La Mott BHAR Minutes
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La Mott Historic District, Township of Cheltenham
Board of Historical and Architectural Review
Meeting Minutes of
Thursday, October 19, 2017 at 6:30 P.M.

Location: Township Administration Building Annex, 8230 Old York Rd., Elkins Park, PA

Present: Mr. Timothy Hinchcliff, Chairman
Ms. Linda Foggie, Member
Mr. Heruy Sekawungu, Member

Absent: Ms. Darlene Melton, Vice Chairperson
Ms. Emma Trusty, Member
Ms. Zilan Munas-Bass, Member

1. Meeting Commencement

Chairman Hinchcliff called the meeting to order at 6:30 P.M. It was noted that there was no official quorum of voting members present.

2. Meeting Minutes

Since a quorum was not present, acceptance of the minutes of the September 18, 2017 meeting was deferred until the next scheduled meeting of the La Mott BHAR.

3. Application L17-203 of John L. Hopson, owner of the property located at 1713 Willow Avenue, La Mott, PA 19027.

Mr. Hopson was present to discuss his application for the installation of a new 6' high fence in the side yard of his property.

Mr. Sekawungu inquired about the material of the fence the applicant planned to install. Mr. Hopson responded that the new fence would be white vinyl to match the style currently at the rear of his property.

Application L17-203 of John L. Hopson, for a Certificate of Appropriateness for the installation of a new 6' high vinyl fence on the side of the property located at 1713 Willow Avenue, La Mott, PA, was informally recommended to the Public Works Committee for approval of the COA as presented.

4. Old Business.

Mr. Sekawungu provided the BHAR members with a copy of the completed brochure on the renovation of historic wood windows. Chairman Hinchcliff requested that it be placed on the Township website, and staff informed him that it would be.
Mr. Sekawungu provided copies of the SolSmart guidelines that had been revised based on comments from the La Mott and Wyncote BHAR members at their September, 2017 meetings.

Discussion ensued regarding the process by which the BHARs will review these types of applications, and it was agreed that they will be considered on a case-by-case basis to allow for differences in building type and location.

5. **New Business.**

There was no new business to report.

6. **Adjournment.**

Chairman Hinchcliff adjourned the meeting at 6:50 P.M.

Bryan T. Havir  
Township Manager

Per Heather Hubert
Township of Cheltenham
Board of Historical and Architectural Review

GUIDELINES FOR WOOD WINDOWS

Windows typically comprise at least one quarter of the surface area of the exterior walls of most historic buildings. In terms of operation, windows provide access to natural light and ventilation for a building. In terms of appearance, they are an important design feature that helps to define the style and period of a building. Whether elaborate or simple, windows demonstrate both the history of the building and the history of the methods of manufacturing when they were created.

Windows, including their shutters, trim and associated features, are important elements of historic buildings because they can:

- Act as a welcoming transition from the building's exterior to the interior
- Act as the "eyes" of a building
- Provide natural light and ventilation
- Help define architectural style and building type
- Help date the age of construction
- Define the character of each individual building and provide a visual connection to the streetscape
- Contribute to the visual cohesiveness and architectural vocabulary of the surrounding area

DEFINITIONS

Glazing: Glass
Light: A pane of glass
Mullion: The vertical framing element separating two window or door frames
Multi-light: Having many glass panes, as a window or door
Muntin: The narrow molding separating individual panes of glass in a multi-paned window sash
Rail: Any of various horizontal members that frame panels of a window or door
Sash: The part of the window frame that holds the glazing, especially when movable
Simulated Divided Light [SDL]: A window or door in which muntins are applied to a larger piece of glass at the exterior, interior and/or between layers of insulated glass
Single-light: Having one glass pane, as a window or door
Stile: Any of the various members that frame panels of a window or door, typically vertical
True Divided Light: A window or door in which a glass area is divided into several small panes
COMMON WINDOW TYPES
All of the identified window types can have different muntin patterns or configurations. Muntin patterns are defined in terms of the number of panes or lights. (Refer to Window Configurations at right for additional information.)

