

2015 Safe Routes to School Walk Audit Findings Report

Charles Wright
Elementary School

The Pearl Of Wethersfield

*Charles Wright Elementary School
Wethersfield, CT*

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INTRODUCTION

A walk audit was performed by CTDOT's "Safe Route to School" (SRTS) consultant, VN Engineers, Inc. and AECOM for Charles Wright Elementary School in Wethersfield, CT on May 27, 2015. Charles Wright Elementary School serves 320 students from kindergarten through 6th grade. The purpose of a SRTS walk audit is to assess the existing conditions of the walking and biking routes to school and to identify the issues that may discourage or prevent walking and bicycling. SRTS audits are performed by transportation professionals experienced in traffic, pedestrian, and bicycle operations and design. These professionals assess and review factors that can promote or obstruct safe walking and bicycling routes to school. Some of these factors include social aspects, traffic volumes and speeds, topography or presence/absence of sidewalks and/or bicycle lanes.

The aforementioned SRTS Walk Audit Report is an objective review intended for the School's Safe Routes Committee use to help assess the existing conditions surrounding the school. This document is an innovative planning tool to help identify bicycle, pedestrian, and non-motorized transportation needs that encourage walking and bicycling to the school, as well as assists in developing recommendations to improve existing conditions. The contents of this report are not intended to be legally binding, but rather offer recommendations to improve safety in the vicinity of the school and create a more appealing transportation alternative.

The audit for Charles Wright Elementary School followed standard walk audit protocol. Before the site visit was conducted, the CTDOT SRTS team analyzed the area topography and the routes surrounding the school. Available on-line imagery was used to study and assess the most prevalent routes, adjacent land use, sight distance issues, sidewalk locations, on-street parking, and other site-specific issues.

Following the initial review, the CTDOT SRTS team visited the site to observe arrival and dismissal operations. During class sessions, the team walked and drove throughout the surrounding neighborhoods to evaluate pedestrian walking and biking routes. Measurements and photographs were taken of the focus area and school officials were interviewed by the SRTS team to document current perceptions and conditions surrounding school transportation. Upon completion of the site visit, a meeting was held by the CTDOT SRTS team with the Charles Wright Elementary School Principal and Wethersfield SRTS champion to discuss findings and listen to parents' and administrators' concerns.

The SRTS audit team found that the area around Charles Wright Elementary School and the various walking routes are in fair to good condition with some of the appropriate safety amenities in place. The team did find a few infrastructure issues that could be addressed in the short and long-term. However, the main issue is pedestrian safety, which is a function of high-speed traffic, parking lot circulation, misaligned and faded crosswalks, and ignoring rules of the road. The number of walking students at Charles Wright Elementary School is relatively moderate. The school utilizes seven (7) buses. Three (3) vans also dropped off and picked up students from school. If the district wishes to increase the number of students safely walking and biking to school, they could initiate pedestrian and bicycling educational and encouragement campaigns.

The following subjects are discussed below:

- Existing Features and Walking Routes
- School Parent Drop-off and Bus Drop-off Area
- Assessments of Various Pedestrian and Bike Routes
- Recommendations

Figure 1 shows an overview of the Charles Wright Elementary School study area.

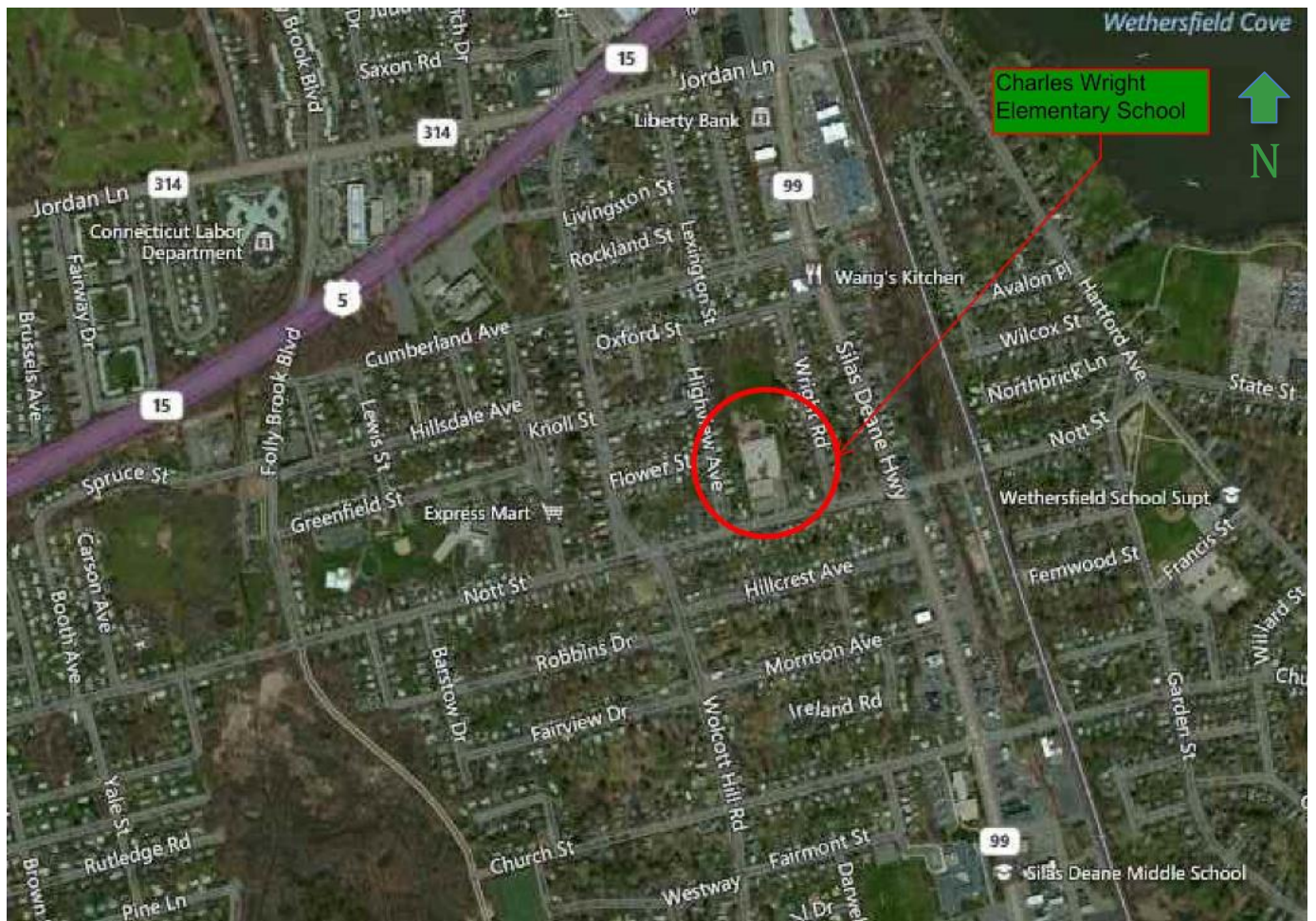


Figure 1: Charles Wright Elementary School

1 EXISTING FEATURES AND WALKING ROUTES

The SRTS Committee members identified that the following three routes were used by most of the pedestrian students attending Charles Wright Elementary School:

- **Route 1:** Intersection of Wells Road (Route 175) and Wolcott Hill Road to Nott Street;
- **Route 2:** Intersection of Buckland Road and Cumberland Avenue, through gravel bike path to Oxford Street to walk/bike path on school grounds; and
- **Route 3:** Intersection of Livingston Street and Wolcott Hill Road to Nott Street.

This study examines the three main routes, along with all other potential walking routes within a 0.75 mile radius of Charles Wright Elementary School.

1.1 Charles Wright Elementary School Surrounding Area

Charles Wright Elementary School is situated in a suburban neighborhood in Wethersfield, Connecticut. School begins at 8:30 a.m., but students are allowed to enter the building at 8:10 a.m. Walkers and bikers tend to arrive between 8:10 a.m. and 8:20 a.m., while students who take the bus typically arrive between 8:10 a.m. and 8:30 a.m. While student drop-offs both by car and walking with parents started around 8:10 a.m., the highest concentration of students arriving was from 8:15 - 8:25 a.m., as shown in **Figure 2**.

The Town of Wethersfield has assigned three crossing guards dedicated to students walking to and from Charles Wright Elementary School and other schools nearby (**Figure 3**).

These three crossing guards are stationed at the following key intersections:

- Wolcott Hill Road and Church Street
- Wolcott Hill Road and Nott Street
- Nott Street and Front of School

There are adequate sidewalks on both sides of the bus parking lot which enables students to safely walk to the school entrance.

