COMMUNITY
connectivity program

Shelton

Shelton Avenue– Road Safety Audit

April 5, 2016

CONNECTICUT DEPARTMENT OF TRANSPORTATION

AECOM

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Acknowledgements:

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With assistance from AECOM Transportation Planning Group

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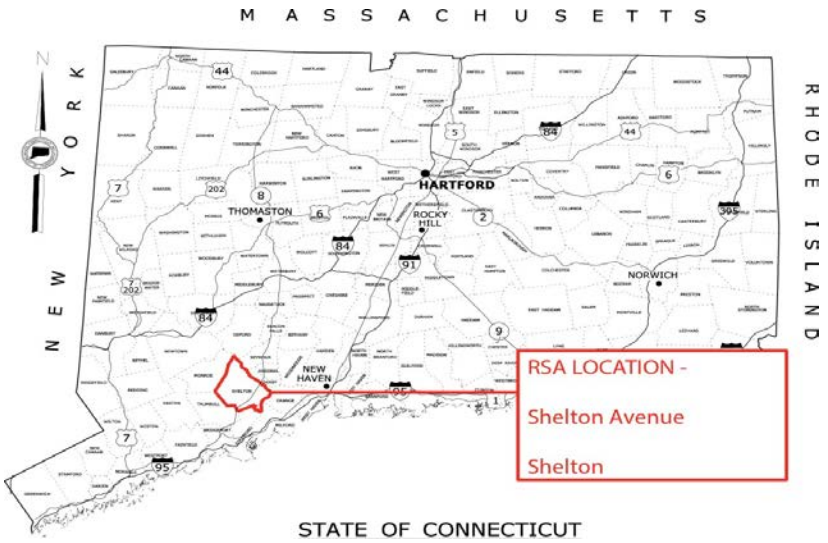
The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state's transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this program is conducting Road Safety Audits (RSA's) at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

The City of Shelton submitted an application to complete an RSA on the Route 108 (Shelton Avenue) corridor to improve safety for pedestrians and bicyclists. The City wants to complete a public sidewalk connection from downtown Shelton to Meadow Street to the west. It will connect to the Shelton Lakes Recreation Path and the Meadow Street sidewalk that provides access to Shelton High School. Students from Shelton High School currently walk this route, but the existing sidewalk is discontinuous. The short segments of sidewalk that do exist have surface and/or stability issues and conflicts with parked vehicles. As a result, pedestrians walk in the road shoulder at several locations.

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

1.1 Location

The RSA corridor includes Shelton Avenue from Meadow Street to Wooster Street/Oak Avenue (Figure 1). Shelton Avenue is classified as a minor arterial. The Shelton Avenue Average Daily Traffic (ADT) volume ranges from 8,000 to 10,600 vehicles per day (vpd). This is moderate traffic volume for the corridor. There is a High School nearby that generates many walking students, and the Shelton Lakes Recreation Path (Rec Path) around Pine Lake. There are also extensive pedestrian facilities adjacent to both ends of the corridor, but discontinuous sidewalks in the corridor itself. The RSA corridor is therefore a gap in the pedestrian network. Figure 2 shows the regional context of the study area.

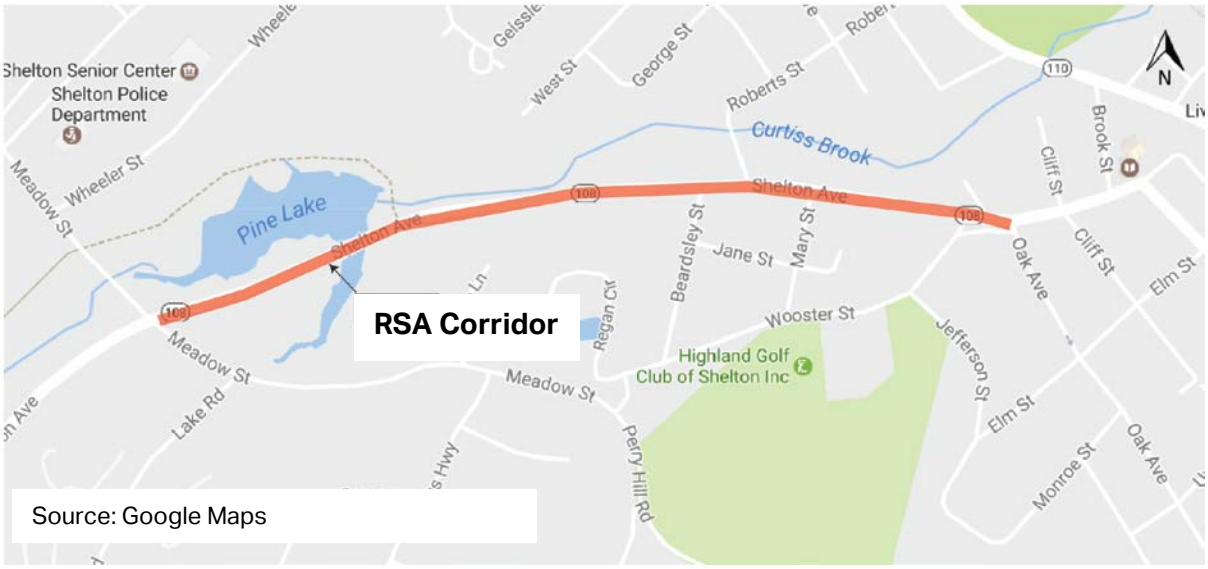


Figure 1: Shelton RSA Corridor

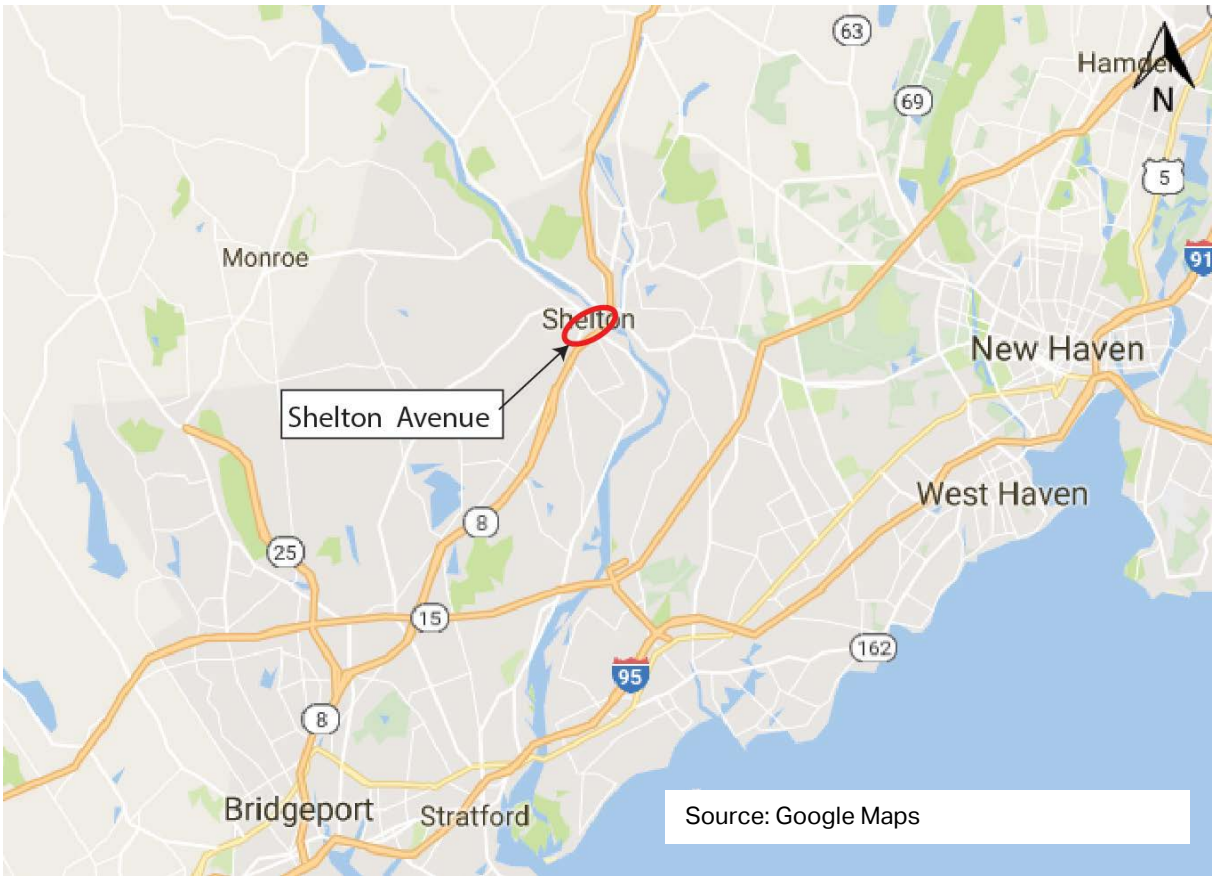


Figure 2: Regional Context

2 Pre-Audit Assessment

2.1 Pre-Audit Information

Between 2012 and 2014 there were 16 crashes in the RSA Area. The majority of crashes (75%) reported in this area resulted in property damage only; however 25% of crashes did result in an injury (Table 1 and Table 2). One crash involved a bicyclist and none involved a pedestrian. The crash involving a bicyclist occurred at the Mary Street intersection when a vehicle turned left and failed to grant right-of-way to the bicyclist. The bicyclist, who was not wearing a helmet, was injured. The crash types reported were primarily turning-intersecting paths. Figure 3 displays crashes that occurred in this area during 2015 and shows that most crashes are clustered around the Oak Avenue and Cliff Street intersections. Town representatives indicated that there were several crashes at the mini-market on the south side of Shelton Avenue near Brooks Street. It was also noted that a pedestrian was struck and killed crossing the Rec Path at Meadow Street late in 2016. Distracted driving was noted as a factor in many recent crashes.

