

SOCIETY FOR INDUSTRIAL ARCHEOLOGY

NEWS LETTER

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PITTSBURGH 1974



THE 1974 CONFERENCE-- PITTSBURGH

Charlotte B. Furness

The two day Annual Conference began Friday evening, 26 April, with registration for the 125 attendees at the Pittsburgh History & Landmarks Foundation Museum, the restored, grand Old Post Office of 1897. Bright sunshine and 80° weather characterized the entire weekend, making the work of conference organizer Field Curry that much more rewarding.

That first evening witnessed a presentation, in the Museum's rotunda, on the impressive work of the PHLF. Speaking on behalf of the Foundation was its Executive Director, Arthur P. Ziegler, Jr. A wine & cheese reception followed. Above the noisy din of an SIA reunion, and without the slightest fanfare, a local chamber ensemble played for two hours. Only in time did it sink in that their concert was a part of Pittsburgh hospitality; the entire evening simply providing a sneak preview of the good things in store over the course of the next three days.

The formal program began Saturday in the William Penn Hotel's art nouveau Pittsburgh Room, designed in the 1930s by the renowned architect John Urban, we learned from Pittsburgh's architectural historian, James Van Trump. For the first time an SIA conference took place in a hotel and the elegant, lively William Penn nicely filled the bill--it was convenient and rather novel. The morning's agenda included five presentations on IA sites and structures (see Abstracts) and as well, provided an opportunity to look over a number of IA-related exhibits and publications.

At lunch, outgoing President Edward Rutsch and Treasurer Vance Packard conducted what has to be regarded as the least painful, most humorous business meeting on record (see Minutes). Kenneth Hudson, our English guest speaker, was overheard to comment, "It alone was worth a trans-Atlantic voyage!" During the course of the afternoon a much needed and often proposed session of short notes and project reports finally took place, chaired by eminent labor folklorist Archie Green. These less-formal offerings apparently were well received and will become a part of

future conferences.

Louise M. Merritt, historian and preservationist, chaired the last two papers of the day. The program ended on Merritt's positive, strongly personal observations about the Society and its future directions. Filled with visions and information about over a dozen IA sites and projects, the conferees reeled off to their rooms to make ready for the evening's program, aboard the *Gateway Party Liner*.

A lazy four-hour cruise along the rivers of Pittsburgh provided an opportunity to chat, snap dozens of frames of film, and generally gawk; for the shores were alive with IA activity--all rather surreal. Little incline cars crawled up and down the heights, giant caldrons spewed out molten metal, blast furnaces were charged, and coke ovens smoked at the numerous steel mills; river barges loaded with coal shuffled by; and on shore freight trains snaked along. We passed almost endlessly under the spans of Pittsburgh's bridges, which truly fit Curry's description: they were "a living textbook of bridge engineering, from lenticular trusses to suspension bridges to tied arches." Getting everyone to come indoors for dinner was quite a chore, after which only Kenneth Hudson's compelling films on the popularization of Industrial Archeology in Great Britain could possibly have kept them there. Back at dockside for most the evening ended; but for the hard-core, there still were those inclines to ride that night.



THE SUNDAY TOUR

Michael W. Robbins

The legwork portion of the SIA's 3rd Annual Conference began promptly at 8:45 on a bright Sunday morning. James Van Trump led off with an informative commentary on the now-departed architectural occupants of numerous sites in the downtown section, as the group--most of those attending the meeting--strode toward the Monongahela River. (Steamboats, Van Trump noted, once tied up at the cobblestone quay at the foot of Smithfield Street. On his way to his first inaugural, President-elect Lincoln addressed a crowd, where now stands the Blue Cross Building.)

At the foot of Smithfield Street is the last remaining glory among Pittsburgh's bridges, the Smithfield Street double-bowstring (lenticular) truss, designed by Gustav Lindenthal, and constructed between 1881 and 1890. The trolley section was added in 1889. Photo opportunities were numerous--and risky--as the assemblage inspected the bridge while crossing to the Pittsburgh & Lake Erie RR Terminal.

