

2016 Safe Routes to School Walk Audit Findings Report



Bielefield Elementary School Middletown, CT

Submitted By:
VN Engineers, Inc.
116 Washington Avenue
North Haven, CT 06473
Phone (203) 234-7862

June, 2016



VN Engineers, Inc.

Table of Contents

- 1. INTRODUCTION 1**
- 2. Existing Features and Walking Routes 2**
 - 2.1 Bielefield Elementary School Surrounding Area2**
 - 2.2 Bielefield School Existing Conditions4**
 - 2.3 Walking Route One 9**
 - 2.3.1 Traffic and Pavement Markings..... 9
 - 2.3.2 Signs 9
 - 2.3.3 Sidewalks 10
 - 2.3.4 Crime 10
 - 2.4 Walking Route Two 13**
 - 2.4.1 Traffic and Pavement Markings..... 13
 - 2.4.2 Signs 13
 - 2.4.3 Sidewalks 14
 - 2.4.4 Crime 14
 - 2.5 Walking Route Three 15**
 - 2.5.1 Traffic and Pavement Markings..... 15
 - 2.5.2 Signs 17
 - 2.5.3 Sidewalks 17
- 3. Assessment of Walking Routes And School Grounds18**
 - 3.1 Best Practices 18**
 - 3.2 Key Issues..... 18**
- 4. Recommendations19**
 - 4.1 Short-Term Improvements 19**
 - 4.1.1 Education..... 19
 - 4.1.2 Encouragement 19
 - 4.1.3 Engineering..... 19
 - 4.1.4 Evaluation..... 19
 - 4.1.5 Enforcement..... 20
 - 4.2 Long Term Improvements..... 20**
 - 4.2.1 Education..... 20
 - 4.2.2 Encouragement 20
 - 4.2.3 Engineering..... 20
 - 4.2.4 Evaluation..... 21
 - 4.2.5 Enforcement..... 21

List of Tables

Table 1: Bielefield School Street Inventory 6

List of Figures

Figure 1: Bielefield School..... 1
 Figure 2: Bielefield School Location 2
 Figure 3: Aerial View of School Arrival and Dismissal Patterns 3
 Figure 4: Faded Pavement Marking in School Lot 3
 Figure 5: Bus Drop-off 4
 Figure 6: Parent Drop-off..... 4
 Figure 7: Pedestrians Along Campus Sidewalk 4
 Figure 8: Crosswalk for Pedestrians on Campus 5
 Figure 9: Bus Dismissal..... 5
 Figure 10: No Idling Sign on Campus 5
 Figure 11: Bielefield Elementary School Plan Map 7
 Figure 12: Walking Route One 8
 Figure 13: Clew Drive 9
 Figure 14: No Parking on Maynard 9
 Figure 15: Sidewalk Along Maynard Street 10
 Figure 16: Crime Rate Map 11
 Figure 17: Walking Route Two 12
 Figure 18: Intersection of Wall Street and Saybrook Road 13
 Figure 19: Slow School Sign 13
 Figure 20: Bidwell Terrace 14
 Figure 21: Walking Route Three 15
 Figure 22: Construction at Top of Bow Lane 16
 Figure 23: Crosswalk at the Intersection of Saybrook Road and Tryon Street 16
 Figure 24: Speed Limit on Tryon Street 17
 Figure 25: Slow Children Sign 17
 Figure 26: Pedestrian Beacon at Tryon Street and Saybrook Road 18
 Figure 27: Saybrook Road 18
 Figure 28: MUTCD S1-1 Sign and W16-9P Sub-Plate..... 19
 Figure 29: Pedestrian Training 20
 Figure 30: Current Non-ADA Compliant Ramp 20

1. INTRODUCTION

A walk audit was performed by CTDOT's "Safe Route to School" (SRTS) Consultant, VN Engineers, Inc., for Bielefield Elementary School on June 3, 2016. Bielefield Elementary School is located at 70 Maynard Street, Middletown, CT 06457. This school serves 297 students from pre-kindergarten to grade 6, see **Figure 1**.

The purpose of a SRTS Walk Audit is to assess the existing conditions of the walking and biking routes to a 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, and presence/absence of sidewalks and/or bicycle lanes.



Figure 1: Bielefield School

The audit for Bielefield 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 online 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.

The CTDOT SRTS Team visited the site to observe arrival and dismissal operations. During class sessions, the team walked 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.

The SRTS Audit Team found that the area around Bielefield School and the various walking routes are in good condition with some of the appropriate safety amenities in place. The team noted speeding concerns and a few infrastructure issues that could be addressed in the short- and long-term. If the district would still like to increase the number of students safely walking and biking to school, then they could initiate pedestrian and bicycling education 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

2. Existing Features and Walking Routes

The SRTS Team worked in conjunction with Bielefield Elementary School's Kindergarten teacher, Maghan Heslin, and Complete Streets Committee Member, Howard Reid, to select the three routes most amenable for walking. Despite the school only having several student pedestrians, the champion requested that our team analyze the infrastructure and connectivity of this area. The streets reviewed are as follows: Maynard Street, Bidwell Terrace, Clew Drive, Autumn Lane, Tyron Street, Saybrook Road, Bow Lane, Frisbie Street, and Wall Street.

The SRTS Team divided these streets into three walking routes as follows:

- **Walking Route 1:** Maynard Street to Clew Drive to Saybrook Road to Bow Lane (0.68 miles).
- **Walking Route 2:** Maynard Street to Bidwell Terrace to Saybrook Road to Frisbie Street and Wall Street (0.8 miles).
- **Walking Route 3:** Maynard Street to Clew Drive to Tryon Street (0.65 miles).