- **Fixed**: Non-operable framed glazing
- **Single-hung**: Fixed upper sash above a vertically rising lower sash
- **Double-hung**: Two sashes that can be raised and lowered vertically
- **Sliding**: Either a fixed panel with a horizontally sliding sash or overlapping horizontally sliding sash
- **Casement**: Hinged on one side, swinging in or out
- **Awning**: Hinged at the top and projecting out at an angle
- **Hopper**: Hinged at the bottom and projecting in at an angle
- **Vertical Pivot**: Pivots vertically along its central axis
- **Horizontal Pivot**: Pivots horizontally along its central axis

WINDOW CONFIGURATIONS
Window patterns and configurations are intrinsically linked to a building’s period of construction and architectural style. Older buildings, such as those built in the Federal period, typically have double-hung or casement windows with smaller panes of glass and more simplified detailing reflective of the materials and hand manufacturing processes readily available at that time. Late-19th century buildings, such as those from the Victorian period, often had windows of varying shapes with elaborate frames, casings, applied ornament and trim, and larger glass lights. Finally, Colonial Revival buildings of the early-20th century often reproduce aspects of the Federal style but might include larger lights.

Because all of the components and details of a window are essential to defining the construction period and style, the pattern and configuration of a proposed replacement window should be historically appropriate for each building. If considering a replacement window, it is important to keep in mind that altering the window type, style, shape, material, size, component dimension, muntin pattern or location can dramatically alter the appearance of the building.

The BHAR encourages:
- Matching the historic window configuration
- Matching the historic, exterior muntin pattern, profile and size as closely as possible
- Matching the historic window operation
- Installing true divided-light windows rather than snap-in muntin grids when feasible

The BHAR discourages:
- Use of internal muntins between glazing layers
- Installing an inappropriate window type, such as a casement in a former double-hung window location or an operable window in place of a fixed transom.
HISTORIC WINDOW PROBLEM SOLVING

Property owners may not pay attention to their windows until a problem occurs. Typical concerns include operability, air infiltration, maintenance and appearance. Generally, the appearance of a window that has not been properly maintained can seem significantly worse than its actual condition. Replacement of an entire wood window because of a deteriorated component, typically the sill or bottom rail, is rarely necessary. In many instances, selective repair or replacement of damaged parts and the implementation of a regular maintenance program is all that is required. It is generally possible to repair windows in fair or good condition relatively economically.

Maintenance

- Regularly review condition, repair and repaint windows
- Verify that sash cords, chains and weights are functional — Install metal sliders or sash tape, balances or operators at jambs if repair is not practical
- Repair or replace deteriorated components such as parting beads that separate window sash
- Remove built-up paint, particularly at jambs

To reduce air infiltration

- Replace broken glass (glazing)
- Install weather-stripping snugly between moving parts — Quality metal weather-stripping can last 20 years (Refer to Weather Stripping & Caulk, page 5)
- Re-caulk perimeter joints
- Remove and replace missing or cracked glazing putty
- Add sash locks to tighten windows
- Add interior or exterior storm window — A storm window can achieve similar R-values to a new thermal window
- Insulate weight pockets if no longer in use

To reduce solar heat gain or heat loss

- Install and utilize operable exterior shutters where historically appropriate
- Install interior blinds, curtains or UV window shades
- Plant deciduous trees at south and west elevations to block summer sun and allow in winter sun, and plant conifer trees at north to reduce effect of winter winds
- Install clear, transparent low-e film or glass
WINDOW REPAIR VERSUS REPLACEMENT

When considering repair and retention of existing windows versus installation of replacement windows, applicants are strongly encouraged to retain existing historic windows except in the case of extensive deterioration. In such a case, documentary evidence must be provided with an application. It can often be less costly to repair an existing historic window than to install a replacement window. (Refer to Historic Window Problem Solving, page 3.)

It is important to remember that although a portion of the window or door is deteriorated, replacement of the entire component or unit might not be necessary, particularly for wood windows. A simple means of testing wood window deterioration is to probe the element with an awl or ice pick. Pierce the element perpendicular to the grain at an angle where the wood appears darker in color and measure the penetration depth and damp wood and assess the type of splintering.