There are two (2) parking lots in front of the school. One lot (smaller lot) is strictly reserved for school staff and for bus drop-off and pickup. The other lot is for parent/guardian drop-off and pickup and staff parking. Both parking lots have one-way access and egress on Nott Street.

During the morning drop-off, four (4) full-sized buses, three (3) mini-buses, and three (3) vans arrive at the bus parking lot area. Buses enter through the one-way access on Nott Street, drop off students and exit from the one-way egress onto Nott Street. There are signs in the parking lot restricting through traffic to buses only. There are two teachers stationed at the bus drop-off area to receive students and ensure that they safely enter the school building.



Figure 2: Drop-Off Process at Parents/Guardians Parking Lot



Figure 3: Crossing Guard helping Students Cross at Nott Street

Parents/Guardians drop off students in the second (larger) parking lot. Cones are placed in front of six (6) parking spaces to create a drop-off area for students. Typically vehicles wait in a queue until the school doors open at 8:10 a.m. Vehicles then make a counter-clockwise loop through the parking lot to drop students off at the designated drop-off area. The school principal is on hand to meet and assist students as they exit their vehicles.

In general, the drop-off process functions rather well, with a few instances where parents dropped off students without waiting for the queue to dissipate and drove by the queued vehicles resulting in a safety issue. There was also congestion in front of the school with some parents parking in the “No Parking 8 AM – 4 PM on School Days” spots and allowing students to walk to the school.

The school day at Charles Wright Elementary School ends at 2:45 p.m. Charles Wright' dismissal is not staggered, with bus dismissal and student pickup beginning at 2:45 p.m. The bus dismissal uses the bus/staff parking lot, while the student pickup uses the student/staff parking lot. Vehicles start parking illegally on Nott Street and around the corner of Wright Street to the east at around 1:45 p.m. Vehicles start forming a queue in the parking lot around 2:25 p.m. Congestion was observed during pick-up with a number of vehicles illegally parked on both sides of Nott Street resulting in sight distance restrictions and safety issues (**Figure 4**). A number of vehicles also made U-turns in private drives on Nott Street. Some parents parked their cars illegally on both sides of Nott Street and walked to the school to pick up their children. The pickup of students by parents is well coordinated with three (3) staff members on hand to assist. One of the staff members used a bull horn to instruct students and drivers to keep order and streamline the pickup process. The queue in the parking lot cleared by 2:55 p.m. It is estimated that approximately 60 to 70 vehicles used the student pick-up area. Staff members raised concerns about children waiting for their parents and darting through the parking lot to their vehicles.

During bus dismissal, some buses queued in the parking lot and blocked the sidewalk area and part of the roadway (Nott Street) as shown in **Figure 5**. Two (2) teachers are on hand in the bus parking lot area to ensure students safely board their respective buses.

At dismissal, students either boarded a school bus, were picked up by an adult in a vehicle, or left on foot. While most students who walked home were escorted by an adult, there were isolated cases where students biked home alone or traveled in groups without an adult. Crossing guards are located at the crosswalk on Nott Street directly in front of the school; Wolcott Hill Road at Nott Street; and Wolcott Hill Road at Church Street.

Table 1 provides an overview of key characteristics for major streets within the immediate area.



Figure 4: Illegally Parked Cars in Front of School Causing Congestion on Nott Street



Figure 5: School Buses Blocking Sidewalk and Part of Roadway

Table 1: Charles Wright Elementary School Street Inventory

Street Name	Street Width	Direction of Travel	Existing Sidewalk	Sidewalk Width	Sidewalk Condition	Curb Ramps	Curb	Parking Observed on Sidewalk	Sidewalk Buffer	Crime Area
Nott St	32 ft	Two-way traffic	YES	4 ft (both sides)	Fair/Good	YES, with no detectable warning strips	YES	NO	YES	NO
Wright Rd	24-26 ft	Two-way traffic	YES	3-4ft (both sides)	Fair	YES, with no detectable warning strips	YES	NO	YES	NO
Wolcott Hill Rd	34-36 ft	Two-way traffic	YES	3-4 ft (both sides)	Fair/Good	YES. A few locations had detectable warning strips.	YES	NO	YES	NO
Church St	24-38 ft	Two-way traffic	YES	4 ft (both sides)	Fair/Good	YES, with detectable warning strips	YES	NO	YES	NO
Wells Rd	28-40ft	Two-way traffic	YES	3-4ft (both sides)	Fair/Good	YES, with detectable warning strips	YES	NO	YES	NO
Cumberland Ave	19 ft WB One-Way 23 ft EB One-way	One-way traffic each leg	YES	4 ft (both sides)	Fair/Good	YES, with no detectable warning strips	YES	NO	YES	NO
Buckland Rd	26-28 ft	Two-way traffic	YES	4 ft (both sides)	Fair/Good	YES, with no detectable warning strips	YES	NO	YES	NO
Livingston St	30 ft	Two-way traffic	NO	N/A	N/A	YES, with no detectable warning strips	YES	N/A	N/A	NO
Robbins Dr	26-28ft	Two-way traffic	YES	4ft (both sides)	Fair	YES, with no detectable warning strips.	YES	NO	YES	NO
Hillcrest Ave	30-32 ft	Two-way traffic	YES	3-4ft (both sides)	Fair/Good	YES, with no detectable warning strips	YES	NO	YES	NO

Figure 6 shows a plan map of the pedestrian routes to Charles Wright Elementary School. The walkable areas to Charles Wright Elementary School are bounded by the blue line. This area is bounded by Jordan Lane (Route 314)/Cumberland Avenue to the north, Wells Road (Route 175) to the south, Silas Deane Highway (Route 99) to the east, and Folly Brook Boulevard/Wolcott Hill Road to the west. Since there is a high concentration of homes throughout, this area is assessed by dividing it into three pedestrian zones: (1) south, (2) northwest, and (3) northeast.

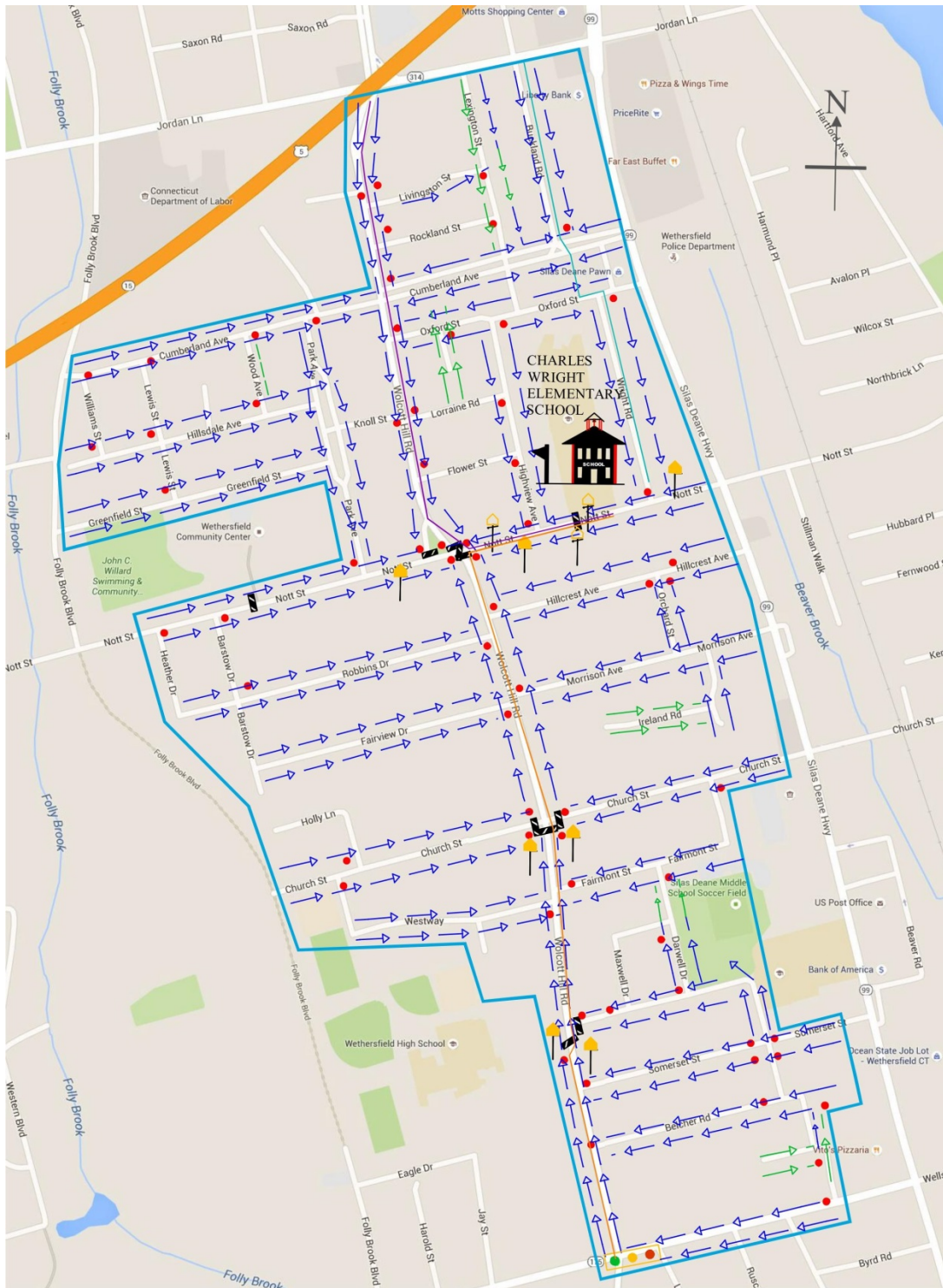
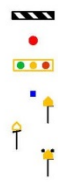


