

HISTORIC RESOURCES INVENTORY - BUILDING AND STRUCTURES

Please send completed form to: National Register and State Register Coordinator,
State Historic Preservation Office, Department of Economic and Community Development,
One Constitution Plaza, 2nd Floor, Hartford CT 06103

* Note: Please attach any additional or expanded information on a separate sheet.

GENERAL INFORMATION

Building Name (Common) Kline Science Buildings: Geology Laboratory, Chemistry Laboratory, Biology Tower
 Building Name (Historic) Kline Science Buildings: Geology Laboratory, Chemistry Laboratory, Biology Tower
 Street Address or Location 223, 243 Prospect Street, 180 Whitney Avenue
 Town/City New Haven Village _____ County New Haven
 Owner(s) Yale University, PO Box 208372, New Haven, CT 06520-8372 Public Private

PROPERTY INFORMATION

Present Use: EDUCATION: research facility; laboratory
 Historic Use: EDUCATION: research facility; laboratory

Accessibility to public: Exterior visible from public road? Yes No
 Interior accessible? Yes No If yes, explain _____
 Style of building MODERN MOVEMENT: New Formalism Date of Construction 1963-1965

Material(s) (Indicate use or location when appropriate):

- | | | | | |
|--|---|---|---------------------------------------|--|
| <input type="checkbox"/> Clapboard | <input type="checkbox"/> Asbestos Siding | <input checked="" type="checkbox"/> Brick | <input type="checkbox"/> Wood Shingle | <input type="checkbox"/> Asphalt Siding |
| <input type="checkbox"/> Fieldstone | <input type="checkbox"/> Board & Batten | <input type="checkbox"/> Stucco | <input type="checkbox"/> Cobblestone | <input type="checkbox"/> Aluminum Siding |
| <input type="checkbox"/> Concrete (Type _____) | <input checked="" type="checkbox"/> Cut Stone (Type <u>Brownstone</u>) | <input type="checkbox"/> Other _____ | | |

Structural System

- Wood Frame Post & Beam Balloon Load bearing masonry Structural iron or steel
 Other _____

Roof (Type)

- Gable Flat Mansard Monitor Sawtooth
 Gambrel Shed Hip Round Other _____

(Material)

- Wood Shingle Roll Asphalt Tin Slate Asphalt Shingle
 Built up Tile Other _____

Number of Stories: 3, 2, 13 + B Approximate Dimensions 120' x 213', 100' x 260', 58' x 150'

Structural Condition: Excellent Good Fair Deteriorated

Exterior Condition: Excellent Good Fair Deteriorated

Location Integrity: On original site Moved When? _____

Alterations? Yes No If yes, explain: _____

FOR OFFICE USE: Town # _____ Site # _____ UTM _____

District: S NR If NR, Specify: Actual Potential

PROPERTY INFORMATION (CONT'D)

Related outbuildings or landscape features:

- Barn Shed Garage Carriage House Shop Garden
 Other landscape features or buildings: Colonnade, sunken courtyard, lawn, plaza paving

Surrounding Environment:

- Open land Woodland Residential Commercial Industrial Rural
 High building density Scattered buildings visible from site

• Interrelationship of building and surroundings: Located on the Yale University campus, adjacent to a rectangular plaza at the crest of Science Hill. Three buildings include: Geology Lab on Whitney Avenue north of the Peabody Museum; Chemistry Lab on Prospect Street attached to Sterling Chemistry Lab building; Biology Tower at the west side of the plaza at the crest of the hill. A colonnade of massive brick columns with a cantilevered concrete roof surrounds the plaza and links the Biology Tower with Bass and Gibbs Lab buildings on the north and east sides of the plaza. A sunken court is north of the tower.

• Other notable features of building or site (*Interior and/or Exterior*)

See continuation sheet.

Architect Philip Johnson & Richard Foster, Builder see below
Zion & Breen Landscape Architects

• Historical or Architectural importance:

Biology Tower: Lev Zetlin & Associates, Structural Engineer Builder: E & P Construction Company
 Geology & Chemistry Laboratory: Henry Pfisterer, Structural Engineer Builder: W. J. Megin Company

See continuation sheet.

