



# Town of Brunswick, Maine

INCORPORATED 1739

## OFFICE OF THE TOWN MANAGER

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June 20, 2024

Ms. Debbie-Anne Reese  
Acting Secretary Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

Re: FERC P-2248 Brunswick Hydroelectric Project

Dear Acting Secretary Reese,

On behalf of the Town of Brunswick, I respectfully submit these comments on the Notices of Intent (NOI) and Pre-application Documents (PAD) for the Brunswick Project (P-2248) filed for Great Lakes Hydro America, LLC by Brookfield Renewable of Brookfield White Pine Hydro LLC (Applicant) dated February 21, 2024.

The Town of Brunswick is bounded by the Androscoggin River on its entire northern border, and yet has limited access to the river upstream from the Brunswick dam for the enjoyment and recreation of its residents. For many years, acquiring property and improving access has been part of every Comprehensive Plan, and a continual priority of our Town. The 2002 Brunswick Parks, Recreation, and Open Space Plan identified a number of action items to improve public access and recreational facilities on the river upstream of the Brunswick dam. The Open Space Plan can be found on the Town's website, and the Action Plan starts on page 36 of the report: <https://me-brunswick.civicplus.com/DocumentCenter/View/769/2002-Parks-Recreation-and-Open-Space-Plan-PDF>

Currently, along with several entities which own land along the river in the Project area, such as Brunswick Topsham Land Trust (BTLT), Brunswick Topsham Water District (BTWD), the Maine Department of Transportation (MaineDOT), and the Town of Topsham, Brunswick would like to develop several parcels as recreational facilities, allowing the public to boat, fish, hike and enjoy water views on the Androscoggin. What has been lacking is funding to make these plans a reality. Town requests that as part of the Brunswick dam re-licensing, FERC require that the Applicant contribute to the development and improvement of recreational facilities along the river as mitigation for continuing impacts associated with project operations.

Attached as Exhibit A is a map indicating the parcels currently available to the Town of Brunswick for public recreational access to the river, and following are some of the needs of the Town for assistance with funding recreational facilities in the Project area. In most cases, attachments are included to illustrate the plans that the Town has made, but has not been able to bring to fruition for lack of funding.

250<sup>th</sup> Anniversary Park is below the Brunswick dam, and is listed as a project recreation site within the project boundary. The PAD notes that *"The parcel owned by BWPH was leased to the Town in 1984 for the duration of the original FERC license. Per the lease agreement, BWPH is responsible for signage required by the FERC license, and Brunswick is responsible for all other operations and maintenance costs associated with the park."* This Park is a well-loved Brunswick feature, used by our community for walking, picnicking, launching hand-carry boats, fishing, and enjoying views of the river. The Town expects to negotiate a new lease, and because the park is inside the project boundary, the Applicant is required to provide, maintain and upgrade as necessary recreational facilities.

With the replacement of the Frank J. Wood Bridge, MaineDOT is including improvements to the Park in the right-of-way area. Images of the preliminary design of this section of 250<sup>th</sup> Anniversary Park are attached as Exhibit B. The Town requests that the Applicant design a new landscape plan to upgrade the rest of the Park, update signage, remove invasives, open views to the river on their land, and improve access to the water through their property. This should include developing ADA compliant access to appropriate points, observation points and seating areas, a fishing pier and canoe launch, possibly a ramp, all to be balanced with physical and visual impacts. This would ensure that the water below the bridge remains accessible as a recreational facility to the public.

Moving upstream, the Town currently leases a waterfront parcel owned by Maine DOT on Mill Street for a canoe portage. This site is adequate to launch canoes, but needs significant improvement to be used as recreational access to the river. In addition, the stretch of the river from this point to the Brunswick dam does not provide safe pedestrian access, and presents huge challenges to anyone trying to portage around the Brunswick dam. This issue has been recognized for many years, and in 2002, the Town produced the Mill Street Streetscape Project Plan, attached here as Exhibit C. The conditions for pedestrians and portaging along this corridor have not improved from those described in the Plan.

In 2021, the Town and MaineDOT collaborated on a feasibility study to complete the Riverwalk Project on the Brunswick side of the Androscoggin. The Final Report is attached here as Exhibit D. Currently the Town is working with MaineDOT on preliminary designs for one section of this plan – from the Swinging Bridge to Cabot Street. Since the report was completed, estimates of the cost for this section have increased to nearly \$2 million. The Town requests that the Applicant contribute to the improvements outlined in the Mill Street Streetscape Plan, to provide safe portage and bicycling/pedestrian access from the canoe portage to 250<sup>th</sup> Anniversary Park.

Upstream from the Mill Street portage, the Town and partner entities hold a number of wooded riverfront parcels. All of these have potential for well-developed recreational facilities that provide public access to the Androscoggin River. Each of the properties was acquired by different means, with the intention that they be used for recreational purposes, and each property has its own features that can offer recreational opportunities to Town residents and visitors. For many years, the Town has envisioned a gravel path along the river from the Mill Street portage to the Pejepscot dam, linking these parcels. The attached Exhibit E illustrates the type of path that would be constructed.

The Lamb Property, for example, is an 8-acre parcel on River Road, which was donated to the town in 1995 with the condition that it be used for public recreation purposes in perpetuity. This parcel has

deep water frontage, and the plan has been to develop a motorized boat launch facility. Further upstream is the Coffin Pond Property, where for many decades, the Town has operated a swimming pond, and has hoped to expand the recreational possibilities of the parcel by developing access to the river for boating, fishing, picnicking, etc. Attached as Exhibit F is a plan from 1968, as revised in 1984, and which still represents an aspiration for the Coffin Pond Property. Attached as Exhibit G are images of the types of boat launch facilities that would be appropriate on the Lamb and Coffin Pond sites.

In 2010, the Town entered into an agreement with the Brunswick Topsham Land Trust for the Coombs Property, just upstream from the Coffin Pond Property. The plan is that the Town will acquire the property for recreational purposes, including natural recreational facilities appropriate for small children, as well as a trail system and access to the water for fishing and boating. The riverfront path that is envisioned would continue upstream and under Route 295 to connect to parcels owned by Brunswick Topsham Water District, and from there to Town properties at the Pejepscot dam and beyond to the former landfill property.

Downstream from the Brunswick dam, there are several opportunities for recreational access to the river, but of a different nature than is envisioned for upstream. On Water Street, the old Town Landing, Pinette Park and the boat launch provide gravel access for winter smelt fishing and for people launching hand carry watercraft, while the Dog Park and the Bike Path attract pedestrians and bicyclists. The Town recently acquired Merrymeeting Park, which does offer some wooded trails, and is also a historic site with several structures.

The river from the Brunswick dam and upstream is currently not very accessible for recreational purposes but clearly the relatively untouched, wooded areas along this section of the river could provide a valuable recreational resource for walking, fishing and boating in an environment different from the downstream section of the river. The Town has spent many years imagining possibilities and developing plans, and with the necessary funds, the Town could develop and construct these facilities in the coming years.

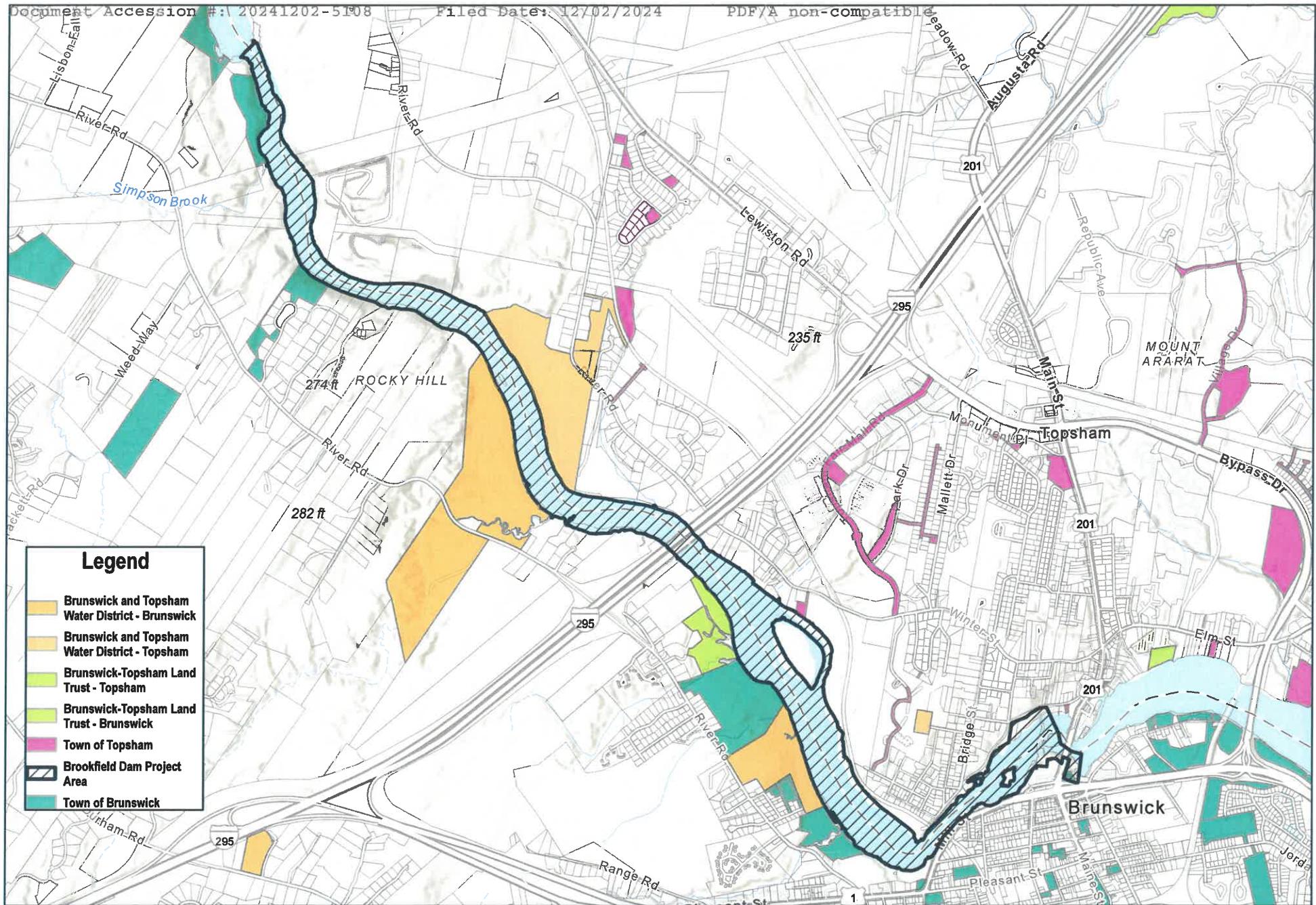
The Town respectfully requests that FERC require the Applicant to undertake construction of the planned recreational facilities along the river in the Project area, or provide funding to the Town for this purpose. We look forward to continued discussions on the recreational needs within the Project area during the re-licensing process, and would be pleased to provide any additional information required.

Sincerely,



Julia AC Henze  
Interim Town Manager

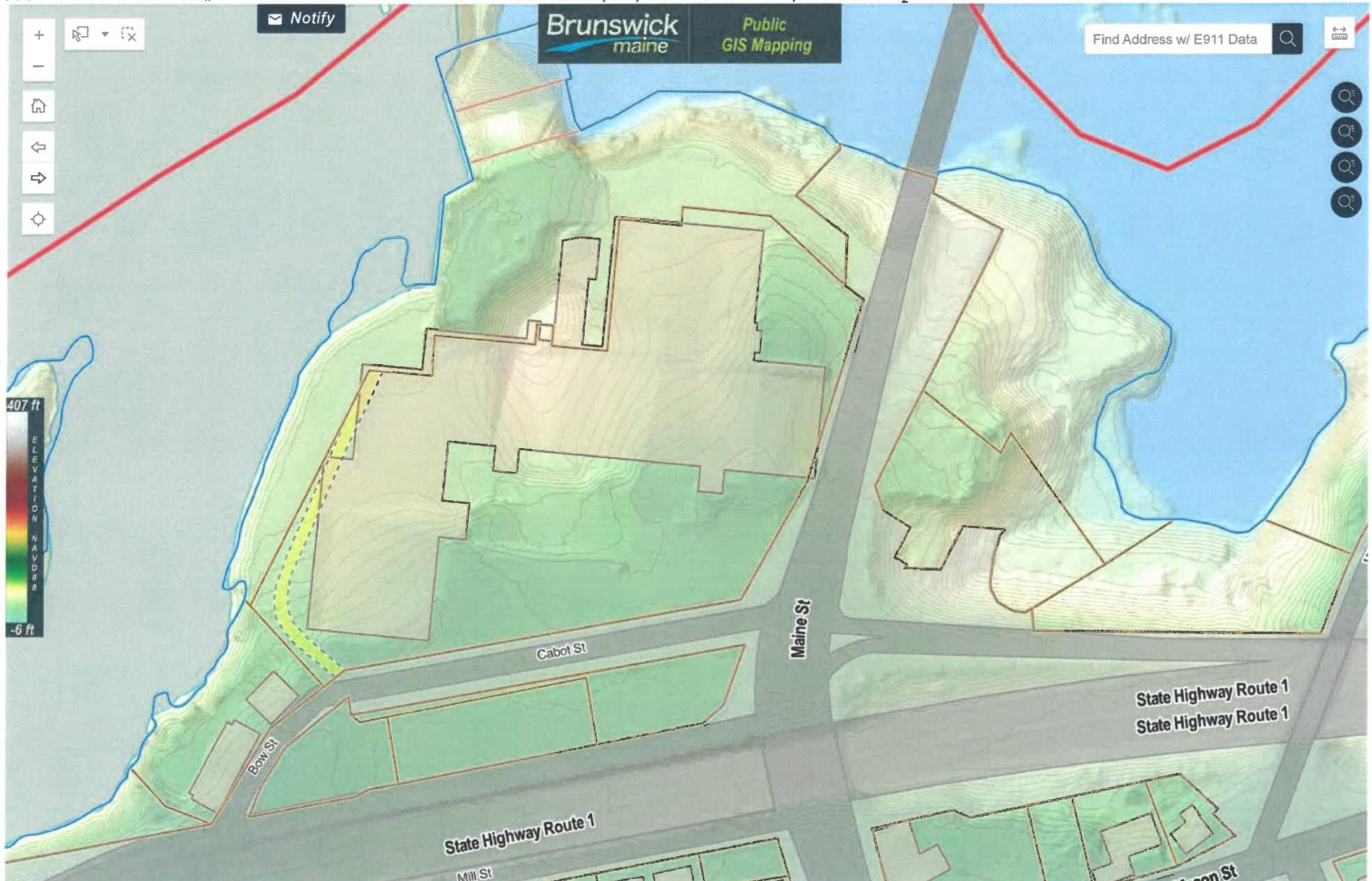
# Exhibit A



**Town of Brunswick, Town of Topsham, Brunswick-Topsham Water District and  
Brunswick-Topsham Land Trust Parcels Adjacent to Brookfield Dam Project Area**



