SCARLETS MILL BRIDGE
(Horseshoe Trail Bridge)
Philadelphia and Reading Railroad
Spanning former Reading Railroad
Scarlets Mill
Berks County
Pennsylvania

HAER No. PA-210

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
P.O. Box 37127
Washington, D.C. 20013-7127

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HISTORIC AMERICAN ENGINEERING RECORD

SCARLETS MILL BRIDGE
(Horseshoe Trail Bridge)
Philadelphia & Reading Railroad

HAER No. PA-210

Location:	Carries Horseshoe Trail over abandoned Conrail right-of-way (former Reading Railroad), Scarlets Mill, Robeson Township, Berks County, Pennsylvania UTM:18.428230.4452300 Quad: Elverson, PA
Date of Construction:	1881
Designer:	John L. Foreman
Fabricator/Erector:	Philadelphia and Reading Railroad
Present Owner:	Unassigned[1]
Present Use:	Recreational horse and hiking trail.
Significance:	The Scarlets Mill Bridge is a cast- and wrought-iron Pratt-type truss with a rolled upper chord arched in the form of an ellipse, one of many built in the 1870s and 1880s for the Philadelphia and Reading Railroad. It is unusual in its use of the elliptical form and in its late use of cast iron for principal structural members. It is one of only two of these "overhead bowstring bridges" known to survive.
Project Information:	Documentation of the Scarlets Mill Bridge was prepared by the Historic American Engineering Record (HAER), National Park Service, during the summer of 1991, as part of the Cast- and Wrought-Iron Bridge Recording Project, sponsored by the West Virginia Institute for the History of Technology and Industrial Archeology, West Virginia University. This report was written by William P. Chamberlin, PE.

I. DESCRIPTION OF THE BRIDGE

A. The Site

The subject of this documentation is a single-span bridge that carries Horseshoe Trail, a horse and hiking trail, over an unused right-of-way at milepost 58.94 of Conrail's Wilmington and Northern Branch railroad, Robeson Township, Berks County, Pennsylvania. Robeson Township is located southeast of Reading in the southern portion of Berks County. It is bounded on the north by the Schuylkill River and the Borough of Birdsboro and, with the exception of a small shared boundary with Chester County on its southeastern flank, by the Townships of Union, Caernarvon, Brecknock and Cumru. The area is predominantly rural, characterized by dispersed farms, small villages and hamlets, the nearest of which is Scarlets Mill, located on State Route 82, 1-1/4 miles northwest of the bridge.[2]

The Horseshoe Trail, a 120-mile-long horseback riding and hiking trail, was established in 1935 to connect Valley Forge in Chester County with the Appalachian Trail at Manada Gap, a saddle in the Kittatinny Mountains near Harrisburg.[3] In Robeson Township, it crosses Conrail right-of-way at a shallow cut through a tongue of Long Mountain, southeast of Scarlets Mill. At this point, the trail connects an unimproved private road leading northeastward from State Route 82 with Mullen Hollow Road, approximately 0.4 mile northeast of the bridge.[4] The railroad right-of-way, known by Conrail as the Joanna Secondary Track (formerly the Reading Company's Coatesville Secondary Track), was removed in 1991, and the right-of-way barricaded at Scarlets Mill. The only buildings in the immediate vicinity of the bridge are a nineteenth-century stone farmhouse and several outbuildings, presently owned and occupied by Alice M. Fultz.

B. The Structure

The Scarlets Mill Bridge is a single-span truss, without overhead bracing, seated on plank-formed concrete abutments founded on bedrock. The approaches are rammed fill contained by reinforced concrete wing walls. The bridge's cast- and wrought-iron superstructure is 36' 3" in overall length with a clear span of 34' 8-1/4", measured from the inside faces of the bearing shoes. Its two trusses, skewed by approximately 32 degrees, are divided into ten panels each that increase in length from the abutments to mid-span. The trusses are 12' 10" apart center-to-center and 6' 3/4" high at mid-span, measured from the top of the upper chord to the bottom of the lower. The bridge supports a wooden plank deck with an 11' 2" clear roadway between timber curbs, approximately 21' above the Conrail roadbed.

