

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Kenderdine Mill Complex
other names/site number N/A

2. Location

street & number Keith Valley and Davis Grove Roads N/A not for publication
city, town Horsham N/A vicinity
state Pennsylvania code PA county Montgomery code 091 zip code 19044

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
<input checked="" type="checkbox"/> private	<input checked="" type="checkbox"/> building(s)	Contributing	Noncontributing
<input type="checkbox"/> public-local	<input type="checkbox"/> district	<u>4</u>	<u> </u> buildings
<input type="checkbox"/> public-State	<input type="checkbox"/> site	<u>1</u>	<u> </u> sites
<input type="checkbox"/> public-Federal	<input type="checkbox"/> structure	<u> </u>	<u> </u> structures
	<input type="checkbox"/> object	<u>5</u>	<u>0</u> objects
			<u> </u> Total

Name of related multiple property listing: N/A
Number of contributing resources previously listed in the National Register 0

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. See continuation sheet.
Signature of certifying official Brent D. Glass Brent D. Glass
Date 12/10/91
State or Federal agency and bureau Pennsylvania Historical & Museum Commission

In my opinion, the property meets does not meet the National Register criteria. See continuation sheet.
Signature of commenting or other official _____ Date _____
State or Federal agency and bureau _____

5. National Park Service Certification

I, hereby, certify that this property is:
 entered in the National Register. See continuation sheet.
 determined eligible for the National Register. See continuation sheet.
 determined not eligible for the National Register.
 removed from the National Register.
 other. (explain.) _____

Signature of the Keeper

Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)

INDUSTRY: manufacturing facility

DOMESTIC: single dwelling

DOMESTIC: secondary structures

Current Functions (enter categories from instructions)

DOMESTIC: single dwelling

DOMESTIC: secondary structure

7. Description

Architectural Classification

(enter categories from instructions)

COLONIAL: Postmedieval English

EARLY REPUBLICAN: Federal

Materials (enter categories from instructions)

foundation stone

walls stone

wood

roof wood shake

other _____

Describe present and historic physical appearance.

The Kenderdine Mill historic complex is centered on the intersection of Keith Valley and Davis Grove Roads in the northwest corner of Horsham Township. Buildings of the immediate complex include the original fieldstone mill building (expanded in the nineteenth century by a third story) with its attendant raceways, (see Photographs 2, 3, 4, 5, 6, 7) a handsome fieldstone mill owner's house dating from the early nineteenth century at the point of transfer to John Shay (see Photographs 10, 11), and a stable and carriage house constructed in the middle of the nineteenth century by the same family (see Photographs 8, 9). Across Keith Valley Road is an earlier, fieldstone house constructed in two phases which began as the original house of the Richard Kenderdine family, the builders of the mill (see Photograph 1). It later became the home of Richard's son Joseph, a millwright, the probable builder of the mill. These constitute the principal buildings of the Kenderdine Mill historic complex.

The mill complex was positioned in a shallow valley where two small waterways could supply a millpond and dam and millrace. In the last ten years, portions of the millrace and tailrace that came off an unnamed tributary to Park Creek and from Park Creek have been excavated in the vicinity of the mill (see Photograph 4). The depression of their course is clearly evident along the remainder of their route though it has not been excavated. These two water sources assured a sufficient head to operate the mill. The site was reached by the Horsham Road to the north between Horsham and William Keith's mansion, Graeme Park, which was opened in 1736. It was linked to the mill by a path which later became the Keith Valley Road. A generation later, the Davis Grove Road was opened on the south providing a more direct link to the site.

The central building of the group is the 34' by 47' gable roofed, rubble stone mill (see Photographs 2, 3, 4). Its rubble fieldstone walls show evidence on the gable ends of the original steeper pitch of the roof, following the fashion of late medieval designs (see Photograph 3). Slight changes in the masonry on the gable ends and the unusual barn siding of the second story indicate the construction of the second story in the nineteenth century, during the period of

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operation by the Shay family. At that time the original pitch of the roof was altered, taking the broader proportions of the Federal period. These alterations probably occurred in response to changes in mill technology and kept the building up-to-date - in function if not in appearance. Though the building was enlarged by the added story, the lower walls show no evidence of enlargement, indicating that this was a particularly ambitious building in the manner of the Wentz Mill rather than a tiny structure in the fashion of such earlier enterprises as the Rittenhouse paper mill or the Caleb Pusey Mill in Chester County. The mill remained operational by its original water power until the first years of the twentieth century and according to the history of the Kenderdine family, was among the last such structures in eastern Pennsylvania.

