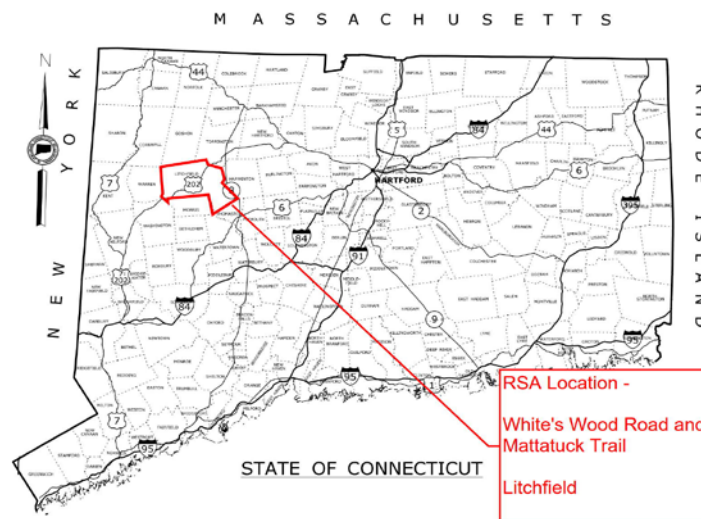
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The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state's transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this 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 Federal Highway Administration (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 White's Woods Road and Mattatuck Trail, Litchfield RSA

The Town of Litchfield submitted an application to complete an RSA on White's Woods Road from South Lake Street to Mattatuck Trail at the Morris Town Line to improve safety and accessibility for pedestrians and bicyclists travelling along the study corridor. The Town has stated that their main safety concerns include issues with pedestrians, parking, the Litchfield Community Greenway Trails project, and new bicycle and pedestrian trails within or in proximity to the right-of-way (ROW). The study corridor is in close vicinity to wetlands and waterways, as well as White Memorial Conservation Center/Land Trust.

The Town's application states that this study corridor should be considered for an RSA to improve connectivity to the Litchfield Community Greenway Trails project and scenic roadways and brooks/waterways and the White Memorial Conservation Center that provide unique flora and fauna habitat.

1.1 Location

The RSA study corridor includes White's Woods Road from South Lake Street to Mattatuck Trail at the Morris Town Line (Figure 1). White's Woods Road starts at South Lake Street in the north and generally runs in a north-south direction. It then continues as Mattatuck Trail, which runs in a north-south direction and ends at the Morris Town Line in the south. White's Woods Road is classified as a Major Collector. The Average Daily Traffic (ADT) on White's Woods Road is 1,700 vehicles per day (vpd). There are no signalized intersections along the corridor in the study area. All the intersections in the study area are stop controlled. Figure 2 shows the regional context of the study area.

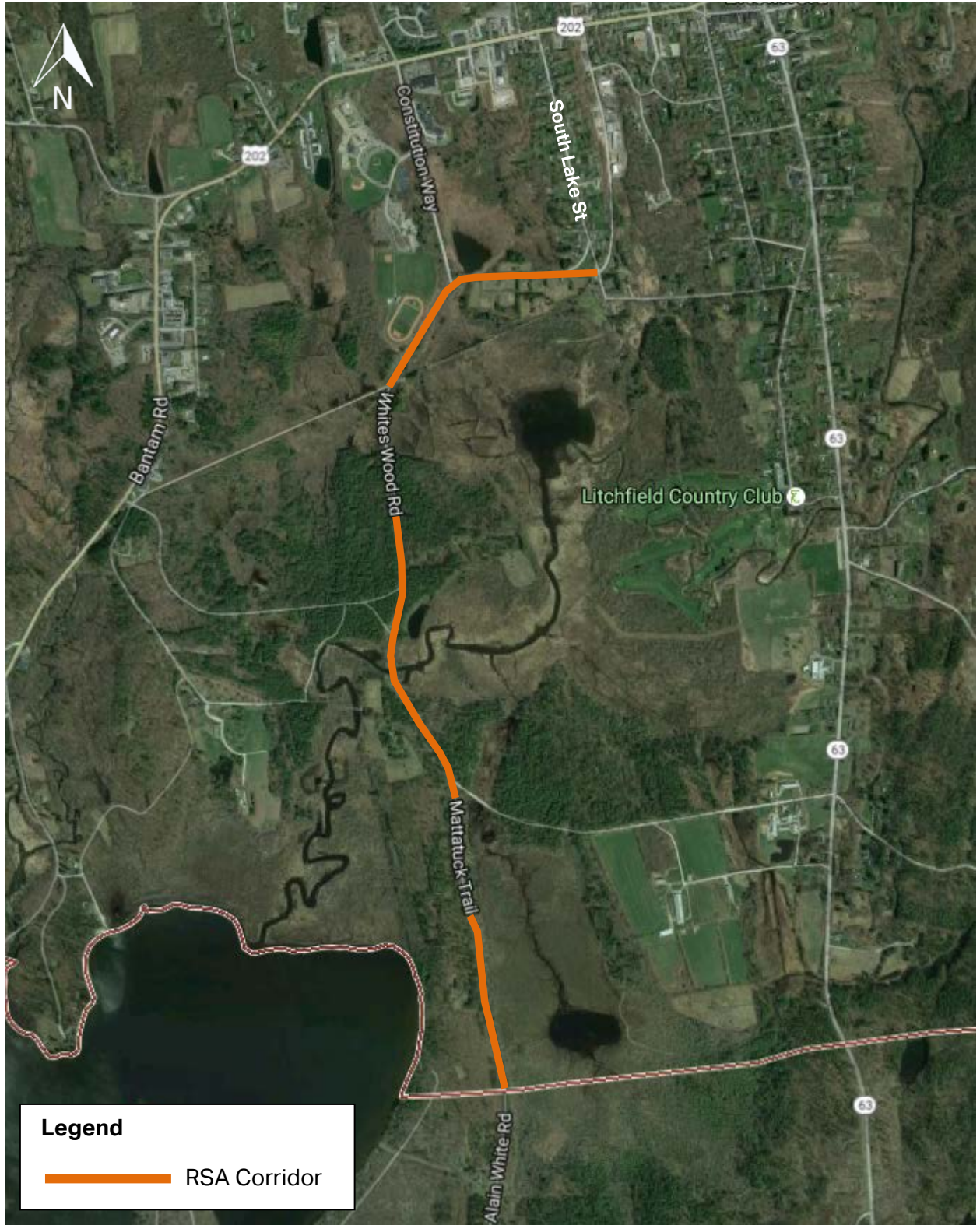


Figure 1. White's Woods Road and Mattatuck Trail, Litchfield

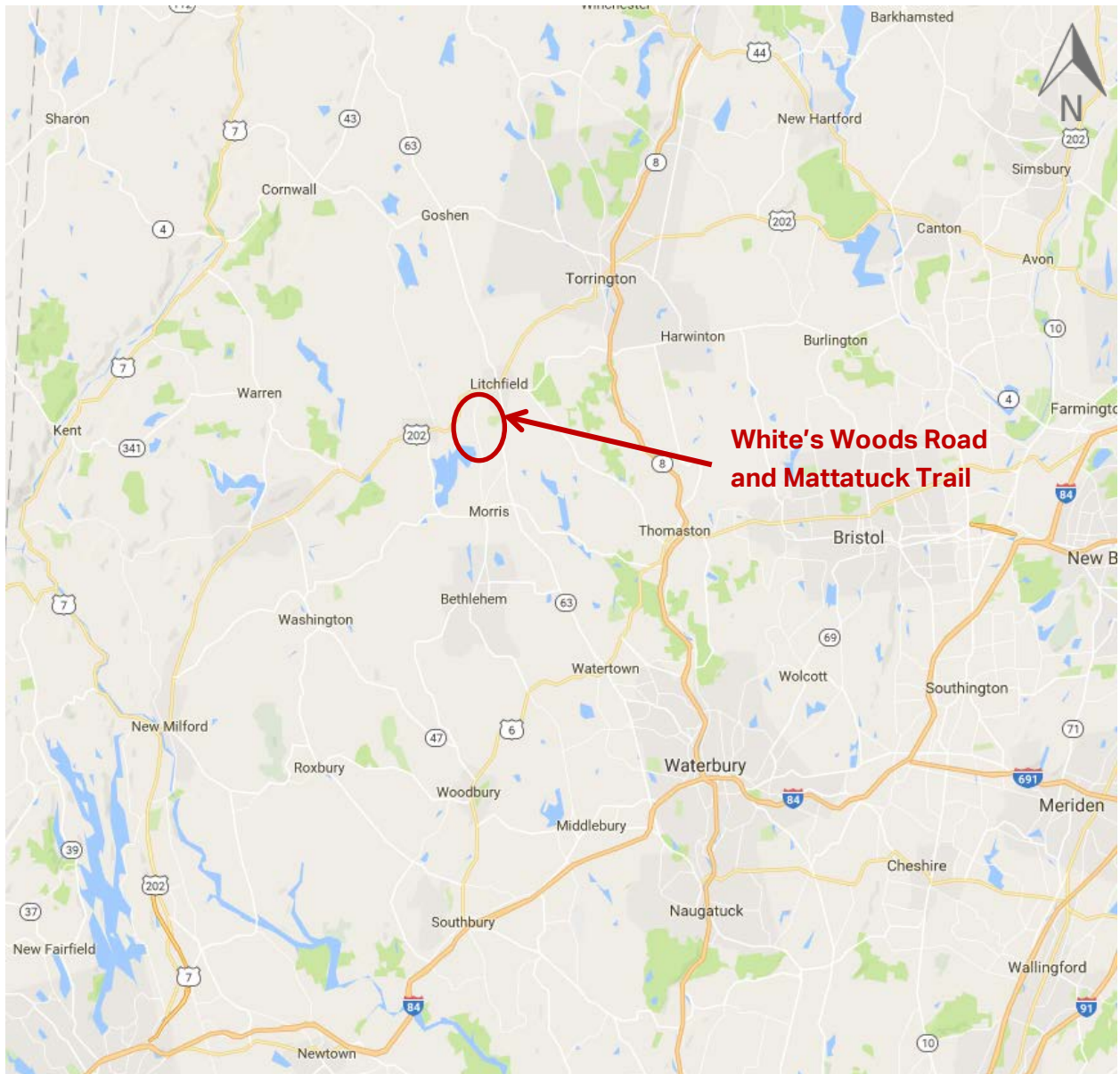


Figure 2. Study Area – Regional context

2 Pre-audit Assessment

2.1 Pre-audit Information

Between 2012 and 2014, there were 10 crashes in the RSA corridor. Five of the crashes (50%) reported in this area resulted in property damage only and the remaining five crashes (50%) resulted in injury (Table 1). Although the crash history in this area is relatively low, the proportion of crashes that resulted in injury is high. There were no crashes involving pedestrians or bicyclists. Fixed object crashes were the predominant crash type in the study

area, which represented 60% of the crashes. Fixed object crashes are typical along rural corridors with high travel speed (Table 2).