2.1 Bielefield Elementary School Surrounding Area

The school submitted an application for a Walk Audit Site Assessment in order to develop clear rules and a safety plan for students and all modes of transportation. The main objective for the Walk Audit was that it would contribute to the school developing a safety plan and provide some analysis into whether parent pick up/drop-off was being done in the safest way possible.

Bielefield School was encouraged to submit an application by the Complete Streets Committee. The Middletown Common Council unanimously adopted the Complete Streets Ordinance proposed by the City's Complete Streets Committee. The ordinance requires the city to consider the needs of all users, including pedestrians, bicyclists, users of wheelchairs, and public transit riders when planning transportation improvement projects. Bicycle- and pedestrian-friendly improvements are expected to be made when roadways and sidewalks are scheduled for work as part of road bond projects with priority given to areas around schools and commercial districts. The Complete Streets Committee is already working with Middletown's Public Schools to encourage more students to walk or bike to school.

Bielefield Elementary School is located in the south side of Middletown, a city of 48,000 in Middlesex County. The school campus is situated in a residential area west of Route 9 and south of Saybrook Road which is a highly travelled connector road with no sidewalk connectivity. The physical building is situated on a cul-de-sac so there is no additional through traffic around the campus.

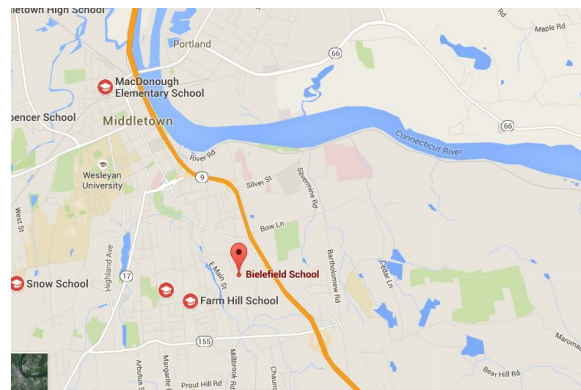


Figure 2: Bielefield School Location



Figure 3: Aerial View of school arrival and dismissal patterns

In general, the area around the school is not conducive to walking for elementary age students. There are very few sidewalks in the surrounding neighborhoods. There are hills with longitudinal slopes as high as 7% that make walking and biking challenging. There are many areas with poor sight lines and overgrown vegetation which are not conducive to walking. According to the SRTS Engineering Guide, “Properly maintained landscaping along sidewalks helps maintain appropriate sight distances and makes it easier for pedestrians to use the sidewalks.”

Middletown uses yellow painted curb to indicate *No Parking* areas. The yellow curb paint is significantly faded in most areas as are the pavement markings on the school grounds, see **Figure 4**.



Figure 4: Faded Pavement Marking in School Lot

The car drop-off and pick up area is directly in front of the main entrance with no designated curb side area for passengers to unload, see **Figure 3**. Buses proceed to the rear to drop-off passengers. Individual cars park perpendicular to the curb in front of the main entrance to allow the students to disembark from their respective vehicles. The drivers are then only able to reverse their vehicles to turn around and exit. Simultaneously, the buses are entering, which can pose a potential vehicular conflict.



Figure 5: Bus Drop-off

The Town of Middletown employs several police resource officers to assist with daily school operations in response to the Sandy Hook tragedy. Officer Rob Marshall is assigned to Bielefield in an unmarked police vehicle. When interviewed, he stated the drop-off and pick up were chaotic at times. However, according to the school staff, there have been no accidents in the parking lot, despite the lack of clear drop-off and pick up operations.

Parents also drop-off students at Bidwell Terrace, which is located to the west of the campus. Students then proceed along the asphalt path to the west side bus loop and enter the side doors. This path is separated from vehicular traffic with a chain link fence.



Figure 6: Parent Drop-off

There are no crossing guards employed by the town, due to the low percentage of pedestrians.

2.2 Bielefield School Existing Conditions

Bielefield School has 297 students. School doors open at 8:40 am and the first of seven buses arrive at 8:35 and other buses intermittently drive in and wait until 8:40 to unload the passengers, **Figure 5**. Once the students unload, they enter one of three doors adjacent to the bus zone. The operation is smooth due to the low volume of buses and the presence of two staff members, one at each entry to guide students into the building. Our team noted that staff members do not wear personal safety gear.



Figure 7: Pedestrians Along Campus Sidewalk

There are no pavement markings in the bus loop. The center section appeared marked for recreation purposes. The informational signs that direct drivers where to park during drop-off and pick up are not clear. According to the SRTS Guide, "Signs help define areas in drop-off and pick up zones and their proper use. Signs should be standard, highly visible, properly installed, and well-maintained."

Parent drop-off begins at the same time as the bus drop-off, with doors opening at 8:40 am, (**Figure 6**). There is no designated school drop-off and pick up lane, so parents pull up to the school campus via the sole entry point off of Maynard Street and then locate a temporary spot to unload their passengers. Most parents attempt to pull up perpendicular to the curbside where they unload their kids. Then the drivers reverse out of parking spaces to exit the lot.

Some parents dropped off their students along side streets and students walked the remainder of the way along the fenced off sidewalk (**Figure 7**) adjacent to the driveway, crossing over midway at the crosswalk in the driveway (**Figure 8**) or proceeding until the bus unloading zone and entering the school building there. There are two staff members monitoring this process and they do not wear personal safety gear.