Figure 6: Charles Wright Elementary School Plan Map

KEY :

- CROSSWALK
- STOP SIGN
- TRAFFIC SIGNAL
- CROSSING GUARD
- SCHOOL CROSSING
- CROSSWALK SIGN
- FLASHING SCHOOL SIGN



- WALKING DIRECTION
- WALKING DIRECTION WITH SIDEWALK
- SCHOOL ZONE
- TOWN LINE
- ROUTE # 1
- ROUTE # 2
- ROUTE # 3



1.2 Pedestrian Zone# 1: South of Charles Wright Elementary School

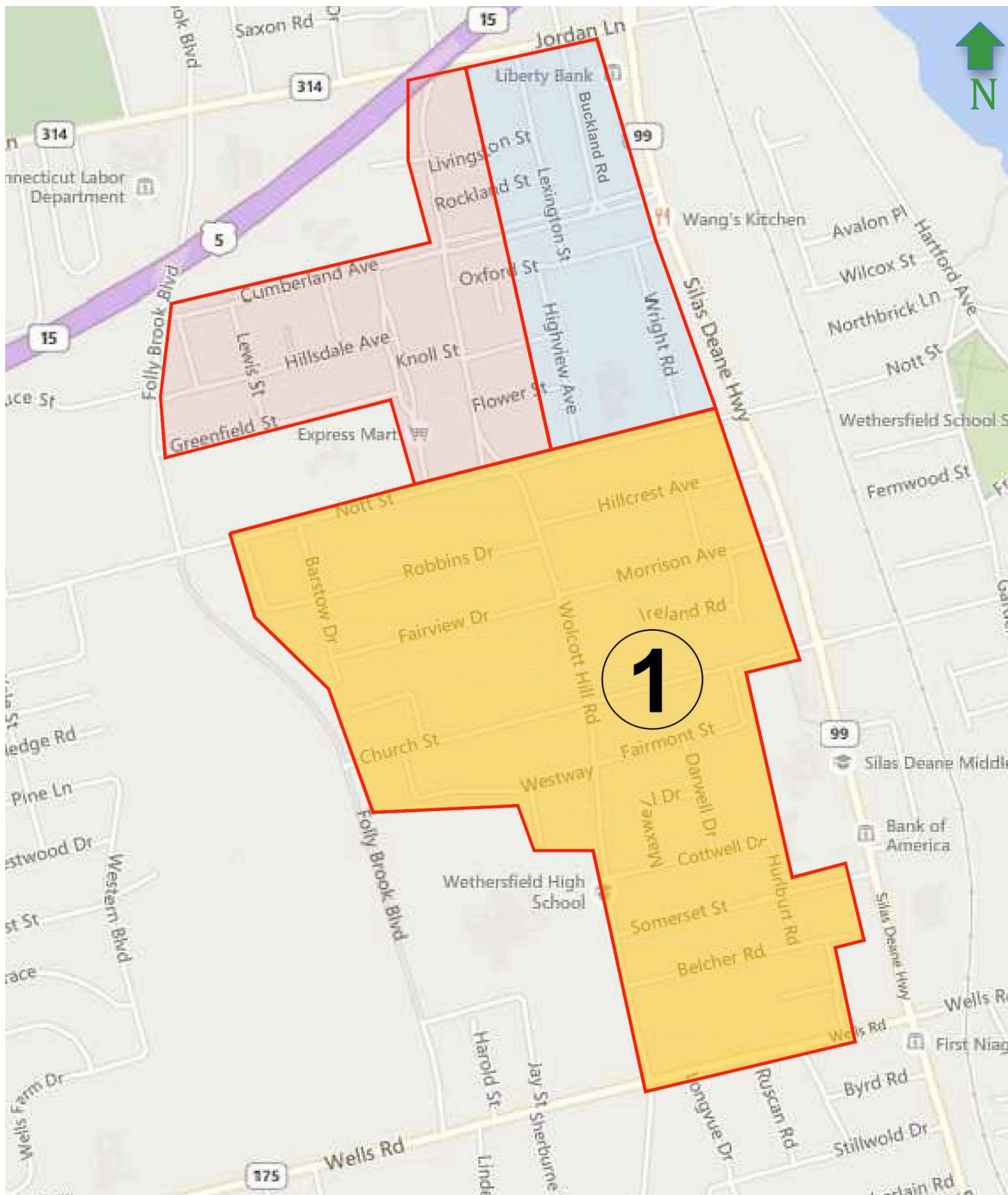


Figure 7: Pedestrian Zone #1

Pedestrian Zone #1 is bounded by Nott Street to the north, Wells Road (Route 175) to the south, Silas Deane Highway (Route 99) to the east, and Folly Brook Boulevard / Wolcott Hill Road to the west. The main roads for pedestrian access to Charles Wright Elementary School in Pedestrian Zone #1 include Nott Street, Church Street, Wolcott Hill Road, Robbins Drive, and Hillcrest Avenue. From the farthest point on Wells Road, the route is about 0.75 miles to the entrance of Charles Wright Elementary School, as shown in **Figure 7**.

1.2.1 Roadway and Pavement Marking Conditions

In general, the pavement quality in Pedestrian Zone # 1 is in good condition, except for a portion of the intersection of Robbins Drive with Wolcott Hill Road as shown in **Figure 8**. The pavement at the intersection of Wolcott Hill Road and Cottwell Drive/Wethersfield High School Drive is in fair condition with a few cracks in the pavement.

Pavement markings along this route are comprised of stop bars and crosswalks with double yellow lines on Nott Street, Wolcott Hill Road, Church Street and Wells Road. There are edge lines along Wells Road and Wolcott Hill Road from the intersection with Cottwell Drive/Wethersfield High School Drive to Wells Road. All other roadways within this pedestrian zone do not have edge lines. The double yellow lines on Wolcott Hill Road at the intersection of Cottwell Drive/Wethersfield High School Drive are in poor condition. The existing double yellow centerline pavement markings were not properly removed when new pavement markings were installed to provide exclusive turn lanes to Cottwell Drive and Wethersfield High School Drive. There are "SCHOOL SLOW" pavement markings on both approaches to the school on Nott Street which were painted on top of old pavement markings and are in poor condition as shown in **Figure 9**. While there are generally painted crosswalks at all major intersections within this pedestrian zone, most of them need to be repainted. The crosswalk in front of Charles Wright Elementary School extends into a private driveway on Nott Street. The intersection of Wolcott Hill Road and Nott Street is an all-way stop-controlled offset intersection resulting in very long crosswalks, with one in the middle of the intersection across Nott Street. The alignment of this intersection does not provide adequate sight distance from all approaches, resulting in a safety issue for pedestrians and motorists.

1.2.2 Signs

The speed limit in Pedestrian Zone # 1 is 35 mph for Wells Road and Wolcott Hill Road and 30 mph for Nott Street, except in the immediate vicinity of the school where 25 mph signs are posted. The speed limit is 25 mph for all other streets.

The posted speed limit was observed to be generally not obeyed by motorists on Nott Street. The increased speed on Nott Street is especially problematic because of the sight distance limitations and the offset geometry at the intersection with Wolcott Hill Road.