Figure 3 displays crashes that occurred in this area during 2015. As shown in the figure, a total of four crashes occurred in the study area - three on White's Woods Road and one on Mattatuck Trail. Two of the crashes recorded on White's Woods Road occurred at the stop controlled intersections with Bissell Road. All the crashes resulted in property damage only, except for one on Mattatuck Trail, which resulted in injury.

Severity Type	Number of Accidents	
Property Damage Only	5	50%
Injury (No fatality)	5	50%
Fatality	0	
Total	10	

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	1	10%
Rear-end	1	10%
Turning-Intersecting Paths	0	0%
Turning-Opposite Direction	0	0%
Fixed Object	6	60%
Backing	0	0%
Angle	0	0%
Turning-Same Direction	0	0%
Moving Object	0	0%
Parking	0	0%
Pedestrian	0	0%
Overturn	1	10%
Head-on	0	0%
Sideswipe-Opposite Direction	1	10%
Miscellaneous- Non Collision	0	0%
Total	10	

Table 2. Crash type 2012-2014

Source: UConn Connecticut Crash Data Repository

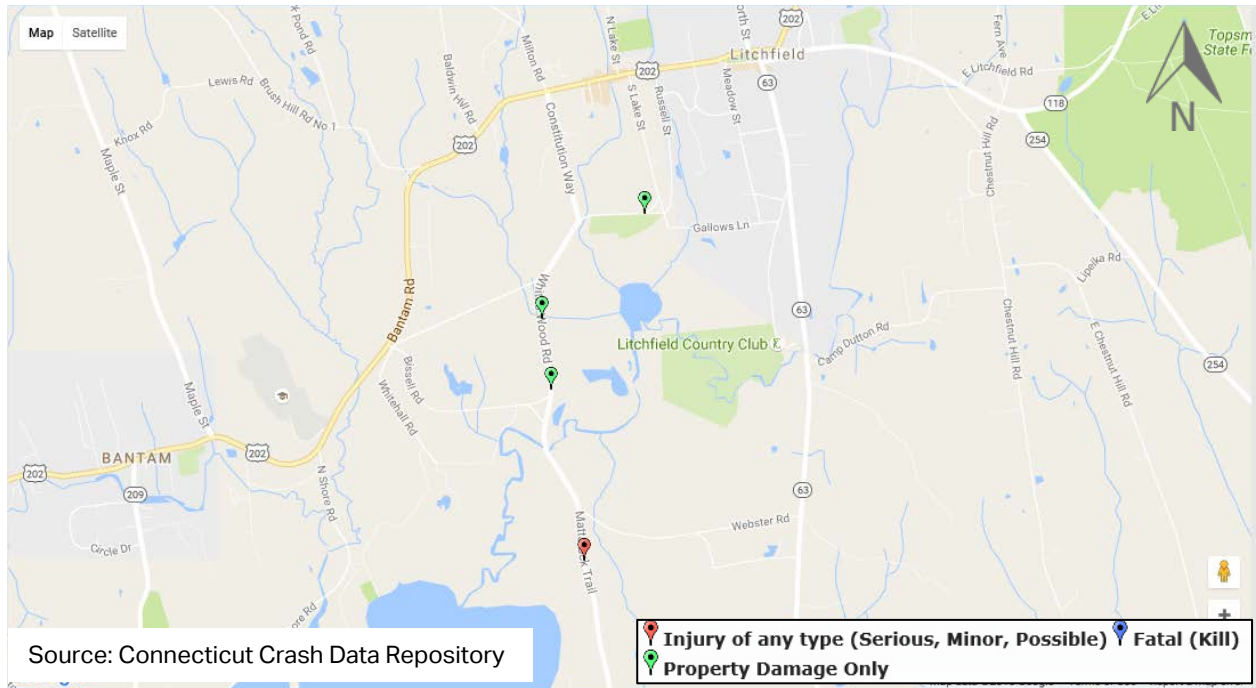


Figure 3. Crashes that occurred in 2015 (Connecticut Crash Data Repository)

White's Woods Road

White's Woods Road has one travel lane in each direction with lane width varying from 12 to 15 feet wide in northbound direction and from 14 to 16 feet wide in southbound direction. A double yellow center line is provided north of Constitution Way. There are no striped shoulders, curbing, sidewalks or pedestrian crosswalks along White's Woods Road. Dedicated turn lanes are not provided along the study corridor. The study corridor does not have signalized intersections. The minor streets are stop controlled. The intersection with Bissell Road is a triangle-type configuration, with White's Woods Road intersecting Bissell Road at two locations on the west side (on the north and south ends of the triangle). Both Bissell Road connections are two-way roadways and are stop controlled. The posted speed limit is 35 mph along White's Woods Road within the study corridor.

Just north of Bissell Road (north), there is a wide area on the east side of the White's Woods Road used for parking for access to the Little Pond Boardwalk Trail. Vehicles also park on the west side of the road in this area. The Litchfield Community Greenway intersects White's Woods Road at-grade just south of the Litchfield Intermediate School. Pedestrian crossing signs are provided in each direction at the Greenway crossing on White's Woods Road, but there is no crosswalk. A trailhead for the Litchfield Community Greenway is provided on the

south side of the intersection of White's Woods Road, South Lake Street and Russell Street. However, parking is not provided immediately at the trailhead. Informal parking areas are located along White's Woods Road. Land use along White's Woods Road is predominantly forest with access to trails. An informal parking area for canoe/kayak launching is provided on Whitehall Road, on the west side of White's Woods Road south of the bridge over the stream. A cemetery and a baseball field are located along White's Woods Road north of Litchfield Community Greenway.

Mattatuck Trail

Mattatuck Trail has one travel lane in each direction with a posted speed limit is 40 mph. A double yellow center line is provided south of Webster Road. Striped shoulders, curbing, sidewalks and pedestrian crosswalks are not provided along Mattatuck Trail. There are wood/cable guiderails from Bantam River to Bissell Road. There are no dedicated turn lanes or signalized intersections along the study corridor, and minor streets are stop controlled. There are forests on both sides of Mattatuck Trail with access to trails - only a few homes are located in this area.

Figure 4 and Table 3 summarize roadway geometrics for the study area.

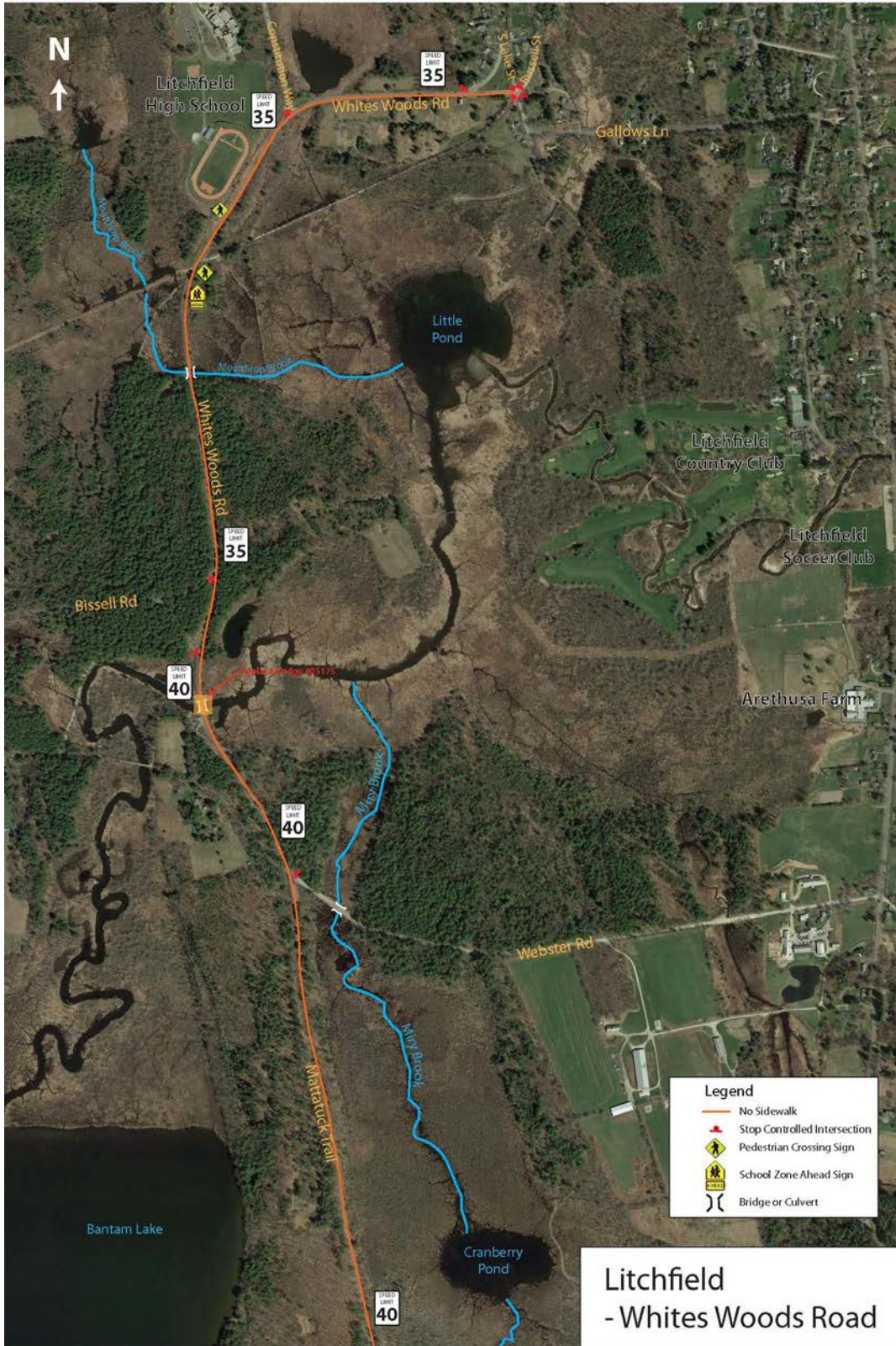


Figure 4. White's Woods Road and Mattatuck Trail Road Geometrics

Litchfield – White’s Woods Road Street Inventory

Street	Direction	No. of Lanes	Lane Width	Sidewalk			Curb	Parking	Shoulder	Ramps	
				Type	Width	Condition*				Exist	Compliant
White’s Woods Road (near Greenway Crossing)	NB	1	14.5’	No	N/A	N/A	No	No	No	No	N/A
	SB	1	16’	No	N/A	N/A	No	No	No	No	N/A
White’s Woods Road (at Bissell Road intersection north and south)	NB	1	12’	No	N/A	N/A	No	No	No	No	N/A
	SB	1	14’	No	N/A	N/A	No	No	No	No	N/A
White’s Woods Road (at Bridge)	NB	1	15’	No	N/A	N/A	No	No	No	No	N/A
	SB	1	15’	No	N/A	N/A	No	No	No	No	N/A
White’s Woods Road (between the Bridge and Webster Road)	NB	1	13.5’	No	N/A	N/A	No	No	No	No	N/A
	SB	1	15’	No	N/A	N/A	No	No	No	No	N/A

