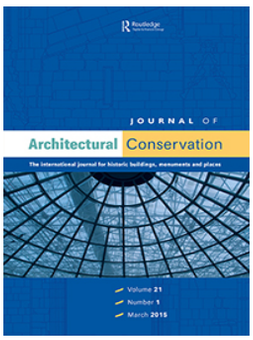

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Philip Johnson's Painting Gallery: Case study of a modernist earth berm roof replacement and restoration

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Philip Johnson's Painting Gallery is a National Historic Landmark earth berm building built in 1965 at the Glass House in New Canaan, Connecticut. The gallery design is based on an ancient Greek tomb also known as the Treasury of Atreus, and contains an exceptional collection of modern art including works by Andy Warhol, Frank Stella and Robert Rauschenberg. After the National Trust for Historic Preservation became the stewards of the Glass House site in 2006, recurring leaks at various locations became increasingly problematic at the Painting Gallery. It was determined that a comprehensive approach was needed to address the water emanating from under the berm at the roof and rising walls for the conservation of the building itself and to protect the building's highly significant art collection. The comprehensive approach began with a six-month study and evaluation of the building including review of all archival materials, trench probes, consultations with technical product representatives and proposed waterproofing and roofing system mock-ups.

The study determined the repair scope of work that included replacing the original 1965 roof membrane with a cold-applied Kemper roofing system at the main roof and sub-grade roofs under the berm. To access the roof work areas, all of the 54 Redstone copings, each weighing 1200-1500 pounds, were removed by a crane and over 200 cubic yards of the earth berm were removed by hand. The scope of work also included restoration of the full profile and landscaping of the earth berm over the building in keeping with Johnson's original design intent.

Construction began in July 2013 and was complete in October 2013. Mary Kay Judy was the Principal Architectural Conservator, Robert Silman Engineers were the consulting structural engineers for mobilisation and Nicholson and Galloway was the General Contractor.

Key words: Philip Johnson; Glass House; earth berm; Modernism; sub-grade roofing

Introduction

Philip Johnson's Painting Gallery is a National Historic Landmark earth berm building built in 1965 at the Glass House in New Canaan, Connecticut. The gallery design is based on an ancient Greek tomb also known as the Treasury of Atreus, and contains an exceptional collection of modern art including works by Andy Warhol, Frank Stella and Robert Rauschenberg.

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with a six-month study and evaluation of the building, including review of all archival materials, trench probes, consultations with technical product representatives and proposed waterproofing and roofing system mock-ups.

The study determined the scope of the repair work, which included replacing the original 1965 roof membrane with a cold-applied Kemper roofing system at the main roof and sub-grade roofs under the berm. The scope of work also included restoration of the full profile and landscaping of the earth berm over the building in keeping with Johnson's original design intent. Due to the logistic and conservation concerns regarding dismantling the artwork, the collection could not be removed from the building and was protected in situ. Construction began in July 2013 and was completed in October 2013.

Glass House: Background

The Glass House is one of the United States' most significant architectural resources of the Modernist period. With 47 acres and 14 structures spanning four decades, the Glass House is a masterpiece of architectural, artistic and landscape design. It provides an unparallelled insight into the life and work of one of America's foremost architects, Philip Johnson, while chronicling the history of modern architecture in America.

The first buildings designed by Johnson on the property are known as the Glass House. The Glass House proper is composed of two structures engaged in a dynamic dialogue of opposites, one constructed in glass and one in brick. The two buildings, situated in a bi-axial plan with landscaped courtyard, were conceived as one design, the solidity of the Brick House serving as a counterpoint to the transparency of the Glass House.

Changes to the site began in 1955 when Johnson added the pool on the north side of the Brick House, followed by the pavilion on the pond below the Glass House in 1962. However, as Johnson began to acquire the neighbouring adjacent properties, he began to re-envision the surrounding landscape as a part of the Glass House. As part of his broadening plans, the driveway was reconfigured to enter the site from the south, as opposed to the original drive that entered at the north, opening the way for the Glass House's expansion northward to where the Painting Gallery (1965) and the Sculpture Gallery (1970) were later built.