There are SCHOOL CROSSING signs with downward arrow at the crosswalk in front of the school on Nott Street (**Figure 10**). There are also advanced SCHOOL CROSSING signs with 25 mph signs on both approaches on Nott Street Other locations with SCHOOL CROSSING signs in this zone are Wolcott Hill Road at Cottwell Drive/Wethersfield High



Figure 8: Poor Pavement Condition at Wolcott Hill Road and Robbins Drive



Figure 9: Poorly Painted SCHOOL SLOW Pavement Markings



Figure 10: School Crossing Sign on Nott Street

School Drive northbound/southbound approaches; Wolcott Hill Road at Church Street northbound/southbound approaches; and Nott Street westbound approach to Wolcott Hill Road. All SCHOOL CROSSING signs within Pedestrian Zone #1 appear to be recently installed.

There are also a number of “NO PARKING SCHOOL DAYS 8 am – 4pm” signs along Nott Street in front of the school (**Figure 11**). Ideally, these postings prevent cars from parking in the vicinity of the school, which should positively impact the visibility and travel space for both walkers and bikers. However, as noted earlier, these signs were not obeyed during the walk audit.



Figure 11: NO PARKING SCHOOL DAYS Signs in Front of School

1.2.3 Sidewalks

All streets surrounding Charles Wright Elementary School in Pedestrian Zone #1 have sidewalks on both sides of the road. Almost all sidewalks also have grass strips that were typically 4’ wide or greater which serve as a buffer between the sidewalk and the roadway. Generally, the sidewalk pavement at all locations along potential walking and biking routes were in fair to good condition. However, there were a few areas where the sidewalk area is in poor condition. An example is the sidewalk along Nott Street, to the east of the school entrance and just before the intersection with Wright Road as shown in **Figure** .

With the exception of a few locations, most curb ramps in this area were not American with Disabilities Act (ADA) compliant with no detectable warning strips. There are a few locations where the curb ramp slopes are too steep or the crosswalk is aligned with a private driveway ramp (**Figure**).



Figure 13: Sidewalk along Nott Street in Poor Condition



Figure 12: Crosswalk Aligned with Private Driveway along Nott Street

A summary of locations with crosswalk and curb ramp issues in Pedestrian Zone #1 is shown in **Table 2**.

Table 2: Unsafe Crosswalk/Handicap Ramp Locations in Pedestrian Zone # 1

Location	Approach(es)	Issue	Quantity
Nott Street/School Entrance	E,W	Crosswalk aligned with driveway	1
Nott Street/Wolcott Hill Road	E,W	Poor geometry – crosswalk in the middle of intersection	1
Nott Street/Wolcott Hill Road	N,S	Extra long crosswalk Steep slope handicapramp (NW)	2
Wolcott Hill Road/Church Street	S	No crosswalk for SB approach	1
Wolcott Hill Road/High School Drive/Cottwell Drive	N,S	Poor geometry – skewed crosswalk and handicap ramp	1
Wolcott Hill Road/Wells Road	N,S,E,W	Poorly-defined crosswalks for all approaches	4
TOTALS			10

1.2.4 Crime

The school principal stated that crime is not an issue in the area.

1.3 Pedestrian Zone # 2: Northwest of Charles Wright Elementary School

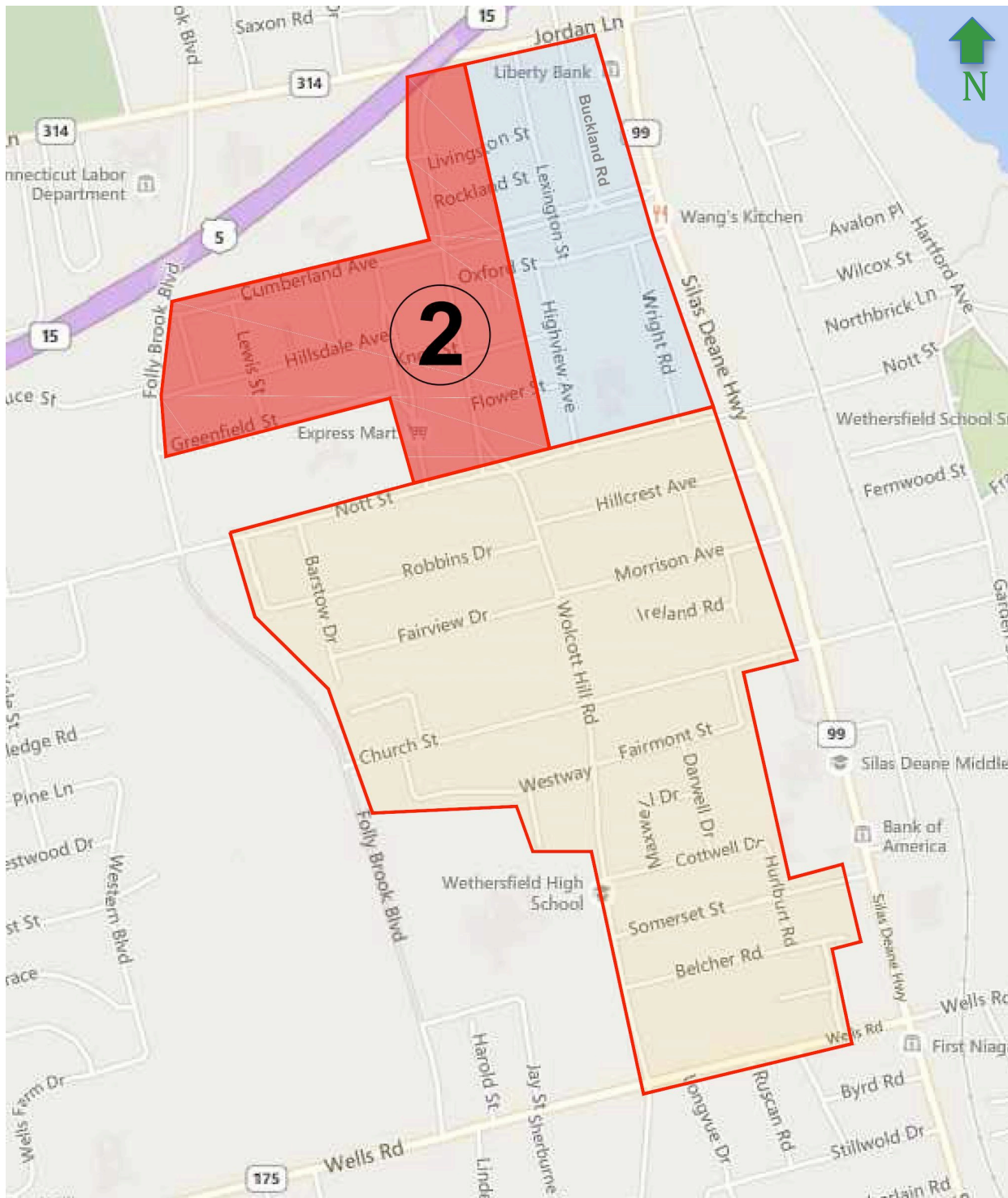


Figure 14: Pedestrian Zone #2

Pedestrian Zone # 2 is bounded by Jordan Lane to the north, Nott Street to the south, Highview Avenue to the east, and Folly Brook Boulevard to the west. The main roads for pedestrian access to Charles Wright Elementary School in Pedestrian Zone # 2 include Folly Brook Boulevard, Wolcott Hill Road, Cumberland Avenue, and Nott Street. The longest walking route is approximately 0.5 miles from the westernmost point on Folly Brook Boulevard to the front entrance of Charles Wright Elementary School, as shown in **Figure 14**.

1.3.1 Roadway and Pavement Marking Conditions

In general, the roadway pavement quality in Pedestrian Zone # 2 is in fairly good condition, except for a few locations along Wolcott Hill Road. There are areas of light rutting, and longitudinal/transverse cracking at the intersection of Wolcott Hill Road and Cumberland Avenue as shown in **Figure 15**.

Pavement markings along this route are comprised of stop bars and crosswalks with double yellow lines on Nott Street and Wolcott Hill Road. There are no edge lines along any roadways within this pedestrian zone, which is problematic for cyclists that do not have defined paths. Cyclists on this route to Charles Wright Elementary School face unsafe conditions because of the lack of painted shoulders. The only painted crosswalks in this pedestrian zone are at the intersection of Wolcott Hill Road and Nott Street.



Figure 15: Longitudinal and Transverse Cracking at Wolcott Hill Road and Cumberland Avenue

1.3.2 Signs

The speed limit in Pedestrian Zone # 2 is 35 mph for Wolcott Hill Road and 30 mph for Nott Street and Folly Brook Boulevard. The speed limit is 25 mph for all other streets. Generally, drivers in this area appear to exceed the speed limit. The increased speeds on Nott Street and Wolcott Hill Road are especially problematic because of the sight distance issues and the offset geometry at the intersection.