Table 3. Street inventory

2.2 Prior Successful Effort

The Town of Litchfield, The Alan White Memorial Foundation and the Litchfield Community Greenway Group provide facilities for pedestrians and bicyclists in the White's Woods study corridor:

1. In 2010 the Friends of the Litchfield Community Greenway, Inc¹. completed the first two-mile section of the Greenway, which extends from the south end of South Lake Street to the entrance to Alan White Memorial Foundation land off Bissell Road.
2. The Alan White Memorial Foundation allows the public to use its property for hiking and other passive activities, with access to several trails located on White's Woods Road and Mattatuck Trail.
3. The Town has recently been obtaining and summarizing right-of-way information along White's Woods Road and Mattatuck Trail.

Potential Future Changes/Considerations:

1. The Town would like to provide new parking areas on White's Woods Road to provide access to the Litchfield Community Greenway and White Memorial land and trails.
2. The CTDOT and the Town will begin reconstructing the White's Woods Road Bridge in the spring of 2017. A sidewalk is planned for one side of the bridge. The existing informal area for canoe/kayak will be formalized as part of the project.

2.3 Pre-Audit Meeting

The RSA was conducted on November 8, 2016. The pre-audit meeting was held at 8:30 AM in the Litchfield Town Garage located at 101 Russell Street, Litchfield, CT 06759.

The RSA team was comprised of staff from AECOM, VN Engineers, CTDOT, and Litchfield Public Works. The complete list of attendees can be found in Appendix B. Materials distributed to the RSA Team, including the agenda, audit checklist, ADT counts, crash data and road geometrics, can be found in Appendix C.

The following observations and conditions were discussed prior to conducting the field audit of the White's Woods and Mattatuck Trail Corridor:

- The Town requested that the RSA focus on the White's Woods corridor between South Lake Street on the north and Webster Road on the south.
- The south end of South Lake Street is closed as a result of a motorcycle accident.

¹ The Town of Litchfield and the White Memorial Foundation are partners.

- There is a trailhead for the Litchfield Community Greenway on the south side of the White's Woods Road/South Lake Street/Russell Street. On-street and off-street parking are not currently allowed in the vicinity of the trailhead.
- The Town would like to provide facilities to get pedestrians off the road between Webster Road and Bissell Road.
- White's Woods Road is used for a large portion of the annual Litchfield's Hill's Road Race course.
- Commuters and the State Police use Mattatuck Trail, White's Woods Road, and Bissell road from Morris to avoid Route 63.
- Bissell Road is also used as a cut-through road.
- Truck traffic on White's Woods Road is primarily for local truck deliveries.
- Bicyclists use White's Woods Road.
- Speed is an issue and State Police have enforced speed limits on White's Woods Road. There is an opportunity to borrow a portable speed radar trailer from the Town of Morris.
- The Town has not performed a speed study along White's Woods Road. It would like to collect and summarize speed data.
- There are no striped shoulders on White's Woods Road. This gives motorists the perception of a wide road, and encourages speeding.
- Sight distance for motorists is restricted at the intersection of White's Woods Road and Bissell Road. There was a fatality about 10 years ago at this location where speeding and alcohol was involved. The Town removed trees to improve sight lines. Additional measures would need to be coordinated and approved by the White Memorial Foundation.
- Large White Pine trees block the sun from reaching Bissell Road. This prevents ice and snow from melting in the winter time and is an issue for motorists.
- There is no crosswalk at the Greenway crossing on White's Woods Road. There is one crossing sign in each direction, but additional measures, such as flashing beacons, may be needed due to limited sight distance and vehicle speeds. There is currently no street lighting.
- There may be the potential to provide a pedestrian path on the east side of White's Woods Road.
- People park on both sides of the White's Woods Road at the Little Pond Trail and cross the road at multiple locations.
- The trails along White's Woods Road are used for hiking, cross-country skiing and snow shoeing.

3 RSA Assessment

3.1 Field Audit Observations

White's Woods Road at Greenway Crossing

- The northbound travel lane is 14.5 feet wide and the southbound lane is 16 feet wide. There is a narrow gravel recovery area on both sides. (Figure 5).
- There are advance pedestrian crossing signs in both directions that are newer and appear to meet retro-reflectivity standards.
- There is no crosswalk and no pedestrian crossing signs where the Greenway actually crosses White's Woods Road (Figure 6).
- There are no street lights near the crossing.
- The sight distance was measured as approximately 270 feet for vehicles traveling northbound on White's Woods Road approaching the Greenway crossing. The sight distance is restricted by a vertical curve. The available stopping sight distance is adequate for approximately 35 mph.
- There is no centerline or shoulder striping on White's Woods Road.



Figure 5: Looking north on White's Woods Road toward Greenway crossing



Figure 6: Greenway crossing at White's Woods Road

White's Woods Road at Little Pond Boardwalk Trail

- The Town recently improved the off-street parking area on the east side of White's Woods Road.
- Parking is not striped or designated and drivers parked, head-in, angled and parallel to the road.

White's Woods Road at Bissell Road Intersection North and South

- The intersection with Bissell Road is a triangle-type configuration with White's Woods Road intersecting Bissell Road at two locations on the west side (on the north and south ends of the triangle). Both Bissell Road connections are two-way roadways and are stop controlled.
- The northbound travel lane is 12 feet wide and the southbound lane is 14 feet wide.
- There is a post and cable guide rail on both sides of White's Woods Road at the Bissell Road (south) intersection (Figure 7).
- The sight distance was measured as approximately 375 feet for vehicles traveling southbound on White's Woods Road approaching Bissell Road (north). The sight distance is restricted by White Pine trees on the west side of the road.
- White Pine trees also block the sight distance for vehicles exiting Bissell Road (north) and looking south on White's Woods Road (Figure 8).
- Bissell Road (north) is approximately 26 feet wide.
- There are stop signs and stop bars on both Bissell Road approaches to White's Woods Road (Figure 9).
- There is no centerline or shoulder striping on White's Woods Road.



Figure 7: White's Woods Road looking south at Bissell Road (south)



Figure 8: Looking southbound on White's Woods Road near Bissell Road (North)



Figure 9: Bissell Road (north) approach to White's Woods Road

White's Woods Road at Bridge

- The bridge has 15-foot wide travel lanes in each direction and a 2-foot wide safety walk on each side (Figure 10).
- There are steep slopes and wetlands on both sides of the bridge that may restrict options for providing a new pathway on either side.
- There is post and cable guide rail on both sides south of the bridge.



Figure 10: Bridge on White's Woods Road looking south

White's Woods Road between the Bridge and Webster Road

- The northbound travel lane is 13.5 feet wide and the southbound lane is 15 feet wide.
- The posted speed limit is 40 mph in both directions south of the bridge.
- There are no speed advisory signs.
- South of the bridge the utility poles cross from the west side of White's Woods Road to the east side.
- The east side of White's Woods Road appears to have fewer constraints than the west side, which has steep slope (Figure 11).

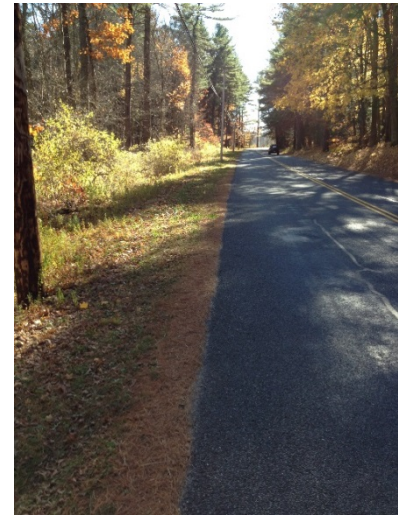


Figure 11: White's Woods Road looking south, south of bridge

White's Woods Road to Webster Road

- Webster Road intersects White's Woods Road on the east side as a T-intersection.
- There is a new stop sign with a vertical reflective strip on the pole, but no stop bar.
- Webster Road is wide where it intersects White's Woods Road, with wide corner radii on the both corners (Figure 12).
- Town staff indicated there have been crashes at this intersection.
- There is damaged guide rail on the southeast corner (Figure 13).



Figure 12: Webster Road approach to White's Woods Road



Figure 13: Damaged guardrail on southeast corner of White's Woods Road and Webster Road

White's Woods Road at South Lake Street and Russell Street

- On-street and off-street parking is prohibited in the vicinity of the intersection and the Greenway trailhead. As a result, Greenway users who drive must park further away, such as on Russell Street.
- The cemetery is located on the east side of White's Woods Road.
- There is a worn path on the east side of the road indicating pedestrian activity (Figure 14).