The bus pick up process begins at 3:00 PM when the first bus arrives on campus. The buses queue up until students are dismissed at 3:25 PM, see **Figure 9**. There are two staff members who monitor this process, as in the morning drop-off operation. Despite the lack of pavement markings or signs, the pick up and drop-off process was more orderly than expected.

Parents begin to arrive at 3 pm to retrieve students. They are permitted to park in any available spaces in the sole parking lot in front of the school. Since this is the only on-site area for vehicles, the parents must compete with teachers and staff for availability. The team noted a few issues with the dismissal operations:

- Cars idling despite a no idle policy, **Figure 10**.
- Conflict between arriving and departing cars and arriving and departing buses.
- Limited parking.
- Parents allowing other parents in the building despite a controlled entry policy.
- Lack of or faded pavement markings.

The site assessment team noted a bike rack at the rear of the school, but no bikes were stationed there.



Figure 8: Crosswalk for Pedestrians on Campus



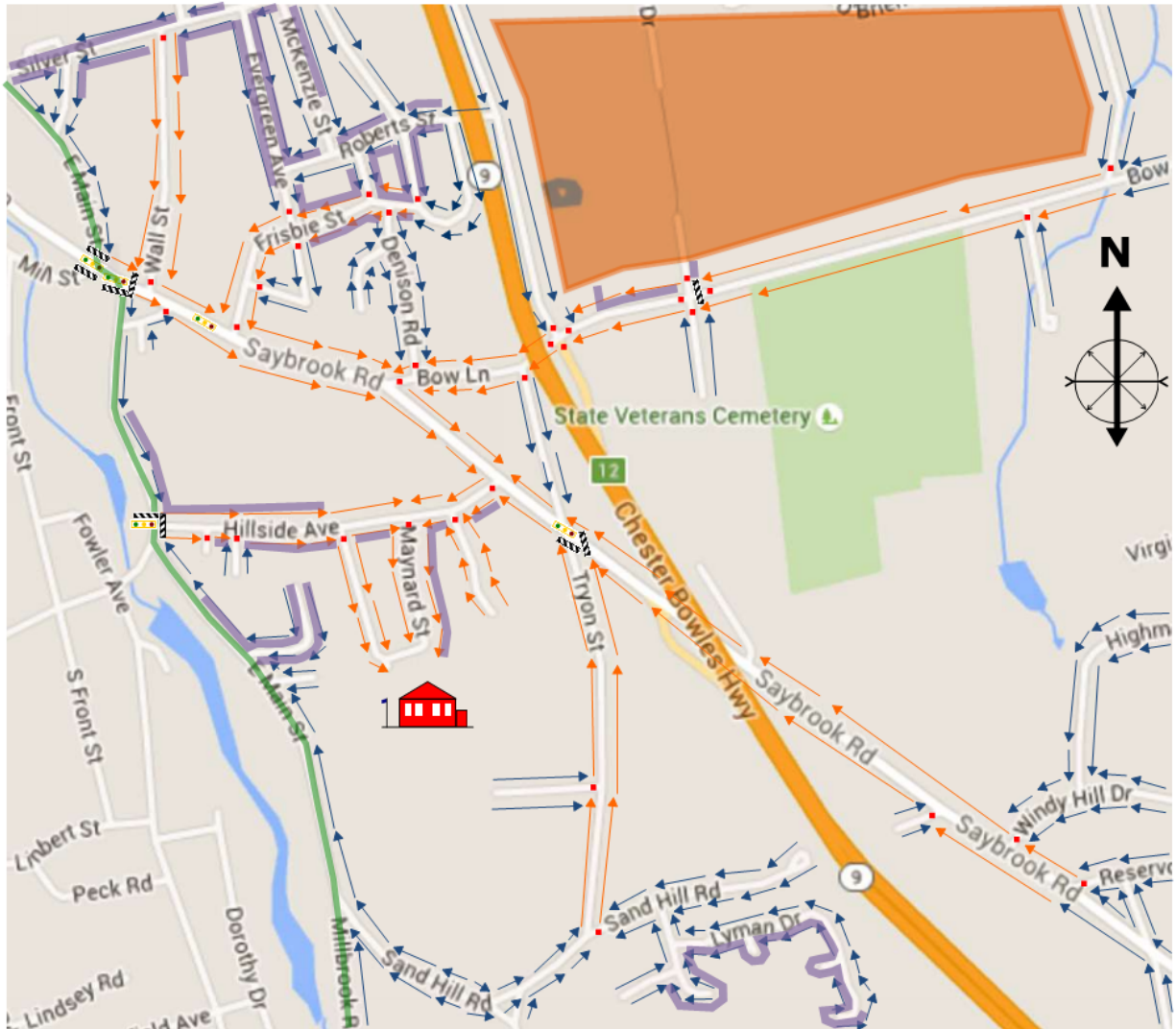
Figure 9: Bus Dismissal



Figure 10: No Idling Sign on Campus

Table 1: Bielefield School Street Inventory

Street Name	Street Width	Direction of Travel	Existing Sidewalk	Sidewalk Width	Sidewalk Condition	Sidewalk Ramps	Curb	Signs	Sidewalk Buffer	Striping
Maynard Street	24'	Two Way	Yes One Side North of school	4 Feet	Excellent	Yes Not ADA	Yes	No Parking sign	4 Feet	No
Bidwell Terrace	30'	Two Way	No	N/A	N/A	N/A	N/A	20 mph	N/A	No
Clew Drive	24'	Two Way	Yes One Side	4 Feet	Excellent	Yes Not ADA	Yes	No	4 Feet	None
Autumn Lane	24'	Two Way	No	N/A	N/A	N/A	N/A	N/A	N/A	None
Tyron Street	28'	Two Way	No	N/A	N/A	N/A	N/A	25 MPH sign	N/A	None
Saybrook Road	32'	Two Way	No	N/A	N/A	N/A	N/A	No	N/A	Double yellow
Bow Lane	26'	Two Way	NO	N/A	N/A	N/A	N/A	No	N/A	Center lines
Frisbie Street	24'	Two Way	Yes North of Evergreen Ave	4 Feet	Excellent	Yes Not ADA	Yes	No	4 Feet	None
Wall Street	24'	Two Way	intermittent on both sides	4 Feet	Poor	Yes Not ADA	Yes	25 MPH sign	3-4 Feet	None
Hillside Avenue	28'	Two Way	Yes Both Sides for section	4 Feet	Good	Yes Not ADA	Yes	25 MPH sign	2 Feet	None



LEGEND

SCHOOL



SCHOOL ZONE



WALKING DIRECTION



FOCUS STREETS



CROSSWALK



STOP SIGN



STOP LIGHT



SCHOOL AHEAD



CROSSWALK AHEAD



CROSSING GUARD



CT MENTAL HOSPITAL



SIDEWALK



Figure 11: Bielefield Elementary School Plan Map



Figure 12: Walking Route One

2.3 Walking Route One

Maynard Street to Clew Drive to Saybrook Road to Bow Lane (0.68 miles).

2.3.1 Traffic and Pavement Markings

Walking Route One (**Figure 12**) starts along Maynard Street and continues on to Clew Drive, to Saybrook Road, and to Bow Lane (0.68 miles).

In general, the pavement markings and pavement quality are in good condition, **Figure 13**. According to the MUTCD:

Pavement markings, or stencils, are an effective way to enhance driver awareness near schools. They can be used to supplement regulations and warnings provided by traffic signs and signals, or they can convey regulations, guidance, and warnings independently.



Figure 13: Clew Drive

All of the aforementioned roads are two-way travel routes measuring 24'-32' in width. There are no crosswalks along any of these three routes and no shoulder lines. Saybrook Road and Bow Lane do have double yellow center lines.

There is low traffic volume along Maynard Street and Clew Drive due to the residential nature of these streets and the cul-de-sac configuration of Maynard Street. There is more traffic along Bow Lane and Saybrook Road.

2.3.2 Signs

There are *No Parking* signs along Maynard Street (**Figure 14**) on both sides in the vicinity of the school campus. According to the MUTCD, "Parking and stopping regulatory signs may be used to prevent parked or waiting vehicles from blocking pedestrians' views, and drivers' views of pedestrians, and to control vehicles as a part of the school traffic plan."



Figure 14: No Parking on Maynard

There are no *School Zone* signs or *School Crossing Assembly* signs. According to the SRTS Guide, "The school zone should be marked with special signing to alert drivers of the high concentration of children. School crossing signs, speed signs, school zone pavement markings, and other traffic calming devices remind drivers to treat the area with special care and attention."

2.3.3 Sidewalks

The sidewalks along this route are intermittently constructed. There is connectivity along Maynard Street and Clew Drive with sidewalks running along the eastern side of Maynard Street (**Figure 15**) and the southern side of Clew Drive. However, there are no sidewalks on Saybrook Road or Bow Lane. The denser traffic along Saybrook Road and the lack of sidewalks and shoulder striping make the option of walking or biking very challenging. Pedestrians have opted to walk along the grass noted by the goat trail that runs along the southern side of this highly travelled corridor.

According to the MUTCD:

Sidewalks, specifically paved sidewalks, are an important piece of a walking route to school. Paved sidewalks are “pedestrian lanes” that provide people with space to travel within the public right-of-way separated from motor vehicles and on-road bicycles. Sidewalks provide places for children to walk, run, skate and play, and are often used by young bicyclists. Continuous and accessible sidewalk networks improve mobility for all pedestrians and are particularly important for pedestrians with disabilities. They provide access for all types of pedestrian travel to schools as well as work, parks, shopping areas, transit stops, and other destinations.

