



COMMUNITY
connectivity program

New London

Route 32 (Mohegan Avenue) – Road Safety Audit (RSA) Route 32 – Road Safety Audit

April 14, 2016



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Acknowledgements:

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

With assistance from AECOM Transportation Planning Group

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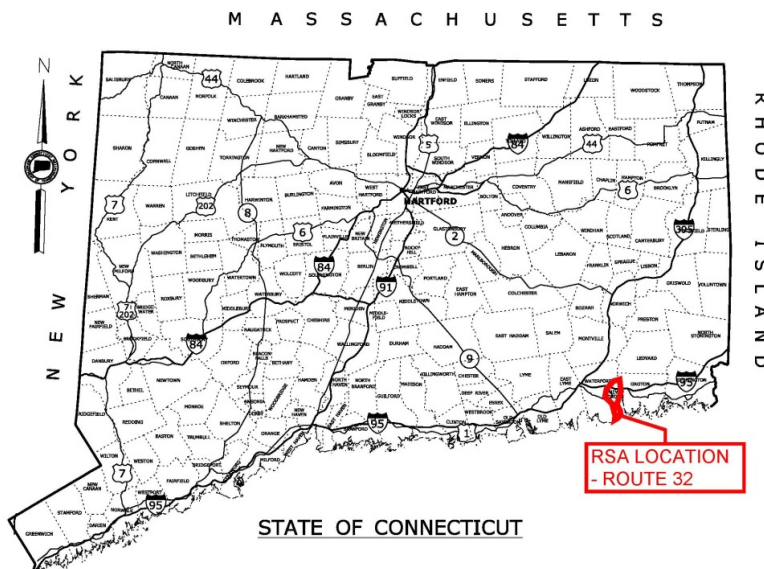
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The Connecticut Department of Transportation (CTDOT) is undertaking a Community Connectivity Program that focuses on improving the state's transportation network for all users, with an emphasis on bicyclists and pedestrians. A major component of this 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 and severity.

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

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



1 Introduction to the New London – Route 32 (Mohegan Avenue) RSA

The City of New London submitted an application to complete an RSA along the Route 32 corridor, which passes through Connecticut College and runs directly in front of the Williams School and the United States Coast Guard Academy (CGA), to improve safety for pedestrians and bicyclists. The current corridor creates a channeling effect for motorists, which encourages high speeds not conducive to a college campus or residential setting. This, coupled with high traffic volumes and pedestrian activity during all times of the day, has resulted in a need to enhance the amenities/facilities. Pedestrian safety has always been a concern in and around the schools but the recent (December, 2015) tragic death of a student struck while crossing has increased the urgency to improve safety.

1.1 Location

The corridor includes the section of Route 32 (Mohegan Avenue) from the Benham Avenue intersection in the town of Waterford, south to the intersection of State Route (SR) 635 (Williams Street); Williams Street #2 from Route 32 (where it is SR 635) to the entrance of the Connecticut College Arboretum (where it is City-owned), and continuing north into the Town of Waterford as Old Norwich Road to Benham Street; and Benham Avenue between Old Norwich Road and Route 32 (Figure 1). The Route 32 Average Daily Traffic (ADT) northbound is 13,000 vehicles per day and southbound is 9,200 vehicles per day. These are significant volumes of traffic for an area that has at least 479 weekday pedestrian crossings of Route 32 in addition to 266 side street crossings and 967 crossings on the existing pedestrian overpass. In addition to the arterial crossings, the sidewalks are heavily used by pedestrians and student athletic groups from all three institutions who run along these paths.

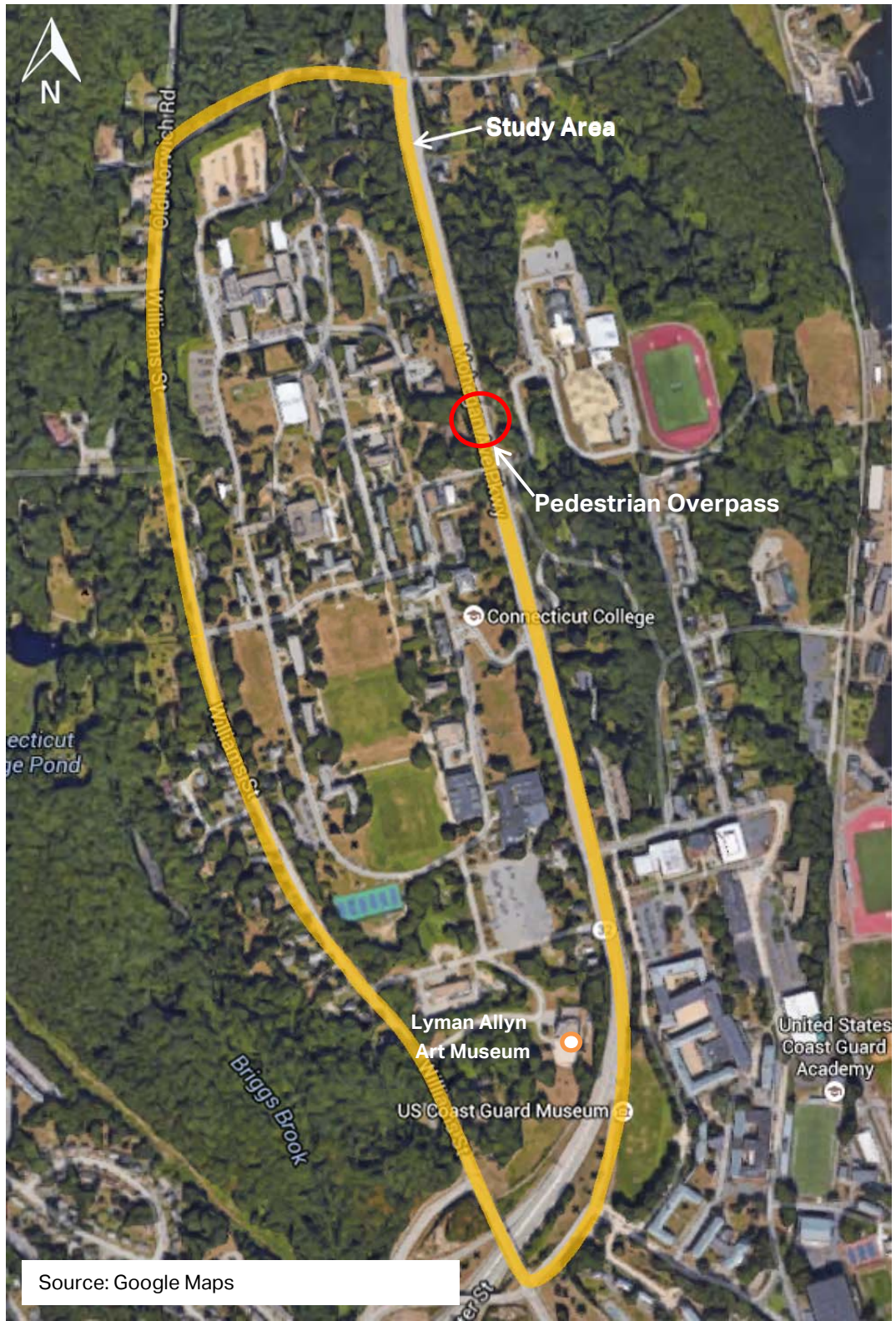


Figure 1. Study Area

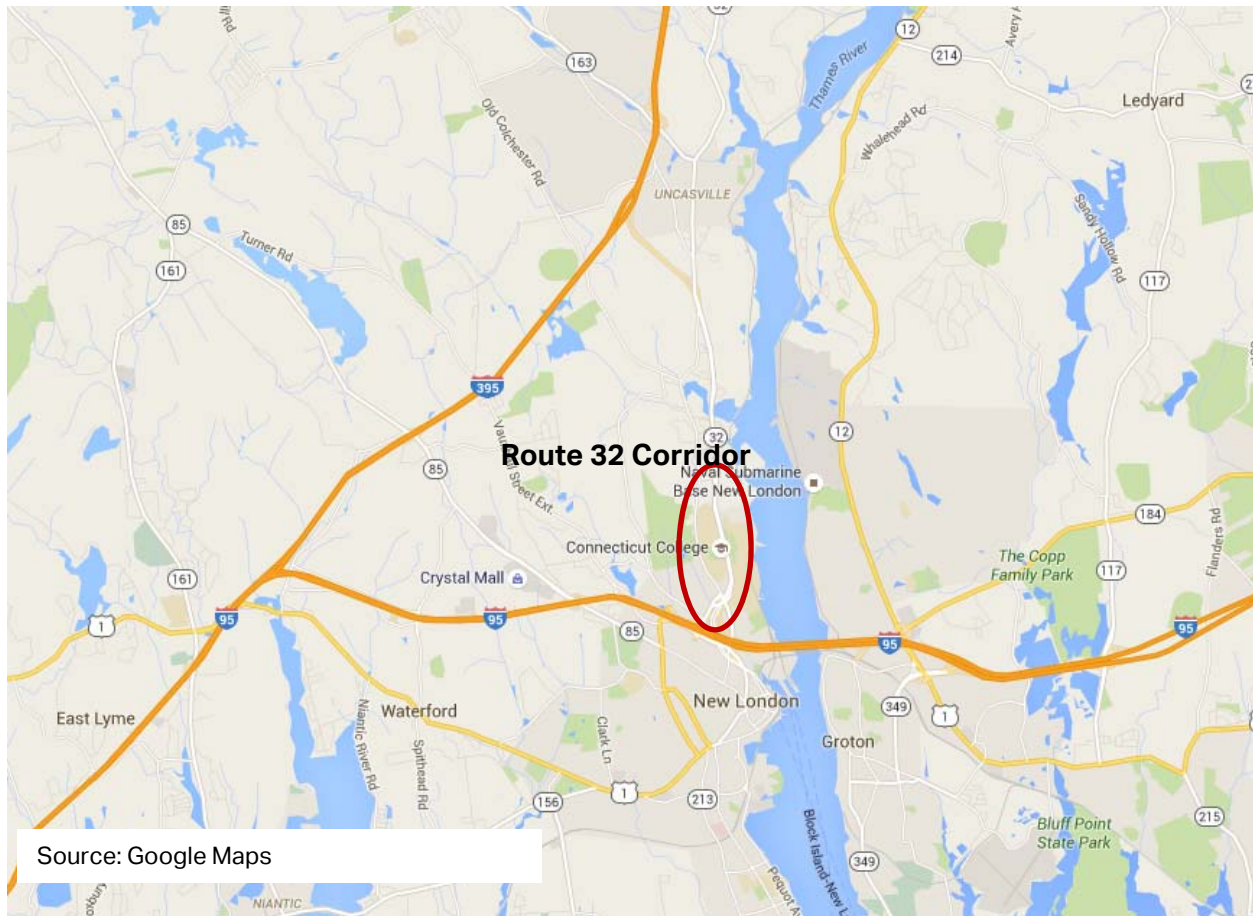


Figure 2. Study Area Regional Context

South of Williams Street, Route 32 is a divided, limited access highway. Williams Street and Route 32 are grade separated, with connections made by access controlled ramps. North of this interchange, Route 32 becomes a divided roadway, and it is classified as an Urban Principal Arterial, with signalized intersections at Deshon Street, the Connecticut College Drive, Reservoir Street, and Benham Avenue. Each signalized intersection consists of two through lanes in each direction and dedicated left turn lanes. There are also exclusive right turn lanes at some locations. Side streets have single lane approaches. The signals operate with exclusive left turn phases in the northbound and southbound directions. The pedestrian phases are generally “exclusive” (all approaches receive a red signal during the walk phase), although Benham Avenue has no pedestrian phase at all – pedestrian crossing Route 32 must cross concurrently with the side street vehicle green signal. In addition, a pedestrian bridge is located a short distance north of the Reservoir Street Intersection.

The posted speed limit in the northbound direction is 35 MPH south of Reservoir Street and 45 MPH north of Reservoir Street. The southbound speed limit is posted at 40 MPH.

2 Pre-audit Assessment

2.1 Pre-audit Information

As noted previously, traffic volumes are significant at this location. Crash history for 2015 shows that the highest frequency of crashes occurred between the Connecticut College Entrance and the Coast Guard Academy (Figure 3). The four corridor intersections showed a total of 56 crashes, compared with 445 crashes that occurred over the length of the corridor.¹ At the Connecticut College entrance and Deshon Street over one-third of the accidents resulted in an injury between 2013 and 2015². The most prevalent type of crash is rear end, which is indicative of high operating speeds and signals operating near or above capacity, resulting in congestion and more aggressive driving practices. The peak crash rate is in the afternoon between 2:00 PM and 5:00 PM, which can be attributed to the high volume period associated with commuting, shopping, and school activities. Weather and lighting conditions did not show any significant pattern of influence.

¹ Along the entire Route 32 corridor from Deshon Street to Benham Avenue there were 445 crashes between 2012 and 2015, six of which involved pedestrians.

² Because the fatality that occurred in December 2015 was a hit and run, no vehicle crash report was filed.

	Deshon St.		Connecticut College		Reservoir Rd./Winchester St.		Benham Ave.	
	Number	%	Number	%	Number	%	Number	%
Total	22	100%	12	100%	9	100%	13	100%
Property Damage Only	14	64%	7	58%	8	89%	12	92%
Injury	8	36%	5	42%	1	11%	1	8%
Fatality ³	0	0%	0	0%	0	0%	0	0%

Table 1. Crash Severity

Source: UConn Connecticut Crash Data Repository

Manner of Crash / Collision Impact	Deshon St.		Connecticut College		Reservoir Rd./Winchester St.		Benham Ave.	
	Number	%	Number	%	Number	%	Number	%
Total	22	100%	12	100%	9	100%	13	100%
Rear End	15	68%	10	83%	6	67%	7	54%
Sideswipe	1	5%	0	0%	0	0%	1	8%
Fixed Object	3	14%	1	8%	1	11%	3	23%
Overturn	0	0%	0	0%	1	11%	0	0%
Angle/Turning	2	9%	0	0%	0	0%	1	8%
Animal	1	5%	0	0%	1	11%	0	0%
Other	0	0%	1	8%	0	0%	1	8%

Table 2. Crash Type

Source: UConn Connecticut Crash Data Repository

³ Because the fatality that occurred in December 2015 was a hit and run, no vehicle crash report was filed.