• Sources:

Brown, Elizabeth Mills; New Haven: A Guide to Architecture and Urban Design, Yale University Press, New Haven, 1976.
 Carley, Rachel D., Tomorrow is Here: New Haven and the Modern Movement (Privately printed by the New Haven Preservation Trust, New Haven CT) June, 2008.
 Ryan, Susan. 1981. HRI 706. New Haven Architectural Survey. Map/block/lot: 245/0363/01200, 245/0363/00300, 245/0363/00201.

See continuation sheet.

Photographer Charlotte Hitchcock Date 6/17/2016

View Multiple Views Negative on File NHPT

Name Charlotte Hitchcock Date 10/31/2016

Organization New Haven Preservation Trust

Address 922 State Street, P.O. Box 8968, New Haven, CT 06532

• Subsequent field evaluations:

Latitude, Longitude: Kline Geology Laboratory 41.316741, -72.921169
 Kline Chemistry Laboratory 41.318833, -72.922722
 Kline Biology Tower 41.317241, -72.922706

Threats to the building or site:

- None known Highways Vandalism Developers Renewal Private
 Deterioration Zoning Other _____ Explanation _____

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Other notable features of building and site (*Interior and/or Exterior*):

Kline Geology Laboratory:

This is a 120' x 213' three-story building with a flat roof. The building has a steel frame of five bays by eight bays, with a steel structural grid which is camouflaged on the exterior by curved brick engaged piers which present an appearance as of massive bearing columns. The exterior has a base of brownstone and wide belt courses of brownstone at the floor and as a roof level cornice. Walls are in-filled with dark purplish-brown brick matching the curved piers. Pairs of full height vertical openings occur in each bay; some are windows with metal frames while others are blind recessed panels of brick infill.

The entry in the north façade, located off-center toward the west, is marked by a wider bay with a pair of round columns flanking the opening into a recessed porch area where there is a glazed wall with entry doors. The stone-paved porch floor extends out to the north forming a generously scaled entry stoop. Beyond at the interior is an atrium containing the main stairwell enclosed by glass walls, under a skylight. The stair is suspended from the roof structure on steel tension rods. The three floors contain laboratories and offices around the perimeter, a ring corridor, and support spaces in the remaining central area. A mechanical penthouse extends above the cornice line.

The east wall of the Geology Laboratory aligns with the 1925 Peabody Museum of Natural History to the south. The Geology building matches the scale of the brick and brownstone museum building.

Kline Chemistry Laboratory:

This is a 100' x 260' U-shaped two-story building with a flat roof attached to the north side of the Sterling Chemistry Laboratory. The materials and detailing are similar to the Geology Laboratory, with a series of bays marked by curved brick attached piers, vertical full height window openings, and brownstone belt courses. The building works visually as a background or context structure, and now is embedded between the older (1922) Sterling Laboratory and the newer (2005) Class of 1954 Chemistry Research Building.

Kline Biology Tower:

The Biology Tower is a 13-story building with its main entrance from the plaza level, and a lower concourse level which looks out onto its sunken courtyard and also provides a western entrance from Prospect Street. Lower basement levels house library stacks. A café is located on the top floor. A tall colonnade above the occupied floors forms a roofless enclosure for mechanical equipment. Like the Geology Laboratory, the structure is a steel frame, with round brick columns encasing the structure and giving the building its expressive character. A brownstone base and belt courses provide accents contrasting with the dark brown brick. The central portion of the building is nine bays long (north-south) by seven bays wide. Extensions toward the north and south are three bays long and five bays wide, narrowing the building footprint at the ends. In the north extension, a double height space extends up from the concourse level.

The Tower is located at the southwest corner of the open plaza, in a vertical counterpoint to the long horizontal form of Gibbs Laboratory across the plaza on the east side. The buildings are connected by a colonnaded covered walkway surrounding the plaza on three sides. This has massive round drum-like columns supporting a concrete slab cantilevered roof. At the southeast corner sits a pavilion composed of a double row of columns, marking the arrival of a path up the hill from Sachem Street to the south.