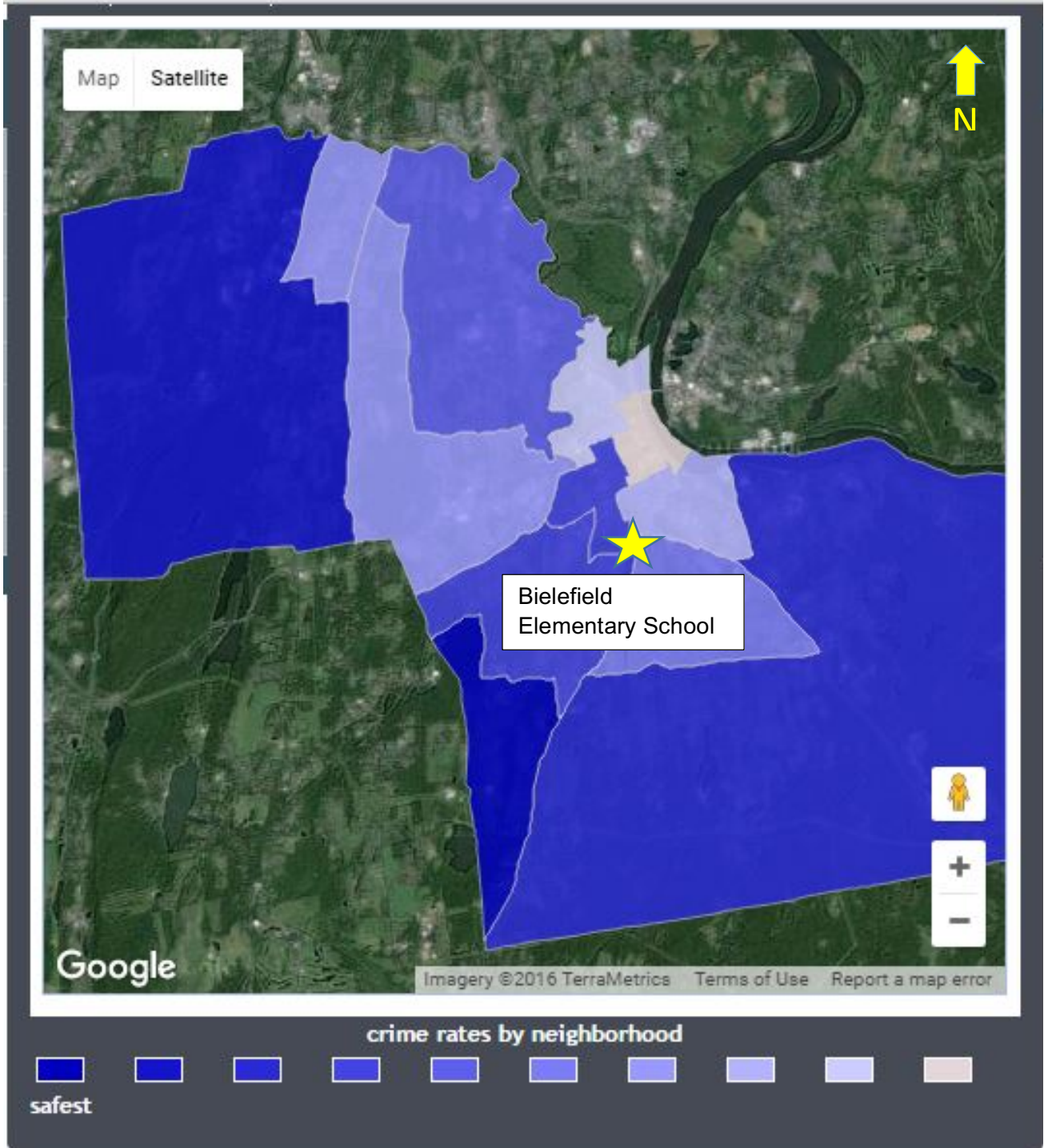


Figure 15: Sidewalk Along Maynard Street

2.3.4 Crime

Crime rates in this area are relatively low compared to similar US cities and other neighborhoods in Middletown, see **Figure 16**. According to the National Center for Safe Routes to School, crime includes “stranger danger, bullying, and drug dealing,” as well as “unsafe behaviors on the streets around the school” including:

- Speeding through residential streets and school zones (speed is directly related to crash frequency and severity).
- Failing to yield to students walking or bicycling (especially in crosswalks), the law requires motorists to stop for pedestrians in crosswalks—it’s a law that is often ignored.
- Running red lights or stop signs.
- Passing stopped school buses.
- Parking or stopping in crosswalks.



