KNOXVILLE HISTORIC ZONING COMMISSION
STAFF REPORT - CERTIFICATE OF APPROPRIATENESS APPLICATION

PROPERTY ADDRESS: 1802 Washington Ave 37917 **FILE NO.: 8-K-15-HZ**

DISTRICT: Edgewood-Park City H-1

MEETING DATE: 8/20/2015

APPLICANT: Katherine McBride (owner)

LEVEL OF WORK: Level II. Major repair or replacement of materials or architectural elements

PROPERTY DESCRIPTION: Queen Anne (c. 1895)

Two-story frame with weatherboard wallcovering. Hip roof with lower cross gables, asphalt shingles, fishscale pattern wood shingles and bargeboard in gable, louvered paired attic vents. Two-story one-half front porch with balcony at second stohy, turned woodcen porch postes on first and second story, turret roof at second story. Sawn wood beaded balustrades on first and second story, spandrels on first-story porch with incised floral pattenr. Two-story bay on west elevation. Double-hung 1/1 windows. Interior offset brick chimney. Brick foundation. Irregular plan. (Contributing)

DESCRIPTION OF WORK:

Replace asphalt shingles in-kind on main house. Repair gutters and downspouts and repair rot on soffit on main house as needed.

APPLICABLE DESIGN GUIDELINES:

The houses in the Edgewood-Park City Historic District may have been roofed with slate, tile, wood shingles, metal, or with asphalt shingles, sometimes cut in over-size, shaped patterns. Printed and sculptured fiberglass shingles can also be used to duplicate the look of original roofs.

1) . . .Replacement roofs must copy the shape and pitch of original roofs, and the soffit, fascia and trim detail between roof and wall should mimic the original. 3.) Repair or replace roof details (chimneys, roof cresting, finials, attic vent windows, molding and other unique roof features). Use some of these details in designing new buildings. 4.) Materials used in roofing existing buildings or new construction shall duplicate original roofing materials as much as possible. Asphalt or fiberglass shingles can be appropriate, as are slate, standing seam metal, or metal or wood shingle roof coverings. The color of roofing materials should be a dark green, charcoal gray or black or dark reddish brown, to simulate the original roof colors.

NPS Preservation Brief #19
Shingle fabrication was revolutionized in the early 19th century by steam-powered saw mills. Shingle mills made possible the production of uniform shingles in mass quantities. The sawn shingle of uniform taper and smooth surface eliminated the need to hand dress. The supply of wooden shingles was therefore no longer limited by local factors. These changes coincided with (and in turn increased) the popularity of architectural styles such as Carpenter Gothic and Queen Anne that used shingles to great effect. Wooden shingles, however, were never abandoned. Even in the 20th century, architectural styles such as the Colonial Revival and Tudor Revival, used

COMMENTS:

The applicant relays that earlier roofers found remnants of wood shingles on the interior attic side of the roof.

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STAFF FINDINGS:

1. Wooden roof shingles are documented in the historic survey files and guidelines to have been utilized in Park City, and are historically appropriate for this house.
2. The existing asphalt shingle roof is appropriate, but not historically significant.
3. The roofing of low-slope front porches and rear additions were often historically and currently of different materials (usually metal) to reduce leakage. Metal roofing of 5V-groove was sometimes used on rear porches or later small rear additions.
4. The rear addition roof slope is very low and only slightly visible from the street.
5. The three roofs (porch, main house, and rear addition) requested to be re-roofed are not able to be viewed concurrently, so a difference in materials would not detract.
6. Staff does not believe that the submitted metal roof shingle adequately simulates a wood shingle due to the sheen and uniform shape of the material.
7. Stamped metal roof shingles have been approve on a 2-storhy, elaborate Queen Ann house on Washington Avenue because metal shingles were offered as an option in Barber catalogs. However, the approved metal shingles were not attempting to imitate wood.

STAFF RECOMMENDATION:

Approve prefabricated standing seam roof on front porch with condition that is a subdued or dark color. Approve 5-V-groove on small rear addition. Approve synthetic wood shingle roof of a material other than metal, or approval for metal shingles stamped with authentic metal design that do not attempt to imitate wood.

