COMMUNITY
connectivity program

South Windsor

Ellington Road (Route 30) – Road Safety Audit

CONNECTICUT DEPARTMENT OF TRANSPORTATION

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Acknowledgements:

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CONNECTICUT DEPARTMENT OF TRANSPORTATION

With assistance from AECOM Transportation Planning Group

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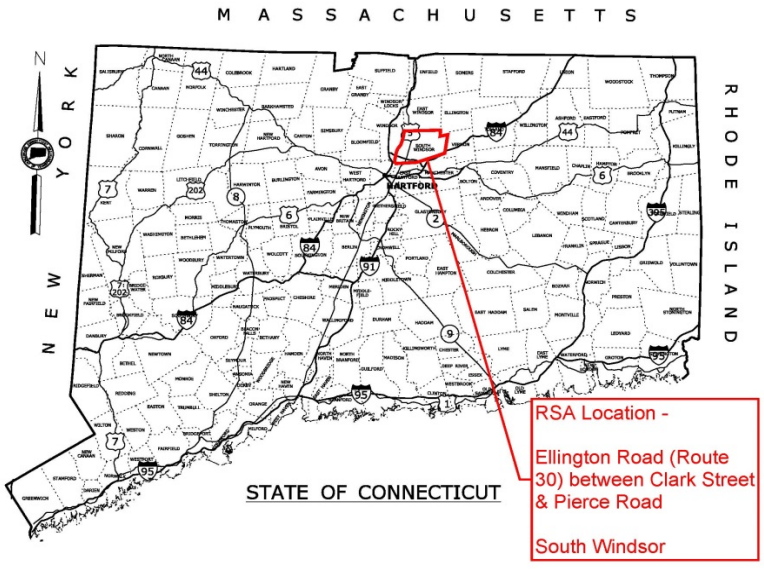
The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state's transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this program is conducting Road Safety Audits (RSA's) at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

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

Each RSA was conducted using RSA protocols published by The Federal Highway Administration (FHWA). For details on this program, please refer to www.ctconnectivity.com. Prior to the site visit, area topography and land use characteristics are examined using available mapping and imagery. Potential sight distance issues, sidewalk locations, on-street and off-street parking, and bicycle facilities are also investigated using available resources. The site visit includes a "Pre-Audit" meeting, the "Field Audit" itself, and a "Post-Audit" meeting to discuss the field observations and formulate recommendations. This procedure is discussed in the following sections.



1 Introduction to Ellington Road, South Windsor RSA

The Town of South Windsor submitted an application to complete an RSA on Ellington Road (State Route 30) to improve safety for pedestrians and bicyclists travelling along the corridor between Pierce Road and Clark Street. The Town would also like to investigate the intersection of Ellington Road and Pierce Road to determine the adequacy of sight lines for motor vehicles. This corridor, which is designated as State Route 30, experiences high traffic volumes and speeds, but has limited sidewalks. This has resulted in concerns for pedestrians and cyclists through this area. Wapping Park is located approximately 0.1 miles from the intersection of Ellington Road and Clark Street, and many pedestrians and bicyclists use Ellington Road and Clark Street to access the park. There are also numerous shopping centers, municipal buildings, financial institutions and medical facilities in the area.

The Town of South Windsor's application contained information on crash data and mapping of the corridor. The application and supporting documentation are included in Appendix A.

1.1 Location

The RSA site is the section of Ellington Road (State Route 30) between Pierce Road and Clark Street (Figure 1). The Average Daily Traffic (ADT) on Ellington Road near the Clark Street intersection is 10,100 vehicles per day (vpd). Ellington Road consists of a single lane in each direction, separated by a double yellow center line. There are striped shoulders on each side of the road, with widths that vary from less than one foot up to 7 feet.

The Pierce Road intersection is controlled by a side-street stop sign, and the Clark Street intersection is controlled by a traffic signal. See (Figure 2) for the regional context.

Figure 1. Ellington Road (State Route 30), South Windsor

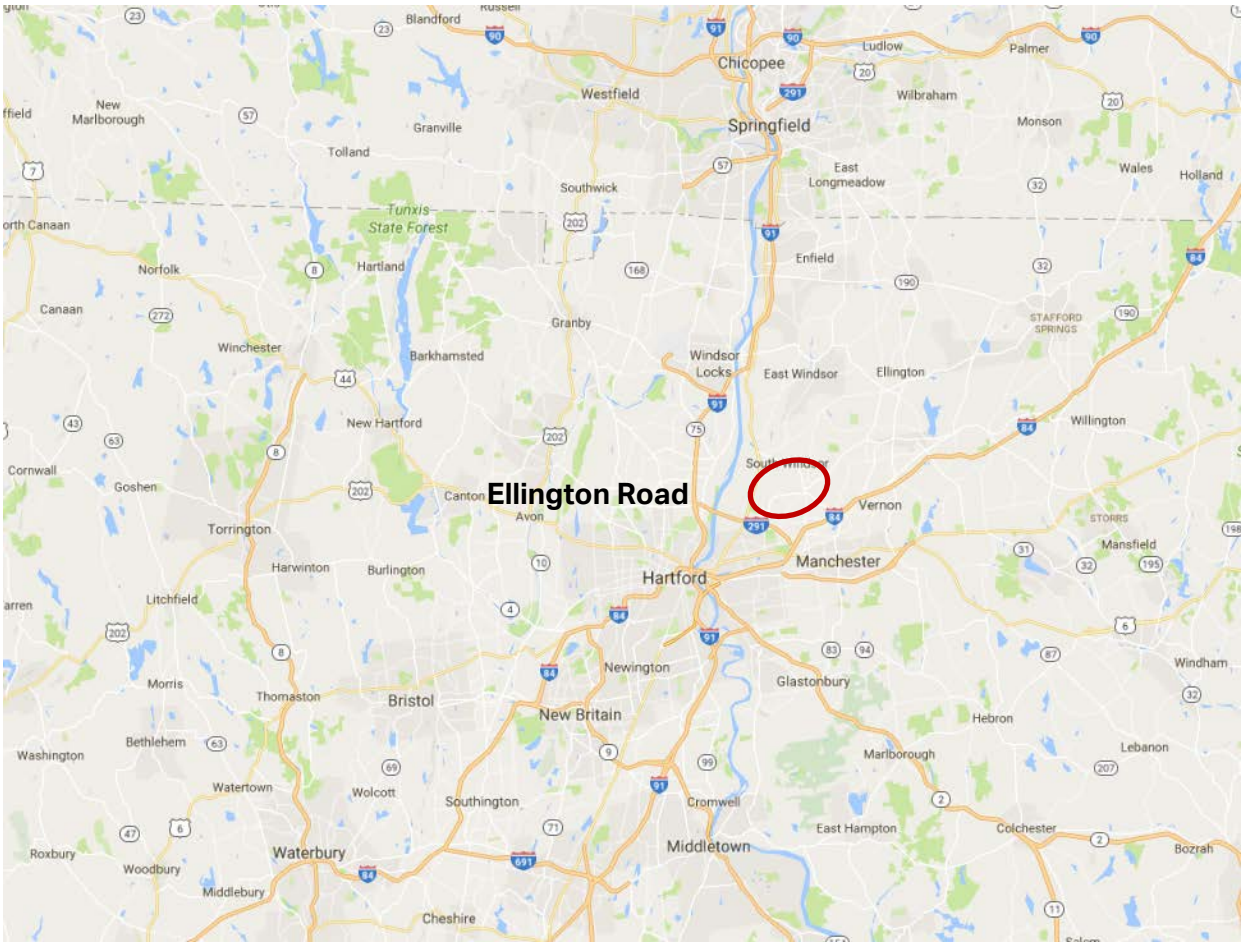


Figure 2. Study Area – Regional Context

2 Pre-audit Assessment

2.1 Pre-audit Information

As noted in section 1.1, traffic volumes are substantial along this corridor. Route 30 is a major east/west facility in this area, and there are several commercial and recreational facilities nearby that attract traffic. As a result, this portion of Ellington Road carries traffic to and through the town from other areas.

