

## Southington

Queen Street (Route 10) – Road Safety Audit August 1, 2016





Acknowledgements:

OFFICE OF INTERMODAL PLANNING BUREAU OF POLICY AND PLANNING CONNECTICUT DEPARTMENT OF TRANSPORTATION

With assistance from AECOM Transportation Planning Group

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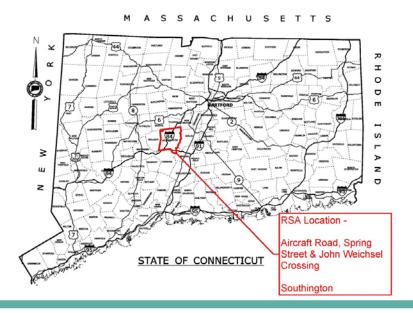
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The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state's transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this program is conducting Road Safety Audits (RSA's) at selected locations. An RSA is a formal safety assessment of the existing conditions of walking and biking routes and is intended to identify the issues that may discourage or prevent walking and bicycling. It is a qualitative review by an independent team experienced in traffic, pedestrian, and bicycle operations and design that considers the safety of all road users and proactively assesses mitigation measures to improve the safe operation of the facility by reducing the potential crash risk frequency or severity.

The RSA team is made up of CTDOT staff, municipal officials and staff, enforcement agents, AECOM staff, and community leaders. An RSA Team is established for each municipality based on the requirements of the individual location. They assess and review factors that can promote or obstruct safe walking and bicycling routes. These factors include traffic volumes and speeds, topography, presence or absence of bicycle lanes or sidewalks, and social influences.

Each RSA was conducted using RSA protocols published by the FHWA. For details on this program, please refer to <a href="www.ctconnectivity.com">www.ctconnectivity.com</a>. 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 Queen Street (Route 10) RSA

The Town of Southington submitted an application to complete an RSA along Queen Street (Route 10) from John Weichsel Crossing to West Queen Street/Camp Ground Road, to improve safety for pedestrians and bicyclists. The alignment of this corridor, coupled with high traffic volumes, has resulted in what is perceived as a confusing and stressful environment for pedestrians and bicyclists. Specifically, the Town is seeking to improve pedestrian and bicycle facilities along Queen Street and connections to the planned Farmington Canal Heritage Trail (Trail) located west and parallel to Queen Street. Future connections between the Trail and Queen Street will allow pedestrians and bicyclists to access businesses on Queen Street. Several intersections along Queen Street lack current standard pedestrian crosswalk, ramps, detectable warning strips and pedestrian signals.

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

#### 1.1 Location

The RSA corridor includes Queen Street (Route 10) from John Weichsel Crossing to West Queen Street/Camp Ground Road with particular focus on the Spring Street, Aircraft Road, West Queen Street/Camp Ground Road, and John Weichsel Crossing intersections, and connections to the Farmington Canal Heritage Trail (Figure 1). Queen Street (Route 10) is classified as a Principal Arterial and John Weichsel Crossing, Spring Street and Aircraft Road are classified as Local Roads. Average Daily Traffic (ADT) on Queen Street ranges from 23,700 to 31,900 vehicles per day (vpd). This section of roadway contains a significant number of driveways, adding complexity to walking and bicycling maneuvers through the area. Figure 2 shows the regional context of the study area.

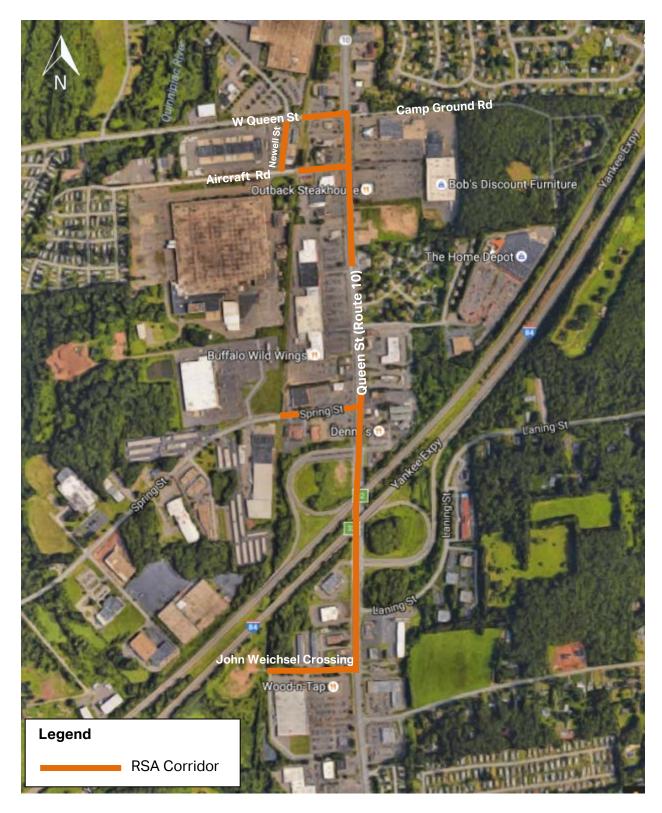


Figure 1. Queen Street (Route 10), Southington

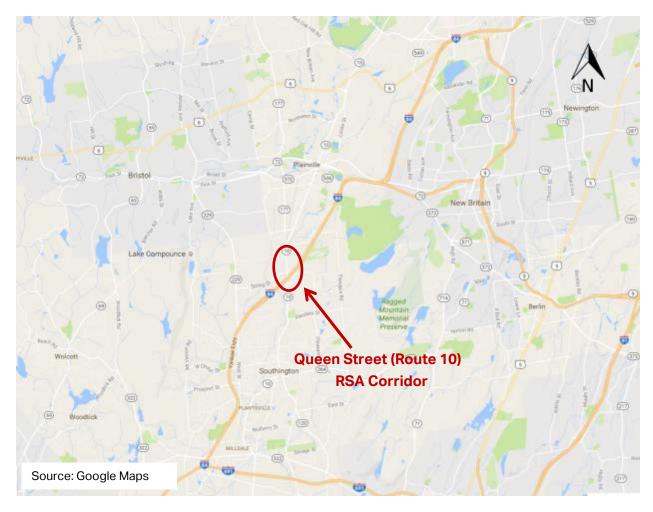


Figure 2. Study Area - Regional Context

#### 2 Pre-Audit Assessment

#### 2.1 Pre-Audit Information

As noted above, traffic volumes are significant along this corridor. This is primarily because Route 10 is a major north/south facility in the area, provides access with many commercial developments, and has an interchange with I-84.

Between 2012 and 2014 there were 274 crashes in the RSA Area. The majority of crashes (79%) reported in this area resulted in property damage only; however 21% of crashes did result in injuries (Table 1). There were three crashes involving bicyclists, two of which resulted in injuries. There was also one crash involving a pedestrian that resulted in an injury. The crash types reported were primarily rear-end collisions accounting for 60% of all reported incidents (Table 2).

