

MACLAY'S MILL TWIN BRIDGE (EAST & WEST)  
Pennsylvania Historic Bridges Recording Project  
Spanning Conodoguinet Creek at Maclay's Mill Rd. (State Rt. 4018)  
Mowersville vic. <sup>^</sup> *and Mill Road*  
Franklin County  
Pennsylvania

HAER No. PA-457

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HISTORIC AMERICAN ENGINEERING RECORD

MACLAY'S MILL TWIN BRIDGE (EAST & WEST)

HAER No. PA-457

Location: Spanning Conodoguinet Creek and mill race at Maclay's Mill Rd. (State Rt. 4018), Mowersville vicinity, Franklin County, Pennsylvania.

USGS Quadrangle: Shippensburg, Pennsylvania (7.5-minute series).

UTM Coordinates: 18/280860/4441480 (east bridge)  
18/280840/4441460 (west bridge)

Date of Construction: 1827.

Builder: Silas Harry.

Present Owner: Pennsylvania Department of Transportation.

Present Use: Vehicular bridge.

Significance: The Maclay's Mill Twin Bridges are outstanding examples of surviving stone arch bridges constructed by a nineteenth-century designer-craftsperson. Before the appearance of professional engineers and architects during the middle of the nineteenth century, local craftspeople such as Silas Harry were responsible for the design and construction of vernacular bridges such as the Maclay's Mill Twin Bridges. No fewer than six Franklin County stone arch bridges have been attributed to Harry. An active stonemason throughout much of the first half of the nineteenth century, Harry also was responsible for the 1842 reconstruction of the Franklin County courthouse. The Maclay's Mill Twin Bridges were listed in the National Register of Historic Places in 1988.

The bridges are also significant for their association with the Maclay family. David Maclay, the owner of Maclay's Mill at the time the bridges were built, was a prominent Franklin County landowner and former Pennsylvania legislator. Also, Maclay — a second generation owner of the mill — was the nephew of William Maclay, Pennsylvania's first U.S. Senator.

Historian: Dr. David S. Rotenstein, August 1997.

Project Information: This bridge was documented by the Historic American Engineering Record (HAER) as part of the Pennsylvania Historic Bridges Recording Project - I, co-sponsored by the Pennsylvania Department of Transportation (PennDOT) and the Pennsylvania Historical and Museum Commission during the summer of 1997. The project was supervised by Eric DeLony, Chief of HAER.

## CHRONOLOGY

- 1780 John Maclay begins operating a still on his farm.
- 1786 John Maclay begins operating a grist mill on his farm.
- 1790 John Maclay begins operating a saw mill on his farm.
- 26 February 1800 John Maclay sells his farm, grist and saw mills, and still to his son David Maclay.
- 29 October 1822 Benjamin Long begins construction on first bridges at Maclay's Mill over Conodoguinet Creek and mill race.
- 17 October 1823 Bridges completed.
- 7 March 1826 Bridge over Conodoguinet Creek collapsed during heavy storm.
- 24 March 1826 Bridge over tail race collapsed.
- 4 October 1826 David Maclay testifies in suit of *Franklin County Commissioners v. Benjamin Long* for breach of contract in constructing earlier bridges.
- 27 July 1827 Construction of new bridges at Maclay's Mill underway by Silas Harry.
- October 1827 Construction completed on new bridges?
- 14 November 1827 Judgement handed down in case of *Franklin County Commissioners v. Benjamin Long* for breach of contract in constructing earlier bridges.
- 9 February 1839 David Maclay dies at Maclay's Mill.
- May 1845 Silas Harry dies in Chambersburg.

- 1 January 1936      Maclay's Mill Twin Bridges acquired by the Pennsylvania Department of Highways (later PennDOT).
- June 1988          Bridges listed in National Register of Historic Places.

### DESCRIPTION — EAST BRIDGE

Maclay's Mill, Twin Bridge (East) is a three-span, camelback, closed-spandrel stone arch bridge. Constructed of semi-coursed local limestone rubble and blocks, the bridge is 173'-7" long and an average of 20'-9" wide with a single 16'-4" travel lane. The bridge spans Conodoguinet Creek on a perpendicular alignment and rests on two 6'-0"-wide conical piers. Its approaches have abutments with wing walls that expand to widths of 26'-0" on the west and 25'-0" on the east.

The stone with which the bridge is constructed is a weathered Cambro-Ordovician limestone, a fossiliferous dark blue-black limestone that weathers to a lighter tan color.<sup>1</sup> Its three segmental arches have spans, measured from east to west, of 29'-1", 32'-7-1/2", and 28'-10-1/2". The arches rise, again from east to west, 6'-10", 8'-0-1/2", and 6'-2-3/4".

