STAFF REPORT: DECEMBER 8, 2021 MEETING PREPARED BY: A. DYE

APPLICATION NUMBER: 21-7613

ADDRESS: 1409 BAGLEY

HISTORIC DISTRICT: CORKTOWN

APPLICANT: NADAV DORON, ABI INVESTMENTS

PROPERTY OWNER: NADAV DORON, ABI INVESTMENTS

DATE OF PROVISIONALLY COMPLETE APPLICATION: NOVEMBER 15, 2021

DATE OF STAFF SITE VISIT: NOVEMBER 18, 2021

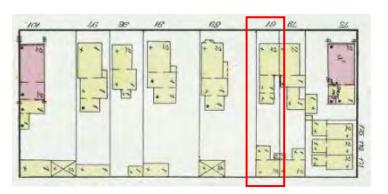
SCOPE: REPLACE ALL WINDOWS, REPLACE VINYL SIDING WITH NEW VINYL SIDING, REPAIR NON-

HISTORIC FRONT PORCH

EXISTING CONDITIONS

The two-story, wood frame house at 1409 Bagley was likely erected prior to 1884 as a building with a footprint similar to the existing house appears on the 1884 Sanborn map.





Left: Existing Conditions, HDC Staff

photo, 11/19/21

Above: Sanborn Map, v. 1, 1884. The property identified with its original

number is outlined in red.

The three-bay house fills the width of the narrow lot and single-story additions extend from the rear elevation. The low pitch, side gabled roof is punctuated by a steeply pitched front gable. Three single window openings are evenly spaced across the front elevation's second floor, while identically placed openings on the first floor offer a not-quite symmetrical arrangement due to the front entrance. The majority of the windows are wood, one-over-one double-hung units. Based on the interior photographs submitted by the applicant, it appears a few windows are missing lower sash; a few openings on the rear elevation are filled with vinyl double (or single)-hung, one-over-one, replacement units.

The house is covered in vinyl siding (wood window casings remain visible) and aluminum storm windows cover wood double-hung sash. Wood, fishscale siding fills the wall surface of the front gable. A single-story porch expands across three-quarters of the front elevation and the current porch design presumably dates to 1989, per the Commission issued Certificate of Appropriateness.

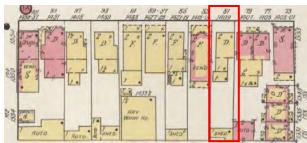
A free-standing garage is located at the rear lot line and is faced with plywood. One multiple-paneled overhead steel door fills the automotive door opening that faces the alley.

PROPOSAL

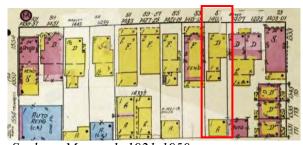
Per the submitted documents and photographs, the applicant is proposing to replace all of the existing windows with vinyl single-hung, one-over-one units; install new vinyl siding (double 5-inch lap siding, smooth surface) on the house and garage; install new gutters and downspouts; and repair the existing front porch.

STAFF OBSERVATIONS AND RESEARCH General

- The Corktown Historic District was established in 1984.
- The original street name was Baker. It was renamed Bagley and renumbered circa 1921.
- A building card, dated 1-13-1937, states "raise house and install piers, remove chimney". This work created the gap between the bottom of the house and grade, which is currently covered by a stamped metal product.
- Reviewing the Sanborn maps (1884, 1897, 1921 and 1921 1950) for this property, there are no indications of a front porch. The first documentation the city has on file for the property is the 1984 district designation photo which shows a front porch. Therefore, staff believes a single-story covered porch was added after 1950 and likely replaced a small stepped entry stair (as seen on neighboring houses in page 7 photo).



Sanborn Map, v. 1, 1921



Sanborn Map, v. 1, 1921-1950



Google Aerial View, 2021



District designation photo, HDAB, 1984

Front Porch/Exterior Siding

- Visible in the district designation photo is "Insulbrick" siding (asphalt fiber siding with a brick appearance) covering the exterior walls. It appears the window casings, but not the sills, were covered by aluminum trim as part of the storm window installation.
- In 1989 the Commission issued a COA for the erection of a new wood front porch.
 - o It is staff's opinion the interpretation of the National Park Service's Standards for Rehabilitation has been refined and strengthened over the ensuing 30+ years since the Commission issued its 1989 COA for the replacement porch.
 - O Staff believes current design does not meet the Standards as there was no historical evidence to substantiate the decorative design of the porch columns and railing spindles. However, as the applicant plans to repair the existing porch, the existing design can remain.
- In 1996 the Commission issued a COA for the installation of 4" vinyl siding.
 - O Staff presumes the Insulbrick was still in place at this time.
 - The vinyl siding was installed to stop short of the window openings allowing the wood casings to be visible once again.
 - Wood fishscale shingles were either uncovered or installed within the front gable and painted the same dark gray color as the front porch. The scales are not of equal dimension and do not exhibit weathered deterioration at the shingle edges which leads staff to believe these shingles are not of historic age.



HDC staff photo

- Listed are excerpts from the National Park Service document <u>Evaluating Substitute Materials in Historic</u> Buildings.
 - o Substitute materials, like all replacements, must closely match the design, color, surface texture, reflectivity, finish, details, and other qualities of the material or element to be replaced.
 - o Many modern materials used as substitutes are promoted as maintenance-free. Historic materials that require maintenance offer the possibility for indefinite life spans sustained by the renewal of maintenance. Materials that are maintenance-free have more limited life spans, with replacement being the only response to deterioration.
- Staff also reviewed the National Park Service <u>Preservation Brief 8: Aluminum and Vinyl Siding on Historic Buildings</u>
 - O Changes to the character-defining features of a building, such as distinctive clapboarding and other wall surfaces and decorative trim, always have an impact on more than just that building; they also alter the historic visual relationship between the buildings in the district.
 - O Because substitute siding is usually added on top of existing siding, details around windows and doors may appear set back from the siding rather than slightly projecting; and if the relationship of molding or trim to the wall is changed, it can result in the covering or removal of these historic features.
 - O Therefore, the underlying issue in any discussion of replacement materials is whether or not the integrity of historic materials and craftsmanship has been lost.
 - o For historic residential buildings, aluminum or vinyl siding may be an acceptable alternative only if:
 - (1) the existing siding is so deteriorated or damaged that it cannot be repaired;
 - (2) the substitute material can be installed without irreversibly damaging or obscuring the architectural features and trim of the building; and
 - (3) the substitute material can match the historic material in size, profile and finish so that there is no change in the character of the historic building.

- In cases where a non-historic artificial siding has been applied to a building, the removal of such a siding, and the application of aluminum or vinyl siding would, in most cases, be an acceptable alternative, as long as the abovementioned first two conditions are met.
- O There are, however, also certain disadvantages in the use of a substitute material such as aluminum or vinyl siding, and these factors should be carefully considered before a decision is made to use such a material rather than the preferred replacement with new wood siding duplicating the old.
- o The implication is that the new material is an economical and long-lasting alternative and therefore somehow superior to the historic material. In reality, historic building materials such as wood, brick, and stone, when properly maintained, are generally durable and serviceable materials. Their widespread existence on tens of thousands of old buildings after many decades in serviceable condition is proof that they are the original economic and long-lasting alternatives.
- Thirteen structures remain on this block of Bagley: five are masonry, six have historic wood siding, and two structures (1409 and 1423-1425) are faced with vinyl siding.

Windows

- It appears some openings retain the full wood window sash (upper and lower), while others retain only upper wood sash, have vinyl replacement units, or in one case, only a storm window. Staff believes the photos of wood units that remain fully intact offer evidence that they are repairable.
- However, in the openings where lower sash are missing, the remaining window frames and rough openings have likely suffered severe deterioration due to long-term water exposure.



Applicant photos.

The upper left window unit remains intact, with minimal noticeable deterioration to the sash and sill.

The upper right window unit is missing the lower sash as well as the storm window glass. Due to exposure, the sill has deteriorated to the point that part of it is gone.



- Staff reviewed the existing conditions and determined 36% of the openings within the structure contain complete sash units. The front elevation retains 60%, while the rear elevation retains 25%. The sides retain 0% full wood sash units.
 - o Front Elevation 5 openings 3 have full wood sash; 2 have missing lower wood sash
 - o Rear Elevation 4 openings 1 has full wood sash, 3 have vinyl sash
 - West Side Elevation 2 openings 2 have missing lower wood sash
 - o East Side Elevation 1 opening missing entire sash, only retains aluminum storm window
- If replacement windows are considered for any of the openings, the following excerpts from the National Park Service's document <u>Replacement Windows that meet the Standards</u> may be helpful. The proposed replacement windows are American Craftsman Vinyl units and are manufactured by Anderson.
 - o When historic windows exist, they should be repaired when possible. When they are too deteriorated to repair, selection of the replacement windows must be guided by <u>Standard 6</u>.
 - o Replacement windows on primary, street-facing or any highly visible elevations of buildings of three stories or less must match the historic windows in all their details and in material (wood for wood and metal for metal).
 - Replacement windows on secondary elevations that have limited visibility must match the historic windows in size, configuration and general characteristics, though finer details may not need to be duplicated and substitute materials may be considered
 - O While it may be theoretically possible to match all the significant characteristics of a historic window in a substitute material, in actuality, finish, profiles, dimensions and details are all affected by a change in material.
 - O The stiles of double-hung historic windows align vertically and are the same width at the upper and lower sashes. The use of single-hung windows as replacements may alter this relationship with varying effects on the appearance of a window.
 - o Meeting rails of historic windows were sometimes too narrow to be structurally sound. Reproducing a structurally inadequate condition is not required.
 - o In addition to the surface characteristics, vinyl-clad or enameled aluminum-clad windows may have joints in the cladding that can make them look very different from a painted wood window.
 - O Secondary window elements that do not match the finish or color of the window can also diminish the match. Examples include white vinyl tracks on dark-painted wood windows or wide, black, glazing gaskets on white aluminum windows.
 - o Insulated glass is generally acceptable for new windows as long as it does not compromise other important aspects of the match.