"This great railway cathedral," as Van Trump termed it, was grudgingly opened for a few minutes (it is no longer in use) by a P&LE official. Its most striking feature is the central space, a full barrel vault, with a coffered ceiling that includes stained



glass windows. Van Trump pronounced it Pittsburgh's best Edwardian interior and conjured memories of stentorian tones announcing arrivals and departures. The building was designed by George Burns, in 1898, and the P&LE has expressed its interest in preserving it--although there is (of course) some question of an appropriate adaptive use.

From this point, the walking tour became a bus tour, as SIA-ers rode up Carson Street, through the South Side area, a long-time blue-collar neighborhood, whose houses and storefronts appeared little altered in this century.

Our destination was the Jones & Laughlin steel mill, on the South Side. This rare visit was arranged by J&L Superintendent of Maintenance John O'Rourke. There, we were shepherded along in groups of a dozen at a time, and entered the high, dim, charcoal-grey shed, which contained railroad tracks and electric locomotives for material handling, and a locomotive-sized electrical device for charging the open hearth furnaces--called a "charger." The first bank of massive furnaces was immediately inside the entrance. We watched as the doors were opened and the individual furnaces were in turn charged with bins of scrap steel. Piles of alloy ingredients were noted, e.g., manganese.

Of the eleven furnaces in the building, six were in work. While the charging operation occurred on one side of the furnace, on the other molten steel was tapped into a ladle suspended from a traveling crane. The fiery liquid was poured into ingot molds, which were placed on short railroad flat cars. All SIA types seemed awestruck by the coolness of the men who trod the platform adjacent to the molds of molten steel, scraping off slag with a rake-like device, and occasionally reaching out to flip sheets of tin onto the tops of the moulds, and then turning hoses on the molds to cool them for removal. It seemed dangerous work, with temperatures which could be tolerated for only minutes at a time.

The ingots were rolled across the open yard--their heat was like a July sun, even at some distance--to a crane which stripped off the mold leaving a red-glowing ingot. The ingots were then transferred to a "soaking pit," which raised the temperature of 8 to 10 ingots to 2000° F., required for rolling. The adjacent rolling mill was not in operation; it was Sunday and it was shut down for some maintenance and repairs. Massive, damaged bevel gears were being replaced. Out in the cooling yard, streams of water were directed onto thick slabs of steel which--while now a familiar gray color--still were hot enough to ripple the air, mirage-fashion. A shed near the yard contained a bona fide J&L antique, an 1898 Morgan vertical steam engine once employed to drive the billet mill.

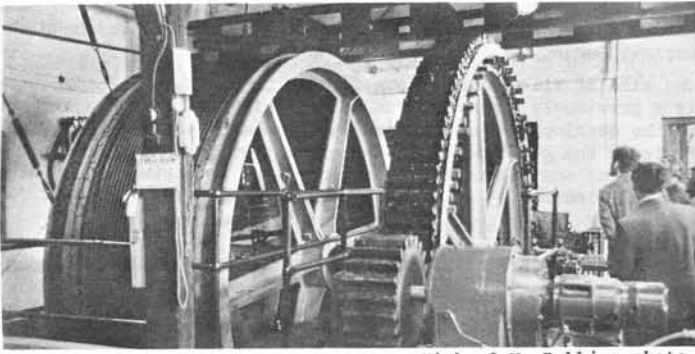
After heartfelt thanks to our J&L guides, we re-boarded the bus for a short drive to lunch at Sarah's Restaurant--for 40 years a Southside bastion of Yugoslav cooking.

