FORT SMITH HISTORIC DISTRICT COMMISSION
REGULAR MEETING
DECEMBER 7, 2023 5:30 P.M.
DARBY COMMUNITY CENTER, 220 NORTH 7TH STREET

AGENDA

I. CALL TO ORDER

II. ROLL CALL

III. STATEMENT OF QUALIFICATIONS

IV. CITIZENS FORUM

V. PUBLIC HEARING

A. Historic Name: Louis Weinstein House
Construction Date: c. 1890
Address: 311 North 8th Street
Owner: Ashley and Emilee Moss
Style Influence: Folk Victorian
Significance: (1) Very Significant

Historic Name: G.T. Williams House
Construction Date: c. 1890
Address: 315 North 8th Street
Owner: Ashley and Emilee Moss
Style Influence: Queen Anne/Eastlake
Significance: (1) Very Significant

- Request for reconsideration regarding substitute materials on privacy fence

VI. NEXT MEETING DATES

Study Session – December 28, 2023 – 5:30 pm
Regular Meeting – January 4, 2024 – 5:30 pm

VII. ADJOURN

AMD-1 10/27/2023

Memorandum of Understanding

Subject: Darby House Fence Hardie Board HZ10

The Darby House disputes the material denial of Hardie Board HZ10 for not being durable enough material compared to traditional wood fencing planks.

1. Hardie fiber HZ10 boards are far less susceptible to damage or rotting in addition to being known for low maintenance. James Hardie HZ10 boards / planks are designed to resist minor to moderate hail impact. It's made of fiber cement, which is known for its durability. The boards have baked-on ColorPlus finishes making painted surfaces also resistant to impact damage.
2. Fort Smith Arkansas has a semi-arid to arid climate with mild winters and hot summers with extreme UV exposure. Hardie HZ10 products are formulated with the highest quality raw materials to help resist cracking, splitting, rotting, and swelling in addition to being resistant to damage with up to softball size hail.
3. Insects can wreak havoc with other traditional types of wooden or synthetic boards that do not affect Hardie HZ10 boards and or products.
4. Hardie fiber HZ10 boards are designed to be resistant to rain, hail, high winds, storms, snow, ice, harsh humidity, temperature changes, insects, and therefore is the best choice for fencing material.
5. Commercial HZ10 used in fences https://primewaywood.com/fiber-cement-board/
6. More detailed reports can be found at Hardie manufacture website under the GOVERNMENT REPORTS & RESOURCE CENTER. https://www.jameshardiepros.com/pro-support/resource-center
7. Fence installation companies using Hardie fiber board in commercial applications.
   a. https://primewaywood.com/fiber-cement-board/
   b. https://texasfence.com/benefits-of-hardie-plank-fence/

Thank you,

Ashley Moss
Director
Darby House
311 N 8th Street
Fort Smith, AR 72901
913.940.5642

Belle Grove Historic District
c/o City of Fort Smith Planning Dept.
P.O. Box 1908 or 623 Garrison Ave., Rm 331
Fort Smith, AR 72902

Certificate of Appropriateness Application Form

(please use blue or black ink only)

PROPERTY LOCATION

Historic Name of Property Darby House 311 N 8th Street & 315 N 8th Street Lot 9 Block 32

Address _____

Lot Number _____ Block Number _____

OWNER

Name Ashley Moss

Address 1315 N 52nd Street Fort Smith AR 72904 Phone (913)940-5642

PERSON FILING APPLICATION, IF OTHER THAN OWNER darbyhousenpo@gmail.com

Name _____

Address _____ Phone _____

BUILDING DATA

Construction Date: ASAP

Type of Construction: Wood Frame ____ Brick ____ Stone ____ Other X

Original Use: simular to David Craigs' fence at 322 N 8th Street will look like wood from the outside looking in

Single Family Residential X Multi-Family Residential ____

Hotel/Boarding House ____ Office ____

Commercial/Retail ____ Industrial ____

Vacant ____ Combined Uses ____

Other Darby House use with Ranger Team Room (Private)

CONCISE DESCRIPTION OF PROPOSED WORK: (Attach additional papers if necessary)

Historic Heritage Colors 1820-1920 Historical Color Collection color Waterbury Cream HC-31 color match by Sherwin-Williams Architectural Latex FM8000XL same as order #0097620 9/18/21 8ft fence closing sides and rear of 311 & 315 N 8th Property. to complemunt ADA dogs, veteran needs, and eliminate theft, vagrant harassment/general safty of visitors. Match height of existing fence

PROJECT ARCHITECT/ENGINEER:

Name Ashley Moss (owner)/Director of the Derby House

Address 1315 N 52nd Street Fort Smith AR 72904 Phone 913 9405642

MINOR WORK APPROVAL

_____ staff

_____ date

Upon being signed and dated above by the Planning Director or designee, this application becomes the Minor Work Certificate of Appropriateness. It is valid until _____. Issuance of a Minor Work Certificate shall not relieve the applicant, contractor, tenant, or property owner from obtaining any other permit required by City code or any law. Minor work projects not approved by staff will be forwarded to the Certificate of Appropriateness Committee for review at its next meeting.