Philip Johnson bequeathed the Glass House to the National Trust for Historic Preservation in 1986, and retained life tenancy. He lived at the Glass House until his death in 2005, and it was opened to the public in 2007.

Painting Gallery construction

The Painting Gallery was completed in 1965 and was the fourth structure built on the property. The gallery was designed by Johnson with Lev Zeitlin Structural Engineers and Jaros & Bolles Associates Mechanical Engineers. Before construction of the Painting Gallery, Johnson displayed work on an easel and free-standing sculptures in the Glass House and used the entry hall in the Brick House as a rotating gallery for his early collection. In 1960 Johnson met art curator David Whitney, who would become his life partner, and began focusing his collection on contemporary art.

To house and display the growing collection, Johnson conceived an on-site gallery at the Glass House based on the ancient Treasury of Atreus in Greece. The gallery, like the Treasury, was designed with a monumental entrance, a long ceremonial hallway opening into a grand round space with high ceilings concealed under an earth berm. He also liked the contrast of the ancient tomb exterior with a very modern interior. He was quoted by the *New York Times* before construction began as stating: 'Outside it may look like an ancient tomb, but inside it will jump with lively art!'[1]

Johnson's modern interior floor plan was created by the contours of four interlocking circles of differing sizes, in contrast with the singular circular interior of the Treasury. At the centre of the three larger circles are steel columns that support a moveable panel carousel system for the paintings. The smallest circle creates the transition between the long rectangular entry hall and the gallery space. At the left side of the entry hall there is a wet bar, bathroom and discrete mechanical room in an adjoining rectangular plan.

Johnson's choice of the earth berm provided a better opportunity for climate control for the artwork and elimination of UV light. The earth berm also became part of the landscape of the Glass House without interfering with the design intent of the Glass House and the Brick House's composition.

Building and roofing description

The Painting Gallery was built at grade and covered with a seeded grass earth berm. Visible building features include the monumental entrance framed with oversized Redstone masonry blocks with a 'crandaled' or hammered rusticated finish. Redstone was also used to create the interlocking curved copings at the exposed main roof at the top of the berm. The distinctive stone came from East Longmeadow, Massachusetts and was used on Johnson's concurrent private commissions in New York City and New Haven, Connecticut.

The Gallery's structural walls have a poured concrete foundation and are composed of concrete masonry units (CMU) laid with horizontal Duro-O-Wall brand reinforcing at each course. At approximately every 6' at the walls are either two or four courses of vertically reinforced CMU with concrete and rebar threaded through the voids the full height of the wall. The reinforcing serves to receive the steel roof beams that radiate from the three oversized columns which bridge the centre of the gallery. The columns are located at the centre of the circular gallery spaces, supporting both the panel displays and roof deck. There is no structural steel in the walls. The structural cheek walls at the entrance are poured-in-place reinforced concrete.

The original roof configuration was composed of a structural concrete deck, metal decking, lightweight concrete topping slab, a bituminous coating applied directly to the topping slab, a thick layer of FoamGlas insulation and a butyl rubber roofing membrane 1/8" thick. The membrane was topped with approximately one (1') foot of Redstone gravel and finished with several inches of sand, presumably to enhance its tomb-like appearance.

The roofing membrane passed under the coping stones and lapped down over the rising wall 6–8 inches. The lap covered the chamfered edge of the topping slab and extended down over the joint of the roof deck and the CMU wall. The lapped roofing membrane was not mechanically fastened to the roof deck or CMU walls. Nor were the Redstone copings: they were fastened to each other with stainless steel threaded rods and placed directly on the membrane on the deck. The stones act to weigh down and secure the roofing membrane below. It was a very unusual installation, with nothing fastened or anchored to the deck and the weight of the stones themselves securely anchoring the roof membrane.

