

Feasibility Study for the Schuylkill River West Trail

Appendix 2:

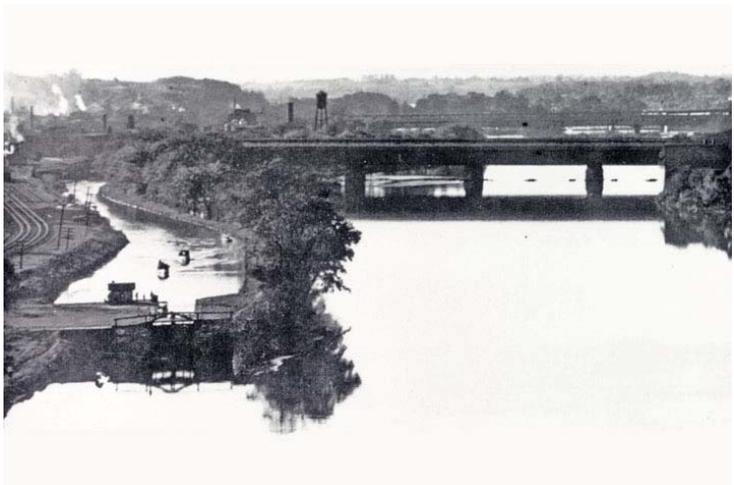
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Schuylkill Navigation System Towpath

The Schuylkill Navigation System, incorporated in 1815, was built in two sections simultaneously; from Philadelphia at the Lancaster Schuylkill Bridge (near Callowhill Street) to Reading and from Reading to Mount Carbon south of Pottsville. In his 1991 book The Schuylkill Navigation: A Photographic History author Harry L. Rinker explains.

The term Schuylkill "canal" is incorrect. The Schuylkill Navigation Company used a series of slackwater pools, dams and canals to cover a distance of slightly over 108 miles. After the initial construction, the system consisted of 50.50 miles of slackwater navigation and 57.73 miles of canals. The correct term to describe the company's efforts is "navigation system."

In July 1824 the system was opened between Reading and Philadelphia, with the full system officially opened on May 20, 1825, consisting of eighteen dams, twenty-three canals, one hundred twenty locks, seventeen stone arch aqueducts, one tunnel (450 feet long, near Auburn) and thirty one homes for toll and lock keepers.



Canal in Bridgeport, PA

Improving the system began almost immediately upon its initial completion. Towpath construction began in 1825. In 1828 the system

was extended 2.5 miles north from Mount Carbon to the mouth of Mill Creek above Pottsville, thus fulfilling the company's charter. In 1829 a doubling of the locks was undertaken. In some cases the lock doubling created two different lock combinations at the same site. A canalboat travelled through more locks ascending (going north), than descending (going south).

The Schuylkill Navigation enjoyed its greatest prosperity between 1837 and 1845. In 1842, the Philadelphia and Reading Railroad was completed through to Mount Carbon giving the Schuylkill Navigation serious competition. In response, in 1846, the Navigation embarked on an enlargement program to increase the capacity of the boats used on the system. A second era of prosperity occurred between 1855 and 1867. The company's peak tonnage, almost two million, was achieved in 1859.

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In 1869, forces conspired to bring the company to an end. The year began with a miner's strike and then a prolonged drought closed the canal for much of the boating season that followed. It was not until September 27th that full shipping resumed only to be stopped again by a devastating flood on October 4th. In 1870, the Philadelphia and Reading Railroad Company signed a long-term lease on the holdings of the Schuylkill Navigation System.

Although the Philadelphia and Reading maintained the Navigation System, it continued to siphon off traffic to the railroad and let maintenance slip. Beginning in the late 1850s coal was washed with river water forming large deposits of coal silt. Schuylkill Navigation dredges maintained the channel, but by 1872 silt deposits above Schuylkill Haven had reached a point where they could no longer be effectively handled by the dredges so that section of the system had to be closed.



**Blackie Bridge with pedestrian/towpath deck to Pencoyd.
View from Manayunk**

When the Philadelphia and Reading Railroad acquired rail access to New York City in 1887, it closed the canal above Port Clinton. From 1896, when the Philadelphia and Reading experienced financial difficulties, through 1902, operation of the system passed back and forth from Philadelphia and Reading and the Schuylkill Navigation Company, with the latter finally retaining control in 1902. But by then the day of the canal was all but over. In 1915 the Port Clinton loading pens were closed and many boatmen, realizing that their way of life was vanishing, sought other occupations. In [The Schuylkill Navigation: A Photographic History](#) by Harry L. Rinker writes, "The last shipment of coal occurred sometime in 1924-25. Commercial traffic continued between Manayunk and Fairmount until 1931". But Sarah Jane Elk writes on the Workshop of The World - Philadelphia Website, "The last commercial boat made the trip in 1917..."

In the first decades of the 20th century the Schuylkill Navigation profited from hydroelectric power generation. Recreational boating also became popular. Several excursion boats operated out of Reading. Locktenders remained on duty and the Schuylkill Navigation maintained the locks and dredged the channels.

In 1949, as part of the Army Corps of Engineers Schuylkill River Desilting Project, the Schuylkill Navigation Company conveyed the system to the Commonwealth of Pennsylvania. Although an engineering study of that year found the Navigation's structures (dams, locks, canals, etc.) to be in surprisingly good condition, no effort at preservation was undertaken at that time. Several dams were removed, sections of canal were filled in and a number of locks were buried.

