

**ISSUE:** Permit to Demolish/Capsulate (partial) and Certificate of Appropriateness for addition

**APPLICANT:** Jeff and Lindsay Mutimer

**LOCATION:** Old and Historic Alexandria District  
210 Franklin Street

**ZONE:** RM/Residential Townhouse Zone

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**STAFF RECOMMENDATION**

Staff recommends approval of the Permit to Demolish/Capsulate (partial) and Certificate of Appropriateness for addition with the conditions below:

1. Windows must be wood and comply with “Alexandria New and Replacement Window Performance Specifications in the Historic Districts.”
2. Include the statements below in the General Notes of all site plans and on all site plan sheets that involve demolition or ground disturbance (including Basement/Foundation Plans, Demolition, Erosion and Sediment Control, Grading, Landscaping, Utilities, and Sheeting and Shoring) so that on-site contractors are aware of the requirements.:
  - a. The applicant/developer shall call Alexandria Archaeology immediately (703-746-4399) if any buried structural remains (wall foundations, wells, privies, cisterns, etc.) or concentrations of artifacts are discovered during development. Work must cease in the area of the discovery until a City archaeologist comes to the site and records the finds.
  - b. The applicant/developer shall not allow any metal detection to be conducted on the property, or allow independent parties to collect or excavate artifacts, unless authorized by Alexandria Archaeology.

**GENERAL NOTES TO THE APPLICANT**

1. **APPEAL OF DECISION:** In accordance with the Zoning Ordinance, if the Board of Architectural Review denies or approves an application in whole or in part, the applicant or opponent may appeal the Board's decision to City Council on or before 14 days after the decision of the Board.
2. **COMPLIANCE WITH BAR POLICIES:** All materials must comply with the BAR's adopted policies unless otherwise specifically approved.
3. **BUILDING PERMITS:** Most projects approved by the Board of Architectural Review require the issuance of one or more construction permits by Department of Code Administration (including signs). The applicant is responsible for obtaining all necessary construction permits after receiving Board of Architectural Review approval. Contact Code Administration, Room 4200, City Hall, 703-746-4200 for further information.
4. **ISSUANCE OF CERTIFICATES OF APPROPRIATENESS AND PERMITS TO DEMOLISH:** Applicants must obtain a copy of the Certificate of Appropriateness or Permit to Demolish **PRIOR** to applying for a building permit. Contact BAR Staff, Room 2100, City Hall, 703-746-3833, or [preservation@alexandriava.gov](mailto:preservation@alexandriava.gov) for further information.
5. **EXPIRATION OF APPROVALS NOTE:** In accordance with Sections 10-106(B), 10-206(B) and 10-307 of the Zoning Ordinance, any Board of Architectural Review approval will expire 12 months from the date of issuance if the work is not commenced and diligently and substantially pursued by the end of that 12-month period.
6. **HISTORIC PROPERTY TAX CREDITS:** Applicants performing extensive, certified rehabilitations of historic properties may separately be eligible for state and/or federal tax credits. Consult with the Virginia Department of Historic Resources (VDHR) prior to initiating any work to determine whether the proposed project may qualify for such credits.



**Note:** Staff coupled the applications for a Permit to Demolish (BAR #2023-00043) and Certificate of Appropriateness (BAR #2023-00022) for clarity and brevity. The Permit to Demolish requires a roll call vote.

## I. APPLICANT'S PROPOSAL

The applicant requests a Permit to Demolish/Capsulate (partial) and Certificate of Appropriateness to demolish an existing rear/south one-story addition and portions of the adjacent two-story addition's walls and roof in order to construct a new two-story addition in their stead.

### Permit to Demolish/Capsulate

The applicant proposes the demolition of the entire rear elevation and its associated one-story addition with wood deck and steps, part of the two-story wall and two windows on the east elevation, and part of the roof at the rear of the house. See Figures 1 & 2.

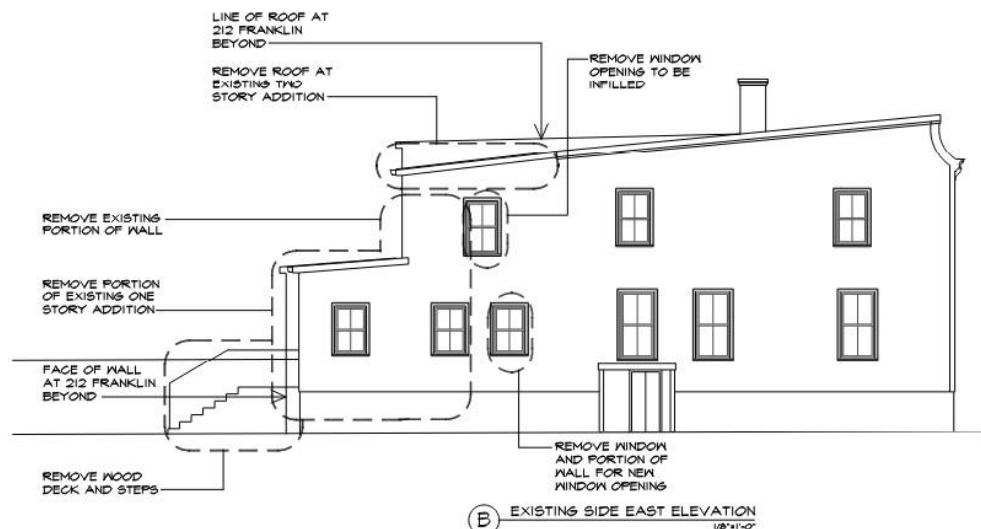


Figure 1: Proposed demolition east elevation

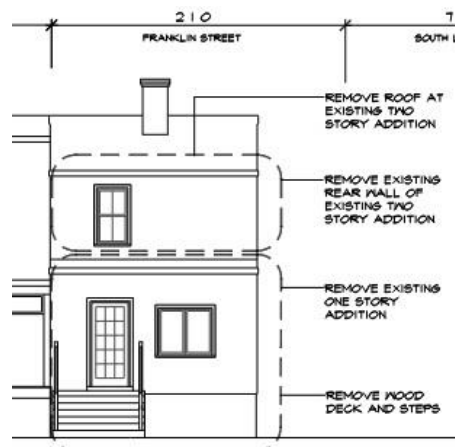


Figure 2: Proposed demolition rear/south elevation



## Certificate of Appropriateness

### Addition

The applicant proposes constructing a two-story addition to the rear/south of the house which will measure 20' 7.5" deep by 18' wide. It will extend 6'9" beyond the existing rear plane of the house and approximately 2' beyond the east plane of the house. See Figures 3 & 4.

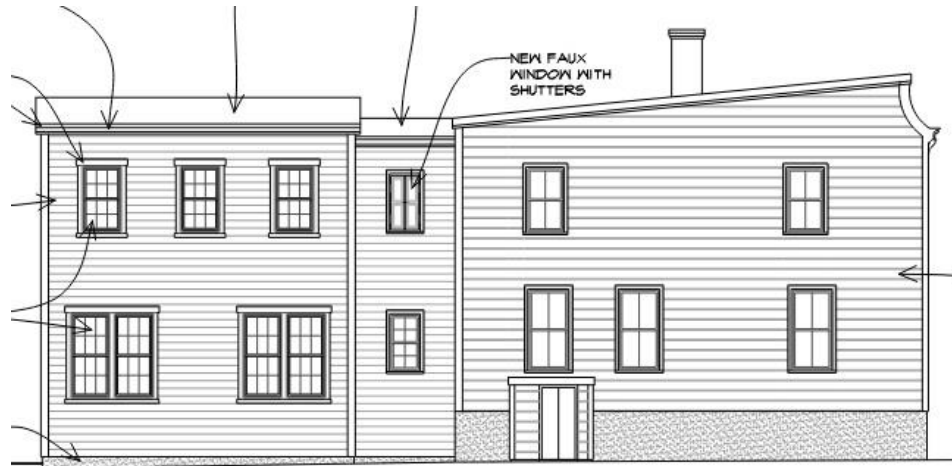


Figure 3: Proposed east elevation



Figure 4: Proposed south elevation

## **II. HISTORY**

The house was most likely constructed **prior to 1912, possibly by the 1870s**. Tax records indicate that the house was built in 1870, but there is no evidence to support that date and those records are often inaccurate. The 1877 G.M. Hopkins *Atlas of Alexandria, Virginia* shows a building in this location, but we cannot be sure it is the same building, as we do not know the materials of that building. The block is labeled “Corcelia Karn,” probably a reference to Mary Cornelia Carne (1913-1998), whose father Richard Carne was something of a real estate speculator.<sup>1</sup> The 1888

<sup>1</sup> Many thanks to Alexandria Archaeology for providing this information.

Alexandria, Virginia City Directory lists Richard and Emily J. Brown residing at 210 Franklin Street, so we know that a house stood here by 1888. Again, we can't be sure it's the same house.

The first Sanborn Fire Insurance Map to include this block, the 1912 map, shows a single two-story frame dwelling which is most likely this house. It has an ell on the west elevation, a non-combustible roof, and a one-story rear/south addition attached to the ell. Either this is not the same house as depicted on the Hopkins map, or an ell has been added. The form of the house changes in the 1921 Sanborn. The ell has been filled in on the west side and the house is now a simple rectangle with that rear one-story addition, which appears to extend a bit further east than it did in 1912. The 1921 map also depicts a one-story inset porch on the west elevation which is later enclosed in 1930 (Permit #887). This 1930 permit also indicates that the roof is tin. By 1941, the house has been divided into two separate dwellings, 210 Franklin on the east and 212 Franklin on the west. Other than filling in the porch in 1930, the form and materials of the house remain unchanged from the 1921 Sanborn through the 1996 Sanborn.

Regarding the two rear/south additions referenced in this application, the 1912 and 1921 Sanborn maps would imply that the two-story addition was the result of the ell being filled in between those dates. The one-story rear addition does not appear on the 1959 Sanborn map but does appear on the 1970s - 1981 tax assessment. Preservation staff and Archives staff found no permits for either addition.

#### *Previous BAR Approvals*

- 7/21/1971      BAR approval to install 8" white aluminum siding and fixed metal shutters; permit #28468 authorized the work.
- 4/5/2006      BAR2006 – 00054, window and shutter replacement. The approved new windows are two-over-two, double glazed, true-divided light, double-hung wood windows.
- 3/23/2016      BAR2016 – 00080, administrative approval to replace mansard shingles and replace gutters; BLD2016-00321 authorized the work.

### **III. ANALYSIS**

#### **Permit to Demolish/Capsulate**

In considering a Permit to Demolish/Capsulate, the Board must consider the following criteria set forth in the Zoning Ordinance, §10-105(B), which relate only to the subject property and not to neighboring properties. The Board has purview of the proposed demolition/capsulation regardless of visibility.

<b>Standard</b>	<b>Description of Standard</b>	<b>Standard Met?</b>
(1)	Is the building or structure of such architectural or historical interest that its moving, removing, capsulating or razing would be to the detriment of the public interest?	No
(2)	Is the building or structure of such interest that it could be made into a historic shrine?	No

(3)	Is the building or structure of such old and unusual or uncommon design, texture and material that it could not be reproduced or be reproduced only with great difficulty?	No
(4)	Would retention of the building or structure help preserve the memorial character of the George Washington Memorial Parkway?	N/A
(5)	Would retention of the building or structure help preserve and protect an historic place or area of historic interest in the city?	No
(6)	Would retention of the building or structure promote the general welfare by maintaining and increasing real estate values, generating business, creating new positions, attracting tourists, students, writers, historians, artists and artisans, attracting new residents, encouraging study and interest in American history, stimulating interest and study in architecture and design, educating citizens in American culture and heritage, and making the city a more attractive and desirable place in which to live?	No

The analysis of the standards indicated above relate only to the specific portions of the building proposed for demolition/capsulation, not the overall building. Due to numerous heavy modifications over the years, the amount of original material is questionable.

Building permits indicate that the house underwent several changes which compromised much of the original fabric of the house. Permit #9780 was issued on July 30, 1951 to replace all wood windows, window frames, and trim. Permit #9932 was issued on October 22, 1951 to replace all wood steps and platforms with brick steps and platforms. The 1970s - 1981 tax assessment indicates that the house had a roll roof and aluminum siding at that time. The house currently has wood German siding and a tin roof. See Figures 5 & 6. Staff found no BAR cases or permits to indicate when the aluminum siding was replaced with wood and the roll roof was replaced with tin. The "Historic Alexandria Architectural Significance Map," created in 1972 and based on a report by Russell Wright, puts this building in Group 4: "...buildings of no particular architectural value or may even be of negative importance, do not contribute to the character of "Old Town," and architecturally, are considered expendable."

Therefore, in the opinion of staff, none of the criteria for demolition and capsulation are met and the Permit to Demolish/Capsulate should be granted. The select portions of the building proposed for demolition have been changed significantly over time and are not themselves of unusual or uncommon design. Staff therefore recommends approval of the demolition.



Figure 5: 210 Franklin tax assessment photo 1970s – 1981



Figure 6: 210 Franklin today

#### Certificate of Appropriateness

As noted above, the multiple alterations to the house over time have compromised much of the original fabric so the proposed addition will not negatively affect any historic elements of the house. The *Design Guidelines* section on additions notes that an addition should be “respectful of the existing structure,” and “...be clearly distinguishable from the original structure.” The proposed design will be clearly distinguishable from the original structure, will not compromise any historic integrity of the building, and will be minimally visible from a public right of way. The smooth Hardie plank siding, single slope roof, TPO roofing, and six-over-six windows will differentiate the new addition from the historic main block of the house. The well-designed addition will protrude slightly, approximately 2 feet, beyond the east plane of the main block, further distinguishing it as a modern addition. Because 210 Franklin Street is an early building, any new windows must be wood. The provided window specifications appear to be for aluminum-clad windows and do not include glazing specifications.

With the condition that the windows be wood and comply with “Alexandria New and Replacement Window Performance Specifications in the Historic Districts,” staff recommends approval of the project, noting the recommendations of Alexandria Archaeology.

#### **STAFF**

Susan Hellman, Historic Preservation Planner, Planning & Zoning

Tony LaColla, AICP, Land Use Services Division Chief, Planning & Zoning

### **III. CITY DEPARTMENT COMMENTS**

Legend: C- code requirement R- recommendation S- suggestion F- finding

**Zoning**

C-1 Proposed demolition and two story addition complies with zoning.

**Code Administration**

C-1 Building permit is required for review.

**Transportation and Environmental Services**

R-1 The building permit must be approved and issued prior to the issuance of any permit for demolition, if a separate demolition permit is required. (T&ES)

R-2 Applicant shall be responsible for repairs to the adjacent city right-of-way if damaged during construction activity. (T&ES)

R-3 No permanent structure may be constructed over any existing private and/or public utility easements. It is the responsibility of the applicant to identify any and all existing easements on the plan. (T&ES)

F-1 Duplicate request under BAR2023-00023, 24, 25, 26, 27, 28, 29. (T&ES)

F-2 A released grading plan is required prior to submitting for building permits. (T&ES)

F-3 If the alley located at the rear of the parcel is to be used at any point of the construction process the following will be required:

For a Public Alley - The applicant shall contact T&ES, Construction Permitting & Inspections at (703) 746-4035 to discuss any permits and accommodation requirements that will be required.

For a Private Alley - The applicant must provide proof, in the form of an affidavit at a minimum, from owner of the alley granting permission of use. (T&ES)

C-1 The applicant shall comply with the City of Alexandria's Solid Waste Control, Title 5, Chapter 1, which sets forth the requirements for the recycling of materials (Sec. 5-1-99). (T&ES)

C-2 The applicant shall comply with the City of Alexandria's Noise Control Code, Title 11, Chapter 5, which sets the maximum permissible noise level as measured at the property line. (T&ES)

C-3 Roof, surface and sub-surface drains be connected to the public storm sewer system, if available, by continuous underground pipe. Where storm sewer is not available applicant must provide a design to mitigate impact of stormwater drainage onto adjacent properties and to the satisfaction of the Director of Transportation & Environmental Services. (Sec.5-6-224) (T&ES)

C-4 All secondary utilities serving this site shall be placed underground. (Sec. 5-3-3) (T&ES)

C-5 Any work within the right-of-way requires a separate permit from T&ES. (Sec. 5-2)

(T&ES)

C-6 All improvements to the city right-of-way such as curbing, sidewalk, driveway aprons, etc. must be city standard design. (Sec. 5-2-1) (T&ES)

**Alexandria Archaeology**

F-1 Historic maps indicate that this property was active by the mid-nineteenth century. During the Civil War W.H. Irwin owned the block and a structure stood on the lot. By the 1870s the current dwelling at 210 Franklin St. was standing on the property. Over the next 75 years a series of people occupied the duplex as indicated by city directories. The property may contain significant archaeological evidence about the growth and development of Alexandria in the second half of the nineteenth century and into the twentieth century.

\*R-1 The applicant/developer shall call Alexandria Archaeology immediately (703-746-4399) if any buried structural remains (wall foundations, wells, privies, cisterns, etc.) or concentrations of artifacts are discovered during development. Work must cease in the area of the discovery until a City archaeologist comes to the site and records the finds.

\*R-2 The applicant/developer shall not allow any metal detection to be conducted on the property, or allow independent parties to collect or excavate artifacts, unless authorized by Alexandria Archaeology,

R-3 The statements in archaeology conditions above marked with an asterisk “\*” shall appear in the General Notes of all site plans and on all site plan sheets that involve demolition or ground disturbance (including Basement/Foundation Plans, Demolition, Erosion and Sediment Control, Grading, Landscaping, Utilities, and Sheeting and Shoring) so that on-site contractors are aware of the requirements.

**V. ATTACHMENTS**

*1 – Application Materials*

*2 – Supplemental Materials*



ADDRESS OF PROJECT: 210 Franklin St  
 DISTRICT: ☒ Old & Historic Alexandria ☐ Parker - Gray ☐ 100 Year Old Building  
 TAX MAP AND PARCEL: 081.03-01-01 ZONING: BM

**APPLICATION FOR:** *(Please check all that apply)*

☒ CERTIFICATE OF APPROPRIATENESS

☐ PERMIT TO MOVE, REMOVE, ENCAPSULATE OR DEMOLISH  
 (Required if more than 25 square feet of a structure is to be demolished/impacted)

☐ WAIVER OF VISION CLEARANCE REQUIREMENT and/or YARD REQUIREMENTS IN A VISION  
 CLEARANCE AREA (Section 7-802, Alexandria 1992 Zoning Ordinance)

☐ WAIVER OF ROOFTOP HVAC SCREENING REQUIREMENT  
 (Section 6-403(B)(3), Alexandria 1992 Zoning Ordinance)

**Applicant:** ☒ Property Owner ☒ Business *(Please provide business name & contact person)*

Name: Marks-Wood Construction

Address: 205 S Union St

City: Alexandria State: VA Zip: 22314

Phone: 7039282513 E-mail: Gmarks@markswoods.com

**Authorized Agent** *(if applicable):* ☐ Attorney ☐ Architect ☒ Marks-Woods Construction

Name: Greg Marks

Phone: 703-928-2513

E-mail: Gmarks@markswoods.com

**Legal Property Owner:**

Name: Jeff and Lindsey Mutimer

Address: 210 Franklin St

City: Alexandria State: VA Zip: 22314

Phone: \_\_\_\_\_ E-mail: \_\_\_\_\_

- |                              |  |  |
|------------------------------|--|--|
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Is there an historic preservation easement on this property?               |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | If yes, has the easement holder agreed to the proposed alterations?        |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | Is there a homeowner's association for this property?                      |
| <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | If yes, has the homeowner's association approved the proposed alterations? |

If you answered yes to any of the above, please attach a copy of the letter approving the project.

**NATURE OF PROPOSED WORK:** *Please check all that apply*

- ☐ NEW CONSTRUCTION
- ☒ EXTERIOR ALTERATION: *Please check all that apply.*
- |   |   |  |                                   |
|---|---|--|-----------------------------------|
| <input type="checkbox"/> awning           | <input type="checkbox"/> fence, gate or garden wall | <input type="checkbox"/> HVAC equipment                        | <input type="checkbox"/> shutters |
| <input checked="" type="checkbox"/> doors | <input checked="" type="checkbox"/> windows         | <input checked="" type="checkbox"/> siding                     | <input type="checkbox"/> shed     |
| <input type="checkbox"/> lighting         | <input type="checkbox"/> pergola/trellis            | <input checked="" type="checkbox"/> painting unpainted masonry |                                   |
| <input type="checkbox"/> other _____      |   |  |                                   |
- ☒ ADDITION
- ☒ DEMOLITION/ENCAPSULATION
- ☐ SIGNAGE

**DESCRIPTION OF PROPOSED WORK:** *Please describe the proposed work in detail (Additional pages may be attached).*

Demolishing portions of existing rear one- and two story additions and adding new two story addition.