The mill was powered by a breast-shot millrace that turned an interior water wheel, estimated as 9' high by as much as 9' wide, at the north end of the building. Such a system, while not so picturesque as those of later mills with the exposed wheel, protected the expensive carpentry and joinery of the wheel and was typical of eighteenth and early nineteenth century construction. Massive oak hand-hewn, mortised and tenoned framing timbers and pit-sawn girders and joists carry the interior floors and support the various pieces of milling machinery. These include wooden cranes in the lower level to enable the miller to remove and resurface the grinding stone, and a sack and cask hoist which according to mill historian Steven Kindig "is the only complete, original one in wood remaining." The machinery, some of which was probably remade in the nineteenth century, survives with a remarkable degree of integrity, lacking only the water wheel and the belts to be operational (see Photographs 5, 6). Minor changes in openings and mill machinery continued through the nineteenth century, as is evidenced by the 1840s date inscribed on the fragile but surviving silk bolting (sifting) machine (see Photograph 5, at left rear).

The operations of the mill are immediately apparent from its openings and its machinery. The south gable is punctuated by centered openings beneath a projecting roofed overhang that sheltered the hoisting mechanism which raised raw materials to the upper level of the mill (see Photograph 3). At the fourth (top) level, a slack belt sack hoist raised the unmilled grain for storage. There a scouring machine cleaned the grain of superfluous material. From that level, the grain was chuted down to the third level where it was stored until it was milled. At this level survives the original wooden power transmission equipment for driving the elevator to move the grain. Chutes conduct-

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ed the grain to the second or "Stone Floor" where it was ground by the millstones. Two of the original three stones remain in place as do two stone cranes which lifted the stones when they needed to be re-dressed or sharpened. On this level is a "bolting" or flour sifting machine dating from the 1840s and an apparatus for bagging and conveying the finished product to wagons at ground level. The first level was largely occupied with the nine foot wide water wheel and the massive frame that transmitted the wheel's force down to the various hoists and milling machinery.

Predating the mill is the other ancient building of the site, the stuccoed, fieldstone Richard/Joseph Kenderdine house which stands to the east across what is now Keith Valley Road (see Photograph 1). Its easternmost portion shows the steep roof pitch of pre-Georgian design. Its massive corner fireplace and winder stair are typical of early eighteenth century plans as well. Although the stair has been replaced on the first floor, it survives on the second floor into the attic. In the basement, the timbers of that early portion of the house are hewn and pit sawn, corroborating the antiquity of the forms and the plan. The house was enlarged with a two room deep "two thirds Georgian" Federal wing in the early nineteenth century, probably at the time that the mill was sold to Shay. Federal mantels, door and window surrounds, and chair rails establish the period of the addition while the old, single room house became the hall and kitchen.

With the old mill owner's house remaining in the original Kenderdine family, the new mill-owner, John Shay, was forced to build a new house (see Photographs 10, 11). This he located on the inner corner of the property at Keith Valley and Davis Grove Road. Its proportions and details are similar to those of the addition to the Kenderdine house, suggesting that it was by the same builder and of the same general period. It is also of fieldstone construction, with its long face paralleling Davis Grove Road and its gable end facing Keith Valley Road. Though altered over time, and transformed in recent years into a modern gentleman's country residence, its major elements remain intact.

The last building of the complex marks the continuing evolution of the site. In 1858, Shay's son John, Jr. erected a fourth building between his house and the mill, which served as a stable and carriage house (see Photographs 8, 9). It's two stories were of the same warm red-tan stone, laid up in quarried blocks and containing a datestone with the Shay initials in the gable. Together the four buildings form an

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intact, early industrial complex of a sort that once was common in Montgomery County but are now rare.