# Exhibit B



Selected features: 0

# AMENITIES

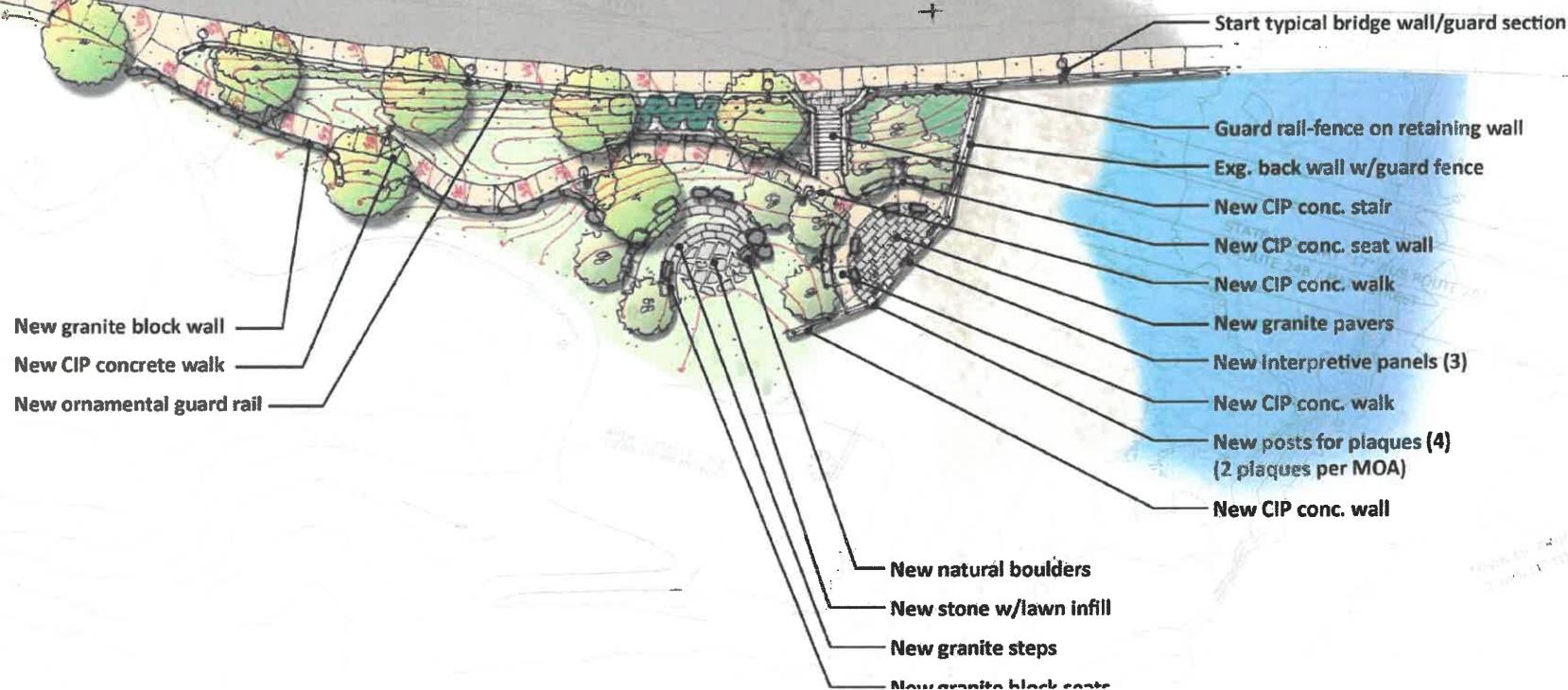
Brunswick

250<sup>th</sup> Anniversary Park



# AMENITIES – BRUNSWICK

## 250<sup>th</sup> Anniversary Park



# Exhibit C

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# MILL STREET STREETSCAPE PROJECT

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Brunswick, Maine



TERRENCE J. DEWAN & ASSOCIATES  
Landscape Architects

December 2002

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**MILL STREET STREETSCAPE PROJECT****1. INTRODUCTION**

A half-mile of Route 1 in Brunswick becomes Mill Street between Cumberland Farms on Pleasant Street and Fort Andross. This is a busy section of roadway. According to the MDOT the Annual Average Daily Traffic count was 31,560 vehicles in 2000. This two-lane road runs parallel to the Androscoggin River. Regrettably, the trees between the road and the river have not received much care over the past decade. While this section of road is somewhat forgotten, many consider it a “gateway” to Mid Coast Maine. Opportunities for streetscape improvement present themselves in this much-overlooked location.

The notion of making improvements to Mill Street is certainly not a new one. The Brunswick Comprehensive Plan recommended that “The town should study potential improvements to Pleasant and Mill Streets in order to reduce congestion, improve safety, facilitate access to adjacent businesses, and improve the aesthetics of this roadway.” The 1997 Downtown Master Development



*Goal 1: Reestablish open views to the river*

Plan noted that “Mill Street, from Maine Street to Pleasant Street, is an important component of the downtown area...The length of the street should be studied for ways to improve its visual image and provide a better edge/gateway into Brunswick.”

In February, 2002, the Town of Brunswick received an Ice Storm Recovery Grant from the Maine Bureau of Forestry. These funds are made available to help communities recover from the tree damage caused by the 1998 ice



*Goal 2: Develop a tree plan for Mill Street*

storm and to strengthen and support efforts to improve the health of community trees.

The work plan for the grant called for developing a strategy for streetscape improvements for Mill Street focusing on:

1. Tree pruning along the Androscoggin to re-establish and/or enhance views of the river from the road.



*Goal 3: Install pedestrian improvements*

2. Tree planting plan along the town-side of the road.
3. Pedestrian improvements from the so-called “SwingingBridge”(a pedestrian-only connection to Topsham) to Fort Andross/Frank Wood Bridge and downtown Brunswick.
4. Landscape improvements of a MDOT-owned truck-turnaround along Mill Street.



*Goal 4: Improve the MDOT turnaround*

**MILL STREET STEETSCAPE PROJECT****A VISION FOR THE FUTURE**

Mill Street is a street with a past... but more importantly it is a place with a tremendous future. The recommendations in this report are designed to transform this half-mile of somewhat forgotten roadway into a riverfront parkway that celebrates one of Maine's premier waterbodies. Mill Street is envisioned as a gateway into Mid-Coast Maine, uniting two livable communities.

The highlights of this vision include:

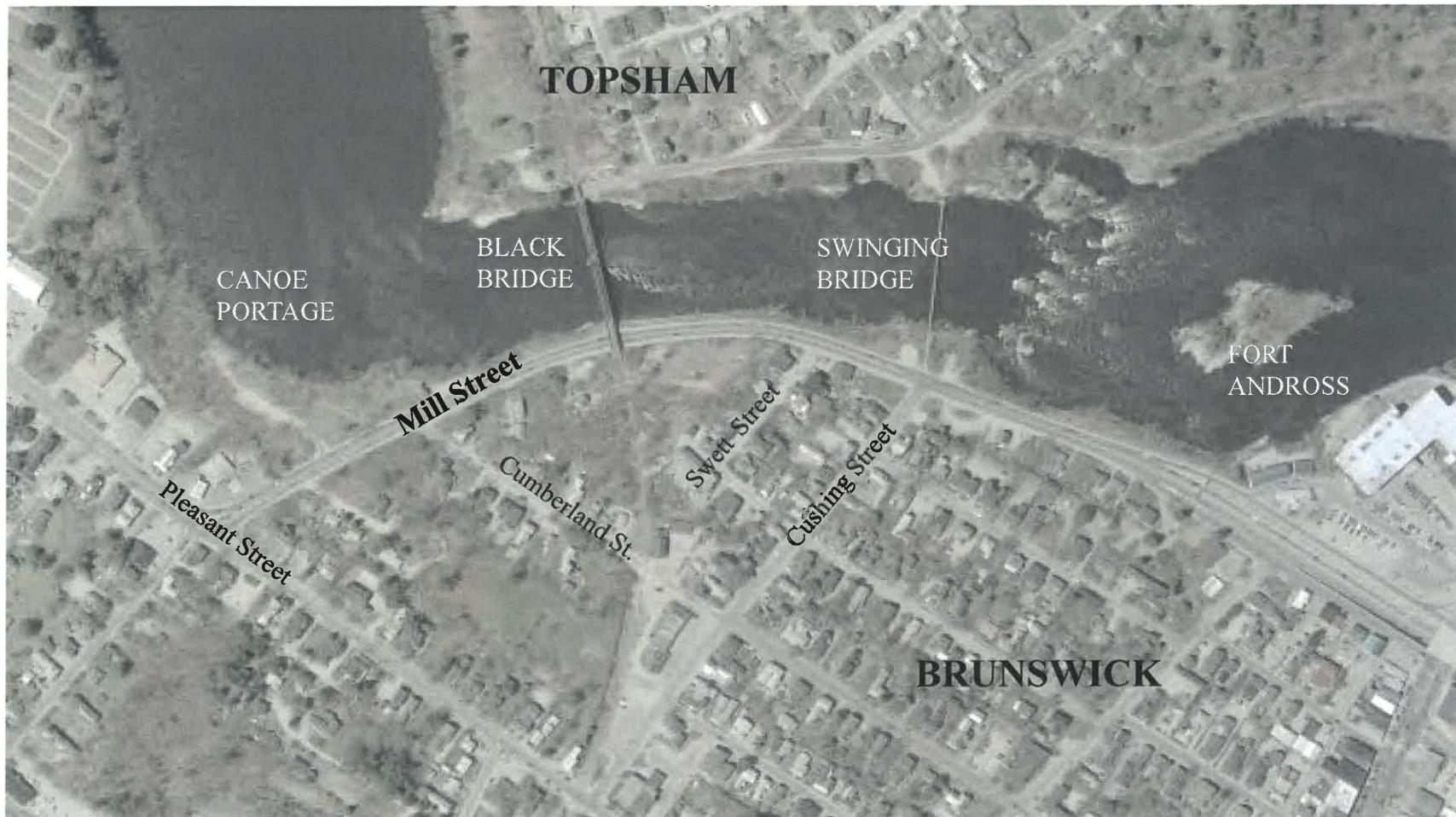
- ¥ Views of the Androscoggin River opened up for residents, motorists, and pedestrians to appreciate.
- ¥ A park-like landscape along the roadway that helps to unify two of Brunswick's most significant commercial areas: Pleasant Street and Maine Street.
- ¥ New plantings of native species that will replace the opaque jungle that now characterizes the storefront.
- ¥ Pedestrian improvements that encourage people to walk along the riverfront on their way to work or just out for a stroll.
- ¥ Pedestrian-scaled lighting fixtures that will help create a parkway atmosphere and encourage evening activity.

- ¥ New street trees along Mill Street that will add shade and pedestrian scale while helping to separate the roadway from the abutting homes.
- ¥ Crosswalks, guardrails, and esplanades that increase pedestrian safety while helping to calm the traffic.
- ¥ Rest areas installed periodically along the length of Mill Street to afford a place to rest and appreciate the moving river.



While this report has focussed on the roadway, the town should also be looking at all land uses along Mill Street and the streets that feed into it. There are many opportunities to create more housing opportunities, additional green space, walkways, and view corridors to help tie these neighborhoods into the riverfront. The Mill Street improvements will be of significant benefit to the entire community.

*The Mill Street vision, as seen in a computer-enhanced photograph.*



*The study area extends from Cumberland Farms (at the corner of Mill Street and Pleasant Street) to Fort Andross.*

**MILL STREET STREETSCAPE PROJECT****2. EXISTING CONDITIONS**

Mill Street is seen by thousands of people every day: people driving the roadway as part of Route One, local motorists making their way around Brunswick and over the Black Bridge into Topsham, pedestrians navigating the irregular walkways to go downtown, and neighborhood residents whose homes face the Androscoggin River.

This section of the report presents a summary of the existing conditions along Mill Street. For ease of presentation, the study area is divided into five sections:

- ¥ Pleasant Street to Cumberland Street
- ¥ Cumberland Street to the Black Bridge
- ¥ Black Bridge to Cushing Street
- ¥ Cushing Street to Swinging Bridge
- ¥ Swinging Bridge to Fort Andross.

*A sequence of photographs taken through the windshield of a car travelling westerly on Mill Street (June, 2002). In several locations the roadway seems excessively wide, which may be a factor in the average rate of speed. The detailing of Mill Street & the light standards, guardrails, and fencing & are designed to a highway scale.*

## MILL STREET STEETSCAPE PROJECT



*Close proximity to town*



*Dramatic river views*



*Waterfront Park*



*Historic structures*



*Walkable neighborhoods*



*Open Space*

### OPPORTUNITIES

Mill Street possesses a wealth of opportunities, as seen in these photographs.

**Proximity to Town.** Mill Street is located within easy walking distance of downtown.

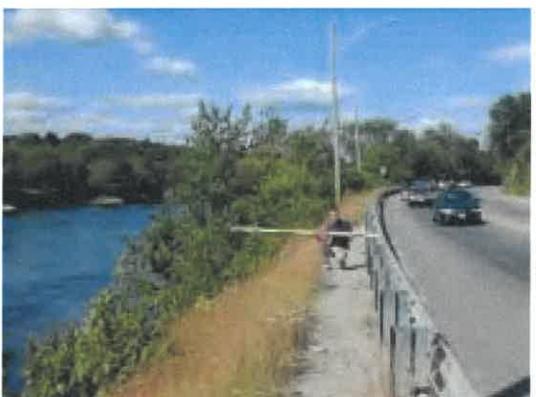
**River Views.** Views to the river are one of the town's most significant resources. While the views are hidden in many instances, it will not take a significant effort to open them to the public.

**Existing Waterfront Park.** The Canoe Portage at the upper end of Mill Street is a hidden gem in the Brunswick park system. In addition to the boat launch, it features picnic tables, benches, a gravel parking area, an easy path up to Mill Street, and dramatic views of the river.

**Historic Context.** The Swinging Bridge between Brunswick and Topsham is one has been recognized as a significant cultural resource, to be appreciated by residents of nearby homes, pedestrians, and motorists alike.

**Walkable Neighborhoods.** Many of the surrounding residential streets are prime examples of the Great American Neighborhood model of community planning.

**Open Space.** A number of existing parcels are already well established open spaces, providing a buffer along Mill Street.

**MILL STREET STEETSCAPE PROJECT***Heavy traffic/ lack of curbing**No sidewalks / little space to plant**Narrow sidewalks/steep drop-off**Overhead utility structures**Detailing inappropriate for a neighborhood setting**Invasive plants / lack of maintenance***CHALLENGES**

Mill Street is faced with a number of environmental and physical challenges that will require unique solutions.

**Heavy Traffic.** Mill Street is the intown location of Route One with high traffic volumes that include significant number of trucks.

**Lack of Adequate Curbing.** Most of the curbing is badly deteriorated bituminous which offers no protection to the pedestrian.

**Lack of Adequate Sidewalks.** Where walks exist they generally are in poor condition.

**Limitations on Planting.** There are few places for planting new trees on the south side of the road.

**Steep Riverfront Topography.** In many places there is little room for a path before the grade drops into the river.

**Overhead Utility Structures.** Tree planting and walkway construction is further limited by overhead wire utilities and traffic control signs.

**Highway Detailing.** The guardrails, fencing, and other details used along Mill Street are typical of interstate highways.

**Invasive Plants.** Much of the lush vegetation along the corridor is actually highly invasive, non-native species. See map on next page.

## MILL STREET STEETSCAPE PROJECT



**MILL STREET STREETSCAPE PROJECT****EXISTING CONDITIONS SEGMENT 1**  
**Pleasant Street to Cumberland Street**

**Curbs and Sidewalks** are generally in poor condition. Low asphalt curbs do not protect the pedestrian. Gravel walkway leads to the canoe launch with a pleasant, serpentine alignment.

**Riverfront Vegetation** is well maintained, affording good views to the river. A buffer strip at the edge provides some riparian habitat.

**Views.** Well-maintained parkland leads down to the river throughout the Canoe Launch. The town has done a good job in establishing viewing opportunities.

**Site Features.** The Canoe Launch is a significant open space for the community, providing parking, picnicking, trails, and a boat launch.

**Miscellaneous.** The lack of transition from the heavy commercial patterns of Pleasant Street to the park-like atmosphere of Mill Street is jarring.





#### EXISTING CONDITIONS SEGMENT 2 Cumberland Street to Black Bridge

**Curbs and Sidewalks** are generally in poor condition where they exist at all. Low asphalt curbs do not protect the pedestrian. Sidewalks do not extend east of the small commercial building. Narrow beaten paths show evidence of active pedestrian use.

**Riverfront Vegetation** is primarily second growth hardwoods with many non-native invasive species. Town mows the grass behind the guardrail throughout the summer.

**Views.** Limited views of the river and Black Bridge are found in this segment. View corridors would be relatively easy to establish through the narrow band of riverfront trees.

**Site Features** The small commercial building on Mill Street features oversized signs which detract from the setting. Its parking lot lacks landscaping and proper definition along the edges.

**Black Bridge** offers an opportunity to reinforce Mill Street's role as the gateway into the Mid-Coast region.





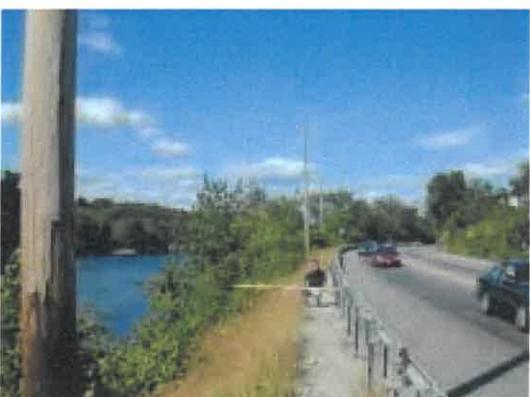
### EXISTING CONDITIONS SEGMENT 3 Black Bridge to Cushing Street

**Curbs and Sidewalks** are generally in poor condition. A heavy guardrail protects the occasional pedestrian walking on top of the bank. There is a narrow sidewalk on the south side of the Mill Street, but crossing traffic is difficult.

