



COMMUNITY
connectivity program

Meriden

Camp Street Corridor: Colony Street to Pratt Street Road

Safety Audit

June 2, 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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**Plans developed and shared by Meriden*

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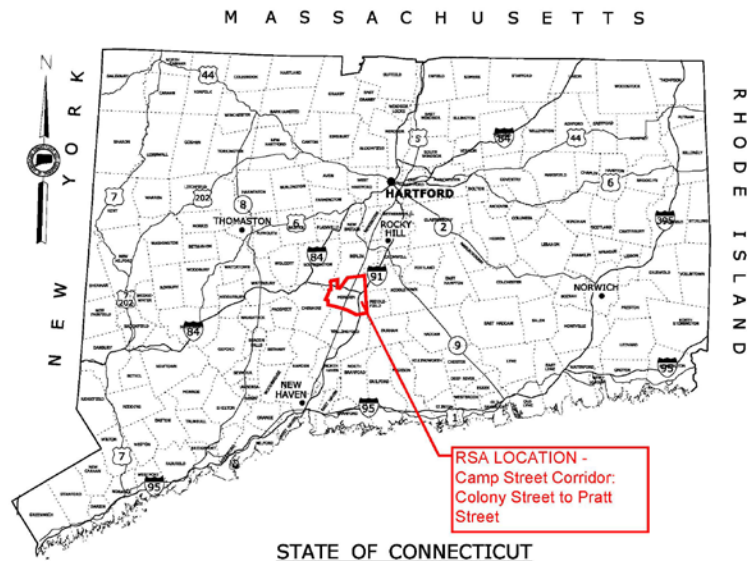
**Plans developed and shared by Meriden*



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 and 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 the Camp Street Corridor RSA

The City of Meriden submitted an application to complete an RSA in the Camp Street Corridor between Colony Street and Pratt Street to improve safety for pedestrians and bicyclists. Camp Street is an important link for vehicular and pedestrian traffic between I-691 and the communities adjacent to and north of the highway. It provides access between these residential neighborhoods, employment centers and shopping. The City has focused significant plans for growth and redevelopment in the area, with projects such as the Meriden Transit Center and Pratt Street Gateway Boulevard project. Projects such as these, as well as the grade crossing elimination at Brooks Street, are expected to increase vehicular and pedestrian traffic on Camp Street. The deterioration of the physical infrastructure of Camp Street is a concern, and many features do not meet current engineering or ADA standards. These include items such as poor sidewalk and roadway conditions, worn pavement markings, inadequate sidewalk ramps, older pedestrian signals and insufficient sidewalk width. Pedestrians have been noted to be walking on the road instead of using the unattractive sidewalks.

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

1.1 Location

The RSA site is the section of Camp Street between Colony Street and Pratt Street (Figure 1). The Average Daily Traffic (ADT) on Camp Street is 6,400 vehicles per day (vpd). Camp Street consists of a single lane in each direction separated by a double yellow center line. White shoulder lines are not generally provided. Parking is allowed for the majority of the length of Camp Street on both sides of the street.

The intersections of Camp Street with Colony Street and Camp Street with Center Street are controlled by traffic signals. All other intersections are controlled with side-street stop signs. The Colony Street traffic signal controls the intersection of Colony Street at Columbia Street and Camp Street.

At Colony Street, the crosswalks are striped at the south and east legs of the intersection. At Center Street, the intersection is striped with a single bar on each leg, indicating that diagonal crossing is permissible. This is consistent with the diagonally aimed pedestrian crossing signals at this location. The unsignalized intersections have few marked crosswalks. There is a faded mid-block crosswalk west of Jackson Street.

Between State Street and Colony Street, Camp Street crosses the Amtrak railroad on a structure, with steep approach grades on each side. As a result, the stopping sight distances over the bridge, and approaching State Street and North George Street are quite poor. The State Street intersection is controlled by a somewhat unconventional three-way stop (eastbound traffic does not stop) due to the poor stopping sight distance coming off the bridge.

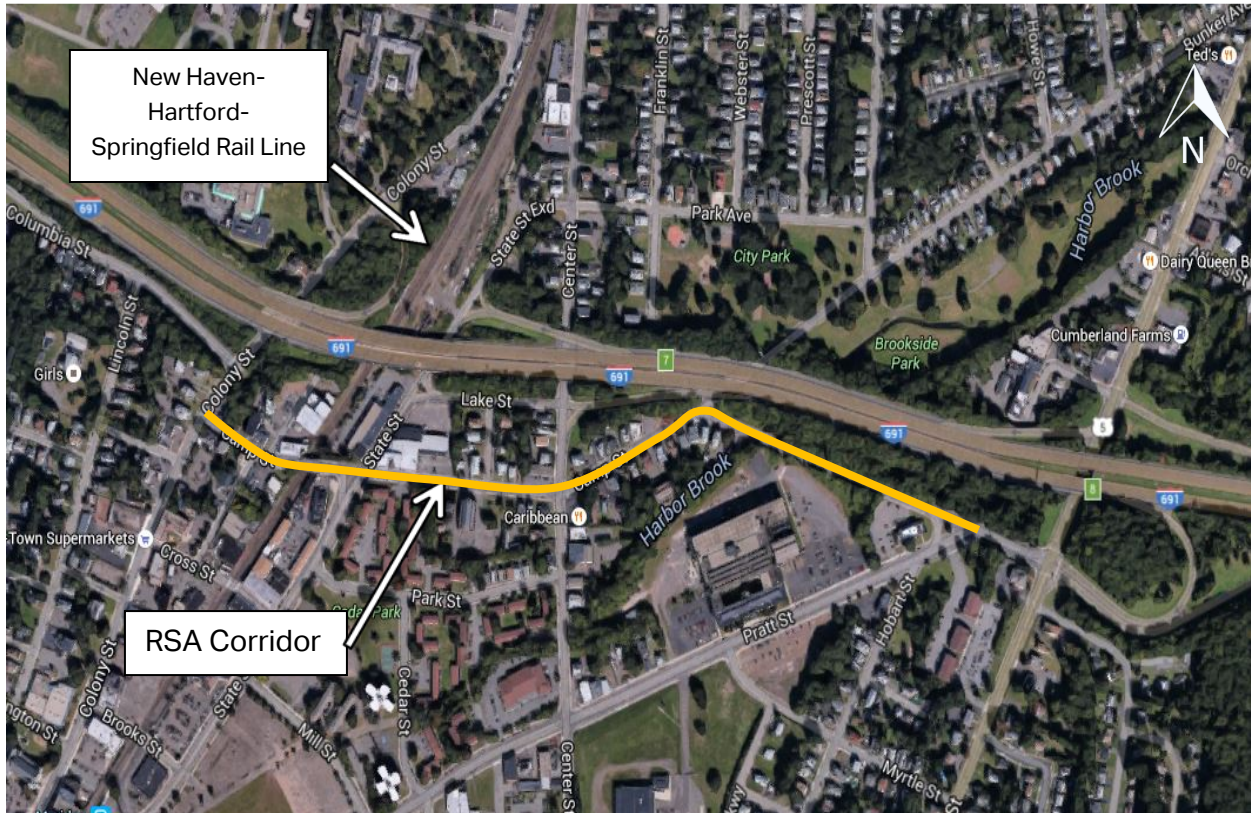


Figure 1. Camp Street Corridor

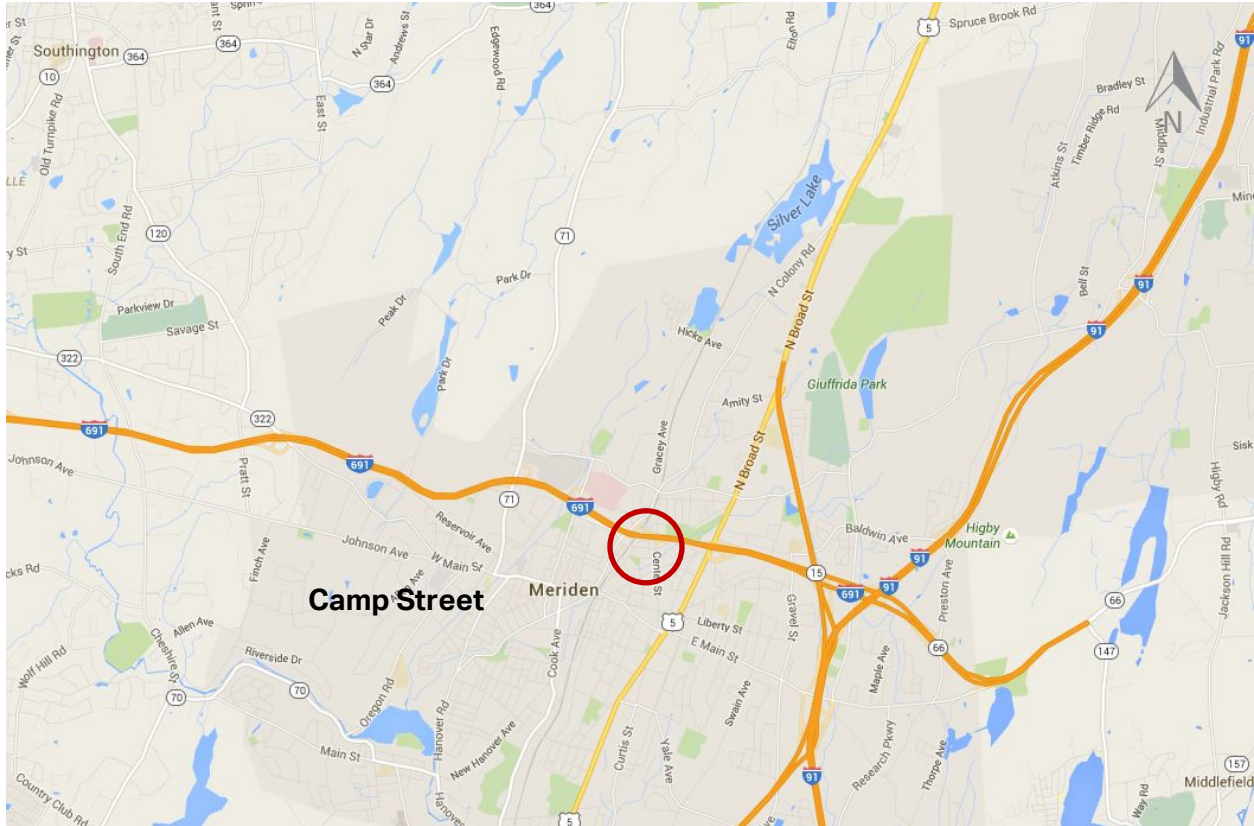


Figure 2. Corridor Area - Regional Context

2 Pre-Audit Assessment

2.1 Pre-Audit Information

As noted previously, the traffic volumes being experienced along the study corridor are typical for a local collector road, and are projected to increase due to area development and traffic diversion from other parallel routes. Crash history in this area is relatively low, with one accident involving a pedestrian between 2012 and 2014. Table 1 and Table 2 provide data on Crash Severity and Type, respectively.