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Historical or Architectural importance (*continued*):

By 1953, when Paul Schweikher was appointed chair of the architecture department of the Yale School of the Fine Arts, President A. Whitney Griswold (1906-1963) had been president of Yale University for two years, and had begun sponsoring Modernist architecture and also the preferential selection of alumni as the architects of new campus buildings. The 30-acre Hillhouse estate, Sachem's Wood, had been purchased and donated to the university in 1910 (Scully et al, 186), but the crest of the hill remained undeveloped until after World War II. Eero Saarinen, an alumnus, began a university master plan including the layout of Science Hill and the first building commission for a site on the hill was the Gibbs Lab, awarded to the new department chair Paul Schweikher, also an alumnus. The building was sited by Schweikher to lie along the east slope of the hill, leaving an open hilltop from which there would be views south to Hillhouse Avenue and the main campus (Scully et al, 306). The university's first group of Modernist buildings included the Gibbs Lab of 1955, the Yale University Art Gallery, designed by Louis Kahn in 1953, and the Ingalls Rink designed by Saarinen in 1957.

During Griswold's tenure, a major building campaign by the university was ongoing (Carley, 54) and Philip Johnson was awarded the commission for a series of three science buildings to be located on Science Hill. Although not an alumnus of Yale, Johnson lectured frequently at the university, and welcomed students to visit his Glass House in New Canaan. Having recently spent time in Italy studying ancient Roman architecture, in the words of Yale art historian Vincent Scully, Johnson "did his best to give his science buildings as much Roman bulk and solidity as he could" (Scully, 323).

The first of these was the 1963 Geology Laboratory, which was functionally and visually connected with the Yale Peabody Museum, a neo-Gothic style building at a prominent corner location on Whitney Avenue at Sachem Street. Second came the Chemistry Laboratory in 1964; this was a two-story addition to the 1922 Sterling Chemistry Laboratory, a very large and visually dominant facility, also neo-Gothic and like the Peabody, built in red brick and brownstone. The third building was the 1965 Biology Tower, located at the crest of Science Hill and forming the visual focus of the entire science complex.

While the Chemistry building is a background building, an addition to a large and visually dominant pre-existing facility, the other two are significant for the way they present Modernism in the period after the International Style, and for the way each relates to context while asserting its individuality and modernity. The Biology Tower forms a dramatic vertical counterpoint to the prior Gibbs Laboratory building. With the assistance of the colonnade and the negative volume of the sunken courtyard, the tower organizes the crest of the hill as an asymmetrical urban space and as the visual focus on the axis of Hillhouse Avenue. At the time of construction, the built campus was to the south and on lower ground. This complex made a statement about the university's image by taking control of the hilltop and doing it with cutting edge Modernist design, which nevertheless harmonized in materials and colors with the traditional neo-Gothic campus. The Geology Laboratory, while deferring in scale to its neighbor, presented a unique identity with its solidity of mass and its bold columnar imagery, that may perhaps invoke the antiquity of its subject, Geology. In the words of Vincent Scully, Johnson "realized that architecture has a humanistic objective which may or may not be served by the simple expression of the way it is built" (Scully, 323). He was thus moving away from the International style dictum of form following function, toward a more expressionist language of design.

Architect:

Philip Johnson (1906-2005) studied at Harvard College as an undergraduate. He was a member of the Harvard Society for Contemporary Art, founded in 1928 by a group of students mentored by Professors Edward W. Forbes and Paul J. Sachs, many of whom became prominent art museum directors and curators

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(Weber 1992, Chapter 1). Johnson directed the Department of Architecture at the then-new Museum of Modern Art (MoMA) in New York City and with Henry-Russell Hitchcock he wrote *The International Style: Architecture Since 1922*, published in 1932. He is credited with coining the term International Style. In 1940 Johnson went back to Harvard University as a graduate student of architecture, studying with Marcel Breuer. Following World War II he worked both as a practicing architect (in partnership with Richard Foster and then with John Burgee) and at MoMA. Continuing his enthusiasm for the International Style, he designed and built his Glass House in 1949. He then went on to explore subsequent trends in architecture which took him away from the expression of structure and function as primary inspirations for form, to expressionistic work that took inspiration from Classical Roman architecture and ultimately to Postmodernism.

Sources (*continued*):

Maps and aerial views:

Bing Maps accessed at: <https://www.bing.com/mapspreview>

Google Maps accessed at: <https://www.google.com/maps/>

AIA Historical Directory of American Architects,

<http://public.aia.org/sites/hdoaa/wiki/Wiki%20Pages/What's%20here.aspx>

Architectural Record

“Laboratories at Yale.” May 1965. p. 15.