Roof drainage was via a system of concealed drainage pipes under the gravel with several branches to the different areas of the roof. The drain pipes are perforated at the bottom; all feed into the main pipe which passes through the coping stones at the north end.

Prior to its replacement in 2013, the roof was of the original configuration and composition dating from 1965.

Johnson designed another earth berm building at the same time; it was also completed in 1965 and is in Cincinnati, Ohio. The building was a private house commission known as the Geier

House, which is still in existence and is now maintained as a guest house on a larger estate. The Painting Gallery and the Geier House were Johnson's only earth berm buildings.

After the Painting Gallery's completion in autumn 1965 it received a few mentions in architectural press, including the *Architectural Record* and *Architectural Forum*, for its novel construction. It is likely that it received no significant press attention because it was on his private estate, while his New York-based firm was very prolific at the time with high-profile public commissions. Some of Johnson's notable commissions at the time were the recent completion of the 1964 World's Fair New York State Pavilion in Flushing, Queens and the 16-storey Kline Biology Tower that was nearing completion at Yale University in New Haven, Connecticut.

While the gallery remained just under the radar of the architectural press, the contemporary art community was paying close attention to Johnson's growing contemporary collection housed by the new gallery. In the years following its completion, the gallery was featured in numerous art journals highlighting Johnson's acuity as a collector and the unique visitor experience of the artwork displayed on moveable panels. In 1966, *Art in America* published a feature entitled 'Philip Johnson Goes Underground' about the rotating display and art collection; it included a partial photo of the building's exterior and was otherwise richly illustrated with interior images. Johnson and Whitney's collection is especially significant since they were collecting their contemporaries' work outright from their downtown New York studios prior to their being tested by time or reputation – this included artists such as Donald Judd, Andy Warhol, Robert Rauschenberg, Frank Stella and Jasper Johns. Upon Johnson's death part of the collection was bequeathed to the MOMA, but many of the pieces remain on display in the Painting Gallery today.

NTHP stewardship

The National Trust for Historic Preservation took over stewardship of the Glass House after Johnson's death in 2005. From that point, they undertook a challenging schedule to have the site open to the public by 2007. In preparing to open for visitors, the NTHP prioritised building and site maintenance and repairs in terms of severity and impact on the visitor experience. The schedule limitations meant that issues such as the minor leaks that had been observed around the door and the hallway in the Painting Gallery were repaired as needed and monitored closely. The leaks had not reached the level of priority repairs since the artwork was safe and the damage to the plaster finish had to date been negligible.

However, by 2012 the leaks – while still contained in the same two primary areas – were increasing in frequency and severity, and the repair cycle was becoming a more frequent occurrence. As such, it was decided that greater consideration should be given to a more comprehensive and permanent repair programme. The NTHP also realized, with the leaks increasing, that the seminal collection that the building housed would be in danger if any of the leaks became more severe. The first inspection of the leaks took place in December 2012 and an initial exterior assessment outlined an investigation plan which would be critical to understanding the waterproofing conditions, which were all concealed under heavy gravel ballast and the earth berm.

Roof and leak investigation

The investigation plan included both site work and archival research to understand the current conditions of the concealed waterproofing and to determine a compatible and appropriate repair programme. From the outset, it was understood that the art collection would have to remain in the building during construction, so it was a constant consideration going forward into the investigation and determination of the scope of the repairs.

Physical examination of the exterior of the building revealed that the berm was no longer covering the roof deck or top of the rising wall in many locations (see Figure 1). Special attention was paid to the two locations from which exterior leaks were emanating: the main door and hallway. No other leaks or water damage were observed on the interior. The receding berm revealed multiple waterproofing treatments as well as the original butyl rubber member roofing, none of which were intended to be exposed to UV or weathering. The treatments included Grace Procor, Liquid Plastics and bentonite clay. The exterior examination also revealed exposed pieces of Hydroduct drainage that had been installed under the berm. The main roof drainage was concealed under a heavy layer of gravel ballast, but the drainline on the exterior passing through the copings was no longer connected to a downspout – a condition also exposed by the receding berm.