Figure 3 displays crashes that occurred in this area during 2015. The crash history for year 2015 shows an even distribution of crashes along Queen Street with a significant cluster of crashes at the intersections of Queen Street with Aircraft Road; Interstate Park Drive; Spring Street; I-84 westbound and eastbound on-and off-ramps, and with Laning Street.

Severity Type	Number of Accidents		
Property Damage Only	216	79%	
Injury (No fatality)	58	21%	
Fatality	0	0%	
Total	274		

Table 1. Crash Severity 2012-2014

Source: UConn Connecticut Crash Data Repository

Manner of Crash / Collision Impact	Number o	of Accidents
Unknown	0	0%
Sideswipe-Same Direction	31	11%
Rear-end	165	60%
Turning-Intersecting Paths	33	12%
Turning-Opposite Direction	14	5%
Fixed Object	12	4%
Backing	1	0%
Angle	5	2%
Turning-Same Direction	10	4%
Moving Object	1	0%
Parking	0	0%
Pedestrian	1	0%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	1	0%
Miscellaneous- Non Collision	0	0%
Total	274	

**Table 2. Crash Type 2012-2014** 

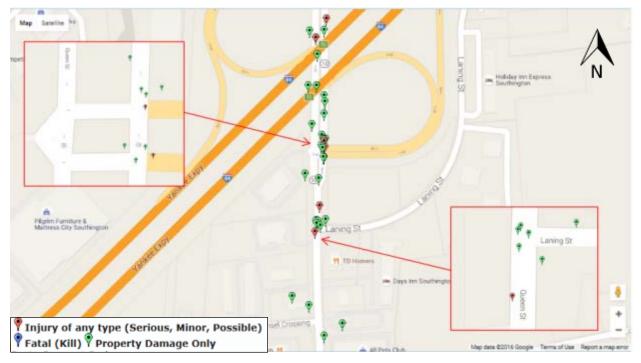
Source: UConn Connecticut Crash Data Repository



Source: UConn Connecticut Crash Data



Source: UConn Connecticut Crash Data



Source: UConn Connecticut Crash Data

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

Queen Street has two travel lanes in each direction that are 11 feet wide. Shoulders (two feet wide on average) are provided. A seven-foot wide median is located on Queen Street between I-84 eastbound and westbound off ramps. Sidewalks (five feet wide) are provided on both sides. There is one pedestrian crossing across Queen Street north of Aircraft Road within the RSA corridor. The posted speed limit on Queen Street is 40 mph. There are several shopping malls and commercial areas with driveways along Queen Street. Most of the driveways along Queen Street do not have crosswalks through the driveway.

John Weichsel Crossing is a 24 foot wide, unpaved, two-way road. Sidewalk (five feet wide) is provided on the south side for approximately 200 feet west from Queen Street. Land uses are primarily retail/commercial.

Spring Street has one travel lane in each direction. The roadway width varies from approximately 32 feet at the rail trail to 40 feet at Queen Street. Shoulders vary from one to four feet wide and are provided on both sides. Sidewalks (five feet wide) are provided on both sides. On the north side there is a gap in the sidewalk at the rail crossing, and on the south side the sidewalk extends only from Queen Street to the first property boundary (Bertucci's). There is a crosswalk at the Queen Street intersection. Land use is a mix of retail and commercial properties.

Aircraft Road has one travel lane in each direction (20 feet wide eastbound and 15 feet wide westbound), and widens to provide two eastbound lanes at the Queen Street intersection. Sidewalks between 4.5 and 5 feet wide are provided on the south side from Queen Street to the rail crossing, and on the north side between Queen Street and the first property boundary (Dunkin' Donuts). There are no shoulders on either side. Land use is a mix of retail and commercial properties.

West Queen Street has one travel lane in each direction (18 feet wide eastbound and 22 feet wide westbound), and widens to provide two eastbound lanes at the Queen Street intersection. Sidewalks (four to five feet wide) are provided on both sides from Queen Street to just before the railroad tracks. There are no shoulders painted on either side.

Newell Street between Aircraft Road and West Queen Street has one travel lane in each direction (15 feet wide northbound and 14 feet wide southbound). There are no sidewalks or shoulders on either side. On-street parking is prohibited on both sides, and the posted speed limit is 25 mph. The intersection with Aircraft Road is stop controlled, and the intersection with West Queen Street is controlled by an all-way stop.

The intersection of Queen Street, West Queen Street and Camp Ground Road is a four-way signalized intersection. Pedestrian crosswalks are not provided at the intersection, although sidewalks are provided along both sides of Queen Street and West Queen Street.

The intersection of Queen Street, Aircraft Road and Queen Plaza driveway is a four-way signalized intersection. Pedestrian crosswalk is provided across north leg of Queen Street. Sidewalks are provided along both sides of Queen Street and Aircraft Road.

The intersection of Queen Street, Shop Rite Plaza driveway (north) and 7-Eleven driveway is a four-way signalized intersection. Pedestrian crosswalks are not provided, although sidewalks are provided along both sides of Queen Street.

The intersection of Queen Street, Shop Rite Plaza driveway (south) and Interstate Park Drive is a four-way signalized intersection. Pedestrian crosswalks are not provided, although sidewalks are provided along both sides of Queen Street and south side of Interstate Park Drive.

The intersection of Queen Street, Spring Street, and D'Angelo driveway is a four-way signalized intersection. The Shell gas station driveway is located adjacent to the D'Angelo driveway. There is a painted crosswalk across Spring Street, but pedestrian crosswalks are not provided on the other approaches. Sidewalks are provided along both sides of Queen Street and Spring Street.

The intersection of Queen Street, I-84 westbound on-and off-ramps and Starbucks/Motel 6 driveway is a four-way signalized intersection. Pedestrian crosswalks are not provided, although sidewalks are provided along both sides of Queen Street.

The intersection of Queen Street, I-84 eastbound on-and off-ramps and Rite Aid driveway is a four-way signalized intersection. Pedestrian crosswalks are not provided, although sidewalks are provided along both sides of Queen Street.

The intersection of Queen Street and Laning Street is an unsignalized T-intersection. The Queen Street approaches are not controlled and the Laning Street approach is stop controlled. Pedestrian crossings are not provided, although sidewalks are provided along both sides of Queen Street.

The intersection of John Weichsel Crossing, Queen Street and Dunking Donut's driveway is a four-way unsignalized intersection. The Dunkin Donut's approach is stop-controlled. Pedestrian crosswalks are not provided. Sidewalks are provided along both sides of Queen Street and on the south side of John Weichsel Crossing.

Roadway geometrics and traffic volumes for the study roadway are shown in Figure 4 and described in Table 3.