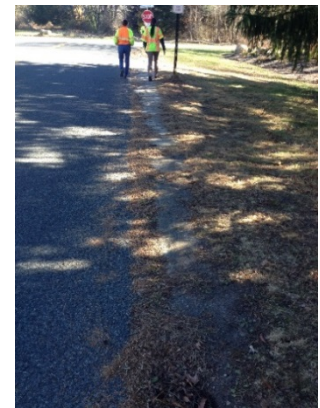


Figure 14: White's Woods Road looking northbound at intersection with South Lake Street and Russell Street

3.2 Post Audit Workshop - Key Issues

- If off-street parking were considered for the triangle area bounded by White's Woods Road and Bissell Road, drainage issues would need to be addressed.
- Providing parking on the east side of White's Woods Road in this area would necessitate coordinating with the cemetery and the White Foundation.
- Encouraging drivers to park at a 30-degree angle at the Little Pond Boardwalk Trail on White's Woods Road should be evaluated.

- Evaluate alternative intersection concepts for the intersection of White's Woods Road and Bissell Road (north and south). This would include a roundabout and one way alternatives.
- Consider providing a walkway or boardwalk on the west side of the bridge on White's Woods Road. Evaluate connecting with a new pathway on the east side of White's Woods Road south of the bridge.

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 costlier 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.

Note:

- All roadside recommended improvements will require an inland wetland application and approval by the Litchfield Inland Wetlands Commission.
- All aspects regarding the Litchfield Greenway, where it is not located in White Memorial property, shall require Litchfield Planning and Zoning Commission's approval via submission of an application for Special Exception - Outdoor Recreation.
- If the Town makes trail improvements by itself, this would also involve an 8-24 application (Connecticut Code - Sec. 8-24. Municipal improvements.) as a public park area.

4.1 Short-Term

1. Town to coordinate with Northwest Hills Council of Governments to measure vehicle travel speeds along White's Woods Road. Results will be used to identify areas of concern; especially where pedestrians cross and where sight distance is restricted. Based on the results, the Town should consider adding advisory speed signs in the vicinity of the Greenway crossing and Bissell Road.

2. Town to borrow a portable speed trailer from the Town of Morris for use on White's Woods Road (Figure 15).
3. Town to stripe a crosswalk at the Greenway crossing on White's Woods Road with reflective paint or thermo-plastic/inlay tape. Install new retro-reflective pedestrian crossing signs and arrow plaques. See Medium-term measures below.
4. Town to stripe a stop bar on the Webster Road approach to White's Woods Road. The stop bar should be located near the intersection with White's Woods Road.
5. Town to install signage at the parking area on White's Woods Road for the Little Pond Boardwalk trail to encourage 30-degree angled parking.
6. Town to coordinate with the CTDOT on the design of the improvements to the bridge on White's Woods Road. Determine if a cantilever walkway can be added to the west side of the bridge. This could then connect with a new pathway being considered by the Town on White's Woods Road.



Figure 15: Portable speed trailer

Figure 16 depicts these recommendations.

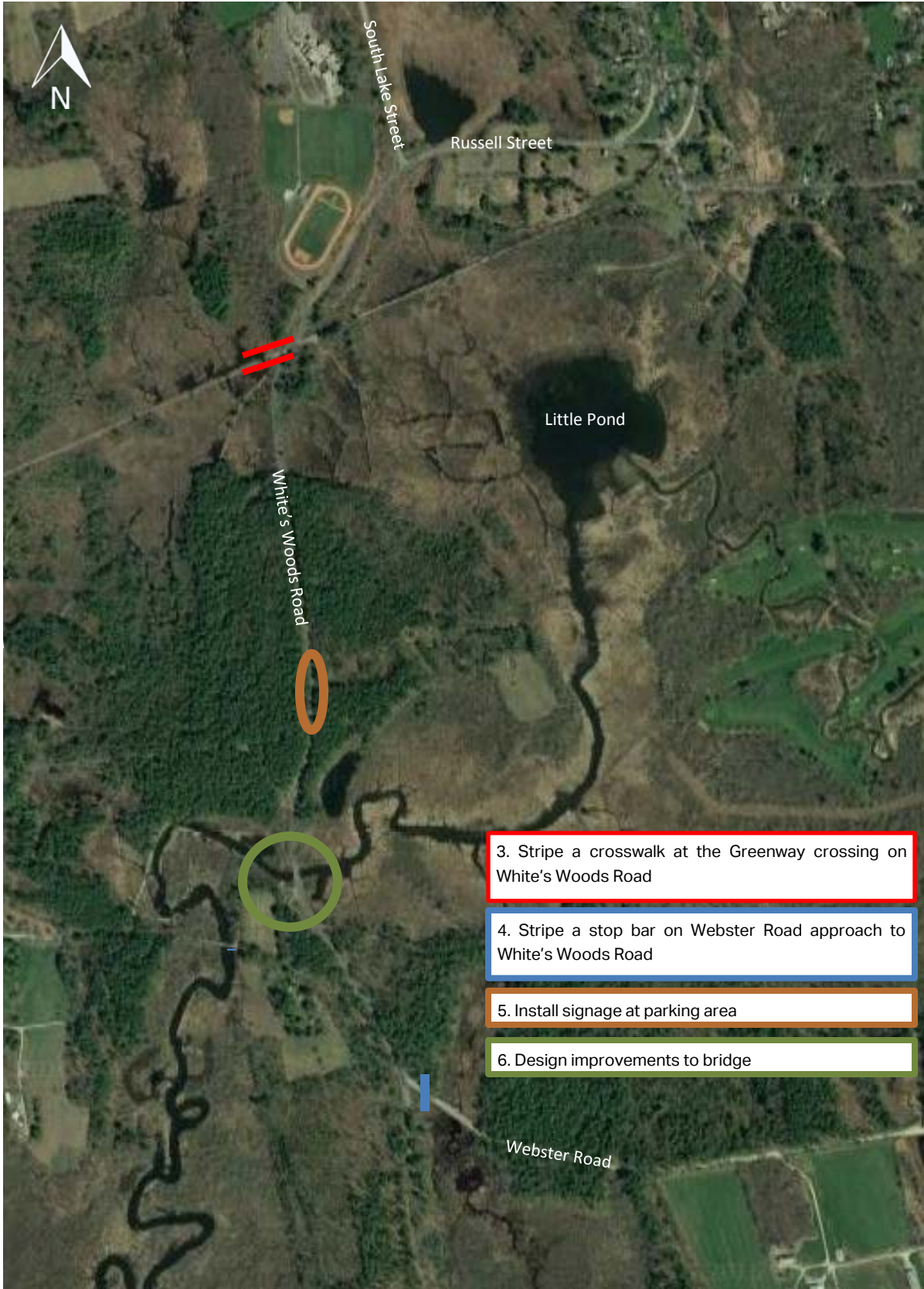


Figure 16: Short-Term Recommendations

4.2 Medium-Term

1. Town to consider installing a rectangular rapid flashing beacon or other similar device at the Greenway crossing on White's Woods Road. This type of device may be needed due to limited sight distance and high travel speed (Figure 17).
2. Town to consider providing street lighting at critical spot locations on White's Woods Road where pedestrians cross, such as the Greenway crossing and Little Pond Boardwalk trail.
3. Town to repair damaged guiderail on the southeast corner at the intersection of White's Woods Road and Webster Road.
4. Town to develop concept plans for a new pedestrian pathway between Bissell Road and Webster Road. A preliminary alignment may have the pathway on the west side of White's Woods Road from Bissell Road to and including the bridge, and then shifting to the east side south of the bridge and continuing to Webster Road. Materials for the pathway may include stone dust or crushed stone.
5. Town to evaluate alternatives for a new configuration and alignment at the intersection of White's Woods Road and Bissell Road (north and south). Alternatives should be developed that would eliminate one of the two T-intersections or consolidate the two Bissell Road segments into a single roadway. The goals of a new alignment would be to improve safety for all users, slow traffic speed, reduce the amount of impervious pavement, and potentially provide an additional parking area. Alternatives may include a roundabout, a one-way pair, and consolidating the existing north and south segments into a single conventional T-intersection. The Town should coordinate with the White Foundation which owns property adjacent to the intersection and within the intersection.
6. Town to evaluate alternatives for providing parking to serve the Greenway trailhead near the intersection of White's Woods Road/South Lake Street/Russell Street. Alternative locations include:
 - a. The west side of White's Woods Road within the grass triangle area.
 - b. Roadways surrounding the triangle, if made one-way, which would create a lane for parking by eliminating one direction of travel.
 - c. Russell Street, if closed to the general traffic to create parking area. Access would still be allowed for town employees.



Figure 17: Rectangular rapid flashing beacon

Alternatives should be coordinated with the cemetery and White Foundation.

Figure 18 depicts these recommendations.



Figure 18: Medium-Term Recommendations

4.3 Long-Term

1. Town to construct pathway along White's Woods Road between Bissell Road and Webster Road.
2. Town to construct improvements at the intersection of White's Woods Road and Bissell Road (north and south).
3. Town to provide additional parking to serve the Greenway trailhead near the intersection of White's Woods Road/South Lake Street/Russell Street.
4. Town to develop concept plans for providing additional pathways along White's Woods Road north of Bissell Road.

Figure 19 depicts these recommendations.

