



Shaun A. Suhoski, *Town Manager*
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June 28, 2022

Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
Attention: MESA Regulatory Review
1 Rabbit Hill Road
Westborough, MA 01581



Re: Request for Simple MESA Review: Millers River Greenway Trail Feasibility Study

Dear MESA Reviewer:

The Town of Athol respectfully requests your review and comments on the proposed conceptual design in Athol including: 1) the proposed off-road shared use path (SUP) from Brookside Road (near McDonalds) to the Athol wastewater treatment plant located off Jones Street; and 2) the proposed improvement to Alan E. Rich Environmental Park as described in the letter and the enclosed attachments.

As part of your review, the Town asks that your office provide direction on any restrictions, requirements, and design/construction considerations that should be incorporated into the project to minimize potential impacts the Massachusetts Endangered Species Act (MESA) and Natural Heritage & Endangered Species Program (NHESP) regulated resources including but not limited to any seasonal issues or buffers from natural resources.

Project Overview

The proposed work, located in Athol, consists of providing a greenway that connects from Brookside Road (near McDonalds) to the Alan E. Rich Park. These proposed greenway features include two proposed trailheads, a combination of off- and on-road bike paths, a pedestrian bridge, and improvements to the existing features of Alan E. Rich Park. The two trailheads will be located at: 1) just south of the McDonalds located on Brookside Road; and 2) at the entrance to Alan E. Rich Park.

Proposed Off-Road SUP from Brookside Road to Athol Wastewater Treatment Plant

The proposed off-road SUP is approximately 4,200 feet long, 12 feet wide, and begins at the proposed trailhead on Brookside Road, directly south of the McDonalds, and continues easterly to the service road to the Athol Wastewater Treatment Plant located west of Jones Street. The potential alignment of this SUP follows the footprint of an existing dirt path, connects to Proctor Avenue, and crosses the Millers River, with a proposed 175-foot-long prefabricated steel bridge, and then connects to the wastewater service road located approximately 2,000 feet to the east of Millers River. It is currently presumed that this off-road portion of the SUP would include lighting for safety. The proposed SUP alignment appears to impact multiple environmental features including, but not necessarily limited to, NHESP Estimated

Habitats of Rare Wildlife, wooded marsh, marsh/bog, and work within the 100-year Federal Emergency Management Agency (FEMA) flood plain, with no net-loss to flood storage proposed. No work except for the proposed pedestrian bridge will be within the 25-foot river buffer.

The on-road portion of the greenway begins at the Athol Wastewater Treatment Plant and extends to the Alan E. Rich Park trailhead. This on-road path is 10-foot-wide and approximately 3,600-feet-long.

Proposed Improvement to Alan E. Rich Environmental Park

All work will occur within exist disturbed areas including and within the immediate vicinity of the existing parking lot and will consist of providing a clear connection to the proposed greenway, additional pedestrian accommodations, and a clear connection between the proposed trailhead and the existing park paths, as well as consolidating existing pedestrian features to reduce pedestrian and vehicle conflicts. These park improvements consist of a proposed trailhead, a gravel picnic table area, and proposed connecting paths. While none of the work takes place in the 25-foot river buffer, the existing park is in the 100-year FEMA flood plain and NHESP Estimated Habitats of Rare Wildlife.

We appreciate your assistance in this matter. If you have any questions regarding the enclosed information, plans or any other questions or concerns please contact Eric R. Smith, Athol Planning Director, at (978) 721-8500, ext. 517, or via email esmith@athol-ma.gov for further clarification.

Sincerely,



Shaun A. Suhoski
Town Manager

Enclosures

- MESA Project Review Checklist
- USGS Project Locus Map
- Athol Assessors Maps with Natural Resources Layers Shown
- Existing Site Photos
- Millers River Greenway Feasibility Report

ATTACHMENT 1

MESA Project Review Checklist



DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581

p: (508) 389-6300 | f: (508) 389-7890

MASS.GOV/MASSWILDLIFE

MESA Project Review Checklist

Massachusetts Endangered Species Act M.G.L. c.131A and Regulations (321 CMR 10.00)

1) Project Location:

Millers River Greenway	Athol	01331
Street Address/Location	City/Town	Zip Code
N/A	N/A	
Assessors Map/Plat Number	Parcel /Lot Number	

Property recorded at the Registry of Deeds for:

N/A	
County	Certificate # (if registered land)
N/A	
Book	Page Number

2) Applicant:

Shaun A. Suhoski	Athol Town Manager	Town of Athol
First Name	Last Name	Company
584 Main Street		
Mailing Address		
Athol	MA	
City/Town	State	Zip Code
978 575-0301		01331
Phone Number	Fax Number	Email address

3) Property owner (if different from applicant):

First Name	Last Name	Company
Mailing Address		
City/Town	State	Zip Code
Phone Number	Fax Number	Email address

4) Representative (if any):

Company		
Steven	Tyler	
Contact Person First Name	Contact Person Last Name	
11 Beacon Street		
Mailing Address		
Boston	MA	02108
City/Town	State	Zip Code
617-538-9504		styler@hshassoc.com
Phone Number	Fax Number	Email address

Additional Information

1. Will this project require a filing with the Conservation Commission and/or DEP? ☐ No ☒ Yes
2. Has this project previously been issued a NHESP Tracking Number (either by previous NOI Submittal or MESA Information Request Form)? ☒ No ☐ Yes, if Yes -Tracking No. _____

Project Description (attach separate sheet, as needed)

Please note, certain projects or activities are exempt from review, see 321 CMR 10.14. The MESA does not allow project segmentation. Your filing must reflect all anticipated work associated with the proposed project (CMR 321 10.16).

Construction of approximately 7800 linear feet of shared use path (approx. 4200 feet off-road & 3600 feet on-road), associated signage, trail heads and a pedestrian bridge (approximately 175 linear feet) crossing Millers River along the Northern side of South Athol Road in Athol, MA.

Please refer to attached cover letter, figures, maps and conceptual plans for further information.

Include the Following Information:

ALL Applicants must submit:

- 1 USGS map (1:24,000 or 1:25,000) with property boundary clearly outlined
- 1 Project plans for entire site (including wetland Resource Areas, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work)
- 1 Assessor's map or right-of-way plan of site
- 1 Statement/proof that applicant is the Record Owner or that applicant is a person authorized in writing by the record owner to submit this filing
- 1 Photographs representative of the site

Projects altering 10 or more acres, must also submit:

- 1 A vegetation cover type map of the site
- 1 Project plans showing Priority Habitat boundaries

The NHESP may request additional information, such as, but not limited to, species and habitat surveys, wetland reports, soil map and reports, and stormwater management reports (321 CMR 10.16). The NHESP will notify the applicant within 30 days if the materials submitted do not satisfy requirements for a filing and request submission of any missing materials (321 CMR 10.18(1)).


Filing Fee, Payable to Comm. of MA - NHESP (see website for fee information)

a. Total MESA Fee Paid \$300 b. Acreage of Disturbance <5 acres c. Total Site Acreage TBD

Required Signatures

I hereby certify under the penalties of perjury that the foregoing MESA filing and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

Shaun A. Suhoski

 Digitally signed by Shaun A. Suhoski
Date: 2022.06.28 19:36:33 -04'00'

06/28/2022

Signature of Property Owner/Record Owner of Property

Date

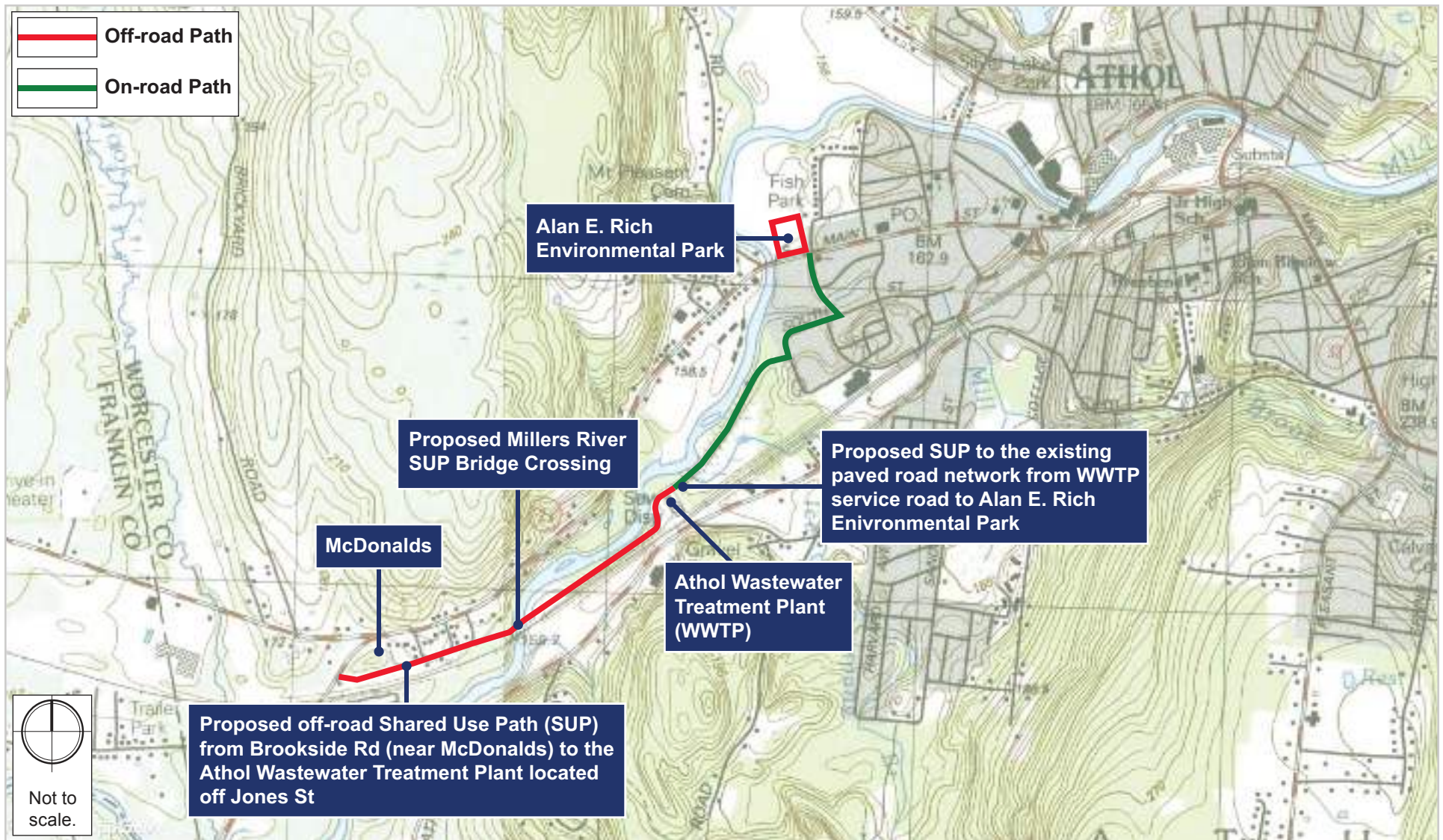
Signature of Applicant (if different from Owner)

Date

ATTACHMENT 2
USGS Project Locus Map



Figure 1. *USGS Map of Project Locus*



ATTACHMENT 3

Athol Assessors Maps with Natural Resources Layers Shown



Athol, MA

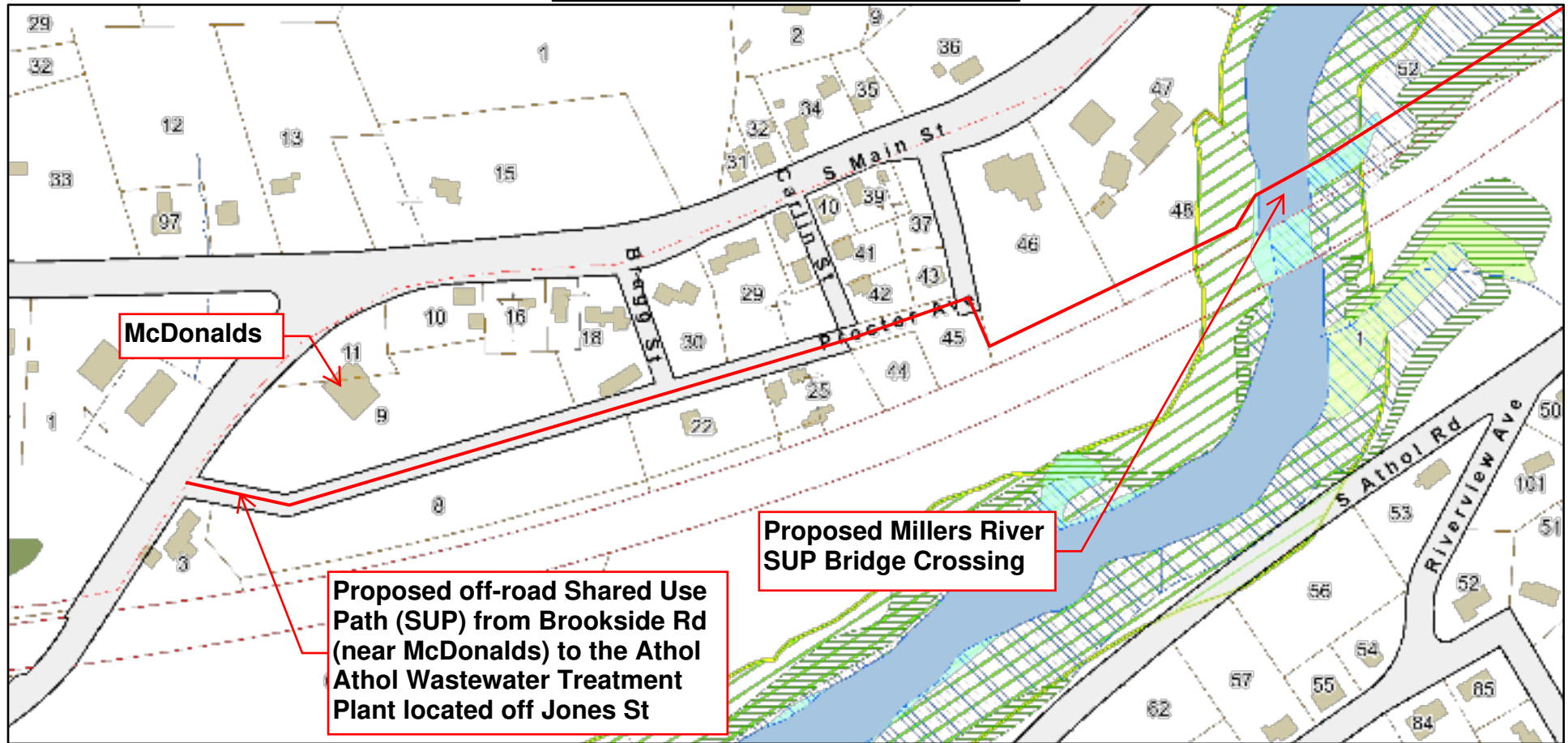


May 11, 2022

1 inch = 277 Feet

www.cai-tech.com

0 277 554 832



NHESP Estimated Habitats of Rare Wildlife	500 Yr - Zone X500	Tract Line	PWater
Marsh/Bog	Water-poly	Utility	Property Line
Wooded marsh	Right of Ways	Property Hook	Public Road
Open Water	Buildings	Property TIC	Railroad
100 Yr - Zone AE	WaterLines	Utility	

Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.



