COMMUNITY
connectivity program

Torrington

East Main Street Corridor – Road Safety Audit

April 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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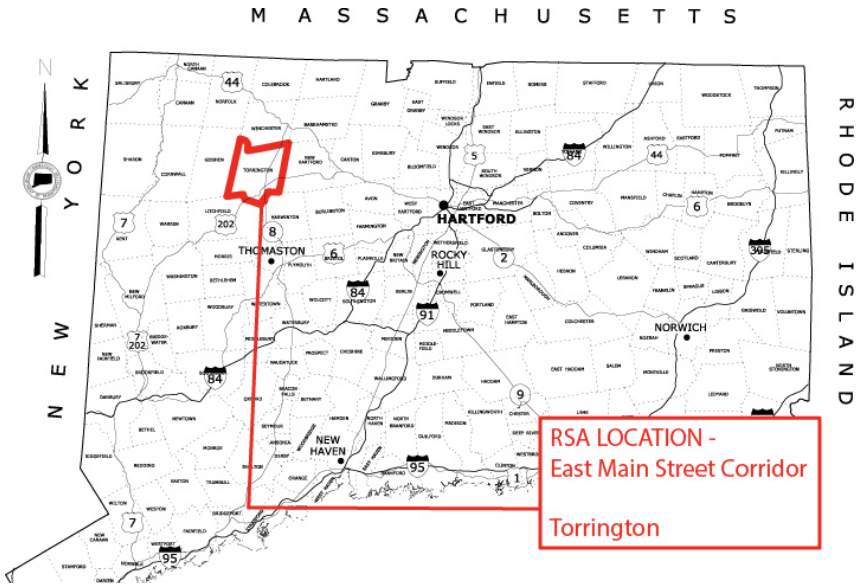
The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state's transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this program is conducting Road Safety Audits (RSA's) at 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 East Main Street - Torrington RSA

The City of Torrington submitted an application to complete an RSA along the East Main Street Corridor, from the 5-way downtown intersection at Main Street easterly to the town line, to improve safety for pedestrians and bicyclists. The high traffic volume, numerous driveways and steep terrain contribute to a confusing and potentially unsafe environment for these pedestrians and bicyclists. Specifically, the town has noted significant pedestrian activity despite the high traffic volumes and limited sidewalks. This is evident by the many paths worn into grass areas along the corridor, signifying the need for a better pedestrian environment.

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

1.1 Location

The RSA site consists of the 3.5 mile long East Main Street (Route 202) corridor between the 5-way downtown intersection with Main Street and the New Hartford town line (Figure 1). It includes the downtown intersection of East Main Street, Main Street, South Main Street, Water Street and Franklin Street, as well as the Litchfield Street/South Main Street intersection. The corridor carries a significant amount of local traffic because of substantial commercial development and the fact that it is the primary access to the downtown area. It also carries significant through traffic movements, as Route 202 is the primary east/west corridor in this area of the state, bisected by State Routes 4, 8 (Exit 44) and 183.

The Average Daily Traffic (ADT) in the corridor varies between 15,400 veh./day and 21,100 veh./day, except for the portion where Route 4 overlaps Route 202, and the ADT is 25,000 veh./day. These are significant volumes of traffic for the corridor to process.

Figure 1. East Main Street Corridor

East Main Street is a state owned and maintained facility (Route 202), and runs in a relatively straight south east/north west direction. Route 202 is the primary commercial corridor and has some of the highest traffic counts in Torrington. The numerous businesses, which range in size from a few employees to over 100, provide employment and services to the residents of Torrington and surrounding towns. There is high pedestrian activity despite large sections of the corridor with limited, no or poor condition sidewalks. Between the downtown area and Route 8, East Main Street consists of a single lane in each direction with parking on both sides of the street. East of Route 8, a second uphill (eastbound) lane is added to assist with the uphill traffic capacity. Between Greenridge Road and the town line, the roadway consists of two through lanes in each direction. Turn lanes are provided at most intersections.

The 5-way downtown intersection is the convergence of Water Street, Main Street, East Main Street, South Main Street and Franklin Street (Figure 2). South Main Street is on a bridge structure over the Naugatuck River, and intersects with Litchfield Street on the south side of the bridge. Route 202 is a "dog-leg" that uses East Main Street to the east, and Litchfield Street to the west, connected by the South Main Street Bridge. The intersection is confusing and challenging for drivers to traverse, with each leg containing multiple lanes. Similarly,

pedestrians must follow a difficult path using multiple pedestrian phases to cross this expansive area.

Because of the complexity of this intersection, it is not pedestrian or bike friendly, and it creates a significant pedestrian disconnect between the downtown core and areas south of the Naugatuck River. In April 2016, the City, in conjunction with CTDOT, began the second phase 2 of a Streetscape project along Main Street from Water Street to Maiden Lane. The re-design includes new sidewalk infrastructure, pedestrian friendly amenities, landscaping and lighting.

Figure 2. 5-way Intersection

There are sidewalks on both sides of the roadway between downtown and the Route 8 interchange. Sidewalk continues up the hill on the north side only, to a point just beyond Fern Drive. Through the rest of the corridor, sidewalk is located sporadically, typically being found in front of more recent commercial developments, where sidewalk access was required by the City. The sidewalks are generally 5 feet in width, but have little or no snow shelf or buffer from the roadway traffic. The sidewalks are generally concrete but there are old sections of asphalt sidewalk, some of which is in poor condition. Table 3 provides a summary of the street inventory and sidewalk conditions.

There are several other projects in development which will have a significant impact on the corridor. These include:

- A new Supreme Court House is currently being constructed ½ mile north of the 5-way intersection. It is scheduled to open late 2016 or early 2017. The new court house will relocate jobs to this area, create additional economic activity downtown, and increase traffic in this area.
- A new trail head for the Naugatuck River greenway is proposed within 500' of the 5-Way intersection.
- As part of the City's Master Development Plan, Franklin Street will be closed to motorized traffic to convert the street into a pedestrian friendly area and connect to the Greenway trail head.
- Continuation of the Naugatuck River Greenway toward Stillwater pond will require crossing of the 5-way intersection.
- As part of the planned Sue Grossman Greenway Expansion, the trail would be expanded from its trailhead at Buttrick Road to connect with the Naugatuck River Greenway.

2 Pre-audit Assessment of Location

2.1 Pre-audit Information

As noted above, traffic volumes are significant at this location. The crash history shows that the largest number of crashes involves rear end accidents. The crashes tend to be clustered around high volume intersections (Figure 3). This is indicative of congestion coupled with access management issues (many driveways). The peak crash rate occurs in the afternoon, which is generally attributed to commuting, shopping, and school activities that peak during this time.

Severity Type	Number of Accidents	
Property Damage Only	337	76%
Injury (No fatality)	108	24%
Total	445	

Table 1. Crash Severity 2012-2014

Source: UConn Connecticut Crash Data Repository

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	5	1%
Sideswipe-Same Direction	43	10%
Rear-end	214	48%
Turning-Intersecting Paths	73	16%
Turning-Opposite Direction	31	7%
Fixed Object	17	4%
Backing	11	2%
Angle	13	3%
Turning-Same Direction	20	4%
Moving Object	1	0%
Parking	4	1%
Pedestrian	6	1%
Overturn	1	0%
Head-on	2	0%
Sideswipe-Opposite Direction	4	1%
Total	445	

