



TOWN OF MAINE PEDESTRIAN & BIKE SAFETY ASSESSMENT

THE BINGHAMTON METROPOLITAN TRANSPORTATION STUDY

NOVEMBER 15TH, 2019

OVERVIEW

ROAD SAFETY ASSESSMENT

Road Safety Audits or Road Safety Assessments (RSAs) are a generally accepted proactive, low-cost tool to identify safety issues of transportation facilities within communities or a specific corridor. The Federal Highway Administration (FHWA) encourages states and local municipalities to use RSAs. A Safety Assessment is a formal performance examination of an existing or planned transportation facility by an independent, qualified multidisciplinary team. An assessment team considers the safety of all users, qualitatively estimates and reports on safety issues, and suggests opportunities for safety improvements. This pedestrian and bicycle road safety assessment reports on safety issues for the entire corridor, but primarily focuses on issues affecting alternative transportation users.

RSA PROCESS

To familiarize everyone involved with the process and purpose of a Road Safety Assessment, reference material was shared prior to the meeting. Additionally, further information was provided and a brief meeting was had on location prior to beginning the road safety assessment.

The RSA Team was composed of the following individuals:

Danielle Besso, *New York State Department of Transportation*

Susan Pitely, *New York State Department of Transportation*

Stephanie Brewer, *Broome County Department of Planning & Economic Development*

Scott Reigle, *BMTS*

Leigh McCullen, *BMTS*

Ashley Seyfried, *BMTS*

The safety assessment was conducted on November 15, 2019. The resulting report was prepared by BMTS staff and circulated to NYSDOT, Broome County Department of Planning & Economic Development, as well as local and regional bike and pedestrian planning committees before being finalized.

BACKGROUND

BMTS has included in its 2019-2020 UPWP under task D. 6 *Transportation Planning Assistance* a corridor study for NY 26 in the Town of Maine to make recommendations for bicycle and pedestrian improvements.

The Town of Maine’s Comprehensive Planning Committee, in conjunction with the Broome County Department of Planning, released an updated comprehensive plan in 2017. This plan discusses the limited nature of bicycle accommodations and sidewalks seen throughout the Town and stresses that roadways, especially those without options for a variety of travel modes, create neighborhood divides that can be barriers to access. The Town suggested working with BMTS to develop a plan for improving pedestrian and bicycling facilities on the corridor.

EXISTING CONDITIONS

The Town of Maine’s comprehensive plan addresses the fact that much of the town is rural in nature and that pedestrian and bicycling facilities should be targeted in the Hamlet of Maine. The Town has a population of 5,377 and considers itself to be a rural community where the Hamlet of Maine acts as a centralized location for business, government activity, and concentrated living. The comprehensive plan delineates the unincorporated Hamlet of Maine as running along NY 26 from Pollard Hill Rd to Lewis Street, a roughly .3 mile stretch of road. In the comprehensive plan, this is the targeted area for bicycling and pedestrian implementation. However, in analyzing business, residential, community, and greenspace locations, for the most impactful implementation of bike and pedestrian facilities, BMTS defines the study area to be a 1.0 mile stretch of roadway along NY 26 running from Pollard Hill Road to the intersection of NY 26 and County Road 21 (See Appendix A). This boundary includes more businesses, the elementary school, and the Town of Maine Park—which are all locations that could benefit from increased intermodal accessibility—within its boundaries.

ROADWAY

- NY 26, the Union Center Maine Highway, is a State Highway that runs from the Pennsylvania border north, connecting to Whitney Point and extending beyond the County.
- NY 26 bisects the Town of Maine and acts as the primary gateway for traveling within and outside of the community, connecting residents to centralized locations, such as Endicott and Vestal.
- The study area has street lighting.
- The roadway has two lane traffic divided by a double yellow center stripe.

SPEED

- The study area is a 35-mile per hour (mph) speed zone.
- Southbound into the Hamlet, speed limits are 55 mph, reducing to 35 mph and immediately entering into an unsigned school area. The speeds throughout the one-mile section are consistently 35 mph, increasing to 55 mph once exiting the study area .
- Preliminary analysis suggests a widespread ill-compliance with speed limits, and the lack of a designated school zone in front of the elementary school poses further safety issues.
- An official speed study was conducted by NYSDOT for this study and will be described in detail in the report

ROADWAY SURROUNDINGS

- The Town prohibits parking alongside NY 26 for the majority of the study area.
- Many residencies and businesses are adjacent to the state right of way, with large and numerous driveway access points.

ZONING

- The immediate surrounding area is primarily zoned as R-2 Residential, B-1 Business, or B-2 Business with several key operations—restaurants, gas stations, shopping centers, municipal buildings & an elementary school—off NY 26; see Appendixes C&D for uses and pedestrian generators.

CROSSWALKS

- Crosswalks are not present at any location within the study area. However, NYSDOT has received a Pedestrian Safety Action Plan grant for this corridor and will be installing 3 crosswalks at various locations within the study area (Appendix E for locations and renderings).

ACCIDENTS

- There have been 21 motor vehicles accidents directly on NY 26 within the last 5 years. The study area has an acceptable, below average, accident tolerance rate; See Appendixes F & G for the accident diagram.
- Despite potentially unsafe conditions for pedestrians and bicyclists, there are 0 pedestrian or bicycle involved accidents within the last 5 years. One accident on 10/31/19 occurred in the Town of Maine on NY 26, but it is unclear whether that was within the study area boundaries; further investigation is required.

TRAFFIC DATA

- The annual average daily traffic on the roadway is 6,189 vehicles per day (Appendix J). There were pedestrians and bicyclists observed during two preliminary studies.

FINDINGS

POSITIVE ATTRIBUTES OF EXISTING CONDITIONS

Based on an assessment of existing site conditions, there are several notable roadway features that enhance pedestrian safety in the study area, namely:

- **Buffer:** where sidewalks exist, a buffer is provided for many sections of the sidewalks. This buffer places pedestrians further from the direct lane of traffic, providing protection.
- **Education:** Broome County Health Department, in partnership with BMTS, has recently provided bicycle and safety education at the Maine Memorial Elementary School.
- **Shoulder width:** the roadway through the Hamlet of Maine is wide with adequate shoulder width for current pedestrian accommodations where sidewalks are not present. Additionally, the shoulder widths can minimally meet the needs for bicycle travel, though poor shoulder condition and edge drop-offs along portions of the corridor need to be

addressed. Roadway widths average 33 feet across, which provides the potential for widening shoulders or installing bike lanes when a sidewalk system is established.

- **Crosswalks:** the three crosswalks to be implemented by NYSDOT will help pedestrians navigate the busy, high-speed roadway.
- **Pavement:** NY 26 has recently been repaved, reducing the number of cracks and pavement breakages that could harm pedestrians and motorists
- **Accidents:** No pedestrian or bicycle accidents are known to exist for this stretch of NY 26. However, this does not mean that the roadway is safe for pedestrians.

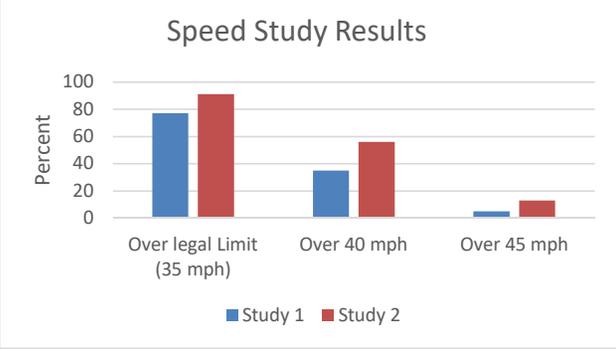
IDENTIFIED SAFETY ISSUES AND SUGGESTIONS FOR IMPROVEMENT

The RSA team assessed the corridor and identified numerous issues. The RSA team prioritized issues based upon their perceived importance and developed suggestions to correct or mitigate safety concerns. As NY 26 is a State roadway, many alterations are dependent on the State's involvement. The RSA team consisted of members of the New York State Department of Transportation (NYSDOT). Due to their involvement, a few changes will be immediately made to make the corridor safer; these alterations will be included in the suggested improvement sections, but will be noted to indicate that these improvements are already underway. The suggested improvements will be categorized based on the feasibility of immediate action, perceived impact, as well as cost. The tables below summarize the safety issues present as well as suggested improvements, with photos to illustrate the safety concerns.

Table 1. Pavement

Safety Issue	Suggested Improvements	Reference Material
<p>Pavement and pavement marking maintenance: Although recently repaved, the re-pavement was not done according to standards. In sections there are 6 inch pavement edge drop-offs. Shoulder safety wedges are supposed to be put in place through tapering at no more than a 45 degree angle. Wedges were seen throughout the segment at a 90 degree angle, up to 6 inches in height. This does not enable safe reentry to the roadway for motor vehicles, and is a substantial hazard for bicyclists who may cross the edge.</p>	<p><i>Intermediate, high cost:</i> Mill & Repave shoulders</p> <p>The shoulder sections of the road should be milled and repaved to create a tapered safety wedge as well as to reduced edge drop-off for safe bicyclist and motor vehicle use.</p>	 <p>Photo shows an example of the pavement edge drop-off seen throughout the corridor.</p>
<p>Inconsistent cross-section: the road width cross section is inconsistent throughout the study area. The cross section ranges from 3-6 foot shoulder lengths. Inconsistent cross-sections could lead to inconsistent driver behavior due to the lack of expectancies. Additionally, in some sections, pavement overlay projects did not pave the entire roadway width, creating an unexpected drop-off.</p>	<p><i>Intermediate, medium-high cost:</i> Create consistent cross-sections</p> <p>Identify the desired cross-section for NY 26 and coordinate with the DOT for future pavement replacement. Creating consistent cross-section may help to create uniform speeds. A cross-section with median treatment could have a gateway effect, enhancing visual appeal and reducing traffic speeds within the corridor. Alternatively, a cross-section with wider shoulders for bicycle lanes on the shoulder could help with traffic calming and enhancing speed compliance throughout the corridor.</p>	
<p>Slope of shoulder: Shoulders, especially in areas where shoulders are the primary pedestrian accommodation route, should have a cross slope of less than 6 degrees.</p>	<p><i>Intermediate, medium-high cost:</i> Reduce cross-slopes to be less than 6%</p> <p>There is currently no ADA accessible route within the town. The current shoulder slope exceeds 6 percent. When repaving, the cross slope should be less than 6 percent to create an ADA accessible route, especially if sidewalks are not installed and the shoulder remains the primary pedestrian route.</p>	 <p>Example photo of shoulder slope</p>

TABLE 2: SPEED

Safety Issue	Suggested Improvements/Actions	Reference Material												
<p>Unsafe speeds throughout the corridor: Speed studies were completed by NYSDOT before and after the RSA, conducted in front of the Maine Memorial Elementary School (Study 1, 9:00) & Dollar General (Study 2, 13:00). For speed limits to be respected, 85 percent of vehicles should adhere to the legal limit. The study revealed that the speed limit is artificially low, with an 85th percentile between 43-45 mph.</p>	<p>Speed limits are set to the 85th percentile, with allowance for a 67th percentile in certain cases. NYSDOT is aware of the speed limit issues; artificially low speed limits can increase the risk of crashes.</p> <p>Traffic Calming Measures: This stretch of roadway is considered a Category III roadway and NYS HDM provides traffic calming suitability treatments for all varieties of roadways (Appendix K). Relevant treatments to consider prescribing:</p>	 <table border="1"> <caption>Speed Study Results Data</caption> <thead> <tr> <th>Category</th> <th>Study 1 (%)</th> <th>Study 2 (%)</th> </tr> </thead> <tbody> <tr> <td>Over legal limit (35 mph)</td> <td>75</td> <td>85</td> </tr> <tr> <td>Over 40 mph</td> <td>35</td> <td>55</td> </tr> <tr> <td>Over 45 mph</td> <td>5</td> <td>15</td> </tr> </tbody> </table>	Category	Study 1 (%)	Study 2 (%)	Over legal limit (35 mph)	75	85	Over 40 mph	35	55	Over 45 mph	5	15
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TRAFFIC CALMING MEASURES

Traffic Calming Type	Suitable Traffic Calming Feature	Speed Reduction Likelihood	Cost
Constrictions	Curb Extension	Slight	Medium
	Pedestrian Refuge/Mid Block Islands	Slight	Medium
Entrance Features	Gateway	Yes	High
Street Scaping	Color Contrast or Pattern Marking	Possible	Low
	Landscape Development	Possible	Low
	Furniture and Lighting	Possible	Low
	Sidewalks, shoulder	No information	Medium
	Surface Textures	Possible	Low
	Arterial Improvements	No information	Medium-High
	Bike Facilities	No information	Low
Route Modification	Median Treatments	Possible	Medium
	Diverters	Likely	Medium
	High Visibility Crosswalks	Possible	Low
	Signage	Possible	Low
Traffic Control Devices	Regulations/Enforcement	Likely	Low