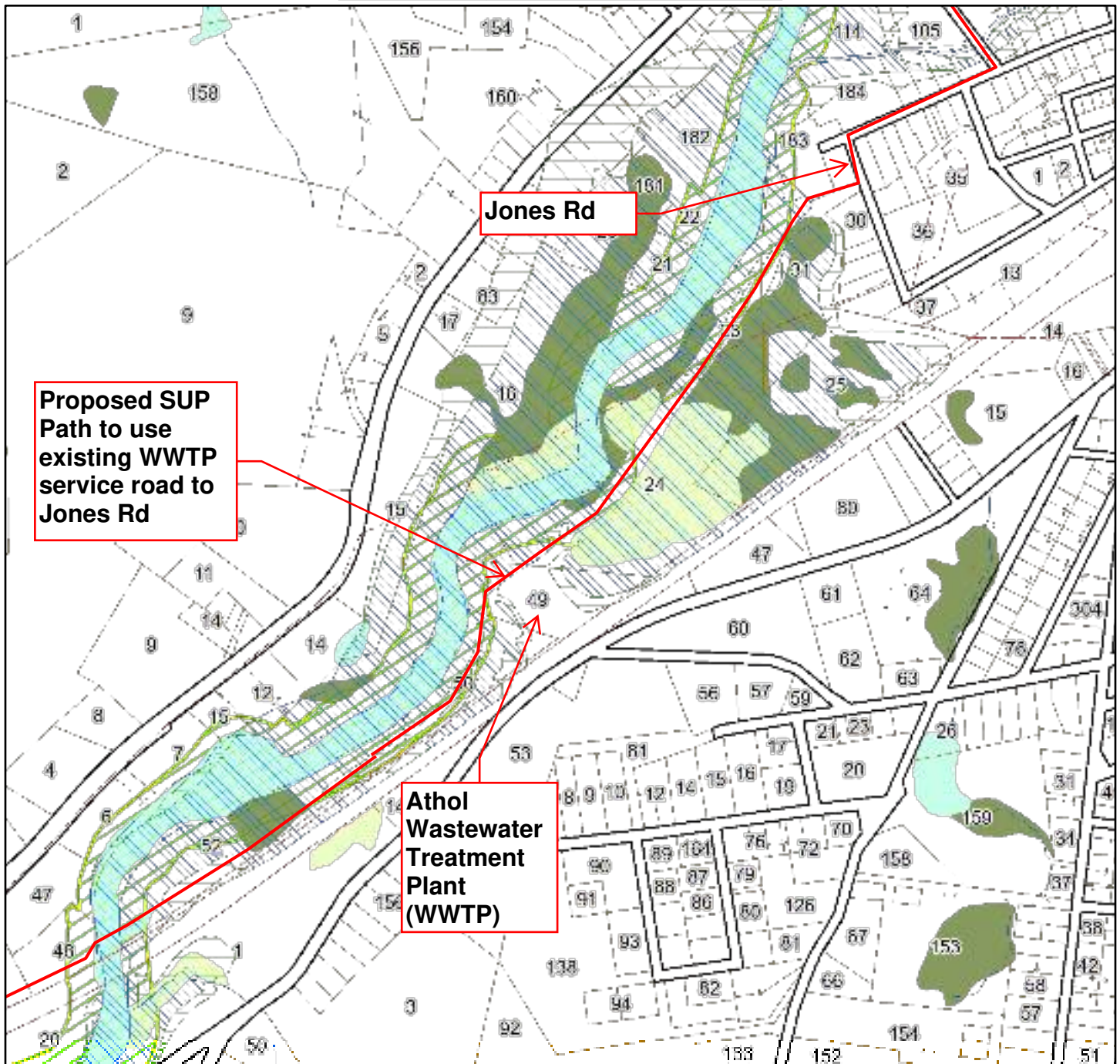
Athol, MA

1 inch = 554 Feet



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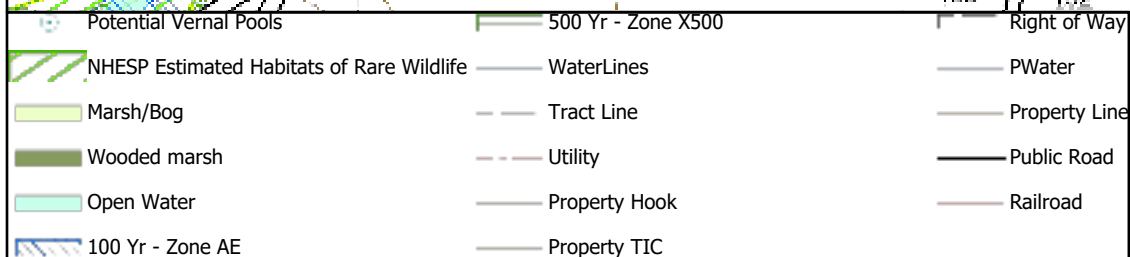
May 11, 2022



**Proposed SUP
Path to use
existing WWTP
service road to
Jones Rd**

Jones Rd

**Athol
Wastewater
Treatment
Plant
(WWTP)**



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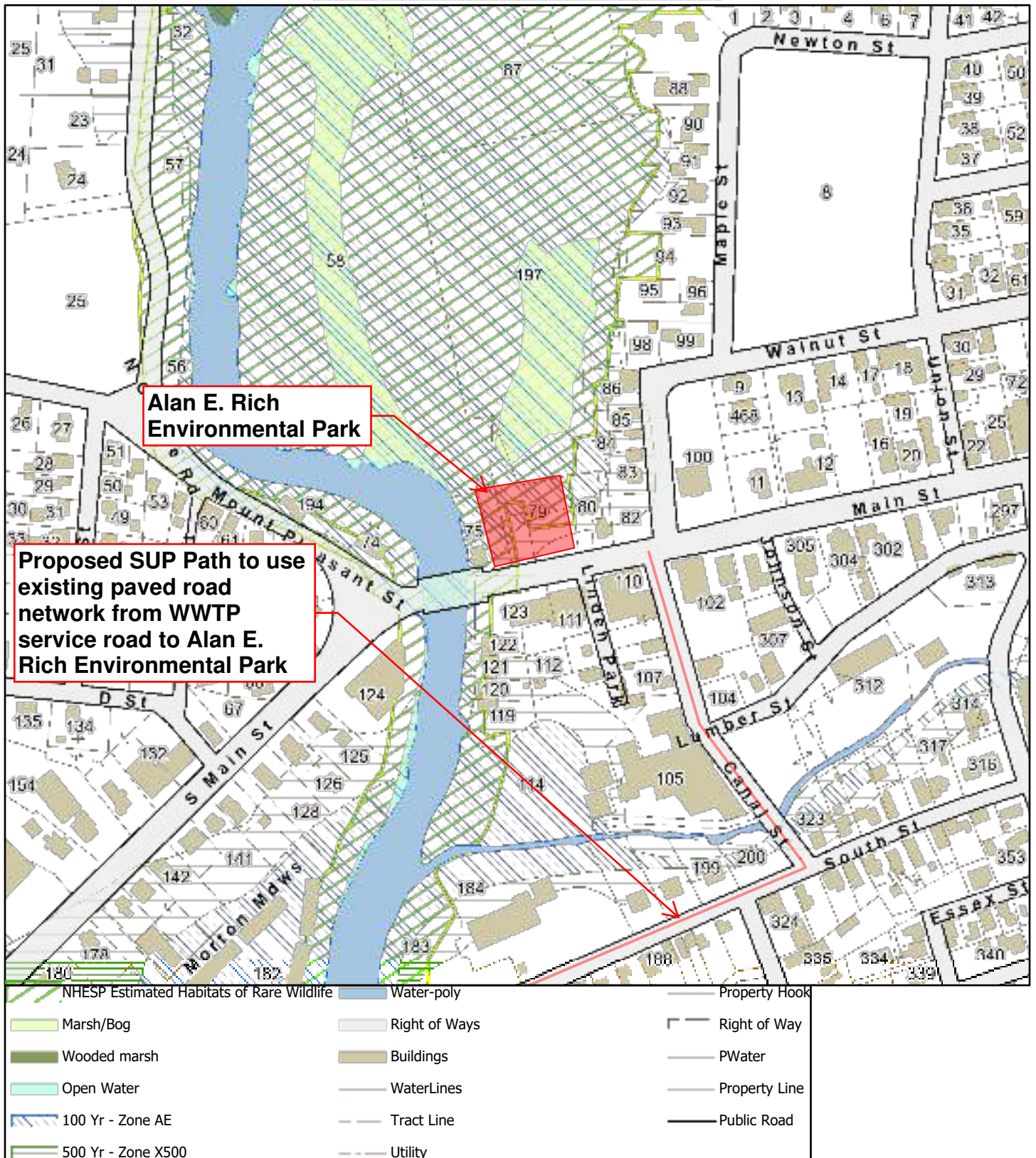
Athol, MA

1 inch = 277 Feet



www.cai-tech.com

May 11, 2022



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ATTACHMENT 4
Existing Site Photos



Photo 1 – Beginning of Future Trailhead/Greenway beginning location South of the McDonalds of Brookside Road looking East.



Photo 2 – Western Most location on Proctor Avenue looking toward Bragg Street



Photo 3 – Millers River-looking West located directly by railroad track. Location of proposed bridge. NHESP Priority Habitat of Rare Species



Photo 4 – Existing parking lot of Alan E. Rich Environmental Park. End of proposed greenway looking North. NHESP Priority Habit of Rare Species. DEP certified Wetlands can be seen behind tree line.

**Photos of Off-Road Trail from Brookside Road
to West of the Millers Rivers**



2022-03-16 Athol McDs to Carlin St 043.JPG



2022-03-16 Athol McDs to Carlin St 044.JPG



2022-03-16 Athol McDs to Carlin St 001.JPG



2022-03-16 Athol McDs to Carlin St 002.JPG



2022-03-16 Athol McDs to Carlin St 003.JPG



2022-03-16 Athol McDs to Carlin St 004.JPG



2022-03-16 Athol McDs to Carlin St 005.JPG



2022-03-16 Athol McDs to Carlin St 006.JPG



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2022-03-16 Athol McDs to Carlin St 008.JPG



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2022-03-16 Athol McDs to Carlin St 010.JPG



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2022-03-16 Athol McDs to Carlin St 014.JPG



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2022-03-16 Athol McDs to Carlin St 035.JPG



2022-03-16 Athol McDs to Carlin St 037.JPG



2022-03-16 Athol McDs to Carlin St 038.JPG

Photos at Proposed Millers Rivers Bridge Crossing Location

2022-03-16 Athol Miller's River 000.JPG





2022-03-16 Athol Miller's River 001.JPG



2022-03-16 Athol Miller's River 004.JPG



2022-03-16 Athol Miller's River 007.JPG



2022-03-16 Athol Miller's River 008.JPG



2022-03-16 Athol Miller's River 012.JPG



2022-03-16 Athol Miller's River 013.JPG

Photos at Alan E. Rich Environmental Park



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2022-03-16 Athol Alan Rich Park 025.JPG



2022-03-16 Athol Alan Rich Park 026.JPG



2022-03-16 Athol Alan Rich Park 027.JPG



2022-03-16 Athol Alan Rich Park 028.JPG

ATTACHMENT 5

Millers River Greenway Feasibility Report

ATHOL AND ORANGE, MASSACHUSETTS

Millers River Greenway Trail Key Points Feasibility Report

Prepared for
Town of Orange, MA

Prepared by
Howard Stein Hudson

June 2022



HOWARD STEIN HUDSON

Engineers + Planners



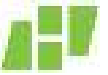


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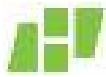


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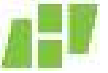
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Appendices

Appendix A – White Paper

Appendix B – BETA Concept Plan

Appendix C – Land Plot Plan and DLTA Study



Background

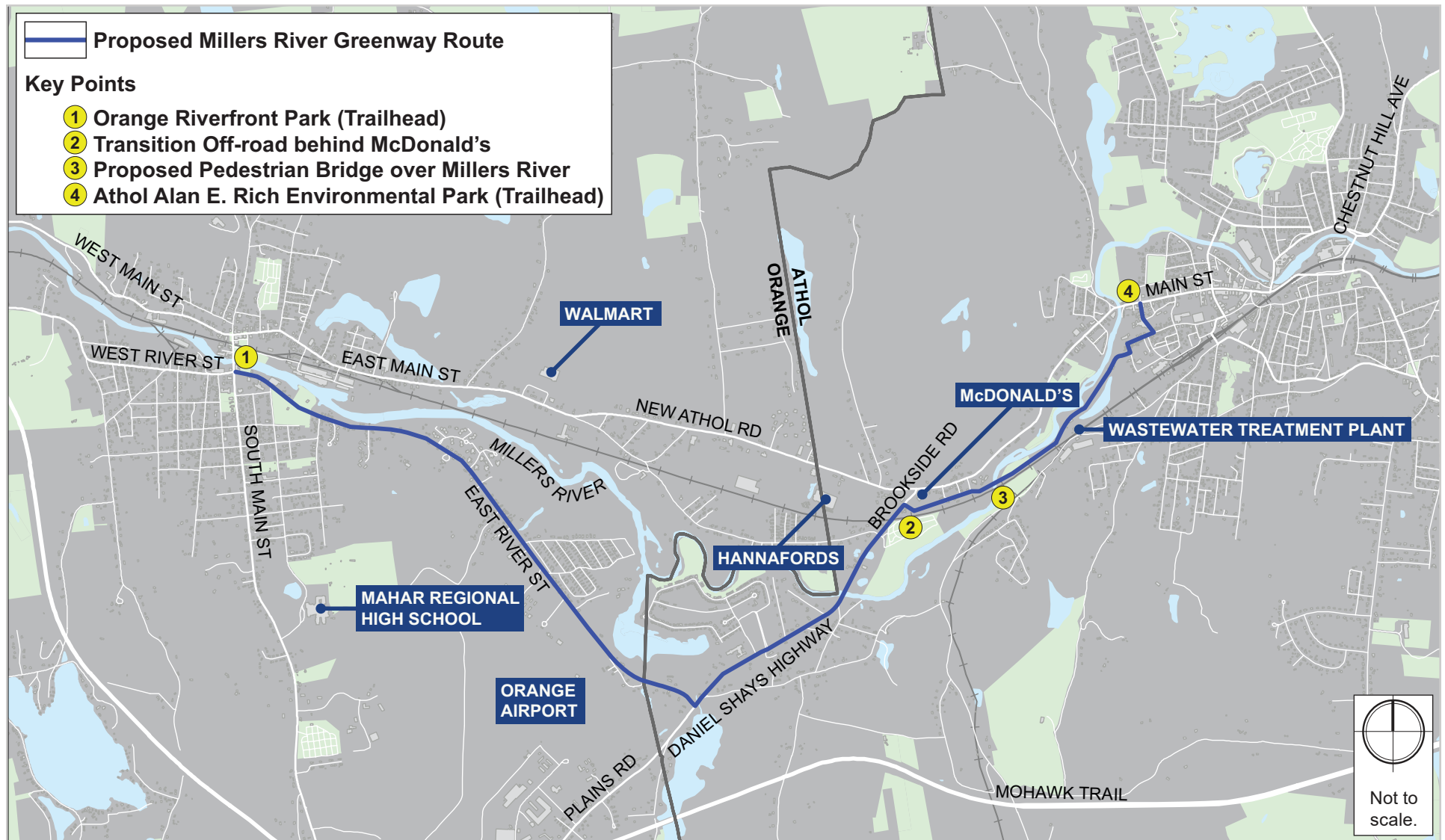
The Towns of Athol and Orange received a MassTrails Program grant to perform a feasibility evaluation and conceptual design of key points of the Millers River Greenway Trail, a 5.2-mile greenway that proposes to connect the downtown areas of Orange and Athol. The route would start at Orange Riverfront Park and travel on or alongside roadways for 3.7 miles on East River Street and Daniel Shays Highway, which crosses into the Town of Athol and later becomes Brookside Road, before transitioning off-road just south of the McDonald's restaurant before the intersection with Route 2A (South Main Street) in Athol. At this point, the on-road portion would transition off-road to travel along a currently undeveloped road layout of Proctor Avenue where it would need to cross the Millers River with a new bridge, travel through Department of Conservation and Recreation (DCR)-owned riverfront land, and eventually connect and end at the Alan E. Rich Environmental Park in Athol. This feasibility study will focus on critical transitions of the path, including trail heads in Orange and Athol, the shared use path bridge over the Millers River, and the transition from Daniel Shea Highway to the off-road trail section located behind the McDonald's. These priority areas are shown along the overall path alignment in **Figure 1**.

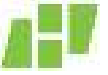
To provide additional background information on the Millers River Greenway Trail, a white paper dated February 1, 2021 is attached in **Appendix A**. This document provides background and detail on the work that had been previously performed related to the development of the Greenway, which has been discussed since the 1990s. The desire for this potential trail link has been documented in the Master Plans, Open Space and Recreation Plans, and Complete Streets Prioritization Plans for both Towns, as well as other local or regional planning documents. A bicycle route between Orange and Athol has been consistently identified as a top recreation and transportation priority to revitalize the Millers River waterfront and both downtowns.

The four key points, mentioned previously, along the proposed Millers River Greenway Trail will be evaluated in this feasibility report. A summary of existing conditions, proposed concept design, and next steps will be included for each of these locations.



Figure 1. *Study Area Locus Map*





General Considerations

While this feasibility study is focused on the four critical points shown in **Figure 1**, this section outlines general considerations that were considered for the key points that also relate to the future trail project as a whole.

Right-of-Way (ROW)

- Right-of-way (ROW) coordination/acquisition for private lots that are critical to the path alignment or investigation of alternative alignments – this is most relevant for the shared use path connection from the potential trailhead located near the McDonald's to Athol Wastewater Treatment Plant. This critical stretch includes the proposed bike bridge crossing Millers River.
- Both the Towns of Athol and Orange are aware of potential ROW issues on this project.
- The assessor's linework pulled from MassGIS for this conceptual report appeared to have ROW discrepancies that should be rectified by a professional land surveyor.
- Establishing ROW by a Massachusetts licensed Professional Land Surveyor (PLS) is important to being able to design the exact location of the overall trail and to know how much width exists along the roadway to determine the best cross section for on-road facilities, and/or to determine where land easements or acquisitions may be required.

Environmental Permitting

Many segments of the proposed trail run alongside the Millers River. The Town of Orange has coordinated with the Orange Conservation Commission on the proposed work at the Orange Riverfront Park and similar coordination will be required for any work within the riverfront area at other parts of the trail. At the direction of the Town, concepts shown in this feasibility study include an approximated mean annual high-water (MAHW) line and a 25-foot line offset to define a riverfront area where no work should be performed that impacts the river. For all work proposed in jurisdictional wetland and riverfront areas in the future or for other parts of the trail, a Request for Determination of Applicability (RDA) will be needed to allow the Conservation Commission to determine if a Notice of Intent (NOI) will be required for work within the environmental resource area.