	Deshon St.		Connecticut College		Reservoir Rd./Winchester St.		Benham Ave.	
	Number	%	Number	%	Number	%	Number	%
Total	22	100%	12	100%	9	100%	13	100%
No Adverse Condition	19	86%	10	83%	7	78%	10	77%
Snow	1	5%	1	8%	1	11%	1	8%
Rain	2	9%	1	8%	1	11%	2	15%

Table 3. Crash Weather Factors

Source: UConn Connecticut Crash Data Repository

	Deshon St.		Connecticut College		Reservoir Rd./Winchester St.		Benham Ave.	
	Number	%	Number	%	Number	%	Number	%
Total	22	100%	12	100%	9	100%	13	100%
Day	15	68%	9	75%	6	67%	9	69%
Night	7	32%	3	25%	3	33%	4	31%

Table 4. Crash Daylight Factors

Source: UConn Connecticut Crash Data Repository

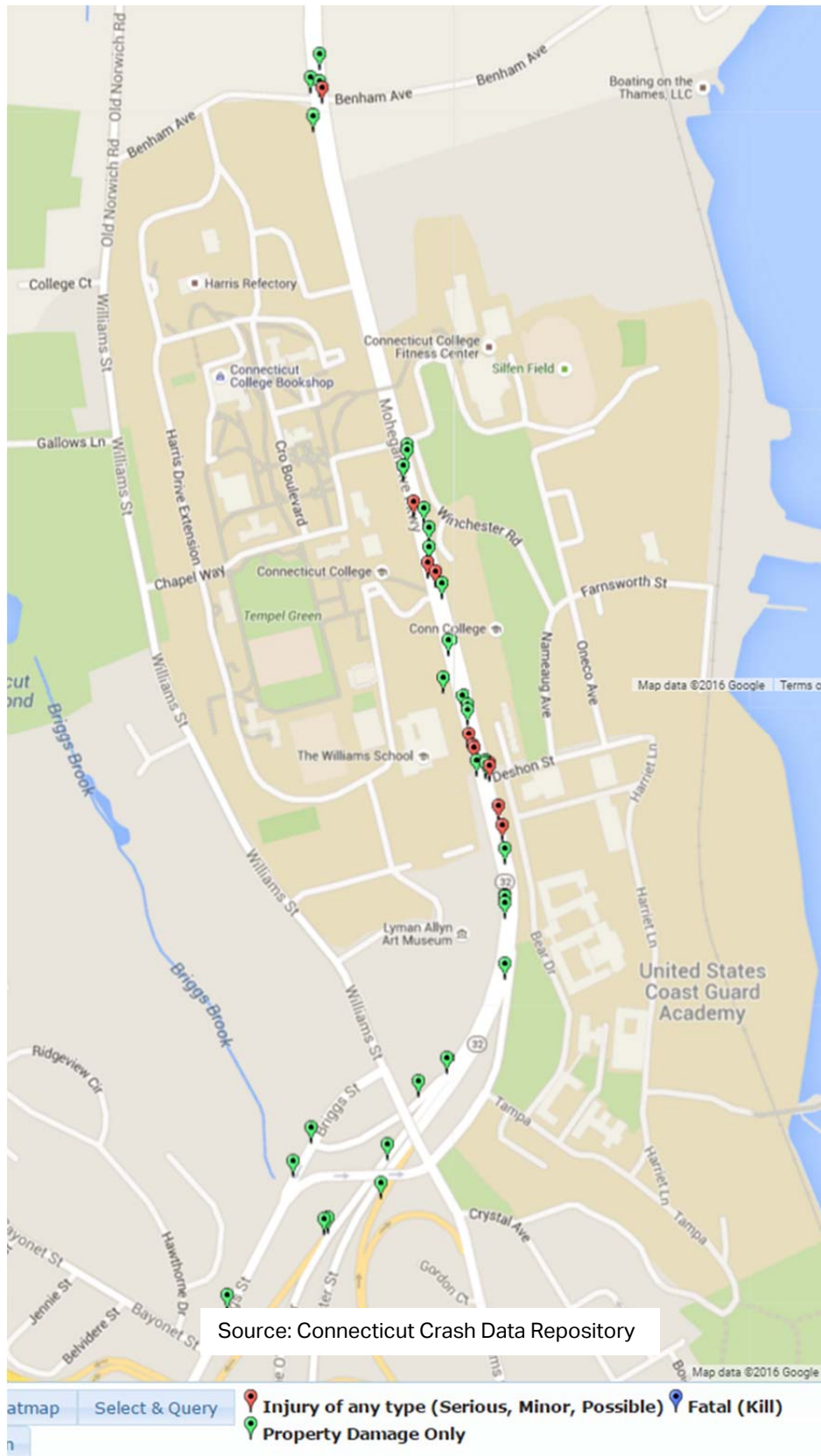


Figure 3. Crashes that Occurred in 2015 (Connecticut Crash Data Repository)

The posted speed limit in the northbound direction is 35 MPH south of Reservoir Street, and 45 MPH north of Reservoir Street. The southbound speed limit is posted at 40 MPH. Actual speeds measured by the New London Police Department between March and April of 2016 show that vehicles are traveling faster than the posted speed limit (Table 5). The southbound direction has a larger percentage of vehicles speeding.

SPEED	NB	SB
Posted	35	40
Pace ⁴	34 to 43	39 to 48
85th Percentile ⁵	44	51
Average speed	32.35	42.9
Percent speeding	46.52	62.23%
Faster than 10 mph over the speed limit	11% over 45 mph	15% over 50 mph
Faster than 20 mph over the speed limit	< 1% over 55 mph	1% over 60 mph

Table 5. Route 32 Speed Characteristics

On the west side of Route 32 there is sidewalk along most of the corridor, excluding approximately 875 feet south of Benham Avenue. The average width is 5 feet with some wider sections between the Williams School and Reservoir Street, where there is also a 2 foot snow shelf. The sidewalk north of Reservoir Street does not have a snow shelf. On the east side of Route 32 sidewalk is located from SR 635 (Williams Street) to the pedestrian bridge just north of Reservoir Street. There is no sidewalk north of that point. The sidewalk averages 5 feet wide and is protected by a guide rail placed at the curb line.

There is sidewalk on both sides of SR 635 (Williams Street) on the bridge overpass of Route 32. However, the sidewalk on the east side of the street ends at the SR 638 (Briggs Street) intersection. The sidewalk continues on the west side to the Arboretum entrance opposite Chapel Way. North of Chapel Way, there is no sidewalk along Williams Street #2, although there is an internal paved path on the Connecticut College grounds. This path comes to street side on the east side of Williams Street #2 opposite Gallows Way, which is controlled by an all-way stop. A diagonal marked crosswalk connects this path to the northwest corner of Gallows Way, where a sidewalk continues to the west. There is no sidewalk on Williams Street #2 north of this point up to the Town line of Waterford. Williams Street #2 become Old

⁴ The pace is the 10 MPH increment with the largest number of vehicles observed.

⁵ The speed that 85% of the traffic not exceeding.

Norwich Road in Waterford, where a sidewalk is located on the east side of Old Norwich Road as far as Benham Ave. The sidewalk is generally 5 feet wide and made of concrete, with a snow shelf of varying width. The sidewalk in Waterford is asphalt.

The shoulder along Route 32 is approximately 8 feet wide on both sides between Benham Ave. and Deshon Street except at the Connecticut College Entrance (southbound) and Reservoir Street (northbound) where the shoulder was narrowed to provide a right turn lane.

2.2 Prior Successful Efforts

The layout of the Connecticut College Campus and its location relative to the Coast Guard Academy campus result in a significant number of pedestrians crossing Route 32 on a regular basis. Various measures have been taken to provide the best environment for these crossings. The traffic signals have been equipped with pedestrian crossing phases, and a pedestrian bridge has been constructed to physically separate the crossing maneuver. On-campus pathways are oriented to discourage mid-block crossing, and barriers have been placed strategically to channel pedestrians to the appropriate crossing locations. Sidewalks are generally as wide as possible within the constraints imposed by the roadway pavement and vertical topography.

More recently, active detection signs, known as “speed trailers” have been placed in the area to warn motorists of their approach speeds, and to alert them that the nature of the area has changed from a freeway to a campus environment. Countdown pedestrian signals have also been installed.

Nonetheless, it remains a concern that the high number of pedestrian crossings and the relatively high volume and speed of the vehicles traveling this roadway create a difficult pedestrian environment.

2.3 Pre-Audit Meeting

The RSA was conducted on April 14, 2016. The Pre-Audit meeting was held at 8:00 AM in the Crozier-Williams Center located on the Connecticut College campus at 270 Mohegan Ave Parkway in New London.

The RSA Team was comprised of staff from AECOM, CTDOT, representatives from the three academic institutions, the City Of New London (including the Engineering Department, Police Department, Fire Department, and planning office) and others. The complete list of attendees can be found in Appendix B.

Several items were presented for general information for the audit by RSA Team members from New London:

- Within the last few months several changes have been made to the corridor to help improve pedestrian safety and include the following:
 - The active detection signs were added to warn people if they were speeding. These are mobile devices that capture significant data on travel speeds.
 - The pedestrian signal heads were replaced with the countdown heads.

- The walk time was extended for certain crossings to meet the latest MUTCD standards.
- The traffic signal timings were adjusted so that the maximum amount of time pedestrians will have to wait to cross once the button is pushed is 65 seconds.
- All the left turning detectors on Route 32 are placed onto a "lock" mode.
- A pedestrian safety working group with students was established.
- A consultant has been engaged to improve mobility in and around campus.
- The campus master plan has been reviewed to advance pedestrian initiatives.
- A campus-wide survey on drivers and pedestrians was administered, and 600 individuals responded,
- The area north of Chapel Way on Williams Street is used by college students in addition to cadets.
- On the northbound side of Route 32 by the CGA vegetation blocks visibility.
- On April 8th, 2016 a truck struck the brick wall in front of the CGA, severely damaging it.
- Athletic groups often run along SR 635 (Williams Street) and Williams Street #2 but have to cross numerous times in order to stay on the sidewalk.
- Many students come up Winchester Road and cross Reservoir Road to access the pedestrian bridge but there is no crosswalk at Reservoir Road.
- The athletic center on Reservoir Road hosts numerous events. There is no traffic detector at this location, so when an event lets out traffic gets backed up. The stop bar is far back, cars pull up beyond it.
- There is no wayfinding on Route 32 (either side) that you are approaching a school zone.
- Pedestrians feel unsafe walking on narrow sidewalks next to speeding vehicles, particularly on the southern end of Route 32 on the Connecticut College side.
- Route 32 is wide and has evolved over time to be vehicle centric. In the 1960's Elm Trees used to line it. In the late 90's turning lanes were added to improve vehicle safety.
- Since there is ample width on Route 32 there are many opportunities long term to redesign the roadway to be more pedestrian friendly and slow traffic.
- The pedestrian counts were taken in the winter; in warmer weather these would be much higher especially at Benham Avenue, which leads down to the water and Arboretum.
- When allowed to live off campus many students rent homes in and around Benham Avenue.
- There are more pedestrian crossings at night than during the day across Reservoir Road heading to Winchester Road. Sufficient lighting is important.
- The I-95 interchange is complicated; CTDOT is studying ways to improve it.
- When vehicles come off of the highway they are entering a residential area but there are no visual cues that the area is changing, resulting in excessive speeds. The highway ramp that leads into Route 32 was designed for higher speeds with no transition from the highway to campus.

- The wide shoulders and divided highway channel vehicles through at higher speeds.
- There is a narrow shoulder on Williams Street and no sidewalk after the Arboretum. Could it be striped to have narrower lanes?
- Visual cue / signs coming off the ramp from I-95 north to Route 32 are missing.
- The grades add to higher speeds.
- Route 32 is posted at 35 mph but seems to be designed for 65 mph.
- Utility poles in the sidewalk along Route 32 cause snow shoveling problems
- The wide shoulder equates to higher speeds.
- Sidewalks are in poor condition along Williams Street and on the southern section of Route 32 on the Connecticut College side.
- Benham Avenue connects to the river, so there is more traffic during the summer.
- The pedestrian bridge is being used significantly.
- It seems as though some of the traffic detectors in certain locations are not functioning properly.
- The stone wall in the southern section of Connecticut College on Route 32 southbound gives the feeling that you are driving through a tunnel.
- Williams Street #2 has broken sidewalks and shrubs and vegetation overgrowing.
- The Williams Street #2 and Chapel Way intersection has narrow shoulder and no sidewalks. This area is used for running by the cadets.
- Students have been observed crossing midblock, jumping over the barrier, to get to student housing off of Winchester Road.
- When students are dismissed at the Williams School in the afternoon, there is a lot of activity on Williams Street #2 between parents picking up students, bus traffic, and CGA runners.
- On Williams Street #2, pedestrians often walk on the roadway during the winter because the sidewalks are covered in snow/ice.

3 RSA Assessment

3.1 Field Audit Observations

The study area field observations have been divided into 7 geographic sections plus a section for general corridor wide or nonspecific observations. Figure 5 depicts the seven study areas and the numbers correspond to the observation areas in text.

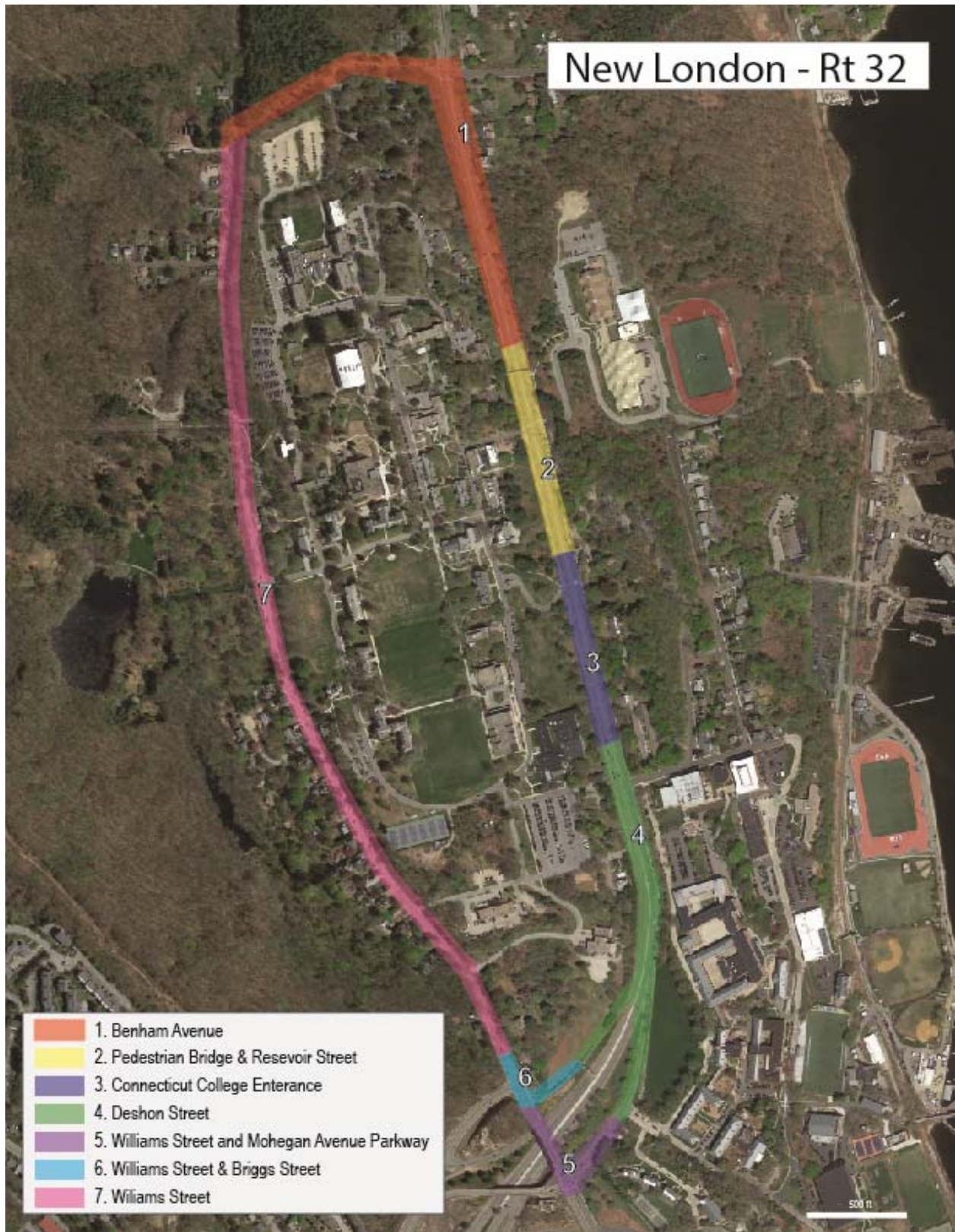


Figure 5. Corridor Sections

1. Benham Avenue

- This is where the Connecticut College campus begins, but there is no signage indicating this. (During the field investigation, a car stopped and asked where Connecticut College was.) The only signage indicating that you are entering a college campus area is a small sign directing deliveries for the college to the receiving docks.
- There are no sidewalks on Benham Avenue or this section of Route 32 on either side. Adding sidewalks on Benham Avenue would be challenging due to the grade.
- There is a pedestrian push button for the crossing but there are no pedestrian signal heads or ramps. This signal has pedestrians cross on the green light (Figure 6). There is no pedestrian phase. This is inconsistent with the other crosswalks. There are also no ramps leading to the crosswalk or push button, making them non ADA compliant.
- Students walk on the wide shoulder.
- Benham Avenue leads down to the water and Arboretum; many students visit here on nice days and sometimes classes are held here (Figure 7).
- There are many competing signs.
- There is no gateway on the northern section of Connecticut College.
- A multiuse path could be installed here on Route 32.
- The active speed signs here do help, but it was warned that if made permanent, they lose their effectiveness unless connected to enforcement.
- Roadway lane widths are 12 feet.
- A median with trees would be more attractive and create less of a channel feeling.