Following exterior physical examinations, attention tuned to two sets of archival documents: the original construction documents from 1965 and later records that Johnson kept on the repair and maintenance done by his office during his lifetime. Fortunately, Johnson was an excellent archivist and all of the Painting Gallery construction documents, including the Redstone shop drawings, were well maintained and had been donated to the Avery Architectural Library. Consulting the original construction documents, wall sections with roofing and coping configuration was critical in understanding the building construction under the berm, as well as under the ballast. The drawings corresponded with the observed configuration exposed by the receding berm and shed new light on how the membrane lapped the Foamglas insulation and passed under the coping stones. To complete the picture, the more recent records on maintenance and repair during Johnson's residency were onsite. This correspondence and records revealed that problematic large-scale leaks were occurring in the 1980s on the curved gallery walls – in much closer proximity to the art collection.

In approximately 1989/90, the gallery wall leaks were addressed by completely removing the earth berm to expose the rising walls for an application of Grace Procor. Procor had only very recently been introduced to the market when it was selected by Johnson and the product is still

Figure 1. Redstone coping and receding berm at main roof during the investigation phase. (Mary Kay Judy)

commonly used today. It is a fluid-applied rubber-based membrane applied directly to the substrate that cures in place to form a monolithic waterproof barrier. It is typically used in sub-grade applications such as foundation walls, tunnels, planters and other earth bermed structures. While correspondence in regard to the leaks and repairs was archived, no photographic documentation was available of the work performed in the 1989/90 campaign.

The next step was to observe and investigate the current conditions of the rising walls and the Procor application. Four trench probes were performed at the location of the hallway leak and three other locations at different lobes chosen to represent typical conditions. Several important observations were made from the trench probes. When the berm was removed in the last campaign, the copings and roof membrane were left intact, but the membrane was pulled back to reveal the top of the rising wall exposing the joint at the roof deck. Procor had been applied in multiple layers, using both trowel-on and spray-on methods, with a sheet of plastic in between. Presumably the motivation was to stop water from migrating horizontally, but it did not fully address the vulnerability at the top of the wall. The Procor did not extend over the joint and, at the hallway leak, the Procor had not adhered into the exterior corner, creating a channel for the water to be trapped between the masonry and rising wall.

Another important consideration in hindsight is that on Johnson's original drawings, he noted all CMU walls should be treated with a 'bituminous coating'. It is very likely that the Procor may not have fully adhered to the substrate with a coating, especially since the product had just been introduced to the market and its behaviour on varied treated substrates had not been fully established. It is likely that it would have adhered without complication if the surface was prepped by mechanical means, either grinding or scoring the CMU. However, that would have created airborne dust and particulates which would threatened the collection inside, and was likely discouraged.

After the Procor was installed, a Liquid Plastic-type product was used to tack the butyl membrane back down to the rising wall and the whole curb was covered with bentonite clay. When the earth berm was reinstalled, the lifts may not have been adequate allowing the berm to settle over time to recede and expose the roof curb.

After the conditions, configuration and products on the rising walls were understood, attention turned back to the main roof replacement. The options for replacing the roof were limited due to the collection inside, meaning it was not possible to use heat, to create noxious fumes or dust from deck preparation or to use penetrations or fasteners for membrane attachments or sheet metal flashing. In addition, due to budget concerns in the campaign, with the focus on the roof itself, the rising walls and berms could not be fully exposed as they had been in 1989/90, so whatever roofing material was selected would have to be compatible with the existing Procor.

Determining the means and methods for roof replacement and berm restoration

Kemper roofing was identified as an ideal candidate for the project since it could be applied directly to the roof deck substrate and lap on the rising walls, where it would self-terminate, eliminating the need for fasteners or penetrations. Within the product range, Kemper 2 K Pur was selected, since it was cold-applied and had very little odour and no fumes potentially dangerous to the collection. However, it was still unknown whether the Kemper would adhere to the Procor. Working with Kemper technical representatives, four different primers with 2 K Pur roofing were applied to an exposed, cleaned section of Procor in one of the trench probes (see Figure 2). Pull tests were then performed several days later, after allowing the mock-ups to fully cure. Pull tests revealed that the primer that provided the best adhesion was the existing manufacturer's primer for the 2 K Pur system chosen, as opposed to modifications made to the other primers in the mock-up. It was determined that the Kemper 2 K Pur system would be used on both the exposed main roof and the sub-grade roofs under the berm.

