



CITY OF NORMAN, OK
HISTORIC DISTRICT COMMISSION MEETING
Development Center, Room A, 225 N. Webster Ave., Norman, OK 73069
Monday, November 03, 2025 at 5:30 PM

AGENDA

It is the policy of the City of Norman that no person or groups of persons shall on the grounds of race, color, religion, ancestry, national origin, age, place of birth, sex, sexual orientation, gender identity or expression, familial status, marital status, including marriage to a person of the same sex, disability, relation, or genetic information, be excluded from participation in, be denied the benefits of, or otherwise subjected to discrimination in employment activities or in all programs, services, or activities administered by the City, its recipients, sub-recipients, and contractors. In the event of any comments, complaints, modifications, accommodations, alternative formats, and auxiliary aids and services regarding accessibility or inclusion, please call 405-366-5424, Relay Service: 711. To better serve you, five (5) business days' advance notice is preferred.

ROLL CALL

MINUTES

1. CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE MINUTES AS FOLLOWS:

HISTORIC DISTRICT COMMISSION MEETING MINUTES OF OCTOBER 6, 2025.

CERTIFICATE OF APPROPRIATENESS REQUESTS

2. (HD 25-25) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR THE PROPERTY LOCATED AT 315 CASTRO STREET FOR THE FOLLOWING MODIFICATION: A) THE CONSTRUCTION OF A GARAGE. *This was postponed from the September 8, 2025, meeting.*
3. (HD 25-31) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR THE PROPERTY LOCATED AT 301 E KEITH STREET FOR THE FOLLOWING MODIFICATION: A) INSTALLATION OF WOOD SHUTTERS ON THE FRONT AND WEST SIDE ELEVATIONS OF THE PRINCIPAL STRUCTURE.
4. (HD 25-34) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR THE PROPERTY LOCATED AT 485 COLLEGE AVENUE FOR THE FOLLOWING: A) THE INSTALLATION OF EIGHT-FOOT METAL SIDE AND REAR YARD FENCE.
5. (HD 25-35) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR

THE PROPERTY LOCATED 508 CHAUTAUQUA AVENUE FOR THE FOLLOWING MODIFICATIONS: A) INSTALLATION OF A DETACHED ACCESSORY DWELLING UNIT; B) REPLACEMENT OF THE EXISTING REAR DRIVEWAY WITH A PARKING PAD; C) INSTALLATION OF A PARKING PAD IN THE REAR YARD.

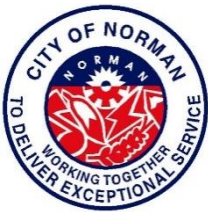
6. (HD 25-36) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR THE PROPERTY LOCATED AT 720 S LAHOMA AVENUE FOR THE FOLLOWING MODIFICATION: A) INSTALLATION OF A COVERED PERGOLA IN THE REAR YARD.

REPORTS/UPDATES

7. STAFF REPORT ON ACTIVE CERTIFICATES OF APPROPRIATENESS AND ADMINISTRATIVE BYPASS ISSUED SINCE OCTOBER 6, 2025.
8. DISCUSSION OF PROGRESS REPORT REGARDING FYE 2025-2026 CLG GRANT PROJECTS.

MISCELLANEOUS COMMENTS

ADJOURNMENT



CITY OF NORMAN, OK
HISTORIC DISTRICT COMMISSION MEETING
Development Center, Room A, 225 N. Webster Ave., Norman, OK 73069
Monday, October 06, 2025 at 5:30 PM

MINUTES

The Historic District Commission of the City of Norman, Cleveland County, State of Oklahoma, met in Regular Session in Conference Room A at the Development Center, on Monday, October 06, 2025 at 5:30 PM and notice of the agenda of the meeting was posted at the Development Center at 225 N. Webster Avenue, the Norman Municipal Building at 201 West Gray, and on the City website at least 24 hours prior to the beginning of the meeting.

Commissioner Zorba called the meeting to order at 5:30 p.m.

ROLL CALL

PRESENT

Karen Thurston
Tyler Burns
Jo Ann Dysart
Kendel Posey
Michael Zorba
Kayla Molina
Susan Skapik

ABSENT

Mitch Baroff
Gregory Heiser

STAFF PRESENT

Anais Starr, Planner II/Historic Preservation Officer
Jeanne Snider, Assistant City Attorney III
Whitney Kline, Admin Tech IV

GUEST PRESENT

Erika Evans, 742 S. Lahoma Avenue, Norman, OK
Stanley Berry, 820 Clement Drive, Norman, OK
Matt Seaton, 630 Okmulgee Street, Norman, OK
Brock & Trina Gibbins, 502 Macy Street, Norman, OK
Michael Powers, 630 Okmulgee Street, Norman, OK

MINUTES

1. CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE MINUTES AS FOLLOWS:

HISTORIC DISTRICT COMMISSION MEETING MINUTES OF SEPTEMBER 8, 2025.

Motion by Commissioner Thurston to approve the September 8, 2025 Historic District Commission meeting minutes; **Second** by Commissioner Posey.

The motion passed unanimously with a vote of 7-0.

CERTIFICATE OF APPROPRIATENESS REQUESTS

2. (HD 25-28) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR THE PROPERTY LOCATED AT 742 S LAHOMA AVENUE FOR THE REPLACEMENT OF A STORAGE SHED.

Motion by Commissioner Skapik to approve (HD 25-28) as submitted; **Second** by Commissioner Thurston.

Staff Presentation

Anais Starr, Planner II/Historic Preservation Officer, presented the staff report.

Applicant Presentation

Erika Evans, applicant, explained the proposed project.

Commissioners asked questions about the orientation of the new shed's door and the placement of windows.

Public Comments

There were no public comments.

Commission Discussion

Commissioners discussed the applicant's foundation options and the existing shed's current foundation.

The motion passed unanimously with a vote of 7-0.

3. (HD 25-29) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS FOR THE PROPERTY LOCATED AT 630 OKMULGEE STREET FOR THE FOLLOWING MODIFICATIONS: A) REPLACEMENT OF EXTERIOR METAL SIDING WITH HARDIE LAP SIDING; B) REPLACEMENT OF OVERHEAD GARAGE DOOR.

Motion by Commissioner Thurston to approve (HD 25-29) as submitted; Second by Commissioner Dysart.

Staff Presentation

Anais Starr, Planner II/Historic Presentation Officer, presented the staff report.

Applicant Presentation

Matt Seaton (applicant) and Michael Powers (property owner) explained the proposed project.

Commissioners discussed the applicant's presentation, including the condition of the existing siding and the proposed materials for the new siding and garage door.

Public Comments

There were no public comments.

Commission Discussion

Commissioner Burns stated that this met the Guidelines.

The motion passed unanimously with a vote of 7-0.

4. (HD 25-30) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR THE PROPERTY LOCATED AT 502 MACY STREET FOR THE FOLLOWING MODIFICATIONS: A) DEMOLITION OF THE EXISTING GARAGE; B) DEMOLITION OF THE EXISTING STORM SHELTER; C) INSTALLATION OF A GARAGE WITH AN ATTACHED CABANA.

Motion by Commissioner Thurston to approve (HD 25-30) as submitted; **Second** by Commissioner Posey.

Staff Presentation

Anais Starr, Planner II/Historic Preservation Officer, presented the staff report.

Commissioner Thurston questioned if the applicant was applying under the Guidelines for a new garage or new accessory structure. Ms. Starr clarified that the proposal is for a 640 sqft garage including a cabana, so the garage part is staying under at the 575 sqft that is listed in the Guidelines for a Garage.

Applicant Presentation

Stan Berry, applicant, explained the proposed project.

Commissioners asked questions about the height of the new structure and the use of the loft space.

Public Comments

There were no public comments.

Commission Discussion

Commissioner Thurston expressed her concern with the size of the garage and setting a precedent.

Commissioner Burns stated that he liked the design and the added dormers to match the primary structure as well as the proposed materials.

Motion by Commissioner Thurston to amend the original motion to separate into three separate motions; **Second** by Commissioner Molina.

The motion passed unanimously with a vote of 7-0.

Motion by Commissioner Dysart to approve (HD 25-30) item a) demolition of the existing garage; **Second** by Commissioner Posey.

The motion passed unanimously with a vote of 7-0.

Motion by Commissioner Thurston to approve (HD 25-30) item b) demolition of the existing storm shelter; **Second** by Commissioner Molina.

The motion passed unanimously with a vote of 7-0.

Motion by Commissioner Dysart to approve (HD 25-30) item c) installation of a garage with an attached cabana; **Second** by Commissioner Molina.

Commissioners discussed the surrounding garages and how this garage would compare.

The motion passed with a vote of 6-1. Commissioner Thurston voting against.

REPORTS/UPDATES

5. STAFF REPORT ON ACTIVE CERTIFICATES OF APPROPRIATENESS AND ADMINISTRATIVE BYPASS ISSUED SINCE SEPTEMBER 8, 2025.

Anais Starr reported on active COAs as follows:

- 549 S. Lahoma Avenue - Applicant is in the process of submitting a COA request for the north windows. Staff will be sending a violation notice.
- 904 Classen Avenue - Applicant is in the process of installing windows and siding on the north side of the house.
- 607-609 S. Lahoma Avenue - New wood front windows installed. They have until 6/5/2028 to install remaining windows.
- 1320 Oklahoma Avenue - Demolition completed.
- 505 Chautauqua Avenue - Work continues. Applicant installed textured wood grain siding and trim. Historic Preservation Officer notified the applicant that this violated the COA. The applicant stated it will be replaced with smooth siding.
- 643 Okmulgee Street - Work on the house is complete. Expansion of the driveway with an additional parking space has not started. The rear fence is complete.
- 424 College Avenue – Parking pad installed.
- 800 Miller Avenue - Work is complete.
- 514 Shawnee Street - Work has started.
- 510 Shawnee Street – Demolition permit issued. Dumpster placed for demolition work.
- 315 Castro Street – Demolition of garage complete.
- 467 College Avenue - Work is in progress.
- 485 College Avenue – Work has not started.
- 325 Keith Street – Work has not started.

Anais Starr reported on Administrative Bypass issued since September 8, 2025.

- 421 College Avenue – Swimming pool in rear yard behind the house. No visibility from the front.

6. DISCUSSION OF PROGRESS REPORT REGARDING FYE 2025-2026 CLG GRANT PROJECTS.

Anais Starr stated there will possibly be a Lunch and Learn Program on November 14th but expressed confusion on the CLG grant funding availability with the current federal government shutdown.

MISCELLANEOUS COMMENTS

The newest Commissioners introduced themselves and discussed what roles they fill in regards to the Historic District Commission.

ADJOURNMENT

The meeting was adjourned at 7:06 p.m.

Passed and approved this _____ day of _____ 2025.

Historic District



CITY OF NORMAN, OK STAFF REPORT

MEETING DATE: November 3, 2025

REQUESTER: Stacy Patillo & John Scott Williams

PRESENTER: Anais Starr, Planner II/Historic Preservation Officer

ITEM TITLE: (HD 25-25) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR THE PROPERTY LOCATED AT 315 CASTRO STREET FOR THE FOLLOWING MODIFICATION: A) THE CONSTRUCTION OF A GARAGE. *This was postponed from the September 8, 2025, meeting.*

Background

Historical Information

2004 Miller Historic District Nomination Survey Information:

315 East Castro Street. *Ca. 1925. Bungalow/Craftsman. This contributing, one-story, vinyl-sided, single dwelling has an asphalt-covered, clipped, side-gabled roof and a brick foundation. The non-historic aluminum windows are one-over-one hung, and the wood door is glazed paneled. The partial porch has a clipped front-gabled roof supported by full brick square columns. Other exterior features include a brick, exterior, gable wall chimney on the east side. Decorative details include double and triple windows, false beams and exposed rafters. There is a single car, weatherboard, clipped front-gabled garage to the rear with wood paneled garage door and a wood paneled pedestrian door.*

Sanborn Insurance Map Information

The 1925 Sanborn Insurance Map shows a shared garage located between 311 and 315 Castro Street. The 1944 Sanborn Insurance Map does not show the shared garage, indicating it was removed prior to 1944.

Previous Actions

April 17, 2014 – A Certificate of Appropriateness (COA) by Administrative Bypass was granted for window and door replacements.

May 5, 2014 – A COA was granted for modification of the rear of the principal structure.

July 7, 2025 – A COA was granted for demolition of the garage.

September 8, 2025 – A COA request for a new garage was postponed to a future meeting to allow the applicant time to clarify the proposed design for the garage.

REQUEST

A) The construction of a one-story garage.

Project Description:

The applicants received a COA to demolish the existing garage at the July 7, 2025, Historic District Meeting. A two-car garage proposal was considered at the September 8, 2025, Historic District Meeting. After discussion, the Commissioners suggested that the applicant postpone their request to allow time to submit additional details for the proposed garage. In particular, the Commissioners stated that the submitted drawings, site plan, and specification sheets lacked sufficient information to allow them to review and approve the garage structure. Additionally, the Commission stated that a front-facing two-car garage was not appropriate for the Miller Historic District and suggested that the applicant revise the proposal to a one-car garage.

The applicants are now resubmitting a revised proposal for a one-car garage on the site. The proposed garage will be 25 feet by 20 feet, with a footprint of 500 square feet. The front-facing garage is proposed at the end of the driveway behind the rear elevation of the principal structure. The existing driveway is proposed to be extended and widened as it approaches the garage door to allow for vehicle access. As indicated on the site plan, no trees will be removed for the construction of the garage.

The exterior materials include Smart siding, aluminum-clad wood windows, an aluminum-clad entry door, and an overhead garage door made of metal with a composite overlay. The applicants propose a faux carriage door design with metal handles, similar to the door design found on the demolished garage structure.

The Zoning Ordinance requires the height of an accessory structure to be less than that of the principal structure. The garage has a proposed roof height of 17 feet, while the principal structure's roof height is 21.5 feet. The Zoning Ordinance also requires a five-foot setback from the side property line as shown on the proposed site plan.

Reference - Historic District Ordinance

36-535.a.2.g: *To safeguard the heritage of the City by preserving and regulating historic district structures in such a way that maintains or restores their historic integrity while allowing modern-day uses and conveniences for their residents. (0-0910-12).*

Preservation Guidelines

2.4 Guidelines for Garages

A review by the Historic District Commission will use the following criteria for the issuance of a Certificate of Appropriateness (COA):

.5 New Garage Construction. *A new garage shall be compatible in form, scale, size, materials, features, and finish with the principal structure. The following criteria will be considered for a new garage constructed where there is currently no historic structure:*

- a. The new structure will utilize alley access if available.*
- b. The new footprint will be 575 square feet or 50% of the footprint of the principal structure, whichever is smaller.*
- c. The cumulative of square footages for all garage structures on the lot, shall be no greater than the footprint of the principal structure.*
- d. New garage are to be subservient to the principal structure and in no case will the garage structure be taller, wider or deeper than the principal structure.*

e. The proposed construction will preserve existing trees.

f. Maximum of two garages are allowed per site.

.6 New Garage Height. *New garage structures shall be the traditional height and proportion of garages in the district. New garages in blocks that contain only one-story garages shall be one-story. One and a half-story and two-story garages may be built if located on a block where one and a half-story and two-story garages are dominant or if adjacent properties contain similar height garages. The wall height and height of the roof ridge are to be no greater than the principal structure.*

.7 New Garage Location. *New garage structures that are not replacing a historic garage are to be located behind the principal structure in the rear yard with limited or no visibility from the front right-of-way. Garages replacing historic garages shall maintain the location and configuration of a historic garage, typically at the end of a front driveway. Such garages shall be located behind the back elevation of the principal structure.*

.8 New Garage Materials. *The following may be considered on a case-by-case basis for new garages:*

a. Acceptable materials include wood, brick and stone masonry, and stucco. Fiber cement products for new garage construction located off an alleyway or if setback behind the rear of the house will be considered on a case-by-case basis. It should be noted that wood siding does not have "wood grain." Only smooth cement board is permitted. The use of vinyl, Masonite, aluminum or other metal sidings is prohibited.

b. Aluminum clad doors and windows are allowed for garages located off an alleyway or behind the rear elevation of the house, with no or limited visibility from the front right-of-way.

c. Wood, wood composite or metal overhead garage doors with wood/wood composite trim are allowed.

d. Garage doors shall be a single width. Double width garage doors will be considered on a case-by-case basis.

Considerations/Issues

The proposed garage structure will replace a noncontributing garage structure. The proposed replacement garage is a modern-day structure with a simple design.

As required by the *Guidelines for Garages*, the proposed garage will be located at the end of the front driveway behind the rear elevation of the principal structure. The garage will have limited visibility from the front streetscape, as shown in the submitted streetscape view.

The proposed aluminum-clad windows, aluminum-clad entry door, and steel overhead garage doors with a composite overlay are permitted by the *Guidelines for Garages* for new garages. The proposed Smart siding for a new garage can be considered by the Commission on a case-by-case basis when it has limited visibility from the front, as is the case with this request. The applicants are proposing a smooth finish for the Smart siding, as approved by the Commission for previous garage requests.

The proposed garage will be 500 square feet, which is under the maximum size limitation of 575 square feet listed in the *Guidelines for Garages*.

The *Guidelines* state that new garages are to be of a traditional height found in the neighborhood. The property to the east contains a two-story garage apartment built in 2015. The remainder of the block has one-story garages. The *Guidelines* further state that the wall height and roof ridge height of a new garage shall not exceed those of the principal structure. The proposed garage

meets this requirement as it has a height of 17 feet, while the principal structure's height is 21.5 feet.

The Guidelines state *"new structures are to be of their own time and differentiated from the historic structure while maintaining compatibility with the principal structure and the character of the neighborhood"*. The proposed garage is a simple modern structure with a clipped gabled roof that matches the historic principal structure. The proposed faux carriage doors are a modern-day detail that references the historic Craftsman Bungalow style found on this property and in the Miller Historic District. The use of modern materials such as composite overlay and SmartSide siding will differentiate this structure from the historic principal structure and ensure that the garage does not create a false sense of history.

The Commission needs to determine if the proposed garage, as submitted, meets the *Preservation Guidelines* for design, size, location, placement, materials, and whether it is compatible with the historic principal structure and the Miller Historic District.

Commission Action:

Consideration of approval, rejection, amendment, and/or postponement of the certificate of appropriateness request (HD 25-25) for the property located at 315 Castro Street for the following modification: a) the construction of a garage.

The City of Norman Historic District Commission
APPLICATION FOR CERTIFICATE OF APPROPRIATENESS (COA)

Staff Only Use:

HD Case # _____

Date _____

Received by: _____

Note: Any relevant building permits must be applied for and paid for separately in the Planning and Community Development Office 405-366-5311.

Address of Proposed Work: _____

Applicant's Contact Information:

Applicant's Name: Stacy A. Pattillo, John Williams

Applicant's Phone Number(s): _____

Applicant's E-mail address: _____

Applicant's Address: _____

Applicant's relationship to owner: ☐ Contractor ☐ Engineer ☐ Architect

Owner's Contact Information: (if different than applicant)

Owner's Name: _____

Owner's Phone Number(s): _____

Owner's E-mail: _____

Project(s) proposed: (List each item of work proposed. Work not listed here cannot be reviewed.)

1) Build of Replacement Garage

2) _____

3) _____

4) _____

Supporting documents such as project descriptions, drawings and pictures are required see checklist page for requirements.

Authorization:

I hereby certify that all statements contained within this application, attached documents and transmitted exhibits are true to the best of my knowledge and belief. In the event this proposal is approved and begun, I agree to complete the changes in accordance with the approved plans and to follow all City of Norman regulations for such construction. I authorize the City of Norman to enter the property for the purpose of observing and photographing the project for the presentations and to ensure consistency between the approved proposal and the completed project. I understand that no changes to approved plans are permitted without prior approval from the Historic Preservation Commission or Historic Preservation Officer

Property Owner's Signature: Stacy A. Pattillo

Date: 6-29-25

☐ (If applicable): I authorize my representative to speak in matters regarding this application. Any agreement made by my representative regarding this proposal will be binding upon me.

Authorized Representative's Printed Name: _____

Authorized Representative's Signature: _____

Date: _____

To Norman Historical District Commission.

Proposal and request for Permit/accommodation.

Stacy Pattillo and John Williams, married couple and owner and occupant of the property, 315 Castro street, Norman, Oklahoma hereby submit a request to replace the detached garage structure located behind the primary structure named above.

The removal is required to accomplish the excavation and replacement of the primary sewer line connecting the primary home and the city sewer main. This connection sewer line is 96 years old and is collapsed, limiting free flow and results in frequent sewage overflows into the property and yard. This connection sewer line has been determined to lie directly under the original detached garage structure. The existing detached garage is 20ft x 21ft with a height of 16 ft. Originally having a dirt floor, a substandard 2-3 inch non reinforced concrete layer was poured directly over the dirt floor and has heaved and cracked extensively. The garage structure also apparently lacks any conventional foundation.

The requested replacement detached garage structure is 25ft x 20ft with a height of 17ft representing an additional 80 sq. ft. footprint compared to the original structure.

the proposed detached garage structure would be placed with the west wall at the exact line of the original structures west wall. The centerline of the replacement structure would be relocated 10ft north to eliminate an eave overhang which the existing structures occupy. The exterior of the proposed structure will emulate and be in concert with the primary structures architectural style, feature and visual impression; I.E. semi hip roofed, 6inch lapboard sided, bungalow style with double hung divided light windows conforming the preservation Guidelines (Miller Historic District).

Conventional concrete slab foundation with dimensional lumber construction complying to Norman building codes.

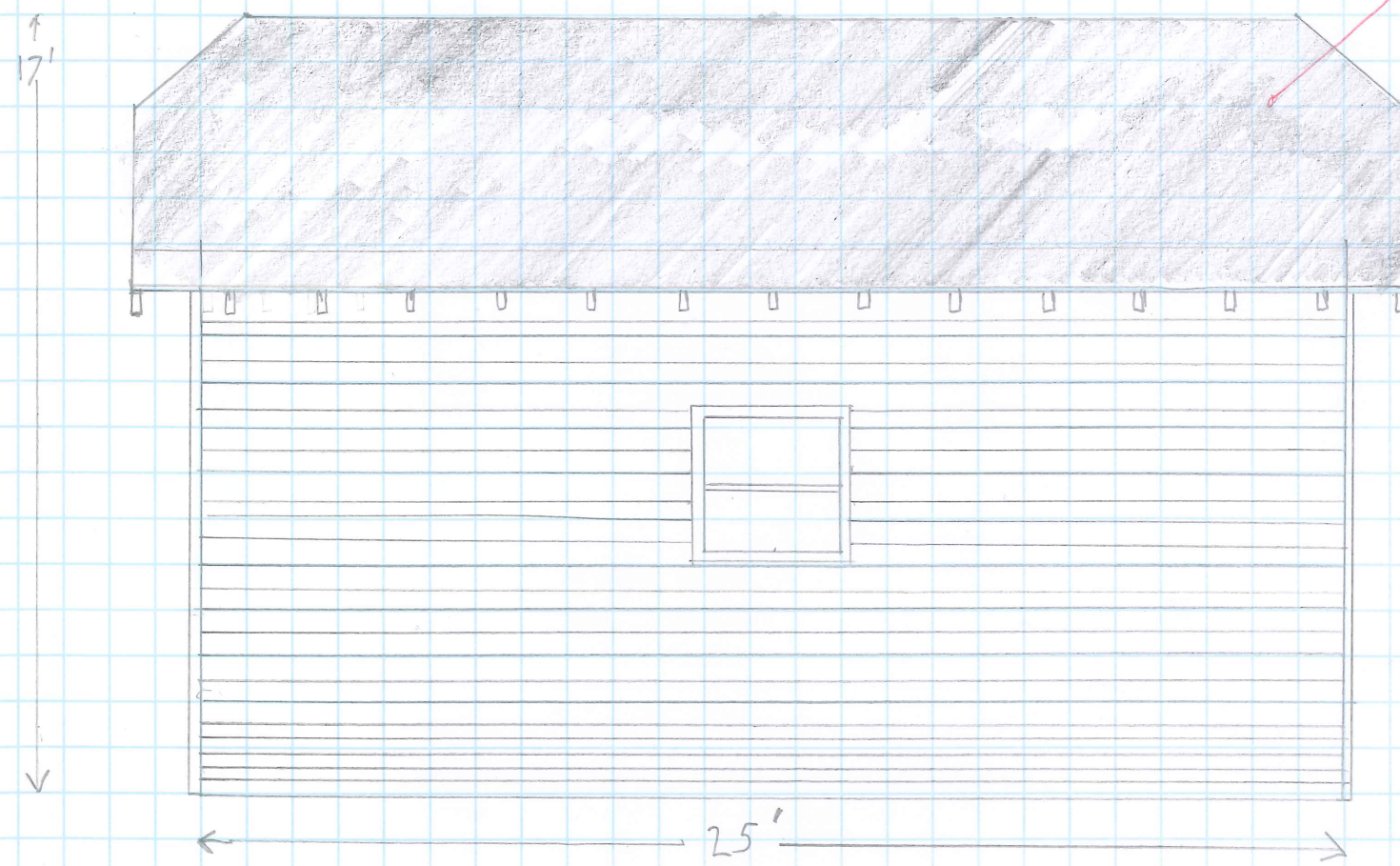
A concrete apron connecting existing driveway to garage will be 26 x 12 feet (total 312sqft) representing an increase in 172 sqft of driveway surface area. This 26ft x 12 ft apron includes 140 sqft of temporarily removed driveway during previous demolition of previous detached garage to allow ground access to trench a replacement sewer line.

Also an existing brick and flagstone surface in the back 'patio' area will be connected to detached garage walk through door by a concrete pavement Of 98 sqft (+-10%)

Attached is information on the specific siding, windows, garage doors we will use to further emulate the style and visual impression of the primary structure.

This proposal is for a single story 1 car detached garage.

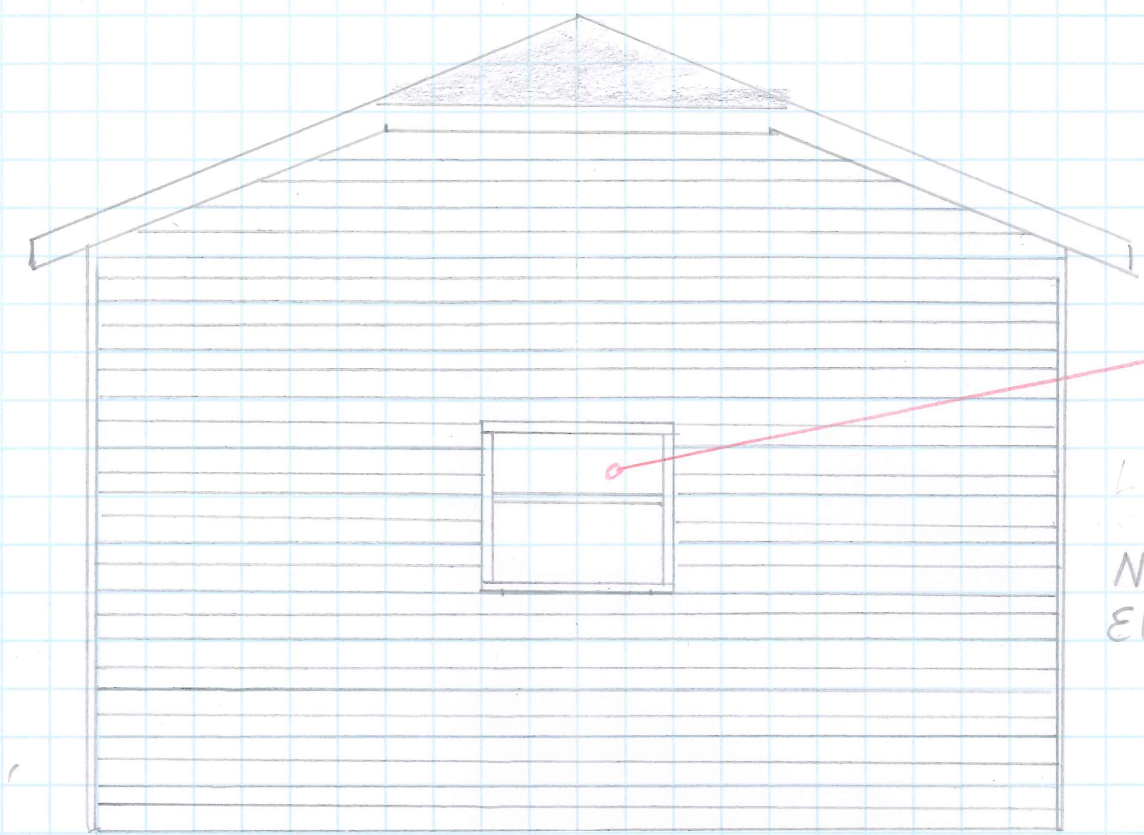
Respectfully,
Stacy Pattillo



East and West Elevation

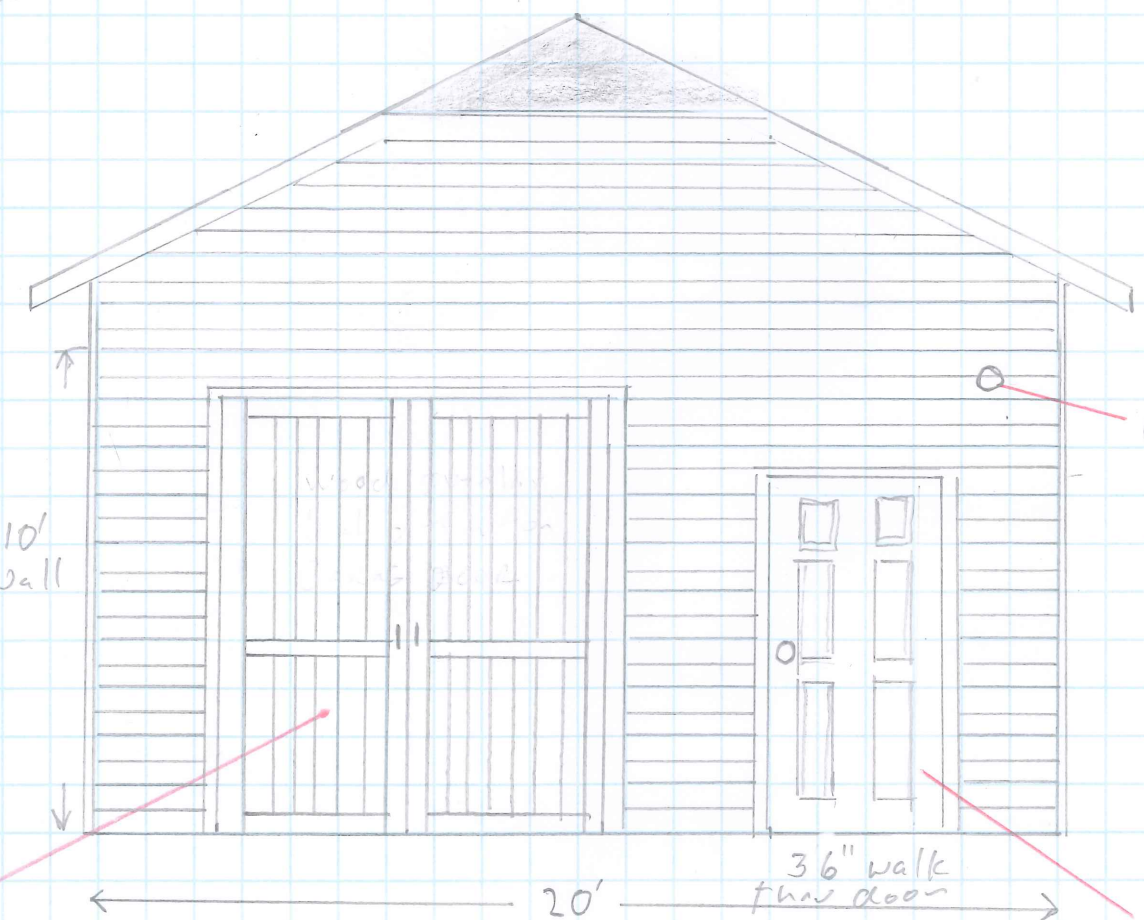
Owens
Corning
Oak Ridge
Driftwood
#HL30
Conventional
Composite
High Definition
Shingle Roof
Matching
House

Exposed
Rafter
tails



Attached
window spec
sheet

North
Elevation



10'
wall

6" Smart Siding
L.P. Lap Boards

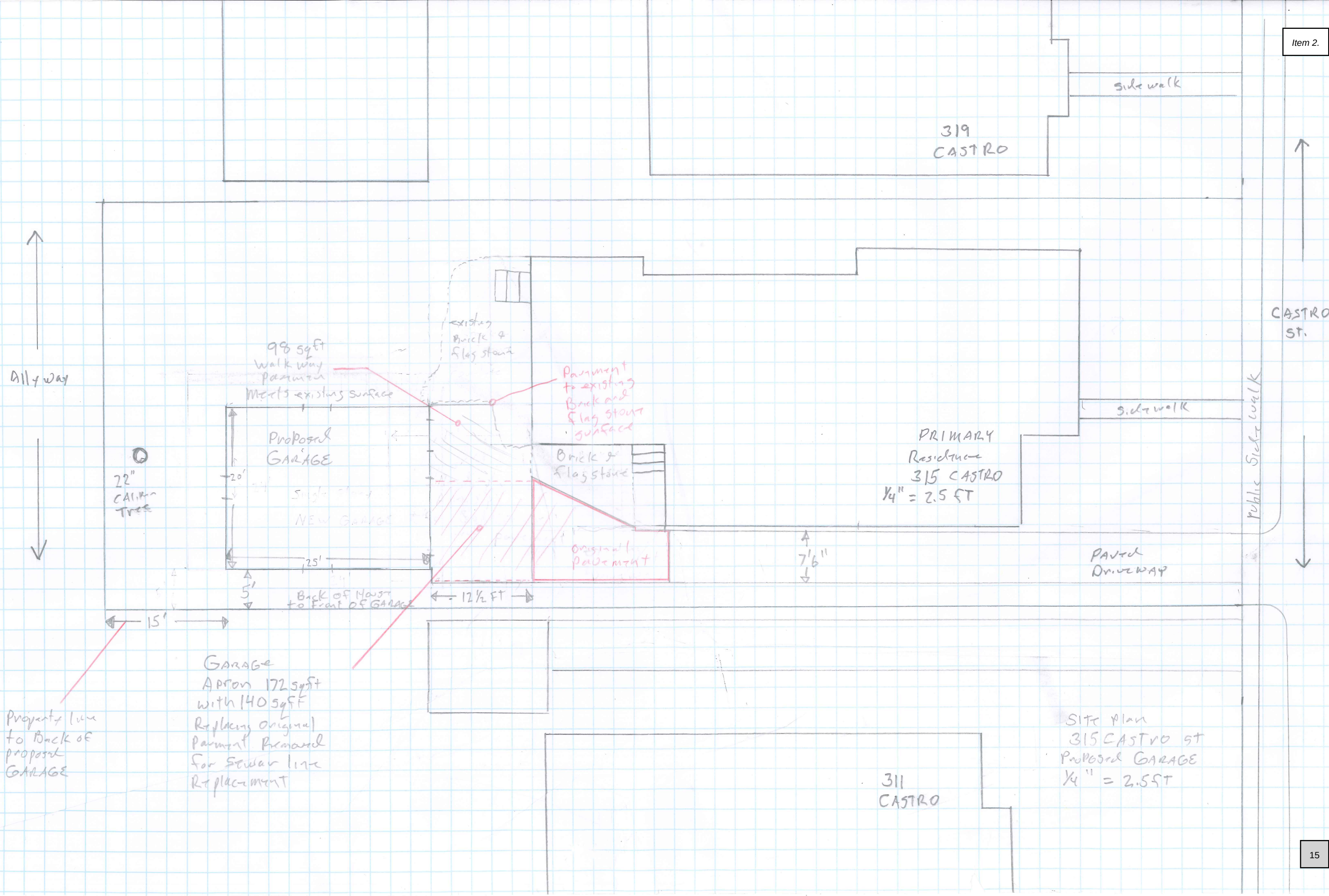
36" walk
thru door

Clapay Canyon Ridge
Carrriage House
Series 3
Design #36 with
Spade Lift handles
Attached Specification

Looking South Elevation

Proposed Elevation drawings 1/4" = 1'
San 315 Castro Detached
GARAGE

#45739
Masonite Brand
High definition
Six panel
Steel Pinkings





CANYON RIDGE®

garage doors



America's Favorite Garage Doors®

CARRIAGE HOUSE ■ CHEVRON ■ LOUVER ■ MODERN ■ ELEMENTS

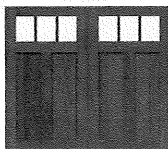


*Canyon Ridge® / Carriage House 5-Layer Design 13; Shown Custom Painted with Mahogany Cladding, Mahogany Overlays and REC14 Window Design
Photo Credit: Lauren Armellini Pillich*

COMPOSITE OVERLAY

The Look of Wood Without the Upkeep

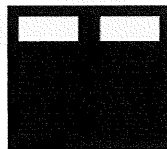
For homeowners who want the look of wood without the upkeep, composite overlay doors are an excellent choice. Our faux-wood doors are constructed with an insulated steel base door for strength and durability and topped with a moisture-resistant composite overlay molded from natural wood boards. This gives the doors their realistic grain patterns and textures while keeping them low-maintenance. Like wood, the doors can be painted, and in most instances, stained, for a look that is distinctly yours.