Figure 2 shows the most up to date Priority and Estimated habitats (15th Edition Natural Heritage Atlas, August 1, 2021) online map viewer for the project area related to MassWildlife's Natural Heritage and Endangered Species Program (NHESP). It was determined that Millers River



FEASIBILITY REPORT

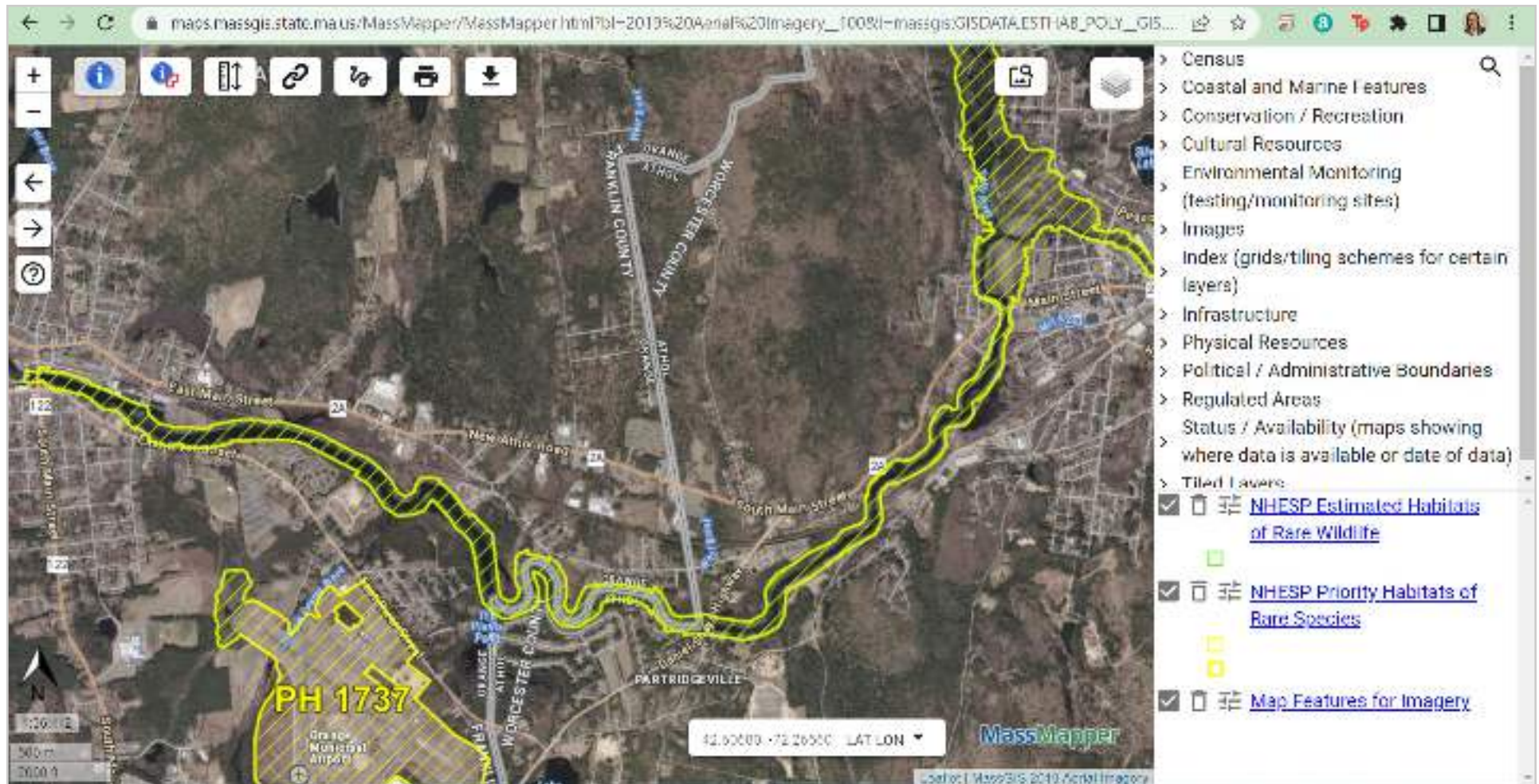
Millers River Greenway Trail Key Points
June 2022

intersects both NHESP Estimated Habitats of Rare Wildlife and NHESP Priority Habitats of Rare Species. These maps are used for determining whether a proposed project must be reviewed by the NHESP for Massachusetts Endangered Species Act (MESA) and Wetland Protection Act (WPA) compliance. The green hatching indicates Estimated Habitats, which are a sub-set of the yellow hatched Priority Habitats and are based on the geographical extent of habitat of state-listed rare wetlands wildlife and is codified under the WPA. State-listed wetland wildlife species are protected under MESA and WPA.

In support of this feasibility study, a Simple MESA Review Filing was submitted to determine potential requirements associated with MESA for the off-road portions of the proposed shared use path in Athol including the proposed Millers River bridge crossing and its approaches. A full review of required environmental permits is beyond the scope of this feasibility study and should occur prior to full design.



Figure 2. *NHESP Priority and Estimated Habitats*





Orange Riverfront Park (Trailhead)

Existing Conditions

Orange Riverfront Park (Trailhead) is an existing public park located approximately 400 feet east of the intersection of South Main Street and East River Street. The park is located on East River Street, which is a two-way, urban minor arterial running west to east. The park currently includes four (4) distinct areas (which are described from west to east).

Photo 1. Existing Orange River Park looking North from East River Street



There is an existing park area consisting of a parking area (two groups of five straight parking spaces, with eastern most parking spots being reserved for persons with disabilities and a handicap placard). The parking lot is separated from East River Road by a grass median that also acts as a drainage swale. The parking lot is accessed from the east and exited through the west. Beyond the parking lot there is open green space, which has permeable pavement walking paths connecting the parking lot to the riverfront area. This open green space is mostly grass but there are planting areas throughout the park that act as rain gardens. There are also multiple sitting areas with benches and apparently ADA-compliant picnic tables. There are streetlights located at both the exit and entrance of the parking area as well as lighting along the center of the walking path. The riverfront portion of the park consists of plants and small trees. It should be noted that the proposed alterations or additions to the park should blend with the existing parks aesthetics.

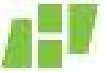


Photo 2. Billy Goat Boats looking North from East River Street

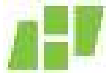


Immediately to the east of the existing Orange Riverfront Park is the Orange Community Boathouse. The walking paths within Orange Riverfront Park provide connections to this boathouse. There is a bike rack to the west of the boathouse building. To the right of the boathouse is a fenced off area for rowboat storage that also serves to separate the boathouse from the eastern undeveloped parking area. The Town of Orange owns this property, and they lease the location to a local business, Billy Goats Boats. The Town has a great relationship with the owner of this business and are actively working on extending the lease. There is an electrical box located in front of the boathouse, as well as a utility pole located in the northeastern corner of the boathouse property.

Photo 3. Undeveloped Parking Area looking North from East River Street



To the east of the boathouse location is an open, undeveloped parking area, which is the location for proposed park expansion. This location was purchased by the Town from Clearlight Enterprises, a local hardware store, located directly across East River Street from the park, sometime in 2017/2018.



There is an existing utility pole located in the northwestern corner adjoining the boathouse lot that has some type of electrical box attached to it. There is also a utility pole located directly off East River Road directly next to a large tree. It should be noted that no proposed park improvements can take place within 25 feet of the riverfront of the Millers River. Proposed improvements to the existing retaining wall require the removal of many existing trees and bushes. The 25-foot riverfront protection area will be used for planting mitigation to offset the previously removed trees and bushes. The plant species should be selected to ensure that future growth will not limit or restrict the view of the river and select plants with root systems that will not harm the riverfront wall. The proposed design has taken this green mitigation space into account.

Photo 4. Undeveloped Area, Potential Future Location of Local Vending/Retail Area, looking Northeast from East River Street



The fourth piece of Orange Riverfront Park is an undeveloped grassy area separated from the parking area by a wooden fence and the eastern business by a row of trees. This area is also owned by the Town and is a potential future location of a local vending or mini-retail area once the proposed improvements to the park are completed. It should be noted that it appears there is a guy wire extending from across East River Street to a tree located along the bank of the river in this area. The Town hopes as the expansions of the park are completed, they can slowly purchase the local business located to the east of the park and continue the riverfront park's expansion.

Proposed Design

- The proposed riverfront park improvements will be constructed by the Town and Howard Stein Hudson (HSH) has provided a conceptual design plan including a properly designed parking lot, sidewalk, and Shared Use Path (SUP) to assist the Town with the construction of the proposed park. See **Figure 3** for the conceptual Orange Riverfront Park plan.



- As indicated on the concept plan, the Town requested a minimum of 10 parking spaces for this proposed park. A few key design requirements were considered in the design of the proposed parking lot. Per ADA requirements one of these spaces is ADA accessible. No parking or additional park improvements (besides planting mitigation) can take place within the 25-foot riverfront buffer. Per Town ordinance, all proposed parking spaces are a minimum of 20 feet from the edge of East River Street. To avoid unnecessary pedestrian and vehicle conflicts, all parking spaces have been designed at a 45-degree angle with the vehicle backing out of the parking spot away from the park.
- The proposed design focuses on a few design components. Besides the parking requirements discussed, HSH tried to mimic the aesthetics of the existing Orange Riverfront Park as much as possible to provide a smooth visual transition for pedestrians. This includes proposing low impact development/best management practices (LID/BMP) including Grass Swales, Rain Gardens, Bioretention/planting areas, providing pedestrian accommodations, and proposing a SUP that uses pavers as the main material. The pavers serve two functions as they mimic the existing SUP as well as act as a pervious material for the path. The addition of any additional impervious material near the riverfront is not suggested by HSH but given potential budget constraints, the final material choice of the SUP will be the Town's decision. During the site visit, the Town of Orange mentioned they have a surplus of benches, which can be added where desired.



Transition Off-road behind McDonald's

Existing Conditions

The Transition Off-road behind McDonald's (location of proposed trailhead) is located southwest of the intersection of South Main Street and Brookside Road. The proposed off-road transition is located off Brookside Road, which is a two-way, urban principal arterial. There is a small portion of publicly-owned road, between the McDonald's and the adjacent property to the South, that appears to be used for utility pole maintenance. The entrance to this public layout can be seen in **Photo 5** as the area between the overgrown detention basin and the driveway to the private property. This area is the proposed located for the future trailhead and trail connection that ultimately leads to Athol Alan E. Rich Environmental Park.

Photo 5. *Off-road Transition Location behind McDonald's, looking East*



There is also open space to the north of the detention basin on McDonald's property that may be used as an alternative location for the trailhead through coordination with McDonald's, as there is more room there. This location is shown in **Photo 6**.



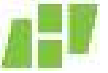
Photo 6. *Off-road Transition Alternative Location behind McDonald's, looking North*



An existing dirt road connects to Proctor Avenue, which is a two-way local road, that runs from west to east. Proctor Avenue continues east for approximately 425 feet and dead ends into Carlin Street, which is also a two-way local road that runs north to south and connects to South Main Street.

Photo 7. *Developed Portion of Proctor Avenue, looking East toward Carlin Street*





Proposed Design

Safe and comfortable access from the roadway is a critical element of shared use paths. Where there is a transition from an on-road facility to an off-road facility, the path entrance should be easily detectable and accessible through signage, appropriate sight distance, and a functional design. The transition behind McDonald's proposed along Brookside Road is an important one because it will be used to bring users off the road, allowing northbound users to avoid the intersection with Route 2A and travel on that roadway.

As discussed in the Existing Conditions section of this report, the Town owns a public right-of-way from an undeveloped Proctor Avenue layout that runs in between property owned by McDonald's and private property currently used for the Athol Burner Services business. According to linework pulled from MassGIS, the width of this public space is approximately 40 feet wide. There is also potential to coordinate with McDonald's to place the trailhead on their property where there is more available space. Both options are shown in the concept plan in **Figure 4**.

Figure 4 portrays the concept design for the publicly-owned, right-of-way trail head, which proposes two seven-foot-wide path entrances/exits with a raised splitter island between. The raised splitter island will also include a decorative bollard to prevent non-emergency vehicles from attempting to utilize the path. The two path entrances will then join to create a 14-foot-wide SUP that continues onto the proposed trail. To create a visual distinction between the adjoining private properties, tall hedges and/or fencing may be installed to limit the views of the McDonald's parking lot and private business property on each side of the public right-of-way. The landscaping will be set back far enough to prevent the obstruction of views of driveways along Brookside Road to Route 2A.

The concept in **Figure 5** was designed to fit within the existing right-of-way based on current MassGIS data. The right-of-way location of the underdeveloped Proctor Avenue currently does not align with visual location of the existing dirt path. The right-of-way should be investigated and confirmed by a licensed land surveyor as the current graphical GIS ROW layout does not match the existing layout of the properties, and to ensure that the path is not being proposed on private property.



Figure 4. *Plan View of Off-Road Transition*

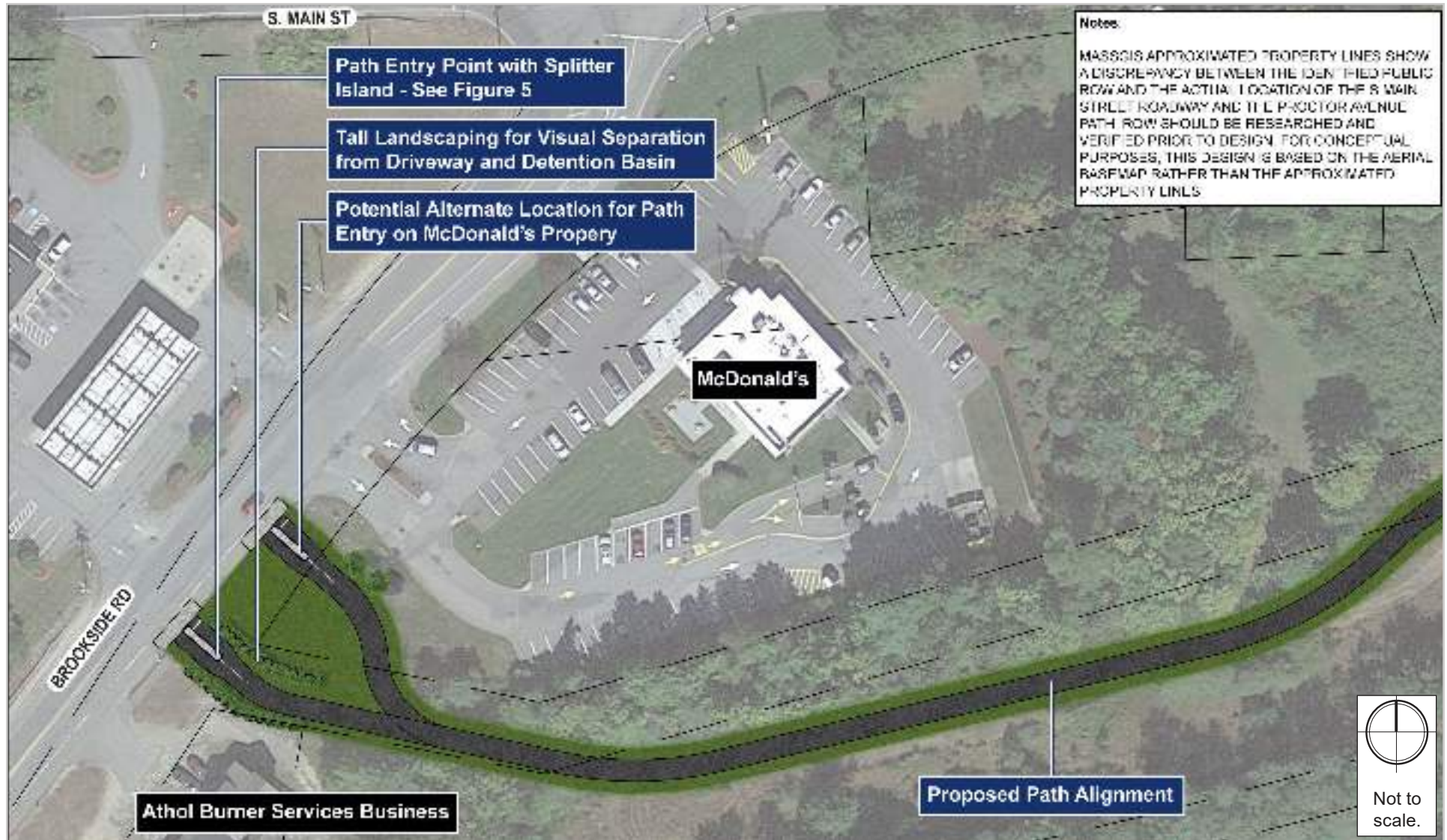




Figure 5. *Rendering of Off-Road Transition*





New Millers River Bridge

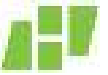
Existing Conditions

A proposed Millers River Bridge will be needed to cross the Millers River adjacent to an existing railroad bridge to follow the proposed trail alignment as shown in the white paper (**Appendix A**) and **Figure 1**. The proposed crossing is located approximately 400 feet north of the intersection of South Athol Road (a two-way road which is federally classified as a major collector) and Riverview Avenue (a two-way local road). The river's bankfull width provided by StreamStats is 142 feet.

According to the United States Department of Transportation (USDOT) Federal Railroad Administration Safety Map, the railroad bridge is owned and operated by Pan Am Southern Railroad (PAS) and is a part of the Patriot Corridor, along the existing 155-mile-long freight railroad corridor known as the PAS Freight Main Line (FML). There appears to be approximately 14 feet between the railroad tracks and the edge of the existing railroad bridge.