Middletown crime rates

POPULATION
47,043

Figure 16: Crime Rate Map

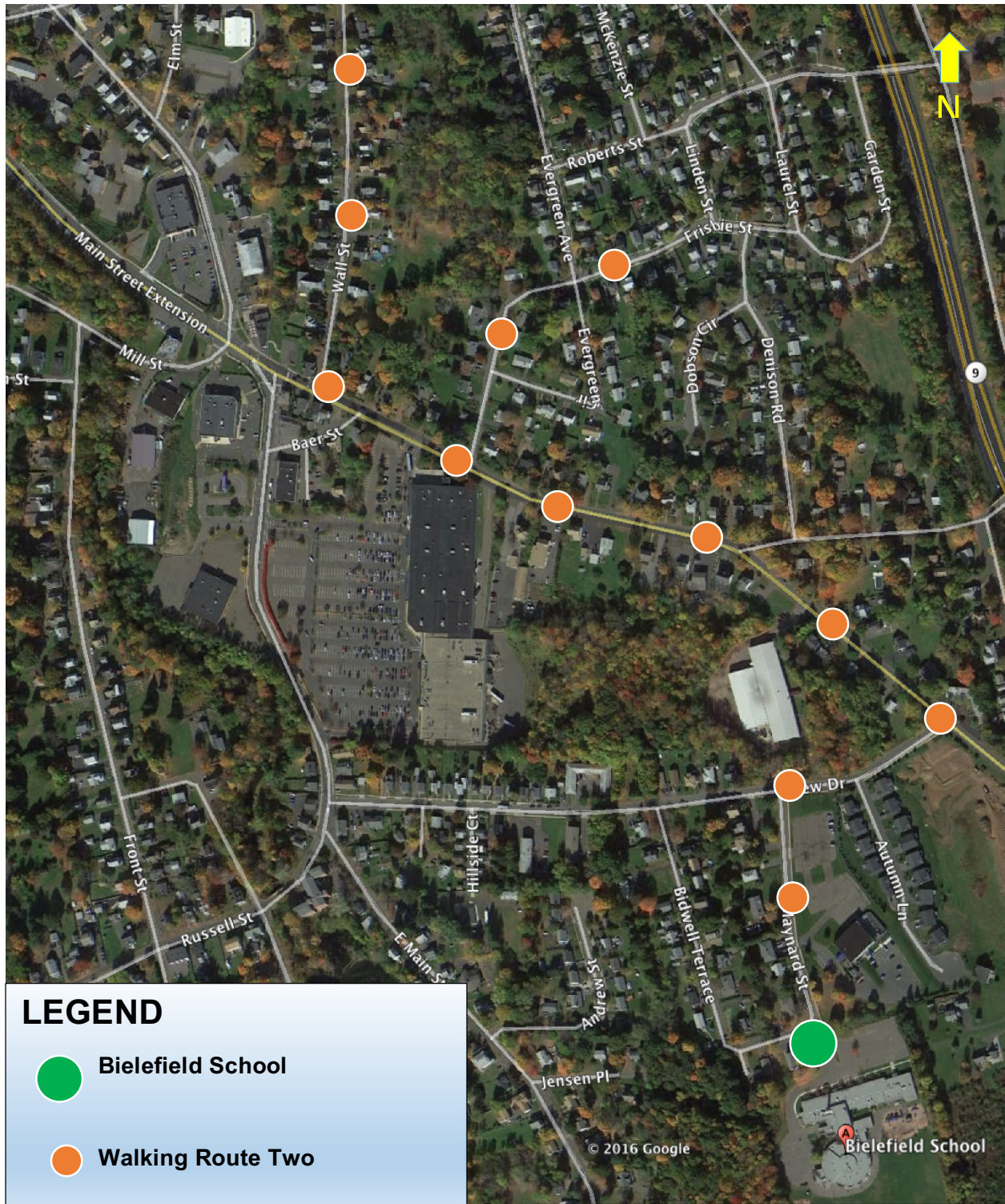


Figure 17: Walking Route Two

2.4 Walking Route Two

Maynard to Bidwell Terrace to Hillside Avenue to Clew Drive to Saybrook Road to Frisbie Street and Wall Street (0.8 miles)

2.4.1 Traffic and Pavement Markings

Walking Route Two starts at Maynard Street to Bidwell Terrace to Hillside Avenue to Clew Drive to Saybrook Road to Frisbie Street and Wall Street (0.8 miles), see **Figure 17**. As noted in Section 2.3.1, the traffic along Maynard Street and Clew Drive is nominal. Bidwell Terrace, Clew Drive, Frisbie Street, and Wall Street are also low in vehicular traffic. Saybrook Road traffic volume is higher.

All these roads are for two-way travel; Saybrook Road measures 32' in width, Bidwell Terrace is 30' wide, and the others are 24' wide. There are no crosswalks along this route and no shoulder lines, however, Saybrook Road does have double center lines. The pavement along Saybrook Road, Frisbie Street, and Wall Street is fair. Maynard Street and Bidwell Terrace are in better condition, see **Figure 18**.

The only road with higher traffic volume is Saybrook Road. The others are locally travelled neighborhood roads.



Figure 18: Intersection of Wall Street and Saybrook Road

2.4.2 Signs

There are stop signs along Maynard Street and a 20 mph speed limit sign with an outdated *Slow School* sign on the south side where Bidwell Terrace transitions into Maynard Street, **Figure 19**. As mentioned in section 2.3.2, there are *No Parking* signs along Maynard Street on both sides in the vicinity of the school campus. According to the MUTCD "Parking and stopping regulatory signs may be used to prevent parked or waiting vehicles from blocking pedestrians' views, and drivers' views of pedestrians, and to control vehicles as a part of the school traffic plan."

The only sign on Frisbie Street is the stop sign. Along Wall Street there are two 25 mph speed limit signs posted with the *Slow Children at Play* signs posted below located on the east and west side of the road. Along this section of Saybrook Road, there are no speed limit signs or school zone signs, although there is a location sign for Bielefield School.



Figure 19: Slow School Sign

2.4.3 Sidewalks

There are no sidewalks along the section of Maynard Street that connects to Bidwell Terrace, nor along Bidwell Terrace, see **Figure 20**. The southern section of Frisbie Street, adjacent to Saybrook Road has sidewalks. There are newer sidewalks along both sides of Frisbie Street, east of the intersection with Evergreen Avenue. There are no sidewalks along Wall Street that provide continuous connectivity, although there are a few intermittent segments. And as noted above, there are no pedestrian accommodations along Saybrook Road.



Figure 20: Bidwell Terrace

2.4.4 Crime

See Section 2.3.4.