TABLE 3: MAINE MEMORIAL SCHOOL & TOWN PARK

Safety Issue	Suggested Improvements/Actions	Reference Material
<p>Unsafe speeds through the school area: Through conducting the speed study, speeds were elevated directly in front of the school area, as well as the Town Park and adjacent playgrounds.</p>	<p><i>Short-term, low cost:</i> Create a School Zone</p> <p>The state will provide a school zone, reducing the speed limit, as well as flashing school crossing signs. The NYSDOT regional traffic engineer has been notified and is looking into providing these measures.</p>	 <p>View of Maine Memorial School and adjacent playgrounds. The area lacks a school zone, crosswalks, and has an insufficient number of school crossing signs, as well as wayfinding signage.</p>
<p>Pedestrian accessibility to the park and school: The park, playgrounds, and school are pedestrian generators, mainly for children, who are less-able to practice safe pedestrian maneuvering. Currently, there are no sidewalks or crosswalks that connect these areas to the community.</p>	<p><i>Short-term, low cost:</i> Install additional crosswalks</p> <p>NYSDOT is installing three crosswalks in this corridor, but not in this section. Because of the RSA, NYSDOT is considering adding an additional crosswalk in front of the school/playground area. Additional crosswalks are recommended at the northern park entrance as well as one at the southern playground that crosses to the ice cream shop (Appendix F).</p>	
<p>Insufficient signage for School and Park: The school, park, and playground area is a pedestrian destination, especially for children. These areas lack sufficient roadway signage and pedestrian accommodations.</p>	<p><i>Short-term, low cost:</i> Adjust signage</p> <p>School Entrance: Add one-way signage to the entrance of the school. Current 5 mph speed limit is not a legal speed, update to 15 mph. Parent Pick Up/Dropoff: Add signage for clearer pickup/drop-off & school wayfinding. Town Park: Town Park current signage does not adhere to state road guidance. Update the signage to adhere to the wayfinding guidance (see Appendix L for Local Park Signage Guidelines).</p>	

TABLE 4: SIDEWALK RECOMMENDATIONS

Safety Issue	Suggested Improvements/Actions	Reference Material														
<p>Sidewalk connections & continuity: The limited number of sidewalks throughout the corridor are not connected or continuous. Pedestrians cannot predict or rely on sidewalk availability. Additionally, shoulder widths fluctuate throughout the area, limiting the separation between vehicles and pedestrians.</p>	<p><i>Long-term, high cost:</i> Connect sidewalks</p> <p>The Town should develop a bike/pedestrian plan based on the findings in this study. See Appendix B for sidewalk condition rating. NYSDOT should use the condition rating for prioritizing sidewalk locations when repaving the roadway. Appendix N shows original NY 26 Highway plan for the Hamlet; sidewalk conditions should have been maintained.</p>	 <p>Sidewalks randomly starting and terminating throughout the corridor. Most are in poor condition, narrow, and not ADA accessible</p>														
<p>Sidewalk conditions: The limited number of sidewalks present throughout the corridor are in poor condition with insufficient width and are not ADA accessible. Sidewalks do not connect to the roadway and there is not an ADA accessible route within the corridor.</p>	<p><i>Intermediate, medium cost:</i> Apply for funding to enhance sidewalk conditions</p> <p>As the study area is a NYSDOT right of way, NYSDOT could fund a project in the future. Alternatively, the Town can apply for Transportation Alternative Program Funds (TAP) based on an action plan developed from this study to improve pedestrian and bike conditions throughout the corridor, but would likely need assistance from NYSDOT in the implementation due to its limited administrative and financial capacity.</p>															
<table border="1"> <thead> <tr> <th colspan="2">Sidewalk Installation Total Linear Feet Estimates</th> </tr> <tr> <th>Amount of Sidewalk</th> <th>Linear feet needed</th> </tr> </thead> <tbody> <tr> <td>One side of roadway, complete sidewalk installation</td> <td>~4224</td> </tr> <tr> <td>Both sides of roadway, complete sidewalk installation</td> <td>~8448</td> </tr> <tr> <td>East-side of roadway, using existing sidewalks as connection (partial)</td> <td>~3168</td> </tr> <tr> <td>West-side of roadway, using existing sidewalks as connection (partial)</td> <td>~2058</td> </tr> <tr> <td>Two-sided, using existing sidewalks as connection (partial)</td> <td>~5226</td> </tr> </tbody> </table> <p>*Linear feet is an estimate. Current estimates for sidewalk installation range from \$150-\$220/linear foot for 5' wide sidewalk</p>		Sidewalk Installation Total Linear Feet Estimates		Amount of Sidewalk	Linear feet needed	One side of roadway, complete sidewalk installation	~4224	Both sides of roadway, complete sidewalk installation	~8448	East-side of roadway, using existing sidewalks as connection (partial)	~3168	West-side of roadway, using existing sidewalks as connection (partial)	~2058	Two-sided, using existing sidewalks as connection (partial)	~5226	
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TABLE 5: GENERAL ROADWAY

Safety Issue	Suggested Improvements/Actions	Reference Material
<p>Access management: Parking lots throughout the corridor have large and numerous access points. This can lead to an increased number of motor vehicle accidents and is additionally less safe for pedestrians as it increases the number of conflict points throughout the corridor.</p>	<p><i>Intermediate/ long-term, medium-high cost:</i> Enforce Access Management Policies</p> <p>NYS DOT has specific standards for access management off of a NYS roadway, see: "POLICY and STANDARDS for the Design of Entrances to State Highways." Additionally, the Town of Maine zoning code has strict requirements for access management and parking lot guidance (Appendix M); the code should be enforced for all new development and encourage adaptation for established development. Solutions: defining and narrowing driveways, curbing.</p>	 <p>Parking lot with parallel parking adjacent to the roadway with out distinguishing curbs and is also a pedestrian route.</p>
<p>No parking: The study area has multiple locations where 'No Parking Left/Right' signs are present, indicating parking is allowed in some locations.</p>	<p><i>Short-term, low cost:</i> Maintain consistent parking signs</p> <p>The Town of Maine should have 'No Parking Anytime' signs throughout the study area on NY 26; remove existing signs that allow for parking and replace.</p>	
<p>Lighting on roadway: Some areas could use enhanced lighting for more secure pedestrian movement throughout the corridor.</p>	<p><i>Intermediate, low-medium cost:</i> Add additional street lighting</p> <p>The Town of Maine has lighting throughout the Hamlet area. Some areas that have high traffic during the evening could benefit from enhanced street lighting: Frank's.</p>	<p>No Parking 'Left' Should be replaced with 'Anytime' (See Appendix H for recommended signage).</p>

TABLE 6: GENERAL INTERSECTION

Safety Issue	Suggested Improvements/Actions	Reference Material
<p>Pedestrian accessibility: Sidewalks exist partially on the sides of Rt. 26; installing a crosswalk across the intersecting road would inform drivers that pedestrians could be present.</p>	<p><i>Short-term, low/ medium cost:</i> Add crosswalks at intersections</p> <p>The municipality that owns the roads intersecting with NY 26 can paint pedestrian crosswalks at the intersection to inform drivers in/out of NY 26 of possible pedestrian presence.</p>	
<p>Define/narrow the intersection: Many intersections are wide and not well defined. This can pose problems for motor vehicle drivers as well as pedestrians crossing at an intersection.</p>	<p><i>Long-term, medium cost:</i> Narrow/square out intersections</p> <p>The municipalities that own the roads intersecting with NY 26 should narrow/square out the intersection through curb safety treatments when repaving.</p>	
<p>Double arrow signs: The intersections throughout the corridor do not have double arrow signs on NY 26 that indicate the road terminates, which could lead to accidents.</p>	<p><i>Short-term, low cost:</i> Add double arrow signs at intersections</p> <p>Due to the findings from this study, NYSDOT will be installing double arrow signs at Pollard Hill Rd, Lewis St., and McGregor Ave.</p>	

View of Lewis Street from NY 26. Lewis St. would benefit from curbing to define the intersection as well as a crosswalk across to connect the sidewalks



TABLE 7: POLLARD HILL ROAD INTERSECTION

Safety Issue	Suggested Improvements/Actions	Reference Material
<p>Stop sign: Stop signs should be placed either at the stop line at an intersection or 4 feet in advance of a crosswalk.</p>	<p><i>Short-term, low cost:</i> Reposition the Stop Sign</p> <p>The municipality in ownership of Pollard Hill Rd. should move the existing stop sign forward closer to the intersection about 30 feet. The locality can install a "Stop Ahead" sign prior to the intersection if desired.</p>	 <p>View of Pollard Hill Rd. & NY 26 intersection. Stop sign is far back from the intersection, intersection is not defined, sight distance is limited, access driveways are too close to the intersection.</p>
<p>Sight distance triangle: At an unsignalized intersection, there needs to be clear lines of view without obstructions to vision on either side of the intersecting right-of-ways. Driveways should not be within 30 feet of an approach to a stop sign.</p>	<p><i>Short-Intermediate, low cost:</i> Maintain adequate sight distance at the intersection</p> <p>Picture 1 showcases that the intersection does not have clear sight distance due to the business. The business should at least limit the access driveway adjacent to Pollard Hill Rd and limit parallel parking within the right of way in the front of the business on NY 26 (Picture 2).</p>	 <p>View of NY 26 at Pollard Hill Rd. intersection. Cars often pull up and park along side Rt 26 at the auto body shop. This limits sight distance at the intersection.</p>
<p>Speed limit: The speed limit is 35 mph in the Hamlet of Maine, a reduction from the 55 speed limit prior to and after the Hamlet.</p>	<p><i>Short-term, low cost:</i> Reposition speed limit signs</p> <p>Traveling southbound on NY 26, the speed limit changes from 35 to 55 mph immediately following the Pollard Hill intersection. The speed limit change should be placed further southbound, after the inclusion of more residential houses. See Appendix H for recommended signage updates and G for existing signage conditions.</p>	

TABLE 8: POST OFFICE INTERSECTION

Safety Issue	Suggested Improvements/Actions	Reference Material
<p>Sidewalk connection: The front of Kelli's and the Post Office suffer from wide access driveways with significant traffic in and out of the businesses. The area could benefit from sidewalks within and added definition to the parking lot area.</p>	<p><i>Short-term, low cost:</i> Paint a sidewalk using white striping and an infill color along the business front from Church Street to the end of Kelli's parking lot</p> <p><i>Intermediate, medium cost:</i> Apply for outside funding</p> <p>NYSDOT can fund a project for the Hamlet, or the Town could apply for 2020/2021 TAP funding to treat this intersection; however, the Town would likely need assistance due to its limited financial and administrative capacity. Kelli's would benefit from a sidewalk alongside the business front connecting Church St. to the end of Kelli's parking lot, parking, and adding on street parking on the street-side of the sidewalk.</p>	 <p>Current Kelli's frontage: large and undefined access driveway where cars park along side the road, pedestrians attempt to navigate, and cars and trucks pull in and out.</p>
<p>Curb safety treatment, defining the intersection: Intersections that are not defined and have adjacent businesses have an increased number of conflict points and can be confusing and unsafe for drivers, pedestrians, and bicyclists.</p>	<p><i>Intermediate, medium cost:</i> Define the intersection and add curb safety treatment</p> <p>The Church Street intersection is positioned with the Post Office directly adjacent to it, without curb treatments to define the intersection or the business parking lot. The intersection needs to be defined with curb safety treatment. The intersection could be curbed to 5 ft behind the existing pole, (where people are standing in Picture 2) leaving a pull-through for the post office but creating a safer intersection.</p>	 <p>Current post office 'parking lot' and Church Street intersection.</p>

OPPORTUNITIES BEYOND ENGINEERING

PUBLIC OUTREACH: EDUCATION & COMMUNITY MEETINGS

The Town of Maine, Broome County Health Department, BMTS, as well as the Police Department should continue to provide public outreach in the form of educational messages on pedestrian and bike safety to the community and schools through community meetings. Further educational messages should be developed with the addition of new crosswalks in the area, as well as the creation of a school zone with reduced speed limit. Moreover, community meetings would help to identify a pedestrian and bicycle action plan or target area for improvements.

ENFORCEMENT

Through conducting two speed studies in the park entrance next to the school as well as the Dollar General, we have concluded that speeding is an issue both directly in front of the school zone and throughout the corridor. Speeding in front of the school poses a significant issue due to the children that attend the school, play in the adjacent playgrounds, and frequent the park. Additionally, speeding in this Hamlet area affects pedestrian and bike safety. The RSA team has provided various treatment options to calm traffic and address the speeding issue. However, there is an opportunity for the local police department to provide spot enforcement directly in front of the school as well as throughout the corridor. Moreover, another option for addressing speeds would be to install an electronic speed monitoring system when entering the 35-mph speed zone.

