

The History of Mile Brook Bridge Topsfield, Massachusetts

November 16, 2021

Topsfield Historical Society

Jeanne Pickering Bruce Bolnick Matt Howe Wendy Thatcher

Executive Summary

This is a report on the history of the Mile Brook Bridge in Topsfield, Massachusetts, based on our search through the Town of Topsfield's official records, the Topsfield Historical Society's archives and publications, and consultations with local historians and natural resource experts.

Our conclusions are:

- There has been a bridge over Mile Brook where it intersects with Perkins Row since at least 1667. The records also show that a dam was built on the south side of the "high way" in the seventeenth century creating and/or extending the wetlands.
- The bridge has taken several designs over the centuries. Early designs were intended to provide and maintain a practical use. The current stone/concrete bridge was designed by Thomas Proctor Jr. sometime between 1905 and 1908 to provide both practicality and a natural/historic aesthetic.

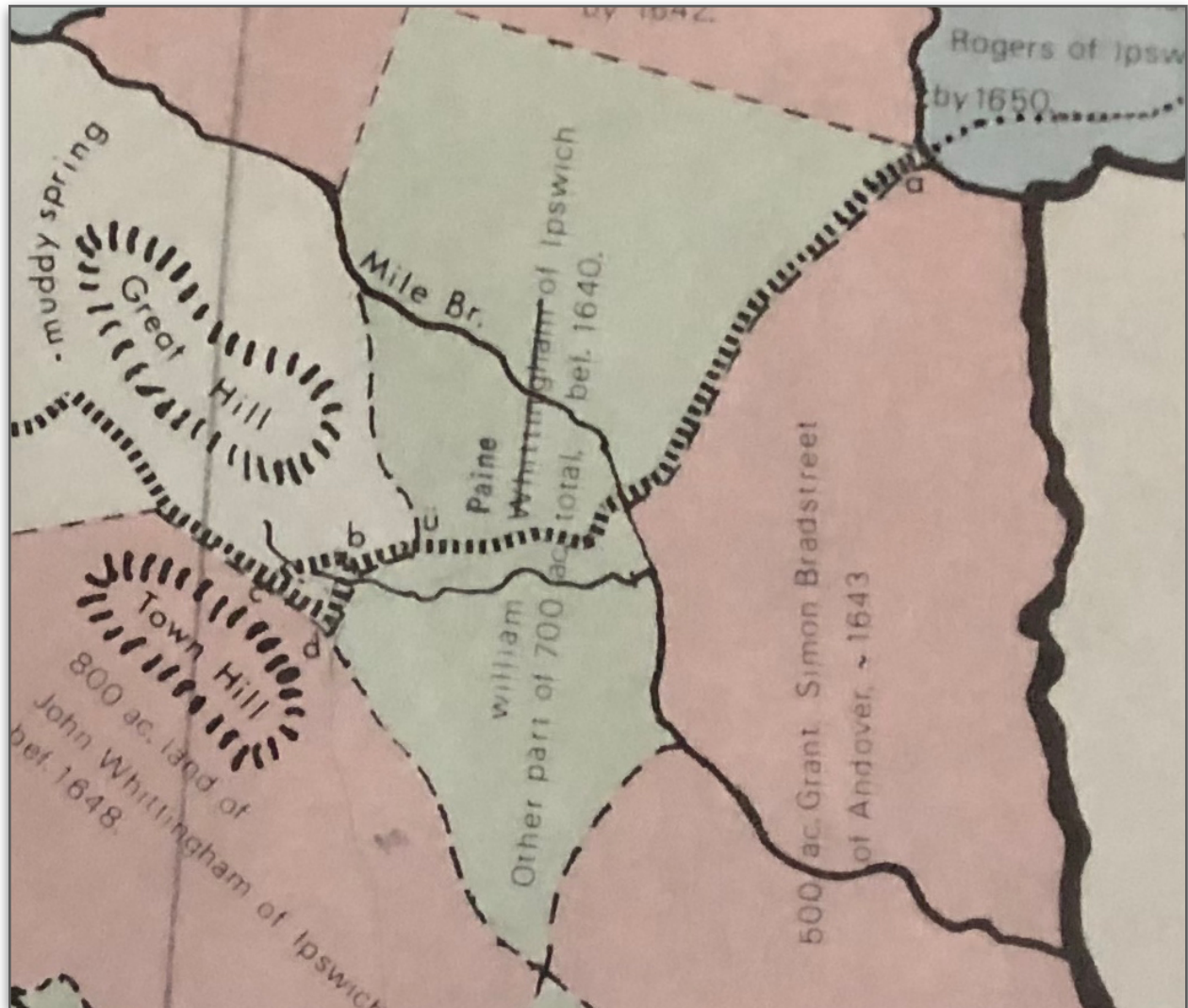
Introduction

As its name indicates, Mile Brook in Topsfield Massachusetts does indeed meander for a mile or two southeast of where Pye Brook branches into Mile Brook and Howlett Brook. Practically unnoticed, it crosses under the intersection of Ipswich Road and Route 1 to wander through residential neighborhoods and past one of the Town's shallow ground-water wells near North Street. There it spreads into a large wetland, narrows to cross under rural Perkins Row and then spreads out into the Mile Brook Reservoir and Mass Audubon's Ipswich River Wildlife Sanctuary, before flowing into the Ipswich River. At the last road crossing, prosaically named the Mile Brook Bridge, the brook, the wetlands and the stone bridge itself form one of the most beloved and beautiful sites in Topsfield. Generations of parents and school-children have passed over the bridge on the way to elementary school and home again. Innumerable numbers of bikers, runners, walkers have stopped at the bridge's triangular, millstone-floored cutouts to enjoy the vistas, to appreciate the changing seasons, the birds that visit the wetlands on their

migration paths, the turtles, muskrats and snakes, and to wonder at the pointed ends of cut saplings testifying to the busy work of not-always-appreciated beavers.