“The Kline Tower at Yale.” June 1967. p. 141.

Condit, Carl W. 1968. *American Building: Materials and Techniques*. Chicago: University of Chicago Press.

Fitch, James Marston. 1973. *American Building: the Historical Forces That Shaped It, Second Edition*. New York: Schocken Books.

Johnson, Philip, biography. *Encyclopedia Britannica* accessed 10/30/2016 at

<https://www.britannica.com/biography/Philip-C-Johnson> .

Metz, Don and Yuji Noga. 1966. *New Architecture in New Haven*. Cambridge: MIT Press.

New Haven Modern web site. New Haven Preservation Trust. Accessed at: <http://newhavenmodern.org/>

Progressive Architecture. February 1967. “Locus for Gown, Focus for Town.” pp. 90-97.

Scully, Vincent et al. 2004. *Yale in New Haven: Architecture & Urbanism*. New Haven: Yale University Press.

Weber, Nicholas Fox. 1992. *Patron Saints: Five Rebels who Opened America to a New Art 1928-1943*. New York: Alfred A. Knopf.

Whiffen, Marcus and Frederick Koeper. 1981. *American Architecture: 1607-1976*. Cambridge: MIT Press.

Wright, Gwendolyn. 2008. *USA: modern architectures in history*. London: Reaktion Books.

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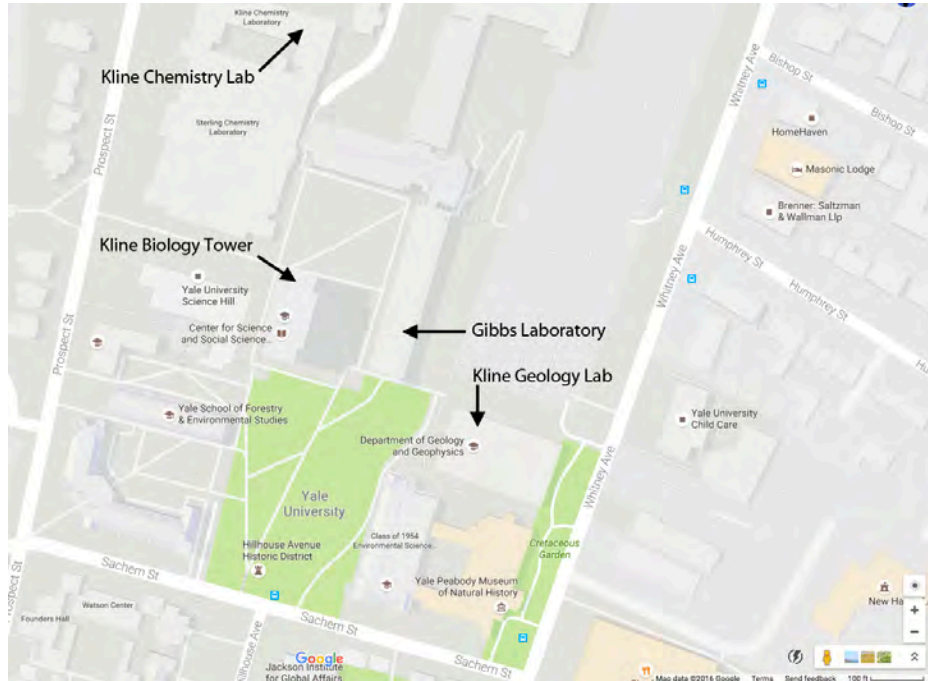


Figure 1. Location map of Kline Science Laboratories. Base image from Google Maps accessed 11/03/2016; annotation to identify Kline Science buildings.