Table 2. Crash Type 2012-2014

Source: UConn Connecticut Crash Data Repository

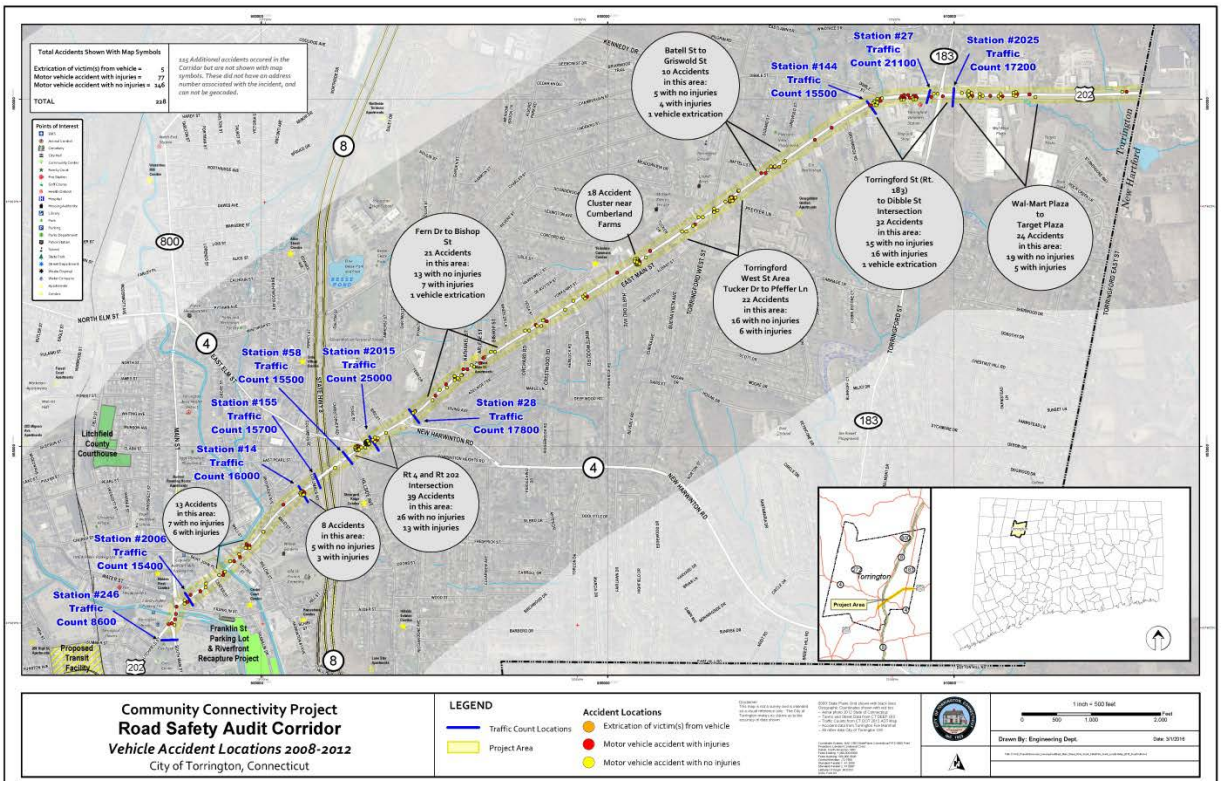


Figure 3. Crashes that Occurred in 2015 (Connecticut Crash Data Repository)

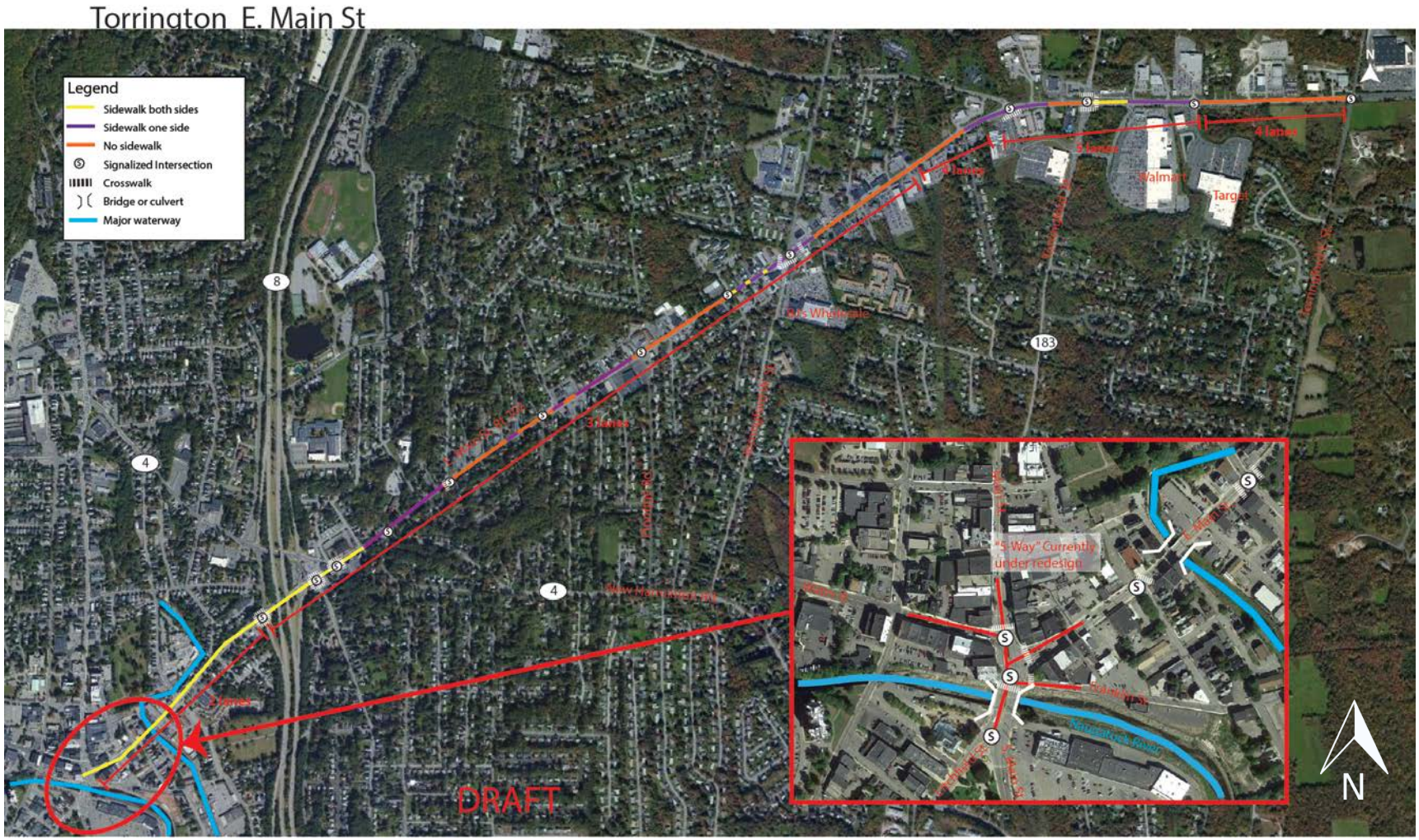


Figure 4. East Main Street Road Geometrics

Torrington - East Main Street

Street Inventory

From	To	Distance	Width	Sidewalk				Curb	Parking	Shoulder	Ramps	
				Side	Type	Width	Condition				Exist	Compliant
5-way	Rt 8 S on-ramp	0.5 miles	1 lane	EB	Concrete	6' - 12'	Fair	Concrete	Yes	7'	50%	No
			1 lane	WB	Concrete	6' - 12'	Fair	Concrete	Yes	7'	50%	No
Rt 8 S on-ramp	Bird Street	0.3 miles	2 lanes	EB	Concrete	5'	Fair	Concrete	No	2'	No	No
			1 lane	WB	Concrete	5'	Fair	Concrete	No	2'	No	No
Bird Street	Fern Drive	900 feet	2 lanes	EB	No	N/A	N/A	Concrete	No	1'	N/A	N/A
			1 lane	WB	Concrete	4'	Fair	Concrete	No	2'	Yes	No
Fern Drive	Buena Vista Ave	0.8 miles	2 lanes	EB	No	N/A	N/A	Concrete	No	2'-6"	No	No
			1 lane	WB	No	N/A	N/A	Concrete	No	2'	No	No
Buena Vista Ave	Torringford West St	800 feet	2 lanes	EB	Asphalt	4'	Poor	Concrete	No	1'	Yes	No
			1 lane	WB	No	N/A	N/A	Concrete	No	2'	No	No
Torringford West St	Torringford St	0.7 miles	2 lanes	EB	No	N/A	N/A	Asphalt	No	6"	No	No
			1 lane	WB	No	N/A	N/A	Asphalt	No	2'	No	No
Torringford St	Target Enterance	1200 feet	2 lanes	EB	Concrete	5'	Good	Asphalt	No	2'	Yes	Yes
			3 lanes	WB	No	N/A	N/A	Asphalt	No	2'	Yes	yes
Target Enterance	Torringford E. St	0.3 miles	2 lanes	EB	No	N/A	N/A	Asphalt	No	4'	No	No
			1 lane	WB	No	N/A	N/A	Asphalt	No	4'	No	No

***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

The City of Torrington has executed a construction program that will improve streetscape elements throughout the downtown area, and make Main Street more attractive as well as functional for all users. They have worked toward the completion of several hiking/bicycle trails and coordinated these efforts with adjacent towns. They have funding in place to plan additional trail connections as well as to continue construction of these facilities, with a goal of a complete trail system throughout the community. Present plans include accommodating trailheads near the 5-way intersection.

Zoning regulations provide for the construction of new sidewalks as developments are approved. This, however, is a lengthy process, and does not provide a mechanism for correcting gaps in the pedestrian paths. With an overall plan in place, it will be possible to direct funding in a way that is most effective for providing a safe pedestrian environment.

2.3 Pre-Audit Meeting

The RSA was conducted on April 6, 2016. The Pre-Audit meeting was held at 9:00 AM in the Torrington City Hall, located at 140 Main Street, Torrington.

The RSA Team was comprised of staff from AECOM, staff from CTDOT and representatives from several Torrington departments and organizations including the Engineering Department, Police Department, Mayor's office, Planning and Economic Development Department, Fire Department and Inland-Wetlands Office. The complete list of attendees can be found in Appendix B.

