

River Point Conservation Area Access/Bridge Background 5/13/2013

The Town Council, through its FY13 Work Plan, requested the Town Manager and staff present possible options for the River Point bridge upgrades. The Work Plan, Item 1-D, stated the following: *“Railroad crossings for Community Park and River Point Bridge. The Town Council is committed to designing and implementing long range solutions for both of these crossings. Staff and committees should continue to design all feasible concepts for consideration to fund significant infrastructure projects.”* At the April 22, 2013 Town Council meeting, staff presented two options whereas the Town Council requested additional information and documentation. The following report, attached maps and appendix seek to address those requests.

Access Points

When the town obtained the River Point parcel in 1995 as part of the Falmouth Crossing development project (at no cost to the town), it also received two Right of Way (ROW) access points to the parcel. The first was an aerial easement via the existing wooden railroad bridge; the second is a potential grade level crossing to the west of the bridge that exists on paper only (see Map I) and currently does not have railroad approval.

At this time, there is no other way to legally access this property, with the exception of a foot trail from a trailhead off Falmouth Road. This location is the start of a trail which follows the East Branch of the Presumpscot River across Falmouth Land Trust’s property (Smith Property) and, for most of its length, across private property owned by Neil & Lucia Adam and held in easement by the Falmouth Land Trust (see Map II).

The Adams’ hold an “agricultural easement” across the railroad tracks from Leighton Road into their property. This easement provides for “occasional access for purposes of farming or forestry”. [The Adams’ have attempted to get this easement upgraded to provide for continuous access but have been unsuccessful in that regard.] This access is not a viable alternative to the existing River Point access because (1) it is not an authorized ROW that would allow for vehicle or, more importantly, pedestrian access across the railroad tracks; (2) it leads to private land, not open to the public except for an approximate 100 ft. foot wide swath along the river which is held in an easement with the Falmouth Land Trust; and (3) it would not allow for vehicular access to River Point unless a new bridge was built over the West Branch of the Piscataquis River. This option has limitations as the provisions of the existing conservation easement prohibit construction of such a structure in the easement-protected area that borders the West Branch as well as prohibits any motorized vehicles.

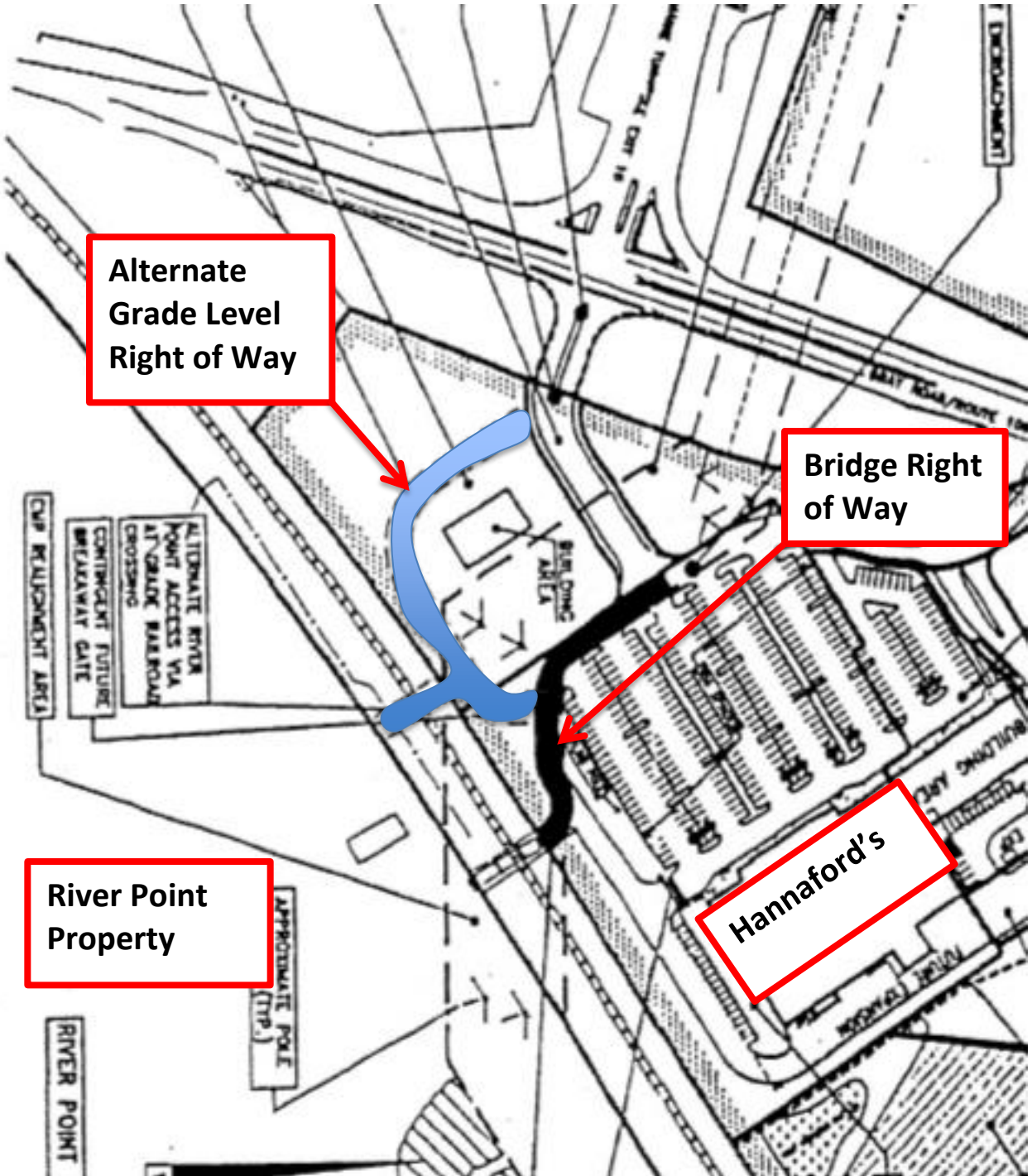
To the west of the property, the MDOT owns an abutting parcel that extends from River Point to the Route 100 Bridge. It too, is on the river side of the tracks and would require railroad approval for an at-grade crossing.