**SUBMITTAL REQUIREMENTS:**

Items listed below comprise the **minimum supporting materials** for BAR applications. Staff may request additional information during application review. Please refer to the relevant section of the *Design Guidelines* for further information on appropriate treatments.

Applicants must use the checklist below to ensure the application is complete. Include all information and material that are necessary to thoroughly describe the project. Incomplete applications will delay the docketing of the application for review. Pre-application meetings are required for all proposed additions. All applicants are encouraged to meet with staff prior to submission of a completed application.

**Demolition/Encapsulation :** *All applicants requesting 25 square feet or more of demolition/encapsulation must complete this section. Check N/A if an item in this section does not apply to your project.*

- N/A
- ☒ ☐ Survey plat showing the extent of the proposed demolition/encapsulation.
- ☒ ☐ Existing elevation drawings clearly showing all elements proposed for demolition/encapsulation.
- ☒ ☒ Clear and labeled photographs of all elevations of the building if the entire structure is proposed to be demolished.
- ☒ ☒ Description of the reason for demolition/encapsulation.
- ☐ ☒ Description of the alternatives to demolition/encapsulation and why such alternatives are not considered feasible.

**Additions & New Construction:** *Drawings must be to scale and should not exceed 11" x 17" unless approved by staff. Check N/A if an item in this section does not apply to your project.*

- ☒ ☐ <sup>N/A</sup> Scaled survey plat showing dimensions of lot and location of existing building and other structures on the lot, location of proposed structure or addition, dimensions of existing structure(s), proposed addition or new construction, and all exterior, ground and roof mounted equipment.
- ☒ ☐ FAR & Open Space calculation form.
- ☒ ☐ Clear and labeled photographs of the site, surrounding properties and existing structures, if applicable.
- ☒ ☐ Existing elevations must be scaled and include dimensions.
- ☒ ☐ Proposed elevations must be scaled and include dimensions. Include the relationship to adjacent structures in plan and elevations.
- ☒ ☐ Materials and colors to be used must be specified and delineated on the drawings. Actual samples may be provided or required.
- ☐ ☒ Manufacturer's specifications for materials to include, but not limited to: roofing, siding, windows, doors, lighting, fencing, HVAC equipment and walls.
- ☐ ☒ For development site plan projects, a model showing mass relationships to adjacent properties and structures.

**Signs & Awnings:** *One sign per building under one square foot does not require BAR approval unless illuminated. All other signs including window signs require BAR approval. Check N/A if an item in this section does not apply to your project.*

- ☐ ☐ <sup>N/A</sup> Linear feet of building: Front: \_\_\_\_\_ Secondary front (if corner lot): \_\_\_\_\_
- ☐ ☐ Square feet of existing signs to remain: \_\_\_\_\_
- ☐ ☐ Photograph of building showing existing conditions.
- ☐ ☐ Dimensioned drawings of proposed sign identifying materials, color, lettering style and text.
- ☐ ☐ Location of sign (show exact location on building including the height above sidewalk).
- ☐ ☐ Means of attachment (drawing or manufacturer's cut sheet of bracket if applicable).
- ☐ ☐ Description of lighting (if applicable). Include manufacturer's cut sheet for any new lighting fixtures and information detailing how it will be attached to the building's facade.

**Alterations:** *Check N/A if an item in this section does not apply to your project.*

- ☒ ☐ <sup>N/A</sup> Clear and labeled photographs of the site, especially the area being impacted by the alterations, all sides of the building and any pertinent details.
- ☐ ☒ Manufacturer's specifications for materials to include, but not limited to: roofing, siding, windows, doors, lighting, fencing, HVAC equipment and walls.
- ☒ ☐ Drawings accurately representing the changes to the proposed structure, including materials and overall dimensions. Drawings must be to scale.
- ☐ ☒ An official survey plat showing the proposed locations of HVAC units, fences, and sheds.
- ☐ ☒ Historic elevations or photographs should accompany any request to return a structure to an earlier appearance.



**ALL APPLICATIONS:** *Please read and check that you have read and understand the following items:*

- ☒ I have submitted a filing fee with this application. (Checks should be made payable to the City of Alexandria. Please contact staff for assistance in determining the appropriate fee.)
- ☒ I understand the notice requirements and will return a copy of the three respective notice forms to BAR staff at least five days prior to the hearing. If I am unsure to whom I should send notice I will contact Planning and Zoning staff for assistance in identifying adjacent parcels.
- ☒ I, the applicant, or an authorized representative will be present at the public hearing.
- ☒ I understand that any revisions to this initial application submission (including applications deferred for restudy) must be accompanied by the BAR Supplemental form and revised materials.

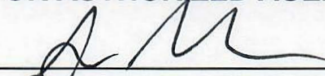
The undersigned hereby attests that all of the information herein provided including the site plan, building elevations, prospective drawings of the project, and written descriptive information are true, correct and accurate. The undersigned further understands that, should such information be found incorrect, any action taken by the Board based on such information may be invalidated. The undersigned also hereby grants the City of Alexandria permission to post placard notice as required by Article XI, Division A, Section 11-301(B) of the 1992 Alexandria City Zoning Ordinance, on the property which is the subject of this application. The undersigned also hereby authorizes the City staff and members of the BAR to inspect this site as necessary in the course of research and evaluating the application. The applicant, if other than the property owner, also attests that he/she has obtained permission from the property owner to make this application.

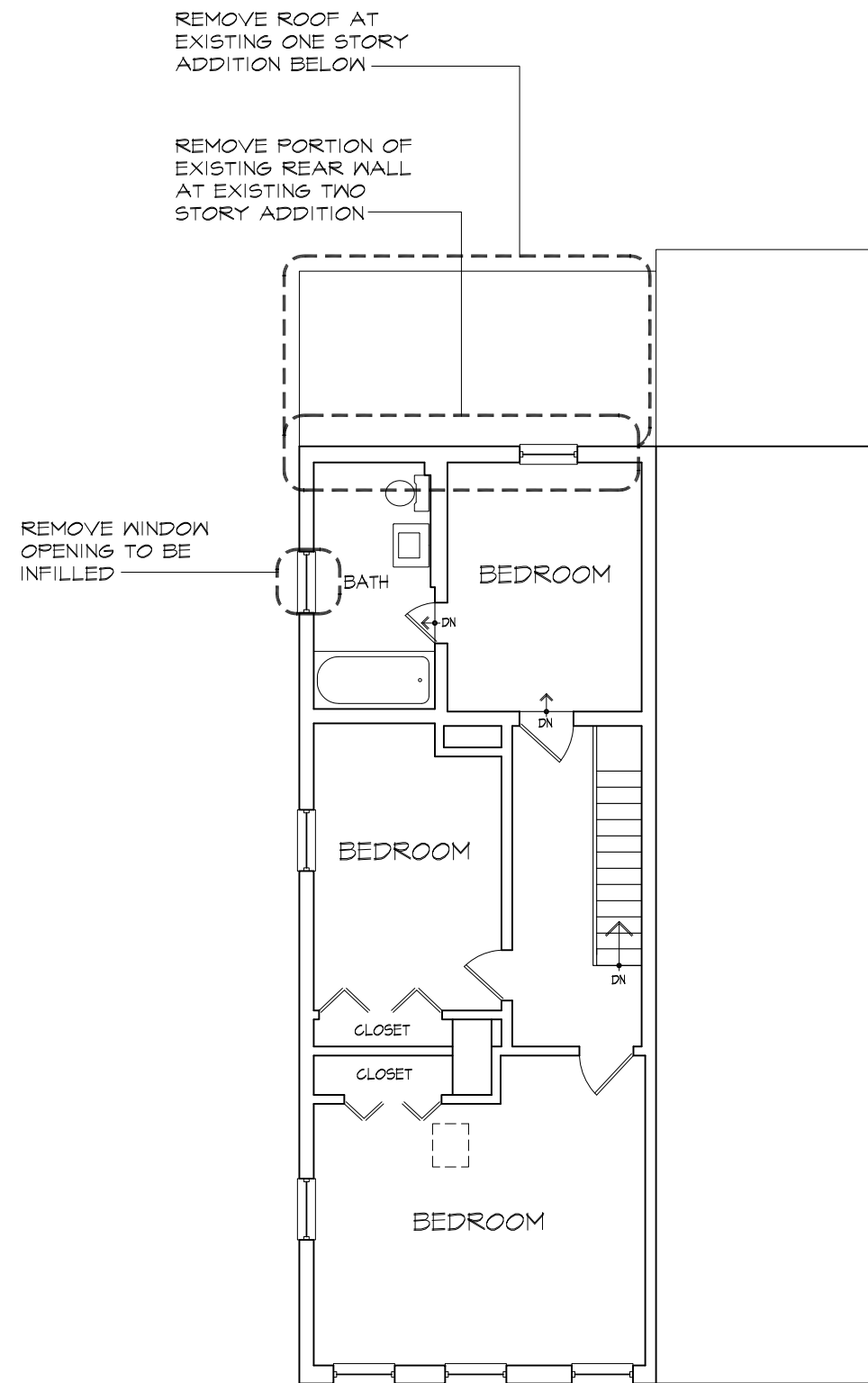
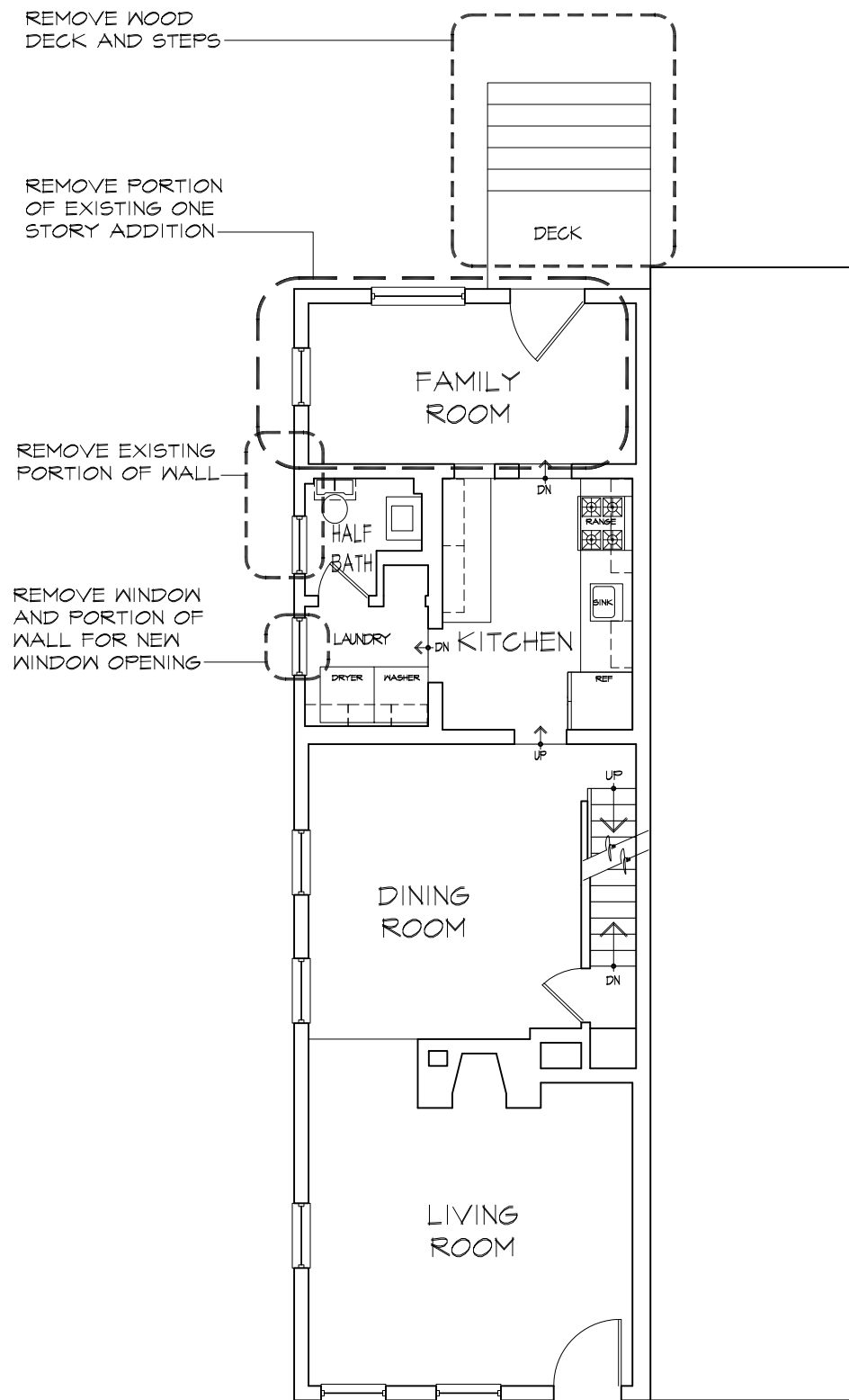
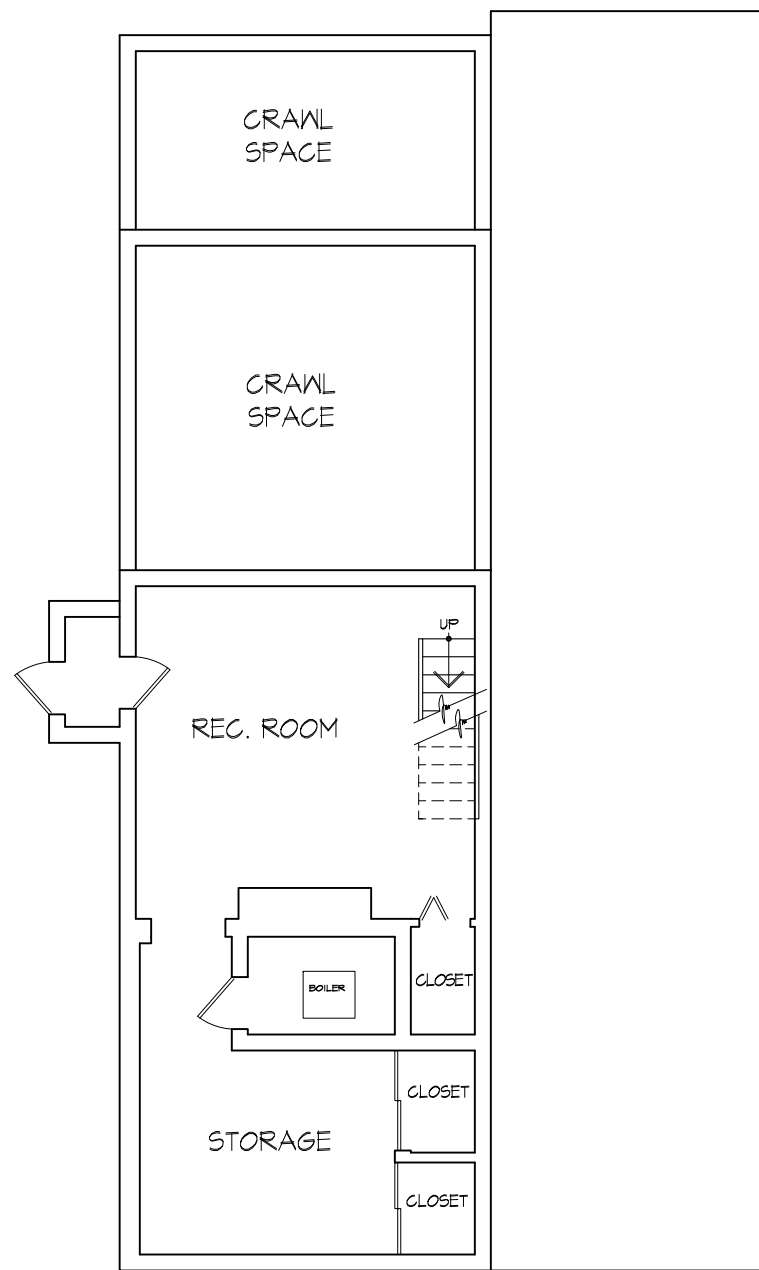
**APPLICANT OR AUTHORIZED AGENT:**

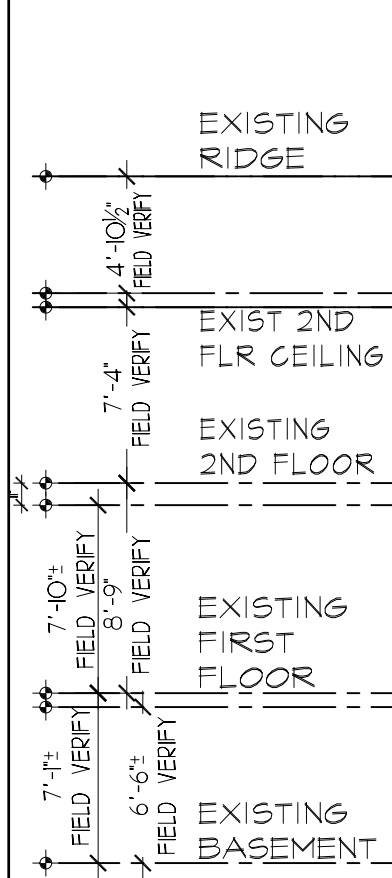
Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

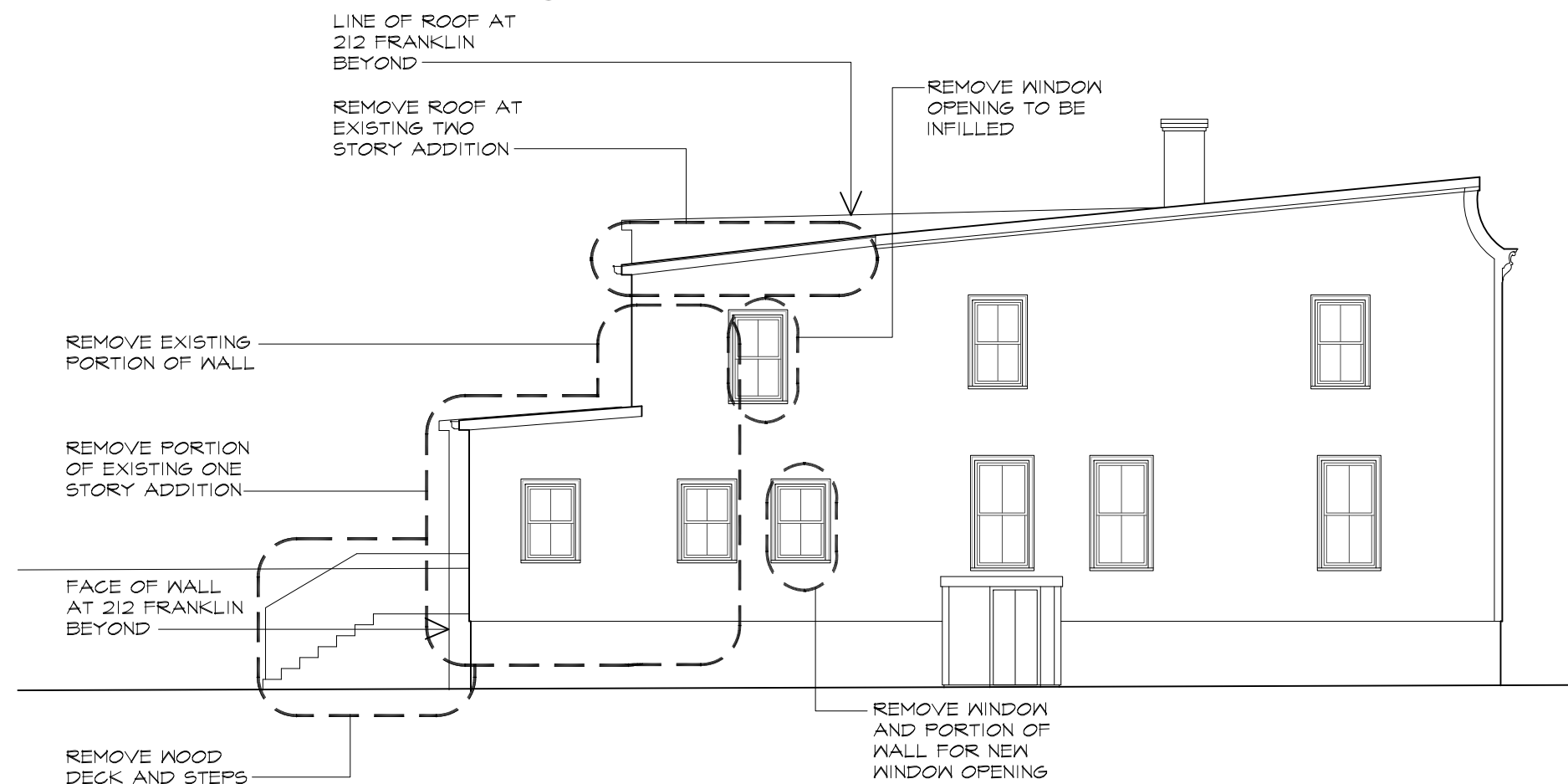
Date: \_\_\_\_\_

  
Gregory Tate Marks  
01/17/23

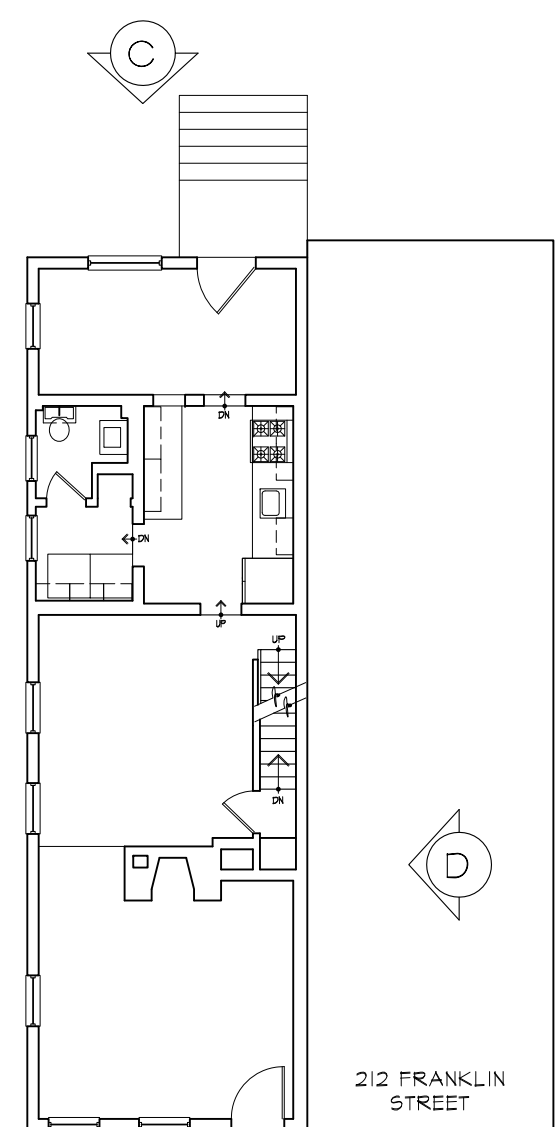
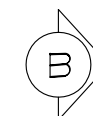