The crash history in this area shows several crashes but there were no accidents involving pedestrians or bicyclists between 2012 and 2014 (Table 1 and Table 2). The majority of crashes involved rear-end collisions (54%), sideswipes (4%), or turning maneuvers (total 29%). Together, these indicate issues related to intersecting streets or driveways, and may involve speeding on the artery. However, since most crashes (72%) did not involve injury, excessive speeding was not likely a factor. There were no recorded fatalities. Figure 3

displays crashes that occurred in this area during 2015. As expected, the great majority of these incidents occurred at intersections.

Severity Type	Number of Crashes	
Property Damage Only	33	72%
Injury (No fatality)	13	28%
Fatality	0	0%
Total	46	

Table 1. Crash Severity 2012-2014

Source: UConn Connecticut Crash Data Repository

Manner of Crash / Collision Impact	Number of Crashes	
Unknown	0	0%
Sideswipe-Same Direction	2	4%
Rear-end	25	54%
Turning-Intersecting Paths	3	7%
Turning-Opposite Direction	6	13%
Fixed Object	5	11%
Backing	0	0%
Angle	1	2%
Turning-Same Direction	3	7%
Moving Object	0	0%
Parking	0	0%
Pedestrian	0	0%
Overturn	0	0%
Head-on	1	2%
Sideswipe-Opposite Direction	0	0%
Miscellaneous- Non Collision	0	0%
Total	46	

Table 2. Crash Type 2012-2014

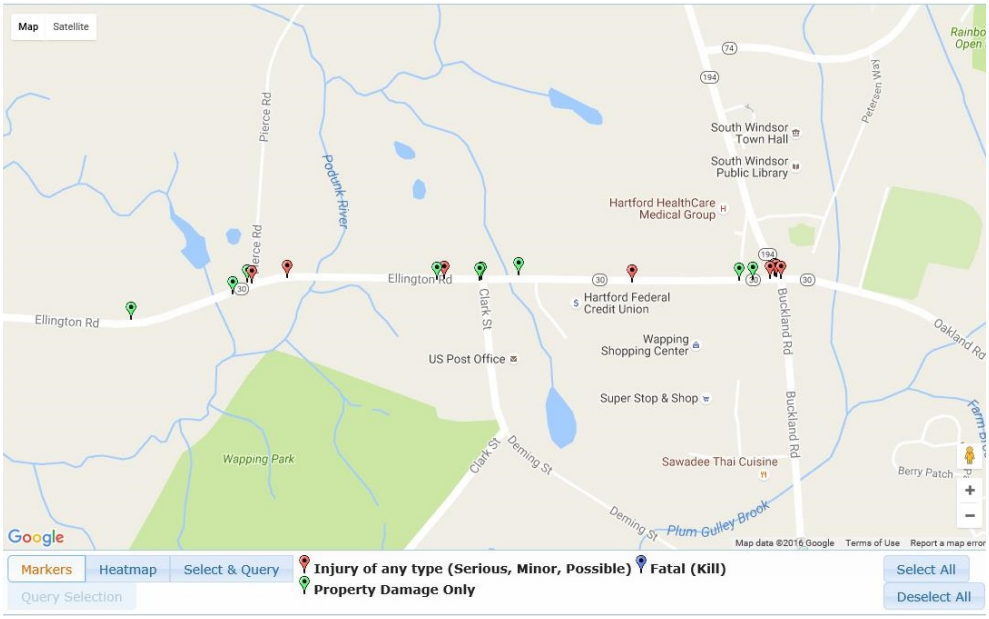


Figure 3. Crashes that Occurred in 2015 (Connecticut Crash Data Repository)

Ellington Road (State Route 30) provides an east/west route through the Town of South Windsor, between U.S. Route 5 and State Route 194, where Route 30 continues easterly as Oakland Road. It consists of a single lane in each direction, separated by a double yellow center line, with turn lanes at major intersections outside of the RSA study area. Ellington Road is a connector between several other major travel routes, including Route 5, I-291, 194 (Sullivan Avenue), Buckland Road, Deming Street, and I-84. As noted above in section 1.1, traffic volumes are substantial, due to local land uses and the connections provided to these other routes.

The RSA study area encompasses the intersections of Pierce Road and Clark Street, local roads that are collector roads for other local streets to the north and south of the study corridor. Pierce Road and Clark Street both provide a single lane in each direction, although Clark Street widens to two lanes (right turn and left turn) on its approach to Ellington Road. All three roadways have striped shoulders on each side of the road, with widths that vary from less than one foot up to 7 feet.

The intersection of Pierce Road and Ellington Road is a "T" intersection, with Pierce Road approaching from the north. The skewed intersection is controlled by a "Stop" sign on Pierce Road. Sight line to the west for left turning traffic is hampered by a tall hedge row located along the frontage of the private property on the north-west corner. Although the stop bar is set back from the intersection, vehicles regularly creep forward into the intersection in order to see.

The intersection of Clark Street with Ellington Road is controlled by a semi-actuated traffic signal that provides an actuated green interval for Clark Street traffic approaching from the south. There are no turn lanes provided on Ellington Road.

There are no sidewalks on either side of Ellington Road between Pierce Road and Clark Street.

To improve connectivity within the town, South Windsor created new zoning regulations in 2014. As part of the "South Windsor Center" project, the Town has stated that their plan is to encourage developers to follow four goals:

- Reinforce a "South Windsor Center" brand.
- Draw more people to the Center.
- Enhance the Center through physical improvements.
- Convey a vision for longer term redevelopment.

As part of this plan, the Town has identified the area of Ellington Road between Pierce Road and Clark Street as a South Windsor Center Gateway. Improving this area would be consistent with their long term "South Windsor Center" goals.

Currently there is a concrete sidewalk on the south side of Ellington Road extends across the Town Center Plaza and ends at the Credit Union Plaza approximately 500 feet east of Clark Street. There are no sidewalks within the study area between Pierce Road and Clark Street. Because of the nearby park and retail areas, pedestrian and bicycle traffic is common through this area despite the lack of sidewalks. The Town would like to provide better accommodations to improve pedestrian and bicycle safety through the corridor and at the intersections to reach the existing sidewalk.

A second concern is related to the intersection of Pierce Road and Ellington Road. There is a hedge on private property on the northwest corner of the intersection that currently limits the sight distance for vehicles left turning from Pierce Road onto Ellington Road eastbound. This causes vehicles to pull up well past the stop bar in order to see far enough to turn left onto Ellington Road.

Figure 4 depicts the roadway geometry throughout the study area, and Table 3 presents data on the physical features of these roads.