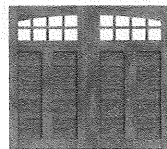
CARRIAGE HOUSE
5-LAYER



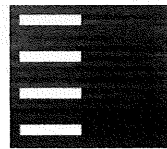
CHEVRON



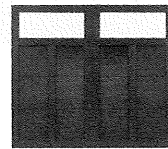
LOUVER



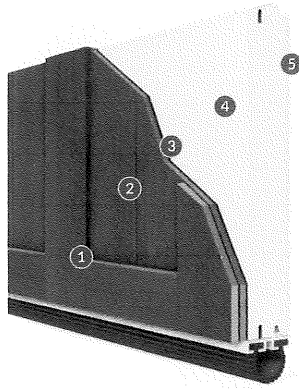
CARRIAGE HOUSE
4-LAYER



MODERN



ELEMENTS



- 1 COMPOSITE OVERLAY
- 2 COMPOSITE CLADDING
- 3 STEEL
- 4 2" INTELICORE® POLYURETHANE INSULATION
- 5 STEEL

COMPOSITE OVERLAY
DELAMINATION
LIMITED
5YR
WARRANTY

HARDWARE
LIMITED
5YR
WARRANTY

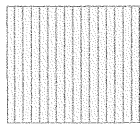
STYLE AND CONSTRUCTION

- 5-layer composite faux-wood doors with Intellicore® polyurethane insulation. 20.4 R-value.
- Insulated glass styles include clear, frosted, seeded, rain and obscure. See page 16 for details.
- Removable clip-in window grilles for easy cleaning.
- Spade lift handles and step plates included. See page 17 for more options.

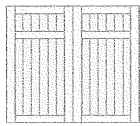
Calculated door section R-value is in accordance with DASMA TDS-163. Canyon Ridge® doors not applicable for new construction in California areas designated as "Fire Hazard Severity Zones".

DOOR DESIGNS

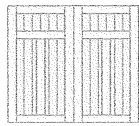
SERIES 1



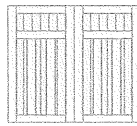
Design 01



Design 11

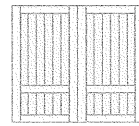


Design 12

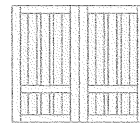


Design 13

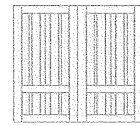
SERIES 3



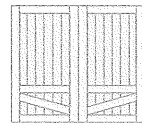
Design 31



Design 32

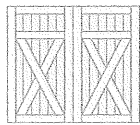


Design 33

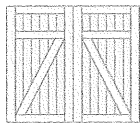


Design 34

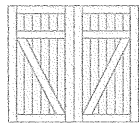
SERIES 2



Design 21

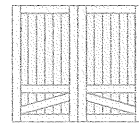


Design 22

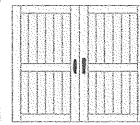


Design 23

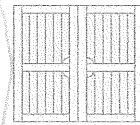
Design 01
does not
have overlays.



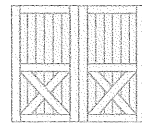
Design 35



Design 36



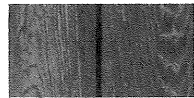
Design 37



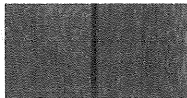
Design 38

MATERIAL DESIGN OPTIONS

CLADDING



Clear Cypress (C)



Mahogany (M)

OVERLAY



Clear Cypress (C)



Mahogany (M)

Composite cladding and overlay material options may be mixed and matched.

COLORS



Natural Finish



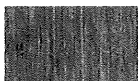
Medium Finish



Dark Finish



Walnut Finish



Slate Finish



Bronze Finish*



Charcoal Finish*



Espresso Finish



Black Finish*



White Finish*



Primed
(No Finish)

Doors can be ordered primed for custom field painting or staining. Door stain color may vary due to finishing process.

*Bronze, Charcoal, Black and White Finish available only on Mahogany cladding and overlays. Two-tone doors are available. To see all options go to ezdoor.clopay.com.

Due to the printing process, colors may vary. Order free color samples at clopaydoor.com/requestcolorsamples.

WINDOWS/TOP SECTIONS



REC11



REC13



REC14



SQ23



SQ24



ARCH1 (Glass)



ARCH13



ARCH14



ARCH3



ARCH4



TOP11



TOP12



TOP13



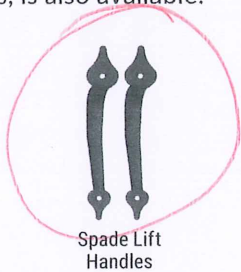
ARCH1 (Solid)

Impact windows available on the following widths only: 8'0", 9'0", 10'0", 12'2", 16'2", 18'2". Additional designs, windows and top sections available.

Windows not available on Designs 31, 32, 33, 34, 35, 36, 37 and 38. Standard windows available on the following widths only: 6'2", 8'0", 9'0", 10'0", 10'2", 12'0", 12'2", 13'6", 15'0", 15'2", 15'6", 15'8", 16'0", 16'2", 18'0", 18'2", 20'0", 20'2".

DECORATIVE HARDWARE

Attractive black powder coated handles and step plates are provided standard to further enhance the Canyon Ridge® Design. Optional decorative hardware — including handles, operable L-keylocks and strap hinges, is also available.



Spade Lift
Handles



Spade Step Plate

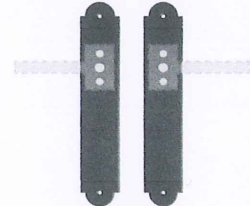


Spade Strap Hinge*

*Complements Standard Spade Lift Handles
and Spade Step Plate*



Twisted "L" Handles



Escutcheon
Plate(s)



Spear Lift Handles



Spear Step Plate



Spear Strap Hinge*



Colonial Lift
Handles



Colonial Step Plate



Colonial Strap Hinge*



Decorative Handles
with Keyhole



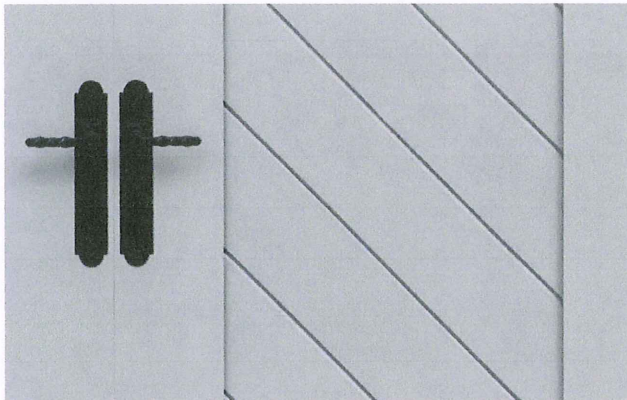
Ring Door
Knocker



Aluminum Grip
Handles
(Modern)

** Door may not open properly if installed near the top
depending on opening dimensions and lift type.*

*Aluminum Grip Handles are available in the following colors:
Clear Aluminum (Anodized), Standard White (Painted),
Bronze (Painted), Bronze (Anodized), Black (Anodized)
and Dark Bronze (Anodized).*



CUSTOM PAINT PROGRAM

Color Blast® offers more than 1,500 Sherwin-Williams® color options to complement your home. Clopay's durable two-part paint system has been thoroughly tested and is backed by a five-year warranty.



COLOR BLAST®





Pella® Reserve™ Traditional Hung Window

Special Sizes and Dimensions

Special Size Frame Dimensions*

Sash configuration	Vent-Equal	Cottage	Fixed
Sash Glass Ratio Top % : Bottom %	50 : 50	40 : 60	NA
Shortest Unit Frame Size	24-3/8" (619)	40-1/4" (1 022)	17" (432)
Tallest Unit Frame Size	96" (2 438)	81" (2 057)	71" (1 803)
Unit Frame Width Range	14" to 48" (356 to 1 219)	14" to 48" (356 to 1 219)	17" to 59" (432 to 1 499)

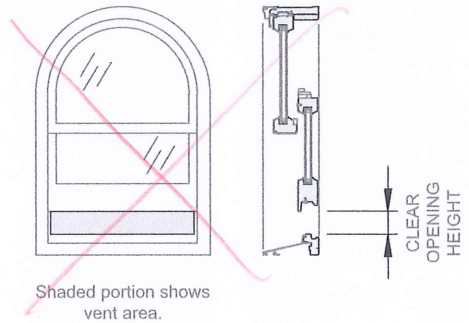
Opening Dimensions

Clad Exterior Units:
Dimensions shown in standard size tables are rough opening dimensions.

Wood Exterior Units:
Use frame dimension plus dimensions below. This dimension includes the use of standard 1-1/8" wood subsill.

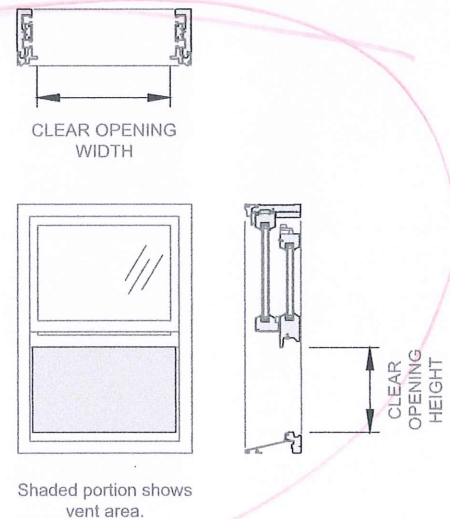
Frame	Rough		Masonry	
Brickmould	Width	Height	Width	Height
STD	+ 3/4"	+1-7/8"	+ 3-1/8"	+ 3-1/8"
3-1/2"	+ 3/4"	+1-7/8"	+ 6-3/8"	+ 4-3/4"

For clad and wood units with impact-resistant glass, see the product installation instructions or refer to local building code requirements.



Equal Sash Rectangular Only

	Vent Units	Fixed and Transom Units
Visible Glass	Width = Frame - 5.647" Height = (Frame - 8.681") ÷ 2	Width = Frame - 5.75" Height = Frame - 5.75"
Actual Glass	Width = Frame - 4.375" Height = (Frame - 5.983") ÷ 2	Width = Frame - 4.375" Height = Frame - 4.375"
Clear Opening*	COW = Frame Width - 3.4375" COH = (Frame Height ÷ 2) - 4.4375"	— —
Vent Area Ft ²	(COW x COH) ÷ 144	—



Traditional grille patterns shown. Refer to Grille Types section for additional patterns and profiles.

* Some units with custom glazing may have limited travel. Integrated Rolscreen® is only available on sizes greater than or equal to 34" tall and 21" wide and less than or equal to 84" tall and 48" wide.

See your local Pella sales representative for specific size information.



Pella® Reserve™ Traditional Hung Window

Features and Options

Standard	Options / Upgrades
Glazing	
Glazing Type	
Dual-Pane Insulating Glass	—
Insulated Glass Options/Low-E Types	
	SunDefense™ Low-E
	SunDefense+ Low-E
	AdvancedComfort Low-E
Advanced Low-E	NaturalSun Low-E
	NaturalSun+ Low-E
	Clear (no Low-E coating)
Additional Glass Options	
	Tempered Glass
	Obscure Glass ¹
Annealed Glass	Low-E Tinted Glass (Bronze, Gray and Green)
	Non-Impact Laminated Dual-Pane Insulating Glass
Gas Fill/High Altitude	
Argon	High altitude
Exterior	
Exterior Sash Profile	
Ogee	Putty Glaze
Exterior Finish	
EnduraClad® aluminum-clad exterior	EnduraClad Plus protective finish, Factory Primed Pine wood exterior, Unfinished Mahogany wood exterior
Cladding Colors	
Standard colors ¹	Feature Colors, Custom Colors ¹
Interior	
	Factory primed
Unfinished wood	Factory prefinished paint ¹
	Factory prefinished stain ¹
Wood Types	
Pine	Mahogany, Douglas Fir
Hardware	
Hardware Types	
	Simulated lock
Sash lifts, Cam-action lock	Air conditioner lock
	Historical spoon-style lock (surface mounted)
Hardware Finishes	
Champagne, White, Brown or Matte Black	Satin Brass, Satin Nickel, Oil-Rubbed Bronze, Distressed Bronze, Distressed Nickel ⁴
Tilt-Wash Cleaning	
Tilt to interior on both sashes	—
Grilles	
Integral Light Technology® Grilles	
—	Traditional, Prairie, Top Row, Cross, New England, Victorian, Diamond, Custom
Grilles-Between-the-Glass	
—	Traditional, Prairie, Top Row ¹ , Cross, Custom-Equally Divided
Screens	
—	Integrated Rolscreen® - retractable screen, InView™ screens, in standard roll-form or premium extruded aluminum frame

(—) = Not Available

(1) Contact your local Pella sales representative for current designs and color options.

(2) Only available for Pella Reserve products with triple glazing. Not available with high altitude glazing.

(3) Available with Low-E argon-insulated glass only.

(4) Antique Brass, Distressed Nickel, Distressed Bronze finishes available for Historical spoon-style lock only.



Pella® Reserve™ Traditional Hung Window

Design Data

Vent Equal Sash for Single- and Double-Hung

Unit	Egress	Clear Opening (Inches)		Vent Area Ft²	Visible Glass Ft²	Standard Glass Thickness (mm)		Performance Class & Grade ¹	
		Width (Inches)	Height (Inches)			Annealed	Tempered	Clad	Wood
2135		17-5/16	13-1/16	1.6	2.8	2.5	3	CW50	CW45
2141		17-5/16	16-1/16	1.9	3.4	2.5	3	CW50	CW45
2147		17-5/16	19-1/16	2.3	4.1	2.5	3	CW50	CW45
2153		17-5/16	22-1/16	2.7	4.7	2.5	3	CW50	CW45
2157		17-5/16	24-1/16	2.9	5.2	2.5	3	CW50	CW45
2159		17-5/16	25-1/16	3.0	5.4	2.5	3	CW50	CW45
2165		17-5/16	28-1/16	3.4	6.0	2.5	3	CW50	CW45
2171		17-5/16	31-1/16	3.7	6.6	2.5	3	CW50	CW45
2177		17-5/16	34-1/16	4.1	7.3	2.5	3	CW50	CW45
2184		17-5/16	37-9/16	4.5	8.0	2.5	3	CW40	CW40
2535		21-5/16	13-1/16	1.9	3.5	2.5	3	CW50	CW45
2541		21-5/16	16-1/16	2.4	4.3	2.5	3	CW50	CW45
2547		21-5/16	19-1/16	2.8	5.1	2.5	3	CW50	CW45
2553		21-5/16	22-1/16	3.3	6.0	2.5	3	CW50	CW45
2557		21-5/16	24-1/16	3.6	6.5	2.5	3	CW50	CW45
2559		21-5/16	25-1/16	3.7	6.8	2.5	3	CW50	CW45
2565		21-5/16	28-1/16	4.2	7.6	2.5	3	CW50	CW45
2571		21-5/16	31-1/16	4.6	8.4	2.5	3	CW50	CW45
2577	E ₁	21-5/16	34-1/16	5.0	9.2	2.5	3	CW50	CW45
2584	E ₁	21-5/16	37-9/16	5.6	10.1	2.5	3	CW40	CW40
2935		25-5/16	13-1/16	2.3	4.3	2.5	3	CW50	CW45
2941		25-5/16	16-1/16	2.8	5.2	2.5	3	CW50	CW45
2947		25-5/16	19-1/16	3.4	6.2	2.5	3	CW50	CW45
2953		25-5/16	22-1/16	3.9	7.2	2.5	3	CW50	CW45
2957		25-5/16	24-1/16	4.2	7.8	2.5	3	CW50	CW45
2959		25-5/16	25-1/16	4.4	8.2	2.5	3	CW50	CW45
2965		25-5/16	28-1/16	4.9	9.1	2.5	3	CW50	CW45
2971	E ₁	25-5/16	31-1/16	5.5	10.1	2.5	3	CW50	CW45
2977	E	25-5/16	34-1/16	6.0	11.1	2.5	3	CW50	CW45
2984	E	25-5/16	37-9/16	6.6	12.2	2.5	3	CW40	CW40
3335		29-5/16	13-1/16	2.7	5.0	2.5	3	CW50	CW45
3341		29-5/16	16-1/16	3.3	6.1	2.5	3	CW50	CW45
3347		29-5/16	19-1/16	3.9	7.3	2.5	3	CW50	CW45
3353		29-5/16	22-1/16	4.5	8.4	2.5	3	CW50	CW45
3357		29-5/16	24-1/16	4.9	9.2	2.5	3	CW50	CW45
3359	E ₁	29-5/16	25-1/16	5.1	9.6	2.5	3	CW50	CW45
3365	E	29-5/16	28-1/16	5.7	10.7	2.5	3	CW50	CW45
3371	E	29-5/16	31-1/16	6.3	11.8	2.5	3	CW50	CW45
3377	E	29-5/16	34-1/16	6.9	13.0	2.5	3	CW50	CW45
3384	E	29-5/16	37-9/16	7.7	14.3	2.5	3	CW40	CW40

Continued on next page

Egress Notes:

Check all applicable local codes for emergency egress requirements.

E = Window meets minimum clear opening of 24" height, 20" width, and 5.7 ft².

E₁ = Window meets minimum clear opening of 24" height, 20" width, and 5.0 ft².

(1) Maximum design pressure when glazed with appropriate glass thickness.

To convert area to square meters (m²), multiply square feet by 0.0929.



Norman 10PM

73072

W.



Norman 10PM

73072

Shop All Services

DIY

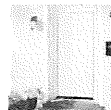
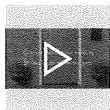
John

[/ Front Doors](#) / [Steel Doors](#) / [Steel Doors Without Glass](#) / [Masonite Steel Doors](#)

Internet # 202768877 Model # 45739



Hover Image to Zoom



See This in My Room

Masonite

**36 in. x 80 in. 6-Panel Right-Hand Inswing Primed Steel
Prehung Front Exterior Door No Brickmold**

★★★★★ (21) Questions & Answers (54)

 Magic Apron ^{Beta}AI-generated responses. [More information](#)

Hi! Need help with a product, project, or question? I'm here to assist. What can I help you with today?

What are the key specifications?

What do I need to know before using it?

What are the top uses for this product?

Feedback

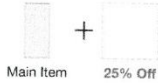


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 Apply for a Home Depot Consumer Card

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- Elegant wood appearance with the durability of steel
- High-definition panels provide architectural interest
- Energy-saving core delivers superior insulation properties
- [View More Details](#)

 Color/Finish: **Primed White**

 Common Door Size (WxH) in.: **36 x 80**

 Door Hanging: **Right-Hand/Inswing**

 Pickup at **Norman**

 Delivering to **73072**

Ship to Store

Oct 17 - Oct 21

5 available

FREE

Delivery

Oct 21 - Oct 23

5 available

[Check Nearby Stores](#)
[Delivery Details](#)


Get Expert Door Installation

A local pro will take care of the job for you

☐ Request door installation service

 ⓘ [What to Expect](#)


Have Questions? We're Here to Help.

Speak to a Virtual Associate about Doors or Windows today.

Monday - Friday from 9AM - 11PM ET &

Saturday - Sunday from 9AM - 9PM ET.

☐ Request Appointment

 ⓘ [What to Expect](#)

Feedback



38 SERIES BRUSHED SMOOTH OR CEDAR TEXTURE PREFINISHED LAP JOINT SIDING

LOUISIANA-PACIFIC CORPORATION PERIODICALLY UPDATES AND REVISES ITS PRODUCT INFORMATION AND APPLICATION, CARE, AND MAINTENANCE INSTRUCTIONS. WARRANTY REMEDIES ARE NOT AVAILABLE IF THESE INSTRUCTIONS ARE NOT FOLLOWED. THE INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.

FIND ALL LP® SMARTSIDE® PRODUCT LITERATURE AT LPCORP.COM/SMARTSIDE

LP® SmartSide® ExpertFinish® Trim and Siding is covered under the LP® SmartSide® Prorated 50-Year and 15-Year Limited Warranty. Refer to the warranty, which is available online, for complete terms and conditions. Product must be transported, stored, handled, installed, finished, and maintained in accordance with all published application, finishing, care, and maintenance instructions, technical notes, and bulletins (collectively, "Instructions") in effect at the time of installation.

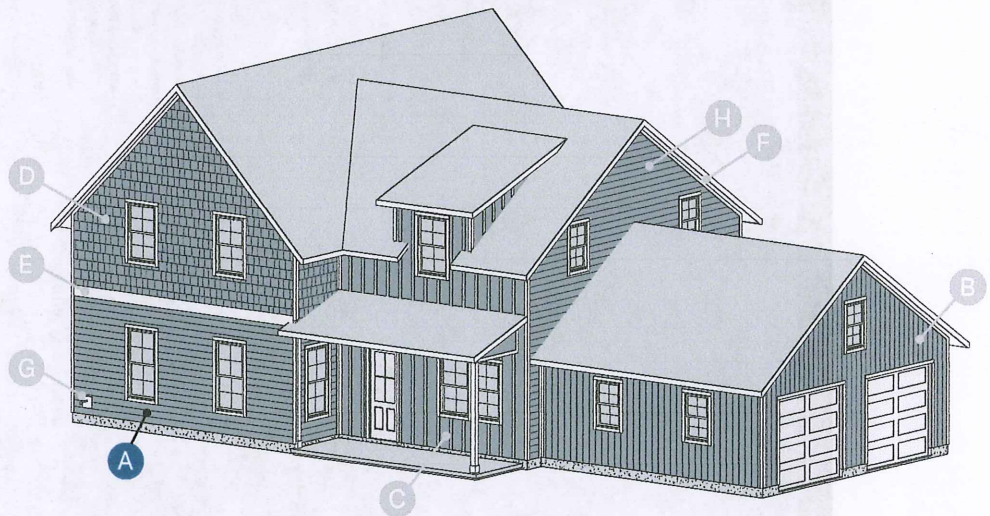
Failure to follow such Instructions will make the limited warranty inapplicable as to the products affected by such failure. No modification or exception to these Instructions and no non-published recommendations are valid unless issued in writing on a project-specific basis by LP's Director of Technology prior to application. Always check and comply with local building codes. Even where these instructions approve installation over certain substrates or incorporate requirements of building codes, LP's liability for the performance of the product is limited as expressly provided in the Limited Warranty.

⚠ WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to P65Warnings.ca.gov/wood-dust.

PRODUCT LEGEND

- A** LP® SmartSide® ExpertFinish® Lap Joint Siding
- B** LP® SmartSide® ExpertFinish® Panel Siding
- C** LP® SmartSide® ExpertFinish® Vertical Siding
- D** LP® SmartSide® ExpertFinish® Cedar Shake
- E** LP® SmartSide® ExpertFinish® Trim & Fascia
- F** LP® SmartSide® ExpertFinish® Soffit
- G** LP® SmartSide® ExpertFinish® Accessories
- H** LP® SmartSide® ExpertFinish® Nickel Gap Siding

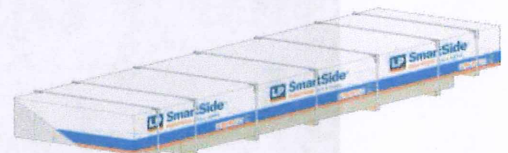
6 inch wide LP SmartSiding proposed- Smooth finish



GENERAL INFORMATION

HANDLING

- Handle prefinished LP SmartSide ExpertFinish lap siding with extreme care during storage and application.
 - When unpackaging siding, cut the clear shrink-wrap the full-length of siding to avoid dragging and scuffing of the painted surface.
 - If siding is restacked after removing clear shrink-wrap, make sure to keep slip between painted surface and back of the siding.



STORAGE

- Store off the ground well supported, on a flat well-drained surface. If delivered without a pallet, additional support may be required to provide a minimum 2 inch (51 mm) clearance of Prefinished siding from the ground.
- Store Prefinished siding under a roof or separate waterproof covering until the siding is installed on the structure. **The clear shrink-wrap is perforated and does not provide protection from water intrusion.**
 - Protect the Prefinished siding at the end of each installation day by moving siding back under a roof or reapply a waterproof covering.
- Do not install if any type of residue is detected on the surface. Follow Residue Removal Guidelines in [Technical Bulletin #0](#)

LP® SMARTSIDE® ENVIRONMENTAL PRODUCT DECLARATION

EPD FOR LP® SMARTSIDE® TRIM & SIDING PRODUCED BY
LOUISIANA-PACIFIC CORPORATION, NASHVILLE, TENNESSEE, USA

LPCorp.com/SmartSide



SmartSide®
TRIM & SIDING

ASTM CERTIFIED ENVIRONMENTAL PRODUCT DECLARATION

PROGRAM OPERATOR	ASTM International 100 Barr Harbor Drive PO Box C700 West Conshohocken, PA, 19428-2959 USA www.astm.org	 ASTM INTERNATIONAL Helping our world work better
GENERAL PROGRAM INSTRUCTIONS AND VERSION NUMBER	ASTM Program Operator Rules. Version: 8.0, Revised 04/29/20	
DECLARATION OWNER	Louisiana-Pacific Corporation 1610 West End Ave #200 Nashville, TN 37203 USA LPCorp.com	
DECLARATION NUMBER	EPD 597	
DECLARED PRODUCT		
DECLARED UNIT	1 m ³ of SmartSide® produced at LP® SmartSide® facilities in North America and installed in a building for 75 years	
REFERENCE PCR AND VERSION NUMBER	ISO 21930:2017 Sustainability in Building and Civil Engineering works – Core Rules for environmental Product Declaration of Construction Products and Services. [10] UL Environment: Product Category Rules for Building-Related Products and Services Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report, v3.2 2018 [17] Part B: Structural and Architectural Wood Products EPD Requirements, v1.0 2020 [18]	
DESCRIPTION OF PRODUCT'S INTENDED APPLICATION AND USE	SmartSide products are an engineered wood product. It is a durable waterproof exterior product used for siding and trim.	
MARKETS OF APPLICABILITY	Construction Sector, Exterior Siding and Trim	
DATE OF ISSUE	11/21/2023	
PERIOD OF VALIDITY	5 years	
EPD TYPE	Product-specific EPD	
EPD SCOPE	Cradle to Grave	

YEAR OF REPORTED MANUFACTURER PRIMARY DATA	2019-2022
---	-----------

LCA SOFTWARE	SimaPro v9.5
---------------------	--------------

LCI DATABASES	USLCI [13], Ecoinvent 3.5 [19], Datasmart [12]
----------------------	--

LCIA METHODOLOGY	TRACI 2.1 [3], CML-IA Baseline V3.08, CED, LHV 1.0
-------------------------	--

THE SUB-CATEGORY PCR REVIEW WAS CONDUCTED BY:	Dr. Thomas Gloria (chair) t.gloria@industrial-ecology.com
--	--

LCA AND EPD DEVELOPER This life cycle assessment was conducted in accordance with ISO 14044 and the reference PCR by:	The Consortium for Research on Renewable Industrial Materials (CORRIM) PO Box 2432 Corvallis, OR 97330 541-231-2627 www.corrim.org 	
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This declaration was independently verified in accordance with ISO 14025:2006. The UL Environment “Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Project Report,” v3.2 (December 2018), in conformance with ISO 21930:2017, serves as the core PCR, with additional considerations from the USGBC/UL Environment Part A Enhancement (2017). Tim Brooke, ASTM International

☐ Internal
 ☒ External

INDEPENDENT VERIFIER This life cycle assessment was independently verified in accordance with ISO 14044 and the reference PCR by:	Lindita Bushi, PhD, Athena Sustainable Materials Institute
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LIMITATIONS

- Environmental declarations from different programs (ISO 14025) may not be comparable.
- Comparison of the environmental performance using EPD information shall consider all relevant information modules over the full life cycle of the products within the building.
- This PCR allows EPD comparability only when the same functional requirements between products are ensured and the requirements of ISO 21930:2017 §5.5 are met. It should be noted that different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared.

COMPANY AND PRODUCT DESCRIPTION

This EPD represents the cradle-to-grave energy and materials required for producing LP® SmartSide® Lap, Panel, and Trim (“Products”) produced in North America. Louisiana-Pacific (LP) Corporation SmartSide products are manufactured in Minnesota, Michigan, and Wisconsin of the U.S., and British Columbia and Manitoba, Canada. Primary application categories of SmartSide products include lap and panel exterior siding and trim for residential buildings. These products go into a variety of applications based on their properties and desired end use. The production data used in this EPD considers all SmartSide products produced during 2019 and is weighted based on material output. The production data used in this EPD is presented in cubic meters and one square meter representing the dimensions in Tables 1-3 [11].

TABLE 1 Size Specification for LP® SmartSide® Panel Siding

LENGTH-FEET METERS)	PANEL WIDTH-INCHES (CENTIMETERS)	THICKNESS-INCHES (MILLIMETERS)	WEIGHT-POUNDS PER SQUARE FOOT (KG PER SQUARE METER)
6 ft (1.8 m)	48.56 in (123.4 cm)	0.354 in ^{a/} (9 mm)	1.5 lb/ft2 (7.32 kg/m2)
7 ft (2.1 m)	48.56 in (123.4 cm)	0.354 in ^{a/} (9 mm)	1.5 lb/ft2 (7.32 kg/m2)
8 ft (2.4 m)	48.56 in (123.4 cm)	0.354 in (9 mm) ^{a/, b/, c/} 0.418 in (10.6 mm) ^{d/, e/} 0.578 in (14.7 mm) ^{f/}	1.5 lb/ft2 (7.32 kg/m2) 1.5 lb/ft2 (7.32 kg/m2) 2.0 lb/ft2 (9.76 kg/m2)
9 ft (2.7m)	48.56 in (123.4 cm)	0.354 in (9 mm) ^{a/,b/} 0.418 in (10.6 mm) ^{d/, e/} 0.578 in (14.7 mm) ^{f/}	1.5 lb/ft2 (7.32 kg/m2) 1.5 lb/ft2 (7.32 kg/m2) 2.0 lb/ft2 (9.76 kg/m2)
10 ft (3.0 m)	48.56 in (123.4 cm)	0.354 in (9 mm) ^{a/,b/} 0.418 in (10.6 mm) ^{d/, e/} 0.578 in (14.7 mm) ^{f/}	1.5 lb/ft2 (7.32 kg/m2) 1.5 lb/ft2 (7.32 kg/m2) 2.0 lb/ft2 (9.76 kg/m2)

^{a/} 38 Series Cedar Texture Panel
^{b/} 38 Series Cedar Texture Panel, No Groove, Shiplap Edge
^{c/} 38 Series Cedar Texture Panel, No Groove, Square Edge
^{d/} 76 Series Cedar Texture Panel
^{e/} 76 Series Cedar Texture Panel, No Groove, Shiplap Edge
^{f/} 190 Series Cedar Texture

[SmartSide® Product Catalog](#)



TABLE 2 Size Specification for LP® SmartSide® Lap Siding

LENGTH-FEET (METERS)	PANEL WIDTH-INCHES (CENTIMETERS)	THICKNESS-INCHES (MILLIMETERS)	WEIGHT-POUNDS PER SQUARE FOOT (KG PER SQUARE METER)
12 ft (3.7 m)	7.84 in ^{a/} (19.9 cm)	0.354 in (9 mm)	1.5 lb/ft2 (7.32 kg/m2)
16 ft (4.9 m)	5.84 in (14.8 cm) ^{a/, b/} 7.84 in (19.9 cm) ^{a/, b/, c/} 11.84 in (30.1 cm) ^{a/, b/}	0.418 in (10.6 mm)	1.5 lb/ft2 (7.32 kg/m2)

^{a/} 38 Series Cedar Texture Lap
^{b/} 76 Series Cedar Texture Lap
^{c/} 76 Series SmartLock® Cedar Texture Lap

[SmartSide® Product Catalog](#)



TABLE 3 Size Specification for LP® SmartSide® Trim

DESCRIPTION	LENGTH-FEET (METERS)	PANEL WIDTH-INCHES (CENTIMETERS)	THICKNESS-INCHES (MILLIMETERS)	WEIGHT-POUNDS PER SQUARE FOOT (KILOGRAM PER SQUARE METER)
190 Series Cedar Texture Trim	16 ft (4.9 m)	2.50 in (6.4 cm) 3.50 in (8.9 cm) 5.50 in (14.0 cm)	0.578 in (14.7 mm)	2.0 lb/ft2 (9.76 kg/m2)
440 series cedar Texture Trim	16 ft (4.9 m)	1.50 in (3.8 cm) 2.50 in (6.4 cm) 3.50 in (8.9 cm) 5.50 in (14.0 cm) 7.21 in (18.3 cm) 9.21 in (23.4 cm) 11.21 in (28.5 cm)	0.678 in (17.1 mm)	2.0 lb/ft2 (9.76 kg/m2)
540 Series cedar Texture Trim	16 ft (4.9 m)	1.50 in (3.8 cm) 2.50 in (6.4 cm) 3.50 in (8.9 cm) 5.50 in (14.0 cm) 7.21 in (18.3 cm) 9.21 in (23.4 cm) 11.21 in (28.5 cm)	0.970 in (24.6 mm)	3.0 lb/ft2 (14.65 kg/m2)
440 Series Cedar Texture Ploughed Fascia	16 ft (4.9 m)	5.50 in (14.0 cm) 7.21 in (18.3 cm)	0.675 in (17.1 mm)	2.0 lb/ft2 (9.76 kg/m2)

[SmartSide® Product Catalog](#)

The primary species used in SmartSide products is aspen (*Populus spp.*) representing 93% and 6% from basswood (*Tilia spp.*). Other species include soft maple, pine, balsam poplar, and white birch. Aspen is abundant in northern Midwest of the United States and throughout Canada where SmartSide products are produced.