**(A) EXISTING FRONT NORTH ELEVATION**  
1/8"=1'-0"



**(B) EXISTING SIDE EAST ELEVATION**  
1/8"=1'-0"

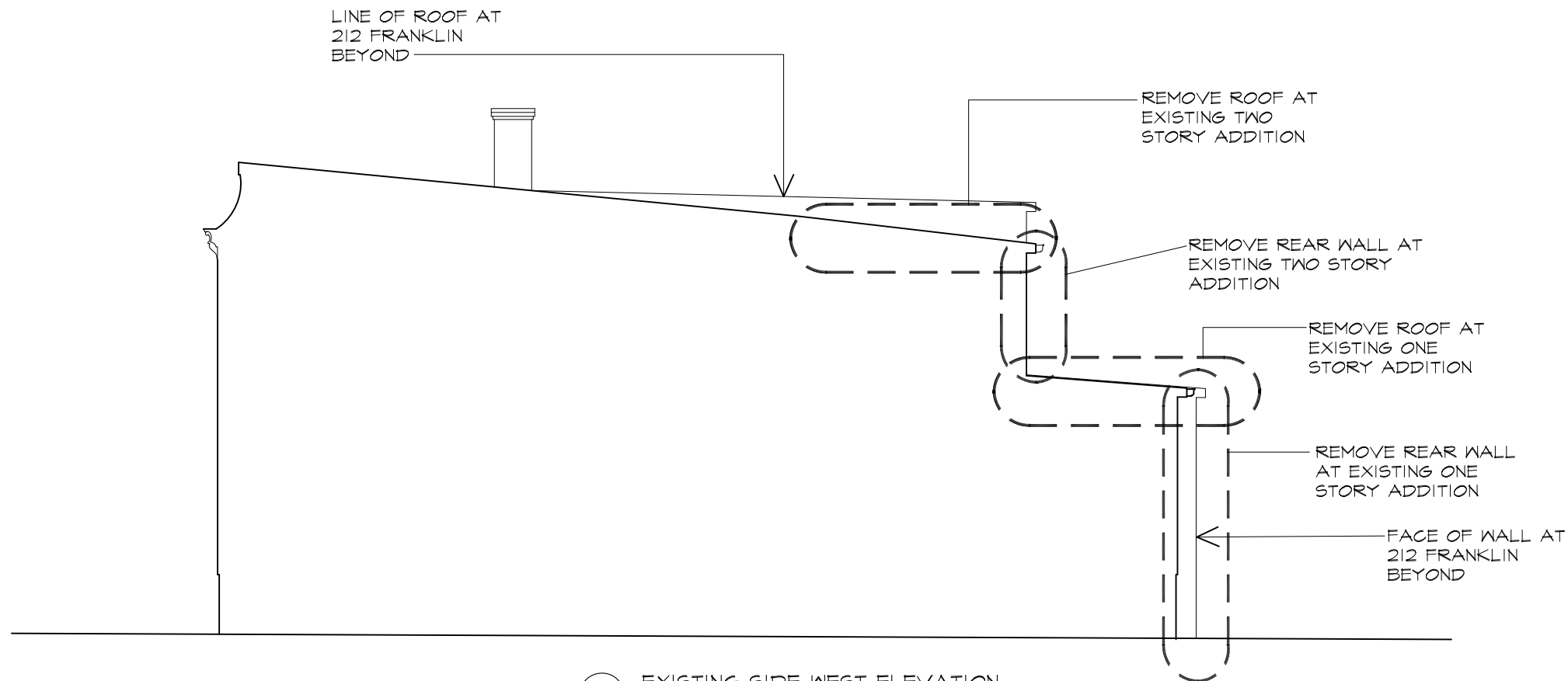


**KEY PLAN**

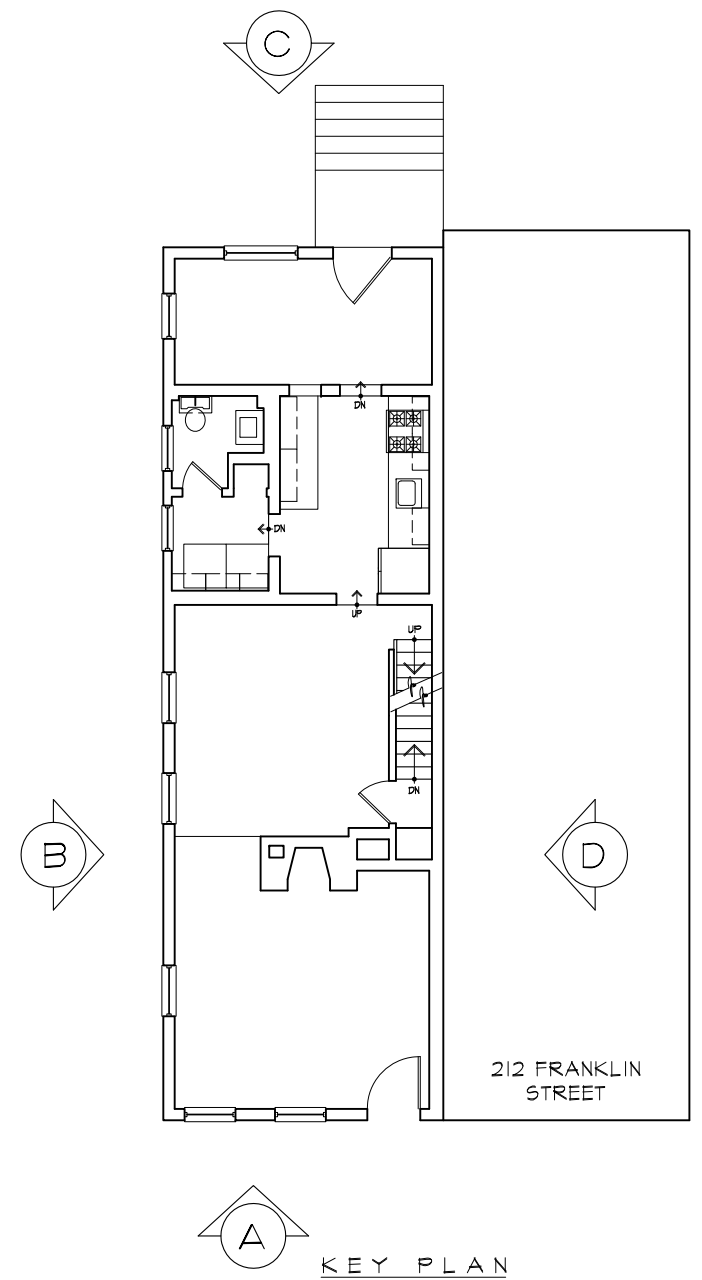


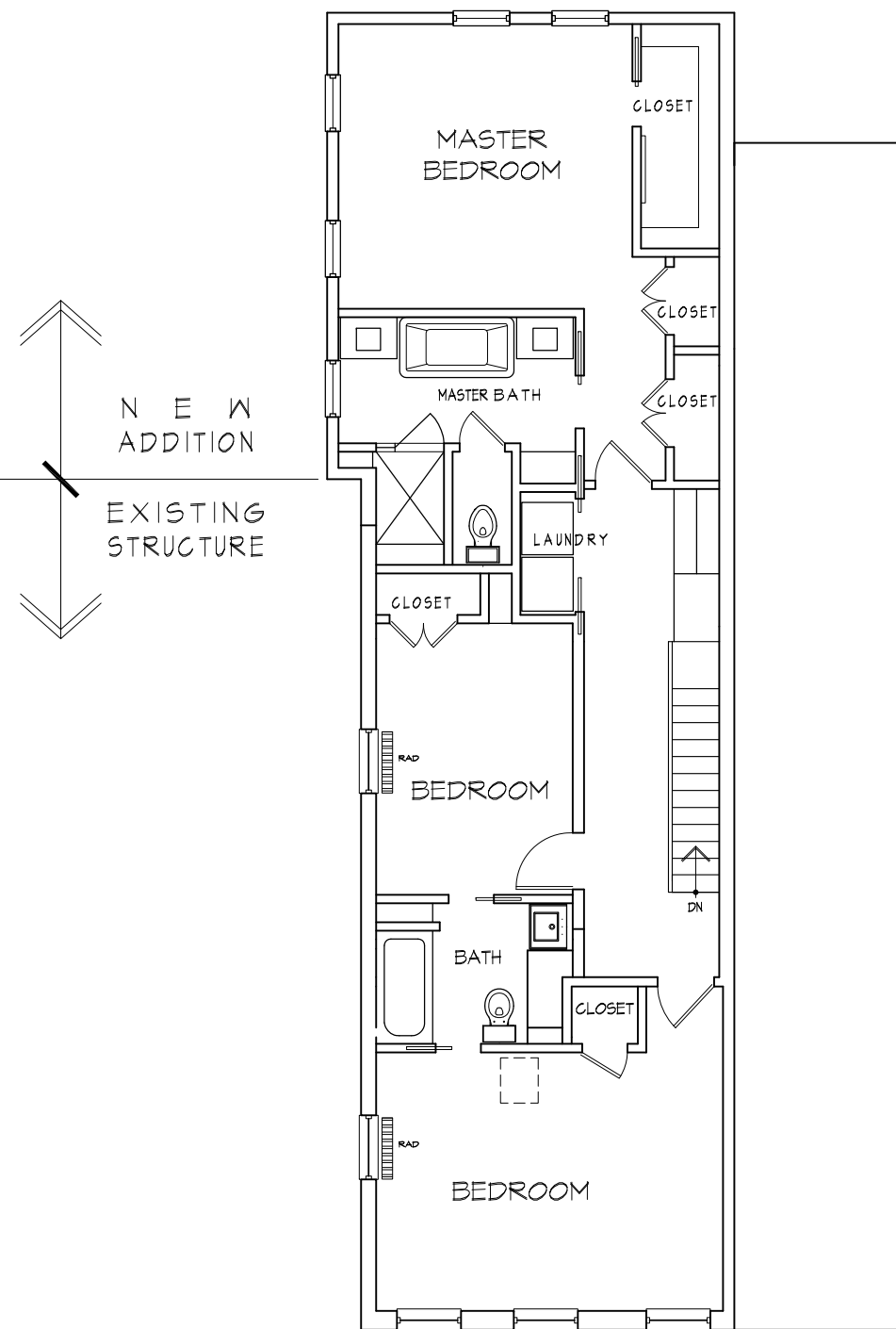
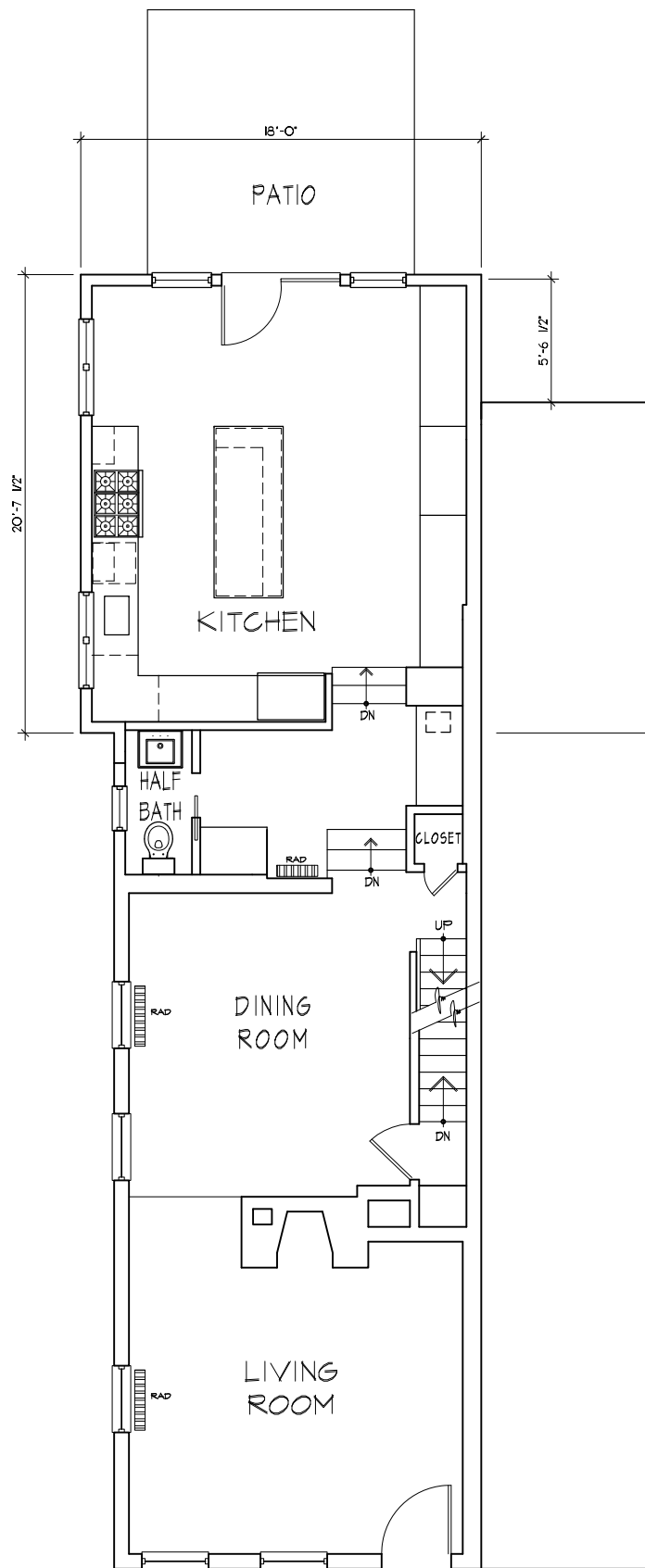
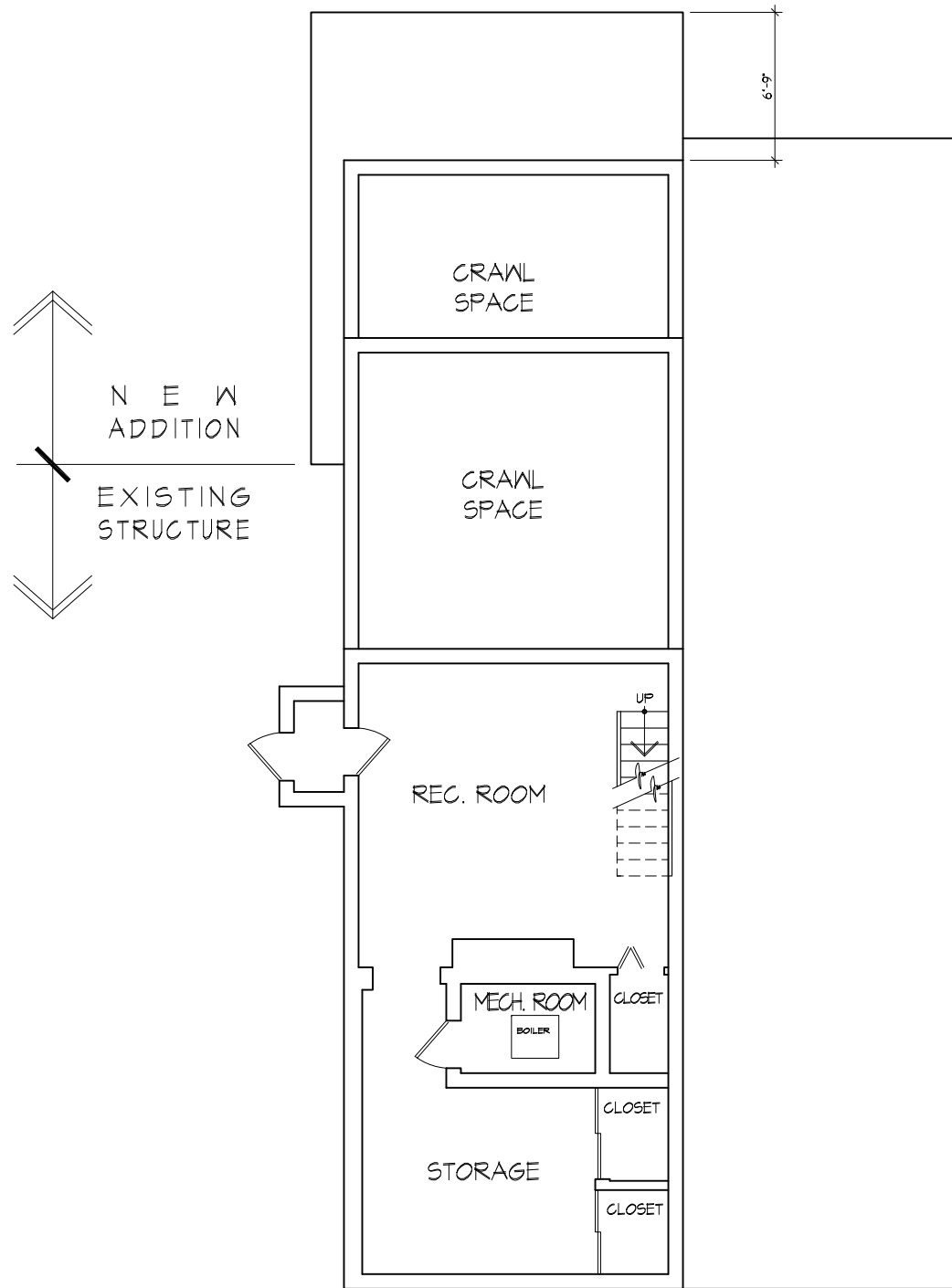