Certificate (File) No: _____

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
KNOXVILLE/KNOX COUNTY HISTORIC ZONING COMMISSION

Please print all information:

1. NAME OF APPLICANT: Katherine McBride

Address: 1802 Washington Ave, Knoxville, TN 37917

Telephone: (865) 919-1796 E-mail address: katherine@rfmcbride.com

Relationship to Owner: Owner of property

2. NAME OF OWNER: Katherine and Richard McBride

Address: 1802 Washington Ave., Knoxville, TN, 37917

Telephone: (865) 919-1796 E-mail address: katherine@rfmcbride.com

3. LOCATION OF PROPERTY:

Address: 1802 Washington Ave. Tax ID/Lot/Parcel No: 082PG009

4. LEVEL OF WORK (circle Level)

Level I Routine repair, replacement of non-original materials in-kind; removal of artificial siding or late additions; installation of gutters, storm windows/doors, screen doors, satellite dishes, or signage; demolition of a noncontributing structure; renewal of COA

Level II Major replacement of materials or architectural elements; construction of addition or outbuilding

Level III Construction of a new primary building; subdivision of individually designated property

Level IV Demolition or relocation of a contributing structure

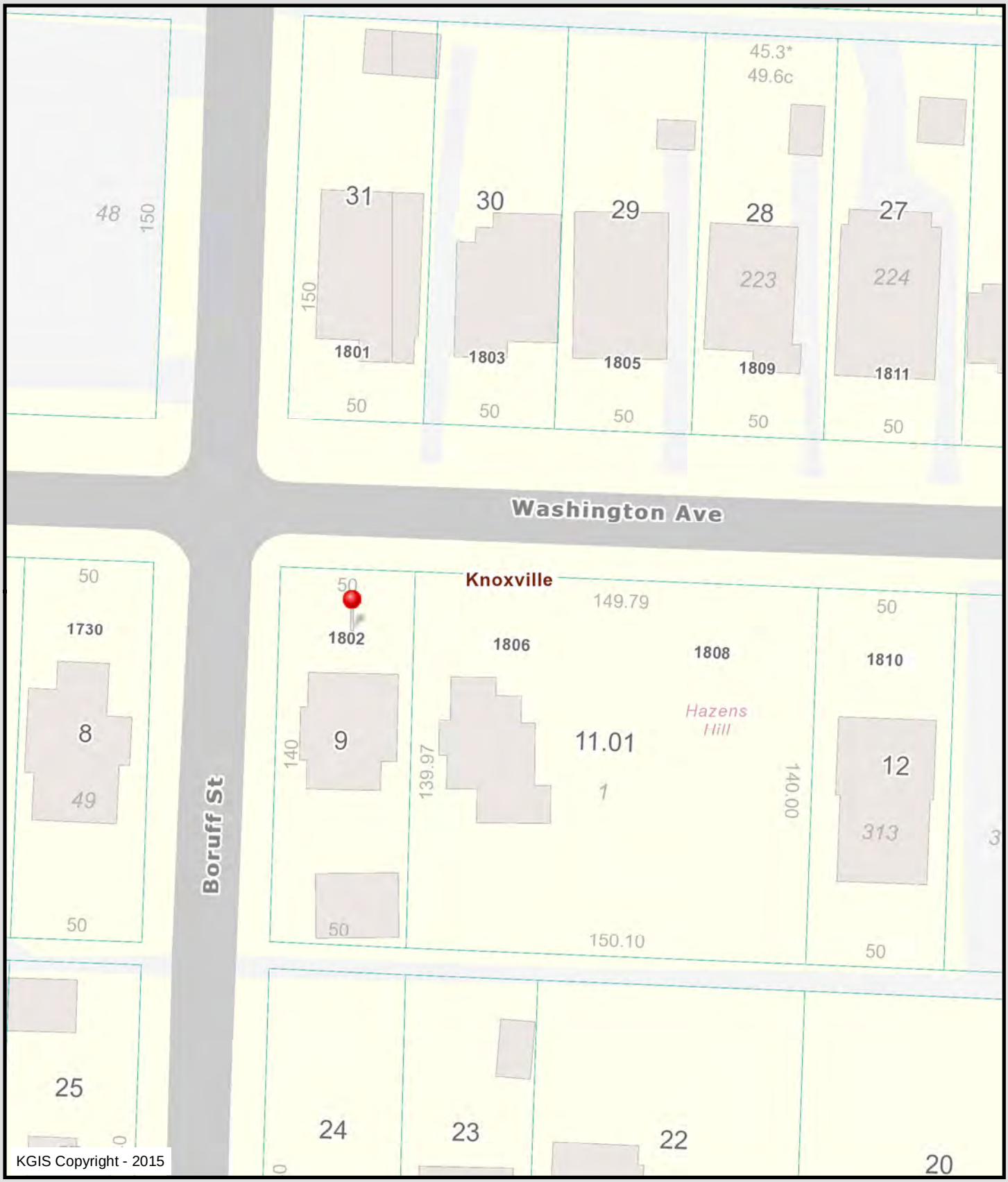
5. DESCRIPTION OF WORK: (See Part 2 of this application for additional information that is required for submittal with the application. (A copy of all information which is submitted with an application must be retained by the Knoxville/Knox County Historic Zoning Commission.)