Figure 6. Pedestrian Push Button for Crossing

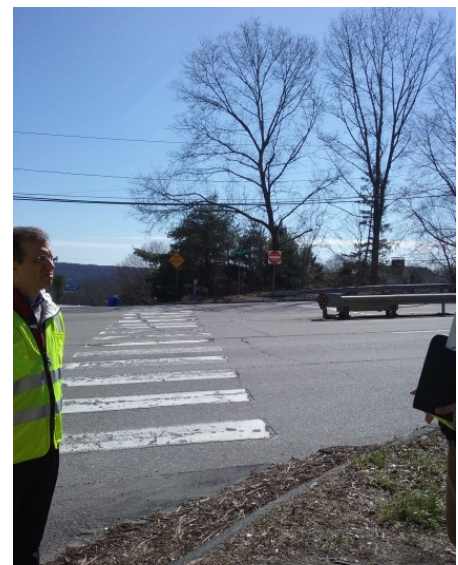


Figure 7. Crosswalk at Benham Avenue

- Painted crosswalks and stamped concrete ones would be more apparent to motorists.
- Lighting would be needed for any new sidewalk.
- Southbound speed limit is 45 mph but northbound is 35 mph. This appears inconsistent.
- Southbound traffic on Route 32 has a visual cue from the traffic speed sign to slow down.
- There is considerable available roadway width here to make improvements.
- The pedestrian bridge can be seen from this intersection.

2. *Pedestrian Bridge and Reservoir Street*

- The pedestrian bridge is at the crest in the road.
- The bridge is not ADA accessible (Figure 8).
- The bridge could be used as a gateway with student art.
- Crosswalk ramps lack detectable warning strips.
- The push button in the northeast corner of the intersection for the pedestrian crossing is placed where it is inaccessible to those in a wheelchair (Figure 9).
- Utility poles are located within the sidewalk making it difficult to plow and reducing the available walking path (Figure 10).
- The guard rail is broken (wooden blocks) in places.
- There is no crosswalk on Reservoir Street (Figure 11).
- Fences should be placed along the property to direct students to crossings.



Figure 8. Pedestrian Bridge, not ADA Compliant



Figure 9. Push Button is not ADA Accessible



Figure 10. Utility Poles in the Sidewalk Path

- The crosswalk is long and not perpendicular to the roadway, sometimes people may stop in the middle.
- Going northbound on Route 32, the stop lines are far back from the intersection.
- Reservoir St. (westbound) is closed at night – vehicles turning onto this street do not have room to stop and turn around due to the location of the gate. (All of the entrances close at night so that all vehicles must enter through the main entrance).
- If drivers heading northbound on Route 32 and in the left turn lane creep past the stop line, the vehicle will not trigger the detector for the left-turn green arrow.
- The sidewalk seems very close to the road and is not a hospitable place to walk.

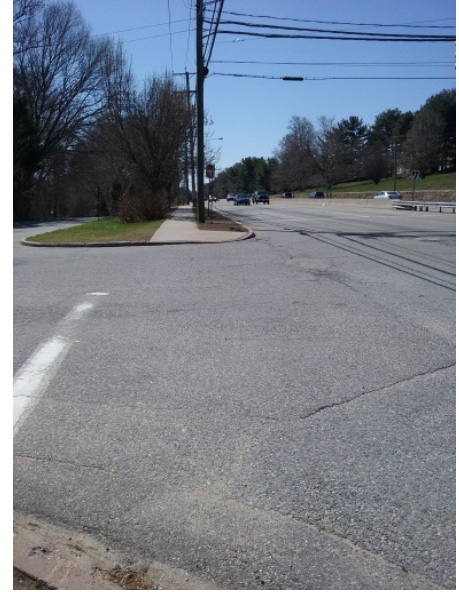


Figure 11. Lack of Crosswalk Across Reservoir Street

3. Connecticut College Entrance

- The gateway is hard to see to Connecticut College (Figure 12).
- Campus cameras to have surveillance of this area would be helpful in case of events.
- The stop bars are set far back on the northbound side of Route 32.
- Would a roundabout work here?
- There are no detectable warning strips.
- The paint should be restriped with epoxy resin.
- Traffic calming is needed here.
- Some traffic signs are dull and old.
- There is a lack of consistency in signing.



Figure 12. Gateway to Connecticut College



Figure 13. Old Sign Stub

- Vegetation encroaches on the sidewalk on the northbound side of Route 32.
- Old sign stubs stick out in the grass buffer area along the northbound side of Route 32 (Figure 13).
- There are high pedestrian counts at this crossing; they are likely even higher in warmer weather.

4. *Deshon Street*

- This signal has an exclusive pedestrian phase but there is no crosswalk north/south across Deshon Street (Figure 14).
- Between the I-95 ramp and Deshon Street there is no signage to tell cars to slow down (Figure 15).
- The pedestrian signal is long.
- On the Connecticut College side of Route 32 the sidewalk is old and not maintained well. There is overgrowth, especially by the museum.
- There are yield signs, not stop signs, from the I-95 ramp onto Route 32.
- Pedestrian signal does not have audio.
- There are no detectable warning strips on the northeast corner of the intersection.
- Pedestrian crossing signs can be added before Deshon Street.

5. *SR 635 (Williams Street) & SR 636 (Mohegan Avenue)*

- The crosswalk on the north side of SR 635 (Williams Street) does not end at a ramp but there are ramps on either side of it (Figure 16).
- The crossing distance across SR 636 (Mohegan Avenue) on the eastern side is a long distance.



Figure 14. Lack of Sidewalk Across Deshon Street



Figure 15. Lack of Visual Cues to Slow Down



Figure 16. Crosswalk at Williams St. & Mohegan Ave. in NW Corner

- The catch basin grates in this area are not bicycle friendly.
- The sidewalk is narrow.
- There is no pedestrian wayfinding (Figure 17).
- There are no painted shoulder lines.



Figure 17. Lack of Pedestrian Wayfinding

6. SR 635 (Williams Street) & SR 638 (Briggs Street)

- This is a three leg intersection but only two directions are stop controlled.
- The sidewalk ends here and pedestrians are forced to cross, about 150 feet down the road it picks back up again for a short distance.
- The crosswalk ramps are ADA compliant but there is no painted crosswalk (Figure 18).
- There is no pedestrian crossing signage.
- This may be a good candidate for a flashing beacon crosswalk; this intersection is heavily used by student athletic groups.
- A pedestrian crossing sign is needed.
- The sidewalk begins to break down after Briggs Street (Figure 19).



Figure 18. Crossing with Ramps but no Painted Crosswalk



Figure 19. Poor Sidewalk Conditions Along Williams Street

7. Williams Street #2

- There is no parking along most of Williams Street #2 but the lanes are wide. Could the center line be shifted and parking eliminated to fit a sidewalk on both sides, or lanes narrowed and shoulder stripped?
- Many of the traffic signs are faded and difficult to read, particularly the no parking signs (Figure 20).
- Signs (both private and street signs) are low (below 7') in places but within the walkway. In

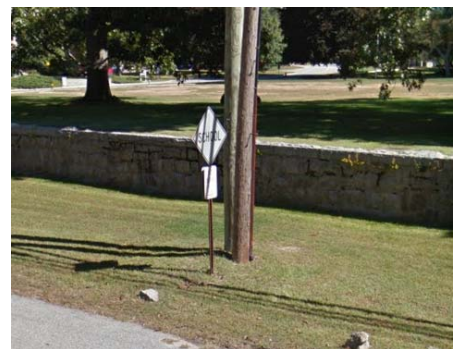


Figure 20. Faded Traffic Signs

particular, a few of the no parking signs are below the minimum required per the MUTCD. There are also a few “for sale” or other private signs whose posts are not within the right-of-way but signs hang in it.

- Can the Hawk crossing system be installed at the arboretum entrance; there is heavy pedestrian crossing here from Conn College. Could a speed table be installed?
- The sidewalk is in poor condition along most of Williams Street. It is heavily cracked, chunks are missing and tree roots have caused upheavals in sections. The sidewalk is nearly impassable for those using a mobility device.
- In areas where there are no sidewalks, vehicles were observed veering into the opposite lane to accommodate pedestrians walking in the road.
- Intersection visibility at the service entrance to the Williams School is poor due to vegetation, a sign, and the road grade.
- The sidewalk picks back up at the Waterford town line, approximately 1600 feet from the arboretum where it currently ends, and goes to Benham Avenue. The sidewalk is on the northbound side of the road, this is the opposite side of the Arboretum and existing sidewalk (Figure 21).
- Along the sidewalk, across from the entrance to the Lyman Allan Museum on Williams Street #2, there is a steep drop in grade that is a safety hazard for pedestrians (Figure 22).
- There are confusing parking signs in front of the arboretum. There is a “no parking this side of sign” sign with a “free parking, 2 hour limit beyond this point” sign stacked on top of each other (Figure 23).



Figure 21. Start of Sidewalk on Williams St at Waterford Town Line.



Figure 22. Steep Drop-off Adjacent to Sidewalk



Figure 23. Conflicting Parking Signs

8. Other - General

- Rumble Strips can help slow down traffic.
- Reduced lane widths can provide wider sidewalk/ bikeway and act as traffic calming.
- If a screen system was used (instead of guiderails) this might prevent jay walking.
- Multi-use path along the corridor would accommodate pedestrians and bicyclists.
- Most sidewalks are not ADA compliant.
- The college is exploring another Pedestrian Bridge at Deshon Street to reduce pedestrian traffic the Connecticut College Entrance.
- Crosswalk striping can be changed to provide perpendicular crosswalks which provide shorter roadway crossing distance.
- The two college entrance gates are closed in the night – currently have no room for a vehicle that turns in by mistake to get back on the road safely.
- Timed signals – if you drive 35 mph you can drive through with all green lights.



Figure 24. Lack of Traffic Calming

3.2 Post Audit Workshop - Key Issues

Benham Intersection:

- Branding the area with signs:
 - Advanced wayfinding signs (for college and CGA) (Figure 25).
 - One group was asked by a car where the college was.
 - Signs at this intersection would improve wayfinding.
 - Should investigate the possibility for adding a sign to the pedestrian bridge to reinforce the message about being in a



Figure 25. The Only Wayfinding Sign at the Benham Intersection

college area. Vertical clearance might be an issue (Figure 26).

- Southbound traffic on Route 32 has a visual cue from the active traffic speed sign to slow down.
- Pedestrian cross with green, this is not an exclusive walk. This is inconsistent with the other crosswalks.
 - There is no signal head to notify pedestrians when it's safe to walk.
- There is a lot of roadway width here to make improvements.
- Install a multi-use trail – narrow lane widths to slow vehicles down, eliminate barrier.
- Install a barrier that cannot be crossed/jumped over to discourage pedestrians from crossing midblock.
- Repaint crosswalks to stand out more (different color or stamped crossing).
- Incorporate art.

Reservoir St./Winchester Rd.

- Crosswalks should be made perpendicular to the road.
- Look into pedestrian phases on the side roads.
- The radius of the curve coming out of Reservoir St. could be tightened (or add bump-outs).
- Long crosswalk, sometimes people may stop in the middle (Figure 28).
- Going NB the stop lines are far back from the intersection.
 - The centerline could be extended and the stop line could be moved up.
- Reservoir St. (westbound) is closed at night – vehicles turning left onto this street do not have



Figure 26. Pedestrian Bridge as you Head South on Route 32 Which Could Become a Gateway



Figure 27. View North From Pedestrian Bridge, Lacks Visual Cues that you are on a College Campus

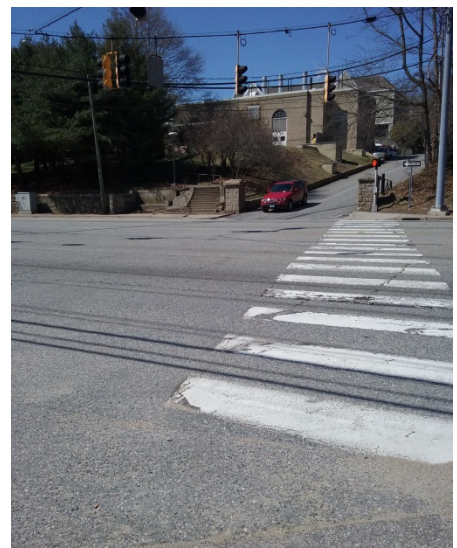


Figure 28. Long Crossing Distance

room to stop and turn around due to the location of the gate (All of the entrances close at night so that all vehicles must enter through the main entrance).

- Drivers heading NB and in the left turn lane, if they creep past the stop line the vehicle will not trigger the detector for the left-turn green arrow.
- All stop areas should be evaluated to address visibility/sight lines.
- Sidewalks at this intersection are not ADA compliant (Figure 29).
- In-road lighting for the crosswalks.
 - Flashing LEDs.
- Timed signals – if you drive 35 mph you can drive through with all green lights.



Figure 29. Non-ADA Compliant Crosswalk

Area between Reservoir St. and Main Entrance:

- Sidewalk is very close to the road.
- Not a hospitable place to walk.
- Safety hazards (old signs, rocks).

Main Entrance:

- High pedestrian counts at this crossing, likely higher in warmer weather.
- New count-down pedestrian signals were added and maximum wait time for pedestrians was reduced (65 seconds).
- Observed 15 to 20 seconds from time student pressed button and when they crossed.
- Heading SB on 32, you cannot see sign for college until it's too late.
- Warning signs on guide rails are not consistent (some not reflective, some are different colors).



Figure 30. Span Pole in the Sidewalk

- There is no crosswalk or pedestrian button for the entrance driveway crossing.
- Cameras could be used to monitor hot-spot areas
- Utility box is blocking the sidewalk, a wheelchair might not be able to pass around it (Figure 30).
 - Might need an easement from the school to move this to a better location off the sidewalk.
- Northwest intersection area is very small.
 - One group felt the right-turn lane was not needed and could be removed to make more room for the sidewalk (Figure 31).
 - The slope of the sidewalk heading up towards campus is steep.
- Evaluate lighting at this intersection.
- Potential pedestrian bridge south of the main entrance.
- If a second pedestrian bridge was added, a fence could be added to prevent students from crossing anywhere other than the crosswalks and bridges.



Figure 31. Little Room for Groups to Wait for Crossing



Figure 32. Overgrown Vegetation

Deshon St. Intersection:

- Should be a crosswalk on Deshon St. (CGA uses this entrance and there are a lot of right turns).
 - College students cross here.
- No pedestrian button on the east side for pedestrians heading south.
 - The whole intersection is exclusive.
 - If an exclusive button is added, a pedestrian just crossing Deshon St. would stop all traffic on Route 32.
- Overgrown vegetation – pedestrians are not able to use the entire width of sidewalk (Figure 32).

Other areas:

- On-ramp – sends a mixed message that vehicles should speed up to enter Route 32, but then reach a traffic signal .
 - Make this more like a Merritt Parkway ramp.
- Rumble strips could be added.
 - Noise could be an issue for nearby residential areas.
- Long term – modifications to the entrance at CGA from Route 32 would have to consider their security/gate house.
- Both of the southern bridges can be used for signage to let drivers know they are entering the campus area (to slow down) (Figure 33).
- Highway ramps and routes to get to CGA and Connecticut College campus are convoluted.

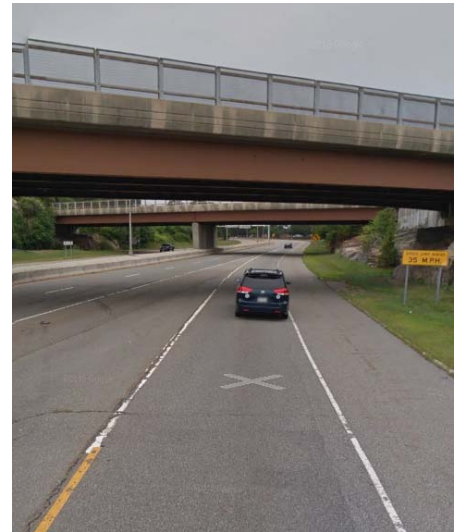


Figure 33. Opportunity for Visual Cues to Slow Down on Bridges

SR 635 (Williams Street)

- Room for signs to be installed on both sides of road.
- SR 635 (Williams St.)/SR 636 (Mohegan Ave.) has pedestrian signals but they do not have countdowns.
- Crosswalks do not align with sidewalk ramps.
- Room on eastern side of bridge to make a wider shoulder.
- Hodge’s Square – plan to revitalize this area calls for connection to Williams St.
- SR 635 (Williams St.)/SR 638 (Briggs St) is a two-way stop.
 - Add sign “Opposing Traffic Does Not Stop”.