The most distinctive features of the Scarlets Mill Bridge are the arched upper chords of its trusses, the use of cast iron, particularly in the cruciform vertical posts and their connections, and in the decorative "knees" that join the upper chords to the shoes and provide a pleasing visual transition between the two. The upper chord is a rolled 8" I-beam composed of three sections, spliced at the 3rd and 7th upper panel points, and arched to approximate an elliptical curve.[5] The upper chord intersects the cast iron shoes at right angles where it is bolted to the knee which, in turn, is bolted to the shoe. Embossing on the web identifies the beams' manufacturer as:

PHOENIX IRON CO.
PHILADA PA.

The cruciform posts taper gracefully from their mid- point to their ends. Their connection with the upper chord is made by a friction fit into a cast "cylinder and sleeve rocker" that permits a snug fit to be made during assembly with the underside of the upper chord. A friction fit is also made with the lower cord connection. This latter connection, also cast, provides for both the pinning of the lower chord bars and attachment of the wrought iron diagonals. Different letters are used to identify replicable castings for the center and lateral-post chord connections.

The bridge's wooden planked deck is supported by five timber stringers that rest on railroad-rail deck beams that, in turn, rest unattached on the lower chords of the truss, approximately at the panel points. The deck beams that correspond to the second and eighth lower-panel points of each truss extend laterally beyond the truss lines to support battered braces bolted to the upper chord and connected to the floor beams by U-bolts.

A cast-iron handrail, consisting of an endpost mounted on the shoe plus three horizontal pipe rails with upper chord connections, is placed at each end of both of the trusses. The replicable parts, excluding the rails, are identified by embossed numbers (1, 2, 3, and 7). Each end post also includes the following identification at the level of the top rail, just below a ball finial:

P & R
1881

The truss, an uncommon form, is probably best described as Pratt-type with curved upper chord. Pratt, as commonly used, describes a truss in which the top and bottom chords are mutually parallel,

the diagonals are in tension and the verticals (except for those adjacent to the end posts) are in compression. Except for its curved upper chord, these conditions are generally met in the Scarlets Mill Bridge. The exceptions are in the end panels: 1) where a strut has been added, presumably to counter bending in the upper chord at this point; and 2) where the adjacent vertical has been designed for compression, either to offset the load in the strut, to provide consistency with the appearance of the other posts, or for both reasons.

II. HISTORY OF THE BRIDGE

A. Design and Construction

The builder of the Scarlets Mill Bridge is clearly identified by the information cast into the bridge's handrail end posts as the Philadelphia and Reading Railroad Company (P & R), and the construction date as 1881. Unfortunately, surviving engineering records of the P & R and its corporate successor, the Reading Company, are scant and records of the Horse Shoe Trail Club are non-existent.[6] Thus, much of the bridge's history is speculative, based on inferences drawn from collateral sources. What has been learned is that the superstructure of the Scarlets Mill Bridge was probably built in the Pottstown shops of the P & R for use as an overhead crossing, possibly at a site on the East Penn Branch, just west of Reading, and probably moved to its present location between 1907 and 1935.

The Philadelphia and Reading originated for the specific purpose of providing low cost transportation from the Schuylkill and Mahanoy anthracite coal fields in eastern Pennsylvania to Philadelphia. Incorporated in 1833 and opened in 1842, the P & R remained as a corporate identity until January of 1924 when it was restructured, under court order, as the Reading Company. In 1976, along with several other northeastern carriers, it was reorganized under the Regional Rail Reorganization Act into Conrail.[7]

The Reading's (Conrail's) Wilmington and Northern Branch began operation as an independent line, the Wilmington and Reading Railroad, in 1874. It was formed through consolidation and merger of three smaller companies to provide a line between Wilmington and Reading. In 1877, it was reorganized as the Wilmington and Northern Railroad Company and in 1898 was absorbed into the P & R.[8]

As with many of the larger eastern railroads, the P & R had a tradition of engineering many, if not all, of its own bridges.[9]

From surviving correspondence of the P & R's Chief Engineer, W. Lorenz, it is apparent that at least two bridge types, one referred to as "Foreman's bridge" and the other as an "iron bowstring bridge," were being fabricated and erected during the 1870s and early 1880s by the railroad's maintenance-of-way shop at Pottstown, and that this work was the responsibility of its Master Carpenter, John L. Foreman.[10]

