TOWN OF NEWINGTON

131 Cedar Street Newington, Connecticut 06111

Office of Town Engineer

Tanya D. Lane
Town Manager

Gary J. Fuerstenberg, P.E.
Town Engineer

May 22, 2018

Ms. Jennifer Carrier
Director of Transportation
CRCOG
241 Main Street
Hartford, CT 06106

Re: 2018 LOTCIP
Request for Proposals
Robbins Avenue and Maple Hill Avenue
Complete Street Upgrade
Newington, Connecticut

Dear Ms. Carrier:

Please find enclosed two (2) hard copies and one (1) CD Town of Newington 2018 LOTCIP application.

Please contact me at 860-665-8572 if you need additional information or require clarification on the application and/or supporting documents.

Sincerely,

Gary J. Fuerstenberg, P.E.
Town Engineer

Enclosure: RFP (2)
CD (1)

cc: Tanya Lane, Town Manager
Sotoria Montanari, Program Manager
File

GJF/crd

Phone: (860) 665-8570 Fax: (860) 665-8577
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APPLICATION

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Connecticut Department of Transportation

Local Transportation Capital Improvement Program Application

Municipality:	Newington	COG:	Capital Region
Route/Road:	Robbins Avenue - Maple Hill Avenue		
Project Title:	Complete Street Upgrade		
Roadway Functional Classification (if applicable):	Minor Arterial		
COG Contact Information:	Jennifer Carrier		Director of Transportation Pl
	Name		Title
	860-724-4215		Jcarrier@crcog.org
	Phone Number		Email
Municipal Contact Information:	Tanya Lane		Town Manager
	Name		Title
	860-665-8500		Tlane@NewingtonCT.GOV
	Phone Number		Email

The applicant must answer the questions below which are intended to address basic issues about existing conditions, project management, project costs, impacts on private property, utilities, wetlands, etc. **You may provide your answer in the space provided below or submit separate answer sheets. It is important that the application be as thorough as possible as missing information will delay the review process. All project- related sections must be completely filled out or the application will be returned and will require resubmittal.**

The intent of the application is to establish eligibility, service life, and to ensure the municipality is considering all pertinent aspects associated with major infrastructure improvements consistent with the purpose and need of the project.

(A) Project Information

1. Select the type of proposed improvement (select all that apply):

Please note: The entire application must be completed for all projects in addition to any necessary supplemental sections (K through P) as determined by the type of project.

- ☐ Roadway Geometric Improvement
- ☐ Stand-Alone Sidewalk Construction
- ☑ Bicycle/Pedestrian Improvement, including Multi-Use Trail Facilities
- ☐ Intersection Improvement

  Provide additional information as required in section K
- ☐ Bridge Rehabilitation/Replacement

  Provide additional information as required in section L
- ☐ Major Drainage Improvement

  Provide additional information as required in section M
- ☐ Pavement Structure Improvement

  Provide additional information as required in section N
- ☐ Traffic Signal Replacement/Upgrade/New Installation/Coordination

  Provide additional information as required in section O
- ☑ Other (please specify): resurfacing roadway

  Provide additional information as required in section P

2. Describe the purpose and need of the project (i.e what are the problems to be corrected?). Please provide adequate detail to clearly convey the nature of the problem(s) to be corrected. Provide photographs to document the existing conditions and support the purpose and need. see attached photos

   Project need: extensive fatigue and longitudinal cracking in pavement as well as potholes and utility patches are present too.

   These roads were last surfaced (mill and overlay) in 1998 and last crack sealed in 2015. Crack sealing is no longer practical. These roads have outlived the overlay design life and crack seal useful life and are in need of resurfacing to avoid future costly reconstruction.

   Current road system rating (RSR) range from 60 to 75. We expect the roadway to rapidly deteriorate due to extensive cracking and high traffic volume. In 2020, RSR is expected to range from 50 to 60. Town roadway maintenance practice calls for resurfacing when the arterial RSR decreases below 60 (lower RSR standard for local roads with significantly lower traffic volume).

   These are high traffic volume roads that were state routes. The Town has maintained these roads since CDOT abandoned the roads cira 1970.

3. Provide a project description which specifically describes how the proposed improvements will correct the problem(s) identified in the purpose and need. Describe what alternative(s) were considered?

   Project description:
   1 Mill and overlay roadway surface.
   2 Replace catch basin frames.
   3 Replace deteriorated concrete curb.
   4 Replace traffic detector at up to 4 signaled intersections.
   5 Install sidewalk handicap accessible ramps.
   6 Incorporate CRCOG complete street plan - add bike lanes and pedestrian protection.

4. Provide concept plans of the proposed improvement. The plans must be sufficiently developed and provide enough detail on a scaled drawing (including aerial photography base mapping if possible) to identify the following:

Inc.	N/A	
☑		Project location
☑		Limits of project
☐	☑	Approximate limits and extent of any pavement widening or realignment ← none ← resurface existing roadway
☑	☐	Proposed number of lanes, widths, and arrangements ← see sections
☐	☑	Approximate limits and extent of any anticipated ROW acquisitions (based on available ROW information from Assessors maps, GIS data, etc.) ← no right-of-way acquisition - see sections
☑	☐	Structures (i.e. Retaining walls, bridges) ← see Bridge 093005 Inspection Report
☑	☐	Watercourses ← School House Brook
☑	☐	Typical Cross Section including lane and shoulder widths, pavement structure, etc.

5. Have the improvements at this location been submitted to the Department previously for funding? ☑ No ☐ Yes

   If yes, when and under what program?

   _____

6. Does the project impact any State-owned Facilities (i.e. roads, bridges, etc.)?
   ☑ No ☐ Yes

   If yes, describe the impacts:

   Project terminates at State Route 176 (Main Street) and
   State Route 174 (New Britain Avenue) - project crosses State Route 173
   (Willard Avenue)

7. In the area of the project, are there any known proposed developments?

☑ No ☐ Yes

If yes, describe the proposed developments:

Existing urban area - no development is planned.

8. Design Standards to be used:

☑ Established municipal standards

☑ AASHTO Policy on Geometric Design of Highways and Streets

☑ Connecticut Department of Transportation Highway Design Manual

☐ AASHTO LRFD Bridge Design Specifications and Connecticut Department of Transportation Bridge Design Manual

☐ Other, please specify: _____

(B) Rights of Way

1. Are any Right of Way (ROW) impacts anticipated? ☑ No ☐ Yes

   If yes, describe the nature, extent, and type of impacts:

   Work within existing right-of-way.

2. If ROW acquisitions will be required, who does the municipality plan to have perform acquisition activities?

   ☐ Municipal staff ☐ Consultant hired by municipality ☐ State

3. If ROW acquisitions are to be performed by the municipality's staff or their consultant, will the municipality be seeking reimbursement for ROW costs?

   ☐ No ☐ Yes

(C) Utilities

1. List all utilities within the project area, including their owners.

Overhead	Underground
electric - Eversource	water/sewer - MDC
communication - Frontier	gas - CNG
	communication - Frontier/ATT

2. Are any utility impacts anticipated? ☑ No ☐ Yes

   If yes, explain the nature and extent of the impacts:

   Note: Costs associated with utility betterments/upgrades that are not required to accommodate the proposed transportation improvement are not eligible project costs.

3. Have the utility companies been contacted to identify any plans to expand or improve existing utilities that would that would compromise the service life of the proposed improvements?

   ☐ No ☑ Yes

   If yes, describe any proposed improvements and their schedule:

   Contacted MDC and CNG - no response regarding proposed utility work in project corridor.

(D) Storm water drainage system and under drains

1. Do any existing storm water drainage problems exist? ☑ No ☐ Yes

   If yes, describe the problem(s):

   None reported by residents or observed by Engineering/Highway staff.

2. Is any storm water drainage system work anticipated, including any new or modified drainage outlets? ☐ No ☑ Yes

   If yes, explain the nature and extent of the improvements:

   Replace catch basin frames.

3. Are there any existing watercourse crossings that are proposed to be modified, rehabilitated, or replaced as part of the project? ☑ No ☐ Yes

   If yes, indicate the type of improvement needed and the reason for it. Please also indicate if any existing watercourse crossings have inadequate hydraulic capacity:

   No modifications proposed for Schoolhouse Brook culvert.

(E) Rail Crossings

1. Are there any railroad crossings that are likely to be impacted as part of the project?

   ☑ No ☐ Yes
   ☐ At-grade
   ☐ Grade separated

   If yes, describe impacts and any necessary modifications:

(F) Pedestrian/Bicycle Safety and Mobility

1. Complete and attach the Department's Bicycle and Pedestrian Needs Assessment Form to this application (a copy of this form is included in Appendix D). In accordance with Connecticut General Statutes, Section 13a – 153f, and the Department's focus on accommodating non-motorized travel modes, accommodation of all users shall be a routine part of the planning, design, construction, and operating activities of all highways. The need for inclusion of accommodations for bicyclists and pedestrians, including those with disabilities, must be reviewed for every project, regardless of funding source.

see attached →

(G) Traffic

Used most current CDOT ADT data (2012).
Updated traffic count can be performed as needed.

The information below needs to be provided or reviewed (as specified) by the designer for all project types except for stand-alone sidewalk projects and bicycle/pedestrian improvements, and multi-use trail facilities that do not involve pedestrian crossings

1. Volumes — 2012/2018 ADT data - 0.5% increase per year (urban area)

   Provide existing and 20-year Projected ADTs and Turning Volumes. Refer to the Preliminary Engineering/Preliminary Design section for guidance on traffic volumes. — EASL computations attached

2. Accident Experience

   see attached

   Provide a summary of accident experience (most current three years data. An accident diagram is preferred.) — diagrams available upon request

3. Traffic Signals — no changes planned - replace loop detectors as needed

   Review the existing traffic signal plans for projects involving signalized intersections

4. Speed Data

   Provide 85th percentile speeds in the project area — consultant to obtain data after award

   Provide all posted speed limits in the project area

(H) Environmental Resource Involvement

Refer to Application Process/Preliminary Project Submittals - Information Provided by the Department for more information.

1. Parks, Cemeteries, Historic Structures

   a. Are there any parks, cemeteries, or historic structures that are likely to be affected by the project? ☑ No ☐ Yes

      If yes, describe the type and extent of the anticipated impact.

2. Wetlands

   a. Are there any wetlands that are likely to be affected by the project?

☑ No ☐ Yes

If yes, describe the type and extent of the anticipated impact.

Schoolhouse Brook flows beneath roadway via culvert. No culvert improvements planned.

3. Hazardous or Contaminated Sites

   a. Has the potential for hazardous or contaminated sites and materials in the project area been investigated? ☑ No ☐ Yes

      If yes, describe the type and extent of the anticipated impact.

      None known.

(I) Public Involvement

Refer to Preliminary Engineering/Project Design - Public Involvement section for more information.

1. Has public involvement been conducted? ☑ No ☐ Yes

   If yes, was there significant public opposition to the project? Describe below:

   Residents typically support road improvement projects.

(J) Cost Estimate ← see attached

1. Attach a preliminary cost estimate identifying:
   a. Approximate quantities and assumed unit prices of the major contract items
   b. An allowance for minor items (percentage of a)
   c. Standard lump sum items (i.e. clearing and grubbing, mobilization, construction staking, maintenance and protection of traffic) as applicable (percentages of a + b)
   d. Total contract items (a + b + c)
   e. Contingencies (10% of d)
   f. Incidentals to construction, (i.e. construction inspection, materials testing) (10% of d)
   g. Rights of way costs

h. Eligible utility relocation costs (in accordance with CGS13a-98f)
Note: Costs associated with utility betterments/upgrades that are not required to accommodate the proposed transportation improvement are not eligible project costs
i. Total project costs (d + e + f + g + h)

Sample cost estimate form provided in Appendix M

Refer to the Department's most current Cost Estimating Guidelines for cost estimate guidance or use town generated unit prices. The anticipated costs for each phase of the project shall be well documented and based on reasonable anticipated costs.

The guidelines are located at: http://www.ct.gov/dot/cwp/view.asp?a=3194&q=484094

ADDITIONAL INFORMATION TO BE PROVIDED BASED ON IMPROVEMENT TYPE SELECTED IN SECTION (A)1:

(K) Intersection Improvements ← NOT APPLICABLE

Capacity Analyses (For build and no-build conditions using existing and projected traffic volumes).*

(L) Bridge Rehabilitation/Replacement ← NOT APPLICABLE

Latest Condition Report ← see attached bridge 093005 inspection report

(M) Major Drainage Improvement ← NOT APPLICABLE

Material, Age, Hydraulic adequacy assessment of existing drainage system (Condition Report, post-cleaning is preferred)

(N) Pavement Structure Improvement ← NOT APPLICABLE

The level of investigation will be dependent upon the proposed improvements. Cores or test pits must be performed such that a representative sample of the existing roadway condition is obtained. If varying pavement conditions exist along the roadway indicating the possibility of different pavement conditions, a test pit should be performed in each roadway section. Pavement thickness and type, sub-base thickness and type, and the presence of fines and/or groundwater should be noted. Attach the data obtained. If full depth reconstruction is proposed, cores or test pits are not required.