CATEGORIES OF MINOR WORK

(A) Emergency, temporary maintenance and repair which does not permanently alter the distinctive features of the subject building, structure or property, all required City of Fort Smith permits are obtained, and the owner of the property commits to apply for a certificate of appropriateness to make permanent repairs within thirty (30) days of the date on which the administrative staff grants written approval of the emergency, temporary repair;

(B) The installation of HVAC equipment that is located in the rear or on the side of the property and is entirely screened from public view with wood lattice panels or plantings;

(C) The installation of electrical and telephone panels, cable connections, satellite dishes, gas meters, or window air conditioning units that are located on a building's rear facade;

(D) The installation of a roof ventilation device not larger than twelve inches height and located

on the rear of the building's roof;

(E) The installation of a privacy fence that is made of wood with flat boards in a single row, no taller than six feet, located in the rear of the property and set back from the building's front facade at least one-half the distance between the front facade and the property's rear property line;

(F) Installation of a picket fence that is made of wood, no taller than three (3) feet, with pickets no wider than four (4) inches and spacing between pickets of not more than three (3) inches, and painted white or neutral color; Cream HC-31 (Tan)

(G) Removal of a chain link fence;

(H) Installation of storm windows that match the design, configuration, and color of the existing windows;

(I) Repair and replacement of a sidewalk or driveway on public and private property that does not involve a change in size material, and location;

(J) The construction, replacement, or repair of a public street or alley; and,

(K) The painting of or installation of shingles on the roof of any building or structure provided the paint colors or shingle color is consistent with the Commission's adopted list of approved paint and shingle colors for use within the historic district.

CERTIFICATE OF APPROPRIATENESS

Please include the following items that are application specific:

On Existing Buildings:

- ❑ COMPLETE THE CERTIFICATE OF APPROPRIATENESS APPLICATION FORM
- ❑ CURRENT COLOR PHOTOGRAPH OF EXISTING APPEARANCE OF STRUCTURE showing its present condition and the existing materials, colors, and textures.
- ❑ ELEVATION DRAWINGS- Dimensional drawings of all elevations showing proposed exterior architectural changes.
- ❑ PAINT SAMPLES required when changing color. Provide manufacturer's samples or samples of actual paint. Indicate manufacturer's name and the name of the color.
- ❑ SIDING SAMPLE- Provide a piece of the siding or a manufacturer's brochure showing a picture of the siding and indicating the specifications.
- ❑ WINDOWS- indicate window frame material- wood, vinyl or aluminum- indicate size and style.
- ❑ SHINGLES- Provide a sample of the shingle and manufacturer's name and color of the shingle.
- ❑ OTHER EXTERIOR DETAIL NOT LISTED ABOVE. Provide sample of the detail along with the

manufacturer's name and specifications.

On New Construction:

- ❑ COMPLETE THE CERTIFICATE OF APPROPRIATENESS APPLICATION FORM.
- ❑ SITE PLAN OF PROPERTY (Recommended scale: 1 inch= 20 feet) Include location of all structures and outside equipment (trash, mechanical, common mail boxes, walls, fences, external lighting fixtures, existing and proposed structures, etc.) Show parking areas, driveways, walks, and other hard surface areas. Indicate on the site plan, materials to be used. A surveyed drawing of the perimeter of the lot(s) is required for all Category III applications that involve a change of footprint.
- ❑ ELEVATION DRAWINGS- Dimensional drawings of all exterior elevations. Show textures, architectural details and materials. An additional drawing showing landscaping is desirable. (Recommended Scale: at least 1/4 inch = 1foot).
- ❑ PAINT SAMPLES required when changing color. Provide manufacturer's sample or samples of actual paint. Indicate manufacturer's name and the name of the color.
- ❑ SIDING SAMPLE- Provide a piece of the siding or a manufacturer's brochure showing a picture of the siding and indicating the specifications.
- ❑ WINDOWS- indicate window frame material- wood, vinyl, or aluminum- indicate size and style.
- ❑ SHINGLES- Provide a sample of the shingle and the manufacturer's name and color of the shingle.
- ❑ OTHER EXTERIOR DETAIL NOT LISTED ABOVE. Provide sample of the detail along with the manufacturer's name and specifications.

Certificates of Appropriateness are effective immediately upon issuance. Any work done outside the scope of the Certificates of Appropriateness renders it null and void.

I hereby certify I am the owner, agent of the owner, or other person in control of the property and that the information given herein, and as shown on the application and Certificate of Appropriateness, is true and that I am authorized to obtain this Certificate of Appropriateness. I understand that if the construction and/or installation for which this Certificate of Appropriateness is issued, is contrary to the requirements of city codes or regulations, violations must be corrected. Approval by the Historic District Commission does not excuse the applicant, owner or agent from compliance with any other applicable codes, ordinances or policies of the City of Fort Smith unless expressly stated by the Commission or its staff.

Upon approval of commission, all applicants must purchase a permit from the City Building Inspector.

Penalties: Violation of the ordinance constitute a misdemeanor, and violators upon being found guilty shall be fined not less than $10 nor more than $500. Each day that a violation continues to exist shall constitute a separate offense**. (Reference State Act 14-172-204)

** (If cited for violation, applicant may appeal in court)

SIGNATURE OF APPLICANT _____ 9/24/2023
(Date)

The Planning Department will mail notices of hearing on all Certificate of Appropriateness applications to adjacent property owners at least 10 days prior to the date of the hearing and publish a notice of the Historic District Commission at least 1 time in a newspaper serving the population of Fort Smith at least 15 days prior to the hearing date.

Application is: Approved_____, Denied_____, Deferred_____

Reason for approval, denial or deferral:

_____

_____

_____

_____

_____

_____

_____ _____
Signature of Historic District Chair *Date Action Taken*

_____
Date of Issuance


311


SIMPSON
Strong-Tie®
PGT2
(2-3/8" DIA)


SIMPSON
Strong-Tie
ABU44Z
ESR-2523
Use & Warning
strongtie.com/info

No. 6922

12"
NOMINAL

QUIK-TUBE®
Calculations

No. 6922

12"
NOMINAL

2.4 Fences and Walls

Numerous patterns and styles and several different materials of fencing are in the Belle Grove Historic District. These should be preserved and retained.