There is a SCHOOL CROSSING sign in the landscaped median on southbound Wolcott Hill Road a few feet before the intersection with Nott Street. The school crossing assembly is the appropriate yellow-green color specified by the *Manual on Uniform Traffic Control Devices* (MUTCD). There are BIKE ROUTE and BIKE CROSSING signs at or around the intersection of Folly Brook Boulevard and Nott Street.

1.3.3 Sidewalks

Most streets surrounding Charles Wright Elementary School in Pedestrian Zone #2 have sidewalks on both sides of the road. Almost all sidewalks also have grass strips that on average were 6' wide or greater which serve as a buffer between traffic and pedestrians using the sidewalk. Generally, the sidewalk pavement at all locations along potential walking and biking routes were in fair to good condition. There are a few locations where new sidewalk has been installed such as the intersection of Wolcott Hill Road and Knoll Street/Lorraine Road (**Figure 16**). All curb ramps in this area were not American with Disabilities Act (ADA) compliant with no detectable warning strips. The curb ramps at the Wolcott Hill Road and Cumberland Avenue are in poor condition (**Figure 17**). A summary of locations with crosswalk and curb ramp issues is shown in **Table 3**.



Figure 16: New Sidewalk at Wolcott Hill Road and Knoll Street/Lorraine Road



Figure 17: Poor Condition of Curb Ramps at Wolcott Hill Road at Cumberland Avenue

Table 3: Unsafe Crosswalk/Handicap Ramp Locations in Pedestrian Zone # 2

Location	Approach(es)	Issue	Quantity
Nott Street/Wolcott Hill Road	S	Steep slope Handicap ramp (NW)	1
Wolcott Hill Road/Cumberland Avenue	E,W	Handicap ramps in poor condition	1
TOTALS			2

1.3.4 Crime

The school principal stated that crime is not an issue in the area.

1.4 Pedestrian Zone # 3: Northeast of Charles Wright Elementary School

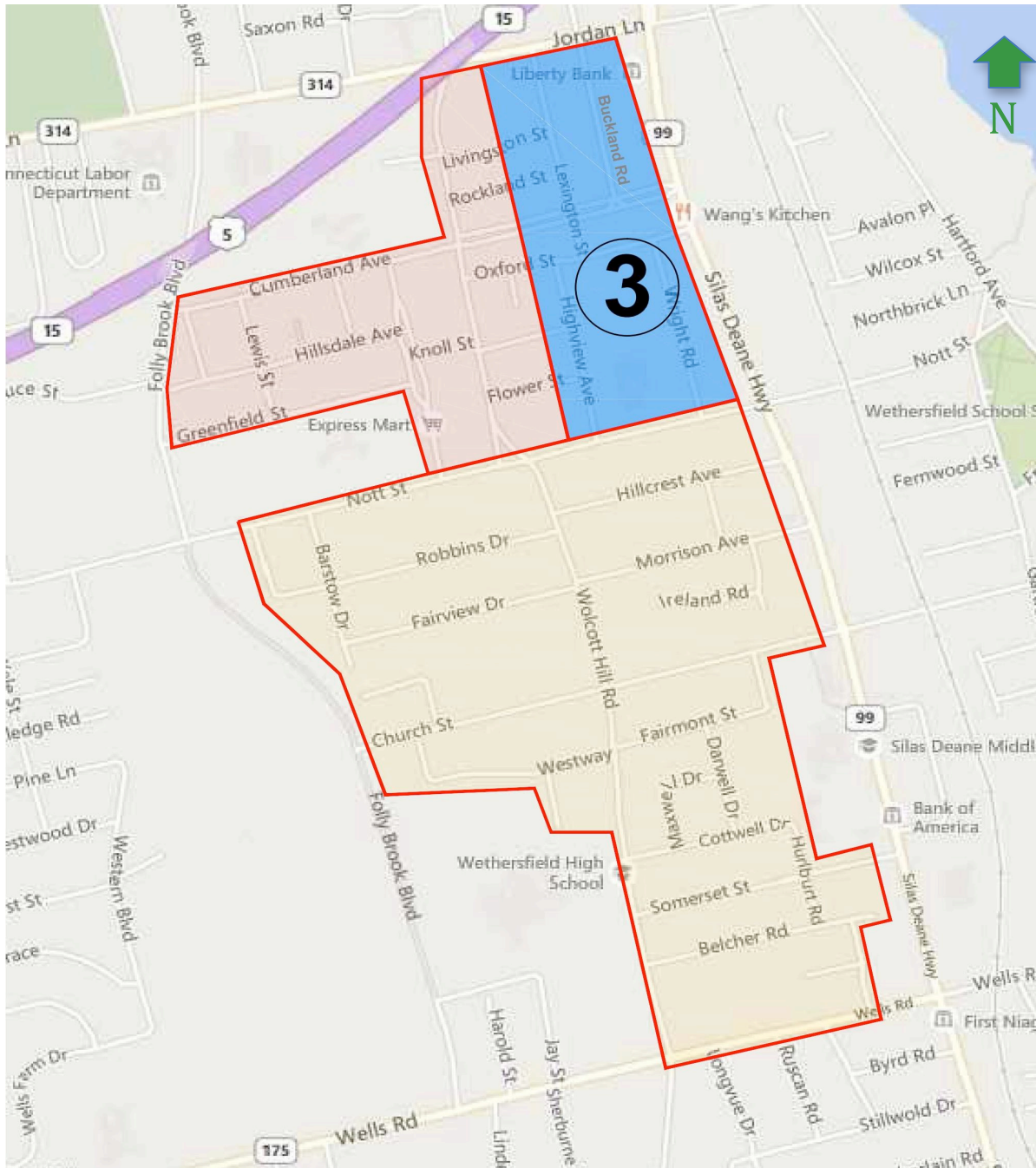


Figure 18: Pedestrian Zone # 3

Pedestrian Zone # 3 is bounded by Jordan Lane to the north, Nott Street to the south, Silas Deane Highway to the east and Highview Avenue to the west. The main roads for pedestrian access to Charles Wright Elementary School in Pedestrian Zone # 3 include Buckland Road, Cumberland Avenue, Oxford Street, Wright Road, and Nott Street. Students also use the gravel path from Cumberland Avenue to Oxford Street to get to the walk/bike path on the school grounds. The longest walking route is approximately 0.5 miles long from the northernmost point on Buckland Road to the front entrance of Charles Wright Elementary School, as shown in **Figure 18**.

1.4.1 Roadway and Pavement Marking Conditions

In general, the roadway pavement quality in Pedestrian Zone # 3 is in fairly good condition, except for a few locations along Cumberland Avenue. There are areas of light rutting, and longitudinal/transverse cracking at the intersection Cumberland Avenue and Buckland Road as shown in **Figure 19**.

Pavement markings along this route are comprised mainly of stop bars. There are no edge lines along any roadways within this pedestrian zone, which is problematic for cyclists that do not have defined paths. Cyclists on this route to Charles Wright Elementary School face unsafe conditions because of the lack of painted shoulders.

There are no existing crosswalks for crossing Cumberland Avenue and Oxford Street to access the path leading to the school. Crossing the Cumberland Avenue and Buckland Road intersection is potentially dangerous based on the lack of crosswalks and sidewalk/curb ramps in the wide landscaped median. This is a safety issue of particular concern to parents and school authorities.

1.4.2 Signs

The posted speed limit for most streets within Pedestrian Zone # 3 is 25 mph, except Nott Street that has a speed limit of 30 mph. While the speed limit is posted as 25 mph on Cumberland Avenue and Oxford Street, observed speeds were higher. This observation is particularly concerning because students cross these roads to access the walk/bike paths to the school. There are bicycle route signs on Cumberland Avenue and Nott Street. There are pedestrian crossing signs along Oxford Street in the vicinity of the bike path (**Figure 20**). However there is no existing crosswalk or curb ramp.

1.4.3 Sidewalks

All streets have sidewalks on both sides of the roadway, with the exception of Oxford Street and Livingston Street, both of which only have sidewalks on small sections along one side of the road. Almost all sidewalks also had grass strips that on average were 3' wide or greater which serve as a buffer between traffic and pedestrians using the sidewalk. Generally, the concrete sidewalk pavement at all locations along potential walking and biking routes were in fair to good condition.

The condition of the gravel path that runs from Cumberland Avenue to Oxford Street is poor and not ADA compliant. It consists of loose gravel material and does not provide a firm and stable trail surface, especially in wet weather. The path surface has grass and weeds growing on the trail surface as shown in **Figure 21**.