Replace existing asphalt shingles with faux metal wood shake roofing on the second story and standing seam metal roofing on first story roofs. The ridgecaps will be completed with faux metal wood shake style caps. The fireplace will remain intact and the weathervane above the balcony will placed in the same position. Copper roof over front bay window will not be changed.

6. SIGNATURE OF APPLICANT: Katherine McBride Date: 08/03/15

Return application to: MPC, Knoxville/Knox County Historic Zoning Commission, Suite 403, City/County Building, 400 Main Street, Knoxville, Tennessee 37902 or **Fax:** 865-215-2068. **Incomplete applications will not be accepted.**

FOR STAFF USE ONLY
Date Received _____ . Approved _____ Disapproved _____ Approved As Modified _____ .
Date Acted On _____ .



1802 Washington Avenue

Edgewood-Park City H-1

corner of Boruff

Knoxville - Knox County - KUB Geographic Information System

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ft

The current asphalt roofing material on my house has reached the end of its use life and needs to be replaced. I have tried to research the original material of the roof, but have been unable to find a written or pictorial source. My neighbor, Mike Anderson, states that the house originally had a wood shake roof and that a previous owner had removed wood shake on a portion of the roof to replace it with asphalt. Nearby homes at 1730 and 1904 Washington Ave., both Barber homes, originally had or currently have portions of roof covered with wood shake. It could be reasonable to believe that wood shake could have also been used on my home.

Wood shingles were popular for roofing choice Barber home and other Queen Anne style homes. Because Barber homes were sold as plans, the builder and the homeowner had freedom to choose the building materials. Roofing materials within the catalog are often specified as "shingled," but do not refer to what type of shingle. For reference to Barber home roofing materials and the historical appropriateness for metal roofing, I would like to refer to Lynne Sullivan's COA application for metal roof replacement (File #83012EDG). She has done a thorough and well-researched argument for the historical value of using metal roofing materials.

Specifically, wood shingles were a readily available roofing material at the time my house was built and Barber houses were built with a wide variety of materials.