Figure 4. Queen Street (Route 10) Road Geometrics

# Southington – Queen Street (Route 10) Street Inventory

		Lanes	Ave. Lane Width	Sidewalk						Ramps	
Street	Direction			Туре	Width	Condition*	Curb	Parking	Shoulder	Exist	Compliant
Ougan Street	NB	2	11'	Concrete	5'	Good to Fair	Asphalt	No	2′	Yes	No**
Queen Street	SB	2	11'	Concrete	5'	Good to Fair	Asphalt	No	2′	Yes	No**
John Weichsel	EB	1	24'	Concrete	5'	Good	No	No	No	Yes	No
Crossing	WB	1	24	No	N/A	N/A	N/A	No	No	Yes	No
Caring Ctroot	EB	1	11'-17'	Concrete	5'	Good	Asphalt	No	1'-3.5'	Yes	No
Spring Street	WB	1	12'-18'	Concrete	5'	Good	Asphalt	No	2'-4'	Yes	No
Aircraft Dood	EB	1	20′	Concrete	4'-4.5'	Good	Concrete & Asphalt	No	No	Yes	No
Aircraft Road	WB	1	15'	Concrete & Asphalt	4.5′	Good to Poor	Concrete & Asphalt	No	No	Yes	No
Newell Street	NB	1	15	No	N/A	N/A	Asphalt	No	No	No	N/A
Newell Street	SB	1	14	No	N/A	N/A	Asphalt	No	No	No	N/A
West Ougen	EB	1	18	Concrete	4'-5'	Good	Asphalt	No	No	Yes	No
West Queen Street	WB	1	22	Concrete	4'-5'	Good	Concrete & Asphalt	No	No	Yes	No

<sup>\*</sup>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. Street Inventory** 

<sup>\*\*</sup>Only some locations have detectable warning strips.

#### 2.2 Prior Successful Efforts

The Farmington Canal Heritage Trail (Trail) is a state and federal project that will be extended through Southington. The Trail is a linear park permitting pedestrian and cyclist travel through Southington to border communities (Cheshire & Plainville). Presently the trail is constructed from the Cheshire town line through the center of Plantsville and downtown Southington to Curtiss Street. The bridge crossing over Germania Brook is completed and the trail design from Curtiss Street to Lazy Lane is underway. Construction is anticipated to start soon, and the Town has received a commitment letter from CTDOT for the remainder of the trail to the Plainville town line.

The Town plans to improve John Weichsel Crossing (presently unpaved) this construction season. Improvements will provide connectivity to the Trail and a second means of access to the proposed medical office building under construction at 462 Queen Street. The reconstruction project will designate parking spaces for trail users and provide access to a 10 acre undeveloped parcel. The Town and the developer are coordinating utility connections prior to constructing the public improvements in an effort to spur economic development to this area.

The Town is actively pursuing keeping existing businesses in town, in addition to having new businesses come into town. The following properties are stakeholders and have expressed interest in future development within the project area: a former Pratt & Whitney facility at 75 Aircraft Road, vacant parcels at 785, 801 & 811 Queen Street, Yarde Metals industrial complex at 45 Newell Street, and the creation of a bike path to ESPN from the Farmington Canal Heritage Trail.

#### 2.3 Pre-Audit Meeting

The RSA was conducted on August 1, 2016. The Pre-Audit meeting was held at 8:30 AM in the Southington Municipal Center located at 1196/200 N. Main Street in Southington.

The RSA Team was comprised of staff from CTDOT and AECOM, and representatives from several Southington departments including the Public Works and Engineering, Planning, Economic Development. 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 Southington presented relevant information for the audit, including:

 The RSA study corridor is Queen Street (Route 10) from John Weichel Crossing to West Queen Street/Camp Ground Road with particular focus on the Spring Street, Aircraft Road, West Queen Street/Camp Ground Road, and John Weichsel Crossing intersections and connections to the Farmington Canal Heritage Trail.

- There is currently a study underway to complete the 8-mile gap between the Trail head in Farmington and Lazy Lane in Southington.
- The rail line has been cleared between Lazy Lane and Aircraft Road.
- Traffic for the I-84 ramps back up to Laning Street. It can take multiple signal cycles
  for vehicles to clear the intersection. Laning Street is not signalized. The Town would
  like to see if it warrants a signal, but there are concerns that it would be too close to
  the I-84 ramp signals. A 74-unit subdivision is planned on Laning Street.
- There is significant traffic congestion on Route 10 at the I-84 ramps during the afternoon commute period.
- There are a significant number of driveways, causing access management issues.
- A new retail development is planned to be located just south of the Outback Steakhouse. The development will have an Aldi, Chick Fillet, Starbucks and Chipotle. To provide access the developer has purchased several properties on Chaffee Lane and Upson Drive in order to tie into the signal for the Southington Plaza. The developer is also negotiating with the owner of the property just north to provide access. The development will be built by early next year.
- West Street runs parallel to Queen Street. There is a new 350,000 square foot professional office park which will generate 1,700 new jobs. Since there are limited food establishments on West Street there are concerns regarding increased traffic on West Queen Street and Spring Street during the lunch hour.
- After developers get local approval they must go through OSTA for any required traffic mitigation.
- There are not many cyclists on Queen Street (Route 10), most ride on the sidewalk. There are no town ordinances prohibiting riding on the sidewalk. The Town expects cyclist activity to increase with the development of the rail trail.
- There was a pedestrian fatality on Chaffee lane that occurred in the snow.
- There is no sidewalk on Flanders Street.
- There is a school bus pick up location on Queen Terrace.
- The Town asked if this route is listed as part of the state bike plan as a cross state route.
- Wayfinding will be needed from the trail to the businesses on Queen Street.
- Pedestrians crossing mid-block is not an issue.
- Property owners must plow snow from the sidewalks.
- There is no transit or TMAs on Queen Street. There is an informal commuter park and ride lot at the Price Chopper site.
- Southington envisions that traffic will continue to increase along Route 10.
- The exit ramp from I-84 westbound has a double left, which can be confusing for those not familiar with the area.

- At the Spring Street intersection there are two left turn lanes and two left turn arrows on northbound Queen Street. It is confusing because the signal head for the through lane is aligned to the left turn lane.
- Spring Street merges down to one lane westbound just before the railroad crossing.
   Two lanes are required because there are two left turn departure lanes from Queen Street northbound approach.
- Spring Street is wide, has sidewalks, and high truck volumes. A connection between the rail trail and Route 10 via Spring Street is critical.
- Southington has a four foot wide standard for sidewalk, with a five foot standard on state routes. A multi-use path must be a minimum of eight feet wide for bi-directional traffic.
- Aircraft Road is a relatively narrow concrete roadway with bituminous shoulders and high truck volumes. It may not be appropriate for bicycle lanes or sharrows. A wider sidewalk to accommodate both pedestrians and bicyclists should be considered.