SmartSide products are categorized under United Nations Standard Products and Services Code (UNSPSC) and Construction Specification Institute (CSI®) for sheathing, sheets, siding, and exterior materials (Table 4).



TABLE 4 United Nations Standard Products and Services Code (UNSPSC) and Construction Specification Institute (CSI®) Masterformat Code for LP® SmartSide® Trim & Siding

CLASSIFICATION STANDARD	CATEGORY	PRODUCT CODE
UNSPSC	Wood Sheathing and Sheets	30103604
	Siding	30151802
	Siding and Exterior Wall Materials	30151800
CSI/CSC	Sheathing	06 16 00
	Wood, plastic, and composites	06 00 00
	Thermal and Moisture Protection	07 00 00
	Wood siding	07 46 23
ICC-ES	Treated Engineered Wood Siding	AC-321



LP® SMARTSIDE® TRIM & SIDING PRODUCTION

The production process begins with whole logs that are debarked (Figure 1). The debarked logs are cut into strands and then dried and screened. The strands are then blended with resin, wax, and zinc borate and formed into mats where a phenolic resin-saturated overlay is applied. The formed panels are pressed using heat produced from self-generated wood waste, then cut and trimmed, (for panel siding, lap siding or trim), and packaged for shipment. Panels are embossed with either a smooth or cedar textured finish.

Panels are protected during shipping with a polypropylene wrapping material made from 100% recycled materials. Other packaging materials include plastic strapping, cardboard shrouds and corner protectors, and wood stickers.

SmartSide products from LP production facilities contain wood fiber that is legally and sustainably sourced. LP is third party certified to the [Sustainable Forestry Initiative® \(SFI®\)](#) Forest Management, Fiber Sourcing and Chain of Custody Standards and the Programme for the Endorsement of Forest Certification™ (PEFC™) Chain of Custody Standard.





How is it Made?

LP SmartSide Trim & Siding - Treated Engineered Wood Strand Technology

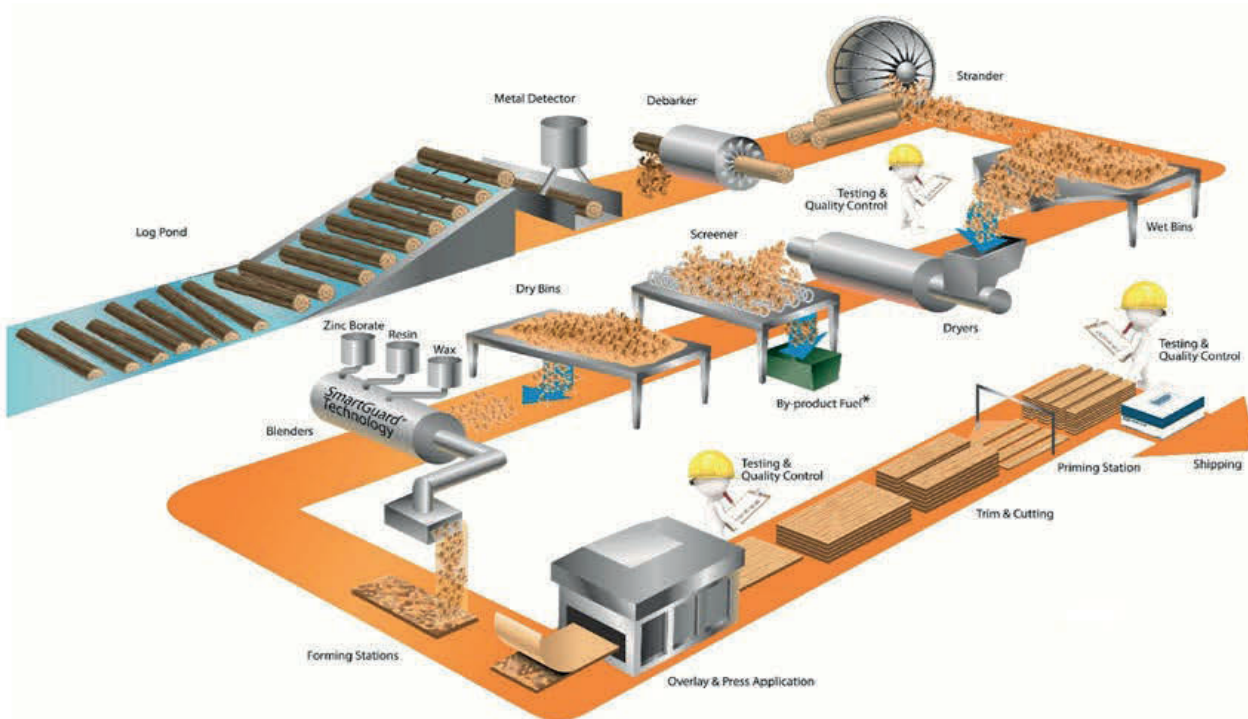


FIGURE 1 Process flow for the production of LP® Smartside® products.

The technical requirements for SmartSide products represented in this LCA are defined by the following product standards, testing, and certifications.

- ICC-ES ESR-1301 (2020) [Joint Evaluation Report 2020](#)
- ANSI/AWC SDPWS-2015 Special Design Provision for Wind and Seismic
- ASCE 7-16; ASCE 7-10; ASCE 7-05 Minimum Design Loads for Buildings and Other Structures
- APA PRP-108 Performance Standards and Qualification Policy for Structural-Use Panels
- APA PR-N124

Other Technical Standards and Certifications

- NRC-CNRC – CCMC 11826-L 2019

METHODOLOGICAL FRAMEWORK

TYPE OF EPD AND LIFE CYCLE STAGES

This EPD is intended to represent product specific life cycle assessment (LCA) for SmartSide® products. Six LP facilities were surveyed and contributed production data, resource use, energy and fuel use, transportation distances, and onsite processing emissions. These data were weighted average based on production to produce the life cycle inventory data for the life cycle impact assessment (LCIA). The underlying LCA [4] investigates SmartSide product systems from cradle to grave. Information modules included in the LCA are shown in Table 5. This EPD includes mandatory modules A1-A3 for a cradle-to-gate analysis. Additional declared Modules include A4-Transportation to building site and A5 – Installation, Module B – Use, and EoL stages (C1 – C4) and additional benefits or reuse, energy recovery and recycling potential in Module D to complete a cradle-to-grave analysis (ISO 21090 5.2.2). Due to data gaps, the impact of deconstruction/demolishing and waste processing (Module C1 and C3) are considered null for this LCA as well as Module B1 – B7 (Table 5).



CEDAR TEXTURE PANEL



SMOOTH FINISH TRIM

TABLE 5 Life Cycle Stages & Information Modules per ISO 21930

PRODUCTION STAGE			CONSTRUCTION STAGE		USE STAGE							END-OF-LIFE STAGE				OPTIONAL BENEFITS
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Extraction and up-stream production	Transport to factory	Manufacturing	Transport to site	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Building Operational Energy Use During	Building Operational Water Use During	Deconstruction	Transport	Waste Processing	Disposal	Reuse, Recycle, & Recovery benefits
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

SYSTEM BOUNDARIES AND PRODUCT FLOW DIAGRAM

The product system described in Figure 2 includes the following information modules and unit processes:

A1 - RAW MATERIAL EXTRACTION	A1 includes the cradle-to-gate production of resins that are used in manufacturing SmartSide® Trim & Siding. The upstream resource extraction includes removal of raw materials and processing. A1 also includes the cradle to gate forestry operation that may include nursery operations (which include fertilizer, irrigation, energy for greenhouses if applicable, etc.), site preparation, as well as planting, fertilization, thinning and other management operations.
A2 - RAW MATERIAL TRANSPORT	Average or specific transportation of raw materials (including secondary materials and fuels) from extraction site or source to manufacturing site (including any recovered materials from source to be recycled in the process).
A3 - MANUFACTURING	Manufacturing of SmartSide Trim & Siding, including packaging. Packaging materials represent less than one percent (0.7%) of the mass of the main product. Common packaging materials are wrapping material, plastic strapping, wood stickers, corner protectors, and shrouds. The packaging is allocated 100 percent to the primary product.
A4 - PRODUCT TRANSPORTATION	Average or specific transportation of product from manufacturing facility to construction site. This LCA product system includes actual product shipping distance to either customer or distribution/reload centers for both road and rail transportation modes.
A5 - CONSTRUCTION	The installation module covers installation of the construction product into any type of constructions and includes waste of construction product, waste from packaging material, energy for construction, waste management at the site.
B1 – B7 - USE	Considered null for this EPD
C1- DEMOLITION	Considered null for this EPD
C2 - TRANSPORTATION TO EOL TREATMENT	Average or specific transportation of product from construction site to EoL processes.
C3 – WASTE PROCESSING	Considered null for this EPD
C4 - PROCESSING & DISPOSAL	Final deposition of wastes to be landfilled, incinerated, or reused/recycled.
D - BENEFITS BEYOND THE SYSTEM BOUNDARY	Optional information about the potential net benefits from reuse, recycling, and energy recovery.

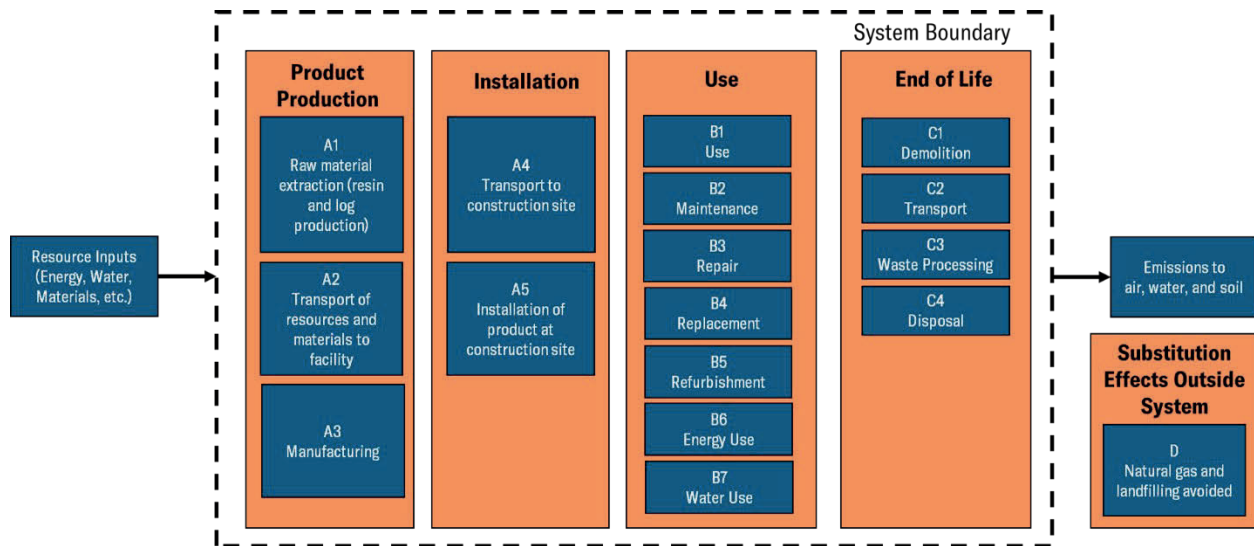


FIGURE 2 Cradle-to-Grave System Boundary for SmartSide® Products



DECLARED UNIT

Table 6 shows the declared unit and additional product information. In accordance with the PCR, the declared unit for LP® SmartSide® Trim & Siding is one cubic meter (m³), which represents the area of the product multiplied by its thickness and installed in a building for 75 years [17]. This value is presented as 1.0 m³ , 9.5 mm basis.

TABLE 6 Declared Unit and Product Information

The declared unit is “the production of one cubic meter (1 m³) of LP® SmartSide® products.

PROPERTY	UNIT	VALUE
Mass	kg	657
Thickness	mm	9.5
Density	kg/m³	657
Moisture Content, oven-dry basis	%	2%
PRODUCT COMPOSITION		
Wood	%	80-95
MDI Resin	%	<10
Wax	%	<2
Zn Borate	%	<3
Overlay	%	<5

ALLOCATION METHODS

Allocation is the method used to partition the environmental load of a process when several products or functions share the same process. Processing logs to produce SmartSide® product involves multiple processes with generation of co-product (sawdust, chips, bark). SmartSide product production processes were allocated on a mass basis in accordance with UL PCR 2020 and ISO 21930:2017.

CUT-OFF CRITERIA

The cut-off criteria for all activity stage flows considered within the system boundary conform with ISO 21930: 2017 Section 7.1.8. Specifically, the cut-off criteria were applied as follows:

- All inputs and outputs for which data are available are included in the calculated effects and no collected core process data are excluded.
- A one percent cut-off is considered for renewable and non-renewable primary energy consumption and the total mass of inputs within a unit process. The sum of the total neglected flows does not exceed 5% of all energy consumption and mass of inputs.
- All flows known to contribute a significant impact or to uncertainty are included.
- The cut-off rules are not applied to hazardous and toxic material flows – all of which are included in the life cycle inventory.

No material or energy input or output was knowingly excluded from the system boundary.

DATA SOURCES

Primary and secondary data sources, as well as the respective data quality assessment are documented in the underlying LCA project report in accordance with UL PCR 2020.

This EPD estimates the impacts of forest management from the industry average U.S. North Central Hardwood and Canadian resources LCA. [14,15].

Third party verified ISO [7,8,9] secondary LCI data sets contribute more than 72% of total impact to any of the required impact categories identified by the applicable PCR [17,18].

TREATMENT OF BIOGENIC CARBON

Biogenic carbon emissions and removals are reported in accordance with ISO 21930 7.2.7. and 7.2.12. Detailed information is provided in the underlying LCA in Section 3.3.

ISO 21930 requires a demonstration of forest sustainability to characterize carbon removals with a factor of -1 kg CO₂ eq/kg CO₂. ISO 21930 Section 7.2.11 Note 2 states the following regarding demonstrating forest sustainability: “Other evidence such as national reporting under the United Nations Framework Convention on Climate Change (UNFCCC) can be used to identify forests with stable or increasing forest carbon stocks.” The United States UNFCCC annual report Table 6-1 provides annual NET GHG Flux Estimates for different land use categories. This reporting indicates non-decreasing forest carbon stocks and thus the source forests meet the conditions for characterization of removals with a factor of -1 kg CO₂ eq/kg CO₂.

ENVIRONMENTAL PARAMETERS DERIVED FROM LCA

The impact categories and characterization factors for the LCIA were derived from the U.S. EPA Tool for the Reduction and Assessment of Chemical and Other Environmental Impacts - TRACI 2.1 [3]. The total primary energy consumption is tabulated from the LCI results based on the Cumulative Energy Demand Method (CED, LHV, V1.0) published by ecoinvent [19]. Lower heating value of primary energy carriers is used to calculate the primary energy values reported in the study.

Other inventory parameters concerning material use, waste, water use, and biogenic carbon were drawn from the LCI results. We followed the ACLCA's Guidance to Calculating non-LCIA Inventory Metrics in accordance with ISO 21930:2017 [1]. SimaPro 9.4 [16] was used to organize and accumulate the LCI data, and to calculate the LCIA results. The reporting of landfill emission factors used are 0.0035 metric tons of methane (CH₄) / metric ton of product and 0.2060 metric tons of carbon dioxide, CO₂ / metric ton of product.

To consider the biogenic carbon dynamics that occur in landfills, UL Environment published an Appendix to the reference PCR that estimates the emissions from landfilling of wood products. The landfill modeling for biogenic carbon is based on the United States EPA WARM model [5] and aligns with the biogenic accounting rules in ISO 21930 Section 7.2.7 and Section 7.2.12. The WARM model is documented by the EPA at <https://www.epa.gov/warm/documentation-waste-reduction-model-warm>. These background accounting assumptions (Appendix A of the PCR) [17] form the basis for landfill modeling that adjusts the carbon storage as a portion of the initial carbon while accounting for remaining carbon converted to landfill gas. It does not assign the percentage of the wood product sent to the landfill. In 2017, the average U.S. EoL treatments for durable wood products were estimated to be 0% recycling, 0% composting, 18% combustion with energy recovery and 82% landfilling as a percentage of wood material generated by weight. In this EPD it is reported as the "Average" EoL Scenario. Other scenarios adjusted the allocation for 100% landfill and 100% reuse.



BIOGENIC CARBON RESULTS

Table 7 shows additional inventory parameters related to biogenic carbon removal and emissions. The carbon dioxide flows are presented unallocated to consider any coproducts leaving the product system in information Module A3 (345 kg CO₂ eq). The biogenic CO₂ component for SmartSide® products show that the landfill scenario causes a net removal of biogenic carbon from the atmosphere equivalent to 773.23 kg CO₂ eq. This is caused by the permanent storage of 84 percent of the biogenic carbon that enters the landfill; only 16 percent of the wood decomposes as estimated by the US EPA [5]. The net incineration and reuse are zero because of the assumption 100% of product is either completely combusted or reused. The net average uses the U.S. EPA Materials Management Fact Sheet for durable wood products assuming 0% recycling, 0% composting, 18% incineration, and 82% landfilling [6].

TABLE 7 Biogenic Carbon Inventory Parameters for LP® SmartSide® Products

ADDITIONAL INVENTORY PARAMETERS		A1 ALL SCENARIOS	A3 ALL SCENARIOS	C4 LANDFILL SCENARIO	C4 INCINERATION SCENARIO	C4 REUSE SCENARIO	C4 AVG
Biogenic Carbon Removal from Product	kg CO ₂	-1,886.06	-	-	-		
Biogenic Carbon Emission from Product	kg CO ₂	-	344.78	322.391	1,095.62	1,095.62	463.11
Biogenic Carbon Removal from Packaging	kg CO ₂	-	-	-	-		
Biogenic Carbon Emission from Packaging	kg CO ₂	-	-	-	-		
Biogenic Carbon Emission from Combustion of Waste from Ren. Sources Used in Production	kg CO ₂	-	445.67	-	-		
TOTAL BIOGENIC CO₂ REMOVALS & EMISSIONS							
Net biogenic carbon emission landfill scenario	kg CO ₂	-773.23					
Net biogenic carbon emission incineration scenario	kg CO ₂	0.00					
Net biogenic carbon emission recycling scenario	kg CO ₂	0.00					
Average end-of-life treatment	kg CO ₂	-632.50					

THE RESULTS

A1 – A3 -PRODUCT MANUFACTURING

Table 10 presents the cradle-to-gate (A1-A3) LCIA and LCI parameter results for the functional unit of 1 m³ of SmartSide product. No permanent carbon storage is included in the cradle-to-gate (A1-A3) results. As a result, the biogenic carbon balance for the cradle-to-gate portion of the life cycle is net neutral.

A4 -PRODUCT TRANSPORTATION

The product system includes actual product shipping distance to either customer or distribution/reload centers for both road and rail transportation modes. Product shipping distances were distributed over a weighted average of 2,895,km by road and 8,179 km by rail.

A5 – INSTALLATION

For this LCA waste of product and packaging waste is considered null and waste management is not relevant. Construction energy (A5) is based on diesel fuel consumption using a default value for building construction from Athena Impact Estimator [2]. Diesel construction energy use is 2.16 L. The reference service life for the product is 75 years which is the default specified by the UL Part B PCR (UL 2020).

B1-B7 – USE

The use phase of a product includes seven information modules, B1 - B7. This product does not require any inputs including energy and water during the use phases (B1-B7) and is declared null.

C2 AND C4 – END OF LIFE

This product system includes the end-of-life (EoL) modules C1-C4. For the purpose of this LCA, C1 and C3 are null. For EoL processing, we applied the weighted average of the typical waste treatment in the United States for durable wood products: 82% landfill and 18% incineration (EPA 2019). As per the PCR, the results for each of the individual options are also separately reported, as required by ISO 21930 Section 7.1.7. Table 8 lists the assumptions for C1-C4 and the net values.

TABLE 8 End of Life (C1-C4) Assumptions for Scenario Development (Description Of Deconstruction, Collection, Recovery, Disposal Method, and Transportation)

C1-C4 DESCRIPTION OF PROCESSES	DESCRIPTION	VALUE	UNIT
Collection Process	Collected separately	NA	Dry kg
Collection Process	Collected with mixed construction waste	597.61 ^{1/}	Dry kg
Recovery	Reuse		Dry kg
Recovery	Recycling		Dry kg
Recovery	Landfill	511.77	Dry kg
Recovery	Incineration		Dry kg
Recovery	Incineration with energy recovery ^{1/}	108.77 ^{2/}	Dry kg
Recovery	Product or material for final deposition	511.77	Dry kg
Removal of biogenic carbon (excluding packaging)		(632.5)	kg CO ₂ eq

Note: C1 - Building demolishing is considered null

^{1/} Waste was collected as construction waste using dump truck to the disposal site with 81% of the total product mass was landfilled

^{2/} Remaining 19% of the product mass was incinerated with energy recovery

D – SUBSTITUTION EFFECTS OUTSIDE SYSTEM

Per ISO 21930 Section 7.1.7.6, the net output flow for all products for reuse, secondary materials, secondary fuels and/or recovered energy leaving a product system is calculated by adding all output flows of the secondary material or fuel or recovered energy and subtracting any input flows of this secondary material or fuel or recovered energy from each information module (A1 to A5, B1 to B7, C1 to C4) thus arriving at the net output flow of secondary material or fuel or recovered energy from the product system. Table 9 lists the assumptions for module D substitution benefits and the net values.

Incineration with energy recovery causes the potential displacement of fossil fuels with an equivalent heat content. To estimate the natural gas displacement, we first calculated the potential fuel heating value of a wood panel on a lower heating value (LHV) of 20.9 MJ/ oven dry kg and 35.7 MJ/kg for resin, which equates to 13,561 MJ/m³. The energy equivalent amount of natural gas was calculated based on a lower heating value, or 36.6 MJ/m³.

$$\text{Wood Panel energy content} = (20.9\text{MJ/kg} \times 598 \text{ kg/m}^3) + (35.7 \text{ MJ/kg} \times 30.0 \text{ kg}) = 13,561 \text{ MJ/m}^3$$

$$\text{Substitution with Natural gas} = \frac{13,561 \text{ MJ/m}^3}{36.6 \frac{\text{MJ}}{\text{m}^3}} = 371 \text{ m}^3/\text{m}^3$$

Displacing 371 cubic meters of natural gas for every cubic meter of SmartSide® product combusted.

TABLE 9 Use, Recovery and/or Recycling Potentials (D), relevant Scenario Information

C1-C4 DESCRIPTION OF PROCESSES	VALUE	UNIT
Net energy benefit from energy recovery from waste treatment declared as exported energy in C3 (R>0.6)	NA	MJ
Net energy benefit from thermal energy due to treatment of waste declared as exported energy in C4 (R <0.6)	11,526.7	MJ
Net energy benefit from material flow declared in C3 for energy recovery	NA	MJ
Process and conversion efficiencies (thermal efficiency)	85.0	%
Further assumptions for scenario development (e.g., further processing technologies, assumptions on correction factors)	NA	

Tables 10 and 11 show the mandatory cradle-to-gate results (A1-A3) for 1 cubic meter and 1 meter squared of SmartSide® products. Tables 12 to 15 present the cradle-to-grave results includes the delivery of the product to the construction site (A4), construction energy (A5), the use phase (B1-B7) and the EoL (C1-C4). Table 12 presents the weighted average results for the average waste treatment in the United States for durable wood products, 82% landfill and 18% incineration [5]. As per the PCR and ISO 21930 Section 7.1.7, the results for each of the individual options are also separately reported and include 100% landfilling (Table 13), 100% incineration (Table 14) and 100% reuse (Table 15).

TABLE 10 LCIA Results Summary for 1 m³ of LP® SmartSide® Products – Cradle-to-Gate Scope

CORE MANDATORY IMPACT INDICATOR	INDICATOR	UNIT	A1-A3	A1	A2	A3
Global warming potential - Total	GWP _{TOTAL}	kg CO ₂ eq	279.43	-1796.41	26.17	2,049.67
Global warming potential - Biogenic	GWP _{BIOGENIC}	kg CO ₂ eq	0.00	-1886.06	0.00	1,886.06
Global warming potential - Fossil	GWP _{FOSSIL}	kg CO ₂ eq	279.43	89.65	26.17	163.61
Depletion potential of the stratospheric ozone layer	ODP	kg CFC-11 eq	9.02E-06	2.71E-06	6.01E-07	5.71E-06
Acidification potential of soil and water sources	AP	kg SO ₂ eq	1.82	0.76	0.19	0.87
Eutrophication potential	EP	kg N eq	0.94	0.04	0.02	0.88
Formation potential of tropospheric ozone	SFP	kg O ₃ eq	34.64	15.35	5.46	13.84
Abiotic depletion potential (ADP _{fossil}) for fossil resources	ADP _f	MJ, NCV	4,160.12	1,825.18	330.77	2,004.17
Fossil fuel depletion	FFD	MJ Surplus	544.39	264.88	49.23	230.29
USE OF PRIMARY RESOURCES						
Renewable primary energy used as energy	RPRE	MJ, NCV	4,251.32	6.65	1.44	4,243.23
Renewable primary energy used as material	RPRM	MJ, NCV	17,136.12	17,136.12	0.00	0.00
Non-renewable primary energy used as energy	NRPRE	MJ, NCV	4,390.75	1,835.23	336.75	2,218.77
Non-renewable primary energy used as material	NRPRM	MJ, NCV	1,119.55	1,119.55	0.00	0.00
SECONDARY MATERIAL, SECONDARY FUEL AND RECOVERED ENERGY						
Secondary material	SM	kg	0.00	0.00	0.00	0.00
Renewable secondary fuel	RSF	MJ, NCV	0.00	0.00	0.00	0.00
Non-renewable secondary fuel	NRSF	MJ, NCV	0.00	0.00	0.00	0.00
Recovered energy	RE	MJ, NCV	0.00	0.00	0.00	0.00
MANDATORY INVENTORY PARAMETERS						
Consumption of freshwater resources	FW	m ³	1.30	0.06	0.02	1.22
INDICATORS DESCRIBING WASTE						
Hazardous waste disposed	HWD	kg	1.02	0.85	0.02	0.15
Non-hazardous waste disposed	NHWD	kg	8.15	0.00	0.00	8.15
High-level radioactive waste, conditioned, to final repository	HLRW	m ³	1.96E-07	5.42E-09	3.26E-09	1.88E-07
Intermediate- and low-level radioactive waste, conditioned, to final repository	ILLRW	m ³	3.05E-06	1.03E-07	2.03E-07	2.75E-06
Components for re-use	CRU	kg	0.00	0.00	0.00	0.00
Materials for recycling	MR	kg	0.00	0.00	0.00	0.00
Materials for energy recovery	MER	kg	0.00	0.00	0.00	0.00
Recovered energy exported	EE	MJ, NCV	0.00	0.00	0.00	0.00

TABLE 11 LCIA Results Summary for 1 m² of LP® SmartSide® Products – Cradle-to-Gate Scope

CORE MANDATORY IMPACT INDICATOR	INDICATOR	UNIT	A1-A3	A1	A2	A3
Global warming potential - Total	GWP _{TOTAL}	kg CO ₂ eq	2.66	-17.11	0.25	19.52
Global warming potential - Biogenic	GWP _{BIOGENIC}	kg CO ₂ eq	0.00	-17.96	0.00	17.96
Global warming potential - Fossil	GWP _{FOSSIL}	kg CO ₂ eq	2.66	0.85	0.25	1.56
Depletion potential of the stratospheric ozone layer	ODP	kg CFC-11 eq	8.59E-08	2.58E-08	5.72E-09	5.44E-08
Acidification potential of soil and water sources	AP	kg SO ₂ eq	0.02	7.25E-03	1.78E-03	8.28E-03
Eutrophication potential	EP	kg N eq	0.01	3.89E-04	1.45E-04	8.39E-03
Formation potential of tropospheric ozone	SFP	kg O ₃ eq	0.33	1.46E-01	5.20E-02	1.32E-01
Abiotic depletion potential (ADP _{fossil}) for fossil resources	ADP _f	MJ, NCV	39.63	17.38	3.15	19.09
Fossil fuel depletion	FFD	MJ Surplus	5.19	2.52	0.47	2.19
USE OF PRIMARY RESOURCES						
Renewable primary energy used as energy	RPRE	MJ, NCV	40.49	0.06	0.01	40.42
Renewable primary energy used as material	RPRM	MJ, NCV	163.22	163.22	0.00	0.00
Non-renewable primary energy used as energy	NRPRE	MJ, NCV	41.82	17.48	3.21	21.13
Non-renewable primary energy used as material	NRPRM	MJ, NCV	10.66	10.66	0.00	0.00
SECONDARY MATERIAL, SECONDARY FUEL AND RECOVERED ENERGY						
Secondary material	SM	kg	0.00	0.00	0.00	0.00
Renewable secondary fuel	RSF	MJ, NCV	0.00	0.00	0.00	0.00
Non-renewable secondary fuel	NRSF	MJ, NCV	0.00	0.00	0.00	0.00
Recovered energy	RE	MJ, NCV	0.00	0.00	0.00	0.00
MANDATORY INVENTORY PARAMETERS						
Consumption of freshwater resources	FW	m ³	1.24E-02	6.09E-04	1.54E-04	1.16E-02
INDICATORS DESCRIBING WASTE						
Hazardous waste disposed	HWD	kg	9.71E-03	8.13E-03	1.54E-04	1.43E-03
Non-hazardous waste disposed	NHWD	kg	7.76E-02	5.88E-06	2.24E-07	7.76E-02
High-level radioactive waste, conditioned, to final repository	HLRW	m ³	1.87E-09	5.16E-11	3.11E-11	1.79E-09
Intermediate- and low-level radioactive waste, conditioned, to final repository	ILLRW	m ³	2.91E-08	9.81E-10	1.94E-09	2.62E-08
Components for re-use	CRU	kg	0.00	0.00	0.00	0.00
Materials for recycling	MR	kg	0.00	0.00	0.00	0.00
Materials for energy recovery	MER	kg	0.00	0.00	0.00	0.00
Recovered energy exported	EE	MJ, NCV	0.00	0.00	0.00	0.00

TABLE 12 LCIA Results Summary for 1 m³ of LP® SmartSide® Products – Average End-of-Life, Treatment, 82% Landfill/18% Combustion with Energy Recovery – Cradle-to-Grave Scope

CORE MANDATORY IMPACT INDICATOR	INDICATOR	UNIT	A1-C4	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Global warming potential - Total	GWP _{TOTAL}	kg CO ₂ eq	-250.42	-816.19	73.99	6.98	0.00	0.00	8.18	0.00	476.62	-163.78
Global warming potential - Biogenic	GWP _{BIOGENIC}	kg CO ₂ eq	-632.50	-1,095.62	0.00	0.00	0.00	0.00	0.00	0.00	463.11	0.00
Global warming potential - Fossil	GWP _{FOSSIL}	kg CO ₂ eq	382.09	279.43	73.99	6.98	0.00	0.00	8.18	0.00	13.51	-163.78
Depletion potential of the stratospheric ozone layer	ODP	kg CFC-11 eq	1.25E-05	9.02E-06	2.63E-06	1.32E-08	0.00E+00	0.00E+00	3.45E-10	0.00E+00	8.27E-07	-3.71E-12
Acidification potential of soil and water sources	AP	kg SO ₂ eq	2.68	1.82	0.49	0.09	0.00	0.00	0.10	0.00	0.19	-0.04
Eutrophication potential	EP	kg N eq	1.01	0.94	0.04	0.01	0.00	0.00	0.01	0.00	0.01	0.00
Formation potential of tropospheric ozone	SFP	kg O ₃ eq	58.77	34.64	14.32	2.99	0.00	0.00	2.42	0.00	4.41	-0.10
Abiotic depletion potential (ADP _{fossil}) for fossil resources	ADP _f	MJ, NCV	6561.77	4,160.12	939.32	94.12	1.00	0.00	59.33	1.00	186.36	-2384.18
Fossil fuel depletion	FFD	MJ Surplus	893.45	544.39	139.18	14.13	2.00	0.00	8.91	2.00	26.05	-395.63
USE OF PRIMARY RESOURCES												
Renewable primary energy used as energy	RPRE	MJ, NCV	6,537.28	4,251.32	3.04	0.22	0.00	0.00	0.00	0.00	2,282.69	0.00
Renewable primary energy used as material	RPRM	MJ, NCV	17,136.12	17,136.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-renewable primary energy used as energy	NRPRE	MJ, NCV	5,456.22	4,390.75	661.92	95.50	0.00	0.00	124.39	0.00	183.66	-81.39
Non-renewable primary energy used as material	NRPRM	MJ, NCV	1,119.55	1,119.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SECONDARY MATERIAL, SECONDARY FUEL AND RECOVERED ENERGY												
Secondary material	SM	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Renewable secondary fuel	RSF	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-renewable secondary fuel	NRSF	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recovered energy	RE	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANDATORY INVENTORY PARAMETERS												
Consumption of freshwater resources	FW	m ³	1.50	1.30	0.06	0.02	0.00	0.00	0.00	0.00	0.12	0.00
INDICATORS DESCRIBING WASTE												
Hazardous waste disposed	HWD	kg	1.89	1.02	0.85	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Non-hazardous waste disposed	NHWD	kg	5.20E+02	8.15E+00	6.17E-04	2.35E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E+02	0.00E+00
High-level radioactive waste, conditioned, to final repository	HLRW	m ³	2.06E-07	1.96E-07	5.42E-09	3.26E-09	1.00E+00	0.00E+00	0.00E+00	0.00E+00	9.58E-10	0.00E+00
Intermediate- and low-level radioactive waste, conditioned, to final repository	ILLRW	m ³	3.50E-06	3.05E-06	1.03E-07	2.03E-07	2.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-07	0.00E+00
Components for re-use	CRU	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Materials for recycling	MR	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Materials for energy recovery	MER	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recovered energy exported	EE	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TABLE 13 LCIA Results Summary for 1 m³ of LP® SmartSide® Products – 100% Landfilling at End-of-Life – Cradle-to-Grave Scope