Photo 8. Railroad Bridge, looking West across Millers River from Eastern Bank





Proposed Design

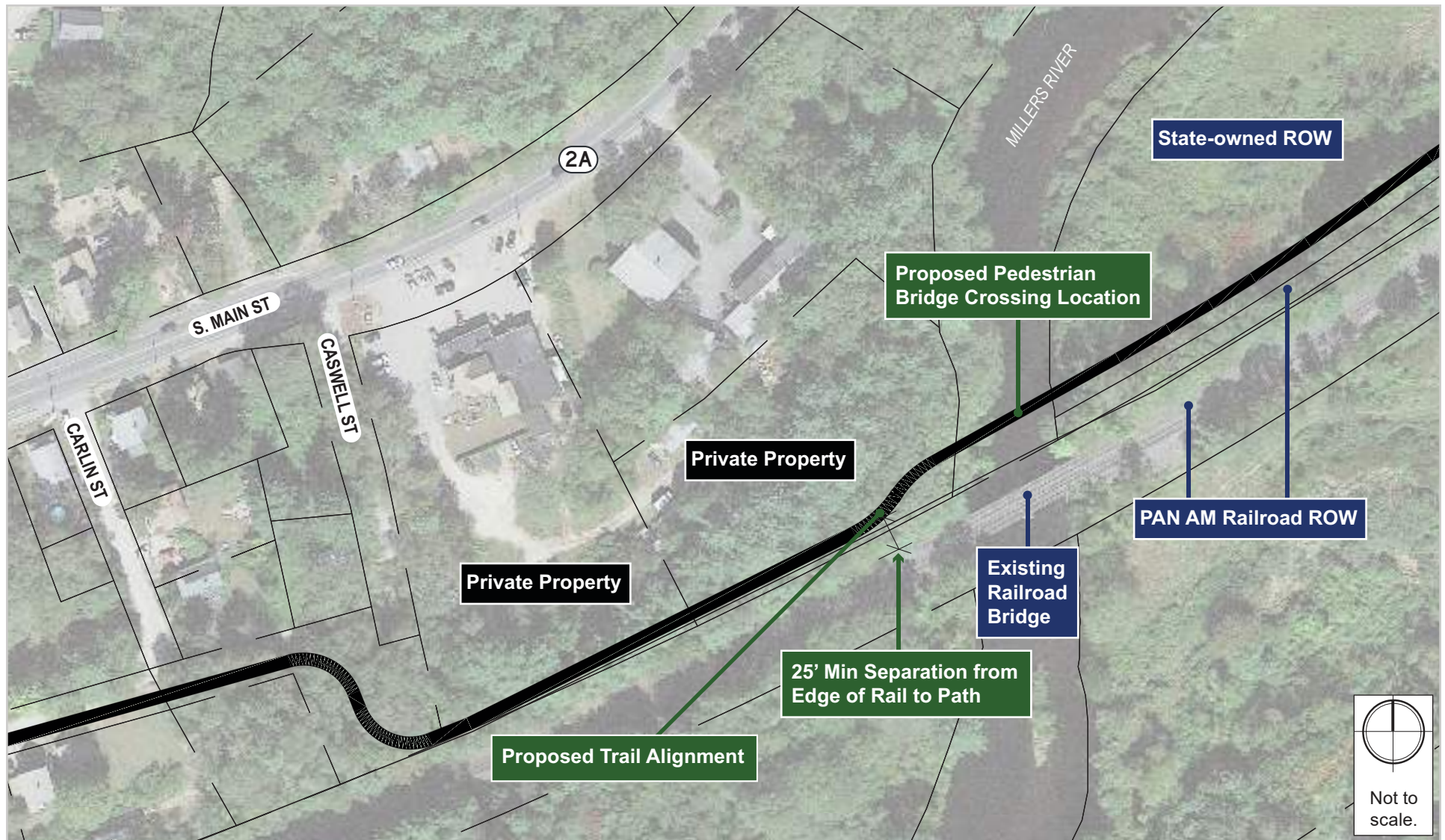
The Massachusetts Department of Transportation (MassDOT) Project Development and Design Guide (PDDG) Exhibit 11-17 and 11-18 dictates the required minimum separations between shared use paths and active railroads based on rail operation type (see **Figure 6** for approximate location of the proposed bridge). The required minimum will likely be 25 feet from the last rail to the shared use path fence or 15 feet with a solid barrier. Based on this, a new bridge will be required to carry the path because a path could not fit with an appropriate separation zone within the 14 feet remaining on the existing railroad bridge. Additionally, approximated property lines from the MassGIS database show an 85-foot-wide railroad right-of-way. In order to construct a new pedestrian bridge at this crossing, it would require acquiring right-of-way from the two adjacent private property parcels located on the western side of the Millers River.

Based on overall length and typical loading requirements for a shared use path, the type of bridge most appropriate at this location may be a prefabricated steel truss bridge. There are many different variations and aesthetic appearances for a structure like this, but the benefit is that they provide a shallow below deck superstructure which would not restrict the hydraulic opening of the crossing. A prefabricated steel truss bridge would also be able to span the 170 feet with a single span and not require a pier in the Millers River. A prefabricated truss can be shipped to the site in preconstructed segments and assembled on-site for placement. The proposed decking can consist of concrete, wood, steel, or fiber reinforced plastic (FRP) and would be installed once the trusses and floorbeams were in place. The approach pathway to the bridge would likely require retaining walls to build up the grade, so that the bridge can be set to a similar grade of the existing railroad bridge crossing.

Approximate design and construction costs for a bridge structure of this size and scope is \$2.25 million dollars.



Figure 6. *Proposed Bridge Location Sketch*





Athol Alan E. Rich Environmental Park

Existing Conditions

Athol Alan E. Rich Environmental Park (Trailhead) is the final critical location for the proposed Greenway Trail located approximately 300 feet West of the Main Street and Canal Street intersection. The park entrance is located directly off Main Street (Route 2A) which is a two-way road with a federal classification as a principal arterial. The existing park consists of a gravel parking lot with 20 parking spaces and kayak storage racks. To the right of the parking area is an open green space with a bike rack, benches, and planting areas. This park also has public boat ramp access directly to Millers River. The sidewalk, driveway entrances, and ADA ramps located at Main Street and Canal Street intersection all appeared to be ADA compliant.

Photo 9. *Athol Alan. E Rich Environmental Park looking North from Park Entrance*



Photo 10. *Athol Alan. E Rich Environmental Park looking Northeast from Park Entrance*





Proposed Design

The proposed concept for the Athol Alan E. Rich Environmental Park was designed to incorporate the following goals:

- Provide a connection to the proposed greenway;
- Provide additional pedestrian accommodations;
- Provide a clear connection between the proposed trailhead and existing park paths;
- Consolidate existing trail amenities (signage, bicycle racks, etc.) to the greenway trailhead to avoid pedestrian and vehicle conflicts; and
- Provide a visually pleasing trailhead that is seen as an attractive destination for potential users.

HSH has proposed improvements for the existing conditions of the area for the connection to the proposed greenway. The existing pedestrian crossings and ramps located at the intersection of Walnut Street, Main Street, and Canal Street appear to be ADA compliant but do not provide a clear connection from the Athol Alan E. Rich Environmental Park to the proposed greenway. HSH has provided a potential option for a pedestrian crossing from Linden Park to the Athol Alan E. Rich Environmental Park Trailhead as displayed in **Figure 7**. This includes a 10-foot-wide crossing and a 10-foot-wide pedestrian ramp with curbs and associated signage. This crossing location is shown for visual purposes only and will need to be further evaluated for safety and feasibility once the path location and alignment has been finalized.

The proposed pedestrian area visualized in **Figure 8** is to be connected to the existing park paths with a clear connection that avoids the existing park lot. This pedestrian area serves as a potential planting area for local pollinators with the concept showing a central planting box surrounded by multiple raised planter boxes. HSH has also provided a potential location for local artwork to be displayed. The central pedestrian area has been designed in a way to provide a distinct separation from the parking lot as well as being visually appealing to draw attention to this potential local art display. The proposed pedestrian area also includes a pedestrian overlook area near the existing kayak ramp. The feasibility of utilizing this area for an overlook location will be decided at the discretion of the Town.

The proposed trailhead serves two main functions. The first is to provide a clear visual landmark for all pedestrians using the future shared use path, and the second is to provide a central location for all existing and proposed pedestrian accommodations and amenities. These amenities include but are not limited to, associated trail signage, informational kiosks, kayak racks, bicycle racks, and picnic tables. Moving amenities to a centralized location away from the existing parking will reduce possible conflicts between pedestrians utilizing the proposed trail and vehicles navigating through the parking lot.



Figure 7. *Athol Alan E. Rich Environmental Park – Locus Map and Network Connections*

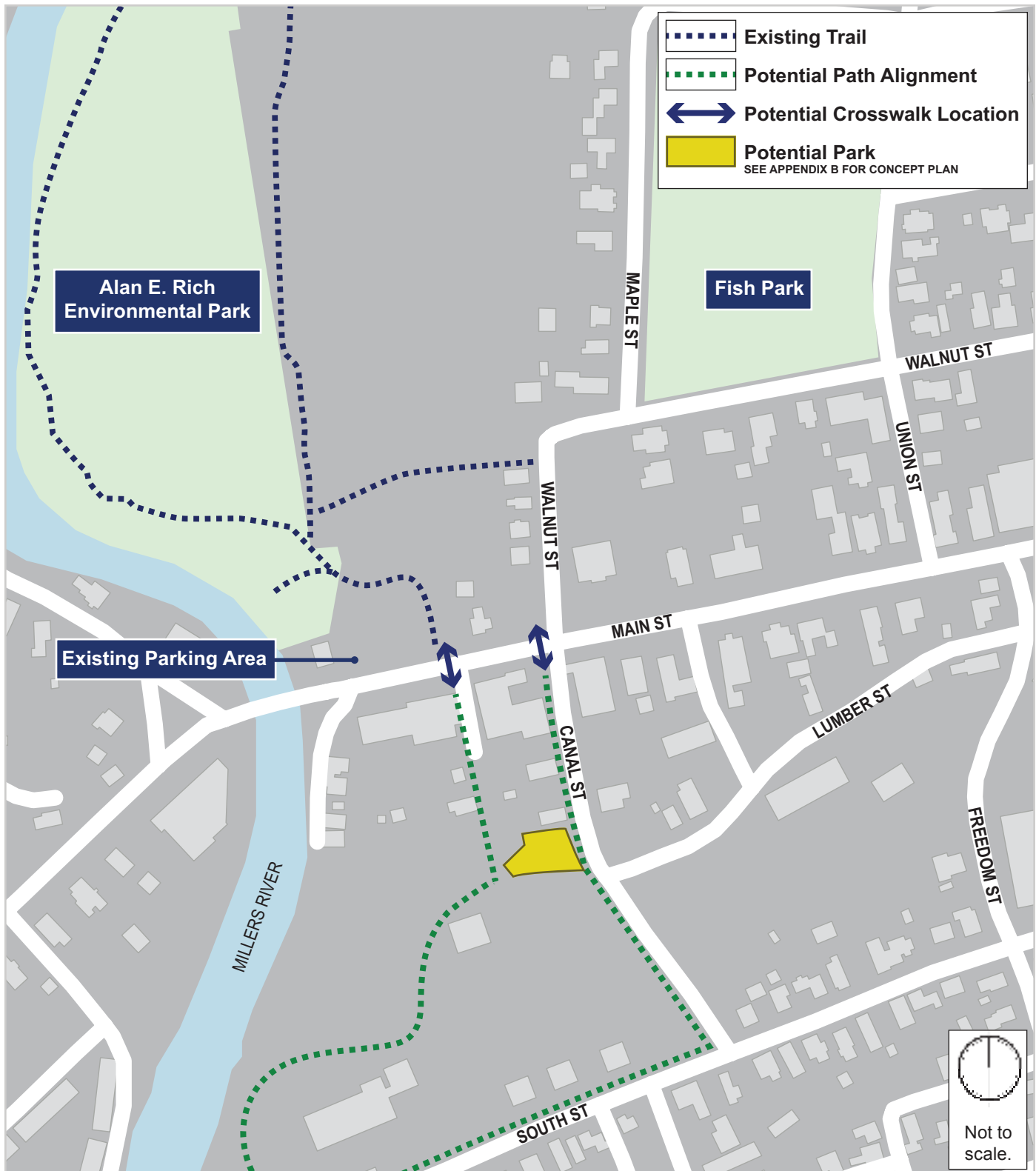




Figure 8. *Athol Alan E. Rich Environmental Park – Concept Design*

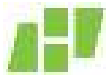




Next Steps

The procurement of funding for the project is ongoing but will be coordinated by the Towns of Athol and Orange. HSH performed a high-level concept cost estimate using the MassDOT shared use path planning and design guide (SUPPDG). This concept level estimate did not consider the cost associated with any ROW purchase and assumed lighting would only be provided at critical crossings (see **Table 1** for breakdown of the conceptual cost estimate). All costs will need to be further evaluated during the design process. Additional next steps for this concept include enlisting a structural engineer and a geotechnical engineer to further evaluate and design the potential bridge crossing Millers River. HSH also recommends hiring an engineering consultant to further evaluate what facility for the on-road improvements required on East River Street and Daniel Shays Highway, as well as potential roadway crossings on Main Street near the Athol Alan E. Rich Environmental Park and Daniel Shays Highway. HSH is happy to assist the Towns of Athol and Orange with the items discussed above as well as procure quotes for required survey and designing the shared use path, on-road side path, as well as the structural component of the bridge.

- Find funding for the construction of the concepts using sources outlined in the White Paper (refer to **Appendix A**)
 - Discuss the high-level cost estimate that was performed using SUPPDG
 - Discuss assumption related to lighting is that only trailheads will be lit and critical crossings – this should be re-evaluated during design
- Find funding for design of the path including structural and geotechnical engineering for the bridge
- Enlist an engineering consultant to investigate what facility is appropriate for the on-road improvements to East River Street, Daniel Shays Highway
 - Roadway crossings near Athol Park and at Brookside should also be investigated to provide safe connectivity between the critical points
 - Procure a survey quote for the required project limits affecting private property
 - Engineering consultant to develop a design scope of services and fee to cover all required elements, not limited to shared use path design, bridge design, geotechnical services, cross section analysis to determine preferred concept, permitting, and preliminary/final design
- Continued coordination with MESA on which permits are required for the bridge and overall path



Conceptual Cost Estimate

Table 1. Conceptual Cost Estimate

	Estimated Design Fee	Estimated Construction Cost
Bridge over Millers River	\$250,000	\$2,000,000
Off-Road Trail Section (~4,200 ft) Includes clearing, boardwalk over wetlands	\$1,000,000	\$8,000,000
On-Road Section: Sidepath	\$500,000	\$4,000,000
Trailheads (per trailhead)	\$15,000	\$50,000



HOWARD STEIN HUDSON

Engineers + Planners

Appendix A

White Paper

White Paper Athol Orange Millers River Greenway Trail

Background

This white paper is intended to provide background and detail on the work that has been completed previously related to the development of a bikeway/greenway connecting downtowns Athol and Orange. It is also intended that this white paper will provide information to support moving to the next steps of the planning and design process. The white paper includes a narrative detailing the previous planning related to the trail; information on other recent planning documents that recommend or support the trail development; information about potential funding sources that could be used to complete the design and/or construction of the trail; and next steps including a proposed timeframe.

Past Bikeway/Greenway Planning

The towns of Athol and Orange identified the development of a bikeway/greenway along the Millers River as a priority and a long-term planning project in the 1990s. Since then, several evaluations and feasibility studies have taken place to identify the best route.

In 1997, the Orange Revitalization Partnership received funding through the Massachusetts Transportation Enhancements program to design and construct an off-road bikepath. At that time, the concept was for a bikepath along the Millers River from where the Orange Riverfront Park is now located to Canal Street in Athol. In 2000, the engineering firm Vanasse Hangen Brustlin, Inc. (VHB) completed a feasibility study of potential bicycle routes along the river. However, after an initial assessment of the right-of-way and environmental issues, it was determined that this off-road concept was not feasible, and an on-road bicycle facility became the preferred alternative. The off-road concept had involved significant acquisitions and/or easements to secure the necessary right-of-way for the path.

Consequently, a feasibility study that reviewed the option to construct an on-road bicycle facility was completed. The report included descriptions of the existing conditions and traffic volumes on the roads that were being considered as a part of the bicycle route, the potential bicycle route alternatives for the proposed on-road bicycle facility connecting Orange and Athol, an analysis of the alternatives, and a recommended route. The recommended route was approximately 5.2 miles beginning at what is now the Orange Riverfront Park on the southern side of the Millers River in Orange. The route continues east on East River Street to the intersection of East River Street and Daniel Shays Highway (Route 202). The route then turns north and follows Daniel Shays Highway to Route 2A. At the intersection of Daniel Shays Highway and Route 2A, the route heads east along Route 2A into downtown Athol and ends at Canal Street. These plans did not move toward implementation because of safety concerns (such as high speeds and traffic volumes) and cost (blasting was required to put the bike route on Route 2A).

During 2004 and 2005, the Franklin Regional Council of Governments (FRCOG), the Montachusett Regional Planning Commission (MRPC), the Town of Athol, and the Town of Orange reassessed the plans and completed additional conceptual design work. A revised route was developed which included the on-road route in Orange that was identified in the 2000 study,

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but that also incorporated an off-road bicycle path section in Athol. The proposed route is approximately 4 miles beginning at the Riverfront Park in Orange. The route continues east on East River Street to its intersection with Daniel Shays Highway (Route 202). The route turns north and follows Daniel Shays Highway to an abandoned road located just south of the McDonalds restaurant. The proposed route travels along an abandoned road (Procter Avenue) and through land that is publicly owned. The route reconnects with residential neighborhood streets (Jones Street, South Street, and onto Canal Street) and then terminates in downtown Athol at the Alan E. Rich Environmental Park. The off-road section utilizes land that is almost entirely publicly owned. There is one location where a crossing of the Millers River would be necessary. This proposal did not move forward because of a lack of funding for design and commitment by a project proponent.