Less penetration and long splinters are an indication of healthy wood.

Greater penetration and short splinters against the grain are a possible indication of rot.

WOOD WINDOW REPAIR

Given the significance windows play in defining the architectural character of a building, the BHAR strongly encourages the maintenance and repair of existing windows. If portions of a window are deteriorated, it is often possible to replace only the deteriorated portion or component of the window. Replacement of the entire component or unit might not be necessary. When evaluating window repair versus replacement, the following guidelines can be helpful:

1. **Perform routine maintenance**: Replace broken or missing components such as trim, glazing or sash cords. Verify that caulking, glazing putty, parting beads and weather-stripping are applied securely and repaint the window.

2. **Treat or repair deteriorated components**: At the earlier stages of wood deterioration, it is possible to complete in-place treatments that do not necessitate component replacement. These include treating wood for insects or fungus, consolidating with epoxy and applying putty at holes and cracks and painting.

3. **Replace Deteriorated Components**: Replace either the deteriorated portion of wood with a “Dutchman” or the entire component if the majority is deteriorated. (A Dutchman is a repair with a piece of the same material in a sharp-edged recessed cut. Refer to photograph below.) The replacement piece should match the original in design, shape, profile, size, material and texture. New wood sills are usually easily installed, while complete sash replacement might solve problems of broken muntins and deteriorated rails.

4. **Replace Window**: If the majority of the window components are deteriorated, damaged or missing and in need of replacement, installation of a new window that matches the original window might be warranted with appropriate documentation.

One of the advantages of historic wood windows over a modern prefabricated unit is repairability. This photograph demonstrates a Dutchman repair at the corner of the historic wood window sash. Also note the application of new glazing putty as part of the repair.
WEATHER STRIPPING & CAULK

Proper application of weather stripping and caulk around windows and doors can greatly reduce air infiltration and drafts. When selecting weather stripping or caulk, choose materials appropriate for each location and follow the manufacturer's installation recommendations for best results. Because weather stripping is used between the moving parts of windows and doors, it can easily become damaged, loose, bent or torn. Inspect weather stripping regularly, preferably every fall, and replace it as needed. For heavy-use installations such as entrance doors, it may be beneficial to install more durable weather stripping, such as spring metal or nailed felt.

The installation of caulk or other sealants should occur throughout the exterior of the building to minimize interior drafts and to protect the building's wall system from wind-driven rain. Locations where caulk is recommended include where two dissimilar materials meet; where expansion and contraction occur; or where materials are joined together. Select caulks and sealants that can be sanded and/or painted to minimize their visual appearance. In addition, care should be taken to prevent caulk or sealant from being smeared onto the face of adjacent materials since the residue might affect paint adherence. It is also important to select the appropriate type for each location and exercise care when removing old caulk that might contain lead.

Recommended weather-stripping locations:
- Behind window sash track
- Between window meeting rails
- At perimeter of doors/windows

Recommended caulk locations:
- Between door/window frame and adjacent wall
- Between abutting materials such as corner boards and siding, porch and wall surface
- Between dissimilar materials such as masonry and wood, flashing and wall surface

DEFINITIONS

Weather Stripping: A narrow compressible band used between the edge of a window or door and the jambs, sill, head and meeting rail to seal against air and water infiltration; made of various materials including spring metal, felt, plastic foam and wood with rubber edging.

Caulk: Flexible sealant material used to close joints between materials, made of various materials including tar, oakum, lead, putty and modern elastomerics such as silicone and polyurethane.

Expansion / Contraction: Building materials expand and contract due to changes in temperature, which can lead to open joints and water infiltration.
WINDOW MATERIALS: PAST & PRESENT

Wood windows were historically manufactured from durable, close-grained hardwood of a quality uncommon in today's market. The quality of the historic materials and relative ease of repairs allows many well-maintained old windows to survive from the early 20th century or earlier.