CORE MANDATORY IMPACT INDICATOR	INDICATOR	UNIT	A1-C4	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Global warming potential - Total	GWP _{TOTAL}	kg CO ₂ eq	-398.01	-816.19	73.99	6.98	0.00	0.00	8.18	0.00	329.02	0.00
Global warming potential - Biogenic	GWP _{BIOGENIC}	kg CO ₂ eq	-773.23	-1,095.62	0.00	0.00	0.00	0.00	0.00	0.00	322.39	0.00
Global warming potential - Fossil	GWP _{FOSSIL}	kg CO ₂ eq	375.22	279.43	73.99	6.98	0.00	0.00	8.18	0.00	6.64	0.00
Depletion potential of the stratospheric ozone layer	ODP	kg CFC-11 eq	1.27E-05	9.02E-06	2.63E-06	1.32E-08	0.00E+00	0.00E+00	3.45E-10	0.00E+00	1.01E-06	0.00E+00
Acidification potential of soil and water sources	AP	kg SO ₂ eq	2.52	1.82	0.49	0.09	0.00	0.00	0.10	0.00	0.02	0.00
Eutrophication potential	EP	kg N eq	1.00	0.94	0.04	0.01	0.00	0.00	0.01	0.00	0.01	0.00
Formation potential of tropospheric ozone	SFP	kg O ₃ eq	54.90	34.64	14.32	2.99	0.00	0.00	2.42	0.00	0.54	0.00
Abiotic depletion potential (ADP _{fossil}) for fossil resources	ADP _f	MJ, NCV	6,603.23	4,160.12	1,825.18	330.77	0.00	0.00	59.33	0.00	227.82	0.00
Fossil fuel depletion	FFD	MJ Surplus	899.25	544.39	264.88	49.23	0.00	0.00	8.91	0.00	31.84	0.00
USE OF PRIMARY RESOURCES												
Renewable primary energy used as energy	RPRE	MJ, NCV	4,256.75	4,251.32	3.04	0.22	0.00	0.00	0.00	0.00	2.16	0.00
Renewable primary energy used as material	RPRM	MJ, NCV	17,136.12	17,136.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-renewable primary energy used as energy	NRPRE	MJ, NCV	5,349.74	4,390.75	661.92	95.50	0.00	0.00	124.39	0.00	77.18	0.00
Non-renewable primary energy used as material	NRPRM	MJ, NCV	1,119.55	1,119.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SECONDARY MATERIAL, SECONDARY FUEL AND RECOVERED ENERGY												
Secondary material	SM	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Renewable secondary fuel	RSF	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-renewable secondary fuel	NRSF	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recovered energy	RE	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANDATORY INVENTORY PARAMETERS												
Consumption of freshwater resources	FW	m ³	1.46	1.30	0.06	0.02	0.00	0.00	0.00	0.00	0.08	0.00
INDICATORS DESCRIBING WASTE												
Hazardous waste disposed	HWD	kg	1.89	1.02	0.85	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Non-hazardous waste disposed	NHWD	kg	633.79	8.15	0.00	0.00	0.00	0.00	0.00	0.00	625.64	0.00
High-level radioactive waste, conditioned, to final repository	HLRW	m ³	2.06E-07	1.96E-07	5.42E-09	3.26E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-09	0.00E+00
Intermediate- and low-level radioactive waste, conditioned, to final repository	ILLRW	m ³	3.53E-06	3.05E-06	1.03E-07	2.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-07	0.00E+00
Components for re-use	CRU	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Materials for recycling	MR	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Materials for energy recovery	MER	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recovered energy exported	EE	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TABLE 14 LCIA Results Summary for 1 m³ of LP® SmartSide® Products – 100% Incineration with Energy Recovery at End-of-Life – Cradle-to-Grave

CORE MANDATORY IMPACT INDICATOR	INDICATOR	UNIT	A1-C4	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Global warming potential - Total	GWP _{TOTAL}	kg CO ₂ eq	412.97	-867.58	73.99	6.98	0.00	0.00	8.18	0.00	1140.01	-899.91
Global warming potential - Biogenic	GWP _{BIOGENIC}	kg CO ₂ eq	0.00	-1,095.62	0.00	0.00	0.00	0.00	0.00	0.00	1095.62	0.00
Global warming potential - Fossil	GWP _{FOSSIL}	kg CO ₂ eq	412.97	279.43	73.99	6.98	0.00	0.00	8.18	0.00	44.39	-899.91
Depletion potential of the stratospheric ozone layer	ODP	kg CFC-11 eq	1.17E-05	9.02E-06	2.63E-06	1.32E-08	0.00E+00	0.00E+00	3.45E-10	0.00E+00	7.30E-10	-2.04E-11
Acidification potential of soil and water sources	AP	kg SO ₂ eq	3.43	1.82	0.49	0.09	0.00	0.00	0.10	0.00	0.93	-0.22
Eutrophication potential	EP	kg N eq	1.03	0.94	0.04	0.01	0.00	0.00	0.01	0.00	0.04	0.00
Formation potential of tropospheric ozone	SFP	kg O ₃ eq	76.14	34.64	14.32	2.99	0.00	0.00	2.42	0.00	21.78	-0.54
Abiotic depletion potential (ADP _{fossil}) for fossil resources	ADP _f	MJ, NCV	6375.41	4160.12	1825.18	330.77	0.00	0.00	59.33	0.00	0.00	-13,099.87
Fossil fuel depletion	FFD	MJ Surplus	867.40	544.39	264.88	49.23	0.00	0.00	8.91	0.00	0.00	-2173.77
USE OF PRIMARY RESOURCES												
Renewable primary energy used as energy	RPRE	MJ, NCV	16,787.15	4,251.32	3.04	0.22	0.00	0.00	0.00	0.00	12,532.56	0.00
Renewable primary energy used as material	RPRM	MJ, NCV	17,136.12	17,136.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-renewable primary energy used as energy	NRPRE	MJ, NCV	5,934.79	4,390.75	661.92	95.50	0.00	0.00	124.39	0.00	662.24	-447.20
Non-renewable primary energy used as material	NRPRM	MJ, NCV	1,119.55	1,119.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SECONDARY MATERIAL, SECONDARY FUEL AND RECOVERED ENERGY												
Secondary material	SM	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Renewable secondary fuel	RSF	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-renewable secondary fuel	NRSF	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recovered energy	RE	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANDATORY INVENTORY PARAMETERS												
Consumption of freshwater resources	FW	m ³	1.68	1.30	0.06	0.02	0.00	0.00	0.00	0.00	0.29	0.00
INDICATORS DESCRIBING WASTE												
Hazardous waste disposed	HWD	kg	1.89	1.02	0.85	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Non-hazardous waste disposed	NHWD	kg	8.15	8.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
High-level radioactive waste, conditioned, to final repository	HLRW	m ³	2.05E-07	1.96E-07	5.42E-09	3.26E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Intermediate- and low-level radioactive waste, conditioned, to final repository	ILLRW	m ³	3.36E-06	3.05E-06	1.03E-07	2.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Components for re-use	CRU	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Materials for recycling	MR	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Materials for energy recovery	MER	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recovered energy exported	EE	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TABLE 15 LCIA Results Summary for 1 m³ of LP® SmartSide® Products – 100% Reuse at End-of-Life – Cradle-to-Grave

CORE MANDATORY IMPACT INDICATOR	INDICATOR	UNIT	A1-C4	A1-A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Global warming potential - Total	GWP _{TOTAL}	kg CO ₂ eq	368.58	-816.19	73.99	6.98	0.00	0.00	8.18	0.00	1,095.62	-279.43
Global warming potential - Biogenic	GWP _{BIOGENIC}	kg CO ₂ eq	0.00	-1095.62	0.00	0.00	0.00	0.00	0.00	0.00	1,095.62	0.00
Global warming potential - Fossil	GWP _{FOSSIL}	kg CO ₂ eq	368.58	279.43	73.99	6.98	0.00	0.00	8.18	0.00	0.00	-279.43
Depletion potential of the stratospheric ozone layer	ODP	kg CFC-11 eq	1.17E-05	9.02E-06	2.63E-06	1.32E-08	0.00E+00	0.00E+00	3.45E-10	0.00E+00	0.00E+00	-9.02E-06
Acidification potential of soil and water sources	AP	kg SO ₂ eq	2.49	1.82	0.49	0.09	0.00	0.00	0.10	0.00	0.00	-1.82
Eutrophication potential	EP	kg N eq	0.99	0.94	0.04	0.01	0.00	0.00	0.01	0.00	0.00	-0.94
Formation potential of tropospheric ozone	SFP	kg O ₃ eq	54.36	34.64	14.32	2.99	0.00	0.00	2.42	0.00	0.00	-34.64
Abiotic depletion potential (ADP _{fossil}) for fossil resources	ADP _f	MJ, NCV	6,375.41	4,160.12	1,825.18	330.77	0.00	0.00	59.33	0.00	0.00	-4160.12
Fossil fuel depletion	FFD	MJ Surplus	867.40	544.39	264.88	49.23	0.00	0.00	8.91	0.00	0.00	-544.39
USE OF PRIMARY RESOURCES												
Renewable primary energy used as energy	RPRE	MJ, NCV	4,254.59	4,251.32	3.04	0.22	0.00	0.00	0.00	0.00	0.00	-4,251.32
Renewable primary energy used as material	RPRM	MJ, NCV	17,136.12	17,136.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-17,136.12
Non-renewable primary energy used as energy	NRPRE	MJ, NCV	5,272.56	4,390.75	661.92	95.50	0.00	0.00	124.39	0.00	0.00	-4,390.75
Non-renewable primary energy used as material	NRPRM	MJ, NCV	1,119.55	1,119.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1,119.55
SECONDARY MATERIAL, SECONDARY FUEL AND RECOVERED ENERGY												
Secondary material	SM	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Renewable secondary fuel	RSF	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-renewable secondary fuel	NRSF	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recovered energy	RE	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MANDATORY INVENTORY PARAMETERS												
Consumption of freshwater resources	FW	m ³	1.38	1.30	0.06	0.02	0.00	0.00	0.00	0.00	0.00	-1.30
INDICATORS DESCRIBING WASTE												
Hazardous waste disposed	HWD	kg	1.89	1.02	0.85	0.02	0.00	0.00	0.00	0.00	0.00	-1.02
Non-hazardous waste disposed	NHWD	kg	8.15	8.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-8.15
High-level radioactive waste, conditioned, to final repository	HLRW	m ³	2.05E-07	1.96E-07	5.42E-09	3.26E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-1.96E-07
Intermediate- and low-level radioactive waste, conditioned, to final repository	ILLRW	m ³	3.36E-06	3.05E-06	1.03E-07	2.03E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	-3.05E-06
Components for re-use	CRU	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Materials for recycling	MR	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Materials for energy recovery	MER	kg	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Recovered energy exported	EE	MJ, NCV	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

INTERPRETATION

The primary sources of impacts across the life cycle are the manufacturing of SmartSide® products (Modules A1-A3) and the net flows of biogenic carbon (Table 7). Table 7 shows the flows of biogenic carbon out of the system in Module A3 from the combustion of biomass and the export of coproducts out of the system boundary. In Module C4, landfill gas and incineration emissions are significantly less than the flows of biogenic carbon into the system in Module A1 (removal of biomass from a net neutral sustainable forest). The permanent biogenic carbon storage is so significant (633 kg CO₂ eq.) (Table 7) that this net benefit is larger than the total fossil emissions from all other modules and causes the total global warming potential to be negative. The total global warming potential (GWP_{TOTAL}) of -250.42 kg CO₂ eq. (Table 12 (A1-C4)) means the product system removes more greenhouse gases from the atmosphere than are emitted in its production and disposal combined.

BIOGENIC CARBON NOT DECLARED (A1-C4):

Table 12 - Cradle-to-grave GWP_{FOSSIL} = 382.09, average EoL treatment assuming 82% landfill and 18% incineration with energy recovery

Table 13 - Cradle-to-grave GWP_{FOSSIL} = 375.22, EoL treatment assumed to be 100% landfill

Table 14 - Cradle-to-grave GWP_{FOSSIL} = 412.97, EoL treatment assumed to be 100% incineration with energy recovery

Table 15 - Cradle-to-grave GWP_{FOSSIL} = 368.58, EoL treatment assumed to be 100% reuse

BIOGENIC CARBON DECLARED (A1-C4):

Table 12 – Cradle-to-grave GWP_{TOTAL} = -250.42 average EoL treatment assuming 82% landfill and 18% incineration with energy recovery

Table 13 - Cradle-to-grave GWP_{TOTAL} = -398.01, EoL treatment assumed to be 100% landfill

Table 14 - Cradle-to-grave GWP_{TOTAL} = 412.97, EoL treatment assumed to be 100% incineration with energy recovery

Table 15 - Cradle-to-grave GWP_{TOTAL} = 368.58, EoL treatment assumed to be 100% reuse

Summarizing the GWP from Table 12, the most common representation of EoL treatment for wood products, the cradle-to-gate 279.43 kg CO₂ eq/m³ increases to 382.09 kg CO₂ eq/m³ when EoL modules are added without biogenic carbon or substitution effects. When biogenic carbon is added, there is a dramatic drop in GWP to -250.42 kg CO₂ eq/m³. This further drops to -163.78 kg CO₂ eq/m³ when substitution effects are included.

The lowest GWP_{TOTAL} occurs in the EoL 100% landfill treatment where the result is -398.01 kg CO₂ eq/m³ where biogenic carbon is added (A1-C4, Table 13). This scenario maximizes the permanent carbon storage in the landfill which, **strictly in terms of the GWP only**, is the most beneficial treatment for wood at EoL.

The highest GWP_{TOTAL} (412.97 kg CO₂ eq/m³) is in the 100% incineration EoL treatment which excludes the substitution benefits of fossil fuel (A1-C4, Table 14). This scenario assumes the worst-case carbon storage and fossil fuel combustion. When the substitution effects are added, there is a significant reduction in the GWP (-899.91 kg CO₂ eq/m³) meaning that the potential energy value of the product is greater than fossil fuels combusted from cradle-to-grave.

In this cradle-to-grave EPD there is a wide range of GWP_{TOTAL} results 412.97 to -398.01 kg CO₂ eq/m³ illustrating the importance of making correct assumptions for the LCA and the intended use. Louisiana-Pacific Corporation offers this information in this EPD to help users make informed decisions. The user is responsible for determining the intended use of the product.

LIMITATIONS

Environmental declarations from different programs (ISO 14025) may not be comparable. Comparison of the environmental performance using EPD information shall consider all relevant information modules over the full life cycle of the products within the building. This PCR allows EPD comparability only when the same functional requirements between products are ensured and the requirements of ISO 21930:2017 §5.5 are met. In addition, to be compared EPDs must comply with the same core and sub-category PCRs (Part A and B) and include all relevant information modules. It should be noted that different LCA software and background LCI datasets may lead to different results for upstream or downstream of the life cycle stages declared.

This LCA was created using manufacturer average data for upstream materials. Variation can result from differences in supplier locations, manufacturing processes, manufacturing efficiency and fuel type used. This LCA does not report all of the environmental impacts due to manufacturing of the product, but rather reports the environmental impacts for those categories with established LCA-based methods to track and report. Unreported environmental impacts include (but are not limited to) factors attributable to human health, land use change, and habitat destruction. In order to assess the local impacts of product manufacturing, additional analysis is required.

Although this LCA is cradle-to-grave in scope, it assumes the use and maintenance stages of the products are null (B1-B7). The reference service life (RSL) refers to the declared technical and functional performance of the product within a construction works. RSL is indicated by the manufacturer. RSL is dependent on the properties of the product and reference in-use conditions [17]. This LCA acknowledges the limitation making the use phase null as one could conclude that a shorter lifespan is just as good as a life span of 75 plus years. The functional unit declared in this LCA assumes the default RSL of 75 years [17].

ADDITIONAL ENVIRONMENTAL INFORMATION

Pressing and drying processes contribute the most emissions in wood production facilities. These are caused by the thermal energy production through the direct fired process and by the use of emission control devices. All facilities reported the use of ECDs throughout their facility. Types of ECDs include electrostatic precipitators (ESP), wet electrostatic precipitators (WESP), regenerative thermal oxidizers (RTO), regenerative catalytic oxidizers (RCO), cyclones, and baghouses. Most ECDs use electricity or natural gas. Hence, the additional energy requirement for ECDs can potentially result in an overall increase of other greenhouse gases such as CO₂, SO₂, NO_x, and CH₄. The pMDI emission from using pMDI resin is listed on the US Environmental Agency (EPA) Toxics Release Inventory.

FOREST MANAGEMENT

While this EPD does not address landscape level forest management impacts, potential impacts may be addressed through requirements put forth in regional regulatory frameworks, ASTM 7612-15 guidance, and ISO 21930 Section 7.2.11 including notes therein. These documents, combined with this EPD, may provide a more complete picture of environmental and social performance of wood products.

While this EPD does not address all forest management activities that influence forest carbon, wildlife habitat, endangered species, and soil and water quality, these potential impacts may be addressed through other mechanisms such as regulatory frameworks and/or forest certification systems which, combined with this EPD, will give a more complete picture of environmental and social performance of wood products.

SCOPE OF THE EPD

EPDs can complement but cannot replace tools and certifications that are designed to address environmental impacts and/or set performance thresholds – e.g., Type 1 certifications, health assessments and declarations, etc.

DATA

National or regional life cycle averaged data for raw material extraction does not distinguish between extraction practices at specific sites and can greatly affect the resulting impacts.

ACCURACY OF RESULTS

EPDs regularly rely on estimations of impacts; the level of accuracy in estimation of effect differs for any product line and reported impact when averaging data.



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CITY OF NORMAN, OK STAFF REPORT

MEETING DATE: November 3, 2025

REQUESTER: Doug Rogers

PRESENTER: Anais Starr, Planner II/Historic Preservation Officer

ITEM TITLE: (HD 25-31) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR THE PROPERTY LOCATED AT 301 E KEITH STREET FOR THE FOLLOWING MODIFICATION: A) INSTALLATION OF WOOD SHUTTERS ON THE FRONT AND WEST SIDE ELEVATIONS OF THE PRINCIPAL STRUCTURE.

BACKGROUND

Historical Information

2004 Miller Historic District Survey Information:

301 E Keith St., Ca. 1919. Bungalow/Craftsman. This contributing, one-story, weatherboard single dwelling has an asphalt-covered, front-gabled roof and a poured concrete foundation. The wood windows are vertical, three-over-one hung, and the wood door is flush. The partial porch has a front-gabled roof supported by short brick piers topped by long, tapered, wood columns. Decorative details include triangular knee braces and double and triple windows. A shorter addition has been constructed on the east side with a shed roof and a poured concrete foundation.

Sanborn Insurance Maps

The 1925 map indicates a primary structure with two structures located at the rear of the property along the alley. The 1944 map shows a single garage structure located adjacent to the alley.

This historic garage structure was removed in 2019 after receiving a Certificate of Appropriateness (COA) for demolition.

Previous Actions

January 7, 2019 – A COA was approved for the demolition of a detached garage.

June 30, 2025 – A COA by Administrative Bypass was issued for the installation of a rear yard fence.

REQUESTS

a) Installation of wood shutters on the front and west side elevations of the principal structure.

Project Description

The applicant replaced the existing vinyl shutters with wood shutters without realizing review and issuance of a COA by the Historic District Commission was required. The applicant has installed shutters on the front and west side of the principal structure. The applicant has now submitted an *ex post facto* COA request to retain the installed shutters as shown in the submitted pictures.

Reference

Historic District Ordinance

36-535.a.2.g: *To safeguard the heritage of the City by preserving and regulating historic district structures in such a way that maintains or restores their historic integrity while allowing modern-day uses and conveniences for their residents.*

Preservation Guidelines

3.18 Guidelines for Utilities and Energy Retrofit

A review by the Historic District Commission will use the following criteria for the issuance of a Certificate of Appropriateness (COA):

- 1. Retain Inherent Energy-Conserving Features.** Retain and preserve the inherent energy-conserving features of historic buildings and their sites, including shade trees, porches, awnings, as well as operable windows, transoms, shutters, and blinds.
- 2. Use Traditional Energy-Saving Practices.** Increase the thermal efficiency of historic buildings by observing appropriate traditional practices, such as weather stripping and caulking, and by introducing energy-efficient features such as awnings, operable shutters, and storm windows and doors, where appropriate.

3.3 Guidelines for Wood Features

A review by the Historic District Commission will use the following criteria for the issuance of a Certificate of Appropriateness (COA):

- .1 Preserve Original Features.** Retain and preserve wood features that contribute to the overall historic character of a building, including siding, shingles, cornices, brackets, pediments, columns, balustrades, and architectural trim.
- .2 Replace Only Deteriorated Elements.** If replacement of a deteriorated detail or element of a wood feature is necessary, replace only the deteriorated detail or element in-kind rather than the entire feature. Match the original in design, dimension, texture, and material. Compatible substitute materials can be considered if in-kind replacement materials are not available or feasible.
- .3 Replace Missing Features.** Replace missing wooden features based on accurate documentation of the missing original or a new design compatible in scale, size, material, and texture, with the style, period, and design of the historic building and the district. Compatible substitute materials can be considered if in-kind replacement materials are not available or feasible.
- .4 Avoid False Historical Appearances.** Features or details that are introduced to a house shall reflect its style, period, and design. Features shall not create a false historical appearance by reflecting other time periods, styles, or geographic regions of the country.

Considerations/Issues

As indicated, this is an *ex post facto* review and the Historic District Ordinance requires the Commission to review the alterations as if the work had not been installed.

The *Preservation Guidelines for Energy Retrofit* allow for the installation of operable shutters as a means of energy conservation. In this case, the applicant is requesting shutters as a decorative feature for the front and west side elevations of the principal structure.

The *Preservation Guidelines for Wood Features* state it is not appropriate to add or remove wood features from the front façade. The Commission has approved the addition of decorative shutters to a historic structure where the width and height of the shutters are designed to give the appearance of operability. In the past, the Commission has viewed fixed shutters as a temporary feature that will not permanently alter the exterior of the historic principal structure.

Per the *Guidelines*, new features should reflect the style, period, and design of the historic structure and not create a false sense of history. While not a typical shutter design found in the Miller Historic District, the shutters do not reflect another specific period or style of house.

The Commission would need to determine if the proposed shutters on the principal structure meet the *Preservation Guidelines* and whether such proposed work is compatible with both the historic structure and the district.

Commission Action

Consideration of approval, rejection, amendment, and/or postponement of (HD 25-31) the Certificate of Appropriateness request for 301 E Keith Street for the following modification: a) installation of shutters on the front and west side elevations of the principal structure.

The City of Norman Historic District Commission
FOR CERTIFICATE OF APPROPRIATENESS (COA)

Staff Only Use

HD Case #:

Date:

Received by:

Note: Any relevant building permits must be applied for and paid for separately in the Planning and Community Development Office. 405-366-5311

Address of Proposed Work: 301 Keith street

Applicant's Contact Information:

Applicant's Name: Doug Rogers

Applicant's Phone Number(s):

Applicant's E-mail address:

Applicant's Address:

Applicant's relationship to owner: ☐ Contractor ☐ Engineer ☐ Architect

Owner's Contact Information: (if different than applicant)

Owner's Name:

Owner's Phone Number(s):

Owner's E-mail:

(Same)

Project(s) proposed: (List each item of proposed work requested. Work not listed cannot be reviewed.)

1) Replace Vinyl Shutters with Cedar shutters

2)

3)

4)

Supporting documents such as project descriptions, drawings and pictures are required see checklist page for requirements.

Authorization: I hereby certify that all statements contained within this application, attached documents and transmitted exhibits are true to the best of my knowledge and belief. In the event this proposal is approved and begun, I agree to complete the changes in accordance with the approved plans and to follow all City of Norman regulations for such construction. I authorize the City of Norman to enter the property for the purpose of observing and photographing the project for the presentations and to ensure consistency between the approved proposal and the completed project. I understand that no changes to approved plans are permitted without prior approval from the Historic Preservation Commission or Historic Preservation Officer.

Property Owner's Signature: [Signature]

Date: 9/29/25

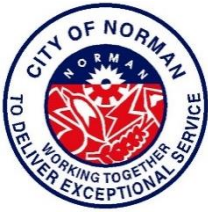
☐ (If applicable): I authorize my representative to speak in matters regarding this application. Any agreement made by my representative regarding this proposal will be binding upon me.

Authorized Representative's Printed Name:

Authorized Representative's Signature:

Date:





CITY OF NORMAN, OK STAFF REPORT

MEETING DATE: November 3, 2025

REQUESTER: Catherine Gilarranz, Krittenbrink Architecture

PRESENTER: Anais Starr, Planner II/Historic Preservation Officer

ITEM TITLE: (HD 25-34) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR THE PROPERTY LOCATED AT 485 COLLEGE AVENUE FOR THE FOLLOWING: A) THE INSTALLATION OF EIGHT-FOOT METAL SIDE AND REAR YARD FENCE.

BACKGROUND

Historical Information

1988 Chautauqua Historic District Survey Information:

485 College Ave. Circa 1935. This is a contributing Colonial Revival, two-story, weatherboard single dwelling. It has a gabled roof with a brick chimney on the north end. It does not have any porch or columns on the front, but there is a gabled wing that projects from the front of the house with a bay window. The siding has been clad with vinyl and the entry hood has been replaced.

485½ College Ave. Circa 1935. This non-contributing structure was originally built for automobile storage. It has a gable roof with no porch, chimney, or columns and has no discernible architectural style. Sometime after 1944, the exterior siding was clad with metal siding and the garage was converted to an accessory structure. The windows are metal while the door is wood panel. Due to alterations, this structure is considered non-contributing.

Sanborn Insurance Maps

The 1944 Sanborn Insurance Map shows the principal structure in its current location. An accessory structure is visible on the 1944 Sanborn Insurance Map, located where the front wing of the house currently stands. The 1944 Sanborn Insurance Map also shows an accessory structure situated along the southern property line in its current location and configuration.

Previous Actions

This property was designated part of the Chautauqua Historic District on August 14, 2018.

March 7, 2022 – The property owner requested a feedback session with the Commission about the removal of existing structures to accommodate the installation of a garage, swimming pool, greenhouse, and carport. The Commission stated that the demolition of a historic structure did not comply with the *Preservation Guidelines*.

June 3, 2024 – A Certificate of Appropriateness (COA) was approved for the following agenda items:

- a) Removal of existing front yard parking and reconfiguration of the driveway with either grasscrete or concrete.
- b) Installation of gutters on the house.
- c) Installation of gutters on the accessory structure.
- d) Replacement of existing windows with alternative material windows on the house.
- e) Replacement of existing windows with alternative material windows on the accessory structure.
- f) Installation of a new concrete walkway in the front yard with an additional leg from the northwest corner to the public sidewalk.

The Commission postponed the following requests to allow for revisions:

- g) Installation of a four-foot wrought iron fence with brick columns in the front yard.
- h) Installation of an eight-foot solid metal fence with brick columns in the sides.
- i) Installation of an eight-foot solid metal fence with brick columns in the rear yard.
- j) Installation of wrought iron gates over a driveway.
- k) Addition of a porch to the front façade of the house.
- l) Addition of a porch to the front façade of the accessory structure.
- m) Installation of a metal and glass sunroom to the rear of the house.
- n) Installation of a swimming pool and associated decking in the side yard; and
- o) Installation of new concrete walkways in the side and rear yards.

The Commission denied the request for the installation of front façade dormers.

June 7, 2025 – The applicant, Krittenbrink Architecture, requested a feedback session with the Commission to revisit possible exterior modifications to the principal structure, accessory structure, and the property. The Commission provided feedback on the proposed changes.

August 4, 2025 – A Certificate of Appropriateness (COA) was approved for the following agenda items:

- c) The removal of a window on the front elevation of the principal structure.
- d) The replacement of a door on the north side of the front room of the principal structure with a window.
- e) The moving of the existing window on the north side of the front room of the principal structure.
- f) The addition of a window on the north side of the front room of the principal structure.
- g) The replacement of a double window with a single window on the south side of the front room of the principal structure.
- h) The addition of a rear porch to the principal structure.
- i) The replacement of a bay window with a sliding glass door unit on the rear of the principal structure.
- j) The replacement of a door with a window on the rear of the principal structure.
- k) The re-opening of a window opening on the rear of the principal structure.
- l) The reconfiguration of windows and doors on the accessory structure.
- m) The installation of a stoop canopy on the north and west (front) sides of the accessory structure.
- n) The installation of walkways in the side and rear yards.

The Commission postponed the following agenda items to allow the applicant time to revise the drawings:

- a) replacement of the front stoop canopy on the principal structure.
- b) replacement and installation of wood shutters on the front and rear elevations of the principal structure.

September 8, 2025 – A Certificate of Appropriateness (COA) was approved for the installation of a front stoop canopy and shutters on the principal structure.

REQUESTS

a) The installation of an eight-foot metal side and rear yard fence.

Project Description

The property owner wishes to replace the existing eight-foot wood fence on the north side of the property with an eight-foot metal fence similar to the design of the metal fence along the south property line. The metal fence located adjacent to the south property line was installed by the adjacent property owner, OU Hillel. The applicant has submitted a site plan and pictures to illustrate the location and design of the proposed metal fence.

Reference

Historic District Ordinance

36-535.a.2.g: *To safeguard the heritage of the City by preserving and regulating historic district structures in such a way that maintains or restores their historic integrity while allowing modern-day uses and conveniences for their residents.*

Preservation Guidelines

3.16 Guidelines for Fences

The Historic District Commission will use the following criteria for review of a Certificate of Appropriateness (COA):

.1 Replacing Conforming Fences. *If an existing, conforming type of fence or wall is being replaced with one that is the same in material, height, placement, and style, a Certificate of Appropriateness is not required.*

.2 Materials. *Retain and preserve historic wall and fence materials that contribute to the overall historic character of a building. Acceptable materials for new fences and walls are wood, brick, stone, cast iron, iron, twisted wire, and painted aluminum that mimics the appearance of cast iron or iron fences. Vinyl is prohibited. A 4-foot chain link in the side or rear yards will be considered on a case-by-case basis.*

.3 Front Yard Fences. *Front yard fences taller than 4 feet are prohibited by the Norman Zoning Ordinance.*

.4 Side Yard Fences. *Side yard fences of up to 4 feet in height may be approved by Administrative Bypass. Side yard fences taller than 4 feet require a COA. Side yard fences taller than 6 feet are prohibited.*

.5 Rear Yard Fences. *Rear yard fences of a contemporary design or of non-traditional materials or of height greater than eight feet will be considered on a case-by-case basis. Such fences will be review for their impact to the historic structure and the District as a whole. The Norman Zoning Ordinance prohibits rear yard fences taller than 8 feet.*

.6 Fences on Corner Properties Adjacent to Alleys. *Fences on corner properties with alley*

access shall be located very carefully to maximize sight lines and minimize conflicts between alley traffic, pedestrians, and on-street traffic.

.7 Fence and Wall Materials. Fences or walls shall be constructed of wood, brick, stone, iron or cast or forged metal, stucco, or a combination of these materials. Stone or brick used in walls shall be compatible in size, scale, and style to that used elsewhere in the historic district, or typical of residential structures of this type, age, and location. No vinyl, cinder block, concrete block, or corrugated metal, may be used for fences or walls in historic districts. Chain link in the rear yard will be considered on a case-by-case basis.

.8 Colors and Finishes. Although paint color is not regulated by the Commission, it is strongly recommended that wood fences be stained or painted in colors and finishes appropriate to the style and period of the property and the district or left unfinished. No decorative murals shall be applied to fence or wall surfaces visible from the street.

.9 Finished Side Out. Fences or walls facing the street shall be constructed with the finished side out.

.10 Setback and Adjacent Property Tie-In. A fence 4 feet or less in height shall be set back a minimum of 1 foot from the inner edge of a public sidewalk. Where no sidewalk exists, fences shall be set back a minimum of 6 feet from the back of the curb or edge of pavement. If a fence exists on an adjacent property, the corner side yard fence shall tie into the existing fence.

Considerations/Issues

The Zoning Ordinance and the Preservation Guidelines define side yards as the area between the front edge and the back edge of the principal structure. The rear yard begins at the back edge of the principal structure and extends to the rear property line. The existing eight-foot wood fence starts at the north side of the house, which is the side yard, and extends east along the north property line, terminating behind the house, in the rear yard.

The *Preservation Guidelines* permit eight-foot rear yard fences to be considered on a case-by-case basis. The *Guidelines* prohibit fences taller than 6 feet in the side yard. However, this request is to replace an existing eight-foot wood fence with a fence of the same height but of a different material. The *Guidelines for Fences* state that metal is an allowed material. The *Guidelines* further state that the Commission can consider contemporary designs on a case-by-case basis.