Crash history shows that the most frequent crashes are rear-end and turning-intersection paths crashes on the approaches to the intersections. Figure 3 displays crashes that occurred in this area during 2015. The peak crash rate is in the afternoon, which can be attributed to the higher traffic volumes resulting from commuting, shopping, and school activities.

Figure 4 provides more details on existing conditions along Camp Street including driveways, sidewalks, crosswalks and pedestrian signs.

Severity Type	Number of Accidents	
Property Damage Only	16	64%
Injury (No fatality)	9	36%
Fatality	0	0%
Total	25	

Table 1. Crash Severity

Source: UConn Connecticut Crash Data Repository

2012 - 2014

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	0	0%
Sideswipe-Same Direction	3	12%
Rear-end	6	24%
Turning-Intersecting Paths	5	20%
Turning-Opposite Direction	1	4%
Fixed Object	3	12%
Backing	2	8%
Angle	2	8%
Turning-Same Direction	0	0%
Moving Object	0	0%
Parking	1	4%
Pedestrian	1	4%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	1	4%
Total	25	

Table 2. Crash Type

Source: UConn Connecticut Crash Data Repository

2012 - 2014



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



Figure 4. Camp Street Corridor Geometrics

Camp Street Street Inventory

From	To	Distance	Lanes	Sidewalk				Curb	Parking	Shoulder	Ramps	
				Side	Type	Width	Condition				Exist	Compliant
Colony Street	North George Street	300 ft.	1 Lane EB	South	Concrete/ Asphalt/ Bluestone	4' - 5'	Poor	None/ Bluestone	Yes	No	33%	No
			1 Lane WB	North	Concrete/ Asphalt/ Bluestone	4' - 5'	Poor	None/ Concrete/ Bluestone	Yes	No	33%	No
North George Street	State Street	425 ft.	1 Lane EB	South	Concrete	6' - 8'	Good	Concrete/ Granite	No	2'	None	None
			1 Lane WB	North	Concrete/ Asphalt	6' - 8'	Good	Concrete/ Asphalt	No	1'	None	None
State Street	Center Street	825 ft.	1 Lane EB	South	Concrete	4' - 5'	Fair/Good	Granite	Yes	No	Yes	No
			1 Lane WB	North	Concrete/ Bluestone	6' - 10'	Poor/Fair	Granite	Yes	No	Yes	No
Center Street	Bunker Avenue	700 ft.	1 Lane EB	South	Concrete	5'	Good	None/ Bluestone/ Granite	Yes	No	N/A	N/A
			1 Lane WB	North	Concrete/ Asphalt	5'	Fair/Good	Granite/ None	Yes	No	N/A	N/A
Bunker Avenue	Pratt Street	1200 ft.	1 Lane EB	South	Concrete	5'	Fair/Poor	Granite	Yes	No	N/A	N/A
			1 Lane WB	North	Concrete	5'	Fair	Concrete/ Granite	Yes	No	N/A	N/A

*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. Intersection Street Inventory

2.2 Prior Successful Efforts

Although the sidewalks throughout the corridor are old, they have been installed throughout the length of the study area, and provide walkways on both sides of the street. The signal at Colony Street provides an exclusive pedestrian phase, and the signal at Center Street provides an exclusive diagonal crossing phase. The City has investigated the vertical geometry of the bridge over the Amtrak railroad to determine if there are any reasonable measures that can be taken to improve the grades and sight distance approaching State Street. Due to building and driveway locations and grades abutting the road, it appears that any meaningful improvement would require significant property impacts surrounding the State Street intersection.

2.3 Pre-Audit Meeting

The RSA was conducted on June 2, 2016. The Pre-Audit meeting was held at 8:30 AM at the Joy Unlimited Ministries located at 305 Center Street in Meriden.

The RSA Team was comprised of staff from CTDOT, AECOM, and representatives from several Meriden departments and organizations, including the Engineering Department, Department of Public Works, Grants Administration, Police Department, Health and Human Services, Economic Development, Planning, Zoning Enforcement, Midstate Chamber of Commerce, and Joy Unlimited Ministries. 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.

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

- CTDOT has placed new emphasis on all users of the highway facilities, not just automobiles.
- It was pointed that driving through the corridor seems dangerous in general.
- Three-way stop control at State Street and Camp Street intersection is not an ideal configuration and there is limited visibility eastbound due to the grade on the Camp Street Bridge.
- The crash rate is not as high as would be expected as the daily commuters have familiarity to the area.
- Urbanized homes and businesses are located very close to the roadway, making it difficult to resolve some issues without property acquisition.
- There is lack of pedestrian and bike education. Pedestrians and school-age children frequently walk on the road instead of using the sidewalk.
- Recently, use of mopeds has increased. This may influence crashes.
- There are no bike lanes. It was discussed that bike lanes can work in a safe and efficient manner if designed appropriately.
- ADT of 6400 vehicles per day is typical for a local collector street.

- With the ongoing and proposed development in the area, the vehicular and pedestrian traffic is expected to increase. State Street is temporarily one way between Brooks Street and East Main Street, roughly ¼ mile south of Camp Street corridor. The at-grade crossing at Brooks Street has been closed as part of the New Haven-Hartford-Springfield (NHHS) Rail Program. This will add more traffic to Camp Street as it will be the primary east-west connection.

3 RSA Assessment

3.1 Field Audit Observations

Colony Street and Camp Street

- The sidewalks do not have ADA complaint sidewalk ramps (Figure 5).
- The pavement markings are worn out.
- There is no shoulder striping (Figure 5).
- Lane width at Colony Street is very tight. Curb radii are extremely small. Trucks frequently traverse the curb to make right turns onto Camp Street from Colony Street.
- The sidewalk changes from concrete to asphalt to slate abruptly. The sidewalk is in poor condition (Figure 6).
- The curbing is in poor condition, and missing entirely in some places.

North George Street and Camp Street

- The lane width of Camp Street is approximately 33 feet.



Figure 5. Tight Turns –No shoulder striping, No ADA Ramps.



Figure 6. Sidewalk deterioration.

- The sidewalk changes from concrete to asphalt abruptly. The sidewalk is in poor condition.
- The right turn onto North George Street from Camp Street Bridge is very tight for trucks going to Russell Hall. They encroach on the opposite side of the road in order to negotiate this turn. (Figure 7).
- Condition of the bridge is not inviting with respect to walkability. There is encroaching vegetation and debris. Grades are steep.
- The sidewalks do not have ADA complaint sidewalk ramps.
- The pavement markings are worn out.
- There is no shoulder striping.
- More signage needs to be added to slow down traffic before they arrive at the State Street intersection.



Figure 7. Tight turn for trucks to negotiate

State Street and Camp Street

- The sidewalks do not have ADA compliant sidewalk ramps.
- The pavement markings are worn out and there are no stop bars.
- There is no shoulder striping.
- The sidewalk changes from concrete to asphalt abruptly.



Figure 8. Steep grades on Camp St. Bridge

- The intersection is three-way stop controlled. This is unconventional. A suggestion was made to investigate making it a four-way stop.
- A team member suggested looking into a roundabout. This might be difficult unless the road is raised to match the grade on the bridge. Close-by buildings may also be a problem.
- Grade on the Bridge, sightline issues and stopping issues are not safe for pedestrians. (Figure 8)
- Utility Poles are too close to the roadway.
- Limited visibility and stopping sight distance eastbound from Colony Street due to steep grade over Amtrak bridge. Stop-controlling this leg could create a safety issue.



Figure 9. Insufficient clearance for Utility Poles

Center Street and Camp Street

- The sidewalks do not have ADA compliant sidewalk ramps.(Figure 10)
- There is no shoulder striping.
- The overall width of Center Street is approximately 30 feet and Camp Street is 33 feet.
- The pavement markings are worn out.
- Pedestrians cross in non-designated areas, also pedestrian ramps are not properly oriented.



Figure 10. No sidewalk ramps

- The two wide driveways to the Caribbean Restaurant are too close to the intersection and create an unsafe situation.
- There is no designated on-street parking but the street is used for parking.

Bunker Avenue and Camp Street

- Properties at Bunker Avenue are in the floodplain, removing the structures would reduce the environmental impact. (Figure 12).
- The curb and sidewalk is in poor condition. (Figure 11).
- There is no striping at this intersection.

Pratt Street and Camp Street

- Pratt Street is being transformed into a Gateway Boulevard.
- "Share the Road" signs are being added.



Figure 11. Sidewalk in poor condition



Figure 12. Houses in the floodplain

3.2 Post-Audit Workshop - Key Issues

- Future funding requirements or sources for further studies or engineering design has not been determined at this point.
- Shovel ready projects (with a plan in place and designs that follow guidelines/policy) are more likely to get funding.
- The state will incorporate generalized scoped areas about bicycle facilities/amenities within the statewide bicycle plan..
- The plan will include general and specific recommendations.
- It is anticipated that the audit report will be completed in 4 to 6 weeks.