Approximate percentage of heavy vehicles: _____

What is the existing pavement type, condition, and thickness?

(Cont'd)

What is the anticipated pavement design? Describe the type and depth of each course including the base that is suitable for the ADT and percentage of heavy vehicles. Does it meet current design standards? Describe the cross-section (i.e. lanes and shoulder widths, etc.).

Describe how the service life requirement for the proposed pavement design was determined:

(O) Traffic Signal Replacement/Upgrade/New Installation/Coordination

NOT APPLICABLE

Who is/will be responsible for ownership, maintenance, and electrical costs

Age of existing signals

Capacity Analyses (For build and no-build conditions using existing and projected traffic volumes).*

Warrant Analysis for new signals

Systems Engineering Analysis Form (SEAFORM) for Intelligent Transportation Systems (ITS) projects

(P) Other

To be determined based on type of improvement proposed

***Capacity Analysis:** For the purposes of this application, a simplified analysis may be performed for signalized intersections that do not require detailed assumptions, proprietary software or specialized traffic engineering skills. The "Quick Estimation Method" is described in detail in the 2010 Highway Capacity Manual, with accompanying worksheets that can be completed by hand. A brief description of the method is also described in Section 3.3.6 of the FHWA Signal Timing Manual, where it is referred to as a "Critical Movement Analysis." The relevant section of the FHWA publication can be accessed at: http://ops.fhwa.dot.gov/publications/fhwahop08024/chapter3.htm#3.3. This simplified analysis will yield an approximate critical volume/capacity ratio that can be used to assess overall operation of the intersection. The build and no-build conditions should be analyzed for the existing and projected traffic volumes.

APPLICATION SUBMISSION

This application and supporting documents must be submitted by the municipality to their COG. At such time when the application is to be forwarded to the Department of Transportation by the COG, it must be addressed to:

Mr. Hugh H. Hayward, P.E.
Department of Transportation
2800 Berlin Turnpike
P.O. Box 317546
Newington, CT 06131-7546

Prepared by: Gary J. Fuerstenberg, PE Date: 05-22-18

Name, Title and stamp of Responsible P.E. (Municipal ~~or Consultant~~)

Signature

Reviewed/Recommended by: Stephen Clark (Acting Town Manager) Date: 05-22-18

Name & Title of Municipal Chief Administrative Officer

Acting Tm Steph Clark

Signature

Endorsed/Recommended by: _____ Date: _____

Name & Title of COG Executive Director

_____

Signature

PHOTOGRAPHS

(SECTION A4)

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Maple Hill Ave
Looking South From
Emmanuel Christian
School

Maple Hill Ave
Looking North From
Emmanuel Christian
School

Robbins Ave
Looking East From
Golf Street

Robbins Ave
Looking West From
Golf Street

Robbins Ave
Looking West From
Broadview Street


Robbins Ave
Looking East From
Broadview Street


CLIFFORD ST
Robbins Ave
Looking West From
Clifford Street

Robbins Ave
Looking East From
Clifford Street

Maple Hill Ave

Maple Hill Ave

Maple Hill Ave

Robbins Ave

Robbins Ave

Robbins Ave

FIGURE

Project location

(SECTION A4)

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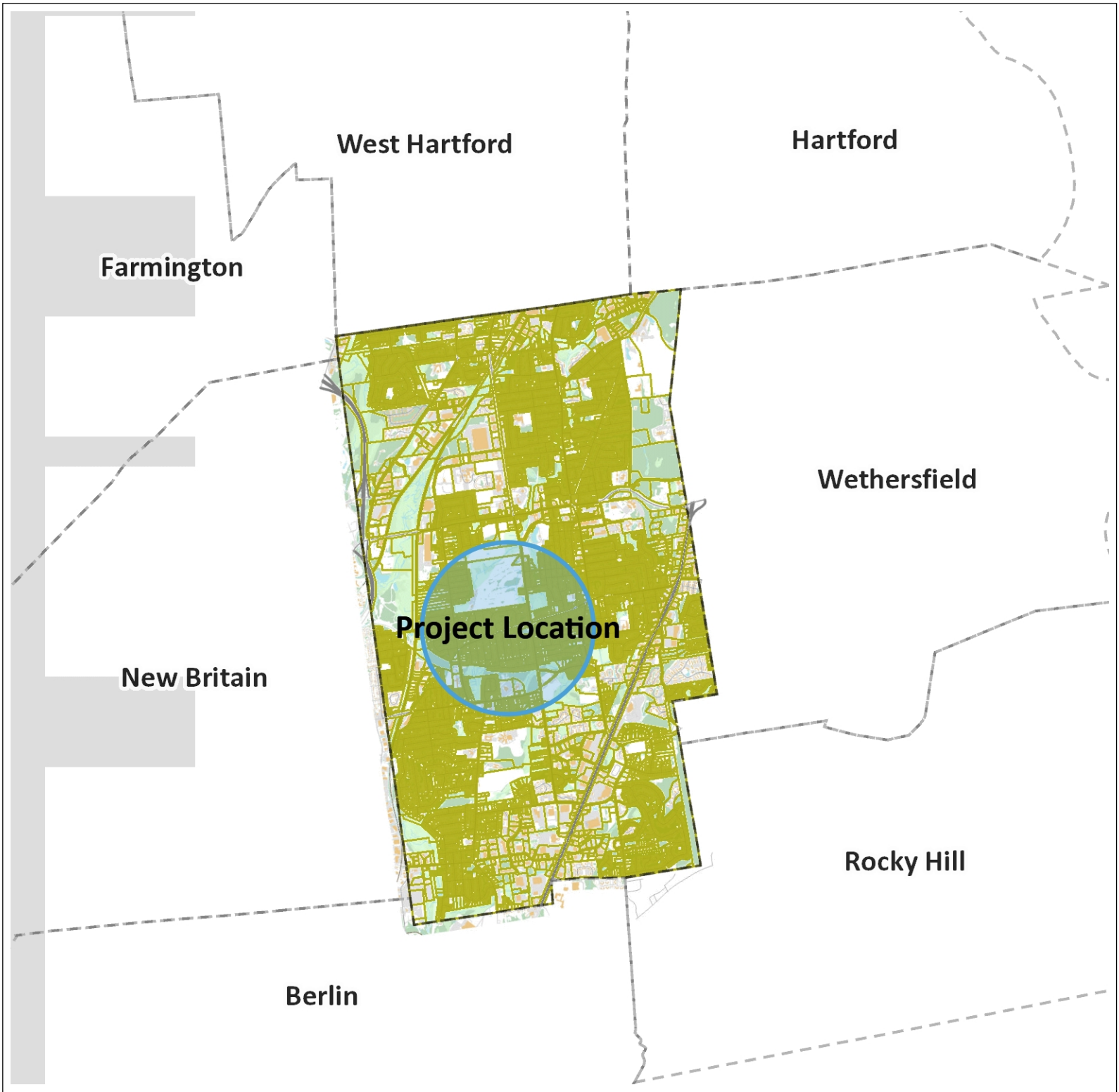

Project Location

0 6,000.00 12,000.0

Feet

Map Legend

Parcels

N

This map is for planning purposes only. Verification of its accuracy, currency and completeness is the responsibility of the reader's own independent research. Neither the Town of Newington nor any of its consultants shall be held liable for any loss, damages or claims made solely as a result of anyone referring to this map.

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FIGURE

Limits of project

(SECTION A4)

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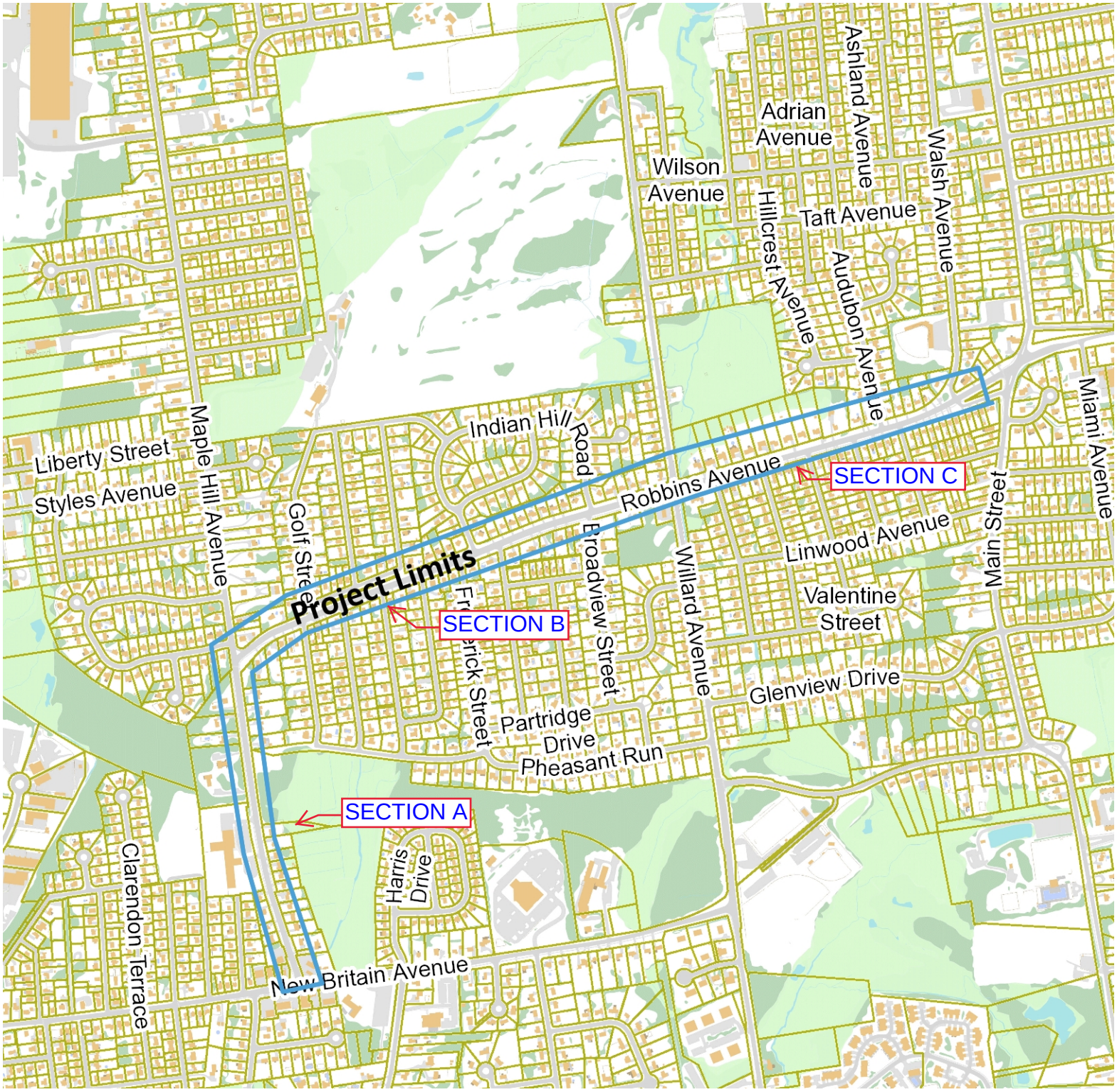

Project Limits

0 1,000.00 2,000.0

Feet

N

Map Legend

Parcels

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TYPICAL CROSS SECTION

(SECTION A4)

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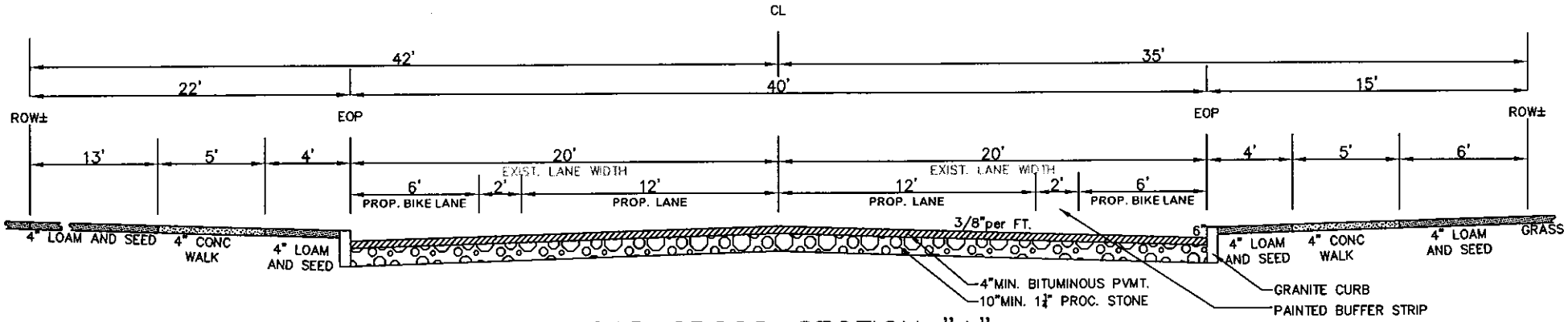


ROAD CROSS-SECTION "A"

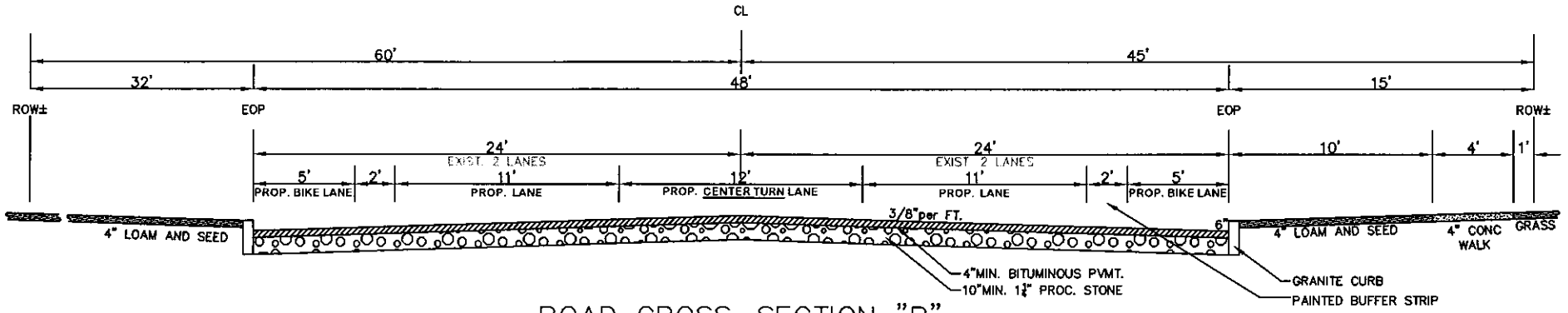
MAPLE HILL AVENUE

(2 LANE ROAD)

NEW BRITAIN AVENUE TO ROBBINS AVENUE

[LOOKING NORTH]

N.T.S.