The proposed eight-foot solid metal fence is not typical of fences seen in the Chautauqua Historic District. However, the proposed fence will have limited visibility from the front right-of-way. It should also be noted that this specific fence will be a much more permanent feature, unlike the typical wood stockade fences seen in the district. However, the applicant has received support from the property owner to the north, who shares this property line.

The Commission would need to determine whether the request for an eight-foot metal side and rear yard fence meets the *Preservation Guidelines* and if the proposed work is compatible with this historic structure and the Chautauqua Historic District.

Commission Action

Consideration of approval, rejection, amendment, and/or postponement of (HD 25-34) the Certificate of Appropriateness request for 485 College Avenue for the following modification: a) the installation of an eight-foot metal side and rear yard fence.

Staff Only Use:**HD Case #** _____**Date** _____**Received by:** _____

The City of Norman Historic District Commission

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS (COA)

Note: Any relevant building permits must be applied for and paid for separately in the Planning and Community Development Office 405-366-5311.

Address of Proposed Work: 485 College Ave, Norman OK 73069**Applicant's Contact Information:** Krittenbrink Architecture LLC

Applicant's Name: Carla Catherine Gilarranz

Applicant's Phone Number(s): [REDACTED]

Applicant's E-mail address: [REDACTED]

Applicant's Address: [REDACTED]

Applicant's relationship to owner: ☐ Contractor ☐ Engineer ☒ Architect**Owner's Contact Information: (if different than applicant)**

Owner's Name: Stephen Teel

Owner's Phone Number(s): [REDACTED]

Owner's E-mail: [REDACTED]

Project(s) proposed: (List each item of work proposed. Work not listed here cannot be reviewed.)

1) New fence on the north and west side of the property

2)

3)

4)

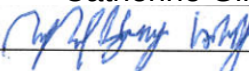
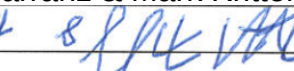
Supporting documents such as project descriptions, drawings and pictures are required see checklist page for requirements.

Authorization:

I hereby certify that all statements contained within this application, attached documents and transmitted exhibits are true to the best of my knowledge and belief. In the event this proposal is approved and begun, I agree to complete the changes in accordance with the approved plans and to follow all City of Norman regulations for such construction. I authorize the City of Norman to enter the property for the purpose of observing and photographing the project for the presentations and to ensure consistency between the approved proposal and the completed project. I understand that no changes to approved plans are permitted without prior approval from the Historic Preservation Commission or Historic Preservation Officer

Property Owner's Signature: **Date:** 09.30.2025

☐ (If applicable): I authorize my representative to speak in matters regarding this application. Any agreement made by my representative regarding this proposal will be binding upon me.

Authorized Representative's Printed Name: Catherine Gilarranz & Mark Krittenbrink**Authorized Representative's Signature:**  **Date:** 09.30.2025



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FAX: FAX

ELECTRICAL CONSULTANT:
ELEC. ENG
ELEC-ENG-ADDR

PHONE: PHONE
FAX: FAX

TEEL,STEPHEN
RESIDENCE
485 COLLEGE AVE
NORMAN, OK 73069

FIELD
VERIFICATION SET
06.30.2025

MARK	DATE	DESCRIPTION
REVISIONS		

NOT FOR

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SHEET TITLE:
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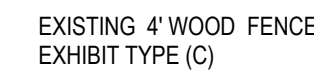
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EXISTING -
ARCHITECTURAL
SITE PLAN - 490 ELM
& 485 COLLEGE

SHEET NO:

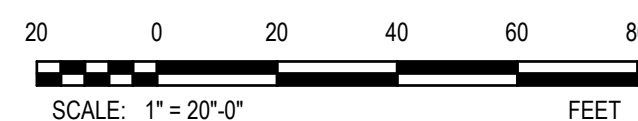
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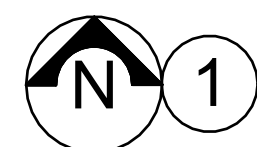
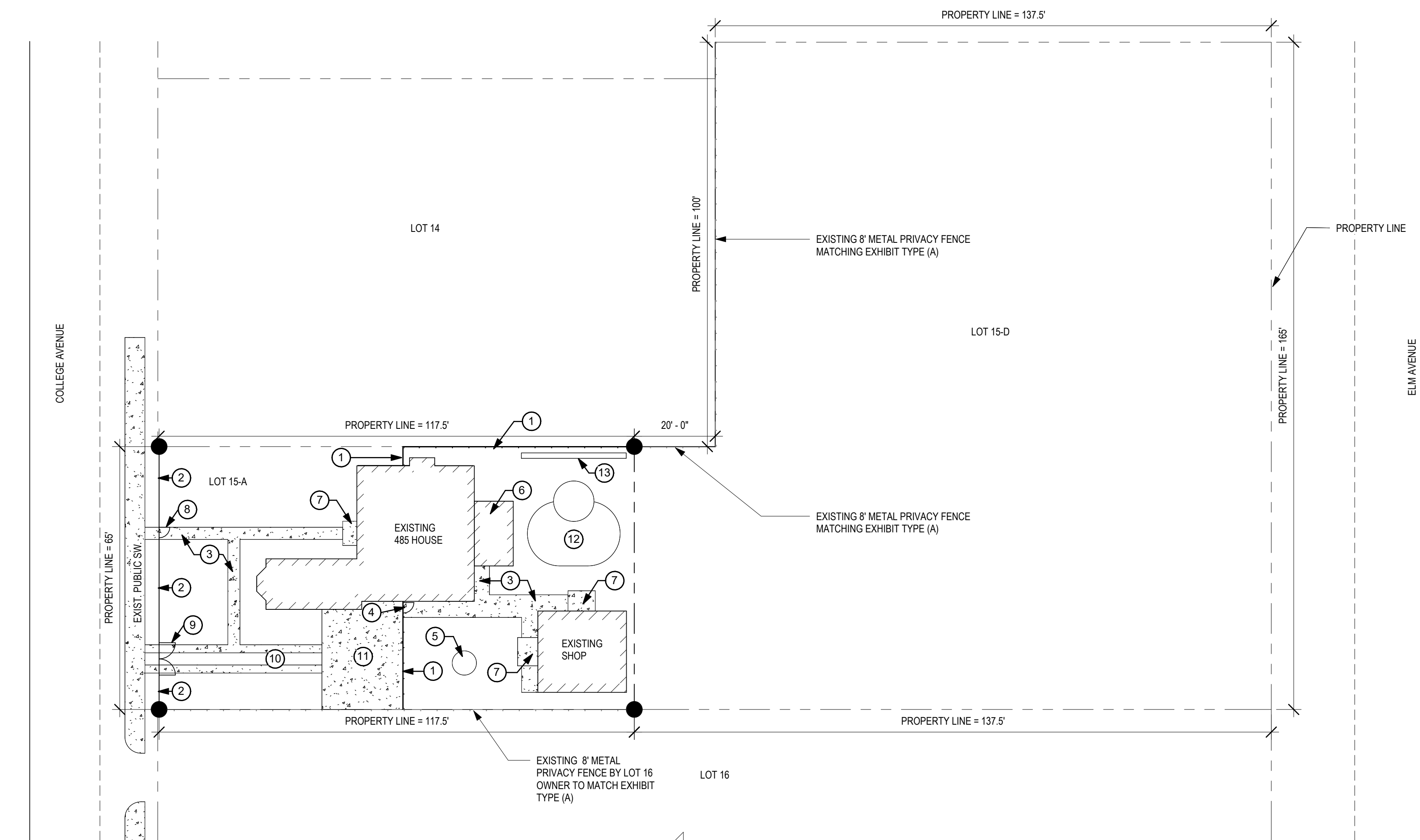
66



EXISTING ARCHITECTURAL SITE PLAN

1" = 20'-0"





ARCHITECTURAL SITE PLAN COA

$$1'' = 20'-0''$$


KEY NOTE SYMBOL LEGEND:

- (X) REFER TO - BUBBLE NOTE WITHOUT ARROWS APPLIES TO ENTIRE ROOM IN WHICH IT IS LOCATED UNLESS SHOWN OTHERWISE.

KEY NOTES:

- 1 8' TALL PRIVACY FENCE TO MATCH EXISTING SURROUNDING REFER TO EXHIBIT TYPE (A) UNDER COA PRESENTATION DOC.
- 2 4' TALL IRON COLONIAL-STYLE FENCE REFER TO EXHIBIT TYPE (D) UNDER COA PRESENTATION DOC.
- 3 CONCRETE SIDEWALK.
- 4 3080 METAL FENCE GATE TO MATCH FENCE TYPE (A).
- 5 FIRE PIT AREA.
- 6 PORCH ADDITION W/ GABLE ROOF AND COLONIAL-STYLE COLUMNS.
- 7 STOOP ADDITION W/ BRACKETED GABLE ROOF.
- 8 3040 IRON FENCE GATE TO MATCH FENCE TYPE (D).
- 9 8040 IRON FENCE GATE TO MATCH FENCE TYPE (D).
- 10 2' WIDE SPLIT RIBBON CONCRETE DRIVE WAY.
- 11 CONCRETE PARK DRIVEWAY.
- 12 POOL AND JACUZZI AREA.
- 13 GRILL AND TV AREA.

GENERAL NOTES - PROPOSAL

- A. DATA PRESENTED IN THESE DRAWINGS ARE AS ACCURATE AS SURVEYS AND PLANNING CAN DETERMINE. BUT ABSOLUTE ACCURACY IS NOT GUARANTEED. FIELD VERIFICATION OF THE PLANS IS THE RESPONSIBILITY OF THE CONTRACTOR SINCE FINAL DISTANCES, LOCATIONS AND HEIGHTS WILL BE GOVERNED BY ACTUAL FIELD CONDITIONS. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS IN AREAS TO BE RENOVATED PRIOR TO BID IN ORDER TO PROVIDE AN ACCURATE BID AND BE AWARE OF ALL CONSTRUCTION METHODS NEEDED TO PROVIDE THE FINISHED PRODUCT AS SHOWN ON THE PLANS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR A DECISION TO RESOLVE CONFLICTS PRIOR TO BID.
- B. CONTRACTOR SHALL FINISH ALL EXPOSED ITEMS IN NEW CONSTRUCTION.
- C. CONSTRUCTION IN AREAS TO BE RENOVATED SHALL BE CAREFULLY COORDINATED WITH THE OWNER AND ARCHITECT PRIOR TO CONSTRUCTION. EXISTING EQUIPMENT WILL BE RENOVATED SHALL BE CAREFULLY COORDINATED WITH THE OWNER AND ARCHITECT PRIOR TO CONSTRUCTION. EXISTING EQUIPMENT WILL BE RELOCATED OR STORED AS PER OWNER'S DIRECTION. EQUIPMENT AND FURNISHINGS TO BE STORED SHALL BE PROTECTED FROM DAMAGE AND VANDALISM IN LOCATIONS ACCEPTABLE TO THE OWNER.
- D. DASHED LINES ON DEMOLITION PLANS/ ELEVATIONS INDICATE EXISTING MATERIALS TO BE REMOVED, UNLESS OTHERWISE NOTED. EQUIPMENT TO BE REUSED SHALL BE STORED AND PROTECTED FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE RESULTING FROM CONSTRUCTION WILL BE REPAIRED TO ITS ORIGINAL STATE.
- E. ITEMS TO REMAIN AND TO BE PROTECTED ARE DESIGNATED WITH LIGHT CONTINUOUS LINES. IF DAMAGE OCCURS, PATCH, REPAIR, REFINISH OR REPLACE DAMAGED ITEMS AT NO COST TO OWNER.
- F. REPAIR SOFFITS, CEILING, WALL AND FLOOR FINISHES LEFT VOID OR DAMAGED BY DEMOLITION WORK TO MATCH EXISTING ADJACENT FINISHES.
- G. REPAIR ALL EXIST. CONSTRUCTION DAMAGED BY DEMOLITION TO LIKE NEW APPEARANCE.
- H. REPAIR WALLS DAMAGED BY DEMOLITION TO PROVIDE SMOOTH SURFACE, WITH PATCHES DRESSED FLUSH, SMOOTH AND READY TO RECEIVE FINISH MATERIAL.
- I. COORDINATE DEMOLITION AND CONSTRUCTION OPERATIONS WITH OWNER WHERE THEY EFFECT EXISTING WORK AREAS AND NORMAL OPERATING PROCEDURES.
- J. DEMOLITION EXPOSING THE INTERIOR OF THE BUILDING TO THE OUTSIDE ELEMENTS OR TO THE PUBLIC SHALL BE PROPERLY SEALED AND PROTECTED TO DAMAGE FROM VANDALISM OR WEATHER DURING CONSTRUCTION.
- K. PROVIDE SCREENING FROM DUST, FUMES, SMOKE, WATER, AND NOISE WHERE DEMOLITION REQUIRES CONSTRUCTION TO BE TO BE EXPOSED TO NORMAL OPERATIONS OF THE FACILITY.
- L. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO THE DEMOLITION WORK. PROBLEMS OR DISCREPANCIES IN THE PLAN SHALL BE REPORTED AT ONCE TO THE ARCHITECT AND ALL WORK INVOLVED IN THAT QUESTIONED AREA SHALL BE HALTED UNTIL ARCHITECT GIVES NOTICE TO PROCEED.
- M. PROTECT ALL EXISTING FLOORING FROM DAMAGE & REPAIR ANY DAMAGE TO LIKE NEW APPEARANCE UNLESS NOTED W/ NEW FLOORING.
- N. PATCH SURFACES AS REQUIRED TO MATCH EXISTING WHERE PLUMBING, MECHANICAL, AND ELECTRICAL ITEMS OR EQUIPMENT HAVE BEEN REMOVED.
- O. GENERAL CONTRACTOR TO PROPERLY DISPOSE, DONATE, AND/OR RECYCLE ALL DEMO ITEMS, UNLESS OTHERWISE NOTED 'RETURN TO OWNER': COORD. W/ ARCH. & OWNER.
- P. COORDINATE ALL HVAC DUCTWORK, RETURNS & SYSTEM SPECS W/ HVAC SUB-CONTRACTOR & ARCHITECT.
- Q. SECURE & LEVEL ALL FLOOR & SUB-FLOOR, TYP.
- R. INSTALL ALL APPLIANCES (SELECTED & SUPPLIED BY OWNER) & PRODUCTS AS PER MANUFACTURER'S SPECIFICATIONS, REWORK PLUMBING & ELECTRICAL, COORD W/ OWNER & ARCHITECT, RE: POWER PLAN.
- S. ALL EXTERIOR WALLS & SOFFITS WILL HAVE A MIN. OF R-19 INSULATION TO COMPLY W/ CITY IN WHICH CONSTRUCTION IS BEING DONE COORD. W/ ARCHITECT & OWNER - WHERE NECESSARY.
- T. ATTICS SHALL INCLUDE INSULATION W/ A MIN OF R-30 & RADIANT BARRIER BACKED OSB AT ALL NEW ROOF DECKING, COORD. W/ ARCHITECT & OWNER- WHERE NECESSARY.
- U. ALL GLASS IN WINDOWS & DOORS SHALL BE COMPLIANT W/ IRC 2021, E.G. U-FACTOR, SOLAR HEAT GAIN COEFFICIENT, ETC., COORD. ALL SELECTIONS W/ ARCHITECT.
- V. DOORS/WINDOWS TO BE RE-USED IN NEW CONSTRUCTION (COORD. W/ OWNER).
- W. ALL NEW WALLS TO RECEIVE A LEVEL 4 TEXTURE AND TO BE PAINTED TO MATCH EXISTING WHERE APPLY.
- X. ADD SMOKE DETECTORS & CO2 DETECTORS PER CURRENT CODE.
- Y. DOORS @ 45° ARE EXISTING TO REMAIN & 90° ARE NEW.



Item 4.

KRITTENBRINK

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FAX: FAX

TEEL,STEPHEN
RESIDENCE
485 COLLEGE AVE
NORMAN, OK 73069

SCHEMATIC DESIGN
SET
06.30.2025

[illegible]

MARK	DATE	DESCRIPTION
REVISIONS		

PRIMARY ISSUE		
MARK	DATE	DESCRIPTION
0	00-00-00	PERMIT ISSUE
0	00-00-00	BID ISSUE
0	00-00-00	CONST. ISSUE

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DRAWN BY	CHECKED BY
CCG	MLK

SHEET TITLE

PROPOSAL -
ARCHITECTURAL
SITE PLAN - 490 ELM
& 485

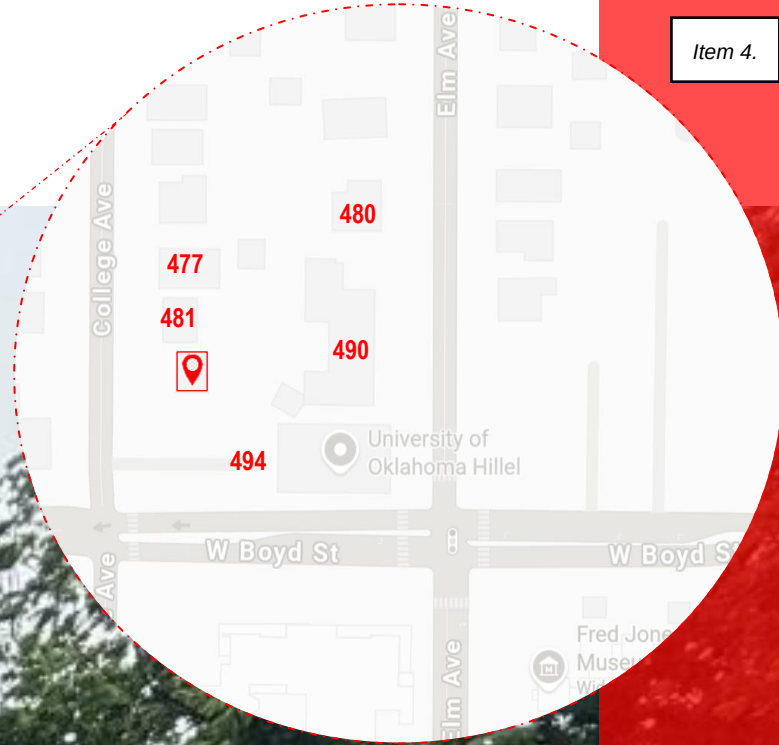
COLLEGE COA

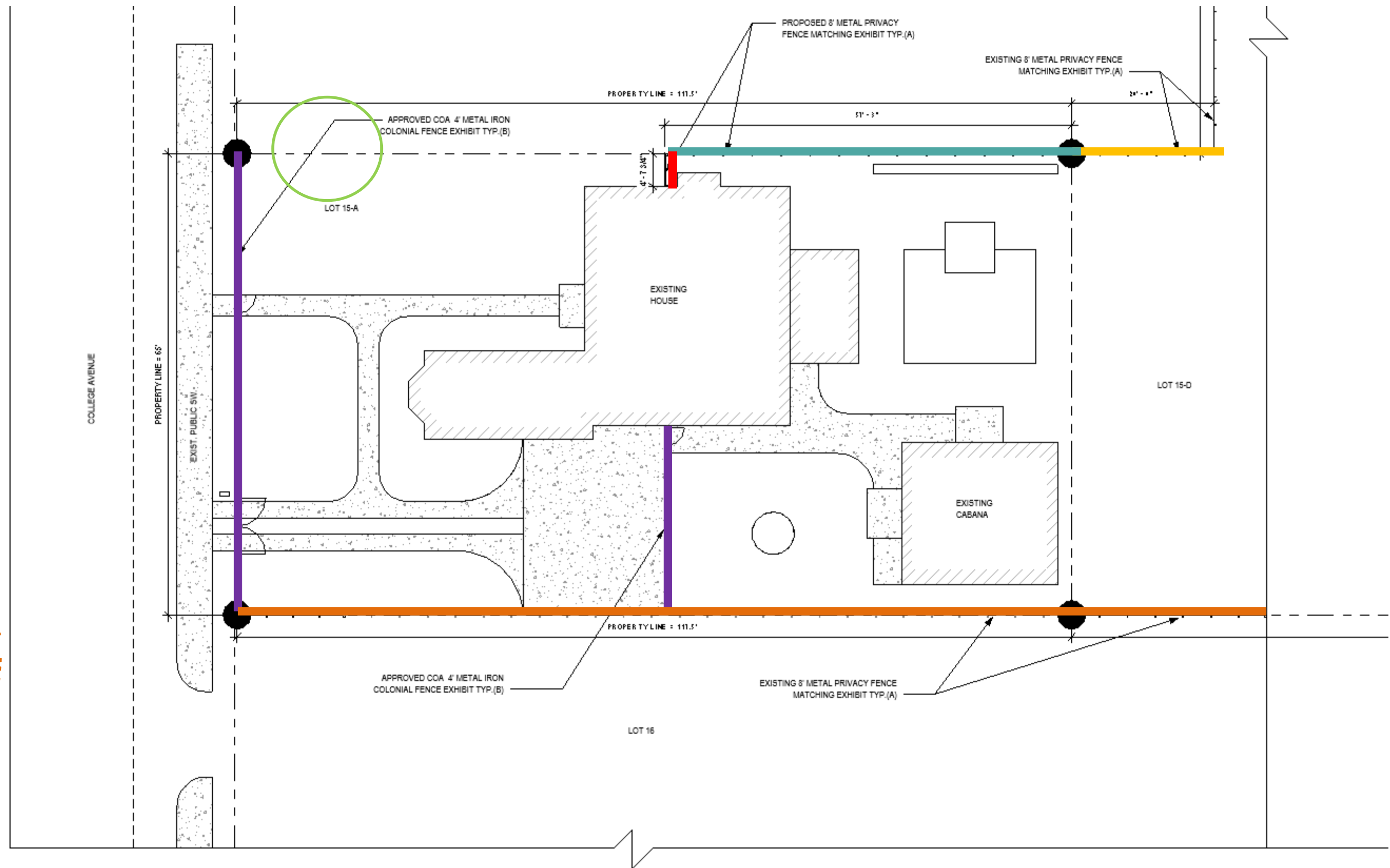
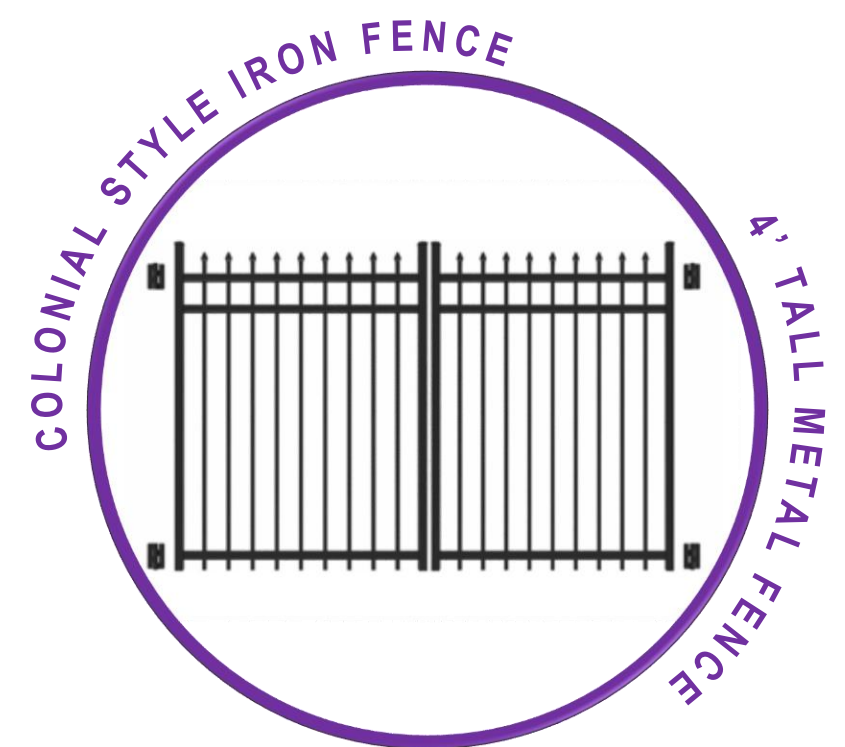
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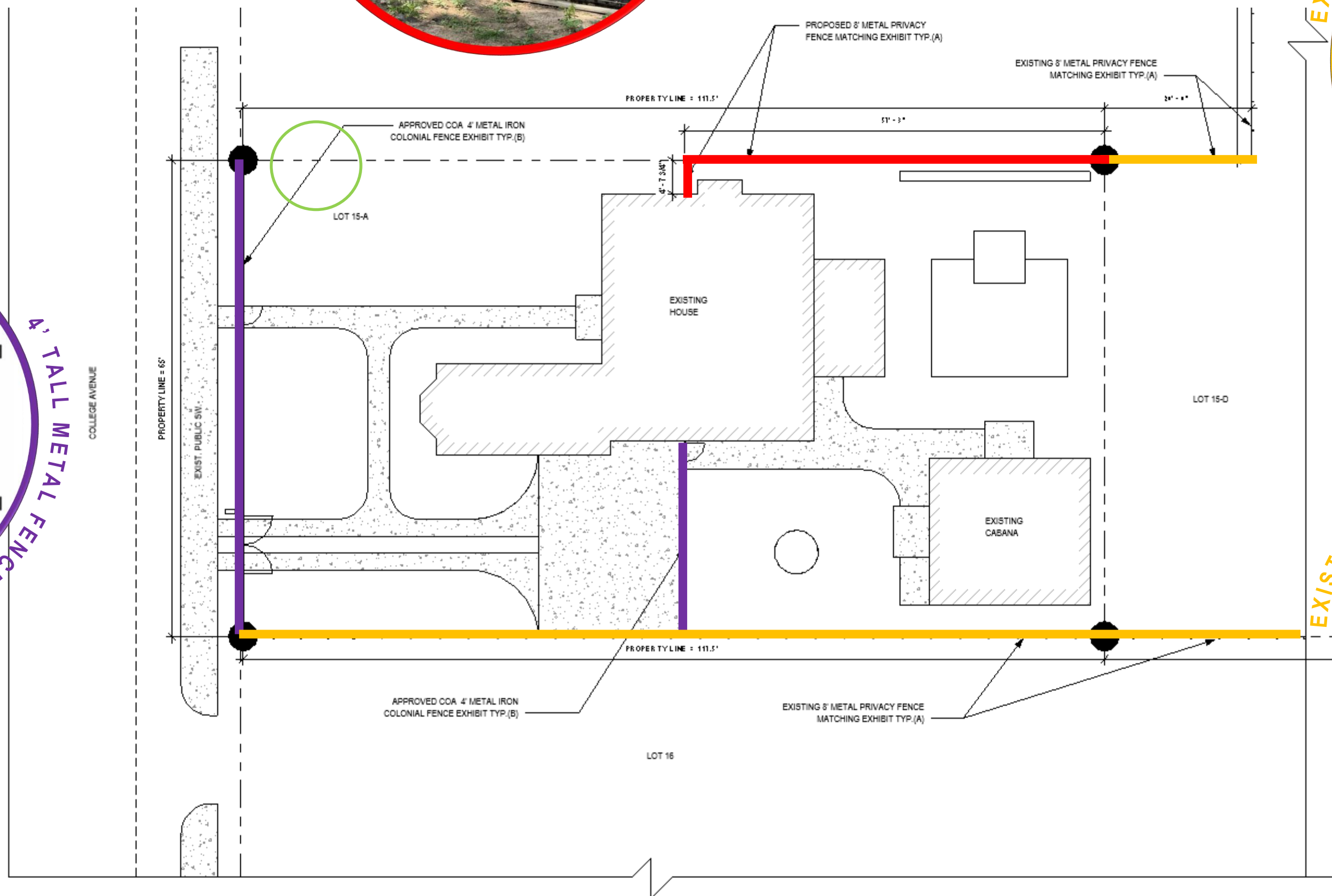
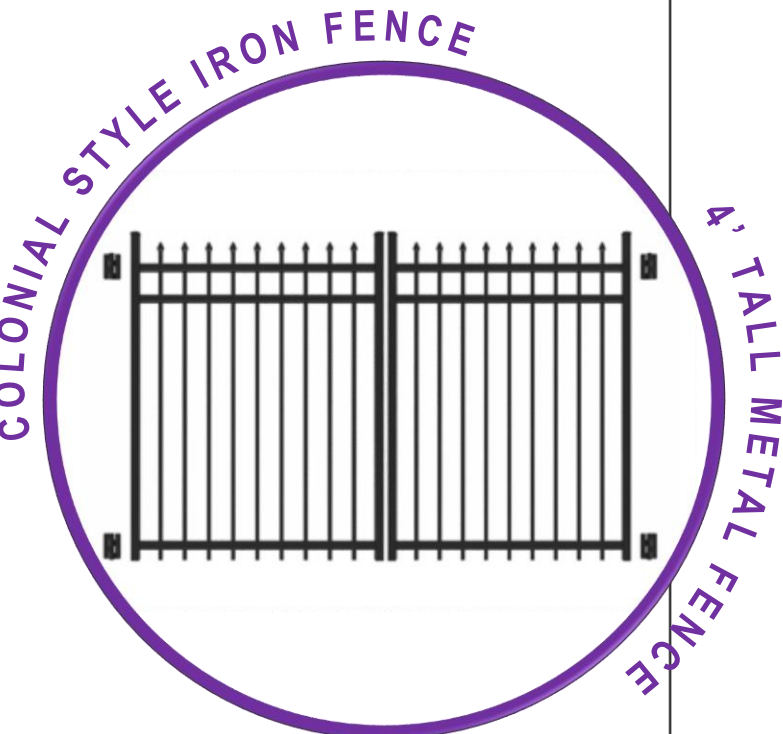
COA VARIANCE

PRESENTATION

PROJECT: Teel Stephen Residence
LOCATION: 485 College Ave, Norman OK
PRESENTER: Catherine Gilarranz & Mark Krittenbrink
DATE: Sep 30th 2025







Greg P. Skinner Surveying

11600 C.R. 3630 · Ada, OK 74820 · (405)255-6161

Legal Descriptions

Legal Description (Lot 15C)

A parcel of land being a part of Lot Fifteen (15), in Block One (1) of LINCOLN ADDITION to Norman, Cleveland County, Oklahoma and being more particularly described as follows:

Commencing at the southeast corner of said Lot 15; Thence West, along the south line of said Lot 15, a distance of 157.5 feet to the Point of Beginning;

Thence, continuing along said south line, a distance of 117.5 feet to a point being 15' east of the southwest corner of said Lot 15; Thence North and parallel to the west line of said Lot 15, a distance of 65.0 feet to a point on the north line of said Lot, said point being 15' west of the northwest corner of said Lot 15; Thence East, along the north line of said Lot 15, a distance of 117.5 feet; Thence South a distance of 65.0 feet to the Point of Beginning.

Legal Description (Lot 15D)

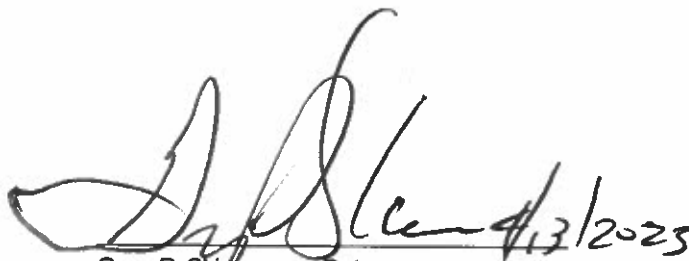
A parcel of land being a part of the South 17.5 feet of the East 137.5 feet of Lot Thirteen (13) and the East 137.5 feet of Lots Fourteen (14) and Fifteen (15) in Block One (1) of LINCOLN ADDITION to Norman, Cleveland County, Oklahoma, being more particularly described as follows:

Beginning at the Southeast corner of Lot Fifteen (15) in Block One (1) of said LINCOLN ADDITION;

Thence North, along the East line of said Lots 13, 14 and 15, a distance of 165.0 feet to a point lying 17.5 feet North of the Southeast corner of said Lot 13; Thence West, and parallel to the North line of said Lot 14, a distance of 137.5 feet; Thence South, parallel with the East line of said Lots 13, 14, and 15, a distance of 100.0 feet to a point on the north line of said Lot 15; Thence West, along said north line, a distance of 20.0 feet; Thence South a distance of 65.0 feet to a point on the South line of said Lot 15; Thence East, along said South line, a distance of 157.5 feet to the Point of Beginning.

CERTIFICATION:

I hereby certify that these legal descriptions were prepared by me or under my direct supervision and checking, and are correct to the best of my knowledge, belief and opinion.

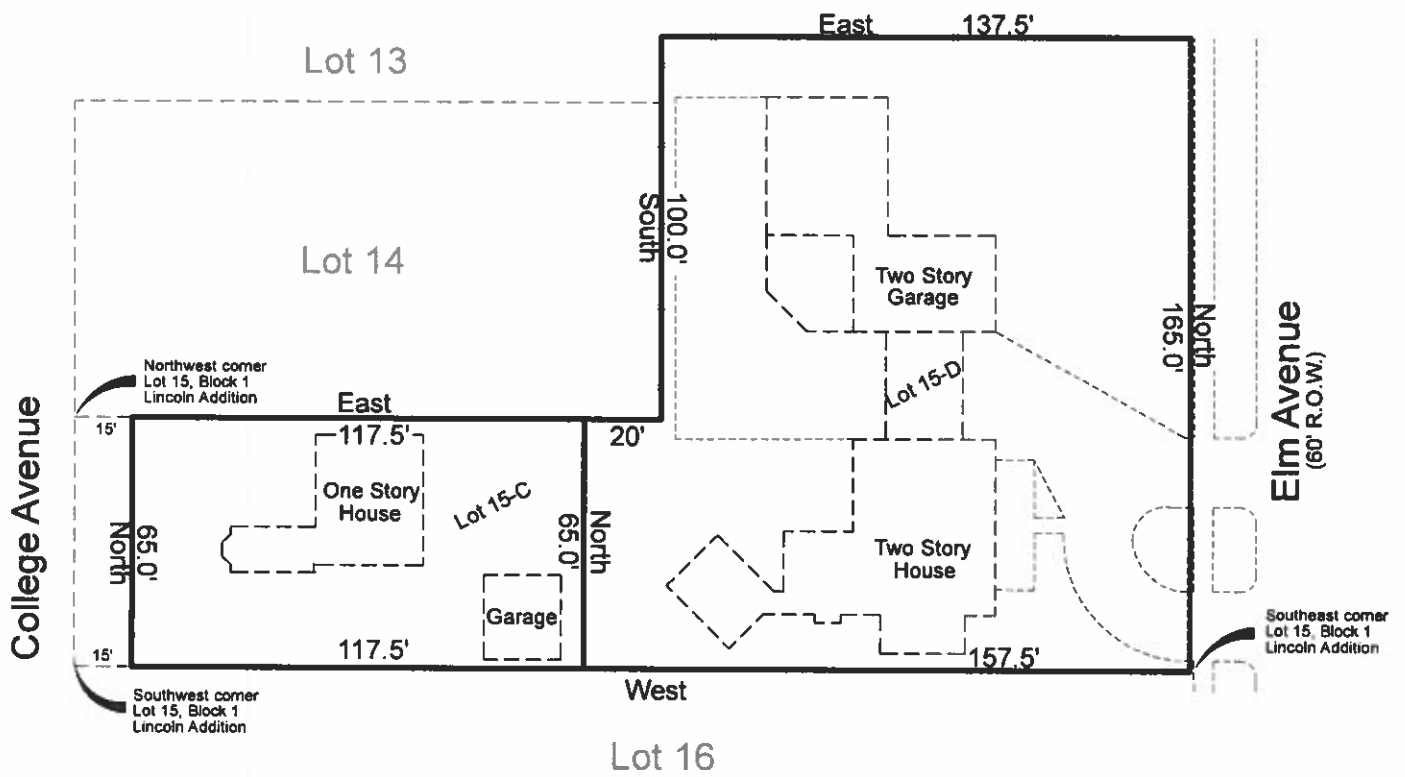

 Greg P. Skinner Date
 Oklahoma L.S. 1458



Greg P. Skinner Surveying

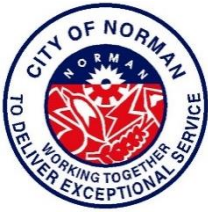
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Lot Line Adjustment (As Proposed)



NOTES:

1. This Lot Line Adjustment was prepared without the benefit of title commitment. Record title information was obtained from the plat of Lincoln Addition to Norman, Oklahoma.