Given its design and popularity, it may seem that the bridge and the surrounding vistas date back to the earliest days of European settlement three hundred and fifty years ago. This report's intention is to verify the history of the bridge. We sought answers to questions about when and why the bridge was originally constructed, what design and purpose it served over the centuries and, especially, when it took on the design and provided the vista that we see today. We searched through the Town of Topsfield's official records, the Topsfield Historical Society's archives and publications and consulted with local historians and natural resource experts. We present our results to the residents of Topsfield for their information and use in determining the future of the Mile Brook Bridge and its beloved vista.

Mile Brook Bridge Chronology: From Fording the Brook to the Twentieth Century



(extract from *Map of Ancient Topsfield*, L Bergsten, 1977, Topsfield Historical Society Archives)

1633 - The Road to Mile Brook

Europeans first came to Topsfield from Ipswich, leasing or farming the large land grants that had been awarded to prominent men. The first road into the early settlement followed somewhat closely an old Indian trail which “seldome is broader than a Cart’s rutte,” wrote William Wood in 1633 and later was marked by “stickes against the trees and marked the rest (of the way) with hatchets in the English fashion.”

This trail, eventually a cartway, came from Ipswich to Gravelly Brook, forded over what would eventually be named Howlett Brook and then turned southwest, becoming what is now known as Perkins Row. This route formed the border between two large land grants, 700 acres on the west and north owned by William Paine of Ipswich from before 1640, and 500 acres to the east and south owned by Simon Bradstreet of Ipswich acquired around 1639.¹ After crossing Mile Brook, the trail continued west over Paine's acreage forming an intersection with Howlett Street and Meetinghouse Lane and forming a border for John Whittingham's grant. With both the meetinghouse and Howlett's blacksmith business in close proximity to the intersection, this must have been a well-traveled east-west route.



Example of a corduroy road²

¹ George Francis Dow, *History of Topsfield*, (Topsfield, Mass.: Topsfield Historical Society, 1940) 10. While Bergsten's map lists the grant as given to "Governor Simon Bradstreet of Andover", Dow states that the grant was given in 1639 and, according to early land records (<https://salemdeeds.com/salemdeeds/bpimage.aspx?book=00001&page=004>) Simon Bradstreet resided in Ipswich at the time. He also became Governor of the Massachusetts Bay Colony in 1679.

² Westerville Public Library, "Early Roads: Corduroy and Plank", Accessed November 4, 2021, <https://www.westervillelibrary.org/history-transportation-early-road>.

..As this trail became more travelled, trees were cut down and it was widened so that two-wheeled carts might pass. Logs were laid, corduroy fashion, in swampy places and muddy fords at brooks eventually were bridged with fallen trees.³

1653 - Early mentions

As early as March 2, 1653, in connection with a transfer of land from William Paine of Ipswich to John Redington of Topsfield, mention is made of a way, probably some portion of what is now Perkins Row.⁴



Example of a plank bridge ⁵

1667 - First Mention of Mile Brook Bridge

Our present bridges are the result of gradual changes, from the old ford way and plank bridge, necessitated by the improved facilities of transportation. The demand for some means of crossing dry shod at first resulted in stepping stones, or a fallen log was utilized, and later a plank was laid across, this in turn being supplemented by another plank. The early records speak of allowing this person, or that person, a certain amount, for mending the highways with plank. Probably the first bridge built was the one across the Ipswich river, now known as Balch's bridge, as mention is made of it as early as 1653.

³ Dow, *History of Topsfield*, 98-99.

⁴ Henry Follansbee Long, "Topsfield Streets and Ways," *The Historical Collections of the Topsfield Historical Society*, XII, (Topsfield Mass.: Topsfield Historical Society, 1907), 79.

⁵ Westerville Public Library, "Early Roads: Corduroy and Plank."

*Mile Brook bridge on Perkins Street was probably the second, first mention of it being under date of April 8, 1667.*⁶

Waterways like Mile Brook offered opportunities to build a dam and produce water power critical to granary and lumber mills. Dams also provided a way to control waterflow and flooding. At the April 8, 1667 town meeting, William Averill and Daniel Borman were given permission to build a dam on Mile Brook “a rode and halfe aboute the bridge to float there medow prouided it be no damage to the town”.⁷

1692-3 Roads created

Well-traveled paths became cartways and eventually laid out roads. In 1692, John Hovey and Danile Ridington were appointed to layout a “high way” from Parson Capen’s house to Howlett’s brook. This planned road would become Perkins Street and then Perkins Row. But Mile Brook Bridge was already there.

*Sargt John Houey and Daniell Ridington being appointed to lay out a high way from Sargt Samuell Houlets by John Wilds his house so to William Houlets brook accordingly thay haue dun it beginning at the country roode and along the south side of Samuell Houlets land and between mr Capens land and the said houlets land and so on the south side of muddy spring : so along the old carte way to John Wilds his land : and so between Corpll French his house and barne : so along the old way to the north side of Daniell Ridingtons bounds by John Wilds his gate and so as the way now lyeth by ye said Wilds his house and so along the old way to **mile Brook bridg** and still along the old way to William Houlets brook : trees being marked in sartin places the most of the way this was take from thare owne mouths.*

dat 21 march 1692 or 3. Attest Ephraim Dorman Town Clark.⁸

1701 - 1735 Maintenance

Bridge repair and maintenance was often an article on the town warrant and funds were regularly allotted for its repair and approved at early town meetings. It had also become a legal landmark for land deeds.

⁶ Dow, *History of Topsfield*, 118-9.

⁷ Topsfield Mass. :Town, *Town records of Topsfield, Massachusetts, 1659-1778*, (Topsfield Mass., Topsfield Historical Society, 1917), 9.

⁸ Topsfield Mass. :Town, *Town records, 1659-1778*, 78. Bold face font added here.