The materials used for the fences are wood and metal. Some of the metal fences are constructed above low stone or brick walls. Some of the fences have very decorative patterns, corner posts and gates. Fences and walls have served as security barriers and property line markers and to keep pets or children at home. Low stone or brick walls have been used as retaining walls at some locations.

For these guidelines, corner properties are to be considered as having two front yards.

See Section 4.3 for Sample-Site Layout Sketch.

2.4 Fences and Walls: Guidelines

Recommended

.1 Fences of iron, wood, stone or brick original to the historic site, or at least 50 years old, should be preserved and retained. If missing, may be reconstructed based on documentary and pictorial evidence.

.2 Iron fences are compatible with substantial-sized buildings other than bungalows and craftsman style houses which had wood fences.

.3 Protect and maintain wood, masonry and metal elements of fences and walls by appropriate means. Refer to Guidelines in Section 3 for further information.

.4 For repair and replacement of parts or all of the components, refer to Section 3.

.5 Introduce new fences or walls of traditional materials only in locations and designs which are characteristic of the District.

.6 Wood picket fences may be located in front and side yards of bungalows and craftsman style houses generally on property lines. They should be painted or stained white or light beige tones; have a height of three feet maximum; pickets no wider than four inches and spaced no further than three inches apart; and of a design that is compatible with the house.

.7 For these guidelines, corner properties are to be considered as having two front yards. Privacy wood board fences should be restricted to the rear yards; no taller than six feet; set back from the front facade at least one-half the distance between front and back walls of the building. Boards should be flat in a single row, and if painted should blend with the structure. The design should be compatible with the building.

.8 Planting of ivy, vines or shrubs to cover or screen existing chain-link fencing is encouraged.

Not Recommended

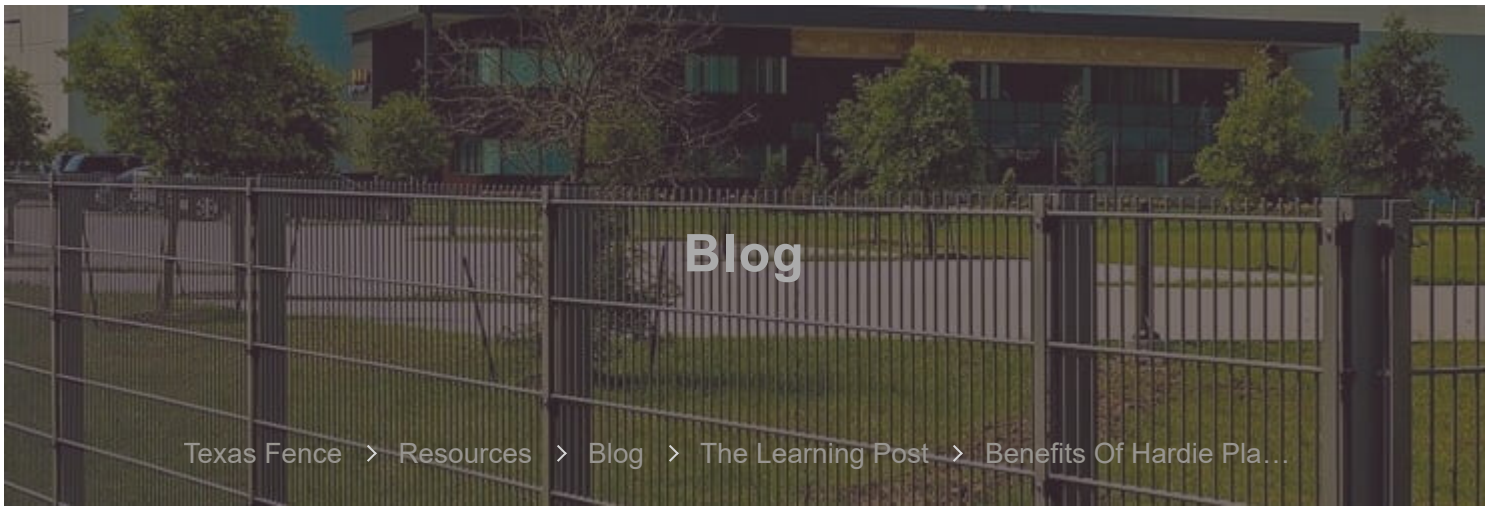
.9 Installing chain-link fencing or vinyl composite fencing.

.10 Removing historic fencing or cutting out sections for driveways or walkways.

.11 Installing non-appropriate fencing materials or patterns.

.12 Constructing concrete and concrete block, railroad ties or landscape timber walls or retaining walls.

.13 Locating fences incorrectly.



April 3, 2023 By: Texas Fence

Benefits of Hardie Plank Fence

The Benefits of Installing a Hardie Plank Fence

6 ft Hardiplank Fence, 6×6 Exposed Posts With Cap and Trim

If you're thinking about adding a Hardie Plank fence to your property, you've already made a wise

installing Hardie Plank fencing. From aesthetically pleasing to providing a great return on investment, a Hardie Plank fence is the perfect option for any property — and we'll tell you why.

The cost of a Hardie Plank fence will depend on the size and design of your project. Typically, you can expect to pay between $80-$120 per linear foot for materials and labor costs.

The Benefits of Hardie Plank Fences

Hardie Plank fences are a popular and effective fencing material that provides numerous advantages for those looking for a long-lasting security solution. The high-quality construction of Hardie Plank fences makes them extremely durable, corrosion resistant, and able to withstand extreme weather conditions without damage. Additionally, this material is often treated with fire retardants, making it safe from accidental fires or infestations from pests. Furthermore, Hardie Plank fences are aesthetically pleasing and can be easily customized with trim styles, paint colors and more.