ROAD CROSS-SECTION "B"

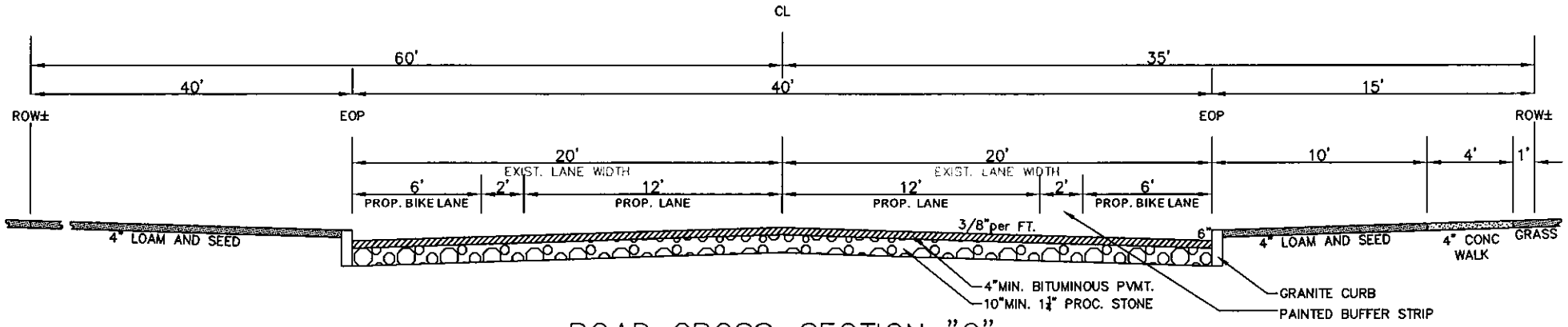
ROBBINS AVENUE

(4 LANE ROAD)

MAPLE HILL AVENUE TO WILLARD AVENUE

[LOOKING EAST]

N.T.S.



ROAD CROSS-SECTION "C"

ROBBINS AVENUE

(2 LANE ROAD)

WILLARD AVENUE TO MAIN STREET

[LOOKING EAST]

N.T.S.

PEDESTRIAN/BICYCLE SAFETY AND MOBILITY

(SECTION F)

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CONNECTICUT DEPARTMENT OF TRANSPORTATION
BICYCLE AND PEDESTRIAN TRAVEL NEEDS ASSESSMENT FORM

In accordance with Connecticut General Statutes, Section 13a-153f, and the Department's focus on accommodating non-motorized travel modes, accommodation of all users shall be a routine part of the planning, design, construction and operating activities of all highways. The need for inclusion of accommodations for bicyclists and pedestrians, including those with disabilities, must be reviewed for every project. This form provides the documentation and information needed to make decisions on the need and extent of bicycle and pedestrian features. This form is not intended to dictate what features should be included in a project design - guidance on those questions can be found in numerous other reference documents. This form should be completed to the extent practical (at least Sections 1-3) during the project scoping phase and fully completed no later than at the completion of the Preliminary Design and attached to the Preliminary Design Statement.

Project Number(s): _____
Type of work: Complete Street Improvements, Road Resurfacing
Municipality(s): Newington
Route(s): Maple Hill Avenue, Robbins Avenue
Planning Region(s): Capitol Region

SECTION 1 - APPLICABILITY

Although bicycle and pedestrian accommodations should be considered for all projects, certain types of projects (e.g. bridge deck patching, culvert re-lining, projects on expressway mainlines) do not typically provide reasonable opportunity to provide improvements for these travel modes. If this project falls into this category, please explain why below, then skip to Conclusions section on the last page, sign the form, and file this form with the project documents. For all other projects, skip this section, go to Section 2 and complete the rest of the form.

_____
_____
_____
_____
_____
_____

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BICYCLE AND PEDESTRIAN TRAVEL NEEDS ASSESSMENT FORM

SECTION 2 – EXISTING CONDITIONS

1. What is the suitability of the project area for bicycle travel according to the ConnDOT Bicycle Map website (http://www.ctbikemap.org/bikemap.html)? For town roads, is any portion of the project located on a road identified in a Regional Planning Organization, or Municipal Bicycle Plan? If the route is designated as "less suitable" or "least suitable", would it be feasible to include improvements in the project to improve these ratings?

Roads within the project limits are identified in the *CRCOG 2008 Pedestrian and Bicycle Plan* as "necessary to provide connections for bicyclists between Towns and commercial corridors". Furthermore, they are also identified in the *2009 CT DOT Bicycle Map* as "less suitable" for bicyclists - likely due to the high traffic speed, narrow or no shoulders and, for the middle portion of the project, multiple travel lanes in both directions. This project would improve these conditions by eliminating the second travel lane, reducing the lane widths and providing currently non-existent bicycle facilities. The Town has identified this corridor as the most viable route of bicycle travel when moving east to west through Newington.

2. Describe any existing bicycle and pedestrian facilities within or just beyond the project limits, including features such as sidewalks (include width and material type), shoulder widths, bicycle markings/signs, and bike racks. Also describe any current or proposed features that hinder bicycle or pedestrian travel and the practicality of removing any such obstacles.

Four-foot-wide concrete sidewalks are provided the entire length of Maple Hill Avenue and Robbins Avenue within the project limits. Sidewalks are the only pedestrian-friendly facility aside from pedestrian crosswalks at each major intersection. Bike lanes, crosswalks, signs and other non-vehicle improvements are absent within the project area. In general, the biggest hindrance to bicycle and pedestrian traffic within the project limits is four travel lanes throughout project segment B. Multiple lanes of travel, high vehicle speeds, and no pedestrian crosswalks or bike facilities make this section of roadway unsuitable for pedestrians and/or bicyclists. This project would remove those hindrances by providing only one 11-foot-wide travel lane in each direction. This will reduce vehicle speed as well as provide a buffered bike lane in both directions.

Is the project located on, or in close proximity to, a route identified in the Department's Americans with Disabilities Act (ADA) Transition Plan? http://www.ct.gov/dot/lib/dot/documents/ddbe/ADATransition_Plan_March_2011.pdf

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BICYCLE AND PEDESTRIAN TRAVEL NEEDS ASSESSMENT FORM

This project is not identified within the CT DOT's ADA Transition Plan. However, as part of this project all sidewalk ramps within the project limits will be upgraded to current ADA standards.

3. Is there a history of bicycle or pedestrian crashes/incidents in the project area? If so, provide details. In addition to ConnDOT crash records, crash information can be found at ctcrash.uconn.edu.

No bicycle or pedestrian crashes have been reported in the past 3 years, likely due to little to no bicycle or pedestrian traffic since the roads are not suitable

SECTION 3 – ASSESSMENT OF CURRENT AND FUTURE NEEDS

Using a location map or aerial photograph, indicate the location of any of the following currently existing or planned typical bicycle and/or pedestrian generators, using the letters indicated (for planned facilities, precede the letter with a P). If the preparer's knowledge of the area is insufficient, consult with appropriate municipal officials. Generally, any facilities within approximately one-half mile of the project limits should be noted. Use this information to answer the following questions.

- Residential Areas (R): Indicate any general areas of dense residential housing
- Parks (P): Include areas that would attract people, whether officially designated as a park or not
- Recreational Areas (RA): Examples include athletic fields, dog parks
- Religious Facilities (C)
- Schools (S)
- Town Centers (TC): typically would include areas where Town Halls, Libraries and other public facilities exist
- Shopping Centers (M): especially centers with businesses where non-motorized customers might be expected (restaurants, bookstores, drug stores, etc.)
- Large Employment Businesses (E): Factories, large office buildings, hospitals, government offices
- Bus Stops (B)
- Public Transit Facilities (T): train/bus stations, airports
- Other (O): other known facilities expected to generate or attract non-motorized users

See Attached Map

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BICYCLE AND PEDESTRIAN TRAVEL NEEDS ASSESSMENT FORM

4. Does the project provide unique or primary access (defined as access which is not otherwise available within approximately one-half mile of the project): **Yes**

a. Across a river, highway corridor or other natural and/or man-made barrier? **Yes**

b. Into or out of any of the bicycle and pedestrian generators listed above? **Yes**

c. Between communities? **No**

6. Characterize the existing and future anticipated pedestrian and bicycle travel within the study area, with emphasis on locations and corridors of high demand.

Note: ("access" as described above is explained in greater detail below)

Once completed, the bicycle and pedestrian facilities for this project will be the first of its kind in Newington and facilitate east-west navigation through town and toward Newington's Town Center, Town Hall, Community Center and Mill Pond Park/Pool from neighborhoods near and adjacent to the project area. Once the improvements are complete, pedestrian and bicycle travel is expected to increase. Neighborhoods with residential densities of four units per acre or more are located along the project corridor. Furthermore, the installation of a rapid flashing beacon will allow both pedestrians and bicyclists safe access, from the South section of Town, to cross Robbins Avenue for access to the municipal facilities mentioned above as well as neighborhoods and business in the central and northern portion of town.

SECTION 4 – EVALUATION OF BICYCLE AND PEDESTRIAN ACCOMMODATION

7. Describe any bicycle/pedestrian accommodation features that were considered for inclusion in the project, including benefits, approximate costs and other factors that were considered (e.g. environmental effects, feasibility).

Many pedestrian and bicycle improvements were considered for this project, including:

- **Buffered bike lanes.**
- **Protected cycle tracks.**
- **Pedestrian protected crosswalks.**
- **Pedestrian safety islands.**
- **Rapid flashing beacons.**

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BICYCLE AND PEDESTRIAN TRAVEL NEEDS ASSESSMENT FORM

- **Improved signage.**
- **Bike/pedestrian overpass over Robbins Avenue.**

While it was the safest option, installation of a protected cycle track was not feasible because it would require the existing street limits be widened. A buffered bike lane was determined to be the most viable option as it would allow for reducing the vehicle travel lanes as well as provide bicyclists a seven-foot-wide lane. Installation of a buffered bike lane also allows for snow plow operations to remain unchanged.

Rapid flashing beacons at the intersection where pedestrians and bicyclists are most likely to cross the street were evaluated and determined to provide adequate accommodations for those users.

Costs associated with bicycle and pedestrian improvements (that are not tied to road reconstruction costs) total about $134,000. This includes ADA upgrades, pedestrian protected crosswalks, rapid flashing beacons and signs for the new bike lanes.

8. Summarize the results of any coordination with stakeholders and general public outreach with regards to bicycle and pedestrian needs, including accommodations proposed during construction. Some of the stakeholder organizations that may be considered for coordination include: Regional Planning Organization, Local Municipalities, ConnDOT Non-Motorized Transportation Coordinator, ConnDOT Bureau of Public Transportation, CT Department of Public Health, Bike Walk Connecticut, and Board of Education Services for the Blind (BESB).

Newington has one local bike shop which has been consulted generally about making the Town more bicycle friendly. Not only does this bike shop cultivate ridership in Town, but they also sponsor multiple events in Newington.