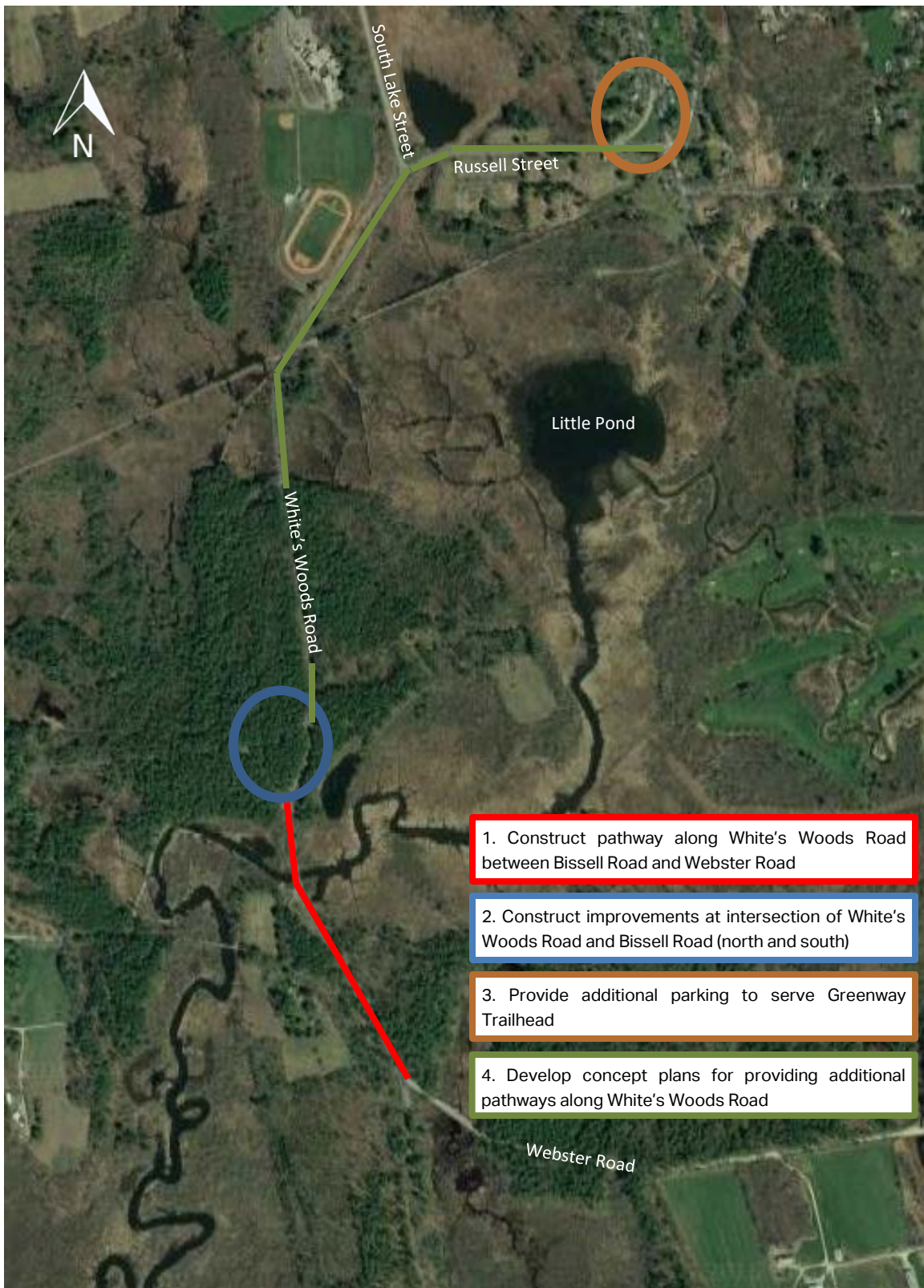


Figure 19: Long-Term Recommendations

4.4 Summary

This report documents the observations, discussions, and recommendations developed during the successful completion of the Town of Litchfield RSA. It provides Litchfield with an outlined strategy to improve the transportation network for all road users on White's Wood Road and Mattatuck Trail, particularly focusing on pedestrians and cyclists. Moving forward, Litchfield may use this report to prepare strategies for funding and implementing the improvements, and as a planning tool for recommendations into future development in this area.



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	<input type="text"/>
Title	<input type="text"/>
Email Address	<input type="text"/>
Telephone Number	<input type="text"/>

2. Location information

Address	<input type="text"/>
Description	<input type="text"/>
City / Town	<input type="text"/>

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

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

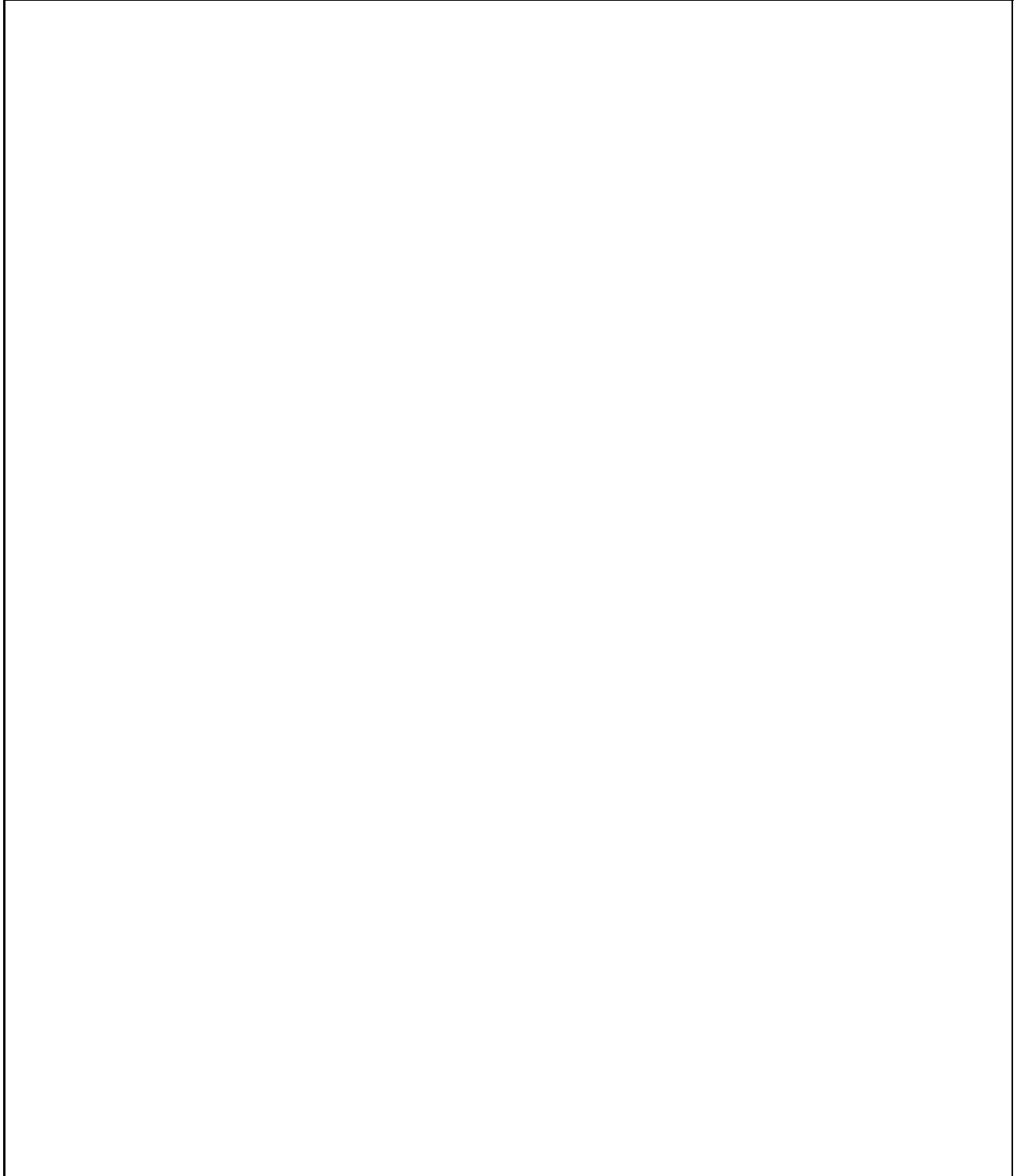
Maintenance issues (cutting grass, leaves, snow removal)

N/A (not applicable)

Other (please specify)

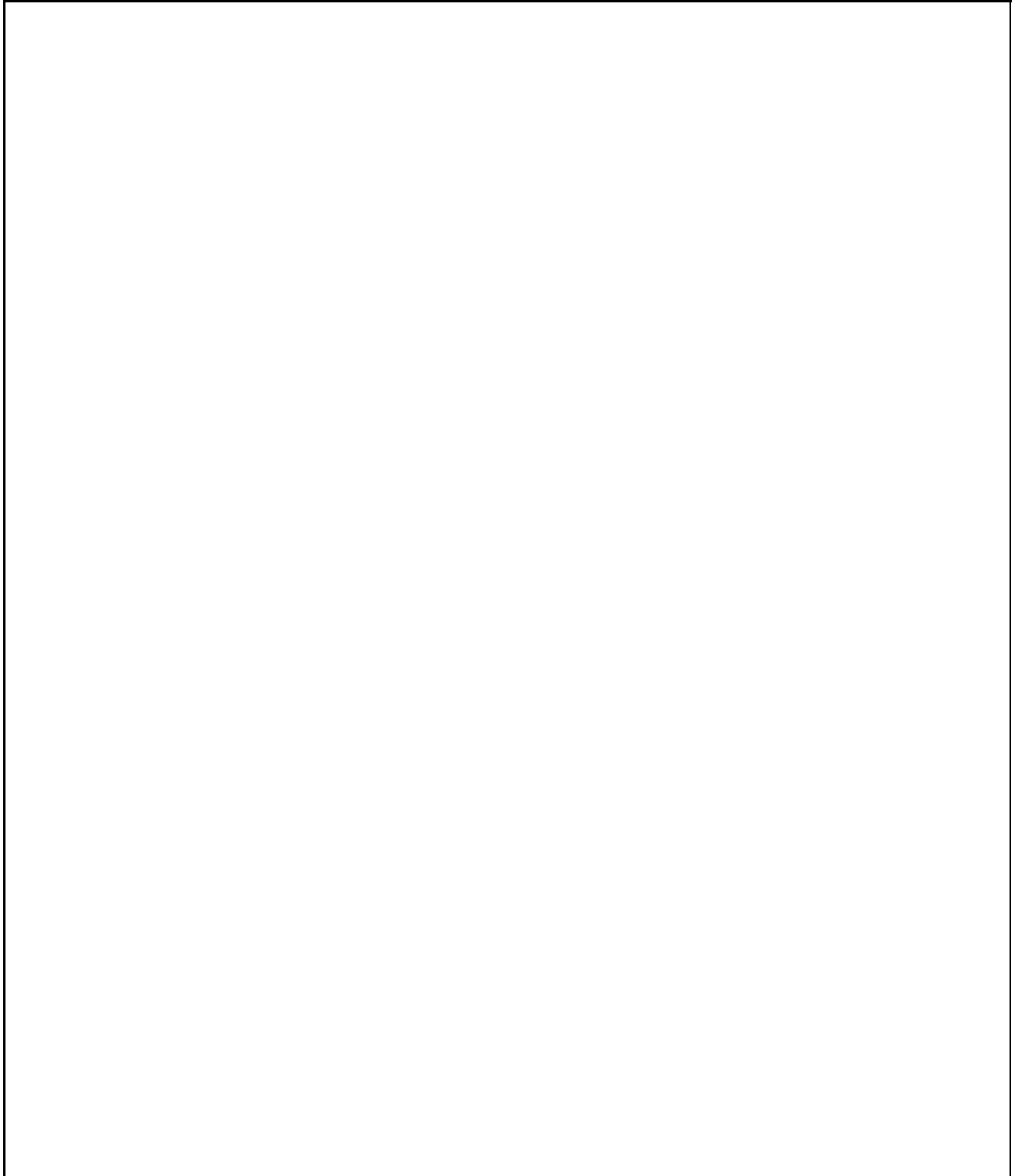
11. Are there any past, current or future transportation/economic development projects near this location (i.e. Federal, State or local projects)?