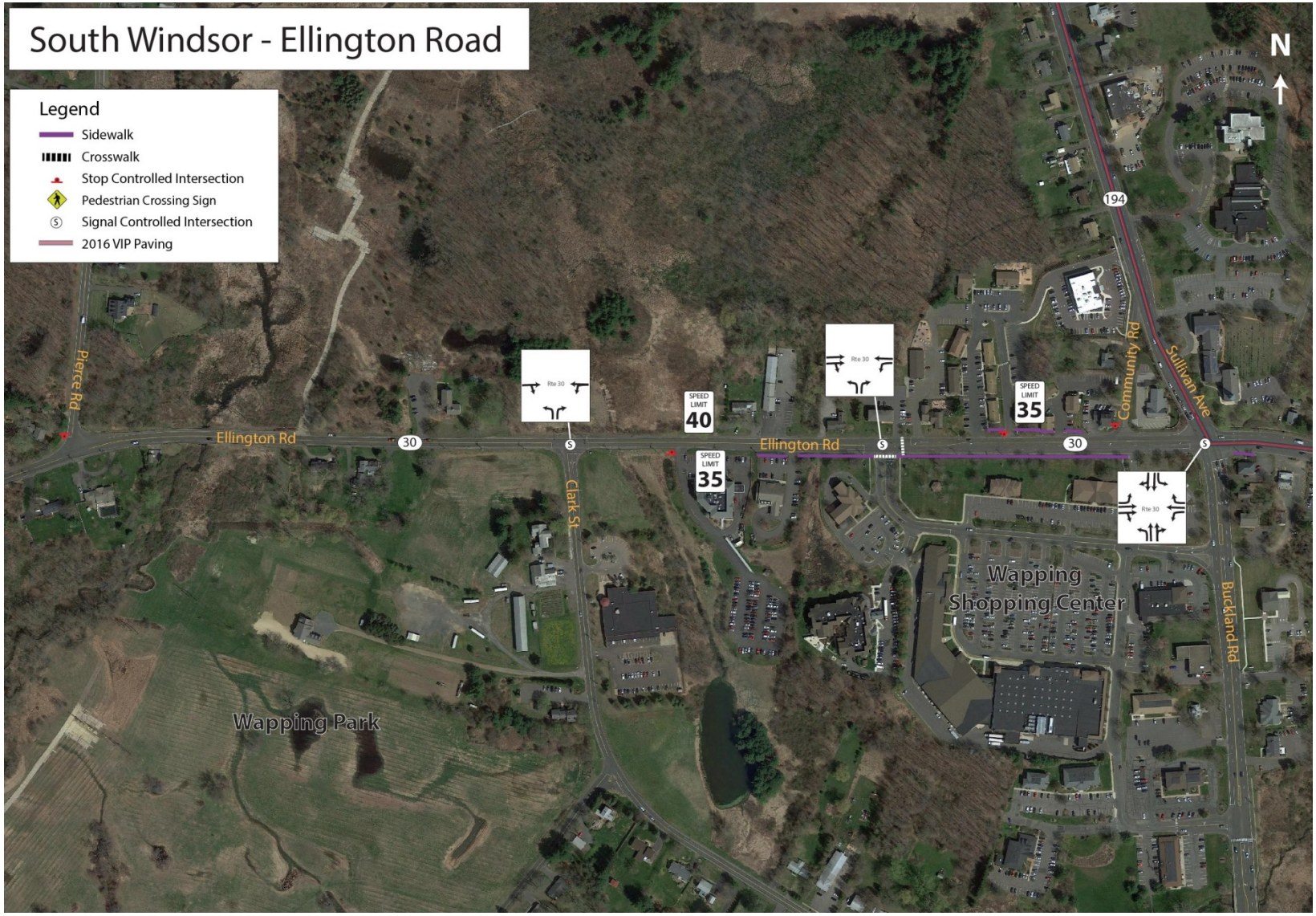


Figure 4. Ellington Road Geometrics

South Windsor - Ellington Road

Street Inventory

From	To	Distance	Width	Sidewalk				Curb	Parking	Shoulder	Ramps	
				Side	Type	Width	Condition				Exist	Compliant
Pierce Road	Podunk River	400 feet	14-15'	EB	No	N/A	N/A	No	No	4-5'	N/A	N/A
			13'	WB	No	N/A	N/A	No	No	6-7'	N/A	N/A
Podunk River	Clark Street	0.2 miles	13'	EB	No	N/A	N/A	No	No	1'	N/A	N/A
			11'	WB	No	N/A	N/A	No	No	2'	N/A	N/A

***CONDITION – "Good" is Serviceable Condition that meets current design standards. "Fair" is generally serviceable, but may need minor repairs, or may not completely align with current design standards. "Poor" is not serviceable, and generally inadequate for continued long-term use.**

Table 3. Street Inventory

2.2 Prior Successful Effort

The Town has started a "South Windsor Center" project, which includes new zoning regulations known as the Center Core Overlay Zone – (CCOZ) from 2014. The plan of this project is to identify gateways, maintain and expand sidewalks, improve connectivity to greenways and trails, create pedestrian friendly crossings and encourage outdoor activities. The study area has been identified as one of the gateway areas and making improvements in this area would be consistent with the long term plans set out in this project.

2.3 Pre-Audit Meeting

The RSA was conducted on September 1, 2016. The Pre-Audit meeting was held at 8:30 AM in the Police Department located at 151 Sand Hill Road in South Windsor.

The RSA Team was comprised of staff from AECOM, staff from CTDOT, representatives from several South Windsor departments including the Police Department, the Town Engineer, and the Town Planner. The complete list of attendees can be found in Appendix B.

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

- There is significant bicycle traffic through the RSA corridor. It is part of a route that some bicycle groups commonly take and a park entrance is nearby.
- The main issue at the Pierce Road/Ellington Road intersection is a poor sight line for vehicles left turning onto Ellington Road from Pierce Road.
    - A line of hedges on the corner property restricts sight lines.
    - The hedges are outside of the state right of way so they can only be removed by the owner.
    - Past efforts to work with the property owner to have the hedges removed have been unsuccessful.
    - The town is not aware of any way they can force the owner to remove the hedges.
    - There can also be sun glare issues as drivers pull out of Pierce Road and onto Ellington Road.
    - There is a daycare on Pierce Road that generates significant morning and afternoon traffic.
    - Pierce Road can also be used as a cut through by drivers looking to avoid traffic on Sullivan Avenue.
- There are areas nearby that could be re-developed and generate additional traffic.
    - Several areas are already approved for residential or commercial development.

- Wapping Park is nearby and contains trails that are popular for bicycle and pedestrian use. This in turn generates additional bicycle and pedestrian traffic in the RSA area as pedestrians and bicycle riders travel to the park.
- There are two different speed limits on Ellington Road, 40 mph west of Clark Street and 35 mph east of Clark Street. The actual point where this change takes place is somewhat unclear.

3 RSA Assessment

3.1 Field Audit Observations

Intersection of Ellington Road and Pierce Road:

- There is insufficient sight distance when making a left turn out of Pierce Road onto Ellington Road due to the hedge (Figure 5).
- The existing curb radius is very large.
- The existing widths on Ellington Road in this area are 6' WB shoulder, 13' WB lane, 14' EB lane and 5' EB shoulder.
- The stop bar is set back significantly from the intersection; this compounds sight line problems.
- There is a municipal bus stop in the area of the intersection (Figure 5).
- Possible improvements to the intersection were discussed.
    - Shifting the Pierce Road yellow line to the east could allow for better sight line.
    - The stop bar could be moved forward to improve sight line.
    - Tightening the lane widths and curb radii could shrink the intersection and make it easier to navigate while also increasing sight distance.

Figure 5. Intersection of Pierce Road and Ellington Road

Ellington Road:

- A proposed sidewalk can run along the north side of Ellington Road from Clark Street to Pierce Road (Figure 6).
- There is a significant culvert (stream crossing) located approximately 400 feet east of Pierce

Figure 6. Ellington Road Facing East

Road. Ellington Road widths at the culvert are 7′ WB shoulder, 13′ WB lane, 15′ EB lane, and 4′ EB shoulder.
    - There is approximately 4′ between the edge of pavement and the culvert headwall behind the guide rail.
- Ellington Road widths east of the culvert are 2′ WB shoulder, 11′ WB lane, 13′ EB lane, and 1′ EB shoulder.
- There is a section of shoulder pavement on the north side of Ellington Road that is in poor condition (broken up) at 1610 Ellington Road (Figure 7).
- There are trails behind 1610 Ellington Road right now with some possibility for a future connection to Ellington Road.
- The existing end of sidewalk on the south side of Ellington Road is much higher than the area to its west, which would have to be re-graded to allow the sidewalk to be continued.