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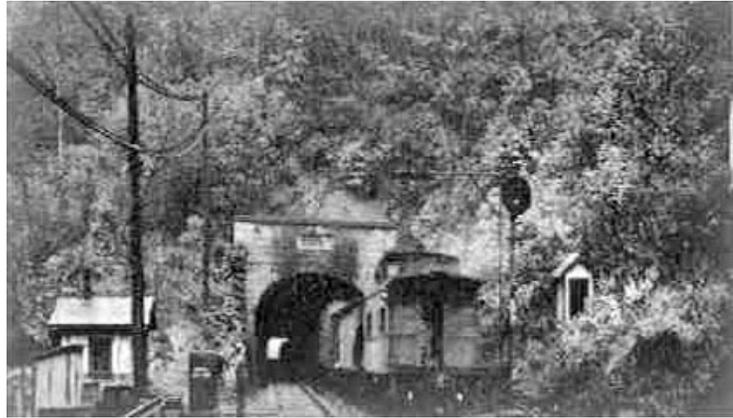
Beginning in the 1970s several groups discovered the beauty of the Schuylkill Navigation system and its important place in the history of the region. These groups and many that have followed launched preservation initiatives that are still ongoing.

Sources: Pages 4-6, [The Schuylkill Navigation: A Photographic History](#) by Harry L. Rinker, 1991, Berkeley Heights NJ: Canal Captain's Press
Workshop of The World - Philadelphia Website, Schuylkill Canal, Scuykill Navigation Company, 1816 by Sarah Jane Elk
<http://www.workshopoftheworld.com/manayunk/canal.html>

The Philadelphia and Reading Railroad Company

Location: track bed along the west bank of the Schuylkill River; now operated by Norfolk Southern Railway.

The Philadelphia and Reading Railroad, more commonly known as The Reading Railroad or the Reading Company, was chartered April 4, 1833 to build a line between its namesake cities alongside the Schuylkill River. It was built for King Coal, to move the anthracite from the mines of east central Pennsylvania to the industrial powerhouse of Philadelphia. The section from Reading to Norristown opened July 16, 1838, and the full line into Philadelphia opened December 9, 1839. The pioneering 94-mile line eventually evolved into a mighty corporation serving eastern Pennsylvania, New Jersey and Delaware. Operations included coal mining, iron making, canal and sea-going transportation and shipbuilding.



View of the north portal of Flat Rock Tunnel before the Schuylkill Expressway was constructed.

Sources: http://en.wikipedia.org/wiki/Reading_Railroad
http://www.readingrailroad.org/reading/rdg_history.html
Pages 4-6, [The Schuylkill Navigation: A Photographic History](#) by Harry L. Rinker, 1991, Berkeley Heights NJ: Canal Captain's Press

Village of Port Kennedy

Location: Valley Forge Road near entrance to Valley Forge NHP.

All that remains of a once thriving 19th-century industrial village are several small worker houses now owned and occupied by the staff of Valley Forge NHP. The town was founded by

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Alexander Kennedy in 1805. In the 19th-century the Montgomery Iron Company was located in Port Kennedy.

In his 1951 history of the river valley, The Schuylkill, author J. Bennett Nolan writes that in the 1850s, "...the south bank of the Schuylkill, all the way from Port Kennedy to Norristown, must have been a floral paradise. The historian Buck, who often walked along the stream, spoke of the flowering fruit orchards and of the excellent fertility of the soil. He always maintained that the view from the twin lock of Catfish Dam was more beautiful than that of the Potomac at Harper's Ferry. Perhaps this was true in Buck's time, but the pyramids of coal which the Reading Company has piled at the river landing of Abrams have not tended to preserve the original charm of the landscape; the Catfish Dam, beloved of artists, is gone."

Sources: Pages 137-138, The Schuylkill by J. Bennett Nolan, 1951, reprinted 2004, New Brunswick NJ: Rutgers University Press.
Page 73, The Schuylkill Navigation: A Photographic History by Harry L. Rinker, 1991, Berkeley Heights NJ: Canal Captain's Press

Port Kennedy Railroad Station

Location: Valley Forge Road near entrance to Valley Forge NHP.

In 1870, the Philadelphia and Reading Railroad leased The Port Kennedy Railroad, a short branch to quarries at Port Kennedy. Passenger service was available at the Port Kennedy station until it was discontinued in 1981. The extant Tudor half-timbered station house still stands, awaiting possible restoration of passenger service.



Sources: Reading station at Port Kennedy, PA 4/71 Photo copyright 1971 by R.W. Clark
<http://members.aol.com/e44e33/Railpix/N3-33-2.htm>

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Railroads and Stations in Chester County, website maintained by Dr. Jim Jones,
West Chester University
<http://courses.wcupa.edu/jones/his480/notes/rr-towns.htm#towns>

Kennedy Supplee Mansion

Location: 1100 Valley Forge Rd at Route 23 and Route 363

Built in 1852 (according to the NR Nomination, but other sources put the date at ca. 1865) by John Kennedy, this home has housed the families of several of Upper Merion's most illustrious early industrialists. The mansion was, according to the National Register Nomination, the focal point of the Port Kennedy Village and one of the few structures to survive the decline of the lime and blast furnace industry in the area.