There is a rectangular marble date stone set into the bridge's north parapet at mid-span. The inscription reads: "BUILT BY SILAS HARRY / 1827 / COMMISSIONERS / BENJAMIN KEYSER / WILLIAM REYNOLDS / WILLIAM HEYSER / To Roxberry 4 Miles / to Shippensburg 4 Miles." There are directional arrows pointing toward Shippensburg and Roxbury.

The bridge's three segmental arches are defined by dressed squared voussoirs and dressed springers. Keystones in each arch ring are not accentuated. Each arch ring was constructed with regular coursed ashlar blocks. The intrados of each arch barrel has been clad in cement. The masonry joints have been repointed with a hard cement mortar throughout much of the structure in a raised, irregular pattern.

The bridge's parapets have a single 2"-thick limestone coping course that is clad in cement. The north parapet has a low elevation above the road bed: measured at the west end, mid-span, and east end (the west end being datum), it rises 4'-5", 6'-4", and 2'-6".

### DESCRIPTION — WEST BRIDGE

Maclay's Mill, Twin Bridge (West) is a two-span, camelback, closed-spandrel stone arch bridge. Constructed of semi-coursed local limestone rubble and blocks, the bridge is 85'-3" long and an average of 20'-6" wide with a single 16'-10" travel lane. The bridge spans the former tail

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<sup>1</sup> See U.S. Bureau of the Census, "Report on the Building Stones of the United States and Statistics of the Quarry Industry," in *Miscellaneous Documents of the House of Representatives for the Second Session of the Forty-Seventh Congress, 1882-'83*, 153.

race of Maclay's Mill on a perpendicular alignment and rests on a single 6'-0"-wide conical pier. Its approaches have abutments with wing walls that expand to widths of 39'-0" on the west and 25'-6" on the east. Like its twin, the west bridge is constructed of weathered Cambro-Ordovician limestone. Its two segmental arches have spans, measured from east to west, of 20'-2-1/2" and 20'-3-3/4" long. The arches rise, again from east to west, 3'-11-3/4" and 4'-1".

The bridge's two segmental arches are defined by dressed squared voussoirs and dressed springers. Keystones in each arch ring are not accentuated. Each arch ring was constructed with regular coursed ashlar blocks. The intrados of each arch barrel has been clad in cement. The masonry joints have been repointed with a hard cement mortar throughout much of the structure in a raised, irregular pattern. Unlike the east bridge, this structure has no date stone.

The bridge's parapets have a single 2"-thick limestone coping course that is clad in cement. The north parapet has a low elevation above the road bed: measured at the west end, mid-span, and east end (the west end being datum), it rises 1'-6", 3'-3", and -0'-3".

## HISTORICAL INFORMATION

### Franklin County

Franklin County is located in the Ridge and Valley physiographic province of south central Pennsylvania. Located within the Cumberland Valley, the region within which Franklin County is situated came to be known during the nineteenth century as Kittochtinny or Kittatinny (for Kittatinny Mountain, which bisects the valley south to north).<sup>2</sup> Throughout most of its history, Franklin County has remained a rural entity with an economy based on agriculture and agricultural byproducts.

Franklin County, comprised of 760 square miles, "with its base line upon the State of Maryland covers an enlargement of the Great (Cumberland) valley between the South mountains (Blue ridge) on the east, and the North (Blue) mountain on the west."<sup>3</sup> By the early nineteenth century Franklin County was well known as a "prosperous agricultural region."<sup>4</sup> Local industrial development was centered on agricultural processing, with grist mills providing much of the economic base.<sup>5</sup> According to cultural geographer Kenneth Koons, Lurgan Township, where

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<sup>2</sup> J. Fraise Richard, *History of Franklin County, Pennsylvania* (Chicago: Wamer, Beers & Co., 1887), 137.

<sup>3</sup> J. P. Lesley, *A Geological Hand Atlas of the Sixty-Seven Counties of Pennsylvania*, Second Geological Survey of Pennsylvania, Report of Progress X (Harrisburg: Commonwealth of Pennsylvania, 1885), lii-liii.

<sup>4</sup> Kenneth E. Koons, "Some Aspects of Franklin County's Rural Heritage," *Kittochtinny Historical Society Papers* 18 (1984): 282.

<sup>5</sup> Koons, "Some Aspects."

Maclay's Mill is situated, is located in an area (the lower Cumberland Valley floor) characterized during the nineteenth century as containing mostly average and below average agricultural soils.<sup>6</sup>

Lurgan Township obtained its name from the early Scots-Irish settlers who located there during middle and late eighteenth century. Among the first wave of Scots-Irish settlers were members of the Maclay family who founded farms and a number of traditional processing industrial sites (mills, stills, and a tannery) within the irregular boundaries of Lurgan and neighboring townships.