In 2014, a series of meetings were held to discuss and identify a viable bike path route between the Orange Riverfront Park and Athol. Two million dollars was included in the 2014 Massachusetts Transportation Bond Bill for “the purchase, planning, design and construction of a scenic pedestrian river walk and bicycle pathway from South Main Street in the town of Athol to West River Street in the town of Orange”. During this round of discussions, State Representative Denise Andrews and Orange Community Development Director Kevin Kennedy proposed moving the project back to an off-road path along the Millers River, and the new round of route planning focused on identifying an off-road route. Kevin Kennedy conducted some planning and mapping and identified a conceptual route that included a portion of the route in Orange being switched to an off-road trail. The route in Athol remained the same as the one that was identified in Athol during the planning in 2004-2005. The proposed route in Orange traveled on East River Street from the Riverfront Park to the King James Court/Pine Crest residential developments. The off-road portion of the trail route traveled along the rear of the King James Court/Pine Crest properties, onto the rear of a 2009 subdivision development and a vacant parcel encumbered by wetlands, and back onto East River Street. It was left that Kevin Kennedy would contact property owners to determine interest in the project. There was no further follow up to the FRCOG about whether this outreach was conducted.

Most recently, a meeting was held on December 23, 2019, with representatives from the towns of Orange and Athol, FRCOG, MRPC, and local interest groups. A review of the previous planning work was presented. The discussion focused on how to proceed with the Athol-Orange Greenway project. It was agreed that the project intended to connect the Orange Riverfront Park and the Alan E. Rich Environmental Park in Athol. The group also agreed that a shared roadway route in Orange will be the focus in the short term and that the off-road section of the trail identified in 2014 would be a long-range project. The follow-up to the December 2019 meeting was to develop a White Paper that outlines the project and identifies the next steps to move the proposed bikeway forward that connects Downtown Athol and Downtown Orange and connect it to the Millers River Blue Trail.

Previously Completed Plans

As previously noted, the planning and development of a trail connection between downtown Athol and Orange have been discussed since the 1990s. It has been highlighted in the goals and recommendations of many planning reports and studies since that time. The listing below highlights the recently complete relevant reports and briefly described the context of the inclusion of the trail project. This is intended to further information about recent discussion and public input supporting the advancement of the trail development.

Athol Plans

Planning Assistance Grant Application (submitted to EOEEA May 2020 and awarded November 2020)

The Planning Assistance Grant Application included a project to update zoning in the downtown area, which will fall under the MA Sustainable Development Principles, including facilitating walking, biking, and transit use. The downtown zoning changes will promote and provide planning for a variety of multimodal transportation options including safer routes, accessible sidewalks, trails, bike paths and lanes, and improved public transportation access.

Athol Open Space and Recreation Plan (January 20, 2020)

As part of the development of the *Athol Open Space and Recreation Plan*, a survey of residents was completed. The survey asked what unmet recreational needs there are in Athol. By a wide margin, the respondents very strongly believed that more recreation opportunities are needed for people with mobility challenges. Respondents also identified a need for bike paths, dog-walking opportunities, hiking trails, and backpacking campsites, better beaches, more camping, fishing, animal watching, and community gardens.

Residents were also asked which activities or places they enjoy, and 45% chose “Biking, roads and bike paths.” Also, several comments from residents in the survey specifically mentioned the desire for a bike path/trail between Orange and Athol.

A general goal to improve and expand parks and open space and to create new recreational opportunities was identified in the *Athol Open Space and Recreation Plan*. Also, an objective was included to link scattered conservation and recreation areas through the establishment of a continuous greenway network for recreation and wildlife. Portions of this network should be bike paths and usable for those with limited mobility. The historic rail bed of the “Rabbit Run” could be the nucleus or backbone of a moderate-length path linking conservation areas in South Athol the center of town.

Statement in the OSRP and Master Plan:

In addition to Athol’s existing conservation and recreation areas, a few areas are of particular interest to local citizens. These are:

- Millers River Greenway - A permanent greenway is proposed along the southern bank of Millers River, extending from Athol Center to Orange Center. The benefits of this greenway are that the greenway would help protect water quality and wildlife habitat, and

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provide an important opportunity for linear pursuits along the river, such as hiking, biking, and walking.

Due Diligence and Master Planning for Key Development Parcels in Downtown Athol Report (completed by the BSC Group and dated 2019)

The report identified the priority actions to:

The future actions proposed include streetscape improvements along Exchange Street, including but not limited to, a reduction in the width of vehicle travel lanes, additional on-street parking, crosswalks, wider sidewalks, and street trees; and an extended river walk trail from the parking lot adjacent to the library to Exchange Street, as a potential open space opportunity in the heart of the downtown.

Athol Municipal Vulnerability Preparedness Community Resilience Building: Integrated MVP HMP Report; Summary of Findings and Hazard Mitigation Plan Update

The Millers River was considered as part of the *Athol Municipal Vulnerability Preparedness Community Resilience Building* (MVP) planning process. It was noted as an important social, economic, and environmental resource. The Millers River represents an important cultural feature within the community. The relationship of the Millers River to Athol's historical heritage was apparent during community resilience-building efforts. During the MVP planning process, stakeholders frequently mentioned the importance of improving access to the river and supporting economic development that improves infrastructural, societal, and environmental conditions along the river. Workshop participants frequently cited the importance of the Millers River to the historic and future prosperity of downtown Athol. Municipal attention and engaged community leadership are committed to building a vibrant downtown Athol that is centered on the Millers River.

The following High Priority Resilience Actions were noted:

The Millers River represents important cultural, ecological, and environmental values within the community. Ensure downtown or open space planning efforts consider access to the Millers River as part of its planning and implementation efforts. Promote the historical or cultural significance of the Millers River through educational or outreach materials. Establish a local greenway along the Millers River. Coordinate with The Town of Orange to promote the establishment of a regional greenway community planning initiative.

The following Medium Priority Resilience Actions were noted:

Expand Pedestrian Shelters and Complete Streets programs. Collaborate with MassDOT for Greenway development. Develop a plan to establish cohesive greenway access or connection to the river in downtown Athol. Ensure access and an infrastructural connection to the Millers River is integrated into planning and implementation efforts.

Complete Streets Prioritization Plan (approved September 2019)

Athol participates in the Massachusetts Complete Streets Funding Program. As part of that program, Athol compiled a *Complete Street Prioritization Plan* and included a project to construct the Millers River Greenway Hike and Bike Trail to connect downtown Athol (Alan E. Rich Environmental Park) and downtown Orange (the Millers River). The Prioritization Plan notes that the project is in the planning stages and that the right of way needs to be determined for the full length of the project. The construction cost for the project is not determined.

Technical Assistance Panel Report (October 10, 2017)

The *Technical Assistance Panel Report* was developed by the Urban Land Institute of Boston and New England. The report included the recommendation:

If the Towns of Athol and Orange could extend their existing level of collaboration to develop a more robust recreational tourist trade – perhaps in collaboration with the Chamber of Commerce’s visitor’s bureau designation – it could serve not only as a driver to revitalize the Downtown of Athol but to benefit the entire region.

Athol Master Plan (November 2002)

The following are selected goals, objectives, and recommendations:

- Work with regional conservation land trusts to permanently protect open space, forestland, and farmland parcels that have been identified as important to preserve from development. Focus open space conservation efforts on parcels along the proposed Millers River Greenway for recreational activities and wildlife conservation.
- Identify and acquire land parcels to improve public access to the Millers River for recreational activities.
- Protect and preserve the character of Athol’s significant historic landscapes.
- Link scattered conservation and recreation areas through the establishment of a continuous greenway network.
- Work with the Department of Environmental Management and the Mt. Grace Land Conservation Trust to develop an active open space conservation program for the Town of Athol that combines passive recreation and land protection with priority given to parcels of land that provide access to the Millers and Tully Rivers.
- Improve the pedestrian and bicycle infrastructure.
- Explore the feasibility of providing walking and bicycling trails throughout Athol. (Millers River Greenway).
- Members of the public strongly support designated bikeways for recreational and commuting traffic. Bikeways are special routes and/or facilities established to facilitate the movement of bicycles as an energy-efficient transportation and/or recreation mode of travel. The construction of bikeways will encourage cycle commuting by providing a direct, separate, and safe route between the communities.
- Work with neighboring communities and regional entities to establish a regional trail network that would ultimately link Athol to recreational opportunities in Orange and Petersham. (Greenway Committee, ongoing)

Orange

Complete Streets Prioritization Plan (approved May 2020)

As part of the Massachusetts Complete Streets Funding Program, Orange compiled a *Complete Streets Prioritization Plan*. The Prioritization Plan includes two projects that include the construction of bicycle facilities on East River Street. One project is the construction of a bike lane on East River Street between South Main Street and the Public Works Building that is estimated to cost \$450,000. The second is a project to install a bicycle facility on East River Street between the Public Works Building and Athol Town Line. The funding required to construct that project is \$171,000.

Orange Americans with Disabilities Transition Plan (2020)

Orange recently completed an Americans with Disabilities (ADA) Transition Plan. The plan assessed accessibility needs throughout the town including sidewalks and parks. The development of a trail connection along East River Street connecting the Riverfront Park to downtown Athol would provide an opportunity to address any accessibility needs.

Orange Open Space and Recreation Plan (2016)

The town of Orange completed an Open Space and Recreation Plan in 2016. The plan was developed with input from a public survey, a public forum, the findings from other recently completed town planning efforts including the 2015 Downtown Orange Riverfront Revitalization Study, and information about the town's natural resources. One of the main goals of the Plan is to "improve the quality, quantity, and accessibility of recreational resources in Orange for current and future generations." The plan acknowledges the town's long-term interest in developing a trail between Orange and Athol.

As part of the development of the Open Space and Recreation Plan, a survey was completed. The development of a bicycle route between Orange and downtown Athol was identified as the top recreation priority in the 2015 Orange Open Space and Recreation survey.

Also, the survey found:

- The top recreation priorities identified by survey respondents are to make Orange more bike-friendly (57%), continue the development of riverfront recreation opportunities downtown (55%), add more recreational programs for teenagers (51%), make Orange more pedestrian-friendly (47%), and create small parks, playgrounds, and community gardens on vacant lots in downtown (42%).
- When asked what they like most about living in Orange, 50 % (the second-highest response) identified outdoor recreation opportunities.
- Sidewalks were identified as the most used recreational resource (65%), with Butterfield Park (50%) second and Riverfront Park and boathouse (49%) third. The proposed trail would increase accessibility to Butterfield Park and the Riverfront Park for all trail users.

A seven-year action plan was developed as part of the plan. One of the final action plan goals is to support the redevelopment and revitalization of downtown Orange by investing in infrastructure improvements and cultural, recreational, and open space assets that will benefit residents and businesses while attracting tourists and new businesses to town. Further, an objective of that goal is to support initiatives that enhance recreational access along the Millers River between Orange and Athol Town Centers. The specific action item is to work closely with

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the Town of Athol to secure funding for the design and development of the Millers River Greenway bike route.

Orange Community Development Strategy (Updated and Adopted on December 2, 2015)

The Orange Community Development Strategy was developed with public input and a comprehensive review of other town planning documents. The Community Development Strategy was reviewed and discussed at a public informational meeting that was held on November 4, 2015, in the Orange Town Hall and broadcast on public access television. The strategy was adopted by the Selectboard at the meeting held on December 2, 2015. The planning processes resulted in the ranking of specific action plans to be undertaken by the Town during the next three to five years. A goal to complete the Orange to Athol bikeway was included in the strategy as number six (6) on the project list.

Downtown Orange Riverfront Revitalization Study (Completed October 1, 2015)

This study is a masterplan vision for the core area of Downtown Orange. A series of meetings with public and private stakeholders were held as part of this planning process. The final report recognized the many past planning efforts, what was completed already from those planning efforts, and what was still needed to be completed. The past reports reviewed include the: Ecotourism Marketing Report (2002); Town of Orange Master Plan (2005); Sustainable Design Assessment Team Study (2009); Community Needs Survey (2010); Market Assessment Survey (2013); Mill Vision/Riverfront Reconsidered (2013); Redevelopment Financing Case Study (2013); Visioning Sessions (2013); and various studies by the Community Development Office.

The plan consolidated the goals from those past efforts into a new set of goals. The goals include one that specifically identified the development of a trail along the river and other related goals. The following are the relevant goals:

- Build identity/economy around local resources including Miller's River;
- Create a mixed-use, pedestrian-friendly environment;
- Strengthen community with downtown events/facilities;
- Focus on outdoor activities, local cafes and galleries; and
- Incorporate new trails along the river's edge.

The fiscal Year 2014 Recreation Trails Program Grant

Orange received a Recreational Trails Grant (now the MassTrails Program) in the fiscal year 2014 for "Re-Centering Around the River Project". This project was to construct a Downtown Riverfront Trail and provide safe and equitable access to the Millers River Blue Trail using a variety of supportive devices for the physically disabled, including a floating dock/adaptive boat launch, a hoist sling, and a shallow transfer area. The project also included the construction of a 2,200 linear foot urban trail along the Millers River and through the artifacts of Orange's industrial past to provide a canoe/kayak portal into the River and accessible anglers landing. This project supports the broader goals and vision for Orange that is also supported by the Athol-Orange Trail Project.

The fiscal Year 2014 MA Parkland Acquisitions and Renovations for Communities (PARC) Grant

Orange received a Massachusetts Parkland Acquisitions and Renovations for Communities (PARC) grant in 2014 to complete improvements to Butterfield Park, including the renovation of the ball field, construction of new sidewalks, and installation of new playground equipment. The Town plans to pursue PARC funds for additional improvements to the park. This park is near the trail on East River Street.

Potential Funding Sources

There are several potential sources of funding to support the design and/or construction of the Athol-Orange Trail Project. While no one source would fund both planning, design, and construction the funding sources detailed below provide opportunities to further develop this project.

MassTrails Grant Program

The [MassTrails Grant Program](#) is administered by the Massachusetts Department of Conservation and Recreation (MA DCR). MassTrails seeks to expand and connect the network of off-road, shared-use pathways, and recreational trails for all users across the state. The program provides matching grants, technical assistance, and resources to assist in the planning, design, construction, and maintenance of trails. The grant applications are due annually on February 1st. Communities, public entities, and non-profit organizations are eligible to apply. Grant amounts are dependent on the project and range from \$5,000 to \$300,000 for high priority projects. The eligible grant activities include project development, design, engineering, permitting, construction, and maintenance of recreational trails, shared-use pathways, and the amenities that support trails. The grants are reimbursable, and the project proponent must provide a minimum 20% match of the total project cost. A review of projects funded under last year's grant round revealed that there were many trail development projects funded through this program at around \$100,000. Tasks that were funded included right of way planning, early design, survey, engineering, and later phases of design and permitting. The program is competitive, but the available funding has increased in recent years.

Massachusetts Complete Streets Funding Program

The Massachusetts Department of Transportation (MassDOT) administers the [Complete Streets Funding Program](#). A Complete Street provides safe and accessible options for all travel modes - walking, biking, transit, and vehicles – for people of all ages and abilities. The MA Complete Streets Funding Program provides technical assistance and construction funding to eligible municipalities. To be eligible to participate in the program a municipality must pass a Complete Streets Policy and develop a Prioritization Plan. Both Athol and Orange are participants in the program. Both communities have compiled Prioritization Plans. Communities that participate in the program are eligible to apply for up to \$400,000 in Tier 3 Construction funding projects that are included in their Complete Streets Prioritization Plan. The program does not fund design work. There is not a required local match. The program is administered like the Chapter 90 program. The deadlines for Tier 3 Construction funding applications are May 1st and October 1st annually.

MassDOT Winter Shared Streets and Spaces

The [MassDOT Winter Shared Street and Spaces](#) funding program is a COVID relief program that is being implemented from December 2020 to February 2021. The program provides cities and towns with grants between \$5,000 and \$500,000 to improve plazas, sidewalks, curbs, streets, parking areas, and other public spaces in support of public health, safe mobility, and renewed commerce. The funding is for projects that can be implemented quickly. The applications are being reviewed in 4 rounds the last of which is February 26, 2021, and the projects must be completed by May 31, 2021. Eligible projects include changes to streets, curbs, sidewalks, and/or parking (on- and off-street) to make more space or safer walking bicycling. The applications are scored based on the quality, functionality, safety, and creativity of the proposed project, its ability to address municipal goals and needs, and sensitivity to the COVID-19 public health crisis. The program could potentially include a trial of painted bike lanes that would be kept permanently if it worked out well.

Transportation Improvement Plan (TIP) Funding

The Transportation Improvement Program (TIP) is a prioritized, financially constrained, multi-year program for the implementation of transportation improvement projects in a particular region (Athol is in the MRPC region and Orange is in the FRCOG region) that will receive federal funding. Any project intended to receive federal transportation funds must, by federal regulation, be listed in an improvement program that includes broad public participation. The TIP is drafted each year by the [FRCOG](#) and [MRPC](#), and includes detailed project evaluations that take into account need, community support, additional benefits, project readiness, and funding availability. The TIP is a potential source of funding for this type of project.

There are several steps to get TIP funding. A project must be initiated with MassDOT. This involves completing a project initiation form through the online tool called MaPIT. As part of the initiation process, the project is scored, reviewed, and potentially approved by the MassDOT Project Review Committee (PRC). Also as part of the MassDOT project initiation process, the Metropolitan Planning Organization (as in the case of Athol) or the Transportation Planning Organization (as in the case of Orange) is notified of the potential project. These organizations are made up of Federal, State, Regional and Local officials who meet regularly to review the status of projects and determine which projects to list on the TIP. Once a project is approved by the PRC it is eligible for TIP funding and it is assigned a project identification number. However, it is important to note that being *eligible* for TIP funding is *not* a guarantee of TIP funding. Getting a project on the TIP requires coordination with MassDOT, the MPO/TPO, and a strong project proponent (i.e. the Town in which the project is located).