The house sits on a hill that originally overlooked the village of Port Kennedy. Route 363 was constructed immediately adjacent to the east side of the house and separates it from parts of the original village.

The mansion has since been converted to a restaurant and was once known as Kenhorst by the Supplee family.

Sources: [UMT-Bike Historic Structures Study by Lori Salganicoff](#)

Port Kennedy Presbyterian Church

Location: On Old Valley Forge Road. Road it was built on originally went through the park, cut off by Rte 422 when they built it. Now on a dead-end road.

The community that would become Port Kennedy began in 1805 with the arrival of Scotch-Irish immigrants. Under the leadership of the village founder, Alexander Kennedy, and his son John, the village became a thriving industrial community. The First Presbyterian Church of Port Kennedy was organized in the summer of 1845, mostly from members of the Great Valley Presbyterian Church, of Chester County. The corner-stone of the present church edifice was laid the same year, and the building was dedicated January 1, 1846. Some of the early families of Port Kennedy are buried in the Presbyterian Church cemetery including the Mancill, Kennedy, Law, Loughlin, and Supplee families. The National Park Service acquired the property in 1978.

Sources: [UMT-Bike Historic Structures Study by Lori Salganicoff](#)

Valley Forge National Historical Park

Location: North Gulph Rd, King of Prussia, PA

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The men and women of the Continental Army were ordinary men and women – like many of us, but these everyday men and women were thrust into extraordinary circumstances. Valley Forge National Historical Park commemorates more than the collective sacrifices and dedication of the Revolutionary War generation, it pays homage to the ability of everyday Americans to pull together and overcome adversity during extraordinary times.

Of all the places associated with the American War for Independence, perhaps none has come to symbolize perseverance and sacrifice more than Valley Forge. The hardships of the encampment claimed the lives of one in ten, nearly all from disease. Despite the privations suffered by the army at Valley Forge, Washington and his generals built a unified professional military organization that ultimately enabled the Continental Army to triumph over the British.

Perhaps one of Washington's soldiers said it best when he described his reasons for not abandoning the field despite the harsh conditions: "We had engaged in the defense of our wounded country and . . . we were determined to persevere." Private Joseph Plumb Martin, 8th Connecticut regiment, December 1777.

Come enjoy exhibits containing Revolutionary War artifacts and the museum shop in the Welcome Center. An eighteen-minute film, "Valley Forge: A Winter Encampment," is shown every 30 minutes on the hour and half-hour, starting at 9:30, ending at 4:30.

Sources: [UMT-Bike Historic Structures Study by Mary Anne Eves](#)

Coal Impounding Basins/Heuser Park/Bob Case Park

Location: Heuser Park, Beidler Road & Geerdes Blvd., King of Prussia, PA 19406
Bob Case Park, Beidler Road & Abrams Road, King of Prussia, PA 19406

In his 1951 history of the river valley, The Schuylkill, author J. Bennett Nolan writes that in the 1850s, "...the south bank of the Schuylkill, all the way from Port Kennedy to Norristown, must have been a floral paradise. The historian Buck, who often walked along the stream, spoke of the flowering fruit orchards and of the excellent fertility of the soil. He always maintained that the view from the twin lock of Catfish Dam was more beautiful than that of the Potomac at Harper's Ferry."

But industry took its toll. The coal that provided employment for thousands along the Schuylkill navigation system destroyed the water quality. For many years, anthracite coal was cleaned by a process that resulted in the production of thousands of tons of very fine sized coal particles called culm. Culm, which was considered a waste byproduct, was disposed of by water carrying it to the nearest tributary and ultimately to the main stem of the Schuylkill River. The culm gradually moved downstream choking the Schuylkill's main channel, building up behind dams and filling the canals, according to the engineers of the Schuylkill River Desilting Project study from 1951.

The problem of maintaining sufficient water for navigation became costly due to the deposits. Meanwhile, the contribution of mining wastes continued at an increasing rate until more than 3

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million tons per year were being dumped into the river. In 1927, the Army Corps of Engineers estimated that the accumulation of culm deposits in the river from its headwaters near Tamaqua to Fairmount Dam totaled 38-million tons. Furthermore, it has even been reported that culm was found in the Delaware River 31 miles downstream and 10 miles upstream from the mouth of the Schuylkill verifying the power of the river to carry waste into other watersheds. These deposits raised the bed of the river, and subsequently, the flood plains.

By the 1940's, steps toward river renewal were in full swing. Legislation was passed to reduce pollution into the river and the U.S. Army Corps of Engineers commenced a study finding it necessary to dredge the river. The Schuylkill River Desilting Project was instituted in 1945 to correct conditions, which had gradually become intolerable over the years. Completed in 1954, the desilting project incorporated dredging of the clogged river with the planning and construction of de-silting basins to abate the impacts of coal mining upstream from Fairmount Dam in Philadelphia to Norristown.

The project was to remove and dispose of the silt deposits, which accumulated in the channel and on the banks of the river from its headwaters to the Norristown Dam. The project, which consisted of the construction of three desilting basins, seven dams and 26 impounding basins for disposal of dredged materials

Today the area that was impounding basin #23 is now Upper Merion Township's Heuser Park (111 acres) and impounding basin #24 is the Township's Bob Case Park (26.5 acres) These sites have been filled with material from the construction of roads in the area.