### Maclay's Mill

The Maclay family emigrated to Pennsylvania from Lurgan, County Antrim, Ireland, in 1734.<sup>7</sup> Charles Maclay (1703-1753) and his wife Eleanor (1707-1789), along with their children, settled briefly in Chester County, west of Philadelphia. Less than a decade later, the Maclays moved westward in 1742, along with other Scots-Irish families, to the Conococheague Valley in what was then Cumberland County.<sup>8</sup> Charles Maclay and his family took up farming in the fertile valley dissected by such streams as the Conococheague and Conodoguinet creeks. Although Maclay family legends suggest that Charles Maclay's oldest son John (1734-1804) built the grist mill for which Maclay's Mill is named along the western bank of the Conodoguinet Creek prior to the American Revolution, there is no evidence for a mill at the location until 1786.<sup>9</sup>

Cumberland and Franklin county tax assessments indicate that John Maclay (listed as "John Maclay, Esq.") owned a modest tract of land along Conodoguinet Creek between about 1760 and 1779. Maclay, in most years, was taxed for owning 150 acres, three horses, and three

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<sup>6</sup> Koons, "Some Aspects," 276-9. Koons developed a tripartite analytical scheme to analyze historical agricultural practices in Franklin County. He identified three zones (mostly superior and above average, mostly above average and average, and mostly average and below average) and Lurgan Township is located in the lowest tier of Koons' scheme; see *ibid.*, 277.

<sup>7</sup> Kenneth R. Bowling and Helen E. Veit, eds., *The Diary of William Maclay and Other Notes on Senate Debates* (Baltimore: Johns Hopkins Univ. Press, 1988), 431; *Biographical Annals of Franklin County* (Chambersburg, Pa.: Kittochtinny Historical Society, n.d.), 145.

<sup>8</sup> Bowling and Veit, *The Diary of William Maclay*, 431.

<sup>9</sup> John G. Orr, "Early Grist Mills of Lurgan Township," *Kittochtinny Historical Society Papers* 1 (1904): 91; Margaret Maclay Patterson and Jacob Crider, "History of Maclay's Mill," in *The Shippensburg Historical Society: A Fifty Year Retrospective, 1945-1995* (Shippensburg, Pa.: Shippensburg Historical Society, 1995), 93. Family narratives include one legend that the mill race leading to John Maclay's grist mill was dug by Hessian prisoners of war during the American Revolution; see Patterson and Crider, "History of Maclay's Mill," 93. Other legends surrounding Maclay's Mill claim that his mill was the first to be built along Conodoguinet Creek and that it was one of the first active in Pennsylvania west of the Susquehanna River; see *Biographical Annals of Franklin County*, 146; Orr, "Early Grist Mills," 91-2; Patterson and Crider, "History of Maclay's Mill," 93.

cows.<sup>10</sup> The earliest evidence of Maclay engaging in any processing industry occurs in 1780, when his tax basis increased to 230 acres and a still worth £25.<sup>11</sup>

Maclay extended his agricultural processing from distilling to milling in about 1786, according to the Franklin County tax assessments for that year.<sup>12</sup> In this year, Maclay was taxed on 350 acres, four horses, four cows, a still, and a grist mill valued at £150. The total value of his property increased by fifty-eight percent (from £353 to £604) between 1782 and 1786.<sup>13</sup> Three years after establishing his grist mill, Maclay began operating a saw mill at his small complex along Conodoguinet Creek.<sup>14</sup>

Maclay's Mill is located at a point equidistant from the towns of Roxbury and Shippensburg. There are no surviving records of when the road (now known as Maclay's Mill Road) was opened, connecting the two towns and passing by Maclay's Mill. Local historian John G. Orr described the road in a 1923 article on Franklin County bridges as "a local road leading from Roxbury through Lurgan past Maclay's mill over the [Conodoguinet] creek (over a stone bridge) and thence to Middle Spring and Shippensburg."<sup>15</sup> Because the Maclays settled on several large tracts east and west of Conodoguinet Creek, the road may have begun as a trail linking the farmsteads of this extended family.

The site (farm, mills, and still) known as Maclay's Mill remained in the Maclay family through the second decade of the twentieth century. Shortly after the mill complex was complete, John Maclay's farm and mills were documented in the 1798 Federal Direct Tax Census. The Lurgan County schedule indicates that John Maclay had a one-story log dwelling (measuring 20'-0" by 38'-0") with seven windows containing fifty-seven lights. Maclay also had a one-story log kitchen (15'-0" square). The domestic portion of his farm embraced two acres. The tax census also noted that Maclay had a log barn and a merchant mill and saw mill. The entire estate, including an additional 348 acres, was valued at \$3,116.

On 26 February 1804, John Maclay sold his second-oldest son David a portion of the farm comprising fifty acres "with a merchant mill, saw mill stillhoux [sic.] & other

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<sup>10</sup> Cumberland County, Pennsylvania, Tax Assessments, Pennsylvania State Archives, Harrisburg, Pa.