One of the main pieces of feedback we've received from them was that Newington used to be more friendly to bicycles than it is today, and that signs are important. Both of those points have been considered when suggesting these changes for this project. Furthermore, the Newington Parks and Recreation Department has received feedback from Town residents that the Mill Pond Park/Pool and the activities held on site are difficult to access without a vehicle from certain parts of Town. These users were also considered when developing this solution.

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BICYCLE AND PEDESTRIAN TRAVEL NEEDS ASSESSMENT FORM

SECTION 5 - CONCLUSION

Describe how the anticipated bicycle/pedestrian travel, including those with disabilities, will be accommodated through existing infrastructure, project-proposed features and features that are planned for the future. If no bicycle/pedestrian features are proposed to be included, explain the reasons for not including them (e.g. project scope applicability from Section 1, excessive environmental or social impacts or costs, safety concerns, etc.).

Currently, pedestrian traffic within the proposed project limits is accommodated via existing sidewalks on the South side of the street. The sidewalk widths vary from 4 to 5 feet. As part of this project, any sidewalk ramps that are not built to ADA specification will be replaced. This will help to further accommodate pedestrian users with disabilities. At this time bicycle users are not accommodated in any way. Within the project limits, shoulder widths vary from 1' to 6' with no defined striping or signage. The project will allow a buffered bike lane to be installed on both sides of the street for the entire distance of the project and give bicycle users the ability to move safely across Town. The 2-foot-wide striped buffer will also help to make bicycle users feel more comfortable on the road.

Prepared by: Gary J. Fuerstenberg, P.E. **Date Prepared:** 5-17-2018
Project Engineer

Approved by: Craig Minor, AICP **Date Approved:** 5-21-2018
Project Manager

GUIDELINES FOR COMPLETING THE FORM:

Section 1: If the type of improvement does not lend itself to including bicycle and/or pedestrian improvements, describe that condition in this section. This section does not apply to reasons such as the project limits are felt to be too short to include meaningful improvements, there is an absence of need, the cost would be too high or the impacts would be too severe.

Section 2, Question 1: For projects on roads that are deemed suitable, designers should consider that the volume of bike traffic is already likely to be significant. For projects on roads deemed "less suitable" or "least suitable", designers should consider what factors have led to this rating and consider whether the project could improve these ratings.

Question 2: Describe in general terms the existing bicycle and pedestrian facilities (i.e.

CONNECTICUT DEPARTMENT OF TRANSPORTATION
BICYCLE AND PEDESTRIAN TRAVEL NEEDS ASSESSMENT FORM

"Five foot wide concrete sidewalks are provided throughout the project limits with the exception of _____ to _____ where no sidewalks exist"). Also, describe any existing hindrances to bicycle and/or pedestrian travel (such as a narrow bridge, steep side slopes, busy commercial driveways, etc.) and the feasibility of removing or improving the hindrances.

Question 3: If the project is on or close to a route identified in the Department's ADA Transition Plan, coordination with those improvements is required. Leo Fontaine is in charge of the Department's Transition Plan. Note: ADA related improvements are still required even if the project is not on one of these routes.

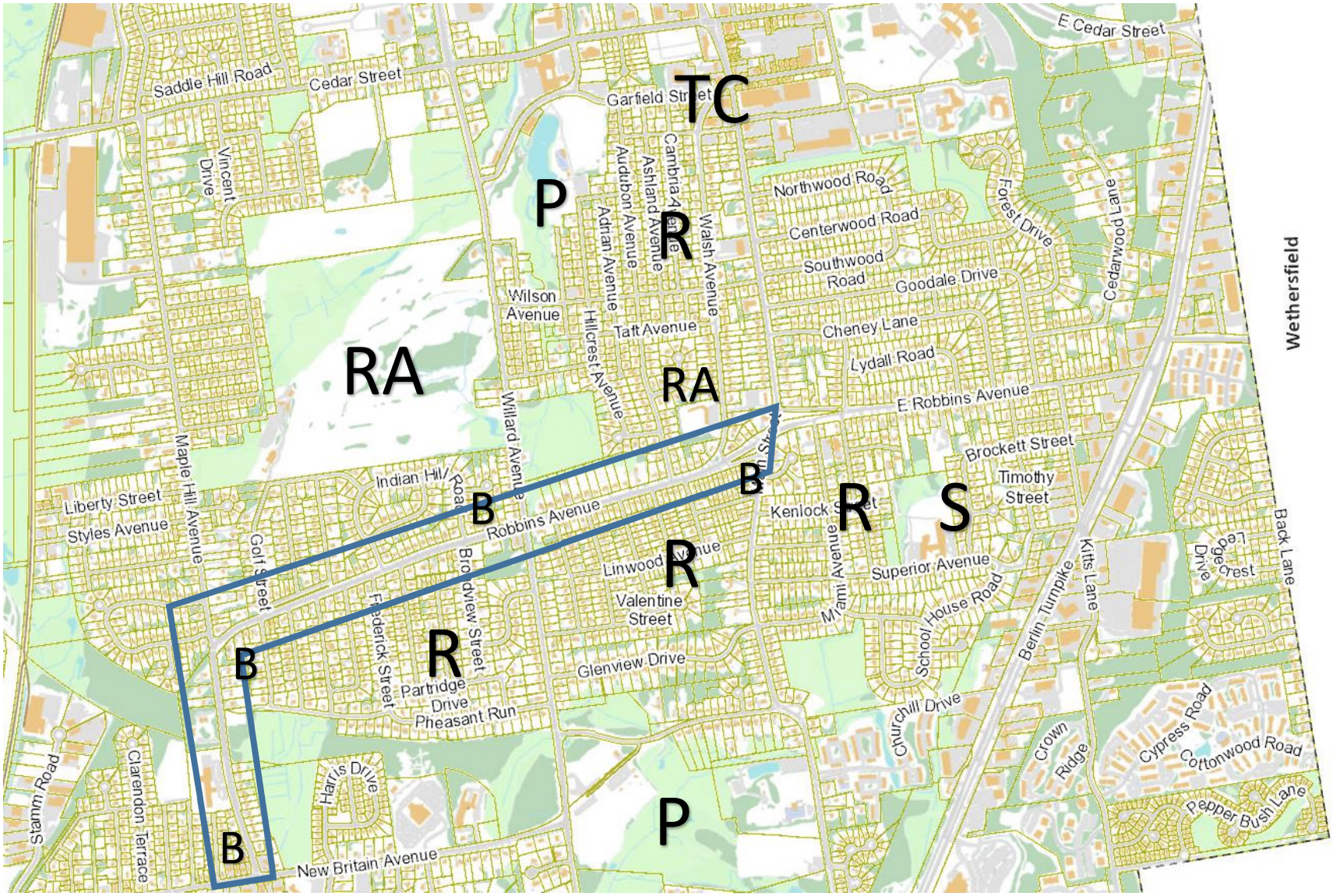
Section 3, Question 6: Based on the information provided on the map, describe where it can be reasonably expected that pedestrians and bicyclists will travel to and from and a general expectation of where these volumes will be high. For example, in an area of dense residential development relatively close to a school, high pedestrian volumes would be expected if sidewalks are present and high volumes of bicyclists could be expected between residential developments and large businesses.

Question 7: List bicycle and/or pedestrian features that were considered for inclusion in the project, regardless of whether or not they were actually included in the design. Describe why these features were, or were not, included.

Question 8: List the stakeholders the designers coordinated with regarding bicycle and pedestrian accommodations. The stakeholders listed are some suggestions. It is not necessary to contact all of these groups and there also may be other groups that could provide useful information.

Section 5: Summarize the results of this form by describing the methods in which bicycle and pedestrian travel is accommodated. For projects described in Section 1 as not being conducive to including these accommodations, describe why.

TOWN OF NEWINGTON LOCATION MAP- 2018 CRCOG LOTCIP GRANT APPLICATION



CDOT ADT data

(SECTION G1)

Phone: (860) 665-8570 Fax: (860) 665-8577
engineering@newingtonct.gov
www.newingtonct.gov

* 2012 ADT (Not counted on 2015)

* ACF 0.97 APPLIED TO ROUTE 176
FROM ROUTE 15 IN NEWINGTON TO ROUTE 175 IN NEWINGTON
(BASED ON STATION 5015 NEWINGTON 2015)

** ACF 0.99 APPLIED TO ROUTE 174
FROM RTE 71 IN NEW BRITAIN TO RTE 173(W JCT) IN NEWINGTON
(BASED ON STATION 5176 NEW BRITAIN 2013)

*** ACF 0.98 APPLIED TO ROUTE 15
FROM US 5 NB IN MERIDEN TO I-84 IN EAST HARTFORD
(BASED ON TMS STATION 8150 BERLIN 2008)

**** ACF 0.97 APPLIED TO ROUTE 173
FROM RTE 15 IN NEWINGTON TO RTE 174 (S JCT) IN NEWINGTON
(BASED ON STATION 17 NEWINGTON 2015)

INTERSTATE
IMPROVED LOCAL ROAD
STATE HIGHWAY (Numbered 1-399)
STATE HIGHWAY (Numbered 400 and up)
STATE INSTITUTION ROAD
UNIMPROVED LOCAL ROAD
STATE PARK OR FOREST ROAD

PORTABLE COUNT: adt 2500, station number 25, indicator
CONTINUOUS COUNT: adt 3000, station number 9030, indicator
TOWN LINE COUNT: indicator, number [118], station number 50, adt 2000

Location 109
2020 Estimate - 11,700
2040 Estimate - 12,900

Location 108
2020 Estimate - 9,000
2040 Estimate - 10,000

Location 18
2020 Estimate - 9,000
2040 Estimate - 10,000

PROJECT LOCATION

MACHINE LOCATIONS (83)

2018 ADT

COUNTED: XXXX

NEWINGTON

CONNECTICUT

PREPARED BY THE
CONNECTICUT DEPARTMENT OF TRANSPORTATION
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SCALE
1000 0 1000 2000 3000 FEET

METRIC SCALE
300m 0 300m 600m 900m

ACCEPTED AS OF DEC. 31, 2016

This map, developed for internal ConnDOT use, is a cartographic rendering of DOT roadway records. It should not be referenced or incorporated in any manner in any legal document or proceedings.

EASL Calculation

(SECTION G1)

Phone: (860) 665-8570 Fax: (860) 665-8577
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ESAL Calculator

This tool provides the ability to calculate the W18 (ESALs over design period) value used in the pavement design tool. Take the result in the yellow cell of the tab you are using and plug into pavement design tool.
Traffic classification may vary by site. In that case,

Disclaimer:
The CT DOT is not responsible for errors in calculation in this ESAL calculation tool.

General Inputs:

1. Two-way Average Daily Traffic for the segment being considered.
2. Lane distribution varies by number of lanes. It is a percentage of the traffic that will be carried in the design lane.
   Note: 50% directional distribution is being assumed for all cases
   Values lower than 100 may be used (use the AASHTO Design Guide, 1993 for reference if varying from the 100% value)

   Typical ranges:
   Six-lane facilities: 70-90
   Four-lane facilities: 90-100

3. Classification of traffic by vehicle class:
   The sum of these percentages must add up to 100%. These cells are in blue.

4. ESAL factors:
   Generally speaking these values should not be changed.
   They should only be changed with data obtained and calculated following the guidance provided in the AASHTO Pavement Design Guide, 1993)

5. Growth rates and factors
   The growth rate of traffic over the design period, in percentage. This value will not

GENERAL INPUTS FOR PROJECT

Once entered in the colored cells, they are called in each individual page. These values only need to be entered here.

I. General project descriptors

Project ID (name, number)	
Project Description	

II. General Parameters

		Defaults	
(Annualized) Average Daily Traffic in both directions	7500	1000	
Lane Distribution	100	100	For 2-lane roadways; 90-100 for 4-lane roadways; 70-90 for 6 or more lane roadways
Growth Rate of cars (annual, as a %)	2.0	2	%
Growth Rate of trucks (annual, as a %)	2.0	2	%
Design Life (years)	15	20	Yrs

III. Vehicle Classification, Road Functional Class

The road functional class should be used to select the correct tab at the bottom of this spreadsheet.

Vehicle Classification:

The light blue cells are used to assign percentages of the Average Daily Traffic by vehicle class (FHWA distribution).
Please check that these add to 100%. The "Sum of all types" value will be highlighted in red if the values do not add up to 100%.
If you do not have this information, you may use the default values already provided in the spreadsheet.
    If you have more information or need to change these values based on what you know, the easiest way is to look at the column to the right of the %.
    It lists how many vehicles of each type are going in each direction per day. For instance, if 30 buses are going (15 each way), you may adjust the % of buses until you see 15 in the appropriate row.
Note that the most important vehicle classes for pavement design are the trucks (higher ESAL factors) and buses.
At the end the %s have to add up to 100%, so changes in classification in one row have to be compensated for in another.

For vehicle type descriptions that are unclear, please see the link below - it has a picture by each vehicle class.
http://onlinemanuals.txdot.gov/txdotmanuals/tda/fhwa_vehicle_classification_figures.htm

ESAL factors should not be varied greatly unless you have more specific information and are following the procedures in the AASHTO 1993 Pavement Design Guide.