CONCLUSION

The objective of this study was to complete an RSA focused on bicycle and pedestrian safety for the Town of Maine community, focusing on NY 26 from Pollard Hill Rd to the intersection of County Rd 21 & NY 26.

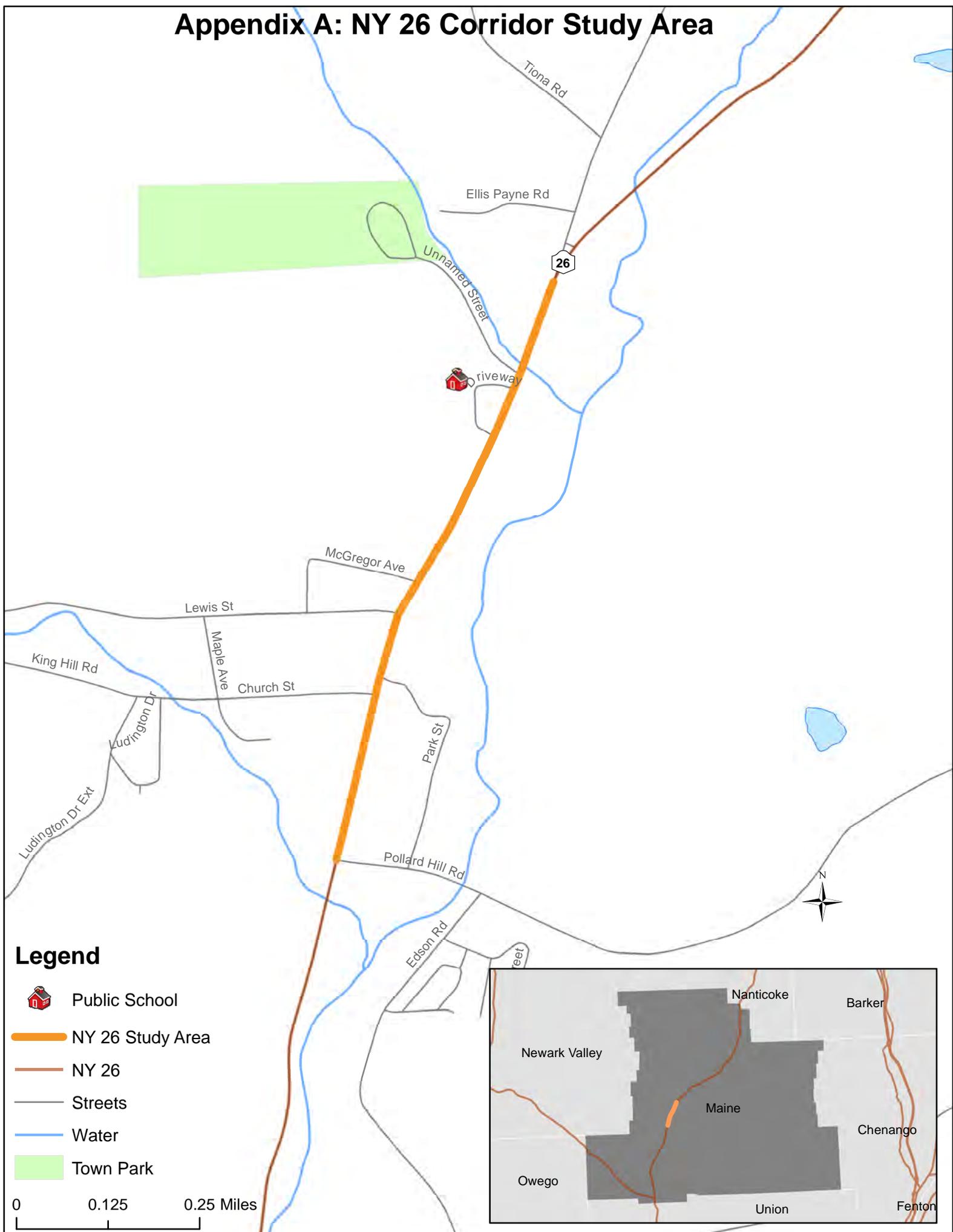
Safety issues were addressed through seven different areas of concern: pavement, speed, general roadway, general intersection, Maine Memorial Elementary School and Maine Town Park, Pollard Hill Rd intersection, as well as the Church St. intersection. The RSA team investigated existing safety issues and found several positive attributes of existing conditions throughout the study area. Safety issues and targeted areas of improvement were identified and described in this report. Beyond engineering measures, safety can be improved through local education initiatives that address and alter unsafe human behavior.

Through the findings in this report, the Town of Maine, Broome County, and New York State can use these recommendations to work together to make targeted alterations that address the needs of this community.

APPENDIXES

- A. Map of Study Area
- B. Existing Sidewalk Conditions
- C. NY 26 Surrounding Uses
- D. Pedestrian Generators
- E. NYSDOT Crosswalks to be Installed
- F. Recommended Crosswalks
- G. Existing Signage
- H. Recommended Signage
- I. Collision Diagram
- J. Traffic Volumes
- K. Traffic Calming Treatments
- L. Park Sign Guidelines
- M. Local Laws Chapter of the Town of Maine Comprehensive Plan Regarding Parking
- N. 1916 NY 26 Highway Plans with Sidewalk Placements