<sup>11</sup> A definition and discussion of processing industries may be found in Margaret Walsh, *The Manufacturing Frontier: Pioneer Industry in Antebellum Wisconsin 1830-1860* (Madison: State Historical Society of Wisconsin, 1972), ix. Distilling and milling may further be described as first-stage resource user processing industries: "they refine or process a natural resource — namely agricultural produce ... either for the custom trade or for local or regional trade"; see *ibid.*, ix. The products of this manufacturing process, e.g., whiskey and flour, are consumed in their finished form and generally are not sent on to "second-stage" processing industries.

<sup>12</sup> Franklin County was formed in 1784 from Cumberland County.

<sup>13</sup> Franklin County, Pennsylvania, Tax Rolls, Pennsylvania State Archives, Harrisburg, Pa.

<sup>14</sup> Franklin County, Tax Rolls, 1790.

<sup>15</sup> John G. Orr, "Fords, Ferries and Bridges," *Kittochintny Historical Society Papers* 9 (1923): 474.

improvements" for £600.<sup>16</sup> Less than eight months later, John Maclay died on 17 October 1804.<sup>17</sup> David Maclay (1762-1839) farmed the land he acquired from his father and continued to operate the mills and still until his death. Like a number of his other kin, notably his uncle William Maclay (who became one of Pennsylvania's first two U.S. senators), David Maclay became a legislator and held other local political offices. He served two terms in the Pennsylvania legislature, from 1812 to 1816, and was a Franklin County bridge viewer.<sup>18</sup>

### Bridging Conodoguinet Creek

The first attempt to permanently bridge Conodoguinet Creek, begun in 1822, resulted in a tragic failure and led directly to the construction of the extant structures. David Maclay maintained a day book in which he recorded the business transactions of his milling and distilling activities and events in his community. Fortunately, Maclay also documented the bridging of Conodoguinet Creek near his mill.<sup>19</sup>

Construction of the first pair of bridges at Maclay's Mill began in the late summer of 1822. Franklin County commissioners determined the site for the bridge in September 1822, and construction was under way by October. Builder Benjamin Long was responsible for constructing the new stone bridges.<sup>20</sup> As David Maclay wrote in his day book entry of 29 October 1822: "Benjamin Long came to work at Bridge over creek and race."<sup>21</sup> It took Long and his workers approximately one year to complete the bridges.

Long's pair of bridges over Conodoguinet Creek and the mill race lasted barely more than two years. Heavy rains during the first week of March 1826 swelled Conodoguinet Creek. On 4 March 1826, David Maclay observed, "Continues cloudy and foggy with moderate rain for eight days past. Saw the sun but once during that time. Some spring birds began to sing, thunder

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<sup>16</sup> Franklin County, Pennsylvania, *Deed Book 7* (Recorder of Deeds, Franklin County Courthouse, Chambersburg, Pa.), 301.

<sup>17</sup> *Biographical Annals of Franklin County*.

<sup>18</sup> *Biographical Annals of Franklin County*, 150; David Maclay, *Memorandum Book, 1824-30*, Maclay Family Papers, microfilm reel 3329, MG 352, Pennsylvania State Archives, Harrisburg, Pa. (hereinafter cited as Maclay Family Papers).

<sup>19</sup> Orr, "Fords, Ferries, and Bridges," 475-6, based upon notes made from the manuscript originals by a third party. Orr's excerpts should be used cautiously because they contain several errors. The original documents cited by Orr are available among the Maclay Family Papers.

<sup>20</sup> Entries in Maclay's day book suggest that Long was a carpenter and not a mason. An entry for 29 March 1822, indicated that "Benjamin Long framed Rafters for the shop"; see David Maclay, *Day Book, 1822-23*, Maclay Family Papers, microfilm reel 3328. Another entry, related to construction of the bridge, reads, "Benjamin Long raised the centres of the middle arch and the masons began to build the arch the same day" (26 May 1823).

<sup>21</sup> David Maclay, *Day Book, 1822-23*.

gusts in the afternoon.”<sup>22</sup> Two days later, on Monday, 6 March, Benjamin Long’s bridge over Conodoguinet Creek collapsed. David Maclay wrote the following day, “Last night about one o’clock the greater part of our stone bridge over Conodoguinet fell from its sublime height into the tide of time and glided into the ocean of Oblivion. Aged 2 years and some days.”<sup>23</sup>

“Tremendous storm of thunder and rain,” wrote Charles Maclay in his day book on Friday, 24 March 1826, “The other part of the Bridge over Conodog’t fell from its ruinous situation and most deplorable situation and very dangerous situation it fell in a sudden crash in the twinkling of an eye.”<sup>24</sup> The following morning, Charles Maclay wrote, “The greater part of little bridge over tail race fell this morning from its noble condition.” Maclay then drew a rough sketch of the former larger bridge and wrote, in sympathy for builder Long, “Alas Poor Benjamin.”<sup>25</sup>