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:

nationally statewide locally

Applicable National Register Criteria A B C D

Criteria Considerations (Exceptions) A B C D E F G

Areas of Significance (enter categories from instructions)

Architecture
Industry

Period of Significance

1735-c.1900

Significant Dates

1735
1858

Cultural Affiliation

N/A

Significant Person

N/A

Architect/Builder

Kenderdine, Joseph

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The Kenderdine Mill complex is a remarkably well preserved, industrial complex surviving on its original site and dating from the first years of the settlement of Pennsylvania. Its evolution over more than a century denoted the continuing agricultural heritage of south-eastern Pennsylvania. Its construction stimulated the opening of many of the roads of the region including the Horsham Road, Keith Valley Road, and Davis Grove Road which made it possible for local farmers to reach the mill. The builders, the Kenderdine family, were important in the history of their community of Horsham, helping to establish the local Quaker Meeting and its school.¹ Finally, the complex of buildings display the characteristics of the evolving architectural character of the region from the primitive Colonial buildings of the early eighteenth century towards the sophisticated Federal designs of the early nineteenth century.

There is no doubt that numerous mills operated along the banks of the streams that dotted what was originally upper Philadelphia, later Montgomery County. Few if any, however, predated the Kenderdine Mill. Richard Kenderdine had acquired 250 acres in 1713 from Samuel Carpenter, who had purchased 4300 acres from Penn.² His son, Joseph, a millwright, and thus the presumed builder of his own mill, acquired the property after the death of his father, and shortly thereafter transferred the ownership to a joint indenture with his brother Thomas. Presumably it was Joseph, who constructed the mill on the property during 1734 and 1735.³ The Kenderdine family built another mill nearby on Park Creek. It has survived though much modified as a residence. Other mills in the township included the grist and saw mills of the William Lukens family on the Pennypack Creek accessed by Saw Mill Lane and erected around 1740. Another mill built shortly before the revolution was operated in the same vicinity by John Lukens.⁴ These no longer exist making the Kenderdine Mill the last to survive in such complete condition in the township. Although numerous

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other mills exist within Montgomery County, such as the late nineteenth century Comley's Mill near Pennsburg, and Schults Mill (Douglas Township) most of the later mills were of brick and those of similar size are later in construction. With few exceptions such as the Sunrise Mill (Lower Frederick) now owned by the county, most such buildings have been converted into housing or other uses. The high degree of integrity, and the early age of the Kenderdine Mill and its early wood machinery (like that of the Sunrise Mill) makes it special.

Of the buildings in the complex, most do not have date plaques but portions of the mill and the first portion of the Joseph Kenderdine/Keller house can with certainty be given a date of 1735 because they were not listed on the 1734 tax rolls, nor were they listed as an asset in the will of Richard Kenderdine who died in 1734. However, the following year, in 1735, Richard's son Joseph petitioned the Court of Quarter Sessions for a road to provide access to the mill which "...Thomas and Joseph Kenderdine has [sic] borne at great expense at building," suggesting that it was constructed immediately after Richard Kenderdine's death in that same year.⁵

The mill is the most important feature of the complex; its lower walls are from the original eighteenth century construction. It is particularly remarkable because its perimeter walls are of a size more consistent with nineteenth century construction. It was this size however which made it efficient to add the upper stories to it rather than demolish and start again. When originally constructed, the lower level contained an internal water wheel (the only major missing piece of the milling machinery), which used wood spindles and gears to turn the millstones on the first floor. That equipment remains in good condition and was later augmented in the nineteenth century when milling was more mechanized, to provide power to lift raw materials to the upper stories, and then to move them through the various stages of production to their finished state as flour. As the above description suggests the mill is a rare survivor from the age of wooden machinery, was adapted as technology changed but is largely intact with only modest additions of iron machinery offering one of the few opportunities to see and even operate such a site in eastern Pennsylvania. Among its rarest artifacts - in addition to the wooden machinery is a "rare flour bolting (sifting) machine."⁶ This wood plank box contained a silk mesh covered cylinder that helped separate finely ground flour from bran and chaff. With little more than the reinstallation of a water wheel and belting and modest repairs, the mill could again be put into operation.

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The other structures that surround the mill provide additional evidence about the character of a mill complex. These include the original house of Joseph Kenderdine which has since been separated from the immediate property by Keith Valley Road. That house began as an early settlement type of a one room house plan but was later enlarged into a considerable residence, with an added "two-thirds Georgian wing"⁷. This apparently occurred at the time that the family sold the mill and its surrounding property to John Shay in 1810.

At the time of their purchase the Shay family must have constructed a new house across Keith Valley Road. The Shay family operated the mill during most of the nineteenth century.⁸ A datestone in the gable peak indicates that in 1858, the Shay family added the stone two-story stable that housed the various animals and wagons of the full-fledged water operated mill. The stonework, makes it likely that this building began as a part of the old cooper shop which is listed on the site in the 1776 will of Thomas Kenderdine in 1779.