Hired by the railroad in 1845, Foreman was (during this period) in the middle of a 58-year career with the P & R that would include positions as common carpenter, carpenter "boss," Master Carpenter, Master Bridge Builder and Superintendent of Buildings and Bridges before his retirement in 1903.[11] His association with bridge building probably evolved naturally from the early application of his carpentry skills to the construction and repair of the line's timber bridges, and continued into the "era of iron" after the Civil War as his broadening responsibilities paralleled the increasing use of iron as a structural material.[12]

In 1868, Foreman was granted a U.S. patent for a timber truss railroad bridge built without vertical interior posts or rods, though incorporating diagonal iron tie rods.[13] This is believed to be the bridge referred to above as "Foreman's bridge", and elsewhere as "Foreman's truss." Apparently, a relatively large number of these bridges were erected by the P & R.[14] The last known survivor, built in 1884, carried Charlotte Street over the company's main line in Pottstown until March 1969.[15]

Some of Foreman's patented truss bridges also were built entirely of iron.[16] These are of interest here because some of their details are replicated in the iron overhead bridges. For instance, the diagonals that replaced those of its timber counterpart were cast in the same tapered cruciform pattern seen in the bridge at Scarlets Mill. Similarly, the lower chord connections, in the timber version cast-iron "sockets" redesigned to accommodate iron chords and diagonals, for which Foreman was granted a second patent in 1870, are also seen (appropriately modified) in the bridge at Scarlets Mill.[17] This transfer of important technical detail from one bridge associated with Foreman, by virtue of two patents in his name, to the bowstring bridge, argues in favor of Foreman being the designer of the second bridge as well.

While Foreman's truss was used primarily, possibly exclusively, to carry rolling stock, the "bowstring" truss was used only for overhead bridges, that is, to carry pedestrian and vehicular traffic over trackage, or over canals that the P & R operated.[18] Compared to Foreman's truss, the overhead bridges were lightly constructed and easily transported, befitting their intended

use.[19] It is likely that its cruciform posts plus other cast elements (post connections, splice plates, rail details and shoes) were founded at the railroad's Pottstown shop, and that the wrought iron from which the upper chord and diagonal rods were fabricated was obtained from the Phoenix Iron Company in nearby Phoenixville.

Bowstring trusses of the period typically employed an upper chord that conformed either to a circular or a parabolic curve from which regularly spaced verticals in tension supported the deck. The elliptical form used in the P & R's overhead bridges was apparently considered to be a special case of bowstring truss and responded to the railroad's need for an economical iron overhead bridge.[20] The term "bowstring," in fact, seems to have been the preferred characterization for these bridges among the railroad's engineering staff even though, as discussed above, they probably functioned more as Pratt trusses than as bowstrings.[21]

In 1871, the following rationale was given for the elliptical shape of the upper chord:

> "The Elliptical form has been induced, partly by a view to aesthetic effect, and partly because it has been found particularly suited to the arrangement of web employed. Much care has been expended in perfecting the detail of this bridge, and it is believed to be well suited to the purpose for which it is intended."[22]

Thus, while the elliptical form in itself offered a pleasing profile, unlike the bowstring it also enabled the diagonals to be arranged at a nearly uniform inclination to the vertical with a visually imperceptible diminution of panel width from the center of the truss to its ends. This was both pleasing in appearance and structurally efficient. In their general profile, these bridges closely resemble one patented the previous year (1870) by Charles H. Parker of Boston, 1870.[23]

The number of these small bridges built by the P & R is unknown. However, an undated inventory, now in a private collection, suggests that the number may have approached forty over the main and branch lines of the railroad alone. Two of these, one located on the East Penn Branch, east of Emaus Station (described as an "Iron Foreman's Truss Overhead Bridge"), and one on the Lebanon Valley Branch, 1/2 mile west of the Schuylkill River (described similarly as a "Foreman's Iron Truss Overhead Bridge"), conform within inches to the truss length and height dimensions of the Scarlets Mill Bridge. The former was located

approximately 10 miles from Scarlets Mill and the latter, approximately 30 miles.[24]

While none of Foreman's truss bridges have survived, three of his iron overhead bridges have. In addition to the one near Scarlets Mill, a 58' long (14-panel), single span (now abandoned) carries Tank Farm Road over a Conrail line near Macungie, Lehigh County, Pennsylvania.[25] Another span, of approximately 80' in length encompassing 17 panels, carries a footpath across the gorge at Watkins Glen State Park, Schuyler County, New York. Known locally as "Suspension Bridge", this latter span is believed to date from the development of the Glen as a private resort between 1869 and 1874, though no date appears on the bridge itself.[26] Except for the absence of date and builder's identification, the trusses and handrails of the Tank Farm Road Bridge resemble the Scarlets Mill bridge in all significant details. In contrast, the interior posts of the Watkins Glen Bridge are made from 2" diameter cast-iron pipe rather than the cast cruciform section seen in the other two bridges. The trusses of both of these other bridges are braced laterally in the same manner as the Scarlets Mill Bridge.