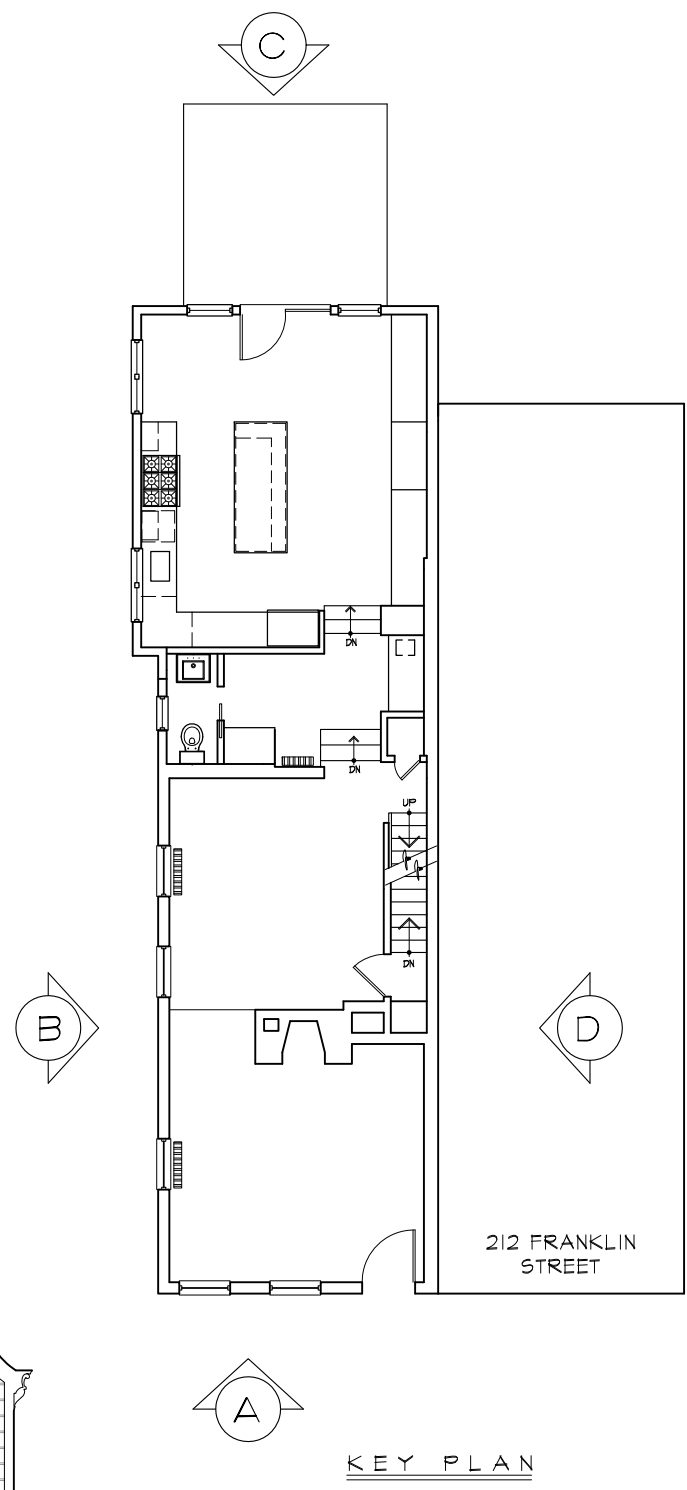
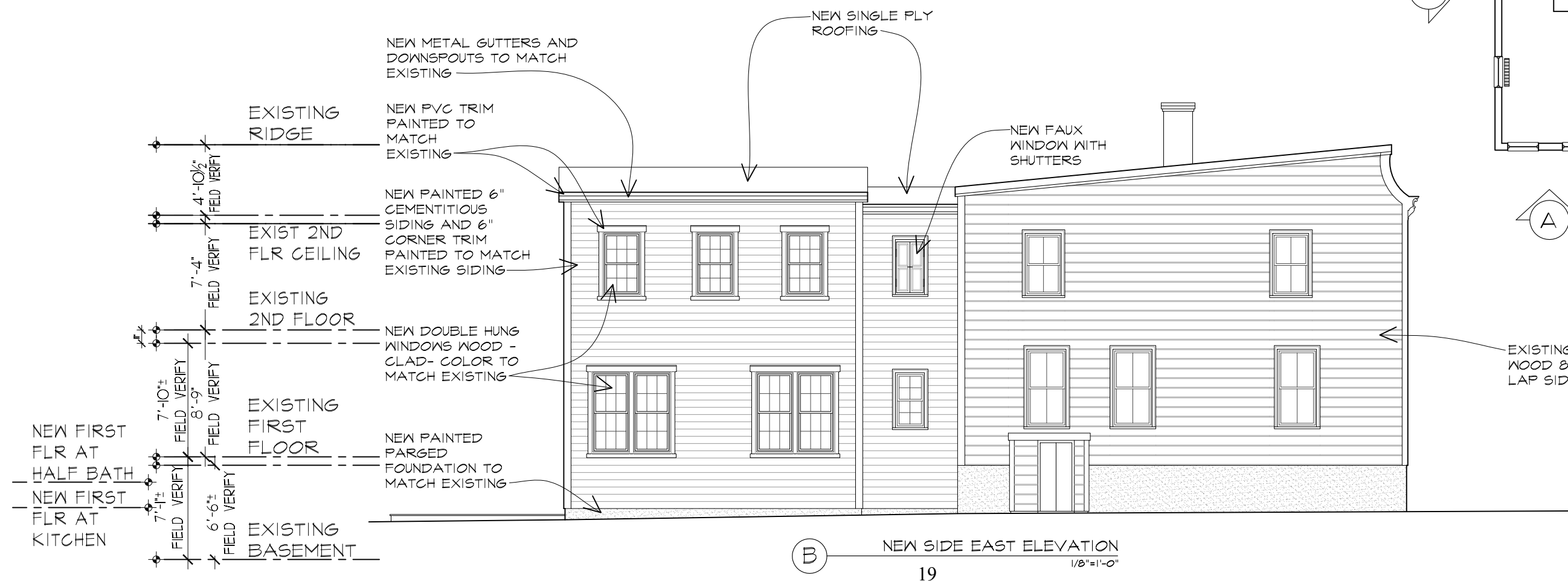
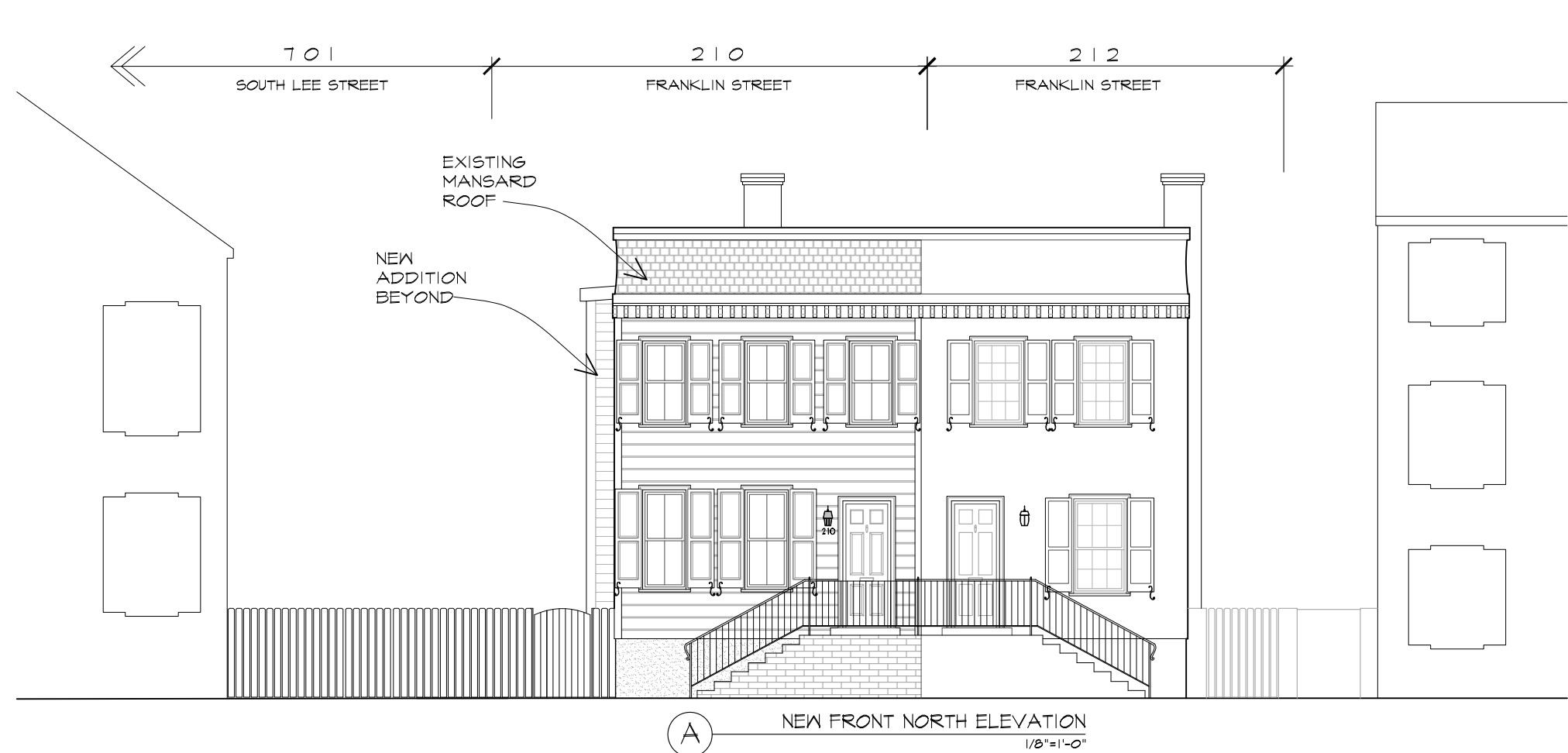
C EXISTING REAR SOUTH ELEVATION  
1/8"=1'-0"



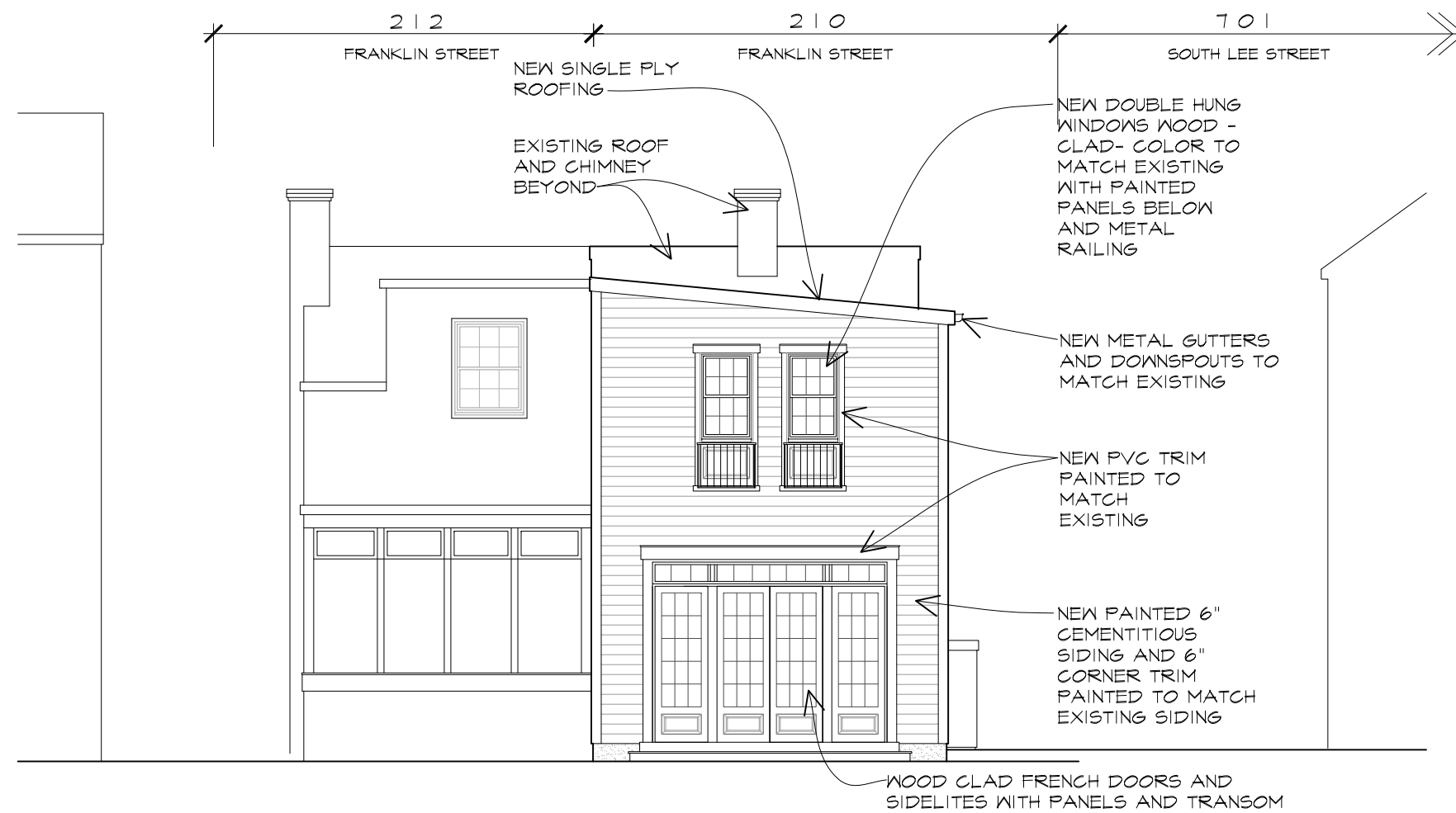
D EXISTING SIDE WEST ELEVATION  
1/8"=1'-0"



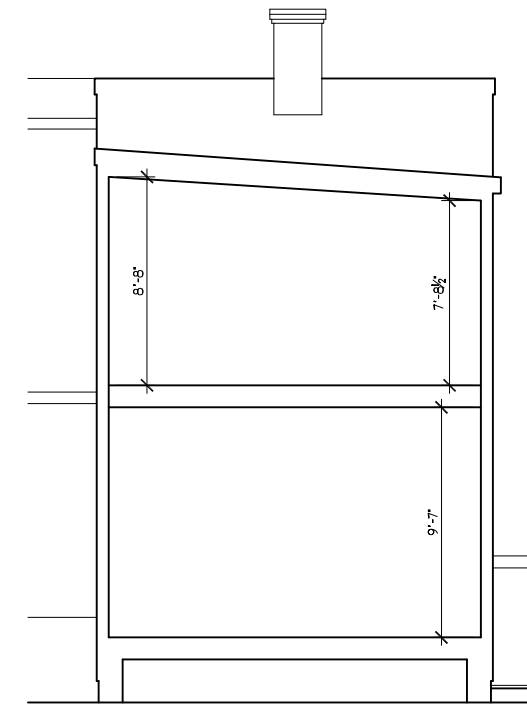




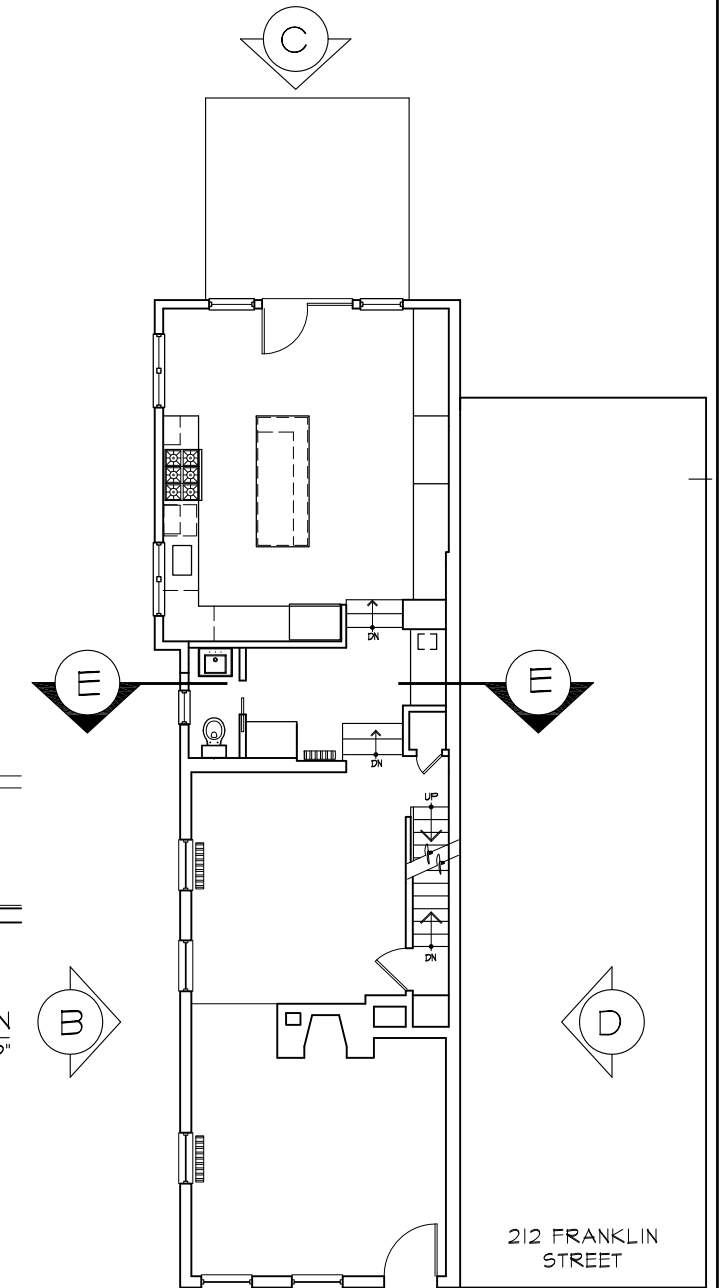
EXISTING PAINTED WOOD 8" GERMAN LAP SIDING



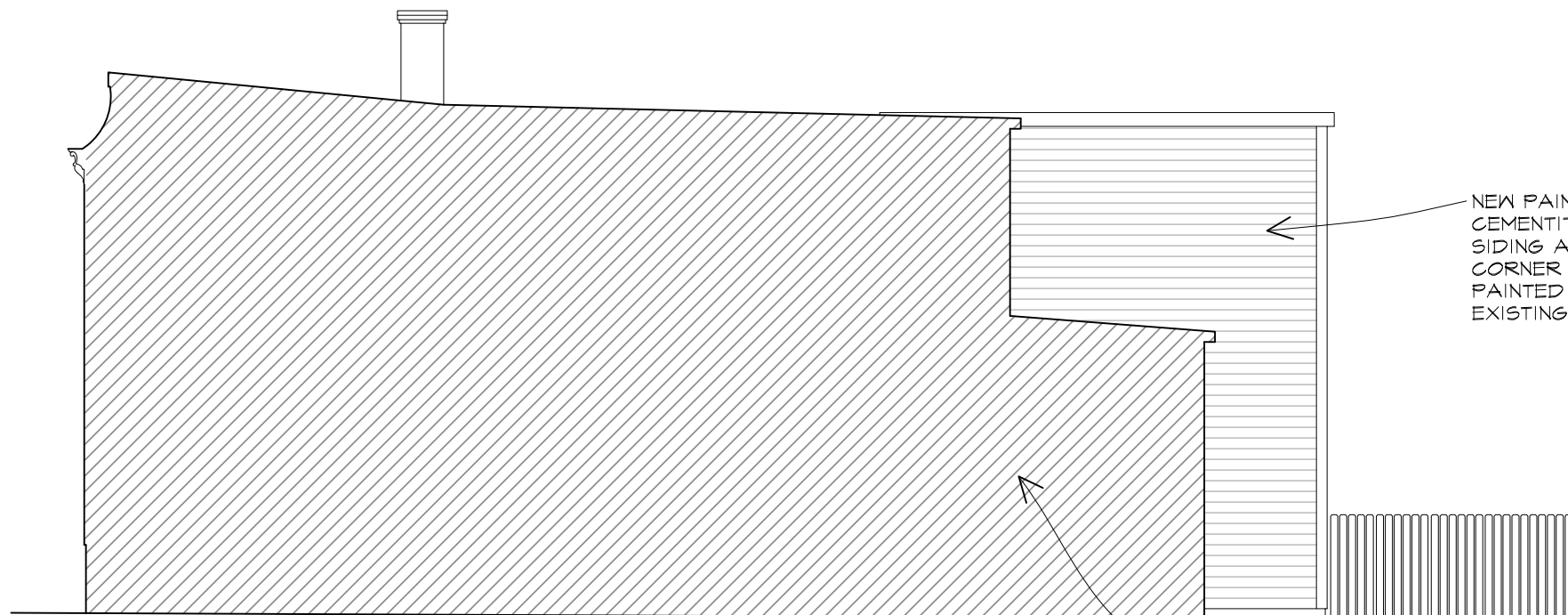
C NEW REAR SOUTH ELEVATION  
1/8"=1'-0"



E BUILDING SECTION  
1/8"=1'-0"



A KEY PLAN



D NEW SIDE WEST ELEVATION  
1/8"=1'-0"