Figure 2. Kemper primer mock-ups at rising wall in trench probe. (Mary Kay Judy)

Equally important to determining the appropriate replacement materials and the scope of work for the roof replacement were the proposed means of mobilisation to perform the work. Mitigating factors included navigating the berm with concealed sub-grade roofs and rising walls to remove the coping stones for the roof replacement which weighed between 1,200 pounds for a standard unit and 1,500 pounds for adjoining keystone units . Initial ideas presented to remove the stones were based on the erroneous understanding that the building had not been excavated into the ground, but rather built on grade before being earth bermed. These proposals assumed that heavy equipment could be taken up the berm for access for the stone removal and for the roofing work. However, loading the berm with heavy equipment could have caused serious structural problems, with catastrophic failure as a worst-case scenario. At the same time, while the building itself needed to be protected, it would still be housing the art collection, putting it at risk as well.

It was determined that a crane was the best option for removing the stones. The crane would have to be large enough to lift the stones while maintaining a safe distance from the berm, while at the same time provide the swing capacity from the roof to the adjacent area designated for on-site stone storage. The complications involved in bringing a crane of the appropriate size onsite were primarily due to narrow vehicle access through nineteenth-century farming field stone walls which bordered the perimeter of the Glass House site along Ponus Ridge Road and were considered contributing historic features of the property.

After determining the means and methods for the roofing and mobilisation of the exterior work, the impact on the artwork was carefully considered. The majority of work in the gallery is too large to move out without taking canvases off frames or partially dismantling it. The NTHP's consulting art conservator for the collection warned against dismantling and removing the artwork. It was then agreed that the artwork would have to remain in place during construction and be carefully monitored for any dust infiltration or changes to the interior climate.

Another dynamic to be considered during the planning phase was that the site and building had to remain open to visitors during the work. The site is only open to the public from May

to November, but this is the optimal construction season, leaving no alternative time to perform the work when the site was closed to the public.

Overall, it should be noted that during the planning phase every attempt was made to honour the original materials and configurations in determining roof replacement materials. However, for improved performance and watertightness, the Kemper cold applied roofing was selected, prompting a change in the insulation configuration. With the Kemper applied directly to the roof deck, the new standard foam installation would be placed on top of the roofing, as opposed to the original installation of the Foamglas under the butyl membrane. All other materials and configurations were replaced in kind.

Contractor selection and site preparation

Due to the complexity of mobilisation and performing the construction work while the site was open to the public, the NTHP opted to issue the bid package only to bidders that were pre-qualified. Pre-qualification was based on several criteria, including that the bidder must be Kemper-approved, be able to perform the masonry coping and craning work in-house and have demonstrated prior work experience on a gallery or museum that housed significant collections during construction. As part of the contractor selection, each pre-qualified bidder had to submit a mobilisation plan for removing the stones, i.e. the size of the crane where it would enter the site and how their plan would effect overall pricing (see Figure 3). Of the six firms identified that met the prequalification, three declined to bid, citing the potential liability of the collection inside.

The remaining three candidates participated in an on-site site walk through, several interviews and bid negotiations. After a competitive process, the project was awarded to Nicholson and Galloway, based in Long Island, New York, with work scheduled to begin in July 2013.