Figure 34. Noticeable pedestrian Path Where Sidewalk Ends

- No crosswalk.
- When sidewalk ends (on eastern side) there is a noticeable path where people walk in the grass (Figure 34).
- Wide lane (Figure 35).
 - Put in line for shoulder.
 - Adjust center line to make room for sidewalks.
- Sidewalks are in bad condition.
- Need for fence/barrier on sidewalk with drop off.

Williams Street #2 Entrance:

- Visibility at service entrance is poor due to vegetation, sign, and hill.

Sunrise Rd/Williams St. #2:

- Add additional pedestrian crossing signs.
 - "No Parking" sign can be removed.

Arboretum:

- Move line to center.
- Alerting traffic of pedestrians.
- Gap in sidewalks between Arboretum and Waterford line.
- Lighting.
- Vehicles use Williams St. #2 and Old Norwich Road to bypass Route 32.
- Gallows Ln – sidewalk extension done by college (Figure 36).
- Crosswalk – painted lines should be parallel with direction of travel.
- New stop signs.



Figure 35. Williams Street has a Wide Cross Section



Figure 36. New Sidewalk Extension at Gallows Lane

- More flexibility on this street for lanes to be less than 11 ft. wide.

Williams St. #2/Benham Ave.

- Slopes are steep.
 - Would require grade work.
- Pedestrians could cut through campus to get to Williams St. from Benham.

Other comments:

- Pedestrian signals should have audio signals.

4 Recommendations

From the discussions during the Post-Audit meeting, the RSA team compiled a set of recommendations that are sorted 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.

All proposed traffic control devices shall conform to the latest Manual on Uniform Traffic Control Devices (MUTCD).

Any work performed within the State R.O.W. will require an encroachment permit application and review by CT DOT.

4.1 Short Term

Benham Intersection

1. Repaint crosswalks to stand out more (different color or stamped crossing. Note possible maintenance issue.) (Figure 37).
2. Incorporate art into the pedestrian bridge to reinforce the message that this is a college area and to slow down.

Pedestrian Bridge and Reservoir Street

3. Add crosswalks and pedestrian signals on the side roads.
4. Adjust stop bar on Reservoir Street to conform to the location of loop detector.
5. The centerline could be extended on Route 32 and the stop line could be moved up on the northbound side, as it is presently set far back. This may require an adjustment to the loop detectors. Conformance with MUTCD and geometrics for turning trucks would have to be checked.

Connecticut College Entrance

6. Add crosswalks and pedestrian signals on the side roads.
7. Add pedestrian warning signs at appropriate locations, in accordance with MUTCD and CT DOT policies.

Deshon Street

8. Add a crosswalk on Deshon Street.
9. Remove or cutback overgrown vegetation just north of the Deshon Street intersection on the northbound side of Route 32.

SR 635 (Williams Street) & SR (636) Mohegan Avenue

10. Replace existing pedestrian heads with countdown ones (Figure 38).
11. Realign the crosswalk on the northeastern side of the intersection to align with one of the crosswalk ramps.
12. Paint edge lines along Williams Street, especially on the bridge.

SR 635 (Williams Street) & SR 638 (Briggs Street)

13. Add "Oncoming Traffic Does Not Stop" signs or make this an all-way stop intersection (Figure 39). If the city wants to pursue all-way stop control, the local traffic authority should send a request to CT DOT (OSTA) for review.
14. Remove brush at the corner of the bridge parapet (NW corner).
15. Add a crosswalk across Williams Street #2.

Williams Street #2/Old Norwich Road

16. Move the center line to the center, paint shoulder lines and add bike lanes.
17. At the new crosswalk at Sunset Road & Williams Street, Remove the "parking sign"/
Add additional pedestrian crossing signs.
18. At the service entrance to the Williams School remove the vegetation that blocks visibility.

General

19. Dynamic speed sign to reduce travel speeds.
20. Repaint lane, crosswalk and other markings which have faded.
21. Relocate signing out of the pedestrian way to accommodate proper horizontal and vertical clearances.
22. All stop areas should be evaluated to address visibility/sight lines.
23. Thin vegetation where there are visibility issues and cut back vegetation encroaching into the sidewalk (Figure 40).
24. Replace signs that worn out and not retroreflective.
25. Add pedestrian crossing signs and down arrows to all non-controlled (signal or stop control) pedestrian crossings (Figure 41).

Figure 42 reflects these recommendations



Figure 37. Painted Stamped Crosswalk



Figure 38. Countdown Pedestrian Signal Head



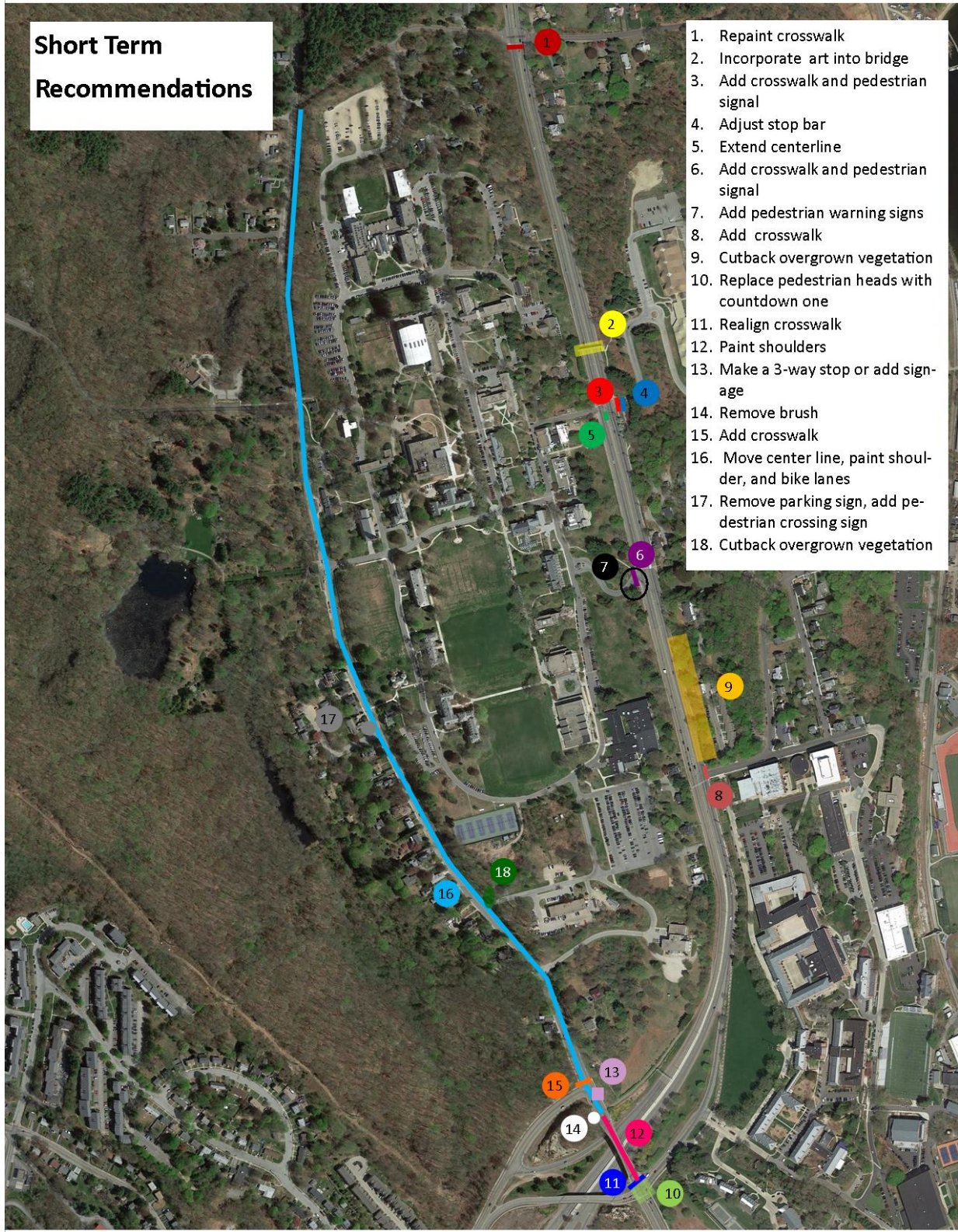
Figure 39. "On Coming Traffic Does Not Stop" Sign



Figure 40. Vegetation that Needs to be Thinned



Figure 41. Example of Pedestrian Crossing with Down Arrow Sign at Uncontrolled Approaches



Short Term Recommendations

1. Repaint crosswalk
2. Incorporate art into bridge
3. Add crosswalk and pedestrian signal
4. Adjust stop bar
5. Extend centerline
6. Add crosswalk and pedestrian signal
7. Add pedestrian warning signs
8. Add crosswalk
9. Cutback overgrown vegetation
10. Replace pedestrian heads with countdown one
11. Realign crosswalk
12. Paint shoulders
13. Make a 3-way stop or add signage
14. Remove brush
15. Add crosswalk
16. Move center line, paint shoulder, and bike lanes
17. Remove parking sign, add pedestrian crossing sign
18. Cutback overgrown vegetation

Figure 42. Short Term Recommendations

4.2 Medium Term

Benham Intersection

1. Brand the area with signs to create a gateway.
2. Update the pedestrian signal heads with the countdown and audible warning.
3. Install barriers that cannot be crossed/jumped over to discourage pedestrians from crossing midblock.

Pedestrian Bridge and Reservoir Street

4. The driveway radius coming out of Reservoir St. could be tightened (or add bump-outs).
5. Adjust the crosswalk on Route 32 so that it is made perpendicular to the road.
6. Reservoir St. (westbound) is closed at night – vehicles turning left onto this street do not have room to stop and turn around due to the location of the gate, move the gate inward so that there is enough room for vehicles to safely turn around if they mistakenly try to enter.
7. Remove safety hazards (old signs, rocks, broken guard rail).

Connecticut College Entrance

8. Install cameras at hot-spot areas (Figure 43) within the college/private property.
9. Evaluate pedestrian lighting at this area

SR 635 (Williams Street) & SR 636 (Mohegan Avenue)

10. Increase wayfinding signage.

Williams Street #2

11. Add a fence/barrier on the sidewalk where there are steep drop offs.
12. Implement no parking in front of the Arboretum.

General

13. Add gateway or visual cues that you are entering a college area. Make it seem that you are not going through Connecticut College but you are at Connecticut College when on Route 32.
14. Add sidewalk ramps where missing (Figure 44).
15. Implement advanced wayfinding for pedestrians, bicyclists and motorists.
16. Paint the shoulders a different color in conformance with the MUTCD so they stand out more (City to maintain - Figure 45).
17. Add rumble strips on Route 32 between the right most travel lane and the shoulder for better vehicle guidance (Figure 46).
18. Investigate the viability of LED streetlights along Route 32 to improve light levels and the uniformity of the lighting for drivers and when pedestrians are using crosswalks.
19. Add detectable warning strips to all crossings where missing (Figure 47).

Figure 48 reflects these recommendations.



Figure 43. Safety Surveillance Camera



Figure 44. Install Sidewalk Ramps Across Cross Streets



Figure 45. Example of Shoulders Painted a Different Color



Figure 46. Example of Rumble Strip between Bicycle and Traffic Lane



Figure 47. Example of Detectable Warning Strip

Mid Term Recommendations

1. Create a gateway
2. Add pedestrian signal heads
3. Install barriers to prevent mid-block crossing
4. Tighten curve radius
5. Make Crosswalk Perpendicular
6. Move gate inward
7. Remove safety hazards
8. Install cameras
9. Evaluate pedestrian lighting
10. Increase wayfinding signage
11. Add barrier/fence
12. Implement no parking
13. Add gate and visual cues
16. Paint shoulders a different color
17. Rumble strips between right most travel lane and shoulder
18. Investigate LED streetlights

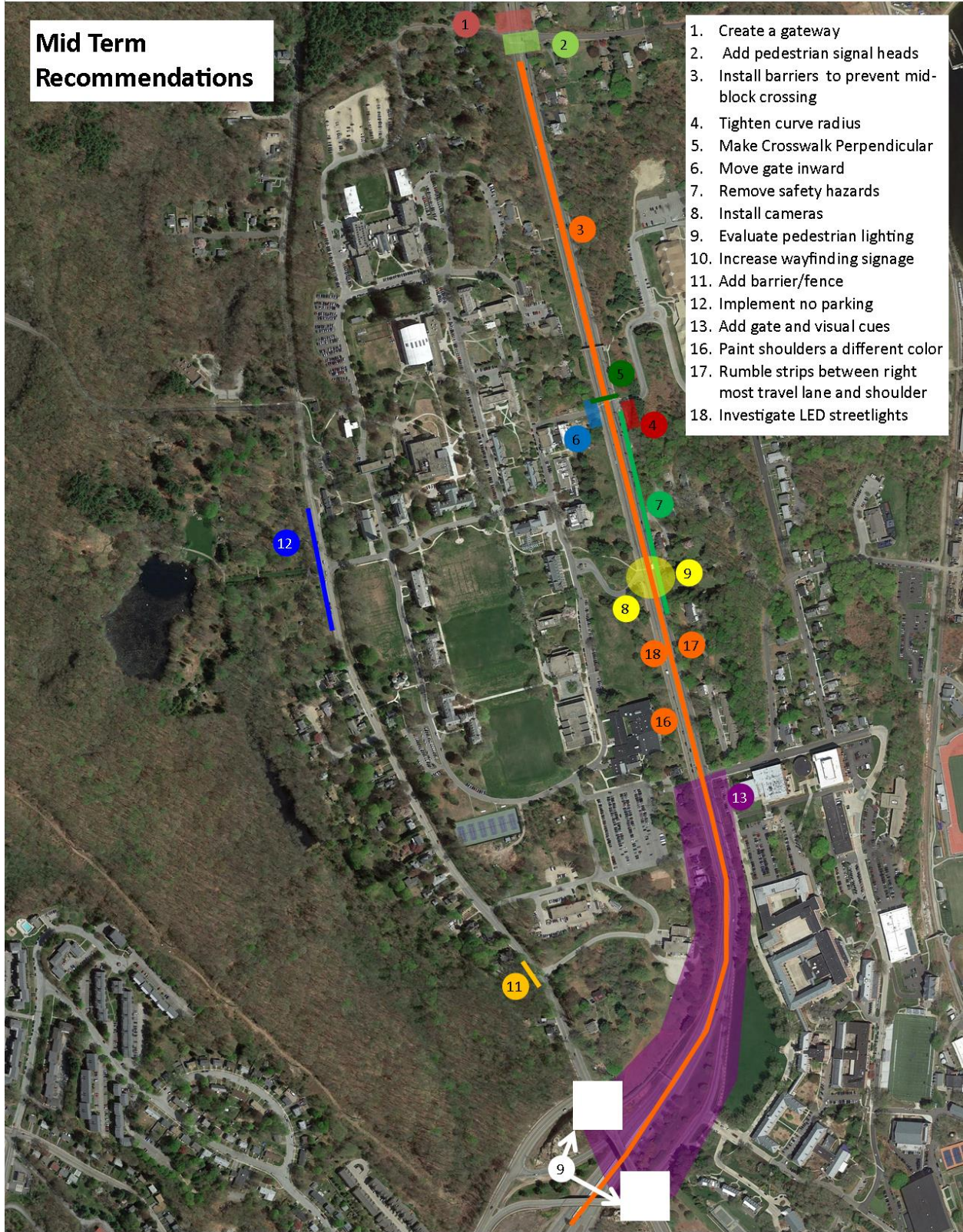


Figure 48. Medium-Term Recommendations

4.3 Long Term

Benham Intersection

1. Narrow the lane width and add a multi-use trail.
2. Add a sidewalk to Benham Avenue.
3. Update the signal to provide exclusive pedestrian phasing.

Pedestrian Bridge and Reservoir Street

4. Evaluate the best location and install a secondary pedestrian bridge.

Connecticut College Entrance

5. Relocate the utility box out of the pedestrian way.
6. Reevaluate the need for a right turn lane into the college.
7. If a second pedestrian bridge was added, a fence could be added to prevent students from crossing anywhere other than the crosswalks and bridges.
8. Install in-road lighting for the crosswalks in accordance with the MUTCD.