**Riverfront Vegetation** is very thin to non-existent along the narrow embankment closest to the Black Bridge. Stands of Japanese Knotweed and Honeysuckle dominant the shoreline near Cushing Street.

**Views** of the Black Bridge and river are common throughout much of this segment, but invasive species will need to be kept in check to maintain water views from Cushing Street.

**Site Features.** Sideslopes on the roadway adjacent to the river are extremely steep and offer very little opportunity for sidewalk development. Planting trees on the opposite side of Mill Street will be difficult due to steep slopes and ledge outcrops.



**MILL STREET STREETSCAPE PROJECT****EXISTING CONDITIONS SEGMENT 4****A: Swinging Bridge**

**Curbs and Sidewalks** are sparse to nonexistent in this segment. A pathway leads from the swinging bridge to Mill Street. A small parking area and access drive services the pump station. Cars had been parking along a gravel pullout, but large rocks have been placed to limit access.

**Riverfront Vegetation** is typically overgrown near the Swinging Bridge. The land surrounding the pump station has a parklike appearance with grass, day lilies and ornamental shrubs.

A specimen ash next to the pump station needs reshaping.

**Views** of the water and Swinging Bridge are blocked by the overgrown vegetation. These are some of the most dramatic views along Mill Street, due to the nature of the shoreline.

**Site Features.** The swinging bridge provides an important focal point to Mill Street as well as a pedestrian connection to Topsham. A separate Town Committee has already made recommendations for improvements to the bridge.



**MILL STREET STREETSCAPE PROJECT****EXISTING CONDITIONS SEGMENT 4  
B: MDOT Turnaround and Vacant Lot**

**Curbs and Sidewalks** are in poor condition. The sidewalk on the south side of Mill Street continues in front of the vacant lot and turnaround. Low asphalt curbs are deteriorating and do not protect pedestrians from traffic.

**Vegetation.** The unpaved land in the turnaround consists of grass, deciduous trees, and a variety of shrubs. Following the first public meeting on July 23, 2002, MDOT crews mowed the grass and cleaned up the turnaround. The grass on the vacant lot is maintained by the abutting property owner under an informal arrangement with MDOT.

**Views** Both the turnaround and vacant lot are highly visible from the Mill Street. Views of the riverfront from these sites are blocked by overgrown shoreline vegetation.

**Site Features.** A chain link fence was recently installed on the vacant lot to restrict vehicle access. Remnants of stone retaining walls are found on the corner. A post and cable guardrail runs along the vacant lot.

**MILL STREET STREETSCAPE PROJECT****EXISTING CONDITIONS SEGMENT 5:  
Swinging Bridge to Fort Andross**

**Curbs and Sidewalks.** in this segment are in fair to poor condition. Granite curbing extends from the urban compact line east of the Swinging Bridge to Bow Street. Sidewalks next to the river are narrow and do not allow more than two people to pass.

**Riverfront Vegetation.** The embankment adjacent to the road is grassy with some larger trees and shrubs closer to the riverfront. Most of the vegetation is overgrown with a considerable number of invasive species.

**Views.** Overgrown vegetation blocks potential water views. A few clearings allow for views of the river and Goat Island.

**Site Features.** The embankment in this segment is wide enough to allow the sidewalk to be located away from the roadway. Grade changes will require low retaining walls.

**Miscellaneous.** A battered chain link fence marks the end of the Maine Street underpass. The buildings along Bow Street form an attractive street edge leading to Fort Andross.



### 3. RECOMMENDATIONS

#### CONCEPT PLAN

The Concept Plan provides an overview of the recommendations for Mill Street.

#### Vegetation Management

- ⌘ Open view corridors at the ends of Cushing, Cumberland, and Swett Streets.
- ⌘ Remove invasive species and replace with native trees and shrubs.

- ⌘ Establish views along Mill Street by selective clearing and removal of branches from lower 1/3 of trees.

#### Pedestrian Improvements

- ⌘ Install new granite curbing the length of Mill Street
- ⌘ Replace existing asphalt sidewalks with decorative pavers similar to Maine Street and inner Pleasant Street.
- ⌘ Create rest areas and smaller overlooks at scattered locations along the river.
- ⌘ Install pedestrian-scale street lamps the length of Mill Street.

- ⌘ Create a pedestrian plaza/river overlook at the Swinging Bridge.

- ⌘ Incorporate artwork throughout the street.
- ⌘ Minor improvements to the Canoe Launch.

#### MDOT Property

- ⌘ Perform general clean-up on turnaround.
- ⌘ Plant ornamental shrubs, perennials, and deciduous trees to create a more park-like atmosphere.
- ⌘ Separate Mill Street traffic from Cushing Street with berms, stone walls, and plantings.

**MILL STREET STEETSCAPE PROJECT****RECOMMENDATIONS: SEGMENT 1**

Establish a view corridor from Cumberland Street to the river.

Continue vegetation managed to maintain views to the river from within the park and from Mill Street.

Partially bury existing boulders along pathway to canoe launch or incorporate into environmental art piece.

Install a focal point for the park, e.g., a large piece of sculpture or environmental art, gazebo, fountain, or similar landscape element.

Extend pedestrian improvements and granite curbing to Pleasant Street on both sides of Mill Street.



**MILL STREET STREETSCAPE PROJECT****RECOMMENDATIONS: SEGMENT 2**

Install a new sidewalk from the end of the parking lot to the Black Bridge, following a curvilinear alignment. Plant Rosa rugosa and other low maintenance shrubs to help separate the walk from Mill Street.

Open views to the river at periodic locations along Mill Street.

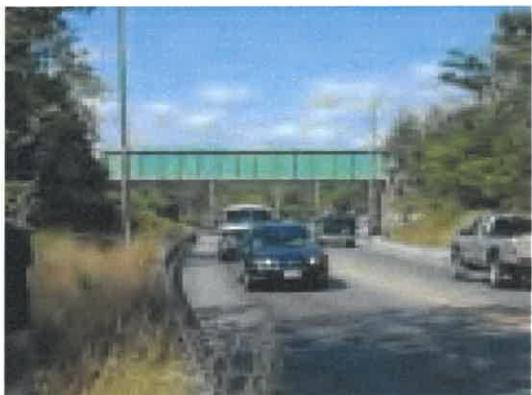
Plant street trees in the parking lot island.

Install granite curbing on both sides of Mill Street. Replace asphalt sidewalks with interlocking concrete pavers, similar to Maine Street.

Consideration should be given to repainting the railroad bridge over Mill Street. This is an opportunity to reinforce Mill Street as the gateway to Mid-Coast Maine.

*Bottom Left: Existing Conditions.*

*Photosimulations Middle and Right. Artwork creates a colorful gateway.*



**MILL STREET STREETSCAPE PROJECT****RECOMMENDATIONS: SEGMENT 3**

Open views to the river at periodic locations along Mill Street.

Install granite curbing on both sides of Mill Street. Replace asphalt sidewalks with interlocking concrete pavers, similar to Maine Street.

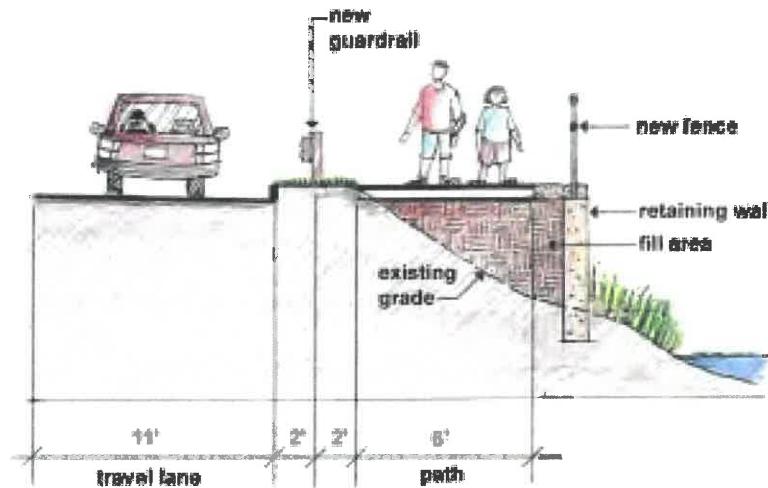
Establish a view corridor from Cushing Street to the river.

Install gabions or concrete retaining wall in area within dashed yellow line to create additional width for a new sidewalk. The wall should be designed to blend into the existing rip-rap and exposed ledge. See photosimulation below and cross sections on following page.



*Left: Existing conditions only provide enough room for a single width path.*

*Photosimulation Right: A five-foot sidewalk installed along the river provides a safe, attractive pedestrian environment. Guardrail has been partially screened by Rosa rugosa plantings. Stainless steel cable fence marks the edge of the walkway, which is supported by gabions or a concrete wall.*

**Typical Cross-Sections**

*Cross section showing treatment of riverbank east of Black Bridge. Gabions or concrete retaining wall may be necessary to support new sidewalk.*



*Typical cross section west of Black Bridge. Guardrail should remain in place, partially screened by low plantings of Rosa rugosa or similar species. Vegetative management calls for removal of invasive species and selective pruning of trees to open up views to Androscoggin River.*

**MILL STREET STREETSCAPE PROJECT**

**MDOT Corner Lot.** Several additional improvements should be made to the corner lot to complement the turnaround and create a small neighborhood park:

- ¥ Construct a stone wall to match stonework at turnaround.
- ¥ Create low earth berm to separate lot from traffic on Mill Street. Plant with low maintenance flowering shrubs and perennials (see cross section on next page)
- ¥ Remove chain link fence after wall and berm are installed.

#### **Miscellaneous Improvements**

- ¥ Follow recommendations of Swinging Bridge Committee for restoration of this landmark structure.
- ¥ Install a sculptural focal point on the opposite side of Mill Street to align with the Swinging Bridge.

**Long Term Improvements.** MDOT should consider alternative locations for the snowplow turnaround to allow this land to be used for community purposes.

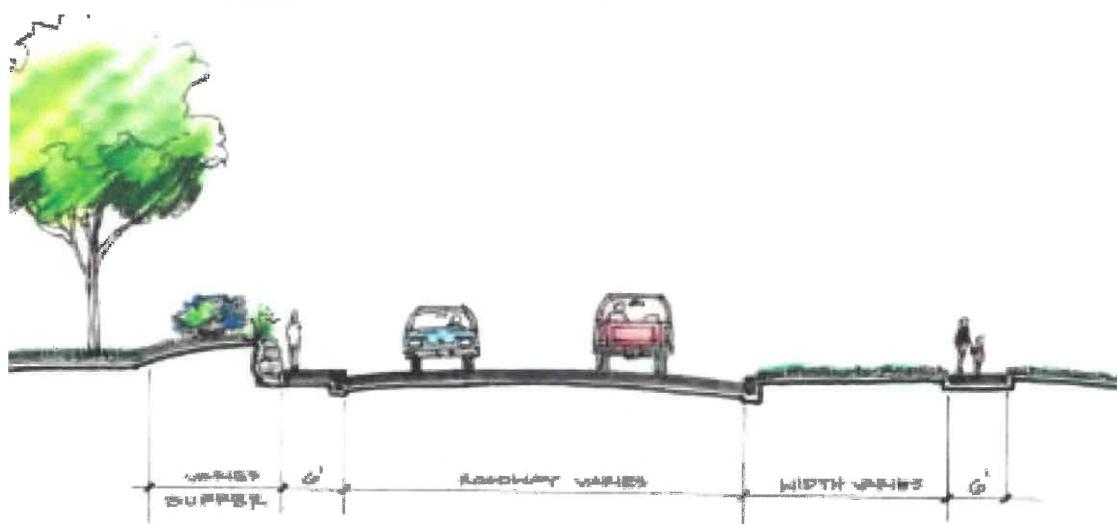
#### **RECOMMENDATIONS: SEGMENT 4**

**Swinging Bridge Park.** Create a pedestrian plaza to complement the Swinging Bridge. Improvements should include the following:

- ¥ Construct a low stone wall at the edge of the river to define the space and protect the public. Walls should terminate with sculpture or similar elements.
- ¥ Install walkway with pedestrian lighting to provide access to Mill Street.
- ¥ Remove existing parking and boulders west of the bridge. Install granite curbing the length of Mill Street.
- ¥ Plant low maintenance perennials to reinforce the shape of the plaza and add seasonal color.
- ¥ Prune mature ash tree to create a focal point for the park.
- ¥ Prune trees at the edge of the river to open up views to the north.
- ¥ Relocate sidewalk to provide room for an esplanade along Mill Street.
- ¥ Design and install interpretive signage about the bridge.

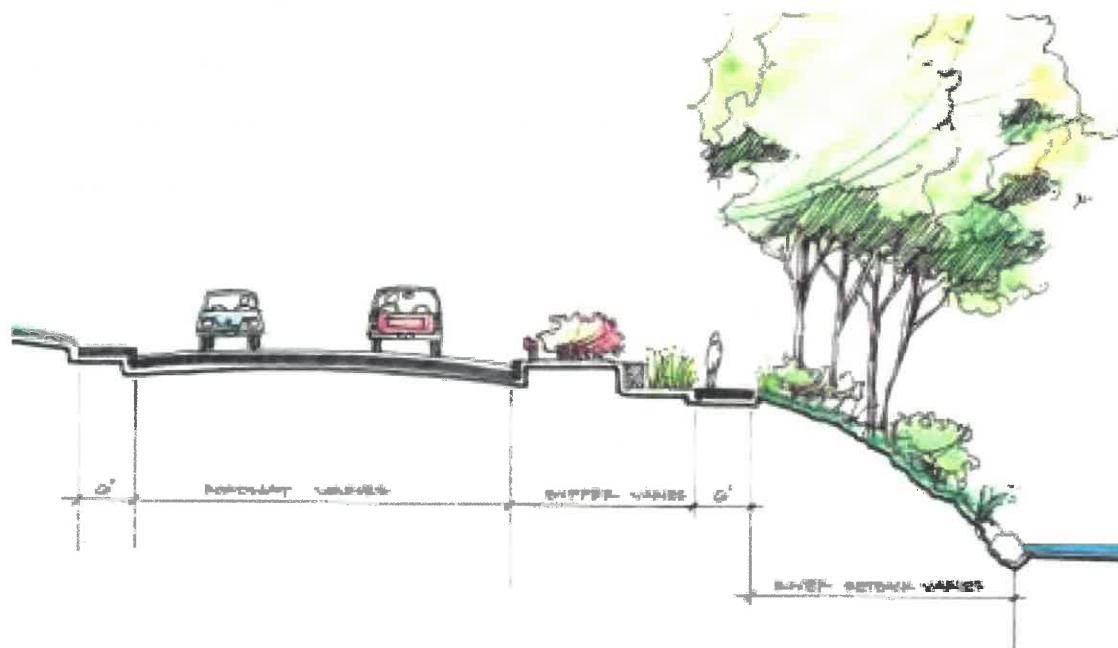
**MDOT Turnaround.** MDOT should upgrade their turnaround with a number of short-term improvements:

- ¥ General clean-up and removal of invasive vegetation.
- ¥ Install low maintenance perennials (e.g., daylilies) on the back side of the turnaround).
- ¥ Plant street trees along Mill Street.
- ¥ Restore the stone wall on the corner.
- ¥ Construct a new stone wall to define the arc of the turnaround.

**MILL STREET STEETSCAPE PROJECT****Typical Cross Sections**

*Cross-section through vacant lot owned by MDOT on Cushing Street at Mill Street. Stone wall and earth berms are used to provide screening to nearby residents.*

*Sidewalk on north side of Mill Street - near Swinging Bridge - is separated from Mill Street by a grass esplanade.*



*Typical cross section between Swinging Bridge and Bow Street. New sidewalk is constructed 2-3' below the grade of the road on a plateau overlooking the river. A low retaining wall is used to provide vertical separation. Vegetation management calls for removal of invasive species, planting new native shrubs, and selective thinning of existing trees.*

**MILL STREET STEETSCAPE PROJECT****RECOMMENDATIONS: SEGMENT 5**

New sidewalk separated from Mill Street and buffered with vegetation. See cross section for details.

Establish and maintain view corridors to river.

Street trees added along Mill Street with homeowner approval. Tree species selected to withstand urban conditions and minimize interference with overhead utilities.

Work with MDOT to replace chain link fence with a more suitable detail along highway.