OUTPUTS

The key output is the accumulated ESALs over the design life, which is the bright-yellow cell in each sheet by the bottom right corner. This value is used in the pavement-design equation and associated spreadsheet.

PAVEMENT MANAGEMENT E.S.A.L. CALULATIONS

Project No. 2018 LOTCIP RFP - Newington CT

PROJECT DESCRIPTION: Maple Hill Avenue - SECTION A

VEHICLE TYPES	PERCENTAGES	CURRENT TRAFFIC	GROWTH FACTORS	DESIGN TRAFFIC	E.S.A.L. FACTOR	DESIGN E.S.A.L.
MOTORCYCLES	0.390	18	15.54	99523	0.0001	10
PASSENGER CARS	85.880	3865	15.54	21915528	0.0020	43831
FOUR TIRE	9.540	429	15.54	2434492	0.0389	94702
HEAVY VEHICLES						
BUSES	0.420	19	15.54	107179	0.4111	44061
SINGLE UNITS						
SIX TIRE TRUCKS	1.090	49	15.54	278155	0.2004	55742
THREE AXLE TRUCKS	0.750	34	15.54	191391	1.1384	217879
FOUR AXLE TRUCKS	0.150	7	15.54	38278	3.4784	133147
SINGLE-TRAILER TRUCKS						
FOUR OR LESS AXLES	0.300	14	15.54	76556	0.8005	61283
FIVE AXLES	0.640	29	15.54	163320	1.3377	218473
SIX OR MORE AXLES	0.500	23	15.54	127594	1.2303	156979
MULTI-TRAILER TRUCKS						
FIVE OR LESS AXLES	0.340	15	15.54	86764	3.0655	265975
SIX AXLES	0.000	0	15.54	0	2.1102	0
SEVEN OR MORE AXLES	0.000	0	15.54	0	2.1102	0
UNCLASSIFIED	0.000	0	15.54	0	1.4500	0
SUM OF ALL TYPES	100.000	4500				1292082 ESALs

AVERAGE DAILY TRAFFIC	9000	2020 ADT	
LANE DISTRIBUTION	100		
GROWTH RATE OF CARS	0.5	15	15.54
GROWTH RATE OF TRUCKS	0.5	15	15.54
	Annual G.Rate in %	Life (yrs)	Growth Factor

G.F. = ((1+g)^n - 1) / g

PAVEMENT MANAGEMENT E.S.A.L. CALULATIONS

Project No. 2018 LOTCIP RFP - Newington CT

PROJECT DESCRIPTION: Robbins Avenue (west) - SECTION B

VEHICLE TYPES	PERCENTAGES	CURRENT TRAFFIC	GROWTH FACTORS	DESIGN TRAFFIC	E.S.A.L. FACTOR	DESIGN E.S.A.L.
MOTORCYCLES	0.390	18	15.54	99523	0.0001	10
PASSENGER CARS	85.880	3865	15.54	21915528	0.0020	43831
FOUR TIRE	9.540	429	15.54	2434492	0.0389	94702
HEAVY VEHICLES						
BUSES	0.420	19	15.54	107179	0.4111	44061
SINGLE UNITS						
SIX TIRE TRUCKS	1.090	49	15.54	278155	0.2004	55742
THREE AXLE TRUCKS	0.750	34	15.54	191391	1.1384	217879
FOUR AXLE TRUCKS	0.150	7	15.54	38278	3.4784	133147
SINGLE-TRAILER TRUCKS						
FOUR OR LESS AXLES	0.300	14	15.54	76556	0.8005	61283
FIVE AXLES	0.640	29	15.54	163320	1.3377	218473
SIX OR MORE AXLES	0.500	23	15.54	127594	1.2303	156979
MULTI-TRAILER TRUCKS						
FIVE OR LESS AXLES	0.340	15	15.54	86764	3.0655	265975
SIX AXLES	0.000	0	15.54	0	2.1102	0
SEVEN OR MORE AXLES	0.000	0	15.54	0	2.1102	0
UNCLASSIFIED	0.000	0	15.54	0	1.4500	0
SUM OF ALL TYPES	100.000	4500				1292082 ESALs

AVERAGE DAILY TRAFFIC	9000	2020 ADT	
LANE DISTRIBUTION	100		
GROWTH RATE OF CARS	0.5	15	15.54
GROWTH RATE OF TRUCKS	0.5	15	15.54
	Annual G.Rate in %	Life (yrs)	Growth Factor

G.F. = ((1+g)^n - 1) / g

PAVEMENT MANAGEMENT E.S.A.L. CALULATIONS

Project No. 2018 LOTCIP RFP - Newington CT

PROJECT DESCRIPTION: Robbins Avenue (east) - SECTION C

VEHICLE TYPES	PERCENTAGES	CURRENT TRAFFIC	GROWTH FACTORS	DESIGN TRAFFIC	E.S.A.L. FACTOR	DESIGN E.S.A.L.
MOTORCYCLES	0.390	22	15.54	126063	0.0001	13
PASSENGER CARS	85.880	4895	15.54	27759668	0.0020	55519
FOUR TIRE	9.540	544	15.54	3083689	0.0389	119956
HEAVY VEHICLES						
BUSES	0.420	24	15.54	135760	0.4111	55811
SINGLE UNITS						
SIX TIRE TRUCKS	1.090	62	15.54	352329	0.2004	70607
THREE AXLE TRUCKS	0.750	43	15.54	242428	1.1384	275980
FOUR AXLE TRUCKS	0.150	9	15.54	48486	3.4784	168653
SINGLE-TRAILER TRUCKS						
FOUR OR LESS AXLES	0.300	17	15.54	96971	0.8005	77626
FIVE AXLES	0.640	36	15.54	206872	1.3377	276733
SIX OR MORE AXLES	0.500	29	15.54	161619	1.2303	198840
MULTI-TRAILER TRUCKS						
FIVE OR LESS AXLES	0.340	19	15.54	109901	3.0655	336901
SIX AXLES	0.000	0	15.54	0	2.1102	0
SEVEN OR MORE AXLES	0.000	0	15.54	0	2.1102	0
UNCLASSIFIED	0.000	0	15.54	0	1.4500	0
SUM OF ALL TYPES	100.000	5700				1636638 ESALs

AVERAGE DAILY TRAFFIC	11400	2020 ADT	
LANE DISTRIBUTION	100		
GROWTH RATE OF CARS	0.5	15	15.54
GROWTH RATE OF TRUCKS	0.5	15	15.54
	Annual G.Rate in %	Life (yrs)	Growth Factor

G.F. = ((1+g)^n - 1) / g

Road Classification

(SECTION G1)

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TOWN OF FARMINGTON
TOWN OF WEST HARTFORD
TOWN OF HARTFORD
TOWN OF BRISTOL
TOWN OF NEWINGTON
TOWN OF WETHERSFIELD
TOWN OF ROCKY HILL
TOWN OF BERLIN
FUNCTIONAL CLASSIFICATION LEGEND
URBANIZED AREA
Principal Arterial
- Interstate
- Other Expwy
- Other
Minor Arterial
Collector
Local
RURAL AREA
Principal Arterial
- Interstate
- Other Expwy
- Other
Minor Arterial
Major Collector
Minor Collector
Local
UPDATED: 7/12/2017
NEWINGTON
CONNECTICUT
PREPARED BY THE
CONNECTICUT DEPARTMENT OF TRANSPORTATION
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
SCALE
1000 0 1000 2000 3000 FEET
METRIC SCALE
300m 0 300m 600m 900m
ACCEPTED AS OF DEC. 31, 2016
This map, developed for internal ConnDOT use, is a cartographic rendering of DOT roadway records. It should not be referenced or incorporated in any manner in any legal document or proceedings.
N

ACCIDENT EXPERIENCE

(SECTION G2)

Phone: (860) 665-8570 Fax: (860) 665-8577
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Accident Data Summary
Maple Hill Avenue
Newington Connecticut

Date Of Crash	Time of Crash	Crash Severity Text Format	Most Severe Injury Text Format	Number Of Motor Vehicles	Number Of Witnesses	Roadway Name	Intersecting Roadway Name	Landmark Description	First Harmful Event Text Format	Manner of Crash / Collision Impact Text Format	Location of First Harmful Event Text Format	Weather Condition Text Format	Light Condition Text Format	Road Surface Condition Text Format	Contributing Circumstances, Environment Text Format	Contributing Circumstances, Road Text Format	Type of Intersection Text Format	School Bus Related Text Format	Work Zone Related Text Format
11/22/2016	17:20:00	Injury of any type (Serious, Minor, Possible)	Possible Injury (C)	2	0	Maple Hill Avenue	ROBBINS AV		Motor Vehicle in Operation	Angle	On Roadway	Clear	Dark-Lighted	Dry	None	None	T-Intersection	No	No
2/12/2016	17:50:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	ROBBINS AV-CON		Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Dark-Lighted	Dry	None	None	T-Intersection	No	No
10/10/2015	13:18:00	Property Damage Only	No Apparent Injury (O)	2	0	Maple Hill Avenue	RT 174-NEW BRITAIN AV		Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	T-Intersection	No	No
1/28/2016	16:22:00	Property Damage Only	No Apparent Injury (O)	2	0	Maple Hill Avenue	RT 174-NEW BRITAIN AV		Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	T-Intersection	No	No
3/5/2017	16:55:00	Property Damage Only	No Apparent Injury (O)	2	0	MAPLE HILL AVE	RT 174-NEW BRITAIN AV		Motor Vehicle in Operation	Angle	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
3/24/2017	15:06:00	Property Damage Only	No Apparent Injury (O)	2	1	MAPLE HILL AVE	RT 174-NEW BRITAIN AV		Motor Vehicle in Operation	Other	On Roadway	Clear	Daylight	Wet	None	None	T-Intersection	No	No
3/2/2017	2:35:00	Injury of any type (Serious, Minor, Possible)	Suspected Serious Injury (A)	1	0	MAPLE HILL AVE	RT 174-NEW BRITAIN AV		Other Post, Pole or Support	Not Applicable	On Roadway	Clear	Dark-Lighted	Dry	None	None	T-Intersection	No	No
10/10/2017	7:29:00	Property Damage Only	No Apparent Injury (O)	2	0	Maple Hill Ave	RT 174-NEW BRITAIN AV		Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	T-Intersection	No	No
11/22/2017	12:34:00	Property Damage Only	No Apparent Injury (O)	2	0	Maple Hill Ave	RT 174-NEW BRITAIN AV		Motor Vehicle in Operation	Angle	On Roadway	Rain	Daylight	Wet	Visual Obstruction(s)	Obstruction in Roadway	T-Intersection	No	No
1/17/2016	23:32:00	Property Damage Only	No Apparent Injury (O)	1	0	Maple Hill Avenue	unknown	RT 174-NEW BRITAIN AV	Other Post, Pole or Support	Not Applicable	Roadside	Clear	Dark-Lighted	Dry	None	None	Not at Intersection	No	No
10/29/2015	17:03:00	Property Damage Only	No Apparent Injury (O)	1	0	Maple Hill Avenue	unknown	RT 174-NEW BRITAIN AV	Deer	Not Applicable	On Roadway	Clear	Dark-Lighted	Dry	Animal(s) in Roadway	None	Not at Intersection	No	No
11/17/2016	15:14:00	Property Damage Only	No Apparent Injury (O)	2	0	Maple Hill Avenue	unknown	RT 174-NEW BRITAIN AV	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
5/19/2017	17:36:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	2	0	MAPLE HILL AVE	unknown	RT 174-NEW BRITAIN AV	Motor Vehicle in Operation	Angle	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
11/24/2017	10:26:00	Property Damage Only	No Apparent Injury (O)	1	0	MAPLE HILL AVE	unknown	RT 174-NEW BRITAIN AV	Deer	Not Applicable	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
11/28/2017	17:27:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	2	0	MAPLE HILL AVE	unknown	RT 174-NEW BRITAIN AV	Deer	Other	On Roadway	Clear	Dark-Lighted	Dry	None	None	Not at Intersection	No	No
3/19/2018	7:40:00	Injury of any type (Serious, Minor, Possible)	Possible Injury (C)	2	0	MAPLE HILL AV	unknown	New Britain Ave.	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
2/12/2015	16:12:00	Property Damage Only	No Apparent Injury (O)	3	0	Maple Hill Avenue		RT 174-NEW BRITAIN AV	Motor Vehicle in Operation	Sideswipe, same direction	On Roadway	Clear	Daylight	Wet	Visual Obstruction(s)	Road Surface Condition (wet, icy, snow, slush, etc.)	Not at Intersection	No	No
2/12/2015	16:12:00	Property Damage Only	No Apparent Injury (O)	3	0	MAPLE HILL AVENUE		PRIVATE RD	Motor Vehicle in Operation	Sideswipe, same direction	On Roadway	Clear	Daylight	Wet	Visual Obstruction(s)	Road Surface Condition (wet, icy, snow, slush, etc.)	Not at Intersection	No	No