Replacement windows and their components tend to have significantly shorter life spans than historic wood windows. Selecting replacement windows is further complicated by manufacturers who tend to offer various grades of windows, with different types and qualities of materials and warranties. Today, lower-cost wood windows are typically made from new growth timber, which is much softer and more susceptible to deterioration than the hardwoods of the past. New wood windows can include aluminum or vinyl cladding, providing exterior protection and reducing maintenance. Vinyl and PVC materials, now common for replacement windows, break down in ultraviolet light, and generally have a life expectancy of less than 20 years. Fiberglass and composite windows, typically made from a combination of wood material and plastic resins, have only been available since the 1990's, so their longevity has not been fully evaluated. Because of the great variety of finishes for aluminum windows, they continue to be tested to determine projected life spans.

Other areas of concern with replacement windows, beyond the construction materials used in the frame and sash, include the type and quality of the glazing, seals, fabrication and installation. Double glazing or insulated glass, used in most new window systems, is made up of an inner and outer pane of glass sandwiched a sealed air space. The air space is typically filled with argon gas and sealed around the perimeter. This perimeter seal can fail in as few as 10 years, resulting in condensation between the glass layers, necessitating replacement to allow for clear visibility. Many of the gaskets and seals that hold the glass in place also have a limited life span and deteriorate in ultraviolet light.

Significant problems with replacement windows also result from poor manufacturing or installation. Twisted or crooked frames can make windows difficult to operate. Open joints allow air and water infiltration into the wall cavity or building interior. When selecting replacement windows, it is important to consider life span and life-cycle costs.

ALUMINUM WINDOWS

When the majority of windows in commercial and large-scale residential buildings are deteriorated, property owners often seek a quality replacement window that will not require a high level of maintenance. One option that is often considered is aluminum replacement windows. Because aluminum replacement windows are typically custom made to fit within existing masonry openings, they are frequently used in larger commercial applications rather than as replacement windows for single or two-family homes.

Some of the advantages of aluminum replacement windows is that they can usually be made to replicate historic wood windows while including insulated glass for better thermal performance. This replication can include the sash operation and exterior profiled muntins matching the historic configuration. In addition, because they have a factory-applied baked on paint finish, which can selected to match historic paint colors, they do not require the regular repainting associated with wood windows.

Because of the strength of aluminum and its ability to fasten the parts of the window together with strong connections, aluminum replacement windows can easily outlast the lifespan of vinyl alternatives by two to three times depending on the quality of each product. Although the initial costs associated with aluminum replacement windows is typically greater than vinyl, the life-cycle costs associated with more frequent replacement of lower-quality windows might provide overall costs savings in the long run. In addition, the overall thermal performance of an aluminum replacement window tends to be higher than most vinyl windows, allowing for energy costs savings for the building occupants.

REPLACEMENT WINDOW QUALITY

Reputable mill shops, lumber yards and window specialists typically provide a better selection and higher quality replacement window options than companies that advertise with bulk mailings or flyers. Local companies are often familiar with the unique attributes of window detailing for building types and periods in Cheltenham and are a better option for matching historic detailing. Additionally, the best quality replacement window can often be found in an architectural salvage store. Because of the traditional craftsmanship and high quality of wood used in historic windows, a salvaged and repaired window will often outlast a replacement window.

REPLACEMENT WINDOW COSTS

The costs that should be anticipated when considering the installation of replacement windows include:

- Labor to remove old windows and a disposal fee
- Purchase price and delivery of new windows
- Labor and materials to modify existing framing for new windows
- Labor to install new windows
- Life-cycle cost of more frequent replacement of deteriorated components, sash and window units
FIBERGLASS & COMPOSITE WINDOWS
Fiberglass windows are made from sand, while composite windows are made from sand combined with wood pulp. When compared to vinyl windows, fiberglass and composite windows:
• Are stronger, harder and more rigid than vinyl - Thus requiring smaller frame and sash dimensions and allowing greater glass sizes and admission of sunlight
• Have similar expansion and contraction rates as wood and glass, minimizing seasonal opening of seams and joints
• Can be fabricated with profiled exterior frames and exterior muntins to approximate the appearance of wood windows
• Can have a paintable, exterior finish

Both fiberglass and composite windows tend to be more affordable than wood windows. However, there is great variety in the types of detailing, with some manufacturers doing a better job of approximating the appearance of wood windows. Care should be taken in reviewing the appearance with regard to all dimensions, such as frames, sash and muntin thicknesses, as well as overall configuration.