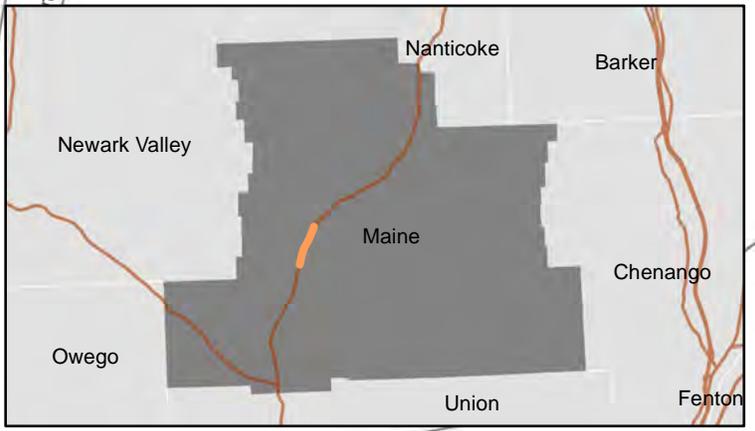
Appendix A: NY 26 Corridor Study Area



Legend

-  Public School
-  NY 26 Study Area
-  NY 26
-  Streets
-  Water
-  Town Park

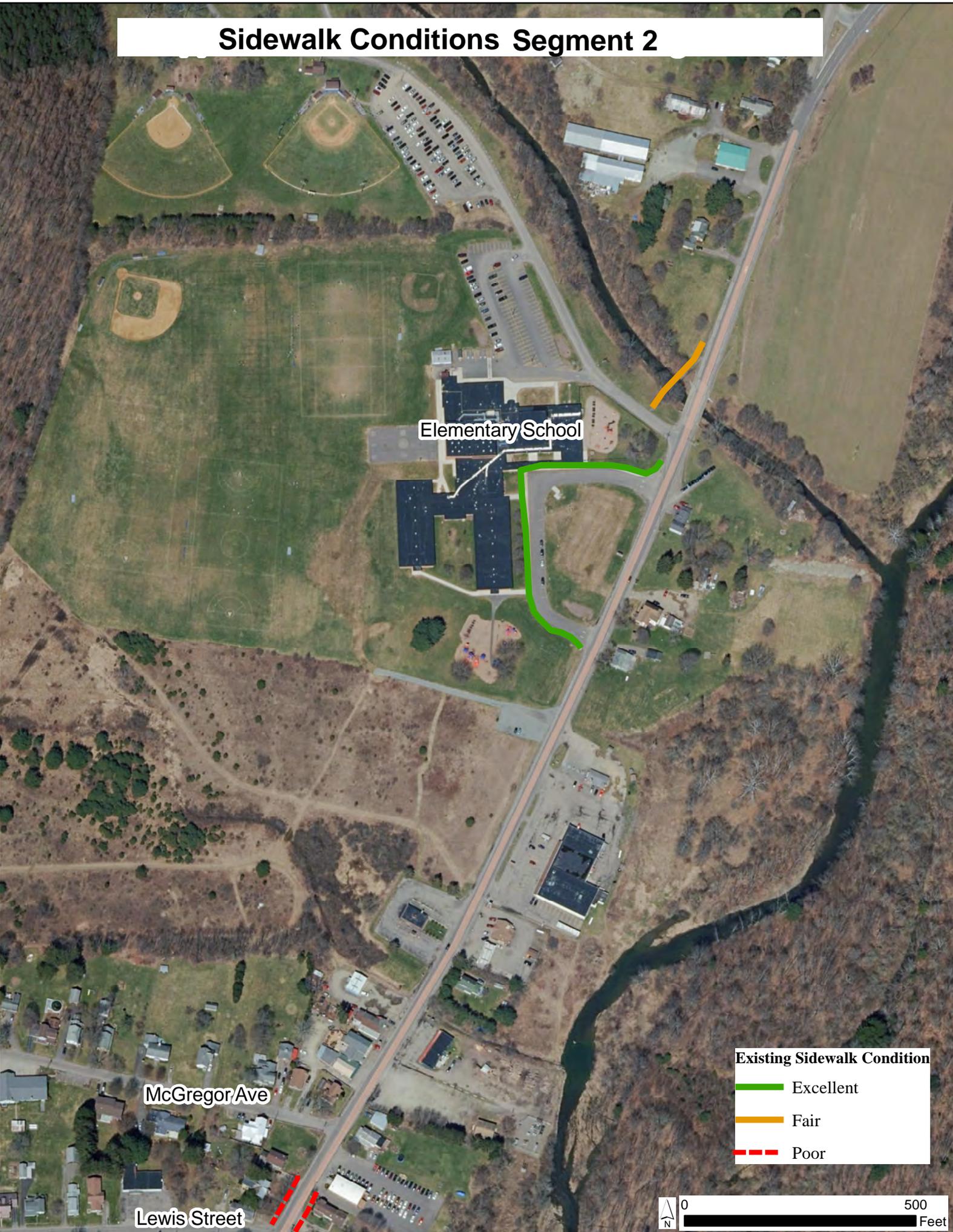
0 0.125 0.25 Miles



Appendix B: Sidewalk Condition Segment 1



Sidewalk Conditions Segment 2



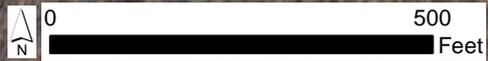
Elementary School

McGregor Ave

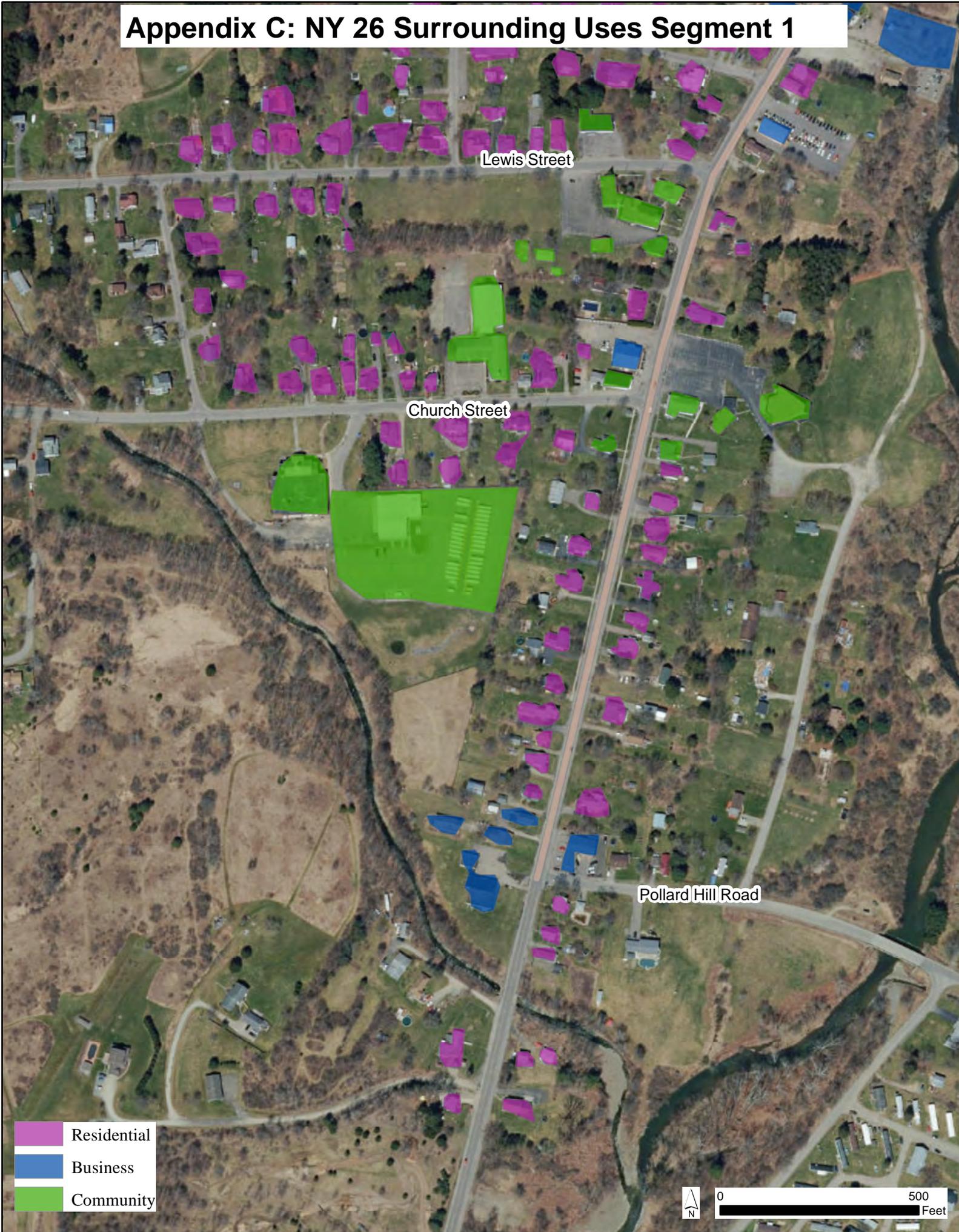
Lewis Street

Existing Sidewalk Condition

- Excellent
- Fair
- - - Poor



Appendix C: NY 26 Surrounding Uses Segment 1



- Residential
- Business
- Community

NY 26 Surrounding Uses Segment 2



Appendix D: Pedestrian Generators Segment 1



Existing Sidewalk Condition

- Excellent
- Fair
- Poor

Pedestrian Generators

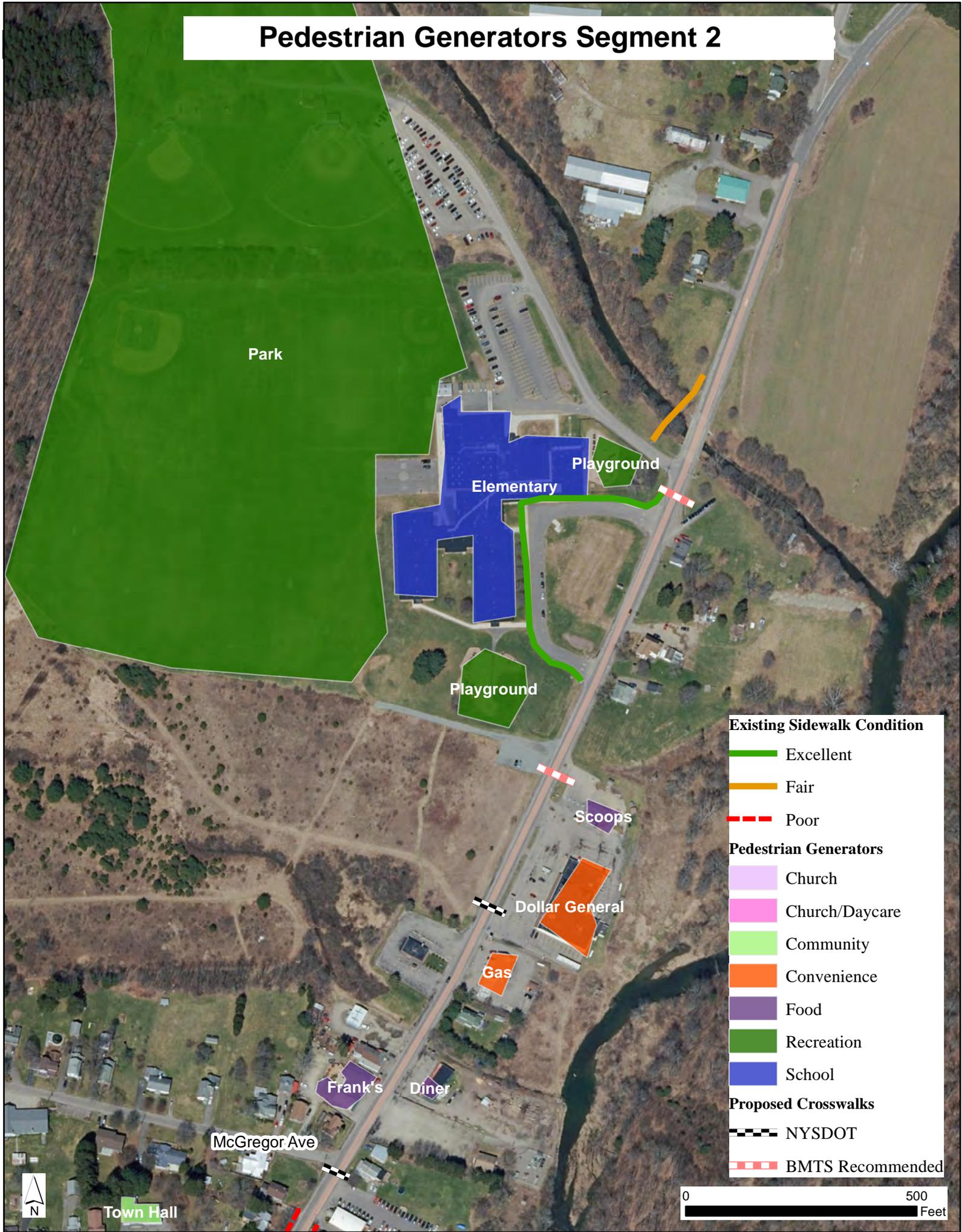
- Church
- Church/Daycare
- Community
- Convenience
- Food
- Recreation
- School

Proposed Crosswalks

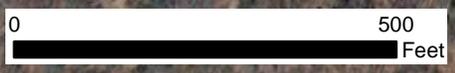
- NYSDOT



Pedestrian Generators Segment 2



- Existing Sidewalk Condition**
- Excellent
 - Fair
 - Poor
- Pedestrian Generators**
- Church
 - Church/Daycare
 - Community
 - Convenience
 - Food
 - Recreation
 - School
- Proposed Crosswalks**
- NYSDOT
 - BMTS Recommended



McGregor Ave

Town Hall

Park

Elementary

Playground

Playground

Scoops

Dollar General

Gas

Frank's

Diner

Appendix E: NYSDOT Crosswalks to be Installed



Elementary School

Dollar General

McGregor Ave

Church St.