Projects that receive TIP funding receive 100% of the construction costs (80% Federal, 20% state). However, the design and right-of-way costs are the responsibility of the project proponent. Whether a project is listed on the TIP and in which year is determined in large part by the commitment and progress of design by the host community. Often the commitment of design funds is extremely difficult for small towns, but without design, towns will not be successful in receiving TIP construction funds. Also, it's important to note that the TIP is an excellent source of funds for eligible projects, however, it does have a very long timeframe. It is

February 1, 2021

not uncommon for projects to take 10 years from project initiation to construction. This is due to a long queue of projects, limited funding, and the length of time design typically takes.

MassDevelopment Commonwealth Places Program

[Commonwealth Places](#) provides a creative funding mechanism to advance community place-making projects throughout Massachusetts. The statewide program will help fund place-based, community-driven projects such as art installations, parks, bike trails, markets, and more to revitalize downtowns and neighborhood commercial districts.

Commonwealth Places is a collaborative MassDevelopment and Patronicity initiative that is a crowd-granting challenge program intended to activate new or distressed public places and community spaces. Municipalities and nonprofits in low- and moderate-income communities in Massachusetts are eligible to participate in the program. The amount of match funding available to communities is dependent on income levels. Both Orange and Athol are eligible for a 50-50 match of up to \$50,000. The program mobilizes community members, residents, and general supporters to make individual contributions while promoting their efforts to others. Communities and non-profits can submit projects by applying for a [Patronicity](#) crowdfunding online donation campaign. Projects meeting fundraising goals can receive a matching grant from MassDevelopment of up to \$50,000.

Projects must demonstrate that they will activate a new or underused space that is open and accessible to the public. The project must be defined and focused and be a place-making project with the potential to catalyze economic impact. The project should be located in a downtown or commercial area and enhance the public realm at the pedestrian scale. Bike paths are listed as an eligible category of the program, and there may be some aspect of the greenway project that could be funded through this program.

Massachusetts Downtown Initiative

The [Massachusetts Downtown Initiative \(MDI\)](#) is an annual, competitive technical assistance program of the MA Department of Housing and Community Development. As opposed to an award of grant funds, the MDI awards professional consultant services for a specific task that is focused on downtown revitalization. In the 2019 application round, the value of these services was up to \$15,000. There is no cash match requirement for this program. The only requirement is the time of municipal staff and local officials and/or volunteers to work with the consultant. Typically, projects are completed within a 6-8 month period.

Technical assistance can be provided on a range of topics, such as housing, parking, and small business support. One of the topics is assistance to develop public wayfinding/branding. This assistance can include the design of a logo/image, a plan for sign placement, and cost estimates for implementation. Two municipalities can work together on a project, with a single municipality as the lead applicant. The MDI may be an opportunity for Athol and Orange to work together to develop shared signage for the bikepath. The project application must highlight how this project will support the revitalization of the two downtowns. The next round is scheduled to be announced in January 2021.

Massachusetts Land and Water Conservation Fund (LWCF) Grant Program

The [LWCF](#) is administered by Massachusetts on behalf of the National Park Service (NPS), an agency of the Department of the Interior. The LWCF program provides grants to states and local governments and federally recognized Indian tribes for the acquisition and development of public outdoor recreation areas and facilities. The program is intended to create and maintain a nationwide legacy of high-quality recreation areas and facilities and to stimulate non-federal investments in the protection and maintenance of recreation resources across the United States.

Eligible projects are those for the acquisition of parkland, development of a new park, renovation of an existing park, development of trails in an existing conservation or recreation area, or the acquisition of conservation land. Applications will be accepted from municipalities that have Open Space and Recreation Plans that are approved or currently under review. For projects that will have a significant impact on climate resiliency, the maximum grant award is \$1,000,000. The maximum grant award for all other project is \$750,000. The minimum grant award is \$50,000. Since the LWCF is a reimbursement program, municipal applicants selected to receive grant funding must have a successful Town Meeting vote that appropriates 100% of the total project cost. Reimbursement is at 50%. All projects must provide appropriate public access. Tasks eligible for funding are engineering, design, construction, construction supervision, and land acquisition.

The deadline for the LCWF grant applications is February 1st of each year and grant timelines give two years to finish work associated with grant awards. Points are gained on the application for recreational access to Environmental Justice populations, as well as the availability of water access, trail development, wildlife viewing opportunities, environmental education opportunities, access for the disabled, making this grant a great potential for award.

Next Steps and Milestones

It is important that the towns commit to moving this project forward. There are opportunities to seek funding for different components of this project, but clear endorsement and direction must come from the towns.

- Towns confirm interest in moving the project forward.

Below are the next steps and timeframe considerations for each of the potential funding sources and the possible components of the project that could be funded.

MassTrails Grant

These are actions to move forward with a MassTrails grant application for the next round, which has a **February 1, 2021**, deadline, or to prepare for a future round. The application is an opportunity to seek funding to begin the design and engineering process. The application could seek funding for project design elements such as completing a preliminary design plan, an assessment of the right-of-way necessary, and/or evaluation of the design options for the bridge needed in Athol. A review of projects that were awarded funding last year revealed that many projects included elements of trail design work and that the MassTrails grant awards were generally around \$100,000.

February 1, 2021

- A decision would need to be made no later than the first week of January 1, 2021, whether to move forward with this application as the application will take time to assemble to meet the February 1st deadline.

The following are needed for the application:

- Define the scope of work;
- Determine the project budget;
- Decide who would be the fiscal agent. More than one entity can apply jointly, but one fiscal agent must be designated.
- A confirmed source for a 20% match. The match can be a cash match, donated services, and volunteer labor. The cash match can be obtained from other state and federal grants, donations, or other resources, like Community Preservation Act (CPA) funds. There are requirements for documenting and accounting for the match, which will be the responsibility of the fiscal agent.
- Letters of support from the select boards, legislators, relevant supportive organizations, and local business leaders.

Winter Shared Streets and Spaces

- Seek funding to complete temporary installation of the on-road portions of the project that could be implemented before May 31, 2021. The funding round is open and the application form available for download.
- Write an application and submit it before February 26, 2021. Contact FRCOG and MRPC for assistance with the application.

Massachusetts Complete Streets Funding Program

Both Orange and Athol have components of the project already included in their Complete Streets Prioritization Plans.

Recommendations:

- Orange apply for funding in the upcoming MA Complete Street Funding round for one of the two relevant projects:
 - Orange submits an application to the MA Complete Streets Funding program for \$171,000 to install a bicycle facility on East River Street between the Public Works Building and Athol Town Line. The deadline for submission is May 1, 2021. The application materials are posted on the [MA Complete Streets Funding Program](#) website so the application materials can be prepared now.
 - Orange applies to the MA Complete Streets Funding program for a portion of the project (up to \$400,000) to construct a bike lane on East River Street between South Main Street and the Public Works Building. This project is estimated to cost \$450,000. Orange could apply for up to \$400,000 and use other funding to make up the difference or scale the project back to cost less than \$400,000. The deadline for submission is May 1, 2021.
- Athol complete design and determine which parts of the project could be completed with Complete Streets funding for the grant rounds in 2022. Seek funding for the portions of the project that are on-road and connect to the Alan E. Rich Environmental Park.

TIP Funding

- As described the TIP process requires balancing projects with limited resources. It takes time for projects to move through this process. Contact FRCOG and/or MRPC to review the TIP process and strategize how this project can proceed.
- Initiate the MassDOT Project Need process.
- Determine the source of funding to complete the design for the project.

Massachusetts Downtown Initiative

Typically, the MDI program has a relatively short time frame between when the application solicitation is announced and the application submission deadline. The application form is usually not very lengthy. It is anticipated that the next round of applications will be announced in January and likely due in February 2021. If this is the case, the following actions are recommended:

- Athol and Orange Select Boards vote in January 2021 to pursue an MDI application for technical assistance to design shared signage for the bikepath. They must also determine which town will be the lead applicant.
- Apply by the anticipated February 2021 deadline. FRCOG and MRPC staff are available to consult on the completion of the application form.
- If awarded, municipal staff and local officials, and/or volunteers will need to work with the consultants to complete the project within a timely period (typically within about 6-8 months).

Massachusetts Land and Water Conservation Fund (LWCF) Grant Program

This program is offered annually in November, with an application deadline of the following February 1st and a grant award of July 1st, and two years to complete all work. Tasks eligible for funding are engineering, design, construction, construction supervision, and land acquisition. Points are gained on the application for recreational access for Environmental Justice populations, as well as the availability of water access, trail development, wildlife viewing opportunities, environmental education opportunities, access for the disabled person, etc., making this grant a great potential for award.

- Recommend further investigation and discussion with the MA Department of Conservation and Recreation to ensure the project is eligible.
- To be eligible to apply for LWCF a municipality must have an up-to-date Open Space and Recreation Plan. Check the status of the Athol and Orange OSRP and, if necessary, complete an update to be eligible to apply.



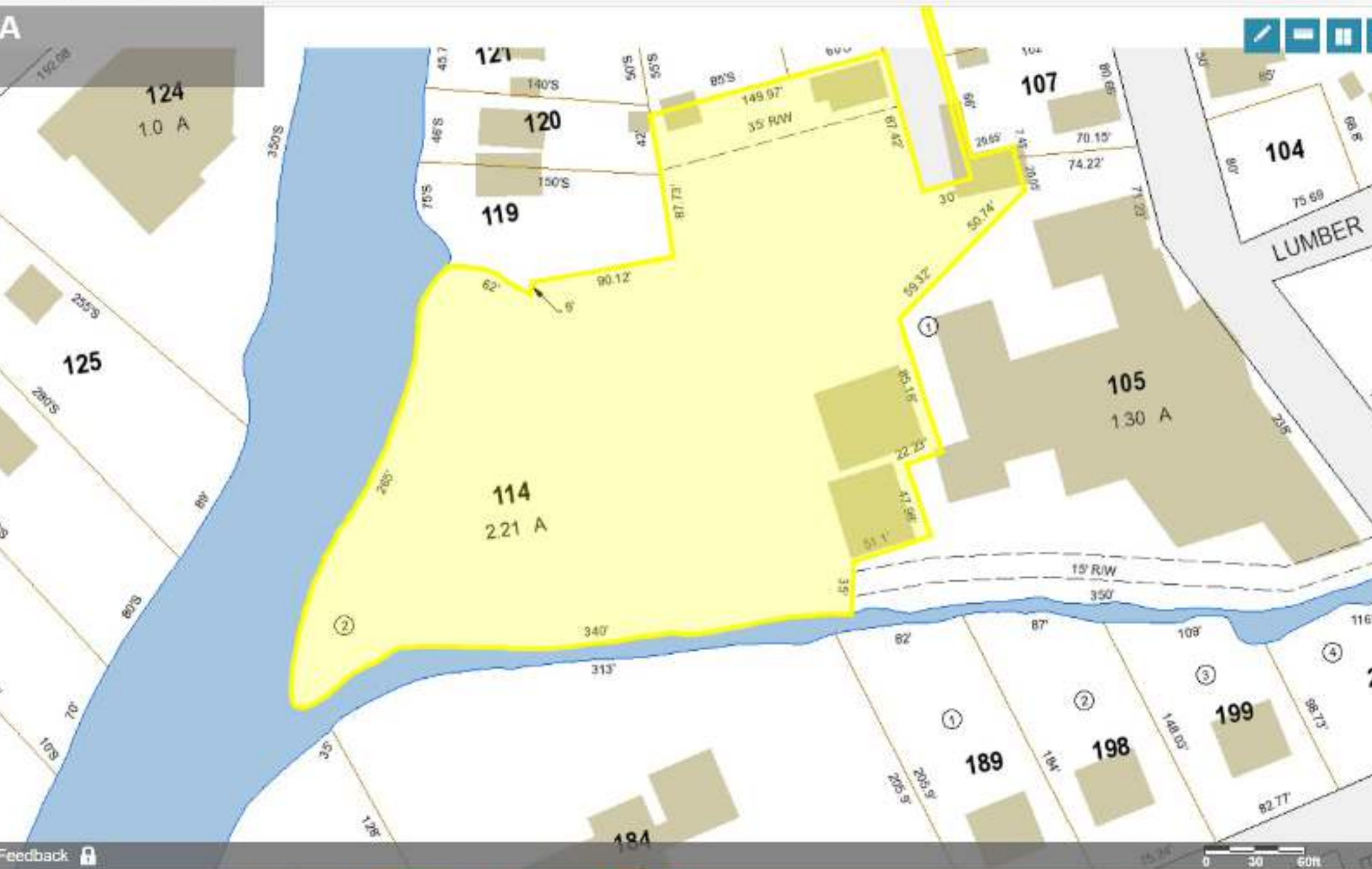


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Engineers + Planners

Appendix B

BETA Concept Plan





*In assessors data base th house sits on a 35' ROW this needs more re-search

Parcel #023-114
 Address is 11 Linden Park
 Building Assessed \$81,300
 Land Assessed \$24,300
 2.21 Acres inclusive of house
 **Note House lot would need to be subdivided from 114.

With a new ROW for streets this lot now gains frontage on the new ROW
 *Note this may instill new value to the restructured lot 114
 However flood plane restricts redevelopment opportunity

BETA NOTES

***Concept for internal Discussions only

BETA mtg.02.01.22
 Notes (1-5) outline a possible approach to Lot 114 if determined acquisition of lot is not possible and land trade or other negotiating is required



Existing Conditions

Athol, MA | Town of Athol

PRELIMINARY

September 2021

Athol, MA





Existing Conditions

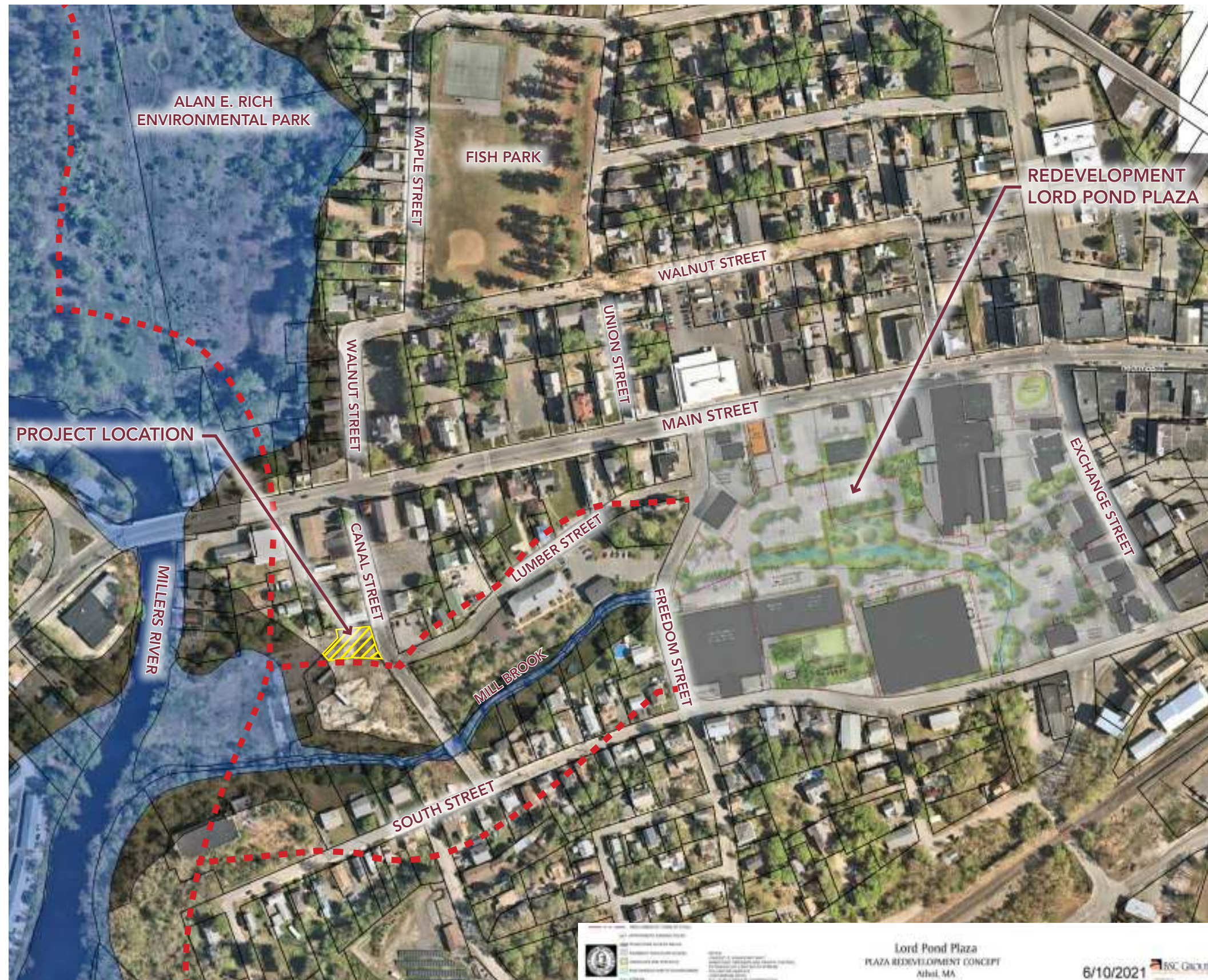
Athol, MA | Town of Athol




PRELIMINARY

September 2021

Athol, MA





KEY	
	ZONE A4
	ZONE B
	200' RIVER FRONT AREA

PRELIMINARY



Flood Zone

Athol, MA | Town of Athol

September 2021

Athol, MA





PRELIMINARY



Concept Plan A-1

Athol, MA | Town of Athol

September 2021

Athol, MA





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Appendix C

Land Plot Plan and DLTA Study

Commercial Cottages: A reuse study for the former Putnam Hall lot in Downtown Orange, MA

Created by Franklin Regional Council of Governments (FRCOG) with the Town of Orange, under an award from the 2019 Massachusetts District Local Technical Assistance program. January 2020.