CLAD WOOD WINDOWS
Aluminum and vinyl clad windows are constructed of solid wood with applied exterior cladding, providing an added exterior layer of protection, thus minimizing the effects of moisture typically experienced with natural wood, such as warping, contracting or expanding and rotting. Both options can be custom made to fit the historic opening and special window shapes. Clad windows typically have simulated divided lights, in which the muntins are applied to the exterior and interior of the window glass, and sometimes between the layers of insulated glass. The muntins are available in a variety of widths and profiles, allowing compatibility with a building’s architectural style when applied at the exterior face of the glass. One of the key differences is that aluminum clad options tend to have crisper detailing, more closely approximating wood than vinyl, which usually has rounded edging.

When selecting a clad window, it is important to keep in mind that it is difficult to paint both aluminum and vinyl, so the initial color selection should be in keeping with the architectural style and long-term color palette of the building. While the color selection for vinyl cladding is typically very limited, there is a greater range available for aluminum window cladding.

VINYL WINDOWS
One of the claims of vinyl window vendors is that their replacement windows do not require maintenance. However, considering the relatively short life span of many of the materials and components, they will need continual replacement. Disadvantages include:
• As joints or seals in a replacement window deteriorate, openings can be formed that allow air and water to enter causing additional damage. Repair of these openings requires replacement of the deteriorated parts. This can present a problem if the manufacturer has modified the design or is no longer in business, necessitating custom fabrication of a deteriorated element or replacement of the entire window.
• The perimeter seal of double-glazing deteriorates over time. In addition, if the glazing unit is cracked or broken, it will require full replacement. This is complicated further when the double-glazing includes an applied or internal muntin grid which must be duplicated as part of the replacement. Additionally, vinyl windows do not provide moulded trim and muntin profiles appropriate to the style and age of the building.

WINDOW MATERIAL REVIEW
Although replacement-in-kind is the preferred approach, the BHAR will consider the following replacement window materials, provided all options include profiled, exterior muntins, appropriate to the building style and period of construction:
1. Wood windows can either be true or simulated divided lights with insulated glass and exterior muntins
2. Aluminum (generally limited to commercial buildings and new construction) details and profiles should generally match wood construction
3. Fiberglass & composite with a painted exterior finish
4. Aluminum clad details typically vary, and it is difficult to modify color/paint
5. Vinyl clad generally lacks sharp details of wood, has a glossy finish, and is difficult to modify color
6. Vinyl windows lack exterior profiles, details of wood, and glossy finish; are difficult to modify color; tend to require more frequent replacement — not encouraged
**WINDOW OPTIONS**

Repair or replacement of existing components:
Deteriorated sills, sash and muntins are repairable by craftsmen with wood consolidant or replacement parts, retaining original fabric and function. In-kind replacement sash components and sills can be custom-made to replace deteriorated elements if necessary. Property owners are strongly encouraged to explore repair and selective replacement parts options prior to considering whole sash or frame replacement, particularly at historically significant buildings.

**Repair and selective component replacement benefits:**
- Original building fabric and historic character remain
- Historic profiles, dimensions and proportions can be retained and matched
- Repairs can be completed by skilled local carpenters
- Timber used in historic windows can last substantially longer than replacement units

**Sash replacement package:** If the sash is beyond repair, some manufacturers offer replacement jamb liners and new sash for installation within existing window casings. (Jamb liners are the vertical internal facing between the window sash and structural frame.) Because of the loss of the historic sash, this option is discouraged by the BHAR.