Deshon Street

9. Install a sidewalk connecting River Ridge Road to the existing sidewalk on Route 32.

SR 635 (Williams Street) & SR 638 (Briggs Street)

10. Continue the sidewalk on the northbound side of Williams Street.

Williams Street #2

11. Widen and redo the sidewalk to bring it up to code.
12. Add a raised crossing and active pedestrian crossing system such as the HAWK system in front of the Arboretum, in accordance with the MUTCD.
13. Improve the existing sidewalk to bring it up to current standards.
14. Add a sidewalk on the side of the road where it is missing.
15. Extend the sidewalk from the arboretum to the Waterford line to meet existing sidewalk.
16. Improve pedestrian lighting, particularly in front of the arboretum.



Figure 49. Example of Hawk Crossing System

General

17. Create a boulevard along Route 32.
18. Relocate utilities out of pedestrian way

19. Reengineer Route 32 to signal lower speeds by creating a boulevard with a wider planted median, creating complete streets, and narrowing the lane widths to 11 feet with 10 feet turning lanes.
20. Reengineer Route 32, south of Deshon Street to signal slower speeds to drivers. SR 635 (Williams Street) overpass could be investigated for use to install dynamic signs to indicate pedestrian/campus area ahead. Signing would need to conform to the MUTCD.
21. As Route 32 is modified, the SR 638 (Mohegan Ave) ramp from SR 635 (Williams Street) could then be reconstructed at a "T" intersection.
22. Create wider sidewalks.
23. Brand the entire area as Campus Hill.
24. Add accessible devices to all pedestrian signals where missing.

Figure 50 reflects these recommendations.

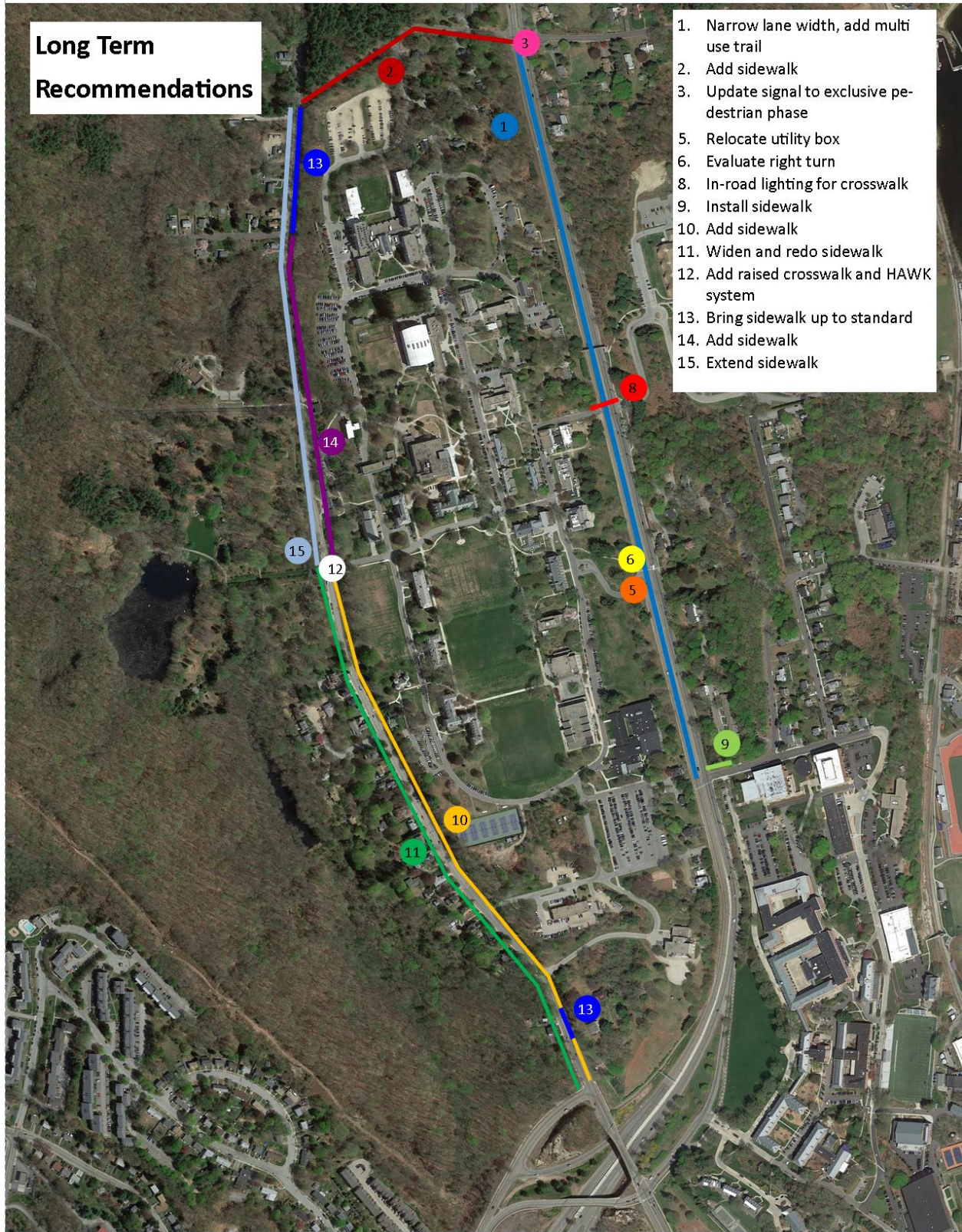


Figure 50. Long Term Recommendations

4.4 Summary

This report outlines the observations, discussions and recommendations developed during the RSA. It documents the successful completion of the City of New London RSA and provides New London, Connecticut College, and the United States Coast Guard Academy with an outlined strategy to improve the transportation network on Route 32 and SR 635 (Williams Street), William Street #2 and Old Norwich Road for all road users, particularly focusing on pedestrians and cyclists. Moving forward, the City and Colleges 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.



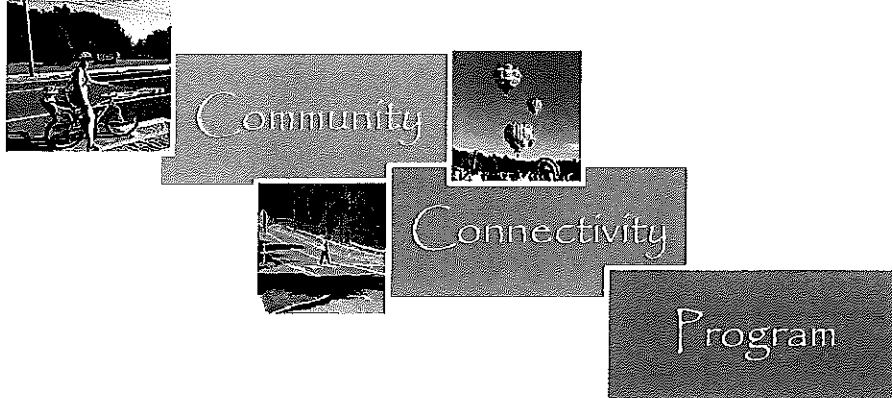
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Appendix A



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Welcome to the Community Connectivity Program Application



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

1. Applicant contact information

Name

Title

Email Address

Telephone Number

2. Location information

Address

Description

City / Town

3. Roadway type
(Please select all that apply)

State road

Local road

Private Road

Other (please specify)

Divided Highway

4. Zoning
(Please select all that apply)

Industrial

Residential

Commercial

Mixed Use

Retail

N/A (not applicable)

Other (please specify)

Educational Institutions, Connecticut College, Williams School & Coast Guard Academy

5. Approximate mile radius around the location

1/2 mile

Other (Please Specify)

A mile section of roadway

6. Community Sites
(Please select all that apply)

Community Centers

Business Districts

Restaurant/Bar Districts

Churches

Housing Complexes

Proximity to Schools

Tourist Locations (examples – Casino, Malls, Parks, Aquarium, etc...)

N/A (not applicable)

Other (please specify)

Educational Institutions, Connecticut College, Williams School & Coast Guard Academy

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

Yes

No

If Yes please describe (please specify)

Roadway passes through two colleges, a military facility and Private School of grades 5-12. A significant number of educators, administrators and support staff are employed in this area.

8. Educational facilities
(Please select all that apply)

Public, Parochial, Private Schools (more than 1 school within a ½ mile)

University / Community Colleges

N/A (not applicable)

Other (please specify)

Military Installation- Coast Guard Academy

9. Transit facilities
(Please select all that apply)

Bus

Rail

Ferry

Airport

Park and Ride Lot

N/A (not applicable)

Other (please specify)

10. Safety Concerns
(Please select all that apply)

Traffic (volumes & speed)

Collisions

Sidewalks

Traffic Signals

Traffic Signs

Parking Restrictions / Additions

Drainage

ADA Accommodations

Agricultural & Live Stock crossing

Maintenance issues (cutting grass, leaves, snow removal)

N/A (not applicable)

Other (please specify)

Pedestrian/Bicycle Safety

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

No

If Yes please describe and list all projects.

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

This section of state road (Route 32) bisects the Connecticut College campus and runs directly in front of the entrances to the Williams School (grades 5-12 and preschool) and the United States Coast Guard Academy. The main portion of the Connecticut College campus is west of the highway and the athletic facilities, student and faculty residences and administrative offices are on the east side of the highway. This requires the faculty, employees and students to cross the busy highway several times a day. The Williams School and children's preschool along with the Coast Guard Academy entrances are directly along this section of roadway also. Due to the residential nature of these educational institutions, at any time during the day or night students, cadets, faculty and staff can and will be crossing this very active highway. While the speed limit is posted as 35 miles per hour, traffic often travels in excess of the posted speed through this section of roadway through the four marked cross walks.

Over the past decade, there have been at least 390 reported accidents in this area and at least 97 involved personal injuries. The most recent serious incident was a December 18, 2015 incident where a Connecticut College student was struck and killed by a hit and run driver while, in the cross walk of the main entrance to campus.

Pedestrian safety has always been a concern in and around schools, colleges and military installations, but the recent tragic death has increased the sense of urgency, to examine, if the most effective efforts and systems are currently being applied in this area of roadway.

Safety concerns include:

Is the speed of traffic through the four cross walks reasonable and safe?

Can improved signage and signaling of the cross walk ahead be effective?

Can the relocation of electric poles currently located in the middle of the sidewalks assist in snow removal?

Can improved timing of the pedestrian lights at crosswalks enable greater time to transit cross walks?

Are there new style pedestrian lights with count downs more effective than just "walk/ don't walk" lights?

Are traffic calming techniques such as road burrs effective?

Is it reasonable and feasible to have permanently mounted speed monitoring devices in the area?

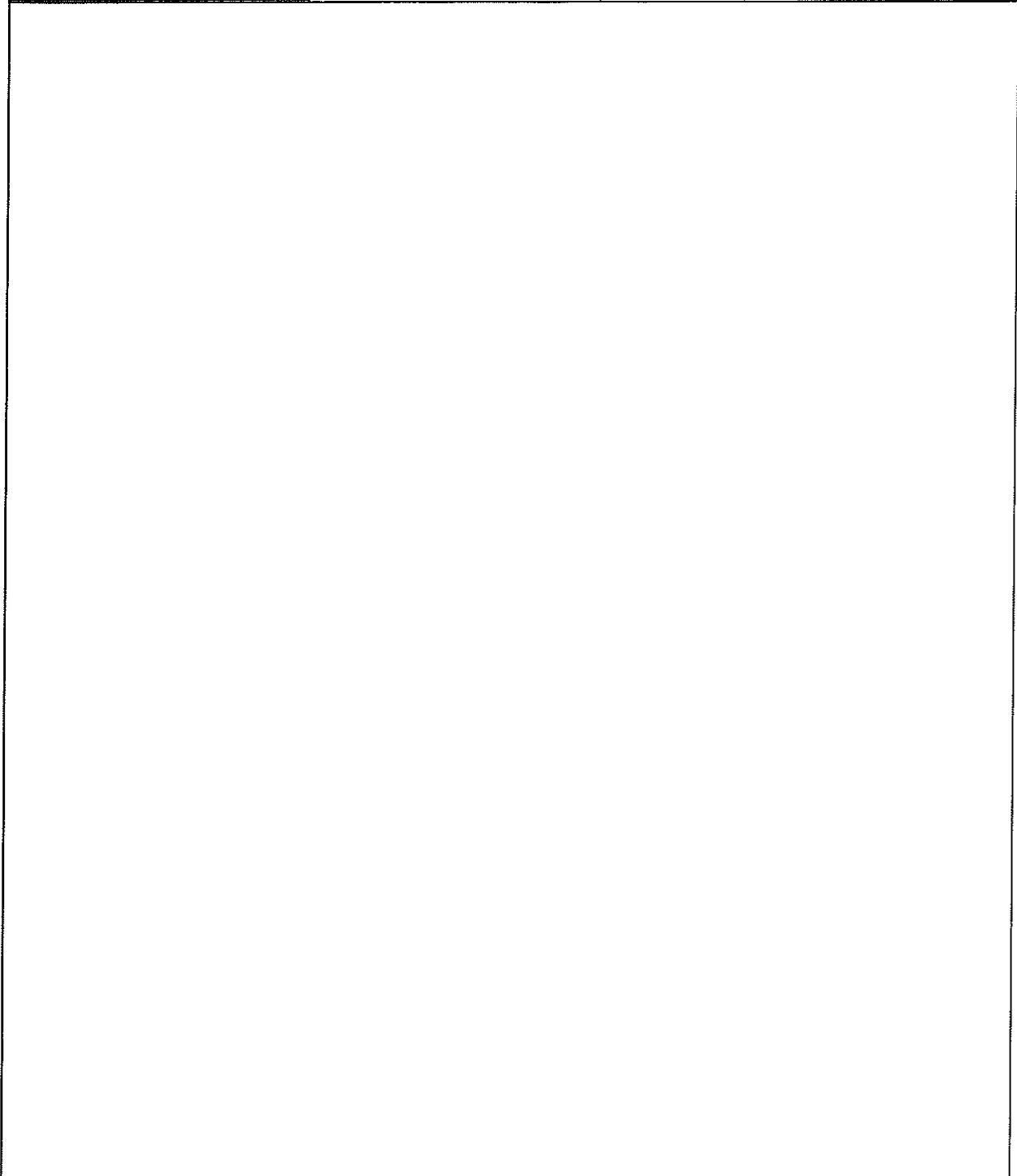
Would construction of a second pedestrian foot bridge on the south end of this section of roadway near the Coast Guard Academy be effective?

With the high volume of motor vehicle traffic on this roadway and the extreme volume of pedestrian/bicycle traffic, are doing everything possible to eliminate and reduce traffic threat and hazards in this area. Are there new practices, systems and efforts that might improve the safety in such a high volume pedestrian/ bicycle and vehicle traffic venue?

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?

Yes

It must be recognized that Route 32 is the main artery that connects travel from I-395 and I-95 in Eastern Connecticut, it must also be realized, this roadway is one of the main travel ways to the following destinations in the area:

Coast Guard Academy
Mohegan Sun Casino
Foxwoods Casino
The Groton Submarine Base
Dominion Nuclear Facility

Thank you for completing the Community Connectivity application.