Commercial Cottages: A reuse study for the former
Putnam Hall lot in Downtown Orange, MA
January 2020

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Introduction

Near the intersection of North, South, East and West Main Streets in Downtown Orange is a vacant lot owned by the Town of Orange. Referred to as the Putnam Hall lot, the property at 7-9 West Main Street/Route 2A had been the site of a celebrated historic structure. Unfortunately, redevelopment of the deteriorated structure was not feasible so it was demolished in 2015. Currently, the site is a cleared 0.25-acre grassy lot with a slight slope abutting railroad tracks to the rear, a municipal parking lot to the east and a three-story commercial building to the west.



Figure 1: Downtown Orange. Photo credit: Pictometry, 2017.

After the structure's demolition, the municipality conducted a Request For Proposal (RFP) process to make the property available for redevelopment. At that time, no private sector interest was expressed. Over the years, other efforts to promote the property for development were made, but with no substantial response.

The Town of Orange is interested in having the property reused in such a way that would activate this vacant space to draw local consumers and visitors to the downtown. By generating greater attention and economic activity in the town center, it may also attract prospective investors and entrepreneurs to the opportunities available in the downtown. A project idea was identified that could meet these goals and be implemented either as a temporary or permanent reuse of the site. The project is to create a cluster of stand-alone cottages, similar to the summertime artist shanties seen at the Hyannis waterfront or to the European-style Christmas Markets.

Snapshot

- 50% of the Town's 7,682 people live downtown.
- In 2018, the average annual daily traffic on Route 2A was 7,367 vehicles.
- The annual North Quabbin Garlic & Arts Festival hosts nearly 10,000 people for the last weekend of September.
- Outdoor recreation is a popular attraction for the region, from parachuting at the Orange Municipal Airport, to paddling the Millers River from the Orange Riverfront Park, to enjoying hundreds of miles of hiking and nature trails throughout the North Quabbin area.

This study evaluates the feasibility of creating a cluster of cottages on the former Putnam Hall lot. A possible layout scenario has been created to illustrate the potential of the project and to highlight different design elements and their cost implications. In addition to the physical layout, this study reviews various considerations for implementing a program to launch and maintain a marketplace of small commercial cottages, including vendor selection and promotion of the site.

This study is a starting point. Before the cottages can be open for business, more work is needed. For example, site design and preparation is required before cottage construction. On the programmatic side, a point person for implementation needs to be determined and structure determined for recruiting and selecting vendors. Also included in this study are suggestions for potential funding sources to help move the project forward.

Background on Artist Shanties and Markets

From traditional Christmas markets to contemporary artist shanties, the concept and goal are the same. Each are a cluster of small scale, independent retailers set up for seasonal operation. The goal for retailers is to have access to a high number of customers at a location with a relatively low overhead cost to operate. To ensure these retailers have customers, there needs to be a festive atmosphere and their presence must be well promoted. If successful, the community will have created a unique asset that generates local interest and attracts visitors to a specific area, who will then visit other stores and restaurants in the neighborhood. This economic activity may encourage investment in other businesses or attract new residents to the area.

Variations of this concept have been implemented around the world in different ways. Christmas Markets in Germany and throughout Europe have been around for centuries. They feature small booths or sheds set up in central plazas that sell seasonal foods and gifts. They are a well-known tradition and major tourist attraction. These same booths may be used for special events and festivals at other times throughout the year.

In 2005, an artist shanty program was launched in the seaside village of Hyannis in the Town of Barnstable, MA (<https://artsbarnstable.com/hyarts-shanties/>). Today, the Hyannis HyArts Artist Shanty Program has approximately a dozen shanties in two neighboring locations near the waterfront: Bismore Park and Harbor Overlook. The shanties range in size from 10'x13' to



*Truffle Festival Booths, Volterra, Italy.
Photo credit: FRCOG, 2019.*



*HyArts Artist Shanty at Bismore Park,
Barnstable, MA. Photo credit: FRCOG, 2019*

12'x15'. Located among the shanties are gathering spaces with public art, seating, picnic tables and play areas for children. The artist shanties are a key feature of Town's designated HyArts Cultural District.

To select vendors, an application process is administered by the Town of Barnstable's Arts and Culture Coordinator. The HyArts program requires that applicants are artists that reside on Cape Cod for at least six months of the year. All applications are reviewed by a jury to ensure "quality and variety of work offered" at the shanties. The shanties are rented on a weekend or full week basis from May through October. In 2019, rental pricing ranged from \$80 to \$240 per weekend or \$55 to \$100 per full week, depending on the month. All artists were required to carry commercial general liability insurance and submit a Certificate of Insurance naming the Town as an additional insured party.



Boardwalk and art shanty at Harbor Overlook, Barnstable, MA. Photo credit: FRCOG, 2019



*Gathering space and walkway among art shanties at Bismore Park, Barnstable, MA.
Photo credit: FRCOG, 2019*

The primary season for the HyArts Shanties is June through September with business hours generally from 11:00 am through 6:00 or 8:00 pm, depending on the month. Vendors have the opportunity to open earlier or later than the hours required by the program organizers. There are also seasonal hours on weekends in October and for special holiday events after Thanksgiving and before Christmas.

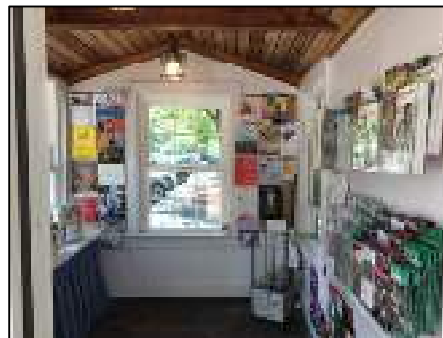
The HyArts Artist Shanty program is very successful as a tourist attraction. The intention of the program was not only to attract tourists to the village center, but to serve as an incubator for artist businesses. Early funding support for program development came from a Massachusetts Cultural Council Adams Grant. According to the program, ongoing programming support comes from the Cultural District's partners, including the Hyannis Main Street Business Improvement District (BID), Cape Cod Art Center, Arts Foundation of Cape Cod, Cape Cod Maritime Museum, the Greater Hyannis Chamber of Commerce and others.



A closed shanty before business hours at Harbor Overlook, Barnstable, MA.

This program has since been adopted by other seaside Massachusetts communities, including Newburyport. The Newburyport Arts and Culture Shanty Program was launched in summer 2019 by the City of Newburyport in collaboration with Firehouse Center for the Arts and other partners. There were four 6'x8' shanties and one shanty was 8'x12' constructed by a local custom home builder. The shanties were open daily from July through mid-October 2019. Hours of operation were from 11:00 am to 6:00 pm during the summer and 12:00 pm to 4:00 pm in September and October. Artist vendors were selected through an application process and reviewed by a jury. According to the application, artists were required to be a resident or headquartered in Essex County and have their work be "original, hand-made or hand-crafted." Shanties were available by the full week, and at prices that ranged from \$100 to \$250 from June through October. The shanties are only for seasonal use and are stored inside for the winter months. Funding to construct the shanties came from the Essex County Community Foundation. Program support, such as social media promotion and vendor support, was by the non-profit arts organization, the Firehouse Center for the Arts.

The artist shanty is a version of this concept that is appropriate to its waterfront and seaport settings. Other variations of this concept have been employed cross the Commonwealth and the country. To promote arts and local businesses, the Stockbridge Chamber of Commerce uses a shed structure as an information booth on its popular Main Street in Stockbridge, MA. The booth provides brochures and maps to tourists visiting the Berkshires. The booth is unstaffed and monitored by a security camera.



Chamber of Commerce Information Booth, Stockbridge, MA. Photo credit: FRCOG, 2019.

The White Lion Brewing Company created a seasonal beer garden using former shipping containers at a park in center of Downtown Springfield, MA. The beer garden was promoted through the Company's Harvest Nights events, held on Wednesdays and Fridays evenings from May to October 2019. In partnership with the Springfield Business Improvement District, a schedule of food trucks, musical acts, and guest brewers were featured as part of Harvest Nights. The Company is currently constructing a brewery and tasting room across the street this park in the Tower Square building.



The beer garden at in downtown Springfield, MA, viewed before Harvest Nights opens in the evening. Photo credit: FRCOG, 2019.

A project in Minneapolis, MN encourages artists to construct unique ice fishing houses, which are placed on frozen Lake Harriet (<https://artshantyprojects.org/>). The structures are part of a three-week festival held on weekends from January through February. Visitors are requested to provide a donation upon entrance. These funds go to support the project and individual artists. In 2019, 20 shanties were displayed.



Art Shanty Projects on Lake Harriet, Minneapolis, MN. Photo credit: Star Tribune, October 11, 2019

In 2013, the small town of Tionesta, PA (population less than 500) transformed a vacant lot in its village center into the Tionesta Market Village (www.marketvillage-tionesta.com). The project was launched by the Forest County Industrial Development Corporation and the Forest County Industrial & Commercial Development Authority. These entities wanted to redevelop a village center block that was vacant after the previous structure burned down years earlier. They had a local artist design the storefronts to replicate the previous structure's architecture. Local builders constructed a cluster of garden sheds with storefront facades. The project focused on encouraging entrepreneurs and increasing visitor traffic. The operating guidelines encourage vendors to predominantly sell handmade craft or artisan products with consignment operations limited or discouraged.



Grand opening day of the Tionesta Market Village, Tionesta, PA. Photo credit: Tionesta Market Village website, www.marketvillage-tionesta.com/about.html, 2013.



Storefronts of the Tionesta Market Village, Tionesta, PA. Photo credit: Tionesta Market Village website, www.marketvillage-tionesta.com/about.html, 2013.

Parcel Conditions

The former Putnam Hall parcel is 0.25-acres in size and is located in the Commercial Area Revitalization District (CARD) zoning district. The proposed project would be in accordance with the CARD zoning district requirements for use, dimensions and parking. As the parcel is sloped, the layout of the sheds and connecting pathways must take American with Disabilities Act (ADA) accessibility standards into consideration, so as to ensure that individuals using wheelchairs or with mobility issues are accommodated.



As the site is located in the downtown, utilities are available to the parcel, including electrical service, telecommunications, and public water and wastewater connections. The West Main Street sidewalk has pedestrian level lighting.

Putnam Hall lot in Downtown Orange. Source: Pictometry, 2015.

On the parcel itself, there are no current utility services or streetlights. To ensure appropriate lighting in and around the sheds, either solar lights should be installed or electrical service provided. If electrical service is extended from the street to the cottages, it could be installed underground or strung aerially. Underground connections will be more visually pleasing but will also be more costly to install. Cost for electricity will need to be factored into the project's operational budget

Vendors will likely need quality broadband access to process credit card sales. Current cell service has been described as “spotty” in the downtown. Either the cell service signal needs to be boosted or a publicly accessible Wi-Fi hot spot must be created. It has been estimated that to install a monopole on the parcel with a sight line to the Town Hall to create a Wi-Fi hot spot would cost approximately \$10,000. The ongoing cost to provide broadband service via the hot spot would need to also be factored into the project's operational budget.

Given the presence of public water and wastewater infrastructure at the site, public restrooms could be constructed. However, the cost to construct ADA accessible bathrooms and the cost for ongoing maintenance must be considered. If it is cost prohibitive to construct and maintain permanent public bathroom facilities, an alternative option is to locate rented porta-potties nearby. Due to the slope and size of the parcel, there is not an accessible spot on the property where a truck could drop off and retrieve rented porta-potties, aside from along the sidewalk of West Main Street. The adjacent parking lot at the corner of West and South Main Streets could accommodate porta-potties that are accessible.

Conceptual Design and Design Elements

A conceptual design was developed to determine if a cluster of cottages could fit on the site, given its dimensions and slope. The design also explored where the cottages could feasibly be located on the site, approximately how many cottages and what size could be accommodated, and among other design considerations.

The layout of the marketplace and the individual cottages will need to meet Americans with Disability Act (ADA) standards, so as to ensure all residents and visitors can enjoy the space. The conceptual design requirements consider both the minimum width of the path and gathering spaces as well as slope requirements. The design has a small gathering area on the northeast corner of the parcel, along the West Main Street sidewalk. From this space, the pathway winds down the ADA accessible slope to the center of the parcel where the cluster of cottages is laid out. At the center of the cluster is an open area that could serve as a small gathering space. The open area could accommodate benches, picnic tables or a children's play area. At the bottom of the slope on the south side of the parcel, the conceptual design includes an area for stormwater management and an area to potentially locate a solar array. This design concept also includes several shade trees and a monopole to create a WiFi hot spot.

The cottages are laid out in a semi-circle open to West Main Street. This layout allows for pedestrians and motorists traveling by to see down the hill into the semi-circle. Hopefully, the activity happening will encourage them to participate. It has been estimated that about 6 to 8 cottages ranging in size from 8'x12' to 10'x12' could fit on the site. These cottages would provide approximately 96 to 120 square feet of space to vendors.

The former Putnam Hall lot is located adjacent to a public parking lot owned by the Town at the corner of West Main Street and South Main Street. This lot provides convenient parking for visitors to the cottages. In addition, this parking lot could be closed for special events involving the cottages, and used to locate food trucks, a stage, and/or porta-potties. On-street parking and other downtown parking lots would accommodate visitor parking nearby.

As this is a conceptual layout, further decisions will need to be made as part of design, and cost estimates for the site. Site specific decisions will need to be made in regard to the materials used for paths and gathering spaces, the types of cottages, the foundations for the cottages, pedestrian lighting, landscape construction, stormwater management, landscape plantings, electrical utilities, broadband access, and site amenities. A table of pricing tiers is provided to demonstrate options and the potential cost implications.

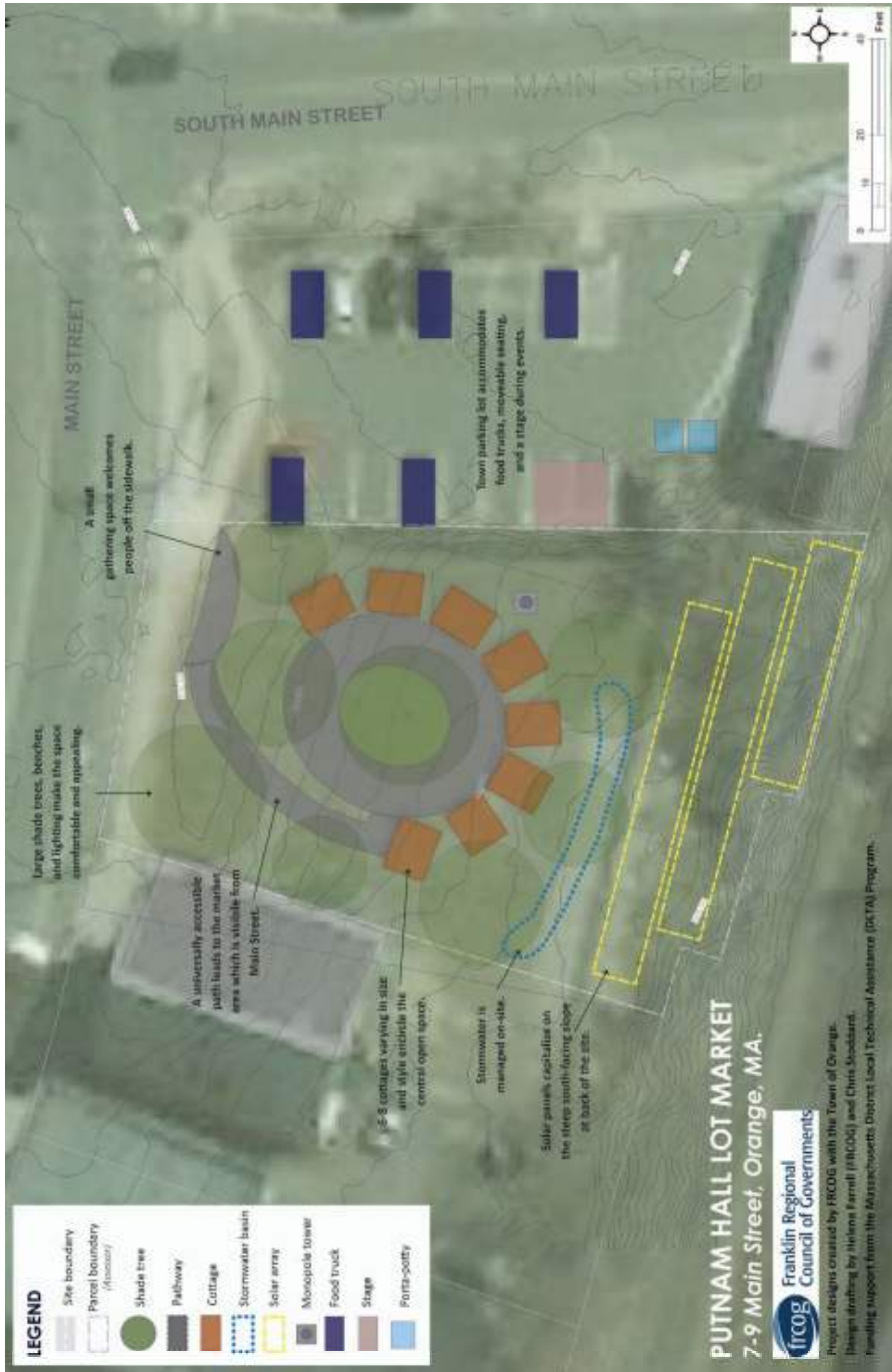
Given the slope of the site and the need to meet ADA accessibility standards, professional services need to be employed to complete the design and engineering of the site and prepare bid documents. Similarly, professional grading services will be needed to prepare the site according to these plans. As the project is located on municipally owned property, the Town will need to conduct a public procurement process to hire these services and will need to pay

prevailing wage rates for construction services. However, there may be opportunities to save money by using volunteer services or donations for benches, public art or other amenities. Depending on the type of cottages procured, there may be opportunities to use volunteer labor to construct them or paint them.