Accident Data Summary
Robbins Avenue
Newington Connecticut

Date Of Crash	Time of Crash	Crash Severity Text Format	Most Severe Injury Text Format	Number Of Motor Vehicles	Number Of Witnesses	Roadway Name	Intersecting Roadway Name	Landmark Description	First Harmful Event Text Format	Manner of Crash / Collision Impact Text Format	Location of First Harmful Event Text Format	Weather Condition Text Format	Light Condition Text Format	Road Surface Condition Text Format	Contributing Circumstances, Environment Text Format	Contributing Circumstances, Road Text Format	Type of Intersection Text Format	School Bus Related Text Format	Work Zone Related Text Format
2/8/2015	17:35:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Ave		RT 176-MAIN ST	Parked Motor Vehicle	Sideswipe, same direction	On Roadway	Blowing Snow	Dark-Lighted	Snow	Weather Conditions	None	Four-Way Intersection	No	No
2/14/2015	11:08:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Ave		WALSH AV	Motor Vehicle in Operation	Sideswipe, same direction	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
4/24/2015	19:20:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	RT 173-WILLARD AV		Other Non-Collision	Front to rear	On Roadway	Clear	Daylight	Dry	None	Other	Four-Way Intersection	No	No
4/4/2015	17:56:00	Property Damage Only	No Apparent Injury (O)	2	0	ROBBINS AVENUE		RT 173-WILLARD AV	Motor Vehicle in Operation	Angle	On Roadway	Clear	Daylight	Dry	Visual Obstruction(s)	Other	Not at Intersection	No	No
6/30/2015	23:09:00	Property Damage Only	No Apparent Injury (O)	2	0	EAST ROBBINS AVENUE	RT 176-MAIN ST		Motor Vehicle in Operation	Angle	On Roadway	Clear	Dark-Lighted	Dry	None	None	Four-Way Intersection	No	No
4/25/2015	0:22:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue		PARKER ST	Parked Motor Vehicle	Not Applicable	On Roadway	Clear	Dark-Lighted	Dry	None	None	Not at Intersection	No	No
10/22/2015	15:15:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue		STUART ST	Motor Vehicle in Operation	Sideswipe, same direction	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
9/16/2015	14:11:00	Property Damage Only	No Apparent Injury (O)	2	0	ROBBINS AVENUE	RT 173-WILLARD AV		Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	Four-Way Intersection	No	No
12/16/2015	18:13:00	Injury of any type (Serious, Minor, Possible)	Possible Injury (C)	2	0	East Robbins Avenue	RT 176-MAIN ST		Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Dark-Lighted	Dry	None	None	Four-Way Intersection	No	No
1/19/2016	15:55:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	3	0	Robbins Avenue		CLIFFORD ST	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	Glare	Backup Due to Regular Congestion	Four-Way Intersection	No	No
3/14/2016	13:22:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue		RT 173-WILLARD AV	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Wet	None	None	Not at Intersection	No	No
2/16/2016	13:45:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue		MAPLE HILL AV	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	Weather Conditions	None	Not at Intersection	No	No
3/10/2015	17:35:00	Property Damage Only	No Apparent Injury (O)	3	0	Robbins Avenue		WALSH AV	Motor Vehicle in Operation	Front to rear	On Roadway	Cloudy	Daylight	Dry	None	None	Not at Intersection	No	No
4/21/2016	14:34:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	MAPLE HILL AV		Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	T-Intersection	No	No
4/24/2016	14:20:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue		AUDUBON AV	Motor Vehicle in Operation	Sideswipe, opposite direction	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
5/23/2016	10:14:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Sideswipe, same direction	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
5/23/2016	17:40:00	Property Damage Only	No Apparent Injury (O)	2	2	Robbins Ave	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Sideswipe, same direction	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
6/2/2016	21:12:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	3	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Dark-Lighted	Dry	None	Backup Due to Regular Congestion	Not at Intersection	No	No
7/4/2016	15:38:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	RT 173-WILLARD AV		Motor Vehicle in Operation	Angle	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
8/19/2016	19:04:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	2	0	Robbins Avenue	GOLF ST		Motor Vehicle in Operation	Front to rear	On Roadway	Cloudy	Daylight	Wet	Weather Conditions	None	Not at Intersection	No	No
9/2/2016	7:47:00	Property Damage Only	No Apparent Injury (O)	1	0	Robbins Avenue	RT 173-WILLARD AV		Pedalcycle/Pedalcyclist	Not Applicable	On Roadway	Clear	Daylight	Dry	None	None	Four-Way Intersection	No	No
9/12/2016	14:50:00	Injury of any type (Serious, Minor, Possible)	Possible Injury (C)	2	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
11/17/2015	13:39:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	CLIFFORD ST		Motor Vehicle in Operation	Angle	On Roadway	Clear	Daylight	Dry	None	None	T-Intersection	No	No
12/22/2015	14:10:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	2	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Front to rear	On Roadway	Rain	Other	Wet	Weather Conditions	Road Surface Condition (wet, icy, snow, slush, etc.)	Not at Intersection	No	No
12/24/2015	17:52:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	unknown	GOLF ST	Motor Vehicle in Operation	Sideswipe, opposite direction	On Roadway	Clear	Dark-Lighted	Wet	None	None	Not at Intersection	No	No
1/18/2016	16:00:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Angle	On Roadway	Clear	Daylight	Dry	None	Backup Due to Regular Congestion	Not at Intersection	No	No
1/28/2016	17:51:00	Injury of any type (Serious, Minor, Possible)	Possible Injury (C)	2	0	Robbins Avenue	FLORENCE ST		Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Dark-Lighted	Dry	None	Backup Due to Regular Congestion	Four-Way Intersection	No	No
10/1/2016	16:56:00	Injury of any type (Serious, Minor, Possible)	Possible Injury (C)	2	0	Robbins Avenue	RT 176-MAIN ST		Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	Four-Way Intersection	No	No
9/21/2015	14:43:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	Animal(s) in Roadway	None	Not at Intersection	No	No
12/17/2015	16:51:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Angle	On Roadway	Clear	Dark-Lighted	Dry	None	None	Not at Intersection	No	No
10/9/2016	10:30:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	Backup Due to Regular Congestion	Not at Intersection	No	No
12/30/2016	14:56:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Ave	unknown	AUDUBON AV	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
1/10/2017	16:30:00	Injury of any type (Serious, Minor, Possible)	Possible Injury (C)	2	0	Robbins Avenue	MAPLE HILL AV		Motor Vehicle in Operation	Front to rear	On Roadway	Cloudy	Dusk	Wet	None	None	Not at Intersection	No	No
1/31/2017	14:07:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Front to rear	On Roadway	Snow	Daylight	Snow	Visual Obstruction(s)	Road Surface Condition (wet, icy, snow, slush, etc.)	Not at Intersection	No	No
2/3/2017	13:56:00	Injury of any type (Serious, Minor, Possible)	Possible Injury (C)	2	0	ROBBINS AVE	RT 173-WILLARD AV		Motor Vehicle in Operation	Angle	On Roadway	Clear	Daylight	Dry	None	None	Four-Way Intersection	No	No
1/31/2017	20:20:00	Property Damage Only	No Apparent Injury (O)	2	1	ROBBINS AVE	RT 176-MAIN ST		Motor Vehicle in Operation	Angle	On Roadway	Snow	Dark-Lighted	Snow	None	None	Four-Way Intersection	No	No
2/4/2017	13:25:00	Property Damage Only	No Apparent Injury (O)	2	0	ROBBINS AVE	unknown	MAPLE HILL AV	Motor Vehicle in Operation	Sideswipe, same direction	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
3/27/2017	14:43:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	2	0	ROBBINS AVE	unknown	RT 176-MAIN ST	Motor Vehicle in Operation	Front to rear	On Roadway	Cloudy	Daylight	Dry	None	None	Four-Way Intersection	No	No
4/20/2017	17:47:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	Four-Way Intersection	No	No
6/9/2017	1:38:00	Property Damage Only	No Apparent Injury (O)	2	0	ROBBINS AVE	RT 173-WILLARD AV		Motor Vehicle in Operation	Angle	On Roadway	Clear	Dark-Lighted	Dry	None	None	Four-Way Intersection	No	No
3/27/2017	14:43:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	2	0	ROBBINS AVE	unknown	RT 176-MAIN ST	Motor Vehicle in Operation	Front to rear	On Roadway	Cloudy	Daylight	Dry	None	None	Four-Way Intersection	No	No
4/20/2017	17:47:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	Four-Way Intersection	No	No
6/9/2017	1:38:00	Property Damage Only	No Apparent Injury (O)	2	0	ROBBINS AVE	RT 173-WILLARD AV		Motor Vehicle in Operation	Angle	On Roadway	Clear	Dark-Lighted	Dry	None	None	Four-Way Intersection	No	No
7/23/2017	16:11:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	2	0	ROBBINS AVE	INDIAN HILL RD		Motor Vehicle in Operation	Sideswipe, same direction	On Roadway	Clear	Daylight	Dry	None	None	Four-Way Intersection	No	No
7/25/2017	7:31:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	INDIAN HILL RD		Motor Vehicle in Operation	Angle	On Roadway	Cloudy	Daylight	Dry	None	None	T-Intersection	No	No
7/29/2017	9:48:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	1	1	Robbins Avenue	JOHNSON ST		Overturn/Rollover	Not Applicable	On Roadway	Clear	Daylight	Dry	None	None	Not at Intersection	No	No
8/14/2017	10:12:00	Property Damage Only	No Apparent Injury (O)	2	0	Robbins Avenue	unknown	RT 173-WILLARD AV	Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	Four-Way Intersection	No	No
9/10/2017	12:34:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	2	0	ROBBINS AVE	RT 173-WILLARD AV		Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	Four-Way Intersection	No	No
11/13/2017	17:14:00	Injury of any type (Serious, Minor, Possible)	Suspected Minor Injury (B)	2	1	Robbins Avenue	INDIAN HILL RD		Motor Vehicle in Operation	Front to front	On Roadway	Cloudy	Dark-Lighted	Dry	None	None	Not at Intersection	No	No
1/19/2018	11:32:00	Property Damage Only	No Apparent Injury (O)	2	0	ROBBINS AV	173-N		Motor Vehicle in Operation	Angle	On Roadway	Clear	Daylight	Wet	None	None	Four-Way Intersection	No	No
1/20/2018	10:48:00	Property Damage Only	No Apparent Injury (O)	2	0	ROBBINS AV	MAPLE HILL AV		Motor Vehicle in Operation	Angle	On Roadway	Clear	Daylight	Dry	None	None	T-Intersection	No	No
3/28/2018	16:02:00	Property Damage Only	No Apparent Injury (O)	2	0	ROBBINS AV	Valentine Street		Motor Vehicle in Operation	Front to rear	On Roadway	Clear	Daylight	Dry	None	None	T-Intersection	No	No

FIGURE

Posted Speed Limit in Project Area

(SECTION G4)

Phone: (860) 665-8570 Fax: (860) 665-8577
engineering@newingtonct.gov
www.newingtonct.gov

Speed Limits

0 1,000.00 2,000.0

Feet

Map Legend

Parcels

N

This map is for planning purposes only. Verification of its accuracy, currency and completeness is the responsibility of the reader's own independent research. Neither the Town of Newington nor any of its consultants shall be held liable for any loss, damages or claims made solely as a result of anyone referring to this map.