1701 - Repaired in 1701.⁹

1711 - Used as a bound in deeds of land.¹⁰

1723 - The Town Allowed two shillings to Joseph Andrew for Timber to mend the Mile Brook bridge in y^e year 1723.¹¹

1728 - The Town Allowed six shillings & two pence to Nath^l Averill for two string pieces & Eight slabs to mend Mile Brook Bridge in 1728.¹²

1729 - The Town allowed two shillings & Eight pence to Nathaniel Averill for Eight slabs to mend Mile Brook bridge in 1729.¹³

1731 - The Town Allowed Jacob Averill three shilling & 4^d for slabs to mend mile Brook Bridge.¹⁴

1733 - The Town Allowed to Joseph Andrew surveyer Two shillings & six pence for Jacob Averill for six slabs to mend Mile brook Bridge this year.¹⁵

1735 or 6 - Town allows Luke Averell one shilling for Timber to mend mile brook bridg.¹⁶

⁹ Henry Follansbee Long, "The Bridges in Topsfield," *The Historical Collections of the Topsfield Historical Society*, XVI (Topsfield Mass.: Topsfield Historical Society, 1911), 53.

¹⁰ Long, "The Bridges in Topsfield", 54.

¹¹ Topsfield Mass. :Town, *Town records, 1659-1778*, 248.

¹² Topsfield Mass. :Town, *Town records, 1659-1778*, 306.

¹³ Topsfield Mass. :Town, *Town records, 1659-1778*, 321.

¹⁴ Topsfield Mass. :Town, *Town records, 1659-1778*, 344.

¹⁵ Topsfield Mass. :Town, *Town records, 1659-1778*, 359.

¹⁶ Topsfield Mass. :Town, *Town records, 1659-1778*, 374.

1813 - Upgrade



Replication of an old horse bridge across the Ipswich River at the end of Bridge Trail in the Audubon Sanctuary.

In the early nineteenth century, Mile Brook Bridge had become a plank bridge with sides.

At a legal Town-meeting holden at the Meeting house in Topsfield on Tuesday the ninth day of March, A.D. 1813 by adjournment from the second day of said March Nehemiah Cleaveland, Moderator.

Voted—to refer to the Selectmen for their examination and allowance the bill of charge of Lieut. Isaac Averell for find poles & posts for a guard at mile-brook bridge, so called.¹⁷

¹⁷ Topsfield Mass. : Town. *Topsfield Town Clerks' Books 1809-1840*, (Topsfield Mass., 2002), 13-14.

1814 - 1815 Flooding problems

The dam which created the mill pond and provided the power for Averill's Sawmill south of the bridge was causing flooding of the bridge and the road over it.

12th day of May, A.D. 1814

David Perkins, Jacob Towne, Jun. and Ephraim Perkins were chosen a committee to make enquiry of the owners of the Mill, called, Averell's Sawmill, the right which they claim to raise their mill pond, so high as to injure the road that passes over Mile brook bridge.¹⁸

At a legal Town meeting held 15th day of May 1815, it was..Voted—That Mr. Robert Perkins, Jun. be a Committee to notify the owners of Averell's Sawmill, so called, that unless they raise Mile brook bridge and causeway so high as that their Mill pond shall not overflow said bridge and causeway, that said Perkins shall and he is hereby empowered and directed in behalf of the Town to commence a prosecution against the owners of said Sawmill for injuring the road.¹⁹

¹⁸ Topsfield Mass., Town 2002, 173.

¹⁹ Ibid, 195.

1826 Replacing Wood with Stone

During the Town meeting held on April, 3, 1826, the Town started to consider replacing the wooden bridges with stone structures.

At a legal meeting of the inhabitants of the Town of Topsfield...holden on the third day of April, being the first Monday of said month, A.D. 1826..

Voted, to choose a Committee to examine a number of small bridges and to estimate the probable expense of building said bridges with stone and report their doings at May meeting, and John P. Peabody, Moses Wildes, Ephraim Perkins, Samuel Hood, and Reuben Smith were chosen the Committee.²⁰

On May 15, 1826, the Town:

Voted, to build a stone bridge in the place of the wooden one near Messrs. Peabody's mills, called Boardman's bridge, and Ephraim Perkins, David Hobbs, Jun., and John Potter Peabody were chosen a Committee to build said bridge.²¹

1840 Widening the Causeway

The text of the 11th article in a town warrant dated February 21, 1840 read as follows:

To see if the Town will vote to widen the causeway adjoining land of Joseph Averell and others being a part of road leading from Mile-brook (so called) to Perkins' Mills and to pass any vote or votes relating to the subject the Town may think best.

This article was voted on March 4, 1840.

Voted, That the Selectmen be authorized to widen the Causey, referred to in the 11th article, as much as they may judge necessary²²

²⁰ Ibid, 423.

²¹ Ibid, 425.

C. Lawrence Bond describes Daniel Boardman's 300 acre farm as extending "from Peabody's mill to the Old Ipswich Rd. (Campmeeting Rd.) leading from North St. to 'the city.' ." Charles Lawrence Bond and John H. Towne, *Houses and buildings of Topsfield, Massachusetts: an up-date of "The houses and buildings of Topsfield, Massachusetts 1902" by J.H. Towne*, (Topsfield, Mass. : C. Lawrence Bond, 1989), 132.

John Towne states that Boardman's land was originally part of the Paine land grant and Boardman's house was on the westerly side of the turnpike ., John H. Towne, "Topsfield Houses and Buildings," *Topsfield Historical Collections, VIII*, (Topsfield, Mass.: Topsfield Historical Society, 1902), 24.