The walk/bike path on the school grounds is generally in fair condition. There are areas of light rutting, and longitudinal/transverse cracking along the path. There are also sections of the path, particularly



Figure 19: Longitudinal and Transverse Cracking at Cumberland Avenue and Buckland Road



Figure 20: Pedestrian Crossing Sign on Oxford Street



Figure 21: Poor Surface Condition on Gravel Path

next to drainage catch basins that show significant signs of deterioration as shown in **Figure 22**. This results in an uneven surface which is not suitable for ADA accessibility. It is noted that this path is also used as an emergency evacuation route.



Figure 22: Deterioration of Pavement Condition along School Walk/Bike Path

A summary of locations with crosswalk and curb ramp issues is shown in **Table 4**.

Table 4: Unsafe Crosswalk/Handicap Ramp Locations in Pedestrian Zone #3

Location	Approach(es)	Issue	Quantity
Buckland Road/Cumberland Avenue	E,W	No crosswalk/sidewalk across Cumberland Avenue to gravel path	2
Oxford Street/Gravel Path	E,W	No crosswalk across Oxford Street from gravel path Gravel path not ADA Compliant No handicap ramp at end of gravel path	1
Oxford Street/School Walk/ Bike Path	E,W	Handicap ramp at access to school walk/bike path obstructed by catch basin	1
TOTALS			4

1.4.4 Crime

The school principal stated that crime is not an issue in the area.

2 ASSESSMENT OF WALKING ROUTES AND SCHOOL GROUNDS

This section summarizes an assessment of the three walking routes in accordance with SRTS practices. Best Practices and Key Issues are discussed below.

2.1 Best Practices

The following SRTS best practices were observed during the walk audit:

- Sidewalks are generally in good condition, with the majority of the streets having grass buffers and sidewalks on both sides of the road within all three pedestrian zones.
- Parents/guardians accompany their children by walking with them to school.
- Crossing guards stationed at high density traffic and walking zones. Crossing guards wore proper safety vests and used handheld stop signs.
- Parents/Guardians drop-off /pickup and Bus drop-off /pickup are in separate parking lots.
- Several teachers help with the arrival and dismissal processes. The school principal is on hand to meet and assist students as they exit their vehicles during drop-off.
- School buses line up at the smaller parking lot and let students out for arrival all at once after the school doors open.
- The pickup of students by parents is well coordinated with three (3) staff members on hand to assist. One of the staff members uses a bull horn to keep order (**Figure 23**).
- The bus dismissal process is orderly and two (2) teachers are on hand in the bus parking lot area to ensure students safely board their respective buses.
- Most of the walking routes in the immediate area of the school are through residential neighborhoods.
- Most signs within the area are new yellow-green fluorescent as specified by the MUTCD.
- The school has a bicycle rack to accommodate cyclists.
- There are no apparent crime concerns within any of the pedestrian zones.



Figure 23: Teachers assisting students during dismissal process.

2.2 Key Issues

Operational issues that were noted and can be improved include:

- New Signs were installed with old signs, lowering the older signs and crowding the sign posts as seen in **Figure 24**. Some signs within the area were installed too low, where pedestrians can potentially hit the sign.
- The school traffic circulation pattern causes issues. Several parents dropped off students without waiting for the vehicle queue to dissipate and drove by the queued vehicles resulting in a safety issue. Also, during morning



Figure 24: Newly Installed Signs Crowding Older Signs

drop-off there was congestion in front of the school with some parents parking in the “No Parking 8 AM – 4 PM on School Days” area, where students got out and walked to the school.

- During dismissal, a number of cars illegally parked on both sides of Nott Street resulting in sight distance restrictions and safety issues. Some cars also made U-turns in private drives on Nott Street causing congestion and holding up traffic.
- During bus dismissal, some buses queued in the parking lot blocked the sidewalk area and part of the roadway.
- Crosswalks in all three zones are faded and some crosswalks extend into handicap ramps which are not ADA compliant with no detectable warning strips.
- The geometry at Wolcott Hill Road and Nott Street is a complex all-way stop offset intersection resulting in very long pedestrian



Figure 25: Long Crosswalk at Wolcott Hill Road and Nott Street

crosswalks as seen in **Figure 25**. The alignment of this intersection does not provide adequate sight distance from all approaches, resulting in a safety issue for pedestrians and motorists.

- Even though parents and school authorities report that a good number of students use the paths from Cumberland Avenue and Oxford Street, there are no crosswalks for crossing the respective streets to access the path leading to the school (**Figure 26**). This is a safety issue of particular concern to parents and school authorities.
- Most roads lack edge lines. All bike routes along Nott Street or locations with bicycle warning signs (W11-1) do not have edge lines.
- There is a lack of professional training and proper gear for teachers helping with arrival and dismissal processes. Teachers were not wearing safety vests.
- The SRTS team can come to the school, talk to the PTA, and introduce the SRTS program. They will offer pedestrian and bike training, while helping to inform parents about the safest way to pick-up and drop-off their children. The team could also further explain the drop-off and pick-up processes.
- There is no designated school zone around the facility to provide an enforceable speed limit during the arrival and dismissal times.
- The number of pedestrians observed walking to Charles Wright Elementary School is relatively low given the student population located within walking distance of the school and available walking infrastructure.



Figure 26: Lack of Crosswalk or Curb Ramps for Crossing Oxford Street from Gravel Path

3 RECOMMENDATIONS

The CTDOT SRTS team developed a list of improvements to address the issues affecting the various walking routes to Charles Wright Elementary School. They have been separated into two categories: short-term and long-term improvements.

3.1 Short-Term Improvements

The SRTS audit team recommends the following short-term low cost improvements to be considered for Charles Wright Elementary School in the Five E's¹ framework.

3.1.1 Education

- The SRTS Program provides free pedestrian and bike education for students and parents. The SRTS committee could contact the SRTS team to arrange follow up training or check the CTDOT website after September 2016 for more information². These education programs would clarify for parents where to walk their children within the school drop-off areas.
- Attend a Driver and Passenger Educational program to clarify drop-off procedures to new parents at the beginning of the school year, taking into account the separate bus drop-off and parent drop-off lots. An educational program would also ensure that drop-off procedures operate without impacting adjacent roadways and sidewalks (**Figure 27**).



Figure 27: No Parking School Days Sign

3.1.2 Encouragement

- Walking Wednesdays, Walking / Biking contests, and mileage tracking could help continue encouraging walking and biking to school throughout the year.
- Walking School Buses/Bicycle Trains consist of groups of students accompanied by adults that walk or bike a pre-planned route to school. Since students have one or two adults walking with them, this activity addresses parents' concerns about traffic and personal safety.
- Encourage faculty and staff members to assist during drop-off and pickup. If they are directing traffic, ensure they wear safety vests.

3.1.3 Enforcement

- Encourage law enforcement to monitor temporary illegal parking and drop-off. Place safety cones, bollards or saw horse in crosswalk to enhance awareness. This would prevent the tendency for children to cross between vehicles and school buses. Enforcement of illegal parking will also improve sightlines for vehicles and buses exiting the school during dismissal.

¹ Five E's of Safe Routes to School are Education, Encouragement, Engineering, Enforcement and Evaluation <http://www.walkitbikeitct.org/The5Es.html>

² CT Department's Bicycle and Pedestrian Dashboard <http://www.ct.gov/dot/cwp/view.asp?a=3531&q=259658&dotPNavCtr=|#40030>

- Coordinate with Wethersfield Police Department to install portable speed trailers along Nott Street in the vicinity of Charles Wright Elementary School to help reduce speeds and increase awareness of local speed limits.

3.1.4 Engineering

- It is recommended that over time all signage around the school be updated to meet MUTCD current specifications, particularly with regards to size, reflectivity, mounting height (MUTCD Figure 2A-2) and the fluorescent yellow-green color. The areas surrounding the school were recently updated with the MUTCD S1-1 School Crossing assembly signs with the arrow sub-plate, but are missing several advanced warning signs as mentioned previously. An example of the MUTCD S1-1 school sign is shown in **Figure 28**. According to the MUTCD, the school advance crossing assembly, with the "AHEAD" sub-plate, should be located 100 feet from the crosswalk. None of the school advance crossing assemblies has the "AHEAD" sub-plates. All of the Stop Ahead signs (W3-1) are outdated at the intersections of Wolcott Hill Road/Nott Street and Wolcott Hill Road/Church Street and lack proper reflectivity.