Sources: Pages 4-6, [The Schuylkill Navigation: A Photographic History](#) by Harry L. Rinker, 1991, Berkeley Heights NJ: Canal Captain's Press
Upper Merion Township Open Space And Environmental Resource Protection Plan, 2004 Update
<http://www.uppermerionparkandrec.org/pdfs/openspaceplan.pdf>
[HISTORY OF THE WATERWAY: Part One In A Three-Part Series](#) by Michelle Mowad, Montgomery County Times Herald, November 30, 2002
http://www.montcopa.org/schuylkill/Schuylkill%20River%20News/news_search.htm

Catfish Dam & Lock House #63 Ruins

Location: Down close to 422 bridge over Schuylkill, close to Valley Forge Apts. off Mansell Road.

The Catfish Dam was dam #28 on the Navigation System. It was used in conjunction with Lock #63.

The Alexis Club was located on the north abutment of the Catfish Dam. The club was abandoned in the 1930s and dismantled sometime between 1945 and 1950.

Sources: Page 74, [The Schuylkill Navigation: A Photographic History](#) by Harry L. Rinker, 1991, Berkeley Heights NJ: Canal Captain's Press

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Knickerbocker Ice Company

Location: Structure visible on the west bank of the Schuylkill along Chelsea Road, King of Prussia. Not easily accessible by foot, must cross railroad.

The Knickerbocker Ice Company was the leading ice company in the Philadelphia area and employed four- to five-hundred men through the late-1890s. The largest of several sizeable ice houses located along the Schuylkill in the Abrams section of Upper Merion Township it is now a ruin.

After being cut from the frozen river each winter, large ice blocks were stored in the Knickerbocker's warehouses on the east bank of the River. They supplied the homes, shops and restaurants down river with cooling throughout the summer. The blocks were transported on the Schuylkill Navigation using Knickerbocker's own canal boat and team. In his remembrance Folklore of the Schuylkill Canal, John B. Bowman wrote:

The Knickerbocker Ice Co. of Philadelphia had four exceptionally large, coal black mules, always well groomed, each one with a high plume on his head, a large red, white and blue tassel at each ear, and a magnitude of bells at his chest. When they came swinging into a level at half trot with a light boat, it was, indeed, a sight to behold. The music of the bells was greater than that in the song "Jingle Bells."

Sources: [UMT-Bike Historic Structures Study by Lori Salganicoff](#)
Pages 7, [The Schuylkill Navigation: A Photographic History](#) by Harry L. Rinker,
1991, Berkeley Heights NJ: Canal Captain's Press

Barbadoes Island

Location: In the Schuylkill between the North Side of Norristown and the North edge of Bridgeport

The land that eventually became Norristown was originally a manor owned by William Penn, Jr. Young Penn did not fare well in the new world. He was a spendthrift and a drunkard who continually embarrassed his Quaker father. Ever in need of funds, he sold his manor to Issac Norris and William Trent in 1704. The island's name is a reflection of the time spent West Indies, having lived on Barbadoes for a few years.

Ownership of the island changed hands over time. In the late 1700s there was a vineyard on the island where Catawba grapes were grown. By the early 1800s it had been given to William Smith, first Provost of the University of Pennsylvania, "for the uses of the college." Penn sold the land and shortly thereafter a two-mile race course was built on the island.

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A defunct coal power plant operated by the Philadelphia Electric Company (PECO/Exelon) currently occupies the island. The PECO facility is currently used for equipment storage, company training and as an electrical substation.

Sources: Pages 141, [The Schuylkill](#) by J. Bennett Nolan, 1951, reprinted 2004, New Brunswick NJ: Rutgers University Press.
The Molls of Montgomery County,
<http://www.angelfire.com/pa5/mollpa/montgomery2.html>

Norristown Dam

Location:

Dam 29 spans the River between Norristown and Bridgeport.

Sources: Page 74, [The Schuylkill Navigation: A Photographic History](#) by Harry L. Rinker, 1991, Berkeley Heights NJ: Canal Captain's Press

Route 100 P&W Trolley Bridge

Location: Schuylkill River between Bridgeport and Norristown, PA

On August 12, 1912, the Philadelphia & Western Railway completed its bridge over the Schuylkill between Bridgeport and Norristown. Three quarters of a mile in length, the span was designed by the noted civil engineering firm Stone & Webster. The bridge continues to carry high-speed transit trains to this day.

Sources: Page 76, [The Schuylkill Navigation: A Photographic History](#) by Harry L. Rinker, 1991, Berkeley Heights NJ: Canal Captain's Press

Borough of Bridgeport

Location:

J. Bennett Nolan writes, "Bridgeport was at one time expected to have a brighter future than the village of Norris across the river, but when the bridge was thrown across the Schuylkill in 1829, the population gravitated to Norristown."

In 1924 the DeKalb Street Bridge, a wooden covered bridge between Norristown and Bridgeport, was destroyed by a fire and replaced with a concrete bridge. That bridge has in turn been replaced with the current four lane wide span.

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The Ford Street Bridge also connected Bridgeport and Norristown, at the foot of Ford Street. Beginning in 1924 this bridge was closed to motor vehicle traffic; pedestrians were charged a 1 cent toll for each crossing. The “Penny Bridge” was dismantled in 1939.