CITY OF NORMAN, OK STAFF REPORT

MEETING DATE: November 3, 2025

REQUESTER: Stan Berry, Architect, on behalf of Marney Snow, III and Emily Snow

PRESENTER: Anais Starr, Planner II/Historic Preservation Officer

ITEM TITLE: (HD 25-35) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR THE PROPERTY LOCATED 508 CHAUTAUQUA AVENUE FOR THE FOLLOWING MODIFICATIONS: A) INSTALLATION OF A DETACHED ACCESSORY DWELLING UNIT; B) REPLACEMENT OF THE EXISTING REAR DRIVEWAY WITH A PARKING PAD; C) INSTALLATION OF A PARKING PAD IN THE REAR YARD.

Background

Historical Information

1988 Chautauqua Historic District Nomination Survey Information:

508 Chautauqua Ave., Ca. 1912. Bungalow/Craftsman. *This contributing, one-and-one-half story, stucco single dwelling has an asphalt-covered, front-gabled roof and a concrete foundation. The metal windows are one-over-one hung and simulated, six-over-six hung. The metal door is glazed paneled with a glazed slab door. The full-width porch is sheltered by the principal roof, which features paneled and stucco columns. Other exterior features include a red brick and stucco exterior chimney on the south side. Decorative details include double and triple windows, wood shingles in the gable end and false half-timbering. To the rear is a one-car, stucco garage with a front-gabled, asphalt-covered roof and a metal, glazed, paneled, overhead door.*

Staff would note that this property underwent significant restoration efforts in 2017-2018. The front porch, stairs, and railing on the principal structure and a set of garage doors were installed based on similar designs found in the district.

Sanborn Insurance Map Information

The principal structure and the garage are indicated in their present location on the 1925 and 1944 Sanborn Maps.

Previous Actions

September 11, 2017 – A Certificate of Appropriateness (COA) was issued for the replacement of the front porch, exterior modifications, windows and door replacement, the installation of a front sidewalk, and the modification of the dormer on the second floor.

May 7, 2018 – A Certificate of Appropriateness was issued for the installation of a garage door and garage door trim.

OVERALL PROJECT DESCRIPTION

The applicant has submitted a proposal with several projects for review. An accessory dwelling unit (ADU) is proposed in the rear yard behind the existing garage. The proposal also includes adding a parking pad adjacent to the front driveway, behind the principal structure. Also requested is a parking pad off the alleyway to replace the existing narrow rear driveway. The applicant also proposes a walkway to connect the accessory dwelling unit to the new parking areas. This request can be approved through the Administrative Bypass process. The applicant plans to replace the wood fence along the rear property line with a fence of the same size and material. An in-kind fence replacement is considered a repair and does not require review. A concrete pad will also be removed as part of the renovations. This does not require review.

This property's current zoning designation is R-1, Single-Family Dwelling District. This zoning designation permits a single-family dwelling unit and an accessory dwelling unit.

REQUEST

a) Installation of a detached accessory dwelling unit.

Project Description:

The applicant is proposing to construct a 650 square foot accessory dwelling unit (ADU) in the rear yard with design elements from the principal structure and the existing historic garage. The following materials are proposed: stucco, cement shingles, aluminum-clad wood windows, and a fiberglass entry door. The ADU is proposed to be located behind the existing garage with limited visibility from the front streetscape.

The City of Norman ordinance allows for either an attached or detached accessory dwelling unit in the R-1, Single-Family Dwelling District. The ordinance limits the maximum square footage for the accessory dwelling unit to 650 square feet. The ADU will be set back 3'6" from the side property line and 25'4" from the rear property line, which meets the setback requirements of the Zoning Ordinance.

Reference

Historic District Ordinance

36-535.a.2(g): *To safeguard the heritage of the City by preserving and regulating historic district structures in such a way that maintains or restores their historic integrity while allowing modern-day uses and conveniences for their residents.*

36-535.c: *Changes to rear elevations do require a COA; however, the rear elevation of a historic structure is considered a secondary elevation and is therefore regulated to a lower standard to allow flexibility for additions or other modern-day appurtenances.*

Preservation Guidelines

2.7 Guidelines for Secondary Structures

A review by the Historic District Commission will use the following criteria for the issuance of a Certificate of Appropriateness (COA):

.1 Secondary structures. Secondary structures are accessory structures with a footprint of 400 square feet or greater and/or taller than one-story, examples of secondary structures are garage apartments, studios, workshops and cabanas.

.6 Make New Construction Compatible. Secondary accessory structures are to be compatible with the principal structure and surrounding district and in no case overwhelm the principal structure. Construction of secondary accessory structures will utilize the following criteria for new construction:

a. Match in design, style, and material to the principal historic structure and the surrounding historic neighborhood.

b. Compatible with the principal historic structure and/or the district in regards to materials, size, scale, height, form, massing, proportions, spacing and size of window and door openings, window to wall proportions and traditional setbacks seen in the neighborhood.

.7 Size of New Secondary Structures. New secondary accessory structures are to be subservient to the principal structure in no case will the secondary structure be taller, wider or deeper than the principal structure. The size of a secondary structure is limited to 575 square feet or 50% of the principal structure footprint. The cumulative of square footages for all accessory structures and garages on the lot, shall be no greater than the footprint of the principal structure.

.8 Location and Setbacks of Secondary Structures. New secondary structures are to maintain traditional locations and setbacks seen in the neighborhood. Locations are to be in the rear yard, with limited or no visibility from the front right-of-way, unless there historical indications of a different location. Corner lots are considered to have two front elevations.

.9 Windows and Doors for Secondary Accessory Structures. Select doors and windows for new secondary accessory buildings that are compatible in material, proportion, pattern, and detail with the doors and windows of historic buildings in the district. See Windows and Door Guidelines.

.10 Materials. Select materials and finishes for proposed new buildings that found in historic buildings in the district in terms of composition, scale, pattern, detail, texture, and finish. Acceptable materials include brick and stone masonry, stucco and wood. Cement fiberboard will be considered on a case-by-case basis for those structures located behind the back elevation of the principal structure, but with limited visibility from the front right-of-way. Metal and vinyl exterior materials are prohibited.

.11 Avoid False Historical Appearance. New secondary accessory structures are to be compatible with the style, age and character of the principal structure and district without creating a false historical appearance. New structures are to be of their own time and differentiated from the historic structure while maintaining compatibility with the principal structure and the character of the neighborhood.

3.12 Guidelines for Windows

.11 New Primary and Secondary Accessory Structures. Windows in new construction are to compatible with in adjacent historic structures in terms of size, profile, design, proportions, and material. Wood and aluminum-clad windows are acceptable for use in new construction.

3.14 Guidelines for Doors

.10 New Primary and Secondary Accessory Structures. Doors in new construction shall be similar to those in adjacent historic structures in terms of size, profile, design, proportions,

and material. Aluminum-clad and fiberglass doors with limited or no visibility from the front façade can be considered on a case-by-case basis.

Considerations/Issues:

The proposed ADU meets the Zoning Ordinance requirements for size, setback, height, and impervious surface.

The principal structure has a footprint of 1,564 square feet. The proposed 650 square foot secondary structure is less than 50% of the principal structure which meets the *Guidelines for Secondary Structures* for size.

The applicant has proposed this location to preserve the current open space and utilize the existing rear yard. For this reason, the applicant will remove the existing concrete pad currently located in the middle of the back yard. The proposed location, situated behind the existing garage, offers limited visibility from the front streetscape and meets the location requirements outlined in the *Guidelines for Secondary Structures*. No trees will be removed for the proposed projects.

For the exterior walls, the applicant proposes stucco and fiber cement trim. Fiber cement shingles are proposed for the gables of the structure. The *Guidelines* permit cement fiberboard to be considered on a case-by-case basis when the structure is located behind the back elevation of the principal structure with limited visibility from the front right-of-way, as found with this proposal. The proposed shingles will have a textured appearance since they emulate wood shingles. The applicant is proposing aluminum-clad wood windows and a fiberglass entry door. The *Guidelines* allow aluminum-clad windows and fiberglass doors when there is no visibility from the front streetscape, subject to a case-by-case review.

The ADU is compatible with the principal structure and meets the *Guidelines* with its simple design, similar materials, and inconspicuous location in the rear yard. It will be differentiated from the principal structure by its use of modern materials such as cement shingles, aluminum-clad wood windows, and a fiberglass entry door, thereby avoiding a false sense of history.

The Commission would need to determine if the ADU meets the *Guidelines* and is compatible with the historic principal structure and the district.

Commission Action: (HD 25-35) Consideration of approval, rejection, amendment, and/or postponement of a Certificate of Appropriateness request for the property located at 508 Chautauqua Avenue for the following modification: a) installation of a detached accessory dwelling unit.

b) Replacement of the existing rear driveway with a parking pad.

Project Description:

To allow for the placement of the ADU while still providing parking, the applicant proposes to remove the existing narrow driveway and replace it with a parking pad. The placement of the driveway is restricted by the existing utility pole and gas meter located in the alleyway, as well as the tree on the south side of the parking pad. The applicant proposes to replace the existing 7' wide by 54' long rear driveway with a 14' wide by 25' 6" parking pad. This will reduce the concrete area from 378 square feet to 355 square feet.

Reference

Historic District Ordinance

36-535.a.2(g): *To safeguard the heritage of the City by preserving and regulating historic district structures in such a way that maintains or restores their historic integrity while allowing modern-day uses and conveniences for their residents.*

Preservation Guidelines

2.9 Guidelines for Sidewalks and Driveways

A review by the Historic District Commission will use the following criteria for the issuance of a Certificate of Appropriateness (COA):

.1 Front Driveway Location. *Preserve and retain historic front driveways locations. New or expanded front driveways shall be perpendicular to the street, except in individual cases where there is historical documentation of an alternate configuration. Unless there is historic documentation otherwise, driveways shall be located along the property line on one side of the house.*

.2 Driveway Width. *Driveways shall be one car width, not to exceed 10 feet wide, unless there is historic documentation of an alternate configuration. Driveway width may vary as it approaches a garage in order to correspond to the width of the door opening.*

.3 New Driveway Composition. *Driveways shall be constructed from material allowed by the City Code. Existing gravel driveways may remain in place subject to other provisions in the City Code.*

.5 Driveway Approaches. *Maintain the rhythm of existing approaches when introducing new driveways. Driveway approaches may be a maximum of 16 feet wide at the curb, narrowing to 10 feet at the sidewalk or property line.*

.10 New Paved Areas. *New paved areas should not directly abut the principal site structure, significantly alter the site topography, or overwhelm in area the residential, landscaped character of a rear or side yard. Care must be taken that paved areas do not injure nearby trees by intruding onto their root areas. They shall be designed to be compatible in location, patterns, spacing, configurations, dimensions, and materials with existing walkways and driveways. Paved areas shall not overwhelm the principal structure.*

.11 Rear Yard Area. *New parking areas are permitted off alleyway with no visibility or limited visibility from the front right-of-way(s). Corner lots are considered to have two front elevations. Rear yard parking must meet Norman City Codes.*

.12 Side Yard Parking Area. *The establishment of parking areas adjacent to the side of historic structures is not allowed.*

.13 Front Yard Parking Area. *Parking areas in the front yard of the property are prohibited except within an existing driveway.*

Considerations/Issues:

The Core Area Parking regulations in the Zoning Ordinance require any new parking areas to be installed in the rear or side yards. The proposed driveway meets the Core Area Parking regulations. The *Guidelines for Driveways and Parking* encourage new driveways and parking pads to be in the rear yard off the alleyway, as is found with this request. As noted under Project Description of this report, the reconfiguration of the rear driveway into a parking pad will result in a slight reduction in size while still providing parking for the parcel.

The Commission would need to determine if replacement of the existing rear driveway with a parking pad meets the *Guidelines* and is compatible with this historic property and the district.

Commission Action: (HD 25-35) Consideration of approval, rejection, amendment, and/or postponement of a Certificate of Appropriateness request for the property located at 508 Chautauqua Avenue for the following modification: b) replacement of the existing rear driveway with a parking pad.

c) Installation of a parking pad in the rear yard.

Project Description:

The applicant proposes a new parking pad to provide additional parking for the property, as well as space for vehicles to turn around and exit the rear yard facing the street. The applicant is proposing a parking pad of approximately 400 square feet behind the house, as shown on the submitted site plan.

Reference

Historic District Ordinance

36-535.a.2(g): *To safeguard the heritage of the City by preserving and regulating historic district structures in such a way that maintains or restores their historic integrity while allowing modern-day uses and conveniences for their residents.*

36-535.c: *Changes to rear elevations do require a COA; however, the rear elevation of a historic structure is considered a secondary elevation and is therefore regulated to a lower standard to allow flexibility for additions or other modern-day appurtenances.*

Preservation Guidelines

2.9 Guidelines for Sidewalks and Driveways

A review by the Historic District Commission will use the following criteria for the issuance of a Certificate of Appropriateness (COA):

.1 Front Driveway Location. *Preserve and retain historic front driveways locations. New or expanded front driveways shall be perpendicular to the street, except in individual cases where there is historical documentation of an alternate configuration. Unless there is historic documentation otherwise, driveways shall be located along the property line on one side of the house.*

.2 Driveway Width. *Driveways shall be one car width, not to exceed 10 feet wide, unless there is historic documentation of an alternate configuration. Driveway width may vary as it approaches a garage in order to correspond to the width of the door opening.*

.3 New Driveway Composition. *Driveways shall be constructed from material allowed by the City Code. Existing gravel driveways may remain in place subject to other provisions in the City Code.*

.5 Driveway Approaches. *Maintain the rhythm of existing approaches when introducing new driveways. Driveway approaches may be a maximum of 16 feet wide at the curb, narrowing to 10 feet at the sidewalk or property line.*

.10 New Paved Areas. *New paved areas should not directly abut the principal site structure, significantly alter the site topography, or overwhelm in area the residential, landscaped character of a rear or side yard. Care must be taken that paved areas do not injure nearby trees by intruding*

onto their roof areas. They shall be designed to be compatible in location, patterns, spacing, configurations, dimensions, and materials with existing walkways and driveways. Paved areas shall not overwhelm the principal structure.

.11 Rear Yard Area. New parking areas are permitted off alleyway with no visibility or limited visibility from the front right-of-way(s). Corner lots are considered to have two front elevations. Rear yard parking must meet Norman City Codes.

.12 Side Yard Parking Area. The establishment of parking areas adjacent to the side of historic structures is not allowed.

.13 Front Yard Parking Area. Parking areas in the front yard of the property are prohibited except within an existing driveway.

Considerations/Issues:

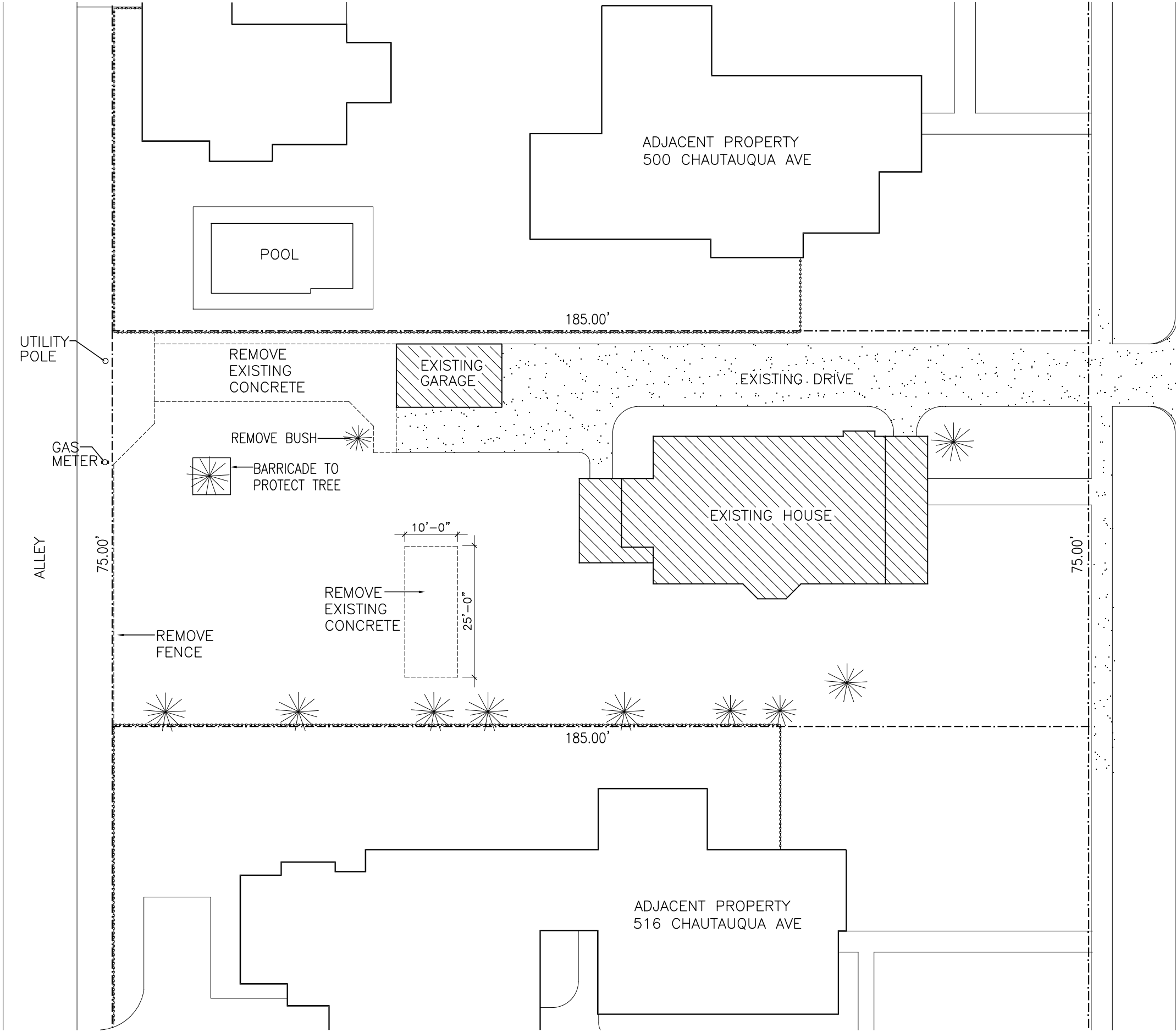
The Core Area Parking regulations in the Zoning Ordinance require any new parking areas to be installed in the rear or side yards. The proposed driveway meets the Core Area Parking regulations. The *Guidelines for Driveways and Sidewalks* permit new parking areas in the rear yard, provided there is no visibility from the front streetscape, as proposed with this request. The requested parking pad meets the Zoning Ordinance and the *Guidelines for Driveways and Sidewalks* for location. The addition of the parking pad will allow for parking by the residents while increasing safety for vehicles exiting the property.

Commission Action: (HD 25-35) Consideration of approval, rejection, amendment, and/or postponement of a Certificate of Appropriateness request for the property located at 508 Chautauqua Avenue for the following modification: c) installation of a parking pad in the rear yard.

The City of Norman Historic District Commission APPLICATION FOR CERTIFICATE OF APPROPRIATENESS (COA)		Staff Only Use: HD Case # _____ Date _____ Received by: _____	Item 5.
Note: Any relevant building permits must be applied for and paid for separately in the Planning and Community Development Office 405-366-5311.			
Address of Proposed Work:		508 Chautauqua Avenue	
Applicant's Contact Information:			
	Applicant's Name: Stanley Berry		
	Applicant's Phone Number(s): [REDACTED]		
	Applicant's E-mail address: [REDACTED]		
	Applicant's Address: [REDACTED]		
	Applicant's relationship to owner: ☐ Contractor ☐ Engineer ☒ Architect		
Owner's Contact Information: (if different than applicant)			
	Owner's Name: [REDACTED]		
	Owner's Phone Number(s): [REDACTED]		
	Owner's E-mail: [REDACTED]		
Project(s) proposed: (List each item of work proposed. Work not listed here cannot be reviewed.)			
1) Remove two existing concrete areas			
2) Construct Accessory Dwelling Unit (ADU)			
3) Remove existing fence and construct new fence			
4) Construct two parking areas			
Supporting documents such as project descriptions, drawings and pictures are required see checklist page for requirements.			
Authorization: I hereby certify that all statements contained within this application, attached documents and transmitted exhibits are true to the best of my knowledge and belief. In the event this proposal is approved and begun, I agree to complete the changes in accordance with the approved plans and to follow all City of Norman regulations for such construction. I authorize the City of Norman to enter the property for the purpose of observing and photographing the project for the presentations and to ensure consistency between the approved proposal and the completed project. I understand that no changes to approved plans are permitted without prior approval from the Historic Preservation Commission or Historic Preservation Officer			
Property Owner's Signature: [Signature]			Date: 9/24/25
☒ (If applicable): I authorize my representative to speak in matters regarding this application. Any agreement made by my representative regarding this proposal will be binding upon me.			
Authorized Representative's Printed Name: Stanley Berry			
Authorized Representative's Signature: [Signature: Stanley Berry]			Date: 9/24/25

Scope of Work – 508 Chautauqua Avenue

1. Remove two existing concrete areas.
2. Construct 650 square feet Accessory Dwelling Unit (ADU).
3. Replace and re-configure wood fencing.
4. Construct two new parking areas.
5. One small bush to be removed as required by construction. No other trees to be removed.



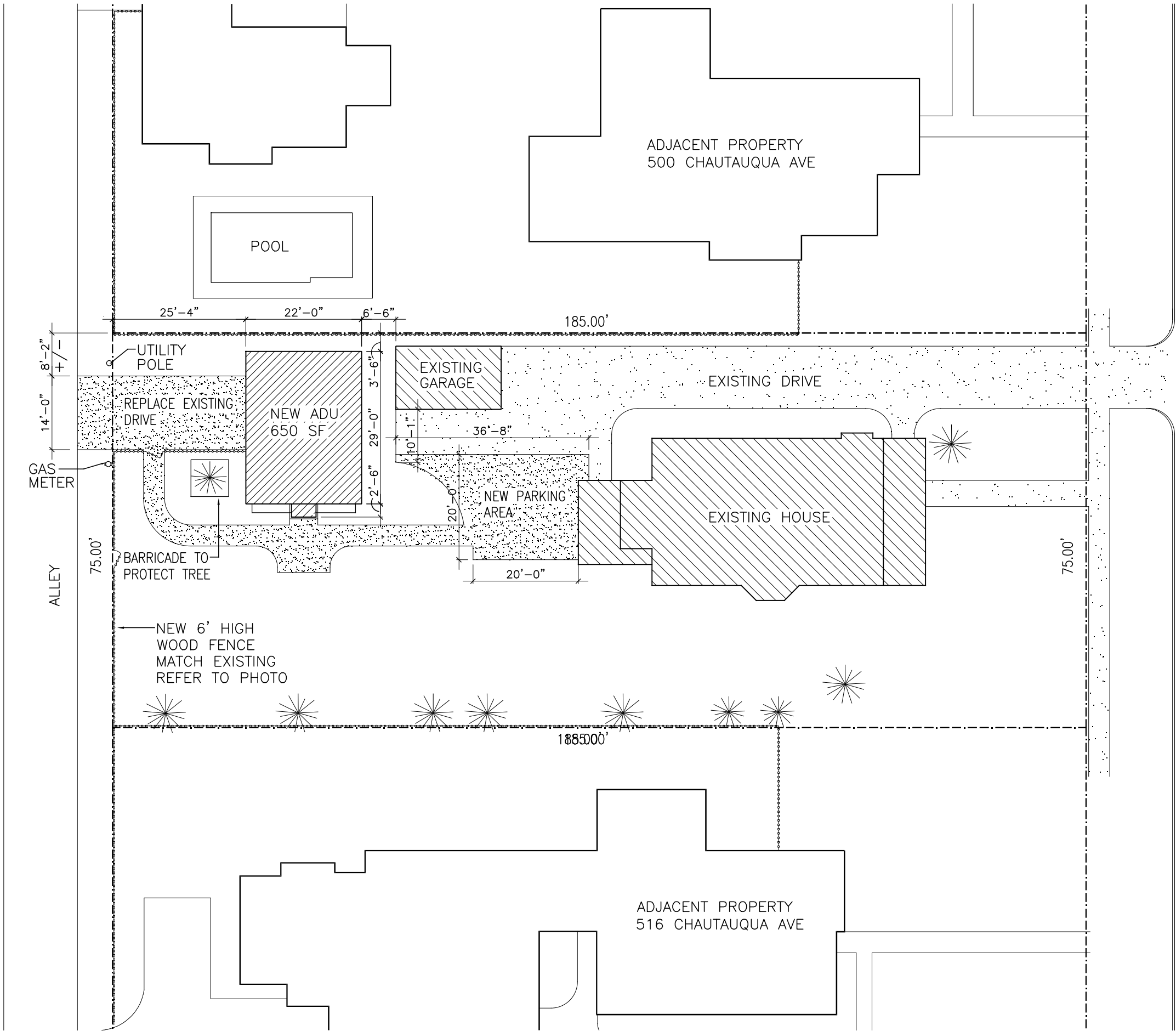
1 EXISTING/DEMO SITE PLAN 1:20

NOT FOR CONSTRUCTION
FOR DESIGN AND REVIEW PURPOSES

STANLEY BERRY
ARCHITECT
820 CLEMENT DR (405) 830-4195
NORMAN, OK 73069
sberry@swbell.net

NEW ADU
508 CHAUTAUQUA AVENUE
NORMAN, OK

ISSUED FOR	
REVIEW	9/30/25



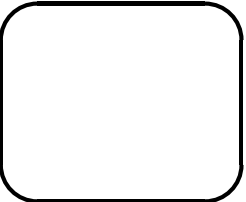
1 SITE PLAN
2 1:20

LOT AREA	13,875 SF
EXISTING HOUSE, PORCH, DECK	1710 SF
EXISTING GARAGE	240 SF
NEW ADU	650 SF
EXISTING DRIVE AND WALKS	1885 SF
NEW PARKING AND WALKS	1206 SF
TOTAL IMPERVIOUS COVERAGE	5691 SF (41%)

NOT FOR
CONSTRUCTION
FOR DESIGN AND
REVIEW PURPOSES

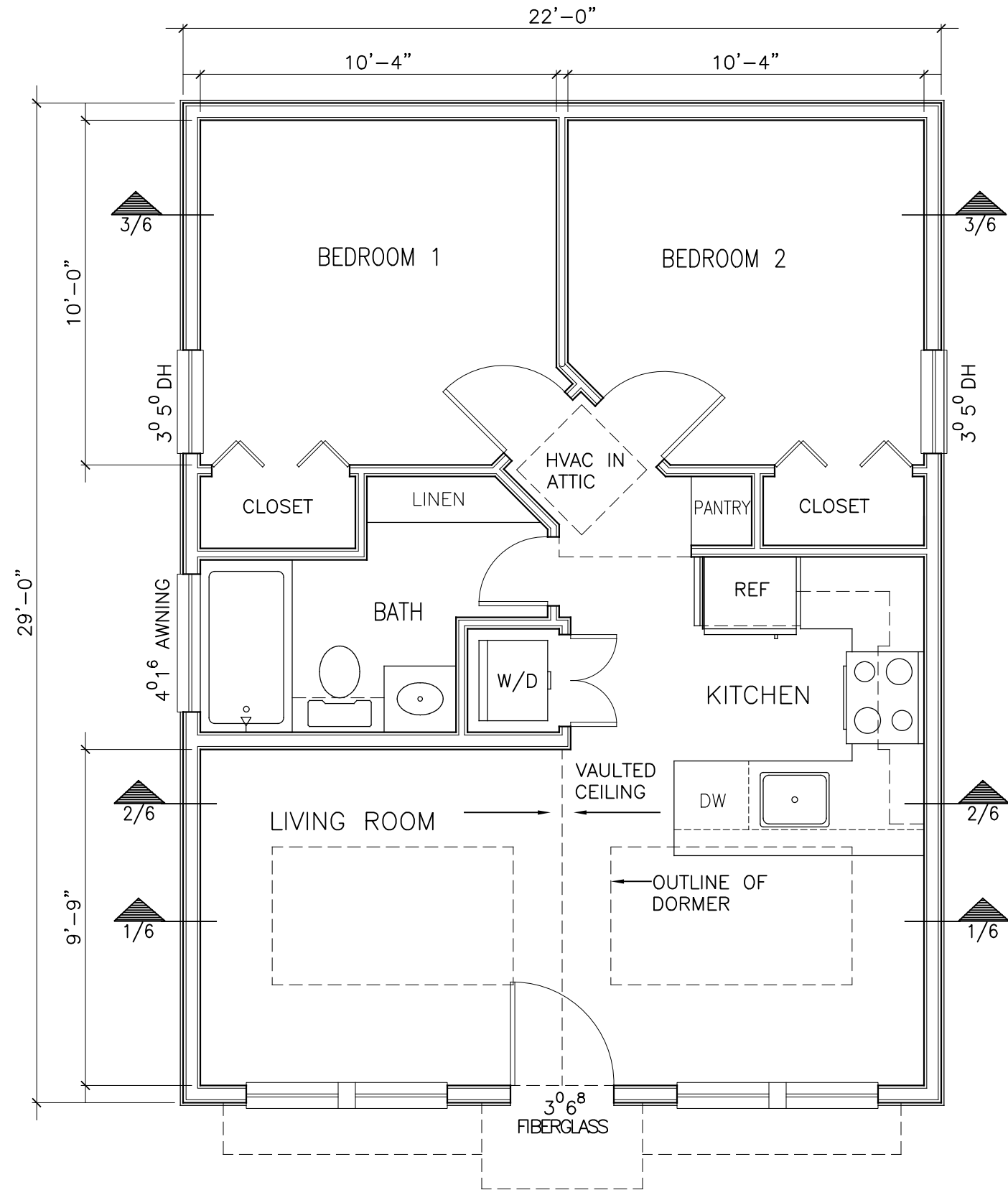
STANLEY BERRY
ARCHITECT
820 CLEMENT DR (405) 830-4195
NORMAN, OK 73069
sberry@swbell.net

NEW ADU
508 CHAUTAUQUA AVENUE
NORMAN, OK



ISSUED FOR	
REVIEW	9/30/25

2



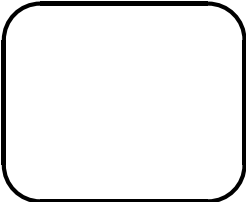
1 FLOOR PLAN
1 1/4"=1'-0"

NOT FOR
CONSTRUCTION
FOR DESIGN AND
REVIEW PURPOSES

Item 5.