If Yes please describe and list all projects.

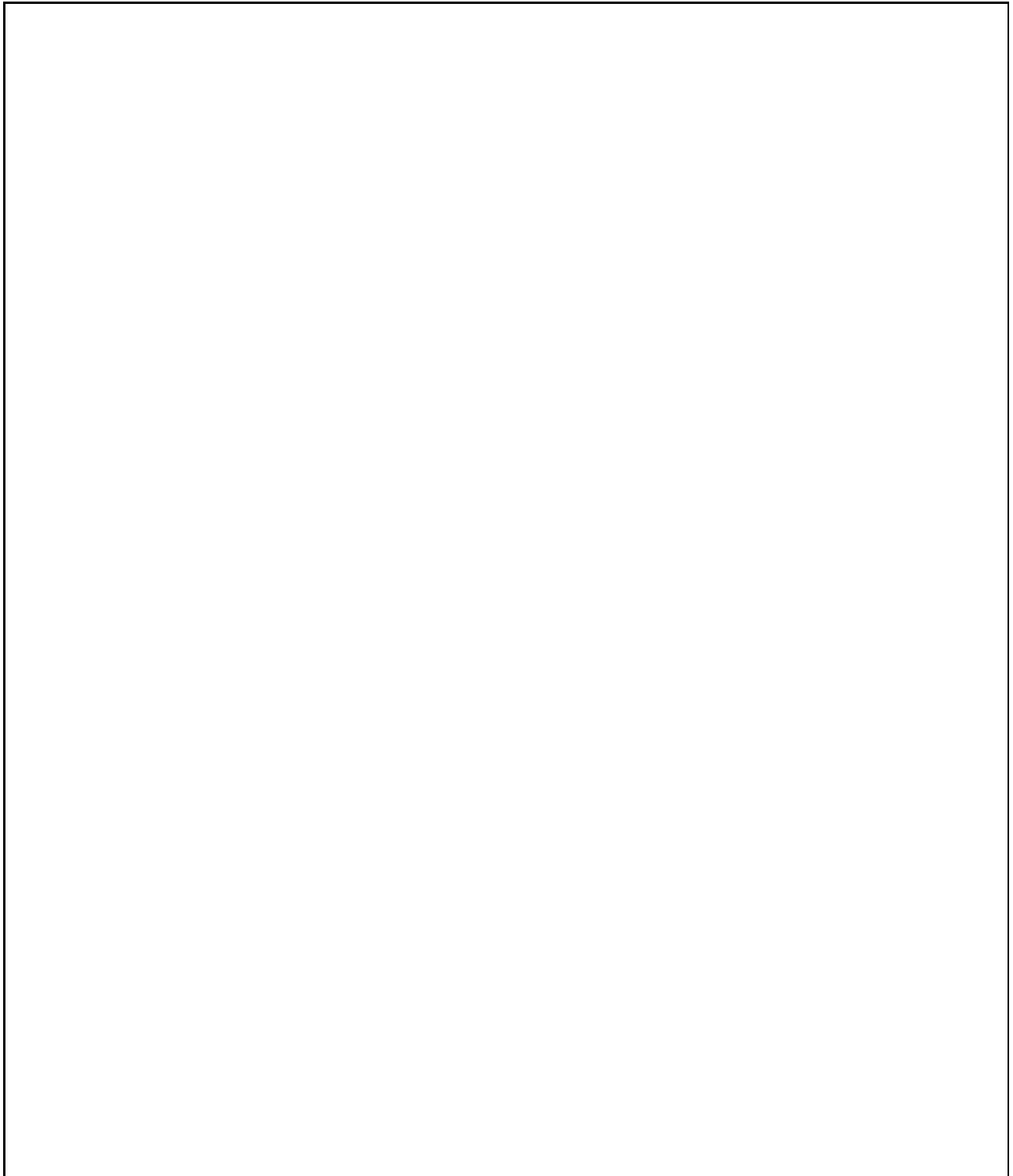
A large, empty rectangular box with a thin black border, intended for the user to describe and list any past, current, or future transportation or economic development projects near the location. The box is currently blank.

12. Environmental Concerns:

If Yes please describe and list.

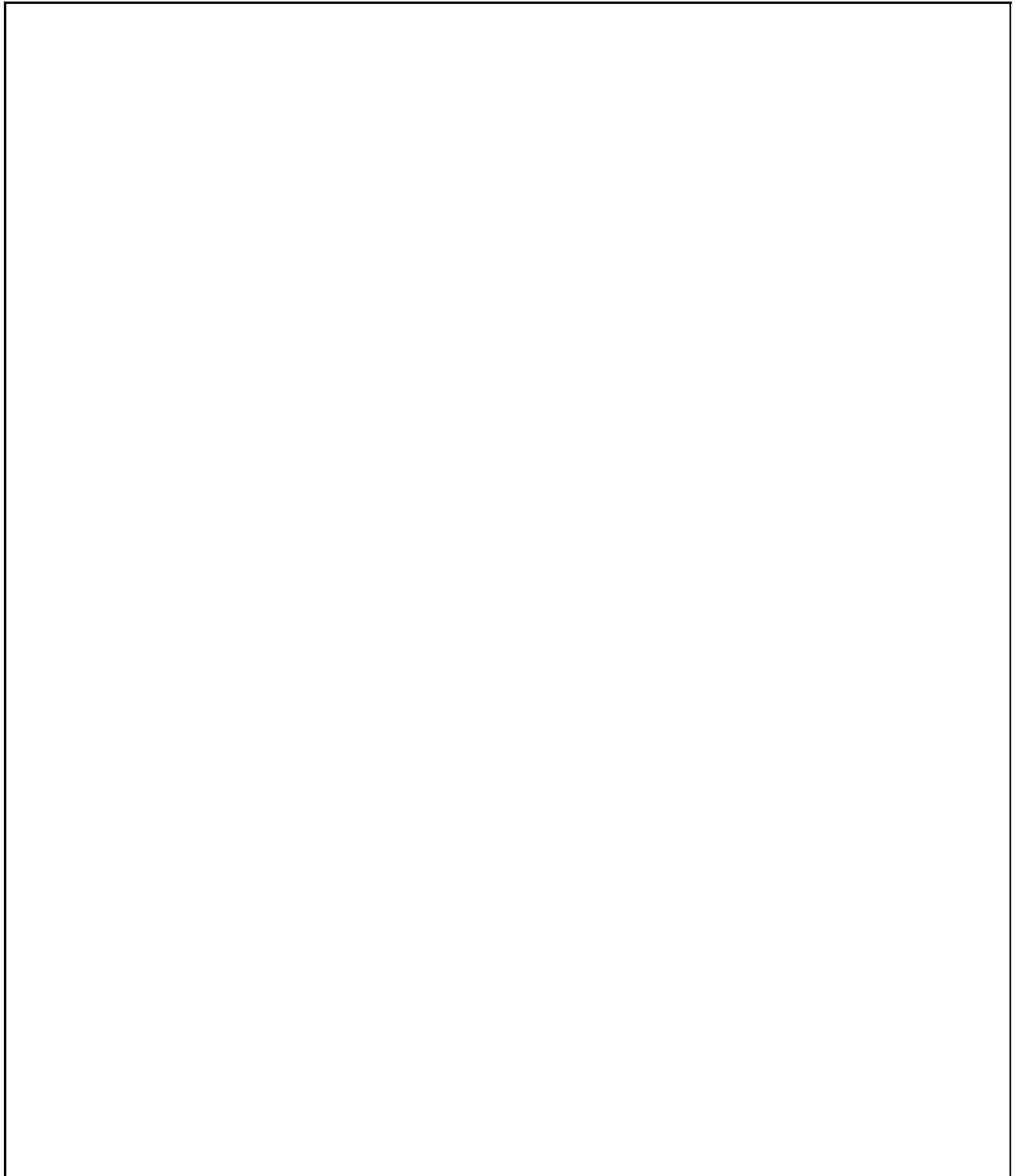
A large, empty rectangular box with a thin black border, intended for the user to describe and list any environmental concerns. The box occupies most of the page's vertical space below the instruction.

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

A large, empty rectangular box with a thin black border, intended for the user to provide an explanation for why a location should be considered for an RSA. The box occupies most of the page's vertical space below the question.

14. Are there plans to expand the area?

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



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

A large, empty rectangular box with a thin black border, intended for the user to provide any other pertinent information unique to the location.