Garage

• A building card on file states a frame garage was constructed in 1923. While it is possible the existing structure is of historic age, it doesn't retain any historic materials or details (i.e., no historic integrity) and therefore staff doesn't consider the garage a contributing structure for this property or the district.



Above and Right: Garage exterior and interior, photos provided by applicant.



• Due to the lack of any historic material on the garage and no photographic documentation to indicate what had been there, installing a synthetic cementitious siding material that offers a similar appearance to wood clapboard siding (as this is the known material on the house) may be appropriate.

ISSUES

Porch

A repair generally consists of minimal new material and the retention of most of the existing components. Staff is not sure the existing porch is structurally sound enough to be repaired without the insertion of mostly new wood decking, railings, and columns. As staff doesn't believe the existing porch meets the Standards, it would not be appropriate to build a new deck to match the existing design. Therefore, if new replacement material is required, a porch with minimal details, similar to the design shown in the 1984 designation photo, is an appropriate solution as it will not add conjectural detail to the house. The applicant agreed to this solution, if the Building Department, during plan review, confirms the porch can't be repaired without a significant amount of new material.

Windows

- It seems one window opening on the rear elevation was previously reduced in size (see below photo) as it shows a horizontal piece of wood between the bottom of replacement window frame and window opening.
 - The applicant said they would return all window openings to their original size if the Commission requests it.
- As a number of existing wood window units remain in place, staff requested the applicant submit dimensions of all components of the existing window frames, as well as dimensions of the proposed vinyl frames. The existing wood window frame dimensions were submitted but the vinyl sash dimensions were not, therefore staff couldn't analyze the replacement windows to determine if they closely match the existing sash.
- Single-hung replacement windows may be fabricated with a thinner upper sash (unlike a double-hung sash which as operable upper and lower sashes) which can alter the window units' appearance within the window openings.

Exterior Siding

- Staff asked the applicant to confirm if the original wood siding is present on the house and if so, can it be restored. A photo from the applicant's submission show original wood siding below a window opening. The applicant replied to say some of the siding is still in place and deteriorating, or is missing in some areas.
- It is staff's opinion that vinyl siding is not an appropriate replacement product as it does not match the surface texture, reflectivity, finish, edge details, and at times width and reveal, of the original wood clapboard siding. Additional details, such as vertical joints in the cladding and protrusion of the siding (either past or in-line with the window casings) further obliterates the "matching" look of wood siding and trim.
- The applicant didn't provide details or sections to show how the siding would be installed.
- The structure is around 140 years old, and asbestos and vinyl siding have been applied over the wood siding for 40+ years. It is very likely wood boards have deteriorated and been damaged (as seen to the right), and even removed in areas to



create flat surfaces for the synthetic product installation. The only way to know if the integrity of the historic wood siding has been retained or lost is to remove the vinyl siding and its underlying sheathing. If it is determined the wood siding cannot be repaired, then a substitute material can be considered.

It is staff's opinion the Commission approving a substitute material at this time is a premature decision. The applicant and Commission have the opportunity to determine if the house's wood siding can be repaired (or replaced in-kind) in a way to reinsert the building into the historic fabric of the district. It is quite common to uncover well-preserved historic siding under later inappropriate materials; indeed, this has occurred recently on some similar houses in Corktown.



Google street view: From left: 1427 (partially shown), 1433, 1439 and 1445 Bagley. The property on the left, due to the vinyl siding installation, has lost (either by being covered or removed) character-defining details and stands in sharp contrast to the three houses to the right which retain wood siding and trim. These three houses were also constructed prior to the 1884, like 1409 Bagley. It is staff's opinion, that even though fascia and upper window casing trim details on 1409 Bagley might have been removed, retaining (whether original or in-kind replacement) wood siding, the existing flat trim and window casings can allow the building to regain a level of historic significance (akin to the neighboring structures further west on the street) and offer a truer identity as to its time of construction.

• What looks to be a stamped metal product (visible on the page 6 photo) was installed between the bottom of the house and grade (which open spaced was created by the 1937 raising of the house). The metal product appears to have deteriorated in spots, as well as being out of plane in other areas. Staff asked if the material will be left as-is, repaired, or replaced (in-kind or with an alternative material). The applicant reported that a matching stamped material has not been located and did not list what will be done to

- continue covering this space.
- In conclusion, the applicant refers to the houses on either side of 1409 Bagley (which have vinyl windows) as precedent for their request for vinyl windows. Staff did not find Commission approval on DPI for either vinyl window installation, nor for the vinyl siding installation at 1425-1427 Bagley. Staff will check the paper files for these properties when back in the office and will proceed with design/violation review as necessary.

RECOMMENDATION

Recommendation One - Denial

Section 21-2-78, Determination of Historic District Commission

It is staff's opinion the applicant didn't provide adequate information to support the replacement of the existing windows with the proposed vinyl windows; staff also believes the installation of new vinyl siding on the house and garage will continue to alter the features and spaces that characterize the property. Therefore, the work as proposed should not qualify for a Certificate of Appropriateness because it does not meet the Secretary of the Interior Standards for Rehabilitation and the Corktown Historic District's Elements of Design, specifically Standards:

- 2) The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
- 5) Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
- 6) Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

Recommendation Two - Certificate of Appropriateness

Section 21-2-78, Determination of Historic District Commission

It is staff's opinion the remaining components of the application, specifically gutter and downspouts, and the repair of the front porch is compatible with the massing, size, scale, and architectural features of its environment and does not destroy historic materials that characterize the site. Staff therefore recommends the proposal should qualify for a Certificate of Appropriateness as it meets the Secretary of the Interior Standards for Rehabilitation and the Corktown Historic District's Elements of Design, with the conditions that:

- Should the existing porch require replacement materials that exceed the insertion of components currently missing in order to meeting building and safety codes, the applicant will erect a new porch. The new porch will be designed similar to the one shown in the designation photo and the new-construction photo included within the applicant's HDC submission. Dimensioned drawings, which also specify material and finish (color of paint or solid stain), will be submitted for staff review.
- If a new porch is constructed, it will not be painted or stained until the wood has properly dried, which generally requires waiting at least two months after installation (and warm weather).

WINDOWS

There are currently 3 different types of windows - wood, aluminum & vinyl. There are some windows missing entirely and some missing the top or bottom panel.

Scope of work: We would like to replace all windows to vinyl.

Reason: Windows cannot be repaired.

Note* Neighbors on each side of subject property have vinyl windows. (Pictures Bellow)

WOOD INTERIOR, ALUMINUM EXTERIOR







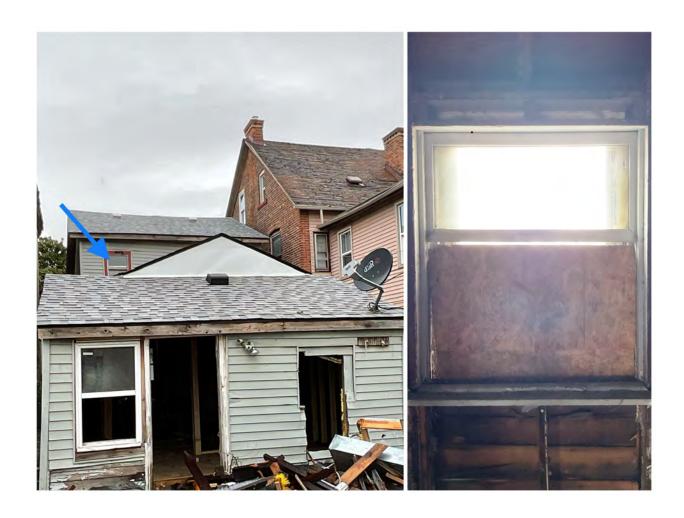


















ALUMINUM INTERIOR & EXTERIOR



VINYL

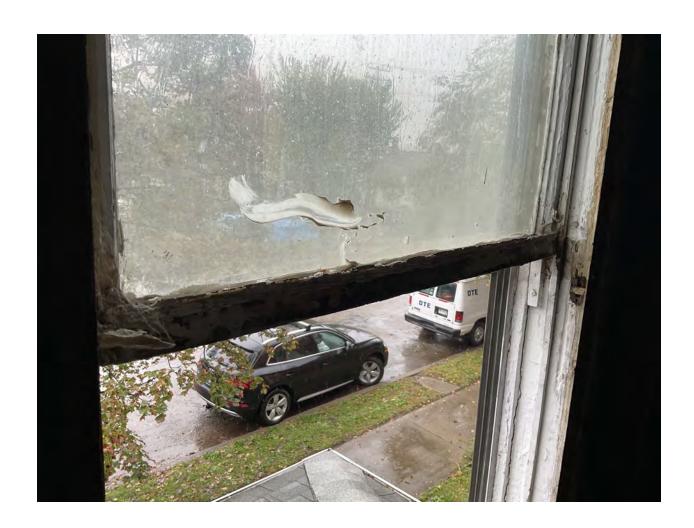




DETERIORATION TO EXISTING WINDOWS









Neighbors on each side currently have all vinyl windows:

1407 BAGLEY





1413 & 1415 BAGLEY





SPECS FOR PROPOSED NEW WINDOWS:

*Sizes in these specs of course will be according to each window

American Craftsman 23.375 in. x 35.25 in. 50 Series Single Hung White Vinyl Window with Nailing Flange



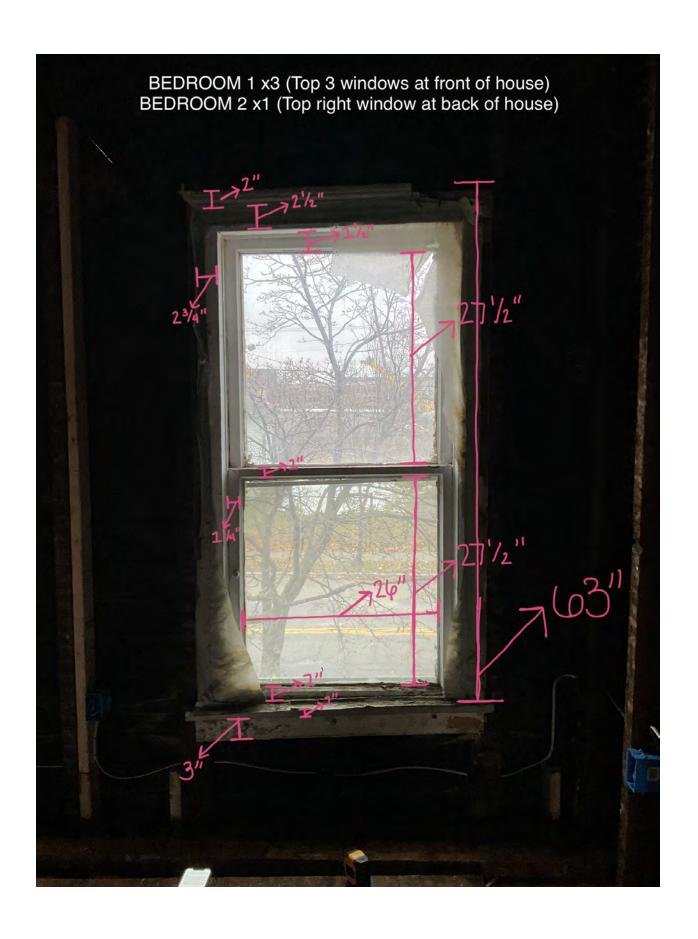


	an 23.375 in. x 35.25 in. 50 Series in the s	
Overview	ecifications Review	/s
Exterior Color/ Finish	White	
Exterior Color/Finish Fami	y White	
Features	Tilt-In Cleaning	
Frame Material	Vinyl	
Frame Type	Nail Fin	
Glass Type	Low-E Glass	
Glazing Type	Double-Pane	
Grid Pattern	No Grid	
Grid Width (in.)	None	
Grille Type	No Grille	
Hardware Color/Finish Far	nily White	
Included	Hardware,Screen	

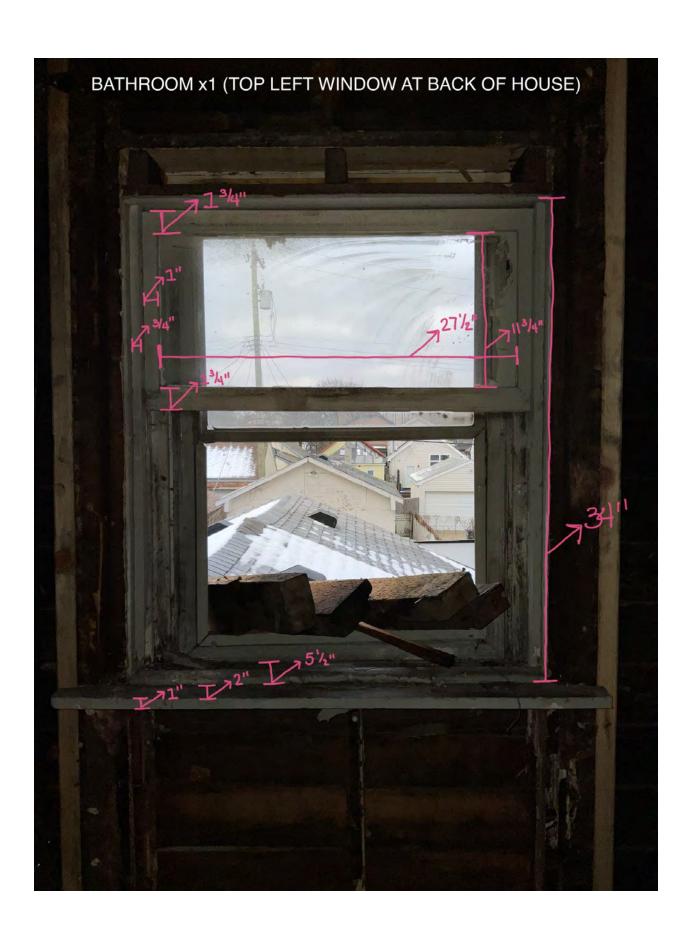
Lock Type	Cam Action
Number of Grids	No Grid
Number of Locks	đ
Product Depth (in.)	3.5 in
Product Height (in.)	35.25 in
Product Highlight 1	Designed for installation into new openings
Product Highlight 2	Low-maintenance vinyl never needs painting
Product Highlight 3	Tilt-in feature for easy cleaning
Product Weight (lb.)	24 lb
Product Width (in.)	23.375 in
Returnable	90-Day
Rough Opening Height (In.)	35.75 in
Rough Opening Width (In.)	23.875
Solar Heat Gain Coefficient	.26