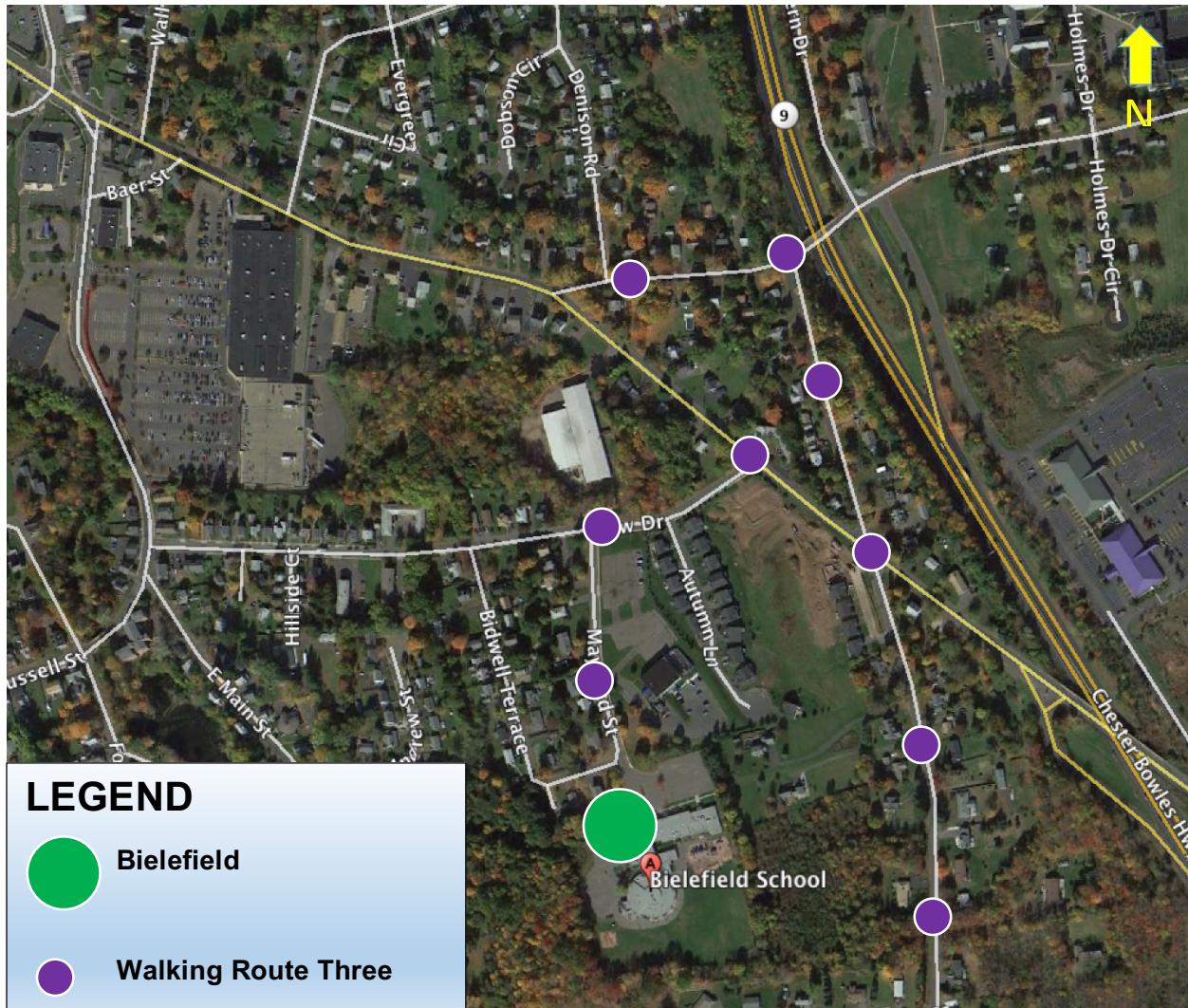


Figure 21: Walking Route Three

2.5 Walking Route Three

Maynard Street to Clew Drive to Saybrook Road to Tryon Street or north to Bow Lane (0.65 miles)

2.5.1 Traffic and Pavement Markings

Walking Route Three starts at Maynard Street to Clew Drive to Saybrook Road to Tryon Street or north to Bow Lane (0.65 miles), see **Figure 21**.

As mentioned in sections above, traffic along Maynard Street and Clew Drive is mostly local residential traffic, except at arrival and dismissal times. Saybrook Road is heavier in vehicular travel due to the commercial businesses situated along this road and because it acts as a

through corridor for travelers. Tryon Street is low in travel density, primarily residential, and Bow Lane was cordoned off for a bridge construction project so we could not properly assess the traffic volume, see **Figure 22**.

The pavement markings along Maynard Street, Clew Drive, and Saybrook Road have been described in section 2.4.1.

At the intersection of Tryon Street and Saybrook Road, there is a crosswalk on the south and east side. There are no sidewalks along either Saybrook Road or Tryon Street, so the markings are not ideal as there is no pedestrian connectivity. According to the SRTS Engineering Guide, “locations chosen to have marked crosswalks should be convenient, accessible and in the direct pedestrian route,” [AASHTO, 2004]. This is not the current state of this intersection, see **Figure 23**. Here is a list of current issues at this particular crossing:

- Crosswalks are not connected to any sidewalks.
- Pedestrian beacon on the west side is not functional.
- Button on the pedestrian beacon is broken.
- Light bulb in pedestrian beacon is burnt out.
- The pedestrian beacon is not MUTCD Compliant.

Bow Lane and Tryon Street have fair pavement conditions. Bow Lane has a double center travel line. None of the streets on this route have shoulder striping.



Figure 22: Construction at Top of Bow Lane



Figure 23: Crosswalk at the Intersection of Saybrook Road and Tryon Street

2.5.2 Signs

The sign inventory for Maynard Street, Clew Drive, and Saybrook Road has already been detailed in section 2.4.2. Tryon Street has a 25 mile per hour posted speed limit on the western side (**Figure 24**), south of Saybrook Road and on the eastern side north of Saybrook Road. There is also a *Children at Play* sign under the 25 posted speed limit, **Figure 25**. This sign is not recommended by the MUTCD.

There are pedestrian features at the intersection of Saybrook Road and Tryon Street. The pedestrian bulbs are dimmed and the button is broken, (**Figure 26**) and there are no sidewalks to connect walkers along this route.

According to the SRTS Engineering Guide:

Traffic signals are the highest form of traffic control. However, their benefit to the pedestrian network is contingent upon the application of several principles including:

- Marking all legs of an intersection.
- Providing pedestrian signal heads in all directions.
- Only using pedestrian pushbuttons if they are needed.
- Installing ADA-Compliant curb ramps and landings on all corners.
- Painting stop bars for motor vehicles on all approaches.
- Installing curb ramps on each corner.
- Providing streetlights on all four corners.