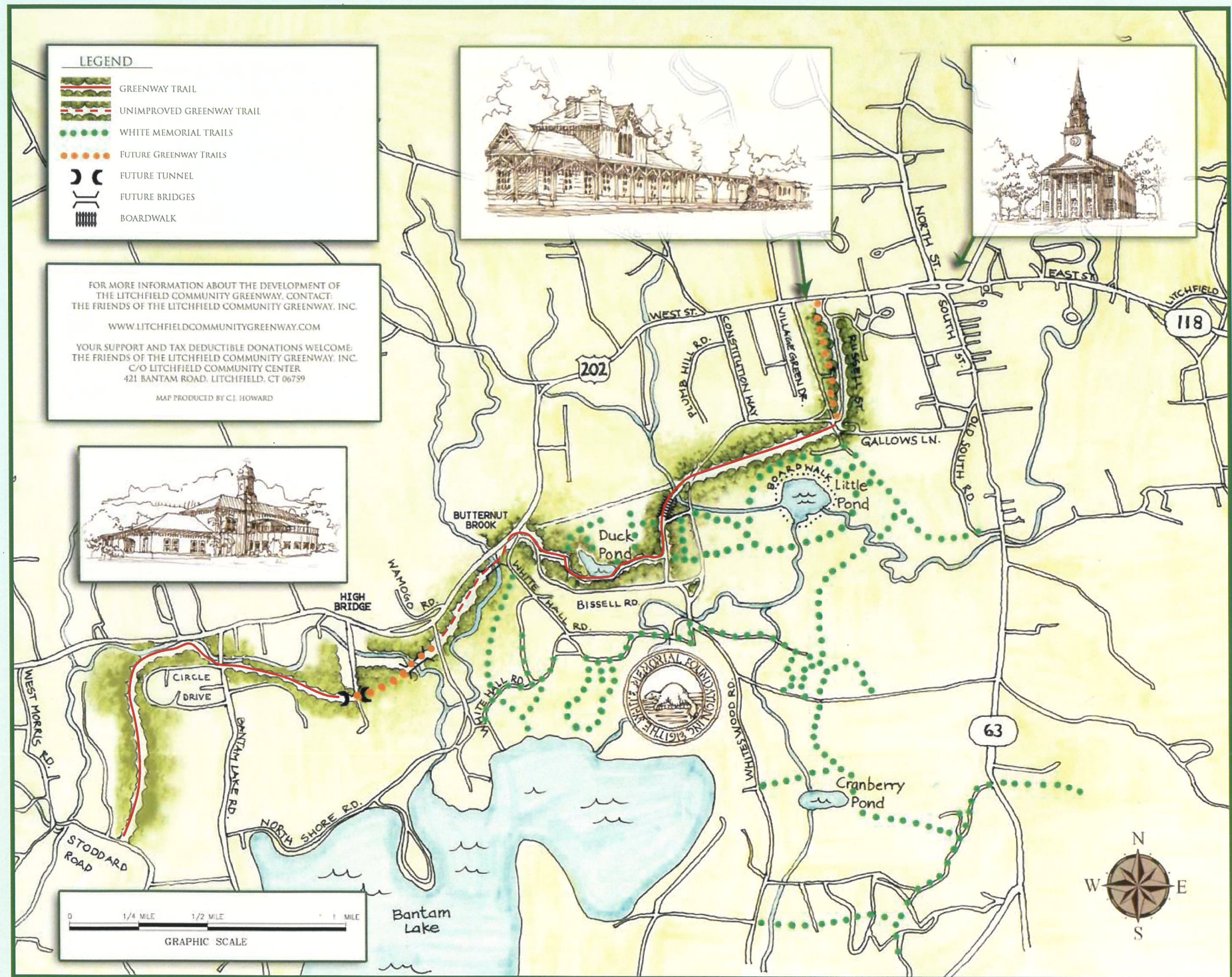
Thank you for completing the Community Connectivity application.

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)



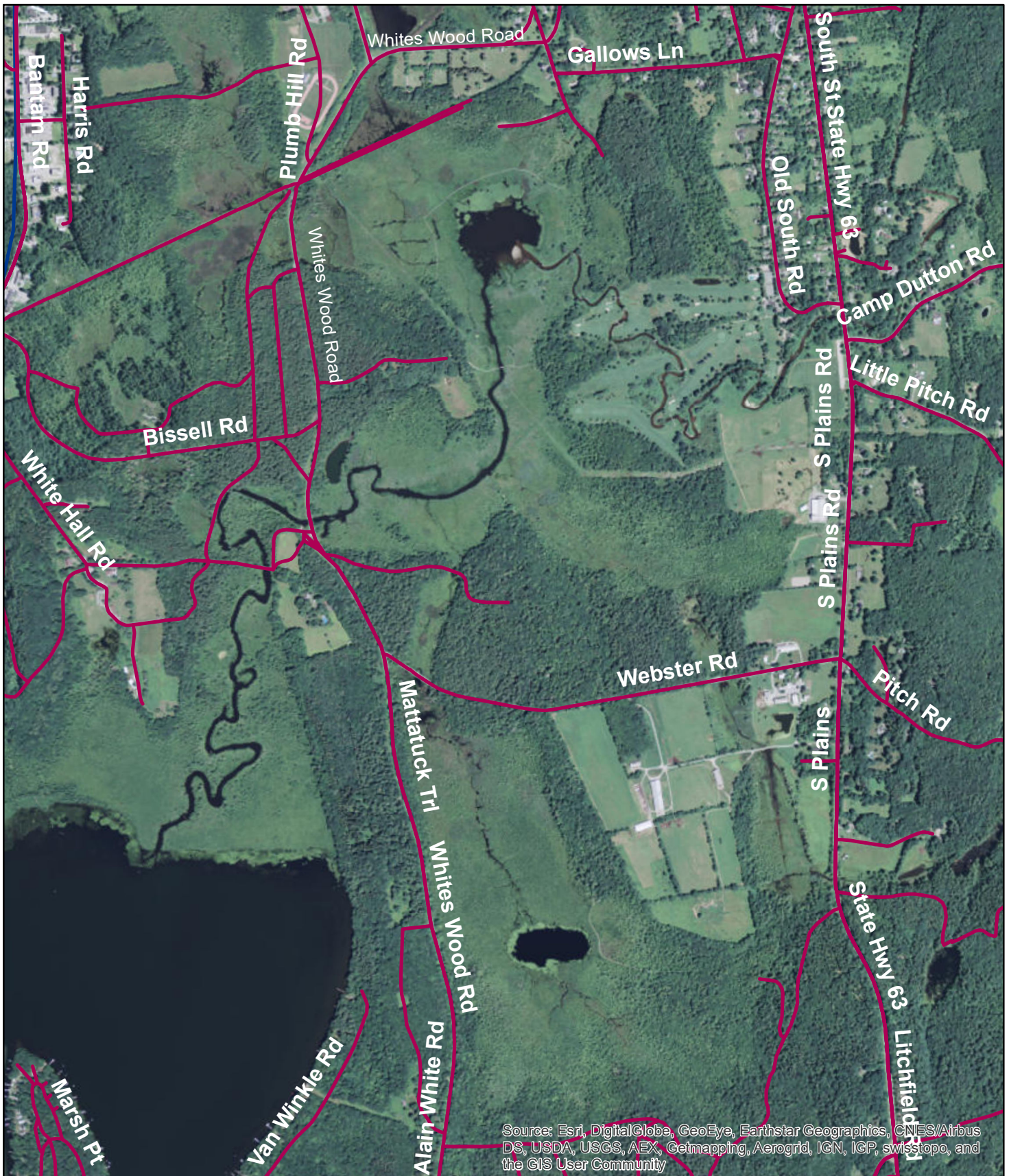
Litchfield Community Greenway



sign purchased with a grant fom

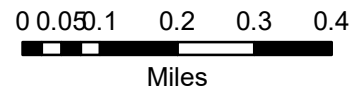
www.LitchfieldCommunityGreenway.com





Whites Wood Road, Litchfield, CT

Prepared by Joanna Wozniak-Brown
 Northwest Hills Council of Governments
 Drafted: February 24, 2016
 Project: Community Connectivity Program



COMMUNITY CONNECTIVITY PROGRAM

ROAD	TOWN	LENGTH	WIDTH	SPEED
Whites Wood Rd	Litchfield	12,302 '	26'	35/30 MPH
Bissell Rd	Litchfield	4700'	25'	35 MPH
North Shore Rd	Litchfield	8,501'	25'	25/35 MPH
Constitution Way Bld	Litchfield	2,746'	26'	30 MPH
Highbridge Rd	Litchfield	2534'	20'	25MPH



COMMUNITY
connectivity program

Appendix B



AECOM
Built to deliver a better world



Road Safety Audit

Town: Litchfield
RSA Location: White's Woods Road from South Lake Street to
Meeting Location: Mattatuck Trail at the Morris Town Line
Address: Litchfield Town Garage
Date: 101 Russell Street, Litchfield, CT 06759 11/8/2016
Time: 8:30 AM

Participating Audit Team Members

Audit Team Member	Agency/Organization
Jeff Maxtutis	Aecom
Sara Radacsi	CTDOT
Patrick Zapatka	CTDOT
Raz Alexe	PW
Naomi Boccio	PW
Bridget Boucaud	VN Engineers, Inc.



COMMUNITY
connectivity program

Appendix C



AECOM
Built to deliver a better world



Road Safety Audit – Litchfield

Meeting Location: Litchfield Town Garage
Address: 101 Russell Street, Litchfield, CT 06759
Date: 11/8/2016
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	
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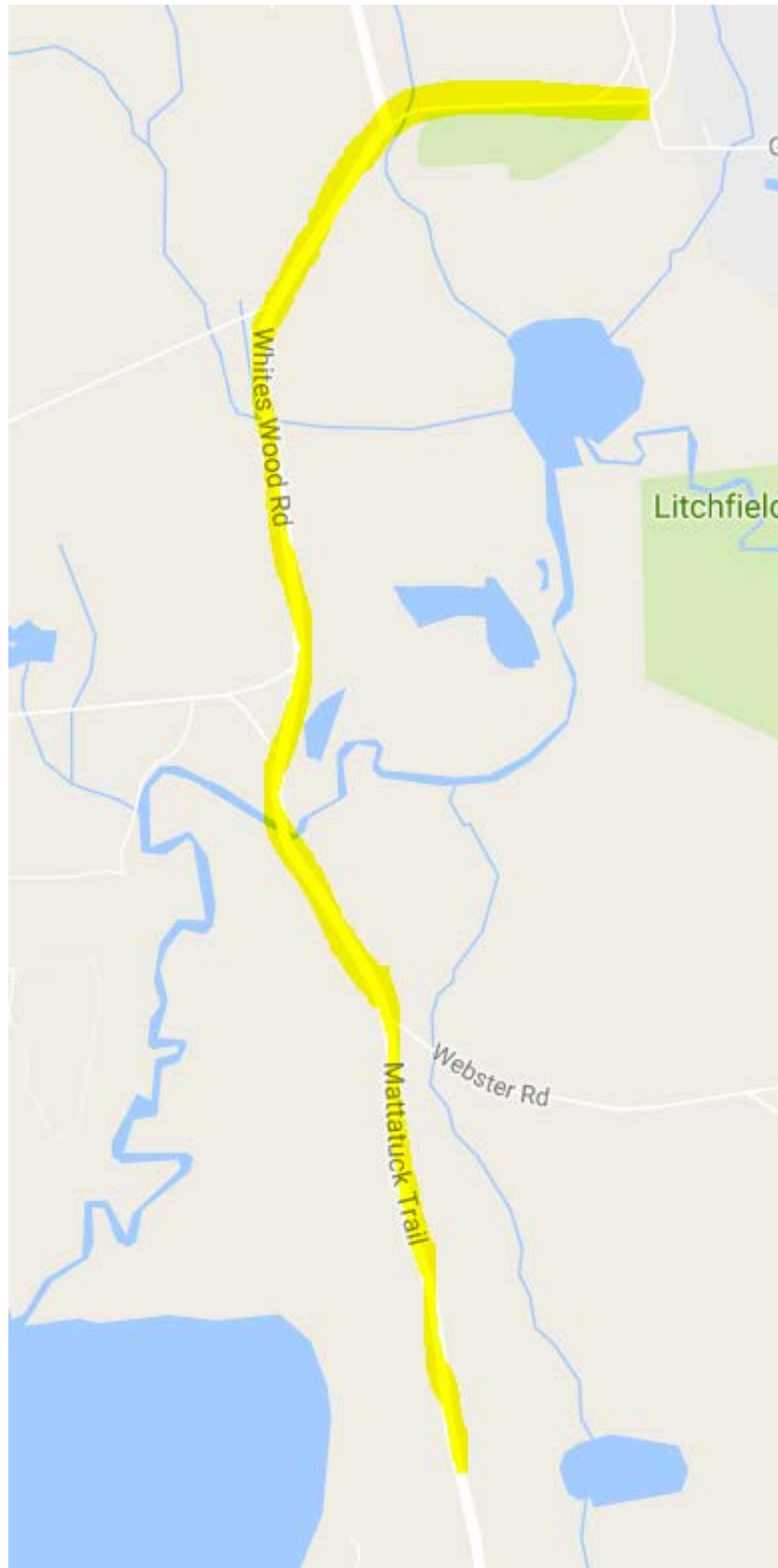
Roadway & Vehicles	
<ul style="list-style-type: none">• Speed-related issues<ul style="list-style-type: none">○ Alignment;○ Driver compliance with speed limits○ Sight distance adequacy○ Safe passing opportunities	
<ul style="list-style-type: none">• Geometry<ul style="list-style-type: none">○ Road width (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	
--	--