> "Historically wooden shingles were usually thin (3/8"-3/4"), relatively narrow (3"-8"), of varying length (14"-36"), and almost always smooth.
>
> Shingle fabrication was revolutionized in the early 19th century by steam-powered saw mills. Shingle mills made possible the production of uniform shingles in mass quantities. The sawn shingle of uniform taper and smooth surface eliminated the need to hand dress. The supply of wooden shingles was therefore no longer limited by local factors. These changes coincided with (and in turn increased) the popularity of architectural styles such as Carpenter Gothic and Queen Anne that used shingles to great effect.
>
> Modern wooden shingles, both sawn and split, continue to be made, but it is important to understand how these new products differ from the historic ones and to know how they can be modified for use on historic buildings. Modern commercially available shakes are generally thicker than the historic handsplit counterpart and are usually left "undressed" with a rough, corrugated surface. The rough surface shake, furthermore, is often promoted as suitable for historic preservation projects because of its rustic appearance. It is an erroneous assumption that the more irregular the shingle, the more authentic or "historic" it will appear.
>
> Historic wooden roofs using straight edge-grain heartwood shingles have been known to last over sixty years. Fifteen to thirty years, however, is a more realistic lifespan for most premium modern wooden shingle roofs."
>
> -NPS, Preservation Brief 4: Roofing for Historic Buildings

The type of metal shingles I have chosen replicates the size of historical wood shingles and will be longer lasting to protect the house structure. I have chosen EDCO metal shake in enhanced charcoal gray color. The stamp for the metal was cast using actual wood, and the dimensions reflect a thinner wood shingle. I have provided a sample of the metal shingle. The color is not the same as I have chosen, but shows the color variation, texture, and size. I chose enhanced charcoal gray to mimic the look of weathered wood. This color provides shading and multi-tones to provide a more accurate representation of wood. The metal shingles are applied in such a way that it does not create a replicating pattern or lines to be seen, such as how a wood shingled roof would be applied. First story roofs with lower pitches will use a standing seam metal roofing, which is an approved roofing material according to ROOFS pp14-15 of the EDGEWOOD-PARK CITY DESIGN GUIDELINES:

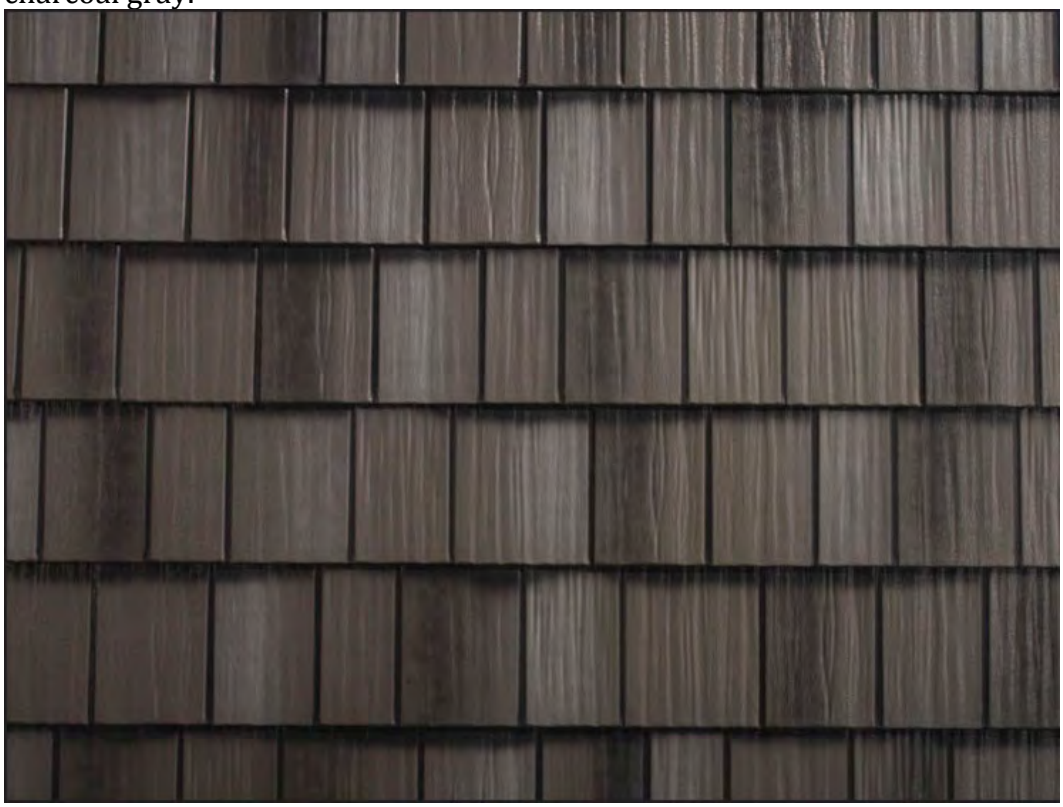
> "4.) Materials used in roofing existing buildings or new construction shall duplicate original roofing materials as much as possible. Asphalt or fiberglass shingles can be appropriate, as are slate, standing seam metal, or metal or wood shingle roof coverings. The color of roofing materials should be a dark green, charcoal gray or black or dark reddish brown, to simulate the original roof colors."