Several items were presented and discussed during the pre-audit meeting:

- Crash data:
    - This is a busy corridor with a typical number of crashes; 1% involved pedestrians.
    - A higher concentration of crashes occurs during the evening commute.
    - The predominant type of crash (rear-end) is typical for a congested roadway with frequent driveways.
- Previous CTDOT thinking was focused on vehicular traffic only, with little focus on other transportation modes. Now CTDOT is looking at ways to balance the ability to accommodate vehicular traffic and still provide pedestrians with a safe and attractive environment.
- 5-way intersection
    - It is important to make this area safer and more inviting for pedestrians.
    - The City is currently working with CTDOT to redesign the intersection but it is still in preliminary phases.
    - The City recently received a brownfield grant to redesign Franklin St. Closing it to create a pedestrian walkway is being considered.

- The city would like to explore ways to connect the existing greenway to the proposed trail located across the intersection.
- This intersection moves a lot of vehicles.
- In summer 2015 the city held charrettes to discuss pedestrian access through the 5-way intersection. They would like to connect the downtown to Coe Park.
- There is a new court house being constructed to the north, and it is anticipated that many people will access it from Route 8 via Pearl St. Improving this corridor would help alleviate traffic at the 5-way intersection.
- Some of the pedestrian crossings are long, with a pedestrian island and split phase. This can be confusing. The islands feel unsafe.
- The islands in and around the 5-way intersection act as guides for vehicular traffic.
- Some of the pedestrian crossings do not seem to provide enough time to cross.
- CTDOT is looking at retiming the signals, installing bump outs and reducing the crossing width and number of lanes.

- East Main Street
  - This corridor experiences a lot of pedestrian activity as evident by the paths worn in the grass.
  - Any new commercial centers are required to install sidewalks. This is good, but has left the corridor fragmented.
  - Some sidewalks are in poor condition, have crossing buttons to nowhere, are not ADA compliant and falling apart.
  - The RT 8 interchange at Burger King will need to be redeveloped in the future.
  - The intersection of East Main Street and Torringford West Street has senior housing on both sides but lacks pedestrian access.
  - The city does desire bike facilities along Route 202 and has recently formed a bike advocate group to accommodate bicyclists. They are looking at bike lanes, sharrows, cycle tracks, wider shoulders and diverting bikes to local roads.

3 RSA Assessment

3.1 Field Audit Observations

5-way Intersection

- Across East Main there is a split pedestrian phase. The pedestrian island appears to originally have stamped concrete and then was paved over (Figure 5). The paving is falling apart here causing a tripping hazard.

Figure 5. Split Pedestrian Phase

- Pedestrian signal heads do not have a countdown.
- Curb cuts are missing tactile warning strips.
- There is a lack of pedestrian crossing signage.
- This is a concurrent pedestrian signal.
- The 99 Plaza has two entrances. The city is looking into eliminating the one closest to the 5-way intersection. This would allow for the stop bar to be moved up and provide a more direct crossing to Coe Park.
- The pedestrian waiting area on the bridge is narrow and feels unsafe.
- The city is looking into extending the island on the bridge towards the park but there are concerns about weight and structural loads on the bridge.
- Some of the sidewalk ramps are broken and have missing chunks of concrete (Figure 6).
- The push button between Franklin and East Main Street is located farther than maximum allowed from the actual crossing (Figure 7).
- It should be investigated as to whether a multi-use path could be installed on the bridge to connect the greenway from Franklin Street across the river. The current sidewalk width is about 8' with a 2' shoulder.
- A pedestrian was observed crossing mid-block between Coe Park and the library even though the crosswalk was within 100 feet. It was noted that the crosswalk is twice as long and requires two signal phases to complete the crossing (Figure 8).
- There is a general lack of pedestrian way-finding.
- The downtown lacks a gateway.
- This intersection can be confusing to motorists.
- The stop bar on Mason Street is set back very far.
- Some of the cross walks are faded.

Figure 6. Broken Sidewalk Ramp

Figure 7. Pedestrian Push Button Far from Crosswalk

Figure 8. Pedestrian Crossing Mid-block by the Library

Torringford West Street & East Main Street

- Some paved islands are acting as narrow sidewalks. (Figure 9).
- The intersection angles are skewed, creating a 45 degree angle. To improve the radius of the corners with sharper turns the curb has been pulled back. This creates longer crossing distances for pedestrians.
- The shoulders are very narrow. Many intersections have been retrofitted to include a turning lane.
- Route 202's position on the Vendor-In-Place (VIP) list should be checked.
- Utility poles and signs are in the way of sidewalks.
- The cross slopes of sidewalks in some locations do not meet ADA guidelines (Figure 10).
- There are ramps for pedestrian signals but no sidewalks.
- This intersection has an audible pedestrian phase.
- The crosswalk paint is worn out.
- Driveways are numerous and large. In some places it becomes difficult to discern the roadway from a private property such as at Jimmy's Store at the southwest corner of the intersection.
- There are no pedestrian crossing signs (although there is one mid-block before the next intersection. (Figure 11).

Figure 9. Island that acts as a Sidewalk

Figure 10. Non-Compliant ADA Ramp, Faded Crosswalk

Figure 11. Pedestrian Crossing Sign not Near a Sidewalk

Routes 4 and 8 access to Route 202

- The sidewalk has guide rail on both sides of the road on the steep grade.
- This is an exclusive pedestrian signal.
- One pedestrian push button is missing the directions plate.

- Right turn on red from Elm Street to Route 202 is permitted, although this is a difficult turn because of the skew of the intersection and the grades.
- Plantings encroach on the sidewalk (Figure 12).

Figure 12. Vegetation Encroaching on the Sidewalk

3.2 Post Audit Workshop - Key Issues

The following issues were discussed:

- Future funding for further studies or engineering design has not been determined at this point.
- The State is going to incorporate these RSA plans and their information into the Statewide Bicycle and Pedestrian Plan.
- The plan will include general and specific recommendations.
- It is anticipated that the audit report will be completed in 4 to 6 weeks.
- With a Master Plan in place, it is relatively easy to get commercial developments to provide portions of the plan as a condition of approval.
- There is a branding and imaging plan for the city outlining wayfinding. Once funding is available they will begin to implement it.

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 years or more when funding is available.

4.1 Short Term

1. When Route 202 is scheduled for repaving, restripe to allow for wider shoulder on the uphill side for cyclists.

2. Repaint crossings.
3. Incorporate the Branding and Imaging Plan as well as the corridor plan into any redevelopment.
4. Redesign East Main Street in phases; it is too much to accomplish at once.
5. Require all new developments to add sidewalks.
6. Patch sidewalks where they are uneven or broken.
7. Remove or cut back encroaching vegetation.