#### 3 RSA Assessment

#### 3.1 Field Audit Observations

#### **John Weichsel Crossing**

- This is a town owned road.
- There is no traffic signal at the intersection with Queen Street, it will remain unsignalized. Traffic can use the signal at the Price Chopper plaza.
- There is an existing sidewalk on the south side of John Weichsel Crossing from Queen Street for approximately 200 feet west (See Figure 5).
- The rail line crosses at the end of the road. The tracks have been removed and the trail cleared in anticipation for the extension of the rail trail. The trail would become part of the Farmington Canal Heritage Trail (see Figure 6).
- The Town is currently performing full depth reconstruction and new sidewalk up to the Price Chopper driveway. The Town is trying to get an encroachment permit to connect to the drainage.
  - According to the final design plans the road will be 24-26 feet wide. Sharrows could be considered.



Figure 5. John Weichel Crossing Looking West Showing Sidewalk and Road Construction

- The new sidewalk would end at the Price Chopper driveway and not extend to the new trail.
- Since the road is being reconstructed, now would be the opportune time to create access for the future rail trail. An-eight foot wide sidewalk trail would be ideal.
- Just west of the rail trail crossing the land is zoned business. The developer is going to install dry utility lines, since the road is under construction, in anticipation of it being developed.
- There is a snow shelf against the existing sidewalk, the snow shelf could be reduced and the sidewalk widened since there is a need to create a connection to the future rail trail.
- It may be possible to work with the Price Chopper plaza owner to install a sidewalk.

#### **Laning Street**

- There is no traffic signal at the intersection with Queen Street; it will remain unsignalized (Figure 7).
- There are sidewalks on both sides of Queen Street with handicap ramps across Lanning Street and driveway on the west side. There are no crosswalks.
- Laning Street is approximately 400 feet south of the signalized intersection for the I-84 eastbound ramps. The queue from the signal for the I-84 ramp can back to Lanning Street.
- Vehicles have a very difficult time taking a left out of Laning Street.

#### I-84 Eastbound (South) Ramp/Rite Aid Driveway

- There are sidewalks on both sides of Queen Street.
- There are no detectable warning strips or crosswalks (Figure 8).



Figure 6. View From the Rail Trail Looking East at John Weichsel Crossing



Figure 7. Lanning Drive Approach to Queen Street



Figure 8. I-84 Eastbound Ramp Approach to Queen Street

- There are no pedestrian signal heads. A sign prohibits pedestrians from crossing Route 10 on the south leg.
- Vehicles pull past the stop bar.
- Left turn vehicle queues are long.
- The I-84 leg of the intersection has a long crossing with a median island.
- Curb is missing on the southbound Queen Street approach and under I-84 (Figure 9).
- The grass buffer strips on Queen Street at I-84 need mowing (Figure 10).
- Large vehicles turning left from the I-84 off-ramp to Queen Street are close to the median island, making it uncomfortable for pedestrians waiting to cross.
- The median island at the I-84 leg of the intersection extends out into the pedestrian path.

#### I-84 Westbound (North Ramp)

- There are sidewalks on both sides of Queen Street.
- There are no crosswalks.
- There are no pedestrian signal heads. The intersection has "push for green" buttons on the northeast and northwest corners for concurrent crossing (Figure 11).
- There are handicap ramps on the northwest and southwest corners with detectable warning strips only on the southwest corner.
- The ramp on the northeast corner is not ADA compliant.
- The sidewalk on the east side crosses the driveway at grade.
- The median island at the I-84 leg of the intersection extends out into the pedestrian path.
- BJ's Wholsesale Club is coordinating with CTDOT on wayfinding signage on off-ramp.



Figure 9. Missing Curb on Queen Street West Side Near I-84



Figure 10. Grass Buffer/snow Shelf on West Side of Queen Street North of I-84



Figure 11. Pedestal With Pedestrian Push Button at Queen Street/I-84 Westbound Ramps (north)

#### **Spring Street**

- There are sidewalks on both sides of Spring Street.
- The intersection has "push for green" buttons on the northeast and northwest corners for concurrent crossing. There is one old (nonstandard) pedestrian signal head on the northeast corner (Figure 12).
- There is a painted crosswalk across Spring Street.
   It is painted with two parallel lines. There are handicap ramps on both sides, but no detectable warning strips (Figure 13).
- The through-movement signal head on Queen Street northbound is aligned with the left turn lane.
- The railroad tracks were removed from Spring Street.
- The sidewalk on the north side of Spring Street has a gap at the former rail crossing (Figure 14).
  - The sidewalk extends through the driveways.
  - o There is a two to three foot snow shelf.
  - The eastern end of the sidewalk along the Staples parking lot has a retaining wall.
- There is a sidewalk on the south side of Spring Street along the Bertucci's parking lot.
  - o There is a small snow shelf.
  - The sidewalk extends through the driveways.
- There are non-bicycle friendly catch basin grates (Figure 15).
- The road tapers down from two lanes westbound to one lane just before the rail crossing (Figure 16).
   The two lanes are needed because of the two left turn departure lanes from Queen Street northbound.



Figure 12. Pedestrian Crossing Queen Street North of Spring Street With Red Pedestrian Signal Indication



Figure 13. Crosswalk Across Spring Street at Queen Street



Figure 14. Gap in Sidewalk on North Side of Spring Street at Rail Trail Crossing Location

- A second lane eastbound is scheduled to be added on Spring Street in conjunction with the planned development. The sidewalk will be shifted over and the driveway for Berttuci's on Spring Street will be consolidated with the Bed Barn Driveway. This is an opportune time to widen the sidewalk.
- It was noted that railroad crossing signs should be removed on Spring Street since the rail line is no longer active. A rectangular rapid flashing beacon should be considered for this crossing due to high traffic volumes and speed.
- A sidewalk along the south side of Spring Street between the rail trail and Queen Street should be considered.

#### Interstate Park Drive/Shop Rite Plaza (south)

- There are sidewalks on both sides of Queen Street.
- There is one old (non-standard) pedestrian signal head on the northeast corner. The intersection has "push for green" buttons on the northeast and northwest corners for concurrent crossing.
- There are no crosswalks. There are handicap ramps on all corners, but detectable warning strips only on northeast and southeast corners.

#### 7-Eleven/Shop Rite Plaza (north)

- There are sidewalks on both sides of Queen Street.
- There are no crosswalks.
- The intersection has "push for green" buttons on the southeast and southwest corners for concurrent crossing. There is an old (nonstandard) pedestrian signal only on the southwest corner.
- There are handicap ramps on each corner, although some may not be ADA compliant. There



Figure 15. Non-Bicycle Friendly Catch Basin Grate.



Figure 16. Spring Street Showing Lane Drop From Two to One Lane westbound.

are detectable warning strips only on the east side across the 7-Eleven driveway.