*Typical existing conditions along Mill Street (Summer, 2002). Views to the river have been blocked by overgrown vegetation. The sidewalks are too narrow and in poor repair, creating a negative experience for the pedestrian.*



*This photosimulation illustrates recommended improvements to the Androscoggin Riverfront adjacent to Mill Street:*

- ⌘ Existing vegetation has been thinned.
- ⌘ Significant trees have been pruned from the ground up to 1/3 their height.
- ⌘ Invasive vegetation has been removed and replaced with native shrubs.
- ⌘ The sidewalk has been relocated closer to the river.
- ⌘ Decorative pavement has been used to create a more attractive pedestrian environment.
- ⌘ Period light fixtures have been installed to encourage evening strolling along the river.
- ⌘ The anodized guardrail has been replaced with Corten steel and partially hidden by a Rosa ruga hedge.
- ⌘ An esplanade has been installed to create a safety buffer for pedestrians.

**MILL STREET STEETSCAPE PROJECT**

*Left: Existing conditions on Mill Street.*

*Right Top: Photosimulation illustrating basic, short-term improvements, primarily the removal of invasive vegetation and limbs on the bottom 1/3 of existing trees to open views to the Androscoggin River.*

*Right Middle: In this photosimulation the sidewalk has been replaced with decorative pavers and the guardrail has been replaced with Corten steel.*

*Right Bottom: Alternate improvements include the installation of period light fixtures and hanging planters. The sidewalk in this photosimulation has been widened to six feet to create a more human-scaled space and allow for easier movement.*





#### 4. PHASING AND FUNDING

##### PHASING PLAN

The improvements recommended for Mill Street are extensive and should be carried out in phases as funding becomes available. The Phasing Plan illustrates how this might be accomplished in a logical order based upon the Town's priorities.

Phasing can be accomplished in a variety of ways. This plan illustrates logical bodies of work that will result in finished, usable products.

## MILL STREET STEETSCAPE PROJECT

## PRELIMINARY OPINION OF COSTS

A preliminary opinion of costs for each of the five phases of Mill Street improvements are provided in spreadsheet form. These numbers were derived by applying current contractors' costs to the quantities of materials estimated from the conceptual plans in this report.

The numbers should be considered an order of magnitude estimate. Final costs will require accurate topographic and boundary surveys as well as a more refined design.

	Quantity	Unit	\$ / Unit	Cost	Subtotal
<b>PLEASANT STREET TO BLACK BRIDGE</b>					
Site Prep. & Veg. clearing	1	LS		\$1,500	
Temp. erosion control	1	LS		\$1,000	
New sidewalk: pavers, 6' wide	740	SY	\$75	\$55,500	
Granite Curb	1,100	LF	\$32	\$35,200	
Street Lights	7	EA	\$4,000	\$28,000	
Landscaping	1	LS		\$6,000	\$127,200
				Contingency	\$19,080
				Subtotal	\$146,280
				Design/Eng.	\$14,628
				Total	<b>\$160,908</b>

	Quantity	Unit	\$ / Unit	Cost	Subtotal
<b>BLACK BRIDGE BRIDGE TO FORT ANDROS</b>					
Site Prep. & Veg. clearing	1	LS		\$2,000	
Temp. erosion control	1	LS		\$1,300	
New sidewalk: pavers, 6' wide	950	SY	\$75	\$71,250	
Granite Curb	2,400	LF	\$32	\$76,800	
Street Lights	14	EA	\$4,000	\$56,000	
Conc. unit retaining wall	800	SF	\$30	\$24,000	
Landscaping	1	LS		\$6,000	\$237,350
				Contingency	\$35,603
				Subtotal	\$272,953
				Design/Eng.	\$27,295
				Total	<b>\$300,248</b>

	Quantity	Unit	\$ / Unit	Cost	Subtotal
<b>SWINGING BRIDGE PARK</b>					
Site Prep. & Veg. clearing	1	LS		\$2,000	
Temp. erosion control	1	LS		\$800	
New sidewalk: pavers, 6' wide	200	SY	\$75	\$15,000	
Granite Curb	250	LF	\$32	\$8,000	
Bollards: 36" ht.	10	EA	\$1,000	\$10,000	
Bike Rack	1	EA	\$800	\$800	
Stone wall	360	FF	\$110	\$39,600	
Landscaping	1	LS		\$10,000	\$86,200
				Contingency	\$12,930
				Subtotal	\$99,130
				Design/Eng.	\$9,913
				Total	<b>\$109,043</b>

	Quantity	Unit	\$ / Unit	Cost	Subtotal
<b>MDOT TURNAROUND</b>					
Street Lights	2	EA	\$4,000	\$8,000	
Stone wall	200	FF	\$110	\$22,000	
Landscaping	1	LS		\$10,000	\$40,000
				Contingency	\$6,000
				Subtotal	\$46,000
				Design/Eng.	\$4,600
				Total	<b>\$50,600</b>

	Quantity	Unit	\$ / Unit	Cost	Subtotal
<b>EAST SIDE OF MILL STREET</b>					
Site Prep. & Veg. clearing	1	LS		\$2,000	
Temp. erosion control	1	LS		\$500	
New sidewalk: pavers, 6' wide	1,500	SY	\$75	\$112,500	
Granite Curb	2,400	LF	\$32	\$76,800	
Street Lights	20	EA	\$4,000	\$80,000	
Stone wall	150	SF	\$110	\$16,500	
Landscaping	1	LS		\$11,000	\$299,300
				Contingency	\$44,895
				Subtotal	\$344,195
				Design/Eng.	\$34,420
				Total	<b>\$378,615</b>

**TOTAL** **\$999,413**

## FUNDING

The public should anticipate that the recommended improvements to Mill Street will be phased over several years. The actual schedule will be based upon the people's desire to see the pathway extended, available funding sources, the towns' success at securing these funds, and the towns' willingness to raise the necessary matching funds.

A variety of private and public funding sources should be pursued. Some of the likely sources include:

- ¥ **Federal Highway Administration (FHWA) Transportation Enhancement Program**, administered through the Maine Department of Transportation (MDOT), offers funding to help communities expand their transportation and livability choices. Brunswick has had a highly visible success with using these funds for the Androscoggin River Bik Path. Mill Street represents an opportunity to expand transportation choice, connect two neighboring communities, enhance a significant gateway, and extend the concept of a linear riverfront corridor. Applications for the next round of funding are due in October 2004 for projects in 2005. For further information see: [www.state.me.us/mdot/msp/teinfo.htm](http://www.state.me.us/mdot/msp/teinfo.htm)
- ¥ **MDOT Community Gateways Program** makes funds available for land-

scaping, signage, and other improvements to enhance the entranceways into Maine communities. These are generally \$10,000 grants and are available every two years. For further information see: [www.state.me.us/mdot/env/gateways/2002\\_gateway\\_pdf.pdf](http://www.state.me.us/mdot/env/gateways/2002_gateway_pdf.pdf)

- ¥ **Recreational Trails Grants**, administered by the Maine Bureau of Parks and Lands, provides money for trail development and trailhead parking. Up to \$30,000 is available to any applicant. A 20% Town match is required. For further information see: [www.state.me.us/doc/parks/programs/community/trailsfund.html](http://www.state.me.us/doc/parks/programs/community/trailsfund.html) for further information.
- ¥ **Roadway improvement projects** funded through the Maine Department of Transportation that could include roadway reconstruction, sidewalks, and shoulder work. Long term plans should include the relocation of the current MDOT turnaround on Mill Street.
- ¥ **Private donations** of money, land, or labor. Once specific projects were identified, local civic groups should be approached. Lumber, sand and gravel, and construction companies may be willing to donate time, materials and equipment to the project as part of the town's requirement for matching funds.
- ¥ **Town funds** raised through the annual budgeting process.

# Exhibit D



October 2021

# Androscoggin Brunswick-Topsham Riverwalk Feasibility Study



Illustration by Anthony Muench RLA

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## 1.0 INTRODUCTION

The Town of Brunswick and the Maine Department of Transportation (MaineDOT) contracted with T. Y. Lin International (TYLI) to conduct a feasibility study for the Androscoggin Brunswick-Topsham Riverwalk beginning at the Swinging Bridge and ending at the Frank J. Wood Bridge via Mill, Bow, Cabot, and Maine Streets. The purpose of the study is to create and widen a bicycle and pedestrian travel-way to the recommended minimum 8-foot width to accommodate concurrent use by bicyclists, pedestrians, and people with disabilities. Guardrails (separating vehicles from bicyclists and pedestrians), handrails, safety bollards and detectable warning fields will be installed as required and appropriate for optimum safety.

### 1.1 Study Area

Figure 1.1 shows the study area between the Swinging Bridge and the Frank J. Wood Bridge.

### 1.2 Advisory Committee

The following Advisory Committee was formed to help guide the study.

- Tom Farrell, Town of Brunswick
- Ryan Leighton, Town of Brunswick
- Jay Astle, Town of Brunswick
- Ryan Barnes, Town of Brunswick
- Josh Katz, Riverwalk Committee
- Nate Howard, MaineDOT
- Patrick Adams, MaineDOT
- Tom Errico, T.Y. Lin International

### 1.3 Related Studies

The following studies were used in development of recommendations:

- MaineDOT QCP 2014-2015 Application dated July 2012
- Brunswick Maine Street Feasibility Study, MaineDOT
- Frank J. Wood Bridge Replacement Project

### 1.4 Background Information

The MaineDOT QCP Application noted the following:

- Describe the project(s) transportation value(s) and purpose(s):

*Cyclists and pedestrians are challenged to travel to and from the Swinging Bridge and the Frank J. Wood Bridge via Mill, Bow, Cabot, and Maine streets. A safety*

*upgrade is necessary. Improvements proposed in this grant application will allow safe passage and clear separation of cyclists and pedestrians from vehicular traffic along intensely busy urban streets in a 1.25 mile loop running between Brunswick and Topsham. It should be noted that this is from the application for the original project and not all elements have been constructed.*

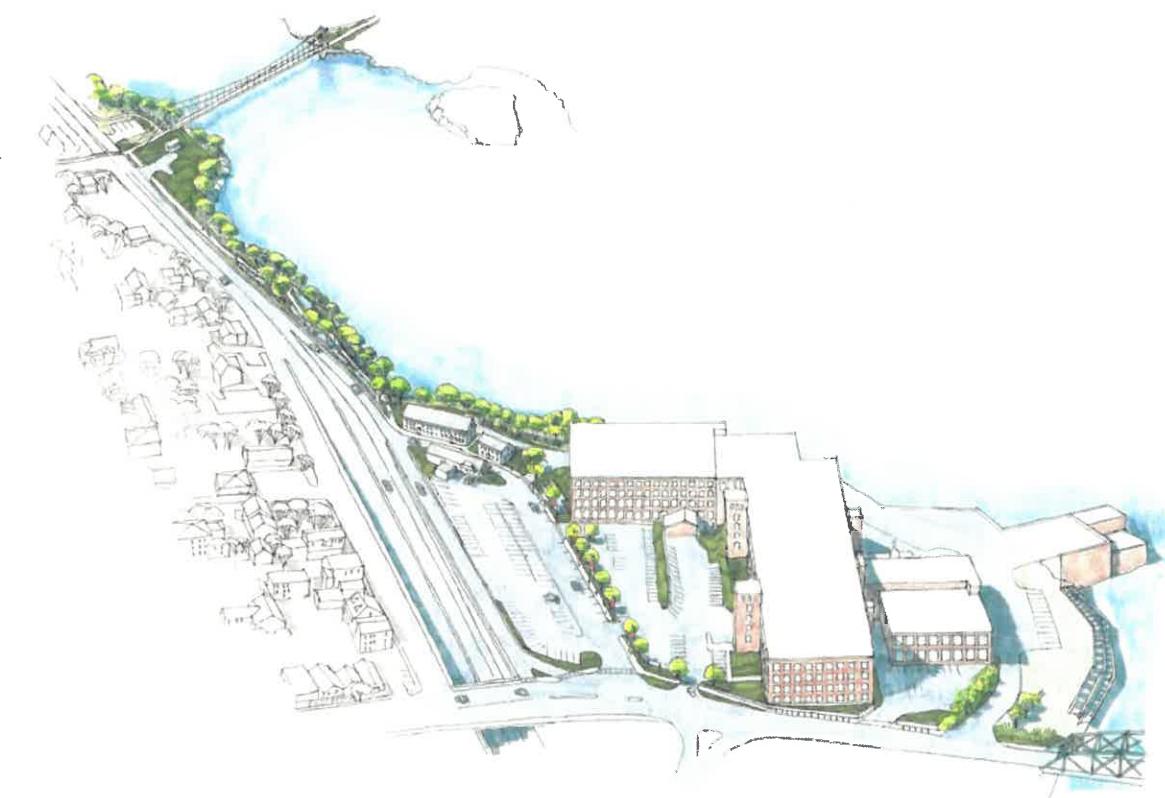
- Describe why this project is important to your community and region):

*March 2007, building on the success of the rehabilitation of the historic John A. Roebling designed Swinging Bridge, residents of Topsham and Brunswick formed the Androscoggin Brunswick-Topsham Riverwalk Advisory Committee. This Advisory Committee brings together the Topsham and Brunswick communities to design, support, and create a 1.25-mile, 4-season, fully accessible, dedicated in-town walking loop along both sides of the Androscoggin River. The plan envisions a safe route along the Androscoggin River that encompasses and enhances the Swinging Bridge and the Frank J. Wood Bridge connecting the two communities.*

- Describe the potential positive impacts on the community, including at a minimum improving safety, mobility, or transportation in general, and the local/regional economy:

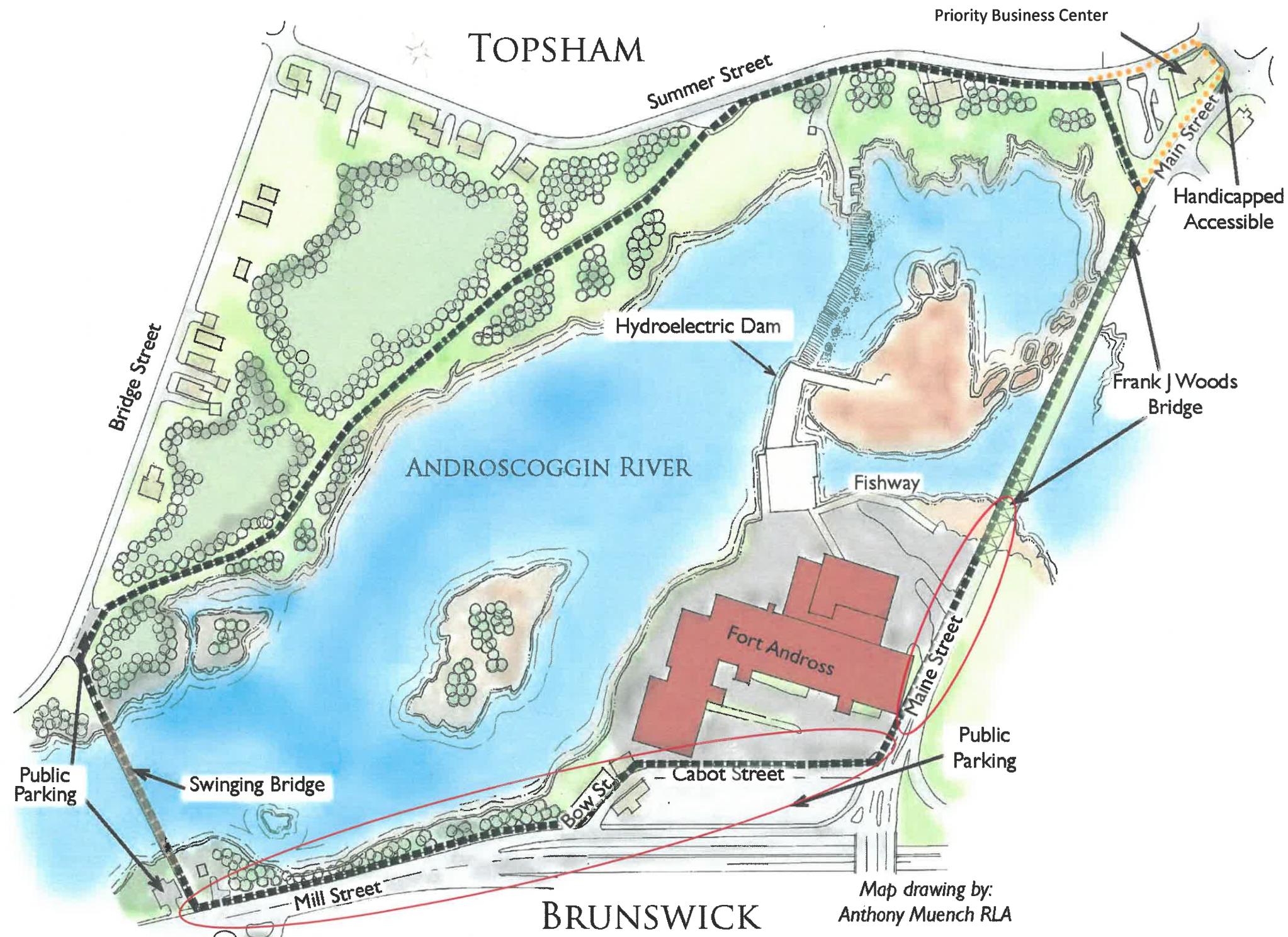
*Phase 3. In Brunswick, construct a safe bike/pedestrian travel way along Mill Street from Bow Street intersection with Route 1 entrance ramp to the Androscoggin Swinging Bridge. Parts of the walkway will be widened to provide overlooks. The walkway will be inside the guardrail to protect pedestrians and cyclists from roadway traffic. Phase 4. In Brunswick, wide sidewalks from Maine Street along Cabot and Bow streets to the Route 1 entrance ramp. Project will include widening and clearly defining Cabot Street sidewalk through Fort Andross parking areas and adding green space as possible. Phase 5. In Topsham at 2 Main Street, create a pocket park along river and stairway up to Frank J. Wood Bridge ("Green Bridge"). The stairway will have two semi-circular river overlooks. Access to the Green Bridge from the pocket park for wheelchairs, bicycles, and strollers will be maintained on Summer and Main Street sidewalks around the Priority Business Center, 2 Main Street. Trails link historic and cultural sites, providing opportunities for community festivals, events, and competitions. Interpretive signs along trails identify areas of historical interest, such as buildings, river transportation, bridges, rail lines, and native heritage. The trails also provide bike routes so that urban commuters can ride their bikes to work or walk, which reduces smog emissions.*

fully accessible, dedicated in-town walking loop along both sides of the Androscoggin River. The plan envisions a safe route along the Androscoggin River that encompasses and enhances the Swinging Bridge and the Frank J. Wood Bridge connecting Brunswick and Topsham.