Sources: Page 140, [The Schuylkill](#) by J. Bennett Nolan, 1951, reprinted 2004, New Brunswick NJ: Rutgers University Press.
 Page 75, [The Schuylkill Navigation: A Photographic History](#) by Harry L. Rinker, 1991, Berkeley Heights NJ: Canal Captain's Press
 Page 20, [History of Bridgeport, PA](#) by Edward Pinkowsky, 1951, Bridgeport PA: South Side Press

PRR Trenton Cut-Off

Location: Swedesburg (South of Bridgeport)

Now known as the Norfolk Southern Morrisville line, the Cut-Off was constructed in 1891 as a high-speed railroad bypass around Philadelphia. A massive steel truss bridge carries two tracks across River Road, the Norfolk Southern railroad, and the Schuylkill River.

Historic Swedesburg Village

Location: in the eastern portion of the Upper Merion Township bounded by the Schuylkill River, Conrail Morrisville Line, Henderson Road, US Route 202, and Bridgeport Borough.

Established by Swedish settlers in 1712, Swedesburg is one of the oldest areas of the township. Religious services were held in homes until 1734 when a combination log cabin school/church was built. This sufficed until 1760 when Christ Church was dedicated.

In the 1830's a great many Irish immigrants settled in Swedesburg and in due time they supplanted the Swedes as the majority. Later they moved on to an area that became part of the Borough of Bridgeport in 1851. In the 1880's immigrant Poles began to settle in Swedesburg. They were attracted by the abundance of work in the industrial Schuylkill Valley, particularly in the quarries, railroads, woolen mills, and steel works, and the presence of the Roman Catholic Church that served their Irish predecessors.

The current Swedesburg resembles the typical development patterns of the area for the mid 19th through early 20th centuries; a grid street pattern with a mix of commercial and residential, including single, twin and multi-family dwellings. There are numerous examples of vernacular "worker housing" from the 19th and 20th centuries. New housing in this area is a mix of townhouse and infill single family.

Sources: [UMT-Bike Historic Structures Study](#) by Mary Anne Eves

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Plymouth Dam

Location: Schuylkill River between West Conshohocken and Plymouth Township, PA

First constructed in 1819, this dam was replaced by a wood and stone crib structure in 1858. The 1858 dam is in place today, although it is soon to be removed by the Commonwealth of Pennsylvania. It is hoped that the massive stone wing walls, replete with iron brackets, can be left in place.

Page 81, [The Schuylkill Navigation: A Photographic History](#) by Harry L. Rinker, 1991, Berkeley Heights NJ: Canal Captain's Press

West Conshohocken Houses & Stores

Location: Front Street, West Conshohocken, PA

To the Lenni Lenape Conshohocken meant "Pleasant Valley".

Mill Worker Homes

Location: Mill Creek Road, Gladwyne, PA

Woodmont

Location: 1622 Spring Mill Rd., Gladwyne PA

Woodmont is a 72-acre hilltop estate in Gladwyne, overlooking the Schuylkill River. Built for one million dollars in 1892 by steel magnate Alan Wood, Jr., the estate is most notably the center of the International Peace Mission movement. Father Divine, a self-proclaimed God, was leader of the movement and given the estate by a follower called John Devoute in 1953. His followers renovated the mansion and placed an American flag prominently in front reflecting Father Divine's patriotism. They also added a well-kept garden like those on previous Peace Mission properties. An open house occurred on September 10, 11, and 12, 1953.

Followers made pilgrimage to the estate to see Father Divine until his death in 1965. All furnishings in Father Divine's rooms, including an antiquated television set, have been left as they were on the day of his death. The estate is now a shrine to his life and a meeting place for his remaining followers. At the time of his death operations of the International Peace Mission fell into the more than capable hand of his wife. Mother Divine.

Woodmont is open to the public, gratis, every Sunday, April through October 1:00 p.m. to 5:00 p.m. and every September 10th, 11th and 12th. Special arrangements can be made for group tours by calling 610-525-5598. There is no charge for tours, but when on the grounds adherence

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to the International Modest Code established by Father Divine is required: no smoking, drinking, obscenity, vulgarity, profanity, undue mixing of sexes, receiving of gifts, presents, tips or bribes. Dress Code requires modesty--no shorts or sleeveless tops.

Sources: <http://en.wikipedia.org/wiki/Woodmont>
<http://www.libertynet.org/fdipmm/contact/contactx.html>

Riverbend Environmental Education Center

Location: 1950 Spring Mill Road, Gladwyne, PA

Since 1974, Riverbend Environmental Education Center has been enriching the lives of children and families through engaging environmental education. From its beginnings as a quiet nature preserve, Riverbend has evolved to a thriving center for environmental education that touches the lives of nearly 12,000 people annually. Whether it is to participate in a public program or just to wander on our trails, a visit to Riverbend offers families a quiet place to relax, unwind and observe the wonders of nature.

At Riverbend, kids can just be kids again, free to dig, touch, build, explore and discover the natural world around them. We believe a steady supply of sunshine, dirt & water are essential ingredients for healthy, happy children. And we are not alone; a growing body of evidence supports the idea that exposure to nature comprises a vital part of children's physical, emotional and mental well-being. It is our way of growing greener children for a brighter future

Riverbend and its surroundings have a rich and varied history. In the 16th and 17th century, the local residents were a band of Lenape Native Americans who were part of a loose confederation of the Algonquin Nation. Known as the Unami Tribe, these Lenape established their "summer station" in the curve of the Schuylkill River that gives Riverbend its namesake. The last written record of Native American activity in the vicinity of Riverbend was an encampment at Black Rocks in 1740.