#### **Aircraft Road**

- There are sidewalks on both sides.
- There is a painted crosswalk across the north leg of Queen Street.
- There are no pedestrian signal heads. The intersection has "push for green" buttons on the northeast and northwest corners.
- There are handicap ramps on each corner, but no detectable warning strips.
- There is a fire hydrant in the sidewalk on the northwest corner.
- On Aircraft Road the eastbound lane is 20 feet wide, the westbound is 15 feet wide.
- The sidewalk on the north side extends only to the Dunkin Donuts drive through exit. There is no shoulder.
- There is a sidewalk on the south side.
  - The sidewalk is concrete until the rail tracks. It then becomes bituminous and ends at the large factory.
  - The sidewalk in front of 24-38 Aircraft Road is in poor condition (Figure 17).
  - o There is no snow shelf.
- The rail tracks are still in place, and this is an active crossing (Figure 18). Metal Works (to the north) receives deliveries via rail and often the trains must back up as far as the road to unload.
- The proposed trail may deviate from the tracks here if the tracks are to remain active. CTDOT and Southington are still in the planning phase and coordinating with the railroad company.
- Consider improving and expanding sidewalk on the south side to connect the rail trail with Queen Street



Figure 17. Sidewalk in Poor Condition



Figure 18. Rail Road Tracks Across Aircraft Road

## Newell Street between Aircraft Road and West Queen Street

- This is an optional route for the rail trail.
- There were several faded no parking signs.
- There is no sidewalk on either side.
- The roadway width is 29 feet wide (15 feet northbound and 14 feet southbound) (Figure 19).
- The posted speed limit is 25 mph.
- The stop bars are faded at all Newell Street intersection approaches at Aircraft Road and West Queen Street.

#### **West Queen Street**

- This is an optional route for the rail trail via Newell Street.
- This street was just recently repaved and will be restriped.
- The roadway width is 40 feet.
- There are sidewalks on both sides from Queen Street to just before the tracks. Both sides have snow shelves.
- At the Queen Street intersection there are no crosswalks (Figure 20).
- There is an old (non-standard) pedestrian signal head on the northeast corner. The intersection has "push for green" buttons in the northeast and northwest corners for concurrent crossing.
- There are handicap ramps on each corner, but only the northeast corner has detectable warning strips.

#### **Queen Street**

- There are sidewalks along both sides of Queen Street (Figure 21).
  - o All sidewalks are concrete.
  - Sidewalks range from four to five feet wide.
  - There is a grass snow shelf on both sides;
     it averages four feet in width. In many



Figure 19. Newell Street



Figure 20. Intersection of Queen Street and West Queen Street



Figure 21. Typical Sidewalk on Queen Street

- locations the grass on the snow shelf is overgrown.
- The utility poles are located in the snow shelf.
- There are four travel lanes, two in each direction.
- Most of the driveways along Queen Street do not have crosswalks that extend through the driveway. One exception is the CVS driveway.
- There are several commercial driveways along Queen Street.
- The shoulder varies, but averages approximately two feet in width.
- Under the I-84 overpass the snow shelf narrows to two feet and the curbing is missing/broken. Tire tracks were evident in the show shelf.
- It is dark under the I-84 overpass due to missing/broken lighting.
- The sign for I-84 on southbound Queen Street was taken down during recent bridge painting and was not put back up (Figure 22).
- The I-84 signs are faded by the intersection for Spring Street. Some street name signs are faded.
- A pedestrian was observed crossing Queen Street mid-block by the 7-11 station.
- Water pools at the base of some handicap ramps, indicating a potential draining issue.



Figure 22. I-84 Sign on Ground Under Bridge

#### 3.2 Post-Audit Workshop - Key Issues

- The Town is doing a full depth reconstruction at John Weichsel Crossing. A base course will be placed all the way up to the rail trail crossing. Once the property west of the rail trail crossing has been developed and utilities extended, a top coat will be placed.
- Coordination with the Price Chopper plaza is needed to allow easements for sidewalk.
- There is congestion and issues with traffic at the I-84 ramps.
- Laning Street may warrant a signal with future development, but it is very close to the I-84 ramp signal and could result in queuing extending into the I-84 intersections.

- There is an overall lack of pedestrian safety facilities along Queen Street. Many of the intersections do not have detectable warning strips, pedestrian signal heads, or ADA compliant ramps.
  - o Traffic signals have "Push button for green" push buttons to call up the side street phases and allow pedestrians to cross concurrently with traffic.
- The median at the I-84 south ramp intersection needs to be cut back or a cut through installed to allow for safe pedestrian access.
- At the intersection of Spring Street and Queen Street the signal heads are misaligned for the northbound approach of Queen Street, the through-movement signal head is in front of the dedicated left turn lane.
- There are plans to create two lanes on Spring Street approach at the Queen Street intersection. This will require moving the sidewalk back.
- There was discussion whether to widen out the sidewalk on the north side of Spring Street to eight feet to create a connection to the rail trail or to leave it at its current width. Widening it would require either reducing the snow shelf or relocating the retaining wall.
- The developer was supposed to put in a sign bridge coming off I-84 as part of the OSTA requirement for the BJ's development project, but it was taken out of the project. Way finding signage is needed when coming off of the interstate.
- The Shop Rite signalized intersection lacks a crosswalk and is wide making it uncomfortable to cross.
- Newell Street may be an option for the rail trail if the tracks between Aircraft Road and West Queen Street cannot be removed. The rail trail would need to continue up Newell Street to the town line.
- The sidewalk along West Queen Street is in good condition with a snow shelf.
- West Queen Street becomes two lanes just past the eastern entrance to TD Bank.
- What is the status of Queen Street (Route 10) on the VIP paving list?
- Aircraft Road has a very wide cross section. A wider sidewalk here would be beneficial.

#### 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. Coordinate with CTDOT to replace old catch basin grates with bike friendly catch basin grates.
- 2. Coordinate with CTDOT to replace worn out signs with new retroreflective signs.
- 3. Town to paint sharrows on John Weichsel Crossing.

pavement markings on Spring Street.

- 4. CTDOT to replace the missing/broken curbing on Queen Street under the I-84 bridge.
- 5. CTDOT to reinstall the I-84 sign which was removed during bridge repairs.
- 6. CTDOT to maintain grass on the snow shelf along Queen Street.
- 7. Town to request CTDOT to evaluate the alignment of signal heads for Queen Street northbound at the Spring Street intersection. The through
- movement signal head is in front of the dedicated left turn lane.

  8. Town to remove the defunct railroad crossing signs and
- 9. Town to construct a short section of new sidewalk on the north side of Spring Street on both sides of the rail trail.
- 10. Town requests that CTDOT evaluate the installation of pedestrian signals and crosswalks on Queen Street at I-84 eastbound ramp and Rite Aid driveway (includes median break).
- 11. Town requests that CTDOT replace the "push for green" pedestrian buttons with current standard pedestrian equipment (Figure 23 and Figure 24) and crosswalks as necessary at the following locations along Queen Street:
  - a. I-84 westbound ramp (no crosswalks).