Severity Type	Number of Accidents	
Property Damage Only	12	75%
Injury (No fatality)	4	25%
Fatality	0	0%
Total	16	

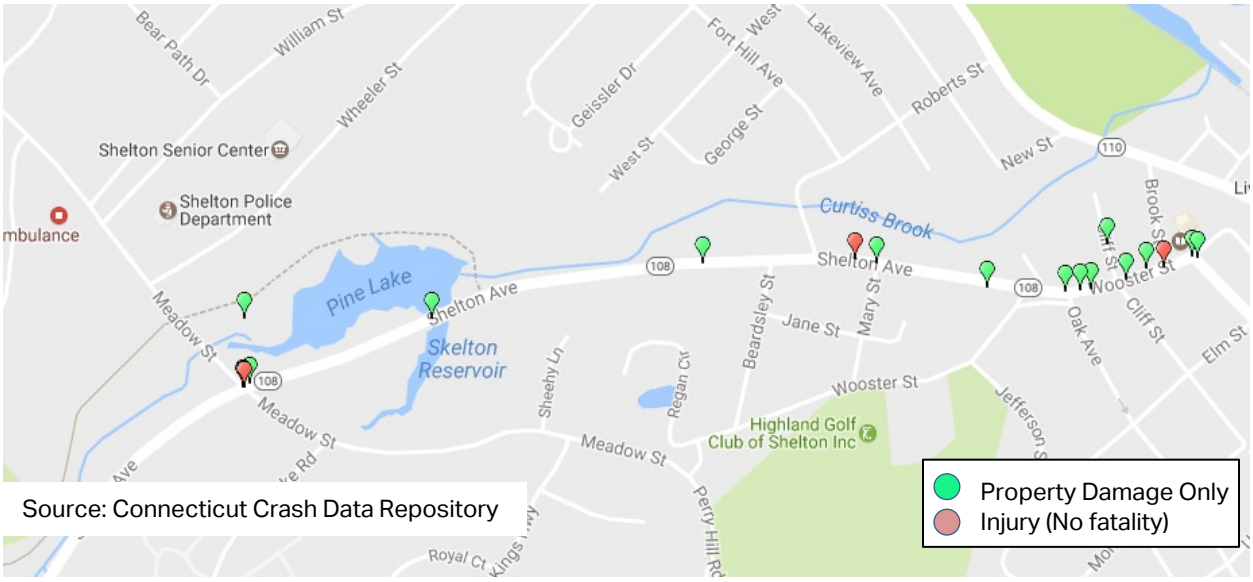
Table 1. Crash Severity 2012-2014

Source: UConn Connecticut Crash Data Repository

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	0	0%
Sideswipe-Same Direction	0	0%
Rear-end	2	13%
Turning-Intersecting Paths	5	31%
Turning-Opposite Direction	0	0%
Fixed Object	2	13%
Backing	2	13%
Angle	0	0%
Turning-Same Direction	1	6%
Moving Object	1	6%
Parking	0	0%
Pedestrian	0	0%
Overturn	1	6%
Head-on	0	0%
Sideswipe-Opposite Direction	2	13%
Miscellaneous- Non Collision	0	0%
Total	16	

Table 2. Crash Type 2012-2014

Source: UConn Connecticut Crash Data Repository



Source: Connecticut Crash Data Repository

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

Route 108 (Shelton Avenue) is a two-lane, state owned road with a posted speed limit of 30 and 35 mph. The travel lanes on Shelton Avenue are approximately 12 feet wide, with the striped shoulder width ranging between one and seven feet wide (average three feet wide). From the east, the concrete sidewalk on Shelton Avenue ends at Oak Avenue. There is intermittent bituminous sidewalk on the north side that is often used as on-street parking for residents in the adjacent homes. The Rec Path, a multi-use crushed stone facility, crosses Meadow Street and wraps around the north side of Pine Lake, connecting Meadow Street with Shelton Avenue.

There is one signal in the corridor at the intersection of Meadow Street and Shelton Avenue. It is a four-way signalized intersection with crosswalks and countdown pedestrian signals across the north Meadow Street leg and the west Shelton Avenue leg. Shelton Avenue eastbound has two approach lanes, with a dedicated left turn lane and shared through-right turn lane. Shelton Avenue westbound has two approach lanes with a shared left-through lane and an exclusive right-turn lane. The two Meadow Street approaches have one lane each (Note - This signal was recently upgraded in 2016, which included revising the Meadow Street southbound approach to a shared left-through lane and an exclusive right-turn lane). All other intersections in the study corridor are Stop controlled. The geometry of the corridor is shown in Figure 4 and described in Table 3.

Figure 4: Shelton Avenue Road Geometrics

Shelton - Shelton Avenue (Route 108)

Street Inventory

From	To	Distance	Width	Sidewalk				Curb	Parking	Shoulder	Ramps	
				Side	Type	Width	Condition				Exist	Compliant
Meadow Street	Pine Lake	0.1 miles	12'	EB	No	N/A	N/A	N/A	No	3'	N/A	N/A
			12'	WB	Bituminous Asphalt	5'	Poor	Bituminous Asphalt	No	3'	Yes	Yes
Pine Lake	110 Shelton Avenue	0.25 miles	12-12.5'	EB	No	N/A	N/A	Bituminous Asphalt	No	1-3'	N/A	N/A
			12-12.5'	WB	No	N/A	N/A	N/A	No	1-3'	N/A	N/A
110 Shelton Avenue	Wooster Street	0.3 miles	12'	EB	No	N/A	N/A	Bituminous Asphalt	No	2-3'	N/A	N/A
			12'	WB	Bituminous Asphalt	6-8'	Fair	N/A	No	3-7'	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 traffic signal at the intersection of Shelton Avenue and Meadow Street has been upgraded by the CTDOT in the fall of 2016. The upgrade included:

- New traffic signal heads and controller.
- New turning lanes on Shelton Avenue and Meadow Street.
- New poles, video detection on Meadow Street, and loop detection on Route 108.
- New countdown pedestrian signal heads and buttons.
- New handicap ramps and detectable warning strips.
- New signage and pavement markings including crosswalks.

Shelton Avenue has been re-paved and striped by the CTDOT sometime in the year of 2015 .
In 2012 the City completed the 4.1-mile multi-use Shelton Lakes Recreation Path (Rec Path) that links Shelton Avenue with Huntington Center. The path is made of crushed stone and ranges between 8 and 12 feet wide. See Figure 5.
Shelton and the Town of Derby are currently coordinating to provide a new pedestrian-bicycle connection from downtown Shelton over the Derby-Shelton Bridge to Main Street in Derby and to the Derby Train Station.

Figure 5: Rec Path near Shelton Avenue trail head

2.3 Pre-Audit Meeting

The RSA was conducted on April 5, 2017. The Pre-Audit meeting was held at 8:30 AM in the Shelton City Hall located at 54 Hill Street in Shelton.

The RSA Team was comprised of staff from CTDOT and representatives from several Shelton departments and organizations including the Engineering Department, Police Department, Mayor's Office, Conservation Commission, Planning and Zoning, Highway Department and Emergency Management, and AECOM. 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.

RSA Team members from Shelton presented relevant information for the audit, including:

- There is an approximately four-mile long trail (Rec Path) on the north side of Pine Lake that the City would like to link with the Downtown area.
- There is a downward slope from west to east in the corridor which can make it challenging for motorists to navigate in adverse conditions.
- The intersection with Meadow Street is signalized and the signal was recently replaced (within the last 6 months) including pedestrian signals.

- Many teenagers walk in the shoulder currently and some skateboarders use the shoulder. Very few adults walk along the corridor since they perceive the corridor to be unsafe. It was estimated that approximately 20 students per day walk through the corridor.
- There is deteriorating bituminous curb in some sections of the corridor and curbing is missing in other sections.
- Residents currently are required to clear snow from sidewalks in front of their property.
    - There have not been any notable problems with this policy.
    - The City's Parks Department handles snow removal on the sidewalks near the High School and the Rec Path. Extending sidewalks would require some additional snow removal responsibility for the Parks Department.
- School buses, tractor trailers, maintenance vehicles and other heavy vehicles were noted using the corridor, but it is not a busy truck route.
- Average vehicle speeds were estimated to be 10-15 mph above the posted speed limits.
- One of the main goals of the City is to connect the Rec Path with the downtown area.
    - There is a desire to connect two significant networks of pedestrian facilities that are currently disconnected through the Shelton Avenue corridor.
    - A new pedestrian sidewalk in the Shelton Avenue corridor is a goal stated in the City of Shelton 2009 Open Space Plan and is the top priority in the 2006 Draft Plan of Conservation and Development.
    - Concrete sidewalk is recommended for the corridor.
    - There are some sections of bituminous sidewalk that the City would like to upgrade to concrete sidewalks when possible.
- Residents park on the sidewalk in some areas because there is insufficient shoulder width.
    - Some residences are multi-family homes with minimal parking and steep driveways, which forces residents to park in the street or on the sidewalk.
    - #108 Shelton Avenue has off-street parking.
- Some residences have fences very close to the sidewalk and street and may be in the State right of way.
- There is a steep ravine along one section of the corridor which could be a design challenge.
- The Derby Train Station and Derby-Shelton Bridge are being upgraded with new pedestrian facilities and the City would like to connect pedestrian routes to these facilities.
- Funding for the Rec Path was provided through a State DEEP grant.

- There have been no preliminary discussions between the City and CTDOT regarding the proposed sidewalk.
- Right of way limits are not known within the RSA corridor, but tax assessor's maps may be useful.

3 RSA Assessment

3.1 Field Audit Observations

- Throughout the corridor utility poles are located close to the road and predominantly on the north side. See Figure 6.
    - The minimum distance between utility poles and the existing edge line (shoulder) was 4.5-feet.
    - Street lights are located on utility poles along the corridor.
- At the parking area to the Rec Path, Shelton Avenue measures 30-feet wide with 12-foot lanes and 3-foot shoulders in each direction.
- The Rec Path is 12-feet wide at the trail head.
- There is a section west of the Rec Path parking lot where there is a chain link fence between Pine Lake and the guard rail on the north side of Shelton Avenue. This grass area between the fence and guard rail is 3-feet wide. See Figure 7.
- There is a grass area west of the Rec Path parking lot on the north side of the road that the City indicated is occasionally used for overflow parking for events. See Figure 8.
    - The City indicated that any future design should allow this overflow parking use to remain.
- Several of the catch basins in the corridor are clogged. See Figure 9.

Figure 6: Utility poles close to road

Figure 7: Grass area between the chain link fence and guard rail

Figure 8: Overflow parking area

Figure 9: Clogged catch basin

- At least one non-bicycle friendly catch basin grate was observed in the corridor. See Figure 10.
- The bituminous sidewalk on the north side of the road at the west end of the corridor (near Meadow Street) is in poor condition and shows signs of drainage problems. See Figure 11.
- At 125 Shelton Avenue the road consists of 12.5-foot wide lanes and 2-3-foot wide shoulders in each direction.

Figure 10: Non-bicycle friendly catch basin grate

Figure 11: Existing bituminous sidewalk on Shelton Road near Meadow Street

Figure 12: Rock structure directly behind the guiderail on the north side

- At 116 Shelton Avenue the road consists of 12-foot wide lanes and 1-foot wide shoulders in each direction. This is the minimum roadway width within the RSA corridor.
- At 112 Shelton Avenue there is a rock structure directly behind the guiderail on the north side. There is a steep drop off behind the guard rail with views of Curtiss Brook. See Figure 12.
- At 110 Shelton Avenue there is a 3-foot wide bituminous sidewalk with a wood fence directly abutting it. See Figure 13.
    - It was unclear if the wood fence was on State right of way.