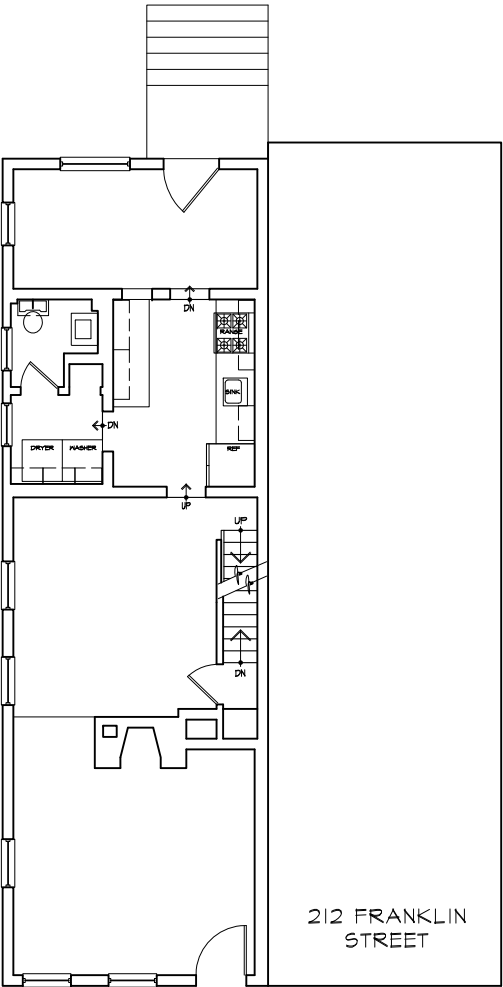
NEW PAINTED 6" CEMENTITIOUS SIDING AND 6" CORNER TRIM PAINTED TO MATCH EXISTING SIDING



FRONT NORTH ELEVATION  
210 FRANKLIN STREET



FRONT NORTH ELEVATION  
210 FRANKLIN STREET



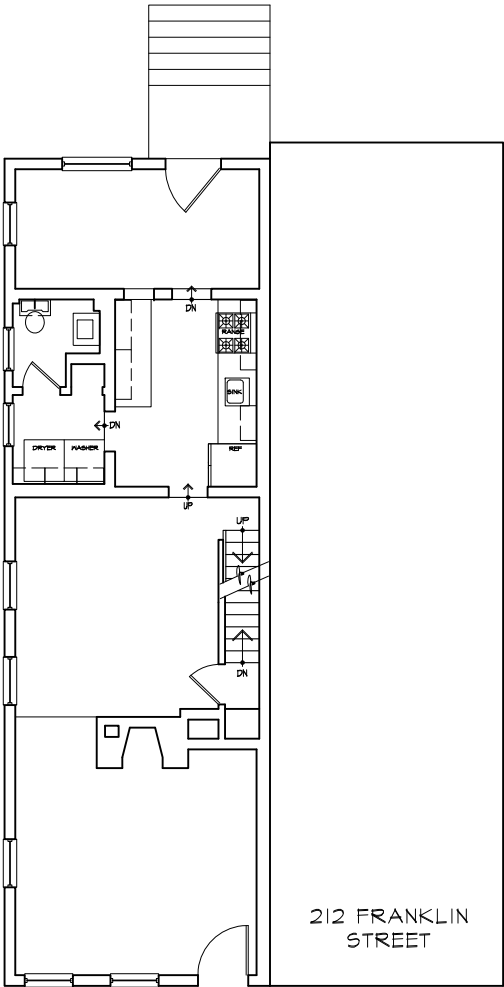




S I D E   E A S T   E L E V A T I O N



S I D E   E A S T   E L E V A T I O N



K E Y  
P L A N  
N T S

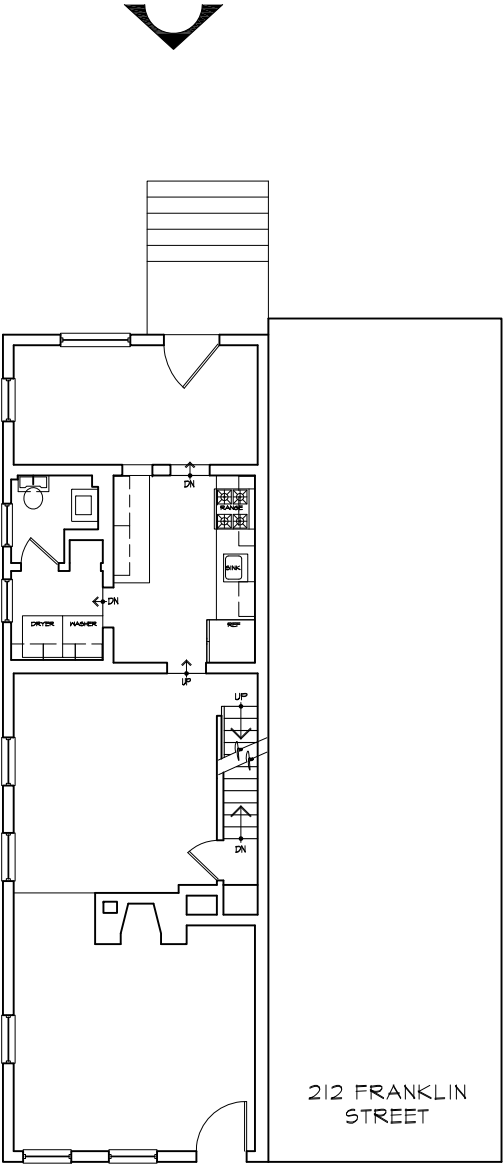




REAR SOUTH ELEVATION  
210 FRANKLIN STREET



REAR SOUTH ELEVATION  
210 FRANKLIN STREET



K  
E  
Y  
P  
L  
A  
N  
S

PASTEUR  
DESIGNS

9303 IRVING STREET  
MANASSAS VA 20110-5110  
E-MAIL: lucy@pasturdesigns.com  
TELEPHONE: 703 472 4172  
FACSIMILE: 703 393 8706

MARKS WOODS  
CONSTRUCTION SERVICES

MUTIMER RESIDENCE  
210 FRANKLIN STREET  
ALEXANDRIA VIRGINIA

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ISSUE DATE  
DESIGN 11/04/22  
11/08/22  
11/14/22  
01/05/23  
B A R  
01/17/23

SHEET TITLE  
PHOTOS

SHEET NUMBER  
A-9



# Department of Planning & Zoning Floor Area Ratio and Open Space Calculations

**B**

## A. Property Information

A1.  Street Address  Zone

A2.  x  =   
Total Lot Area Floor Area Ratio Allowed by Zone Maximum Allowable Floor Area

## B. Existing Gross Floor Area

### Existing Gross Area

Basement

First Floor

Second Floor

Third Floor

Attic

Porches

Balcony/Deck

Lavatory\*\*\*

Other\*\*

### Allowable Exclusions\*\*

Basement\*\*

Stairways\*\*

Mechanical\*\*

Attic less than 7'\*\*\*

Porches\*\*

Balcony/Deck\*\*

Lavatory\*\*\*

Other\*\*

chimney

Other\*\*

B1.  Sq. Ft.  
Existing Gross Floor Area\*

B2.  Sq. Ft.  
Allowable Floor Exclusions\*\*

B3.  Sq. Ft.  
Existing Floor Area Minus Exclusions  
(subtract B2 from B1)

### Comments for Existing Gross Floor Area

B1. **Total Gross**

B2. **Total Exclusions**

## C. Proposed Gross Floor Area

### Proposed Gross Area

Basement

First Floor

Second Floor

Third Floor

Attic

Porches

Balcony/Deck

Lavatory\*\*\*

Other

### Allowable Exclusions\*\*

Basement\*\*

Stairways\*\*

Mechanical\*\*

Attic less than 7'\*\*\*

Porches\*\*

Balcony/Deck\*\*

Lavatory\*\*\*

Other\*\*

Other\*\*

C1.  Sq. Ft.  
Proposed Gross Floor Area\*

C2.  Sq. Ft.  
Allowable Floor Exclusions\*\*

C3.  Sq. Ft.  
Proposed Floor Area Minus Exclusions  
(subtract C2 from C1)

C1. **Total Gross**

C2. **Total Exclusions**

## D. Total Floor Area

D1.  Sq. Ft.  
Total Floor Area (add B3 and C3)

D2.  Sq. Ft.  
Total Floor Area Allowed  
by Zone (A2)

## E. Open Space (RA & RB Zones)

E1.  Sq. Ft.  
Existing Open Space

E2.  Sq. Ft.  
Required Open Space

E3.  Sq. Ft.  
Proposed Open Space

## Notes

\*Gross floor area is the sum of all areas under roof of a lot, measured from the face of exterior walls, including basements, garages, sheds, gazebos, guest buildings and other accessory buildings.

\*\* Refer to the Zoning Ordinance (Section 2-145(B)) and consult with Zoning Staff for information regarding allowable exclusions. Sections may also be required for some exclusions.

\*\*\*Lavatories may be excluded up to a maximum of 50 square feet, per lavatory. The maximum total of excludable area for lavatories shall be no greater than 10% of gross floor area.

The undersigned hereby certifies and attests that, to the best of his/her knowledge, the above computations are true and correct.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_



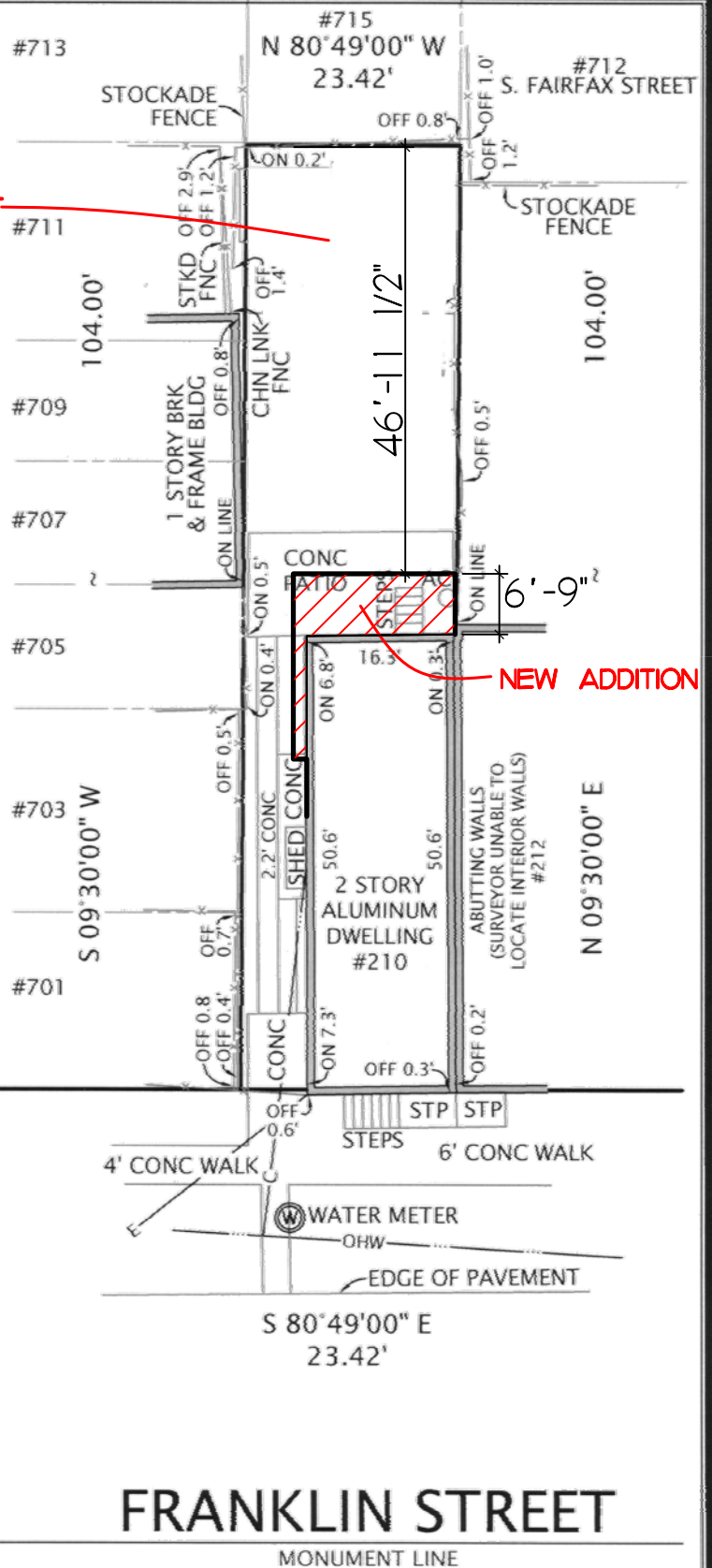
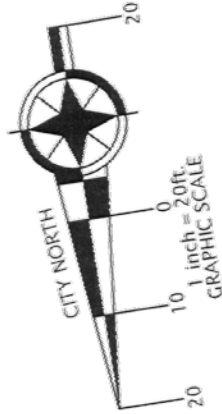
NOTES: 1. FENCES ARE FRAME UNLESS OTHERWISE NOTED. #713

OPEN SPACE REQUIREMENTS:  
2435.68 X .35 = 852.488

OPEN SPACE - 46.95'X23.42' = 1099.57 SQ FT

S. LEE STREET

MONUMENT LINE



FRANKLIN STREET

MONUMENT LINE

PLAT

SHOWING HOUSE LOCATION ON  
ON THE PROPERTY LOCATED AT

**#210 FRANKLIN STREET**

(DEED BOOK 289, PAGE 60)

**CITY OF ALEXANDRIA, VIRGINIA**

SCALE: 1" = 20'

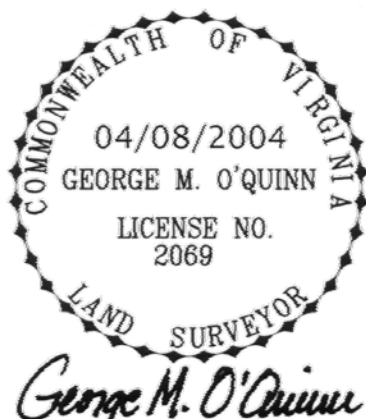
APRIL 8, 2004

I HEREBY CERTIFY THAT THE POSITIONS OF  
ALL THE EXISTING IMPROVEMENTS HAVE BEEN  
CAREFULLY ESTABLISHED BY A CURRENT FIELD  
SURVEY AND UNLESS SHOWN THERE ARE NO  
VISIBLE ENCROACHMENTS AS OF THIS DATE:

THIS PLAT IS SUBJECT TO  
RESTRICTIONS OF RECORD.

A TITLE REPORT WAS NOT FURNISHED.

NO CORNER MARKERS SET.



CASE NAME:

HENRY ~ WILLIAMS

MONUMENT TITLE COMPANY, INC.

**DOMINION SURVEYORS, INC.**

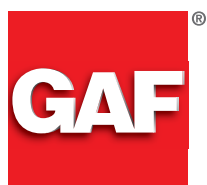
8808-H PEAR TREE VILLAGE COURT  
ALEXANDRIA, VIRGINIA 22309

703-619-6555

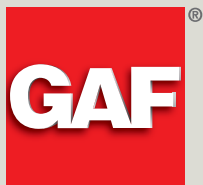
FAX 703-799-6412

# **EverGuard® TPO 45 mil Membrane Information Sheet**

Updated: 6/18



*Quality You Can Trust...From  
North America's Largest Roofing Manufacturer!™*



# EVERGUARD® TPO

MEMBRANE

45 MIL

Quality You Can  
Trust...From  
North America's  
Largest Roofing  
Manufacturer!™

[gaf.com](http://gaf.com)

## Why TPO

- Great Value—Excellent performance at a cost-effective price
- Excellent Seam Strength—Heat-welded seams provide greater seam strength to taped and other seams
- Long-term Weathering—Excellent long-term heat and UV resistance
- Energy Saving—Highly reflective and emissive white roof can help reduce energy costs and urban heat island effect
- CREST Energy Savings Calculator—See your potential savings at [cool.gaf.com](http://cool.gaf.com)
- Versatile Application Method

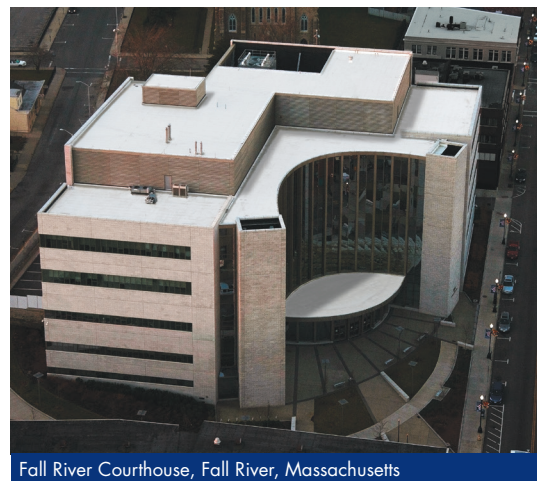
## Why GAF EverGuard® TPO

- Outperforms standard TPO in heat aging and UV tests—the best predictors of TPO performance
  - After accelerated heat aging at 275°F (135°C) for 105 days, EverGuard® 60 mil TPO showed no cracking—while every one of the competitors' samples had failed!
  - UV testing—Greater than 2.5 times the industry standard (ASTM D6878 weather resistance test)
- Guarantees are available up to 20 years when using EverGuard® TPO 45 mil Membrane.\*
- Easier to install due to:
  - Large welding window
  - Most complete line of accessories
  - 10' (3.05 m) wide sheets

## Installation

EverGuard® TPO 45 mil Membrane is suitable for all types of single-ply systems:

- Mechanically Attached Application...for a quick and cost-effective system that can be installed practically year-round.



Fall River Courthouse, Fall River, Massachusetts

- RhinoBond® Application...can be applied without using adhesives and installed practically year round. Qualifies for the same guarantee length as an adhered system.\*
- Adhered Application...can be installed with EverGuard® 1121 Bonding Adhesive (solvent-based), EverGuard® Low VOC Adhesive, or EverGuard® WB181 Bonding Adhesive (water-based) for the smoothest appearance. Provides excellent wind uplift performance.

## Accessories

Field fabrication of TPO accessories is time-consuming, costly, and inconsistent, and can lead to unreliable details that compromise a watertight roofing system. EverGuard® TPO prefabricated accessories deliver consistent quality and eliminate the worry and problems often associated with field fabrication. They can also boost productivity up to 200%,\*\* while reducing installed cost by up to 12%.

\*See applicable guarantee for complete coverage and restrictions.

\*\*Based on GAF estimate to field-fabricate flashing details.



U.S. only



California  
Title 24  
Compliant



TPO membranes meet the  
performance requirements  
of ICC ER-6030

# EverGuard® TPO 45 mil Membrane

## Applicable Standards

UL Listed, FM Approved, Miami-Dade County Product Control Approved, State of Florida Approved, CRRC Rated, Title 24 Compliant\*, ENERGY STAR® Certified\*\*, ASTM D6878.

Physical Properties	ASTM Test Method	ASTM D6878 Minimum	EverGuard® Typical Test Data
1. Certain data is provided in MD (machine direction) x CMD (cross machine direction) format. 2. Data is based upon typical product performance, and is subject to normal manufacturing tolerance and variance.			
Nominal Thickness	ASTM D751	0.039" (min.) (0.99 mm)	0.045" (1.14 mm)
Breaking Strength	ASTM D751 Grab Method	220 lbf/in. (38.5 kn/m)	280 lbf x 270 lbf (417.2 x 402.3 kg/m)
Factory Seam Strength	ASTM D751	66 lbf (98.34 kg/m)	110 lbf (membrane failure) (163.9 kg/m)
Elongation at Break	ASTM D751	15%	30%
Heat Aging	ASTM D573	90% Retention of Breaking Strength and Elongation at Break	100%
Tear Strength	ASTM D751 8" x 8" (203 x 203 mm) Sample	55 lbf (81.95 kg/m)	100 lbf x 120 lbf (149 x 178.8 kg/m)
Puncture Resistance	FTM 101C Method 2031	Not Established	290 lb. (131 kg)
Cold Brittleness	ASTM D2137	-40°C	-40°C
Permeance	ASTM E96	Not Established	0.08 Perms
Dimensional Change	ASTM D1204 @158°F (70°C), 6 hrs.	+/-1%	0.4%
Water Absorption	ASTM D471 @158°F (70°C), 1 week	+/-3.0% max.	0.7%
Hydrostatic Resistance	ASTM D751 Method D	Not Established	380 psi
Ozone Resistance	ASTM D1149	No visible deterioration @ 7 x magnification	No visible deterioration @ 7 x magnification
SRI (Solar Reflectance Index) Initial/Aged	N/A	N/A	94/81 83 Aged Title 24
Reflectivity (white) Initial/Aged	ASTM C1549 ASTM E903	N/A N/A	0.76/0.68 81.9% Reflectance
Emissivity (white) Initial/Aged	ASTM C1371 ASTM E403	N/A N/A	0.90/0.83 0.94
Weather Resistance	ASTM G155/D6878	10,080 KJ/(m² · nm) at 340 nm	>20,000 KJ/(m² · nm) at 340 nm
Heat Aging	ASTM D573	240°F (115°C) for 32 weeks	60 weeks
Thickness Above Scrim	ASTM D7635	Min 30% of Total Thickness	15.8 mil (Nominal)
<b>Guarantee</b>			
Up to 20 years			

\*White Membrane Only

\*\*ENERGY STAR® only valid in the U.S.