**Sash replacement package disadvantages:**
- Stock replacement sash are often inappropriate to the size, profiles and proportions of existing openings and detailing
- Replacement sash have a limited warranty, likely needing another partial or full replacement in 10 to 25 years as seals and joints open
- Modification of the jambs is necessary
- Liner often made from vinyl or other inappropriate material
- The jamb liners do not always work well in existing window openings and might need more frequent replacement
- Out-of-square (wracked) openings can be hard to fit, making window sash hard to operate, and seals might not be tight
- Historic sash are removed and become landfill debris

Frame and sash replacement unit: If the frame is beyond repair, a frame and sash replacement unit is a complete frame with a pre-installed sash of various muntin patterns for installation within an existing window frame opening. Due to the total loss of the sash and modification of the frame, this is discouraged by the BHAR for historic buildings. It might be an option in new construction, based upon the specific circumstances of a project.

**Frame and sash replacement unit disadvantages:**
- Stock replacement sash are often inappropriate to the size, profiles and proportions of existing openings and detailing
- As the surrounding frame typically must be modified, alteration of built-in surrounds might be required and two frames and sills are typically visible at the exterior
- The size of the window sash and glass openings are reduced due to the new frame within the old frame
- In-fill might be required for non-standard sizes
- Modification of existing casing and sills may be required
- Historic sash are removed and become landfill debris
MODIFYING OR ADDING OPENINGS

The arrangement, size and proportions of window and door openings are key components of a building's style and character. As a result, the modification or addition of window or door openings, particularly on more prominent building façades, is strongly discouraged. This includes the infill of all or part of an opening to make it smaller or to visually remove it. It also includes increasing the size of a door opening to provide a larger opening for a display window, garage, loading dock or other use.

INSTALLING REPLACEMENT WINDOWS

When installing windows, it is important to keep in mind that the overall appropriateness of any installation is largely based upon its details. It is generally best to review buildings of similar style, materials and construction period for the appropriate details for a project.

- **Wall Plane** — An easy way to identify new windows is by how far back a window is set into a wall plane from the outside wall face. A historic window tends to have greater depth than a new window, with the window casing, frame and sash receding back from the wall plane, providing shadow lines between components.

- **Casing & Sill** — Many replacement windows do not come with a factory-installed casing or sill, requiring them to be field-applied by a contractor during installation. To ensure that the replacement windows look like they "fit" a building, the stylistically appropriate casing and sill should be installed related to the building's style and construction type, either masonry or wood-framed.

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**If replacement windows are warranted, the BHAR encourages:**

- Relocating historic windows to the publicly visible elevations and installing replacement windows at less visible areas
- Installing quality wood windows when replacement is deemed necessary
- Choosing window style or configuration based upon historical or physical documentation
- Matching the original dimensions (including for the stile and rail), shape, operation, muntin pattern, profiles (including the sill and head) and detailing to the greatest extent possible
- Selecting true divided-light windows when at all possible
- Maintaining serviceable trim, hardware and components or utilizing hardware appropriate for the historic period
- Review of various grades of windows offered by manufacturers
- Utilizing quality materials throughout the installation process
- Understanding the limits of the warranties for all components and associated labor

**The BHAR discourages:**

- Selecting a reputable manufacturer and installer who is likely to be in business and respond if there is a future problem
- Using storm windows rather than replacement windows as the best means to achieve energy efficiency
- Reducing solar heat gain or loss through such activities as: utilizing shutters, blinds or curtains, strategically locating trees and installing UV protection

Replacing historic wood windows with new windows made from a different material
- Decreasing or enlarging window size or altering the shape to allow for installation of stock window size
- Increasing window sizes or altering the shape to allow for picture or bay windows
- New window openings at publicly visible elevations
- Filling or closing in window openings
- Interior or internal muntin grids for multi-paned appearance
- Single-light windows where multi-paned windows historically existed

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Replacement windows should match the historic opening size and shape. For example, round-headed openings should not be modified to accept square-headed sashes.