Figure 7. Broken Up Shoulder Pavement

Intersection of Ellington Road and Clark Street:

- There are wetlands on both sides of Ellington Road around the intersection.
- The only pedestrian facilities at the intersection are pedestrian push buttons on two corners.
- Current phasing for this pedestrian crossing is Side Street Green.
- There are commercially zoned areas on Deming Street.
- There is evidence that some vehicles travelling west on Ellington Road come off the road to bypass left turning vehicles.
- The catch basin on the corner of Clark Street and Ellington Road does not have a bicycle safe grate.
- There is not much space on the south side of Ellington Road east of the intersection between the existing edge of road and the wetlands to construct a sidewalk.

- On the north side of Ellington Road there is 9-10′ between the existing edge of road and a culvert outlet in the wetlands.

3.2 Post Audit Workshop - Key Issues

- A sidewalk on the north side of Ellington Road from Pierce Road to Clark Street is feasible given the existing conditions.
    - Narrowing the existing lane widths can generate the necessary width to construct a sidewalk on the north side without infringing on wetlands at the existing culvert.
    - A standard section of two 11′ lanes with 5-6′ shoulders would provide plenty of space for a sidewalk on one side of the road and still provide adequate shoulder width for bicycle use.
- The pavement condition in this area is poor and the town would like to find out where it falls on the VIP list.
    - The pavement condition may be too poor to warrant VIP paving and may instead warrant full reconstruction.
- Several options were discussed regarding the Pierce Road/Ellington Road intersection.
    - Re-aligning Pierce Road by shifting the centerline striping to the east to create more of a T-intersection would help sight lines.
    - Moving the stop bar closer to the intersection would help but may not be enough by itself.
    - Painted islands can be used to channel traffic into the optimal areas.
    - Tightening the curb radii and re-aligning the intersection into a T long term would improve operations.
- A change in the posted speed limit is not expected to significantly alter actual conditions.
- Additional signage or striping identifying the area as a bicycle area would be useful.
- There was some discussion regarding the possibility of motion activated flashing LEDs on Ellington Road to alert drivers to the T intersection at Pierce Road.
- The possibility of a roundabout at the Pierce Road/Ellington Road intersection was discussed since the intersection is already so large.
    - The roundabout concept does not seem like the best idea because traffic volumes are much higher on Ellington Road than Pierce Road and the dominant movement is a through movement.
- The possibility of a roundabout at the Clark Street/Ellington Road intersection was discussed.
    - Wetlands around the intersection may make a roundabout unfeasible.
- Bicycle traffic is highest between Clark Street and Pierce Road.

- Updated traffic counts are scheduled to be taken this year (2016). Traditionally the CTDOT will update counts on your road (Route 30) every three years.

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 or more years when funding is available.

4.1 Short Term

1. Re-align the Pierce Road centerline further to the east and more perpendicular to Ellington Road to provide better sight distance for left turning vehicles. Consider the possible use of painted islands at the Pierce Road/Ellington Road intersection to channel vehicles into optimal positioning.

2. Consider the use of doted edge line extensions to identify the shoulder line on the north side of Ellington Road as it crosses the Pierce Road/Ellington Road intersection.

3. Move the stop bar on Pierce Road closer to the intersection to provide better sight distance.

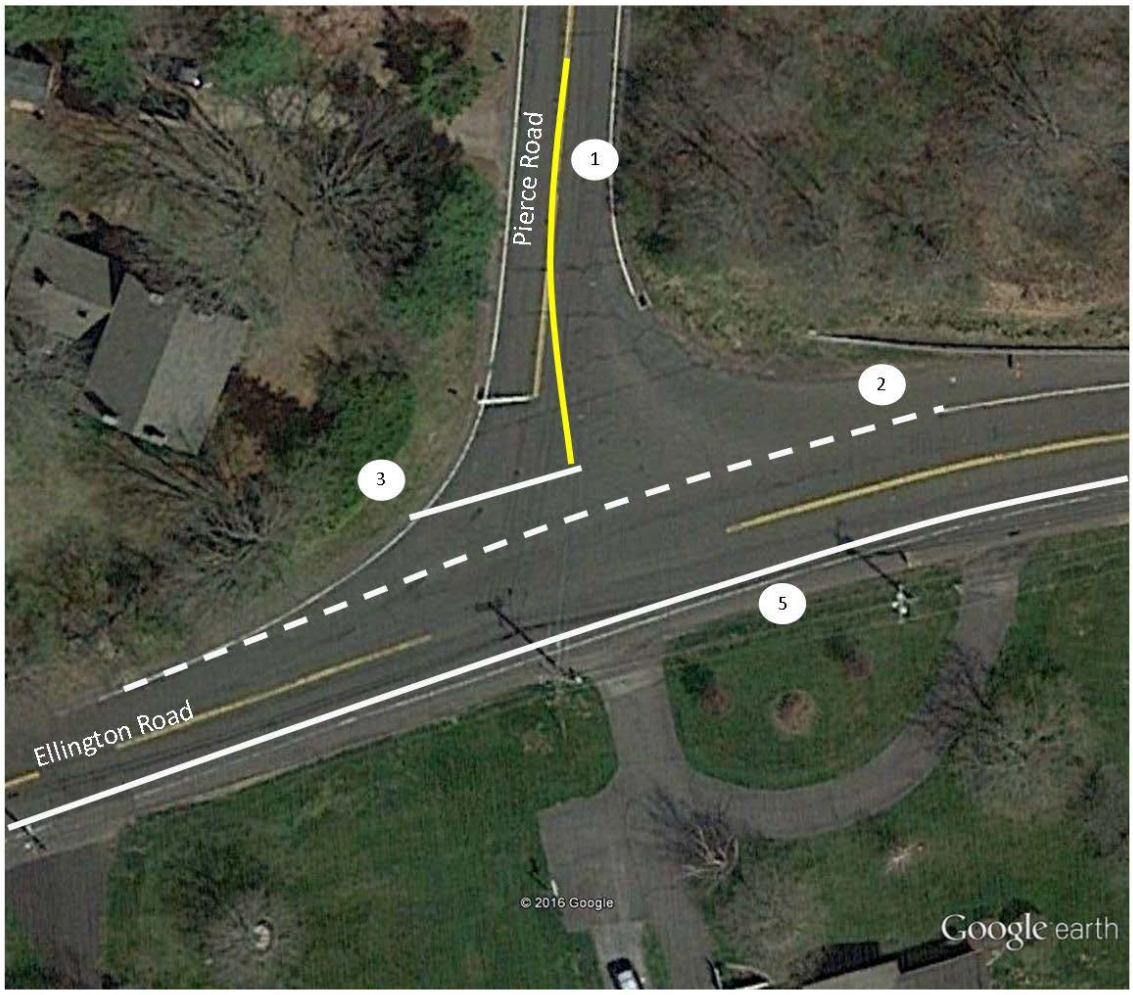
4. Investigate where Ellington Road is on the VIP list for future paving.

5. Re-stripe 11' lanes on Ellington Road if VIP paving is done.

Figure 8 - Share the Road sign

6. Install “Share the Road” signage on Ellington Road to alert drivers to the possibility of cyclists (Figure 8).

Figure 9 depicts some of these recommendations.



1. Re-align the centerline further to the east and more perpendicular to Ellington Road to provide better sight distance. Consider the use of painted islands to channel vehicles into optimal positioning.
2. Consider the use of skip lines to identify the north shoulder line as it crosses the intersection.
3. Move the stop bar closer to the intersection to provide better sight distance.
5. Re-stripe 11' lanes on Ellington Road if VIP paving is done.

Figure 9. Short Term Recommendations

4.2 Medium Term

1. Stripe a crosswalk across Ellington Road and install sidewalk ramps at the Clark Street and Ellington Road intersection (Figure 12).