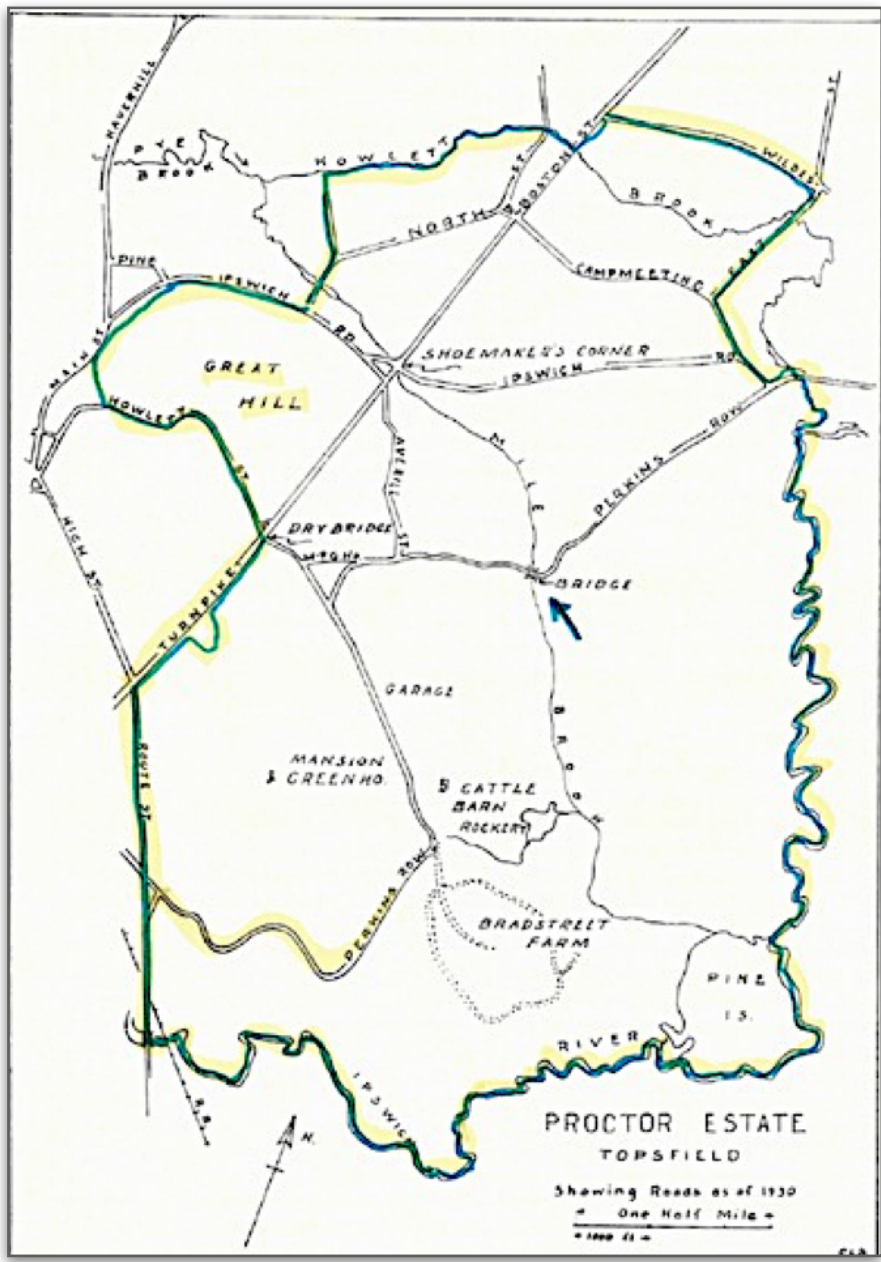
H. Rosa Towne writes mentions a bridge and locates it near the Turnpike and Peabody's mills. H. Rosa Towne, "The Boardman Family of Topsfield," *Topsfield Historical Collections, VIII*. (Topsfield, Mass.: Topsfield Historical Society, 1902), 107.(This area is the intersection of Ipswich Rd. and Rte. 1.)

²² Ibid, 728-9.



Thunder Bridge, Middleton Massachusetts
Courtesy of Jim MacDougall

Mile Brook Bridge Chronology: The Thomas Proctor Years



The Proctor Estate

Mile Brook Bridge in Thomas E. Proctor's Estate

The bridge across Mile Brook on Perkins Row was near the center of Thomas Proctor's vast estate in Topsfield. According to C. Lawrence Bond,²³ Proctor's first acquisition of property in Topsfield, in 1898, happened to be a tract along Mile Brook and the Ipswich River. The following year he purchased the Bradstreet farm, which had been held by the Bradstreet family since the original 500-acre land grant to Governor Simon Bradstreet in 1639.²⁴ Shortly thereafter he moved from Boston to the Bradstreet property with his mother. (That home is now the office of Mass Audubon's Ipswich River Wildlife Sanctuary.) With a substantial income from a family trust established by his father,²⁵ Proctor continued to expand his estate until he owned an estimated 47% of the town.²⁶ Bond describes the eventual extent of his holdings as follows:

"... he held virtually all the land between Perkins Row and the Ipswich River, from High Street to Ipswich Road. On the north and westerly sides of Perkins Row he owned most of the area as far as the Turnpike, with the exception of that reserved by Ephriam Perkins for woodland, of the Pentacost property (later known as the Maryknoll Sisters Seminary) the Oliver Thayer property and some house lots facing on High Street, all the way to Ipswich Road. Northerly of Ipswich Road he held the land between the Turnpike and East Street as far as Wilde Street.

"Westerly of the Turnpike he owned Great Hill between Howlett Street and Ipswich Road and on both sides of North Street as far as Howlett Brook."

Bond's article on Proctor also provides a direct reference to the Mile Brook bridge:²⁷

²³ C. Lawrence Bond, "Thomas Emerson Proctor," *Topsfield Historical Collections*, XXXII (1974), 11 (text), 12 (map). The map shown above is from Bond's article; boundaries of the Proctor estate are added here for clarity, based on the description in Bond's article.

²⁴ Dow, *History of Topsfield*, 10.

²⁵ Bruce Bolnick, "Thomas Proctor's Wealth," unpublished manuscript (2017). <http://topsfieldhistory.org/collections/files/original/d8398a239420b7848cd95c7f33b51195.pdf>

²⁶ Mark Lapin, "Brief History of the Ipswich River Wildlife Sanctuary," *Topsfield Historical Collections*, XXXIV (2009), 60.