On the other hand, there are some potential drawbacks when opting for a Hardie Plank fence. For one, they can be expensive compared to other materials such as wood or chain link (depending on the size and type). Secondly, Hardie Plank fences are not ideal if you get privacy concerns since they are mostly solid panels located in a single row without gaps between them. Some individuals may also find the installation process to be difficult due to the heavy weight of Hardie Plank materials.

Overall, however, the main benefits of selecting a Hardie Plank fence far outweigh any potential drawbacks. With its ability to stand up to extreme weather and provide years of protection by keeping out unwanted visitors, investing in this type of fencing solution can be a wise choice for many consumers. It is also an excellent way to add additional style or color applications to your home as well as value that is sure to impress potential buyers if you ever consider selling down the road.

Hardie Plank fences provide a long-lasting security solution that is highly durable, corrosion resistant, and fire retardant. While they may be expensive and lack privacy features in comparison to other materials, their longevity and ability to be customized aesthetically make them an attractive option for homeowners looking for protection and value. A variety of material choices are available

Longevity and Material Choices

When it comes to selecting a material for a fence, and particularly when looking at how long the fence will last, Hardie Plank is an excellent choice. This type of siding is extremely durable, made from fiber cement and designed to withstand heat, wind, and moisture. It is highly resistant to scratches, dents, and insects, meaning it will last for many years before needing replacement or repairs. While the initial cost of installing a Hardie Plank fence may be higher than other types of fencing materials, the longevity and durability make it a great option in terms of money saved over time.

Hardie Plank is also available in a variety of colors, textures and finishes that can fit into any aesthetic taste. With its natural wood grain look, rustic charm and modern style options, there are plenty of choices to choose from that won't go out of style anytime soon. Plus, unlike real wood, Hardie Plank doesn't require regular maintenance or refinishing treatments. This not only saves on labor costs to keep the fence looking like new, but also saves homeowners considerable amounts on paint or stain each year.

The choice between Hardie Plank and other materials for fencing should ultimately factor in both initial expenses as well as overall longevity and maintenance requirements over time. For example, a wooden fence may be cheaper upfront but requires much more upkeep to stay looking good for years to come. It may be beneficial to some homeowners to pay more upfront for the Hardie Plank fence knowing it won't need near as much maintenance and should last many years longer than alternatives.

With its combination of durability, low maintenance requirements and aesthetic appeal, Hardie Plank fences have risen in popularity among homeowners for landscaping projects across the country. Understanding all the design options available with this type of fencing is key in making a well-informed decision when choosing the right material for your home's fencing needs.

> According to James Hardie, their Hardie Plank fence can last up to 15 years in most climates when installed properly.
>
> A study by the Forest Products Laboratory found that Hardie Plank fences had an impact resistance 5 times greater than wood and 2 times greater than vinyl fences.
>
> In addition, studies have found that Hardie Planck fences can resist damage from winds gusting

Design Options for Hardie Plank Fences

Hardie Plank fences provide homeowners with an all-weather, durable, and aesthetically pleasing enclosure. Homeowners have a large selection of design possibilities with Hardie Plank fences, ranging from reinforcing your existing fence to adding a unique look that ties into your home's architecture. The vertical lines of the Hardie Plank siding create a beautiful, seamless, and almost unnoticeable finish as they blend in with your existing fencing style or match the textures of your home's siding.

For those looking for a completely new and unique approach to fencing, there are many decorative options available such as airy screens, boldly painted accents or intricate latticework. These elaborate designs can be extremely effective when rifling on larger gates, especially if you install the Hardie Plank fence alongside brick or stone pillars for a grand entrance into your property.

On the other hand, some homeowners prefer to keep their fencing area subtle and simple. For these properties, there is an ongoing debate between choosing stained wood or painting Hardie Plank siding for that traditional white picket fence look. While traditionally wooden fences may give an elegant appeal, certain painted Hardie Plank siding can offer a virtually maintenance-free solution as well as maximum protection from rot and pests.

Knowing what design fits best for your property can be difficult without professional help. However, no matter what homeowners choose in terms of design style, they can rest assured that their chosen Hardie Plank fence will retain its value and beauty for many years to come.

Installation Time and Cost for Hardie Plank Fences

Installing a Hardie Plank Fence is usually a job best left to the professionals. The installation time and cost required to properly install this type of fencing must be taken into consideration. On average, it can take between one and three days for professional installation of a basic Hardie Plank Fence, depending on the size of the fence and the complexity of the project.

Perhaps one of the most important considerations to make when thinking about installing this type of fencing is the cost. Professionally installed Hardie Plank Fences are estimated to be slightly more expensive than wood or vinyl fences of similar sizes, but generally last longer. Though initial cost is an obvious factor in deciding what kind of fencing to install, homeowners should consider how much higher quality materials will pay for themselves over time by saving on maintenance costs. It could be argued that in the long run, those who choose a Hardie Plank Fence may end up spending less money overall.

At the same time, others might argue that selecting any type of wooden building material for your fence could perennially require attention and maintenance such as painting and staining or repair from weather damage – meaning that such projects are not always necessarily cost effective investments in constructing your outdoor living space.

Regardless, if you have made the decision to use Hardie Plank Fence in your landscaping design, it is important to factor in not only the financial costs involved but also labor and installation time needed to complete the job.

Different Types of Installs

The installation of a Hardie Plank Fence provides many benefits, and the different types of installations make it suitable for almost any property. There are three main types of installation: direct fastener, face mount, or retrofit stucco. Direct fastening is the most common type of install that requires attaching Hardie Planks directly to the joists of an existing fence system; this is a cost-effective option and can be done in as fast as half a day. Face mount is another option which involves attaching your new Hardie Plank Fence directly to the existing infrastructure in place around your home or commercial business. This method often takes the longest amount of time and money to install but gives you the advantage of having your new fence stand parallel with the

infrastructure on-site.