From its inclusion in the 1682 William Penn land grant of 5,000 acres to British settler Joshua Holland, Riverbend was eventually transferred to Welsh Quaker Morris Llewellyn, Sr., a farmer with huge land holdings called "Indian Fields." Bryn Mawr, Gladwyne, and Bala Cynwyd reflect this period of Welsh influence. At this time, Spring Mill Road was said to lead to a ford and later to a ferry crossing the Schuylkill River and eventually joining up with Spring Mill Road on the Conshohocken side. Although remnants of the old road are still visible on Riverbend's property, access to the river was cut off by the 1950's construction of the Schuylkill Expressway.

Many visitors are curious about the lovely dry masonry stone walls that intersect both Riverbend and surrounding property. To discover their origins, one must look back to the Civil War era in 1864, when the United States army leased land from local farmers to establish "Camp Discharge." This camp, whose sentry house still stands at the entrance of Sentry Lane, housed soldiers released from southern prison camps before they returned to civilian life. One way they employed their time was in the construction of the many stone walls around Riverbend.

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In the post-Civil War era of America's Industrial Revolution, the land surrounding Riverbend caught the eye of Conshohocken's leading steel and iron manufacturer, Alan Wood Jr., whose 300 acres of "Woodmont Farms" came to include the fantastic Woodmont Estate. In 1884, Alan Wood, Jr.'s younger brother, Howard, acquired the adjacent 92-acre farm including "Camp Discharge," gradually amassing almost 400 acres, including the future site of Riverbend.

In 1974, Howard's grandchildren, Alice Grey Wood Read, Phebe Wood Conger and Howard Wood III, in their desire to preserve some of the open space that defined so much of their family history, set aside 26 acres in memory of their parents. Four acres was eventually added, thus creating the 30-acre preserve we now call Riverbend.

Sources: <http://www.riverbendec.org/about/>

Schuylkill Expressway

Location: From the eastern terminus of Pennsylvania Turnpike to the Walt Whitman Bridge

Construction of the first Schuylkill Expressway section between Valley Forge and the Philadelphia city line began in 1949 and opened on September 1, 1954. The design for the Expressway had its basis in early 1930's parkway proposals modified in the late 1940s. As eventually conceived, the Expressway was to offer controlled access, stone-arch bridges, timber light posts and natural vegetation along four-lane highways, but unlike the parkway design the expressway design was to permit access to trucks and buses as well as cars.

In 1948, when the Pennsylvania Turnpike (I-76) was being extended east from Harrisburg to Valley Forge, officials at the Pennsylvania Department of Highways and the Pennsylvania Turnpike Commission considered two extensions. The second extension, a freeway that would eventually become the Schuylkill Expressway, was to extend southeast toward Center City Philadelphia.

As originally planned in 1948, the Schuylkill Expressway was to extend for 20 miles from the Pennsylvania Turnpike-Valley Forge interchange southeast to the University Avenue bridge over the Schuylkill River. Later, the route was extended for five miles to the proposed Walt Whitman Bridge. Part of this newly extended route was to utilize an alignment along Vare Avenue and South 26th Street.

As the expressway was completed through Philadelphia in the late 1950's, Mayor Richardson Dilworth served as the main dignitary at the ribbon-cutting ceremonies.



Schuylkill Expressway in Lower Merion Twp. in 1961

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After leaving the mayor's office in 1962, Dilworth called the road "the worst mistake in my administration." His lament was not for the inadequacies of the expressway, but rather for its effects on the once-tranquil Fairmount Park.

While the Federal Bureau of Public Roads included the Schuylkill Expressway in the preliminary Interstate highway system, the expressway did not officially become part of the Interstate highway system until 1956.

The construction of the Schuylkill Expressway is considered by many to be the most radical change in study corridor's history. This King of Prussia to Philadelphia link facilitated a building boom, with new residential developments quickly followed by commercial developments.

Sources: [UMT-Bike Historic Structures Study by Lori Salganicoff](#)

Historic Railroad Bridges

Location: Mill Creek Road at River Road and Hollow Road at River Road

Flat Rock Dam

Location:

The construction of the Flat Rock Dam near Manayunk involved the excavation of a two mile canal through a section of the river known as the "Dead Waters," located near Flat Rock. According to Charles V. Hagner it was: "...a kind of natural canal extending from above Flat Rock bridge down to nearly where the main road cross the canal. In high freshets the water flowed into it from above, but generally it was a kind of pool or swamp into which ran the little streams from the hills..." (Charles V. Hagner, *Early History of the Falls of the Schuylkill*, Philadelphia, 1869)



View from Mt. Ararat, showing Flat Rock Dam during construction of Schuylkill Expressway

To navigate the fall in the river at Manayunk, locks number 68 & 69 were completed as a part of the canal. Number 69, near the present day Lock Street, although minus much of its mechanism, still retains enough of its metal fittings and its basic construction to reveal its double chambered lock. The upper lock, a single chamber, remains in much the same condition and is located near the dam. The Manayunk canal and its locks opened for use in 1819, despite bouts with lack of funding and poor workmanship. Although no longer standing, toll houses were located near each

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lock to collect the fare. Later a hydro-electric generating station at the upper lock produced electricity for the Philadelphia Transit Company. Its structure and machinery remain as a ruin.