²⁷ Bond, "Thomas Emerson Proctor," 15.

“To reach the two polo fields on North Street, Mr. Proctor maintained bridle paths on both sides of the Turnpike from the Dry Bridge on Howlett Street to Campmeeting Road. In addition to this he also supplied manpower to grade and gravel the full length of Perkins Row, to plow the snow in winters and even to design and build a bridge over Mile Brook near the present well field. Proctor’s stipulation that this bridge be designed so that a man, in a canoe, could pass beneath it accounts for its arched construction which we can see today.”

Further evidence of Proctor’s involvement in construction of the present-day bridge over Mile Brook can easily be seen by comparing its appearance to that of the landmark Stone Bridge at Pintail Pond within the Ipswich River Wildlife Sanctuary (photos below). The bridge within the Sanctuary was unquestionably constructed by Proctor, who brought in a crew of Italian immigrants to build the Rockery grotto and Rockery Pond. As an avid horticulturalist, Proctor proceeded to transform the Bradstreet farmlands and woodlands into an elegant private arboretum featuring trees and plants from around the world, manicured gardens and carriage roads.²⁸



Stone Bridge at Pintail Pond in the
Mass Audubon
Ipswich River Wildlife Sanctuary



Mile Brook Bridge

²⁸ See Lapin, *“Brief History”*, 60 and Bolnick, *“Thomas Proctor’s Wealth,” op. cit.*

*Insights from Topsfield Annual Reports
Proctor Estate*

A series of entries in the town's Annual Reports (ARs) from the early 20th century reveal clearly that the present-day bridge over Mile Brook is a product of that era.

In the AR for 1902-03, the Selectman's Report laments that a recent "freshet" left the town's river bridges in "extremely bad and in some cases dangerous" condition. "The stringers in all the bridges were either dislocated or entirely washed away from the abutments.... There seems little doubt that the substitution of iron bridges for the present wooden ones would be an economy. But ... a larger appropriation than usual is necessary."²⁹ From this passage one may conclude that the small river bridges in town were made of wood at that time. As confirmation, the Selectman's Report in AR 1903-04 explains that the "thoroughly rebuilt" Rowley Bridge "consists of hard-pine stringers, measuring 16 x 20 inches, their upper surfaces coated with tar, a course of plank laid with the stream, these also being coated with tar, and another course of plank laid across stream and spiked to the first course."

Iron bridges had been introduced as long ago as the 1840s, especially for heavier loads like railways, and steel/concrete bridge designs were already in use by the early 1900s.³⁰ But the fact that the town chose to repair the Rowley Bridge with hard-pine stringers and a plank deck confirms that wood was still the standard design in Topsfield at that date, with the horse and buggy era drawing to a close.

There is no direct mention in the Annual Reports from that era of Thomas Proctor's involvement with the Mile Brook bridge. But a related note can be found in the Selectman's Report for 1905-06: "Through the generosity of Mr. B. W. Palmer we have been able to construct a new and ornamental bridge on Asbury St., the bridge commonly known as Lamson's Bridge, at an expense to the town of \$300, less than one half the actual cost of the building." Here we have

²⁹ The term "freshet" means a great rise or overflowing of a stream caused by heavy rains or melted snow (Retrieved November 16, 2021 from <https://www.merriam-webster.com/dictionary/freshet>) The term "stringers" refers to the main load bearing supports to the bridge deck.

³⁰ Michael A. Ritter and Kim Stanfill-McMillan, "Wood Bridges of New England," in Sanayei, Masoud, ed. *Restructuring: America and beyond: Proceedings of Structures Congress 13*; 1995 April 2-5, Vol. 1 (Boston, MA. New York: American Society of Civil Engineers; 1995), 1081-1084.

an explicit example of a wealthy local landowner providing funding for a “new and ornamental bridge” on a town road serving his private estate.³¹

By the time of the Annual Report for 1907-08, the need for stronger bridges must have been clear to the Town. That year the Selectman’s Report says flatly: “We recommend that when any river bridge needs extensive repairs that a steel-bar concrete bridge be considered to replace the old one.”

The Selectman’s Report for 1908-09 has another intriguing passage invoking support from Thomas Proctor for repair of the Stone Bridge over the Ipswich River (bold font added below):

*“We found this bridge in very bad condition the underground water running from the hill had washed the gravel through the abutment forming cavities beneath the surface.... We also found that two of the large abutment stones on the south east corner of the bridge had been loosened from their foundations and pressed outward several inches, we sent for an experienced stone mason to give us some advice in the matter. **While awaiting his arrival, Mr. Thomas E. Proctor came along. Calling his attention to the matter, he said: ‘Put them back in place by all means and I will contribute one hundred dollars toward the expense.’** ... The job is complete and we feel assured it will need no further repairs for many years. **We have received his check for one hundred dollars, also a check from him for fifty dollars, which he kindly gave toward repairs on Perkins St., near the residence of Mr. John Watson.**”³²*

Three years later, in the AR for 1911-12, the Selectmen report that repairs were made to the Turnpike roadbed near the intersection with Ridge Street, “and the expense of the change was paid in full by Mr. Thomas E. Proctor, who still keeps many of our town roads in excellent condition.”

Then in 1915 the Selectmen report on work done to “improve” the brooks in town (bold font added below):

³¹ The AR for 1926 also mentions Bradley W. Parker by name, this time in connection funding “the construction of a new highway between Ipswich Street and Asbury street together with a steel and concrete bridge crossing the Ipswich River.”