When considering these three different types of installations, consider your budget and timeline for

completion, as well as what will look best for your property. Direct fastening may be the most cost-effective and time efficient, but it does come with some slight risks when attaching it to an existing fence system that may not be able to support the weight of your new Hardie Plank Fence. On the other hand, face mount can be more costly and time consuming but yields an aesthetically pleasing result that flows perfectly with the existing structure while assuring your fence remains secure and reliable. Finally, retrofit stucco allows you to achieve all the benefits of having a Hardie Plank Fence without being confined by preexisting infrastructure; however, it can become quite expensive due to added labor costs associated with installation.

No matter which type of installation you choose for your Hardie Plank Fence, rest assured these fences are designed to last through any extreme weather condition or natural hazard that comes their way.

Protection from the Elements and Other Natural Hazards

Fences provide an important barrier between your property and the outside world, and with a Hardie Plank Fence, that barrier is stronger than ever. Hardie Plank siding was designed specifically to resist deterioration due to natural elements like rain and snow, so when you use it as fencing material, you can be confident that it will stand up to weather year-round. Additionally, Hardie Plank products are fire rated, so they can provide protection against embers or sparks. They also resist rot and decay due to moisture, meaning they have a much longer lifespan than traditional wood fences. This reduces the amount of time and money spent on maintenance and repairs over the life of the fence.

Another advantage to installing a Hardie Plank Fence is its resistance to pests. Tiny insects like carpenter ants or termites may not be able to penetrate the siding's material, reducing the likelihood of needing costly repairs due to pest infestation. While some may argue that Hardie Plank siding is more expensive than other fencing materials, investors in these fences know that the long-term cost savings outweigh any initial price difference.

By investing in a Hardie Plank Fence, homeowners can enjoy peace of mind knowing their property is both safe and secure from natural hazards such as weather damage, fire danger, rot, and decay

Building a Fence to Last

When building a fence, longevity is the most important factor. It is important to consider not only the initial cost of building a fence but also the amount of money it will take to replace a fence in a few years. Hardie Plank fences are a great solution for ensuring that your investment is protected from the elements and lasts for many years to come. In comparison to traditional wood and vinyl fences, Hardie Plank fences are designed to withstand extreme weather conditions, pests like termites, and do not fade or rust over time like other materials. This makes them an ideal choice when selecting the material to build your fence out of.

The initial cost of installing a Hardie Plank fence can be more expensive than many other materials; however, with its durability and lifespan, you will save more in the long run as opposed to having to replace a cheaper but less durable fence down the line. Additionally, since Hardie Plank does not require any additional coating or sealing, you will not have to incur yearly maintenance costs like those associated with other fencing materials. Making these types of investments today helps ensure that you will have value for your money tomorrow.

When building a Hardie Plank fence, you have the option between either directly affixing it to existing posts (affixed installation) or embedding it into poured concrete piers (embedded installation). While both methods offer plenty of advantages and neither one is necessarily better than the other, some homeowners prefer the added security that comes with embedded installation due to its resistance against extreme weather events like high winds. On the contrary, affixed installation is often chosen over embedded installation because of its ability to allow flexibility when making specific changes or repairs down the road versus an embedded installation which requires special tools and expertise which in turn can lead to unnecessary costs and delays.

No matter which installation method you choose, Hardie Plank Fences are sure to provide peace of mind for years down the road when it comes to security and longevity. To ensure that you get the most out of your investment, proper installation techniques should always be followed as instructed by Hardies – including waiting at least 24 hours before painting after installation has been completed.

With each decision comes advantages and disadvantages; however, having potential issues in mind before embarking on this journey allows knowing what solutions may be required ahead of time.

How to Paint a Hardie Plank Fence

Painting a Hardie Plank Fence can be a great way to add charm and character to your landscape, as well as providing extra protection and longevity to the surface of your fence. However, it's important to understand the proper steps for painting a Hardie Plank to ensure that you get the most out of your efforts.

Before beginning, it's important to prepare the area by removing cobwebs, dirt, and debris from the fence surface. This can be done with an outdoor broom or cloth. Next, make sure to fill in any holes or cracks in the fence with an exterior grade patching compound. Once you've finished this step, use a stiff brush or pressure washer to give your fence a light scrubbing. Any loose paint should be scraped off and disposed of. The fence must then be allowed to dry completely before painting begins.

When it comes time to paint, many people argue exclusively for oil-based or latex-based paints; however, it is up to the individual preference of the homeowner. Latex-based paints are less smelly and often easier to clean up; however, they do not provide as much protection against moisture and sun damage as oil-based paints do while also having lower staying power. Oil-based paints have higher coverage but require additional toxic solvents for cleanup which may not make it an ideal option for some homeowners who prefer more ecofriendly materials. It is important to recognize the drawbacks of both options so that an informed decision can be made about which type of paint best suits your needs.

Once you have settled on the type of paint you'd like to use, choose a primer specifically designed for fiber cement surfaces if possible (though oil primers tend to work equally well). Apply the primer evenly across the entire fence surface using a roller applicator and wait 3-4 hours until it has dried completely before applying paint. Make sure that all edges are covered thoroughly in order to avoid exposure from rain or moisture build up which can cause rot and other costly damage down the road.

Finally, apply multiple coats (2-3) of high-quality exterior latex paint over your chosen color scheme for best results. Be sure that each coat is dry before applying another one; otherwise, it will result in

harder property.

Painting a Hardie Plank Fence requires careful procedures in order to achieve top quality results without damaging the overall structure of your fencing material; however, if done carefully and

correctly it can yield long-term benefits such as curbside appeal and lasting protection against weather elements as well as fading over time due to UV radiation exposure.