## Product Data

Roll Size	5'x 100'	6' x100'	8'x100'	10'x100'	12'x100'
	(1.52 x 30.5 m) (500 sq. ft. [46.5 sq.m])	(1.83 x 30.5 m) (600 sq. ft. [55.74 sq.m])	(2.44 x 30.5 m) (800 sq. ft. [74.3 sq.m])	(3.05 x 30.5 m) (1,000 sq. ft. [92.9 sq.m])	(3.65 x 30.5 m) (1,200 sq. ft. [111.484 sq.m])
Roll Weight	128 lb. (58.1 kg)	153.6 lb. (69.7kg)	204 lb. (93 kg)	256 lb. (116.1 kg)	307.2 lb. (139.3 kg)
Colors	White, Tan, Gray				
Storage	Store rolls on their sides on pallets or shelving in a dry area.				
Safety Warning	Membrane rolls are heavy. Position and install by at least two people.				
<b>Note:</b> Membrane rolls shipped horizontally on pallets, stacked pyramid-style and banded. Product sizes, dimensions, and widths are nominal values and are subject to normal manufacturing/packaging tolerance and variation.					

RhinoBond® is a registered trademark of OMG.



## HardiePlank® Lap Siding Product Description

HardiePlank lap siding is factory-primed fiber-cement lap siding available in a variety of styles and textures. Please see your local James Hardie® product dealer for product availability. HardiePlank® lap siding comes in 12 ft. lengths. Nominal widths from 5¼ in. to 12 in. create a range of exposures from 4 in. to 10¾ in.

HardiePlank lap siding is also available with ColorPlus® Technology as one of James Hardie's prefinished products. ColorPlus Technology is a factory applied, oven-baked finish available on a variety of James Hardie siding and trim products. See your local dealer for details and availability of products, colors and accessories.



**Select Cedarmill®**



**Smooth**



**Beaded Cedarmill®**



**Beaded Smooth**



**Custom Colonial Roughsawn®**



**Custom Colonial Smooth®**

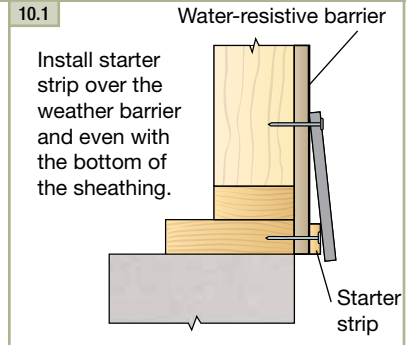


# Installation of HardiePlank® Lap Siding

## INSTALL A STARTER STRIP

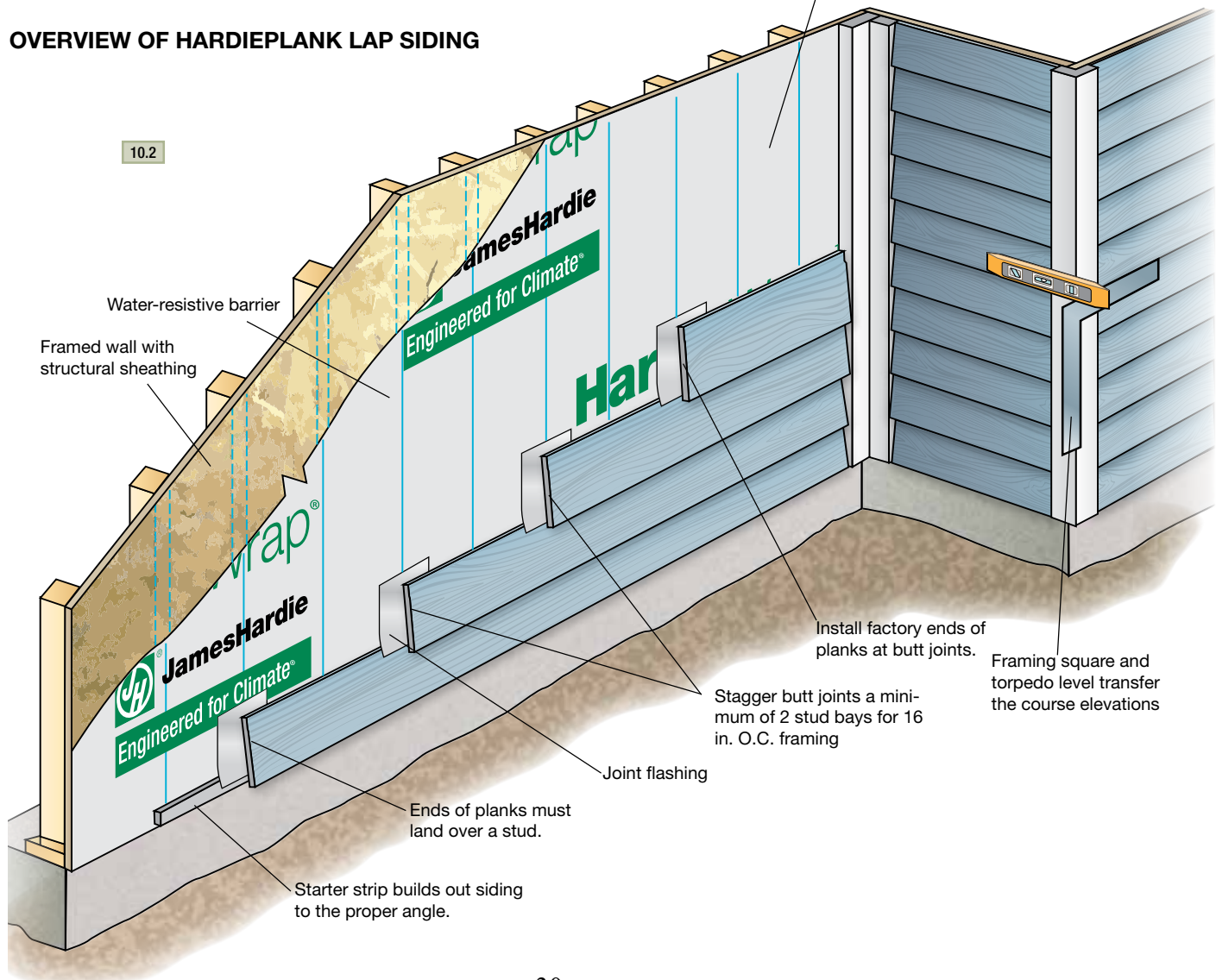
HardiePlank® lap siding requires a starter strip beneath the first course to set it on the proper angle and to create a proper drip edge at the bottom of the siding. Starter strips are easily made by ripping 1 ¼ in. pieces of HardiePlank siding from full or partial planks.

The bottom of the starter strip should be installed even with the bottom of the mudsill or the bottom edge of the sheathing. The strip must be installed over the water-resistive barrier, but occasional gaps should be left in the starter strip to allow any accumulated moisture behind the siding to drain away safely.



**TIP:** For accurate fastening, snap vertical chalk lines on the water-resistive barrier at the center of every stud location.

## OVERVIEW OF HARDIEPLANK LAP SIDING



## INSTALLING THE PLANKS

The first course of HardiePlank® siding is critical to the proper installation of the plank on the rest of the building. The first course should start at the lowest point of the house and within required clearances. Special attention should be made to ensure that it's straight and level. Attention should also be paid to staggering any butt joints in the planks so that the installation is attractive while making efficient use of material.

1. Use a level (4 ft. or longer) or chalked level line to be sure that the first course is level. As installation proceeds up the wall, periodically check the level and straightness of the courses. When correcting for flatness over products such as exterior insulation, use drywall shims. It is good practice to snap a chalk line every 3 to 5 courses to keep the planks straight and level.
2. Position the bottom edge of the first course of siding a minimum  $\frac{1}{4}$  in. below the edge of the starter strip (maintain required clearances) and secure.
3. Run the siding to the HardieTrim® board leaving a  $\frac{1}{8}$  in. gap between the siding and trim.

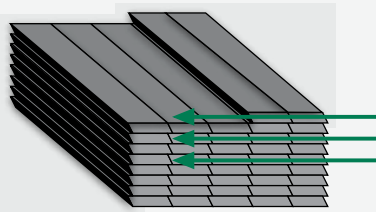
The bottom of the siding should be kept even with the bottom of the trim, or if desired, the trim may extend below the bottom of the siding. But the siding should never hang below the trim. **\*When installing the first course make sure ground clearances are in accordance with James Hardie requirements and those of local codes.**

## PLANK ALIGNMENT AT CORNERS

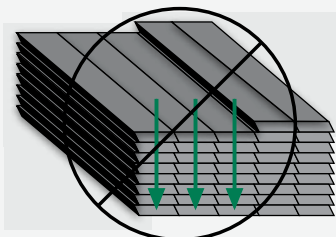
For the best looking installation, make sure that the heights of the plank courses match on both sides of a corner. Use a framing square, speed square or a level to match up the plank heights. Check every few courses to make sure proper heights are being maintained.

**TIP:** When taking planks from the pallet installation, avoid repeating the texture pattern by working across the pallet. Two to four planks can be removed from a stack at one time. But then material should be taken from adjacent stacks, again working across the pallet. Texture repeat is typically a concern on large walls with few breaks such as windows or doors.

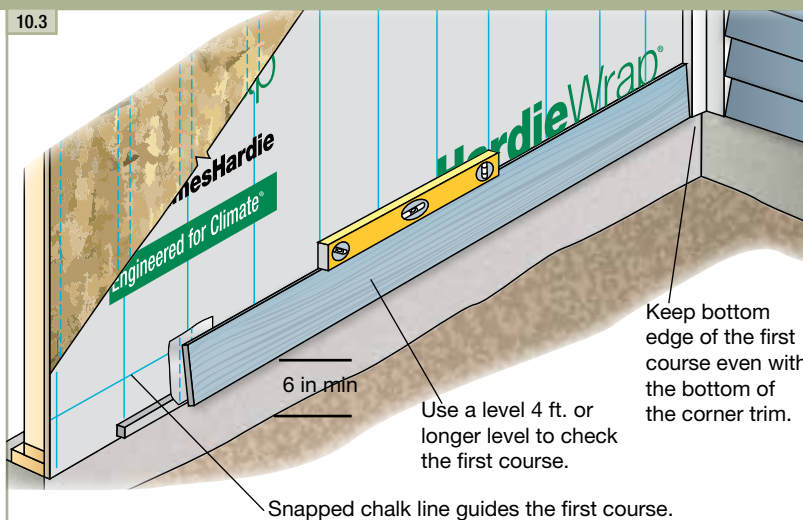
Pull from across the stack



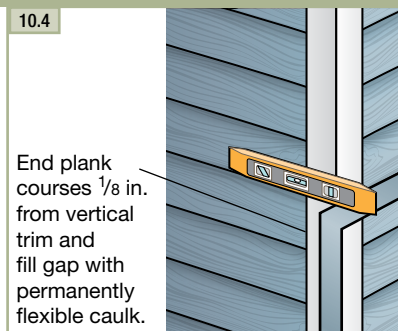
Do not go down the stack



10.3



10.4



# Installation of HardiePlank® Lap Siding (cont.)

## BLIND NAILING (nailing through top of plank)

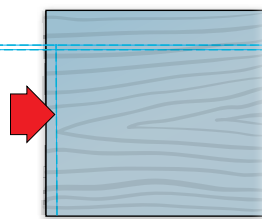
Blind nailing is recommended for installing any type of HardiePlank® lap siding including ColorPlus® siding. With blind nailing, each course covers the fasteners on the course below, which provides a better looking installation.

For blind nailing HardiePlank lap siding, James Hardie recommends driving fasteners 1 in. from the top edge of the plank. Additionally fasteners should be placed no closer than 3/8 in. from the ends of the plank.

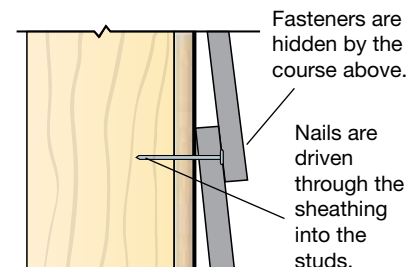
### 10.5 Blind nailing measurements

Nails for blind nailing shall be between 3/4 in and 1 in. from the top of the board.

Keep nails 3/8 in from ends of boards.



### 10.6 Blind nailing

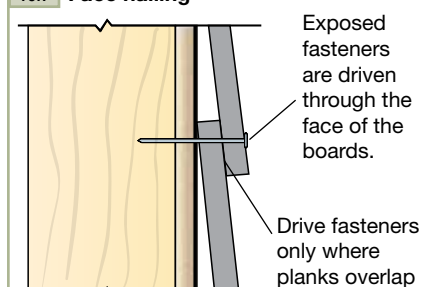


Avoid placing fasteners near the top edge of the plank. This practice, called “high nailing”, may lead to loose planks, unwanted gaps or rattling. **Pin-backed corners may be done for aesthetic purposes only. Finish nails are recommended for pin-backs. Headed siding nails are allowed. Place pin-backs no closer than 1 in. from plank ends and 3/4 in. from plank edge into min. 3/8 in. wood structural panel. Pin-backs are not a substitute for blind or face nailing**

## FACE NAILING (nailing through the overlap at the bottom of the plank)

Although blind nailing is recommended by James Hardie, face nailing may be required for certain installations including: installations in high wind areas, fastening into OSB or equivalent sheathing without penetrating a stud, or when dictated by specific building codes. Refer to Appendix D for related code matters.

### 10.7 Face nailing



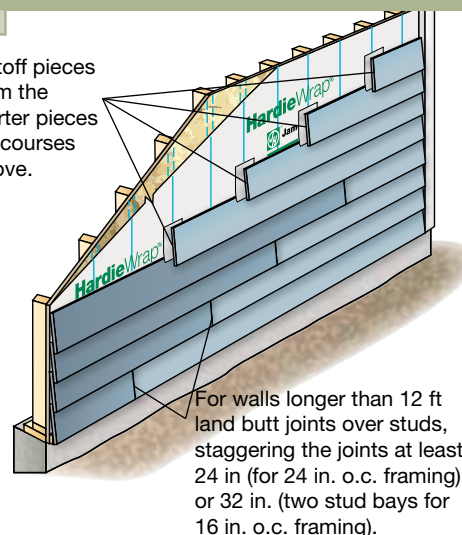
## STAGGERING THE BUTT JOINTS

For walls longer than 12 ft, it is necessary to butt joint additional lengths of HardiePlank siding. These butt joints should be staggered to avoid noticeable patterns, which is determined by the placement of the first course. Butt joints between consecutive courses should be spaced apart by at least two stud bays for 16 in., o.c. framing or one bay for 24 in. o.c. framing.

While random placement of the planks is usually the most aesthetically pleasing, a progressive stagger pattern can make the job easier and faster without the pattern becoming too noticeable. With this strategy, the cut off piece for one course becomes the starter piece for a course above, making efficient use of materials and ensuring that all butt joints land on studs. The pattern can be modified for different stud placement.

### 10.8

Cutoff pieces form the starter pieces for courses above.



For walls longer than 12 ft land butt joints over studs, staggering the joints at least 24 in (for 24 in. o.c. framing) or 32 in. (two stud bays for 16 in. o.c. framing).



## JOINT FLASHING

One or more of the following joint treatment options are required by code (as referenced 2009 IRC R703.10.2)

- A. Joint Flashing (James Hardie recommended)
- B. Caulking\* (Caulking is not recommended for ColorPlus for aesthetic reasons as the Caulking and ColorPlus will weather differently. For the same reason, do not caulk nail heads on ColorPlus products.)
- C. "H" jointer cover

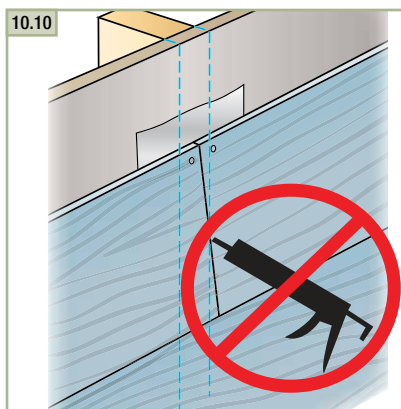
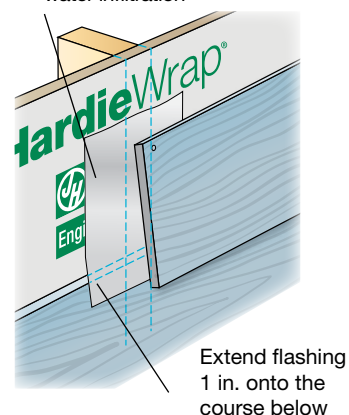
Flashing behind butt joints provides an extra level of protection against the entry of water at the joint. James Hardie recommends 6 in. wide flashing that overlaps the course below by 1 in. Some local building codes may require different size flashing.

Joint-flashing material must be durable, waterproof materials that do not react with cement products. Examples of suitable material include finished coil stock and code compliant water-resistive barriers. Other products may also be suitable.

**TIP:** Joint flashing can be quickly and easily made by cutting a 6 in. wide section off a roll of housewrap. Tape the roll tightly at the cut mark and cut the section off using a miter saw with a carbide blade. Individual sheets then can be cut to length with a utility knife.

**TIP:** Use light-colored joint flashing when using light-colored ColorPlus lap siding or other siding with a light-colored finish. Dark-color joint flashings should be used on siding with dark finishes.

10.9 Flashing behind to add an additional layer of protection from water infiltration

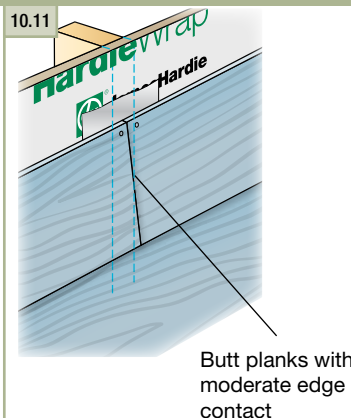


Caulking at HardiePlank lap siding butt joints is not recommended for ColorPlus for aesthetic reasons as the caulking and ColorPlus will weather differently. For the same reason, do not caulk exposed nail heads. Refer to the ColorPlus touch-up section for details

## JOINT PLACEMENT AND TREATMENT

Butt joints in HardiePlank lap siding should always land on a stud. Butt joints between studs are not recommended and should be avoided. Whenever possible, factory-finished ends should be used at butt joints.

Place cut ends where the siding meets a corner, door, window trim, or other break in the wall where the joint is to be caulked. If cut ends are used in a butt joint between planks, James Hardie requires sealing cut ends for all products. For ColorPlus products, use the color-matched edge coater to seal the cut end.



**COLORPLUS® TIP:** When installing HardiePlank lap siding with ColorPlus Technology, position the plank in the immediate area where the plank is to be fastened. Do not place the plank on the course below and slide into position. Doing so may scuff or scratch the ColorPlus finish on the installed piece.

# Installation of HardiePlank® Lap Siding (cont.)

## CONTINUING THE INSTALLATION

Once the initial course of HardiePlank® siding is fastened to the wall, continue installing successive courses with full 12 ft. pieces (follow the stagger pattern for longer walls), or until a window, door or other opening interrupts the course (fig 10.12). Notch planks as needed to fit around windows and doors. Again, be sure to seal all cut edges. Avoid placing butt joints directly above or below windows or above doors. Separate the joint from the opening by at least one course of siding.

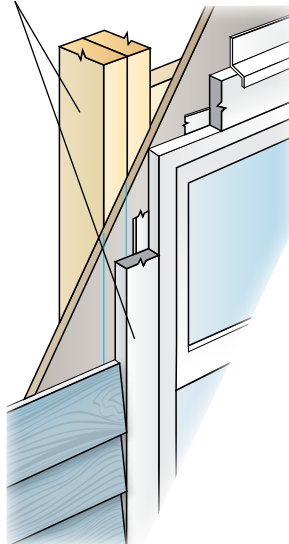
Where butt joints land on a stud, make sure there is enough stud space for plank on both sides of the joint to land properly. Optimally both sides of a butt joint should land in the middle of a stud with  $\frac{3}{4}$  in landing space for each side. The minimum stud space for a plank to land is  $\frac{3}{8}$  in.