John Foreman died in Pottstown in 1915, approximately 20 miles south of his birthplace in Berks County's Maxatawny Township.[27]

B. Relocation to Scarlets Mill

That the Scarlets Mill Bridge was originally located at another site is clear. The most compelling supporting argument is that the Wilmington and Northern line was not even a part of the P & R system until seventeen years after the bridge was built. Moreover, though reconstruction is a possibility, concrete abutments are typically a twentieth- century treatment. Finally, the use of railroad rails for deck beams and their casual placement and attachment to the lower chord is grossly inconsistent with anything seen in early photographs of these bridges.

The Horseshoe Trail Club owns no right-of-way, but uses (by agreement) both private and public ways; it is likely, therefore, that location of the bridge at the present site predates establishment of the trail as a recreational facility. In fact, among some familiar with the crossing, there is a tradition that the bridge was in place to facilitate movement of farm equipment from one side of the track to the other before the trail was established.[28] No crossing is shown on the 1907 USGS base map for the area, the latest pre-1935 mapping that could be found.[29] Thus, the best estimate for the relocation is before 1935, but after 1907.

C. Alterations

With the exception of welding repairs made in 1961 to several of its lower chord castings, the essential character of the Scarlets Mill Bridge, conveyed by its trusses, appears to be unaltered.[30] Details of the bracing that supports the trusses laterally from the extended floor beams appear in drawings and early photographs of other bridges of this type,[31] and may have been original, though the appearance of this same bracing detail on at least one bridge known to have been built considerably earlier suggests that the technique was also used to stiffen existing trusses, probably in conjunction with replacing the floor system.[32]

The floor system of the Scarlets Mill Bridge has almost certainly been altered and the deck narrowed. Judging again from early photographs, it is likely that the original floor consisted of longitudinal planks nailed to heavy timber floor beams supported at a uniform spacing on the lower chord, two per panel.[33] The present system of railroad rails and timber stringers probably dates from when the bridge was moved from its former location. The trusses would likely have been separated from the floor at that time and the floor narrowed to more closely approximate the width of the Horseshoe Trail. The original abutments were probably stone rather than the plank-formed concrete seen at the present site.

ENDNOTES

1. Generally, the properties of the Reading Company, corporate successor to the Philadelphia and Reading Railroad Company, were acquired by Conrail in 1976 during the merger that reorganized the northeastern railroads into one system. However, except for operating rights-of-way, Conrail has disclaimed ownership of or maintenance responsibility for the properties of its predecessor companies, unless otherwise decreed by law or order. Thus, ownership of such properties in Pennsylvania, including the Scarlets Mill Bridge, is assigned by the Pennsylvania Public Utilities Commission (PUC) on a case-by-case basis, typically when an issue arises in which ownership needs to be resolved. No record was found of the PUC having ordered assignment of ownership of the Scarlets Mill Bridge (personal communication, David Wilhelm, Pennsylvania Public Utilities Commission).

2. Though identified on highway touring maps of Pennsylvania, as well as the current USGS Quadrangle map, as Scarlets Mill, the community is referred to locally as White Bear.

3. The Horse-Shoe Trail. Second Edition, Philadelphia Unit of the Federal Writer's Project, Works Progress Administration, William Penn Association, Philadelphia, 1938. Also, Spieler, Gerhard G. "Youth Hosteling in Berks and Lancaster". The Historical Review of Berks County, Vol. XIX, No. 3, April-June 1954, pp. 66-69.

4. USGS 7.5 minute series topographic map, Elverson Quadrangle, Pennsylvania, 1956, photorevised 1969 and 1974.

5. Phoenix Iron Company. Useful Information for Architects, Engineers and Workers in Wrought Iron. Phoenixville, Pennsylvania, ca. 1880.

6. The largest public collections of Philadelphia and Reading Company Records are archived at the Hagley Museum and Library, Wilmington, Delaware (Accession 1520) and the National Museum of American History, Washington, D.C. (Collection No. 208).