In 1951 historian J. Bennett Nolan wrote, "The present Flat Rock Dam hides the former site of dangerous Rummel Falls, a much-feared rapids whose ominous voice reverberated among the hills of Lower Merion during the spring Freshets."

Sources: [Workshop of The World - Philadelphia Website, Schuylkill Canal, Scuykill Navigation Company, 1816 by Sarah Jane Elk](http://www.workshopoftheworld.com/manayunk/canal.html)
<http://www.workshopoftheworld.com/manayunk/canal.html>
Page 155, [The Schuylkill](#) by J. Bennett Nolan, 1951, reprinted 2004, New Brunswick NJ: Rutgers University Press.

Gravers Lane Bridge

Location: over the Schuylkill at River Road and Belmont Avenue.

Pennsylvania Railroad Bridge, Schuylkill Division PRR

Location: Schuylkill River between Lower Merion and Philadelphia, PA

Blackie Railroad Bridge

Location: Schuylkill River between Lower Merion and Philadelphia, PA

Blackie Railroad Bridge to Venice Island. This bridge once carried a pedestrian walkway.

Former Pencoyd Iron Works Headquarters

Location: Penn Real Estate Group. 620 Righters Ferry Road, Bala Cynwyd, PA

History of the Pencoyd Iron Works

In November of 1683, John Roberts, gentleman farmer, acquired 150 acres from William Penn as part of the Welsh Tract in present day Lower Merion Township and immediately began clearing the land for farming. Roberts named his property Pencoyd (meaning "head of the woods") after his family's ancestral home in Wales.

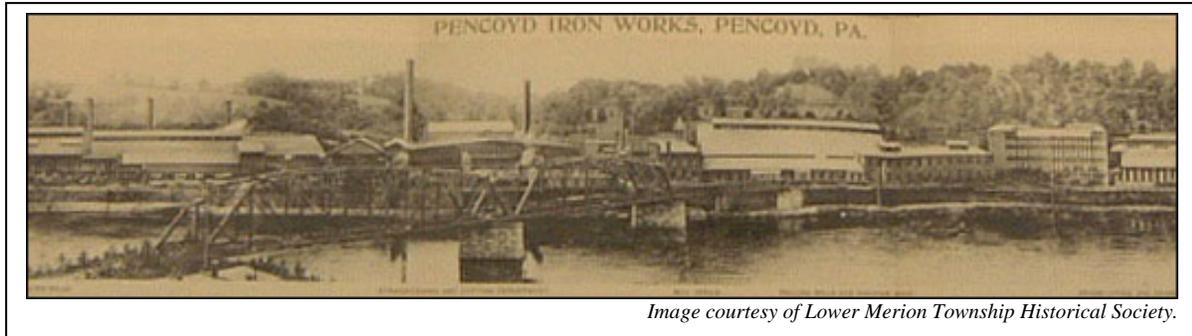


Image courtesy of Lower Merion Township Historical Society.

The Pencoyd Iron Works was the creation of two Roberts' heirs, Algernon and Percival, who had entered the hardware business in Philadelphia. The pair quickly recognized the opportunities that the Philadelphia and Reading Railroad provided for their property situated along the banks of the Schuylkill River. In 1852, working with family capital, they began the construction of a specialty foundry under the name A & P Roberts company, joining an array of specialty iron works along the Schuylkill - uniquely situated to take advantage of the railroad's transportation of raw materials and finished goods.

A & P Roberts Company's focus at Pencoyd Iron Works quickly shifted to the manufacture and shaping of soft wrought iron specifically suited for railroad axles and bridge parts. In 1859, the Pencoyd directors added 'Bridge Company' to the roster of activities and hired engineers to provide technical support for the design and erection of wrought and cast-iron bridges. With the industrial expansion in the late 1800's, Pencoyd Iron Works became a leading bridge producer, constructing hundreds of bridges across North America, including the famous Upper Steel Arch Bridge across Niagara Falls as well as sending a pre-fabricated bridge across the Atlantic to Africa at the request of the British military.

By 1900, Pencoyd Iron Works had attained an international reputation for the quality of their iron and steel, and as a result, was ultimately acquired by JP Morgan's US Steel Corporation in 1902. The original founders, Algernon and Percival, were retained as members of the Board of US Steel.

The former Pencoyd Iron Works ultimately succumbed to the Great Depression and was later divested amongst several industrial users in the 1940's and has continued with industrial uses until 2000 when the Penn Real Estate Group acquired the property.