David Maclay wasted little time in pressuring Franklin County officials to rebuild the bridges at Maclay’s Mill. Maclay retained the services of attorney T. H. Crawford to represent his interests to Franklin County commissioners. On 14 November, David Maclay and his son Charles traveled to the county seat at Chambersburg. The following day, Maclay wrote, “Presented a petition for vain [sic.] of bridge at my mill by T. H. Crawford, Esq.”<sup>26</sup> The county’s bridge viewers agreed to meet the following week to examine the bridge site at Maclay’s Mill.<sup>27</sup>

The issue to rebuild the bridges appears to have been resolved by May 1827. On 28 May 1827, David Maclay recorded in his memorandum book that he had paid “T. H. Crawford attorney for his services in business of our bridge \$5.00 and he claimed five more which I promised to pay if my neighbors would contribute towards it.”<sup>28</sup>

While David Maclay was trying to get his bridges rebuilt, Franklin County officials were pursuing a breach of contract case against Benjamin Long. The case against Long was played out in a Chambersburg court room during October 1826.<sup>29</sup> David Maclay was called as a

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<sup>22</sup> David Maclay, *Memorandum Book, 1824-30*.

<sup>23</sup> 7 March 1826, in David Maclay, *Memorandum Book, 1824-30*.

<sup>24</sup> Charles Maclay, *Day Book, 1826*, Maclay Family Papers, microfilm reel 3328.

<sup>25</sup> 25 March 1826, in Charles Maclay, *Day Book, 1826*. David Maclay also noted the collapse of the remainder of the bridge in his day book entry of 24 March 1826: “All the bridge fell [at the] mill last evening and this morn.”

<sup>26</sup> 15 November 1826, in David Maclay, *Memorandum Book, 1824-30*.

<sup>27</sup> 23 November 1826, in David Maclay, *Memorandum Book, 1824-30*.

<sup>28</sup> David Maclay, *Memorandum Book, 1824-30*. There is no further mention of the dispute with Crawford over his fees in any of Maclay’s subsequent entries.

<sup>29</sup> David Maclay’s brief documentation of the suit against Long appears to be the only surviving record of the case. According to the Franklin County prothonotary, county court records for years prior to 1866 do not exist because of the destruction of the courthouse by Confederate troops in 1864.

witness. "I attend at Chambersburg as a witness in the suit of Commissioners of Franklin County against Benjamin Long and other for failure of contract in building bridge at my mill," wrote Maclay.<sup>30</sup> The court ruled in favor of the county and ordered Long to pay \$1,100 in damages. Maclay noted, later, that Long intended to appeal the case.<sup>31</sup>

Construction of new bridges began during the summer of 1827. Chambersburg stonemason Silas Harry built the twin bridges with a force of about twelve men. While work was underway on rebuilding the bridges, David Maclay provisioned Harry and his workers. In the back of Maclay's 1827 memorandum book, there is a list of a dozen men below Silas Harry's name and the list is followed by a schedule of days, from 30 July through 23 September 1827, with the word "meals" and a corresponding amount shown for each day.<sup>32</sup>

In addition to providing food for Harry's workers, Maclay also loaned money to Harry during construction of the bridges.<sup>33</sup> Early in the reconstruction project, on 27 July 1827, Harry bought six bushels of corn, two bushels of rye, and three quarters of a ton of hay. Harry may have used the grain and hay as feed for draft animals employed to haul limestone blocks to the bridge site.<sup>34</sup> Except for the few mentions in Maclay's books and the appearance of his name on bridges throughout Franklin County, very little information on Silas Harry's life survives.

### Silas Harry, Stonemason and Bridge Builder

Silas Harry was about twenty-five years old on 21 July 1815, when he bought forty acres of land in Montgomery Township, Franklin County. The deed between Harry and Alexander

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<sup>30</sup> 17 October 1826, in David Maclay, *Memorandum Book, 1824-30*.

<sup>31</sup> 14 November 1827, in David Maclay, *Memorandum Book, 1824-30*. According to several legal indices, there is no record of the initial case against Long, or of an appeal to a higher court. The lack of a record for the lower court case is not surprising, because Franklin County has no published legal reporter. That a record of an appeal does not appear suggests that Long never followed through in an attempt to reverse the judgement against him.

<sup>32</sup> David Maclay, *Memorandum Book, 1824-30*.

<sup>33</sup> David Maclay, *Memorandum Book, 1824-30*.

<sup>34</sup> The nearest source of limestone to Maclay's Mill is a band of Chambersburg Stones River limestone about one mile southeast of the bridge site; see Benjamin LeRoy Miller, *Limestones of Pennsylvania*, Pennsylvania Geological Survey Fourth Series, Bulletin M-20 (Harrisburg: Commonwealth of Pennsylvania, 1934), 378. According to Miller, "limestone constitutes the surface rock of almost one-half" of Franklin County; see *ibid.*, 379. Franklin County limestone was a popular nineteenth-century local building medium. Miller observed, "Stone for local building purposes is plentiful in this area, but none suitable for shipment is known.... At present it is used very little for building stone, except in foundations, walls, bridge piers and rubble fences"; see *ibid.*, 382. Although Miller found Franklin County limestone rare in contemporary (i.e., 1930s) buildings, another Pennsylvania Geological Survey geologist observed that Franklin County limestone structures were ubiquitous: "Old stone houses and bridges vouch for its durability"; see Ralph W. Stone, *Building Stones of Pennsylvania*, Pennsylvania Geological Survey Fourth Series, Bulletin M-15 (Harrisburg: Commonwealth of Pennsylvania, 1932), 161.