Printed 5/17/2018 10:31:48

COST ESTIMATE

(SECTION J)

Phone: (860) 665-8570 Fax: (860) 665-8577
engineering@newingtonct.gov
www.newingtonct.gov

Construction Cost Estimate | LOTCIP Application

Project Name, Town Name

Major and Minor Contract Items

Item No.	Item	Unit	Quantity	Unit $	Total Cost
	Catch Basin Top (Bike Friendly Grate)	EA	82	$ 600.00	$ 49,200.00
	Handicap (ADA) Ramps	SF	1950	$ 20.00	$ 39,000.00
	Concrete Sidewalk	SF	1000	$ 15.00	$ 15,000.00
	Milling of Bit. Concrete 0-4"	SY	41353	$ 5.00	$ 206,765.00
	HMA (2.0 inch) >1,000 tons	TON	4756	$ 100.00	$ 475,600.00
	MUTCD Signs R3-17 (Bike Lane)	EA	10	$ 100.00	$ 1,000.00
	Reflective Sign Posts	EA	10	$ 100.00	$ 1,000.00
	4" Epoxy Resin Pavement Striping	LF	46519	$ 1.00	$ 46,519.00
	Epoxy Resin Crosswalk	SF	320	$ 4.00	$ 1,280.00
	Epoxy Resin Pavement Symbols (Bike Lane)	SF	1513	$ 5.00	$ 7,565.00
	Traffic Loops	EA	3	$ 30,000.00	$ 90,000.00
	Solar Powered Pedestrian Crossing Signal	EA	2	$ 4,000.00	$ 8,000.00
	Install Solar Powered Crossing Signal	EA	2	$ 1,000.00	$ 2,000.00
	Pedestrian Protected Crossing	LS	1	$ 10,000.00	$ 10,000.00
	Concrete Curb	LF	550	$ 30.00	$ 16,500.00
	Furnish & place topsoil	SY	350	$ 7.00	$ 2,450.00
	Turf establishment	SY	350	$ 2.00	$ 700.00
				$ 1.00	$ -
				$ 1.00	$ -
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A	**Major Items Subtotal**				**$ 972,579**
B	**Minor Items Subtotal (0% at Final Design)**	20	% of Line "A"		**$ 194,516**
C	**Major and Minor Contract Items Subtotal (A + B)**				**$ 1,167,095**

Other Item Allowances

	Clearing and Grubbing (suggested 0.5% - 2%)	1	% of Line "C"	$ 11,671
	M & P of Traffic (suggested 2% - 5%)	4	% of Line "C"	$ 46,684
	Mobilization (suggested 4% - 10%)	7	% of Line "C"	$ 81,697
	Construction Staking (suggested 1% - 2%)	1	% of Line "C"	$ 11,671
D	**Other Items Subtotal**			**$ 151,723**
E	**CONTRACT SUBTOTAL (C + D)**			**$ 1,318,818**

Inflation Costs (Simple Method)

	Date of Estimate (provide date of estimate)	Apr-18		
	Anticipated Bid Date (provide anticipated bid date)	Jan-20		
	Annual Inflation (4% annually, 0% at Final Design)	4%		
F	**Inflation Subtotal**	7.2%	of Line "E"	**$ 94,955**
G	**TOTAL CONTRACT COST ESTIMATE (E + F)** (Rounded to nearest $1000)			**$ 1,414,000**

LOTCIP Project Costs Summary		
Contract Cost Estimate (Line "G")		$ 1,414,000
Contingencies (10% for all LOTCIP projects)	10%	$ 141,400
Incidentals (10% for all LOTCIP projects)	10%	$ 141,400
ROW	LS	N/A
Utilities	LS	N/A
TOTAL PROJECT COST		**$ 1,696,800**

Individual Construction Items & Suggested Costs

**** See CTDOT website for additional cost information***

	Unit	Suggested 2018 LOTCIP Solicitation Cost/Unit
1. PAVEMENT		
HMA (0.25 inch to 1.0 inch) <100 tons	ton	$140.00
HMA (0.25 inch to 1.0 inch) 100 - 1,000 tons	ton	$115.00
HMA (0.25 inch to 1.0 inch) >1,000 tons	ton	$100.00
Subbase	C.Y.	$40.00
Processed aggregate base	C.Y.	$45.00
Rolled gravel base	C.Y.	$40.00
Formation of subgrade	S.Y.	$3.00
Cut pavement - bituminous	L.F.	$3.00
Cut pavement - concrete	L.F.	$6.00
Material for tack coat	GAL.	$6.00
Milling of Bit. Concrete 0-4"	S.Y.	$5.00
Reclamation (10" Maximum Depth)	S.Y.	$10.00
Pavement Recycling (4" Maximum Depth)	S.Y.	$7.00
Removal of concrete pavement	S.Y.	$13.00
2. EARTHWORK		
Earth excavation - less than 500 cy	C.Y.	$48.00
Earth excavation - 500 to 2,500cy	C.Y.	$35.00
Earth excavation - 2,500 to 5,000cy	C.Y.	$25.00
Earth excavation - more than 5,000 cy	C.Y.	$13.00
Rock excavation - less than 500 cy	C.Y.	$160.00
Rock excavation - 500 to 2,500cy	C.Y.	$120.00
Rock excavation - 2,500 to 5,000cy	C.Y.	$80.00
Rock excavation - more than 5,000 cy	C.Y.	$50.00
Borrow - less than 500 cy	C.Y.	$25.00
Borrow - 500 to 5,000cy	C.Y.	$19.00
Borrow - more than 5,000 cy	C.Y.	$15.00
3. DRAINAGE		
Catch basin	EA.	$3,000.00
Double grate catch basin	EA.	$4,300.00
Complex basin (CM-2)	EA.	$5,500.00
Catch basin top	EA.	$600.00
Reset Catch basin	EA.	$1,000.00
Manhole (new)	EA.	$3,000.00
Manhole (reset)	EA.	$1,000.00
Abandon Manhole or Catch basin	EA.	$1,500.00
Class "A" concrete	C.Y.	$700.00
Bedding material (< 100 cy)	C.Y.	$80.00
Bedding material (100-1,000 cy)	C.Y.	$50.00
Bedding material (>1,000 cy)	C.Y.	$40.00
Riprap	C.Y.	$75.00
Trench excavation (0'-4' deep)	C.Y.	$15.00
Trench excavation (0'-10' deep)	C.Y.	$18.00
Trench excavation (0'-15' deep)	C.Y.	$22.00
Trench excavation (0'-20' deep)	C.Y.	$35.00
Rock in trench excavation	C.Y.	$100.00
Paved ditch	S.Y.	$60.00

Sedimentation control system	L.F.	$6.00
Sediment control system at catch basin	EA.	$150.00
Sedimentation Chamber (10'x4')*	EA.	$35,000.00
Sedimentation Chamber (13'x7')*	EA.	$40,000.00
Sedimentation Chamber (18'x12')*	EA.	$50,000.00
12" R.C. pipe	L.F.	$50.00
15" R.C. pipe	L.F.	$60.00
18" R.C. pipe	L.F.	$65.00
24" R.C. pipe	L.F.	$85.00
30" R.C. pipe	L.F.	$90.00
36" R.C. pipe	L.F.	$120.00
42" R.C. pipe	L.F.	$150.00
48" R.C. pipe	L.F.	$180.00
24" R.C. culvert end	EA.	$1,100.00
30" R.C. culvert end	EA.	$1,400.00
36" R.C. culvert end	EA.	$1,600.00

4. GUIDE RAIL

Metal beam rail (type R-B 350)	L.F.	$25.00
Metal beam rail (type R-B 350) - End Anchorage	EA.	$1,300.00
Metal beam rail (type R-B 350) - Bridge Attachment (trailing end $700	EA.	$1,300.00
Three-cable guide railing (I-beam post)	L.F.	$15.00
Merritt Parkway Guiderail (local roads only)	L.F.	$60.00
Anchorages	EA.	$1,000.00
Precast conc. median or Jersey barrier (21" X 45")	L.F.	$100.00
Precast conc. median or Jersey barrier (30" X 45")	L.F.	$130.00
Temporary precast conc. barrier (24" X 32")	L.F.	$40.00

5. OTHER ITEMS

Bituminous concrete curbing (if new, consider adding pavement)	L.F.	$5.00
Concrete curbing	L.F.	$30.00
Granite curbing	L.F.	$45.00
Reset granite curbing	L.F.	$30.00
Cut concrete sidewalk	L.F.	$5.00
Concrete sidewalk	S.F.	$15.00
Concrete sidewalk(stamped/dyed)	S.F.	$20.00
Brick sidewalk	S.F.	$25.00
Concrete paving brick	S.F.	$22.00
Bituminous concrete sidewalk	S.Y.	$38.00
Bituminous concrete driveway	S.Y.	$40.00
Sodding	S.Y.	$12.00
Turf establishment	S.Y.	$2.00
Furnish & place topsoil	S.Y.	$7.00
Traffic signals - new ($225,000 if part of a city system)	EA.	$180,000.00
Traffic signals- modification ($80,000 if major modification)	EA.	$30,000.00
Temporary Signalization ($35,000 if not at existing signal)	EA.	$3,500.00
Street lighting	L.F.	$50.00

* - Required per Stormwater Phase II General Permit (see DEP/DOT guidelines)

Selected Composite Items & Suggested Costs

1. PAVEMENT

(unit prices include HMA, tack coat, and formation of subgrade; excavation not included and must be calculated separately)

Arterial composite pavement cost: 4" HMA 0.5 inch on 6" HMA 1.0 inch on 14" Subbase in earth (in 20" rock)

Collector composite pavement cost: 3" HMA 0.5 inch on 6" HMA 1.0 inch on 10" Subbase in earth (in 20" rock)

unit	<4,000 SF	4,000 - 40,000 SF	>40,000 SF
S.F.	$10.60 ($13.20)	$9.30 ($11.50)	$8.70 ($10.40)
S.F.	$9.40 ($11.20)	$8.20 ($9.80)	$7.70 ($8.90)

Overlay:
2" HMA 0.5 inch with tack coat (min. overlay)

unit	<8,000 SF	8,000 - 80,000 SF	>80,000 SF
S.F.	$1.80	$1.50	$1.30

Overlay:
3" HMA 0.5 inch with tack coat (structural)

unit	<5,000 SF	5,000 - 50,000 SF	>50,000 SF
S.F.	$2.50	$2.30	$2.00

Overlay:
4" HMA 0.5 inch with tack coat (structural expressway)

unit	<4,000 SF	4,000 - 40,000 SF	>40,000 SF
S.F.	$3.40	$2.90	$2.50

2. STRUCTURES

unit	unit price
S.F.	$400.00
S.F.	$125.00

Bridges - New (per sq. ft. of deck area)

Bridges - Deck rehabilitation (per sq. ft. of deck area)

Bridges - Deck replacement (per sq. ft. of deck area)	S.F.	$145.00
Bridges - New superstructure-including deck (per sq. ft. of deck area	S.F.	$250.00
Bridges - Removal of superstructure over roadway	S.F.	$55.00
Bridges - Removal of superstructure over water or rail	S.F.	$75.00
Concrete Modular Walls / Mechanically Stabilized Earth Walls (sf estimate of exposed face)	S.F.	$75.00
Cast-in-place concrete wall (sf estimate of exposed face)	S.F.	$110.00
Precast box culverts (Estimate per sq. ft of top face; Length X Width)	S.F.	$240.00

3. DRAINAGE

(Unit prices include surface runoff and CB's; doesn't include cross culverts or sedimentation chambers)

	unit	**unit price**
Compact Urban Area - Full Drainage Improvement (total cost / area of pavement)	S.F.	$7.00
Suburban Area - Full Drainage Improvement (total cost / area of pavement)	S.F.	$5.00
Suburban Area - Upgraded Drainage & Rural Drainage (total cost / area of pavement)	S.F.	$3.00

BRIDGE 093005

INSPECTION REPORT

(SECTION M)

Phone: (860) 665-8570 Fax: (860) 665-8577
engineering@newingtonct.gov
www.newingtonct.gov

Inspection Type: Screening

BRIDGE NO. 093005

52140 - NEWINGTON

Robbins Avenue

over

Schoolhouse Brook

Screening Inspection

10/17/2016

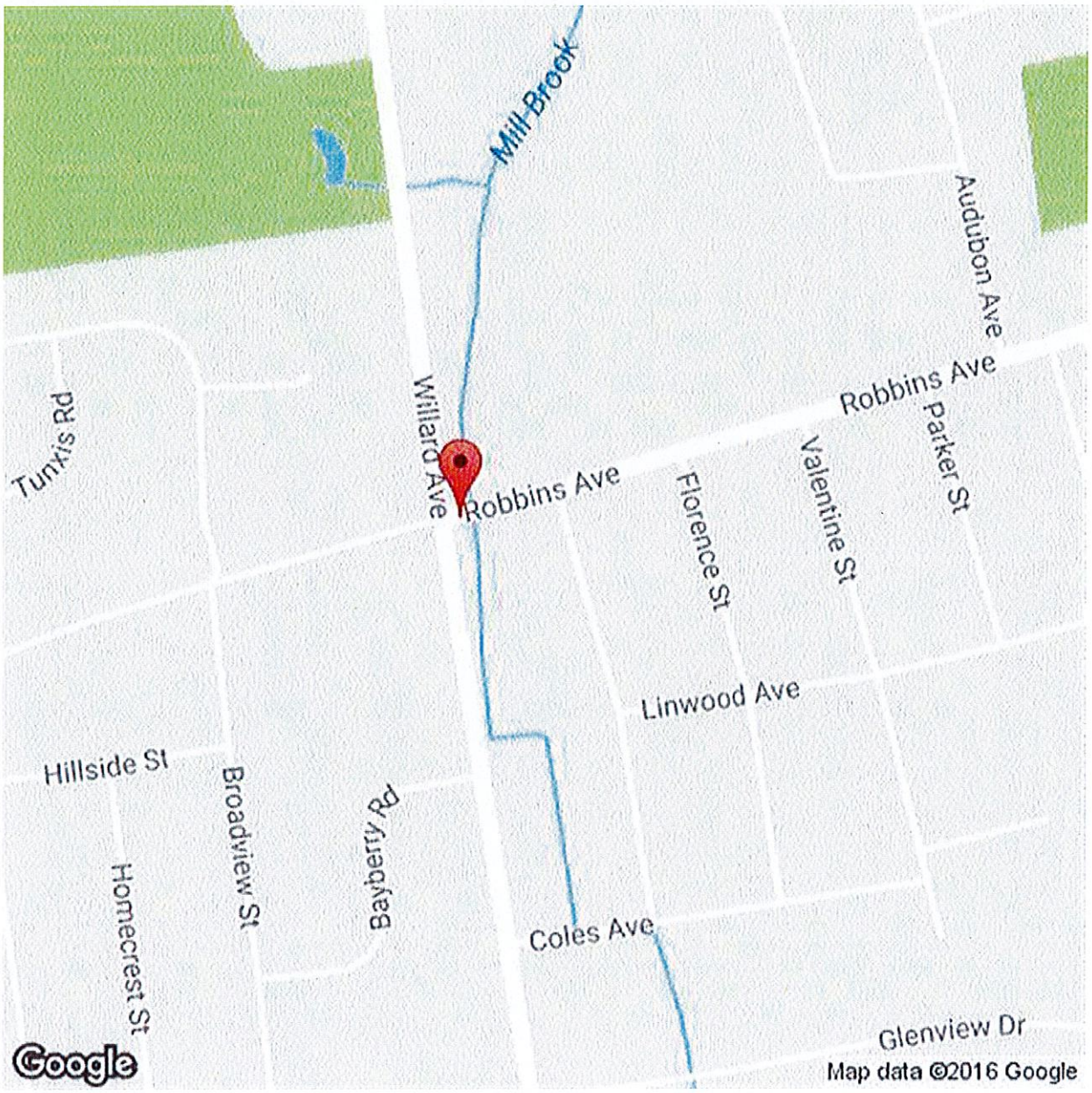
Inspected by: Prime

TABLE OF CONTENTS

Form: Location
Inspection type: Screening
Inspection Date: 10/17/2016
Inspected by: Prime