Figure 13: Wood fence along sidewalk at 110 Shelton Avenue

- At 110 Shelton Avenue the road consists of 12-foot wide lanes in each direction with a 4-foot wide westbound shoulder and a 2-foot wide eastbound shoulder.
- A bituminous sidewalk on the north side of Shelton Avenue is provided between Roberts Street on the west side and North Oak Avenue on the east side.
- At 79 Shelton Avenue there is a 6-foot wide bituminous sidewalk.
    - A hedge is encroaching over the sidewalk, limiting the usable width. See Figure 14.
    - A utility pole is located in the sidewalk.
    - A resident indicated that a 30 mph speed limit sign is missing for the westbound direction.
- At 69 Shelton Avenue the road consists of 12-foot wide lanes in each direction with a 7-foot wide westbound shoulder and a 3-foot wide eastbound shoulder.
- At 61 Shelton Avenue the combined width of the sidewalk and parking area is 11 feet wide.
- At the east end of the RSA corridor, vehicles used the sidewalk for parking. See Figure 15.
    - The City indicated that this was common practice.
- At 53 Shelton Avenue there is an 8-foot wide bituminous sidewalk with a 3-foot wide shoulder on the westbound side of the road.
- East of the Beard Construction Co. Building (across from 43 Shelton Avenue), there is a vacant lot that could potentially be used for off-street parking.
- On the north side of Shelton Avenue between #39 and #5 there is a steep drop-off with a guide rail. There are indications that there have been road wash outs in the past. The sidewalk slopes downward to Curtiss Brook and show signs of deterioration.

Figure 14: Hedge encroaching over sidewalk at 79 Shelton Avenue

Figure 15: Car parked on sidewalk

    - There is a catch basin encroaching into the sidewalk at this location. See Figure 16.
    - The sidewalk behind the catch basin is only 2-feet wide.
- There is an eastbound pedestrian sign at the intersection of Shelton Avenue and Wooster Street that is dented and outdated and may be unnecessary. See Figure 17.
- There are no handicap ramps across North Oak Avenue on the north side of Shelton Avenue.
- Several pedestrians (students), two bicyclists and a runner were observed travelling along the corridor. See Figure 18.

Figure 16: Catch basin encroaching into sidewalk

Figure 17: Outdated pedestrian sign looking eastbound at Shelton Avenue near Wooster Street

Figure 18: Students walking in shoulder on Shelton Avenue towards High School

3.2 Post-Audit Workshop - Key Issues

- At the west end of the corridor there is an existing bituminous sidewalk in poor condition.
- Any recommendations to change the layout at the west end of the corridor should allow the overflow parking grass area to remain functional.
- Throughout the corridor, lane widths are typically 12-12.5-feet wide. The CTDOT allows 11-foot wide lanes on roadways such as Route 108.
- Several students were observed walking in the corridor. See Figure 18.
    - The City indicated that the students typically use the Rec Path to get to the High School, unless there is heavy snow.
- The City believes that pedestrians and bicyclists would prefer to make a loop around Pine Lake using the existing Rec Path and a planned sidewalk on Shelton Avenue.
    - The driveway at the Rec Path parking lot could also be improved as part of a sidewalk construction project.

- Just west of the Rec Path parking lot there is a pinch point where a fence and guiderail abut the road on both sides. See Figure 19.
    - There is a space approximately 4 feet wide between the fence and the guiderail.
- There is a pinch point at the ravine where an old stone wall is directly behind the guiderail, with the ravine and Curtiss Brook below. See Figure 20.
    - A design incorporating a cantilevered sidewalk/boardwalk above the ravine/stone wall should be considered through this section. See Figure 21.
- There was evidence of a previously washed-out section of guiderail near the east end of the corridor (between #39 and #5 Shelton Avenue) that was destroyed over five years ago.
    - The existing bituminous sidewalk in this area is deteriorating and will continue to degrade over time. See Figure 22.
- The wood fence at 110 Shelton Avenue may be on State right of way.
    - Right of way boundaries need to be researched.
    - Coordination with property owners along the corridor will be critical for the project's success.
- Utility poles are close to the curb throughout the corridor and will be a design constraint.

Figure 19: Narrow width between fence and guiderail

Figure 20: Stone wall behind guiderail

Figure 21: Example of cantilevered boardwalk above a river

Figure 22: Washed out guiderail/degrading sidewalk

- There are many driveways, fences, gardens, retaining walls, mailboxes etc. that will be impacted by construction of a sidewalk.
    - Communication with property owners will be a key in securing community consensus for the project.
- Several students were observed walking in the shoulder during the audit.
    - The safety of these students could be improved by providing a sidewalk.
- Some driveways at the east end of the corridor are very steep and have retaining walls on one or both sides. This will be a design constraint.
- At the east end of the corridor, cars currently park on the sidewalk because there is no curbing to prevent them from doing so and alternative parking is limited. See Figure 23.
    - Parked cars often force pedestrians off the sidewalk and into the shoulder of the road.
    - There appears to be sufficient width to incorporate both a sidewalk and on-street parking or a shared space.
    - Design of a sidewalk should incorporate parking in some way.
- A resident noted to the audit team that a 30 mph speed limit sign for the westbound direction in front of 79 Shelton Avenue was missing. The CTDOT is working to reinstall this sign.
- There is a curve ahead sign located behind a utility pole just west of 101 Shelton Avenue. See Figure 24. This sign should be relocated.
- There is a tree at the northeast corner of Shelton Avenue, Wooster Street and North Oak Avenue that is limiting sight distance. See Figure 25.
- Tactile warning strips are not present at intersections where there is existing sidewalk.
- The Chief of Police is the local traffic authority (LTA).
- Several utility poles appeared to be marked for

Figure 23: Vehicle parked on sidewalk

Figure 24: Sign behind utility pole

Figure 25: Tree restricting sight distance

replacement or relocation.

- The City will contact the utility company to determine the disposition of these poles.

Note: Pedestrian signs at the crosswalk at Cliff Street have been upgraded/replaced under State Project 173-453.

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. City to trim hedge encroaching on sidewalk at 79 Shelton Avenue or coordinate with owner.
2. City to contact the utility company to determine the disposition of utility poles marked for relocation/replacement and long-term plans as they may affect construction of a new sidewalk on Shelton Avenue.
3. City to coordinate with the CTDOT to investigate right of way and state highway layout limits throughout the corridor.
4. City to investigate private stockade fence located at 110 Shelton Avenue to determine if fence is located within the right of way.
5. City to request the CTDOT investigate the missing 30 mph speed limit sign in front of 79 Shelton Avenue and replace as necessary.
6. City to request the CTDOT relocate the curve ahead sign that is behind a utility pole just west of 101 Shelton Avenue.
7. City to evaluate the tree at the northeast corner of Shelton Avenue, Wooster Street and North Oak Avenue to determine if trimming would improve sight distance.

8. City to research empty lot located west of the Beard Construction Co. building as a potential off-street parking area for residents.
9. City to develop a draft preliminary plan for new sidewalk on Shelton Avenue. This should include identification of issues and constraints, conceptual layout, phasing opportunities for construction, and a community outreach process going forward.
10. CTDOT to revise curve warning signs to be consistent in the vicinity of Oak Avenue.

Figure 26 depicts some of these recommendations.

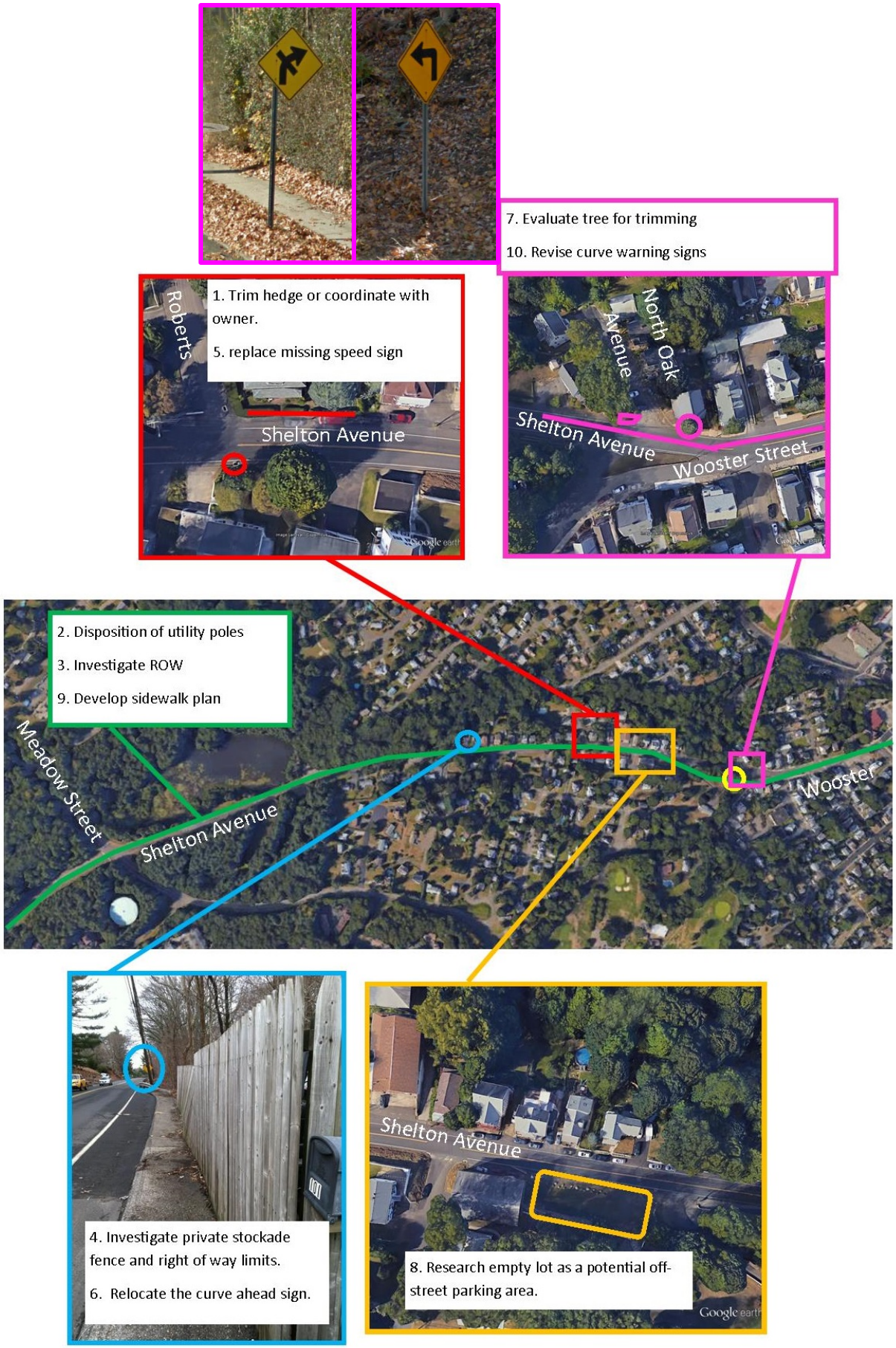


Figure 26. Short Term Recommendations

4.2 Medium Term

1. Replace catch basin grates with bike friendly grates.
2. Install handicap ramps and detectable warning strips as needed at the intersection of Shelton Avenue and North Oak Avenue.

Figure 27 depicts these recommendations.