McClelland represents the first record of Harry in Franklin County.<sup>35</sup> Harry also appeared in Montgomery Township tax rolls for the first time that year; he was assessed for his forty acres, two horses, and one cow.<sup>36</sup>

Legal instruments filed with the Franklin County Recorder's Office and tax records indicate that Harry moved to Chambersburg in 1818, when he bought two half lots from John Johns for \$4,100.<sup>37</sup> By the end of 1818, Harry owned more than sixty acres in Montgomery Township and three lots in Chambersburg.

Five bridges, more than one-fifth of those built in Franklin County between 1825 and 1840, can attributed to Silas Harry (Table 1). The bridges built by Harry exhibit several common characteristics. Among the traits shared by the bridges are mortared semi-coursed rubble construction and stone coping along the parapets. Harry's bridges also contained date stones with his name and the names of Franklin County commissioners in office at the time each bridge was completed. The multiple-span stone arch bridges that Harry built also had conical piers and a camelback profile.<sup>38</sup>

**Table 1** Franklin County, Pennsylvania, Bridges Attributed to Silas Harry.

Bridge	Year Built	Location	Crossing
Heron Branch	1825	Southampton Township	Conodoguinet Creek
Elders	1825	Fannet Township	Conococheague Creek
Maclay's Mill	1827	Lurgan-Southampton townships	Conodoguinet Creek
King Street Bridge	1828	Chambersburg	Conococheague Creek
Mongul	1840	Southampton Townships	Conodoguinet Creek

Source: Frederick Flemming Unger, *Old Bridges of Franklin County* (Mercersburg, Pa.: Mercersburg Journal, 1941).

According to the *Chambersburg Times*, Silas Harry died in May 1845.<sup>39</sup> Craft items listed in his probate inventory include trowels, picks and stone hammers (Table 2). It appears that Harry built his last known stone arch bridge five years before his death.<sup>40</sup> In addition to the

<sup>35</sup> Franklin County, *Deed Book*, 11:502.

<sup>36</sup> Franklin County, Tax Rolls, 1815.

<sup>37</sup> Franklin County, *Deed Book*, 12:32.

<sup>38</sup> See illustrations in Frederick Flemming Unger, *Old Bridges of Franklin County* (Mercersburg, Pa.: Mercersburg Journal, 1941).

<sup>39</sup> *Chambersburg Times*, 26 May 1845, cited in note on file, Kittochtinny Historical Society.

<sup>40</sup> Unger, *Old Bridges*.

Franklin County stone arch bridges, Harry also is credited with a building number of bridges in neighboring Virginia (now West Virginia) and Maryland. In 1819, along the National (Cumberland) Road, Harry completed a five-span stone arch bridge over Conococheague Creek outside of Hagerstown, Maryland.<sup>41</sup> In 1832, Harry is also credited with building a three-span stone arch bridge over Opequan Creek in Berkeley County, (West) Virginia.<sup>42</sup> Besides bridges, which appear to have been his specialty, Harry also built other structures such as the second Franklin County courthouse in Chambersburg, in 1842.<sup>43</sup> According to HAER Chief Eric N. DeLony, Harry was an elusive stonemason who built stone arch bridges throughout much of the mid-Atlantic but about whom little is known.<sup>44</sup> DeLony's observations were confirmed by Virginia historian Allan Clarke, who noted, "Silas Harry was a prolific builder of bridges in both Franklin County and Washington County [Maryland]."<sup>45</sup> Like most researchers who have documented Silas Harry bridges, Clarke lamented the dearth of data regarding Harry's life. "I did not come across much about him or his background," wrote Clarke.<sup>46</sup>

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<sup>41</sup> Eric N. DeLony, "HAER's Historic Bridge Program," *IA: Journal of the Society for Industrial Archaeology* 15, No. 2 (1989): 70; T. J. C. Williams, *History of Washington County, Maryland* (n.p., 1908; reprint, 1968).

<sup>42</sup> Donald C. Jackson, *Great American Bridges and Dams* (New York: John Wiley & Sons, 1988), 155.

<sup>43</sup> Richard, *History of Franklin County*, 194.

<sup>44</sup> Eric N. DeLony, telephone conversation with author, 12 August 1997.

<sup>45</sup> Alan Clarke, to author, 13 August 1997.

<sup>46</sup> Clarke, to author.