A post-lunch bus ride took us to the foot of the Duquesne Incline, built in 1877 and one of the two survivors of a hoisting heyday that included nearly 20 inclines in Pittsburgh. The



Duquesne cars featured handsome interiors of maple and walnut, which had been laboriously scraped and refinished by the members of the Society for the Preservation of the Duquesne Heights Incline (who also operate the incline). Once at the top, the natives pointed out that some 19 bridges were visible, including the three identical eyebar suspension spans crossing the Allegheny River.

A special treat was that the winding house of the incline was open to SIA visitors. The original 1877 equipment (except for the steam engine, replaced by a motor), complete with orange drums and gears, and wooden teeth--but new cables, thank God--was much appreciated.



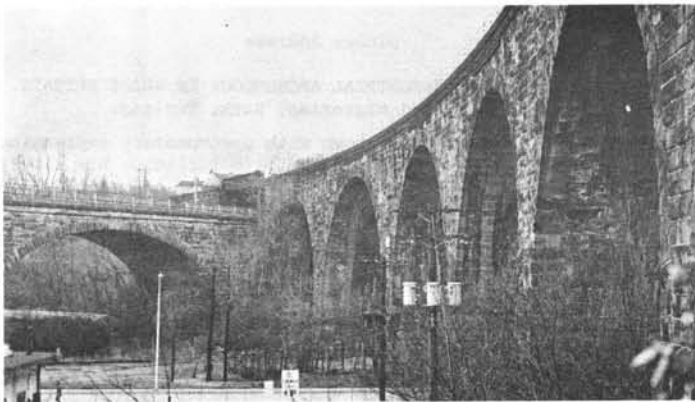
Michael W. Robbins photo

Thence, by bus amid summery warmth, to the South Hills Trolley Junction, situated at one end of the long, slanting Mount Washington Tunnel (1904). (Several observers noted that here, unlike Washington, light was visible at the end of the tunnel.)



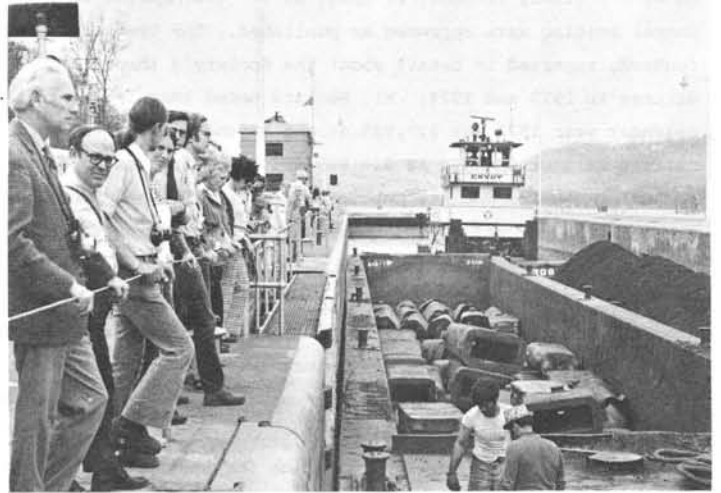
We see it but we don't quite believe it.

The brilliant-hued but erratically-designed trolley paint jobs were appreciated/decried by SIA'ers on the way to the repair shops, where inspection pits, wheel grinders, and cars in various stages of work were duly noted.



The next portion of the afternoon was passed in an essentially architectural and restoration tour, from the Monongahela River north to the Allegheny Riverside, traveling by way of the Squirrel Hill area, the Pitt campus, the Carnegie Institute, etc., on over to the Pennsylvania Railroad's 1903 curved stone-arch viaduct, intersected by a stone-arch highway viaduct, which were photographed to within an inch of their lives.

By a stroke of fortune, the SIA entourage arrived at Lock and Dam No. 2 on the Allegheny River just as the Mon (sic) River Towing Company's *Envoy*, with a string of coal and freight barges, was in the process of being locked through upstream.