Bridge No: 093005

Town: NEWINGTON
Carried: Robbins Avenue
Crossed: Schoolhouse Brook
Inventory Route: 8



Location Map # 1

Bridge No. 093005
Robbins Ave. over Schoolhouse Brook
Newington, CT

SCREENING - INVENTORY DATA

Bridge: 093005 **Town:** 52140 - NEWINGTON **Carried:** Robbins Avenue **Crossed:** Schoolhouse Brook

IDENTIFICATION

(4) Town	52140 - NEWINGTON
(6A) Feature Intersected	Schoolhouse Brook
(7) Facility Carried	Robbins Avenue
(9) Location	E of Jct with Rt 173

	Deg.	Min.	Sec.
(16) Latitude	41	41	1.64
(17) Longitude	-72	43	50.1

(98) Border Bridge	
(A) State Code	
(B) Percent Responsibility	
(C) Border Town Name	
(99) Border Bridge No.	

STRUCTURE TYPE AND MATERIAL

(43) Structure Type, Main	
A) Material	1 - Concrete
B) Design Type	19 - Culvert (includes frame culverts)
(44) Structure Type, Approach	
A) Material	
B) Design Type	
(45) Number of Spans, Main Unit	1
(46) Number of Approach Spans	
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface Protective Systems	
A) Type of Wearing Surface	6 - Bituminous

AGE AND SERVICE

(27) Year Built		1935	(29) Average Daily Traffic	2000
(106) Year Reconstructed			Is Above Half ADT?	
(28) Number Of Lanes	(A) On	02	(30) Year Of ADT	1991

GEOMETRIC DATA

(48) Length of Maximum Span	8 ft	0 in
(49) Structure Length	8 ft	0 in
(51) Bridge Roadway Width		
Curb to Curb	40 ft	0 in
(52) Deck Width, Out to Out* **	74 ft	0 in
Deck Area* **	592 sq ft	
(34) Skew Angle	0	
(35) Structure Flared	0 - No flare	

Creation Date: 10/17/2016 **Created By:** Klucznik, Jack **Approved By:**

* Record measurements to the nearest whole number.

** Under the screening phase of the program, Bridge Width (Out-Out) and Deck Area are not applicable to culverts that are significantly wider than the roadway (i.e. inlet-to-Outlet measurement is significantly greater than the curb-to-curb measurement.)

SCREENING REPORT

Bridge: 093005 **Town:** 52140 - NEWINGTON **Carried:** Robbins Avenue **Crossed:** Schoolhouse Brook

Inspection Date	05/09/2016	**Inspection Team**	Prime

OVERLAY

Depression/Settlement	Sat/Better	There is no settlement noted.
Sidewalk	N/A	
Bridge Rail/Fence	Sat/Better	There is metal beam rail mounted on steel posts attached to the parapets. The southeast approach does not have metal beam rail.

STRUCTURE

Deck	N/A	
Superstructure	N/A	
Substructure	N/A	

CULVERT

Cell	Sat/Better	There are random area of efflorescence staining.
Headwall/Wingwalls	Sat/Better	There are no deficiencies noted.

WATERWAY

Debris	Fair/Worse	There is heavy vegetation along the east bank. There is heavy silt (> 1' deep) in the channel making it difficult to walk.
Stream Alignment	Sat/Better	There are no deficiencies with the alignment noted.
Embankment/Erosion	Sat/Better	There is minor erosion of the southwest bank.

COMMENTS

To be followed by full inspection Yes

Town Bridges (Span of 20 FT & under)– Inventory and Screening Form

Town: Newington Bridge No.: 093005 Date of Inspection: 5/9/16

Consultant Co Name: PRIME AE Group Inc. Navnit Nakrani Digitally signed by Navnit Nakrani Date: 2017.07.11 16:55:11 -04'00'

Inspector: DAL DAVID LOCKE

Inspector: JK

Reviewed by: Navnit R. Nakrani Date: 07/11/2017

Lat 41.683789
Lon -72.730583

Inventory Data

Road: Robbins Ave. Crossing: Schoolhouse Brook

Location to nearest intersection: 0.0 Miles ___ (N/ S/ E/ W) from Junction with Willard Ave

Is this a border bridge? Yes/(No) Border Town (and state): _____

Functional Classification of Roadway: Rural principal arterial (interstate)/ Rural principal arterial (other)/ Rural minor arterial/ Rural major collector/ Rural minor collector/ Rural local/ Urban principal arterial (interstate)/ Urban principal arterial (other freeway)/ Urban other principal arterial/ Urban minor arterial/ Urban collector/ Urban local

ADT: _____ Date of ADT: _____

Source: CDOT Town ADT map, Town source, Project source, other _____
(Do not use the ADT from previous 1991 report and do not estimate ADT – if no source, leave blank)

Main Span:
-Bridge Material: (Concrete)/ Continuous Conc/ Pre-stressed Conc/ Continuous Pre-Stressed Conc/ Steel/ Continuous Steel/ Timber/ Masonry/ Aluminum/ Other _____

-Type of Bridge: Slab/ Multi-Beam/ Girder & Floorbeam/ Tee Beam/ Multiple Box Beam/ Spread box Beam/ Frame/ Deck Arch/ Pipe culvert or (Box Culvert)/ Channel Beam/ Other _____

Approach Span:
-Bridge Material: Concrete/ Continuous Conc/ Pre-stressed Conc/ Continuous Pre-Stressed Conc/ Steel/ Continuous Steel/ Timber/ Masonry/ Aluminum/ Other _____

-Type of Bridge: Slab/ Multi-Beam/ Girder & Floorbeam/ Tee Beam/ Multiple Box Beam/ Spread box Beam/ Frame/ Deck Arch/ Pipe culvert or Box Culvert/ Channel Beam/ Other _____

NBIS Bridge Length: 8' Structure Length: 8'

Number of Spans: 1 Span Lengths: Span1- 8' Span2-____ Span3-____ Span4-____

Bridge Width (out-to-out)**: 74± (curb-to-curb): 40'

Deck Area**: _____ Number of Lanes on Structure: 3

** Under the screening phase of the program, Bridge Width (out to out) and Deck Area are not applicable to culverts that are significantly wider than the roadway (i.e. inlet-to-outlet measurement is significantly greater than the roadway curb-to-curb measurement)

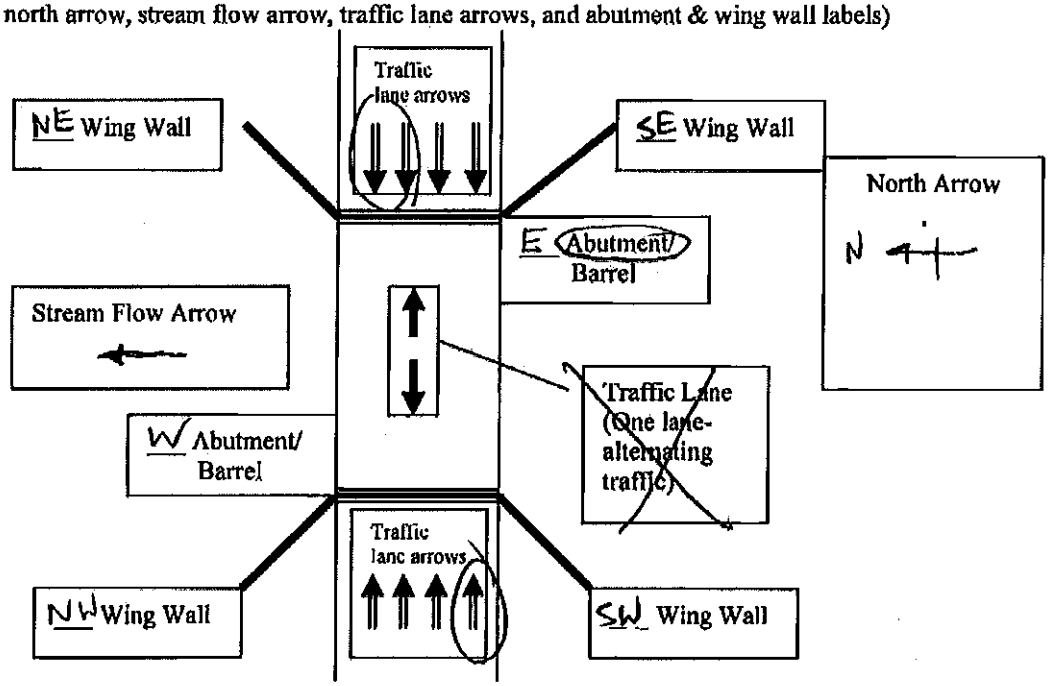
1

Town Bridges (Span of 20 FT & under)– Inventory and Screening Form

Town: Newington Bridge No.: 093005 Date of Inspection: 5/9/16

Basic Orientation Sketch:

(Add north arrow, stream flow arrow, traffic lane arrows, and abutment & wing wall labels)



Screening Data (Limited Inspection)

Was structure inspected under the previous CDOT project (#170-936)? . . . . . Yes ✓ No ___
Is structure new or significantly modified since last CDOT inspection? . . . . . Yes ___ No ✓
Has the structure been inspected by others since the last CDOT inspection? . . . . . Yes ___ No ✓
Date of last inspection by others: _____

Inspection Access

- Is there ready access to both sides of bridge (up & downstream)? . . . . . Yes ✓ No ___
- Can stream be walked with waders? . . . . . ghost waders . . . Yes ✓ No ___
- Items for full inspection - Boat or raft/ Divers/ Ladder/ Tidal/ Low FB/ Confined space/ Other _____

Topside (Bridge and Culvert)

- Condition of Topside (overlay, top of deck). . . . . Sat. Or Better ✓ Fair or worse ___
- Safety concerns of urgent nature on topside? (include parapets, railing, etc) No ✓ . . . Yes ___

Underside (Bridge)

- Condition of underside of deck . . . . . Sat. Or Better ___ Fair or worse ___
- Condition of superstructure. . . . . Sat. Or Better ___ Fair or worse ___
- Condition of abutments . . . . . Sat. Or Better ___ Fair or worse ___
- Condition of wingwalls . . . . . Sat. Or Better ___ Fair or worse ___
- Safety concerns of urgent nature on underside? . . . . . No ___ . . . Yes ___

Underside (Culvert)

- Condition of roof . . . . . Sat. Or Better ✓ Fair or worse ___
- Condition of sidewalls. . . . . Sat. Or Better ✓ Fair or worse ___
- Condition of invert . . . Heavy silt/debris . . . . . Sat. Or Better ✓ Fair or worse ___
- Condition of wingwalls . . . . . Sat. Or Better ✓ Fair or worse ___
- Safety concerns of urgent nature on underside? . . . . . No ✓ . . . Yes ___

Form: Asset Photos
Inspection type: Screening
Inspection Date: 10/17/2016
Inspected by: Prime

Bridge No: 093005

Town: NEWINGTON
Carried: Robbins Avenue
Crossed: Schoolhouse Brook
Inventory Route: 8

Photo Number: 1 Photo Taken: 05/09/2016

South Elevation of the bridge (inlet).

Photo Number: 2 Photo Taken: 05/09/2016

North elevation of the bridge (outlet).

Form: Asset Photos
Inspection type: Screening
Inspection Date: 10/17/2016
Inspected by: Prime

Bridge No: 093005

Town: NEWINGTON
Carried: Robbins Avenue
Crossed: Schoolhouse Brook
Inventory Route: 8

Photo Number: 3 Photo Taken: 05/09/2016

Typical condition of the bridge overlay, looking north.

Photo Number: 4 Photo Taken: 05/09/2016

Typical condition of the culvert interior looking downstream.