**Table 2** Craft Items in Silas Harry's Probate Inventory.

Number	Description	Value	Number	Description	Value
2	Cart saddles & brickband	5.50	1	Dunghook and hoe	0.40
1	Shood and tongs	1.45	1	Lot blasting tools etc.	1.70
2	Trowels	0.40	3	Hoas	2.25
6	Picks	3.11	4	Augurs	1.50
4	Stone hammers & iron rake	2.77 1/2	1	Cart	20.00
1	Lot harness	2.35	1	One horse wagon	31.37 1/2
4	Crowbars	4.42 1/2	3	Stone wheelbarrows	7.00
1	Lot of tools	1.56 1/2	2	Cart wheels & cart frame	4.70
1	Log chain	2.62 1/2	1	Grindstone	1.37
1	Jack screw	2.10	1	Small stand	1.10
3	Spades and 2 shovels	0.89	200	Brick @ 22 cents per hundred	0.44
2	Sledges and hammer	1.75			

Source: Franklin County, Pennsylvania, *Register and Recorder*, Estate No. 4748, Franklin County Courthouse, Chambersburg, Pa.

### Maclay's Mill, to Present

Maclay's Mill remained in operation as an active saw and grist mill owned by the Maclay family until about 1918. David Maclay, the driving force behind construction of the existing bridges over Conodoguinet Creek and the tail race of his mill, died in 1839. His son, David, then assumed control of the mill and farm. The junior David Maclay owned the complex until March 1861, when he sold it to his younger brother, Charles T. Maclay.<sup>47</sup>

U.S. Census of Manufactures data indicate that the Maclay grist mill remained a small traditional agrarian enterprise throughout its active life span. Water power drawn from Conodoguinet Creek drove one run of two burr mill stones. An undershot water wheel enabled the mill to produce up to twenty bushels of flour per day. Because Conodoguinet Creek has a minimal fall, the wooden dam located upstream had to be opened once a day to allow a rush of water into the head race in a flow sufficient to run the mill.<sup>48</sup>

The vicinity of Maclay's Mill has remained rural with some suburban sprawl (planned unit developments and subdivisions) encroaching from nearby Shippensburg. The community

<sup>47</sup> See Franklin County, *Deed Book*, 45:199 for the chain of title from 1800 to 1868.

<sup>48</sup> Jacob Crider, Lurgan Township, Franklin County, Pa., interview by author, 23 June 1997.

still has a number of active farms. It appears, however, that single-family residences are beginning to dominate the landscape around the former Maclay's Mill complex.

The stone arch bridges on the route that now bears the name of the Maclays — Maclay's Mill Road — were acquired by the Pennsylvania Department of Highways (now PennDOT) in 1936. Since their acquisition by the Commonwealth of Pennsylvania, the bridges have undergone several repairs due to vehicular collisions with the western wing walls of the west bridge and the eastern wing walls of the east bridge. Inspection reports prepared by PennDOT and its predecessor since 1942 indicate that the bridges are in "good" condition. Most of the repair and maintenance efforts on these structures have concentrated on repointing deteriorated mortar joints. In June 1988, the Maclay's Mill Twin Bridges were listed in the National Register of Historic Places, as elements in the multiple resource listing "Highway Bridges Owned by the Commonwealth of Pennsylvania, Department of Transportation."

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**APPENDIX: Excerpts from Maclay Family Papers**

Deed, John Johnston (Lurgan Township, Cumberland County), to Charles Maclay (same), for tract in Lurgan Township "joining land of Charles Maclay on North, Abraham Weer on South," containing 70 acres, 16 April 1773 (Maclay Family Papers, microfilm reel 3328, MG 352, Pennsylvania State Archives, Harrisburg, Pennsylvania).

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Charles Maclay, *Day Book, 1826* (Maclay Family Papers, microfilm reel 3328, MG 352, Pennsylvania State Archives, Harrisburg, Pennsylvania).

- 7 March 1826            Tuesday the 7. Last night about 1 o'clock the greater part of our great stone bridge over Conodoguinet fell from its sublime height into the tide of time and glided into the ocean.
- 24 April 1826           Friday, Tremendous storm of thunder and rain in the evening, the creek very high this evening. The other part of the Bridge over Conodog't fell from its ruinous situation and most deplorable situation and very dangerous situation it fell in a sudden crash in the twinkling of an eye.
- 25 April 1826           Sat. Morn 25. The greater part of little bridge over tail race fell this morning from its noble condition. [sketch of bridge]
- 29 April 1826           Beautiful and clear morning. Working today at the bridge clearing away the rubbish.
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David Maclay, *Day Book, 1822-23* (Maclay Family Papers, microfilm reel 3328, MG 352, Pennsylvania State Archives, Harrisburg, Pennsylvania).