Legend

Sidewalk Condition

- Fair
- New
- Poor

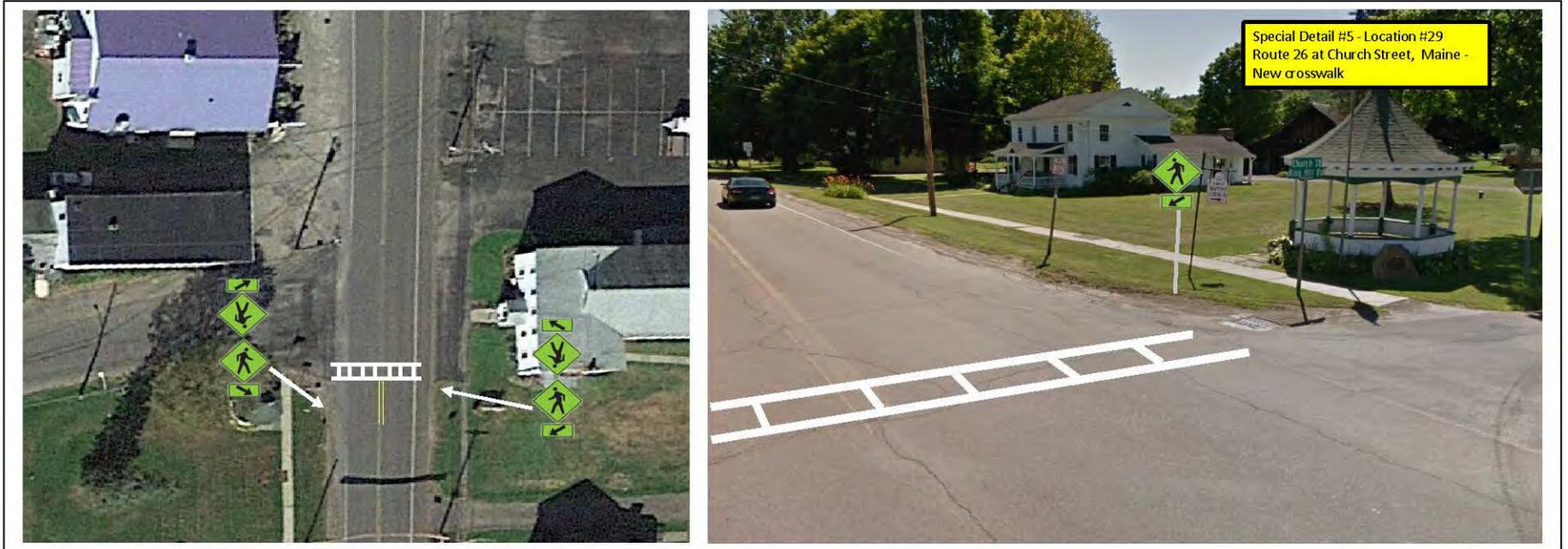
Crosswalks

NY 26 Study Area



0 500 Feet

Crosswalk at Church Street



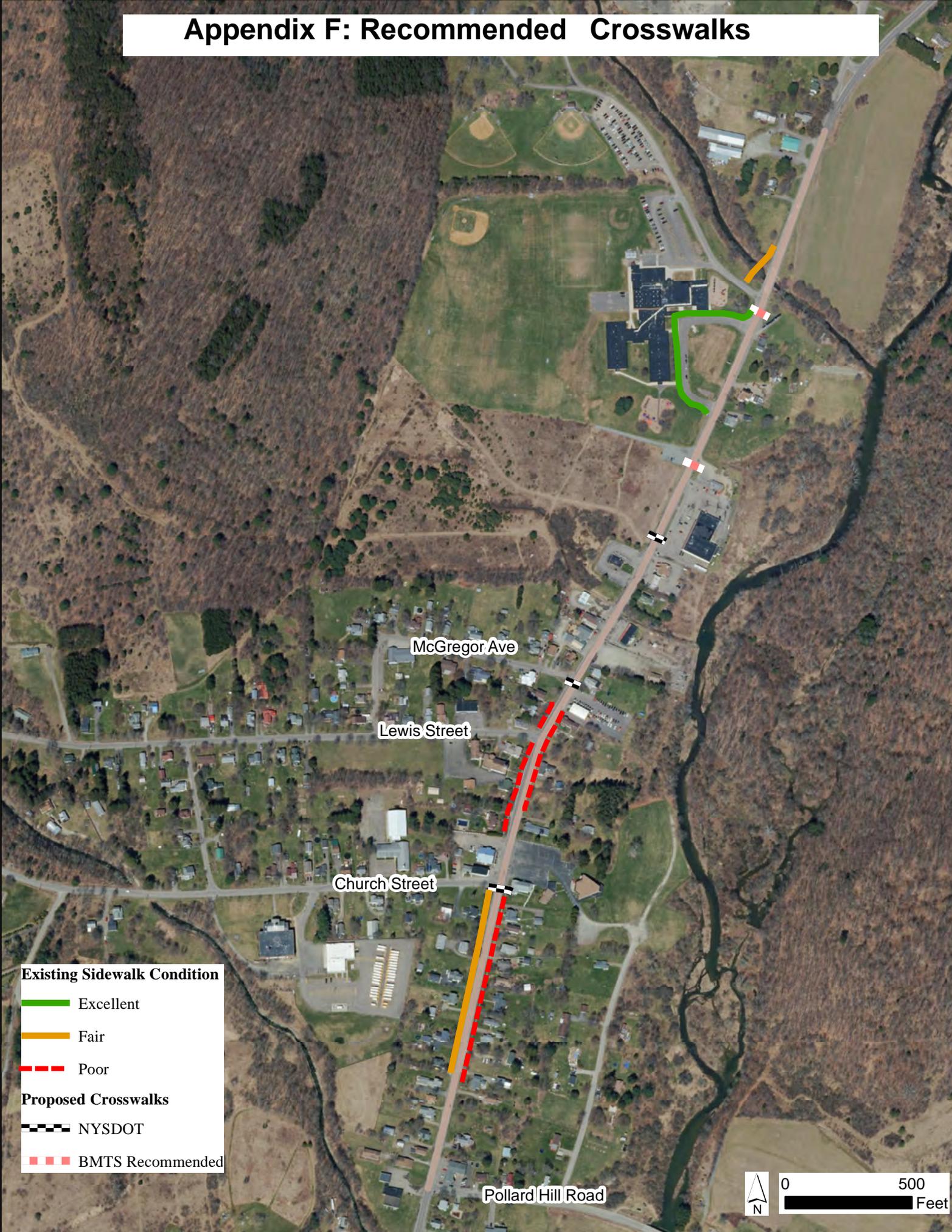
Crosswalk at McGregor Ave



Crosswalk at Dollar General



Appendix F: Recommended Crosswalks



Appendix G: Example of Existing Signage Segment 1



Example of Existing Signage Segment 2



SPEED
LIMIT
55

SPEED
LIMIT
35

SPEED
LIMIT
35

NO
PARKING
ANY
TIME

McGreggor Ave

Lewis Street

0 480
Feet

Appendix H: Proposed Signage Segment 1

Lewis Street



NO PARKING

NO PARKING

NO PARKING

NO PARKING

Church Street

NO PARKING

NO PARKING

NO PARKING

NO PARKING

SPEED LIMIT 35

NO PARKING

NO PARKING

NO PARKING

NO PARKING

SPEED LIMIT 35

NO PARKING

NO PARKING

NO PARKING

~~NO PARKING~~



Pollard Hill Road

~~SPEED LIMIT 35~~

~~SPEED LIMIT 35~~

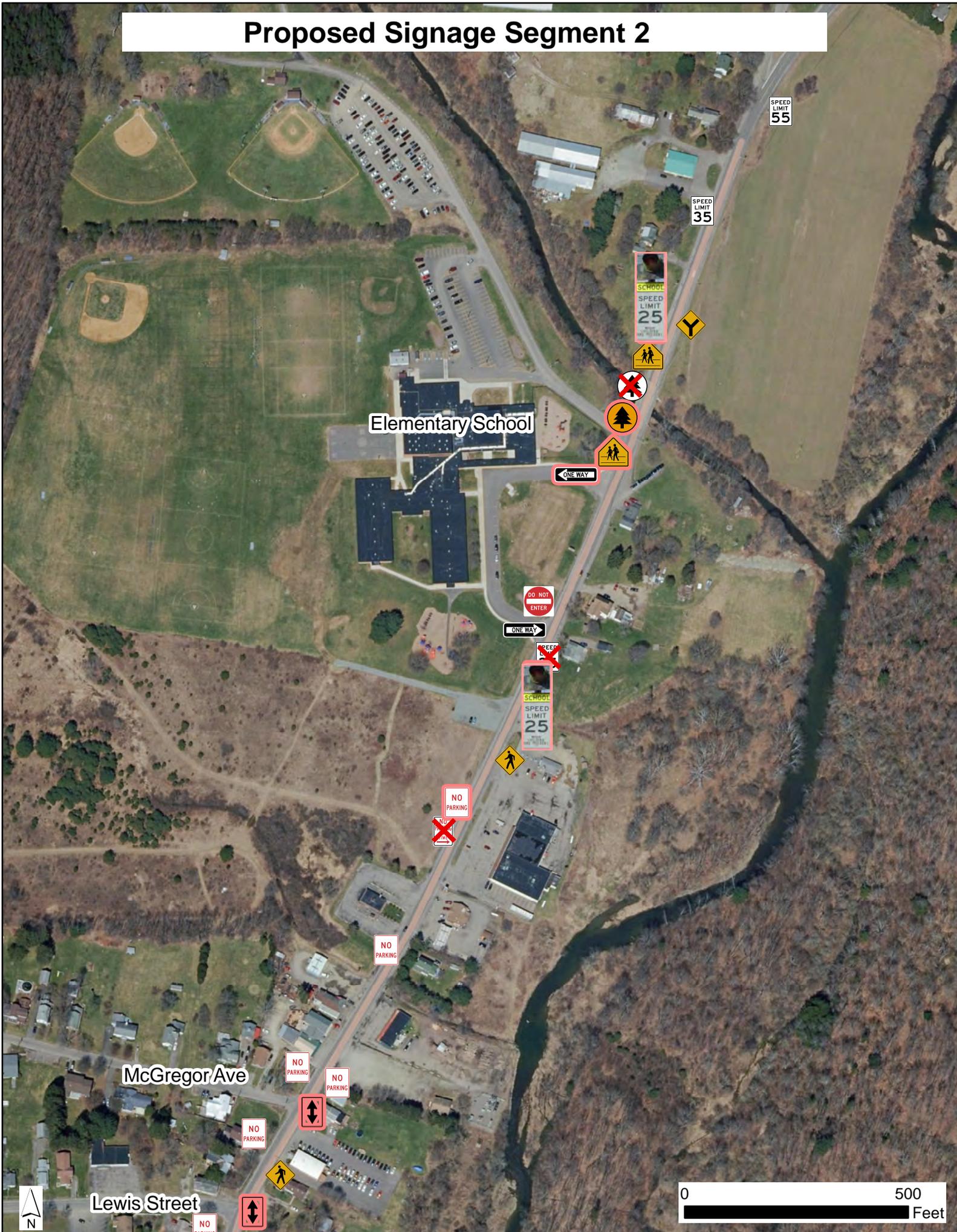


SPEED LIMIT 55

SPEED LIMIT 35



Proposed Signage Segment 2



Elementary School

McGregor Ave

Lewis Street

SPEED LIMIT 55

SPEED LIMIT 35

SCHOOL SPEED LIMIT 25

DO NOT ENTER

ONE WAY

SCHOOL SPEED LIMIT 25

NO PARKING

NO PARKING

NO PARKING

NO PARKING

NO PARKING

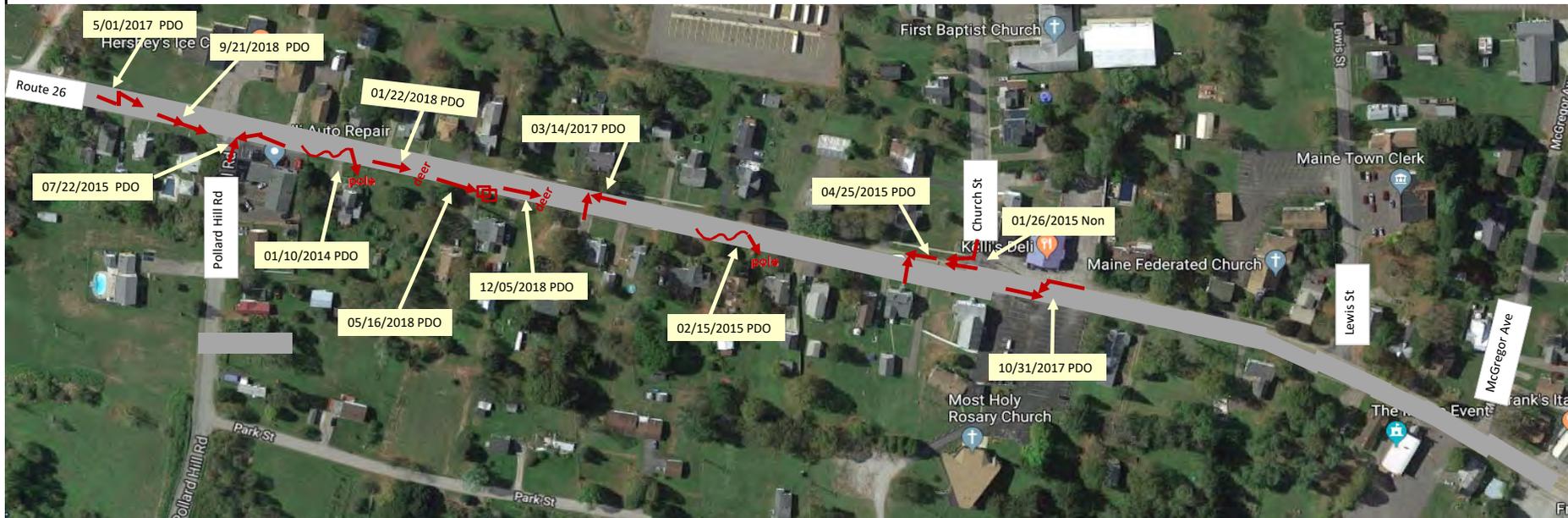
NO PARKING

0 500 Feet



Appendix I: Collision Diagram Segment 1

Municipality	Town of Maine	County	Broome	File	BINGHAMTON METROPOLITAN TRANSPORTATION STUDY				
Segment:	NY 26 from South of Pollard Hill Rd to McGregor Ave				COLLISION DIAGRAM				
Period	5 Years	0 Months	From	1/1/2014 To	12/31/2018	By	AS	Date	Nov-19



Overall	Segment 2 crash rate is	2.124848	< 2 times the average is tolerable
	Crash rate is based on		
	5 years of data		
	12 crashes		
	0.5 mile segment		
	6189 AADT		
Comparable overall expected average crash rate is		2.67	
Linear crash rate is		1.239495	> than 2 times the average warrants attention to patterns
	5 years of data		
	7 non intersection crashes		
	0.5 mile segment		
	6189 AADT		
Comparable linear expected average crash rate is		2.12	

SYMBOLS		MANNER OF COLLISION	
← Moving Vehicle	← Pedestrian	← Rear-end	↔ Head-on
← Motorcycle	← Bicycle	↔ Side-swipe	↔ Left-turn
↔ Backing Vehicle	□ Fixed Object	⚡ Out of control	↔ Right-angle
← Stopped Vehicle		↔ Skidding	
▭ Parked Vehicle		↔ Overturned	

Collision Diagram Segment 2

Municipality	Town of Maine	County	Broome	File	BINGHAMTON METROPOLITAN TRANSPORTATION STUDY			
Segment:	McGregor Ave to Nanticoke Rd split	From	1/1/2014 To	12/31/2018 By	AS	Date	Nov-19	COLLISION DIAGRAM
Period	5 Years	0 Months						



Overall	Segment 2 crash rate is	1.593636	< 2 times the average is tolerable
	Crash rate is based on		
	5 years of data		
	9 crashes		
	0.5 mile segment		
	6189 AADT		
Comparable overall expected average crash rate is		2.67	
Linear crash rate is		1.062424	> than 2 times the average warrants attention to patterns
	5 years of data		
	6 non intersection crashes		
	0.5 mile segment		
	6189 AADT		
Comparable linear expected average crash rate is		2.12	

SYMBOLS		MANNER OF COLLISION	
← Moving Vehicle	← - Pedestrian	← Rear-end	↔ Head-on
← M Motorcycle	← B Bicycle	↔ Side-swipe	↘ Left-turn
↔ Backing Vehicle	□ Fixed Object	⚡ Out of control	↙ Right-angle
← Stopped Vehicle		↺ Skidding	
⊠ Parked Vehicle		↻ Overturned	

TRAFFIC DATABANK LLC

716 SOUTH SIXTH AVE
MT VERNON, NY, 10550

Site Code:
Station ID:
ATR 1-NY RT 26
NORTH OF POLLARD HILL RD
Latitude: 0' 0.0000 Undefined