2.5.3 Sidewalks

There are no sidewalks along Tryon Street, Hillside Avenue, Saybrook Road, or Bow Lane.

The only noted pedestrian connectivity is between the school and Maynard Street and Clew Drive, as noted in Section 2.4.3.



Figure 24: Speed Limit on Tryon Street



Figure 25: Slow Children Sign

3. Assessment of Walking Routes And School Grounds

3.1 Best Practices

The following SRTS Best Practices were observed during the walk audit:

- School resource officer attends the arrival and dismissal process.
- Despite the lack of a highly structured drop-off and pick up operation, the process runs smoothly.
- Parent drop-off/pick up location is separated from the bus drop-off/pick up.
- Teachers monitor the bus and parent drop-off.
- Parents sign out students.
- There are some sidewalks along the routes selected.
- Speed limits are 25 mph in the area.

3.2 Key Issues

Operational issues that were noted and can be improved include:

- There are no existing sidewalks on Saybrook Road, Bidwell Terrace, Tryon Street, Autumn Lane, or Bow Lane.
- Intermittent sidewalks on Wall Street, Frisbie Street, and Hillside Avenue.
- There is a lack of professional training and proper gear for faculty members helping with the arrival and dismissal processes. Specifically, teachers facilitating the arrival and dismissal processes were not wearing safety vests or carrying handheld stop signs.
- Saybrook Road which is a major feeder road into the school is highly travelled by car and has no sidewalks. This presents an issue for students who would have to use this corridor to arrive at school.
- There are currently no crossing guards along any of the selected routes.
- Lack of ADA Compliant ramps on campus and along routes.
- The school has a low number of walkers or bikers.
- There are no designated school zone pavement markings around the facility providing an enforceable speed limit during the arrival and dismissal times.
- All roadways within the immediate area of the school lack edge lines which can help with bicycle accommodations along potential bike routes, **Figure 27**.



Figure 26: Pedestrian Beacon at Tryon Street and Saybrook Road



Figure 27: Saybrook Road

4. Recommendations

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

4.1 Short-Term Improvements

The SRTS Audit Team recommends the use of the Five E's¹ Framework for short-term, low-cost improvements which could be considered for Bielefield Elementary School.

4.1.1 Education

- The SRTS Program provides free pedestrian and bike education for students and parents. The SRTS Committee or champion can schedule an on-site training. These education programs would specialize in suburban pedestrian techniques. The relative lessons would focus on walking, facing traffic in the absence of sidewalks and shoulder lines, and would be relevant to today's high device, distracted pedestrians and drivers.
- The walkitbikeitct.org website has information on how a Walking School Bus Program could be started as well other resources for parents and teachers.

4.1.2 Encouragement

- Walking Wednesdays, walking/biking contests, and mileage tracking could continue the encouragement of walking and biking to school throughout the year.
- Encourage faculty and staff directing traffic to wear safety vests.

4.1.3 Engineering

- Repaint the directional arrows and pavement markings on school grounds.
- Update the signing in a few areas. The stop sign at Maynard Street and Bidwell Terrace is positioned in the wrong orientation and in poor condition.
- Streamline the informational signs that tell the parent where to park and not to park.
- Install a crosswalk at the intersection of Maynard Street and Hillside Avenue.
- It is recommended that all signage around the school be updated to meet MUTCD current specifications, particularly with regards to size, reflectivity, and the fluorescent yellow-green color. There are currently no school zone signs in the vicinity of the campus, **Figure 28**.



Figure 28: MUTCD S1-1 Sign and W16-9P Sub-Plate

4.1.4 Evaluation

Evaluating your school's Safe Route to School Committee's progress is an important step in the process. As a minimum, 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. At the onset of each academic year, walking and biking conditions and opinions on pedestrian and cycling issues can

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

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.

4.1.5 Enforcement

- Continue to employ a town school resource officer to assist the school's arrival and dismissal process.

4.2 Long Term Improvements

4.2.1 Education

- The SRTS Program provides free pedestrian and bike education for students and parents, **Figure 29**. The SRTS Committee or champion can schedule an on-site training. These education programs would specialize in suburban pedestrian techniques. The relative lessons would focus on walking, facing traffic in the absence of sidewalks and shoulder lines, and would be relevant to today's high device distracted pedestrians and drivers.
- The walkitbikeitct.org website has information on how a Walking School Bus Program could be started as well other resources for parents and teachers.



Figure 29: Pedestrian Training

4.2.2 Encouragement

- Continue Walking Wednesdays, walking/biking contests, and mileage tracking could continue the encouragement of walking and biking to school throughout the year.
- Encourage faculty and staff directing traffic to wear safety gear.

4.2.3 Engineering

- Consider installing a crosswalk at the intersection of Maynard Street and Hillside Avenue and Clew Drive.
- Update all ramps to comply with ADA Requirements, **Figure 30**.
- It is recommended that all signage around the school be updated to meet MUTCD current specifications, particularly with regards to size, reflectivity, and the fluorescent yellow-green color. There are currently no school zone signs in the vicinity of the campus.



Figure 30: Current Non-ADA Compliant Ramp

- Consider constructing sidewalks along these three routes where they are currently lacking.
- Consider constructing edge lines along all streets in the school vicinity.

4.2.4 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.

4.2.5 Enforcement

Continue to employ a town school resource officer to assist the school's arrival and dismissal process.

The aforementioned Safe Routes to School Walk Audit Report is an objective review intended for the use of the school's Safe Routes Committee 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, and 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.

Submitted By:
VN Engineers, Inc.
116 Washington Avenue
North Haven, CT 06473



VN Engineers, Inc.