Bridge Replacement History

1). The weakened condition of the wooden bridge that provides the sole legal access to River Point has been a concern of the town’s since at least 2003, when the first engineering assessment of its condition was done. This engineering report conveyed a need to “replace all deteriorated and damaged deck planks immediately” and also that the bridge railing was “woefully inadequate.” This report also recommended reducing the load capacity from 7 to 3 tons.

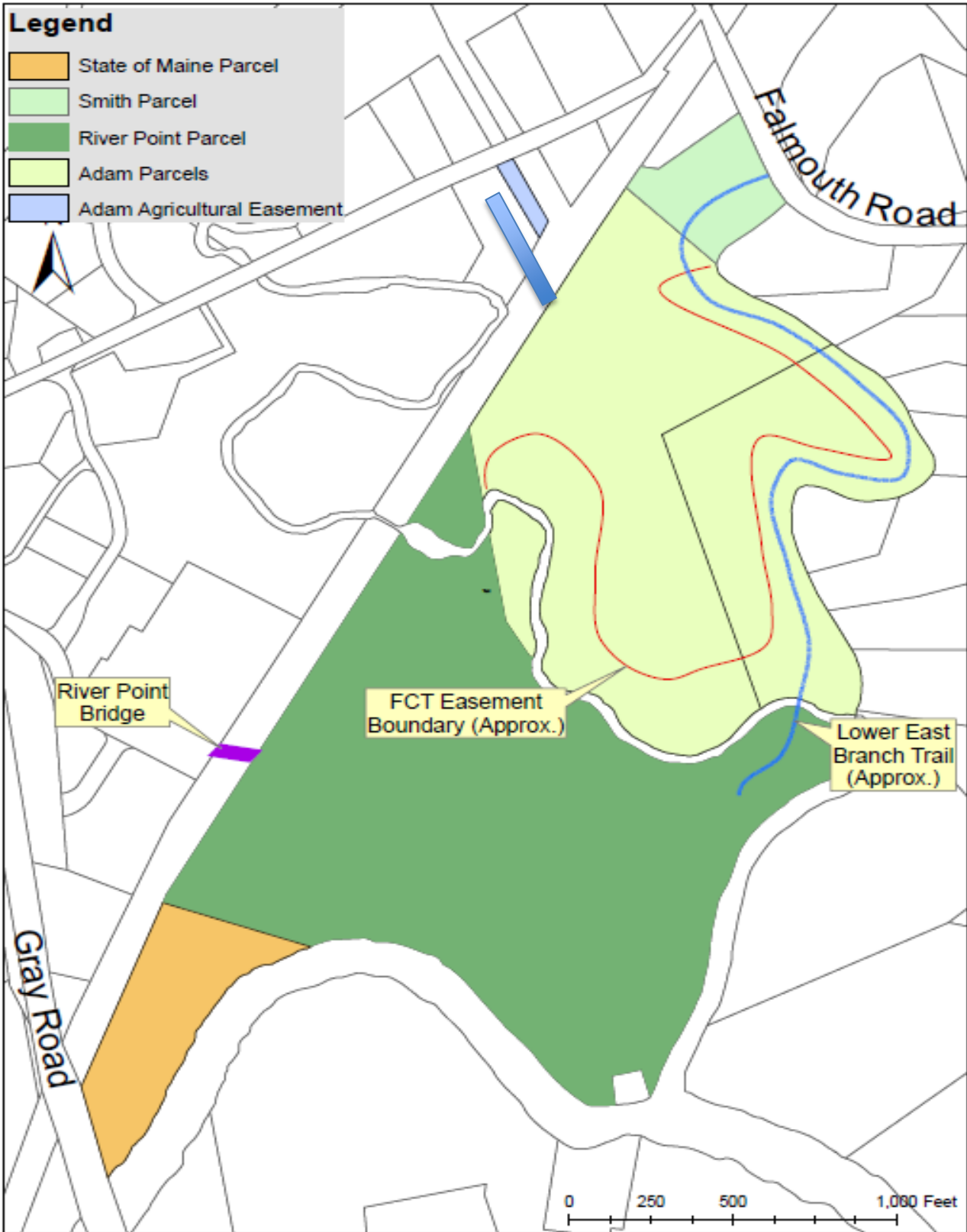
- 2). In 2004, Dopp & Dopp Associates prepared a quote for a 24 ft. wide, steel replacement bridge with a 20-ton weight limit for a cost of \$145,000, which did not include installation, permitting, insurance fees and railroad flagman fees, railroad engineering review, etc. These fees are estimated to be in the \$135,000-\$150,000 range.
- 3). Additional inspections were performed by Caswell Engineering in 2008 and 2009 and both underscored the continued deterioration of the bridge. At this time, the bridge's footings at the base of the vertical supports were reinforced by John Libby.
- 4). In 2008, John Libby, (Houses & Barns by John Libby), an experienced builder of wooden framed structures, submitted a bid to restore the bridge to its original specifications (7-ton weight limit) by replacing the damaged and deteriorated components for a cost of \$221,879, which also did not include the required insurance, railroad flagman fees, and railroad engineering review costs (estimated at \$135,000-\$150,000).
- 5). Also in 2008, Dopp & Dopp submitted a replacement estimate for a 15 ft. wide span with a weight limit of 20 tons at a cost of \$212,312, not including all the other associated costs, such as installation, permit fees, insurance, railroad fees, etc. (estimated at \$135,000-\$150,000).
- 6). In the same 2009 time period, the railroad was approached by the Town with regard to the possible construction of a grade-level crossing to the west of the existing bridge. Pan Am Railroad's immediate response was negative and followed up to state that the cost of such crossings range from \$750,000 to \$1,000,000 including lights and gates, track improvements, approaches, and the required railroad fees.