2. Install pedestrian signals and ADA pushbuttons for crossing at Clark Street (Figure 10 and Figure 11).

Figure 10 - Countdown Pedestrian Signal

Figure 11 - ADA Pushbutton

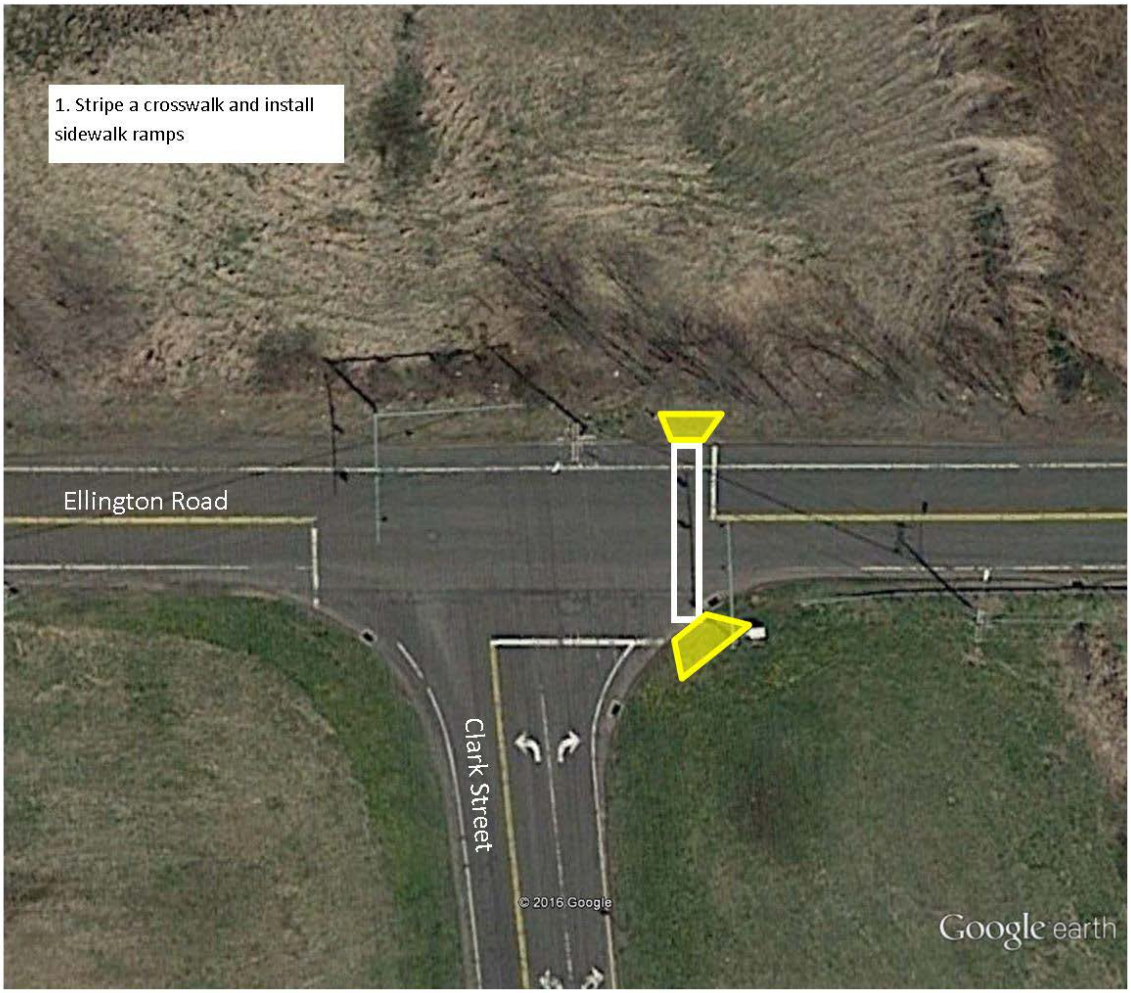


Figure 12. Medium Term Recommendations

4.3 Long Term

1. Construct a sidewalk along the north side of Ellington Road from Pierce Road to Clark Street, Including necessary work at culvert crossing.
2. Continue the sidewalk on the south side of Ellington Road east of Clark Street and connect to the existing concrete sidewalk, including necessary work at culvert crossing.
3. Reconstruct the intersection of Ellington Road and Pierce Road as a perpendicular "T" intersection by tightening the curb radii and re-aligning. Consider the use of islands in the intersection.
4. Widen the westbound side of Ellington Road through the Clark Street intersection to allow vehicles to bypass stopped left-turning vehicles.

Figure 13 depicts these recommendations.

Figure 13. Long Term Recommendations

4.4 Summary

This report documents the observations, discussions and recommendations developed during the successful completion of the Town of South Windsor RSA. It provides South Windsor with an outlined strategy to improve the transportation network for all road users between Pierce Road and Clark Street on Ellington Road (State Route 30), particularly focusing on pedestrians and cyclists. Moving forward, South Windsor 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 in the area.

COMMUNITY
connectivity program

Appendix A

CONNECTICUT DEPARTMENT OF TRANSPORTATION

AECOM
Built to deliver a better world

Welcome to the Community Connectivity Program Application

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

1. Applicant contact information

Name	Christopher Duchesne
Title	Sergeant / Traffic Unit Manager South Windsor Police Department
Email Address	christopher.duchesne@southwindsor.org
Telephone Number	(860) 648-6273

2. Location information

Address	Ellington Rd (Rte 30) Between Clark St & Pierce Rd
Description	Public Highway - State Route - One lane in each direction east / west
City / Town	South Windsor

3. Roadway type
(Please select all that apply)

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

4. Zoning
(Please select all that apply)

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

Commonly used route for cyclist groups & pedestrians accessing Wapping Park & Town Center Business District.

5. Approximate mile radius around the location

¼ mile

Other (Please Specify)

6. Community Sites
(Please select all that apply)

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

Commonly used route for cyclist groups & pedestrians accessing Wapping Park & Town Center Business District.

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

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

If Yes please describe (please specify)

Town Center Shopping Plaza, assisted living care facilities, Seven Banks, and a host of employers are located within 1/10 of a mile. Wapping Park (open space park) also located within 1/10 of a mile. Area supports CT Transit bus route.

8. Educational facilities
(Please select all that apply)

- [ ] **Public, Parochial, Private Schools (more than 1 school within a ½ mile)**
- [ ] **University / Community Colleges**
- [ ] **N/A (not applicable)**
- [x] **Other (please specify)**

3 Day care facilities - within 1/2 mile.

9. Transit facilities
(Please select all that apply)

- [x] **Bus**
- [ ] **Rail**
- [ ] **Ferry**
- [ ] **Airport**
- [ ] **Park and Ride Lot**
- [ ] **N/A (not applicable)**
- [x] **Other (please specify)**

School buses, Town Human Services shuttles, private assisted living shuttles.

10. Safety Concerns
(Please select all that apply)

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

Sight line issues Pierce Rd at Ellington Rd, No crosswalks, Narrow shoulders.

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

Yes

If Yes please describe and list all projects.

The "South Windsor Center" local project is underway including new zoning regulations from 2014 that involve a multi- faceted plan to improve the area by encouraging developers to adhere to the following goals: 1) Reinforce a “South Windsor Center” brand, 2) Draw more people to the Center, 3) Enhance the Center through physical improvements, and 4) Convey a vision for longer term redevelopment. This plan will identify gateways, maintain and expand sidewalks, connectivity to greenways and trails, create pedestrian friendly crossing, and encourage outdoor activities. The area of Ellington Rd between Pierce Rd and Clark St is one of the identified South Windsor Center Gateways (specifically the intersection of Ellington Rd and Clark St). Enhancements in this area would be consistent with the long term goals of this project.

12. Environmental Concerns:

N/A not applicable

If Yes please describe and list.