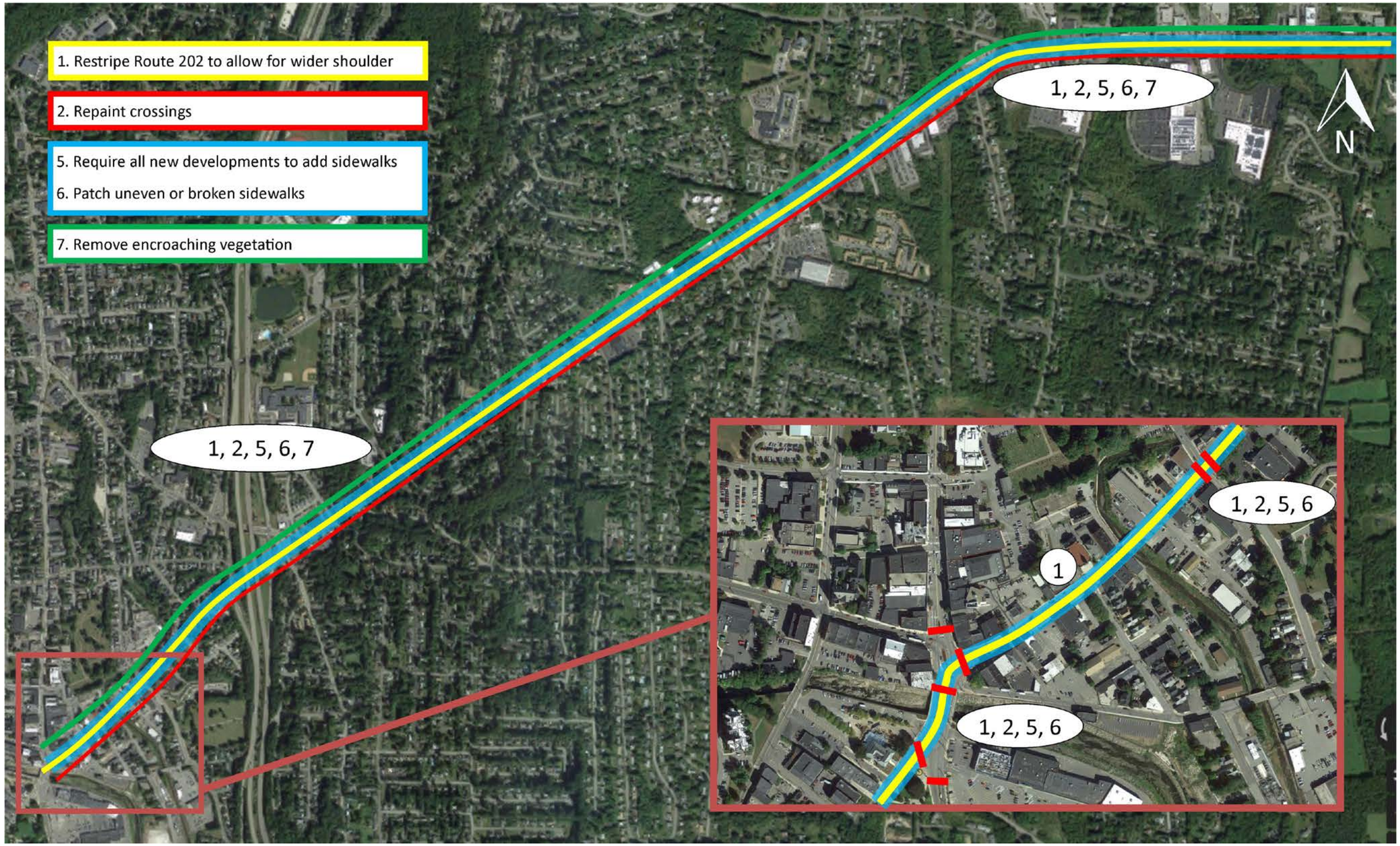


Figure 13. Short Term Recommendations

4.2 Medium Term

1. A Master Plan needs to be developed for East Main Street with a corridor study that looks at access management, ROW, traffic, intersections, and pedestrian amenities. This plan could establish policies for future development and be used as a basis for updating current zoning regulations.
2. Close Franklin Street and make it a pedestrian only area.
3. Connect the existing and proposed greenway over the bridge by widening the sidewalk to create a multi-use trail on one side.
4. Redesign East Main Street in phases; it is too much to accomplish at once.
5. Add sidewalks in the areas where there are direct connections such as at Torringford West & East Main Street.
6. Replace pedestrian signals with countdown signals (Figure 14).
7. Add audible devices to all pedestrian signals.
8. Add tactile warning strips to all crossings.
9. Make all crossings ADA compliant.
10. Relocate all signs out of the pedestrian way.
11. Complete sidewalk mapping.
12. Add pedestrian crossing signs (Figure 15) and relocate existing improperly located signs.
13. Fix broken pedestrian push buttons.
14. Implement wayfinding for pedestrians and vehicular traffic.
15. Add no turn on red sign (Figure 16) from Elm Street to Route 202.
16. Evaluate pedestrian signal timings and adjust accordingly to meet new standards.
17. Relocate pedestrian pushbuttons that do not meet current standards.

Figure 14. Pedestrian Countdown Signal

Figure 15. Pedestrian Crossing Sign

Figure 16. "No Turn on Red" Sign

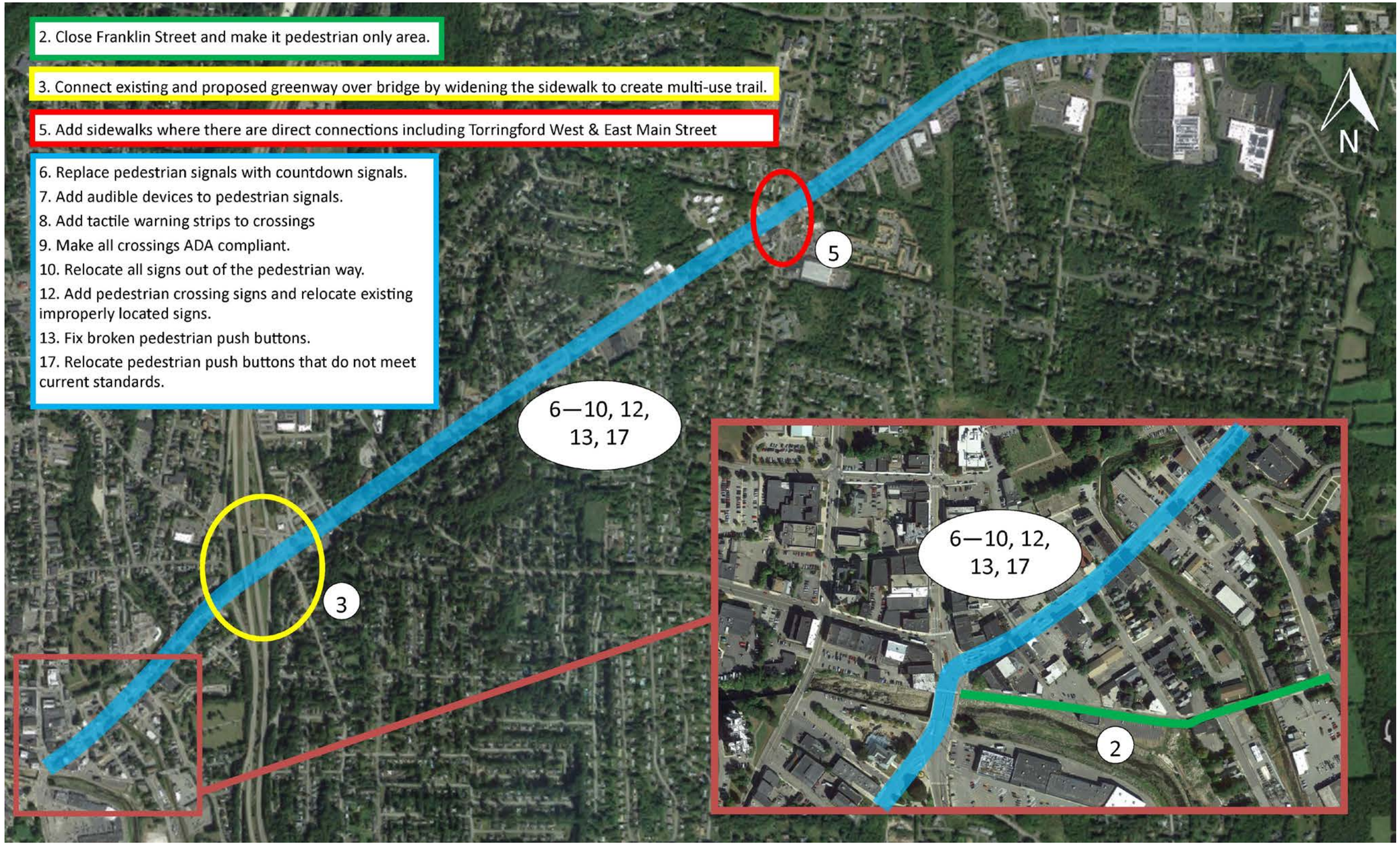


Figure 17. Medium Term Recommendations

4.3 Long Term

1. Incorporate the Branding and Imaging Plan as well as the corridor plan into any redevelopment.
2. Close Franklin St and make it a pedestrian only area.
3. Connect the existing and proposed greenway over the bridge by widening the sidewalk to create a multi-use trail on one side.
4. Redesign East Main Street in phases; it is too much to accomplish at once.
5. Fill in the missing sidewalk gaps along East Main Street.
6. Fix areas with cross slope issues.
7. Eliminate the entrance by the 5-way intersection for the 99 plaza and move up the stop bar to create a more direct crossing to Coe Park.
8. Implement Access Management Plan to consolidate driveways.
9. Narrow crossings at 5-way to eliminate split phases and waiting islands.
10. Add bump outs (Figure 18) at crossings to shorten crossing distance.
11. Create a gateway to downtown.
12. Reconstruct the Pearl Street and East Pearl Street intersection in order to reduce traffic at the 5-way intersection. This would make the 5-way intersection more pedestrian and bicycle friendly.