Metal roofs are longer lasting and my contractor has offered a 10-year warranty on craftsmanship and a manufacturer's 50-year lifetime transferable warranty. This type of metal roof also is energy star rated. A wooden shingled roof, however, would not be a good choice because my house is well shaded with several areas where the roof remains damp for long periods of time and would deteriorate within a decade or two. Although the roof currently has asphalt shingles, I would like to replicate what is thought to be an original roofing material for my home. Furthermore, Barber homes were originally built with a variety of roofing materials and thus far, wood shingles have not been very well represented in the Edgewood-Park City historical zone. Only accepting asphalt roofs creates a sameness amongst roofs in this zone. The roof material I have chosen is the same color and brand that was approved for Lynne Sullivan's home at 1912 Washington Ave., but has a different stamped pattern to replicate wood shake rather than slate. For additional information regarding the specific shingles chosen, please refer to the provided sample, picture CD, and brochure.

Figure 1. Street view of house, 1802 Washington Ave., Knoxville, TN 37917.

Figure 2. Building footprint for 1802 Washington Ave.

Figure 3. Color of shingles for EDCO Arrowline metal shake roofing, enhanced charcoal gray.



1802 Washington Ave. – Front

1802 Washington Ave. – Shingle front porch roof

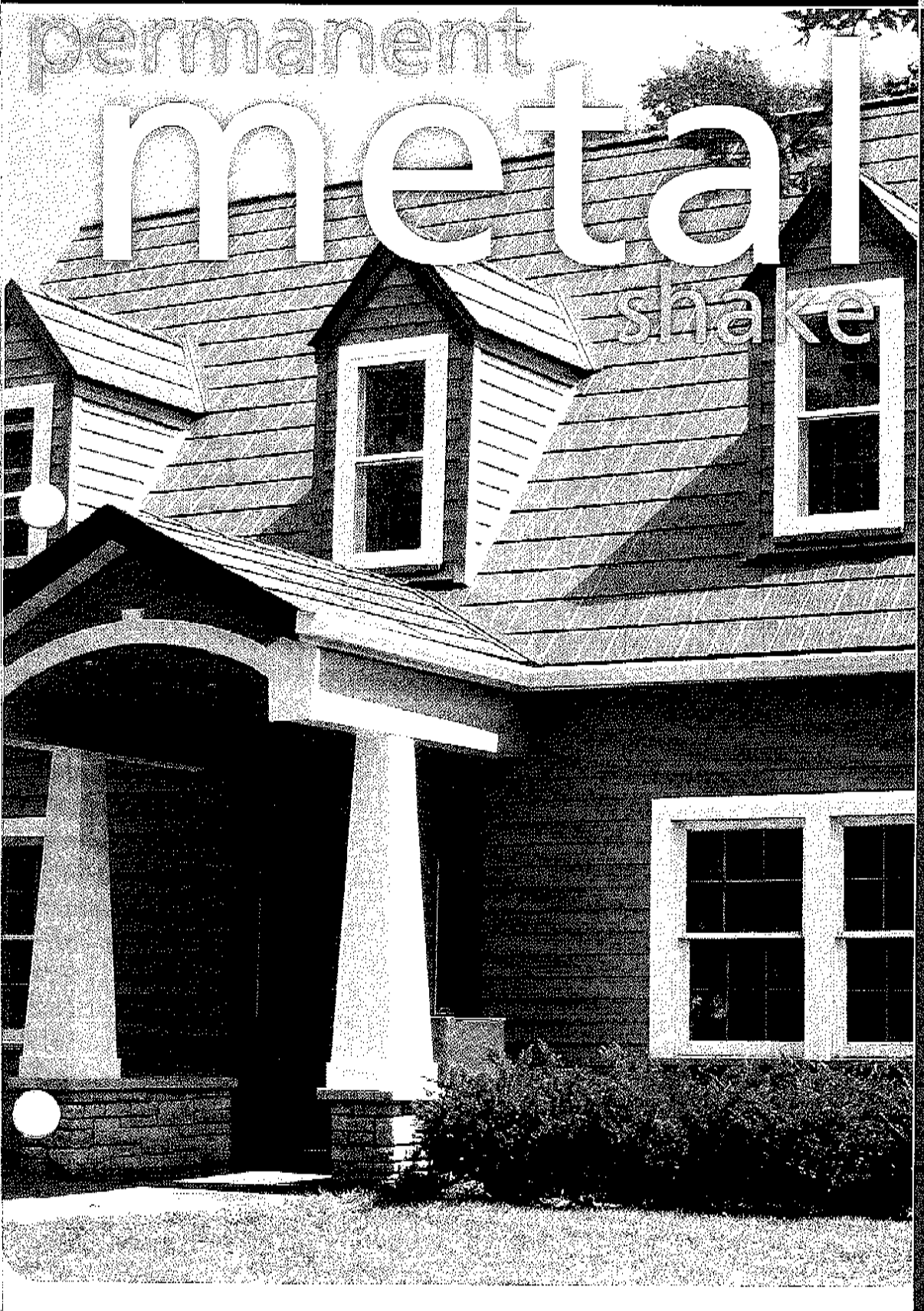
1802 Washington Ave. – West side from Boruff St.