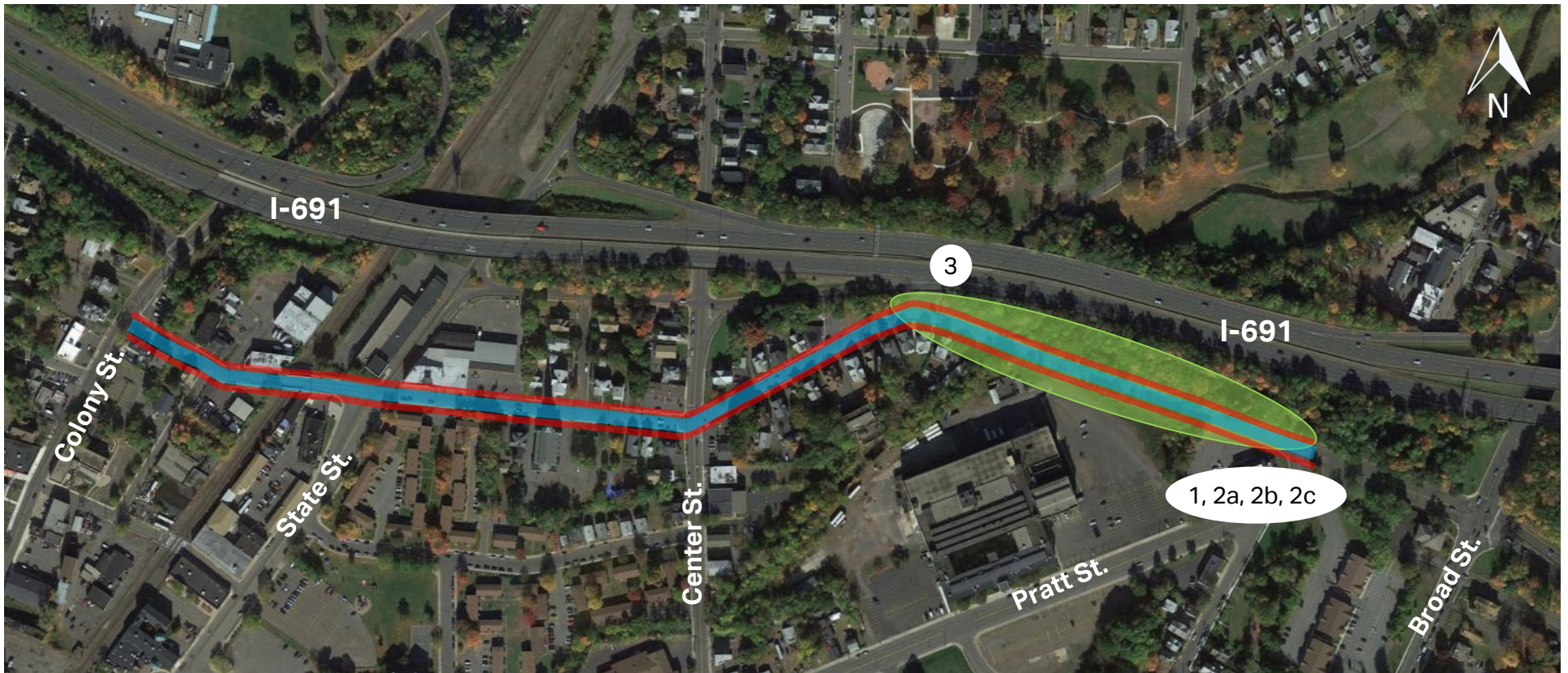
4 Recommendations

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 additional study or design 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 years or more when funding is available.

4.1 Short Term

1. Stripe shoulders on Camp Street and restripe worn out pavement markings.
2. Sidewalks/Crosswalks:
 - a. Repaint crosswalks.
 - b. Repair damaged sidewalk areas.
 - c. Add missing detectable warning strips.
3. Bunker Avenue and Camp Street
 - a. Clean vegetation encroaching on the sidewalks.

Figure 13 depicts these recommendations.



1. Stripe shoulders and restripe worn pavement markings

2a. Repaint crosswalks
2b. Repair damaged sidewalk areas
2c. Add detectable warning strips

3. Clean encroaching vegetation

Figure 13. Short Term Recommendations

4.2 Medium Term

1. At Center Street and Camp Street.
 - a. Restripe to provide 7 to 8 feet of parking lanes.
 - b. Access management at the Caribbean Restaurant needs evaluation, possibly including angled parking.
 - c. Pedestrian crossing time should be adjusted.
 - d. Coordinate with local businesses, such as the laundromat, for parking agreement.
2. Replace the existing traffic signal at Colony Street and Camp Street with a new signal.
 - a. Add ADA compliant pushbuttons and countdown pedestrian heads. Orient buttons and add pedestals, where necessary, to improve accessibility and eliminate confusion about direction.
 - b. Request assistance from the region for information on potential capacity improvement programs for this intersection.
3. At State Street and Camp Street - restripe to provide angled on-street parking in front of Meriden Manufacturing. Potentially use back-in parking.
4. Signage:
 - a. Investigate high visibility pedestrian warning signs.
5. Evaluate if the elimination of a stop control and signalizing the State Street and Camp Street intersection is feasible.

Figure 17 depicts these recommendations.



Figure 14. Pedestrian Crossing Sign



Figure 15. ADA Button



Figure 16. Countdown Signal

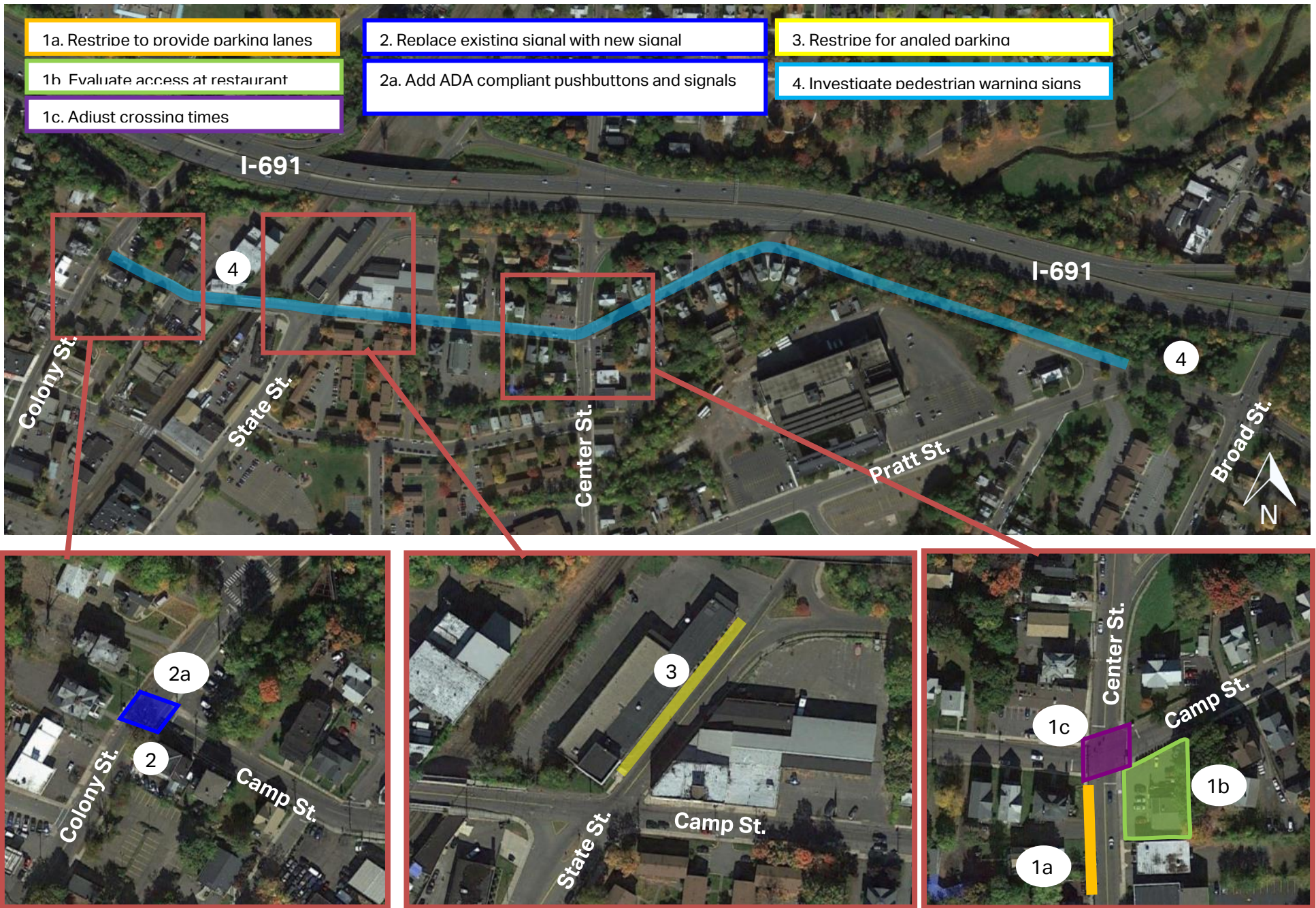
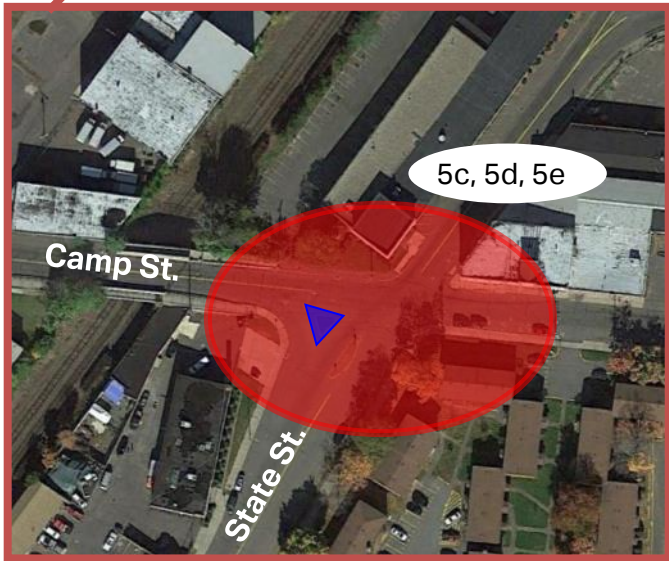
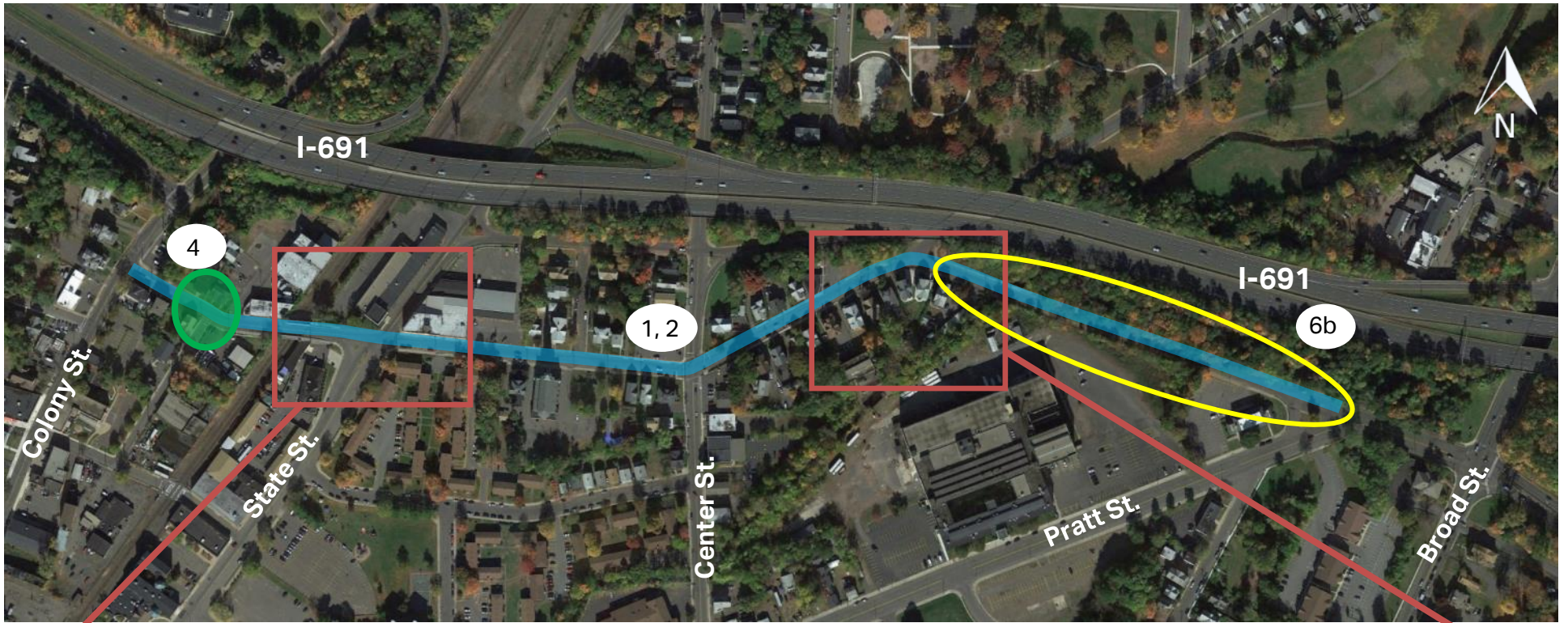