### 1.5 Purpose and Need

The purpose of the study is to create and widen a bicycle and pedestrian travel-way to the recommended minimum 8-foot width to accommodate concurrent use by bicyclists, pedestrians, and people with disabilities. The need is associated with creating a 1.25-mile, 4-season,

**Figure 1.1: Study Area**

## 2.0 PROJECT INITIATION AND DATA COLLECTION

### 2.1 Kick-off Meeting

A Kick-Off meeting was held on December 11, 2018 and key discussion items included:

- The section of roadway was recently repaved and designed by Wright-Pierce. They have cross-section data that can be supplemented with LIDAR data.
- The Committee was unsure of the available right-of-way information available. MaineDOT will check what information they have. Wright-Pierce may also have some available information. TYLI will inquire with them.
- The sewer pump station may have some equipment in the area. The utilities can be found using Brunswick's online GIS database. Any design needs to consider impacts on utilities.
- The mill-and-fill project puts a moratorium on touching the pavement. We can get a waiver to do shoulder work.
- TYLI will look at what environmental information is available in the area from the Frank J. Wood Bridge project.
- Due to the proximity to the mill, Cabot Street may have historic protections as well as the apartment buildings on the west side of Bow Street.
- TYLI will get information on the drilling samples from the Frank J. Wood project.
- The “Pool Table” bridge feasibility project has the potential to aid or hinder this project and needs to be considered in any designs.
- The Town and the State will create minimum design requirements.
- 10' is the preferred width for a shared use path but special constraints are understood for this project. The curb separation standard needs to be clarified by MaineDOT. Standard best practice is to separate the path from the road.
- The Riverwalk Committee would prefer a barrier for the path. MaineDOT will determine if the barrier needs to be crash worthy. Federal guidelines say it doesn't.
- There is a possibility that Cabot Street and the Route 1 On-Ramp will get combined into one road.

- The Riverwalk Committee would prefer to carry the path along the river. It is not likely due to an approximately one-story grade separation behind the mill. The Committee will need to document why we aren't proceeding with this alternative.
- Transitioning from bicycle lanes and sidewalks to a multi-use path is a major design requirement. It is likely easiest to transition at the signal at the Pool Table intersection area.
- The Pool Table bridge project is looking at a roundabout, a new ramp, combining streets, changing traffic flow, and adding a Single Point Interchange (SPUI). These alternatives will change traffic flow in the study area which needs to be considered during any Route 1 road diet analysis.
- The Town will need to write to MaineDOT after the study to acquire funds.
- MaineDOT is looking at about \$400,000-\$500,000 for the project.

### 2.2 Project Survey / Base Mapping

The base map for the project was based on a review of available information provided by the Town and available LIDAR survey from the Frank J. Wood Bridge and Maine Street/Route 1 MaineDOT projects.

### 2.3 Design Field Reviews / Review of Existing Conditions

TYLI conducted a field review of conditions particularly as it relates to roadway measurements as documented later in this report.

### 2.4 Environmental Field Reviews / Review of Existing Data

TYLI obtained information about the environmental resources in the project area to identify potential impacts to natural resources. This will assist with impact avoidance and minimization discussions and decisions during the future design process; assist in identifying the environmental permit requirements for federal, state, and local authorities; and facilitate project planning and permitting discussions.

## 3.0 Alternative Alignment Analysis

For the purposes of this feasibility study, the general path alignment evaluated is along Mill Street, Bow Street, Cabot Street, and Maine Street between the Swinging Bridge and ending at the Frank J. Wood Bridge. It is assumed that this effort will investigate a location of the Riverwalk parallel to Mill Street to the west and investigate various options along Bow Street and Cabot Street depending on information from the MaineDOT Maine Street Bridge Feasibility Study and design plans for the Frank J. Wood Bridge project.

At the Kick-Off meeting it was noted that ideally the Riverwalk Committee would prefer to have an alignment that would follow the river. Given significant constraints between the river and the mill building and parking areas and the grade difference at the hydroelectric dam wall, this alignment was eliminated from consideration.

### 3.1 Segment A – Swinging Bridge to Bow Street

#### Alternative 1

This alternative investigated reduction of lane and shoulder widths on Route 1 to eliminate or minimize the need for retaining walls along the path in accordance with MaineDOT's HCP philosophy and flexible design guidelines. Specifically, TYLI reviewed traffic volumes and safety information and identified a possible roadway cross-section given the Route 1 HCP 1 classification. This Alternative in essence investigated travel lane width and shoulder width reductions that would minimize or eliminate retaining structures along the slope to the Androscoggin River. Detailed field measurements were obtained to evaluate the feasibility of this alternative.

#### Narrowing Route 1 Roadway Pavement Cross-Section

The existing dimension of the Route 1 cross-section just north of Cushing Street is (see **Figure 3.1**):

- 5'6" Sidewalk
- 3'6" Shoulder
- 12'4" Travel lane
- 11'3" Left turn lane
- 13'2" Travel lane
- 3'4" Shoulder

MaineDOT requires a typical roadway section based on the Priority Classification for Route 1 which is providing 4-foot shoulders and 11-foot travel lanes. It may be possible to have a 10-foot left-turn lane.

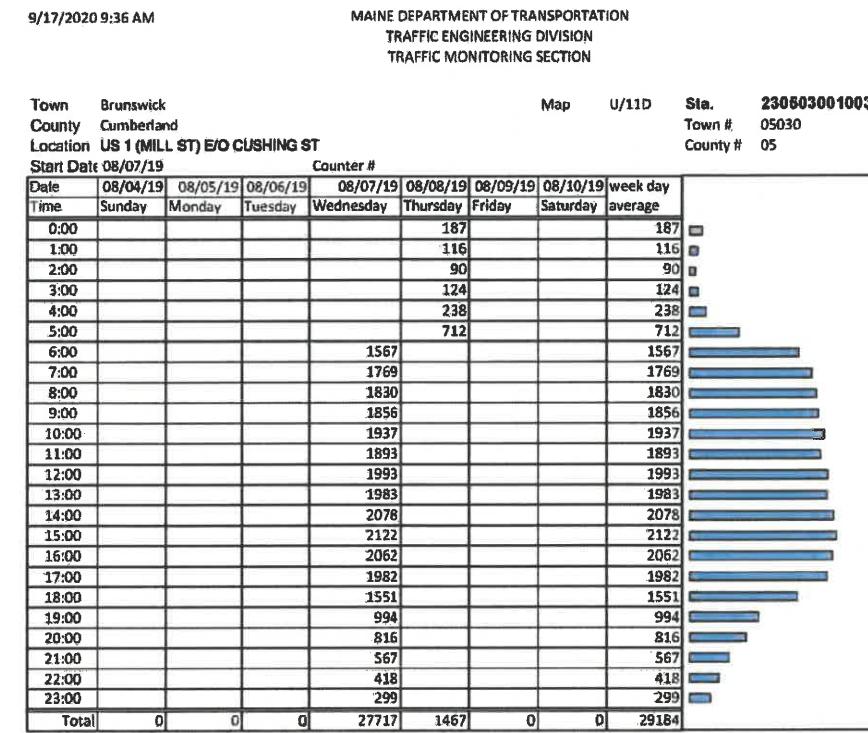
However, this left-turn lane is used by MaineDOT plows trucks and other large vehicles, so a wider 11-foot lane is suggested. Assuming 11-foot travel lanes and 4-foot shoulders, Route 1 could consist of a curb-to-curb width of 41 feet compared to the existing 43 feet 7 inches. Accordingly, the northerly curb line could be adjusted to gain 2.5 feet for the path. The existing sidewalk is 5'6" wide, so the curb adjustment may provide sufficient space for an 8-foot path without any widening toward the river. To obtain the 10-foot preferred width, plus an additional foot for a barrier (separating path users from Route 1 traffic), it would require adjusting the location of the guardrail location about 3 feet towards the river.

**Figure 3.1: Existing Roadway Dimensions**

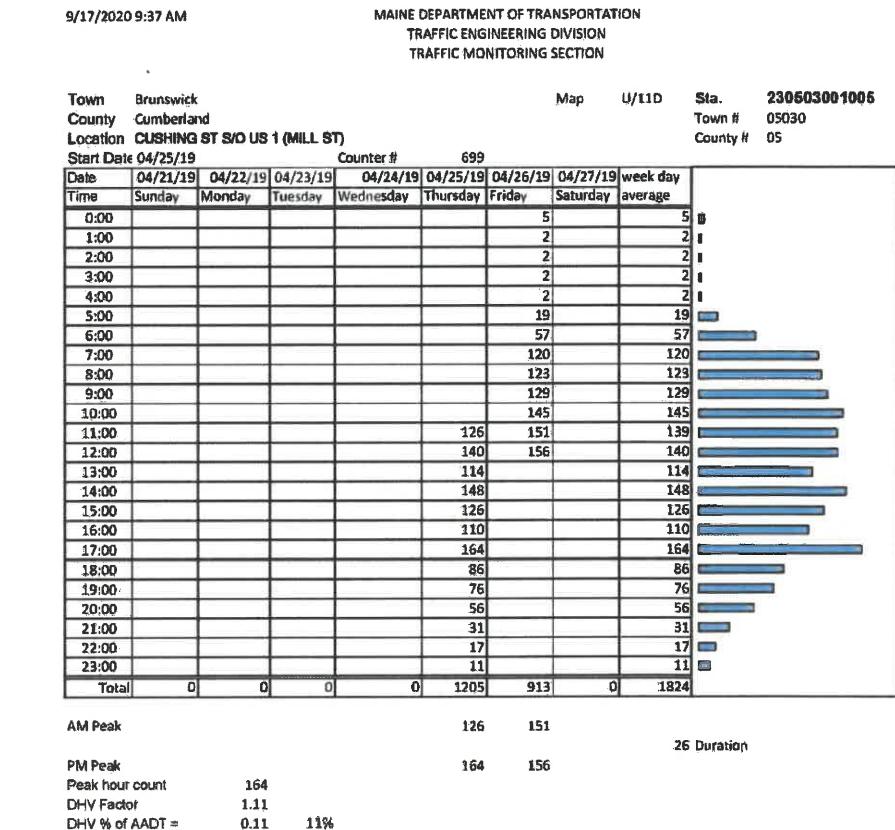
### Eliminating the Route 1 Left-Turn Lane

The key concern with eliminating the left-turn lane on southbound Route 1 is the impact a shared through/left lane would have on mobility and safety. Intersection turning movement volumes are not available. However, MaineDOT conducted Automatic Traffic Recorder counts on Cushing Street and Route 1 in August 2019. Those counts are presented to the right and indicates Route 1 has a daily volume of approximately 29,000 vehicles and Cushing Street has a daily volume of 1,800 vehicles. The heaviest two-way peak hour volume on Cushing Street is 164 vehicles between 3:00 and 4:00 PM. The corresponding two-way volume on Route 1 is 1,982 vehicles. The magnitude of traffic on Route 1 would warrant the need for a left-turn lane for a very low level of left turning traffic. Assuming a 50/50 distribution (half of the 164 vehicles) and the 60% is originating from the north, the peak hour left-turn volume is estimated to be approximately 50 vehicles. This level of traffic would easily warrant a lane and therefore elimination of the left-turn lane is not recommended.

**Conclusion: Given limited available excess pavement on Route 1, the cost to adjust the curb location and the desire to maintain a left-turn lane for movements onto Cushing Street, Alternative 1 is not recommended.**



AM Peak 1937 712 24 Duration  
PM Peak 2122

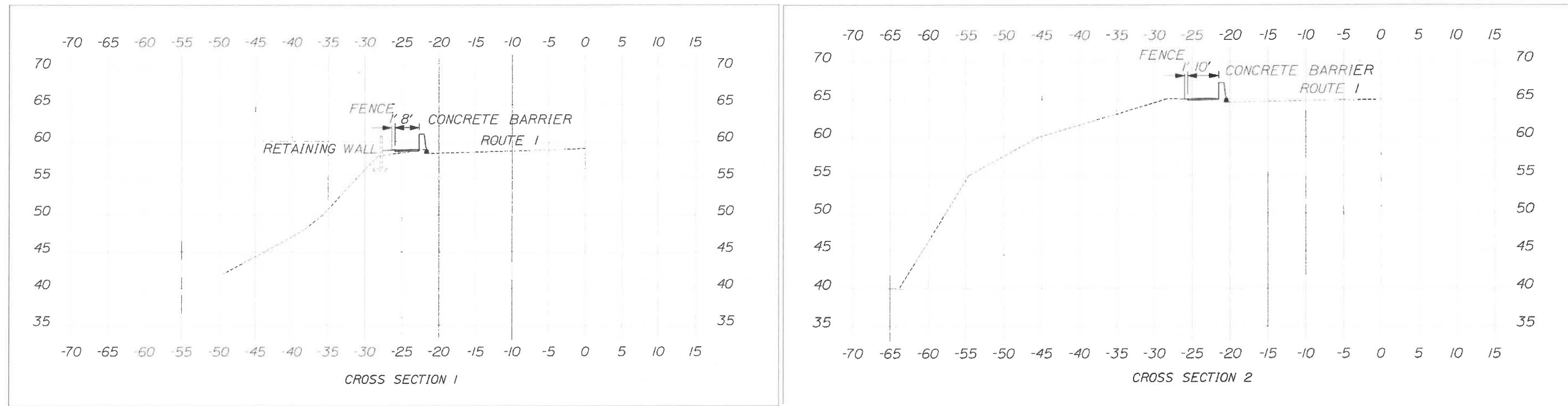


### Alternative 2

This Alternative assumes no changes to the Route 1 (Mill Street) roadway pavement configuration and thus assumes the path will be located north of the existing Route 1 curb line (the sidewalk will be widened). Just north of the Swinging Bridge the Androscoggin River gets very close to the road (see cross-sections). It will be difficult to construct a 10-foot path and barrier along Route 1 without the need for a retaining structure. Accordingly, a retaining structure that is approximately 150 feet in length will be required.

**Figure 3.2** illustrates the path plan view location and details. **Figure 3.3** depicts cross-section details along Route 1.