<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	

Litchfield RSA Location Map



Average Daily Traffic (ADT)



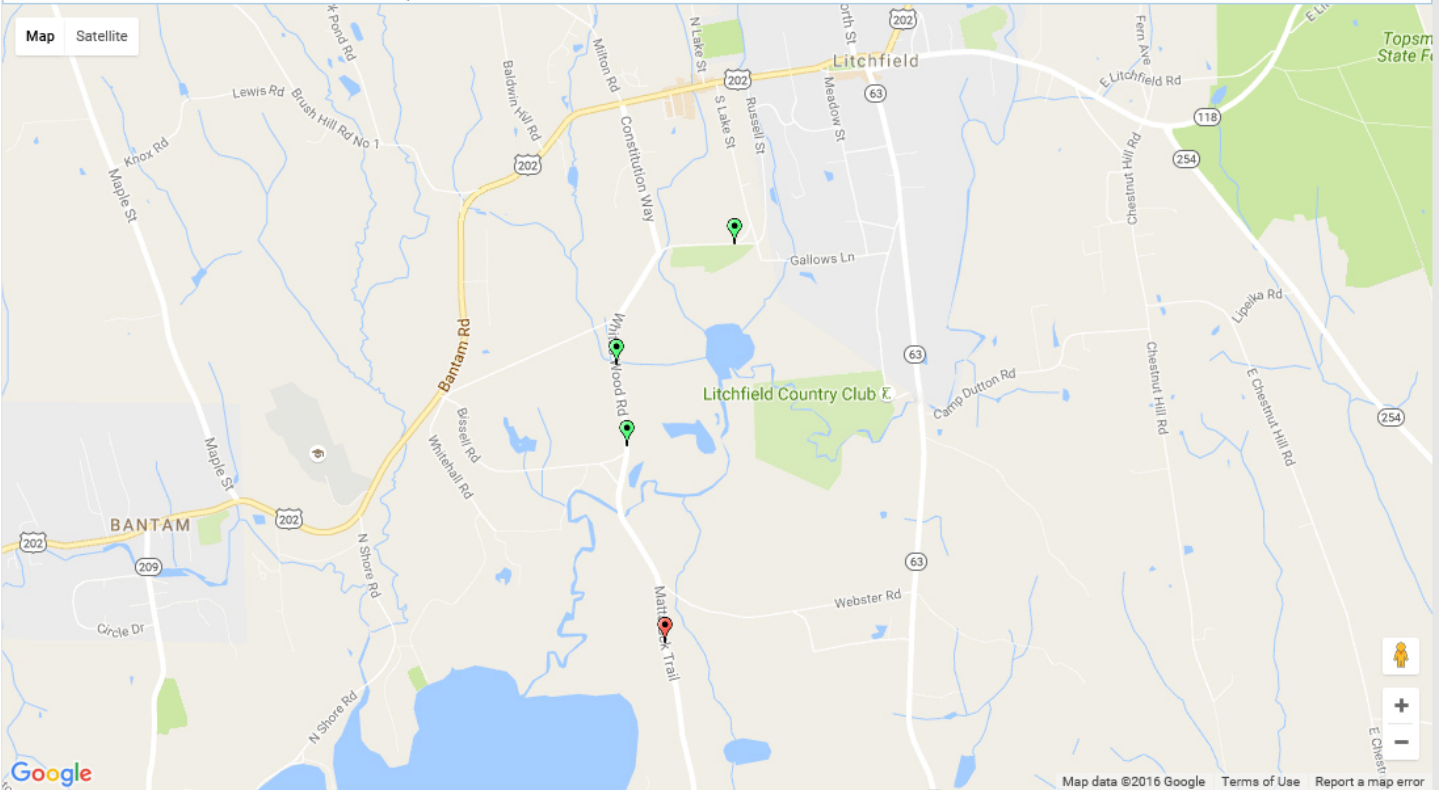
2015 Crashes

UConn

Connecticut Crash Data Repository

Search Criteria:

Dataset: mmucc
Towns: Litchfield
Town & Route: Town:74 Route:131 Intersection:undefined Milepost:-
Town & Route: Town:74 Route:63 Intersection:undefined Milepost:33.74-33.74
Crash Severity: Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only
Case Status: Complete



Markers Heatmap Crashes By Route Select & Query

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

Route Segment Scale 0 to 0

Query Selection View Vehicle Vectors

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 – Litchfield

Crash Summary

Data: 3 years (2012-2014)

There were no crashes that involved pedestrians.

There were no crashes involving bicyclists.

Severity Type	Number of Crashes	
Property Damage Only	5	50%
Injury (No fatality)	5	50%
Fatality	0	0%
Total	10	

Manner of Crash / Collision Impact	Number of Crashes	
Unknown	0	0%
Sideswipe-Same Direction	1	10%
Rear-end	1	10%
Turning-Intersecting Paths	0	0%
Turning-Opposite Direction	0	0%
Fixed Object	6	60%
Backing	0	0%
Angle	0	0%
Turning-Same Direction	0	0%
Moving Object	0	0%
Parking	0	0%
Pedestrian	0	0%
Overturn	1	10%
Head-on	0	0%
Sideswipe-Opposite Direction	1	10%
Miscellaneous- Non Collision	0	0%
Total	10	



Weather Condition	Number of Crashes	
Snow	0	0%
Rain	0	0%
No Adverse Condition	9	90%
Unknown	0	0%
Fog	0	0%
Other	0	0%
Blowing Sand, Soil, Dirt or Snow	1	10%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	10	

Light Condition	Number of Crashes	
Dark-Not Lighted	1	10%
Dark-Lighted	0	0%
Daylight	9	90%
Dusk	0	0%
Unknown	0	0%
Dawn	0	0%
Total	10	

Road Surface Condition	Number of Crashes	
Snow/Slush	0	0%
Wet	1	10%
Dry	9	90%
Unknown	0	0%
Ice	0	0%
Other	0	0.0%
Total	10	



Time		Number of Crashes	
0:00	0:59	0	0%
1:00	1:59	1	10%
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	2	20%
9:00	9:59	0	0%
10:00	10:59	0	0%
11:00	11:59	0	0%
12:00	12:59	1	10%
13:00	13:59	0	0%
14:00	14:59	1	10%
15:00	15:59	2	20%
16:00	16:59	2	20%
17:00	17:59	0	0%
18:00	18:59	0	0%
19:00	19:59	0	0%
20:00	20:59	1	10%
21:00	21:59	0	0%
22:00	22:59	0	0%
23:00	23:59	0	0%
Total		10	



Litchfield High School

SPEED LIMIT 35

Whites Woods Rd

SPEED LIMIT 35

Gallows Ln

Moulthrop Brook



Moulthrop Brook

Little Pond

Whites Woods Rd

SPEED LIMIT 35

Litchfield Country Club

Litchfield Soccer Club

Bissell Rd

SPEED LIMIT 40

Replace Bridge #05175

Arethusa Farm

Miry Brook

SPEED LIMIT 40






Webster Rd

DRAFT

Mattatuck Trail

Miry Brook

Legend

-  No Sidewalk
-  Stop Controlled Intersection
-  Pedestrian Crossing Sign
-  School Zone Ahead Sign
-  Bridge or Culvert

Bantam Lake

Cranberry Pond

SPEED LIMIT 40

Litchfield - Whites Woods Road



Post-Audit Discussion Guide

Safety Issues

- Confirmation of safety issues identified during walking audit

Potential Countermeasures

- Short Term recommendations

- Medium Term recommendations

- Long Term recommendations

Next Steps

- Discussion regarding responsibilities for implementing the countermeasures (including funding)



Road Safety Audit – Litchfield

Fact Sheet

Functional Classification:

- Whites Woods Road is classified as a Major Collector

ADT

- ADT on Whites Woods Road is 1,700

Population and Employment Data (2014):

- Population: 8,365
- Employment: 3,566

Urbanized Area

- Litchfield is in the Waterbury Urbanized Area

Demographics

- The statewide average percentage below the poverty line is 10.31%. There are no areas in Litchfield exceeding the state average
- The statewide average percentage minority population is 30.53%. There are no areas in Litchfield exceeding the state average.

Air Quality

- Litchfield's CIPP number 310
- Litchfield is within the Greater CT Marginal Ozone Area
- Litchfield is within a CO Attainment Area