1802 Washington Ave. – Rear addition from Boruff St.

1802 Washington Ave. - Close-up of rear addition roof

ArrowLine
by EDCO

permanent metal shake



From light commercial to residential applications, the ArrowLine Permanent Metal Shake™ is the next wave in roofing and siding.

Wood shingle

From Wikipedia, the free encyclopedia

Wood shingles are thin, tapered pieces of wood primarily used to cover roofs and walls of buildings to protect them from the weather. Historically shingles were split from straight grained, knot free *bolts* of wood. Today shingles are mostly made by being cut which distinguishes them from shakes which are made by being split out of a bolt.

A section view of a type of wood shingle.

Wooden shingle roofs were prevalent in the North American colonies (for example in the Cape-Cod-style house), while in central and southern Europe at the same time, thatch, slate and tile were the prevalent roofing materials. In rural Scandinavia, wood shingle roofs were a common roofing material until the 1950s. Wood shingles are susceptible to fire and cost more than other types of shingle so they are not as common today as in the past.

Distinctive shingle patterns exist in various regions created by the size, shape, and application method. Special treatments such as swept valleys, combed ridges, decorative butt ends, and decorative patterns impart a special character to each building.

Contents

History of shingles

Historically, wooden shingles were usually thin ($\frac{3}{8}$ inch (9.5 mm) to $\frac{3}{4}$ inch (19 mm)), relatively narrow (3 inches (7.6 cm) to 8 inches (20 cm)), of varying length (14 inches (36 cm) to 36 inches (91 cm)), and almost always planed or knifed smooth. The traditional method for making wooden shingles before the 19th century was to rive (hand split) them from straight grained, knot free, sections of logs pre-cut to the desired

length known as bolts. These bolts were quartered or split into wedges. A mallet and froe (or axe) were used to split or rive out thin pieces of wood. The wood species varied according to available local woods, but only the more durable heartwood, or inner section, of the log was usually used. The softer sapwood generally was not used because it deteriorated quickly. Because hand-split shingles were somewhat irregular along the split surface, it was necessary to dress or plane the shingles on a shaving horse with a drawknife or draw-shave to make them fit evenly on the roof.[1] This reworking was necessary to provide a tight-fitting roof over typically open shingle lath or sheathing boards. Dressing, or smoothing of shingles, was almost universal, no matter what wood was used or in what part of the world the building was located, except in those cases where a temporary or very utilitarian roof was needed.