- 31 August 1822        Sat. 31. This day we expect the commissioners to site the building the bridge over creek — they met but did not site the erection thereof fixed on site.
- 29 October 1822       Benjamin Long came to work at Bridge over creek and race.
- 29 March 1823        Benjamin Long framed Rafters for the Shop. [Long was a carpenter?]
- 26 May 1823           Benjamin Long raised the centres of the middle arch and the masons began to build the arch the same day.

- 31 May 1823      Raised the centres on the eastern shore.
- 30 August 1823      B. Long raised bridge centres over mill race and came with waggon over new bridge over the creek for the first time.
- 17 October 1823      The masons closed arch over mill race (in 4 days).
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- David Maclay, *Memorandum Book, 1824-30* (Maclay Family Papers, microfilm reel 3329, MG 352, Pennsylvania State Archives, Harrisburg, Pennsylvania).
- 12 November 1824      Friday Nov. 12 — John Swanger moved his family from my place where he has resided nearly 19 or 20 years — to Samuel Maclay's house near the run. [Swanger worked for David Maclay; his accounts and pay records are in the day books, etc.]
- 24 December 1824      Haled logs of old house where John Swanger had lived and many others — home.
- 22 February 1825      Eleanor getting weaker.
- 23 February 1825      23d, Wednesday morning — At half past three o'clock AM my dear Eleanor breathed out her soul to her heavenly father who gave her breath and life. Alas poor David!
- 29 March 1825      Paid Jacob Steveck for digging grave for my dear Eleanor one dollar.
- 4 March 1826      Continues cloudy and foggy with moderate rain for eight days past. Saw the sun but once during that time. Some spring birds began to sing, Thunder gusts in the afternoon — heard the frogs in the meadow for the first time this year.
- 7 March 1826      Last night about one o'clock the greater part of our great stone bridge over Conodoguinet fell from its sublime height into the tide of time and glided into the Ocean of Oblivion. Aged 2 years and some days.
- 24 March 1826      All the bridge fell mill last evening and this morn.
- 14 August 1826      Went to Chambersburg as a grand juror had a great many petit bills presented. Ignored several. Got dismissed Thursday noon — detained that evening and next day to 4 o'clock on a view of Bridge in the borough of

MACLAY'S MILL TWIN BRIDGE (EAST & WEST)

HAER No. PA-457

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Chambersburg. Made report in favor of a bridge. County due to me:  
\$1.50

- 4 October 1826 Summued to attend on suit of Commonwealth against Benjamin Long inspecting Bridge on Friday 6th instant. 1 day's notice (did not attend)
- 14 October 1826 Summued to attend in Chambersburg on the 17th on suit of Commonwealth against B. Long representing Bridge (attended)
- 17 October 1826 I attend at Chambersburg as a witness in the suit of Commissioners of Franklin County against Benjamin Long and others for failure of contract in building bridge at my mill — verdict \$1,100 damages. Referees: Jacob Hyser, H. Brotherton, Jas. Hollinger, Geo. K. Harper, Wm. Linn. Brotherton, Hollinger, Harper signed verdict.
- 14 November 1826 Myself and Charles went to Chambersburg (put up at Jac Snider's tavern)
- 15 November 1826 Presented a petition for vain of bridge at my mill by T. H. Crawford, Esq. Viewers: Robert Robison, Geo. Hetich, Mathew Patton, M. Kirkpatrick, Esq., Martin Bechtal to meet in Roxbury on Thursday the 23 instant at the house of Jno. Shoemaker.
- 23 November 1826 The viewers before mentioned all met at Jno. Shoemaker's and came down the road from that place to my mill — took a chick for dinner and on the next day proceeded to view Henry's fording. Did not agree on any site and they adjourned to meet in Chambersburg at Col Findlay on Dec. 27 at 10 o'clock.
- 28 May 1827 Paid J. Hershber for order for bridge (in all for 2 orders \$1.50). Same day paid T. H. Crawford attorney for his services in business of our bridge \$5.00 and he claimed five more which I promised to pay if my neighbors would contribute towards it.
- 27 July 1827 Silas Harry due at this time: To corn 6 bushels in ear. To rye 2 bushels ground; To hay 3/4 ton.
- 1 September 1827 Lent S. Harry five dollars (silver)
- 20 October 1827 Lent Silas Harry \$15.00. Paid 23d in full this loan. [“paid” later note added]

MACLAY'S MILL TWIN BRIDGE (EAST & WEST)

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9 August 1827      Silas Harry due to cash paid Jacob Henry \$20.00. Sept 14 credit by pay  
\$20.00

14 November 1827    Attended Court in Chambersburg as a witness in the case of the  
Commissioners against Benjamin Long — for failure of contract in  
building bridge at my mill. Verdict against Long \$1,800 doll. Long  
appealed to Supreme Court this is report to me.

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8 April 1830      Thursday April 8 John Mahan and Jacob Fishbum began to quarry stone  
for mill dam. [These were employees of Maclay; was quarry on his  
property?]