Figure 17. Medium Term Recommendations

4.3 Long Term

1. Re-align crosswalks to be more perpendicular.
2. Construct new sidewalk to fix broken sections and make sidewalk types and cross section materials consistent.
3. Improve intersection curb radii for safer turning movements. This will require property acquisition in many areas.
4. Revise intersection geometry at North George Street to provide better curb radii for turns to Russell Hall. This may have impacts to surrounding properties or may require property acquisition.
5. At Camp Street/State Street intersection, evaluate:
 - a. Raising the intersection grades to match the steep grades of the Amtrak Bridge.
 - b. Removal of the traffic island on south side of State Street to improve intersection alignment and sight distance. See Appendix D for concept plan developed by Meriden.
 - c. Possibility of re-design of the intersection to be two-way (north/south) stop controlled.
 - d. Installing a roundabout.
 - e. Reconfiguration of the geometry to "square up" the intersection and reduce overall pavement width. See Appendix E for concept plan developed by Meriden.
6. Bunker Avenue and Camp Street
 - a. Remove the homes in the floodplain; parking for the proposed linear trail can be constructed.
 - b. Way-finding signs should be added to provide information on destinations for traffic coming through the proposed Gateway Boulevard at Pratt Street.
7. Formulate/Implement access management plan.
8. Widen roadway to a consistent 34 feet section to allow for on-street parking.

Figure 18 depicts these recommendations.



- 1-2. Realign crosswalks; construct sidewalks
- 4. Improve curb radii for turns
- 5b. Remove traffic island
- 5c – 5e. Reconfigure intersection
- 6a. Remove homes in floodplain
- 6b. Add way-finding signs
- 8. Widen roadway to 34 feet.

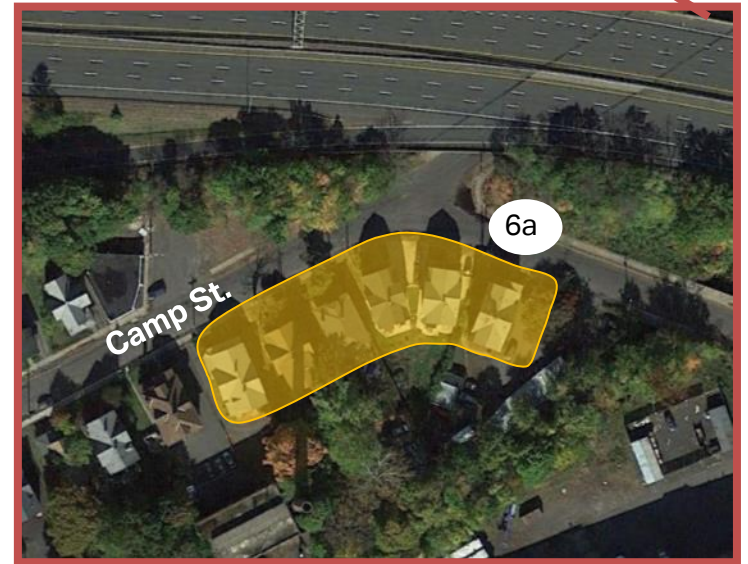


Figure 18. Long Term Recommendations

4.4 Summary

This report outlines the observations, discussions and recommendations developed during the RSA. It documents the successful completion of the City of Meriden RSA and provides Meriden with an outlined strategy to improve the transportation network at Camp Street for all road users, particularly focusing on pedestrians and cyclists. Moving forward, Meriden 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 Camp Street.



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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	<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

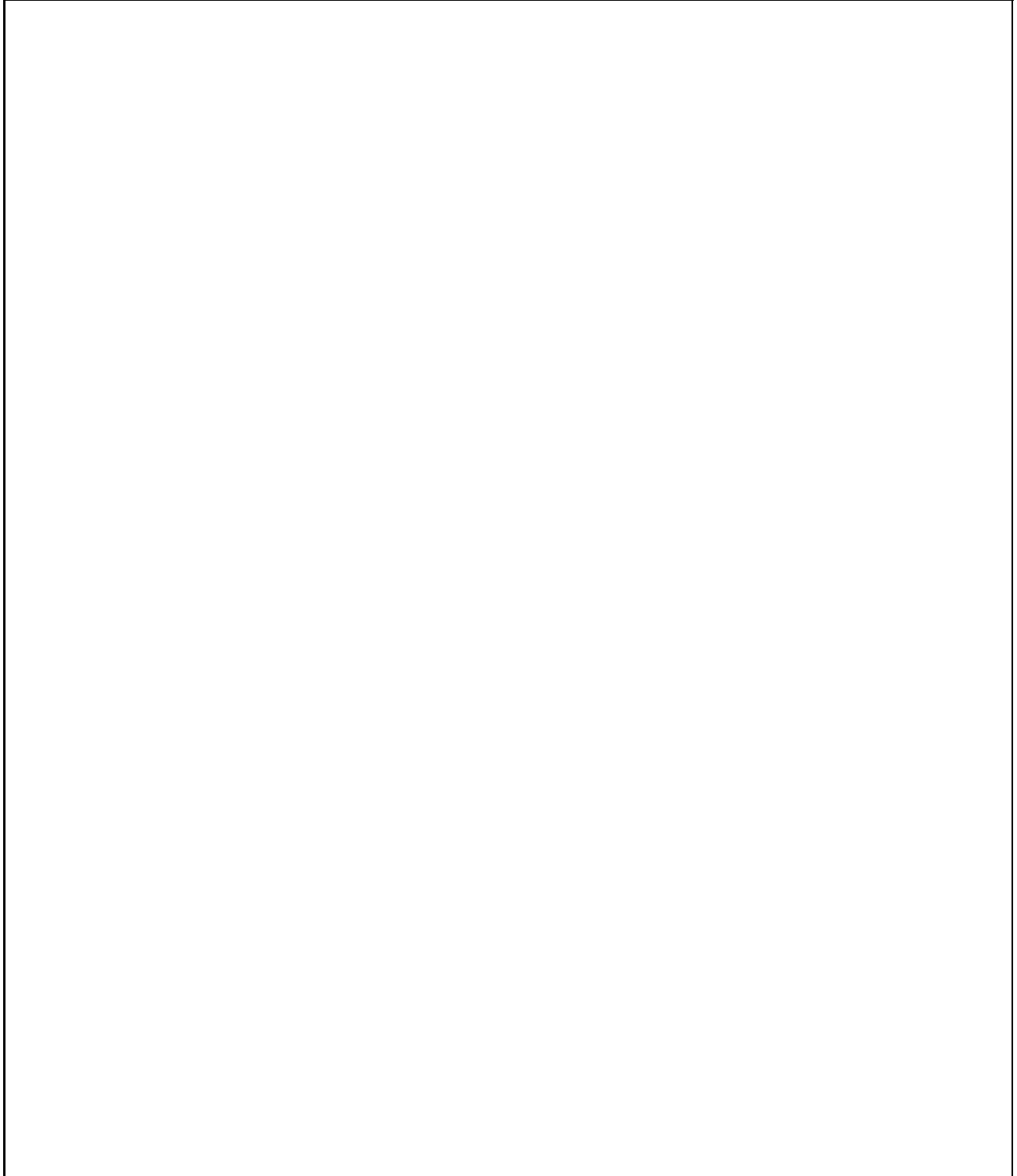
Maintenance issues (cutting grass, leaves, snow removal)

N/A (not applicable)

Other (please specify)