1. Replace catch basin grates with bike friendly grates.

2. Install handicap ramps and detectable warning strips as needed at the intersection.

Figure 27. Medium Term Recommendations

4.3 Long Term

1. The City in coordination with the CTDOT to design and construct a concrete sidewalk on the north side of Shelton Avenue from Meadow Street to Wooster Street. The design will allow the existing overflow parking area near the Rec Path to remain functional and will be coordinated with property owners on the east end of the corridor.
2. The CTDOT to continue to maintain and stabilize the sidewalk and guiderail located between #39 and #5 Shelton Avenue.
3. City to repave/replace sidewalk on the north side of Shelton Avenue west of the Rec Path parking lot.
4. City to request the CTDOT re-stripe Shelton Avenue with 11-foot wide travel lanes and wider shoulders for the next Vendor In-place (VIP) contract. This measure will provide wider shoulders which will allow better accommodations for pedestrians and bicyclists.

Figure 28 depicts these recommendations.

Figure 28. 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 Shelton RSA and provides Shelton with an outlined strategy to improve the transportation network along Shelton Avenue for all road users, particularly focusing on pedestrians and cyclists. Moving forward, Shelton 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 at Shelton Avenue.

COMMUNITY
connectivity program

Appendix A

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	Robert Kulacz
Title	City Engineer
Email Address	r.kulacz@cityofshelton.org
Telephone Number	(203) 924-1555

2. Location information

Address	Shelton Avenue
Description	Between Meadow Street and Wooster Street/Oak Avenue
City / Town	Shelton

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

Recreation Paths/Walking Trails

5. Approximate mile radius around the location

¼ mile

Other (Please Specify)

6. Community Sites
(Please select all that apply)

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

Recreation Paths/Walking Trails

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

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

If Yes please describe (please specify)

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**
- [x] **N/A (not applicable)**
- [ ] **Other (please specify)**

10. Safety Concerns
(Please select all that apply)

- [x] **Traffic (volumes & speed)**
- [ ] **Collisions**
- [x] **Sidewalks**
- [ ] **Traffic Signals**
- [ ] **Traffic Signs**
- [ ] **Parking Restrictions / Additions**
- [x] **Drainage**
- [ ] **ADA Accommodations**
- [ ] **Agricultural & Live Stock crossing**
- [ ] **Maintenance issues (cutting grass, leaves, snow removal)**
- [ ] **N/A (not applicable)**
- [x] **Other (please specify)**

Stability of an existing section of sidewalk abutting steep bank

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.

Project 126-115&116 Realignment of Route 108 & Meadow Street July 1979

12. Environmental Concerns:

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

If Yes please describe and list.

Shelton Avenue (Route 108) crosses Shelton Reservoir No.2, which is owned by the City of Shelton. It is no longer a source of drinking water.

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

It would complete a public sidewalk from downtown Shelton to Meadow Street. It would connect to the Shelton Lakes Recreation Path/Walking Trail and the Meadow Street sidewalk to Shelton High School. Students from Shelton High School currently walk this route that has no sidewalks.

Google Map: https://www.google.com/maps/@41.3190147,-73.1084655,1971m/data=!3m1!1e3

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

No

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

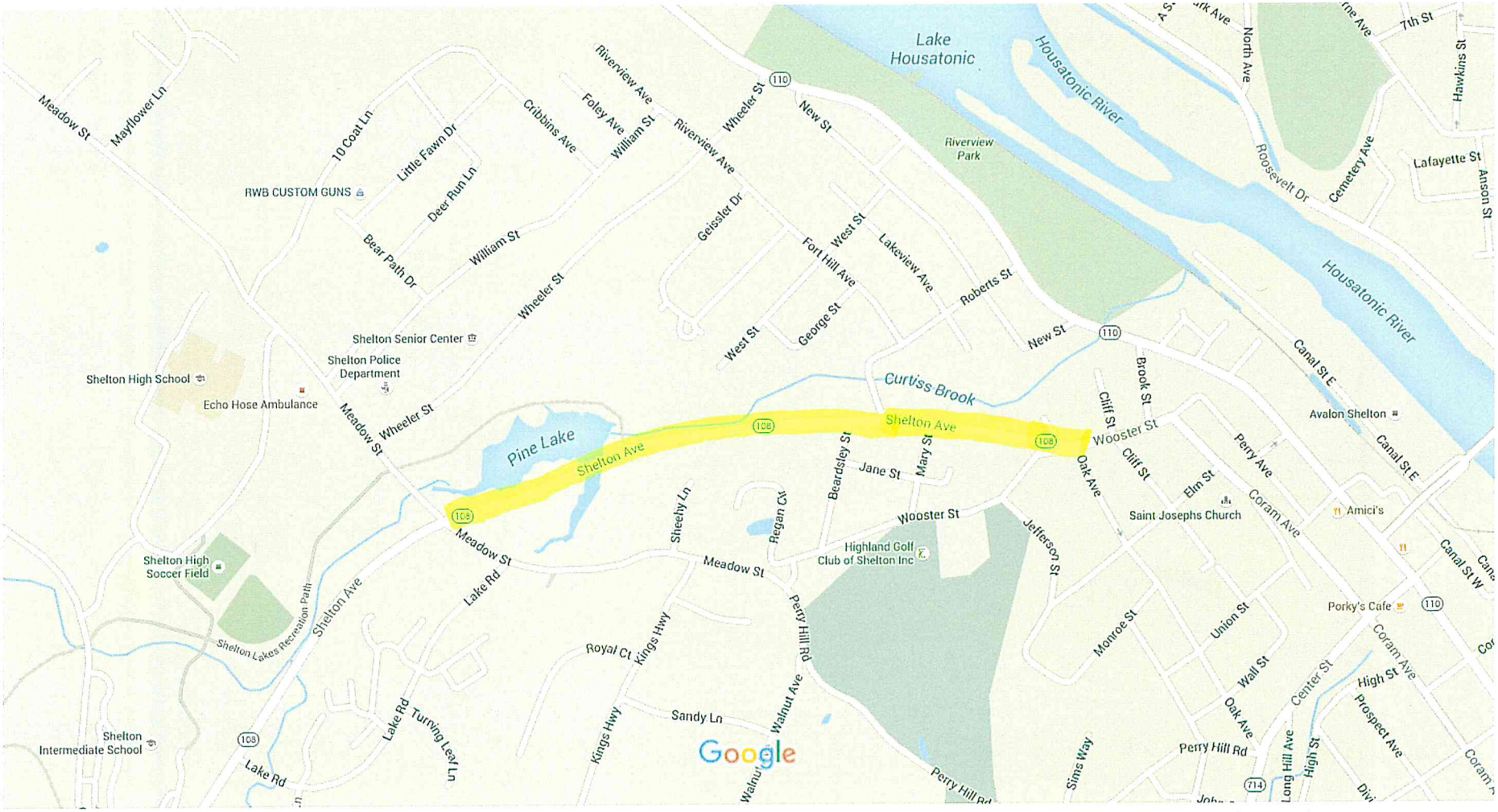
Thank you for completing the Community Connectivity application.