.29

U-Factor



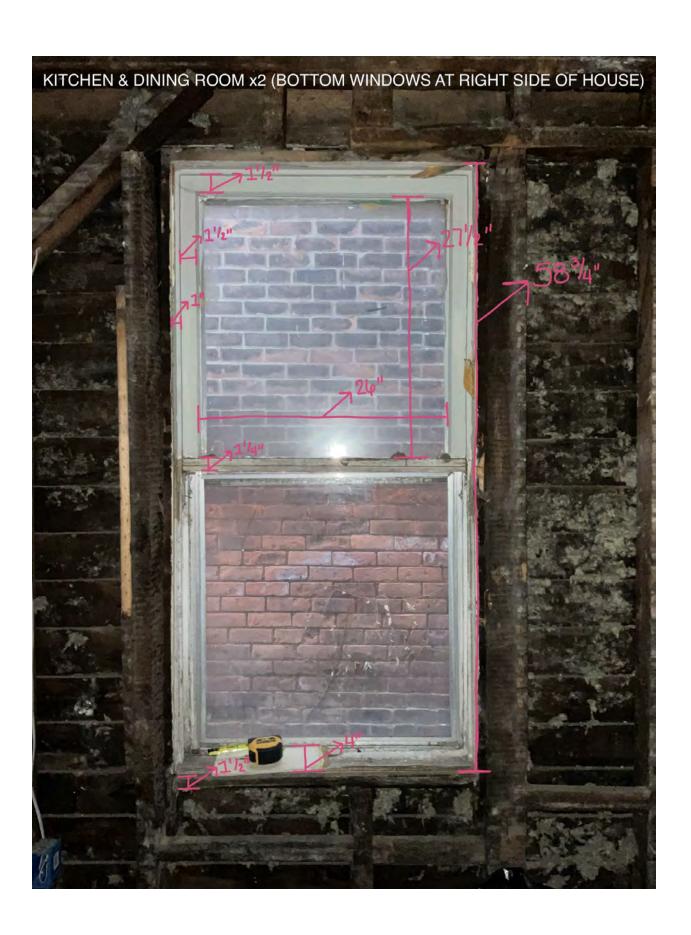


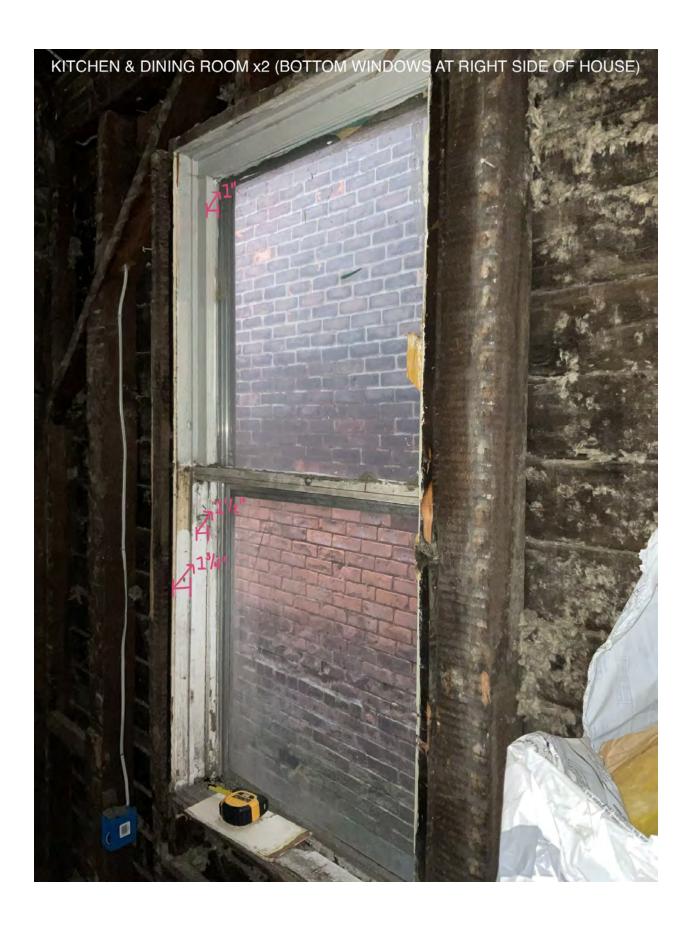












- -Some windows only contain the upper sash while others retain both the lower and upper.
- -No windows have been reduced in size or had any modifications. All window openings are as they were when we purchased the property.
- -We did not plan for all windows to go back to their original size, but if vinyl is approved we can work on matching the original sizing if this is what is preferred/required.

GUTTERS

Missing gutters and damaged gutters throughout.

Scope: We would like to install 5" black seamless aluminum gutters where there are currently none, and paint current ones in black (B-19) Size of current gutters: 5"



Would like to install similar to this:

Amerimax Home Products 5 in. x 10 ft. K-Style Black Aluminum Gutter











-Gutter downspouts will be installed in the same locations as they were in the original design of the house back in 1884. Photo above.

GARAGE

Garage exterior is currently plywood. There are holes and patches throughout which makes it unsecured. We would like to add new vinyl siding which will match the house.

We will repair the current garage door if repairable, if not we will need to replace it with the same style and keep it white.

Size of current garage door: 16x8



If replacement is required, would like to replace with this:

Clopay Classic Collection 8 ft. x 7 ft. Non-Insulated White Garage Door



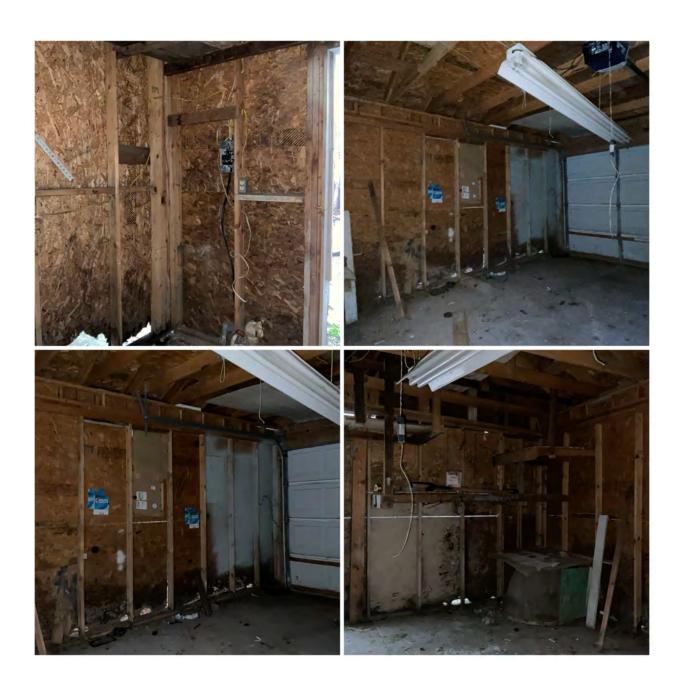






-The exposed plywood on the exterior is installed directly on top of the framing. There is no siding underneath

-We will remove the current pedestrian door as it's just plywood, rotted at bottom corner and no proper hole for a door knob, and we will replace with a new exterior aluminum door





SOFFITS/FASCIA

There is currently damage and deterioration to the soffits/fascia. Will need to replace it. Current materials used are wood and materials for

replacement will also be wood.







Size of current fascia: 1x6 Size of current soffit: 14'x5'x4"

Replace all soffit and Fascia in the same size and material of current which is wood.

FRONT PORCH

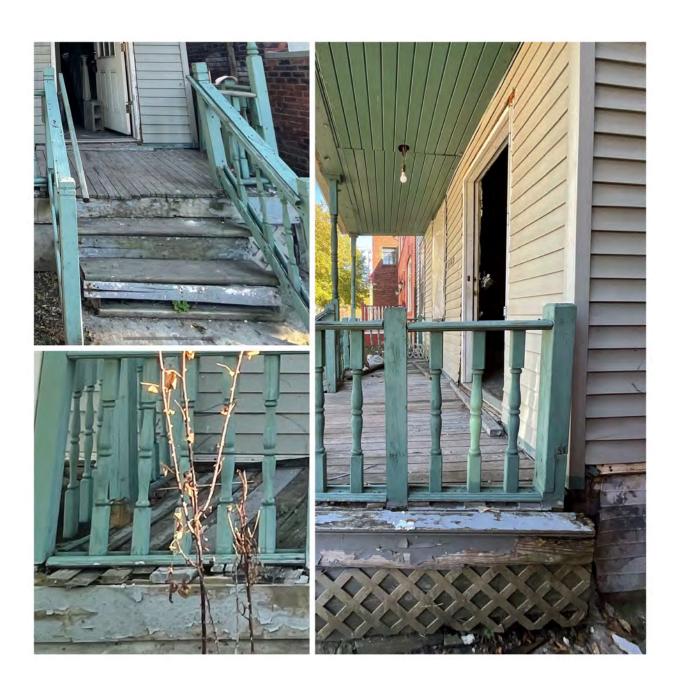
There is a lot of deterioration to the front porch currently and it is not structurally sound or safe. We will do an "in kind" repair.





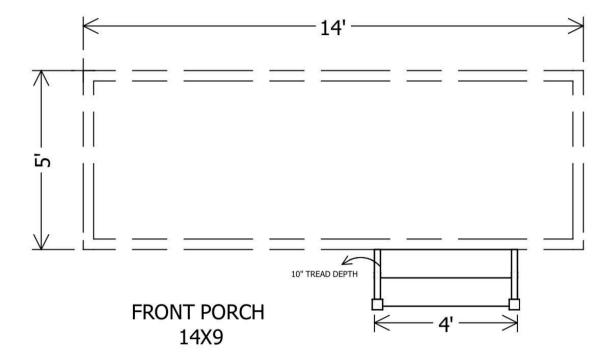








Size of current porch: 14'x5'



Size of elements to current porch:





Materials for porch repair:

- -Will use current <u>wooden</u> rails/<u>wooden</u> posts/<u>wooden</u> balusters. Will sand and paint them
- -Wood soffit & fascia
- -Pressure treated wood for the floor 1x4

WeatherShield 1 in. x 4 in. x 12 ft. Ground Contact Pressure-Treated Board











Nominal Product Length (ft.): 12 ft





Dverview	Specifications	Fléurie Wrs
Actual Product Length (ft.)	8 ft	
Actual Product Thickness (in.)	0,75 in	
Actual Product Width (in.)	3.5 in	
Chemical retention (lb./cu. ft.)	0.15	
Color/Finish	Brown	
Fastener Recommendation	Galvanized Fastener	
Features	Paintable, Pressure Treated, Stainable	
Lumber Grade	Appearance Grade	
Material	Southern Yellow Pine	
Moisture content	Green	
Nominal Product Length (ft.)	8 ft	
Nominal Product Thickness (in.)	1	
Nominal Product Width (in.)	4 in	
Pressure treatment chemical	MCA - Micronized Copper Azole	
Product Highlight 1	2X the protection compared to Above Ground treatment	
Product Highlight 2	Treated for protection against fungal decay, rot and termites	
Product Highlight 3	Use for decks, walkways, landscaping and other outdoor projects	
Texture	Smooth	
Wood Species	Southern Pine	

-Pressure treated lumber for porch beam support 2x12

Unbranded 2 in. x 12 in. x 16 ft. Prime Ground Contact Pressure-Treated Lumber



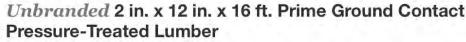












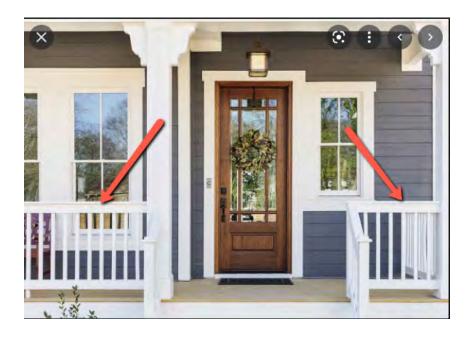
Unbranded 2 in. x 12 in. x Pressure-Treated Lumber	t 16 ft. Prime Ground Conta	
Overview Specific	ations Reviews	
Actual Product Length (ft.)	16 ft	
Actual Product Thickness (in.)	1.5 in	
Actual Product Width (in.)	11.5 in	
Chemical retention (lb./cu. ft.)	0.15	
Color/Finish	No Color	
Fastener Recommendation	Galvanized Fastener	
eatures	Pressure Treated	
Lumber Grade	No. 2 Appearance	
Material	Wood	
Moisture content	Green	
Nominal Product Length (ft.)	16 ft	

Nominal Product Thickness (in.)