Start Time	16-Sep-19		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM	*	*	12	12	10	9	13	5	*	*	*	*	*	*	12	9
01:00	*	*	10	4	7	4	4	7	*	*	*	*	*	*	7	5
02:00	*	*	4	2	8	11	4	1	*	*	*	*	*	*	5	5
03:00	*	*	3	11	4	7	4	8	*	*	*	*	*	*	4	9
04:00	*	*	10	22	9	22	6	24	*	*	*	*	*	*	8	23
05:00	*	*	34	70	28	70	31	70	*	*	*	*	*	*	31	70
06:00	*	*	79	183	92	186	76	180	*	*	*	*	*	*	82	183
07:00	*	*	135	235	120	263	134	242	*	*	*	*	*	*	130	247
08:00	*	*	191	223	211	256	187	217	*	*	*	*	*	*	196	232
09:00	*	*	130	179	122	205	133	178	*	*	*	*	*	*	128	187
10:00	*	*	136	177	151	151	139	181	*	*	*	*	*	*	142	170
11:00	*	*	151	175	149	191	194	166	*	*	*	*	*	*	165	177
12:00 PM	*	*	159	176	179	200	163	174	*	*	*	*	*	*	167	183
01:00	*	*	150	154	163	183	205	184	*	*	*	*	*	*	173	174
02:00	*	*	191	191	219	191	214	204	*	*	*	*	*	*	208	195
03:00	*	*	261	243	282	252	267	278	*	*	*	*	*	*	270	258
04:00	*	*	299	251	297	248	326	250	*	*	*	*	*	*	307	250
05:00	*	*	357	213	358	232	358	228	*	*	*	*	*	*	358	224
06:00	*	*	229	155	235	191	203	175	*	*	*	*	*	*	222	174
07:00	*	*	141	228	168	204	148	190	*	*	*	*	*	*	152	207
08:00	*	*	115	100	98	95	118	93	*	*	*	*	*	*	110	96
09:00	*	*	60	36	65	49	72	55	*	*	*	*	*	*	66	47
10:00	*	*	33	30	37	28	36	30	*	*	*	*	*	*	35	29
11:00	*	*	18	16	20	16	19	16	*	*	*	*	*	*	19	16
Lane Day	0	0	2908	3086	3032	3264	3054	3156	0	0	0	0	0	0	2997	3170
AM Peak	-	-	08:00	07:00	08:00	07:00	11:00	07:00	-	-	-	-	-	-	08:00	07:00
Vol.	-	-	191	235	211	263	194	242	-	-	-	-	-	-	196	247
PM Peak	-	-	17:00	16:00	17:00	15:00	17:00	15:00	-	-	-	-	-	-	17:00	15:00
Vol.	-	-	357	251	358	252	358	278	-	-	-	-	-	-	358	258

Comb. Total	0	5994	6296	6210	0	0	0	6167
ADT	ADT 6,189	AADT 6,189						

TRAFFIC CALMING

Table 25-1 Suitability of Traffic Calming Features for Speed Categories

TRAFFIC CALMING FEATURES	CATEGORY I (NEIGHBORHOOD) (25-39 km/h)	CATEGORY II (40-59 km/h)		CATEGORY III (60-79 km/h)	CATEGORY IV (• 80 km/h)	SPEED REDUCTION ¹	VOLUME REDUCTION ¹
		LOCAL ² STREETS OR ROADS	ALL OTHER STREETS OR ROADS				
VERTICAL SHIFTS ³							
Raised Crosswalks	SUITABLE	SUITABLE • 50 km/h NOT RECOMMENDED >50 km/h	NOT RECOMMENDED	NOT PERMITTED	YES	POSSIBLE	
Raised Intersections						NO	
Speed Cushions						NO INFORMATION	
Speed Humps ⁴						POSSIBLE	
Speed Tables							
LATERAL SHIFTS							
Alternate Side Parking	SUITABLE	SUITABLE		NOT PERMITTED	LIKELY	POSSIBLE	
Chicanes/Serpentine		SUITABLE • 50 km/h NOT RECOMMENDED >50 km/h	NOT RECOMMENDED				YES

See General Notes and Endnotes following this table.

TRAFFIC CALMING

25-15

Table 25-1 Suitability of Traffic Calming Features for Speed Categories (continued)

TRAFFIC CALMING FEATURES	CATEGORY I (NEIGHBORHOOD) (25-39 km/h)	CATEGORY II (40-59 km/h)		CATEGORY III (60-79 km/h)	CATEGORY IV (• 80 km/h)	SPEED REDUCTION ¹	VOLUME REDUCTION ¹		
		LOCAL ² STREETS OR ROADS	ALL OTHER STREETS OR ROADS						
CONSTRUCTIONS									
Neckdowns, Chokers ⁵	SUITABLE		NOT RECOMMENDED	NOT PERMITTED		SLIGHT	NO		
1-Way Entry/Exit Choker, Half Closure, Semi-Diverter						YES	YES		
Curb Extensions at Intersections						SUITABLE•		SLIGHT	NO
Pedestrian Refuge/Midblock Islands						SUITABLE			
Driveway Link	SUITABLE		NOT PERMITTED			YES	YES		
Single Lane Slow Point									
Single Lane Angled Slow Point									
Two-Lane Slow Point								NOT RECOMMENDED	
Two-Lane Angled Slow Point									
NARROW PAVEMENT WIDTHS									
Pavement Narrowing	SUITABLE		NOT RECOMMENDED	NOT PERMITTED		POSSIBLE	POSSIBLE		
ENTRANCE FEATURES									
Gateways	SUITABLE				NOT PERMITTED	YES	YES		

• Suitable only with upstream parking.
See General Notes and Endnotes following this table.

TRAFFIC CALMING

25-16

Table 25-1 Suitability of Traffic Calming Features for Speed Categories (continued)

TRAFFIC CALMING FEATURES	CATEGORY I (NEIGHBORHOOD) (25-39 km/h)	CATEGORY II (40-59 km/h)		CATEGORY III (60-79 km/h)	CATEGORY IV (• 80 km/h)	SPEED REDUCTION ¹	VOLUME REDUCTION ¹		
		LOCAL ² STREETS OR ROADS	ALL OTHER STREETS OR ROADS						
RELATED STREETSCAPING									
Color Contrast or Patterns/Markings	SUITABLE					POSSIBLE	NOT LIKELY		
Landscape Development							NO		
Sidewalks, Shoulders						NO INFORMATION			
Street Furniture and Lighting						NO INFORMATION			
Surface Textures						NOT RECOMMENDED		POSSIBLE	NOT LIKELY
Shared Zones						NOT RECOMMENDED	NOT PERMITTED		NO INFORMATION
UNCATEGORIZED MEASURES									
Supplementary Pedestrian Crossing Channelization Devices ⁶	SUITABLE	SUITABLE (40-49km/h) NOT PERMITTED (50-59km/h)		NOT PERMITTED		NO INFORMATION			
Back-in Diagonal Parking ⁷		NOT RECOMMENDED							
Reduced Intersection Radii		NOT RECOMMENDED							
Single-Lane Roundabouts			••	••		YES	NOT LIKELY		
Multiple-Lane Roundabouts	••	••	••	••		NO INFORMATION			

•• Any proposal for a roundabout should be developed on a case-by-case basis with input from the Design Quality Assurance Bureau. See General Notes and Endnotes following this table.

TRAFFIC CALMING

Table 25-1 Suitability of Traffic Calming Features for Speed Categories (continued)

TRAFFIC CALMING FEATURES	CATEGORY I (NEIGHBORHOOD) (25-39 km/h)	CATEGORY II (40-59 km/h)		CATEGORY III (60-79 km/h)	CATEGORY IV (• 80 km/h)	SPEED REDUCTION ¹	VOLUME REDUCTION ¹				
		LOCAL ² STREETS OR ROADS	ALL OTHER STREETS OR ROADS								
ROUTE MODIFICATIONS											
Arterial Improvements	SUITABLE					NO INFORMATION					
Bike Facilities						POSSIBLE					
Median Treatments						LIKELY		YES			
Modified Intersection, Channelization						NO INFORMATION					
One-Way Operation						NO		MINOR			
Truck Prohibitions						YES		YES			
Cul-de-sacs, Full Closures						NOT RECOMMENDED	NOT PERMITTED		LIKELY		YES
Diverter						NO		YES			
TRAFFIC CONTROL DEVICES											
Higher Visibility Crosswalks ⁸	SUITABLE					POSSIBLE					
Signing						POSSIBLE					
Progressive Traffic Signal Systems						POSSIBLE		NO			
Walk Phase on Signals						NO					
Regulations/Enforcement						LIKELY					

See General Notes and Endnotes following this table.

Hereby amends section 2D.48 to read:

Section 2D.48 General Information Signs (I Series)

INSERT the following at the beginning of the section:

Standard:

Unless otherwise noted, symbol signs shall not be used along the main roadways of freeways in New York.

Signing for political boundaries shall conform to the provisions of Section 2D.110; the I-2 sign shall not be used in New York.

Option:

The following symbol signs (see Sign Drawing SD-G15) may be used in New York:

- A. College (NYM8-5)
- B. State Park (NYM8-9)
- C. Local Park (NYM8-10)
- D. Commuter Rail Station (NYM8-12)
- E. Winery (NYM8-13)
- F. Apple Orchard (NYM8-14)
- G. Maple Products (NYM8-15)
- H. Theater (NYM8-16)
- I. Wildlife Viewing Area (NYM8-22)
- J. Shore Access (NYM8-27)
- K. Agricultural Products (NYM8-28)

DELETE the third Standard subsection and REPLACE with the following:

Standard:

Except for the State Park, Local Park, Theater, and Wildlife Viewing Area symbol signs, political boundary and scenic byway logos and signs, General Information signs shall have white legends and borders on green rectangular-shaped backgrounds. The State Park, Local Park, Theater, and Wildlife Viewing Area symbol signs shall have white symbols and borders and brown backgrounds.

The Shore Access symbol sign shall only have white symbols and border and green background; provided, however, that when used in the Adirondack Park, the Shore Access symbol sign shall have colors as developed and approved by the Commissioner of the New York State Department of Transportation, in consultation with the Adirondack Park Agency.

The Winery symbol sign shall only be used to guide traffic to wineries that are being signed in conjunction with officially legislated wine trails.

The Agricultural Products symbol sign shall only be used to guide traffic to sites that are being signed in conjunction with officially designated farm, apple, or cuisine trails.

Guidance:

The College symbol sign should only be used to guide traffic to colleges and universities accredited by the New York State Education Department.

Option:

The commuter rail line's logo may be displayed in the Commuter Rail Station symbol sign on the front of the rail vehicle. The height of the symbol sign may be increased, and the name of the rail station may be displayed beneath the rail station symbol.

The College symbol sign may be used on the main roadways of the following parkways: Bay Parkway, Bethpage State Parkway, Cross County Parkway, Heckscher State Parkway, Hutchinson River Parkway, Loop Parkway, Meadowbrook State Parkway, Northern State Parkway, Ocean Parkway, Robert Moses Causeway, Sagitkos State Parkway, Saw Mill River Parkway, Southern State Parkway, Sunken Meadow State Parkway, Taconic State Parkway, and Wantagh State Parkway.

College symbol signs used at grade-separated interchanges may be supplemented with Lane Auxiliary signs (see Section 2D.25), and may also display directional word legends such as "NEXT RIGHT", "SECOND RIGHT", "NEXT EXIT", or "SECOND EXIT." Symbol signs may be supplemented with Supplemental Name (NYM14-26 and NYM14-27) plaques (see Section 2D.107).

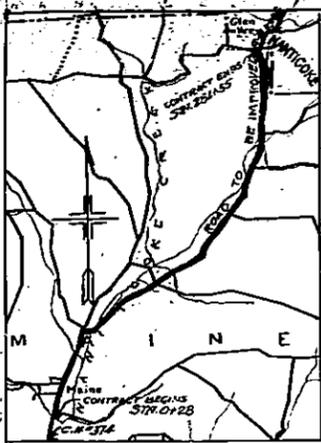
Article VI Off-Street Parking and Loading • Amend Section 450-26 Off-street parking and 450-27 Off-Street Parking Schedule to:

- o Require all weather surface and proper storm water drainage for parking lots.
- o Require devices to prevent parked vehicles from encroaching in the public right-of-way.
- o Require proper design of vehicular ingress and egress, driveway dimensions, parking lots, and pick-up and drop-off areas for better access management, maneuvering, and traffic safety.
- o Require proper emergency access.
- o Require landscaping standards for parking lots.
- o Include requirements for lighting fixtures in parking lots.
- o Omit atrium and lobby areas from floor areas for the purpose of computing parking requirements.
- o Include landscaping requirements for the purpose of computing parking requirements.
- o Establish standard that parking should be located at the rear or side of buildings when feasible.
- o Prohibit vehicles from backing out onto roads.
- o Prohibit parking in setback areas.
- o Require compliance with New York State Department of Transportation design standards for driveways located on state right-of-way.
- o Establish parking standards for light industrial and business park development allowing flexibility, shared parking, and less restrictive parking requirements consistent with modern industrial park standards, including distinctions between parking space requirements for business office, light industrial, and laboratory and research and development space, requirements for pedestrian and bicycle amenities, compact parking spaces, vanpool parking spaces, lighting, paving, landscaping, sites served by public transit, and hybrid vehicles.
- o Amend Section 450-28 Off-Street Loading to include standards for off-street loading setbacks, screening from residences, and distances from public right-of-way to prevent encroaching into or backing out onto the public right-of-way.

SN 1449

1449

SHEET No 1
MAINE
GLEN AUBREY
BROOME CO.
PET-2321



STATE OF NEW YORK
COMMISSION OF HIGHWAYS
PLANS FOR IMPROVING
THE
**MAINE-GLEN AUBREY
COUNTY HIGHWAY**

From the bridge over Lewis Creek, at the north end of County Highway No. 374, northerly through the Hamlet of Maine, northeasterly, northerly to the south end of County Highway No. 902, at the Nanticoke town line in the Hamlet of Glen Aubrey, a length of 5.35 miles in the Town of Maine, Broome County.