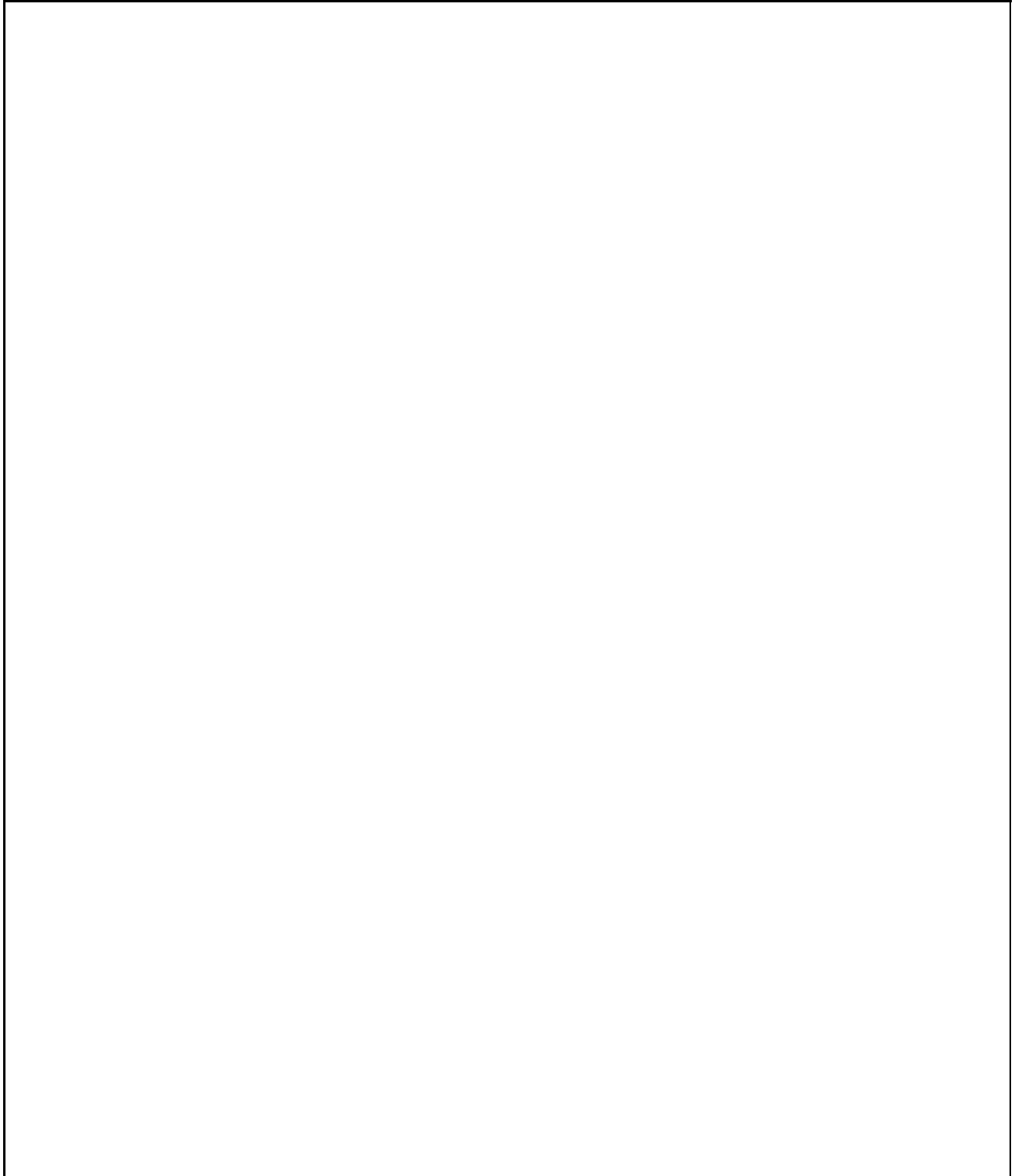
11. Are there any past, current or future transportation/economic development projects near this location (i.e. Federal, State or local projects)?

If Yes please describe and list all projects.

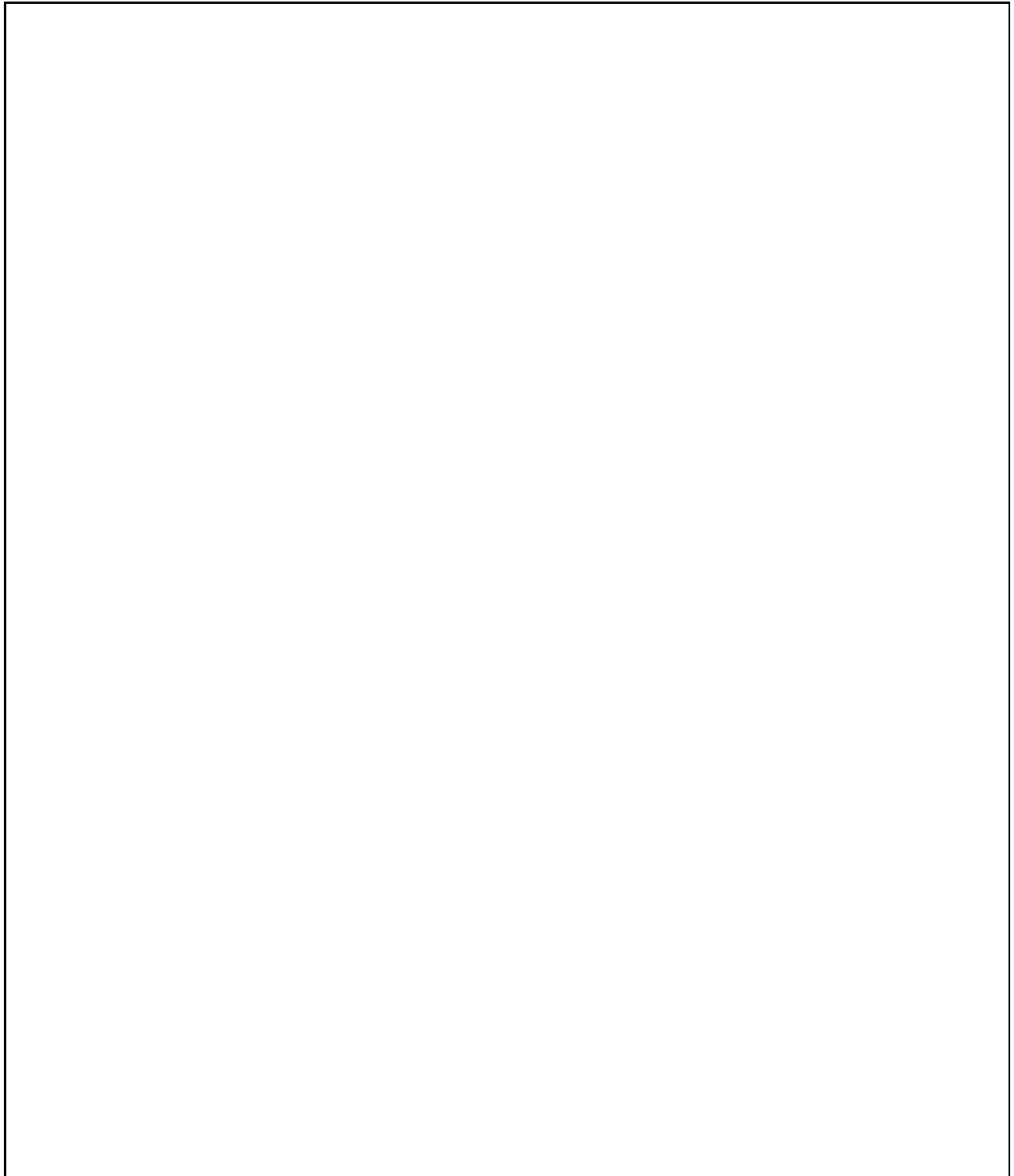
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12. Environmental Concerns:

If Yes please describe and list.

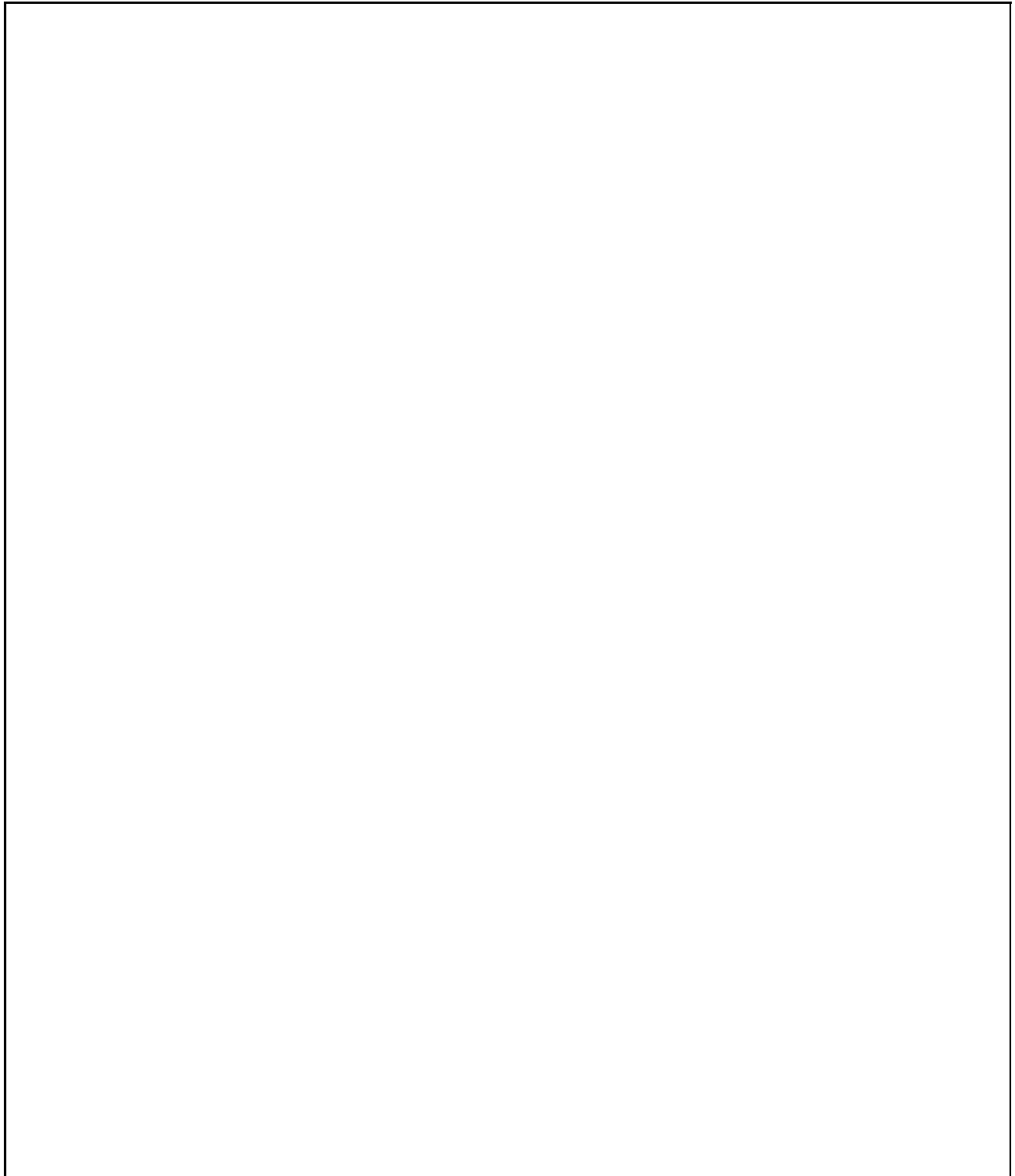
A large, empty rectangular box with a thin black border, intended for the user to describe and list any environmental concerns. The box occupies most of the page's vertical space below the instruction.