Figure 28: MUTCD S1-1 Sign

- All "SCHOOL SLOW" pavement markings and crosswalks should be permanently removed (not blacked out) and restriped or replaced with SCHOOL ZONE pavement markings (MUTCD Section 7C.03) and the appropriate corresponding school zone signage to alert motorists that they have entered a school zone per Connecticut Department's School Zone Guidelines shown as an attachment.
- Improve sightlines for newly installed signs and sidewalks that are being blocked by vegetation and obstructions.
- Clear vegetation on gravel path connecting Cumberland Avenue and Oxford Street.
- Ensure that Town maintains snow plowing of the gravel path during the winter months.
- Properly maintain landscaping along Walk/Bicycle Path to the school to clear it of vegetation and obstructions and make it easier for pedestrians/bikers to utilize.
- Consider installing edge lines with a 3' minimum shoulder (8' maximum) along Wolcott Hill Road and Nott Street to provide a separation between travel lanes of vehicles and bicycles. Reducing the lane widths to 11' will also give the appearance of a narrow roadway and potentially lower the speed of vehicles along these roads.
- Restripe existing crosswalks and provide a temporary crosswalk and signs across Cumberland Avenue.
- If possible, as a traffic flow alternative, the school should consider staggering the morning drop-off schedule to reduce congestion around the school.

3.1.1 Evaluation

Evaluating your school's Safe Route to School Committee's progress is an important step in the process. We recommend using the parent and student surveys that can be found on the walkitbikeitct.org website to measure the progress being made by the SRTS Committee on a yearly basis, as a minimum. At the onset of each academic year, walking and biking conditions and opinions on pedestrian and cycling issues can change. One of the best ways to stay abreast of these changes is to have regular committee meetings and utilize the surveys to guide the committee's efforts and to assess new parents' and students' concerns. Measure your progress and make changes to your plan as needed.

3.2 Long-Term Improvements

The areas surrounding Charles Wright Elementary School already have several amenities that are conducive to walking and bicycling school safely. The landscape is largely residential, with sidewalks and crosswalks present along all major walking routes. Employing the Five E's Guidelines, the following improvements are recommended.

3.2.1 Education

- The SRTS Program provides free pedestrian and bike education for students and parents. The SRTS committee could contact the SRTS team to arrange regular follow up training when there are new faculty and staff members.
- Attend a Driver and Passenger Educational program to clarify drop-off and pickup procedures including the arrival of the buses during drop-off.
- Work with the Town of Wethersfield Public Works Department on a media campaign to both encourage and educate property owners about increased pedestrian safety as a result of better sidewalk maintenance. This media campaign can issue press releases and newspaper columns, among other forms of communication.

3.2.2 Encouragement

- Walking Wednesdays, Walking / Biking contests, and mileage tracking could continue the encouragement of walking and biking to school throughout the year (**Figure 29**).
- Walking School Buses/Bicycle Trains consist of groups of students accompanied by adults that walk or bike a pre-planned route to school. Since students have one or two adults walking with them, this activity addresses parents' concerns about traffic and personal safety.
- Encourage faculty and staff directing traffic to wear safety vests.



Figure 29: Bicycle Racks and Parking at School

3.2.3 Enforcement

- Request an increase in police presence on Nott Street, Wolcott Hill Road, and Cumberland Avenue to enforce speed limit to protect pedestrians.

3.2.4 Engineering

- Regrade and repair the handicap ramps and install detectable warning strips mentioned in above-mentioned tables and/or relocate the crosswalks. Where possible, install perpendicular handicap ramps with detectable warning strips. Some locations are mentioned below:
 - a. Crosswalk on north leg of Wolcott Hill Road at Nott Street extends to a handicap ramp at the NW corner that is steep and not ADA compliant. This handicap ramp needs regrading, detectable warning strip, and/or angled to be ADA compliant.
 - b. Crosswalk across Nott Street in front of the School extends to a private driveway to the north side of the road. This needs to be shifted further east to direct pedestrians directly onto the sidewalk. Install yield lines and corresponding "Yield Here to Pedestrians" sign (R1-5) or a similar sign, at least 20 feet in advance of the crosswalk for both approaches.

- c. It is recommended to install standard bar-type crosswalks across all approaches of the intersection of Wolcott Hill Road and Wells Road (Route 175). This intersection is included for signal replacement in State Project No. 171-358 currently under construction. This recommendation is currently being incorporated under this project to install standard bar-type crosswalks at the four legs of the intersection.
 - d. Install detectable warning strips and repair handicap ramps at Wolcott Hill Road and Cumberland Avenue to be ADA compliant.
- Due to the fact that students use the paths from Cumberland Avenue and Oxford Street, it is recommended that handicap ramps with detectable warning strips, crosswalks, sidewalks and appropriate signs are provided for crossing the respective streets to access the path leading to the school. A concept is shown in **Figure 30**. If possible, the school can also consider requesting a crossing guard be stationed at the proposed Oxford Street crossing location.
 - Resurface gravel path with a suitable, durable and permeable material that offers improved drainage and provides a firm and stable path surface.
 - Fill areas of light rutting and longitudinal/transverse cracking on walk/bike path on the school grounds. Fully repair areas that are severely deteriorated, such as areas next to drainage catch basins, tree roots, etc. Regrade path in the vicinity of the parking lot to reduce the slope and make it ADA compliant.
 - Reconstruct deteriorated sidewalk along Nott Street, install detectable warning strips where there are none and repair any damaged sidewalks within pedestrian zones.
 - The intersection of Wolcott Hill Road and Nott Street is an all-way stop offset intersection resulting in very long crosswalks. The alignment of this intersection does not provide adequate sight distance from all approaches, resulting in a safety issue for pedestrians and motorists. To improve pedestrian and vehicular safety at this intersection one of the following three design improvements are suggested for consideration:
 - a. Conduct a traffic signal warrant analysis in accordance with MUTCD to determine if a traffic control signal is needed at this intersection. Providing a traffic signal with a pedestrian indications and actuation will remove the conflicts between pedestrians and motorists and improve safety at the intersection.
 - b. Evaluate splitting Wolcott Hill Road north of the intersection into a one-way pair as shown in **Figure 31**. This concept shows a section of northbound and southbound Wolcott Hill Road as one-way approaches separated by the median island. Removing the Wolcott Hill Road southbound approach at the intersection eliminates the existing sightline issues for southbound and westbound motorists.
 - c. Realign Wolcott Hill Road northbound approach with the southbound approach. This realignment will result in shorter crosswalk lengths across Nott Street and also provide pedestrian crosswalks at all four approaches. This concept as illustrated in **Figure 32** will improve safety and sightline issues at the intersection.



Figure 30: Concept Showing Proposed Crosswalks, Ramps and Sidewalks on Cumberland Avenue and Oxford Street



Figure 31: Concept Showing Proposed One-Way Split at Wolcott Hill Road and Nott Street