Table 1: Design Elements and Pricing Tiers

Design Element	Low Price Tier	Middle Price Tier	High Price Tier
Paths	Crushed stone	Concrete	Pavers
Cottage Buildings	Home improvement stores	Local design/build	High-end custom
Cottage Foundations	Compacted gravel	Floating slab on grade	Frost-protected concrete foundation
Center of Market Area	Grass, shade tree	Pavers	Additional cottages
Lighting	String lights along cottages	-	Permanent pedestrian level lighting
Landscape Construction	Graded slopes with balanced cut and fill	-	Retaining walls to maximize market area and support cottage foundations
Stormwater Management	Simple basin at base of slope	Raingardens	Multiple tiered basins with attractive plantings
Landscape Plantings	Slope stabilizing turf	Turf and shade trees	Custom native planting design
Electrical Utilities	Aerial	-	Underground
Broadband Access	No action	Monopole with sightline to Town Hall	Monopole on site plus supplemental pole on Trailhead rooftop to expand service area
Seating Amenities	-	Moveable seating	Installed Park benches

Source: FRCOG, 2019.



Cottages come in a variety of styles and sizes. Inexpensive wood shed kits are readily available at area home improvement centers, like Home Depot and Lowes. These kits range in cost from \$2,100 - \$2,400. Making these cottages more interesting to prospective vendors and visitors would require creativity to transform them, such as through colorful paint designs, alternative cladding (like shingles), or more. Shed companies and custom builders offer products that are more expensive but have greater visual interest.



8' by 12' shed for sale at Home Depot. . Photo credit: FRCOG, 2019.

There are companies that offer utility shed, workshop, barn and playhouse kits with additional features such as windows, porches, lofts, and utility hook-ups. For example, French King Sheds & Accessories in Greenfield, MA sells the Old Hickory Buildings & Sheds line of products (www.oldsickorybuildings.com). Depending on size and options, their building kits start at \$3,600 to \$4,600.



Jamaica Cottage Shop's Smithaven Shed. Photo credit: <https://jamaicacottageshop.com>

Specialty builders, such as the Jamaica Cottage Shop in South Londonderry, VT (<https://jamaicacottageshop.com/>), have a broad range of designs that are interesting and have many options. They offer design plans and pre-cut kits ready for assembly. For example, their Smithaven pre-cut kit is 10'x16' and starts at \$2,894. The 8'x12' Dollhouse kit starts at \$1,209. The 8'x12' Church Street Shed starts at \$1,544. The costs for these kits increase if they are multi-season and by type of flooring, siding, number of windows, and more.



Jamaica Cottage Shop's Dollhouse Shed . Photo credit: <https://jamaicacottageshop.com>

In addition to visual interest and price, the user experience should be considered when selecting a design for the cottages. Wider door openings will allow an easier flow of customers entering and exiting the space. As with the HyArts Artist Shanties, double doors allow the customer to see what is inside and encourage them to enter. Having multiple windows and possible skylights will allow more natural light into the space to

better view products and have the vendors less reliant on electric lighting. If the cottages are to be used throughout the year, ensuring that they are insulated and weather protected will be important for the comfort of the vendor and their customers.

Cottages will need a foundation to make them level and secure them in place. The foundation could be made of compacted gravel stone, a floating slab, or a frost-protected concrete foundation. There are advantages and cost implications to each type of foundation.



Jamaica Cottage Shop's Church Street Shed. Photo credit: <https://jamaicacottageshop.com>

As mentioned previously, if the marketplace will be open in the evenings or in the winter months when it gets dark earlier in the day, lighting will be needed in and around the cottages. Access to power is important for the comfort of vendors and visitors so that the cottages can have fans operating on warm days or portable heaters in the cooler months. In the design and engineering process, the determination will need to be made if electricity will be brought to the cottages using an underground conduit or strung aerially to the cottages. The cottages will then need to be wired appropriately.

Programmatic and Vendor Considerations

What are the intended outcomes for this project? If it is simply to fill a vacant space, the cluster of cottages can meet that outcome. However, the community may have additional priorities, such as to create a unique attraction to bring visitors to the downtown, to establish a space for the community to interact, and/or to serve as an incubator for new businesses. The implementation and administration of this project should reflect these priorities. Other projects have utilized a team of organizations and individuals to take on different responsibilities for developing, implementing, managing and promoting the project to meet these objectives. For example, a local arts group or chamber of commerce may take the lead on marketing and event planning for the marketplace.

Selecting and supporting vendors will be critical to the success of the project. As the Town of Orange is the owner of the property, an open solicitation process that meets state rules must be followed. The process will be similar to how the Town selects a vendor to lease the Orange Riverfront Park's boathouse. The solicitation should include the time frames for the applicant to request. Applicable fees, if any, should also be clarified in the application. Fee structures for other programs have had rental rates for full weeks that vary by month. The Newburyport Artist Shanty program has rental fees from \$100 to \$250 depending on the week. The Tionesta Market Village has rents of \$50-\$70 plus electric costs and contributions toward collective advertising. Another option is to collect a percentage of vendor revenues, as has been done with the vendor operating out of the Orange Riverfront Park boathouse.

The requirements for prospective vendors should also be outlined in the public solicitation. For example, if the program has a preferred type of vendor or requires specific times for vendors to be open for business. Both the HyArts Artist Shanty Program and the Newburyport Artist Shanty Program have requirements that vendors located in their respective regions for at least part of the year and sell handcrafted products. These programs have a jury that reviews applications to select vendors. The solicitation should make clear if commercial general liability insurance and a Certificate of Insurance naming the Town of Orange as additionally insured are required. Screenshots of their solicitation requirements and online application forms are included in the appendix.

Given the square footage and utility limitations of the sheds, consideration must be given to the type of retailers that will be using them. The sheds will likely have electricity, but no water or wastewater services. Broadband access will be available through a boost to the cell service or the creation of a public Wi-Fi hot spot. The ideal business candidates are likely those that sell relatively small unique items. Such products may include paintings, photography, pottery, jewelry, clothing, or other arts and crafts. Small size vintage or antique items may also be appropriate. Specialty food products, such as jams or sauces, would be appropriate. Perishable food products or served food and beverages would need to be given greater consideration, due to the lack of water service and the need for trash receptacles.

The Artist Shanty programs mentioned previously focus on the local arts and culture community, either by only having artists and craftspeople as vendors or by having the structures themselves be the art. There are a number of local artists and craftspeople in and around the North Quabbin region, as evidenced by the North Quabbin Garlic & Arts Festival and other venues. These artists and craftspeople may be interested in the opportunity of leasing a cottage. However, other businesses or non-profit organizations may be interested as well.

The opportunity to apply to be a vendor should be broadly promoted, such as in an article in the Athol Daily News and The Greenfield Recorder, and through social media posts by entities like the North Quabbin Chamber of Commerce and Orange Merchants Group. Business incubators and makerspaces in the region may have members that would be interested in the opportunity as well. Ways to collaborate with these groups should be explored, as they may allow for cross promotion.

A point person will need to be identified who will be responsible for communicating with vendors and responding to their needs, including during marketplace operating hours. This point person may also be responsible for ensuring rules are being followed and for checking on the overall condition of the marketplace. They should serve as a resource for vendors. For example, they can help the vendor obtain a Business Certificate application from the town, if needed.

Business Incubators and Makerspaces in the Region:

- Franklin County Community Development Corporation, Greenfield, MA - www.fccdc.org
- Hannah Grimes Center, Keene, NH - www.hannahgrimes.com
- LaunchSpace, Inc., Orange and Athol, MA - www.launchspace-orange.com
- The Hive , Greenfield, MA - www.hivemakerspace.org

In addition to the administrative functions of the program, there will need to be an active promotional campaign. The person or group assigned for promoting the cottages may or may not be the same as the administrative point person. Promotion of the marketplace will be important in directing people to the site. This marketing should include promoting the marketplace itself, the participating vendors and any related events.

The more unique and inviting the marketplace and cottages look, the more it will draw visitors and community members. A prominent trend in designing public spaces is to make them of interest for social media posting, like on Instagram. Is there a particular spot or view that will be “Instagram-able”? In addition to the marketers promoting the marketplace, the participants will post their experiences on social media and be part of this promotional campaign.

Programming of activities can be done in the marketplace itself, or could be expanded to utilize the adjacent parking lot, like for food trucks or a stage. Programming could be in coordination with other groups or annual activities in Downtown Orange, such as Third Thursday sidewalk sales, the Farmers’ Market, movie nights, or activities at the Riverfront Park or Butterfield Park. The Orange Merchants Group, the Orange Business Association, the North Quabbin Chamber of Commerce, the Franklin County Chamber of Commerce, the Mohawk Trail Association, the

Riverfront Park boathouse vendor, the Orange Innovation Center and downtown businesses, are all groups that could become partners in promoting the marketplace.

In addition to costs to construct the marketplace, there will be costs for ongoing operation of this program. The following list identifies costs that should be factored into the program's overall operations budget.

- Staff time to administer the program, unless conducted by volunteers
- Orange Highway Department staff time to maintain lawn and landscape, trash removal
- Periodic repair and maintenance of cottages, benches, and other amenities
- Electric power for cottages
- Internet service costs and power to monopole for broadband access
- Any costs associated with security, such as cottage locks, if provided, or security cameras
- Electric power for pedestrian level lighting and any other amenities that may require it, such as wireless broadband repeaters or security cameras
- Marketing costs, such website domain fee and webmaster services, advertising, etc.
- Special event costs, such as for porta-potties, staging, sound system, insurance, etc.

It is hoped that once the marketplace is operational and vendors become more successful, these businesses may grow into storefronts in the downtown. Engaging partners to help these businesses grow would be advantageous. For example, the Franklin County Community Development Corporation, the regional Chambers of Commerce and groups like LaunchSpace, Inc., could be invited to work with these businesses to help them succeed, such as through business planning workshops or networking in the business community. The Town's Community Development Office could work with local realtors to identify and tour available storefronts that could accommodate the expansion of these businesses.

Potential Resources

Paying for the design and engineering, site construction and cottages will likely require multiple funding sources. The following table lists prospective funding sources.

Funding Source:	Description:
MassWorks Infrastructure Grants - www.mass.gov/massworks	A competitive grant program for municipalities to fund public infrastructure construction projects that support economic and housing development. Match funds are not required but applications for projects with public or private funds committed are considered more competitive. In past rounds, grant guidelines were released in late May with applications due in early August.
Parkland Acquisitions and Renovations for Communities (PARC) Grant Program - www.mass.gov/service-details/parkland-acquisitions-and-renovations-for-communities-parc-grant-program	Through the Commonwealth's Division of Conservation Services, this grant program will fund the development of new parks and improvements to existing parks. It requires municipal applicants to have a current Open Space and Recreation Plan, with the Town of Orange has until it expires in September 2023. The Town must appropriate 100% of the project cost with this grant reimbursing up to 70% of eligible project costs. The maximum award is \$400,000. In past rounds, grant guidelines were released in March with applications due in July.
MassDevelopment's Commonwealth Places Program - www.patronicity.com/commonwealthplaces#!/	This program supports the creation of community-driven placemaking projects by using an online crowdfunding platform called Patronicity. For projects accepted into the Program, MassDevelopment will match up to \$50,000 of the funds donated through a 60-day campaign on Patronicity.

Appendix

Town of Barnstable's 2019 Hyannis HyArts Shanty Application

Town of Newburyport's 2019 Artist Shanties Program Application

Appendix 1: Town of Barnstable's 2019 Hyannis HyArts Shanty Application

Source: <https://artsbarnstable.com/hyarts-shanty-application/>



TOWN OF BARNSTABLE HYANNIS HYARTS SHANTY APPLICATION

Each year, the first application review date for the upcoming season is November 1. After this date, applications **WILL CONTINUE TO BE ACCEPTED ON A ROLLING BASIS** until all spots are filled. Applicants who submit by the first application review date and are accepted get placed for program dates. This is the advantage of applying by November 1.

Artists who submit by this date will be notified no later than December 31st of each year.

There is a rolling application/jury process for any remaining openings and artists are encouraged to always submit an application to be considered for the current season as most often not all spots are filled during the first review.

Artists will always receive confirmation application has been received and should expect to be notified of either in-person jury date or a decision within 8 weeks of submitting an application.

HyArts Shanty Application

Fields marked with an * are required

Program Year

☐ 2019

☐ 2020

First Name *

Last Name *

Address *

City

US States

Zip

Phone *

Email *

Website

Social Media Links (Instagram, Facebook, or link to photos of your work)

Media/Category (Painter, photographer, fiber artist, etc.) *

Describe your work and any unique features (please no more than 80 words) *

Price Range of Items *

What do you hope to gain from this experience beyond sales? *

Have you participated in the past? If so, list the program years. *

How did you hear about the program? *

Date Preferences *

- ☐ Weekends (mid-May - mid-June)
- ☐ Weekends (October)
- ☐ Full Weeks (mid-June thru September)
- ☐ Black Friday/Small Business Saturday (November weekend)
- ☐ Hyannis Holiday Stroll (December 1st Saturday)

Would you like multiple weeks/weekends if space allows? If so, how many? *

If there are certain times you CANNOT be placed (other commitments) please indicate here.

If there are certain times you CANNOT be placed (other commitments) please indicate here.

If you are interested in sharing a shanty with another artist please indicate below (You may list and share a shanty with a specific artist but you all must apply separately and be accepted. If you would like to share but don't have someone to share with, you may request to be matched with another artist. There are no guarantee this request can be met):

SUBMIT

Appendix 2. Town of Newburyport's 2019 Artist Shanties Program Application

Source: <https://www.firehouse.org/shanties/>



Newburyport Artist Shanties Program Application

Please be sure you have read through the list of Requirements before submitting your applications.

Applications are accepted on a rolling basis. Artists are juried and if accepted, placed for the upcoming season.

1. Artists and/or Arts Organizations applying must be a resident of or headquartered in Essex County;
2. All pieces shown must be original, hand-made or hand-crafted ;
3. Each year is a new year, prior participation does not mean automatic acceptance into the program;
4. The amount of time at shanties for each artist varies year to year;
5. Multiple Artists and/or Arts Organizations may share a shanty, but they all must separately apply and be accepted;
6. If an Artist and/or Arts Organization would like to share, but doesn't have someone to share a shanty, this should be indicated on the application;
7. Artists and/or Arts Organizations sharing will coordinate payments and submit ONE check as deposit and ONE as balance due.
8. All work must be juried; any items not approved during the jury process must be approved by the Shanty Programming Committee prior to selling in the shanty;
9. Artists and/or Arts Organizations must complete an application and be juried/accepted into the program on a yearly basis;
10. There is a rolling application/jury process for all openings. As received, artists will be juried and placed if there are remaining openings, otherwise they will be added to the waiting list for the upcoming season;
11. Artists and/or Arts Organizations MUST have a minimum of \$1M Liability insurance naming the City of Newburyport and Firehouse Center for the Arts as additional insured in order to participate in this program;
12. Upon acceptance into the shanty program, artist must submit proof of insurance with their signed contract;

12. Upon acceptance into the shanty program, artist must submit proof of insurance with their signed contract;
13. Hours: June through August (full weeks) – 11:00a.m. to 6:00 p.m./September & October (full weeks) – 12p.m. to 4:00p.m.
14. Cost: June-August (full weeks) \$150 / Yankee Homecoming Week (July 20 – August 4) \$250 /September - October (full weeks) \$100 Prices Subject to Change
15. Artists and/or Arts Organizations will pay full amount with contract;
16. Each shanty must be staffed by a participating artist or assistant/friend/family member who knows the artist's work during operating hours;
17. Shanties rotate each week with new artists coming in Monday morning and previous Artists and/or Arts Organizations leaving Sunday night; Artists and/or Arts Organizations are responsible for removing their work out of the shanty and removing all nails/hooks, etc. New artists may set up before 11:00 a.m. on Monday;
18. The Program Coordinator will send artists all added information (how to unlock the doors, etc.);
19. Every participating artist is emailed information before the season begins and is required to attend a mandatory meeting in the spring to answer any further questions.
20. Artisan Shanties will measure 8-foot-wide by 6-foot-deep and will be equipped with electricity. There will be access to water, but there will not be individual access within the Shanties.
21. Arts Organizations are invited to apply for use of a larger 12-foot-wide by 6-foot-deep Shanty. Add \$100 to weekly rental costs for use of larger shanty.

Below are examples of what the Artisan Shanties may look like.

Example of Shanty



Newburyport Artist Shanties Program Application

* Required

Applicant Information

Name *

Your answer

Street Address *

Your answer

Town *

Your answer

ZIP Code *

Your answer

Phone Number *

Your answer

Email Address *

Your answer

Website (please include http://)

Your answer

Social Media account (Facebook, Instagram, etc)

Hit Enter after each account to include list multiple Social Media accounts

Your answer

Using no more than 500 characters, please provide a description of your work; include medium, materials and any unique features: *

Your answer

Price range of items: *

Your answer

What do you hope to gain through this experience, other than sales? *

Your answer

How did you hear about the program? *

Your answer

Please provide up to five (5) examples of your work (via website, Dropbox folder, etc) *

Your answer



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