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)



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Appendix B



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Road Safety Audit

Town: Meriden
RSA Location: Camp Street
Meeting Location: Joy Unlimited Ministries
Address: 305 Center Street, Meriden
Date: 6/2/2016
Time: 8:30am

Participating Audit Team Members

Audit Team Member	Agency/Organization
Kevin Tedesco	CTDOT
Lea Crown	City of Meriden - Health and Human Services
Paola Mantilla	City of Meriden - Econ. Devel.
Bob Seale	City of Meriden - Planning, Development and Enforcement
Sean Moore	Midstate Chamber of Commerce, Inc.
Howard Weissberg	Meriden Eng.
Julia Oparaocha	Joy Unlimited Ministries
Sgt George Delmastro	Meriden P.D.
Bob Bass	Director - DPW
Tyler Fairborn	City of Meriden - Grants Administrator
Lorenzo Varone	AECOM
Steve Mitchell	AECOM
Shivani Mahajan	AECOM



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Appendix C



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Road Safety Audit – Meriden

Meeting Location: Joy Unlimited Ministries
Address: 305 Center Street
Date: 6/2/2016
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	
--	--

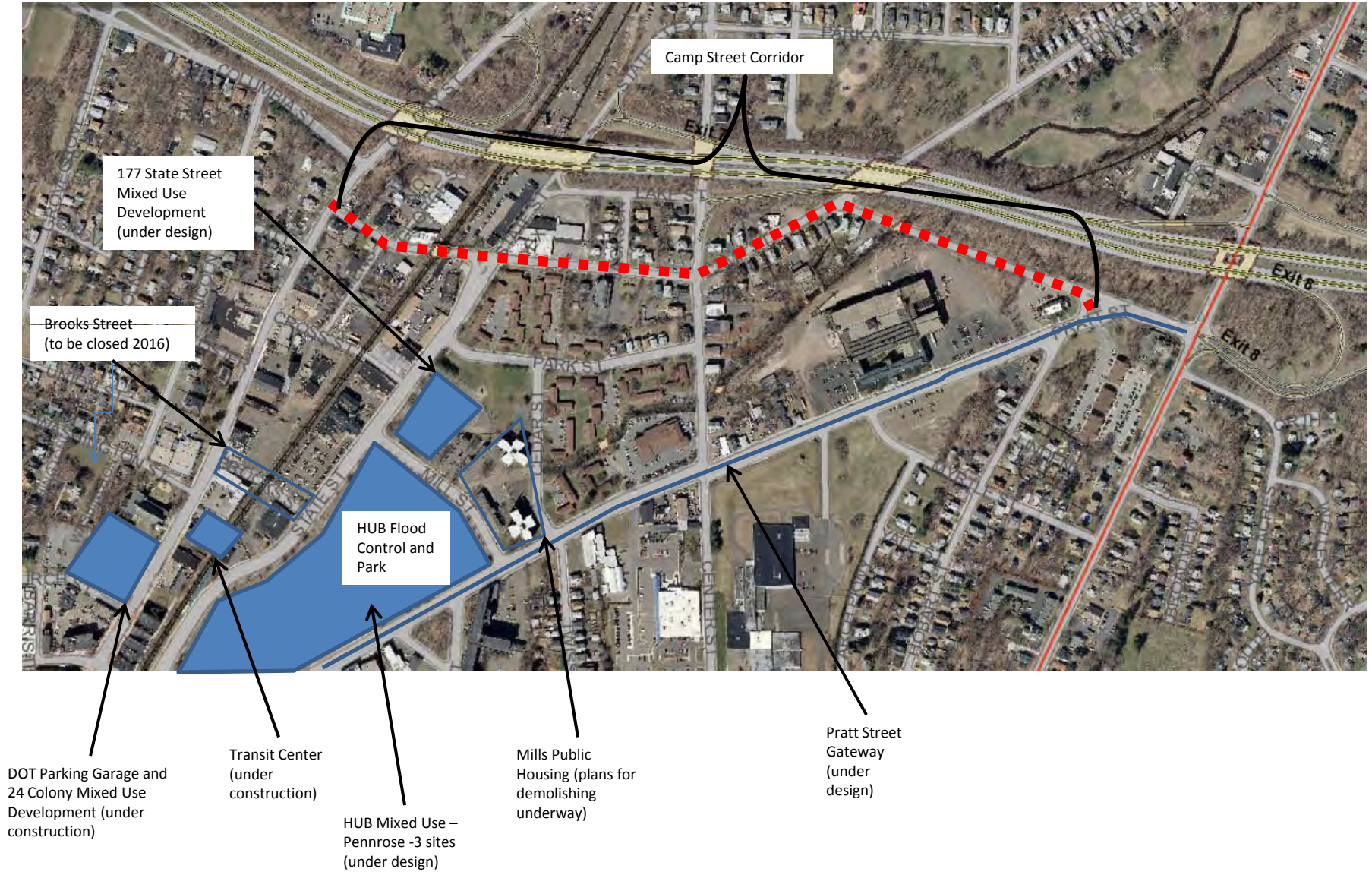
Roadway & Vehicles	
<ul style="list-style-type: none">• Speed-related issues<ul style="list-style-type: none">○ Alignment;○ Driver compliance with speed limits○ Sight distance adequacy○ Safe passing opportunities	
<ul style="list-style-type: none">• Geometry<ul style="list-style-type: none">○ Road width (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	
--	--

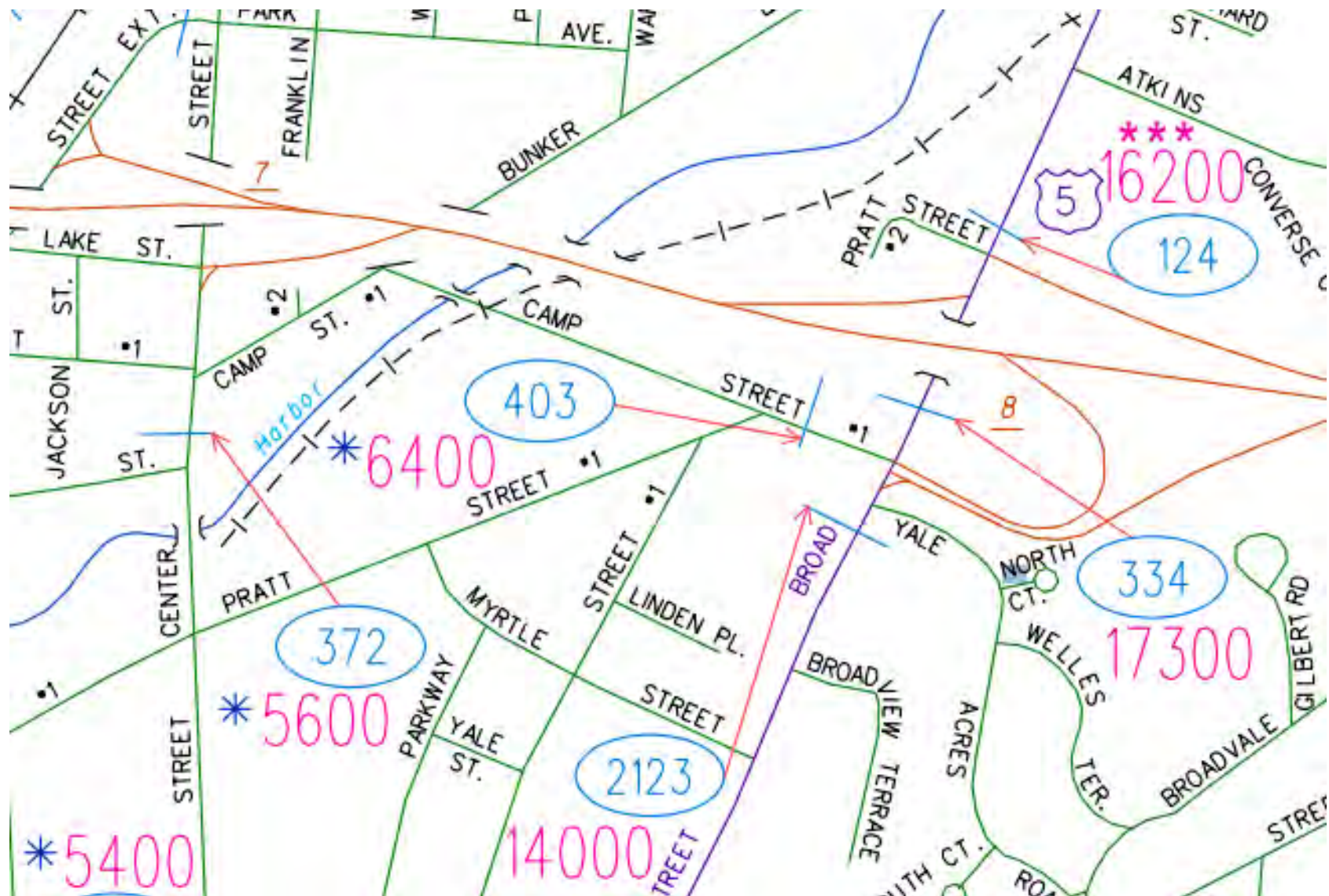


<ul style="list-style-type: none">• Pavement<ul style="list-style-type: none">○ Pavement Condition (excessive roughness or rutting, potholes, loose material)○ Edge drop-offs○ Drainage issues• Lighting Adequacy	
<ul style="list-style-type: none">• Signing<ul style="list-style-type: none">• Correct use 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	

Camp Street Location Map



Average Daily Traffic (ADT)