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

Ellington Rd (Rte 30) between Clark St and Pierce Rd (approximately 3/10 of a mile) is a heavily travelled area. Ellington Rd is a major artery utilized by automobiles, public transportation, pedestrians, and cyclists on a routine basis. This particular area is a main connector for traffic accessing Town of South Windsor municipal buildings, Town Center shopping plaza, numerous professional businesses, financial institutions, medical facilities, assisted living facilities, The Shoppes at Evergreen Walk, The Shoppes at Buckland Hills (Manchester), I-84, and the Towns of Manchester and Vernon.

Traffic volume in this area is high during morning rush hours all the way through evening rush hours. This area is a common route utilized by cyclists traveling in groups coming from Clark St northbound, to Ellington Rd westbound, to Pierce Rd northbound. They also use this route in reverse on their way back through.

Sidewalks are limited to one side of the street only (south side) and run from the area of Town Center on Ellington Rd and end in between Credit Union Plaza and United Bank east of Clark St. The lack of sidewalks in this area makes it difficult for pedestrians to safely travel in and out of the center of town. The Speed Limit is posted in one direction as 40 mph westbound on Ellington Rd at Clark St (entering the area to be studied). The nearest speed limit sign for eastbound traffic is approximately one mile west of Clark St at # 1175 Ellington Rd (South Windsor Fire Headquarters - 40 mph). There is also a speed limit sign (35 mph) on Ellington Rd eastbound just east of Clark St (coming out of the area to be studied). Consideration may be given to reduce the speed limit to 35 mph between Clark St and Pierce Rd to enhance the overall safety of the area.

The main entrance to Wapping Park is located approximately 1/10 of a mile from Ellington Rd and Clark St. It is an open space park area with walking trails. Pedestrians and cyclists utilize Clark St and Ellington Rd access points to get into the park.

Sight Lines in the area are generally acceptable with one exception. The intersection of Pierce Rd and Ellington Rd has a significant sight line issue on the northwest corner due to privately owned hedges. Vehicular, pedestrian, and bicycle traffic exiting Pierce Rd wishing to make a left turn onto Ellington Rd eastbound has to move out into the westbound travel lane of Ellington Rd in order to see eastbound traffic. The intersection of Ellington Rd and Clark Street is controlled in all directions by a traffic signal. It does have activation buttons on Clark St at Ellington Rd and Ellington Rd on the north side of the intersection to turn the traffic signal on Clark St green to assist pedestrians with crossing Ellington Rd. This intersection has no cross walks or crosswalk signal. The intersection of Pierce Rd and Ellington Rd also has no cross walks.

The shoulder widths vary greatly between Clark St & Pierce Rd. There is virtually no shoulder on either side of the road between Clark St and the power line right of way on Ellington Rd. Past the power line right of way, the shoulder opens up a bit, but could be wider to accommodate cyclists more comfortably.

Concerns: As noted above, the following areas are concerns that should be addressed by enhancing the overall safety of the roadway on Ellington Rd between Clark St and Pierce Rd:
1) Lack of sidewalks
2) Speed limit
3) Lack of crosswalks / crosswalk signal
4) Lack of adequate room on the shoulder
5) Sight line issue

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

N/A not applicable

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

N/A not applicable

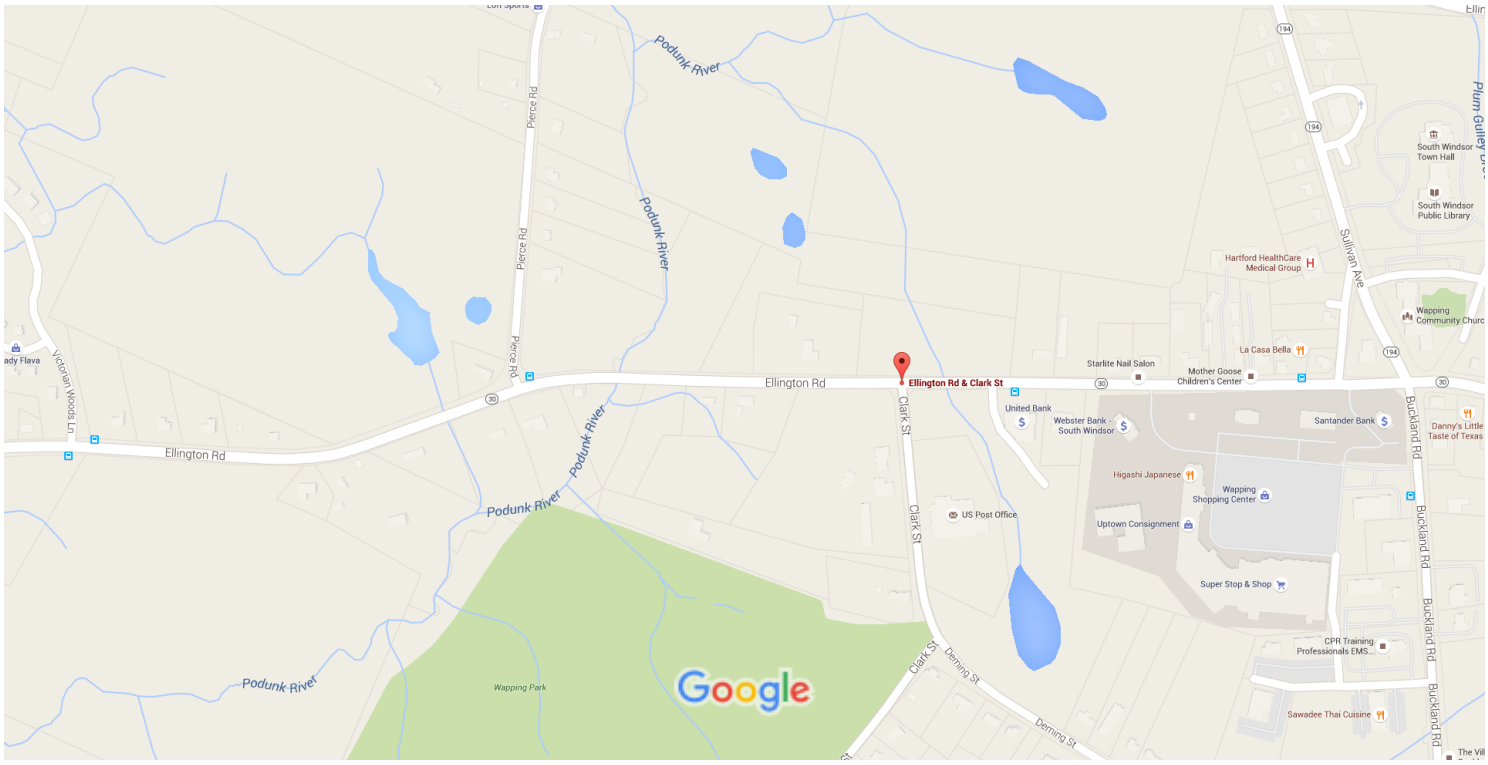
Thank you for completing the Community Connectivity application.