Figure 3. Construction document bidding site plan with mobilization criteria and limitations. (Mary Kay Judy)

To prepare the site, a temporary fence was installed around the Painting Gallery to delineate the construction zone from the public space and prevent any run-off into the sites streams and protected wetlands. At the fieldstone fence on the main road, where the crane would enter the site, several feet of fieldstone were dismantled to allow access and passage of the other construction equipment. Inside the gallery, climate control monitors and back-up dehumidifiers were installed and the artwork was covered with plastic sheeting, draped over temporary framing to keep it from contact with the artwork's surface while preventing the build-up of any humidity underneath. It was anticipated that the mechanical systems would remain off while work was ongoing each day to prevent dust infiltration.

Construction phasing

Construction began with removal of the stone ballast, which was over a foot deep after multiple campaigns. In Johnson's original drawings he called for crushed stone to match the coping, which was then to be covered with a layer of sand. At the time of project commencement the original ballast had been covered by a heavy layer of standard grey commercial-grade gravel, and the sand most likely had filtered to the roof deck in the years preceding completion. Removal was performed with an industrial vacuum system over the course of two days.

The next step was the careful removal of the coping stones by crane (see Figure 4). Each stone was prepped by removing layers of sealant and caulking at the transverse joint to access the original dry set stainless steel conjoining pins located at each stone's midpoint. The pins were then cut within the joint, using a fine saw to prevent any damage to the surrounding stone. Each stone was protected and labelled before strapping and lifting with the crane. Stones were placed in order of

Figure 4. Site protection in place, the crane removing the copings stones from the main roof. (Mary Kay Judy)

removal on the lawn adjacent to the building on wood framing to prevent any moisture from collecting underneath and to preserve the crandaled finish during construction.

After all the stones were removed, trenching began around the perimeter of the main roof to access the rising walls. Work was specified from the roof deck over the rising wall to a minimum of two feet, necessitating a trench several feet wide and approximately five feet deep. At the same time the two sub-grade roofs and two feet of their rising walls were also exposed, under several feet of earth berm. All the work involving removing the select portion of the berm, the trenching and the sub-grade roofs had to be done by hand to ensure protection of the building itself and the collection inside. For several weeks during the berm removal, temperatures remained at over 90 degrees fahrenheit, prompting the installation of tents over the work areas to protect the workers and making the site resemble an archaeological dig as opposed to a roof replacement.

When trenching and berm removal was complete, the existing roofing and drainage systems on all roof levels were removed. Prior to removal of the main deck drainage, the configuration was measured and documented in situ to ensure re-installation of the new system in the same configuration. The removal of the roofing revealed the roof decks to be in very good condition and no patching or repairs were necessary prior to priming and installing the Kemper roofing. The rising walls were prepped by removing any loose waterproofing material that had been installed in the preceding repair campaign. However, while the intention was to adhere the Kemper to the Procor treatment on the rising wall, it was ultimately decided that the top two feet of Procor should be completely removed due to inconsistencies and to allow the new Kemper to lap directly onto the CMU substrate.

The sequencing of the Kemper began with application at the main roof and subgrade roof rising walls to allow the Kemper at the roof decks to lap on to the flashed rising walls (see Figure 5). The Kemper liquid applied system lent itself well to the curved walls, unusual returns and meeting points of the roof levels allowing a monolithic installation at its completion.

Figure 5. Kemper installed at sub-grade hallway roof and curved edge of main roof. (Mary Kay Judy)

Once the roofing was completed on all levels and had been fully approved by a Kemper representative, the trenches began to be refilled in lifts, with mechanical tamping between lifts to prevent settling. The crane retuned to the site after the trenches were filled to replace the coping stones. To prep the main deck for the stones, a layer of alkalinity protection was applied on the Kemper roofing at the perimeter before a mortar setting bed was installed for the coping stones. The first stone replaced was a 'keystone' at the intersection of the north and east curved wall. Working from the first keystone, the stones were lifted back in place one a time around the perimeter. The stones were placed onto a setting bed and re-set with new dry set stainless steel conjoined pins, using the same original bored locations. The transverse joints at the coping joints were all treated with backer rod and sealant to match the colour of the stone. The Redstone masonry surround at the entrance was also given a new application of sealant to match the copings as part of the work.