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

Google Maps



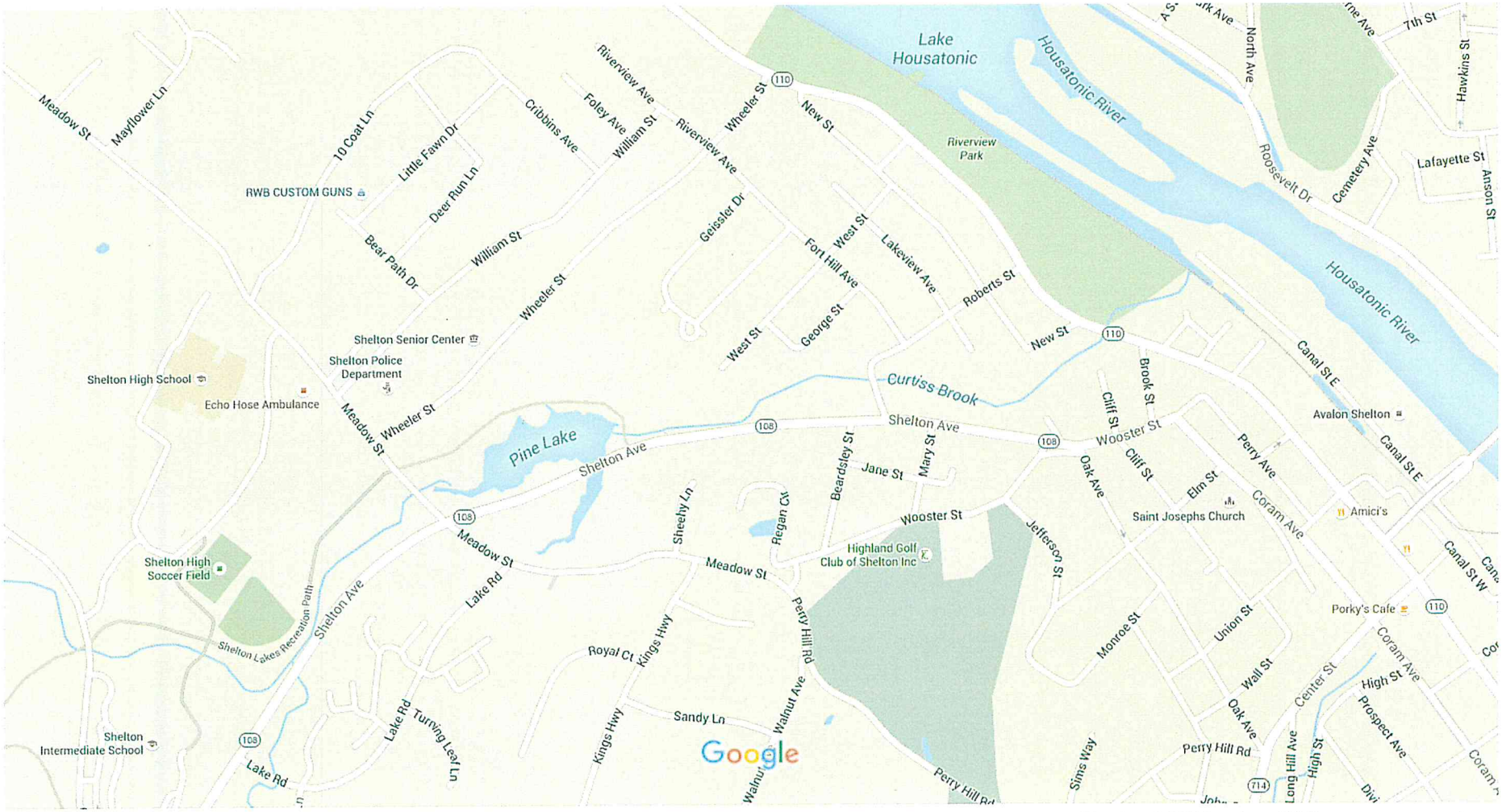
Google Maps

PROJECT LIMITS

SHELTON RSA APPLICATION

FEBRUARY 26, 2016

Google Maps



Google Maps

Google Maps

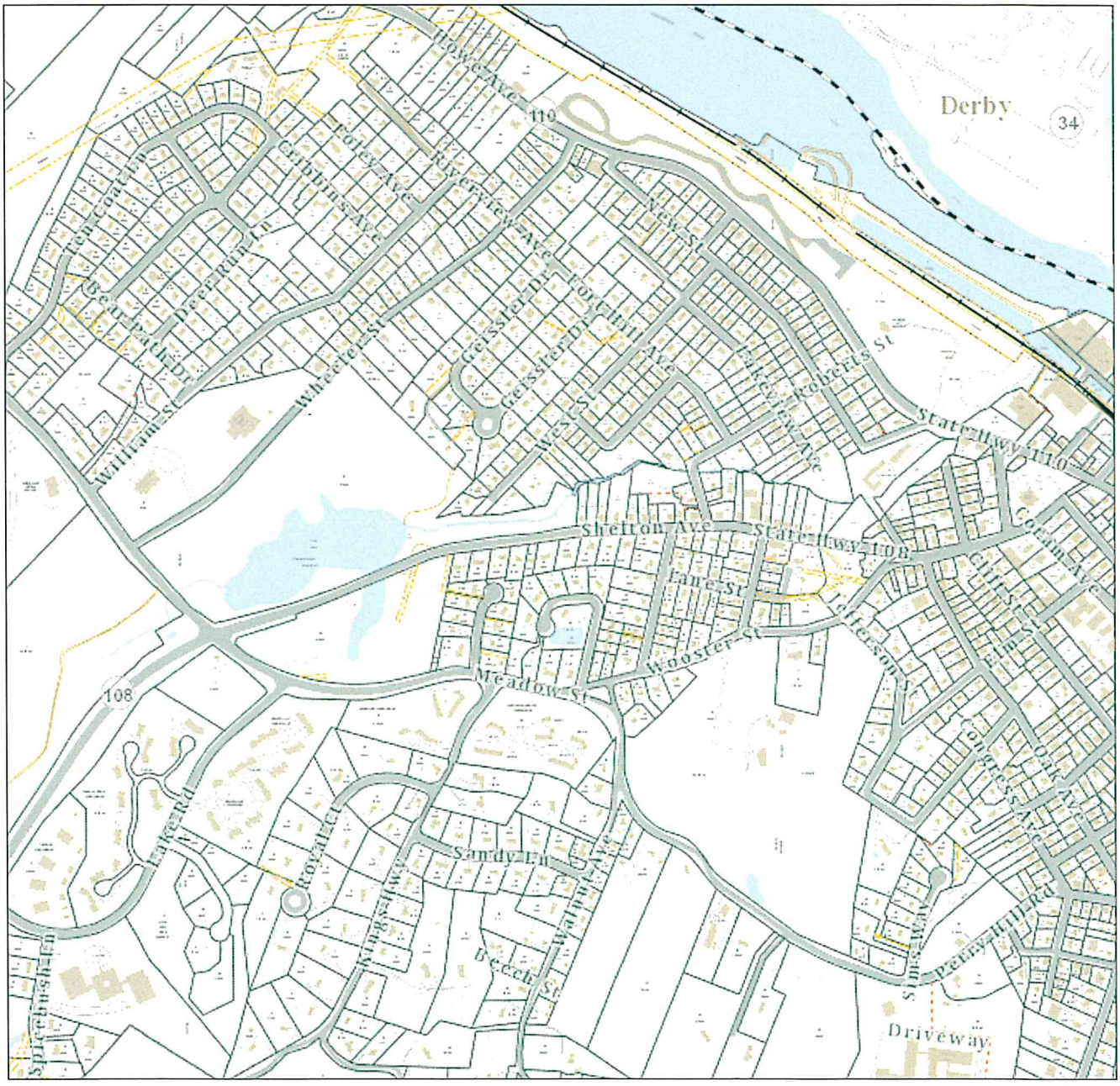
Imagery ©2016 Cnes/Spot Image, DigitalGlobe, New York GIS, USDA Farm Service Agency, Map data ©2016 Google 500 ft

Google Maps

City of Shelton

Geographic Information System (GIS)

Date Printed: 2/26/2016

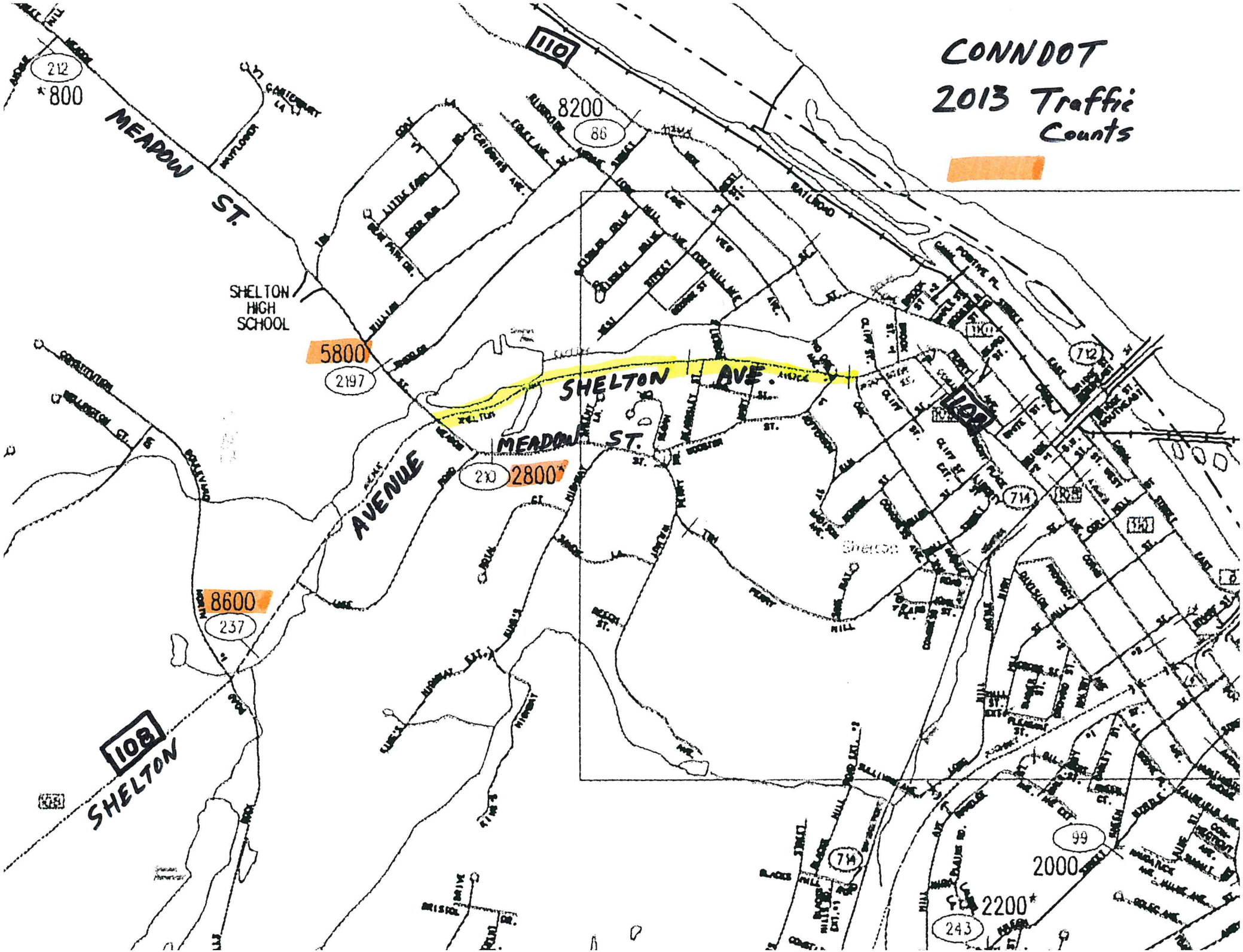


MAP DISCLAIMER - NOTICE OF LIABILITY

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

0 800 Feet

N W E S


CONNDOT
2013 Traffic
Counts
110
212
*800
MEADOW ST.
8200
86
SHELTON
HIGH
SCHOOL
5800
2197
SHELTON AVE.
MEADOW ST.
210
2800*
AVENUE
8600
237
108
SHELTON
714
712
108
99
2000
2200*
243

COMMUNITY
connectivity program

Appendix B

Built to deliver a better world

Road Safety Audit

Town: Shelton
RSA Location: Route 108 (Shelton Avenue)
Meeting Location: Shelton City Hall
Address: 54 Hill Street
Date: 4/5/2017
Time: 8:30 AM

Participating Audit Team Members

Audit Team Member	Agency/Organization
Jeff Maxtutis	AECOM
Brad Sabean	AECOM
Patrick Zapatka	CTDOT
Greg Pacelli	CTDOT
Mike Maglione	Shelton
George Stachowicz	Shelton
Teresa Gallagher	Shelton Conservation
Mark Signlinger	Shelton Police
Robert Kulacz	Shelton Engineering
Rick Schultz	Shelton Planning and Zoning
Rimas Balsys	Shelton Engineering
Mark Ptak	Shelton Police
Jack Bashar	Shelton Mayor

COMMUNITY
connectivity program

Appendix C

Built to deliver a better world

Road Safety Audit – Shelton

Meeting Location: Shelton City Hall
Address: 54 Hill Street, Shelton
Date: 4/05/17
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