Pay special attention to window, doors, and corners that have been trimmed before the siding goes on. Vertical trim boards may cover the king studs beside windows or doors, or they may cover up corner studs leaving no room for nailing the siding. In these places add extra studs as needed.

If corners are trimmed with **HardieTrim® 5/4, 4/4 boards**, it may be necessary to measure and cut the first pieces of siding to make sure the butt joints land on studs.

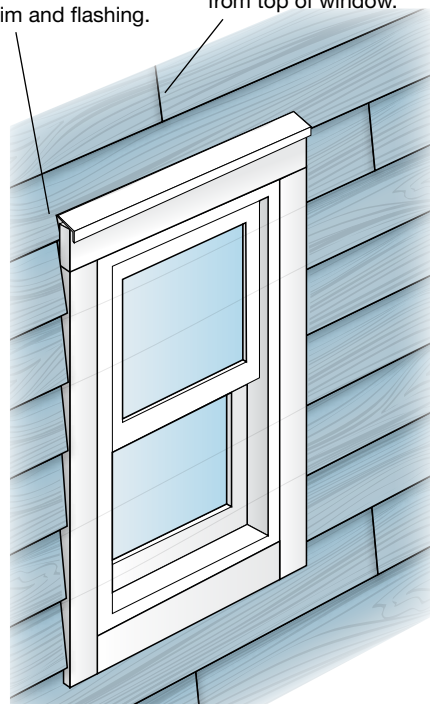
### 10.12 Planking around windows

Add an extra stud if necessary for nailing the ends of the planks.



Notch plank around window trim and flashing.

Keep butt joints more than one course away from top of window.



**COLORPLUS TIP:** HardiePlank lap siding with ColorPlus Technology is shipped with a protective laminate slip sheet, which should be left in place during cutting and fastening to reduce marring and scratching. The sheet should be removed immediately after each plank is installed.



## INSTALLING HARDIEPLANK® SIDING ON GABLE WALLS

Siding gable walls can be challenging, and some of the keys to siding gable walls efficiently are determining the angle or pitch of the roof, properly staging materials, and ensuring that the plank lengths are measured accurately.

To estimate the amount of siding needed to complete a gable end, use the estimating tools located in Appendix C.

Stage enough material on the pump jacks or scaffolding to complete the gable end, but take care not to overload the staging. When possible, a cut table should be located on the pump jacks or scaffolding, which frees up crew members to work on other walls.

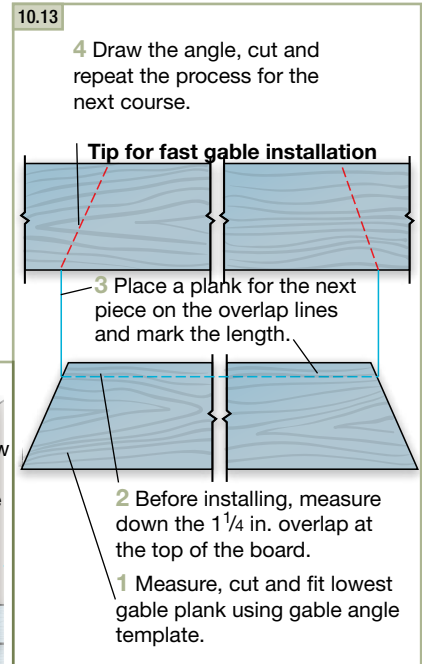
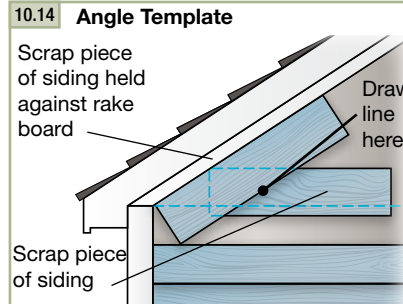
## To cut planks for the gable:

1. Tack up a small scrap piece of siding where the first gable course is going.
2. Hold a second small piece of siding against the eave or rake board.
3. Trace the angle onto the scrap.
4. Cut that line and label the scrap as the template for the gable angle. The template can then be used to transfer the angle onto the larger pieces for cutting and installation.
5. Periodically check the angle as you progress up the wall.

## The quickest way to measure and cut consecutive courses of siding for a gable is to work off the previous piece.

1. Cut and fit the lowest course of siding.
2. Before installing, lay it flat and measure down 1 1/4 in. from the top edge of the plank for the course overlap. Make a mark on both ends.
3. Set a piece of uncut siding on top of the first piece, aligning the bottom edge with the overlap marks. Transfer the length directly to the uncut piece.
4. Draw the gable angle with the template, cut the angle and then repeat the process for the next course.

**TIP:** Stainless steel fasteners are recommended when installing James Hardie® products.



## HARDIEPLANK® SIDING FASTENER SPECIFICATIONS

The Fastener Specifications table shows fastener options for a variety of different nailing substrates. Please refer to the applicable ESR report online (see back page) to determine which fastener meets your wind load design criteria.

Fastener Substrate			Approved Fastener	Fastener Type	
wood studs	blind nail	16 in o.c.	③ ⑨	② .113 in. x .267 in x 2 in.	6D common
		24 in o.c.	③ ⑩	③ .093 in. x .222 in. x 2 in.	6D siding nail
	face nail	16 in o.c.	② ⑤	⑨ No 11ga 1.25 in long	roofing nail
		24 in o.c.	② ⑤	⑦ Ribbed Bugle-Head No. 8 .323 in. x 1.625 in	screws
steel studs*	blind nail	16 in o.c.	⑧ ⑬	⑧ Ribbed Wafer-Head No. 8 (.375 in x 1.25 in)	
		24 in o.c.	⑧ ⑬	⑫ [AKN-100] .100 in x .25 in x 1.5 in	ET&F
	face nail	16 in o.c.	⑦ ⑫	⑬ [AGS-100] .100 in x .313 in. x 1.5 in	
		24 in o.c.	⑦ ⑫	⑭ [ASTM C-90] ASM-144-125 (P/C) .30 in x .14 in x 1.25 in	masonry nail
Direct to Masonry			⑭	⑤ .113 in. x .260 in x 2.375 in	8D common
7/16 in OSB or equivalent (face nailed)			④	⑯ No 11ga 1.75 in long	roofing nail
				④ .091 in. x .221 in. x 1.5 in	4D siding nail

\*When blind fastening 9.5 in or wider product onto steel studs, use screws.

● indicates recommended fasteners



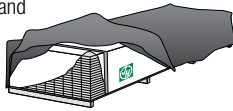
# HardiePlank® Lap Siding

EFFECTIVE DECEMBER 2019

**IMPORTANT: FAILURE TO FOLLOW JAMES HARDIE WRITTEN INSTALLATION INSTRUCTIONS AND COMPLY WITH APPLICABLE BUILDING CODES MAY VIOLATE LOCAL LAWS, AFFECT BUILDING ENVELOPE PERFORMANCE AND MAY AFFECT WARRANTY COVERAGE. FAILURE TO COMPLY WITH ALL HEALTH AND SAFETY REGULATIONS WHEN CUTTING AND INSTALLING THIS PRODUCT MAY RESULT IN PERSONAL INJURY. BEFORE INSTALLATION, CONFIRM YOU ARE USING THE CORRECT HARDIEZONE® PRODUCT INSTRUCTIONS BY VISITING [HARDIEZONE.COM](http://HARDIEZONE.COM) OR CALL 1-866-942-7343 (866-9-HARDIE)**

## STORAGE & HANDLING:

Store flat and keep dry and covered prior to installation. Installing siding wet or saturated may result in shrinkage at butt joints. Carry planks on edge. Protect edges and corners from breakage. James Hardie is not responsible for damage caused by improper storage and handling of the product.



## CUTTING INSTRUCTIONS

### OUTDOORS

1. Position cutting station so that airflow blows dust away from the user and others near the cutting area.
2. Cut using one of the following methods:
  - a. Best: Circular saw equipped with a HardieBlade® saw blade and attached vacuum dust collection system. Shears (manual, pneumatic or electric) may also be used, not recommended for products thicker than 7/16 in.
  - b. Better: Circular saw equipped with a dust collection feature (e.g. Roan® saw) and a HardieBlade saw blade.
  - c. Good: Circular saw equipped with a HardieBlade saw blade.

### INDOORS

DO NOT grind or cut with a power saw indoors. Cut using shears (manual, pneumatic or electric) or the score and snap method, not recommended for products thicker than 7/16 in.

- DO NOT dry sweep dust; use wet dust suppression or vacuum to collect dust.
- For maximum dust reduction, James Hardie recommends using the "Best" cutting practices. Always follow the equipment manufacturer's instructions for proper operation.
- For best performance when cutting with a circular saw, James Hardie recommends using HardieBlade® saw blades.
- Go to [jameshardiepros.com](http://jameshardiepros.com) for additional cutting and dust control recommendations.

**IMPORTANT:** The Occupational Safety and Health Administration (OSHA) regulates workplace exposure to silica dust. For construction sites, OSHA has deemed that cutting fiber cement with a circular saw having a blade diameter less than 8 inches and connected to a commercially available dust collection system per manufacturer's instructions results in exposures below the OSHA Permissible Exposure Limit (PEL) for respirable crystalline silica, without the need for additional respiratory protection.

If you are unsure about how to comply with OSHA silica dust regulations, consult a qualified industrial hygienist or safety professional, or contact your James Hardie technical sales representative for assistance. James Hardie makes no representation or warranty that adopting a particular cutting practice will assure your compliance with OSHA rules or other applicable laws and safety requirements.

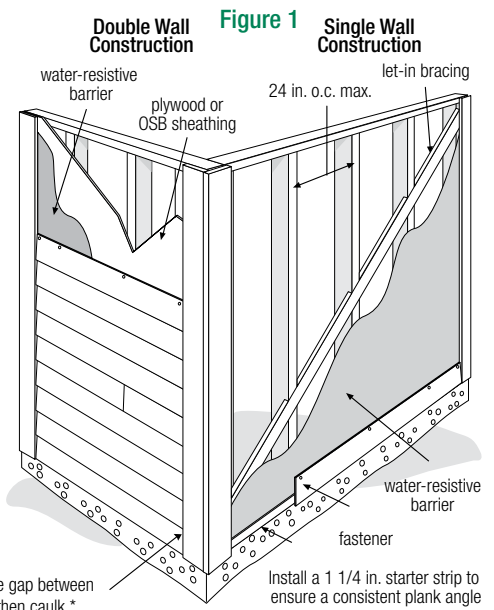
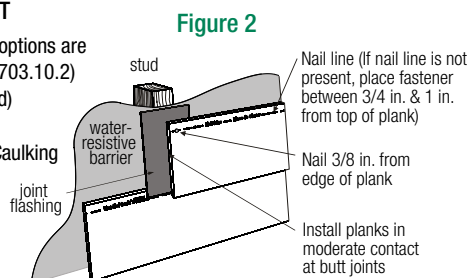
## GENERAL REQUIREMENTS:

- HardiePlank® lap siding can be installed over braced wood or steel studs, 20 gauge (33 mils) minimum to 16 gauge (54 mils) maximum, spaced a maximum of 24 in o.c. or directly to minimum 7/16 in thick OSB sheathing. See General Fastening Requirements. Irregularities in framing and sheathing can mirror through the finished application. Correct irregularities before installing siding.
- Information on installing James Hardie products over non-nailable substrates (ex: gypsum, foam, etc.) can be located in JH Tech Bulletin 19 at [www.jamehardie.com](http://www.jamehardie.com)
- A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. James Hardie will assume no responsibility for water infiltration. James Hardie does manufacture HardieWrap® Weather Barrier, a non-woven non-perforated housewrap<sup>1</sup>, which complies with building code requirements.
- When installing James Hardie products all clearance details in figs. 3-14 must be followed.
- Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6 in. in the first 10 ft..
- Do not use HardiePlank lap siding in Fascia or Trim applications.
- Do not install James Hardie products, such that they may remain in contact with standing water.
- HardiePlank lap siding may be installed on flat vertical wall applications only.
- For larger projects, including commercial and multi-family projects, where the span of the wall is significant in length, the designer and/or architect should take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin "Expansion Characteristics of James Hardie® Siding Products" at [www.jameshardie.com](http://www.jameshardie.com).
- James Hardie Building Products provides installation/wind load information for buildings with a maximum mean roof height of 85 feet. For information on installations above 60 feet, please contact JH technical support.

## INSTALLATION: JOINT TREATMENT

One or more of the following joint treatment options are required by code (as referenced 2009 IRC R703.10.2)

- A. Joint Flashing (James Hardie recommended)
- B. Caulking\* (Caulking is not recommended for ColorPlus® for aesthetic reasons as the Caulking and ColorPlus will weather differently. For the same reason, do not caulk nail heads on ColorPlus products.)
- C. "H" jointer cover



Note: Field painting over caulking may produce a sheen difference when compared to the field painted PrimePlus. \*Refer to Caulking section in these instructions.

<sup>1</sup>For additional information on HardieWrap® Weather Barrier, consult James Hardie at 1-866-4Hardie or [www.hardiewrap.com](http://www.hardiewrap.com)



SELECT CEDARMILL® | SMOOTH | BEADED CEDARMILL® | BEADED SMOOTH | CUSTOM COLONIAL™ SMOOTH | CUSTOM COLONIAL™ ROUGHSAWN

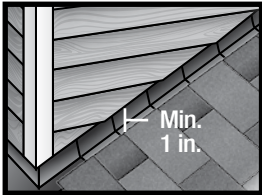


Visit [jameshardiepros.com](http://jameshardiepros.com) for the most recent version.

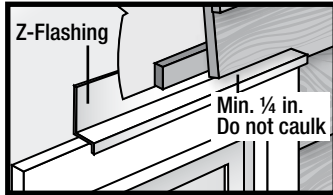


## CLEARANCE AND FLASHING REQUIREMENTS

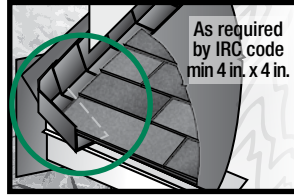
**Figure 3**  
**Roof to Wall**



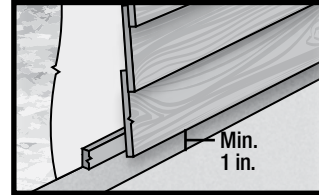
**Figure 4**  
**Horizontal Flashing**



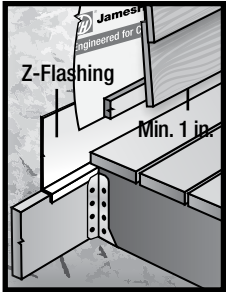
**Figure 5**  
**Kickout Flashing**



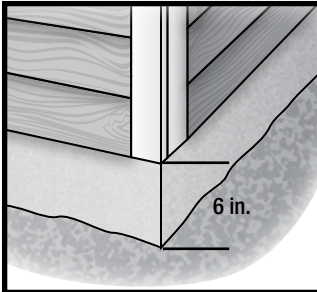
**Figure 6**  
**Slabs, Path, Steps to Siding**



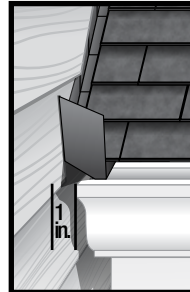
**Figure 7**  
**Deck to Wall**



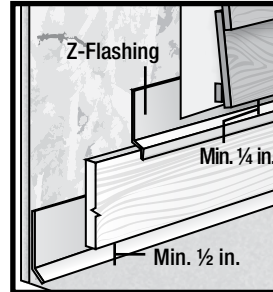
**Figure 8**  
**Ground to Siding**



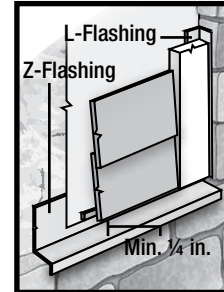
**Figure 9**  
**Gutter to Siding**



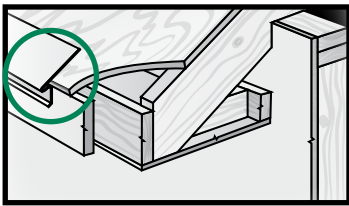
**Figure 10**  
**Sheltered Areas**



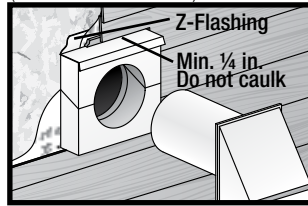
**Figure 11**  
**Mortar/Masonry**



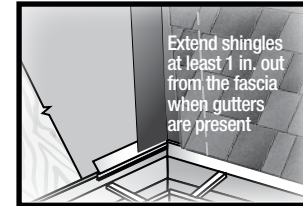
**Figure 12**  
**Drip Edge**



**Figure 13**  
**Block Penetration**  
(Recommended in HZ10)



**Figure 14**  
**Valley/Shingle Extension**



## FASTENER REQUIREMENTS\*

Refer to the applicable ESR report online to determine which fastener meets your wind load design criteria.

Blind Nailing is the preferred method of installation for HardiePlank® lap siding products. Face nailing should only be used where required by code for high wind areas and must not be used in conjunction with Blind nailing (Please see JH Tech bulletin 17 for exemption when doing a repair).

### BLIND NAILING

#### Nails - Wood Framing

- Siding nail (0.09 in. shank x 0.221 in. HD x 2 in. long)
- 11ga. roofing nail (0.121 in. shank x 0.371 in. HD x 1.25 in. long)

#### Screws - Steel Framing

- Ribbed Wafer-head or equivalent (No. 8 x 1 1/4 in. long x 0.375 in. HD) Screws must penetrate 3 threads into metal framing.

#### Nails - Steel Framing

- ET & F Panelfast® nails or equivalent (0.10 in. shank x 0.313 in. HD x 1-1/2 in. long)
- Nails must penetrate minimum 1/4 in. into metal framing.

#### OSB minimum 7/16 in.

- Siding nail (0.09 in. shank x 0.215 in. HD x 1-1/2 in. long)
- Ribbed Wafer-head or equivalent (No. 8 x 1 5/8 in. long x 0.375 in. HD).

### FACE NAILING

#### Nails - Wood Framing

- 6d (0.113 in. shank x 0.267 in. HD x 2 in. long)
- Siding nail (0.09" shank x 0.221" HD x 2" long)

#### Screws - Steel Framing

- Ribbed Bugle-head or equivalent (No. 8-18 x 1-5/8 in. long x 0.323 in. HD) Screws must penetrate 3 threads into metal framing.

#### Nails - Steel Framing

- ET & F pin or equivalent (0.10 in. shank x 0.25 in. HD x 1-1/2 in. long)
- Nails must penetrate minimum 1/4 in. into metal framing.

#### OSB minimum 7/16 in.

- Siding nail (0.09 in. shank x 0.221 in. HD x 1-1/2 in. long)

\*Also see General Fastening Requirements; and when considering alternative fastening options refer to James Hardie's Technical Bulletin USTB 5 - Fastening Tips for HardiePlank Lap Siding.

## FASTENER REQUIREMENTS continued

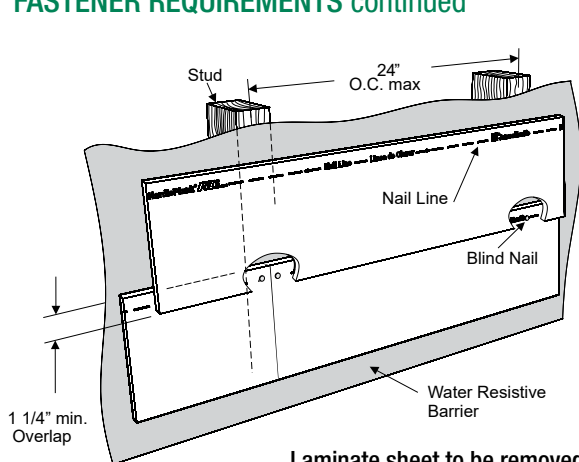
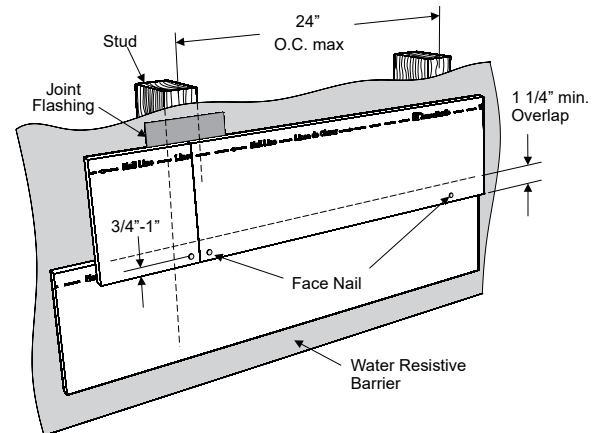
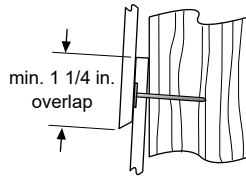


Figure 15 Figure 16

Minimum overlap  
for Both Face  
and Blind Nailing



Laminate sheet to be removed immediately after installation of each course for ColorPlus® products.