**Figure 3.3: Cross-Sections (see Figure 3.2 for location)**

### 3.2 Segment B – Bow Street/Cabot Street to Maine Street

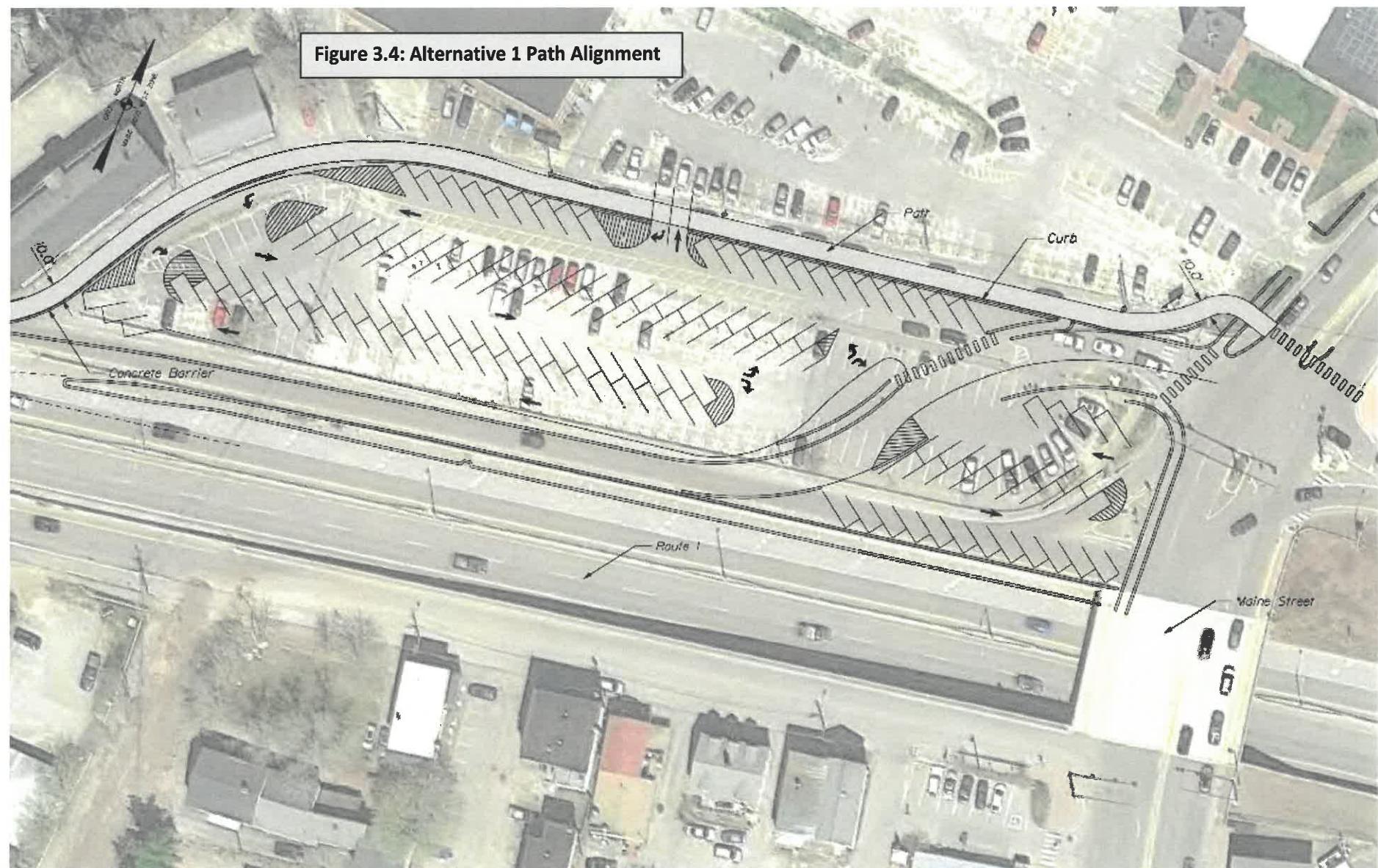
Two alternatives were evaluated from a cost perspective. Alternative 1 assumes the recommendation from the Maine Street Bridge Feasibility Study is constructed and thus the cost is only for adding the path. Alternative 2 assumes the Maine Street Bridge Feasibility Study recommendation is not implemented and the path is constructed under existing conditions on Bow and Cabot Streets.

#### **Alternative 1: With the Brunswick Maine Street Bridge Feasibility Study Recommended Concept**

The Brunswick Maine Street Bridge was initially funded as a deck replacement in MaineDOT's 3-Year Work Plan. In 2018, the feasibility study was initiated by the Bureau of Planning at the request of the Bridge Program to evaluate mobility issues and to consider transportation improvement alternatives on or adjacent to the Maine Street Bridge over Route 1 in downtown Brunswick. Alternative A6 – Simplified Maine Street/Cabot Street Intersection with a New Signal at Mason Street was recommended and assumed the Route 1 Southbound On-Ramp is combined with Cabot Street to create one eastbound approach. A traffic signal was also added at Mason Street to allow the southbound left-turn movement to pass more easily. **Figures 3.4 and 3.5** depict the A6 Alternative and that concept plan includes the provision of a 10-foot path located within the reconfigured Fort Andross Mill parking lot. Some details are noted as follows.

- The area at the corner of Bow Street and the Route 1 Southbound On-Ramp is constrained. The A6 plan includes changes to this merge area such that space is created for construction of the path around the corner.
- The path terminates at Maine Street, where a signalized crossing is proposed. The crosswalk and signal timing shall account for bicycles.
- The layout of the parking spaces will need to consider vehicle overhang impacts to trail users. Appropriate separation is suggested.
- It is suggested that the parking lot driveway crossings of the path be designed for optimal safety of path users. A raised path is suggested.

- Final details on access to Bow Street properties and the side of Fort Andross were not determined during the Maine Street Feasibility Study. Driveway crossings of the path are likely, and that design should also favor the safety of path users versus vehicles.

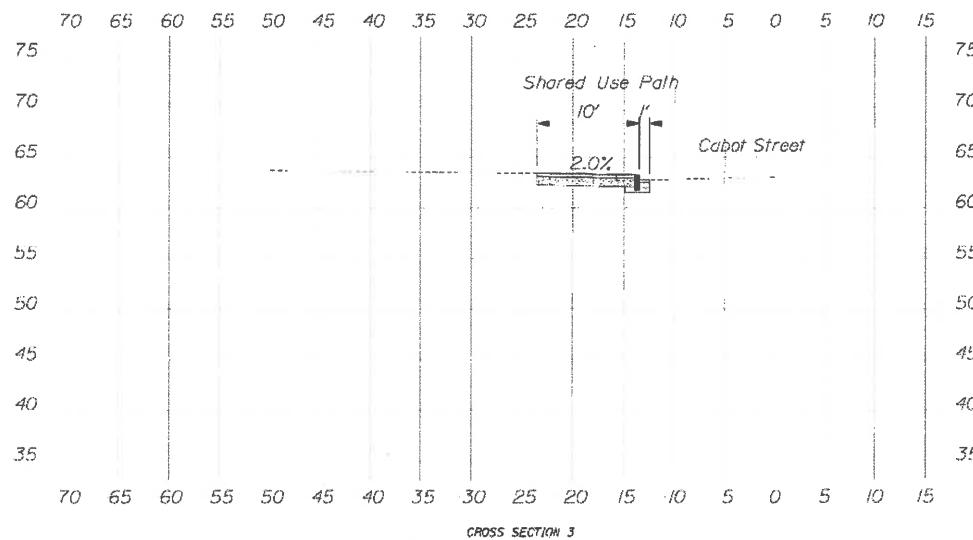


**Figure 3.5: Alternative 1 Path Alignment**

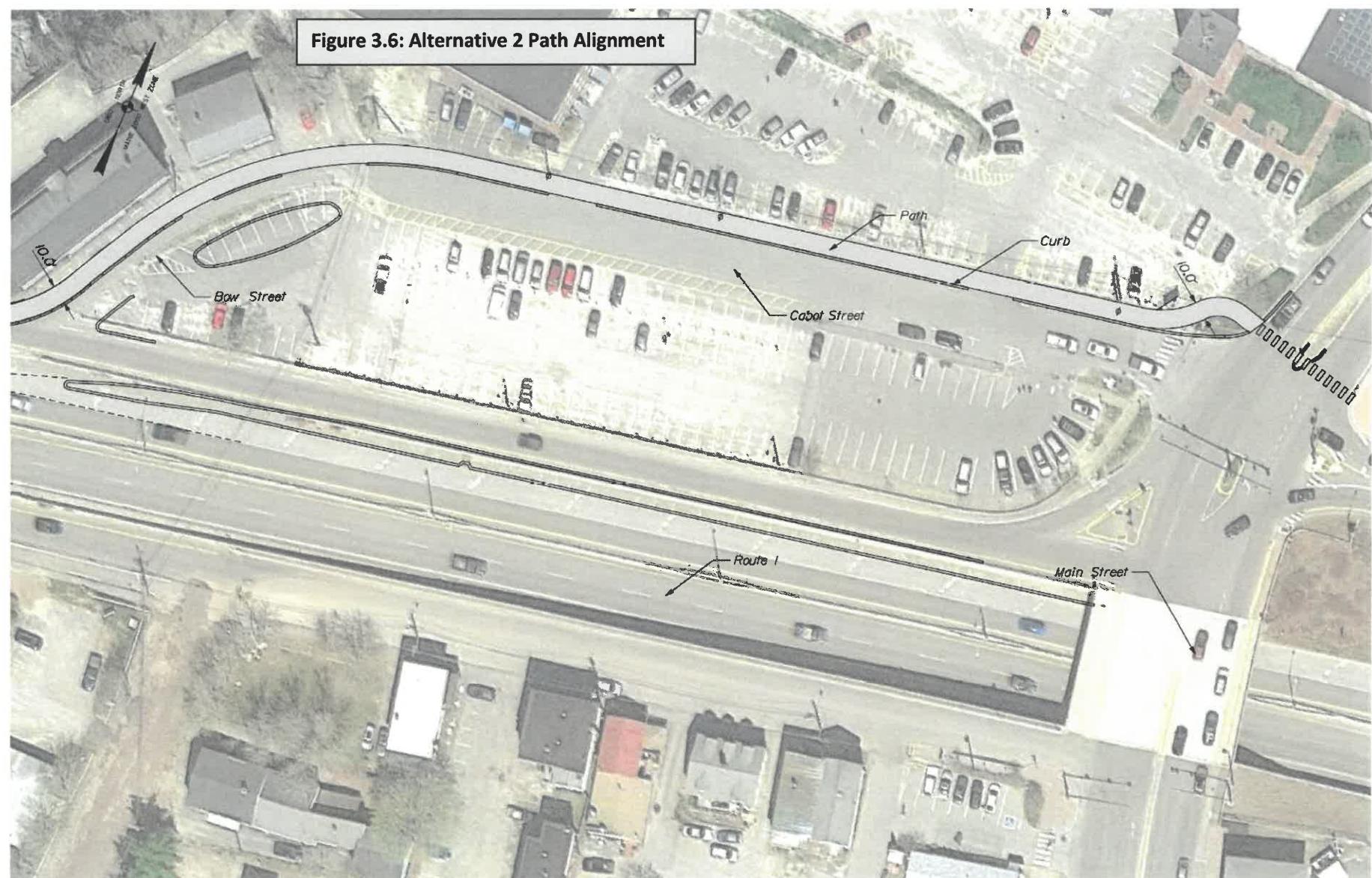
**Alternative 2: Without the Brunswick Maine Street Bridge**  
**Feasibility Study Recommended Concept**

Alternative 2 assumes the path is constructed in the location of the existing sidewalk along Bow and Cabot Streets. See **Figures 3.6, 3.7 and 3.8** depict Alternative 2 conditions. The following should be noted with this Alternative:

- The path is assumed to be 10 feet wide.
- Improvements are required at the corner of Bow Street and the Route 1 southbound On-Ramp. This will require modification to the Waterfront Maine Brunswick LLC parking area.
- On-Street parking is eliminated.
- Existing utility poles may impact the effective width of the path and relocation may be required.



**Figure 3.7: Alternative 2 Cabot St. Cross-Section**

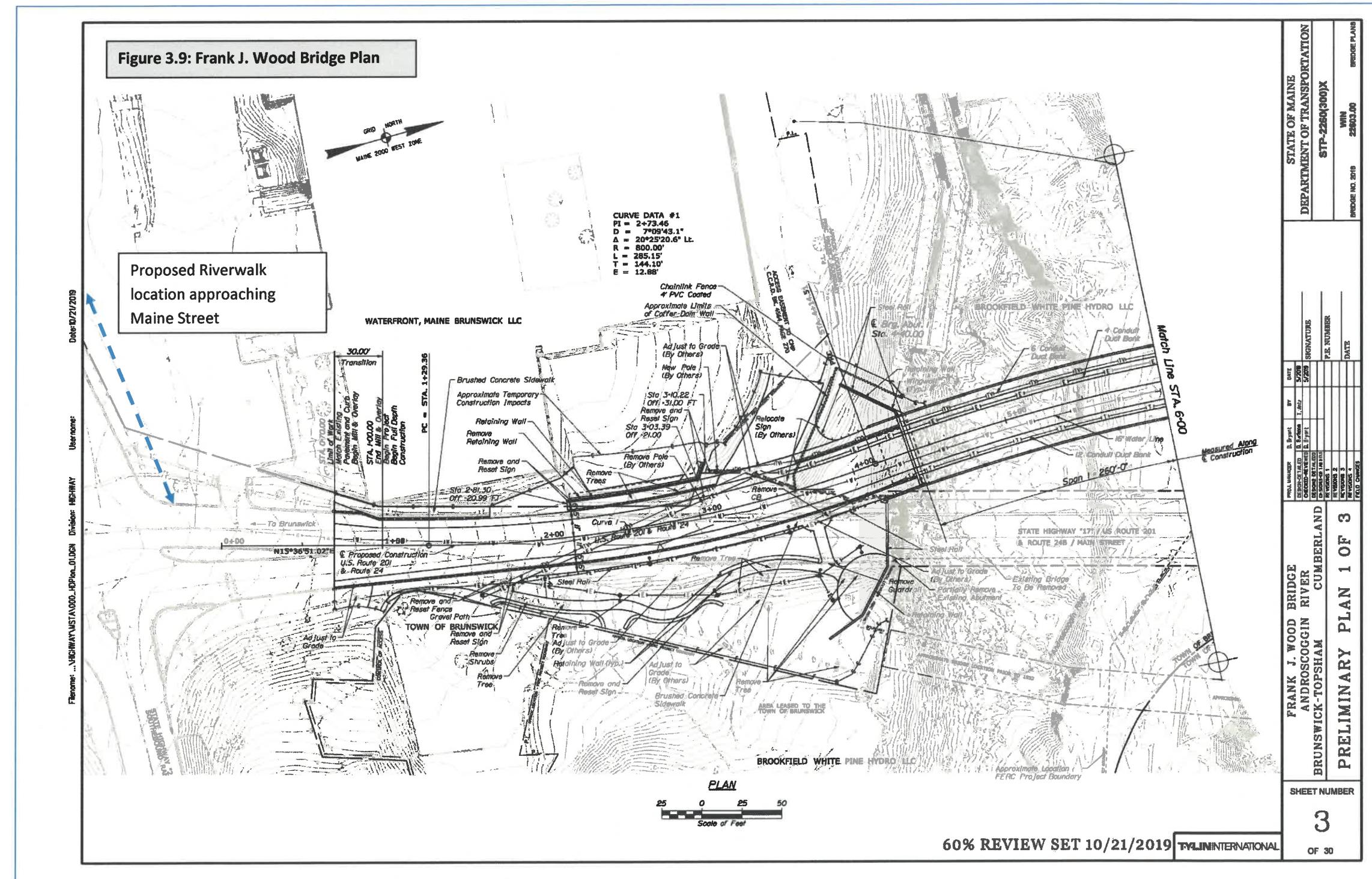


**Figure 3.6: Alternative 2 Path Alignment**

**Figure 3.8: Alternative 2 Path Alignment**

## Frank J. Wood Bridge Project

**Figure 3.9 illustrates** the preliminary design plan for the project, the limit of work ends prior to the Cabot Street intersection. The project will be providing two 5-foot shoulders and 6-foot sidewalks on both sides of the bridge. Bicyclists traveling from the proposed Riverwalk will cross at the signalized Cabot Street intersection to access the shoulder/bike lane.