2

Product Highlight 1	Suitable for decks, walkaways, and other outdoor projects	
Product Highlight 2	Treated with micronized copper azole to resist rot and decay	
Product Highlight 3	Can be painted or stained to enhance natural beauty of the wood	
Texture	Smooth	
Wood Species	Southern Pine	





Colors for porch repair:

- -Wood floor light bluish grey (C-1)
- -Railing/posts/balusters grayish olive green (B-11)
- -Soffit & fascia grayish olive green (B-11)

-According to our experience with the building department, if the current porch is grandfathered in we will do an in-kind repair, save the existing elements and make it structurally sound. If we cannot repair, to our knowledge the building department will work with the Historic Commission's requirements while also making sure the porch be built up to code. We will build the new porch according to the original design dated 1884, while also installing a rail which is required by code. The rail we will use is in the picture above.

- -The colors we would like to use are listed above.
- -The current front and back exterior doors will be retained.

SIDING

The siding is not in good condition. There are many spots around all sides of the house that are damaged or missing and not repairable. We would like to replace it with vinyl siding of an approved color.

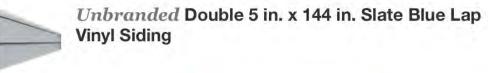




Scope: New siding will be installed in the color of A:7 Bluish Gray

Unbranded Double 5 in. x 144 in. Slate Blue Lap Vinyl Siding





Overview	Specifications	Reviews	
Color Family	Blue		
Color/Finish	Blue		
Coverage Area (sq. ft.)	200		
Finish Type	Finished	Finished	
Material	Vinyl	Vinyl	
Product Highlight 1		Hang-Tough technology resists cracking and thermal damage	
Product Highlight 2	ensures e	Advanced locking system ensures easy installation and secure fit	
Product Highlight 3		Backed by manufacturer's limited lifetime warranty	
Product Length (in.)	144 in	144 in	
Product Thickness (in.)	.040 in	.040 in	
Product Width (in.)	11.78 in	11.78 in	

Clapboard

Profiles

- -The original wood siding underneath is deteriorating and cannot be repaired, or it is missing entirely. Photos above shows this.
- -The scalloped siding at top of the house will be retained. This is the only location on the house where there is decorative siding.
- -New vinyl siding will retain exposure of current wood window casings if we cannot replace with vinyl.
- -Between the foundation of the house and ground is a metal/aluminum material. We have checked several places online and were unable to find anything similar to match.



ABI INVESTMENTS LLC 1409 Bagley, Detroit Michigan 48216

Project: 1409 Bagley

Date :10/01/2021

To whom may it concern:

Hereby allow me to send you a cordial greeting and thank you for allowing us to be an option for project.

Unfortunately, after our specialist carried out the preliminary inspection, we realized that you have 3 different types of windows installed, vinyl, aluminum and wood. Our specialist also determined that the windows are in very poor condition and because of all of that it is impossible to repair them.

Finally we are at your service for a future quote and to be able to present you the wide variety of windows that we have.

Greetings.

Atte.

Jaudiel Alan Muniz Ugalde



70 SERIES 50 SERIES

WINDOWS & DOORS









Quality you expect from a brand you can trust.

American Craftsman® is the brand of vinyl windows and patio doors that not only offers energy efficiency, low maintenance and affordability but the confidence and peace of mind that includes a limited lifetime warranty.

Our products are designed and manufactured with the quality you expect from an Andersen company. So if you are considering vinyl windows for your home, look to American Craftsman products, from the company with the most recognized brand of windows and patio doors in America.



American Craftsman ranked "Highest in Customer Satisfaction with Windows and Patio Doors" by J.D. Power.*

*American Craftsman received the highest numerical score among 16 companies in the J.D. Power 2017 Windows & Patio Doors Satisfaction Study, based on 1,904 total responses, measuring the experiences and perceptions of customers who purchased windows and/or patio doors in the previous 12 months, surveyed February — March 2017. Your experiences may vary West information.



Classic styling for enhanced curb appeal.

70 Series products are a full portfolio of premium quality, energy-efficient, low-maintenance windows and patio doors. They feature an enhanced design with wider profiles to emulate the look of traditional wood windows. Available with a variety of colors and grille patterns for any style and ENERGY STAR® certified glass options.

See pages 6, 10, 11, 12, 13, 16.



For coastal areas, we offer StormDefense™ Protection on 70 Series windows and patio doors. This includes impact-resistant glass and structural reinforcements to help you protect your home from the harshest coastal weather conditions*

See pages 10, 11, 12, 13, 16, 21.



Simplified design for the budget-minded.

50 Series products offer affordability without sacrificing quality. With a simplified design that maximizes light and view for a more contemporary look, these products are low maintenance inside and out and are ENERGY STAR® certified with select glass options.

See pages 9, 11, 13, 17.

^{*}See your code official for local code requirements.

Which window is right for your project?

No matter if you're replacing existing windows or adding windows to a new opening, American Craftsman has a variety of window styles and options to choose from. New windows can provide better insulation, which can help reduce your energy bill, and add style by enhancing your home's curb appeal.



Replacement

Designed to fit inside existing window frames

Replacing old windows with new ones can make an impressive change to your home. Replacement windows fit into the existing window frame, allowing you to update your house with minimal disruption while saving you time and money.

See pages 6, 9, 12, 13.

- Cost-effective upgrade that enhances your home's curb appeal.
- Minimal disruption to your interior trim and exterior siding.
- Improved window operation.
- Easy for do-it-yourselfers.
- Custom sizes to fit any window opening for a fast, weathertight installation.
- ENERGY STAR® certified glass options available for any climate to help reduce energy costs.



Remodel or New Construction

Made for new walls or window openings

Whether you're building a new home, putting on an addition, or creating a new window opening, we have a variety of window styles, options and configurations to let you be creative.

See pages 10, 11, 12, 13.

- Frame options include a nailing flange with or without a J-channel for fast, weathertight installation.
- When using siding on the exterior of your home, a J-channel allows you to attractively trim the siding to the window.
- ENERGY STAR® certified options are available for any climate to help reduce energy costs.





Our 70 Series Pro Replacement double-hung window is designed for easy window replacement and offers an enhanced design for added curb appeal. Featuring wide profiles, this window gives you more of a classic look.

Enhanced design inside and out

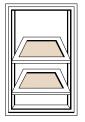
Decorative exterior frame adds curb appeal while **interior jamb covers** create a finished appearance.



Easy to clean

Tilt-in top and bottom sash with **low-profile tilt latches** that blend in with the window.







INTERIOR VIEW SHOWN

Exterior colors



Printing limitations prevent exact color duplication.

Weathertight performance

Dual weatherstripping helps seal out dust, wind and water. The **Premium lock** made of durable metal pulls the sash tight for additional weathertight performance.



Flexible ventilation

Double-hung windows have two operating sash that move up and down and allow **venting from the top and bottom**. This window also features vent latches for the option of **partial ventilation**.



Easy installation to save you time

Custom sizes and head and sill expanders ensure an exact fit. Pre-drilled installation holes save you time.



DID YOU KNOW?

This window is also available as a bay combination unit.









Our 50 Series Replacement double-hung features a slim profile that allows for maximum light and a clean design for more of a contemporary style.

Simplified design

Flat exterior frame for a clean and modern appearance.



Easy cleaning

Tilt-in feature for easy cleaning from inside your home.



Weathertight performance

Dual weatherstripping helps seal out dust, wind and water. The **Standard lock** pulls the sash tight to seal out elements.





INTERIOR VIEW SHOWN

Exterior colors



Printing limitations prevent exact color duplication.

Flexible ventilation

Double-hung windows have two operating sash that move up and down and allow **venting from the top and bottom**. This window also features vent latches for the option of **partial ventilation**.



Easy installation to save you time

Custom sizes ensure an exact fit while **pre-drilled installation holes** save you time.



DID YOU KNOW?

This window is also available in a single-hung where only the bottom sash opens and tilts in for cleaning.







- Wide profiles for a traditional appearance and improved performance.
- Decorative brickmould exterior frame enhances your home's curb appeal.
- Both top and bottom window sash open for flexible ventilation and tilt in for easy cleaning.
- Factory applied flat exterior trim option complements the architectural style of your home.
- Optional integral J-channel allows for attractive trimming of exterior siding and saves you the time and money of installing it separately.