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 Ellington Rd & Clark St



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Ellington Rd & Clark St

South Windsor, CT 06074

COMMUNITY
connectivity program

Appendix B

Built to deliver a better world

Road Safety Audit

Town: South Windsor
RSA Location: Ellington Road
Meeting Location: South Windsor Police Department
Address: 151 Sand Hill Rd, South Windsor
Date: 9/1/2016
Time: 8:30 AM

Participating Audit Team Members

Audit Team Member	Agency/Organization
Brad Sabean	Aecom
Craig Babowicz	CTDOT
Chris Duchesne	SWPD
Michele Lipe	TOSW
Jeff Doolittle	TOSW

COMMUNITY
connectivity program

Appendix C

Built to deliver a better world

Road Safety Audit – South Windsor

Meeting Location: South Windsor Police Department
Address: 151 Sand Hill Rd, South Windsor
Date: 9/1/2016
Time: 8:30 AM

Agenda

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

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

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

8:30 AM **Welcome and Introductions**

- Purpose and Goals
- Agenda

8:45 AM **Pre-Audit**

- Definition of Study Area
- Review Site Specific Data:
  - Average Daily Traffic
  - Crash Data
  - Geometrics
- Issues
- Safety Procedures

10:00 AM **Audit**

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

12:00 PM **Post-Audit Discussion / Completion of RSA**

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

2:30 PM **Adjourn for the Day – but the RSA has not ended**

Instruction for Participants:

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

Audit Checklist

Pedestrians and Bicycles	Comment

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	

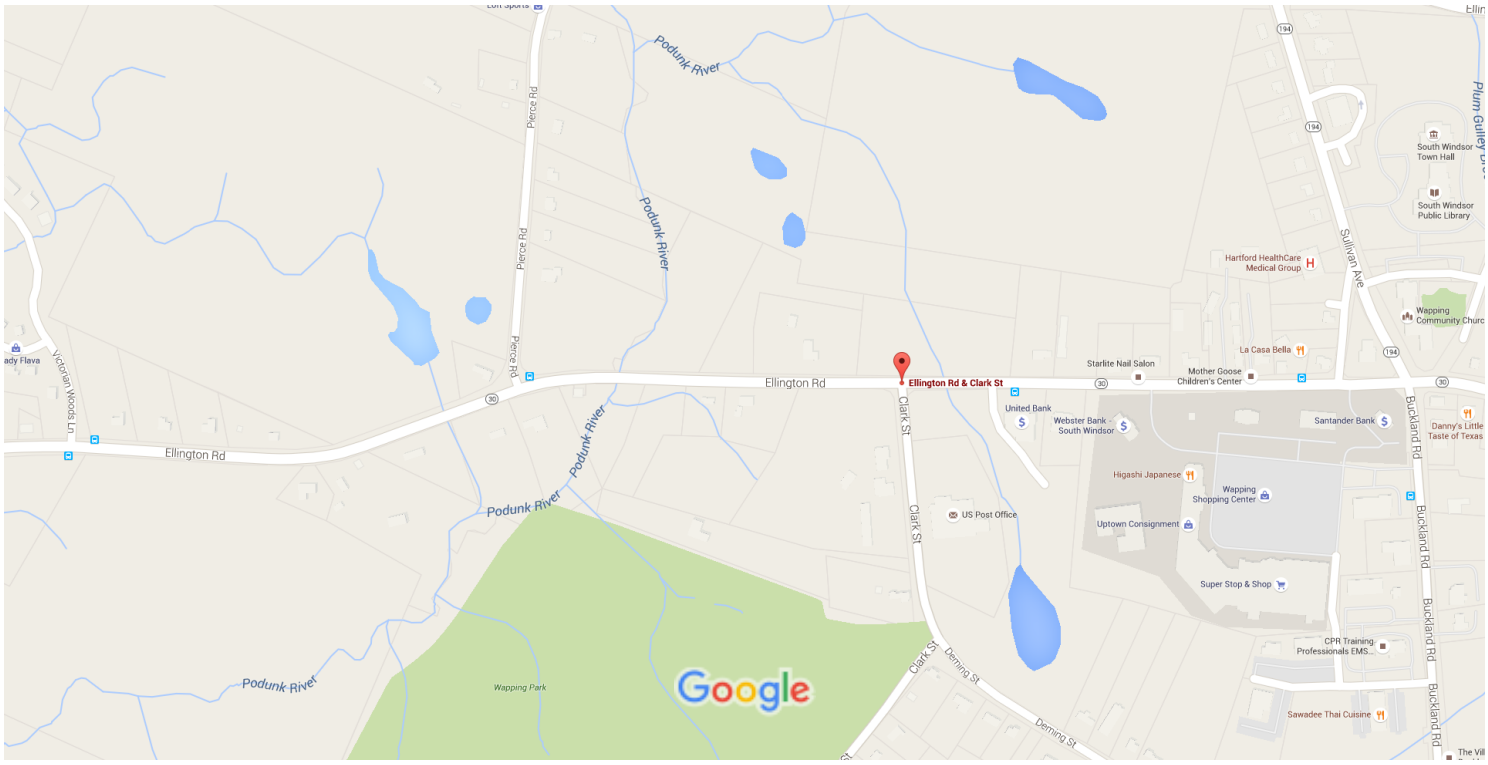
• Signing
  • Correct use of signing
  • Clear Message
  • Good placement for visibility
  • Adequate retroreflectivity
  • Proper support	

• 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	

Google Maps Ellington Rd & Clark St



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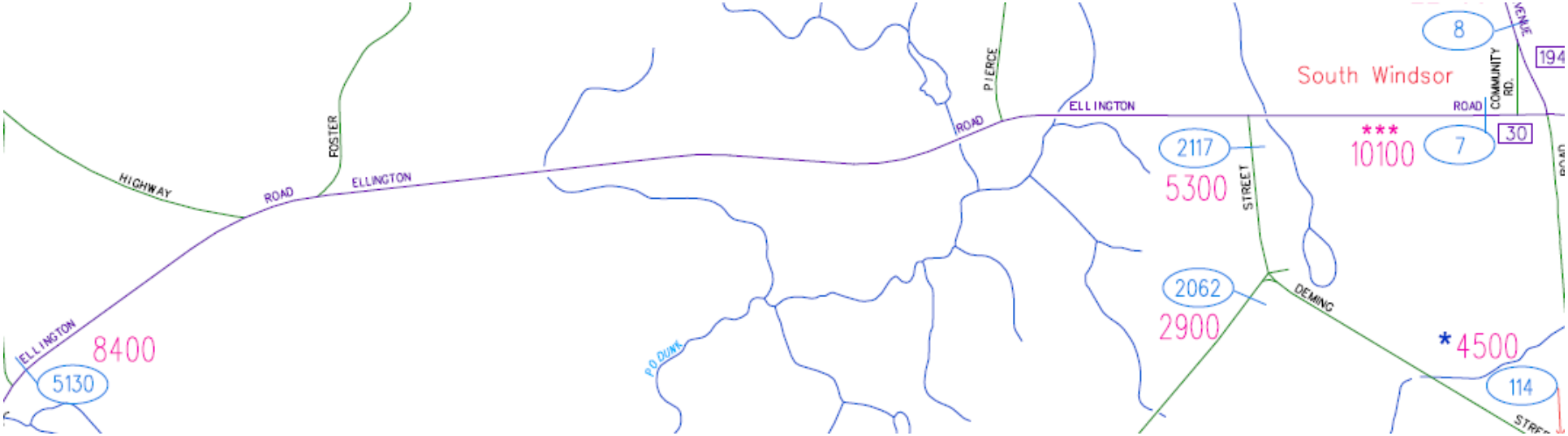
Ellington Rd & Clark St