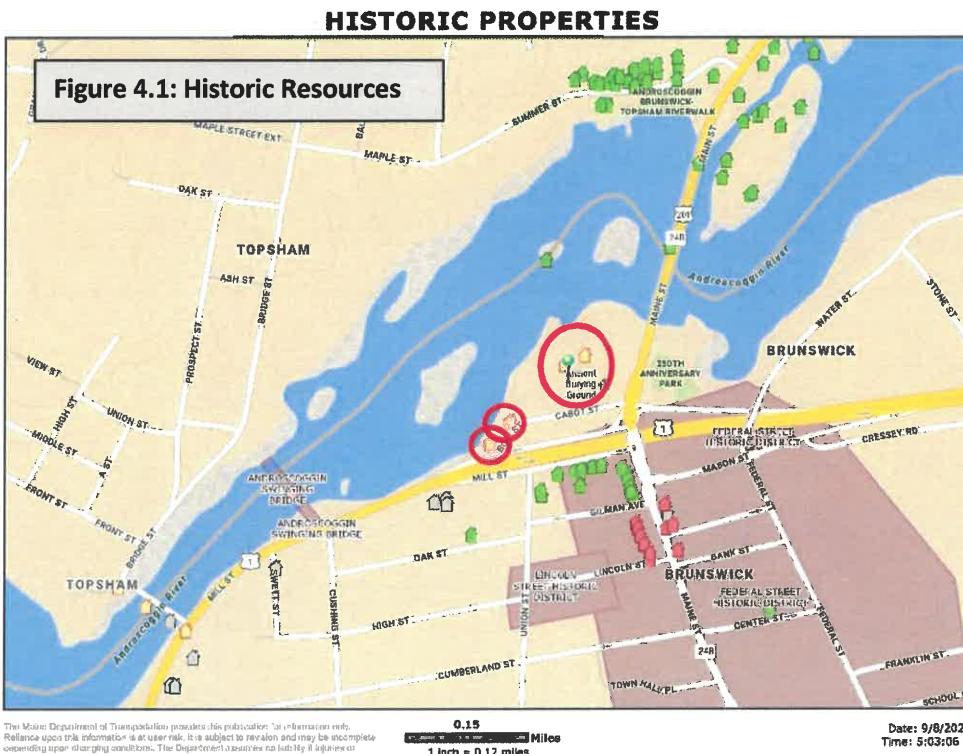
## 4.0 ENVIRONMENTAL RESOURCES

The following documents environmental resources obtained from Town and State online resources. These include a review of historic, state conserved land, and plant and animal habitat.

### 4.1 Historic

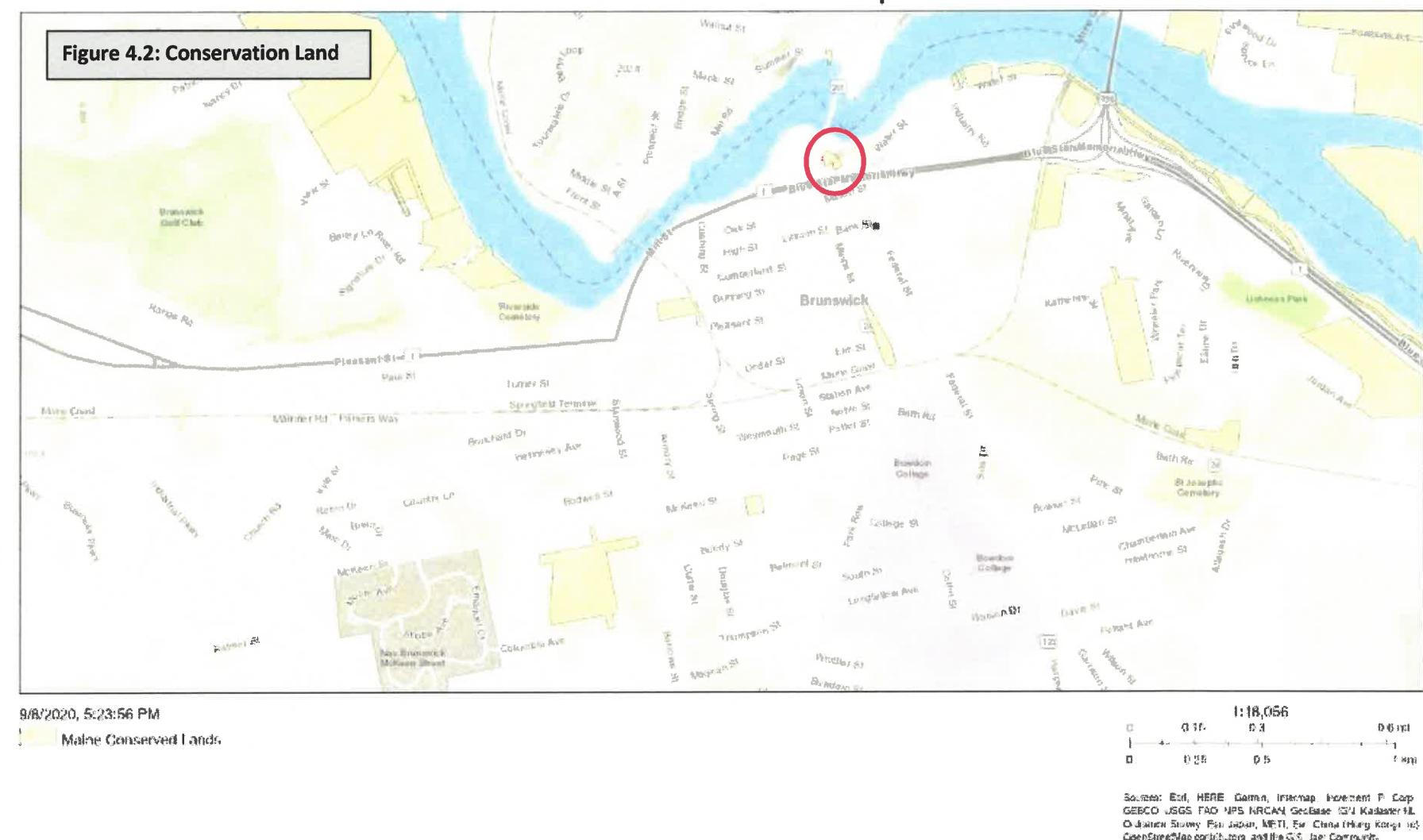
According to state data, there are three properties in the vicinity of the project that are eligible for historic designation (see **Figure 4.1** and appendix). These properties include:

- 2 Bow Street – Cabot Mill Tenement
- 18 Bow Street
- Fort Andross



### 4.2 State Conservation Land

As noted in **Figure 4.2**, there are no state conservation lands located within the study area. The nearest conservation land is the 250<sup>th</sup> Anniversary Park located across Maine Street at Cabot Street.

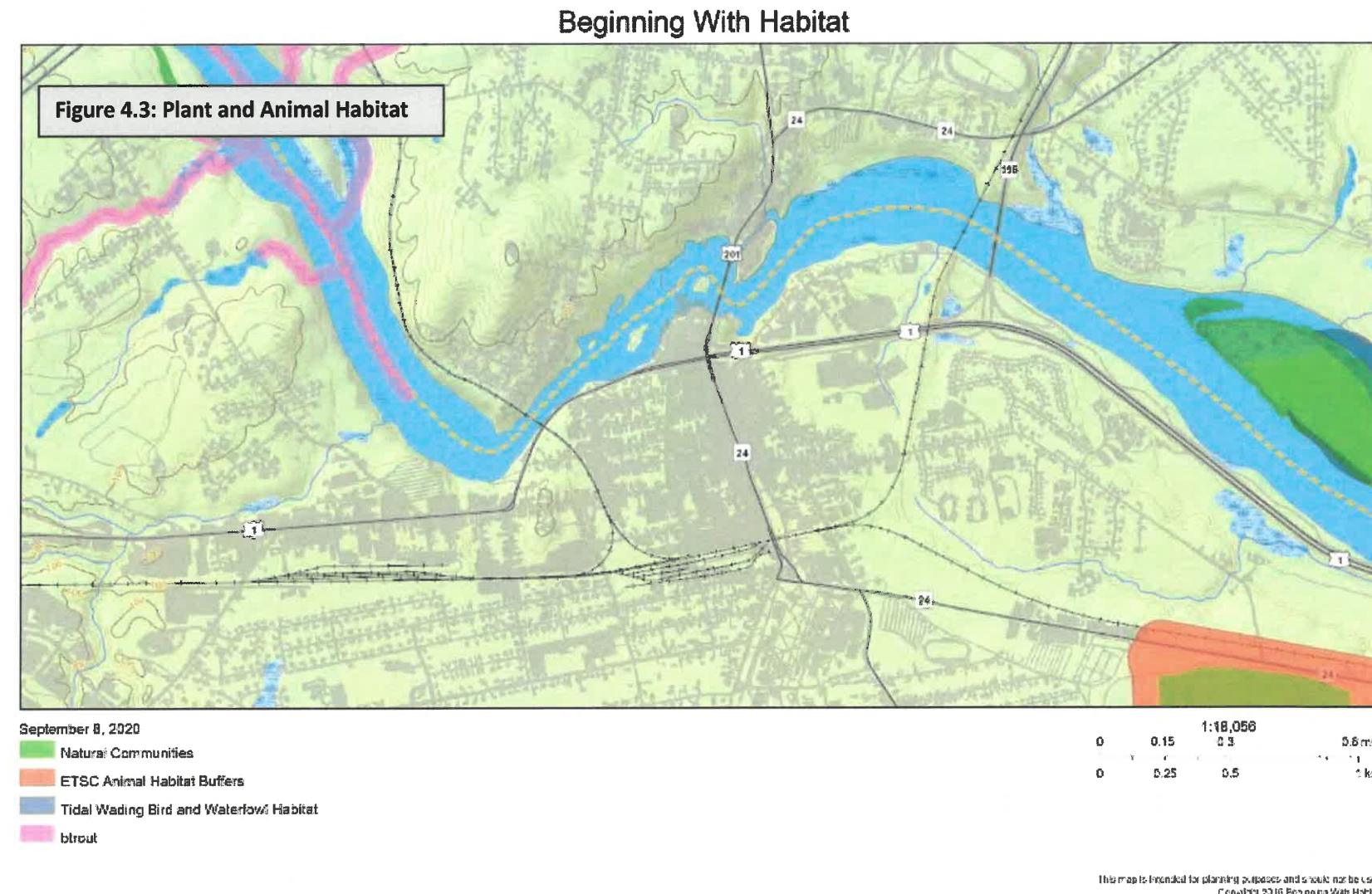


## 4.3 Plant and Animal Habitat

No known endangered plant or animal habitat were identified in the project area. See **Figure 4.3**.

## 4.4 Wetlands

No known wetlands were identified in the project area.

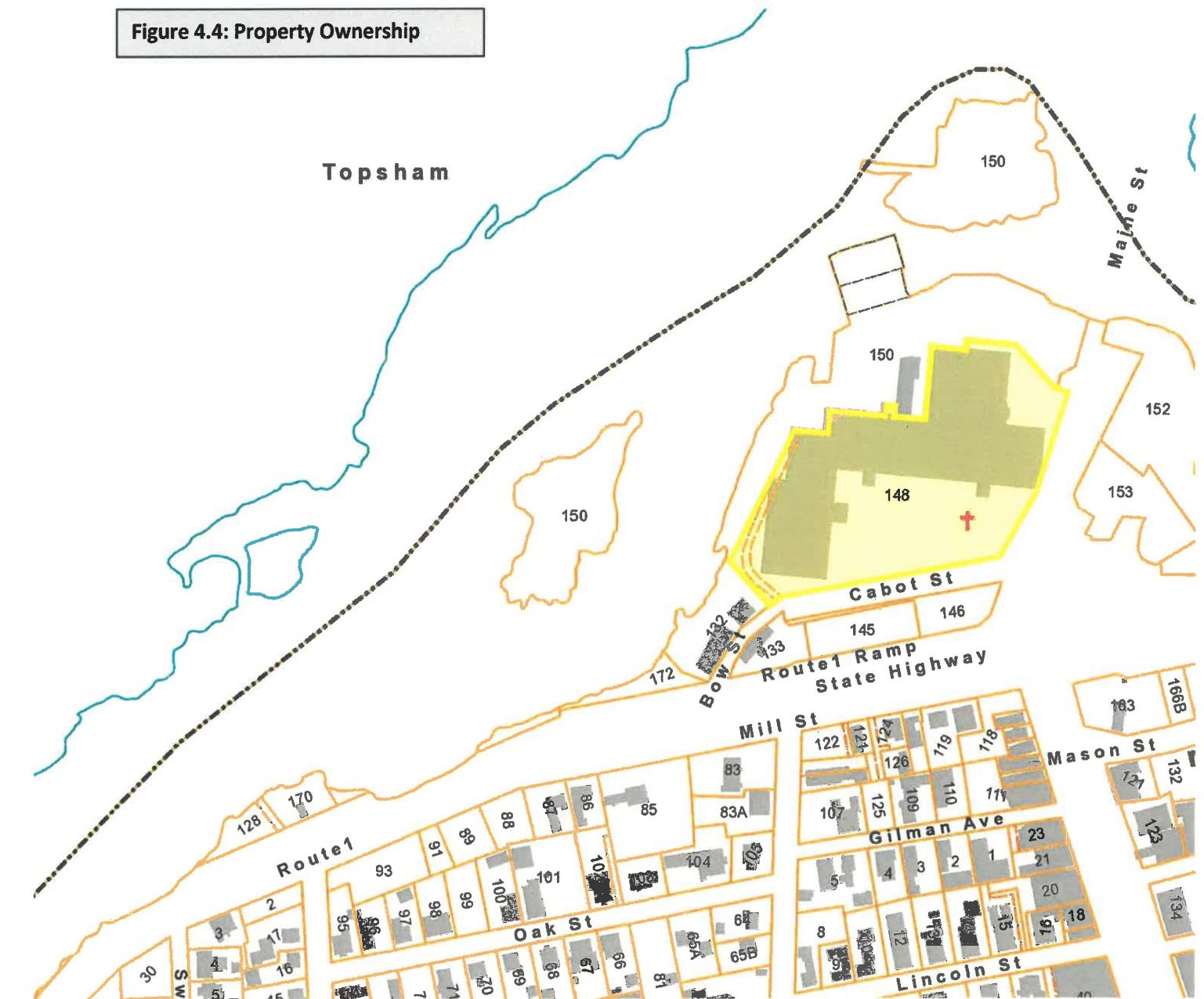


## 4.5 Property Ownership

Figure 4.4 depicts property lots according to Town of Brunswick information. From the Swinging Bridge to Bow Street properties along the path alignment are owned by State and Municipal entities. A summary of each lot ownership is provided as follows:

- Lot 128 – MaineDOT
- Lot 170 – Brunswick Sewer District
- Lot 172 – MaineDOT
- Lot 132 – Taggart Realty, LLC
- Lot 148 – Waterfront Maine Brunswick, LLC
- Lot 133 – Waterfront Maine Brunswick, LLC
- Lot 145 – Town of Brunswick
- Lot 146 – MaineDOT

Figure 4.4: Property Ownership



## 5.0 ALTERNATIVE COST ANALYSIS

TYLI developed planning-level cost estimates for recommendations (including highway and trail and potential right-of-way costs) according to concept level plans. Cost estimates were prepared for the path segments identified previously.

### 5.1 Segment A – Swinging Bridge to Bow Street

The Town requested that a cost be estimated for widening the path to 10-feet in the constrained section, where it is assumed to be 8-feet wide. The 2-foot widening would add \$35,000.00 to the project cost (which is not included in the table to the right). Given that the cost to widen the path to 10-feet is only \$35,000.00, it is recommended that the project include this and the total cost for Segment A is \$1,032,237.13.