Please click on the "submit button" below and include the following attachments

- 1 Location map (google, GIS) **(Required)**
- 2 Collision data (If available)
- 3 Traffic data (ADT or VMT) (If available)
- 4 Pedestrian/bicycle data (If available)





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Appendix B



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Road Safety Audit

Town: New London
RSA Location: Route 32
Meeting Location: Connecticut College - Crozier Williams Center 1941 Room
Address: 270 Mohegan Ave Pkwy, New London, CT 06320
Date: 4/24/26
Time: 8:00AM

Participating Audit Team Members

Audit Team Member	Agency/Organization
Victor Arcelus	Dean of Students, Connecticut College
Ann Devlin	May Buckley Sadowski '19 Professor of Psychology, Connecticut College
Lori Balantic	Senior Associate Director-Career Enhancing Life Skills, Connecticut College
Stewart Smith	Director of Campus Safety, Connecticut College
Jim Norton	Director of Facilities Management, Connecticut College
Fran Shields	Katherine Wenk Christoffers '45 Director of Athletics, Connecticut College
LCDR Laura Holveck	Regimental Officer, United States Coast Guard Academy
1/c Christian Lee	Cadet, United States Coast Guard Academy
2/c Katherine Milenski	Cadet, United States Coast Guard Academy
3/c Matthew Huemme	Cadet, United States Coast Guard Academy
4/c Dat Do	Cadet, United States Coast Guard Academy
Mark Fader	Head of School, The Williams School
Peter Simpson	Director of Facilities, The Williams School
Steven Fields	Chief Administrative Officer, City of New London
Vernon Skau	Fire Marshall, New London Fire Department
Lieutenant Jeff Kalolo	New London Police Department
Carey Redd	Parking Director, New London Parking Authority
Robert Pia	IT Director, New London Information Technology
William Comosci	Assistant Director of Engineering, New London Public Works
Paul Gill	Risk Manager, City of New London
Michelle Johnson Scovish	Assistant Planner, New London Office of Development & Planning
Jack Carey	Fuss & O'Neill
Thomas Maziarz	Connecticut Department of Transportation
Mark Carlino	Connecticut Department of Transportation
Melanie Zimyeski	Connecticut Department of Transportation
Kevin Tedesco	Connecticut Department of Transportation
Kevin Ng	Traffic Division – Connecticut Department of Transportation
Steve Gazillo	AECOM
Steve Mitchell	AECOM
Krystal Oldread	AECOM
Shivani Mahajan	AECOM
Matt Skelly	Fuss & O'Neill
Rich Madonna	Connecticut College
David Burns	US Coast Guard Academy
Kristin Hadjstylianos	AECOM



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Appendix C



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8:00-10:00 AM Pre-Field Walk Meeting

Welcome & introductions

Overview of existing conditions & safety concerns

- Map of study area & key locations
- Photographic tour of corridor

Results of recent data collection activities

- Pedestrian counts (Miovision)
- Vehicle counts
- Vehicle speeds
- Crash data

Roundtable Discussion - concerns of stakeholders

- Participants share their thoughts on safety issues in the study area

10:00 AM - 12:00 Noon Field Walk & Audit

12:00-1:00 PM Working Lunch

1:00-3:00 PM Post-Field Walk Meeting

Summary of all problems identified

Preliminary assessment of problems

- prioritization of problems (high – medium – low)

Discussion potential solutions & action items

Recommendations from Fuss & O'Neill Review

Identify potential solutions as:

- Immediate action options
- Short-term action options
- Long-term action options



Road Safety Audit – New London – Route 32

Meeting Location: Connecticut College; Crozier-Williams Center – 1941 Room
Address: 270 Mohegan Ave Pkwy, New London, CT 06320
Date: April 14, 2016
Time: 8:00 AM

Audit Checklist

Pedestrians and Bicycles	Comment
<p>Pedestrian Crossings</p> <ul style="list-style-type: none">• Sufficient time to cross (signal)• Signage• Pavement Markings• Detectable warning devices (signal)• Adequate sight distance• Wheelchair accessible ramps<ul style="list-style-type: none">○ Grades○ Orientation○ Tactile Warning Strips• Pedestrian refuge at islands• Other	
<p>Pedestrian Facilities</p> <ul style="list-style-type: none">• Sidewalk<ul style="list-style-type: none">○ Width○ Grade○ Materials/Condition○ Drainage○ Buffer• Pedestrian lighting• Pedestrian amenities (benches, trash receptacles)• Other	



Bicycles <ul style="list-style-type: none">• Bicycle facilities/design• Separation from traffic• Conflicts with on-street parking• Pedestrian Conflicts• Bicycle signal detection• Visibility• Roadway speed limit• Bicycle signage/markings• Shared Lane Width• Shoulder condition/width• Traffic volume• Heavy vehicles• Pavement condition• Other	
--	--

Roadway & Vehicles	
<ul style="list-style-type: none">• Speed-related issues<ul style="list-style-type: none">○ Alignment;○ Driver compliance with speed limits○ Sight distance adequacy○ Safe passing opportunities	
<ul style="list-style-type: none">• Geometry<ul style="list-style-type: none">○ Road width (lanes, shoulders, medians);○ Access points;○ Drainage○ Tapers and lane shifts○ Roadside clear zone /slopes○ Guide rails / protection systems	

<ul style="list-style-type: none">• Intersections<ul style="list-style-type: none">○ Geometrics○ Sight Distance○ Traffic control devices○ Safe storage for turning vehicles○ Capacity Issues	
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<ul style="list-style-type: none">• Pavement<ul style="list-style-type: none">○ Pavement Condition (excessive roughness or rutting, potholes, loose material)○ Edge drop-offs○ Drainage issues• Lighting Adequacy	
<ul style="list-style-type: none">• Signing<ul style="list-style-type: none">• Correct use of signing• Clear Message• Good placement for visibility• Adequate retroreflectivity• Proper support	
<ul style="list-style-type: none">• Signals<ul style="list-style-type: none">○ Proper visibility○ Proper operation○ Efficient operation○ Safe placement of equipment○ Proper sight distance○ Adequate capacity	
<ul style="list-style-type: none">• Pavement Markings<ul style="list-style-type: none">○ Correct and consistent with MUTCD○ Adequate visibility○ Condition○ Edgelines provided	
<ul style="list-style-type: none">• Miscellaneous<ul style="list-style-type: none">○ Weather conditions impact on design features.○ Snow storage	

Route 32





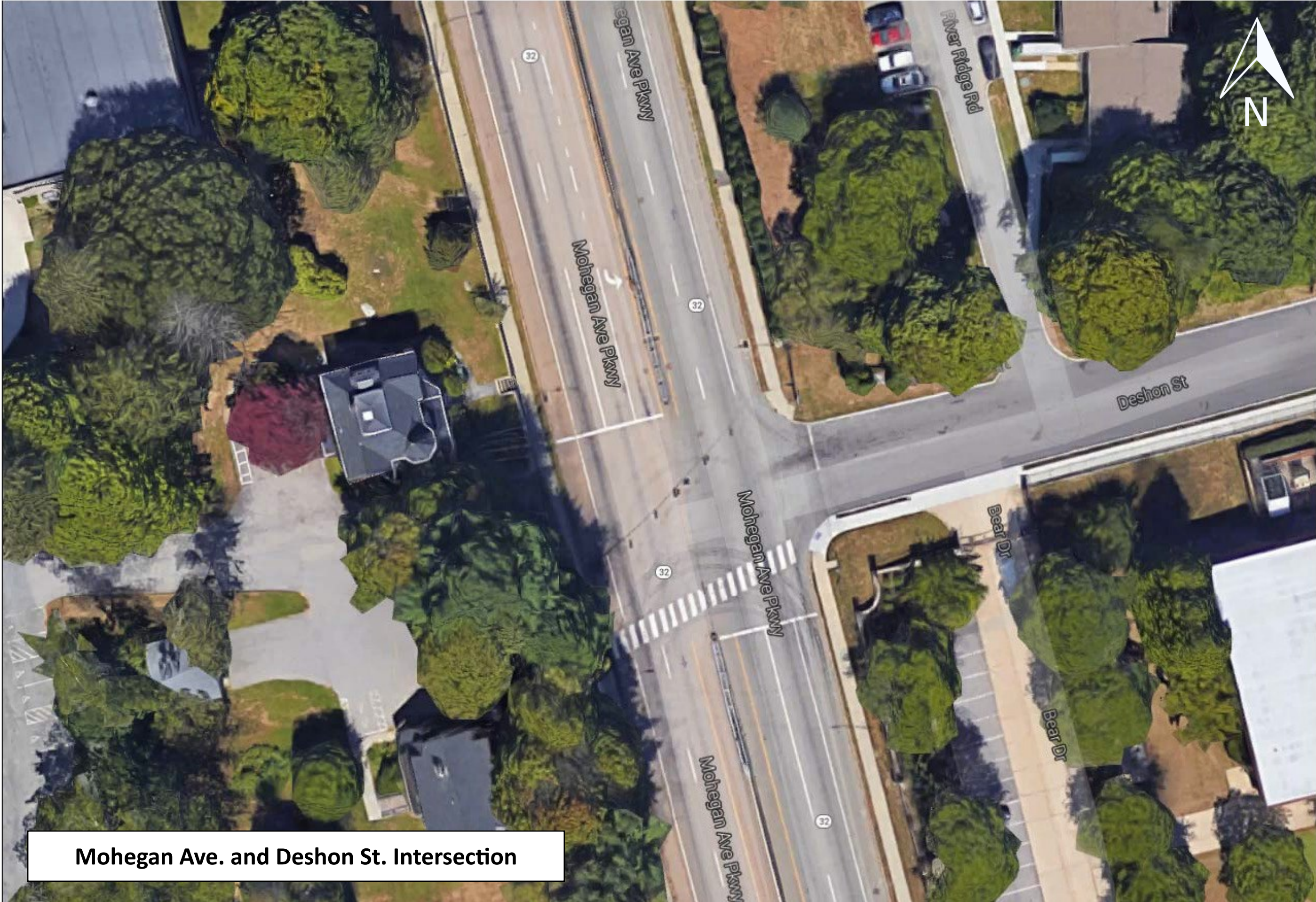
Mohegan Ave. and Benham Ave. Intersection



Mohegan Ave. and Reservoir St. Intersection

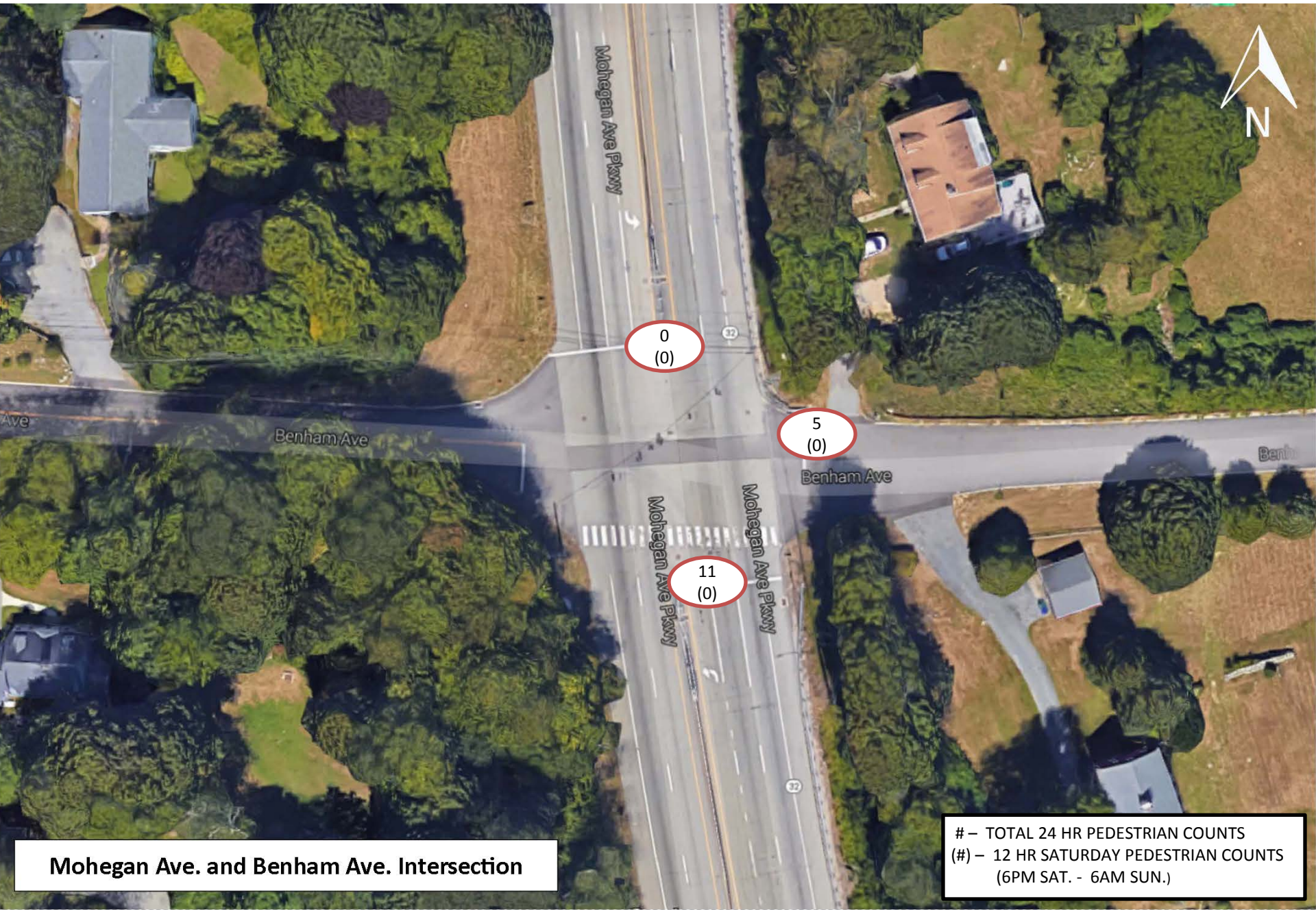


Connecticut College Main Entrance



Mohegan Ave. and Deshon St. Intersection

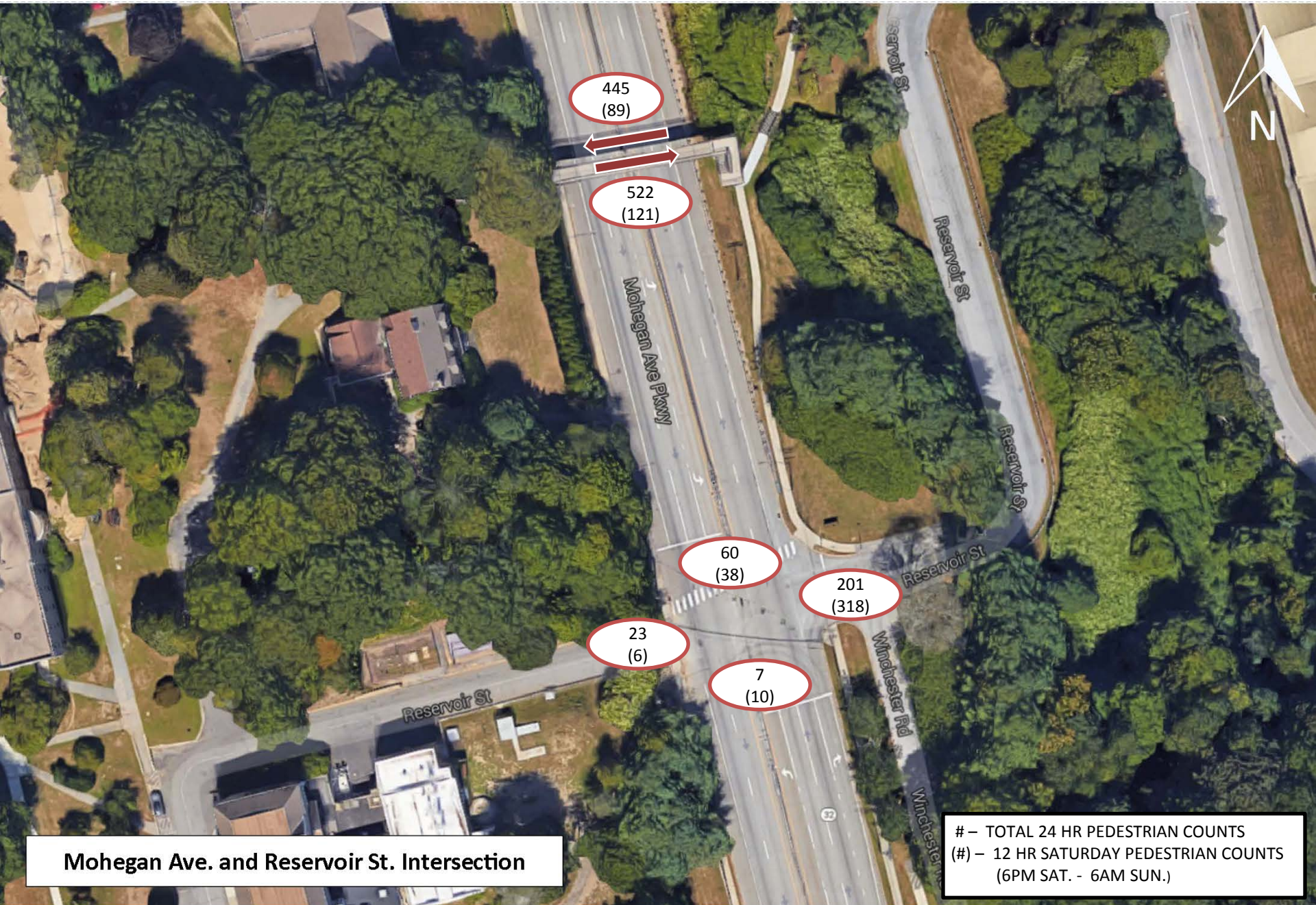
Pedestrian Counts



Mohegan Ave. and Benham Ave. Intersection

- TOTAL 24 HR PEDESTRIAN COUNTS
(#) - 12 HR SATURDAY PEDESTRIAN COUNTS
(6PM SAT. - 6AM SUN.)