Until the steam engine and the railroad altered the industrial landscape in the mid-nineteenth century, mills such as the Kenderdine-Shay group represented a site of considerable importance. This importance caused the mill to become the focus of several important roads which were constructed to make the mill accessible. The Horsham Road was opened into the general vicinity of the mill in 1736 as the result of a petition in December of the previous year by the nearby farmers and the Kenderdine family. Eight years later, in 1744, the mill was a sufficiently important destination to cause the opening Davis Grove Road which reached the mill more directly. Its relationship to the mill is evidenced by its original name of "Mill Road."⁹ Eventually the Keith Valley Road was brought in from the north, presumably after the Shays had purchased the mill.¹⁰ As the processing plant for local agriculture, the Kenderdine/Shay mill complex describe the evolving patterns of settlement of the region.

Finally, the Kenderdine Mill complex offers a superb example of the local fieldstone architecture that evolved out of English traditions and local realities of material and available technology. Both the mill and the early house show the character of the early eighteenth century, only a decade after the completion of nearby Graeme Park. The later Federal additions of the Joseph Kenderdine house and the Shay house are graced by mantels and trim which show the influence of Benjamin Latrobe's work in Philadelphia and mark the evolution of local building from craft to design.

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Notes

¹George E. Thomas and Emily T.C. Jernigan, "Horsham Meeting National Register Nomination" (Philadelphia, Clio Group, Inc., 1990).

²Charles Harper Smith, The Settlement of Horsham Township (1937, published 1975), 6-7.

³Smith, 102-104, 112-113.

⁴In addition, the mill history of Montgomery County and Horsham Township are discussed in Theodore Bean, History of Montgomery County Vol. II (Philadelphia, 1884), 880.

⁵Stephen J. Kindig, "The Kenderdine Mill," prepared for Mrs. Charles Harper Smith, 1985, p. 7. (Ronald Mintz files).

⁶Henry Glassie, "Eighteenth-Century Cultural Process in Delaware Valley Folk Building," Winterthur Portfolio 7 (1972), 42.

⁷The early Kenderdine House deeds have been gathered in Smith, 54-58. See also T. S. Kenderdine, The Kenderdines of America (Doylestown, 1901). This summarizes wills and deeds for the families; see especially pp. 191-207.

⁸The early Mill Road name is discussed in Kenderdine, 206.

⁹The highway history of the Horsham Township is summarized in Smith, 8-12 and Bean, Vol. I, 453-7.

9. Major Bibliographical References

- Bean, Theodore, ed. History of Montgomery County. II volumes. Philadelphia, 1884, vol. II, pp. 874-5.
- Buck, William. "History of Montgomery County." In J. D. Scott, Combination Atlas Map of Montgomery County. Philadelphia, 1877, pp. 13-14., pl. 88.
- Glassie, Henry. "Eighteenth-Century Cultural Process in Delaware Valley Folk Building." Winterthur Portfolio 7 (1972): 29-57.
- Hopkins, G. M. Atlas of Montgomery County. Philadelphia, 1871, pl. 11.

See continuation sheet

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

Primary location of additional data:

- State historic preservation office
- Other State agency
- Federal agency
- Local government
- University
- Other

Specify repository: _____

10. Geographical Data

Acreage of property 1 acre

UTM References

A

1	8	4	8	5	4	9	0	4	4	5	0	6	4	0
Zone		Easting				Northing								

C

1	8	4	8	5	4	8	0	4	4	5	0	8	3	0
Zone		Easting				Northing								

B

1	8	4	8	5	3	6	0	4	4	5	0	7	7	0
Zone		Easting				Northing								

D

1	8	4	8	5	5	6	0	4	4	5	0	6	9	0
Zone		Easting				Northing								

See continuation sheet

Verbal Boundary Description

Beginning at a point 50' east of Keith Valley Road on Davis Grove Road, then extending northwest along Davis Grove Road 150' to a point, then extending northeast 250' to a point, then southeast to Keith Valley Road, then southwest 150' to a point, then southeast 50' to a point, then southwest 50' to the point of origin.

See continuation sheet

Boundary Justification

This is the immediate site of the Kenderdine Mill and Houses, and appurtenant structures, containing land originally acquired by the Kenderdine family from Samuel Carpenter.