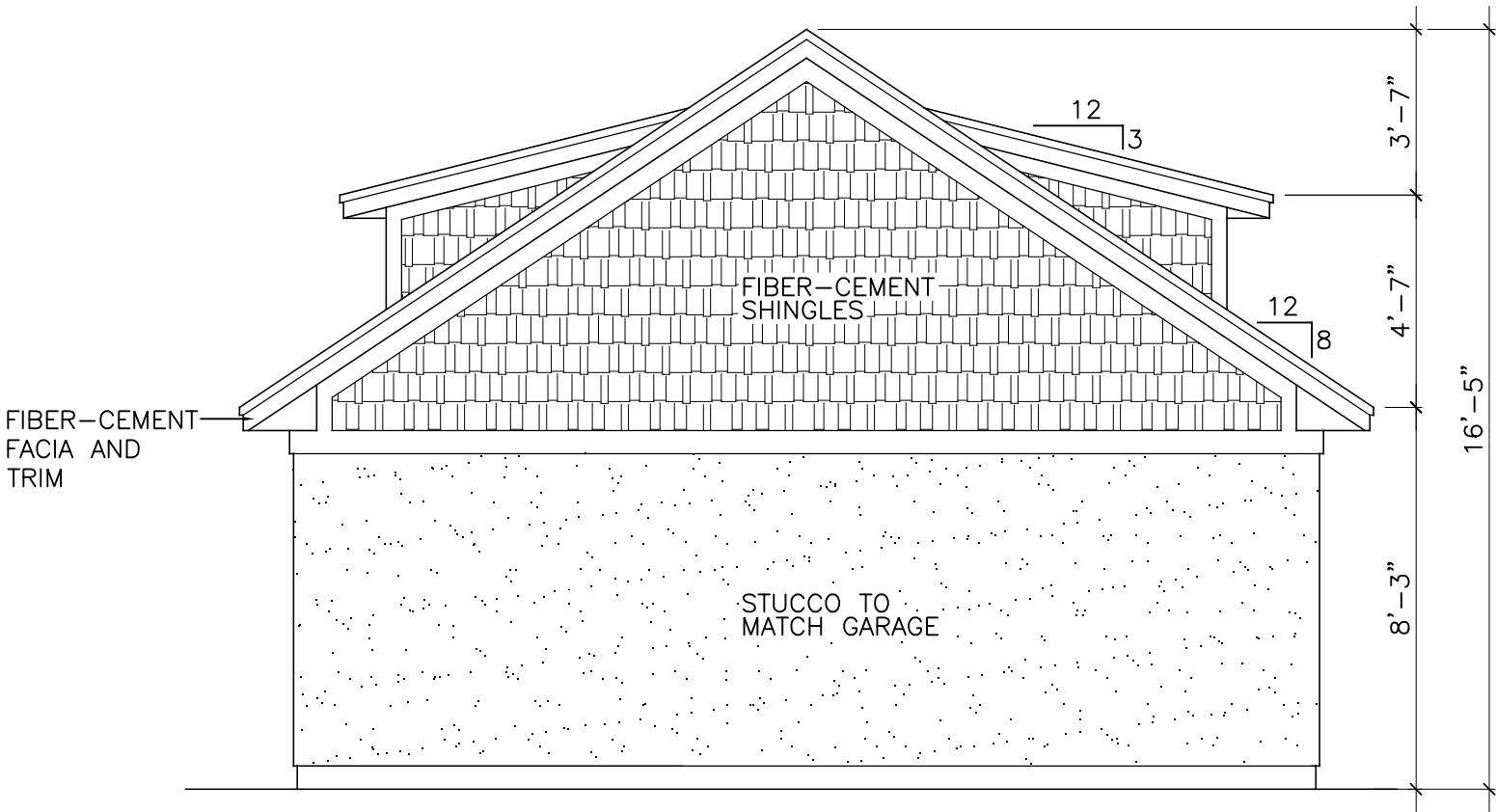
STANLEY BERRY
ARCHITECT
820 CLEMENT DR (405) 830-4195
NORMAN, OK 73069
sberry@swbell.net

NEW ADU
508 CHAUTAUQUA AVENUE
NORMAN, OK

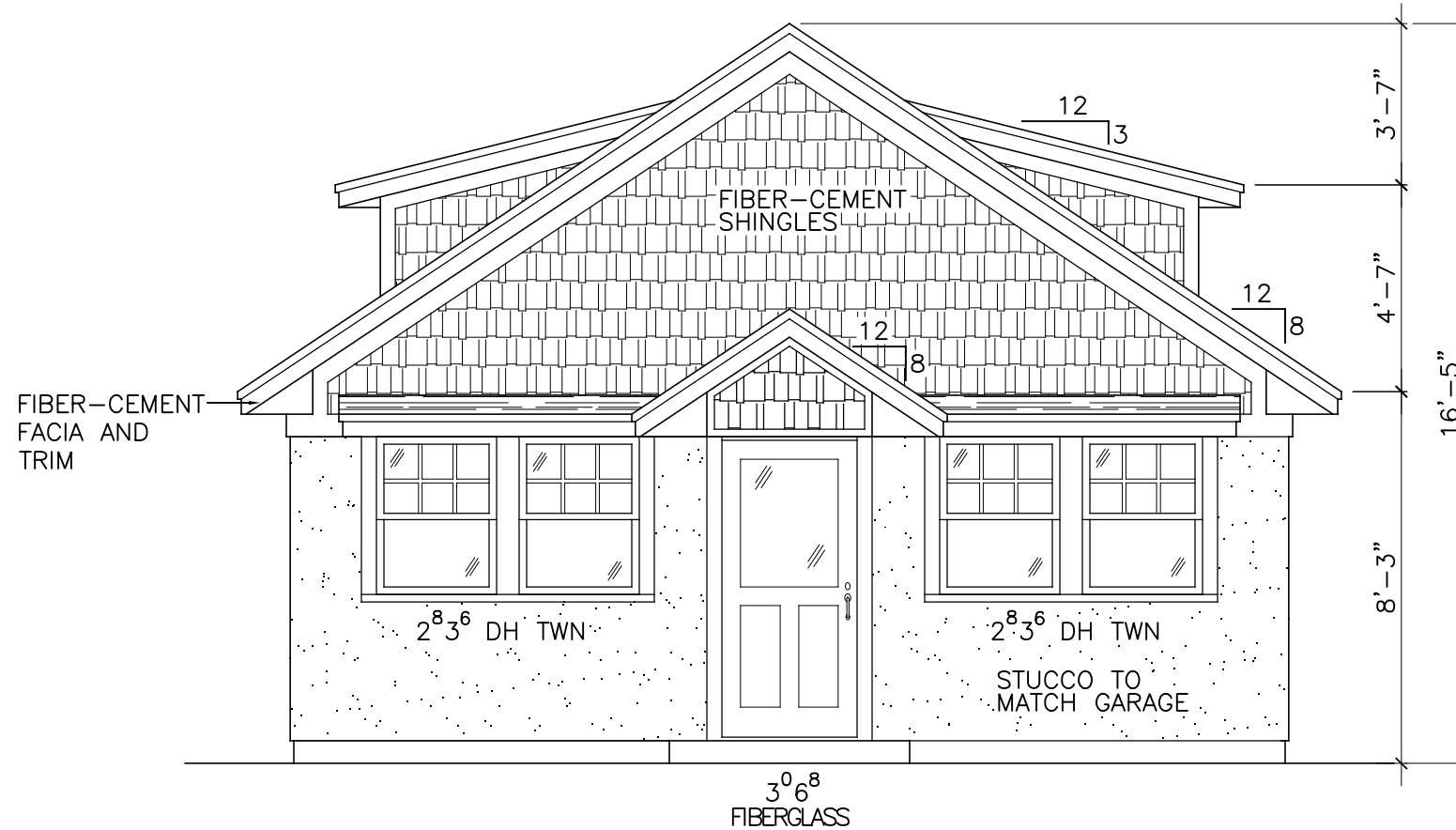


ISSUED FOR	
REVIEW	9/30/25

3



1
4 REAR (NORTH) ELEVATION
1/4"=1'-0"



2
4 FRONT (SOUTH) ELEVATION
1/4"=1'-0"

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REVIEW PURPOSES

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ARCHITECT

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sberry@swbell.net

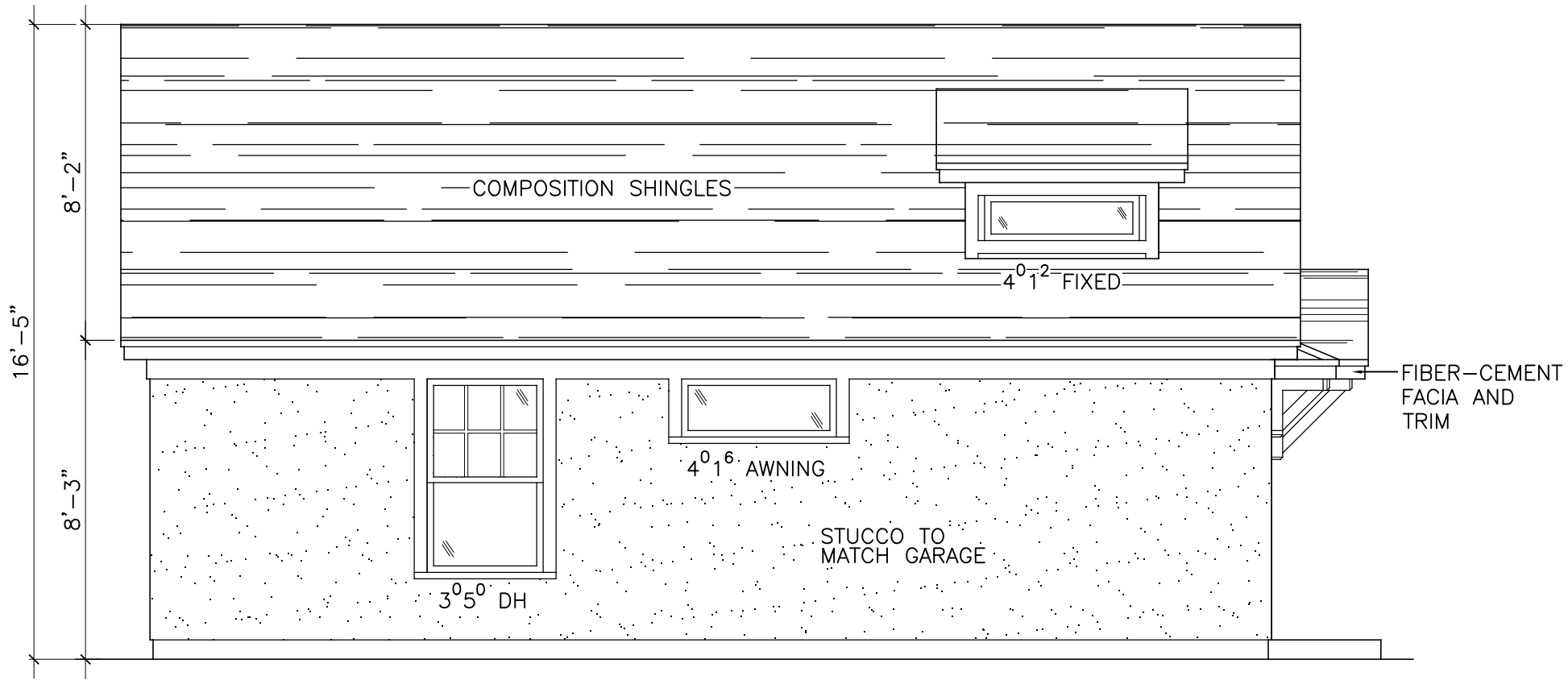
NEW ADU
508 CHAUTAUQUA AVENUE
NORMAN, OK

ISSUED FOR

REVIEW 9/30/25

4

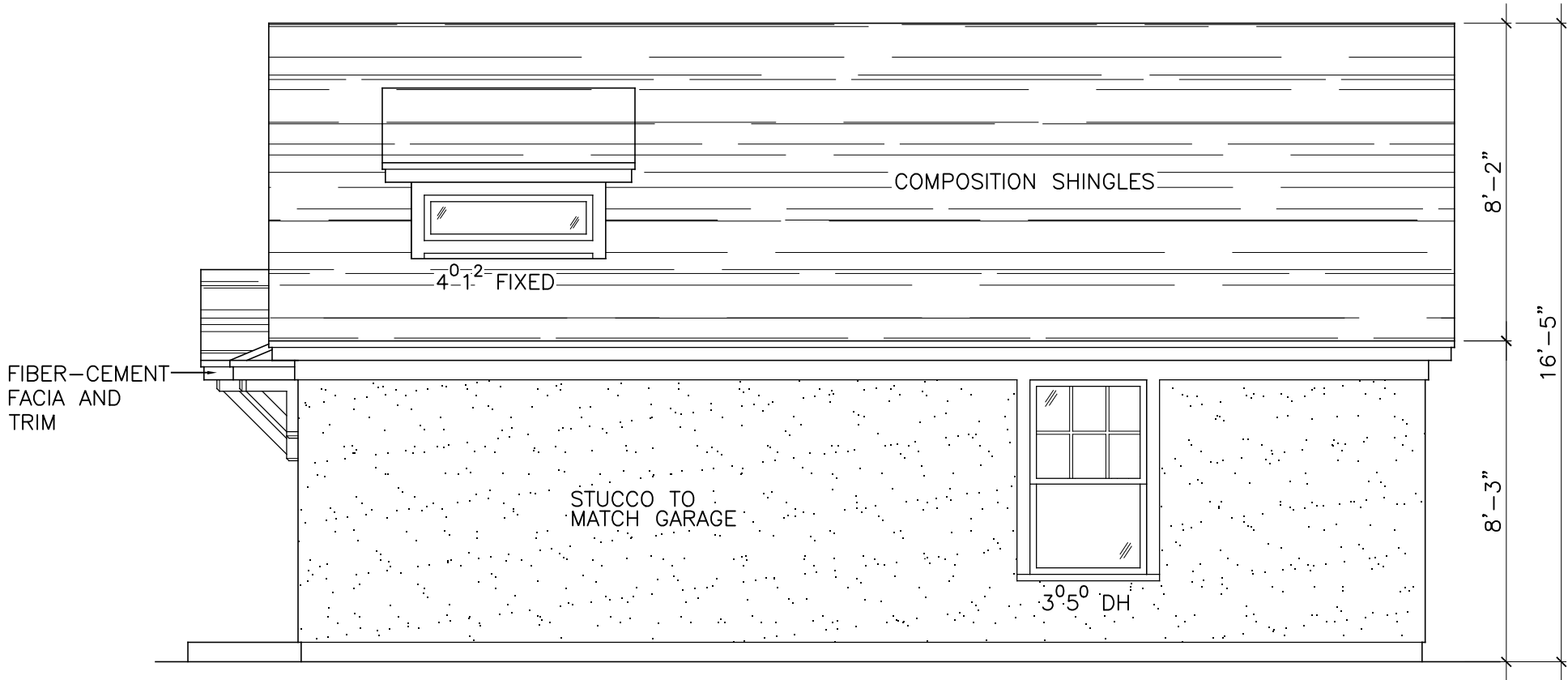
86



1
5

LEFT (WEST) ELEVATION

1/4"=1'-0"



2
5

RIGHT (EAST) ELEVATION

1/4"=1'-0"

NOT FOR
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FOR DESIGN AND
REVIEW PURPOSES

Item 5.

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sberry@swbell.net

NEW ADU
508 CHAUTAUQUA AVENUE
NORMAN, OK

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5

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FOR DESIGN AND
REVIEW PURPOSES

STANLEY BERRY

ARCHITECT

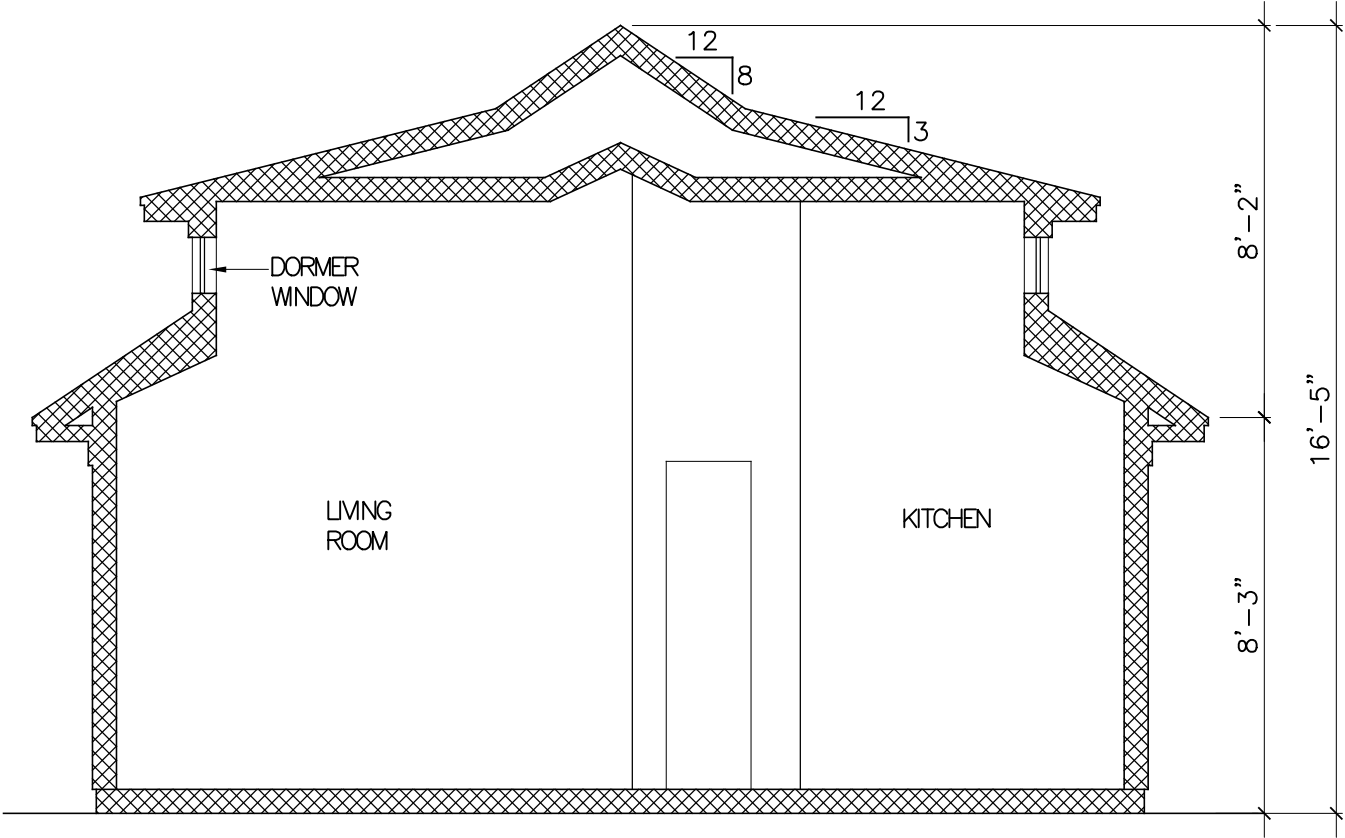
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NORMAN, OK 73069
sberry@swbell.net

NEW ADU
508 CHAUTAUQUA AVENUE
NORMAN, OK

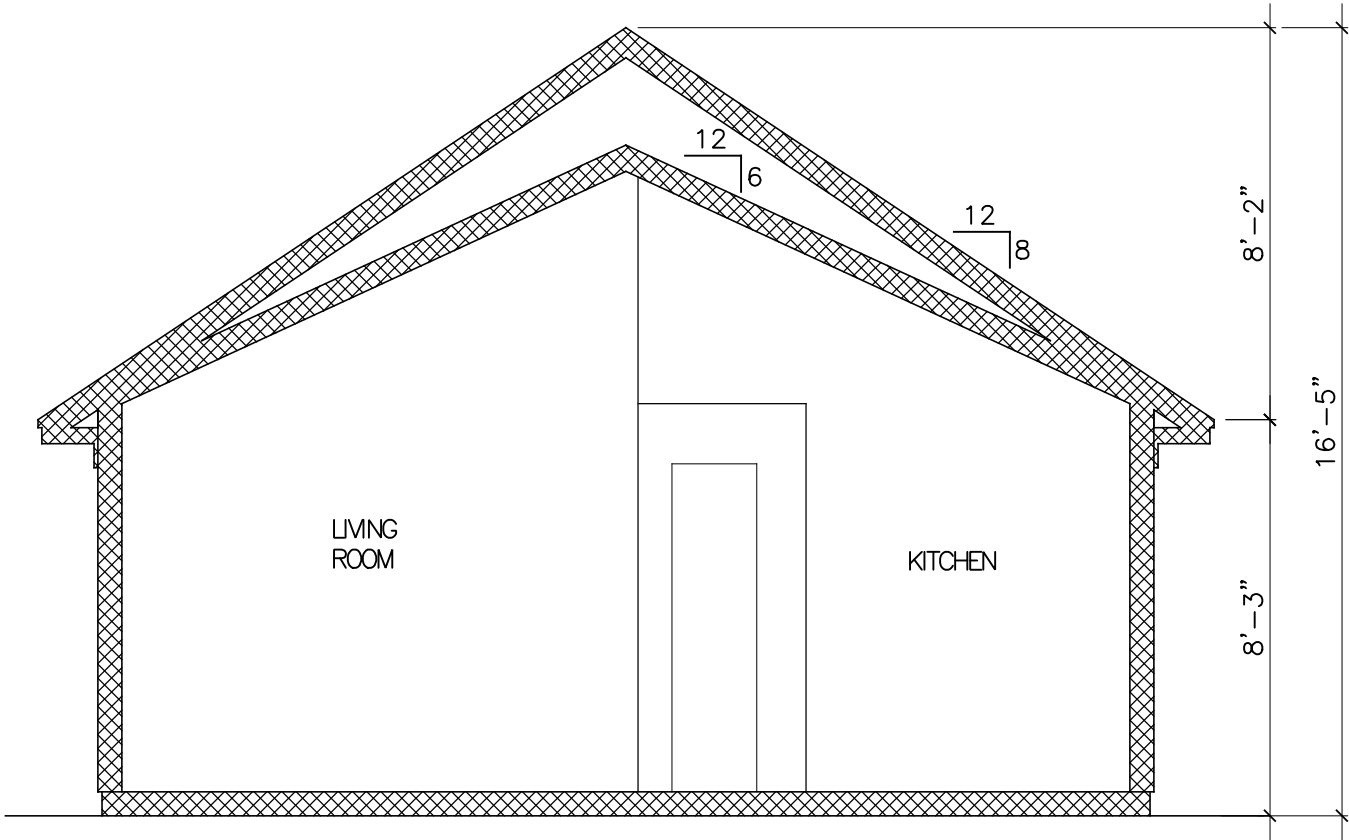
ISSUED FOR

REVIEW 9/30/25

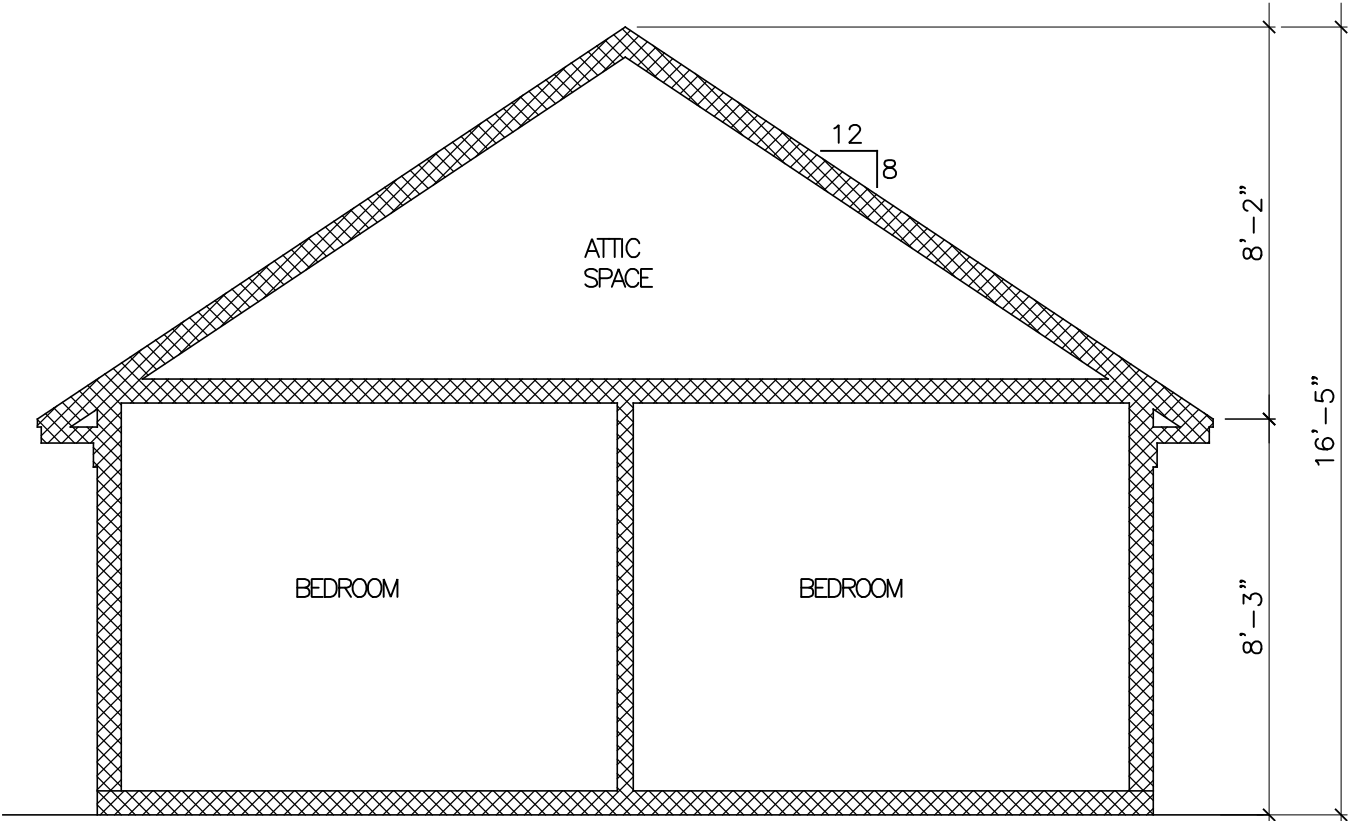
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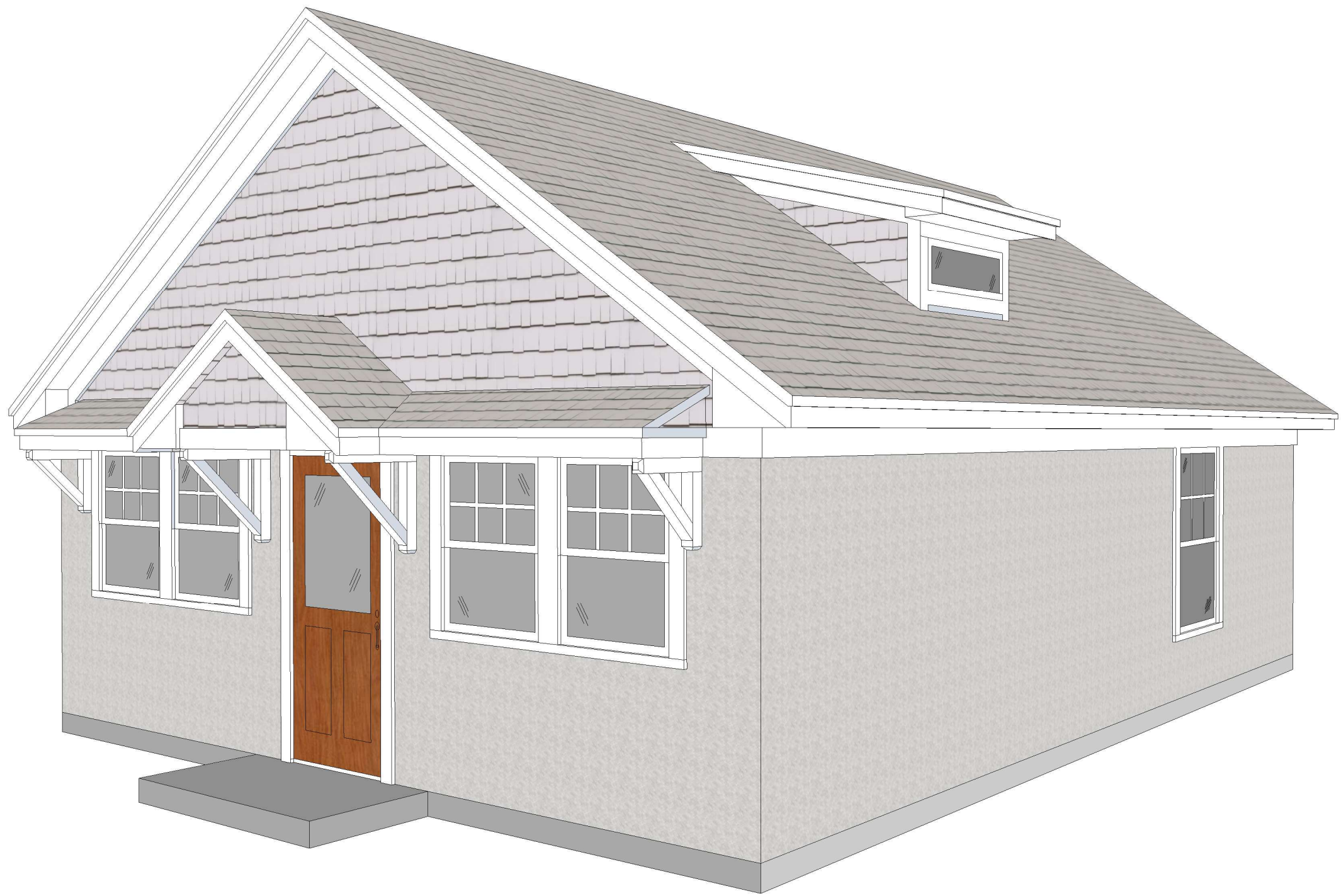
1 SECTION
6 1/4"=1'-0"

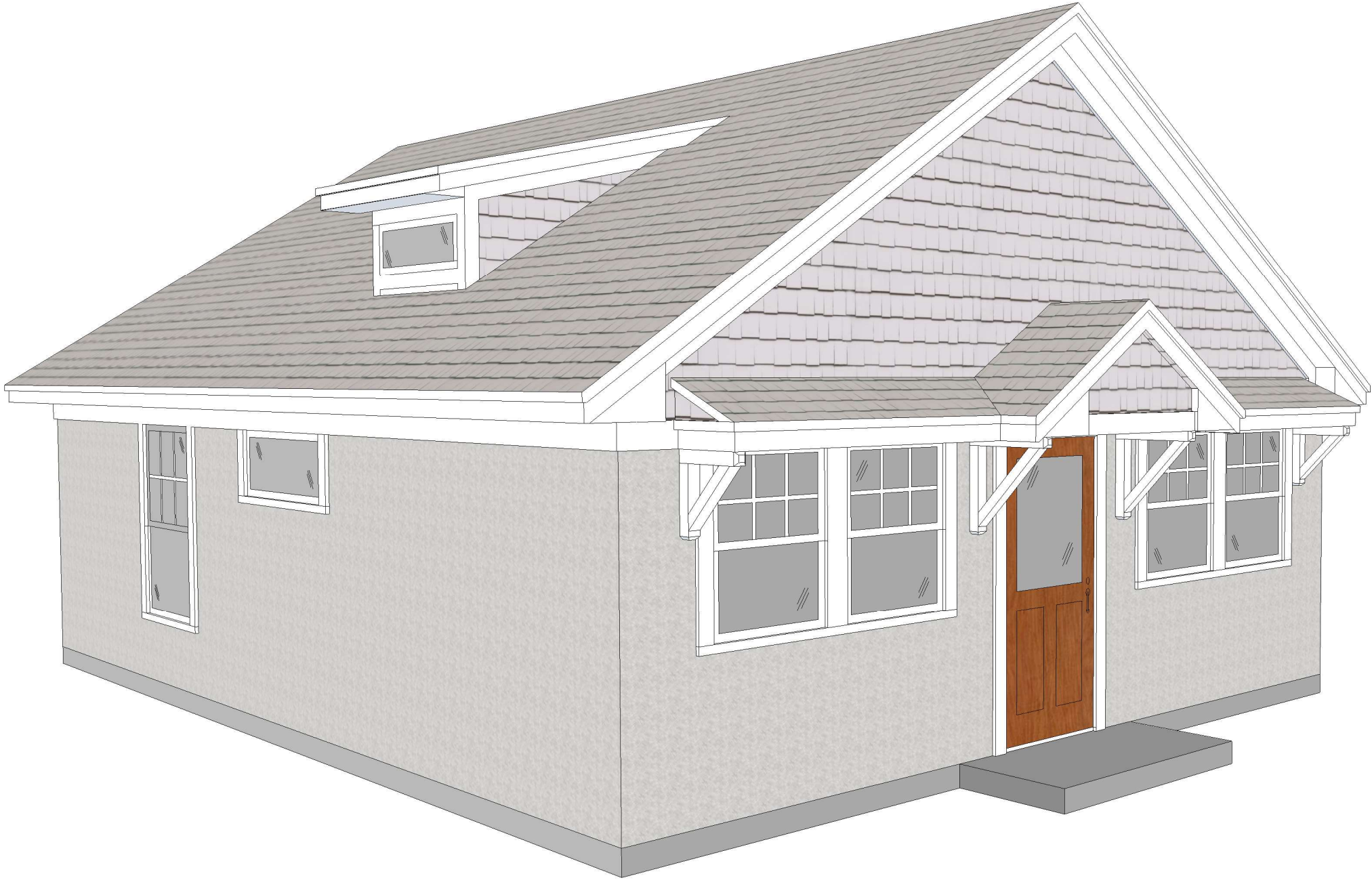


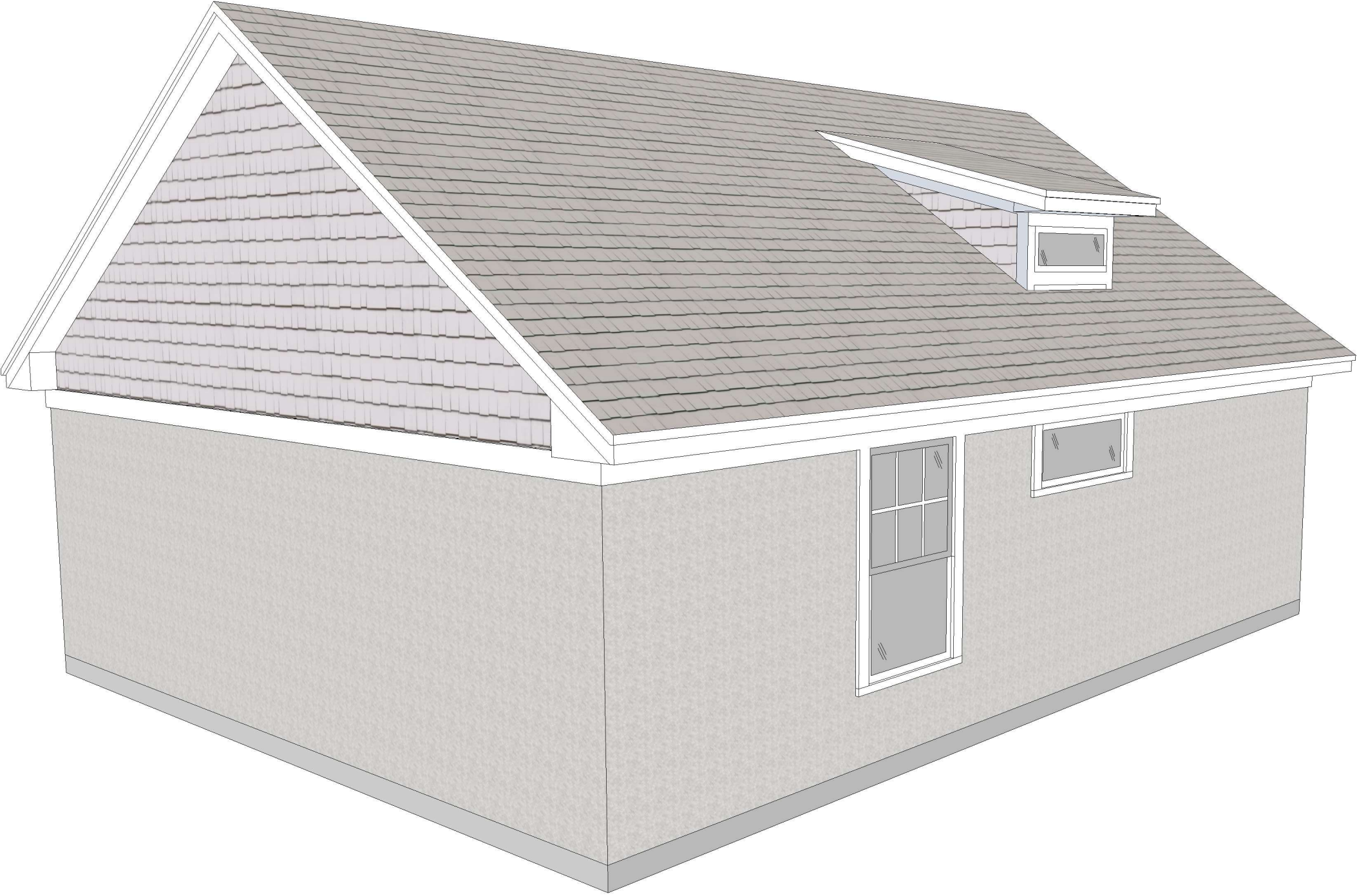
2 SECTION
6 1/4"=1'-0"

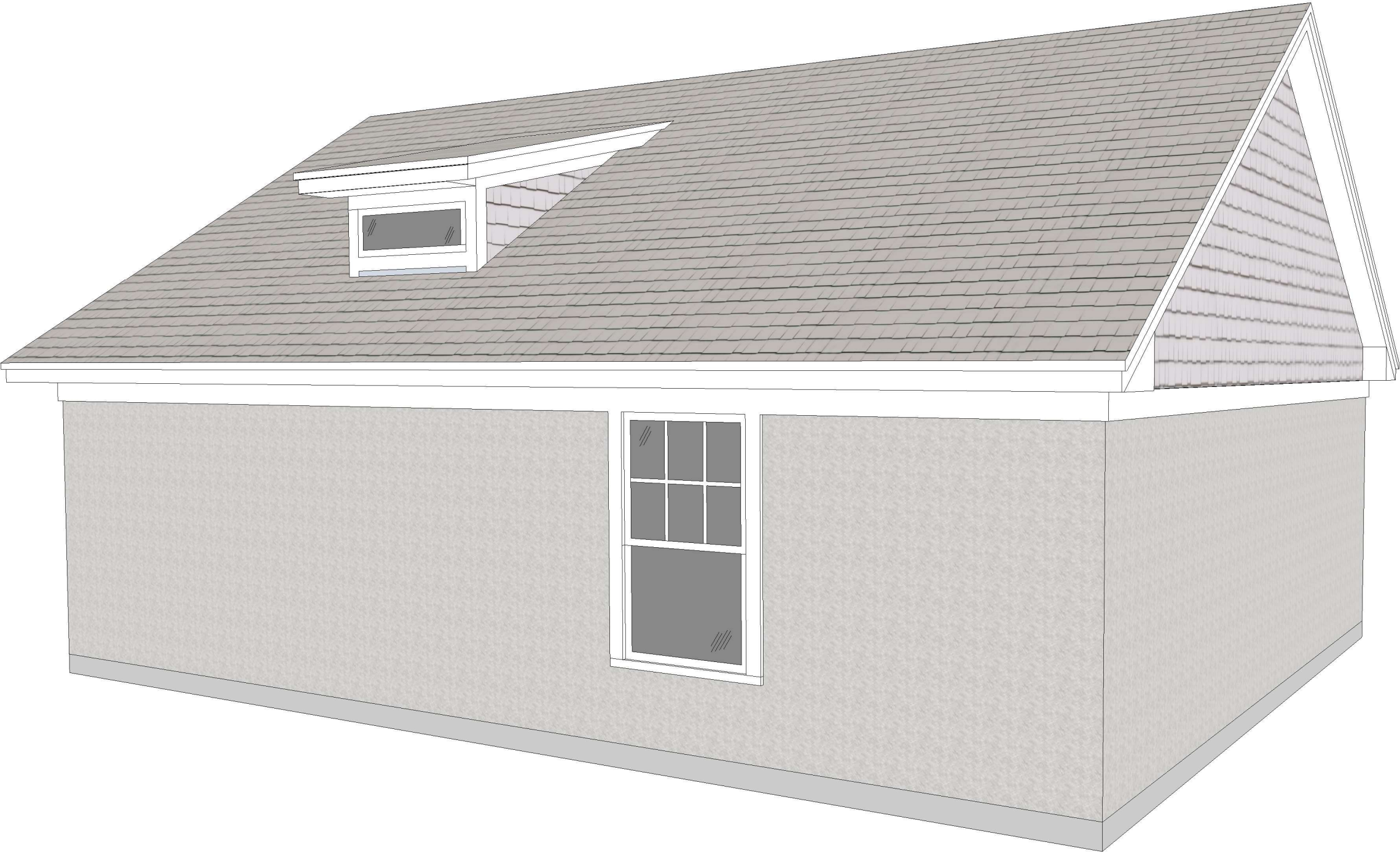


3 SECTION
6 1/4"=1'-0"









Pella® Lifestyle Series

Clad/Wood

Item 5.