Segment A - Swinging Bridge to Bow Street					
Description	Item #	Quantity	Say	Unit Price	Cost
Common Excavation	203.20	295.24	300	\$ 30.00	\$9,000.00
Gravel	304.10	306.30	325	\$ 45.00	\$14,625.00
Pavement	403	101.06	110	\$ 214.54	\$23,599.40
Perm. Conc. Barrier	526.321	65.00	65	\$ 299.35	\$19,457.75
G.R. Double Faced	606.1302	793.00	793	\$45.75	\$36,279.75
Chain link Fence	607.16	825	825	\$34.10	\$28,132.50
Mech. Stab. E. R. Wall	677.2	4550	4550	\$ 73.71	\$335,380.50
Curb Type 3	609.31	793	793	\$ 15.00	\$11,895.00
Drum	652.33	45	45	\$ 65.00	\$2,925.00
Cone	652.34	100	100	\$ 20.00	\$2,000.00
Construction Signs	652.35	400	400	\$ 15.00	\$6,000.00
MOTCD	652.36	80	80	\$ 250.00	\$20,000.00
Flagger	652.38	1800	1800	\$ 27.00	\$48,600.00
Sub Total					\$557,894.90
30% Contingency					\$167,368.47
Mobilization	659.10				\$72,526.34
Construction Total				\$797,789.71	
Preliminary Engineering 15%				\$119,668.46	
Right-of-Way				\$0	
Construction Engineering 10%				\$79,778.97	
Project Total				\$997,237.13	

## 5.2 Segment B – Bow Street/Cabot Street to Maine Street

### Alternative 1 – Riverwalk Abuts Maine Street Bridge Feasibility Project

Alternative 1 – Riverwalk Abuts Maine Street Bridge Feasibility Project				
Description	Item #	Quantity	Unit Price	Cost
Common Excavation	203.20	362.963	\$ 30.00	\$10,888.89
Gravel	304.10	259.2593	\$ 45.00	\$11,666.67
Pavement	403	85.56	\$ 250.00	\$21,388.89
Curb Type 5	609.34/35	24	\$ 65.00	\$1,560.00
Pavement Marking	627.744	160	\$ 3.75	\$600.00
Drum	652.33	15	\$ 65.00	\$975.00
Cone	652.34	35	\$ 20.00	\$700.00
MOTCD	652.36	30	\$ 250.00	\$7,500.00
Flagger	652.38	250	\$ 27.00	\$6,750.00
Sub Total				\$62,029.44
30% Contingency				\$18,608.83
Mobilization	659.10			\$8,063.83
Construction Total				\$88,702.11
Preliminary Engineering 15%				\$13,305.32
Right-of-Way				\$30,000.00
Construction Engineering 10%				\$8,870.21
<b>Project Total</b>				<b>\$140,877.64</b>

**Alternative 2 – Separate Path Project**

Alternative 2 – Separate Path Project					
Description	Item #	Quantity	Say	Unit Price	Cost
Common Excavation	203.20	723.70	750	\$30.00	\$ 22,500.00
Gravel	304.10	499.26	550	\$45.00	\$24,750.00
Pavement	403	194.44	200	\$200.00	\$40,000.00
Vertical Curb Type 1	609.11	640	640	\$40.00	\$25,600.00
Term. Curb Type 1-8 <sup>1</sup>	609.238	12	12	\$350.00	\$4,200.00
Curb Type 5	609.34/35	23.55	24	\$65.00	\$1,560.00
Reset Curb Type 1	609.38	50	50	\$35.00	\$1,750.00
Pavement Marking	627.744	156	160	\$3.75	\$600.00
Drum	652.33	45	45	\$65.00	\$2,925.00
Cone	652.34	100	100	\$20.00	\$2,000.00
Construction Signs	652.35	250	250	\$15.00	\$3,750.00
MOTCD	652.36	65	65	\$250.00	\$16,250.00
Flagger	652.38	700	700	\$27.00	\$18,900.00
Sub Total					\$164,785.00
30% Contingency					\$49,435.50
Mobilization	659.10				\$21,422.05
Construction Total				\$235,642.55	
Preliminary Engineering 15%				\$35,346.38	
Right-of-Way				\$30,000.00	
Construction Engineering 10%				\$23,564.26	
<b>Project Total</b>				<b>\$324,553.19</b>	

\* This estimate assumes the Maine Street Bridge project is not completed.

### 5.3 Total Cost Summary

- **Alternative in conjunction with Maine Street Bridge Project – \$1,174,000.00**
- **Alternative without Maine Street Bridge Project – \$1,357,000.00**

## 6.0 PUBLIC OUTREACH

### 6.1 Advisory Committee Kick-Off Meeting

A Kick-Off meeting was held on December 11, 2018 and key discussion items included:

- The section of roadway was recently repaved and designed by Wright-Pierce. They have cross-section data that can be supplemented with LIDAR data.
- The Committee was unsure of the available right-of-way information available. MaineDOT will check what information they have. Wright-Pierce may also have some available information. TYLI will inquire with them.
- The sewer pump station may have some equipment in the area. The utilities can be found using Brunswick's online GIS database. Any design needs to consider impacts on utilities.
- The mill-and-fill project puts a moratorium on touching the pavement. We can get a waiver to do shoulder work.
- TYLI will look at what environmental information is available in the area from the Frank J. Wood Bridge project.
- Due to the proximity to the mill, Cabot Street may have historic protections as well as the apartment buildings on the west side of Bow Street.
- TYLI will get information on the drilling samples from the Frank J. Wood project.
- The “Pool Table” bridge feasibility project has the potential to aid or hinder this project and needs to be considered in any designs.
- The Town and the State will create minimum design requirements.
- 10' is the preferred width for a shared use path but special constraints are understood for this project. The curb separation standard needs to be clarified by MaineDOT. Standard best practice is to separate the path from the road.
- The Riverwalk Committee would prefer a barrier for the path. MaineDOT will determine if the barrier needs to be crash worthy. Federal guidelines say it doesn't.
- There is a possibility that Cabot and the Route 1 On-Ramp will get combined into one road.
- The Riverwalk Committee would prefer to carry the path along the river. It is not likely due to an approximately one-story grade

separation behind the mill. The Committee will need to document why we aren't proceeding with this alternative.

- Transitioning from bicycle lanes and sidewalks to a multi-use path is a major design requirement. It is likely easiest to transition at the signal at the Pool Table intersection area.
- The Pool Table bridge project is looking at a roundabout, a new ramp, combining streets, changing traffic flow, and adding a Single Point Interchange (SPUI). These alternatives will change traffic flow in the study area which needs to be considered during any Route 1 road diet analysis.
- The Town will need to write to MaineDOT after the study to acquire funds.
- MaineDOT is looking at about \$400,000-\$500,000 for the project

### 6.2 Advisory Committee Working Session

A status meeting was held on November 22, 2019 to discuss progress. Discussion items included:

- In the area from the Swinging Bridge to Bow Street changes to the Route 1 cross-section are not feasible. Accordingly, a section of the path will require a retaining structure. This was specifically discussed in terms of field measurements and traffic conditions.
- Reviewing the draft recommendations for the Maine Street Bridge Street Feasibility Study. Specifically, the path alignment was presented.
- It was noted that the path will terminate at Maine Street and bicyclists headed to Topsham would need to cross at the signalized intersection.

### 6.3 Riverwalk Committee Meetings to present the Draft and Final Recommendations.

#### May 27, 2020 Zoom Meeting (Notes provide by the Riverwalk Committee)

**Present:** Co-Chairs: Nancy E. Randolph & Josh Katz, **Secretary:** Don Gower **Members:** Tom Farrell, Bill Brilliant, Melissa Fochesato, Rick Wilcox & Pam LeDuc **Guests:** Ryan Barnes, Tom Errico, Patrick Adams, Nate Howard and Martin Rooney **Absent:** Members: Alison Harris & Dot Riendeau **Advisory Member:** Tony Muench

#### Pre-meeting workshop 7:01 – 7:29 p.m.:

TY-Lin engineer, Tom Errico, walked us through his Power Point presentation of the preliminary Riverwalk plan. He will forward Nancy E. Randolph a pdf of the presentation. Some key points of discussion were:

1. The estimated cost of the plan is \$1,280,000 (rough estimate and no lighting is included).
2. The current curb-line along Mill Street will need to be maintained. The plan calls for a reduction of the path width from 10' to 8' for an estimated 100' (Tom Errico will confirm the exact distance) along Mill Street. This is due to the limited real estate between Route 1 and the Androscoggin River and the cost of a retaining wall. Nancy E. Randolph stressed the need to maintain the 10' width for the entire length of the path. Tom Errico agreed to provide a cost estimate to do that. Patrick Adams noted that the 8' width meets national standards.
3. The plan calls for the path to follow the current location of the sidewalk along Cabot Street.
4. The plan does not include any details or cost for the connection to the new/rebuilt FJW Bridge.
5. None of the path cost is included in the Main Street Bridge project (Pool Table). In fact, much of the current Riverwalk plan might need to be modified if the Pool Table project is changed from the currently preferred option.
6. The estimated timeline is for a draft by July, Town Council/Riverwalk Committee approval in August & September leading to final plans by October.

Our Committee thanked all the guests who participated in the meeting. Regular Meeting

Josh Katz called the meeting to order at 7:29 p.m.

**Minutes:** The April 22, 2020 minutes were unanimously accepted as presented. (Nancy E. Randolph motioned and Melissa Fochesato 2<sup>nd</sup>).

#### Old Business:

1. Discussion of the Feasibility Study Draft Report:
  1. Increasing the width to 10' for the entire length is our only open question at the moment.
  2. Tom Farrell informed us that MDOT might be limiting any Bike/Ped projects \$400,000 to \$500,000 next year. This would seriously increase our fundraising need. Tom Farrell will follow-up on this concern. Nancy E. Randolph suggested we contact Senator Angus King for some federal support of

the project.

3. MDOT has taken over the design work from Ty-Lin for the Maine Street Bridge (Pool Table) project. This, and expected 2021 budgeting issues, could affect the final plan and how it relates to our project.
4. Tom Errico suggested we have a fall back plan to complete the walkway in sections. He recommended focusing on the Swinging Bridge to Cabot Street section.
5. No EPA study cost has been included with the project.
6. Tom Farrell brought up a question about the need for public input. Other than lighting there is limited opportunity for input. We will review this as needed along the path to approval.
7. The RTP Grant proposal is still on the table. However, we might not have the final plan ready by the September 25, 2020 deadline.

## 6.4 Town Council Meeting

On October 4, 2021, Town Staff review the Riverwalk project with the Town Council, and they unanimously approved the following resolution to request funding for the portion of the Riverwalk project located from the Swinging Bridge to Bow Street.

**TOWN OF BRUNSWICK, MAINE  
TOWN COUNCIL**

**A Resolution Endorsing Segment A of a Multi-Use Pathway (the Riverwalk) along the Androscoggin River from the Swinging Bridge to Bow and Cabot Streets**

WHEREAS, for several years, the Town of Brunswick has participated with the Riverwalk Advisory Committee and the Town of Topsham in the planning and construction of the Riverwalk: a 1.25 mile Androscoggin Brunswick-Topsham walking loop ("Riverwalk"); and

WHEREAS, the Riverwalk project has been included in the Capital Improvement Program since 2010; and

WHEREAS, the 2011 Master Plan for Downtown Brunswick & the Outer Pleasant Street Corridor recommends support for the development of the Androscoggin Riverwalk, with pedestrian connections to Fort Andross, Frank Wood Bridge, the Swinging Bridge and Topsham; and

WHEREAS, in 2017 the Maine Department of Transportation ("MDOT") and Brunswick Town Council approved an \$80,000 project of a "Feasibility study and possibly the preliminary design of a multiuse pathway along the Androscoggin River beginning at the Swinging Bridge, to Mill Street, Bow Street and Cabot Street ending at Frank J. Wood Bridge"; and

WHEREAS, in 2021 the Androscoggin Brunswick-Topsham Riverwalk Feasibility Study has been completed and recommends the project be completed in separate segments; and

WHEREAS, the MDOT and the Riverwalk Advisory Committee support completing Segment A from the Swinging Bridge to Cabot and Bow Streets;

**NOW THEREFORE BE IT RESOLVED**, that in cooperation with MDOT the Town Council endorses proceeding with preliminary design of Segment A of the Riverwalk from the Brunswick end of the Swinging bridge along Mill Street to Cabot Street as proposed in the Androscoggin Brunswick-Topsham Riverwalk Feasibility Study. In endorsing the project, the Town Council recognizes that the Town of Brunswick could be responsible for 100% of the preliminary engineering and related costs should the Town decide not to proceed with the project without good cause.

Proposed to Town Council: October 4, 2021  
Adopted by Town Council: October 4, 2021

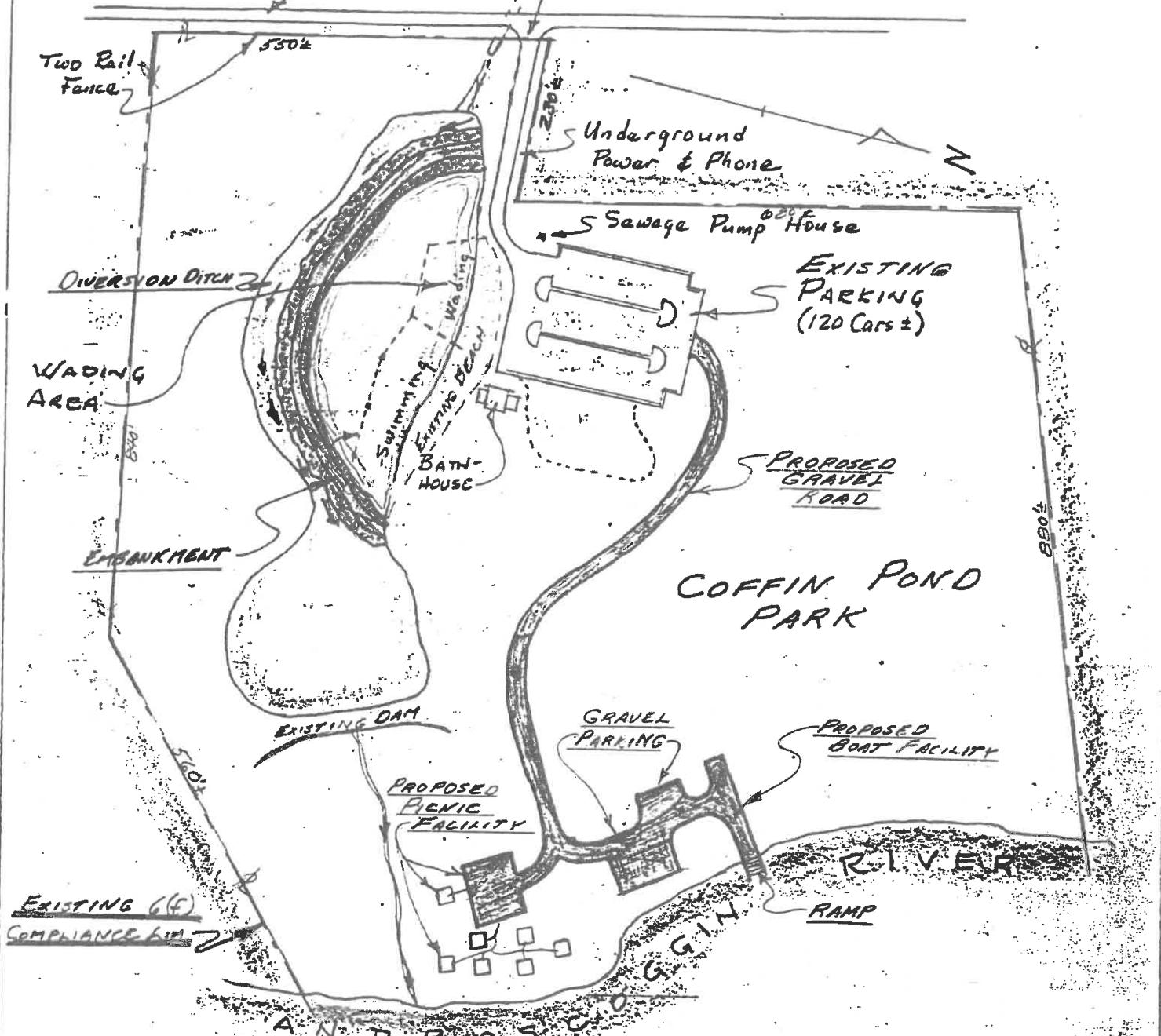
# Exhibit E



# Exhibit F

River Road to  
U. S. Route 1

Entrance



BRUNSWICK-ANDROSCOGGIN BOAT FACILITY

REVISED SCHEMATIC SITE PLAN

1" = 200' ±

REV. 6-22-84 J.H.

REVISED 5-5-69  
6-30-82 J.H.

MAINE STATE PARK  
AND  
RECREATION COMMISSION  
Augusta, Maine  
F.M.B. 11-1-68

NOTE: ACCESS, PARKING, & BEACH  
FACILITIES WERE DEVELOPED  
UNDER PPN #23-00014 (Copy 1, 1972).

THIS PROJECT IS FOR WATER QUALITY  
IMPROVEMENT BY REDUCING CHLORINE  
TREATED VOLUME & DIVERSION OF  
POLLUTED INLET WATER.  
A BEACH SLIDE IS ALSO PROPOSED.

# Exhibit G