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	

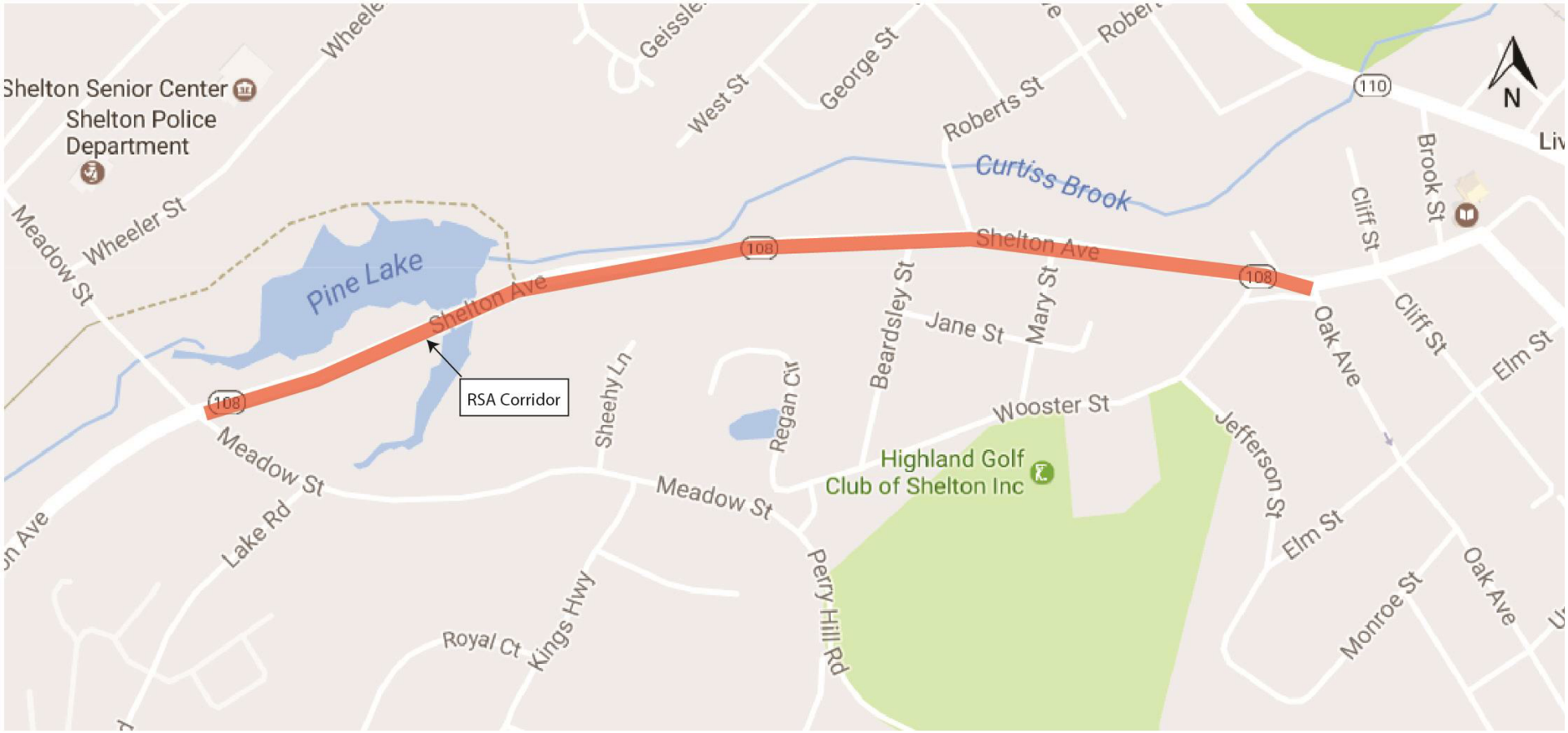
• Signing
  • Correct use of signing
  • Clear Message
  • Good placement for visibility
  • Adequate retroreflectivity
  • Proper support	

• Signals
  o Proper visibility
  o Proper operation
  o Efficient operation
  o Safe placement of equipment
  o Proper sight distance
  o Adequate capacity	

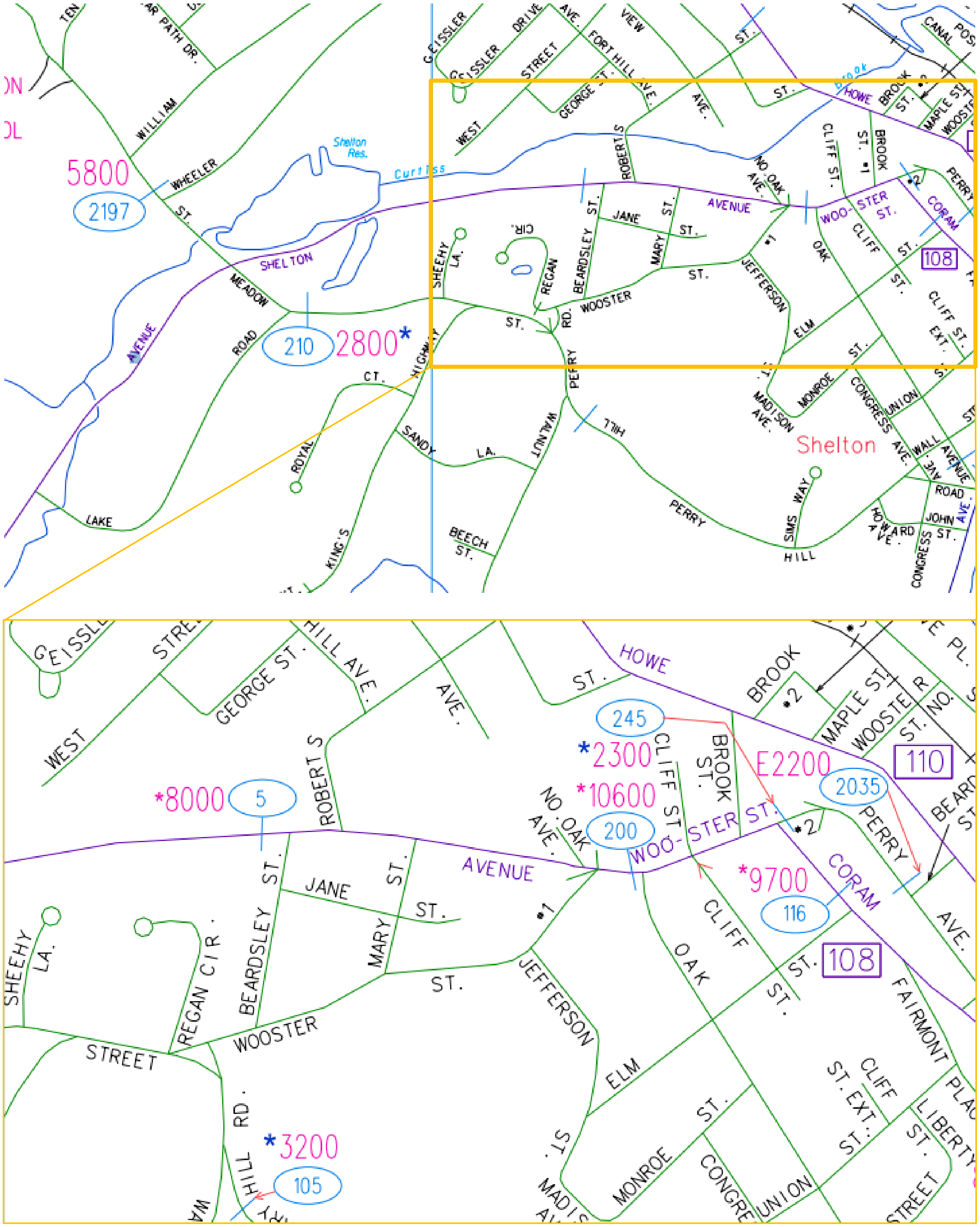
• Pavement Markings
  o Correct and consistent with MUTCD
  o Adequate visibility
  o Condition
  o Edgelines provided	

• Miscellaneous
  o Weather conditions impact on design features.
  o Snow storage	

Location Map

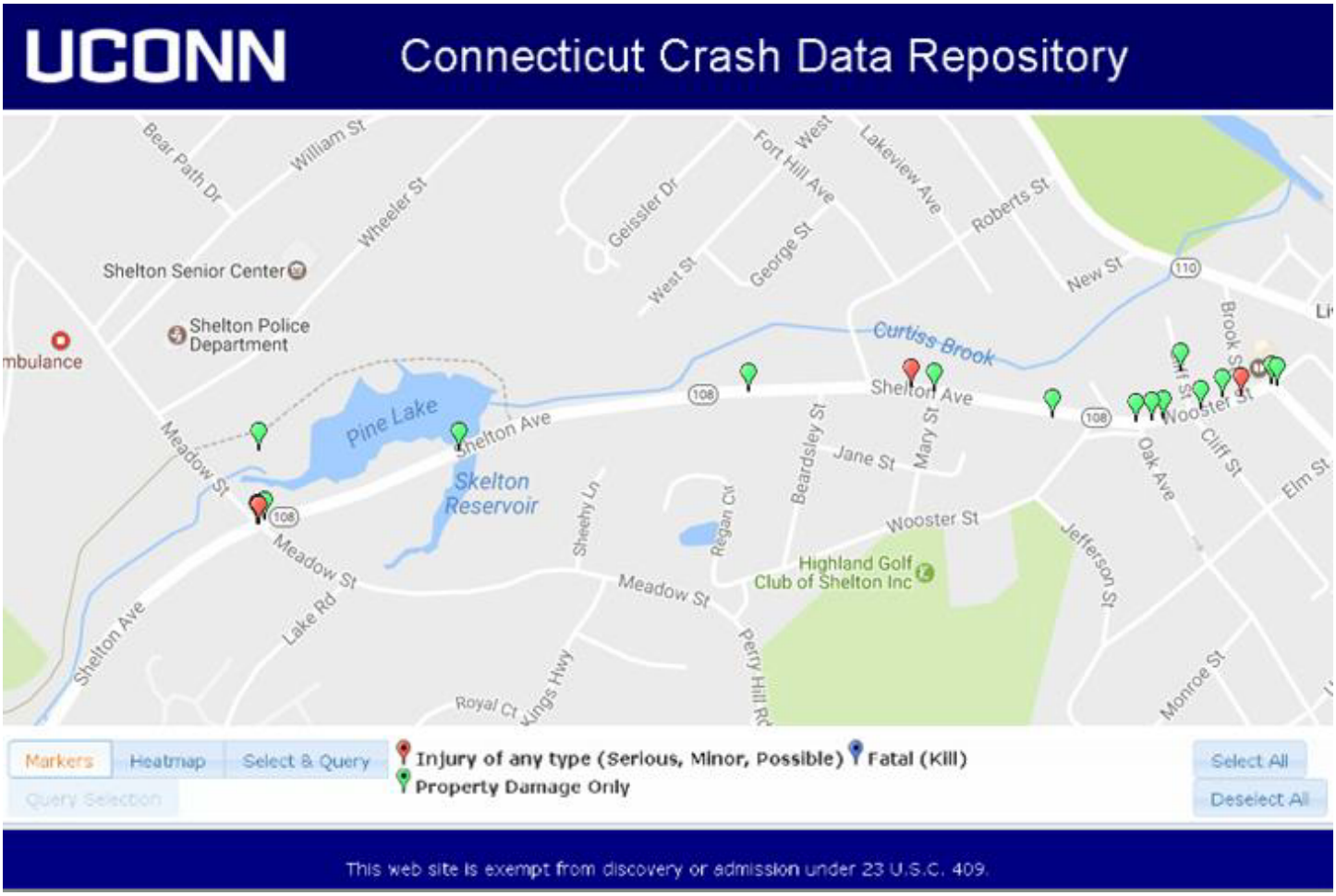


ADT MAP



5800
2197
210
2800*
Shelton
Shelton Res.
Curtiss
SHELTON
AVENUE
WHEELER
ST.
WILLIAM
MEADOW
ROAD
LAKE
ROYAL
CT.
HIGHWAY
SANDY
LA.
WALNUT
BEECH ST.
KING'S
PERRY
HILL
SIMS WAY
MADISON AVE.
MONROE
CONGRESS AVE.
UNION
WALL
ROAD
JOHN ST.
HOWARD AVE.
GEISSLER
GEISSLER STREET
DRIVE
FORT HILL AVE.
GEORGE ST.
WEST
VIEW
HOWE
BROOK ST.
MAPLE ST.
WOOSTER ST.
CANAL
108
110
ROBERTS
SHEEHY LA.
REGAN CIR.
BEARDSLEY ST.
JANE ST.
MARY ST.
WOOSTER STREET
RD.
JEFFERSON
NO. OAK AVE.
CLIFF ST.
WOO-STER ST.
CORAM
PERRY AVE.
OAK
ELM
CLIFF ST. EXT.
FAIRMONT PLACE
LIBERTY STREET
*8000
5
245
*2300
*10600
200
E2200
2035
*9700
116
*3200
105
•1
•2

2015 Crashes



Road Safety Audit – Shelton

Crash Summary

Data: 3 years (2012-2014)

There were no crashes that involved pedestrians.