Pin-backed corners may be done for aesthetic purposes only. Finish nails are recommended for pin-backs. Headed siding nails are allowed. Place pin-backs no closer than 1 in. from plank ends and 3/4 in. from plank edge into min. 3/8 in. wood structural panel. Pin-backs are not a substitute for blind or face nailing.

## GENERAL FASTENING REQUIREMENTS

Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion. James Hardie recommends the use of quality, hot-dipped galvanized nails. James Hardie is not responsible for the corrosion resistance of fasteners. Stainless steel fasteners are recommended when installing James Hardie® products near the ocean, large bodies of water, or in very humid climates.

Manufacturers of ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products. Fasteners used to attach HardieTrim Tabs to preservative-treated wood shall be of hot dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3 or 2009 IBC 2304.9.5

- Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
- NOTE: Published wind loads may not be applicable to all areas where Local Building Codes have specific jurisdiction. Consult James Hardie Technical Services if you are unsure of applicable compliance documentation.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space).
- NOTE: Whenever a structural member is present, HardiePlank should be fastened with even spacing to the structural member. The tables allowing direct to OSB or plywood should only be used when traditional framing is not available.

## CUT EDGE TREATMENT

Caulk, paint or prime all field cut edges. James Hardie touch-up kits are required to touch-up ColorPlus products.

## CAULKING

For best results use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions.

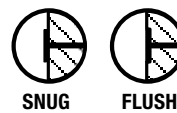
**Note: some caulking manufacturers do not allow "tooling".**

## PAINTING

DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products. Factory-primed James Hardie products must be painted within 180 days of installation. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

## PNEUMATIC FASTENING

James Hardie products can be hand nailed or fastened with a pneumatic tool. Pneumatic fastening is highly recommended. Set air pressure so that the fastener is driven snug with the surface of the siding. A flush mount attachment on the pneumatic tool is recommended. This will help control the depth the nail is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. (Drive under driven nails snug with a smooth faced hammer - Does not apply for installation to steel framing).



DO NOT



IF, THEN

WOOD  
FRAME



HAMMER  
FLUSH

STEEL  
FRAME



REMOVE &  
REPLACE

DO NOT



IF, THEN ADDITIONAL NAIL

FACE  
NAIL



COUNTERSINK  
& FILL

DO NOT USE



ALUMINUM  
FASTENERS



CLIPPED  
HEAD NAILS



STAPLES



## COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE

- Care should be taken when handling and cutting James Hardie® ColorPlus® products. During installation use a wet soft cloth or soft brush to gently wipe off any residue or construction dust left on the product, then rinse with a garden hose.
  - Touch up nicks, scrapes and nail heads using the ColorPlus® Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with new HardiePlank® lap siding with ColorPlus® Technology.
  - Laminate sheet must be removed immediately after installation of each course.
  - Terminate non-factory cut edges into trim where possible, and caulk. Color matched caulks are available from your ColorPlus® product dealer.
  - Treat all other non-factory cut edges using the ColorPlus Technology edge coat, available from your ColorPlus product dealer.
- Note:** James Hardie does not warrant the usage of third party touch-up or paints used as touch-up on James Hardie ColorPlus products.

Problems with appearance or performance arising from use of third party touch-up paints or paints used as touch-up that are not James Hardie touch-up will not be covered under the James Hardie ColorPlus Limited Finish Warranty.

## PAINTING JAMES HARDIE® SIDING AND TRIM PRODUCTS WITH COLORPLUS® TECHNOLOGY

When repainting ColorPlus products, James Hardie recommends the following regarding surface preparation and topcoat application:

- Ensure the surface is clean, dry, and free of any dust, dirt, or mildew
- Repriming is normally not necessary
- 100% acrylic topcoats are recommended
- DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.
- Apply finish coat in accordance with paint manufacturers written instructions regarding coverage, application methods, and application temperature
- DO NOT caulk nail heads when using ColorPlus products, refer to the ColorPlus touch-up section

## COVERAGE CHART/ESTIMATING GUIDE

Number of 12 ft. planks, does not include waste

COVERAGE AREA LESS OPENINGS (1 SQ = 100 sq.ft.)	(exposure)	HARDIEPLANK® LAP SIDING WIDTH								
		5 1/4 4	6 1/4 5	7 1/4 6	7 1/2 6 1/4	8 6 3/4	8 1/4 7	9 1/4 8	9 1/2 8 1/4	12 10 3/4
1		25	20	17	16	15	14	13	13	9
2		50	40	33	32	30	29	25	25	19
3		75	60	50	48	44	43	38	38	28
4		100	80	67	64	59	57	50	50	37
5		125	100	83	80	74	71	63	63	47
6		150	120	100	96	89	86	75	75	56
7		175	140	117	112	104	100	88	88	65
8		200	160	133	128	119	114	100	100	74
9		225	180	150	144	133	129	113	113	84
10		250	200	167	160	148	143	125	125	93
11		275	220	183	176	163	157	138	138	102
12		300	240	200	192	178	171	150	150	112
13		325	260	217	208	193	186	163	163	121
14		350	280	233	224	207	200	175	175	130
15		375	300	250	240	222	214	188	188	140
16		400	320	267	256	237	229	200	200	149
17		425	340	283	272	252	243	213	213	158
18		450	360	300	288	267	257	225	225	167
19		475	380	317	304	281	271	238	238	177
20		500	400	333	320	296	286	250	250	186

This coverage chart is meant as a guide. Actual usage is subject to variables such as building design. James Hardie does not assume responsibility for over or under ordering of product.

HS11119 P4/4 12/19

### SILICA WARNING

**DANGER:** May cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product. Refer to the current product Safety Data Sheet before use. The hazard associated with fiber cement arises from crystalline silica present in the dust generated by activities such as cutting, machining, drilling, routing, sawing, crushing, or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust. When doing any of these activities in a manner that generates dust you must (1) comply with the OSHA standard for silica dust and/or other applicable law, (2) follow James Hardie cutting instructions to reduce or limit the release of dust; (3) warn others in the area to avoid breathing the dust; (4) when using mechanical saw or high speed cutting tools, work outdoors and use dust collection equipment; and (5) if no other dust controls are available, wear a dust mask or respirator that meets NIOSH requirements (e.g. N-95 dust mask). During clean-up, use a well maintained vacuum and filter appropriate for capturing fine (respirable) dust or use wet clean-up methods - never dry sweep.

**WARNING:** This product can expose you to chemicals including respirable crystalline silica, which is known to the State of California to cause cancer. For more information go to [P65Warnings.ca.gov](http://P65Warnings.ca.gov).

**RECOGNITION:** In accordance with ICC-ES Evaluation Report ESR-2290, HardiePlank® lap siding is recognized as a suitable alternate to that specified in the 2006, 2009, 2012 & 2015 International Residential Code for One and Two-Family Dwellings, and the 2006, 2009, 2012 & 2015 International Building Code. HardiePlank lap siding is also recognized for application in the following: City of Los Angeles Research Report No. 24862, State of Florida Product Approval FL#13192, Miami-Dade County Florida NOA No. 17-0406.06, U.S. Dept. of HUD Materials Release 1263f, Texas Department of Insurance Product Evaluation EC-23, City of New York MEA 223-93-M, and California DSA PA-019. These documents should also be consulted for additional information concerning the suitability of this product for specific applications.



Pella

Architect  
Series®  
Reserve™

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Wood Windows and Patio Doors

## Authentically Detailed.

Meticulously designed to replicate the historical millwork process, Pella® Architect Series® Reserve™ offers unparalleled authenticity. Each piece is original, featuring excellent craftsmanship to reflect your project's unique personality and customized to fit your vision.

- A wide range of glazing options as well as HurricaneShield® impact-resistant.
- Divided light options available in Integral Light Technology® grilles, grilles-between-the-glass or wood removable grilles in standard and custom patterns.
- Wide range of historically authentic features and attributes including butt joinery and through stiles
- Two exterior sash profiles are available: Ogee and Putty Glaze.
- Virtually unlimited exterior color options, EnduraClad® protective finish in 27 standard colors plus nearly unlimited custom colors and Anodized finishes.

Insynctive

Available with factory-installed  
integrated security sensors.



## Brand Overview

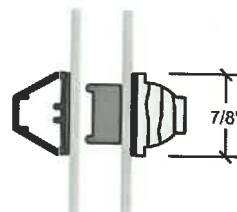
### Grilles

For a full list of grille size and pattern availability contact your local Pella sales representative.

#### Integral Light Technology® Grilles

- Extruded aluminum or wood grilles are adhered to the exterior face
- Wood grilles are adhered to the interior face
- Between-the-glass foam spacers, which are aligned with the interior and exterior grilles, replicate the appearance of true divided lights
- Typical grilles are 7/8" wide putty glazed or ogee profile, other standard and custom widths are available
- Custom grille patterns are available

#### Grille Profile

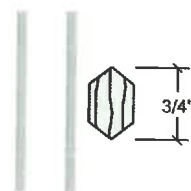


7/8", 1-1/4", and 2" widths

#### Roomside Removable Grilles

- Roomside wood grilles are securely attached to the interior, but can be removed for glass cleaning
- Typical grilles are 3/4" wide, other standard and custom widths and profiles are available

#### Grille Profile

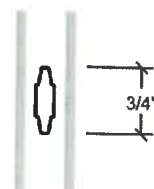


3/4", 1-1/4", and 2" widths

#### Grilles-Between-the-Glass<sup>1</sup>

- Permanent aluminum grilles are factory-installed inside the airspace of insulating glass
- White, Tan<sup>2</sup>, Brown, Putty<sup>2</sup>, Black, Morning Sky Gray, Ivory, Sand Dune, Harvest, Cordovan or Brickstone interior.
- Grilles are 3/4" wide
- Interior colors complements today's most popular interior finishes; choose a color to coordinate with the window or door frame, or select a contrasting grille color for a one-of-a-kind look

#### Grille Profile



3/4" width

#### Interior GBG Colors



#### Available Patterns

Traditional	9-Lite Prairie	Top Row	Cross	Custom Equally Divided

Pattern availability may vary depending on size of unit.

Custom configurations are also available, for details contact your local Pella sales representative.

<sup>1</sup> Appearance of exterior grille color may vary depending on the Low-E insulating glass selection.

<sup>2</sup> Tan or Putty Interior GBG colors are available in single-tone (Tan/Tan or Putty/Putty).

## Pella 7/8 grille BAR



7/8" Integral Light Technology  
Grilles



1-1/4" Integral Light Technology  
Grilles



2" Integral Light Technology  
Grilles

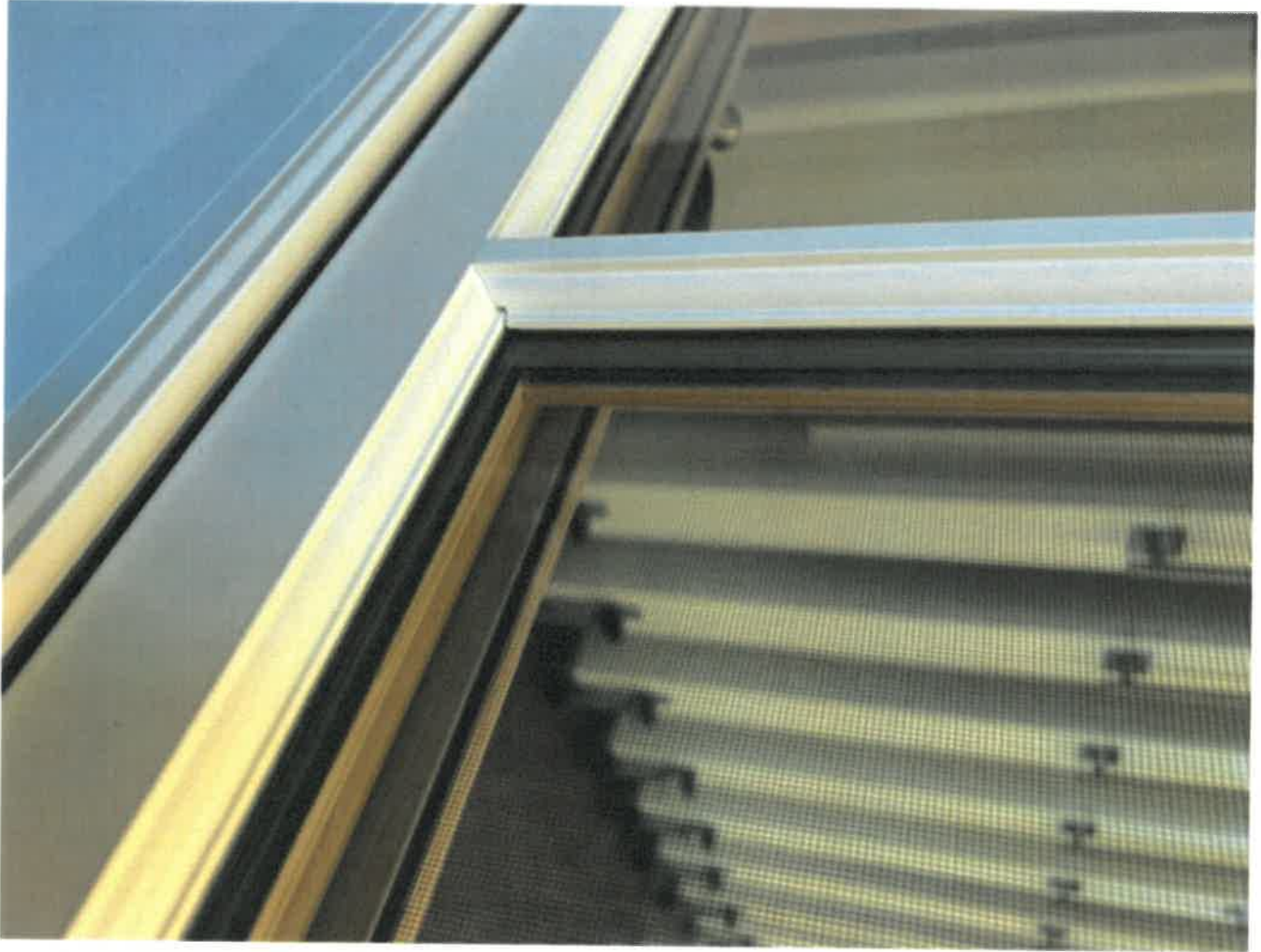
### SIMULATED-DIVIDED-LIGHT GRILLES

- Grilles are permanently bonded to the inside and outside of the glass
- No spacer between the grilles

**BEST USE:** When you want the traditional look of divided-light windowpanes.



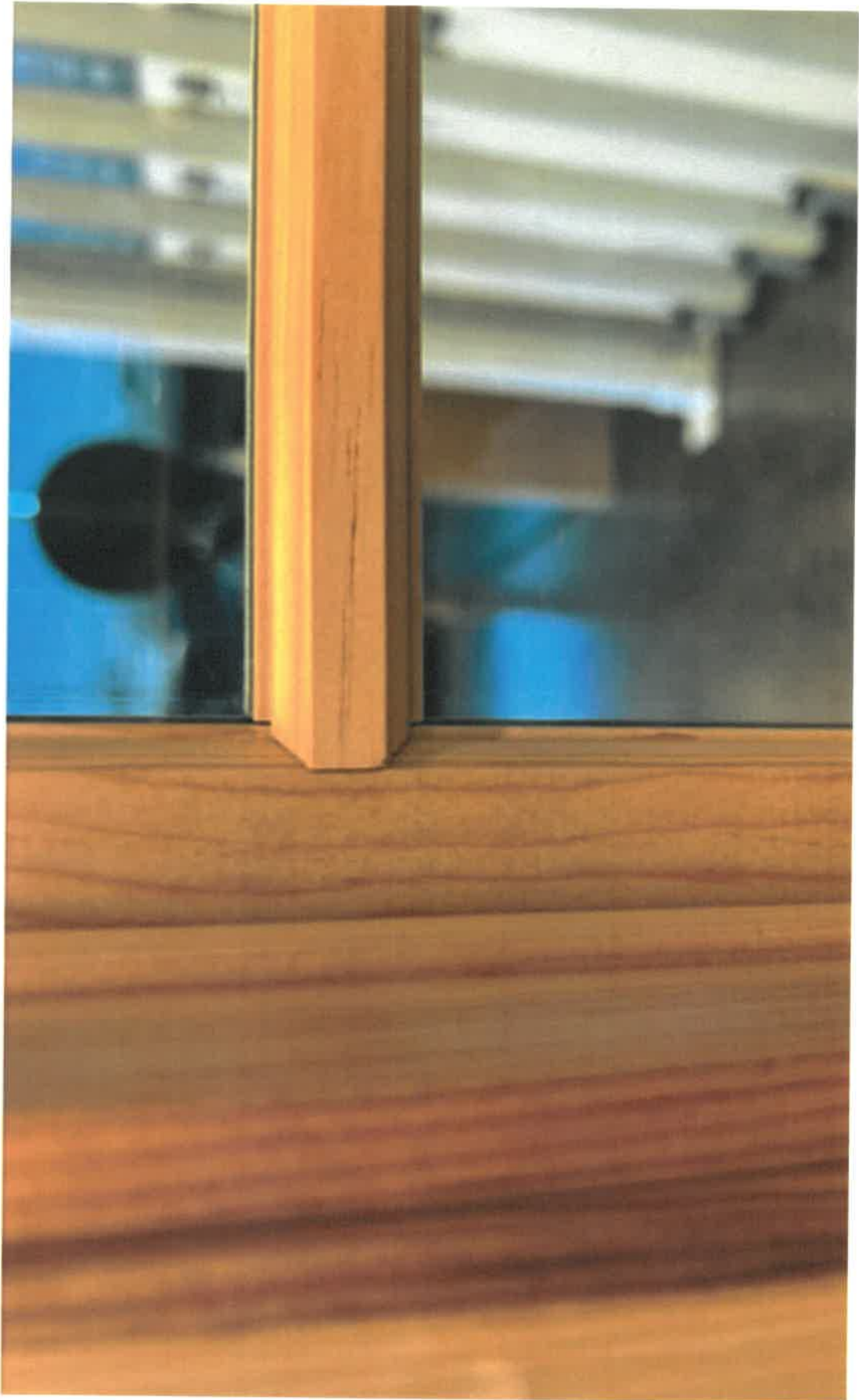
Extend



*Side View*



Interior



## Finishes

### EnduraClad® Protective Finish Standard Colors + Virtually Unlimited Custom Colors and Wood Options



### Anodized Finishes



### Interior Prefinished Colors



## Screens



### Vivid View® Screen

Provides the sharpest view and available as an upgrade on Pella wood windows and patio doors. Allows in 29% more light and is 21% more open to airflow compared to conventional screen. PVDF 21/17 mesh, 78% light transmissive.

### InView™ Screen

Standard screen on Pella wood windows and patio doors, as well as Rolscreen® retractable screens on wood casement windows and Integrated Rolscreen® on Architect Series® Reserve™ single- and double-hung windows.

More transparent than conventional fiberglass, allows 14% more light and is 8% more open to airflow than conventional screen.

Vinyl coated 18/18 mesh fiberglass, Complies with performance requirements of SMA 1201.

### Conventional Screen

Standard on Rolscreen® retractable screens on patio doors.

Black vinyl coated 18/14 mesh fiberglass, Complies with ASTM D 3656 and SMA 1201.

Improved airflow is based on calculated screen cloth openness. Screen cloth transmittance was measured using an integrated sphere spectrophotometer.

Because of printing and display limitations, actual colors may vary from those shown.

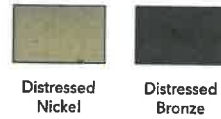
## Hardware

Consult your local Pella Sales Representative for a full list of available hardware options.

### Rustic Collection



### Finishes



### Classic Collection



### Finishes



### Essential Collection



### Finishes

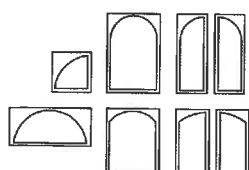


### Finishes



## Custom Capabilities

Consult your local Pella Sales Representative for available options.



Custom Glass Shapes Available



Custom Stile and Rail Widths Available



Custom Door Shapes Available

(1) Only available on Bifold configurations with a passage door. (2) Will not allow lead panel to stack completely. Because of printing and display limitations, actual colors may vary from those shown.