7. "History of the Reading System," The Reading Company Archive. Inventory of Accession 1520, Hagley Museum and Library, Wilmington, Delaware, 1986, pp. iii- xxx.

8. Holton, James L. The Reading Railroad: History of a Coal Age Empire, Vol. I: The Nineteenth Century. Garrigues House Publishers, Laury's Station, Pennsylvania, 1989. Also, Allen, James, Jr. "A History of the Wilmington and Reading Railroad,"

TMs, Hagley Museum and Library, Wilmington, Delaware, 1975.

9. Richard B. Osborne, the Reading's Chief Engineer from 1842 to 1845, is credited with introducing the first all-iron railway bridge in America, one truss of which has been preserved and is on display at the Smithsonian Institution's National Museum of American History in Washington, D.C. An account of Osborne's achievement is given in Emory L. Kemp and Richard K. Anderson, Jr.'s "The Reading-Halls Station Bridge", IA, Vol. 13, No.1, 1987 (pp. 17-40).

10. Lorenz, W., Chief Engineer. Outgoing internal correspondence, Philadelphia & Reading Railroad Company Records, 1863-1936, Collection No. 208, Boxes 27-29, National Museum of American History, Archives Center, Washington (to John L. Foreman, M. C. Pottstown; Aug. 28, 1972, May 29, 1878, Aug. 12, 1878, Oct. 23, 1878, Sep. 15, 1880, May 10, 1881, Aug. 24, 1881 and July 1, 1882). Boxes containing the Lorenz letter files were searched only for letters to Foreman that related to bridge building activities between May 14, 1872, when the file begins, and July 12, 1882, the closing date of the last box examined.

11. "John Foreman Dies at 91 Years of Age," The Pilot, The Reading Company, Reading Terminal, Philadelphia, February 1915, pp. 37-38; cf., obituaries in the Pottstown Daily News, and the Pottstown Daily Ledger, January 8, 1915. The newspaper obituaries describe his position at retirement as Bridge Inspector rather than Superintendent of Buildings and Bridges.

12. One of Foreman's obituary writers refers to Master Carpenter as a position that "he relinquished to become Master Bridge Builder," suggesting that his position may have been retitled to reflect the changing nature of his responsibilities, as iron began to supplant timber as a structural material for bridges.

13. Letters Patent No. 78,797, June 9, 1868.

14. Biltz, F. W., Chief Engineer, Reading Company, to Edward M. Kutsch, March 25, 1957; letter in the Edward M. Kutsch collection.

15. Ibid.; also personal communication, Edward M. Kutsch, August 6, 1991. Two photographs of this bridge, taken in 1956, and a set of line drawings exist in the Edward M. Kutsch collection.

16. Two photographs, dated January 1957, from the Edward M. Kutsch collection (n. 15, above) show an iron Foreman's Truss Bridge over the Norristown Canal at the Continental Diamond Fiber Company, Bridgeport, Pennsylvania.

17. Letters Patent No. 104,295, June 14, 1870. During his tenure with the P & R, Foreman was also granted patents for: a railway car (68,619, Sept. 10, 1867), a device for moving cars (102,388, April 26, 1870), apparatus for moving and discharging cargos of coal (146,242, June 6, 1874) and apparatus for loading and unloading coal, etc. (151,868, June 9, 1874).

18. In 1870, the Philadelphia and Reading Railroad Company acquired operational control of its predecessor and principal competition, the Schuylkill Navigation Company (SNC), which operated a 108-mile-long slack water canal between Mill Creek in the northern Schuylkill coal field and Philadelphia ("History," pp.iv-ix; n. 8, above). Construction drawings for two of Foreman's overhead iron bowstring bridges over the Schuylkill Canal, one in Berks County at Gibraltar (52'-1" overall) and the other in Montgomery County at Pottstown Landing (44'-1" overall), were copied from SNC files in 1971 by Edward Kutsch and exist in his personal collection.