Camp Street Collision Map – 2015 <http://www.ctcrash.uconn.edu>

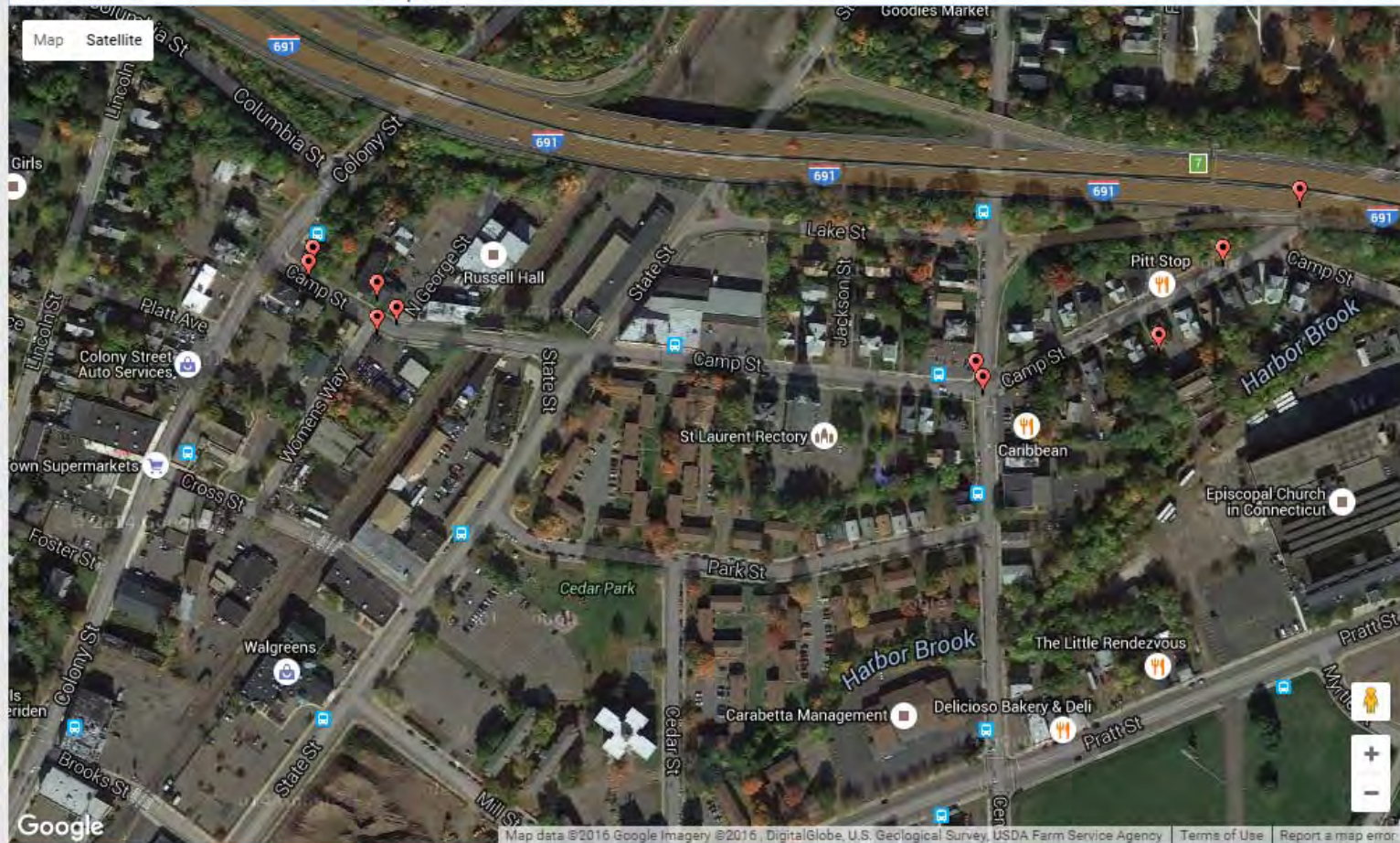
www.ctcrash.uconn.edu/mapViewer.action?queryid=12892

UConn

Connecticut Crash Data Repository

Search Criteria:

Dataset: mmucc
Towns: Meriden
Town & Route: Town:undefined Route:72 Intersection:undefined Milepost:-
Crash Severity: Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only
Case Status: Complete





Road Safety Audit – Meriden

Crash Summary

Data: 3 years (2012-2014)

1 accident involved a pedestrian and resulted in an injury.

Severity Type	Number of Accidents	
Property Damage Only	16	64%
Injury (No fatality)	9	36%
Fatality	0	0%
Total	25	

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	0	0%
Sideswipe-Same Direction	3	12%
Rear-end	6	24%
Turning-Intersecting Paths	5	20%
Turning-Opposite Direction	1	4%
Fixed Object	3	12%
Backing	2	8%
Angle	2	8%
Turning-Same Direction	0	0%
Moving Object	0	0%
Parking	1	4%
Pedestrian	1	4%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	1	4%
Total	25	



Weather Condition	Number of Accidents	
Snow	0	0%
Rain	1	4%
No Adverse Condition	24	96%
Unknown	0	0%
Blowing Sand, Soil, Dirt or Snow	0	0%
Other	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	25	

Light Condition	Number of Accidents	
Dark-Not Lighted	1	4%
Dark-Lighted	6	24%
Daylight	18	72%
Dusk	0	0%
Unknown	0	0%
Dawn	0	0%
Total	25	

Road Surface Condition	Number of Accidents	
Snow/Slush	1	4%
Wet	1	4%
Dry	23	92%
Unknown	0	0%
Ice	0	0%
Other	0	0.0%
Total	25	



Time		Number of Accidents	
0:00	0:59	1	4%
1:00	1:59	0	0%
2:00	2:59	0	0%
3:00	3:59	1	4%
4:00	4:59	0	0%
5:00	5:59	1	4%
6:00	6:59	0	0%
7:00	7:59	0	0%
8:00	8:59	1	4%
9:00	9:59	1	4%
10:00	10:59	3	12%
11:00	11:59	0	0%
12:00	12:59	4	16%
13:00	13:59	2	8%
14:00	14:59	3	12%
15:00	15:59	0	0%
16:00	16:59	2	8%
17:00	17:59	0	0%
18:00	18:59	0	0%
19:00	19:59	2	8%
20:00	20:59	1	4%
21:00	21:59	0	0%
22:00	22:59	1	4%
23:00	23:59	2	8%
Total		25	

Meriden - Camp Street Corridor



Legend

- Sidewalk
- Signalized Intersection
- Stop Controlled Intersection
- Crosswalk
- Pedestrian Crossing Sign
- Bridge or culvert
- Yield Sign
- Driveway
- Triangular Channelizing Island
- One Way Street
- Railroad
- Area Under Construction
- Median

Camp Street
 Speed =
 Lanes =
 Roadway width =
 Shoulder width =
 Sidewalk width =

DRAFT



Road Safety Audit – Meriden

Fact Sheet

Functional Classification:

- Camp Street is classified as a Collector

ADT

- ADT on Camp Street is 6,400

Population and Employment Data (2014):

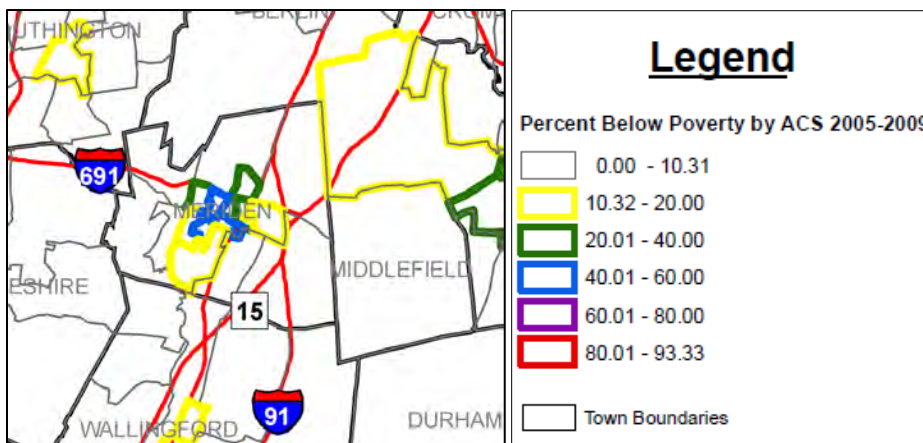
- Population: 60,616
- Employment: 21,646

Urbanized Area

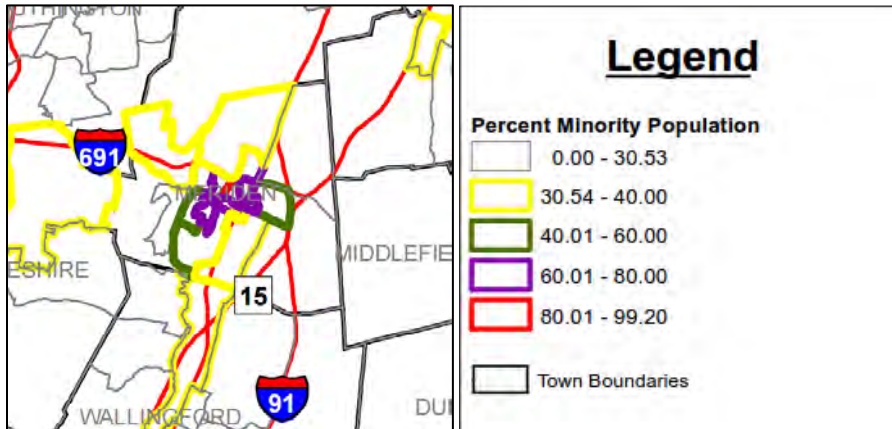
- Camp Street is located within the New Haven Urbanized Area

Demographics

- The statewide average percentage below the poverty line is 10.31%. Within the vicinity of Camp Street, up to 60% of residents are below the state's poverty level.



- The statewide average percentage minority population is 30.53%. Within the vicinity of Camp Street, up to 80% of residents are minorities.