There was 1 crashes involving bicyclists.

Severity Type	Number of Crashes	
Property Damage Only	12	75%
Injury (No fatality)	4	25%
Fatality	0	0%
Total	16	

Manner of Crash / Collision Impact	Number of Crashes	
Unknown	0	0%
Sideswipe-Same Direction	0	0%
Rear-end	2	13%
Turning-Intersecting Paths	5	31%
Turning-Opposite Direction	0	0%
Fixed Object	2	13%
Backing	2	13%
Angle	0	0%
Turning-Same Direction	1	6%
Moving Object	1	6%
Parking	0	0%
Pedestrian	0	0%
Overturn	1	6%
Head-on	0	0%
Sideswipe-Opposite Direction	2	13%
Miscellaneous- Non Collision	0	0%
Total	16	

Weather Condition	Number of Crashes	
Snow	0	0%
Rain	0	0%
No Adverse Condition	16	100%
Unknown	0	0%
Blowing Sand, Soil, Dirt or Snow	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	16	

Light Condition	Number of Crashes	
Dark-Not Lighted	2	13%
Dark-Lighted	4	25%
Daylight	10	63%
Dusk	0	0%
Unknown	0	0%
Dawn	0	0%
Total	16	

Road Surface Condition	Number of Crashes	
Snow/Slush	0	0%
Wet	1	6%
Dry	15	94%
Unknown	0	0%
Ice	0	0%
Other	0	0.0%
Total	16	

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

Shelton Police Department

Shelton Lakes Recreational Path

Pine Lake

Curtiss Brook

Curtiss Brook

Roberts St

Beardsley St

Mary St

N Oak Ave

Cliff St

Wooster St

Oak Ave

Meadow St

Skelton Reservoir

SPEED LIMIT 35

SPEED LIMIT 30

SPEED LIMIT 30

108

108

S

Rte 108

Meadow St

N

Highland Golf Club of Shelton

DRAFT

Legend

- Sidewalk
- No Sidewalk
- Crosswalk
- Stop Controlled Intersection
- Pedestrian Crossing Sign
- Signal Controlled Intersection
- Bridge or Culvert
- One Way Street
- Median
- Major Waterway
- Existing Rail Trail, Not on Roadway

Shelton - Shelton Ave (Rte 108), Meadow Street to Oak Ave

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 – Shelton

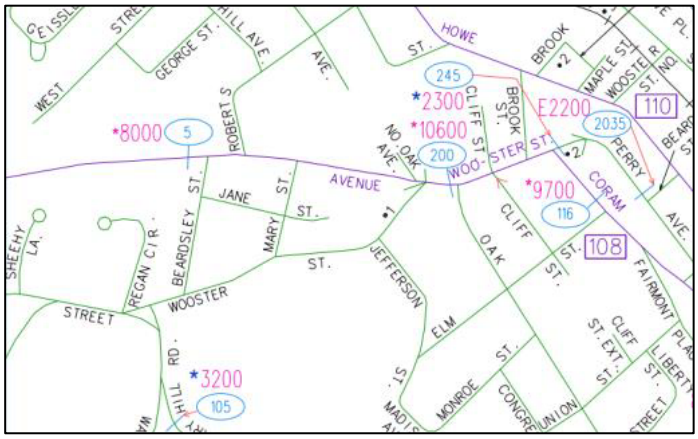
Fact Sheet

Functional Classification:

- Shelton Avenue is classified as a Minor Arterial

ADT

- ADT on Shelton Avenue is 8,000 and 10,600



Population and Employment Data (2014):

- Population: 40,472
- Employment: 22,639

Urbanized Area

- Shelton is in the Bridgeport-Stamford Urbanized Area

Demographics

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

Air Quality

- Shelton's CIPP number 116
- Shelton is within the NY/NJ/CT Marginal Ozone Area and $PM_{2.5}$ Attainment/Maintenance Area
- Shelton is within a CO Maintenance Area

COMMUNITY
connectivity program

Appendix D

Built to deliver a better world

City of Shelton
Shelton Conservation Commission
54 Hill Street, Shelton, Connecticut 06484

Shelton Avenue Road Safety Audit

April 5, 2017 *Prepared by Teresa Gallagher, Natural Resources Manager*

The Conservation Commission and Trails Committee have long recommended installation of a sidewalk along Shelton Avenue between downtown Shelton and Meadow Street in order to provide linkage between the Shelton Lakes Recreation Path and downtown Shelton. The 4.1-mile Rec Path currently connects with sidewalks in the Huntington Center area, creating a greater walkway network that includes the School Campus, Senior Center, Dog Park, Corporate Office Park, Huntington Center Shopping District, and Community Center. This walkway network almost, but not quite, links up with downtown walkway network of Shelton and Derby. The "missing link" is located along Shelton Avenue from Pine Lake to Oak Avenue.

High School students routinely use the Rec Path when walking home from school, then turn onto Shelton Avenue and walk towards downtown in the narrow travel lane between the guardrail and speeding cars.

Background: The handicapped-accessible Shelton Lakes Recreation Path ("Rec Path") runs for 4.1 miles from Shelton Avenue to Huntington Center (see maps). The Rec Path was constructed with the assistance from the CT DEEP Recreational Trails Grant Program for the purpose of connecting downtown Shelton with Huntington Center in order to provide recreational opportunities as well as alternative modes of transportation. Once in downtown Shelton, people can cross into Derby and reach the Train Station.

Documented Goals: A stated goal of the 2006 Shelton Plan of Conservation & Development as well as the 2009 Shelton Open Space Plan is to extend sidewalks along Shelton Avenue between downtown Shelton and Meadow Street. Documentation from these plans is attached.

City of Shelton
2009 Open Space Plan

Shelton Conservation Commission

February 20, 2009

Shelton Lakes Recreation Path at Silent Waters, near Constitution Blvd.

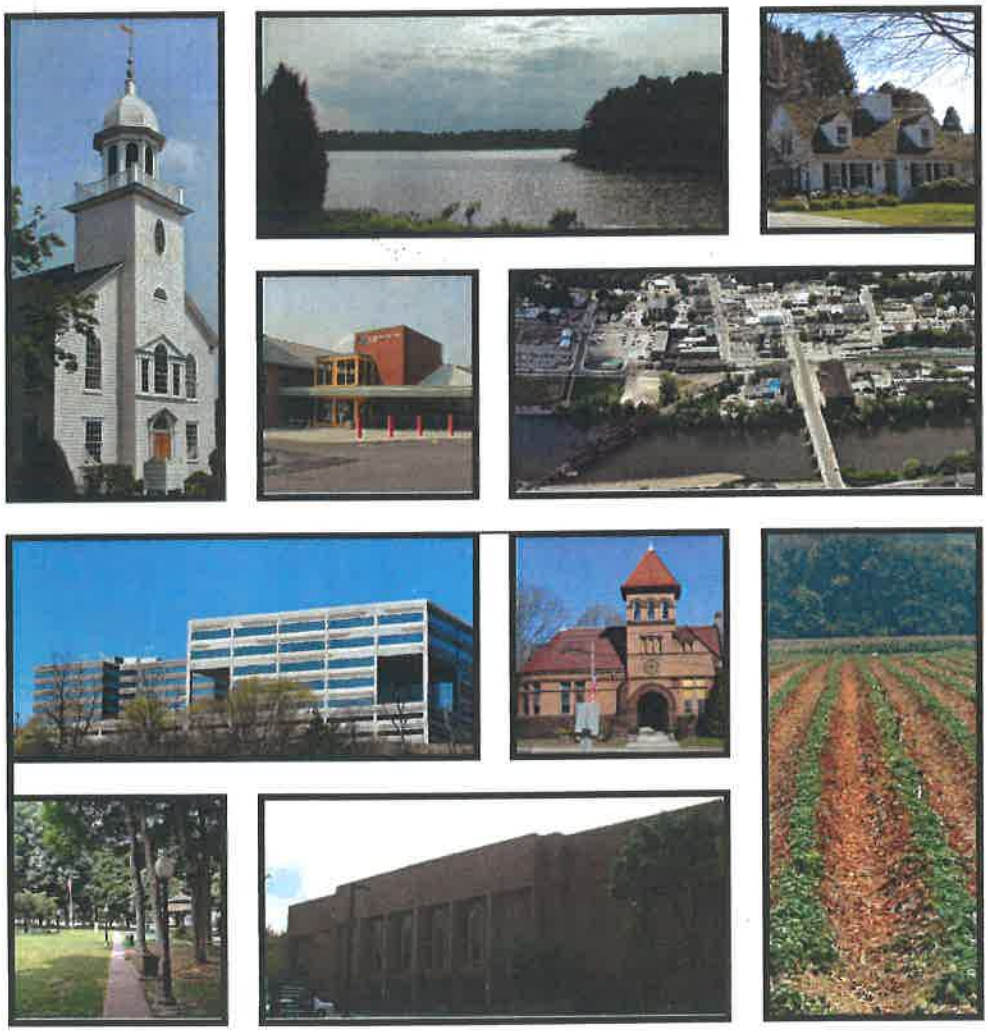
Another goal is to integrate the Rec Path with City sidewalks and to install new sidewalks along streets where appropriate, particularly along Huntington Street and Shelton Avenue so that area residents can safety access the Rec Path. Sidewalks from the trailhead on Shelton Avenue to the downtown area will effectively connect the Rec Path to the downtown area as well as the Riverwalk, Derby Greenway, and Derby train station, allowing these paths to be used for regional transportation.

The Paugussett "Blue Dot" Trail is a regional hiking trail that once extended from East Village in Monroe to Roosevelt Forest in Stratford, passing through Indian Well State Park and what is now Aspetuck Village Condominums. The trail is maintained by the Connecticut Forest and Park Association (CFPA), the oldest forestry association in the nation, and is depicted on a CFPA map from the 1940's. The southern half of the trail was cut off by developments such as Aspetuck in the 1970s and 80s. An isolated remnant of the trail may be seen in Roosevelt Forest as the "blue trail".

The Open Space Plan of 1993 identified a proposed route for the location of the extended trail from Indian Well to the Stratford border. In 2006, the northern portion of that route was completed, allowing the trail to be extended south through Shelton Lakes to Buddington Road. The next goal is to extend the Paugussett Trail along the Far Mill River to the Stratford town line, from which the trail could be further extended through Far Mill River Park to Route 110 with the support of the Town of Stratford. At Route 110, the trail could cross the river back to Shelton and end at the former landfill site, where land along the Far Mill and Housatonic Rivers

Shelton

2006 Draft Plan of Conservation and Development



Shelton Planning and Zoning Commission

April 20, 2006

Tom Harbinson

Examples of desirable new sidewalk locations are:

- from Downtown Shelton to Shelton Lakes,
- along Constitution Boulevard to the Shelton Industrial Park,
- the Shelton Research Park,
- along commercial portions of Bridgeport Avenue within reach of current and future bus stops, and
- from Shelton Reservoir to Bridgeport Avenue via Nells Rock Road.