³² The Selectmen refer to the bridge in question as the “Stone Bridge.” That could be interpreted as the Mile Brook Bridge. Indeed, this passage was given as the source for dating the Mile Brook bridge to 1908 in the town’s submission of the bridge for the Massachusetts Registry of Historic Bridges. We dismiss that interpretation for three reasons. First, the same *Annual Report* lists an appropriation of \$14.00 for “labor, Mile Brook Bridge.” Clearly, that terminology was in use at the time. Second, the Stone Bridge “in very bad condition” was suffering from “underground water running from the hill...” That fits the bridge on the Turnpike, not the Mile Brook bridge. Third, Long’s article, “Bridges in Topsfield”, page 15 uses the label “Stone Bridge” specifically for the Turnpike Bridge.

*“This improvement has consisted of widening, straightening the brooks, removing pollution, cleaning out the brooks to make the flow more even and laying pipes in certain places to prevent further pollution, and **also by constructing bridges or culverts. This work has all been done without any expense to the town and the town is in no way liable for any expense in connection with the work.***

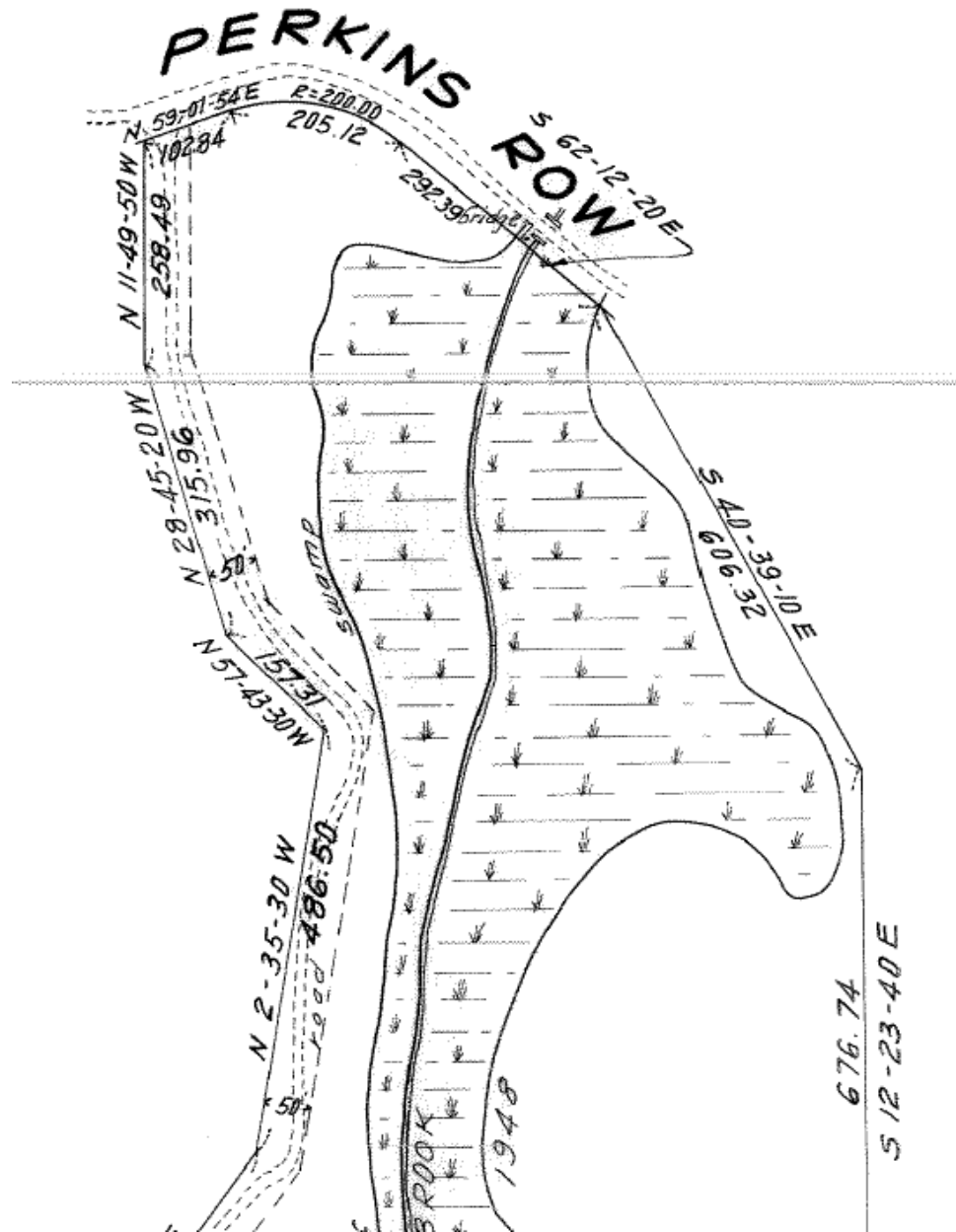
One may reasonably suspect that Thomas Proctor is the one who bore the expense of these improvements within the boundary of his estate. His generosity to the town is displayed explicitly the AR for 1928, in which a Special Town Meeting on March 31, 1928 voted “to accept as a gift from Thomas E. Proctor, the Hutchings field, so-called, as a site for a new school house and play ground...” This gift consisted of 8.72 acres, which Proctor had offered “as a site for a new high school [*sic.*] building.

In summary, these official records show that nearly all the town bridges (notable exceptions being the Stone Bridge on the Turnpike and Boardman’s bridge) were constructed with wooden planks as late as 1904; that wealthy citizens did contribute to infrastructure improvements, including bridges; and that Thomas Proctor was himself one of the benefactors.

Mile Brook Bridge Chronology: World War II to the Twenty-first Century

1947-8 Water Department

Topsfield Water Department was established after World War II. A shallow ground water wells was dug north of Mile Brook Bridge where the Topsfield Town Water Department owns the marshland.