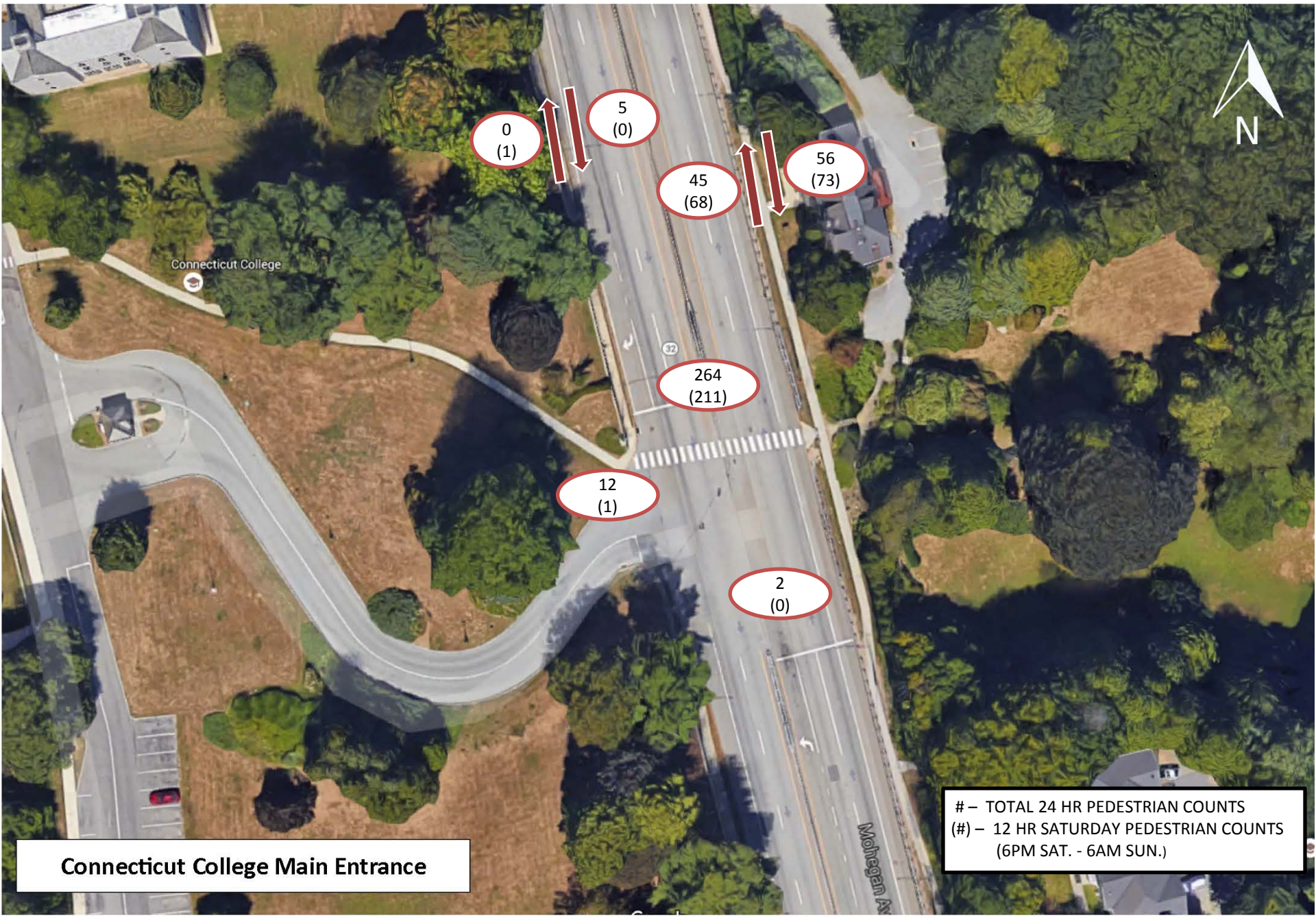
Pedestrian Counts



Mohegan Ave. and Reservoir St. Intersection

– TOTAL 24 HR PEDESTRIAN COUNTS
(#) – 12 HR SATURDAY PEDESTRIAN COUNTS
(6PM SAT. - 6AM SUN.)

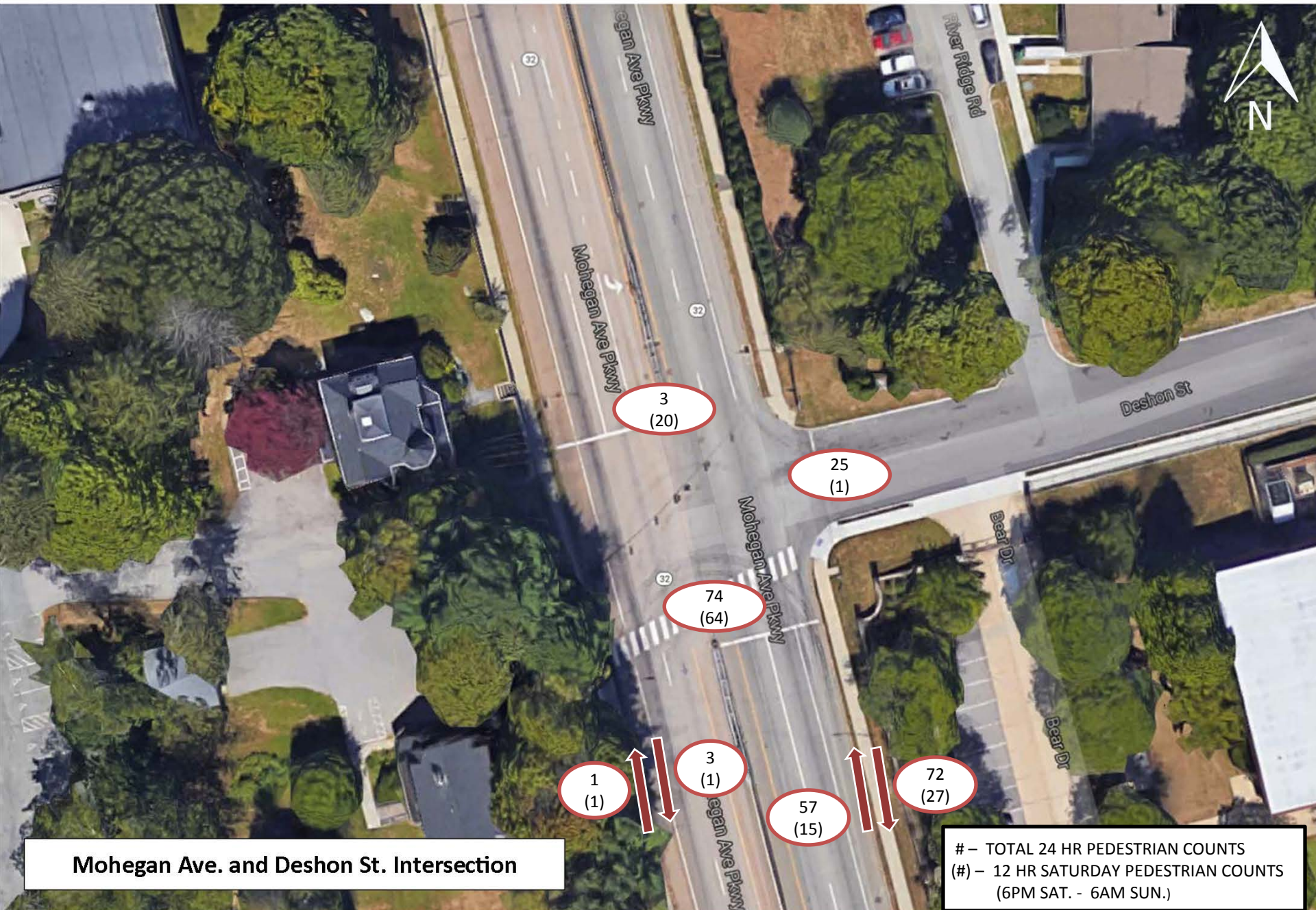
Pedestrian Counts



Connecticut College Main Entrance

- TOTAL 24 HR PEDESTRIAN COUNTS
- 12 HR SATURDAY PEDESTRIAN COUNTS
(6PM SAT. - 6AM SUN.)

Pedestrian Counts



Mohegan Ave. and Deshon St. Intersection

– TOTAL 24 HR PEDESTRIAN COUNTS
(#) – 12 HR SATURDAY PEDESTRIAN COUNTS
(6PM SAT. - 6AM SUN.)



Road Safety Audit – New London – Route 32

Meeting Location: Connecticut College; Crozier-Williams Center – 1941 Room
Address: 270 Mohegan Ave Pkwy, New London, CT 06320
Date: April 14, 2016
Time: 8:00 AM

Traffic Data Route 32 North

City of New London Police Dept.
 5 Governor Winthrop Blvd.
 New London, CT. 06320
Traffic Survey Summary

Location: Rt. 32 N
 Start Date: 3/31/2016
 End Date: 4/6/2016

Zone: Other
 Start Time: 07:42:30
 End Time: 12:04:23
 Travel Direction: N

Speed Statistics		10 MPH Pace		Number Exceeding Limit				
Posted	35	Pace Speed	34 to 43	Speed	35+	45+	55+	Total
#At/Under Limit	41857	# in Pace	28025	Number	27170	8811	442	36423
# Over Limit	36423	% in Pace	35.8%	Percent	34.7%	11.25%	0.56%	46.52%
Average Speed	32.35	85% Percentile	44					



City of New London Police Dept.
 5 Governor Winthrop Blvd.
 New London, CT. 06320
Selective Time Survey

Location: Rt. 32 N
 3/31/2016 to 4/6/2016

Zone: Other
 Travel Direction: N

	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Weekday Average	Weekend Average
0:00	0	151	240	250	71	53	72	69	245
1:00	0	73	125	140	32	41	38	36	132
2:00	0	71	70	64	54	59	54	47	67
3:00	0	88	75	76	91	99	91	73	75
4:00	0	226	166	82	182	205	205	163	124
5:00	0	549	294	162	530	527	575	436	228
6:00	0	860	492	244	831	875	884	690	368
7:00	227	841	519	346	760	854	864	709	432
8:00	725	748	676	481	584	828	743	725	578
9:00	652	753	666	545	586	750	771	702	605
10:00	708	790	720	690	644	747	737	725	705
11:00	826	804	790	722	666	796	868	792	756
12:00	768	793	743	747	553	803	62	595	745
13:00	845	861	801	634	624	889	0	643	717
14:00	871	877	828	791	784	838	0	674	809
15:00	803	785	799	701	653	762	0	600	750
16:00	801	869	793	685	711	820	0	640	739
17:00	755	786	696	632	551	759	0	570	664
18:00	694	735	658	624	422	670	0	504	641
19:00	596	646	624	563	336	560	0	427	593
20:00	545	602	551	443	313	480	0	388	497
21:00	459	589	513	330	241	353	0	328	421
22:00	444	540	511	294	309	404	0	339	402
23:00	322	324	244	123	136	115	0	179	183
Totals	11041	14361	12594	10369	10664	13287	5964	11063	11481

Combined Totals:
22544

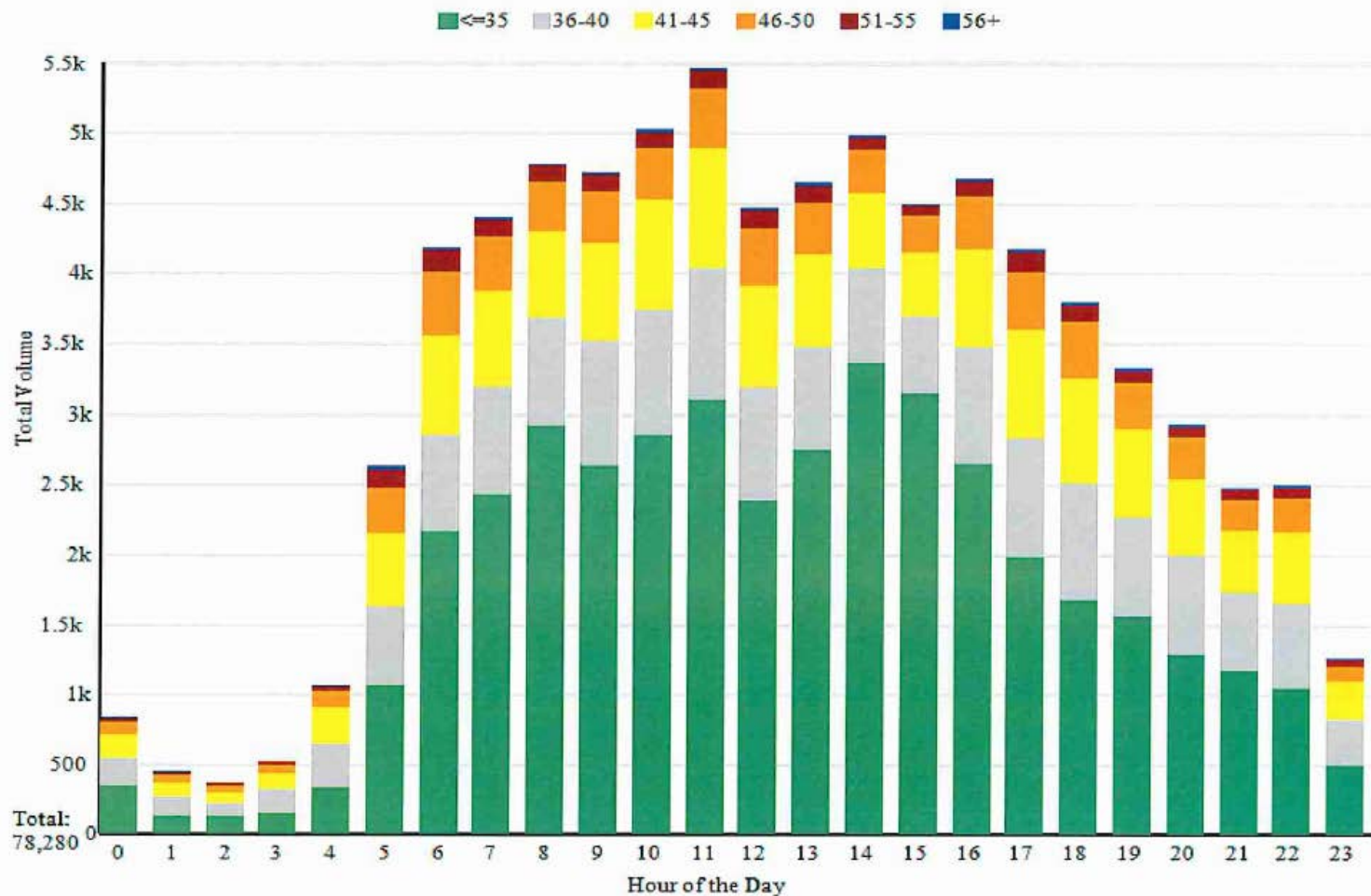


City of New London Police Dept.
5 Governor Winthrop Blvd.
New London, CT. 06320
Speed/Time/Volume Graph

Location: Rt. 32 N
Dates: 3/31/2016 to 4/6/2016

Zone: Other
Speed Limit: 35 MPH

Travel Direction: N



Total:
78,280



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Traffic Data Route 32 South

City of New London Police Dept.
5 Governor Winthrop Blvd.
New London, CT. 06320
Traffic Survey Summary