- 7). Also in 2009, the Portland Water District and Central Maine Power, which also have access rights into River Point were approached to determine if they would share the cost of a new bridge. Both entities declined, preferring instead to pay the railroad a fee to place temporary mats across the tracks should the need arise for the utilities to gain access to the property to maintain their structures (water and utility lines).
- 8). In 2011, town officials met with a MDOT representative responsible for railroad crossings. [This meeting was held with regard to a possible crossing from the Falmouth High School campus to Community Park, but the same information is applicable here.] The MDOT representative stated that the possibility of getting a grade-level crossing approved by the railroad or the MDOT (which does have the power to require such crossings) was not plausible.
- 9). Becker Structural Engineers performed another engineering analysis of the bridge in 2011. Their analysis was such that the Town Manager recommended demolishing the bridge in March 2011. The Town Manager then modified that recommendation by closing the bridge to all vehicle and pedestrian traffic pending replacement of the railing system and repairs to the decking. The Council approved this decision on April 11, 2011. The bridge was reopened in June 2011 after Falmouth Conservation Corps volunteers built a new railing system and made the necessary deck repairs. At the time, Becker estimated the cost of demolishing the bridge at \$100,000 and replacing it at \$400,000.
- 10). In 2013, the Town Manager directed the ombudsman to once again explore replacement options for the bridge and this exploration led to the two options currently before the Council (Appendix 1). This directive was based on the FY13 Town Council Work Plan, Item 1.D. Meanwhile, the bridge's condition continues to worsen.