The final stop on the tour was the Aspinwall pumping & water treatment plant of Pittsburgh's water supply, on the Allegheny River. Pumps and tanks of this modern facility were toured, although by this point the rigors of the tour were manifesting themselves in glazed eyes, swollen feet, and a generally diminished attention span.



On the return to the hotel, Etna, former site of the Isabella Furnace, subject of Klaus Grutzka's fine conference poster, was passed, as was the still-discernible site of the 1814+ Allegheny Arsenal, and numerous other intriguing IA sites and structures along the Allegheny Riverfront.

A relentless, but rewarding time.

And for the thirty or so staying over until Monday, the day was not over. Yet to come was a visit to Old Economy Village (1805-1905), 15 miles NW of the city at Ambridge, now a state historic site. Here we were guests of Dan Reibel and wife Pat for dinner and cocktails on the candle-lit lawn, under cherry trees in full bloom. Old Economy is the site of the successful 19th-century cultural and economic venture that once was the leading manufacturing community in the "West."

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THE PRODUCERS

Conferences don't just happen, we all well know. When it is all over but the memories, it is worth recalling that the initial planning and the final zillion details invariably befall a tiny group who wind up muttering, "Never again." It was Dianne Newell who got it all together programmatically and Field Curry who got it all together locally. The rest of us who just sat back and enjoyed it, are in their debt.

MINUTES OF THE 1974 ANNUAL MEETING
OF THE SOCIETY FOR INDUSTRIAL ARCHEOLOGY

The third annual business meeting was called to order by President Edward Ritsch at the William Penn Hotel in Pittsburgh, PA at 1 o'clock, Saturday 27 April 1974. The Minutes of the last annual meeting were approved as published. The Treasurer, Vance Packard, reported in detail about the Society's income and expenditures in 1973 and 1974. Mr. Packard noted that income during calendar year 1973 was \$27,995.44 and expenditures \$14,060.32. Current balance in 1974 is \$16,909.49, most of which is designated for ongoing Society publication activities and projects. Theodore Sande moved the acceptance of the Treasurer's Report, Richard Candee seconded the motion, and it was passed unanimously.

The President noted the increase in membership to nearly 575 people and that there were approximately 125 participating in the Pittsburgh conference. Thanks were extended to Field Curry who arranged the conference activities, Arthur Ziegler of the Pittsburgh History and Landmarks Foundation for their contributions, and Dianne Newell for the conference program.

Eric DeLony, chairman of the Nomination Committee, nominated the following slate of Officers and Directors:

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|---------------|-----------------------|
| James Massey | Director for one year |
| Emory Kemp | " " three years |
| Dianne Newell | " " three years |
| Paul Rivard | Vice President |
| Chester Liebs | President |

The slate was individually elected unanimously.

The proposed amendment to the Society's constitution, which had formally been circulated to the membership was moved by Vance Packard and seconded by Theodore Sande. After discussion, during which the President and Board of Directors recommended the defeat of the motion in order to prepare a better amendment for the consideration of the membership, the motion was defeated unanimously.

The meeting was adjourned. *Respectfully submitted, Richard M. Candee, Secretary.*

ABSTRACTS OF PAPERS

A VISUAL INTRODUCTION TO INDUSTRIAL ARCHEOLOGY: THE HAER INVENTORY. *Eric N. DeLony, Principal Architect, The Historic American Engineering Record.*

An illustrated presentation of the HAER Industrial Structures Classification.

BLACK POWDER: EVOLUTION OF A PROCESS AND SURVIVING MILLS. *Robert A. Howard, Curator of Engineering, Hagley Museum.*

An illustrated history of the black gunpowder manufacturing process with emphasis on the Belin Powder Works, the only operating plant in the U. S. using a nineteenth-century process.

THE ASCUTNEY MILL DAM. *Edwin A. Battison, Curator, Division of Mechanical & Civil Engineering, National Museum of History & Technology, Smithsonian Institution.*

The Ascutney Mill Dam in Windsor, Vermont (1834), comparable to the large, early dam at Jones Falls, Ontario, apparently is the oldest masonry dam of substantial size in the U. S. Included in the illustrated presentation was information taken from the record books and the daily construction log of the Ascutney Mill Dam Co., as well as comments on their ancillary activities in developing local water power and real estate.