Common Questions

How long do Hardie Plank fences last?

Hardie Plank fences are known to be extremely durable and long-lasting, as they are made from fiber cement which is resistant to rot, pests, and fire. Many Hardie Plank fences come with warranties that range from 15-50 years; however, under normal conditions these fences can last up to 75 years or even longer. With proper maintenance and care, Hardie Plank fences can keep their appearance and functionality for generations to come.

How do I install a Hardie Plank fence?

Installing a Hardie Plank fence is an easy process that requires just a few steps and the right tools. First, you will need to measure out your fence line and mark it with spray paint or string. Next, dig 6” deep holes where you have marked each post. When dealing with corner posts, use the 45-degree angle rule to make sure the miter cuts are in the same direction for both sides of the corner post. Once the holes are dug, place concrete in each hole. Once the concrete dries (24 hours minimum), place pressure treated 4x4s into each post hole and tamp it down until its level. Then, install two horizontal 2x4s across each end of the 4x4s to support the top rail of your fence. Finally, nail Hardie Plank boards onto two 2x4s across each section of your fence for privacy and style. With the right tools and preparation, installing a Hardie Plank fence is easy and rewarding!

PREVIOUS POST:
Decorative Iron Fences and Gates

NEXT POST:
Cedar Fence Ideas for Summer

16 PRESERVATION BRIEFS

The Use of Substitute Materials on Historic Building Exteriors

John Sandor, David Trayte, and Amy Elizabeth Uebel

National Park Service
U.S. Department of the Interior
Technical Preservation Services

The *Secretary of the Interior's Standards for Rehabilitation* generally require that deteriorated distinctive architectural features of a historic property be repaired rather than replaced. Standard 6 of the *Standards for Rehabilitation* further states that when replacement of a distinctive feature is necessary, the new feature must "match the old in composition, design, color, texture, and other visual properties, and, *where possible*, materials" (emphasis added). While the use of matching materials to replace historic ones is always preferred under the *Standards for Rehabilitation*, the Standards also purposely recognize that flexibility may sometimes be needed when it comes to new and replacement materials as part of a historic rehabilitation project. Substitute materials that closely match the visual and physical properties of historic materials can be successfully used on many rehabilitation projects in ways that are consistent with the Standards.

The flexibility inherent in the *Standards for Rehabilitation* must always be balanced with the preservation of the historic character and the historic integrity of a building, of which historic materials are an important aspect. Any replacement work reduces the historic integrity of a building to some degree, which can undermine the historic character of the property over time. With limited exceptions, replacement should only be considered when damage or deterioration is too severe to make repair feasible. When needed replacement is made with a material that matches the historic material, the impact on integrity can be minimal, especially when only a small amount of new material is needed. When a substitute material is used for the replacement, the loss in integrity can sometimes, although not always, be greater than that of a matching material. Also, whether historic or substitute material, there is a point where the amount of replacement can become excessive and the building's historic integrity is diminished to an unacceptable degree, regardless of the material used—that is, a loss of authenticity and the physical features and characteristics closely associated with the property's historic significance.

The term *substitute materials* is used to describe building materials that have the potential to match the appearance, physical properties, and related attributes of historic materials well enough to make them alternatives for use in current preservation practice when historic materials require replacement.

Compelling reasons to use a substitute material instead of the historic material include the unavailability or poor performance of the historic material, or environmental pressures or code-driven requirements that necessitate a change in material. When using a substitute material for replacement it is critical that it match the historic material in all of its visual and physical properties to preserve the historic character of the building and minimize the impact on its integrity.

Substitute materials can be cost-effective, permit the accurate visual duplication of historic materials, and provide improved durability. While the behavior of traditional, historic materials is generally well understood, the behavior of newer materials can be less established and sometimes less predictable. Substitute materials are most successful when the properties of both the original material and the substitute are thoroughly understood by all those involved in the design and construction process. The architect must be adept at the selection of substitute materials and their incorporation into architectural plans and specifications. The contractor or tradesperson in the field must also be experienced with their use.

This Preservation Brief provides general guidance on the use of substitute materials as replacement materials for distinctive features on the exterior of historic buildings. Due to the ever-evolving product market for construction materials, this Brief does not provide specifications for substitute materials. This guidance should be used in conjunction with qualified professionals who are knowledgeable in current construction and historic preservation practices.

Figure 5. (Left) Asbestos shingles were often used as a substitute for traditional slate roof shingles. The historic asbestos roof on this rehabilitation project had reached the end of its lifespan and required complete replacement. (Right) Given the limited replacement materials available to match the historic asbestos shingles, utilizing natural slate was determined to be the best visual match for the original shingles and design intent in this instance. Photos: Crosskey Architects.

Circumstances in which the use of substitute materials may generally be considered appropriate, taking into consideration technical and economic feasibility reasons, include: the unavailability of historic materials; the unavailability of skilled artisans or historic craft techniques; inadequate durability of the original materials; the replacement of a secondary feature; construction of a new addition; the reconstruction of a missing feature; code-required performance; and for enhanced resilience and sustainability:

- **Unavailability of historic material.** A common reason for using substitute materials is the difficulty in finding a good match using the historic material (particularly a problem for masonry materials where the color and texture are derived from the material itself). This may be due to the actual unavailability of the material or to protracted delivery dates, particularly if the material cannot be sourced domestically. It is not uncommon for a local quarry that is no longer in operation to have been the source of an original stone. If another quarry cannot supply a satisfactory match, a substitute material such as dry-tamp cast stone or textured precast concrete may be an appropriate alternative, if care is taken to ensure that the detail, color, and texture of the original stone are matched. Even when the color is successfully matched, the appearance of a cementitious product may diverge from that of the historic stone as the substitute material ages.