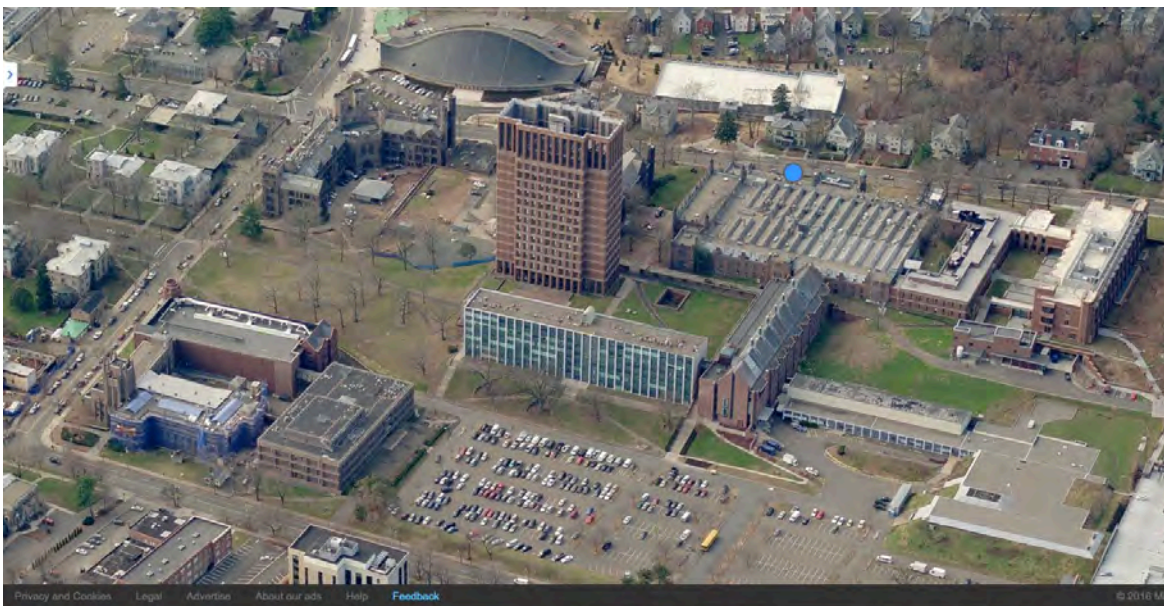


Figure 2. East aerial view of Kline Laboratories, Science Hill. Image from Bing Maps accessed 6/17/2016. The Geology Lab is to left of the parking, Biology Tower is at top center, Chemistry Lab is the U-shaped building at upper right attached to the Sterling Chemistry Lab (with sawtooth roof).

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Photo 3. Northeast view of Kline Geology Laboratory north facade, camera facing southwest. Gibbs Laboratory is at right rear and Kline Biology Tower is beyond.



Photo 4. Northeast view of Kline Geology Laboratory east side with Yale Peabody Museum at rear, camera facing southwest. The Cretaceous Garden along the east side of the buildings faces Whitney Avenue.

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Photo 5. West view of Kline Geology Laboratory; camera facing east.



Photo 6. North detail view of Kline Geology Laboratory entrance; camera facing south.

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Figure 7. Plan view of the Kline Geology Laboratory (Metz, 40).

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Photo 8. Interior view of the Kline Geology Laboratory atrium; camera facing southeast.

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Photo 9. West view of Kline Chemistry Laboratory; camera facing northeast. At right is the Sterling Chemistry Laboratory, at far left is the Class of 1954 Chemistry Research Building.



Photo 10. North view of Kline Chemistry Laboratory; camera facing southeast. An enclosed courtyard is formed by the Class of 1954 Chemistry Research Building on three sides and the Kline Chemistry Laboratory building on the south.

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Photo 11. North view of Kline Chemistry Laboratory seen at rear beyond Class of 1954 Chemistry Research Building; camera facing south. At left rear is the Kline Biology Tower.



Photo 12. North view of the base of Kline Biology Tower, wall of the sunken courtyard, and Gibbs Laboratory at left rear; camera facing south from the west colonnade.

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Photo 13. Southeast view of Kline Biology Tower; camera facing northwest.

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Photo 14. East view of Kline Biology Tower plaza with the base of the tower; camera facing south.



Photo 15. North view of Kline Biology Tower sunken courtyard with the base of the tower and Gibbs Laboratory at left rear; camera facing south.

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Photo 16. North view of Kline Biology Tower interior looking into the lower level which is now a 24-hour study space in the Center for Science and Social Science Information; camera facing southeast.

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Photo 17. North view of Kline Biology Tower lower level courtyard; camera facing southwest.



Photo 18. East view of colonnade at the south entry to Kline Biology Tower plaza; camera facing west.

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Photo 19. View of west side of colonnade; camera facing west.

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Photo 20. South view of Kline Biology Tower; camera facing north.