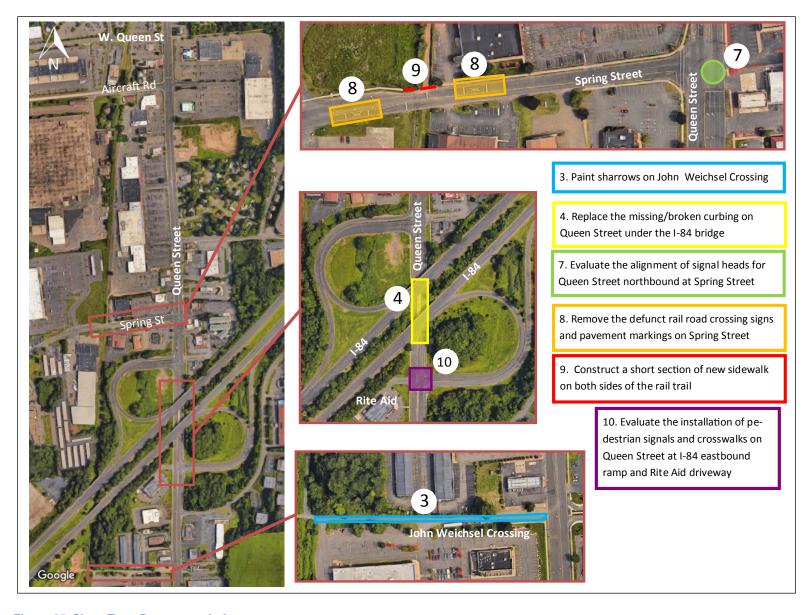
Figure 23. ADA Compliant Pedestrian Button

- b. Spring Street.
- c. Interstate Drive/Shop Rite Plaza (south) (no crosswalks).
- d. 7-Eleven/Shop Rite Plaza (north) (no crosswalks).
- e. Aircraft Road.
- f. West Queen Street (no crosswalks).
- 12. Town request that CTDOT upgrade handicap ramps at intersections along Queen Street with detectable warning strips as needed.
- 13. Determine where Queen Street (Route 10) is on the state VIP list.
- 14. Town to repaint stop bars on Newell Street.

Figure 25 depicts these recommendations.



Figure 24. Pedestrian Countdown Signal

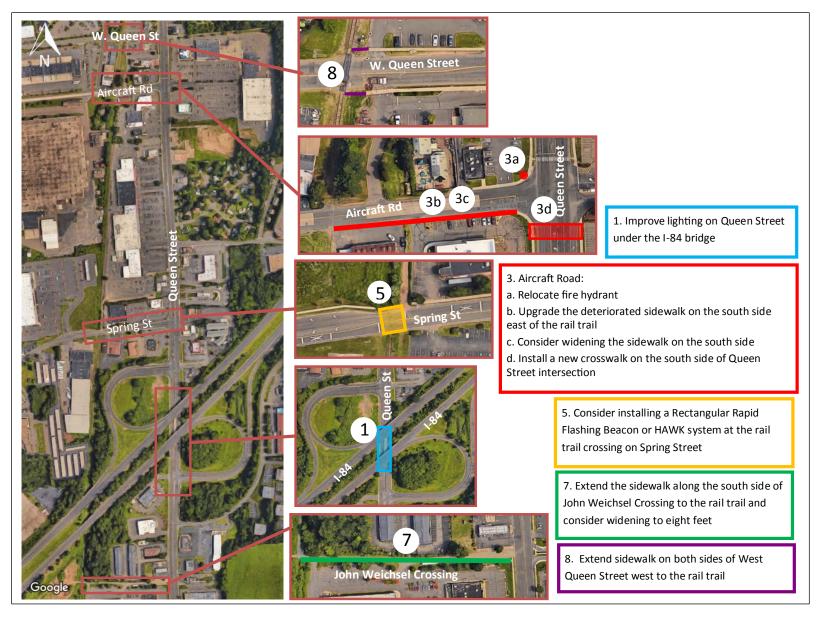


**Figure 25. Short Term Recommendations** 

#### 4.2 Medium Term

- 1. CTDOT to improve the lighting on Queen Street under the I-84 bridge.
- 2. Town to install wayfinding signage from the rail trail to businesses on Queen Street.
- 3. Aircraft Road:
  - a. Relocate the fire hydrant in the middle of the sidewalk on the northwest corner with Queen Street.
  - b. Upgrade the deteriorated sidewalk on the south side east of the rail trail.
  - c. Consider widening the sidewalk on the south side to eight feet wide to create a multi-use path.
  - d. Coordinate with CTDOT to install a new crosswalk on the south side of Queen Street intersection.
- 4. Coordinate with CTDOT to repaint all cross walks with standard international striping (zebra pattern).
- 5. Consider installing a Rectangular Rapid Flashing Beacon or HAWK system at the rail trail crossing on Spring Street.
- 6. Coordinate with CTDOT to install wayfinding off of I-84.
- 7. Town to extend the sidewalk along the south side of John Weichsel Crossing to the rail trail and consider widening to eight feet to provide a multi-use trail.
- 8. Town to extend sidewalk on both sides of West Queen Street a short distance west to the rail trail.

Figure 26 depicts these recommendations.



**Figure 26. Mid Term Recommendations** 

#### 4.3 Long Term

- 1. Town to develop an access management plan to reduce and consolidate driveways along Queen Street.
- 2. Extend sidewalks across all driveways and install detectable warning strips.
- 3. Town to extend sidewalk on the south side of Spring Street west to the rail trail.

Figure 27 depicts these recommendations.



**Figure 27. 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 Town of Southington RSA and provides Southington with an outlined strategy to improve the transportation network along Queen Street (Route 10) for all road users, particularly focusing on pedestrians and cyclists. Moving forward, Southington 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 Queen Street.



# Appendix A





## Welcome to the Community Connectivity Program Application



Please fill in the following information to provide the Audit team leaders with a comprehensive description of the area contained in this application.