Figure 18. Typical Pedestrian Crossing Bump outs

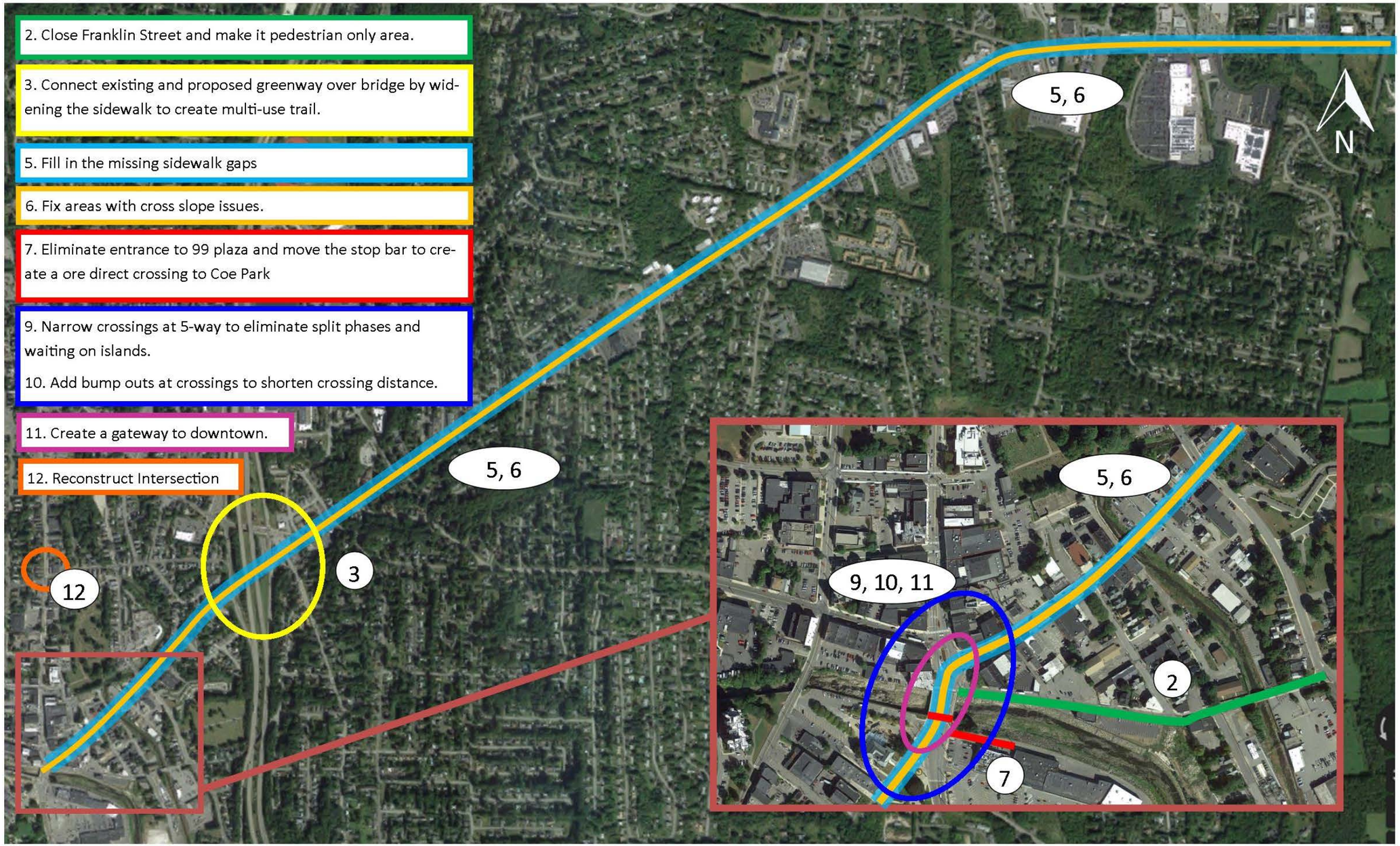


Figure 19. Long Term Recommendations

4.4 Summary

This report outlines the observations, discussions and recommendations developed during the RSA. It documents the successful completion of the City of Torrington RSA and provides Torrington with an outlined strategy to improve the transportation network along the East Main Street corridor and 5-way intersection for all road users, particularly focusing on pedestrians and cyclists. Moving forward, Torrington 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 East Main Street and the 5-way intersection.

COMMUNITY
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Appendix A

CONNECTICUT DEPARTMENT OF TRANSPORTATION

AECOM
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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	Elinor Carbone
Title	Mayor
Email Address	Elinor_Carbone@torringtonct.org
Telephone Number	(860) 489-2228

2. Location information

Address	Route 202
Description	E. Main including intersection of Main St, Water St, S. Main and Litch
City / Town	Torrington

3. Roadway type
(Please select all that apply)

- [x] **State road**
- [ ] **Local road**
- [ ] **Private Road**
- [ ] **Other (please specify)**

4. Zoning
(Please select all that apply)

- [ ] **Industrial**
- [x] **Residential**
- [x] **Commercial**
- [x] **Mixed Use**
- [x] **Retail**
- [ ] **N/A (not applicable)**
- [ ] **Other (please specify)**

5. Approximate mile radius around the location

Greater than a ½ mile

Other (Please Specify)

The Study location is just under 3 Miles. It begins at the "5 Way" Intersection with East I

6. Community Sites
(Please select all that apply)

- [x] **Community Centers**
- [x] **Business Districts**
- [x] **Restaurant/Bar Districts**
- [ ] **Churches**
- [ ] **Housing Complexes**
- [ ] **Proximity to Schools**
- [x] **Tourist Locations (examples – Casino, Malls, Parks, Aquarium, etc...)**
- [ ] **N/A (not applicable)**
- [ ] **Other (please specify)**

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

- [x] **Yes**
- [ ] **No**

If Yes please describe (please specify)

There is a wide range of businesses along Route 202 and in the Center of Torrington's downtown. These businesses include many restaurants, art galleries, retails stores (including smaller local shops and larger "big box" stores such as Walmart, Target, Bed Bath & Beyond), many car dealerships, grocery stores

8. Educational facilities
(Please select all that apply)

- [x] **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)**
- [x] **Other (please specify)**

CTDOT is currenntly in the design stages of building a Bus Maintenance Facility/Trans

10. Safety Concerns
(Please select all that apply)

- [x] **Traffic (volumes & speed)**
- [x] **Collisions**
- [x] **Sidewalks**
- [x] **Traffic Signals**
- [ ] **Traffic Signs**
- [ ] **Parking Restrictions / Additions**
- [ ] **Drainage**
- [x] **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 of CT DOT Transit facility is being proposed within approximately 1/4 mile of the "5-way" intersection shown on the map.

The State of CT DOT and the City are about to embark on Phase 2 of a streetscape plan along Main Street that will include a re-design and new sidewalk infrastructure, landscaping and lighting. In addition, upgrades to the bridge of the "5-way" intersection to include landscaping, lighting and signage are also part of this project plan. Construction begins on April 11, 2016 and is slated to be finished by the end of the summer.

The new Supreme Court House is currently being constructed just over a 1/2 mile of the "5-way" intersection shown on the map. The Court House is slated to open either late 2016 or early 2017. The State of Connecticut consolidated and relocated the Litchfield County Court House to Torrington which will relocate jobs and create economic activity within our downtown.

Both the Naugatuck River Greenway and the Sue Grossman Greenway are proposed to have trail heads within 500' of the "5-Way" intersection. It is likely that construction of the Naugatuck River Greenway will commence this spring. The Sue Grossman Greenway is in conceptual design only. However, the goal is to utilize our existing sidewalk infrastructure to

12. Environmental Concerns:

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

If Yes please describe and list.

The Naugatuck River flows through Downtown Torrington, under both Main Street and E. Main Street. Part of the concern is how to make the the existing bridges more pedestrian friendly.

In addition, Torrington is an old industrial manufacturing community. With the mass exodus of factories over the course of the last 50 years, the City has been left with large, vacant, underutilized and blighted brownfield properties scattered throughout our downtown, along the river and along the Naugatuck Railroad. As part of the redevelopment process of these properties, the City is committed to promoting a walkable community and returning these blighted properties back into productive re-use. Many of these properties fall along or within the proposed trail network through-out Torrington.

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

This area is in the heart of Downtown Torrington and provides access to East Main Street, Franklin Street, South Main Street, Litchfield Street, Water Street and Main Street. In addition there is a driveway to a busy shopping center across the street from a municipal parking lot and library. Due to the culmination of all these intersections, the intersection is currently a high traffic area and does not provide a safe effective way for pedestrians to get from one area to the next. This intersection prevents downtown Torrington from being pedestrian and bike friendly. It creates a significant disconnect within our Downtown.

Downtown Torrington is home to a thriving Arts Community. The Warner Theater, Five Points Gallery, Kids Play, and the Nutmeg Conservatory generate significant pedestrian traffic throughout the year. The re-design on Main Street to make Downtown Torrington was due in part to the activity that occurs within our downtown. Ensuring a safe pedestrian environment to encourage economic development within our downtown is critical in order to support the arts and small businesses downtown.

Furthermore, All of E. Main Street, starting at the intersection described above, has a significant pedestrian traffic, despite there being limited sidewalks and high volume of traffic. The businesses in along this road provide employment and services to the residents of Torrington along with surrounding towns. Many Torrington residents do not rely on a vehicle for transportation; therefore they walk or bike to their job, grocery store, Dr's appointments etc. which is why there is such a significant amount of pedestrian traffic along this road. The attached photo to this application shows one "goat path" among many along this corridor further signifying the need for a better pedestrian environment.

While Route 202 has significant pedestrian traffic, it is also our primary commercial corridor that is home to some of our highest traffic counts and traffic accidents within Torrington. The attached map provides details on the ADT counts and some recent accident data along the Corridor. The Torrington Police Department recently reported 315 accidents over the last 3 years. This does not include all of the State report of accidents along 202.

At the 5-Way intersection the ADT count is 15,400 and is 17,200 at the end towards the New Hartford town line. The accident data recorded on the map is from 2008-2012 and identified 228 accidents along the corridor during that time.

In conclusion, the East Main Street Corridor needs to be more user friendly for pedestrians, bicyclists and vehicular traffic. As Torrington continues to grow and expand along this corridor, providing a safe environment will be key for future redevelopment projects.