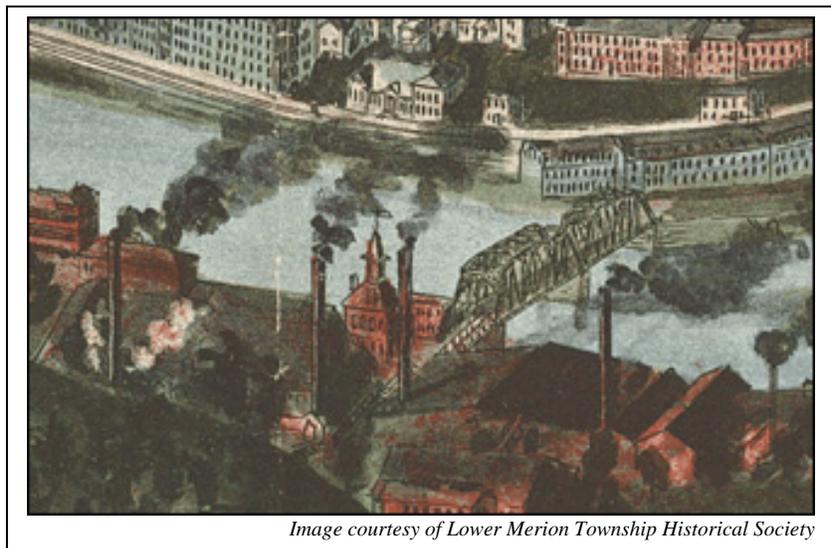


Image courtesy of Lower Merion Township Historical Society

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History of the Pencoyd Iron Works Office

By 1880, Pencoyd Iron Works had developed an international reputation for its high-quality steel and iron bridgeworks and had supplied bridges and bridge parts for hundreds of projects throughout the world. Significant additions to the Pencoyd plant are reported during the early 1880's, including a new headquarters set in and amongst its industrial bridgeworks facility. As a testament to the building's and Lower Merion's industrial roots, an early Pencoyd-built bridge spans the Schuylkill River to the Manayunk Section of Philadelphia just steps from the Pencoyd Iron Works Office.

Most industrial buildings of this time were constructed by builders practiced in the construction of such structures without the aid of an architect. The Pencoyd building, however, features a number of architectural elements associated with Frank Furness. It is also during this time that Furness received numerous commissions for Roberts' family homes in Lower Merion Township. While we can not say with absolute certainty that Furness was the architect, there is more than a passing likelihood that the Pencoyd building is a minor work of his firm.

The Pencoyd building continued in service for a series of companies – including US Steel - and underwent a series of inappropriate renovations over the next 80 or so years - each designed to “modernize” the building. The final blow came in 1990 when a severe fire substantially gutted the building. The building was boarded up and abandoned. While abandoned, the building began to deteriorate rapidly. The windows rotted out; a substantial portion of the roof collapsed; masonry walls began to separate and all of the interior materials that were susceptible to water were destroyed.

When Penn Real Estate Group acquired the property, in 2000, it found the building just as it had been left following the fire ten years before – boarded up and overflowing with burnt rubble. Fortunately, from a preservationist's point of view, there were a number of elements of the building that withstood the ravages of poor stewardship; fire, water and abandonment. The original building was magnificent and featured all masonry and steel construction. Structural and functional elements doubled as design elements and finishes included glazed brick, vaulted ceilings, fireplace mantels, masonry arches, eight-foot high-arched windows, copper-capped piers at each exterior corner and remarkable brick and stone detail.

Unfortunately, however, the extraordinary brick and stone detail of the exterior had been covered in stucco during one of the buildings numerous “modernizations” and major portions of the interior masonry had been destroyed for purposes such as the installation of an enormous oil-fired hot air furnace. The windows had been “downsized” to conserve energy and the interior was a victim of various interior renovations that included drop-ceilings, paneling, wall-to-wall linoleum and carpet. Had these materials not been so flammable, then the damage to the original structure might not have been so severe. The heat from the fire was so great that bricks shattered and the steel trusses in the building's annex were twisted and distorted.

After a careful removal of the charred materials, Penn engaged several masonry restoration contractors to painstakingly remove the stucco from the exterior brickwork. After removal of the stucco, the immense job of repairing and re-pointing the original exterior brick face was

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completed. To advance the restoration of the interior masonry, a process known as baking soda blasting, the same process that was used in the restoration of Ellis Island, was utilized to remove the carbonized deposits from the surface of the original bricks. In total, seventy tons of baking soda were used in the restoration of the interior brick surfaces of the Pencoyd building. The damaged steel trusses were repaired and a new roof was installed, including the restoration of the building's original tower.

With the assistance of the Lower Merion Historical Society, Penn learned the original window fenestrations were an unusual 3 over 2 design. Custom windows – the full eight-foot height with arched tops and original 3 over 2 design – were built and installed to complete the exterior of the building.

Penn continued with infrastructure improvements; bringing water, gas, electrical and phone service to the building – some for the first time. Penn learned that the original floor of a critical stone arch culvert (that carries storm water from the water shed up-gradient along Righter's Ferry Road) had washed out. This culvert is essentially underground (at the elevation of the Schuylkill) and carries a constant stream of water from other portions of Lower Merion. Penn proceeded to replace approximately 300 feet of the culvert floor. This replacement stabilized the stone archway and served to prevent the extension of Righters Ferry Road from collapsing. The buildings driveways were paved and brick drainage inlet boxes were re-pointed and repaired improving drainage around the building.

A custom-designed interior has been put in place to showcase and highlight the finest aspects of this venerable piece of Lower Merion's industrial history. Mahogany entrance doors have been built to the original design while radiant floor heating has been added to avoid covering up any of the original features. The steel trusses, glazed brick, barrel vaulted ceilings, and original fireplaces are prominently featured (instead of being hidden) in a way that would make the Roberts family feel at home.

Sources: Penn Real Estate Group Website, The History of the Pencoyd Iron Works
http://www.pennrealestategroup.com/pencoyd_ironworks_history.htm
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