1. Applicant contact information

Name	
Title	
Email Address	
Telephone	
Number	
2. Location infor	nation
Address	
Description	
City / Town	

State r	oad		
Local	oad		
Private	Road		
Other (	please specify)		
4. Zoning (Please	select all that apply)		
Indust	ial		
Reside	ntial		
Comm	ercial		
Mixed	Jse		
Retail			
N/A (ne	et applicable)		
Other (	please specify)		
5. Approx	imate mile radius around the I	ocation	

Community Centers
Business Districts
Restaurant/Bar Districts
Churches
Housing Complexes
Proximity to Schools
Tourist Locations (examples – Casino, Malls, Parks, Aquarium, etc)
N/A (not applicable)
Other (please specify)
Employment Facilities (Retail, Industrial, etc)
No
If Yes please describe (please specify)

Public, Paroc	hial, Private Schools (mor	e than 1 school wi	thin a ½ mile)	
University / 0	Community Colleges			
N/A (not appl	cable)			
Other (please	specify)			
9. Transit facil				
(Please selec	t all that apply)			
Bus				
Rail				
Ferry				
Airport				
Park and Ride	. Lot			
N/A (not appli				
Other (please	specify)			

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

If Yes please de	scribe and list all <sub>l</sub>	projects.		
n ree predee de		<u> </u>		

Page 6 of 11

If Yes please desc	ribe and list.		

Page 7 of 11

Page 9 of 11

### 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)



# Appendix B









### **Road Safety Audit**

**Town:** Southington

**RSA Location:** Route 10 (Queen Street) between John Weichsel Crossing and Aircraft Road

**Meeting Location:** Southington Municipal Center (Upstairs Meeting Room)

Address: 196/200 N. Main Street

**Date:** 8/1/2016 **Time:** 8:30AM

### **Participating Audit Team Members**

Audit Team Member	Agency/Organization
Krystal Oldread	AECOM
Annette Turnquist	Town of Southington
Colleen Kissane	CT DOT
Kevin Tedesco	CT DOT
Tom Gorr	Southington PD
Lou Perillo	Town of Southington
Jim Grappone	Town of Southington
Keith Hayden	Town of Southington
Rob Phillips	Town of Southington
Jeff Maxtutis	AECOM



# Appendix C









### Road Safety Audit – Southington

**Meeting Location:** Southington Municipal Center (Upstairs Meeting Room)

Address: 196/200 N. Main Street

**Date:** 8/1/2016 **Time:** 8:30 AM

<u>Agenda</u>

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:

o Average Daily Traffic

o Crash Data

Geometrics

Safety Procedures

10:00 AM Audit

Visit Site

Issues

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 Grades Orientation Tactile Warning Strips Pedestrian refuge at islands Other	
Pedestrian Facilities	
<ul> <li>Sidewalk         <ul> <li>Width</li> <li>Grade</li> <li>Materials/Condition</li> <li>Drainage</li> <li>Buffer</li> </ul> </li> <li>Pedestrian lighting</li> <li>Pedestrian amenities (benches, trash receptacles)</li> <li>Other</li> </ul>	





#### **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

### 

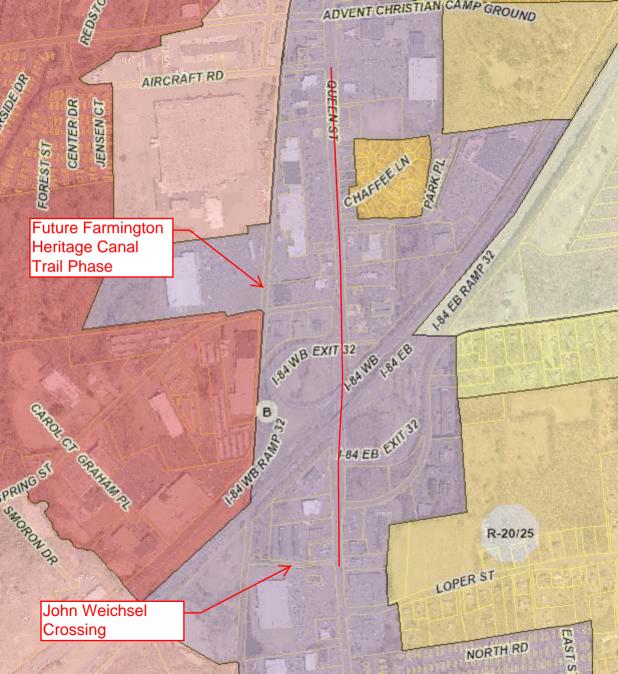
#### Intersections

- Geometrics
- o Sight Distance
- Traffic control devices
- Safe storage for turning vehicles
- Capacity Issues

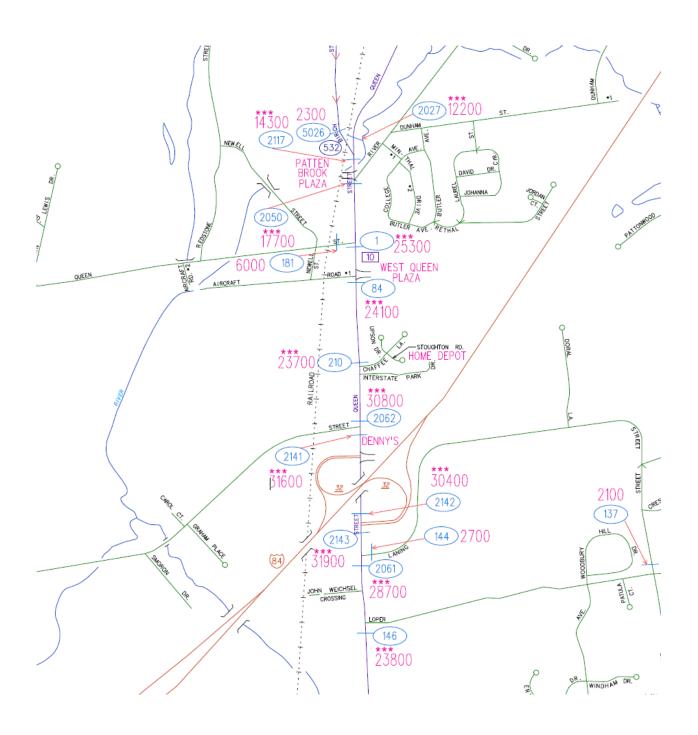




<ul> <li>Pavement         <ul> <li>Pavement Condition (excessive roughness or rutting, potholes, loose material)</li> <li>Edge drop-offs</li> <li>Drainage issues</li> </ul> </li> <li>Lighting Adequacy</li> </ul>	
<ul> <li>Signing</li> <li>Correct use of signing</li> <li>Clear Message</li> <li>Good placement for visibility</li> <li>Adequate retroreflectivity</li> <li>Proper support</li> </ul>	
<ul> <li>Signals</li> <li>Proper visibility</li> <li>Proper operation</li> <li>Efficient operation</li> <li>Safe placement of equipment</li> <li>Proper sight distance</li> <li>Adequate capacity</li> </ul>	
<ul> <li>Pavement Markings</li> <li>Correct and consistent with MUTCD</li> <li>Adequate visibility</li> <li>Condition</li> <li>Edgelines provided</li> </ul>	
<ul> <li>Miscellaneous</li> <li>Weather conditions impact on design features.</li> <li>Snow storage</li> </ul>	



## Average Daily Traffic (ADT)



# 2015 Crashes

### **UCONN** Connecticut Crash Data Repository Dataset: mmucc Southington Towns: Crash Severity: Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only Case Status: Map Satellite ks Laning St Holiday Inn Express Southington Pilgrim Furniture & Mattress City Southington Laning St TD Homers Days Inn Southingto + John Weichsel Crossing oogle All Pets Club 🖣 Injury of any type (Serious, Minor, Possible) 🖣 Fatal (Kill) Heatmap Select & Query Select All Property Damage Only Deselect All

This web site is exempt from discovery or admission under 23 U.S.C. 409.