CHAPTER 30, LAWS OF 1909, AS AMENDED.

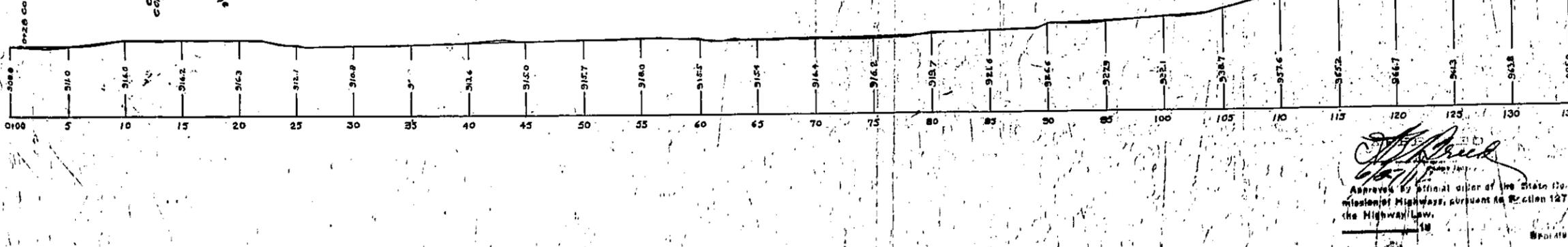
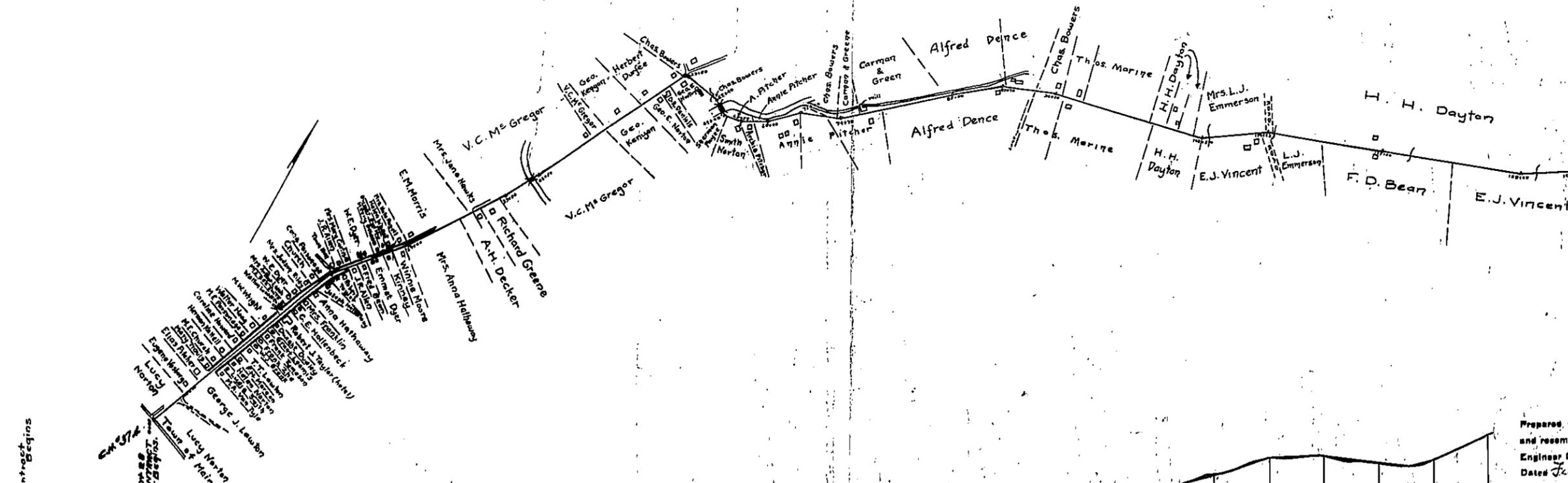
15 Sheets

Petition Nos. 2250 & 2921 County Highway No. 1449

SCALES			SCALES		
Map	Hor. 500 feet = 1 inch	Ver. 50 feet = 1 inch	Map	Hor. 50 feet = 1 inch	Ver. 50 feet = 1 inch
Profile	Hor. 500 feet = 1 inch	Ver. 50 feet = 1 inch	Profile	Hor. 50 feet = 1 inch	Ver. 50 feet = 1 inch
Sections	500 feet = 1 inch	50 feet = 1 inch	Sections	50 feet = 1 inch	50 feet = 1 inch

TYPE OF CONSTRUCTION
5.35 MILES BITUMINOUS MACADAM-PENETRATION METHOD
WITHOUT GUARANTEE

STANDARD STRUCTURE SHEETS 0-18-2



Prepared under Sec. 126 of the Highway Law and recommended by *Harold Smith*
 Engineer Division No. 5
 Dated Feb. 24, 1916

Examined pursuant to Section 129 by *Chas. S. ...*
 Dated ... 1916

Approved by Official Order of the State Commission of Highways pursuant to Section 127 of the Highway Law
July 10, 1916

Approved and adopted by Resolution of the Board of Supervisors of Broome County pursuant to Section 126 of the Highway Law as a meeting held on ...

1449

1071A3

SHEET NO.
1/2
MAINE
GLEN AUBREY
BROOME CO.

PET-2921

NOTE:

THE WORK CONTEMPLATED UNDER THIS CONTRACT IS THE COMPLETION OF THE ORIGINAL CONTRACT ACCORDING TO THESE PLANS WHICH ARE THE ORIGINAL PLANS UNDER WHICH THIS CONTRACT WAS LET EXCEPT AS MODIFIED ON MATERIALS TABLE IN THE ITEMIZED PROPOSAL.

THE ATTENTION OF ALL PROSPECTIVE BIDDERS IS DIRECTED TO THE ITEMS OF WORK WHICH HAVE BEEN PARTIALLY COMPLETED BY THE ORIGINAL CONTRACTOR, AND BIDDERS SHOULD SATISFY THEMSELVES BY PERSONAL INSPECTION OF THE VALUE OF SUCH WORK IN DETERMINING THEIR BID PRICES FOR THESE ITEMS.

UNDER THIS CONTRACT, IF ORDERED BY THE ENGINEER, THE CONTRACTOR WILL REMOVE AND RELAY SOME OF THE PRESENT CAST IRON PIPE CULVERTS. IN THIS WORK THE CONTRACTOR MAY USE ALL SUITABLE MATERIALS RECOVERED.

COMPENSATION FOR LABOR AND MATERIALS FURNISHED TO PLACE PARTIALLY COMPLETED WORK IN CONDITION FOR ACCEPTANCE MUST BE INCLUDED IN THE PRICES BID.

THE TABLES APPEARING ELSEWHERE ON THIS SHEET SHOW THE WORK DONE BY THE ORIGINAL CONTRACTOR AND THE LOCATION OF THE WORK ON THE ROAD.

WORK DONE UNDER ORIGINAL CONTRACT.

EARTH EXCAVATION, ITEM NO. 2.			
ROADWAY		CU. YDS.	CU. YDS.
STATION TO	STATION	EXCAVATION	EMBANKMENT
240+87	253+00	663	781
253+00	271+00	1326	1181
271+00	284+55	1737	1203
Soil		75	
Reinforcing and Culverts		24	
Culvert Excavation		207	
Underdrain		4	
Total		4241	

CAST IRON PIPE, ITEM NO. 12.	
STATION	DESCRIPTION
6+80	16" C.I.P. CULV. 30' LONG. NO HEADHALLS.
14+53	16" " " 30' " " " "
21+23	16" " " 30' " " " "
24+87	16" " " 24' " " " "
43+41	16" " " 24' " " " "
92+09	16" " " 24' " " " "
100+03	16" " " 24' " " " "
114+73	16" " " 30' " " " "
130+31	16" " " 24' " " " "
142+78	16" " " 30' " " " "
152+83	16" " " 30' " " " "
186+33	16" " " 30' " " " "
191+01	16" " " 24' " " " "
198+01	16" " " 24' " " " "
200+38	16" " " 24' " " " "
209+95	16" " " 24' " " " "
222+35	16" " " 30' " " " "
247+11	16" " " 30' " " " "
251+00	16" " " 24' " " " "
253+66	20" " " 24' " " " "
257+12	16" " " 30' " " " "
263+07	24" " " 36' " " " "
274+03	16" " " 30' " " " "

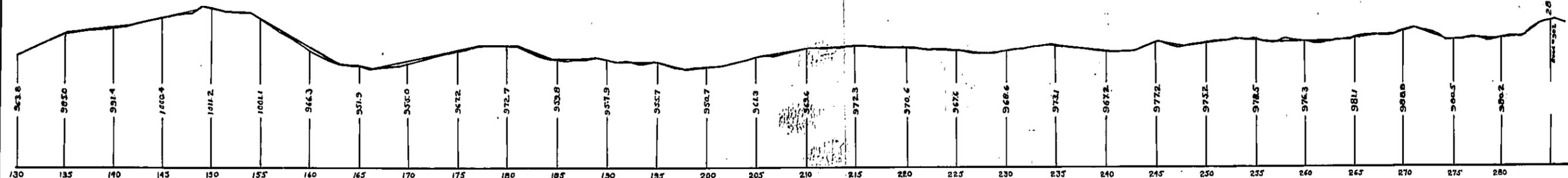
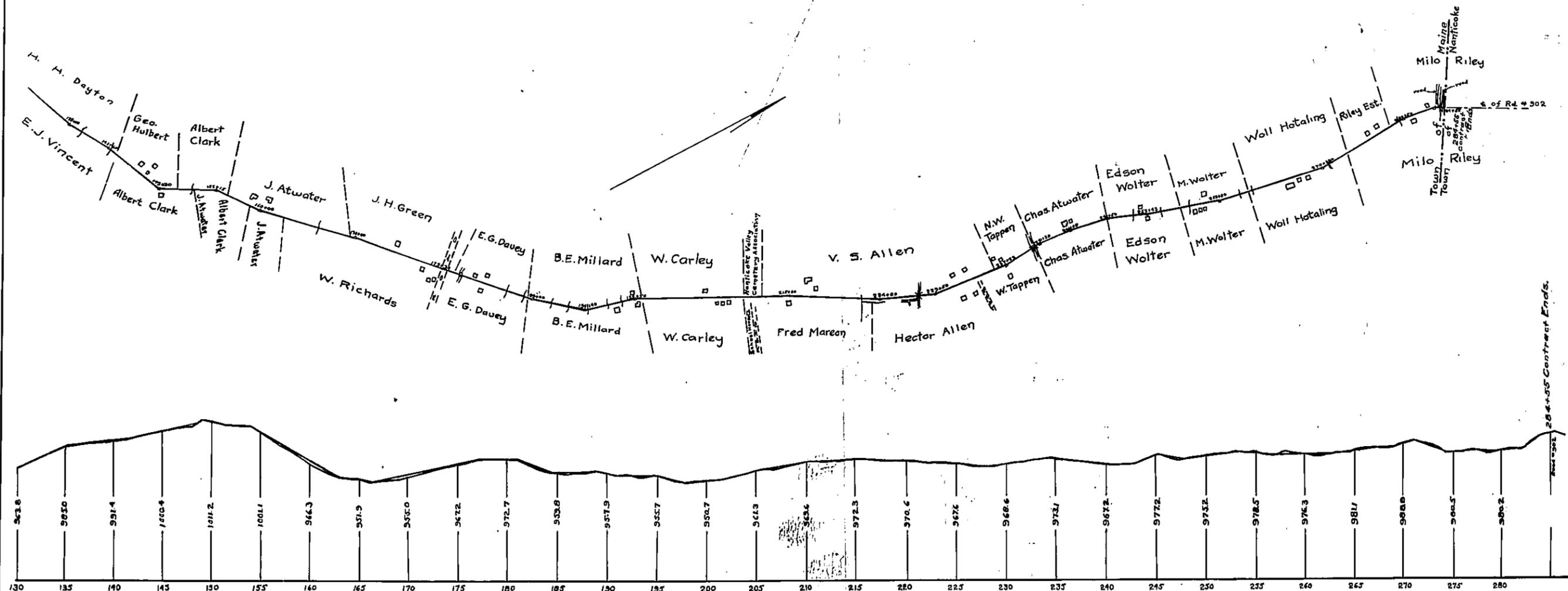
GUIDE SIGNS, ITEM NO. 34.
In Place & Detour Signs.