THE DOCUMENTATION OF THE ELI WHITNEY GUN FACTORY SITE, NEW HAVEN. *Robert R. Macdonald, Executive Director, New Haven Colony Historical Society.*

The site of Eli Whitney's gun factory in New Haven, Connecticut, is a previously unused source in examining Whitney's relationship to the development of the American system of manufacturing. Reviewed the progress of the site's investigation, including both industrial and historical archeology, and interpreted some of the initial findings.

BEEHIVE-OVEN COKING OPERATIONS AT BRETZ, WEST VIRGINIA. *Emory L. Kemp, Chairman, Department of Civil Engineering, West Virginia University.*

The history of the coking process is important in understanding the development of the iron and steel industry and vital to the industrial revolution. Beehive-oven coking operations were introduced by the mid-eighteenth century, and were used for over 200 years. The plant in Bretz, which still is operating, served as the focus for the illustrated case history of the development and operation of one of the few survivors of the beehive-oven coking method.

INDUSTRIAL ARCHEOLOGY AT CURTIN (IRON) VILLAGE. *Vance Packard, Historical Archeologist, Office of Historic Preservation, Pennsylvania Historical & Museum Commission.*

Description of the archeological excavation at Curtin Village, the purpose of which was to generate basic information for the restoration architect. The interaction among the archeologist, the historian and the architect during and after the excavation resulted in a plan for restoration.

INDUSTRIAL ARCHEOLOGY AND THE RECORD OF THE NATIONAL TRUST. *Peter H. Smith, Assistant Director of Field Services, National Trust for Historic Preservation.*

Discussed the change in philosophy toward preservation as reflected by the National Trust, its record in relation to IA, a comparison between the English and the American trusts, and the future direction in relation to IA that the National Trust is considering exploring.

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SHORT NOTES & PROJECT REPORTS

Report on an IA Course at the University of Pennsylvania, *David G. Orr HAER & Emergency Recording, Eric N. DeLony & Donald E. Sackheim* The Realities of the Occupational Safety & Health Administration (OSHA), *John Fowler & Peter H. Smith* "The Old Red Mill," Jericho, Vermont: a Documentary Film by Yudis Bennett.

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Dinner Address

THE POPULARIZATION OF INDUSTRIAL ARCHEOLOGY IN GREAT BRITAIN. *Kenneth Hudson, Industrial Historian, Bath, England.*

Three ten-minute films were shown with a commentary expressing Hudson's philosophy toward IA, especially including his views of a polyclinical approach in the popularization of this field. The films dealt with the museum of the slate industry, industrial monuments in northeast England, and Bowler's engineering workshops and mineral-water factory at Bath.

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OUTGOING PRESIDENT'S REPORT

Edward S. Ritsch

The Society for Industrial Archeology has ended its second regular year of business with its third Annual Conference. Its membership and activities have shown a steady and positive growth in this period, and I leave office with a good bit of optimism for the future.

Our past year has been active and successful. Last fall, we enjoyed an enlightening outing to the Rideau Canal and Canadian industrial archeological sites. Our Newsletter maintains its high standards and serves a real function of communication and education among our growing membership. Two projects, a slide film presentation on industrial archeology and a handbook of adaptation of industrial sites, have been funded and begun.

Looking ahead, we see a good deal of ferment concerning a society journal, and several other tours are planned to important industrial archeology locales. Two society-supported meetings are scheduled: the first, a symposium concerning southern New England textile mills, to be held at the Old Slater Mill in September; the second, a meeting concerning industrial archeology in general, slated for Paterson, NJ in October.