Connecticut Crash Data Repository User Guide Contact Us

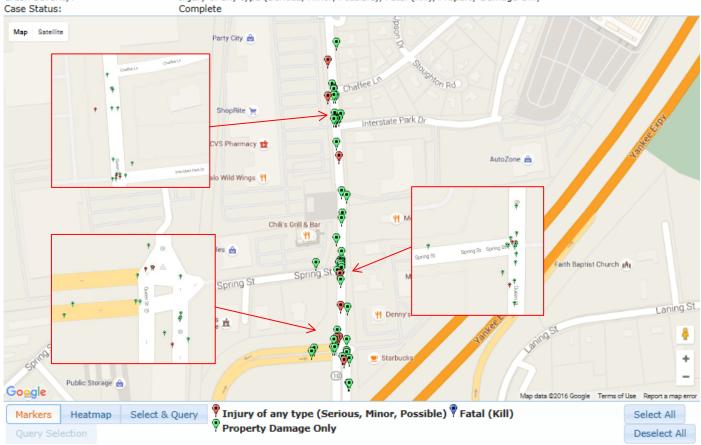
# **UCONN**

### **Connecticut Crash Data Repository**

#### Search Criteria:

Dataset: mmucc
Towns: Southington

Crash Severity: Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only

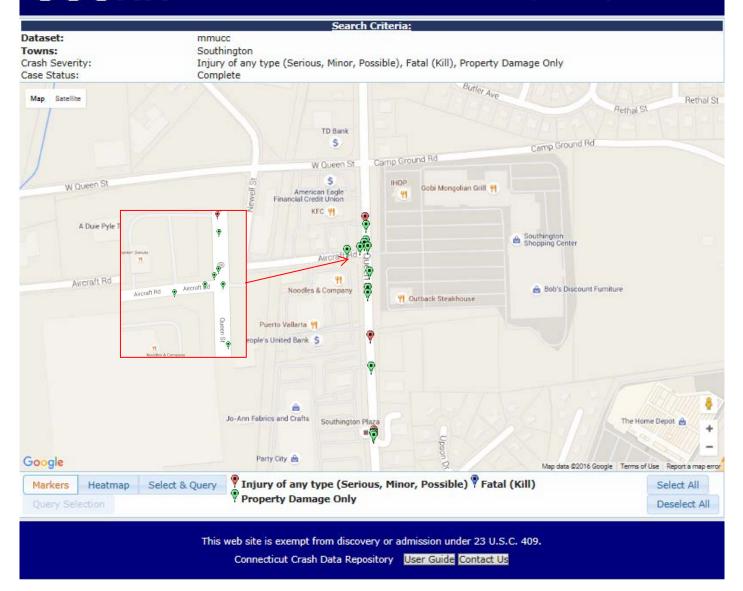


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Connecticut Crash Data Repository User Guide Contact Us

# **UCONN**

### **Connecticut Crash Data Repository**







### **Road Safety Audit – Southington**

### **Crash Summary**

Data: 3 years (2012-2014)

There was one crash involving a pedestrian that resulted in injuries.

There were three crashes involving cyclists; two resulted in injuries and one reported property damage only.

Severity Type	Number of Crashes	
Property Damage Only	216	79%
Injury (No fatality)	58	21%
Fatality	0	0%
Total	274	

Manner of Crash / Collision Impact	Number of C	crashes
Unknown	0	0%
Sideswipe-Same Direction	31	11%
Rear-end	165	60%
Turning-Intersecting Paths	33	12%
Turning-Opposite Direction	14	5%
Fixed Object	12	4%
Backing	1	0%
Angle	5	2%
Turning-Same Direction	10	4%
Moving Object	1	0%
Parking	0	0%
Pedestrian	1	0%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	1	0%
Miscellaneous- Non Collision	0	0%
Total	274	





Weather Condition	Number of Crashes	
Snow	2	1%
Rain	47	17%
No Adverse Condition	225	82%
Unknown	0	0%
Blowing Sand, Soil, Dirt or		
Snow	0	0%
Other	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	274	

<b>Light Condition</b>	Number of Crashes	
Dark-Not Lighted	6	2%
Dark-Lighted	61	22%
Daylight	202	74%
Dusk	5	2%
Unknown	0	0%
Dawn	0	0%
Total	274	

Road Surface Condition	Number of Crashes	
Snow/Slush	2	1%
Wet	61	22%
Dry	207	76%
Unknown	0	0%
Ice	4	1%
Other	0	0%
Total	274	





Time	Time Number of Crashes		rashes
0:00	0:59	3	1%
1:00	1:59	1	0%
2:00	2:59	2	1%
3:00	3:59	1	0%
4:00	4:59	0	0%
5:00	5:59	1	0%
6:00	6:59	2	1%
7:00	7:59	7	3%
8:00	8:59	9	3%
9:00	9:59	7	3%
10:00	10:59	9	3%
11:00	11:59	13	5%
12:00	12:59	34	12%
13:00	13:59	35	13%
14:00	14:59	13	5%
15:00	15:59	22	8%
16:00	16:59	23	8%
17:00	17:59	31	11%
18:00	18:59	21	8%
19:00	19:59	15	5%
20:00	20:59	9	3%
21:00	21:59	10	4%
22:00	22:59	3	1%
23:00	23:59	3	1%
Total		274	







### **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 – Southington**

### **Fact Sheet**

#### **Functional Classification:**

- Route 10 (Queen Street) is classified as a Principal Arterial (Other)
- John Weichsel Crossing is classified as a Local Road
- · Spring Street is classified as a Local Road
- Aircraft Road is classified as a Local Road

#### **ADT**

• ADT on Route 10 (Queen Street) is 23,700 – 31,900

#### Population and Employment Data (2014):

Population: 43,509Employment: 15,430

#### **Urbanized Area**

This area is located within the Hartford Urbanized Area

#### **Demographics**

- The statewide average percentage below the poverty line is 10.31%. Along this portion of Route 10, there are no areas in exceeding the state's average.
- The statewide average percentage minority population is 30.53%. There are no areas in Southington exceeding the state's average.

#### Air Quality

- Southington's CIPP number 223
- Southington is within the Greater CT Marginal Ozone Area
- Southington is within a CO Attainment Area