19. Lorenz (n. 10, above); August 12, 1878 and Oct. 23, 1878.

20. The rationale for these bridges is given in a 40 page prospectus published in 1871 by the Michigan Bridge and Construction Co., Detroit, by which they offered to manufacture iron, wooden, combination and suspension bridges, trestles, turn tables, water stations, etc; and to engineer and construct railroads and other public works. Among the ten bridge types promoted were the timber Foreman's truss (illustrated and identified by name) and the iron elliptical-chord truss discussed here, unmistakably the identical iron-truss bridge manufactured by the P & R under Foreman's supervision. Other textural references reveal a familiarity with the coal carrying railroads of Pennsylvania in general, and the P & R in particular. Absence of any record of this company or its principals in contemporaneous Detroit directories or in local archives suggests that it was either short lived or that it failed altogether to enter the bridge market. It is of interest here because of the design considerations that it reveals plus its curious, but as yet unexplained, relationship to the bridge building activities of John Foreman.

21. Lorenz (n. 10, above); August 12, 1878, October 23, 1878 and July 1, 1882.

22. Michigan Bridge and Construction Company (n. 20, above), p. 16.

23. Letters Patent No. 100,185, February 22, 1870.

24. Record of Bridges. Undated manuscript ledger, Philadelphia and Reading Railroad Company, collection of T. A. Xaras.

25. See "Tank Farm Road Bridge," HAER File No. PA-123. Arrangements have just been completed for this bridge to be acquired by the Hugh More Historical Park and Museums, Inc., Easton, Pennsylvania.

26. Reed, Roger G. "Suspension Bridge - Watkins Glen State "Park, Building-Structure Inventory Form, Division of Historic Preservation, New York State Parks and Recreation, Albany, New York, April 1, 1983. Local tradition is that the iron bridge replaced one of timber at the same site (Akins, Peter, "Report of Gorge Tour, Watkins Glen State Park," TMs, July 1970) and a wood block cut of the gorge showing the bridge. Henry Kollock, The State of New York (New York, 1882), puts it at its present location at least as early as 1882. However, details of the bridge itself, particularly match marks at the end of each of the rolled I-beam segments that form the upper chords, suggest that it may have been moved from another site.

27. The Pilot (n. 11, above).

28. Alice M. Fultz and Charles H. Wolfinger, personal communications to author.

29. USGS 15 minute series topographic map, Honeybrook Quadrangle, Pennsylvania, 1907.

30. Repairs to Bridge No. 58/94, File No. 1, Series 1960- 1965, Trans. Vol. No. TV378(60), Reading Company, Philadelphia, Pennsylvania, October 12, 1961. Typed manuscript file of the Chief Engineer, Design and Construction, provided by Mark W. Sawyer, Senior Civil Engineer, Design & Construction, Conrail.

31. See: construction drawings (n. 18, above); an undated photograph of a road bridge over the Schuylkill Canal at Mohrsville, Pennsylvania; and 1948 photographs of two road bridges over the Schuylkill Canal at Monocacy, Pennsylvania; all from the Edward M. Kutsch collection.

32. The detail was recorded on the ca. 1846 Reading-Halls Station Bridge (HAER No. PA-55; also, Kemp and Anderson (n. 9, above, Figs. 15 and 28) built 35 years before the bridge at Scarlets Mill.

33. Prospectus (n. 20, above) and undated photograph (n. 31, above).

RESOURCES INVESTIGATED/NOT INVESTIGATED

A. Regarding Watkins Glen Bridge:

1. Richard C. Allen, Loudonville, NY (518 462-9734); pvt. researcher.
2. NYS Parks & Recreation, Peebles Island, Albany, NY; Tom Ciampa.
3. Finger Lakes State Park & Recreation Commission, Trumansburg, NY 14886; Jesse W. Miller, Sr., Park Engr.(607 387-7041).
4. Schuyler County Historical Society (607 535-9741).
5. Village of Watkins Glen; Bill Kelly, Historian (607 535-2711).
6. Robert M. Vogel (202 966-1558); stereo collector.