6" VITRIFIED CLAY UNDERDRAIN, ITEM NO. 6.		
STATION	DESCRIPTION	10 Lin. Ft.
276	Lateral Drain	8
276+50	" "	5
Total		13

MADE BY: _____ DRAWN BY: F.M. Toel CHANGED BY: E.D. Parker

Prepared under Section 125 of the Highway Law and

Recommended by: *Howard Smith*
Engineer Division No. 5
Jan 30 1924



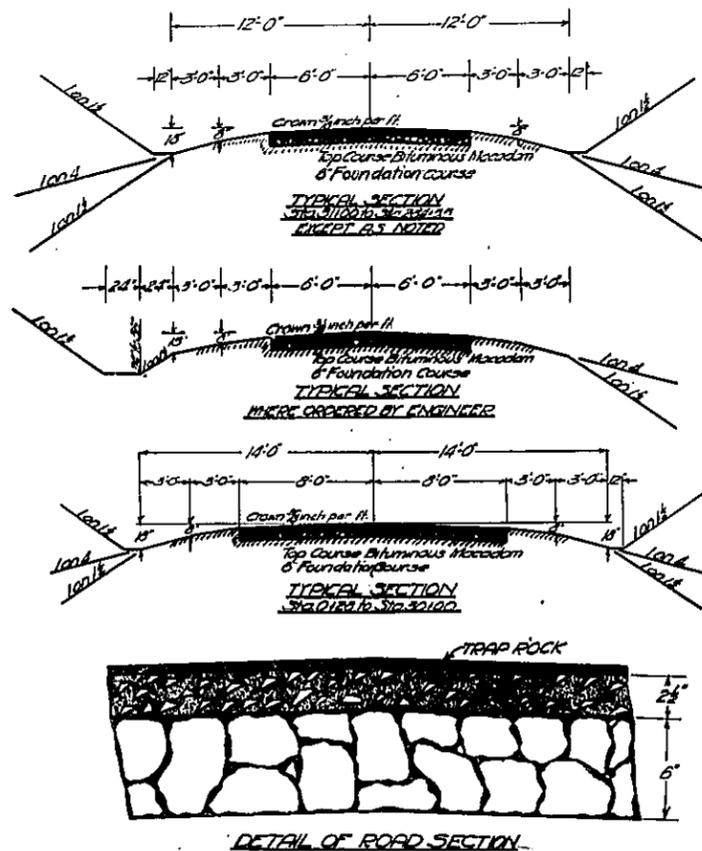
Prepared under Sec. 125 of the Highway Law
and recommended by *Howard Edwith*
Engineer Division No. *5*
Dated *Feb 24* 1916

Examined pursuant to Section 126
by *Chas. J. ...* County Supt.
Dated *March 24* 1916

Approved by Official Order of the
State Commission of Highways, pursuant to
Section 127 of the Highway Law, on
July 10 1916 *J. M. ...*
Secretary

Approved and adopted by Resolution of the
Board of Supervisors of *Broome* County
pursuant to Section 100 of the Highway Law
at a meeting held on *July 10* 1916
A. ...
Chairman

EXCAVATION & EMBANKMENT					GUARD RAILING			COBBLE GUTTER				SIGNS, MILE POSTS, ETC.		LIST OF BENCH MARKS						
STATION TO	STATION	DEPTH	WIDTH	LENGTH	STATION TO	STATION	SIDE	LINE FT.	STATION TO	STATION	LENGTH	WIDTH	DEPTH	STATION	INSCRIPTION	STATION	SIDE	ELEVATION	DESCRIPTION	
0170	13170	321	320		611.50	621.05	R & L	272	1551.00	1571.50	250	L	3'	83	0128	C.H. N° 374	0128	R	902.38	Painted on N.E. Bridge Abut.
191.75	36100	350	262		631.85	631.55	L	500	1551.00	1581.50	350	R	3'	117	C.H. N°	12100	R	916.34	Spike in Maple stump	
36100	41150	34	316	218	721.00	721.50	L	350	VITRIFIED CLAY UNDERDRAIN 500 LIN. FT. OF 6" VITRIFIED CLAY UNDERDRAIN AS ORDERED BY THE ENGINEER				UNION	13125	R	913.75	Root of Elm stump			
42104	62185	45	182	2614	831.80	871.50	L	400					53180	BINGHAMTON	20125	R	910.64	Cherry		
63185	73100	33	413.8	5347	1071.50	1071.50	L	200	EXTRA STONE FOUNDATION				UTICA	41150	R	916.46	Painted on cor. of S.E. Bridge Abut.			
78100	93100	112.6	80.6		1241.50	1251.50	L	200					114143	NEWARK VALLEY	51150	L	917.44	Spike in Maple		
93100	113181	127	382		2411.50	2501.80	R	300	281185	C.H. N°	63180	L	919.07	Root of Maple						
113181	125100	360	270		2521.00	2531.50	R	150	RETAINING WALL STATION TO STATION SIDE CUBIC YDS.				OWEGO	68180	L	916.53	Elm			
125100	137100	72	52.5		2531.00	2531.50	R	100					68180	C.H. N° 302	73170	R	920.91	Maple		
137100	151100	107.6	73.4		2571.50	2681.00	R	100	114143	NEWARK VALLEY	83197	R	923.83	Maple						
151100	163100	302	670		2631.25	2701.00	R	125	281185	C.H. N° 302	100108	R	922.14	Apple						
163100	181117	383	262		2711.25	2731.25	R	200	RIP-RAP				103140	L	920.73	Root of Maple				
181117	197100	115.5	130.5	547	2731.50	2771.50	R	200					128185	C.H. N° 302	128185	R	922.29	Root of Maple		
197100	216100	303	634		1551.00	1881.00			1551.00	1881.00	300	L	5'	18127	R	921.25	Elm			
216100	233100	75.8	521		1571.00	2001.00			1571.00	2001.00	300	L	5'	145100	L	1000.27	Elm			
233100	253100	2101	1601		2511.00	2711.00			2511.00	2711.00	300	L	5'	163100	L	924.07	Maple			
253100	270134	183	135.5		2711.00	2711.00			2711.00	2711.00	300	L	5'	191107	R	925.96	Elm			
270134	281185	172.6	131.4											200100	L	923.29	Back of Maple			
														210150	L	923.70	Back of Maple			
														221150	L	923.44	Maple			
														231150	R	923.04	Maple			
														240145	L	923.29	Maple			
														253183	L	922.29	Maple			
														266185	R	923.55	Pine			
														281185	R	922.96	Maple			
														331185	L	1000.33	Maple			



GENERAL SPECIFICATIONS

The general type of construction shall consist of a bituminous macadam, penetration method, top course upon a foundation course of stone six (6) inches deep.

The number one size stone and the number two size stone used in the top course shall be approved trap rock replacing the corresponding sizes of local stone. The amount of trap rock to be used is approximately three quarters (¾) cubic feet of the number two size and three eighths (⅜) cubic feet of the number one size per square yard of pavement.

The number three size stone comprising the body of the top course shall be approved local stone passing a screen of one and one-half (1½) inch circular opening and rejected by a screen of one and one-half (1½) inch circular opening. The amount of number three size stone to be used shall be such that when rolled it will have a compacted depth of two and one-half (2½) inches. The material specified under this item shall be manipulated in accordance with item 52. The bid price for item 17 shall not include the cost of the trap rock but shall include the manipulation of the full quantities of bituminous material.

Payment for the trap rock shall be made under item 70. Broken Stone, Loose Measure, No. 1 and No. 2 sizes for the number of tons, loose measure, delivered and incorporated in the work. The bid price shall include the cost of the stone in place.

No guarantee will be required.

The excess product of the crusher, excepting tailings, shall be used as filler for the foundation course and payment therefor shall be included in the bid price for the foundation course.

Sand for all classes of concrete shall be approved imported sand.

On curves of six (6) or less the road shall be widened and the road section banked as directed by the engineer.

The quantity of Bituminous Material shall be 2 gals. per sq. yd. the rate of pour for each application shall be as ordered by the engineer.

LOCATION	SOURCE	KIND	QUALITY	TEST NO.
1/2 mile from sta. 58	Stream bank	Fribspathic Sandstone	Accepted, if tested for use in items 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.	4232
1/2 mile from sta. 175	Fields	Fribspathic Sandstone	Accepted, if tested for use in items 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.	4231
1/2 mile from sta. 215	Walls	Fribspathic Sandstone	Accepted, if tested for use in items 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.	4230
1/2 mile from sta. 240	Fields	Fribspathic Sandstone	Accepted, if tested for use in items 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.	4233

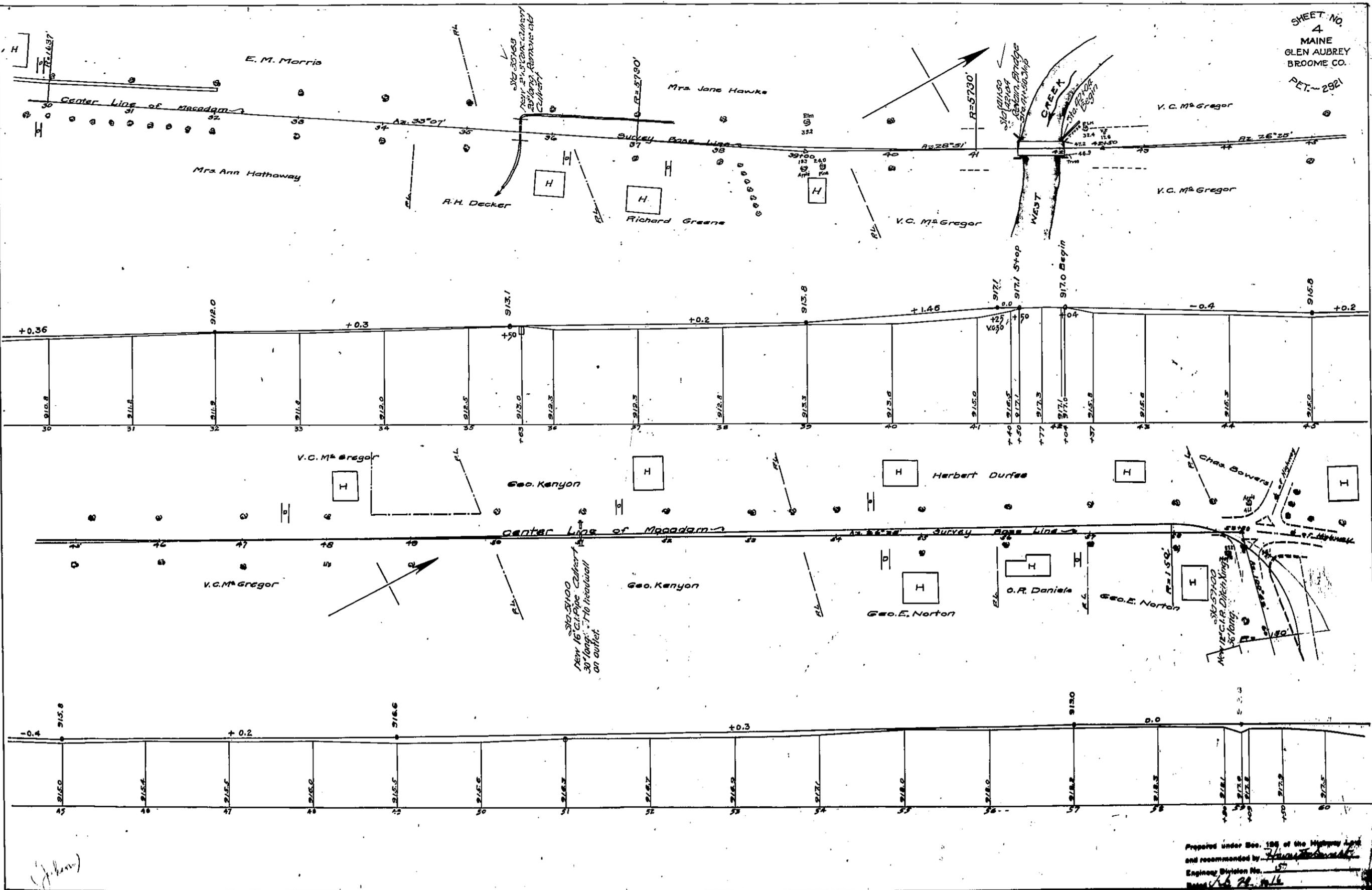
Sand shall be approved imported.

Materials similar to those designated and of acceptable quality, from any source will be accepted for use on this contract for items where imported materials are not specified.

The bidders' attention is called to page 7 of the General Specifications concerning materials of construction.

MADE BY TRACED BY CHECKED BY
PLAN
PROFILE

Prepared under Sec. 125 of the Highway Law and recommended by
Engineer Division No. 5
Date 5/14/1916



Prepared under Sec. 105 of the Highway Law
and recommended by *[Signature]*
Engineering Division No. 157
Date *Feb 28, 1916*

[Handwritten initials]