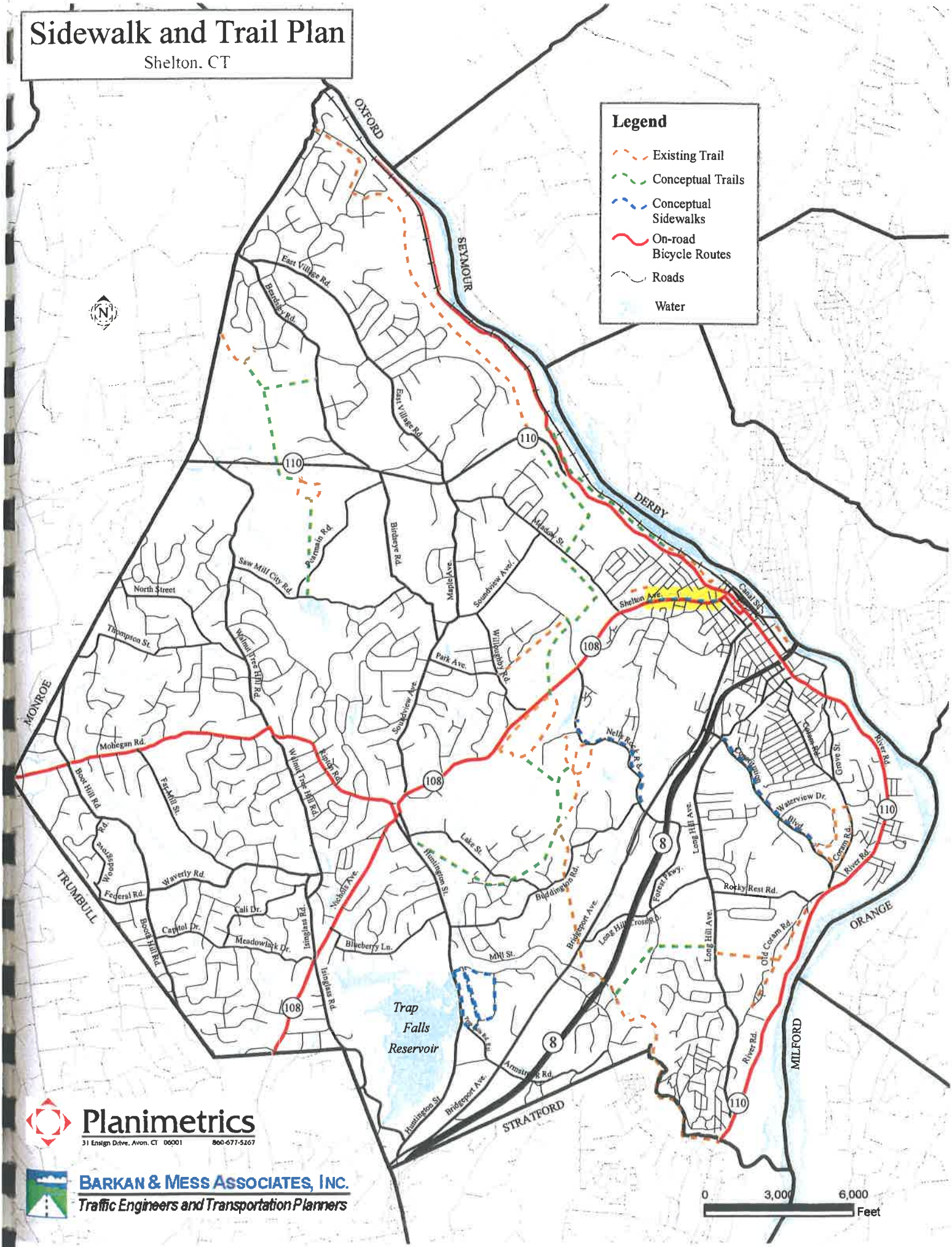
These improvements are also shown on the Trails and Sidewalks Plan on page 5-33.

Transportation Strategies

1. Modify the Subdivision and Zoning Regulations to implement a comprehensive set of access management principles in the Bridgeport Avenue corridor, Downtown, and other congested commercial areas
2. Pursue completion of pending road improvements including the realignment of Perry Hill Road, reconstruction and realignment of East Village Road, widening, realignment and resurfacing of Commerce Drive at the intersection with Bridgeport Avenue and reconstruction of three intersections along Route 110 at Beardsley Road, School Street, and Birdseye Road.
3. Pursue construction of a new southbound entrance ramp to Route 8 from Bridgeport Avenue.
4. Widen and improve Bridgeport Avenue to a four-lane cross section in various locations between Interchange 11 and Interchange 13.
5. Perform a planning/engineering study to forecast traffic volumes on Bridgeport Avenue over a 20-year horizon, evaluate appropriate treatments at each intersection, and assign priorities to manageable sections of road for widening.
6. Reconstruct the intersection with Long Hill Cross Road to include turning lanes, lighting, and signage.
7. Improve the intersection with Trap Falls Road for improved safety and traffic capacity.
8. Pursue traffic signal coordination along Bridgeport Avenue in conjunction with a possible incident management system on Route 8.
9. Identify and acquire remaining right-of-way and seek funding and/or private developers to complete Constitution Boulevard from Bridgeport Avenue to Shelton Avenue and eventually Leavenworth Road.
10. Pursue limited bus route adjustments to better serve areas with potential to generate ridership, such as concentrations of employment and shopping.
11. Encourage use of busses by providing shelters at key locations and sidewalks to facilitate trips between stops and key destinations.
12. Participate in the Valley Council of Government's long-range study of public transportation alternatives.

Sidewalk and Trail Plan

Shelton, CT

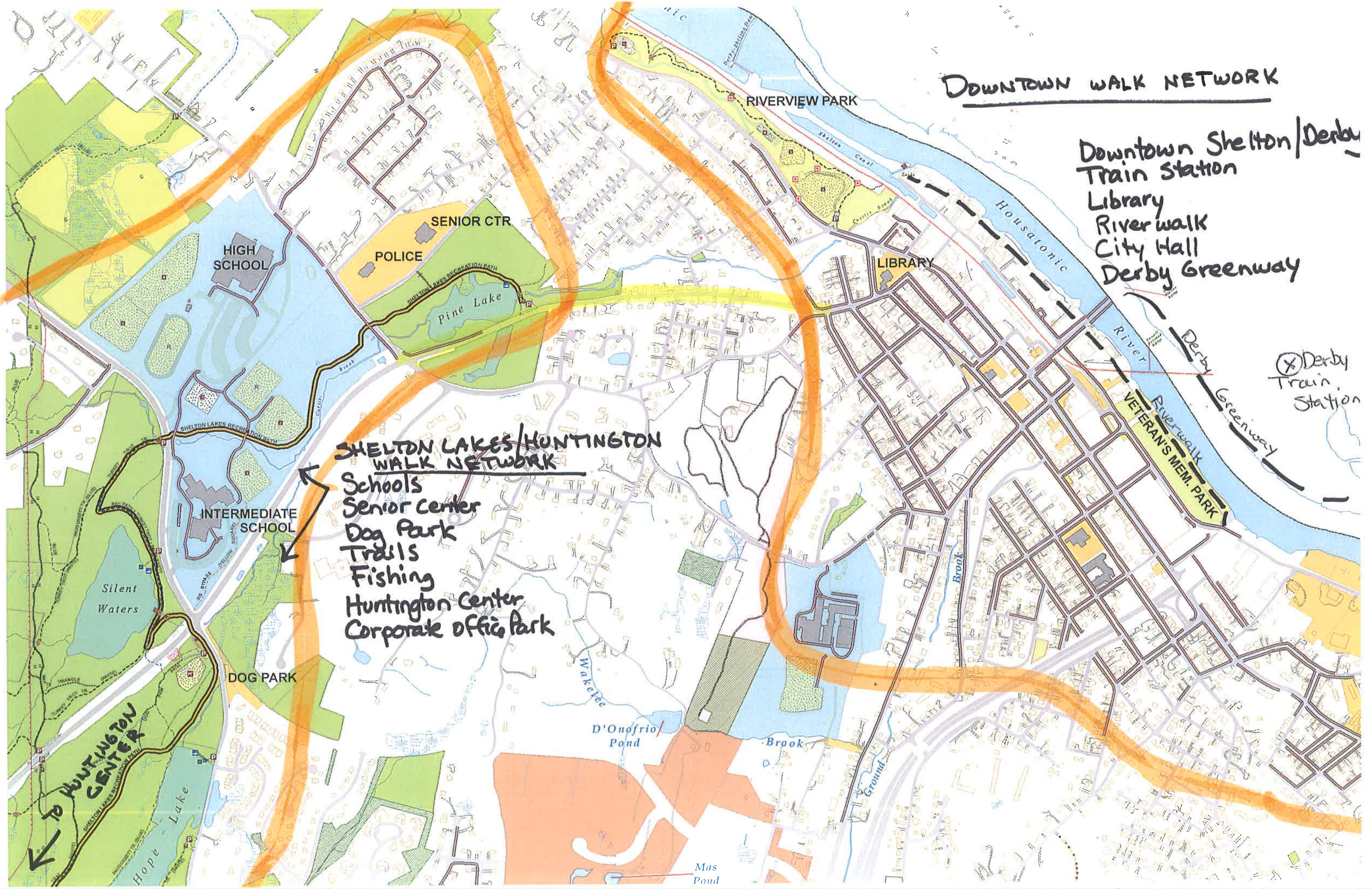


Planimetrics

31 Ensign Drive, Avon, CT 06001 860-677-5267

BARKAN & MESS ASSOCIATES, INC.

Traffic Engineers and Transportation Planners


DOWNTOWN WALK NETWORK
Downtown Shelton/Derby
Train Station
Library
Riverwalk
City Hall
Derby Greenway
Derby Train Station
Derby Greenway
RIVERVIEW PARK
LIBRARY
Housatonic River
VETERAN'S MEM. PARK
Riverwalk
SENIOR CTR
POLICE
HIGH SCHOOL
Pine Lake
SHELTON LAKES RECREATION PATH
SHELTON LAKES/HUNTINGTON WALK NETWORK
Schools
Senior Center
Dog Park
Trails
Fishing
Huntington Center
Corporate Office Park
INTERMEDIATE SCHOOL
DOG PARK
Silent Waters
Hope Lake
TO HUNTINGTON CENTER
Wakelee
D'Onofrio Pond
Brook
Mas Pond


"MISSING LINK"
DOWNTOWN WALK SYSTEM
SHELTON LAKES HUNTINGTON WALK SYSTEM
HIGH SCHOOL
DERBY
X TRAIN STATION
SHELTON LAKES
DOWNTOWN SHELTON
HUNTINGTON CENTER
CORPORATE OFFICE PARK