Available with StormDefense[™] Protection.* See page 21 for details.



^{*}See your code official for local code requirements.





- Decorative brickmould exterior frame enhances your home's curb appeal.
- Bottom window sash opens for ventilation and tilts in for easy cleaning.
- J-channel allows for attractive trimming of exterior siding and saves you the time and money of installing it separately.



Available with StormDefense[™] Protection.*
 See page 21 for details.







- Slim profiles for maximum light and a contemporary look.
- Flat exterior frame for a clean and modern appearance.
- Bottom window sash opens and tilts in for easy cleaning.









Casement

for Replacement & Remodel/New Construction

- Casement windows are hinged on the side and open outward to the left or right, allowing for full top to bottom venting.
- Wide profiles for a traditional appearance and improved performance.
- Decorative exterior enhances your home's curb appeal.
- Multi-point lock engages from a single lever for convenience and security.
- Folding hardware eliminates interference with window treatments.
- Corrosion-resistant operator for long-lasting,* smooth operation.
- Optional integral J-channel allows for attractive trimming of exterior siding and saves you the time and money of installing it separately.



Available with StormDefense[™] Protection.** See page 21 for details.



DID YOU KNOW?

This window is also available as a bay or bow combination unit.





Awning

for Replacement & Remodel/New Construction

- Awning windows open outward from the bottom for ventilation and protection from the rain.
- Wide profiles for a traditional appearance and improved performance.
- Decorative exterior enhances your home's curb appeal.
- Folding hardware eliminates interference with window treatments.
- Corrosion-resistant dual arm operator for long-lasting, smooth operation.
- Optional integral J-channel allows for attractive trimming of exterior siding and helps save you the time and money of installing it separately.



Available with StormDefense[™] Protection.** See page 21 for details.



See the limited warranty for details.

^{**} See your code official for local code requirements.





Gliding

for Replacement & Remodel/New Construction

- Gliding window sash slides horizontally for improved ventilation.
- Decorative brickmould exterior frame enhances your home's curb appeal.
- Durable rollers make sliding easy.
- Dual weatherstripping helps seal out dust, wind and water.
- Remodel/New Construction window comes with J-channel and nailing flange for convenient installation.



• 70 Series replacement gliding window available with StormDefense™ Protection.* See page 21 for details.





Gliding

for Replacement & Remodel/New Construction

- Gliding window sash slides horizontally for improved ventilation.
- Slim profiles for maximum light and a contemporary look.
- Flat exterior frame design for a clean and modern appearance.
- Dual weatherstripping helps seal out dust, wind and water.







Consider enhancing your view.

Specialty windows

Specialty windows are stationary windows that do not operate and are available in a variety of shapes and sizes to help maximize your view and add light to your home.

Combination windows

Create window combinations where various shapes and sizes are placed together to make a statement, let in more sunlight, and create a better view of the outdoors.



Twin Double-Hung



Triple Double-Hung



Picture Window with Double-Hung Flankers



Equal Leg Arch Over







Half Circle Double-Hung



Over Twin Double-Hung



Quarter Circle Over Double-Hung



Half Circle Over Triple Double-Hung



Quarter Circles, Springline, Double-Hungs and Picture Window



Equal Leg Arch Over Triple Double-Hung









Gliding Patio Door

Premium quality vinyl with an enhanced design.

- Low-maintenance vinyl never needs painting.
- Precision ball-bearing rollers for smooth, long-lasting* operation.
- Steel-reinforced construction adds strength and durability.
- Multi-point lock system with exterior keyed lock provides enhanced security.
- J-channel with integral nailing flange comes standard for convenient installation.
- Fully assembled for quick and easy installation.
- Available with built-in blinds. Blinds are protected from dust and damage and feature a cordless design to easily raise, lower, or tilt for control of light and privacy.



Available with StormDefense™ Protection.** See page 21 for details.



*See the limited warranty for details. **See your code official for local code requirements. Printing limitations prevent exact color duplication.

Exterior colors:



Hardware: Includes exterior keyed lock











Gliding Patio Door

Designed with flexibility to match your project and budget.

- Low-maintenance vinyl never needs painting.
- Precision ball-bearing rollers for smooth, long-lasting* operation.
- Steel-reinforced construction adds strength and durability.
- Optional exterior keyed lock available.
- Coastal door option available with performance upgrades to meet HVHZ approval.
- Available with built-in blinds. Blinds are protected from dust and damage and feature a cordless design to easily raise, lower or tilt for control of light and privacy.
- Choose from a fully assembled door for quick and easy installation or a door kit for easy transportation.
- Designed for easy replacement or installation into new openings.

Exterior colors:







Standard



Satin Nickel



^{*}See the limited warranty for details.

^{** 50} Series with built-in blinds is only available in white. Printing limitations prevent exact color duplication.

Choices that make American Craftsman windows your own.



Colors

Available in White, Beige, Sandtone and Dark Bronze.



^{*}Dark Bronze has a white interior. Printing limitations prevent exact color replication.

Window Hardware

Durable hardware color-matched to the interior of the window.





Patio Door Hardware





Wireless Open/Closed Sensors

When you want the peace of mind of knowing whether your windows and patio doors are open or closed, these sensors are a simple, reliable solution.

Available for use on all 70 Series windows and patio doors.

For more details, visit: americancraftsmanwindows.com/connect





Grille Options

Grilles between the glass

Grilles between the glass add style to your windows and doors and make cleaning easy.





Simulated divided light

Grilles are permanently applied to the glass,* providing a more authentic look.



Finishing Accessories

Our windows designed for remodeling or new construction are available with various finishing options for a quick and professional finish.



Flat exterior trim

Exterior trim complements the architectural style of your home. Our trim is factory applied, so it saves installation time and adds to the window's weathertightness. (Available on the 70 Series double-hung window.)



EXTENSION JAMB



DRYWALL CHANNEL



WITH J-CHANNEL

Extension jambs

Extension jambs are used to increase depth of the window jamb to match the wall depth. Available in factory applied 4-9/16" or 6-9/16" wall depth, in either unfinished or primed wood, for easier installation.

Drywall return

Used instead of extension jambs and interior trim to create a clean transition from window to drywall. Factory applied channel surrounds the window and allows drywall to slide into it for a clean finish around your window. Accommodates both 1/2" and 5/8" drywall.

J-channel

The built-in J-channel is necessary for easy and attractive trimming of vinyl siding. Not only does it make your job easier, but it also saves you the time and money of installing it separately.



Performance comparison of glass options.

No matter what type of project you're doing or where you live, American Craftsman has a glass option that is ENERGY STAR® certified and fits the needs of your home.

	ENE	RGY	LIG	HT .
	U-FACTOR	SOLAR HEAT GAIN COEFFICIENT	VISIBLE LIGHT TRANSMITTANCE	UVPROTECTION
GLASS	How well a product prevents heat from escaping.	How well a product blocks heat caused by sunlight.	How much visible light comes through a product.	How well a product blocks ultraviolet rays.
Low-E A great option for climates where both heating and cooling costs are a concern.	****	****	***	***
Low-E SmartSun™ Glass option with thermal control similar to tinted glass but with a visible light transmittance closer to clear glass.	***	***	***	****
Low-E Sun Outstanding thermal control for southern climates where less solar heat gain is desired.	***	***	***	****
Low-E PassiveSun® Allows more heat from the sun into your home, helping to reduce heating costs during colder months.	***	***	****	****
Low-E PassiveSun® with HeatLock® Technology The addition of our room-side HeatLock® coating can help products with PassiveSun® glass meet performance requirements.*	***	***	***	****
Clear Dual-Pane Basic thermal performance with high visibility.	****	***	***	***

 $Center\ of\ glass\ performance\ only.\ Ratings\ based\ on\ glass\ options\ available\ as\ of\ June\ 2015.$

DID YOU KNOW?

Argon gas blend is an available upgrade for all American Craftsman glass to increase insulation and performance.



 $^{{}^\}star Stringent \, ENERGY \, STAR {}^\circ \, requirements in the northern climate zone.$



Impact-resistant glass for coastal areas.



Our products with StormDefense™ Protection include impact-resistant glass and structural upgrades. Designed for coastal areas,* impact-resistant glass from American Craftsman has a layer of clear polymer between two sheets of glass, providing a layer of protection from damaging coastal weather. In addition, an insulating air space helps to keep homes cool in warm months.

The benefits of impact-resistant glass:



Storm protection

Helps protect home against extreme weather and flying debris.



Saves energy

Helps shield homes from the sun's heat, keeping your home cool and lowering energy costs.



Safety

Provides forced-entry resistance for peace of mind.



Sound reduction

Reduces exterior noise for a quieter environment.



Sun protection

Helps reduce damaging UV rays from coming into your home.

3 simple steps to replacing your old windows.



MEASURING TIPS

 $\mbox{\bf WIDTH:}$ Measure width of the opening from jamb to jamb, behind trim or stops.