Location: Rt. 32 S
Start Date: 3/31/2016
End Date: 4/6/2016

Zone: Other
Start Time: 08:41:32
End Time: 13:02:37
Travel Direction: S

Speed Statistics		10 MPH Pace		Number Exceeding Limit				
Posted	40	Pace Speed	39 to 48	Speed	40+	50+	60+	Total
#At/Under Limit	20323	# in Pace	26969	Number	25820	8443	696	34959
# Over Limit	34959	% in Pace	48.78%	Percent	46.7%	15.27%	1.25%	63.23%
Average Speed	42.9	85% Percentile	51					



City of New London Police Dept.
5 Governor Winthrop Blvd.
New London, CT. 06320
Selective Time Survey

Location: Rt. 32 S
3/31/2016 to 4/6/2016

Zone: Other
Travel Direction: S

	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Weekday Average	Weekend Average
0:00	0	145	229	231	113	106	145	101	230
1:00	0	64	134	156	57	39	63	44	145
2:00	0	70	121	146	48	47	66	46	133
3:00	0	63	105	96	56	63	72	50	100
4:00	0	159	92	67	170	157	185	134	79
5:00	0	537	217	153	523	480	514	410	185
6:00	0	615	301	206	583	595	613	481	253
7:00	0	632	384	237	634	621	676	512	310
8:00	196	581	463	304	589	617	662	529	383
9:00	577	515	464	358	397	578	559	525	411
10:00	524	529	497	399	441	529	511	506	448
11:00	507	508	488	443	429	512	508	492	465
12:00	542	518	487	463	410	504	518	498	475
13:00	501	510	497	475	429	531	21	398	486
14:00	545	534	482	461	458	581	0	423	471
15:00	571	545	470	432	473	525	0	422	451
16:00	544	574	445	439	478	559	0	431	442
17:00	498	597	461	401	407	508	0	402	431
18:00	474	514	481	374	303	433	0	344	427
19:00	427	430	353	380	229	380	0	293	366
20:00	382	374	326	330	209	382	0	269	328
21:00	312	341	345	247	172	310	0	227	296
22:00	306	340	328	272	196	243	0	217	300
23:00	177	283	291	142	152	179	0	158	216
Totals	7083	9978	8461	7212	7956	9479	5113	7921	7836

Combined Totals:
15757

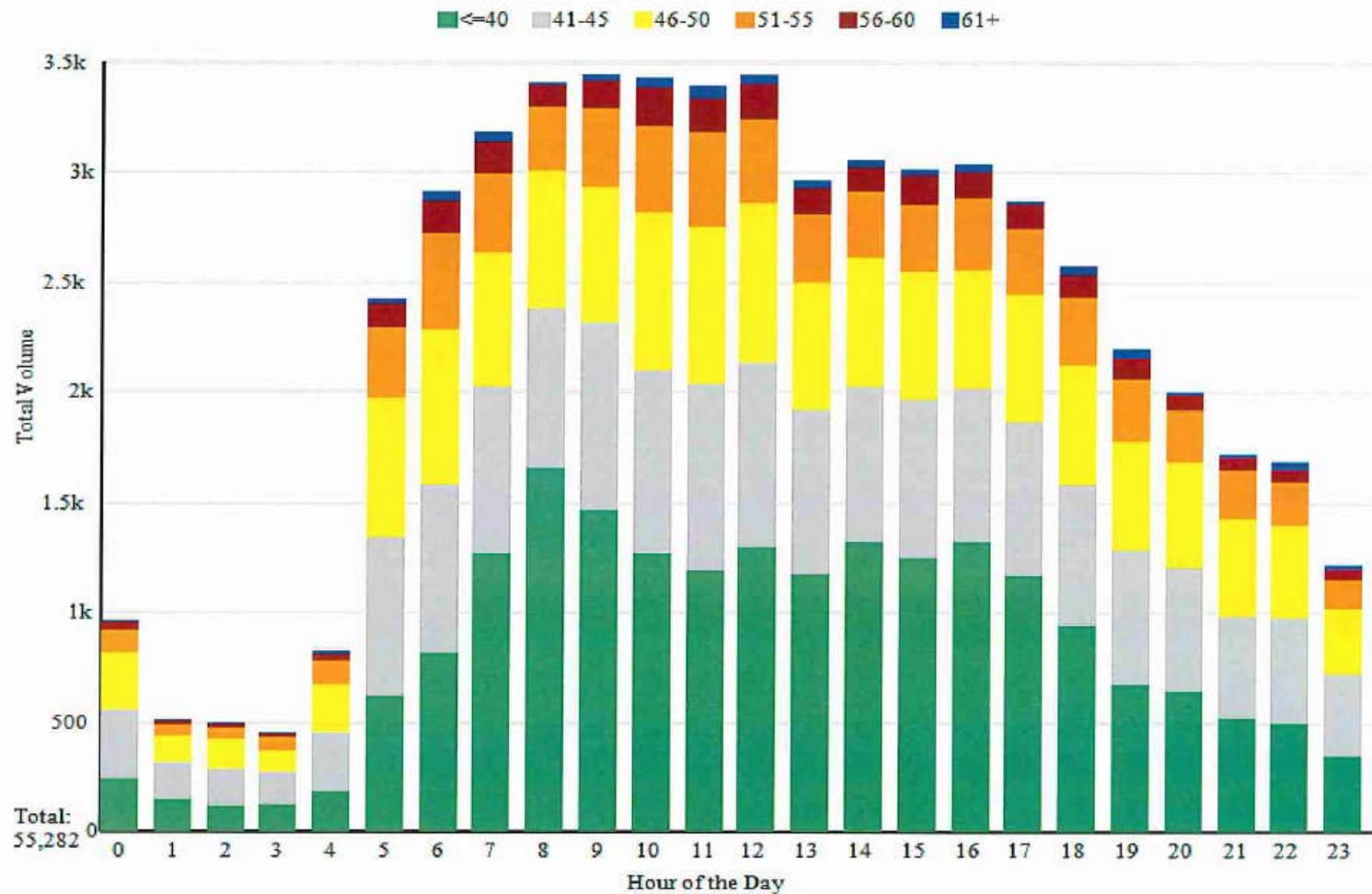


City of New London Police Dept.
5 Governor Winthrop Blvd.
New London, CT. 06320
Speed/Time/Volume Graph

Location: Rt. 32 S
Dates: 3/31/2016 to 4/6/2016

Zone: Other
Speed Limit: 40 MPH

Travel Direction: S





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2015 Crashes

UCONN Connecticut Crash Data Repository

Search Criteria:

Dataset:	mmucc
Towns:	Groton, New London, Waterford
Town & Route:	Town:152 Route:32 Intersection:undefined Milepost:-
Town & Route:	Town:95 Route:32 Intersection:undefined Milepost:-
Town & Route:	Town:59 Route:32 Intersection:undefined Milepost:-
Crash Severity:	Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only
Body Type:	null, null, null
Condition at Time of Crash:	null, null, null
Driver Distracted By:	null, null, null
Non-motorist Distracted By:	null, null, null
Case Status:	Complete

Legend:

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

[Select All](#) [Deselect All](#)

The crash that resulted in a fatality on December 18, 2015 is not recorded in the Connecticut Crash Data Repository.

2015 Crashes

UConn Connecticut Crash Data Repository

Search Criteria:

Dataset:	mmucc
Towns:	Groton, New London, Waterford
Town & Route:	Town:152 Route:32 Intersection:undefined Milepost:-
Town & Route:	Town:95 Route:32 Intersection:undefined Milepost:-
Town & Route:	Town:59 Route:32 Intersection:undefined Milepost:-
Crash Severity:	Injury of any type (Serious, Minor, Possible), Fatal (Kill), Property Damage Only
Body Type:	null, null, null
Condition at Time of Crash:	null, null, null
Driver Distracted By:	null, null, null
Non-motorist Distracted By:	null, null, null
Case Status:	Complete

Map controls: Map, Satellite, Map data ©2016 Google, Terms of Use, Report a map error

Legend:

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

Buttons: Markers, Heatmap, Select & Query, Query Selection, Select All, Deselect All

The crash that resulted in a fatality on December 18, 2015 is not recorded in the Connecticut Crash Data Repository.



Road Safety Audit – New London

Meeting Location: Connecticut College; Crozier-Williams Center – 1941 Room
Address: 270 Mohegan Ave Pkwy, New London, CT 06320
Date: April 14, 2016
Time: 8:00 AM

Crash Summary – Connecticut College Entrance

Data: 3 years (2013-2015)

Severity Type	Number of Accidents	
Property Damage Only	7	58%
Injury (No Fatality)	5	42%
Fatality	0	0%
Total	12	

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	0	0%
Sideswipe-Same Direction	0	0%
Rear-end	10	83%
Turning-Intersecting Paths	0	0%
Turning-Opposite Direction	0	0%
Fixed Object	1	8%
Backing	0	0%
Angle	0	0%
Turning-Same Direction	0	0%
Moving Object	0	0%
Parking	0	0%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	0	0%
Other	1	8%
Total	12	



Weather Condition	Number of Accidents	
Snow	1	8%
Rain	1	8%
No Adverse Condition	10	83%
Unknown	0	0%
Blowing Sand, Soil, Dirt or Snow	0	0%
Other	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	12	

Light Condition	Number of Accidents	
Dark-Not Lighted	0	0%
Dark-Lighted	3	25%
Daylight	9	75%
Dusk	0	0%
Unknown	0	0%
Dawn	0	0%
Total	12	

Road Surface Condition	Number of Accidents	
Snow/Slush	1	8%
Wet	1	8%
Dry	10	83%
Unknown	0	0%
Ice	0	0%
Other	0	0%
Total	12	



Time		Number of Accidents	
0:00	0:59	1	8.3%
1:00	1:59	1	8.3%
2:00	2:59	0	0.0%
3:00	3:59	1	8.3%
4:00	4:59	0	0.0%
5:00	5:59	0	0.0%
6:00	6:59	0	0.0%
7:00	7:59	0	0.0%
8:00	8:59	0	0.0%
9:00	9:59	0	0.0%
10:00	10:59	0	0.0%
11:00	11:59	0	0.0%
12:00	12:59	1	8.3%
13:00	13:59	0	0.0%
14:00	14:59	3	25.0%
15:00	15:59	2	16.7%
16:00	16:59	2	16.7%
17:00	17:59	1	8.3%
18:00	18:59	0	0.0%
19:00	19:59	0	0.0%
20:00	20:59	0	0.0%
21:00	21:59	0	0.0%
22:00	22:59	0	0.0%
23:00	23:59	0	0.0%
Total		12	



Road Safety Audit – New London

Meeting Location: Connecticut College; Crozier-Williams Center – 1941 Room
Address: 270 Mohegan Ave Pkwy, New London, CT 06320
Date: April 14, 2016
Time: 8:00 AM

Crash Summary – Deshon St. Intersection

Data: 3 years (2013-2015)

Severity Type	Number of Accidents	
Property Damage Only	14	64%
Injury (No fatality)	8	36%
Fatality	0	0%
Total	22	

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	0	0%
Sideswipe-Same Direction	1	5%
Rear-end	15	68%
Turning-Intersecting Paths	0	0%
Turning-Opposite Direction	0	0%
Fixed Object	3	14%
Backing	0	0%
Angle	1	5%
Turning-Same Direction	1	5%
Moving Object	0	0%
Parking	0	0%
Pedestrian	0	0%
Overturn	0	0%
Head-on	0	0%
Sideswipe-Opposite Direction	0	0%
Animal	1	5%
Total	22	



Weather Condition	Number of Accidents	
Snow	1	5%
Rain	2	9%
No Adverse Condition	19	86%
Unknown	0	0%
Blowing Sand, Soil, Dirt or Snow	0	0%
Other	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	22	

Light Condition	Number of Accidents	
Dark-Not Lighted	1	5%
Dark-Lighted	6	27%
Daylight	15	68%
Dusk	0	0%
Unknown	0	0%
Dawn	0	0%
Total	22	

Road Surface Condition	Number of Accidents	
Snow/Slush	0	0%
Wet	3	14%
Dry	19	86%
Unknown	0	0%
Ice	0	0%
Other	0	0%
Total	22	



Time		Number of Accidents	
0:00	0:59	0	0.0%
1:00	1:59	0	0.0%
2:00	2:59	0	0.0%
3:00	3:59	0	0.0%
4:00	4:59	0	0.0%
5:00	5:59	0	0.0%
6:00	6:59	0	0.0%
7:00	7:59	1	4.5%
8:00	8:59	0	0.0%
9:00	9:59	2	9.1%
10:00	10:59	0	0.0%
11:00	11:59	1	4.5%
12:00	12:59	1	4.5%
13:00	13:59	1	4.5%
14:00	14:59	3	13.6%
15:00	15:59	0	0.0%
16:00	16:59	3	13.6%
17:00	17:59	3	13.6%
18:00	18:59	0	0.0%
19:00	19:59	0	0.0%
20:00	20:59	2	9.1%
21:00	21:59	4	18.2%
22:00	22:59	0	0.0%
23:00	23:59	1	4.5%
Total		22	



Road Safety Audit – New London

Meeting Location: Connecticut College; Crozier-Williams Center – 1941 Room
Address: 270 Mohegan Ave Pkwy, New London, CT 06320
Date: April 14, 2016
Time: 8:00 AM

Crash Summary – Reservoir St./Winchester Rd. Intersection

Data: 3 years (2013-2015)

Severity Type	Number of Accidents	
Property Damage Only	8	89%
Injury (No Fatality)	1	11%
Fatality	0	0%
Total	9	

Manner of Crash / Collision Impact	Number of Accidents	
Unknown	0	0%
Sideswipe-Same Direction	0	0%
Rear-end	6	67%
Turning-Intersecting Paths	0	0%
Turning-Opposite Direction	0	0%
Fixed Object	1	11%
Backing	0	0%
Angle	0	0%
Turning-Same Direction	0	0%
Animal	1	11%
Parking	0	0%
Overturn	1	11%
Head-on	0	0%
Sideswipe-Opposite Direction	0	0%
Total	9	



Weather Condition	Number of Accidents	
Snow	1	11%
Rain	1	11%
No Adverse Condition	7	78%
Unknown	0	0%
Blowing Sand, Soil, Dirt or Snow	0	0%
Other	0	0%
Severe Crosswinds	0	0%
Sleet, Hail	0	0%
Total	9	

Light Condition	Number of Accidents	
Dark-Not Lighted	0	0%
Dark-Lighted	3	25%
Daylight	9	75%
Dusk	0	0%
Unknown	0	0%
Dawn	0	0%
Total	12	

Road Surface Condition	Number of Accidents	
Snow/Slush	1	11%
Wet	1	11%
Dry	7	78%
Unknown	0	0%
Ice	0	0%
Other	0	0%
Total	9	



Time		Number of Accidents	
0:00	0:59	1	11.1%
1:00	1:59	0	0.0%
2:00	2:59	0	0.0%
3:00	3:59	0	0.0%
4:00	4:59	0	0.0%
5:00	5:59	0	0.0%
6:00	6:59	2	22.2%
7:00	7:59	1	11.1%
8:00	8:59	0	0.0%
9:00	9:59	0	0.0%
10:00	10:59	0	0.0%
11:00	11:59	0	0.0%
12:00	12:59	0	0.0%
13:00	13:59	0	0.0%
14:00	14:59	1	11.1%
15:00	15:59	2	22.2%
16:00	16:59	1	11.1%
17:00	17:59	0	0.0%
18:00	18:59	1	11.1%
19:00	19:59	0	0.0%
20:00	20:59	0	0.0%
21:00	21:59	0	0.0%
22:00	22:59	0	0.0%
23:00	23:59	0	0.0%
Total		9	



Road Safety Audit – New London – Route 32

Meeting Location: Connecticut College; Crozier-Williams Center – 1941 Room

Address: 270 Mohegan Ave Pkwy, New London, CT 06320

Date: April 14, 2016

Time: 8:00 AM

Post-Audit Discussion Guide

Safety Issues

- Summary of problems identified during the walk audit
- Preliminary assessment of problems
 - Prioritization of problems (high – medium – low)

Potential Solutions and Action Items

- Immediate Action Options

- Short-term Action Options

- Long-term Action Options

Next Steps

- Discussion regarding responsibilities for implementing the countermeasures (including funding)