What is most important is that more of us are meeting and exchanging ideas, knowledge, and experiences concerning our mutual interest in the industrial past. This feeling of friendship and appreciation of others' work is very important to a developing field like ours. We need to remember always to make room for the newcomer in our network of IA enthusiasts. We have already begun to discuss the passing of the Society's business to new members, understanding that no experienced hand will lack the opportunity to take on a necessary job.

We have heard some dialogue concerning the nature, scope, and reality of this emerging industrial archeology. I note that in Britain and in our own Newsletter we have moved from a period of self-justification and fighting for a right to use the term "archeologist" to far more substantive discussions concerning the nature and limits of our study. Instead of pursuing this point further, I suggest that we all proceed to get our work done in ways that will set the standards for and expand our field.

Finally, I would like to present my bias concerning what industrial archeology is, or should be: people. I believe that we should be looking for and telling the story of the people who participated in that Industrial Revolution that has had such a profound effect on the human condition. I am the first to admit the relevance of object orientation concerning the symbols of the Industrial Revolution, but I hope we can discern from these symbols an understanding of culture change during the industrial period.

Rather than belabor what any anthropologist will attest to at length regarding man's culture, I should like to give the following example. In the museum--that one I keep thinking about which will tell the story of Paterson's locomotive works--there will be a huge photograph of a Rogers locomotive, barely visible because it will be covered with the workers who built and used it.

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THE MONDAY TOUR

Erastus Bridgewater

This tour was an innovation for the SIA, an effort to take in the area's industrial sites not accessible on weekends, for the sake of those able to stay an extra day. The plan apparently was a worthwhile one, that we will want to repeat.

The tour's theme was the present survivals of the 19th century industrial empire created by George Westinghouse. By bus,

the now truncated group first visited the Westinghouse Extra High Voltage Laboratory in Trafford, east of the city, where experiments are conducted on the behavior of various electrical components--insulators, switchgear, &c--under the effects of both lightning and the extremely high voltages (1.5 million volts in planning) that are becoming necessary for the economic transmission of large quantities of electric power. Several discharges were run off for us, complete with the ominous tension-building hum-buzz of slowly increasing intensity while the capacitor bank builds up the charge, until saturation is reached and it all lets go with a prodigious WHAP, as the pseudo bolt leaps the gap overhead.

We then made our way westward, back toward Pittsburgh, through the Turtle Creek Valley along which the Pennsylvania RR's main line had been built, and thus along which, in turn, Westinghouse had ranged his family of works in order that he might conveniently roam from home to plant to plant, back and forth, all by rail. The next stop was the famed Westinghouse Air Brake Co. (now a division of American Standard) at Wilmerding, the initial element of the Westinghouse group. The works were established here in 1890, 20 years after the company's formation in Pittsburgh. The firm is fully conscious of its distinguished history, maintaining a small collection of patent models of Westinghouse's patents, several of which were assembled for us. Highlight of the visit was the demonstration of a test set of the full air-brake equipment for a 150-car freight train used to evaluate the performance of experimental equipment.

Little of the original physical plant survives on the site, although the foundry is of the Westinghouse period, housing a modern, highly mechanized casting line. The powerhouse, where in 1899 the historic first Parsons steam turbines in the US were installed for trial after Westinghouse had purchased the American manufacturing rights from Charles Parsons, unfortunately no longer exists.

A quick walk through

and around the imposing neo-Tudor company headquarters office building of 1896-97 (addition in 1922), and via the George Westinghouse Memorial Bridge of 1930 directly to the great East Pittsburgh Works of Westinghouse Electric Corporation, once the seat of all of the firm's mechanical and electrical equipment manufacture; now only electrical. Without question the most spectacular of the complex's elements is the high-bay erecting floor of the Large Rotating Apparatus Divn, where are assembled motors and generators of sizes and capacities that considerably exceed comprehension. We spent well over an hour here, inspecting in detail the machining of the casings and rotors, and the assembling of the windings of these formidable machines.