The historic wood casing and sill should be repaired and repainted. Enclosing wood elements can hide deterioration and lead to additional problems.
INAPPROPRIATE REPLACEMENT WINDOWS

The following diagrams indicate historic windows with inappropriate examples of replacement windows. When considering a replacement window, the size, operation, configuration, shape and proportions of the existing window must be replicated and historic trim must be retained or replicated.

- **Size:** The replacement window should be sized to fit the window opening — An infill panel should not be installed.

- **Operable Shutter:** The replacement window should be operable — An infill panel should not be installed.

- **Shape:** The replacement window should be shaped and sized to fit the window opening — An infill panel should not be installed.

- **Configuration:** The replacement window should have a 4/1 light configuration to match the historic window.

- **Concentration:** The replacement window should have a 4/1 light configuration to match the historic window.

- **Proportions:** The proportions of window components should match the historic window, including the size of the frame and muntins.

- **Depth in Wall:** The location of replacement window should be set back into the wall the same distance as the historic window.

- **Type:** The replacement window should match the type of historic window.

- **Decorative Trim:** Decorative trim should be retained or replaced to match the historic trim.
SHUTTERS

Historically, exterior shutters were used as shielding devices to modulate light and protect against inclement weather. Paneled shutters were installed to provide a solid barrier when closed and louvered shutters were used to regulate light and air. Shutters were not used on all historic buildings or in all locations. Some building styles did not typically include shutters. It is often possible to determine if shutters previously existed by looking for hardware such as hinges or tie-backs or evidence of their attachment, such as former screw holes in the window casing.

SHUTTERS REVIEW

The BHAR encourages:

- Maintaining historic shutters
- Installing shutters where they existed historically
- Operable shutters made of materials with a paintable finish that match the original size, shape and type with refurbished or appropriate hardware
- Shutters of the appropriate style for the house and location
- Appropriately sized and shaped shutters for the window opening, fitted to cover the entire window when closed
- Retaining and reusing or utilizing refurbished historic shutter hardware

The BHAR discourages:

- Installing shutters where they did not exist historically
- Shutters screwed or attached to the face of the building or window trim
- Installing vinyl or aluminum shutters
SCREEN / STORM WINDOWS

Screens and storms should conceal as little of the historic window or door as possible and should be selected to complement each window or door type. This generally means selecting a half-screen for double-hung windows and a wood storm window that has rails that coincide with the frames, rails, stiles and glazing pattern and overall configuration of the associated window.

The most recommended option for a screen or storm sash is a simple wood framed opening with minimal ornament. If more elaborate detailing is desired, the style and level of detailing should complement the building style, for example, a screen or storm window with Victorian gingerbread would not be appropriate for a Colonial style house.

STORM WINDOWS REVIEW

The BHAR encourages:

- Interior storms to minimize the change to the exterior appearance
- Retaining wood storm frames rather than replacement with aluminum or vinyl; wood storm windows can be custom made to fit any size or shaped opening, and lose less heat through the frame than aluminum
- Simple storm windows that reveal as much of the historic window as possible and match the size and shape of the original opening
- Aligning the divisions of the storm window with the divisions of the window, revealing as much of the historic window as possible
- Utilizing glass rather than Plexiglas, which can discolor and alligator
- Painting the storm window frame to match the adjacent window trim
- Minimizing damage to historic windows and frames during the installation of storm windows
- Caulking and weather-stripping the storm window in accordance with manufacturer’s instructions allowing for exterior drainage at the sill
- Removable storm sash to facilitate maintenance of historic window

The BHAR discourages:

- Vinyl, aluminum, metal or other synthetic materials for storm frames – Wood frames can be custom made to fit any size or shape opening
- Stock storm units that require in-fill panels within an existing window opening
- Storms adhered or fastened directly to window or door trim, shutters or blinds
- Triple track exterior aluminum storm sash at visible street elevations
- Fixed storm sash

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This program received Federal financial assistance for identification and protection of historic properties. Under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, and the Age Discrimination Act of 1975, as amended, the U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, disability or age in federally assisted programs. If you believe that you have been discriminated against in any program, activity, or facility as described above, or if you desire further information, please write to: Office of Equal Opportunity; National Park Service; 1849 C Street, N.W.; Washington, DC 20240. Prepared by:

PDP Preservation Design Partnership, LLC
Philadelphia, PA www.pdparchitects.com
Guidelines for Solar PV in Cheltenham’s La Mott and Wyncote Historic Districts

These guidelines are designed to help those considering the installation of solar PV on properties located within Cheltenham’s La Mott and Wyncote Historic Districts. All solar panel installations in these districts will be reviewed by the BHARs on a case by case basis recognizing that the best option will depend on the characteristics of the property under consideration. The overall objective of these guidelines is to ensure that all solar PV installations in these historic districts preserve character-defining features and historic fabric of each property while accommodating the need for solar access to the greatest extent possible. A list of the guidelines that the BHAR will use to review each solar PV project is provided below. These guidelines are derived from the National Trust for Historic Preservation: Solar Panels on Historic Properties Guidance, and the Secretary of the Interior’s Standards for Rehabilitation and Guidelines for Sustainability.

1. **Installing solar technology should occur only after implementing appropriate treatments to the building to improve its energy efficiency.** On-site, solar technology should be considered only after implementing appropriate treatments to improve energy efficiency of the building, which often have greater life-cycle cost benefit than on-site renewable energy.

2. **Attempt to locate solar panels on the site (ground mounted), on new additions, or accessory buildings first.** If possible, use a ground-mounted solar panel array. A ground mounted system should respect the building’s historic setting, and be sited in an inconspicuous location, such as a rear or side yard, low to the ground and sensitively screened to further limit visibility. Further, ground mounted solar arrays must comply with all applicable zoning regulations as defined by Cheltenham’s zoning code. If ground mounted is not feasible for your site, consider locating solar on inconspicuous locations on new additions to the property, or if no new additions exist, on any non-historic buildings or accessory structures that have been added to the property. Only after these aforementioned solutions have been evaluated should installing solar on the rooftop of the primary use historic building on a site be evaluated.

3. **Place solar panels in areas that minimize their visibility from a public thoroughfare.** The primary façade of a historic building is often the most architecturally distinctive and publicly-visible, and thus the most significant and character-defining. To the greatest extent possible, avoid placing solar panels on street-facing walls or roofs, including those facing side streets. Installations below and behind parapet walls and dormers, or on rear-facing roofs, are often good choices.

4. **Avoid installations that would result in the permanent loss of significant, character-defining features of historic resources.** Solar panels should not require alterations to significant or character-defining features of a historic resource, such as altering existing roof lines or dormers. Avoid installations that obstruct views of significant architectural features, such as overlaying windows or decorative detailing, or intruding on views of neighboring historic properties in an historic district.

5. **Avoid solutions that would require or result in the removal or permanent alteration of historic fabric.** Solar panel installations should be reversible. Use of solar roof tiles, laminates, glazing and other technologies that require the removal of historic fabric or would permanently damage such fabric must be avoided. Consider the type and condition of the material upon which installation is proposed as well as the method of installation and removal down the road. For example, metal and slate roofs may be able to accommodate
solar panels better than other types of materials. It may also be possible, through the use of brackets, to minimize the points of attachment to a structure.

6. **Require low profiles.** Solar panels should be flush or mounted no higher than a few inches above the roofing surface and should not be visible above the roofline of a primary façade.

7. **On flat roofs, set solar panels back from the edge.** Flat roofs often provide an ideal surface for solar arrays. To minimize visibility, ensure that the panels are set back from the edge and adjust the angle and height of the panels as necessary.

8. **Avoid disjointed and multi-roof solutions.** Panels should be set at angles consistent with the slope of the supporting roof. For example, avoid solutions that would set panels at 70 degree angles when the roof slopes at a 45 degree angle. In addition, panels should be located on a single roof and arranged in a pattern that matches the configuration of the roof upon which they are mounted.

9. **Ensure that solar panels, support structures and conduits blend into the resource.** The visibility of solar panels and support structures can be substantially reduced if the color matches the historic resource and reflectivity is minimized.