B. Regarding Conrail Records:

1. Charles H. Wolfinger, Hershey's Mill, 219 Chandler Drive, West Chester, PA 19380 (215 436-9161): former employee.
2. Jack White (202 546-1244, 202 357-1300); former Smithsonian RR Curator.
3. Ted Zaras 52B Richfield Rd., Upper Darby, PA 19087 (215-352-8898; RR buff, personal archives of P & R incl. Record of Bridges, Ref. 24).
4. Jim Kranefeld, 19 N. Rigby, Apt.2, Landsdown, PA 19050, private researcher, ref. to by Ted Zaras.
5. Annual Reports of the Wilmington & Northern, c. 1881
6. Reading Technical and Historical Society: Lisa Samons, Exec. Sec., PO Box 15143 Reading PA 19612 (215 678-0596)
7. Frank A. Weer, 6361 Drexel Rd., Philadelphia, PA 19151 (215 473-6853); RR buff, has large personal collection of structural stuff from Reading Co., referred to by Lance Metz.
8. Reading Company, Philadelphia (215 735-8300)
9. Conrail, 15 N. 32nd St., Phila., PA 19104; Mark Sawyer, Sr. Civil Engr., Design and Constr. (215 596-2888); Mark Brink, Sup. Bridge Inspection, Structures, Harrisburg Div. (717 541-2417).
10. Berks Co. Planning Commission, Exide Bldg., Reading, PA19601 (215 378-8703); Cheryl Auchenbach, ref. to by Wolfinger. HAER No. PA-210 (page 26)
11. James Shirey, PO Box 49 Geigertown, PA (215 286-9835); RR buff, may have info. on rail line, ref. to byWolfinger.
12. Anthracite Railroad Historical Society; Art Wilkinson,517 Gay St., Phoenixville, PA 19460; ref to by Wolfinger.
13. Historical Society of Montgomery Co.PA (215 272-0297).
14. Pottstown Public Library (215 970-6551), Scott Elmer.

C. Regarding the Scarlets Mill Bridge:

1. Lance Metz
2. Robeson Township Historical Society; Tony Mattasa, Pres. (215 582-4550), Mary Ann Wert (215 582-1017).
3. Robeson Town Hall, (215 582-4636).
4. Berks county Historical Society, 940 Center Avenue,Reading, PA.(215 375-4375); George Miser.
5. Bob Evans, Penn DOT Maintenance Engineer, Berks County, PA.
6. Berks County Court House, Parks and Recreation (215 372-8939).
7. Joe Mitchell, Reading City Engineer (215 320-6236).
8. Horseshoe Trail Association
9. PA Public Utilities Commission, David Wilhelm (717 787-6805).
10. PA Dept. of Environmental Resources, Parks and Recreation, "Rails to Trails" Program; William Forray, Dir.Bur.St.Parks (717 783-0377); Ed Deaton, (717 787-6674).
11. Earl Heydinger, Exeter Twp., Berks Co., PA (215 582- 8583); knowledgeable on RR property, ref. to by George Miser.
12. Chester O. Gottschall, 912 N. Front St., Reading, PA19601 (215 375-0618); ref. to by George Miser.
13. Luthar Linderman, Birdsboro RD; (215 582-1861).
14. Bruce Hoffman, Birdsboro, PA (215 777-1393); Birdsboro Historian.
15. Michael Stuart, Birdsboro, PA (215 582-2786).
16. Victor Darnell, bridge historian (203 229-3921).
17. Reading Public Library (215 478-6350); Peter Jaffe, ref. librarian (215 478-6354).
18. Berks County Engineering Dept.; Bill Wescott (215 378-8700). HAER No. PA-210 (page 27)

D. Regarding Horseshoe Trail Club:
1. Robert Chalfont, 509 Cheltena Ave., Jenkintown, PA19046; Sec/Treas., former Pres.
2. Keystone Trails Assoc., PO Box 251, Cogan Sta., PA 17718.

E. Unexamined Resources:

1. Pennsylvania State Railroad Museum, Stroudsburg, PA;reported to have a good archive, incl. P & R material.
2. "The Report of Valuation", Interstate Commerce Commission Report of 1917 , Federal Records Center, Suitland, MD; inventory of bridges on the W & N Branch of the P & R; may be helpful in identifying the original site and/or moving date of the Scarlets Mill Bridge.
3. PA State Archives, Harrisburg, PA
4. Insurance and tax maps for Berks Co., PA in office ofBerks Co.Engr.; may help bracket date Scarlets Millbridge was

moved to present site.

5. Find out where principals in Michigan Br. and Constr. Co. were living in 1871 and who they were; possibly thru LDS geneological services.
6. Search other P & R letter files at Smithsonian Archives.

ADDENDUM TO
SCARLETS MILL BRIDGE
(Horseshoe Trail Bridge)
Spanning former Reading Railroad
Scarlets Mill
Berks County
Pennsylvania

HAER No. PA- 210

HAER
PA
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XEROGRAPHIC COPIES OF COLOR TRANSPARENCIES

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Department of the Interior
Washington, DC 20001