Signs of wear on that front equalizing lever. . . .

After a stop at the Westinghouse Research & Development Center, the direct descendent of George Westinghouse's own experimental laboratory, the tour ended at the last of the

Westinghouse-founded firms--Union Switch & Signal Co. A special surprise was a pair of silent films--a 1927 classic documenting the B&O Railroad's centenary Fair of the Iron Horse, at which an astonishing variety of antiquarian motive power and rolling stock was shown parading past the grandstand under its own steam; and a dramatic 1936 promotional film showing in operation US&S's then innovative installation of 100+ miles of Centralized-Traffic-Control on the Chicago Burlington & Quincy. There followed an examination of a large roomful of operative equipment and models demonstrating the operating principles of the latest electrical and electronic signalling and switch-operating equipment, man-handled with unexpected energy in view of the general enfeeblement that by this time had gripped those of us still ambulatory. Once more relentless and rewarding; but the only way to go!

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1974-75 OFFICERS & DIRECTORS OF THE SOCIETY FOR INDUSTRIAL ARCHEOLOGY

PRESIDENT (to 1975): Chester H. Liebs. Asst Director, VT Divn of Historic Sites. BA City Coll NY; MA cand Columbia Univ. Born St Albans, NY 1945.

VICE PRESIDENT (to 1975): Paul E. Rivard. Director, Slater Mill Historic Site, Pawtucket, RI. BA Univ ME; MA Cooperstown Grad Prog. Born Sanford, ME 1943.

PAST PRESIDENT (to 1975): Edward S. Rutsch. Adjunct Assoc Prof of Anthropology, Fairleigh Dickenson Univ; Archeologist for Salvage Archeology Project in Historic District of Paterson, NJ. BSc George Washington Univ; MA (anthro) NY Univ; PhD cand (Amer studies) Univ PA. Born Teaneck, NJ 1936.

SECRETARY (to 1975): Richard M. Candee. Researcher in Architecture, Old Sturbridge Village, Sturbridge, MA. BA Oberlin Coll; MA Cooperstown Grad Prog; MA Univ PA; PhD cand Univ PA. Born Plainfield, NJ 1942.

TREASURER (to 1975): Vance Packard. Historical Archeologist, Office of Historic Preservation, PA Historical & Museum Commission. BA Franklin & Marshall Coll; MA Univ NC; PhD cand Univ NC. Born NYC 1942.

EDITOR: Robert M. Vogel. Chairman, Dept of Science & Technology. Natl Museum of Hist & Technology, Smithsonian Inst. BArch Univ MI. Born NYC 1930.

DIRECTOR (to 1975): Richard L. Deily. Exec Director, Inst for Iron & Steel Studies, Green Brook, NJ. BA (Mining & Geol) Lehigh Univ. Born Catasauqua, PA 1913.

DIRECTOR (to 1976): Eric N. DeLony. Principal Architect, Hist American Engineering Record, Natl Park Service. BArch Ohio State Univ; MA cand Columbia Univ. Born Marianna, FL 1944.

DIRECTOR (to 1977): Emory L. Kemp. Chairman, Dept of Civil Engineering, WV Univ. BS Univ IL; D I C, London, Eng; MS Univ London; PhD Univ IL. Born Chicago, IL 1931.

DIRECTOR (to 1975): James C. Massey. Director, Dept of Historic Properties, Natl Trust for Hist Preservation. BArch Univ PA. Born San Gabriel, CA 1932.

DIRECTOR (to 1977): Dianne Newell (formerly Macdougall). Free lance historical researcher and writer. BSc Ottawa Univ; BA, MA (Canadian Studies) Carleton Univ. Born Ottawa, Ont 1943.

DIRECTOR (to 1976): Ted A. Sande. Asst Prof of Art History, Williams Coll. BArch RI School of Design; MArch Yale Univ; PhD Univ PA. Born New London, CT 1933.