  Many manufactured materials that were used historically on buildings are no longer made. Terne-plated steel, which was the material most typically used for painted standing-seam or flat-seam roofing, is no longer made. However, because it was always painted, other metals including galvanized steel or copper can generally be substituted if painted. When the historic material needing to be replaced is a manufactured product developed as an imitation of a natural material, which was the case with asbestos shingles meant to imitate slate, the natural material may now be an appropriate substitute material to consider for the manufactured one that is no longer produced.

- **Unavailability of skilled artisans or historic craft techniques**. These two issues can complicate any preservation or rehabilitation project. This is particularly true for intricate ornamental work, such as carved wood, carved stone, wrought iron, or cast iron. While skilled craftsmen may not be as difficult to find as they once were, there can still be limitations geographically, even in finding less specialized skills, and particularly if a project is small. Technical advances have allowed some stone or wood carvers to take advantage of computerized equipment, but complex designs will likely still require hand work. It may also be possible to mimic a carved element using a material that can be cast in a mold, adding significant efficiency where an historic element survives from which a mold can be made. Options for casting include aluminum, cast stone, fiberglass, glass fiber reinforced concretes, and terra cotta, but not all carved elements can be duplicated by a casting, and mold-making and casting still require skilled craftsmen.

- **Inadequate durability of the original material.** Some historic building materials were of inherently poor quality or were not durable. In other cases, one material was naturally incompatible with other materials on the building, causing staining or galvanic corrosion. Examples of poor-quality materials are very soft sandstones, which eroded quickly, and brownstone, which is vulnerable to delamination. In some cases, more durable natural stones may be visually similar enough to stand in for these soft stones but cast stone or another material may be needed to achieve an appropriate match.

The ready availability of manufactured ornamental wood features fed a nineteenth-century taste for decorative architectural details that were often used on the exterior of buildings with little concern for how they would be affected by moisture or maintained. Even old-growth wood from decay-resistant species often could not prevent features with severe exposure from eventually needing to be replaced. Today's available commercial supplies of lumber no longer provide the denser, more decay-resistant wood of old-growth forests, so even careful matching to species, which is not always possible, will not yield a replacement equal in performance to the historic material. Old-growth wood is likely to be very expensive, if it can be found, and may not be available from a sustainable, environmentally responsible source. When features with severe exposure need to be replaced or reproduced, substitute materials that are less susceptible to decay can have a longer life, and when the feature is painted, as exterior wood features generally are, the visual effect of a substitute material can be minimal.

- **Replacement of a secondary feature.** When it is necessary to replace a less distinctive, secondary feature that is less important in defining the historic character of the property, there is more flexibility in how it can be replaced. While it may be less important to find an exact match in materials when replacing such a feature, the retention of the overall historic character should still guide selection of an appropriate replacement material. For example, replacing secondary features such as those with limited visibility (e.g., siding materials on a rear elevation) may permit replacement materials that are similar in appearance or character without having to be a perfect match.

Figure 6. The dramatic difference in the number of growth rings between old-growth wood and wood that was recently harvested from second- or third-growth forests is indicative of the diminished dimensional stability and durability of most lumber currently available. Photo: Zachary Dettmore.

- **Construction of a new addition.** The *Standards* require that new additions to historic buildings and related new construction be differentiated from the old as well as be compatible with the historic character of the property and its site and environment. Using materials that evoke, without matching, the historic material can be an effective means of achieving the needed balance between compatibility and

Figure 7. A new addition replaced non-historic construction on the rear elevation of this building. Fiber cement gives the addition a compatible appearance without replicating the exposure for thickness of the historic siding. Photo: Ward Architecture + Preservation.

differentiation for new additions and new construction. Even if differentiation is achieved through design rather than materials, there generally is no basis for requiring the use of matching historic materials for new additions and new construction as part of a rehabilitation project.

- **Reconstruction of a missing feature.** Many buildings lose significant features over the course of their lives for reasons such as those previously discussed. When a missing feature is to be reconstructed, the importance of matching the original material may be less important to the effect replacing the missing feature may have on the overall historic character and appearance of the building. Though replacement of missing features must be substantiated by documentary, physical, or pictorial evidence, in many cases the authenticity of the material may be secondary to the overall visual qualities. The use of a more cost-effective substitute material for the construction of a missing feature can often be an important factor in the feasibility of undertaking such work.

- **Code-required performance.** Modern building codes are regularly amended to require higher performance levels for new and existing buildings in such areas as life safety, seismic retrofits, and accessibility. Rehabilitation projects often trigger compliance with code requirements that were not in place when a building was constructed. Although building codes may often allow for the retention of historic materials and assemblies, substitute materials can offer an alternative in situations when the historic materials are non-compliant and cannot otherwise be reasonably retained. In these instances, a change in material may be appropriate to meet code requirements, while in other instances selecting the optimal code compliance method for the project may achieve code-compliant solutions that also allow for the preservation of a building's historic materials and finishes.