14. Are there plans to expand the area?
(Transportation Oriented Development, Economic Development, housing, etc...)

Yes

In addition to the State and local projects that were detailed in section 11, the following are additional projects that are in the works.

As part of our Master Development Plan, the City has intentions to close the Franklin Street leg of the "5-way" Intersection and convert that street into a walkable pedestrian friendly social civic area. Allowing for outdoor dinning, access to the Naugatuck River, and act as the trail head for the Naugatuck River Greenway which when fully constructed will connect the City of Torrington to Derby CT.

A new Cumberland Farms is beginning construction near the intersection of E. Main St (202) and Torringford West St which is one of our most dangerous intersections with vehicular traffic.

Other housing redevelopment projects such as the Torrington Housing Authority and a Senior Housing Complex have all been approved by the Planning & Zoning Commission. Both of these developments are located along the East Main Street Corridor.

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

Yes

Torrington also serves as Litchfield County's center for public services, and as such absorbs a large percentage of the county's most needy citizens. The table included as an attachment illustrates that both Torrington's poverty rate, and unemployment rate, are higher than the state and the national rates.

Torrington is one of the State's 25 Distressed Municipalities—the only distressed community in the 26 municipalities that make up Litchfield County. Due to the size of its population however, Torrington does not qualify for specific state and federal assistance. It is not a Targeted Investment Community, and lacks an entitlement zone. The City cannot qualify for Urban Act funds or State Small Town Economic Assistance Program (STEAP) funding.

The lack of funding presents one challenge, but another is that the statistics do not tell the positive side of Torrington's story. Developers and companies seeking a skilled workforce examine "off-the-shelf" data and quickly dismiss opportunities to invest. But in August 2015, the results of a Bloomberg analysis examining the wealth of micropolitan areas (10,000 to 50,000 in population) ranked Torrington 11th in the country, only 2.47 points separating it from the top spot.

By definition, a micropolitan statistical area is where one or more primary centers within an area have a population center between 10,000 to 50,000 residents but serves a greater population at whole. Torrington, CT is the largest micropolitan statistical area as defined by the US Census Bureau, within the United States with a service area over 180,000 residents with one primary center. This indicates that Torrington serves a greater population outside of our City limits that should be recognized as Torrington continues to promote growth and redevelopment in the economic hub of Litchfield County.

As the regional center and the largest micropolitan community in the country, the importance of providing alternative modes of transportation are not only important for the residents to provide a healthy and liveable environment, but it also strategically promotes economic development. A safe pedestrian and bicycle friendly community is also critical in attracting developers and businesses to locate within our City.

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

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Appendix B

Built to deliver a better world

Road Safety Audit

Town: Torrington
RSA Location: East Main Street Corridor
Meeting Location: City Hall
Address: 140 Main Street
Date: 4/6/2016
Time: 9:00 AM

Participating Audit Team Members

Column1	Column2
Audit Team Member	Agency/Affiliation
Krystal Oldread	AECOM
Kevin Tedesco	CTDOT
Stephen Gazillo	AECOM
Paul Metsack	CTDOT
Shivani Mahajan	AECOM
Steve Mitchell	AECOM
Matt Walsh	City of Torrington
Rista Malanca	City of Torrington
Marty Connor	City of Torrington
Officer Steve Pisarski	City of Torrington - Police
Tim Waldron	City of Torrington - Mayors Office
Chief Gary Brunoli	City of Torrington - Fire Dept
Erin Wilson	City of Torrington - economic Development
Ed Fabbri	City of Torrington - city engineer
Mayor Elinor Carbone	City of Torrington - Mayors Office

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Appendix C

Built to deliver a better world

Road Safety Audit – Torrington

Meeting Location: Torrington City Hall
Address: 140 Main Street
Date: 4/6/2016
Time: 9:00 AM

Agenda

Type of Meeting: **Road Safety Audit – Pedestrian Safety**

Attendees: **Invited Participants to Comprise a Multidisciplinary Team**

Please Bring: **Thoughts and Enthusiasm!!**

9:00 AM **Welcome and Introductions**

- Purpose and Goals
- Agenda

9:15 AM **Pre-Audit**

- Schedule
- Safety Procedures
- Review Site Specific Data:
  - Average Daily Traffic
  - Crash Data
  - Geometrics
- Issues

10:15 AM **Audit**

- Visit Site
- As a group, identify areas for improvements

11:30 PM **Post-Audit Discussion / Completion of RSA**

- Discussion observations and finalize findings
- Discuss potential improvements and final recommendations
- Next Steps

1:00 PM **Adjourn for the Day – but the RSA has not ended**

Instruction for Participants:

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

Road Safety Audit – Torrington – East Main Street

Meeting Location: Torrington City Hall
Address: 140 Main Street
Date: 4/6/2016
Time: 9:00 AM

Audit Checklist

Pedestrians and Bicycles	Comment

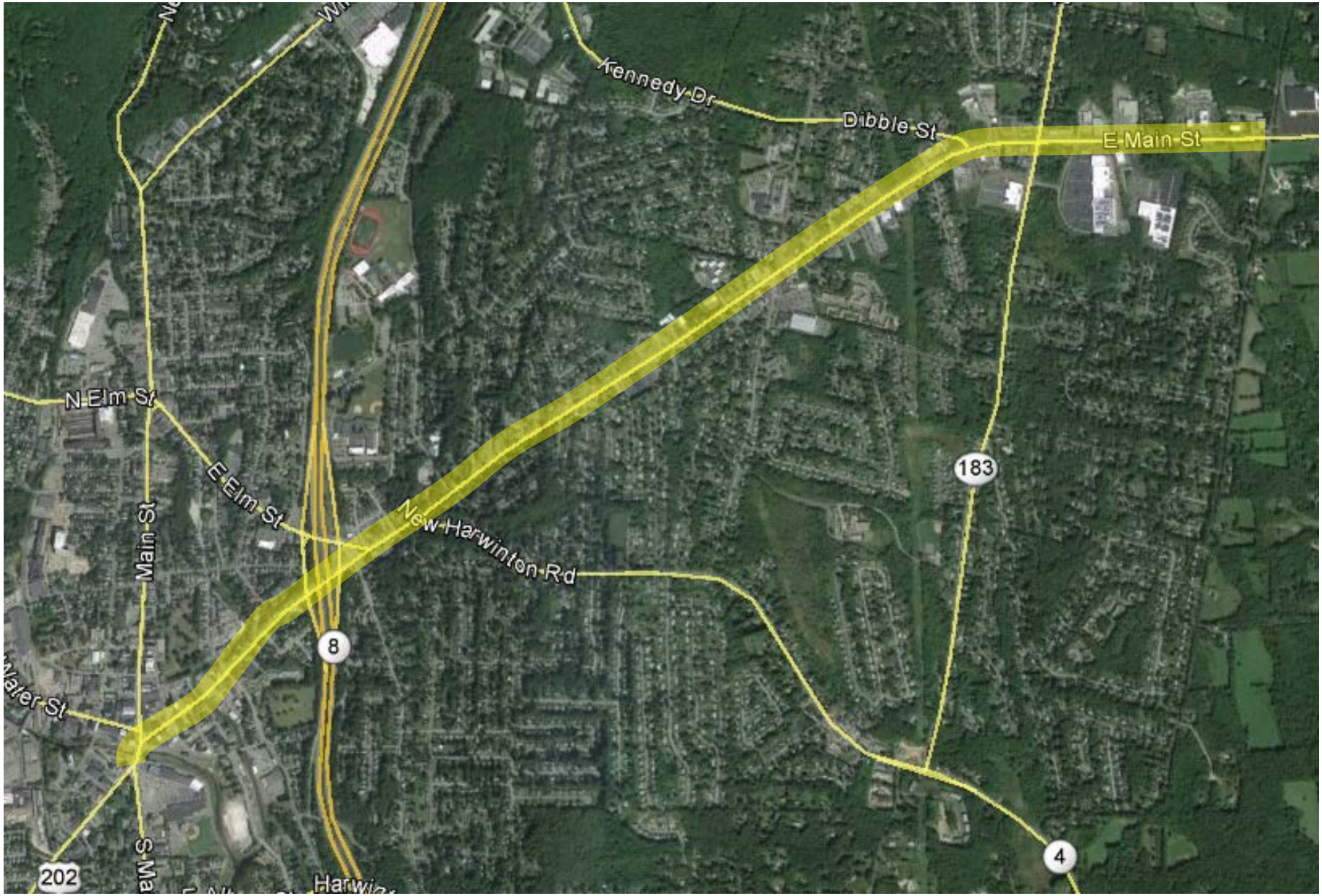
Pedestrian Crossings
• Sufficient time to cross (signal)
• Signage
• Pavement Markings
• Detectable warning devices (signal)
• Adequate sight distance
• Wheelchair accessible ramps
  o Grades
  o Orientation
  o Tactile Warning Strips
• Pedestrian refuge at islands
• Other	