South Windsor, CT 06074

ADT Map

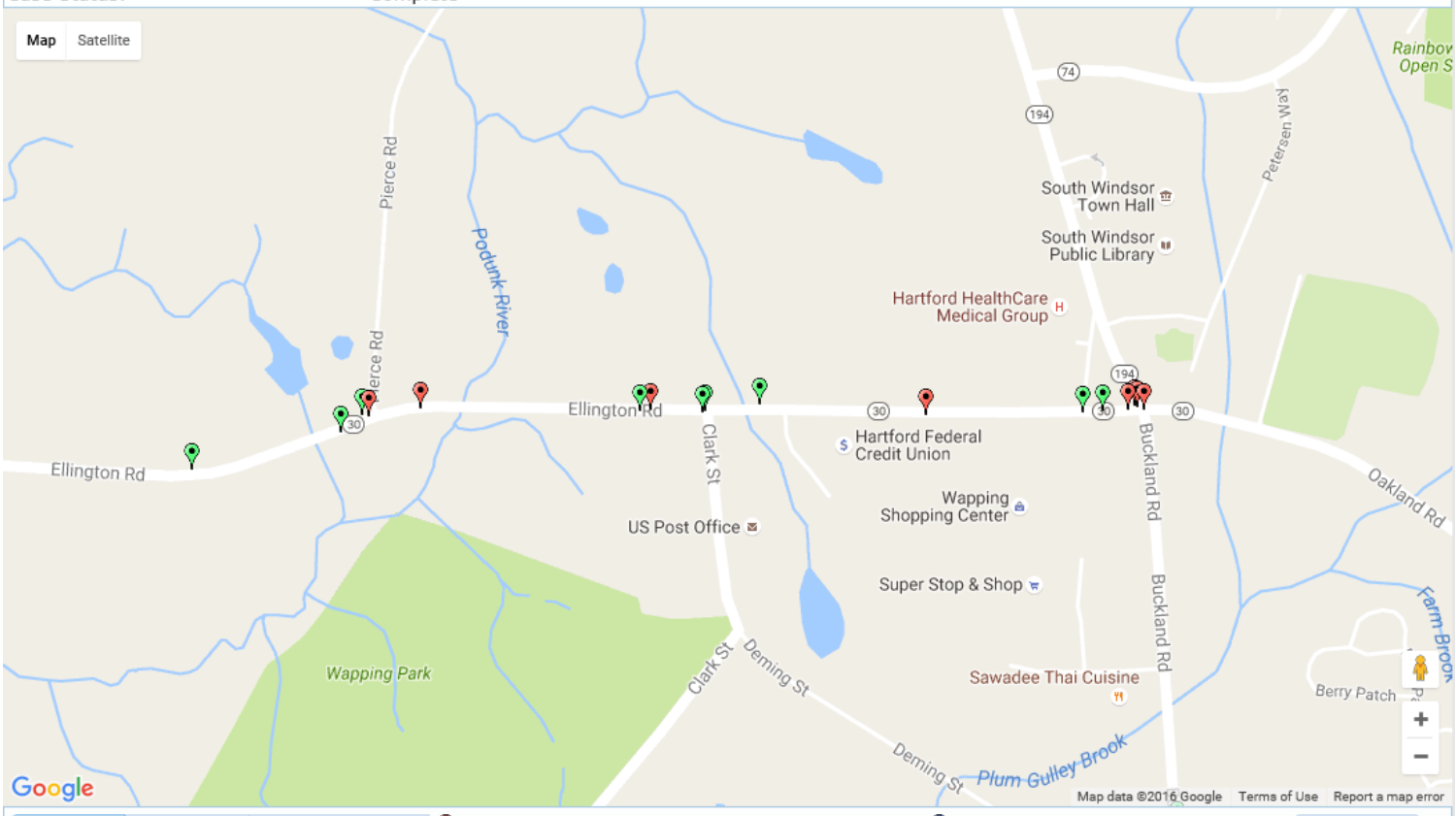

HIGHWAY
ROAD
FOSTER
ELLINGTON
ELLINGTON
8400
5130
PIERCE
ROAD
ELLINGTON
P.O.DUNK
2117
5300
2062
2900
STREET
DEMING
South Windsor
ROAD
***
10100
8
7
30
COMMUNITY
RD.
194
*4500
114

2015 Crashes

UCONN Connecticut Crash Data Repository

Search Criteria:

Dataset:	mmucc
Towns:	South Windsor
Town & Route:	Town:132 Route:30 Intersection:undefined Milepost:-
Crash Severity:	Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only
Case Status:	Complete



Markers | Heatmap | Select & Query | Query Selection

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

Select All | Deselect All

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

Road Safety Audit – South Windsor

Crash Summary

Data: 3 years (2012-2014)

There were no crashes that involved pedestrians.

There were no crashes involving bicyclists.

Severity Type	Number of Crashes	
Property Damage Only	33	72%
Injury (No fatality)	13	28%
Fatality	0	0%
Total	46	

Manner of Crash / Collision Impact	Number of Crashes	
Unknown	0	0%
Sideswipe-Same Direction	2	4%
Rear-end	25	54%
Turning-Intersecting Paths	3	7%
Turning-Opposite Direction	6	13%
Fixed Object	5	11%
Backing	0	0%
Angle	1	2%
Turning-Same Direction	3	7%
Moving Object	0	0%
Parking	0	0%
Pedestrian	0	0%
Overturn	0	0%
Head-on	1	2%
Sideswipe-Opposite Direction	0	0%
Miscellaneous- Non Collision	0	0%
Total	46	

Weather Condition	Number of Crashes	
Snow	1	2%
Rain	6	13%
No Adverse Condition	39	85%
Unknown	0	0%
Blowing Sand, Soil, Dirt or Snow	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	46	

Light Condition	Number of Crashes	
Dark-Not Lighted	1	2%
Dark-Lighted	14	30%
Daylight	30	65%
Dusk	0	0%
Unknown	0	0%
Dawn	1	2%
Total	46	

Road Surface Condition	Number of Crashes	
Snow/Slush	1	2%
Wet	8	17%
Dry	37	80%
Unknown	0	0%
Ice	0	0%
Other	0	0.0%
Total	46	

Time		Number of Crashes	
0:00	0:59	1	2%
1:00	1:59	0	0%
2:00	2:59	0	0%
3:00	3:59	0	0%
4:00	4:59	0	0%
5:00	5:59	0	0%
6:00	6:59	0	0%
7:00	7:59	2	4%
8:00	8:59	0	0%
9:00	9:59	1	2%
10:00	10:59	3	7%
11:00	11:59	3	7%
12:00	12:59	2	4%
13:00	13:59	2	4%
14:00	14:59	4	9%
15:00	15:59	4	9%
16:00	16:59	6	13%
17:00	17:59	5	11%
18:00	18:59	3	7%
19:00	19:59	4	9%
20:00	20:59	2	4%
21:00	21:59	1	2%
22:00	22:59	0	0%
23:00	23:59	3	7%
Total		46	

South Windsor - Ellington Road

DRAFT

Legend

- Sidewalk
- Crosswalk
- Stop Controlled Intersection
- Pedestrian Crossing Sign
- Signal Controlled Intersection
- 2016 VIP Paving

N

Pierce Rd

Ellington Rd

30

Rte 30

S

SPEED LIMIT 40

Ellington Rd

Rte 30

S

SPEED LIMIT 35

30

Community Rd

Sullivan Ave

194

S

Clark St

SPEED LIMIT 35

Ellington Rd

Rte 30

Wapping Park

Wapping Shopping Center

Buckland Rd

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 – South Windsor

Fact Sheet

Functional Classification:

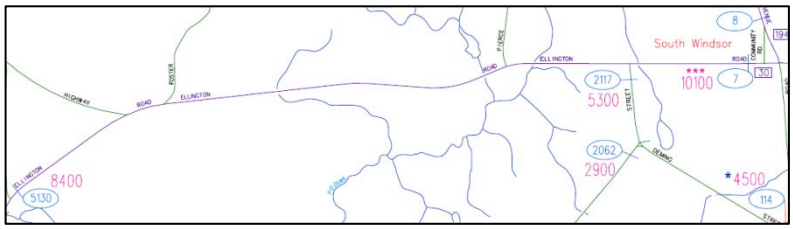
- Ellington Road is classified as a Principal Arterial Other

ADT

- ADT on Ellington Road is 8,400 – 10,100

Population and Employment Data (2014):

- Population: 25,795
- Employment: 12,661



Urbanized Area

- South Windsor is in the Hartford Urbanized Area

Demographics

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

Air Quality

- South Windsor's CIPP number 224
- South Windsor is within the Greater CT Marginal Ozone Area
- South Windsor's is within a CO Attainment Area