The last phase of work involved fully exposing the southwest rising wall return at the curved portion down to the footing at the transition from the entry hall into the main gallery space. The trenches during the investigation revealed that the Procor had not adhered into the corner, allowing water to travel down to the footing between the wall and Procor application. Leaks were continually appearing at the interior at the base of the wall in this location, prompting more invasive repair to the footing in this location. However, removing the berm to expose the fill wall involved a very large volume of the berm, and as such, limited pre-approved mechanical equipment was permissible (as opposed to removal of the berm by hand in other locations). The area exposed to treat the return itself and to lap onto the adjacent walls was 22 feet high and approximately 10 feet wide. Similar to the other parts of the berm that had been filled, this area was also replaced in lifts and tamped between layers.

The final scope of work was the actual berm profile restoration, which was accomplished by adding a new one-foot layer of premium topsoil to cover the entire berm, including the lower areas that had not been disturbed. The new layer of topsoil was seeded with a custom grass mix that had been curated by Johnson for the Glass House property (see Figure 6).

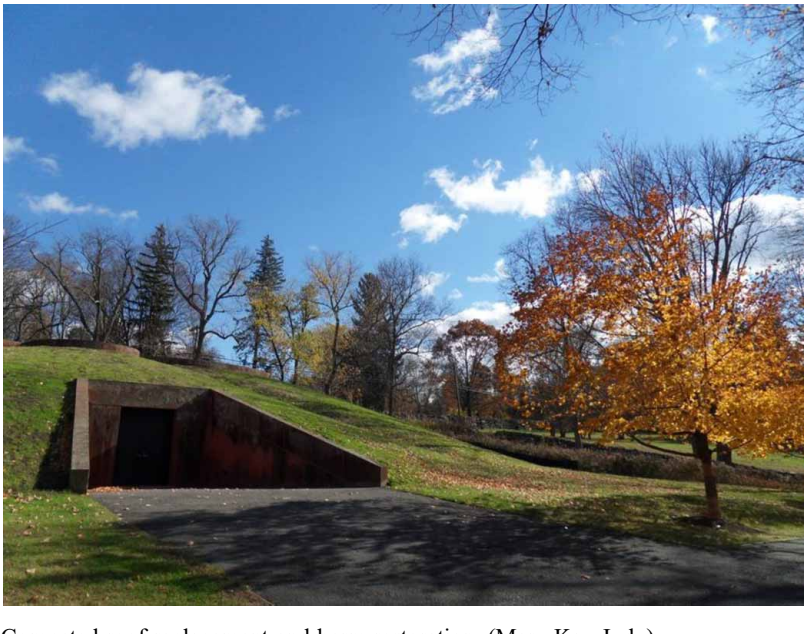

Figure 6. Competed roof replacement and berm restoration. (Mary Kay Judy)

With the full berm reseeding, the project was completed in October 2013. The art collection housed inside, carefully monitored while the project was ongoing, was not affected and the building was never closed during the construction to visitors.

For more information on visiting the Glass House please see www.theglasshouse.org/visit.

Notes on Contributor

Mary Kay Judy is an Architectural Conservator based in Brooklyn, New York. Her practice focuses on the documentation of architectural history and technical conservation treatments for long-term, sustainable preservation. Ms. Judy specializes in the conservation of Modern architecture and has been a consultant several significant properties including the Painting Gallery and Brick House at the Phillip Johnson's Glass House in Connecticut, Philip Johnson's 9 Ash Street House (Thesis House) in Cambridge, Massachusetts and the Mies van Der Rohe Farnsworth House in Plano, Illinois. Ms Judy has also consulted on the conservation of Modern architecture in Tallinn, Estonia; Tbilisi, Georgia; and Lucknow, India. Ms. Judy is the author of numerous articles on the conservation and preservation policy of Modern architecture including "*Moving Modern: Modern Architecture as Moveable Heritage*," published by the National Trust for Historic Preservation's Forum Journal.

Note

1. "Down With Art," by George O'Brien. New York Times: February 28, 1965.