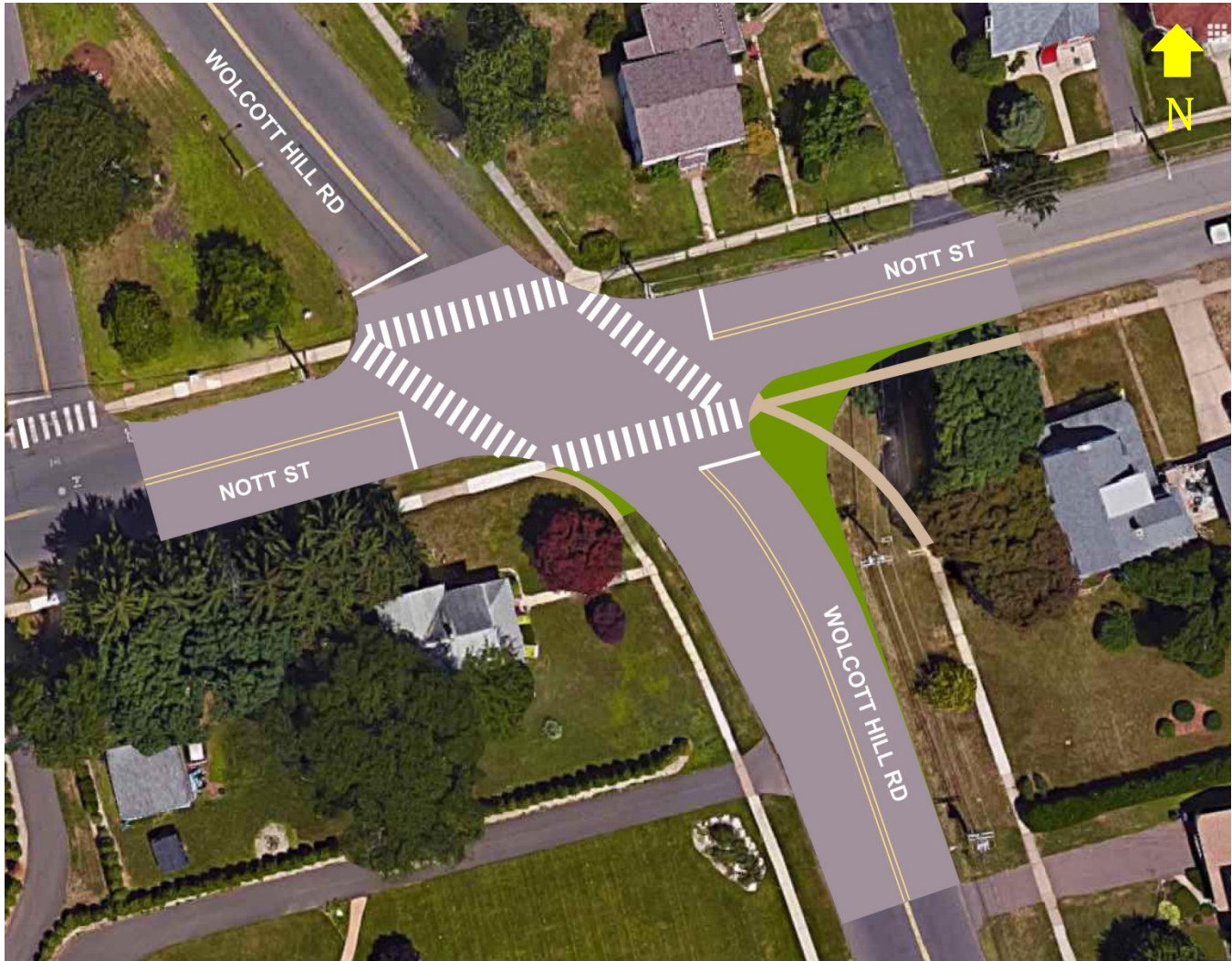
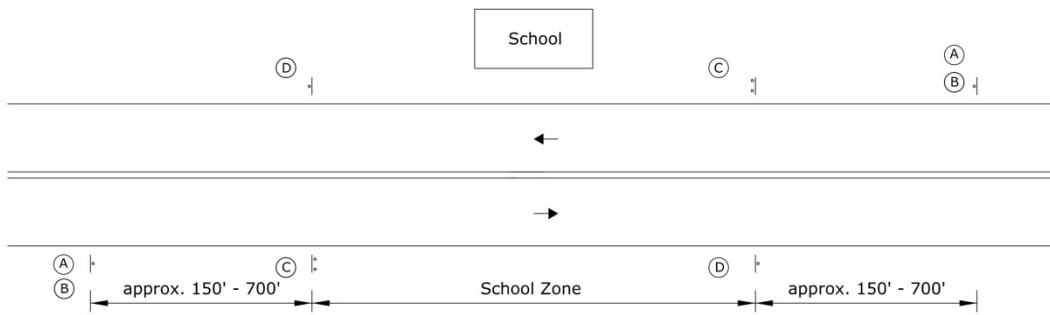


Figure 32: Concept Showing Proposed Realignment of Wolcott Hill Road and Nott Street Intersection

The aforementioned Safe Routes to School Walk Audit Report is an objective review intended for the School's Safe Routes Committee use to help assess the existing conditions surrounding the school. This document is an innovative planning tool to help identify bicycle, pedestrian and non-motorized transportation needs that encourage walking and bicycling to the school, as well as assists in developing recommendations to improve existing conditions. The contents of this report are not intended to be legally binding, but rather offer recommendations to improve safety in the vicinity of the school and create a more appealing transportation alternative.

Appendix A. CT Department's School Zone

School Zone Ahead Fines Doubled Zone



(A) 41-2111, 41-2112, 41-2113

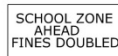


If a school crosswalk is present within the school zone, signing at the crosswalk is required. The advance crossing sign assembly for the crosswalk is optional.

(B) Optional use of 41-6126, 41-6137



(C) 31-2101, 31-2102

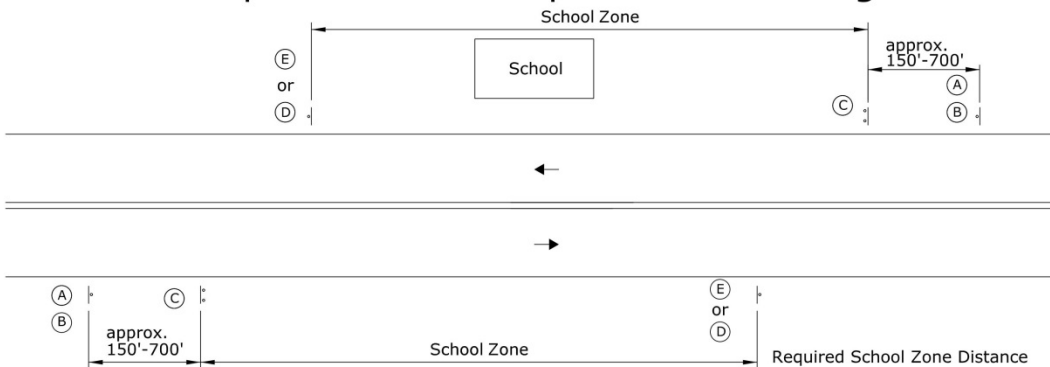


(D) 31-2103 End School Zone



Fines Doubled Zone
Signing Pattern
Figure No. 1

School Speed Limit XX mph When Flashing Zone



(A) 41-2111, 41-2112, 41-2113



(D) 31-2103



At least 200 ft. in advance of school grounds or other related school activities.

(B) Optional use of 41-6126, 41-6137

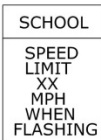


(E) 31-5505



Make sure a regulatory speed limit sign is not located within the school zone.

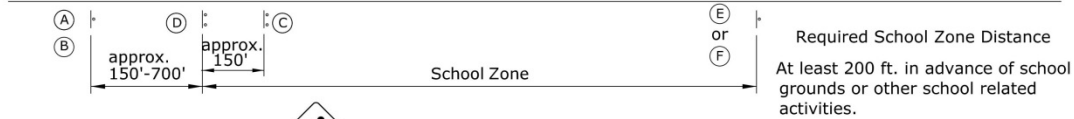
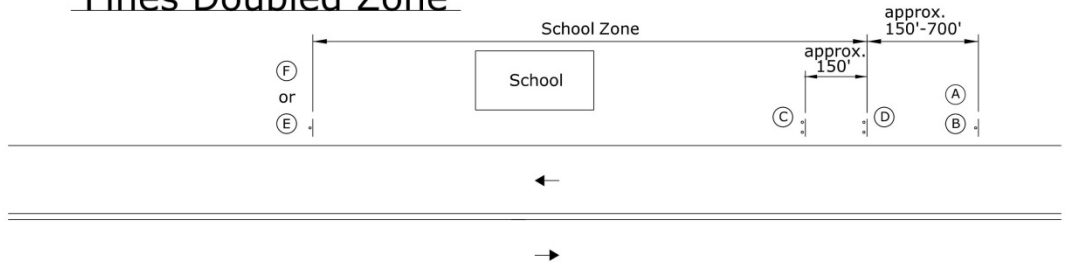
(C) 31-5541



If a school crosswalk is present within the school zone, signing at the crosswalk is required. The advance crossing sign assembly for the crosswalk is optional.

School Zone
Speed Reduction
Signing Pattern
Figure No. 2

School Speed Limit XX mph When Flashing with a Fines Doubled Zone



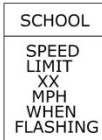
(A) 41-2111, 41-2112, 41-2113



If a school crosswalk is present within the school zone, signing at the crosswalk is required. The advance crossing sign assembly for the crosswalk is optional.

(B) Optional use of 41-6126, 41-6137

(C) 31-5541



(E) 31-2103

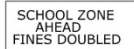


Make sure a regulatory speed limit sign is not located within the school zone.

(F) 31-5505



(D) 31-2101, 31-2102



**School Speed Limit XX
When Flashing with a
Fines Doubled Zone
Figure No. 3**

Non-Regulatory School Area Signing




(A) 41-2111, 41-2112, 41-2113



Suggested School Area Distance
Not less than 150 ft or more than 700 ft.
in advance of the school grounds or school crossing.

(B) Optional Use of:

Ahead Subplate 41-6126, 41-6137 

If a school crosswalk is present within the school area, signing at the crosswalk is required. The use of an "AHEAD" or "XXX FT" subplate is now required on Sign A.

**Non-Regulatory
School Area
Signing
Figure No. 4**

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VN Engineers, Inc.