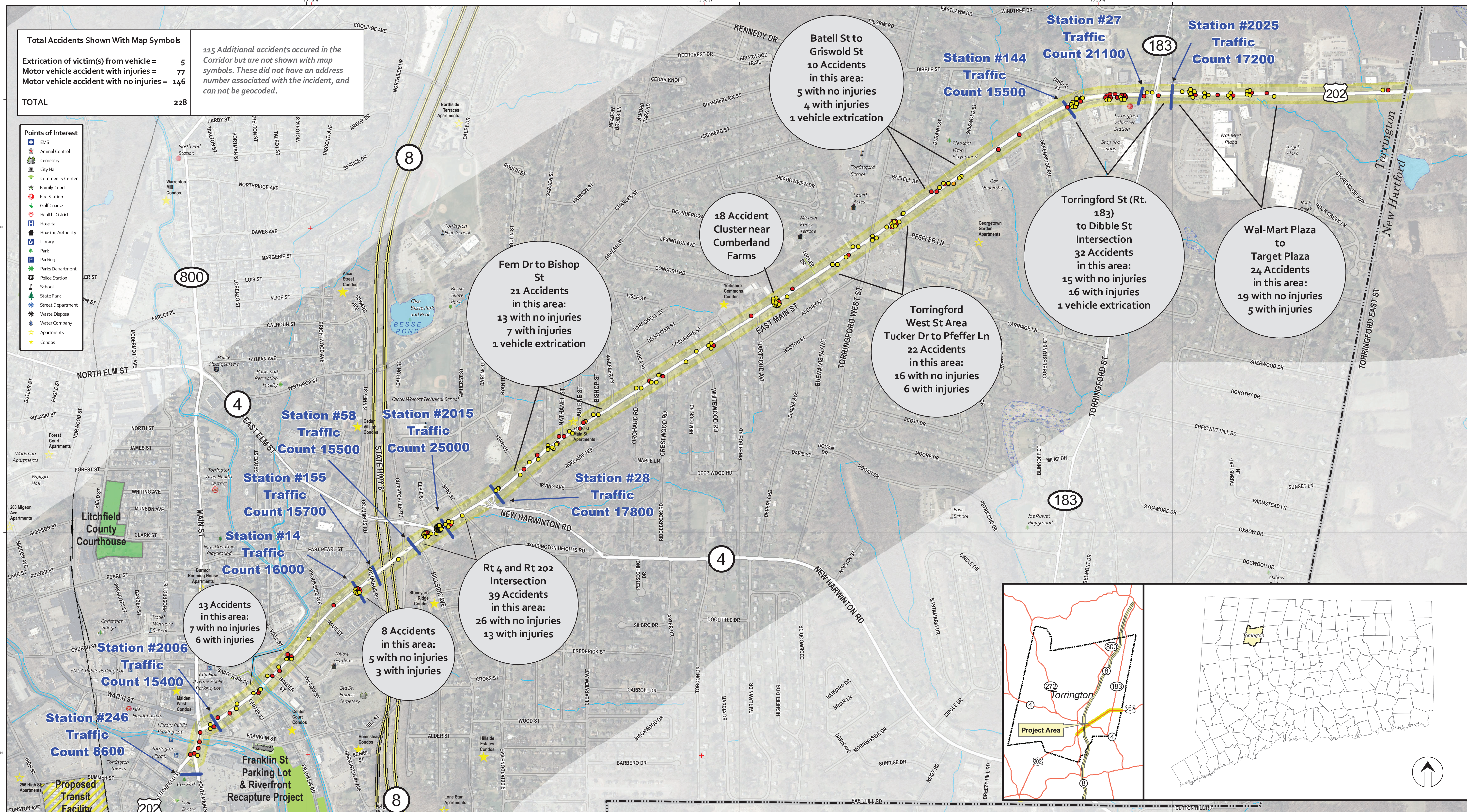
Pedestrian Facilities
• Sidewalk
  o Width
  o Grade
  o Materials/Condition
  o Drainage
  o Buffer
• Pedestrian lighting
• Pedestrian amenities (benches, trash receptacles)
• Other	

Bicycles • 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	
• Speed-related issues o Alignment; o Driver compliance with speed limits o Sight distance adequacy o Safe passing opportunities	
• Geometry o Road width (lanes, shoulders, medians); o Access points; o Drainage o Tapers and lane shifts o Roadside clear zone /slopes o Guide rails / protection systems	
• Intersections o Geometrics o Sight Distance o Traffic control devices o Safe storage for turning vehicles o Capacity Issues	
• Pavement o Pavement Condition (excessive roughness or rutting, potholes, loose material) o Edge drop-offs	

o Drainage issues • Lighting Adequacy	
• Signing o Correct use of signing o Clear Message o Good placement for visibility o Adequate retroreflectivity • Proper support	
• Signals o Proper visibility o Proper operation o Efficient operation o Safe placement of equipment o Proper sight distance o Adequate capacity	
• Pavement Markings o Correct and consistent with MUTCD o Adequate visibility o Condition o Edgelines provided	
• Miscellaneous o Weather conditions impact on design features. o Snow storage	


Kennedy Dr
Dibble St
E Main St
N Elm St
E Elm St
Main St
New Harwinton Rd
183
8
Water St
202
4


Total Accidents Shown With Map Symbols
Extrication of victim(s) from vehicle = 5
Motor vehicle accident with injuries = 77
Motor vehicle accident with no injuries = 146
TOTAL 228
115 Additional accidents occured in the Corridor but are not shown with map symbols. These did not have an address number associated with the incident, and can not be geocoded.
Points of Interest
EMS
Animal Control
Cemetery
City Hall
Community Center
Family Court
Fire Station
Golf Course
Health District
Hospital
Housing Authority
Library
Park
Parking
Parks Department
Police Station
School
State Park
Street Department
Waste Disposal
Water Company
Apartments
Condos
Batell St to Griswold St
10 Accidents in this area:
5 with no injuries
4 with injuries
1 vehicle extrication
Station #144 Traffic Count 15500
Station #27 Traffic Count 21100
Station #2025 Traffic Count 17200
18 Accident Cluster near Cumberland Farms
Torringford St (Rt. 183) to Dibble St Intersection
32 Accidents in this area:
15 with no injuries
16 with injuries
1 vehicle extrication
Wal-Mart Plaza to Target Plaza
24 Accidents in this area:
19 with no injuries
5 with injuries
Fern Dr to Bishop St
21 Accidents in this area:
13 with no injuries
7 with injuries
1 vehicle extrication
Torringford West St Area Tucker Dr to Pfeffer Ln
22 Accidents in this area:
16 with no injuries
6 with injuries
Station #58 Traffic Count 15500
Station #2015 Traffic Count 25000
Station #155 Traffic Count 15700
Station #28 Traffic Count 17800
Station #14 Traffic Count 16000
Rt 4 and Rt 202 Intersection
39 Accidents in this area:
26 with no injuries
13 with injuries
13 Accidents in this area:
7 with no injuries
6 with injuries
8 Accidents in this area:
5 with no injuries
3 with injuries
Station #2006 Traffic Count 15400
Station #246 Traffic Count 8600
Litchfield County Courthouse
Franklin St Parking Lot & Riverfront Recapture Project
Proposed Transit Facility
Torrington
New Hartford
Project Area

Community Connectivity Project
Road Safety Audit Corridor
Vehicle Accident Locations 2008-2012
City of Torrington, Connecticut

LEGEND

- Traffic Count Locations
- Project Area

Accident Locations

- Extrication of victim(s) from vehicle
- Motor vehicle accident with injuries
- Motor vehicle accident with no injuries

Disclaimer: This map is not a survey and is intended as a visual reference only. The City of Torrington makes no claims as to the accuracy of data shown.

1 inch = 500 feet

Drawn By: Engineering Dept.