HEIGHT: Measure height of opening from highest point of sloped sill to top of head jamb, behind interior stop.





Measure the opening

Take the smallest width and height measurements. Make sure opening is square by measuring diagonally. Measurements must be within 1/8". Record measurements on worksheet provided in this brochure and take them to The Home Depot® store near you. Worksheet on page 25.



Remove existing window parts

Remove both sash and interior stops, leaving window frame and trim in place. Apply sealant.



Insert new window

Insert new window, which sits against the outer blind stops. Make sure it's square and then simply secure it. Apply sealant and trim, and you're done.

WATCH IT ONLINE



Watch a video at americancraftsmanwindows.com/replace.

Our replacement windows are custom-sized to fit your window opening. If your measurements fall within these ranges, we have a window for you.





Hung Replacement

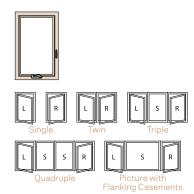
SERIES	Minimum Width	Maximum Width	Minimum Height	Maximum Height
70 Pro Double-Hung	16¾"	48"	26¾"	80"
50 Double-Hung	16¾"	48"	26¾"	771/4"
50 Single-Hung	16"	48"	24"	80"





Casement Replacement

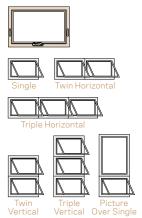
MODELS	Minimum Width	Maximum Width	Minimum Height	Maximum Height
Single	17½"	36"	23"	72"
Twin	35"	72"	23"	72"
Triple	52½"	108"	23"	72"
Quadruple	70"	108"	23"	72"
Picture with Flanking Casements	70"	108"	23"	72"





Awning Replacement

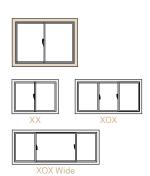
MODELS	Minimum Width	Maximum Width	Minimum Height	Maximum Height
Single	17½"	48"	15"	36"
Twin Horizontal	35½"	96"	15"	36"
Triple Horizontal	54"	108"	15"	36"
Twin Vertical	17½"	48"	30"	72"
Triple Vertical	17½"	48"	45"	108"
Picture Over Single	17½"	48"	45"	96"





Gliding Replacement

MODELS	Minimum Width	Maximum Width	Minimum Height	Maximum Height
XX	22"	86"	141/4"	66"
XOX	48"	108"	141/4"	62"
XOX Wide	48"	108"	141/4"	62"



Customer Worksheet

F	ЮОМ	WINDOW OR PATIO DOOR STYLE	SERIES	SIZE WIDTH X HEIGHT	GRILLES	OPTIONS
Living	Room	double-hung	70	_25 ³ 4_ W x _40 ³ 4_ H		flat exterior trim
1				W x H		
2				W x H		
3				W x H		
4				W x H		
5				W x H		
6				W x H		
7				W x H		

Double-Hung Window and rough opening sizes

37 1/4" 39 1/4" 21 1/4" 23 1/4" 27 1/4" 31 1/4" 35 1/4" 43 1/4" 47 1/4" Exterior J-Channel Cottage (Reverse Oriel): Dimension **CUSTOM WIDTHS:** 19 3/4" 213/4" 25 3/4" 29 3/4" 33 3/4" 35 3/4" 373/4" 41 3/4" 45 3/4" 17¾" to 48" Window Dimension CUSTOM HEIGHTS: 42" to 763/4" 38 1/4" 20 1/4" 22 1/4" 26 1/4" 30 1/4" 34 1/4" 36 1/4" 42 1/4" 46 1/4" Minimum **Rough Opening** Reverse Cottage (Oriel): 19 9/16" 27 9/16" 31 9/16" **CUSTOM WIDTHS:** 13 9/16" 15 9/16" 23 9/16" 29 9/16" 35 9/16" 39 9/16" Unobstructed Glass (lower sash only) 17¾" to 48" CUSTOM HEIGHTS: CUSTOM WIDTHS - 16" to 52" 42" to 763/4" $15^{3/16}$ " 24" to 84 36 3/4" 37 1/4" 38 18210 20210 24210 28210 210210 30210 34210 38210 16210 **CUSTOM HEIGHTS** 17 3/16" 41 1/4" 42 1/4" 40 3/4" 1632 1832 2032 2432 2832 21032 3032 3432 3832 213/16" 50 1/4" 49 1/4" 24310 28310 210310 30310 34310 38310 16310 18310 20310 233/16" 54 1/4" 53 1/4" 52 1642 1842 2042 2442 2842 21042 3042 3442 3842 253/16" 57 1/4" 1/4" 563/4" 58 30460 34460 1846 2046 2446 2846 21046 38460 1646 29 3/16" 661/4" 65 1/4" 643/4" 1652 1852 2052 2452 28520 210520 30520 34520 38520 313/16" 701/4" 69 1/4" 683/4" 2456 2856¢ 3056¢ 3856[◊] 1656 1856 2056 21056 34560 $33^{3/16}$ " 74 1/4" 73 1/4" 723/4" 285100 305100 20510 245100 2105100 345100 385100 16510 18510 77 1/4" $35^{3/16}$ " 1/4" 76 3/4" 28 28620 210620 3062 34620

Cottage or reverse cottage sash ratio available. Check rail is offset 6" up (cottage) or 6" down (reverse cottage) from equal sash location.

^{• &}quot;Window Dimension" always refers to inside frame to frame dimension.

^{•&}quot;Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items.

[♦] Meet or exceed clear opening area of 5.7 sq. ft., clear opening width of 20" and clear opening height of 24."

Single-Hung Window and rough opening sizes

Estados I Observal	19" 21" 25"	29" 31"	33" 37"	39" 41"	43" 45"	49"	from equal sash loca
Exterior J-Channel Dimension	19 21 25	7 29 31	33 37	39 41	45 45	7 1 49	Cottage (Reverse C
Window Dimension	18" 20" 24"	28" 30"	32" 36"	38" 40"	42" 44"	48"	CUSTOM WIDTHS: 16" to 52"
Minimum Rough Opening	181/2" 201/2" 24 1/2	28 1/2" 30 1/2"	32 1/2" 36 1/2"	38 1/2" 40 1/2"	42 1/2" 44 1/2"	48 1/2"	CUSTOM HEIGHTS 42" to 72"
Unobstructed Glass	13" 15" 19"	23" 25"	27" 31"	33" 35"	37" 39"	43"	Reverse Cottage (C
(lower sash only)	CUSTOM WIDTHS — 16" to 5	2"		1 1 1			CUSTOM WIDTHS:
36" 361/2" 15 1/16"	1630 1830 2030	1 2430 2630	2830 3030	3230 3430	3630 3830	4030	16" to 52" CUSTOM HEIGHTS 42" to 84"
39" 38" 16 1/16" CUSTOM HEIGHTS	† † † † † 1632 1832 2032	† † † 2432 2632	2832 3032	3232 3432	3632 3832	4032	
45" 44" 19 1/6"	1638 1838 2038	1 2 438 2638	2838 3038	3238 3438	3638 3838	4038	Cottage Reverse Cottage
47" 46" 20 1/16"	† †	† †	†	†	1	1	
48" 4812" 21146"	16310 18310 2031	24310 26310 ↑ ↑	28310 30310	32310 34310	36310 38310	40310	
51" 50" 50 ½" 22 1/16"	1640 1840 2040	† †	2840 3040	3240 3440 1 1	3640 3840	4040	
52" 52 1/2" 23 1/16"	1642 1842 2042	1	2842 3042	3242 3442 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3642 3842	4042	
55" 54" 541/2" 241/6"	1644 1844 2044	†	2844 3044	3244 3444	3644 3844 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4044	
56" 56 ½" 25 ¼e"	1646 1846 2046	<u> </u>	1	1	1	4048	
60" 6012" 27146"	1648 1848 2048 1650 1850 2050	<u> </u>	2848 3048	3248 3448 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3648 3848 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4048	
62" 62" 62 12" 28 146"	1650 1850 2051 1652 1852 2052	† †	2850 3050	3250 ⁰ 3450 ⁰	3650° 3850° 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4052°	

NOTES

Cottage or reverse cottage sash ratio available. Check rail is offset 6" up (cottage) or 6" down (reverse cottage) from equal sash location.

oriel):

TS:

(Oriel):



 $[\]mbox{-}\,\mbox{``Window Dimension''}$ always refers to inside frame to frame dimension.

^{• &}quot;Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items. ♦ Meet or exceed clear opening area of 5.7 sq. ft., clear opening width of 20" and clear opening height of 24".