Air Quality

- Meriden's CIPP number is 511
- Meriden is within the NY/NJ/CT Marginal Ozone Area and PM_{2.5} Attainment/Maintenance Area
- Meriden is within a CO Maintenance Area



COMMUNITY
connectivity program

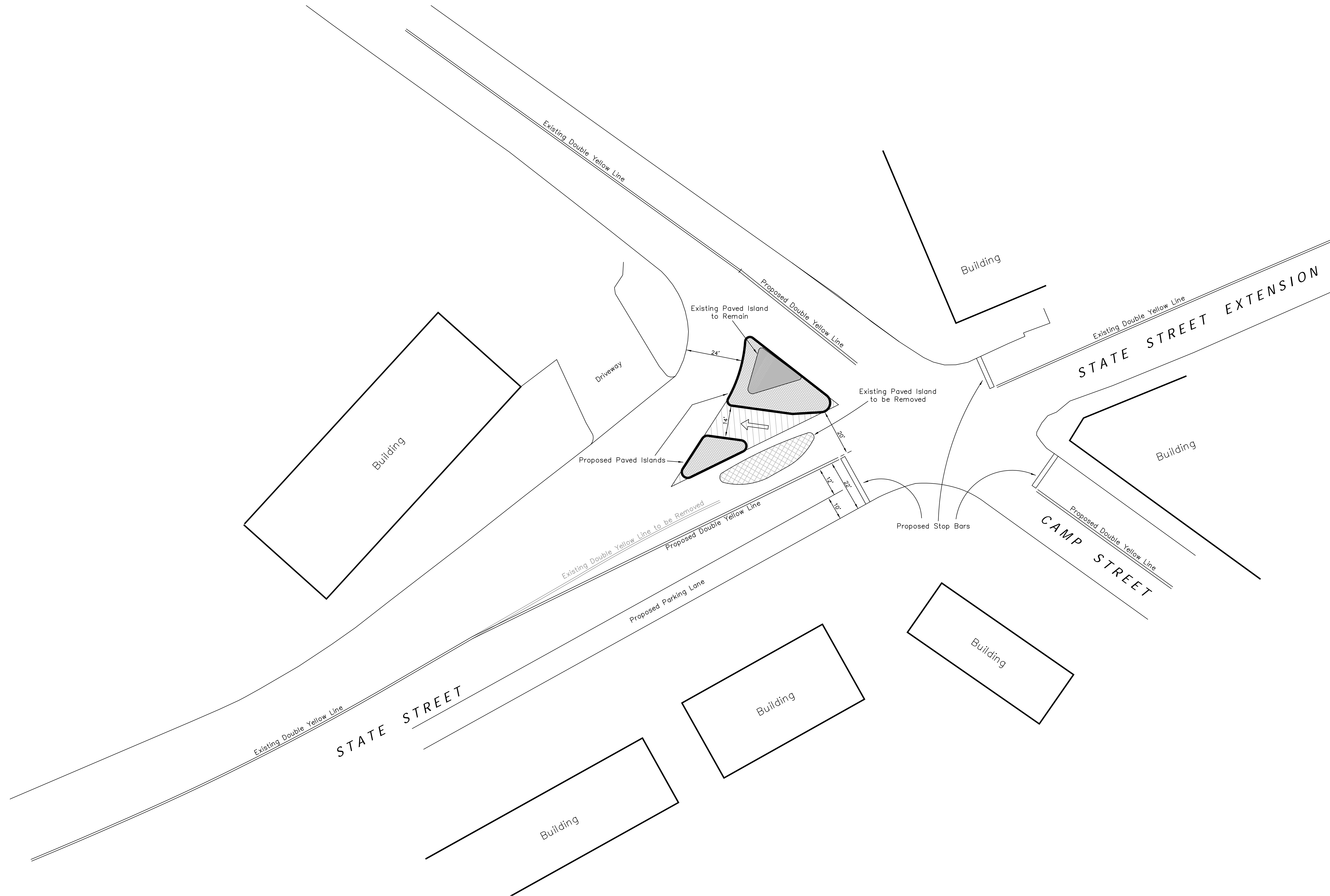
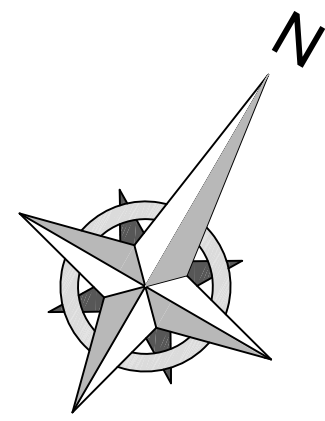
Appendix D

State Street and Camp Street Proposed Intersection Realignment

Plan Developed and shared by Meriden



AECOM
Built to deliver a better world



*Note: All existing features shown were traced from a 2009 aerial survey.



Proposed Intersection Realignment At State and Camp Streets	DATE: 12/26/14
	DESIGN: HJW DRAWN: BBD
<small>DEPARTMENT OF PUBLIC WORKS DIRECTOR OF PUBLIC WORKS AND CITY ENGINEER</small>	SCALE: 1" = 20'
Engineering Division City Hall Room 19 Meriden, Connecticut	DWG. SHEET 1 OF 1



COMMUNITY
connectivity program

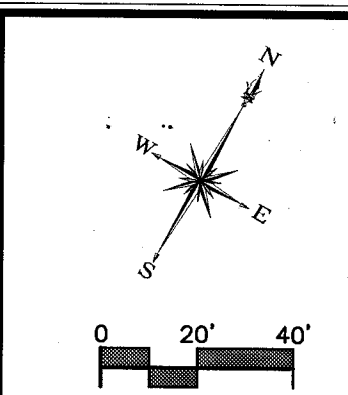
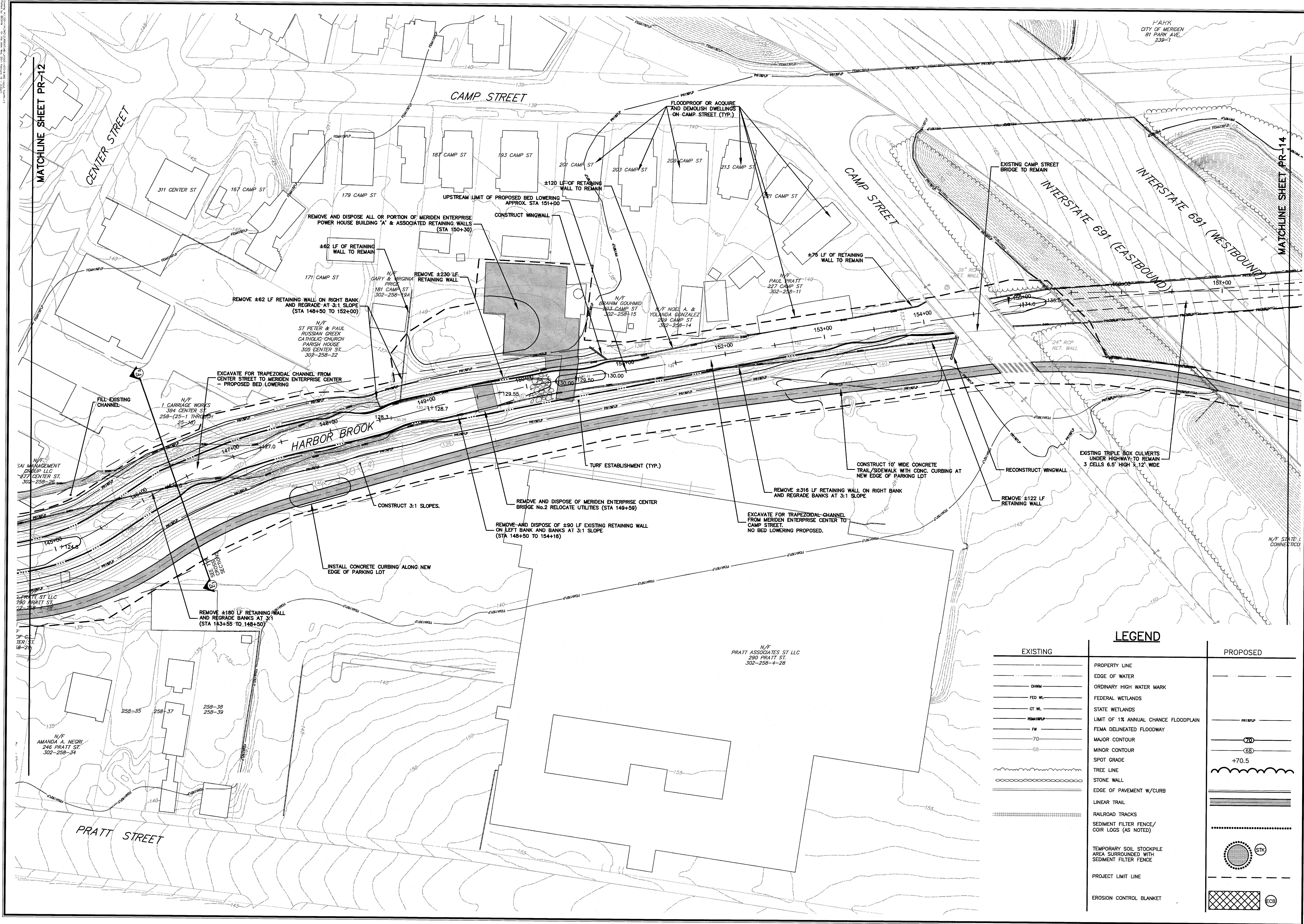
Appendix E

Harbor Brook Flood Control & Linear Trail Project Master Plan

Plan Developed and shared by Meriden



AECOM
Built to deliver a better world



Engineering, Architecture, and Environmental Science
MILONE & MACBROOM
 99 Realty Drive
 Cheshire, Connecticut 06410
 (203) 271-1773 Fax (203) 272-9733
 www.miloneandmacbroom.com

NO.	DESCRIPTION	DATE

PROPOSED CONDITIONS AND S&E CONTROLS
HARBOR BROOK FLOOD CONTROL & LINEAR TRAIL PROJECT
MASTER PLAN
 HANOVER POND TO BALDWIN'S POND
 MERIDEN, CONNECTICUT

DESIGNED	BAM	JGM
DRAWN	CHECKED	CHECKED

SCALE: 1"=40'
 DATE: FEB 2011
 PROJECT NO. 1261-14-20
 SHEET NO. 34 OF 47
PR-13

LEGEND

EXISTING		PROPOSED
---	PROPERTY LINE	---
---	EDGE OF WATER	---
---	ORDINARY HIGH WATER MARK	---
---	FEDERAL WETLANDS	---
---	STATE WETLANDS	---
---	LIMIT OF 1% ANNUAL CHANCE FLOODPLAIN	PR1FLP
---	FEMA DELINEATED FLOODWAY	---
---	MAJOR CONTOUR	70
---	MINOR CONTOUR	65
---	SPOT GRADE	+70.5
---	TREE LINE	---
---	STONE WALL	---
---	EDGE OF PAVEMENT W/CURB	---
---	LINEAR TRAIL	---
---	RAILROAD TRACKS	---
---	SEDIMENT FILTER FENCE/ COIR LOGS (AS NOTED)	---
---	TEMPORARY SOIL STOCKPILE AREA SURROUNDED WITH SEDIMENT FILTER FENCE	STK
---	PROJECT LIMIT LINE	---
---	EROSION CONTROL BLANKET	ECB