Shingle fabrication was revolutionized in the early 19th century by steam-powered saw mills. Shingle mills made possible the production of uniform shingles in mass quantities. The sawn shingle of uniform taper and smooth surface eliminated the need to hand dress. The supply of wooden shingles was therefore no longer limited by local factors. These changes coincided with (and in turn increased) the popularity of architectural styles such as Carpenter Gothic, Queen Anne, and Shingle style architecture that used shingles to great effect.

Hand-split shingles continued to be used in many places well after the introduction of machine sawn shingles. There were, of course, other popular roofing materials, and some regions rich in slate had fewer examples of wooden shingle roofs. Some western "boom" towns used sheet metal because it was light and easily shipped. Slate, terneplate, and clay tile were used on ornate buildings and in cities that limited the use of flammable wooden shingles. Wooden shingles, however, were never abandoned. Even in the 20th century, architectural styles such as the Colonial Revival and Tudor Revival used wooden shingles.

Types of shingles

The simplest form of wood shingle is a rectangle about 16 inches (41 cm) long. The sides and butt of a shingle are often irregular; the sides may taper and the butt may not be square with the sides. Shingles that have been processed so the but is square to the sides are called rebutted and re-squared or rebutted and rejointed shingles often abbreviated R&R.

Collage of different styles of wood shingles used in Chiloé architecture.

Shingles and shakes may be tapered, straight, split or sawn and any combination of these except straight-tapered. Different species and quality of wood are used as are different lengths and installation methods. Shakes and shingles may also be treated with wood preservatives before or after installation and fire retardants.

Shakes

A shake is a basic wooden shingle that is made from split logs. Shakes have traditionally been used for roofing and siding applications around the world. Higher grade shakes are typically used for roofing purposes, while the lower grades are used for siding purposes. In either situation, properly installed shakes provide long lasting weather protection and a rustic aesthetic, though they require more maintenance than some other more modern weatherproofing systems.

The term shake is sometimes used as a colloquialism for all wood shingles, though shingles are sawn rather than split. In traditional usage, "shake" refers to the board to which the shingle is nailed, not the shingle. Split wooden shingles are referred to as *shag shingles*.

Modern shingles

Modern wooden shingles, both sawn and split, continue to be made, but they differ from the historic ones. Modern commercially available shakes are generally thicker than the historic handsplit counterpart and are usually left "undressed" with a rough, corrugated surface. The rough-surface shake is often considered to be more "rustic" and "historic", but in fact this is a modern fashion.


A shake roof in Romania

Some modern shingles are produced in pre-cut decorative patterns, sometimes called fancy-cut shingles, and are available pre-primed for later painting. The sides of rectangular shingles may be re-squared and re-butted which means they have been reworked so the sides are parallel and the butt is square to the sides. These shingles are more uniform go on more neatly.

Recycled rubber shake shingles

Modern recycling technologies have allowed the manufacture of rubber shake shingles, made mostly from old tires. These rubber shake shingles have the same look as a conventional wooden shingle but won't rot, curl, discolor, bend, crack, or take on moisture.

Shingle production

Wood selection


Wooden shakes in Sweden

In North America shakes are typically made from California redwood (*Sequoia sempervirens*) and Western Red Cedar (*Thuja plicata*), while in Scandinavia and Central Europe they are more commonly made from pine (*Pinus sylvestris*). There are various types of shakes, the main differentiating feature between shakes and other types of shingles is that shakes are split while most shingles are sawn on all sides. The sizes also vary from country to country; in North America shakes are usually made in 24-inch lengths - the most common, 18-inch *barn shake*, or even 48-inch shakes, which are typically used for siding. In Scandinavia shakes, traditionally used only for roofing, are generally smaller than in North America, measuring 13-16 inches long, 4-6 inches wide and 1/8 thick.[2] Likewise wooden shingles are manufactured in differing lengths, in North America, 16-inch, 18-inch and 24 inches.

Log handling and transportation