  For example, fire codes may require increased resistance to flame spread for buildings within dense urban environments where building proximity and separation between buildings is a concern. Some substitute materials are non-combustible, have good ratings for flame spread, and can provide an alternative to help meet

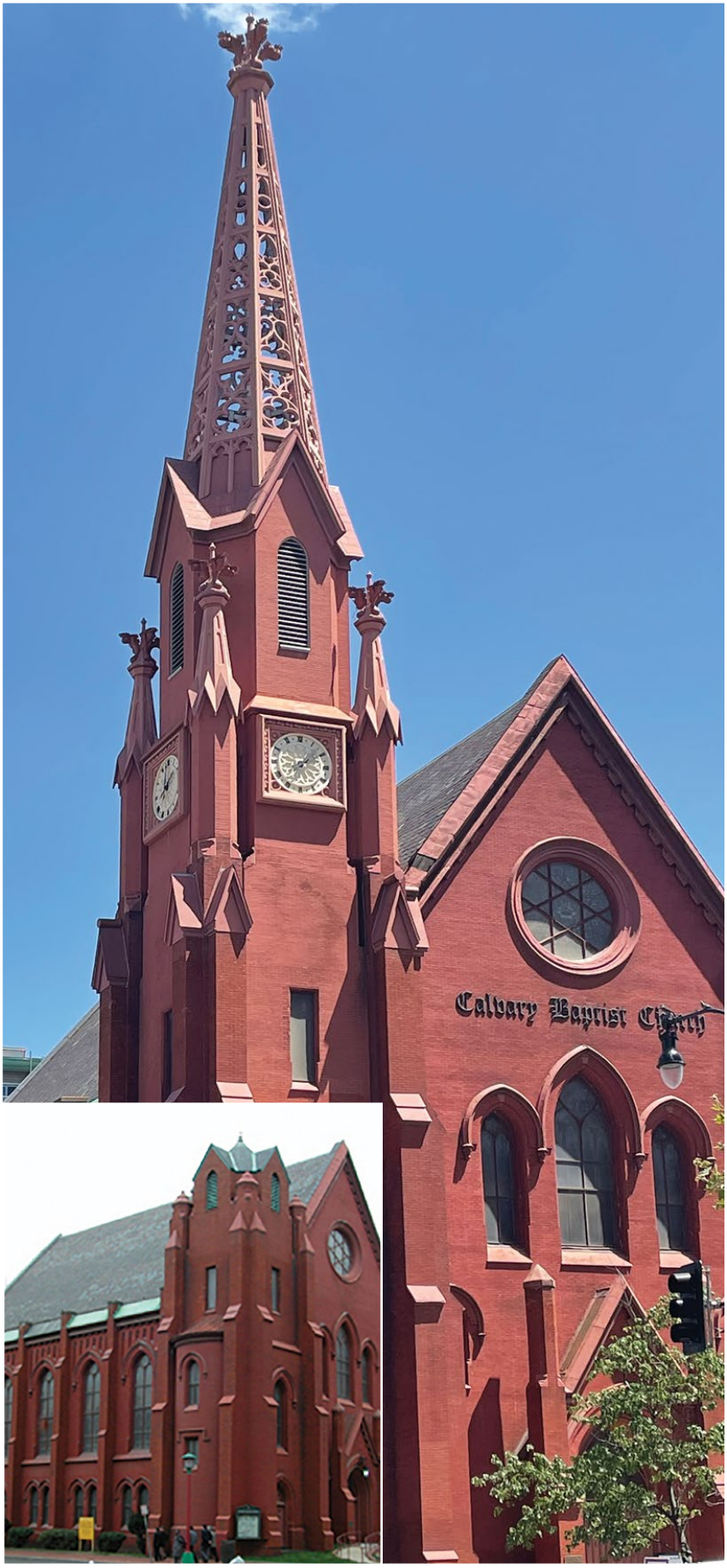


Figure 8. A long-missing cast-iron steeple was reconstructed in aluminum and fiber-reinforced polymer (FRP). Photo: John Sandor, NPS, Inset: Quinn Evans.

Sec. 14-56. - Fencing on residential properties.

(a) *Fence.* For the purposes of this section, a fence is defined as a tangible barrier constructed of any allowable material erected to enclose, screen, or separate areas. On properties zoned or developed for residential purposes, allowable fencing materials shall include wood, metal tubing or wrought iron, stone, masonry and chainlink. Vinyl or fiberglass composite materials may be utilized if the materials is listed, designed, and constructed for fencing materials. Fencing material on property zoned or developed for residential purposes shall not use rope, string, wire products including but not limited to chicken wire, hog wire, wire fabric, barbed wire, razor ribbon wire and similar welded or woven wire fabrics, chain, netting, cut or broken glass, paper, metal panels, corrugated metal panels, galvanized sheet metal, plywood, tarps, fiberglass panels or plastic panels or any other materials that are not manufactured specifically as fencing materials.

(b) *Exemptions.* The following exemptions to the provisions of subsection (a) of this section shall apply:

(1) A fence may be constructed of barbed wire if the property to be fenced is at least one acre in area and utilized for keeping of large domestic animals as identified in section 27-701-2.

(2) Any nonconforming fence in existence at the time of the adoption of this division shall be given six months to comply with these provisions.

(c) *Variances.* In instances where strict enforcement of the requirements of this section would cause undue hardship due to circumstances unique to the individual property under consideration, and the granting of such variance is demonstrated to be within the spirit and intent of the provisions of this section, the property owners appeals board may grant a variance of the requirements of the section according to the following guidelines:

(1) Upon showing required by subsection (c)(2) of this section, the property owners appeals board may modify the requirements of subsection (a) of this section to the extent deemed just and proper so as to relieve such hardship, provided that such relief is capable of being granted without detriment to the public interest.

(2) When the applicant can show the property was acquired in good faith and whereby reason of extraordinary situation or condition the strict application of subsection (a) of this section would prohibit or unreasonably restrict the use of the property, and the property owners appeals board is satisfied that the granting of a variance would alleviate a hardship as distinguished from a special privilege or convenience sought by the applicant, such variance may be granted; provided that all variances shall be in harmony with the intended purpose of this section.

(3) Any property owner aggrieved by the property owners appeals board in granting or denying a variance may appeal the decision to a court of competent jurisdiction within 30 days of the property owners appeals board's decision.

(Code 1992, § 14-56; Ord. No. 7-11, § 1, 2-3-2011)