Map I: River Point Access Points



Map II: Adam Parcels

Adam Parcels



Appendix 1

River Point Bridge Replacement

By Bob Shafto
March 21, 2013

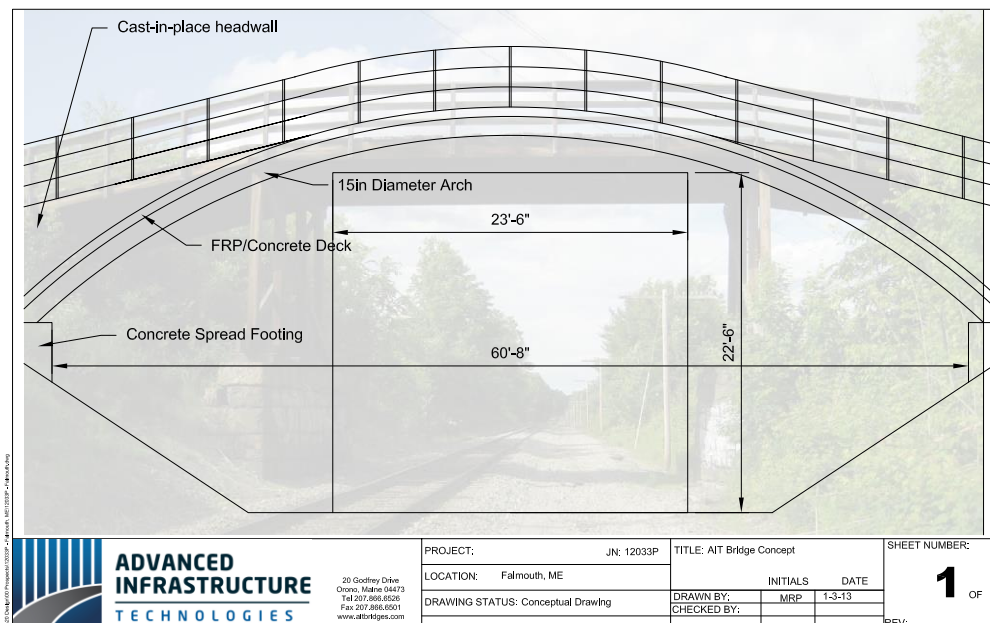
Background

The wooden railroad bridge that provides the only access to the town's River Point Conservation Area property is in poor condition and needs to be replaced. Originally built in 1859, the bridge is rapidly approaching an unsafe condition. Recent improvements to the railing system have made it passable for pedestrian traffic, but there is no way to get a vehicle (i.e. – pickup truck, tractor) to the property in order to maintain the buildings, trails and habitat. Continued deterioration of the decking is making even pedestrian traffic hazardous. Without the ability to get a tractor and mowing attachment into the property, we will soon lose the grassland and early successional habitat that makes the property such a rich area for wildlife.

Options

Three options have been investigated. Replacing the bridge with a new wooden bridge was considered several years ago. That option was rejected for both cost and structural reasons (wood has the shortest lifespan of the other available options).

Recently, two other options have emerged. The first is a “bridge in a backpack” option that uses a new technology developed by the University of Maine College of Engineering. It is a concrete span, 8 ft. in width. Examples can be seen by Googling “bridge in a backpack” at www.youtube.com. A proposed structure for River Point is shown below. The estimated cost of this bridge, including demolition, is \$260,000. That figure does not include railroad required insurance and the cost of a flagman at the site during construction.



The firm that would manage the project is Advanced Infrastructure Technologies in Orono, www.ait.com.

Another option is a self-supporting steel span, also 8 ft. in width, that would span the full 100 ft. distance. It would have a concrete deck. The span itself is expected to cost

\$92,200. Additional costs would include installation (estimated at twice the cost of the span), demolition (\pm \$25,000), and the railroad imposed fees. Based on the information available, the comparative price to the “bridge in a backpack” option is \$301,000.

The firm promoting this option is Contech Engineered Solutions in West Chester, Ohio, www.ContechES.com. Here’s a photo of a similar structure.



Caveats/Unknowns

As previously stated, we do not yet know the cost of the insurance the railroad requires, other than it is very expensive. We do know that a railroad flagman costs \$900 a day, but not how many days construction will require.

Pan Am Railways, the owner of the rail corridor, has specific requirements for any such structure built in the right of way and must approve any final design. How much time and effort that will require is unknown.

Next Steps

Both the “bridge in a backpack” and the steel span seem like viable options that would meet our needs for access, require little or no maintenance, and have a long lifespan. If the we decided to proceed with one of these options, we will solicit bids and plan to replace the bridge within the next year. Unassigned fund balance would be necessary for funding to avoid an increase in the operating budget.