See continuation sheet

11. Form Prepared By

name/title George E. Thomas

organization Clio Group, Inc. date 3-12-91, Revised 8-9-91

street & number 3512 Lancaster Avenue telephone (215) 386-6276

city or town Philadelphia state PA zip code 19104

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Bibliography: (continued)

Kenderdine, T. S. The Kenderdines of America. Doylestown, 1901.

Kindig, Stephen J. "The Kenderdine Mill." Prepared for Mrs. Charles Harper Smith, 1985, p. 7. (Ronald Mintz files).

Montgomery County, Inventory of Historic and Cultural Resources. Norristown, 1975.

Montgomery County Deeds.

Smith, J. L. Property Atlas of Montgomery County. 1893, pl. 14-15.

Smith, Charles Harper. The Settlement of Horsham Township. 1937. Published, 1975.

Thomas, George E. and Emily T.C. Jernigan. "Horsham Meeting National Register Nomination." Philadelphia, Clio Group, Inc. 1990.

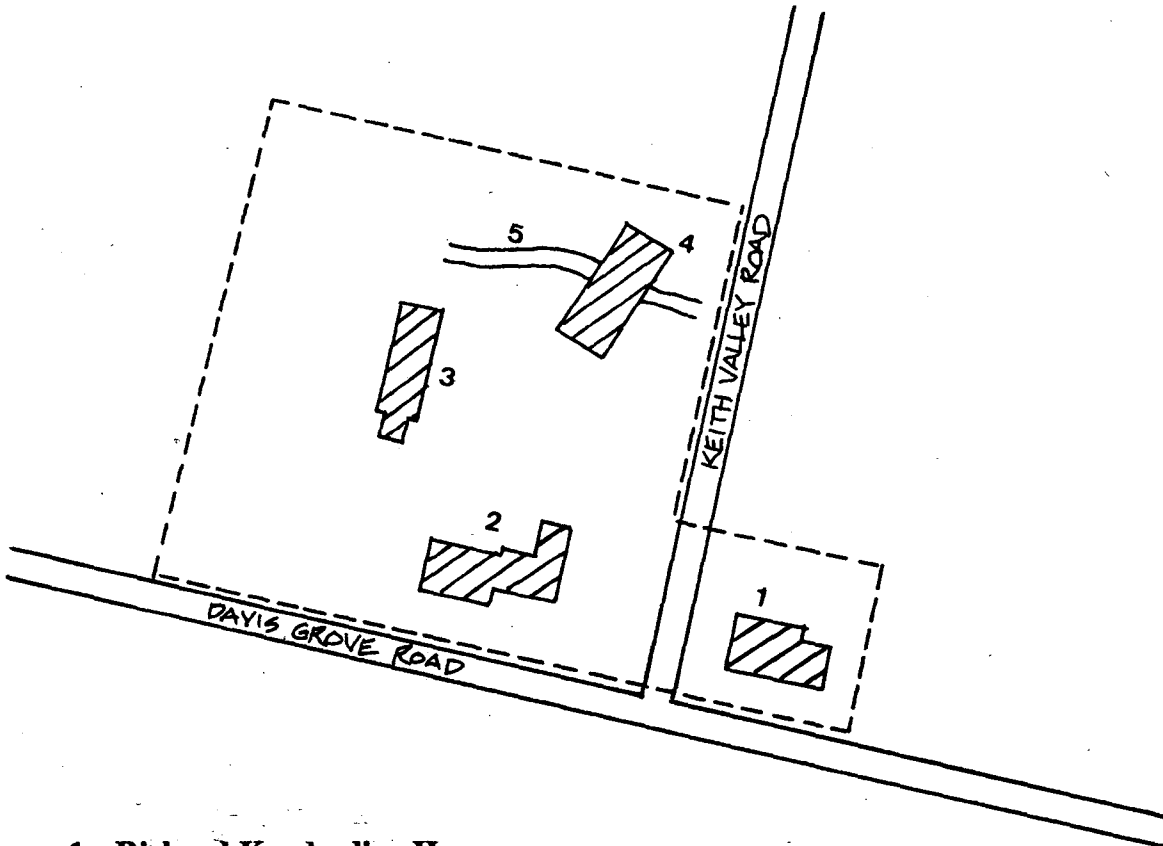
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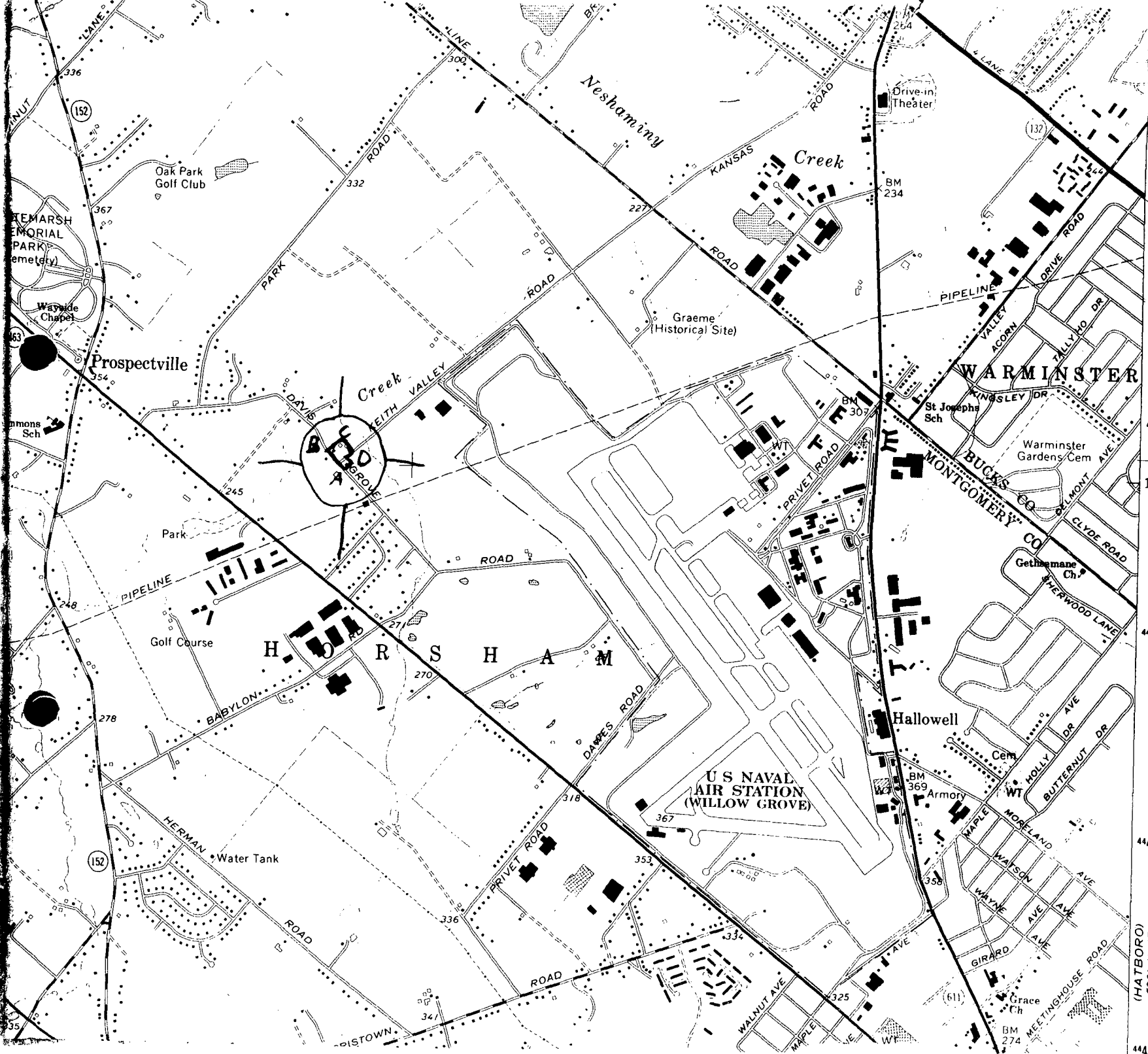
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SITE PLAN



- 1. Richard Kenderdine House
- 2. John Shay House
- 3. John Shay Jr. Carriage House
- 4. Kenderdine Mill
- 5. Mill Race





4453
 WARMINSTER (PO) 1.9 MI.
 4452
 4451
 12'3
 4450
 4449
 5964 II NE
 (HATBORO)
 4448

*Kendra Mill
 Montgomery County
 Amber Road
 Zone 10*

485490 147
 485300 147
 475470 104
 + 8550