50 SERIES

Single-Hung

Window and rough opening sizes

M	indow Dim inimum bugh Open			23 3/8"	27 3/8"	31 3/8"	35 3/8"	37 3/8"	39 ³ /8"	43 3/8"	Co CL CL	om equal sa ottage (Rev JSTOM WII JSTOM HE everse Cot
Ur (lo	nobstructed wer sash only)	d Glass		19 1/16"	23 1/16"	27 1/16"	31 1/16"	33 1/16"	35 1/16"	39 1/16"		JSTOM WII JSTOM HE
_	_	_		CUSTOM V	/IDTHS – 17	1/2" to 52 "						
351/4"	353/4"	14 3/4"	- 24" to 96"	2030	2430	2830	3030	3230	3430	3830		
43 1/4"	433/4"	18 3/4"	CUSTOM HEIGHTS	2038	2438	2838	3038	3238	3438	3838	Cottage Reve	erse Cottage
47 1/4"	473/4"	20 3/4"	CUS	1	1	1	1	1	1	1		
51 1/4"	51 3/4"	22 3/4"		2040	2440	2840	3040	3240	3440	3840		
53 1/4"	53 3/4"	23 3/4"		2044	2444	2844	3044	3244	3444	3844		
59 1/4"	59 3/4"	2634"		2046	2446	2846	3046	3246	3446	3846		
				2050	2450	2850	3050	32500	34500	38500		
61 1/4"	61 3/4"	27 3/4"		2052	2452	2852	30520	↑ 3252 [◊]	3452	3852		
65 1/4"	65 3/4"	29 3/4"		2056	1 1 1 2 4 5 6	2856	3056	3256	↑ 3456 [◊]	3856°		
71 1/4"	713/4"	32 3/4"		†	1	†	1	†	1	+		
				2060	2460	28600	30600	32600	34600	3860◊		

 $[\]mbox{--}\mbox{"Window Dimension"}$ always refers to inside frame to frame dimension.

NOTES

Cottage or reverse cottage sash ratio available. Check rail is offset 6" up (cottage) or 6" down (reverse cottage) from equal sash location.

Cottage (Reverse Oriel):

CUSTOM WIDTHS: 17½" to 52" CUSTOM HEIGHTS: 42" to 72"

Reverse Cottage (Oriel):

CUSTOM WIDTHS: 17½" to 52" CUSTOM HEIGHTS: 42" to 84"

^{• &}quot;Minimum Rough Opening" dimensions may need to be increased to allow for use of building wraps, flashing, sill panning, brackets, fasteners or other items.

 $[\]diamondsuit \ \text{Meet or exceed clear opening area of 5.7 sq. ft., clear opening width of } \ 20" \ \text{and clear opening height of } \ 24."$

Awning & Casement Window and rough opening sizes

Awning:

	ntional Externation (n				25 3/4"	30"	33 1/8"	37 9/16"	42 3/8"	49 5/8"
Wi	ndow Dim	ension			24 1/8"	28 3/8"	31 1/2"	35 15/16"	40 3/4"	48"
	inimum ugh Open	ing			24 5/8"	28 7/8"	32"	36 7/16"	41 1/4"	48 1/2"
Ur	obstructed	d Glass			173/16"	21 7/16"	24 9/16"	29"	33 13/16"	41 1/16"
					CUSTOM W	IDTHS - 17 ¹	/2" to 48"			
185/8"	17"	17 1/2"	10 1/16"	" to 36"	2015	2415	2715	21115	3415	4015
22 1/8"	201/2"	21"	139/16"	GHTS-1E	2018	2418	2718	21118	3418	4018
25 3/4"	24 1/8"	24 5/8"		CUSTOM HEIGHTS –15" to 36"	2020	2420	2720	21120	3420	4020
30"	283/8"	28 7/8"	21 7/16"	- 5 -	2024	2424	2724	21124	3424	4024
33 1/8"	311/2"	32"	249/16"	-	2021	2427	2727	21127	3427	4027
379/16"	35 15/16"	367/16"	29"				27211	21211	34211	40211

Casement:

	tional Exte				19 1/8"	22 1/8"	25 3/4"	30"	33 1/8"	35 1/8"	37 9/16"
	ndow Dim		olevadoris)		17 1/2"	20 1/2"	24 1/8"	283/8"	31 1/2"	33 1/2"	35 15/16"
	nimum ugh Open	ing			18"	21"	24 5/8"	28 7/8"	32"	34"	36 7/16"
Un	obstructed	i Glass			10 5/8"	13 5/8"	17 1/4"	21 1/2"	245/8"	265/8"	29 1/16"
					CUSTOM	WIDTHS – :	17 ½" to 36	3"			
25 3/4"	24 1/8"	24 5/8"	17 1/4"	23" to 72"	1520	1820	2020	2420			
30"	283/8"	28 7/8"	21 1/2"	EIGHTS -	1524	1824	2024	2424	2724	2924	
37 9/16"	3515/16"	36 7/16"	29 1/16"	CUSTOM HEIGHTS -	15211	18211	20211	24211	27211	29211	21211
42 7/16"	40 13/16"	415/16"	33 15/16"		1534	1834	2034	2434	2734	2934	211340
49 5/8"	48"	48 1/2"	41 1/8"		1540	1840	2040	2440*	2740*	29400	211400
54 7/16"	52 13/16"	53 5/16"	45 15/16"		1544	1844	2044	2444*	2744*	29440	211440
611/2"	18/1/8	8/€ 09	57 15/16"		1544	1844	2044	24411*	27411*	294110	2114410
66 7/16"	6413/16"	65 5/16"	58 ¹⁵ / ₁₆ "		1554	1854	2054	2454*	2754*	29540	211540
73 1/2"	71 7/8"	72 3/8"	65"		15511	18511	20511	24511*	27511*	295110	2115110

Gliding Window and rough opening sizes

	Exterior J-Ch Dimension (onlv)		25"	37"	49"	51"	55"	61"	65"	73"
	Window Din		- 3,		24"	36"	48"	50"	54"	60"	64"	72"
	Minimum Rough Ope	ning			24 1/2"	36 1/2"	48 1/2"	50 1/2"	54 1/2"	60 1/2"	64 1/2"	72 1/2"
	Jnobstructe 70 series and si				9 1/8"	15 1/8"	21 1/8"	22 1/8"	24 1/8"	27 1/8"	29 1/8"	33 1/8"
(/O series and s)	_	CUSTOM W	IDTHS — 16" t	0 52"			1	1	
20"	19"	191/2"	14"	24" to 84"	2018	3018	4018	4218	4618	5018	5418	6018
24"	23"	23 1/2"	18"	HEIGHTS -	2020	3020	4020	4220	4620	5020	5420	6020
36"	35"	351/2"	30"	CUSTOM HI								
42"	41"	411/2"	36"		2030	3030	4030	4230	4630	5030	5430	6030¢
		4			2036	3036	4036	4236	4636	5036¢	5436 ^o	60360
44"	43"	43 1/2"	38"		2038	3038	4038	4238	4638\$	50380	5438 ^o	60380
46"	45"	45 1/2"	40"				4030	4230	4030	3038	5438	0030
48"	47"	47 1/2"	42"		20310	30310	40310	42310	463100	503100	543100	60310
20"	49"	491/2"	44"		2040	3040	4040	4240°	4640°	5040°	5440¢	6040
52"	51"	511/2"	46"			3042	4042	4242*	4642*	50429	5442¢	60420
54"	53"	53 1/2"	48"			3044	4044	4244	4644	5044	5444	6044
.09	59"	591/2"	54"			3046	4046	42460	46469	5046°	5446¢	6046\$
ļ						3050	4050	4250 ^{\$}	4650¢	5050¢	5450 ⁰	60500

				V	VINDOWS						DO	ORS
WINDOV DOOR F	V& EATURES	70 Series Pro Double-Hung	So Series Double-Hung	70 Series Double-Hung	70 Series Single-Hung	50 Septés Single-Hung	70 Series Casement New Construction)	70 Series Auning New Conserve Raming	70 Series Gliding New Consults Remode/	50 Series Gliding New Construction)	70 Series Gliding Patio Door	So Series Gliding Patio Door
EXTERIO	R/INTERIOR COLOR*											
	White	•	•	•	•	•	•	•	•	•	•	•
	Beige	•	•	•	•	•	•	•	•	•	•	•
	Sandtone	•		•	•		•	•	•		•	
	Dark Bronze*	•		•	•		•	•	•		•	•
GLASS												
Low-E		•	•	•	•	•	•	•	•	•	•	•
Low-E Sm	nartSun	•	•	•	•	•	•	•	•	•	•	•
Low-E Sur	n	•	•	•	•	•	•	•	•	•	•	•
Low-E Pas	ssiveSun®	•	•	•	•	•	•	•	•	•	•	•
Low-E Pas with Heatl	ssiveSun® Lock® Technology	•	•	•	•	•	•	•	•	•	•	•
Clear Dua	l Pane	•	•	•	•	•	•	•	•	•	•	•
ENERGYS	STAR GLASS OPTIONS	•	•	•	•	•	•	•	•	•	•	•
GRILLES	& BLINDS											
Simulated	Divided Light	•		•			•	•	•**		•	
Finelight (Grilles Between the Glass)	•	•	•	•	•	•	•	•	•	•	•
Blinds Bet	ween the Glass										•	•
STORMDE	EFENSE™ PROTECTION			•	•		•	•	•***		•	
сиѕтом	SIZES 👠	•	•	•	•	•	•	•			•	
WIRELES	S OPEN CLOSED SENSORS	•		•	•		•	•	•		•	

^{*}Dark bronze exterior units come with white interiors.

**Simulated divided light only available with replacement frame.

***StormDefense only available with replacement frame.





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