1950s on - Homes and Sanctuary



Essex County Ornithological Club May 22, 1960 on Perkins Row Bridge (Mile Brook Bridge), Jim Burns, Charlie Ewing, Herb Kelly, Don Allen, Loring Conant, Ralph Lawson, Bud Snow, et al. (Courtesy Jim MacDougall)

In the early 1950s, following the death of Thomas Proctor, the estate began to be parcelled and sold off for residential housing. Most significantly, the Massachusetts Audubon Society purchased the former Bradstreet Farm from Proctor's estate in 1951 and established what is today the Ipswich River Wildlife Sanctuary, a highly-prized nature preserve. The Sanctuary owns the property south of the bridge.

2010

The *Tri-Town Transcript* reports that Mile Brook Bridge is cleared of dirt and debris by Topsfield native Chris Clemson.

*Chris Clemson, who grew up in Topsfield, decided to do something about the problem and completely cleared the overgrowth around the bridge and in the four small lookout areas. Clemson said he cleared out roughly 7 inches of dirt that was caked inside of each lookout station on the bridge, along with weeds and small trees. Underneath the growth, a beautifully intact millstone, used to grind wheat and grains, sits in one of the four lookouts. Another lookout has one half of a millstone sitting inside.*³³

³³ Brendan Lewis, "Topsfield native returns home, cleans historic bridge", *Tri-Town Transcript* (online), 17 Sep 2010. Accessed November 4, 2021. <https://infoweb.newsbank.com/apps/news/document-view?p=NewsBank&docref=news/132516696CE50EA8>.



Mile Brook Bridge (Topsfield Town Library, 2016.)

2018

The last available inspection data listed on the National Bridge Inventory Data website indicates that as of January 2018, Mile Brook Bridge is in “fair” condition (BridgeReports.com 2018).

2020

A detailed inspection report from January 8, 2020...finds that the bridge has “Severe/Major” deficiencies requiring urgent attention (see Appendix 3).

2021

The condition of Mile Brook Bridge and the need for repairs comes to the attention of the Topsfield Select Board. The bridge was an agenda item at the August 23, 2021 meeting.

TA [Town Administrator] Harutunian and Highway Superintendent Wildes discussed the deterioration and structural concerns of the Mile Brook Bridge as identified by MassDOT. MassDOT has placed the bridge on a six-month inspection cycle and slated the bridge to be replaced in FY2026. Until the bridge is replaced by the State, traffic flow must be managed to keep vehicles away from the sides of the bridge that are constructed of field stone, where it is

*most deteriorated. Mile Brook Bridge is historically significant and is pictured on the Town Seal.*³⁴

APPROVED 10.4.2021

Select Board Meeting 8/23/2021

SELECT BOARD VIRTUAL MEETING

Minutes of Monday, August 23, 2021, 7:00 PM

(Topsfield Mass. : Town 2021, 6).

In a letter dated August 26, 2021, Topsfield Police Chief Neil Hovey and Parks and Cemetery Superintendent Gary Wildes notified Tri-Town School Dr. Scott Morrison and Assistant Superintendent Steve Greenberg that, due to further deterioration of the Mile Brook Bridge, a traffic modification plan affecting the Steward School was being put in place. (See Appendix A)

On November 4, 2021 the Topsfield Public Safety Team and neighbors met on site at Mile Brook to discuss the condition of the bridge and answer questions. (The invitation letter may be viewed as Appendix B)

³⁴ [Ed. note]: In fact, the bridge on the Town of Topsfield Official Seal is the Stone Bridge that carries the Boston Turnpike over the Ipswich River.

Conclusion

From the historical records, there has been a bridge over Mile Brook where it intersects with Perkins Row since at least 1667 when the route was a cart trail allowing access between early Topsfield and Ipswich. The bridge began as a ford, using logs, was expanded into a plank bridge in the nineteenth century. The records also show that a dam was built on the south side of the “high way” in the seventeenth century creating and/or extending the wetlands. Historical records, though, show that the bridge was constructed and maintained primarily for protection and extension of its usefulness.

The current stone façade over concrete bridge design was constructed/paid for by Thomas Emerson Proctor Jr. sometime between 1905 and 1908 to replace the old wooden plank design. His design was intended to both improve the safety and usefulness of the bridge and provide a natural and historical aesthetic. The creation of Mass Audubon Society’s Ipswich River Wildlife Sanctuary in the early 1950s began the return of the adjacent land to a natural state, establishing the scenic vistas that the bridge provides today to the general public.

Current public meetings have generated interest in both making the bridge safe and retaining its rustic design and ambiance. This dual purpose is representative of the bridge’s history over the nearly 350 years of its existence.

Appendix A



TOPSFIELD POLICE DEPARTMENT

210 Boston Street
Topsfield, MA 01983-2217
978-887-6533 • Fax 978-887-8424

Neal S. Hovey
Chief of Police

Perkins Row Traffic Modification Plan August 31, 2021

To: Dr. Scott Morrison, Tri-Town School Superintendent
Steve Greenberg, Tr-Town School Assistant Superintendent
From: Neal S. Hovey, Chief of Police
Gary Wildes, Highway Superintendent
Re: Perkins Row Traffic Modification Plan
Date: August 26, 2021

It was recently brought to our attention that the Mile Brook Bridge has further deteriorated over the last six (6) months. In all efforts to preserve the integrity of the bridge for as long as possible it is imperative that we make significant modifications to the traffic patterns on Perkins Row. These modifications will undoubtedly bring inconveniences to the members of the community and guests.

After performing our due diligence of collecting vehicle volume data, studying traffic patterns, measuring time and mileage inconveniences, reviewing bus traffic and sightlines our recommendations are as follows:

Perkins Row shall be one way from Steward School to Brookside Road effective Wednesday, September 1, 2021.