Date: 3/1/2016

Road Safety Audit – Torrington – East Main Street

Meeting Location: Torrington City Hall
Address: 140 Main Street
Date: 4/6/2016
Time: 9:00 AM

Crash Summary

Data: 3 years (2012-2014)

6 accidents involved pedestrians, all resulted in injuries

4 accidents involved bicyclists, 3 resulted in injuries

Severity Type	Number of Accidents	
Property Damage Only	337	76%
Injury (No fatality)	108	24%
Total	445	

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	5	1%
Sideswipe-Same Direction	43	10%
Rear-end	214	48%
Turning-Intersecting Paths	73	16%
Turning-Opposite Direction	31	7%
Fixed Object	17	4%
Backing	11	2%
Angle	13	3%
Turning-Same Direction	20	4%
Moving Object	1	0.2%
Parking	4	1%
Pedestrian	6	1%
Overturn	1	0.2%
Head-on	2	0.4%
Sideswipe-Opposite Direction	4	1%
Total	445	

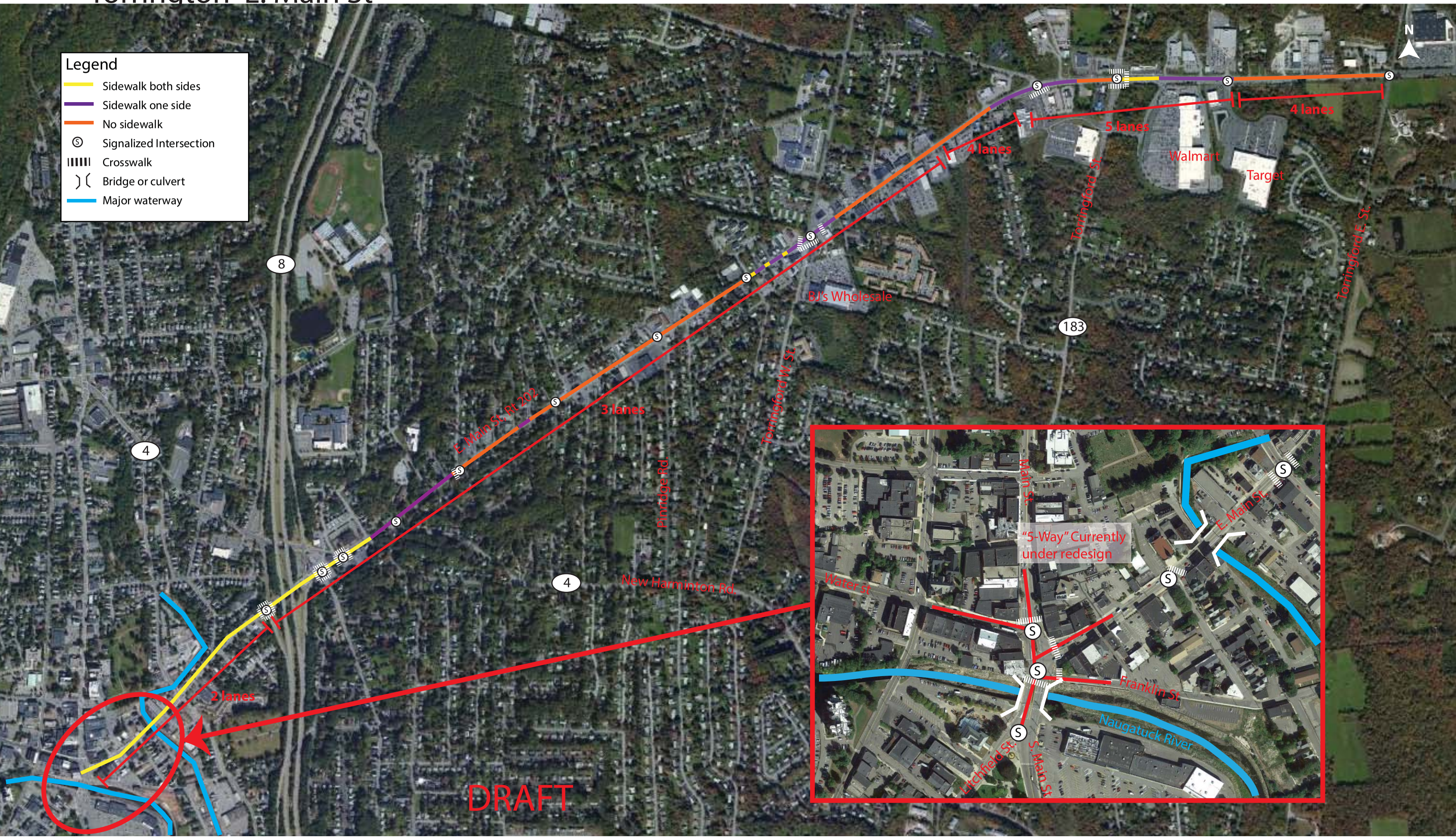
Weather Condition	Number of Accidents	
Snow	16	4%
Rain	44	10%
No Adverse Condition	378	85%
Unknown	3	1%
Blowing Sand, Soil, Dirt or Snow	1	0.2%
Other	1	0.2%
Severe Crosswinds	1	0.2%
Sleet, Hail	1	0.2%
Total	445	

Light Condition	Number of Accidents	
Dark-Not Lighted	3	1%
Dark-Lighted	90	20%
Daylight	334	75%
Dusk	14	3%
Unknown	3	1%
Dawn	1	0.2%
Total	445	

Road Surface Condition	Number of Accidents	
Snow/Slush	12	3%
Wet	60	13%
Dry	366	82%
Unknown	3	1%
Ice	3	1%
Other	1	0.2%
Total	445	

Time		Number of Accidents	
0:00	0:59	4	0.9%
1:00	1:59	1	0.2%
2:00	2:59	1	0.2%
3:00	3:59	2	0.4%
4:00	4:59	0	0.0%
5:00	5:59	3	0.7%
6:00	6:59	4	0.9%
7:00	7:59	14	3.1%
8:00	8:59	13	2.9%
9:00	9:59	22	4.9%
10:00	10:59	14	3.1%
11:00	11:59	30	6.7%
12:00	12:59	36	8.1%
13:00	13:59	36	8.1%
14:00	14:59	42	9.4%
15:00	15:59	36	8.1%
16:00	16:59	47	10.6%
17:00	17:59	53	11.9%
18:00	18:59	28	6.3%
19:00	19:59	17	3.8%
20:00	20:59	16	3.6%
21:00	21:59	11	2.5%
22:00	22:59	11	2.5%
23:00	23:59	4	0.9%
Total		445	

Torrington E. Main St



Road Safety Audit – Torrington – East Main Street Corridor

Meeting Location: Torrington City Hall
Address: 140 Main Street
Date: 4/6/2016
Time: 9:00 AM

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 – Torrington

Meeting Location: Torrington City Hall
Address: 140 Main Street
Date: 4/6/2016
Time: 9:00 AM

Fact Sheet

Functional Classification:

- East Main Street (Route 202) is classified as a Principal Arterial

ADT

- ADT along this corridor spans between 8,600 and 25,000

Population and Employment Data:

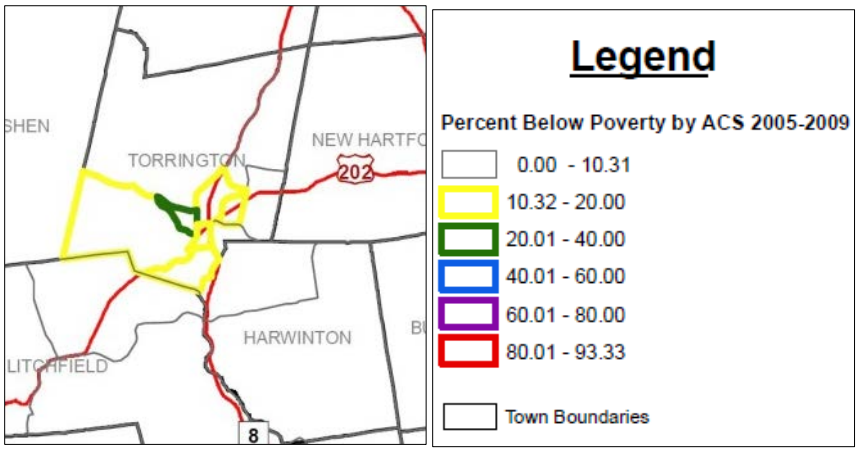
- Population: 36,383
- Employment: 15,268

Urbanized Area

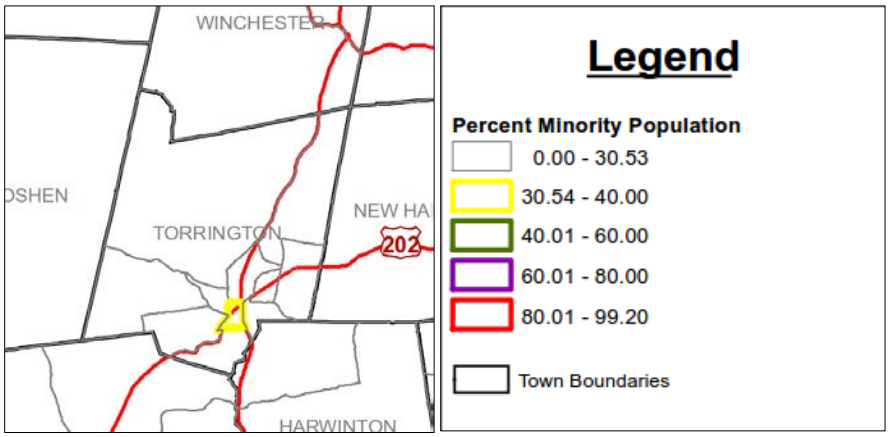
- East Main Street Corridor is located within an Urbanized Area (Torrington Urban Cluster)

Demographics

- The statewide average percentage below the poverty line is 10.31%. Along this corridor 10.32% - 20% of residents are below the state's poverty level



- The statewide average percentage minority population is 30.53%.Towards the western end of this corridor there is a higher concentration of minority residents.



Air Quality

- Torrington's CIPP number 321
- Torrington is within the Greater CT Marginal Ozone Area
- Torrington is within a CO Attainment Area

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Appendix D

AECOM
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YELLOW
SUNOCO
Hertz