Traffic modification plan of impacted area as well as detours and signage will be as follows:

- Perkins Row at Brookside Road will be closed to through traffic
- "Road Closed" "Do Not Enter" signs will be paced on Perkins Row at Brookside Road
- Detour signs will be paced on Perkins Row at Brookside Road
- Barriers will be deployed just past the driveway entrances to 235 and 236 Perkins Row as to relieve any inconvenience to those two residents.
- Detour signs will be posted on Brookside Road at Ipswich Road
- Detour signs will be posted on Ipswich Road at Perkins Row
- No left turn sign will be posted on Perkins Row at Winsor Lane preventing traffic from utilizing Winsor Lane as a cut through
- No Commercial vehicle signs will be posted at Winsor Lane at Perkins Row preventing commercial vehicles from using Winsor Lane
- No parking either side will be posted on Winsor Lane between # 44 – 48



TOPSFIELD POLICE DEPARTMENT

210 Boston Street
Topsfield, MA 01983-2217
978-887-6533 • Fax 978-887-8424

Neal S. Hovey

Chief of Police

Other concerns and measures taken:

- Tree branches will be cut back in the area of Winsor Lane and Perkins Row to increase the sight line
- Parents picking up and dropping off students will stage on the right side of Perkins Row
- All parents will be notified to shut engines off, no idling will be allowed
- All parents will be required to remain in their own vehicles
- Reconfiguration of pick up and drop off on Steward school property will initiate as to maximize the volume and efficiency

Respectfully submitted,

Neal S. Hovey

Chief of Police

Appendix B



TOWN OF TOPSFIELD

Kevin Harutunian, Town Administrator

8 West Common Street, Topsfield, Massachusetts 01983

Telephone 978-887-1500; Fax 978-887-1502

October 27, 2021

RE: Mile Brook Bridge

Dear Neighbor,

In August of this year the Massachusetts Department of Transportation (MassDOT) notified the Town of Topsfield that the Mile Brook Bridge located on Perkins Row near Steward School was experiencing accelerated deterioration on both sides of the structure.

On August 30th, our Public Safety Team, including Police Chief Neal Hovey, Fire Chief Collins-Brown, Highway, Park and Cemetery Superintendent Wildes, and I met onsite with a number of neighbors and other members of the Topsfield community to provide immediate updates on the structural integrity of the bridge and that it is currently still sound for travel, upcoming traffic pattern modifications, and information regarding future reconstruction of the bridge.

Since that time the Town has implemented the traffic pattern modifications and has worked closely with MassDOT regarding the local priorities and upcoming plans for reconstruction of the bridge.

Our Public Safety Team and I would like to invite you to a follow-up informational meeting to provide further details, answer questions and discuss next steps of this project. The meeting has been scheduled for **Thursday, November 4, 2021 @4:00PM** and will be onsite at the Mile Brook Bridge on Perkins Row. We look forward to seeing you.

For any immediate questions please contact the Town Administrator's Office at 978-887-1500 or the Highway Department at 978-887-1542.

Thank you

Kevin Harutunian

Appendix C

Official Records of Mile Brook Bridge

The official Historic Bridge Inventory of the Highway Division of the Massachusetts Department of Transportation³⁵ dates the Mile Brook Bridge on Perkins Row at 1908 and describes the structure as: “Filled-spandrel, reinforced concrete deck barrel arch, stone-faced.”

The National Bridge Inventory³⁶ dates the Mile Brook bridge to 1905 (with a caveat saying “Information not verified; use at your own risk”). That source also provides additional details about the bridge:

- Length of largest span: 25.9 ft.
- Total length: 29.9 ft.
- Roadway width: 23.0 ft.
- Deck width edge to edge: 28.9 ft.
- Owner: Town or Township Highway Agency
- Historic Significance: Bridge is eligible for the National Register of Historic Places
- Main span material: Concrete
- Main span design: Arch – deck
- Recommended work: (January 2018) Bridge rehabilitation because of general structure deterioration or inadequate strength
- Estimated cost of work: \$457,000

Note that eligibility for the National Register of Historic Places confers no special protection for the bridge, nor would actual entry to that National Register.

More recent records at the state level address the structural deficiencies which have limited the bridge to one-lane traffic, and possibly threaten the bridge with closure in the absence of rehabilitation or replacement. A detailed inspection report from January 8, 2020³⁷ lists the bridge date as 1905, and finds that the bridge has “Severe/Major” deficiencies requiring urgent attention. The issues are summarized in a Condition Rating Guide shown on the next page, along with a

³⁵ See <http://wayback.archive-it.org/6180/20180730210122/http://www.massdot.state.ma.us/highway/Departments/EnvironmentalServices/CulturalResourcesUnit/HistoricBridgeInventory/BridgeDetails/Mile%20Brook%20Bridge.aspx>.

³⁶ See <https://bridgereports.com/1238729>.

³⁷ Obtained on October 6, 2021 in PDF format, through a Public Records request.

photo from the inspection report showing the cracking and heavy efflorescence found on the concrete arch.

CONDITION RATING GUIDE			(For Items 58, 59, 60 and 61)
CODE	CONDITION	DEFECTS	
N	NOT APPLICABLE		
G 9	EXCELLENT	Excellent condition.	
G 8	VERY GOOD	No problem noted.	
G 7	GOOD	Some minor problems.	
F 6	SATISFACTORY	Structural elements show some minor deterioration.	
F 5	FAIR	All primary structural elements are sound but may have minor section loss, cracking, spalling or scour.	
P 4	POOR	Advanced section loss, deterioration, spalling or scour.	
P 3	SERIOUS	Loss of section, deterioration, spalling or scour have seriously affected primary structural components. Local failures are possible. Fatigue cracks in steel or shear cracks in concrete may be present.	
C 2	CRITICAL	Advanced deterioration of primary structural elements. Fatigue cracks in steel or shear cracks in concrete may be present or scour may have removed substructure support. Unless closely monitored it may be necessary to close the bridge until corrective action is taken.	
C 1	"IMMINENT" FAILURE	Major deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability. Bridge is closed to traffic but corrective action may put it back in light service.	
0	FAILED	Out of service - beyond corrective action.	



Photo 6: Typical map cracking and heavy efflorescence 5' into concrete section with evidence of wetness and moderate scaling at arch interfaces (northeast corner shown)

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