#1 performing wood window and patio door for the combination of energy, sound and value.¹

Triple-pane casement



Dual-pane double-hung window with Hidden Screen



- **Easy-to-learn Pella Steady Set® interior installation system**

Pella Steady Set Interior Installation System is a revolutionary, award-winning and safer way to install new construction windows.¹ The simple system is the fastest, most labor efficient wood window installation system with uncompromising quality.² Available on select windows.

- **Performance redefined**

You don't have to compromise on any aspect of performance. Available performance solutions offer an unbeatable combination of energy efficiency, sound control and value.³

- **ENERGY STAR® certified⁴**

Pella products offer energy-efficient options that will meet or exceed ENERGY STAR guidelines in all 50 states. Pella Lifestyle Series products with triple-pane glass have been awarded ENERGY STAR Most Efficient Mark in 2023.

- **Enhanced sound control**

Our patented, triple-pane design with Advanced Low-E glass allows for mixed glass thickness for enhanced sound dampening resulting in an average 52% noise reduction versus single-pane windows.⁵

- **Intentional design for improved durability**

Intentional jamb on sill design helps seal the end grain of the wood and elevates it off the rough opening, reducing the potential for moisture.

- **Durable 3-way corner joints**

Three-way corner joints are made up of mortise-and-tenon, metal fasteners and commercial adhesive for added strength and durability.

- **Quality exterior finishes**

EnduraClad® finish is a tough, protective aluminum finish for windows. The overlapping, watershed cladding resists chalking and fading. Our extruded aluminum-cladding delivers exceptional durability for sliding patio door exteriors.

- **Exclusive wood protection**

Pella's exclusive EnduraGuard® wood protection is applied after the pieces have been cut and milled, but prior to final assembly. It provides advanced protection against the effects of moisture, decay, stains from mold and mildew — as well as termite damage.

- **Time-tested innovations**

Create unique room-by-room solutions and achieve project goals with performance options and purposeful innovations like the Hidden Screen and integrated blinds and shades.

- **Best limited lifetime warranty⁶**

Pella Lifestyle Series products are covered by the best limited lifetime warranty in the industry for wood windows and patio doors.⁶

- **Testing beyond requirements**

At Pella, our products are tested beyond requirements to help ensure they have long-lasting performance and reduce call-backs for you.

- **Convenient & durable screens**

The revolutionary Hidden Screen appears when you open a double-hung window and folds away when it is closed. It provides a clear view when the window is closed and improves curb appeal year-round. The heavy-duty TuffScreen® by Phifer keeps bugs out and allows more fresh air in as one of the most durable screen options on the market. Available on sliding patio doors.

Available in these window and patio door styles:⁷



Special shape windows also available.

1,2,3,4,5,6,7 See back cover for details

Product Specifications

Window & Patio Door Styles	Min. Width	Min. Height	Max. Width	Max. Height	Performance Class & Grade	Performance Values			Frame/Install
						U-Factor	SHGC	STC	
Awning Dual-pane vent	21"	17"	59"	59"	LC30 – LC50	0.25-0.34	0.19-0.51	25-28	Pella Steady Set™, Fold-out Fin, Block Frame, EnduraClad Exterior Trim / Brickmould
Awning Triple-pane vent	21"	17"	59"	59"	R20 - CW50	0.20-0.28	0.15-0.41	31-37	
Casement Dual-pane vent	17"	17"	35"	73"	LC30-LC50	0.25-0.34	0.19-0.58	25-31	
Casement Triple-pane vent	17"	17"	35"	73"	R20-CW50	0.20-0.25	0.17-0.46	31-37	
Fixed Casement Dual-pane	17"	17"	73"	73"	LC30-LC50	0.23-0.35	0.20-0.57	29-32	
Fixed Casement Triple-pane	17"	17"	73"	73"	R20-CW50	0.19-0.27	0.15-0.49	33-37	
Double-Hung Dual-pane vent	21"	35"	48"	84"	LC30-LC50	0.25-0.34	0.20-0.48	27-31	Fold-out Fin, Block Frame, EnduraClad Exterior Trim / Brickmould
Hinged Patio Door Dual-pane single door	30"	80"	38"	96"	LC50	0.26-0.32	0.18-0.48	31	
Hinged Patio Door Triple-pane single door	30"	80"	38"	96"	LC55	0.23-0.28	0.12-0.34	34-36	
Hinged Patio Door Dual-pane double door	60"	80"	75"	96"	LC50	0.25-0.29	0.18-0.48	30-32	
Hinged Patio Door Triple-pane double door	50"	80"	75"	96"	LC55	0.22-0.26	0.14-0.38	34-36	
Sliding Patio Door Dual-pane double-door vent (OX or XO)	60"	80"	120"	120"	R20-LC50	0.26-0.31	0.20-0.51	28-31	
Sliding Patio Door Triple-pane double-door vent (OX or XO)	60"	80"	96"	96"	LC35-LC50	0.23-0.26	0.19-0.47	32-34	
Sliding Patio Door Dual-pane triple-door vent (OXO)	90"	80"	180"	120"	R20-LC35	0.26-0.31	0.20-0.51	–	
Sliding Patio Door Triple-pane triple-door vent (OXO)	90"	80"	144"	96"	LC35	0.23-0.26	0.19-0.47	–	
Sliding Patio Door Dual-pane quadruple-door vent (OXXO)	117"	80"	237"	120"	R20-LC35	0.26-0.31	0.20-0.51	–	
Sliding Patio Door Triple-pane quadruple-door vent (OXXO)	117"	80"	189"	96"	LC35	0.23-0.26	0.19-0.47	–	

Window sizes available in 1/4" increments

Special sizes available in dual- and triple-pane sliding patio doors. For more information regarding performance, visit pella.com/performance. For more information regarding frame and installation types, visit installpella.com.

Window Hardware

Essential Collection

Select from popular designs and finishes to suit every style.



Fold-Away Crank



Cam-Action Lock

Finishes:



Champagne



White



Brown



Matte Black



Satin Nickel



Satin Brass

Patio Door Hardware

Essential Collection

Elevate your style and transform a home with elegant selections.



Hinged Patio Door Handle



Sliding Patio Door Handle

Finishes:



Champagne



White



Brown



Matte Black



Satin Nickel



Satin Brass

Colors

Prefinished Pine Interior Colors

We can prefinish pine in your choice of several paint and stain colors. Unfinished or primed and ready-to-paint are also available.



White



Bright White



Linen White



Natural Stain



Golden Oak Stain



Early American Stain



Provincial Stain



Black Stain

Aluminum-Clad Exterior Colors

Our low-maintenance EnduraClad® exterior finish resists fading and helps protect windows and patio doors for years. Seacoast EnduraClad protective finish for coastal projects with high salt exposure is also available.



Black



White



Brown



Fossil



Iron Ore



Portobello



Putty



Almond



Classic White



Brick Red



Hartford Green



Wolf Gray

Integrated Blinds & Shades

Integrated Blinds®

Raise blinds up for an unobstructed view or tilt to let in just the right amount of light.



White



Poplar White



Bisque



Storm



Golden



Mocha



Black

Integrated Shades®

Our best integrated fabric shades feature a white exterior fabric for a uniform look from the street. Integrated and accessible shades are available manual or motorized with Pella Insynctive technology.

Light-Filtering:



White



Silver



Maize

Room-Darkening:



Cotton



Bamboo



Ash

Haven't landed on the final blind or shade color selection? No problem. With our **patented triple-pane** design, you and your customer can make those decisions later in the schedule. Our triple-pane products come with all of the hardware to add a blind or shade straight from the factory or at a later time in the building or remodeling process.

Screens®

Hidden Screen

The Hidden Screen appears when you open a double-hung window and folds away when the window is closed. It allows 44% more natural light into your home when a window is closed than a standard screen.¹⁰ Hidden Screen cartridge available in Black, White, Brown, Fossil and Iron Ore colors to match or complement the exterior cladding color choice.

Rollscreen®

Rollscreen soft-closing retractable screens roll out of sight when not in use. Available on casement and awning windows.

TuffScreen® by Phifer®

The heavy-duty vinyl-coated screen is tear, puncture and damage resistant, standing up to pets, children and harsh weather. The TuffScreen® by Phifer is 2.5x stronger than a standard screen.¹² Available on sliding patio doors.

*All trademarks are property of their respective owners.

InView™

InView flat screens let in 14% more light and are 8% more open for improved airflow when compared to the conventional fiberglass screen.¹¹

6, 8, 9, 11, 12 See back cover for disclosures.

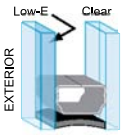
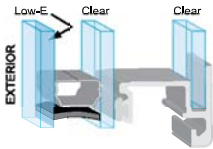
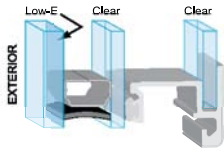
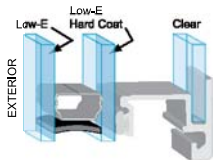
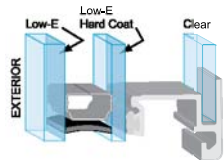
To make things easier, we've created performance packages.

Performance solutions offer an unbeatable combination of energy efficiency, sound control and value.¹ Create room-by-room solutions with the upgraded triple-pane glass design.

All values below are averages compared with single-pane windows.



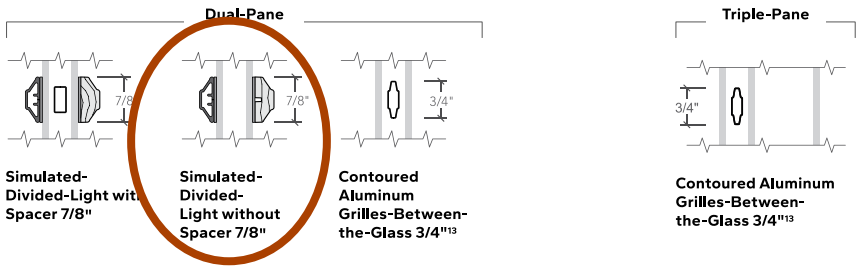
Pella® Lifestyle Series offers products awarded ENERGY STAR® Most Efficient for 2023.⁴

Base	Performance	Sound Control	Energy Efficiency	Ultimate Performance
	71% More Energy Efficient ¹⁰ + 34% Noise Reduction ⁵	52% Noise Reduction ⁵	83% More Energy Efficient ¹⁰	79% More Energy Efficient ¹⁰ + 52% Noise Reduction ⁵
 Advanced Low-E Two panes of insulating, energy-efficient glass and our most popular features and options.	 Advanced Low-E SunDefense Low-E or NaturalSun Low-E A triple-pane glass design for a combination of both improved energy efficiency and sound performance.	 Advanced Low-E, SunDefense Low-E or NaturalSun Low-E Sound-reduction glazing Triple-pane glass design featuring mixed glass thicknesses for enhanced sound dampening.	 AdvancedComfort A triple-pane glass design with upgraded AdvancedComfort Low-E glass for enhanced energy efficiency.	 AdvancedComfort Sound-reduction glazing A triple-pane glass design featuring mixed glass thicknesses with upgraded AdvancedComfort Low-E glass for enhanced energy efficiency.

Patented triple-pane glass design gives flexibility to add integrated blinds or shades without impacting performance.

Grilles

Choose the look of true divided light or make cleaning easier by selecting grilles-between-the-glass.



The Best Limited Lifetime Warranty in the Industry

We know your reputation matters and you stake your reputation on quality, dependable products. That's why we have the best limited lifetime warranty in the industry for wood windows and patio doors.⁶

¹ Compared to leading national wood window brands recommended installation methods for new construction windows.

² Comparing average install time and plumb/level/square measurements of leading national wood window brands when installed following the manufacturer's standard installation methods for new construction windows.

³ Performance solutions require upgrades to triple-pane, AdvancedComfort Low-E and mixed glass thickness. Based on comparing product quotes and published STC/OITC and U-Factor ratings of leading national wood window and patio door brands.

⁴ Some Pella products may not meet ENERGY STAR certification in Canada. For more information, contact your local Pella sales representative or go to nrcan.gc.ca/energy/products/categories/fenestration/13739.

⁵ Reduction in sound based on OITC ratings of Pella Lifestyle Series windows with respective performance package compared to a single-pane wood or vinyl window with an OITC of 19. Calculated by using the sound transmission loss values in the 80 to 4000 Hz range as measured in accordance with ASTM E-90(09). Actual results may vary.

⁶ Based on comparing written limited warranties of leading national wood window and wood patio door brands. See written limited warranty for details, including exceptions and limitations, at pella.com/warranty.

⁷ Double-hung windows available in dual-pane only.

⁸ Available with triple-pane products only.

⁹ Requires the Insynctive App on a smart device, an Insynctive Bridge and a wireless home router with internet connection.

¹⁰ Window energy efficiency calculated in a computer simulation using RESFEN 6.0 default parameters for a 2000 sq. foot new construction single-story home when Pella Lifestyle Series windows with the respective performance package are compared to a single-pane wood or vinyl window. The energy efficiency and actual savings will vary by location. The average window energy efficiency is based on a national average of 94 modeled cities across the country and weighting based on population. For more details see pella.com/methodology.

¹¹ Improved airflow is based on calculated screen cloth openness. Screen cloth transmittance was measured using an integrated sphere spectrophotometer.

¹² Based on the composite results of a 5-panel strength analysis comparing TuffScreen and standard screening.

¹³ Appearance of exterior grille color may vary depending on the Low-E insulating glass selection.



Features and Options

Standard	Options / Upgrades
Glazing	
Glazing Type	
Dual-Pane Insulating Glass	—
Insulated Glass Options/Low-E Types	
Advanced Low-E	SunDefense™ Low-E
	SunDefense+ Low-E
	AdvancedComfort Low-E
	NaturalSun Low-E
	NaturalSun+ Low-E
Additional Glass Options	
Annealed Glass	STC Glazing Options
	Tempered Glass
	Obscure Glass ¹
Gas Fill/High Altitude	
Argon	High altitude (Air-filled only)
Exterior	
EnduraClad® protective finish	—
Cladding Colors	
12 Standard colors ¹	—
Interior¹	
Unfinished wood	Factory primed
	Factory prefinished paint ¹
	Factory prefinished stain ¹
Wood Types	
Pine	—
Hardware	
Finishes	
Champagne, Matte Black, White or Brown	Oil Rubbed Bronze, Satin Nickel
Sash Locks/Sash Lifts	
Cam-action lock	Sash lifts ²
Tilt-Wash Cleaning	
Tilt to interior on both sashes	—
Grilles	
Grilles-Between-the-Glass	
Simulated Divided Light with Optional Spacer ³	Traditional, Prairie, Top Row, Cross, Custom - Equally Divided
	Traditional, Prairie, Top Row, Cross, Custom - Equally Divided
Screens	
—	Full-Size InView™ screens, Hidden Screen ⁴

(—) = Not Available

(1) Contact your local Pella sales representative for current color options.

(2) Sold separately for Pella® Lifestyle Series double-hung windows.

(3) Available with Low-E argon-insulated glass only.

(4) Hidden Screen prevents operation of the upper sash.



Product Selection Guide

 Size and Performance Data LS-AW-2

 Features and Options LS-AW-3

Combination Assemblies LS-AW-4

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Special Sizes and Dimensions.....LS-AW-12

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 Triple-Pane LS-AW-15

Detailed Product Descriptions LS-AW-19

Unit Sections

 Dual-PaneLS-AW-20

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Document Navigation Tips:

Items listed in the table of contents above are active links that will take you to the corresponding page.
The Pella logo on each page is a link back to this table of contents.
Bookmarks are also included in this PDF document and are available as an additional navigation option.

Supporting documents for this product:

- Test Reports:
- https://media.pella.com/professional/adm/CertificationReports/Test_Reports_LS-Dual.pdf?utm_source=pdfdoc
 - https://media.pella.com/professional/adm/CertificationReports/Test_Reports_LS-Triple.pdf?utm_source=pdfdoc
- CSI Specs (readable using Microsoft Word or other text editing application):
- https://media.pella.com/professional/adm/Wood-CSI_Specs/08551.rtf?utm_source=pdfdoc
- Detailed Product Description (readable using Microsoft Word or other text editing application):
- https://media.pella.com/professional/adm/Clad-Wood-LS/PellaLifestyleSrs-AW_DPD.rtf?utm_source=pdfdoc
- Size Tables (requires appropriate CAD software to read and use):
- https://media.pella.com/professional/adm/Clad-Wood-LS/LSCAWE_D.dwg?utm_source=pdfdoc
- CAD cross sections (requires appropriate CAD software to read and use):
- https://media.pella.com/professional/adm/Clad-Wood-LS/LS-AW_XSEC.dwg?utm_source=pdfdoc
- 3D & BIM (requires appropriate software to read and use):
- https://media.pella.com/professional/adm/RevitFiles/LS-Revit/Window-Awning-Pella-Lifestyle_Series.zip?utm_source=pdfdoc
- Sketchup (requires appropriate software to read and use):
- https://media.pella.com/professional/adm/Clad-Wood-LS/PellaSKP_LifestyleSeries_Awning.zip?utm_source=pdfdoc
- Combination Recommendations:
- https://media.pella.com/professional/adm/Clad-Wood/D_Combinations.pdf?utm_source=pdfdoc
- Installation Details:
- https://media.pella.com/professional/adm/Clad-Wood/F_InstallationDetails.pdf?utm_source=pdfdoc

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Performance Data

Size and Performance Data

	Dual-Pane Glazing	Triple-Pane Glazing
Sizes		
Standard vent/fixed sizes	●	●
Special sizes available	●	●
Performance ₁		
Meets or Exceeds AAMA/WDMA Ratings	LC30 - LC50 Hallmark Certified	R20 - CW50 Hallmark Certified
Air Infiltration (cfm/ft ² of frame @ 1.57 psf wind pressure) ₂	0.05	0.05
Water Resistance	4.6 - 14.62 psf	7.5 psf
Design Pressure	30 - 50 psf	20 - 50 psf
Other Performance Criteria		
Forced Entry Resistance Level (Minimum Security Grade) ₃	40	40

Sound Transmission Class / Outdoor-Indoor Transmission Class

Frame Size Tested ₄	Glazing System				STC Rating	OITC Rating
	Overall Glazing Thickness	Exterior Glass Thickness	Interior Glass Thickness	Third Pane Thickness (ML)		
VENT – Dual-Pane Glass						
59" x 23"	11/16"	2.5mm	2.5mm	—	25	22
59" x 23"	11/16"	5mm	3mm	—	32	28
FIXED – Dual-Pane Glass						
47"x 59"	11/16"	3mm	3mm	—	28	24
47"x 59"	11/16"	5mm	3mm	—	30	28
VENT – Triple-Pane Glass						
59" x 23"	11/16"	2.5mm	2.5mm	2.5mm	31	27
59" x 23" with shade	11/16"	2.5mm	2.5mm	2.5mm	33	28
59" x 23" with blind	11/16"	2.5mm	2.5mm	2.5mm	32	27
59" x 23"	11/16"	5mm	3mm	4mm	34	32
59" x 23" with shade	11/16"	5mm	3mm	4mm	35	32
59" x 23" with blind	11/16"	5mm	3mm	4mm	34	32
FIXED – Triple-Pane Glass						
47"x 59"	11/16"	3mm	3mm	3mm	33	27
47"x 59" with shade	11/16"	3mm	3mm	3mm	35	29
47"x 59" with blind	11/16"	3mm	3mm	3mm	34	27
47"x 59"	11/16"	5mm	3mm	4mm	35	30
47"x 59" with shade	11/16"	5mm	3mm	4mm	37	31
47"x 59" with blind	11/16"	5mm	3mm	4mm	35	30
47"x 59"	11/16"	4mm	6mm	4mm	35	29
47"x 59" with shade	11/16"	4mm	6mm	4mm	37	31
47"x 59" with blind	11/16"	4mm	6mm	4mm	36	30

(1) Maximum performance for single unit when glazed with the appropriate glass thickness. See Design Data pages in this section for specific product performance class and grade values. Values shown are for standard and special sizes. Contact your local sales representative for complete information.

(2) Published performance data for air infiltration is determined by testing a minimum of four (4) products of NFRC model size. Testing is conducted in accordance with ASTM E283. Air infiltration ratings for products will differ by size. The performance data does not apply to combination assemblies unless noted. Actual product performance may vary for a number of reasons including installation and product care.

(3) The higher the level, the greater the product's ability to resist forced entry.

(4) ASTM E 1425 defines standard sizes for acoustical testing. Ratings achieved at that size are representative of all sizes of the same configuration.



Features and Options

Standard	Options / Upgrades
Glazing	
Glazing Type	
Dual-Pane Glazing	Triple-Pane Glazing with Clear Moveable Light
Insulated Glass Options/Low-E Types	
Advanced Low-E	SunDefense™ Low-E
	SunDefense+ Low-E
	AdvancedComfort Low-E
	NaturalSun Low-E
	NaturalSun+ Low-E
Glass Performance Package Options	
Base Package (Dual-Pane)	Performance Package - Triple-Pane
	Sound Control Package - Triple-Pane with STC glass
	Energy Efficiency Package - Triple-Pane with AdvancedComfort Low-E
	Ultimate Performance Package - Triple-Pane with AdvancedComfort Low-E and STC glass
Additional Glass Options	
Annealed Glass	STC Glazing Options
	Tempered Glass
	Obscure Glass ₁
Gas Fill/High Altitude	
Argon	High altitude (Air-filled only)
Exterior	
EnduraClad® Cladding Colors₁	
4 Standard colors	8 Feature colors
Interior	
Unfinished wood	Factory primed, Factory prefinished paint, Factory prefinished stain
Wood Types	
Pine	—
Hardware	
Champagne, White, Brown or Matte Black	Satin Nickel, Satin Brass
Sash Locks	
Innovative Locking System, Unison Lock System ₂	—
Hinging	
Large Awning—Wash Hinge	—
Grilles	
Simulated-Divided-Light with Optional Spacer (Dual-Pane glazing)	
—	Traditional, Prairie, Top Row, Cross, Custom - Equally Divided
Simulated-Divided-Light with Grilles-Between-the-Glass (Triple-Pane glazing)	
—	Traditional, Prairie, Top Row, Cross, Custom - Equally Divided
Grilles-Between-the-Glass	
—	Traditional, Prairie, Top Row, Cross, Custom - Equally Divided
Integrated Between-the-Glass Options (Triple-Pane Only)₁	
Cellular Fabric Shades	
—	Raise-and-lower bottom-up
Slimshade® Blinds	
—	Raise-and-lower bottom-up
Screens	
—	InView™ screens

(—) = Not Available

(2) Unit height determines availability.

(1) Contact your local Pella sales representative for current designs and color options.



Features and Options

	Curved Shapes	Rectangular / Angled Shapes
Glazing		
Glazing Type		
Dual-Pane Insulating Glass	S	S
Triple-Pane Insulating Glass	O	O
Clad panel with hardboard core ¹	—	O
Insulated Glass Options / Low-E Types		
Advanced Low-E	S	S
SunDefense™ Low-E	O	O
SunDefense+ Low-E	O	O
AdvancedComfort Low-E	O	O
NaturalSun Low-E	O	O
NaturalSun+ Low-E	O	O
Clear (no Low-E coating)	O	O
Additional Glass Options		
Annealed Glass	S	S
Tempered Glass	O	O
Obscure Glass ²	O	O
Tinted Glass (Bronze, Gray and Green)	O	O
Spandrel Glass	O	O
Non-Impact Laminated Dual-Pane Insulating Glass	O	O
Impact-Resistant Laminated Dual-Pane Insulating Glass	O	O
Gas Fill/High Altitude		
Argon	S	S
High altitude	O	O
Exterior		
EnduraClad® aluminum-clad exterior	S	S
EnduraClad Plus aluminum-clad exterior	O	O
Cladding Colors		
Standard colors ²	S	S
Feature Colors, Custom colors ¹	O	O
Interior Finish		
Factory primed interior	O	O
Factory prefinished paint ¹	O	O
Factory prefinished stain ¹	O	O
Wood Types		
Pine	S	S
Mahogany	O	O
Douglas Fir	O	O
Grilles		
Integral Light Technology® Grilles		
Traditional	O	O ⁴
Sunburst	O	—
Custom	O	—
Simulated Divided Light Grilles		
Traditional, Prairie, Cross, Top Row	O ³	O
Sunburst, Starburst	O	—
Grilles-Between-the-Glass		
Traditional, Prairie, Cross, Top Row	O ³	O
Sunburst	O	—

S = Standard; O = Optional; (—) = Not Available

(1) Contact your local Pella sales representative for current availability, designs and/or color options.

(2) Pella Lifestyle Series is limited to color options within that product offering. Contact your local Pella sales representative for current color options

(3) In select shapes. Cross and Top Row not available in curved units.

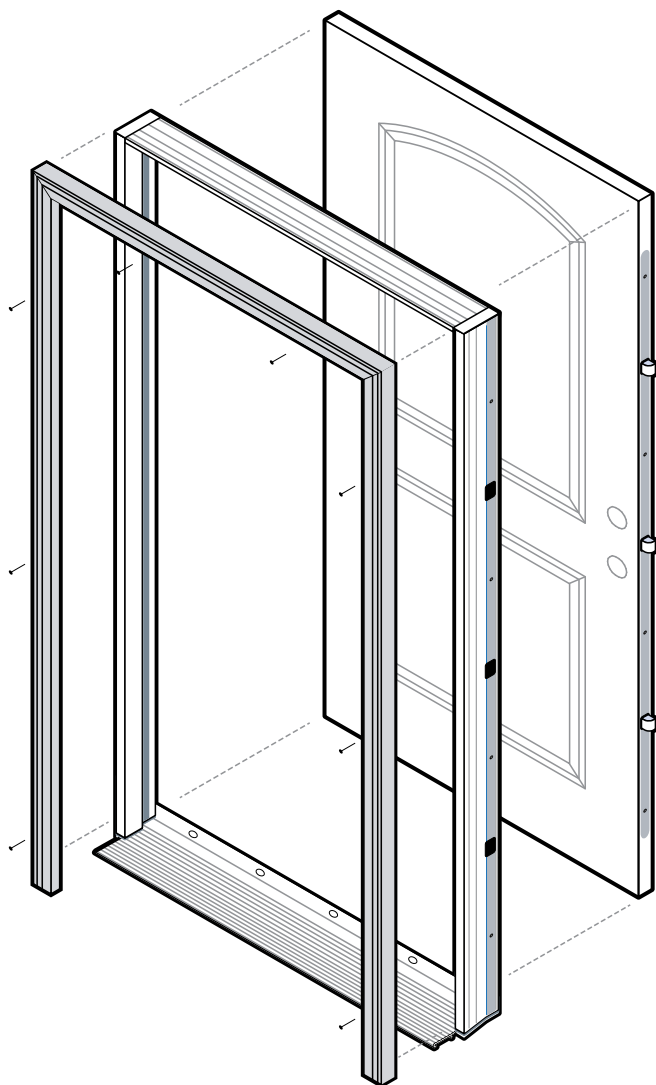
(4) Only available in Contemporary rectangular and angle shape units with square grille profile.

Pella® Entry Doors

Item 5.

#1 preferred entry door brand by homeowners.*

A curated collection of fiberglass and steel entry doors delivering dependable performance and inspired designs.



Rendering shown with all available options.

- **Whole home solution**

Trust Pella to be your whole project solution with our complete offering of windows, patio doors and entry doors. Support is available where and when you need it with trusted national, regional and local partners in sales and installation.

- **Innovative security sensors**

Our integrated security sensors are factory-installed and integrated directly into the entry door system. Preserving the beauty and warranty of a Pella entry door while increasing peace of mind, they can be used with the free Pella Insynctive® app and integrate with many home security systems.

- **Premium hardware**

Pella has partnered with Baldwin®, the #1 premium hardware brand to create three stunning collections to complement your project's style, architecture and coordinating window hardware.

- **Variety of panel materials**

Available in fiberglass and steel, our collection of entry doors can meet the needs of your design vision, while providing exceptional performance and energy efficiency.

- **Rot-resistant frame system**

Pella's complete panel and frame system for fiberglass and steel entry doors is made of a rigid closed cell poly-fiber material and is engineered to be exceptionally energy efficient. It does not absorb moisture and is rot resistant, reducing potential callbacks.

- **Energy-efficient panels**

Our fiberglass and steel entry doors feature solid polyurethane foam-filled panels to increase energy efficiency and ensure years of exceptional performance.

- **Desired, on-trend colors**

Select from a curated color collection, created in collaboration with the team at Sherwin-Williams DesignHouse for Performance Coatings. They are designed to complement Pella windows and patio doors and coordinate with other exterior finishes, including siding, roofing, stone and shingles.

- **Most popular styles**

With the most popular panel styles, we've made the selection process for your next project faster and easier. With a panel offering that fits every home style, you can help fulfill your customer's desired aesthetic.

- **Available impact options**

Offering panel and glass options for impact-certification, Pella's fiberglass and steel panels and frame system allow for code compliance. See performance details at PellaADM.com for more information.



Pella® entry doors are backed by some of the strongest warranties in the business.²

Pella entry door fiberglass systems with composite exterior frames are backed by the Pella Limited Lifetime Warranty. The Pella 20/10 Limited Warranty is the standard warranty for all steel and wood entry doors from Pella.

* Study of homeowner perceptions of leading national brands. Study commissioned by Pella, 2018

Product Specifications

Entry Door Styles	Min. Width	Min. Height	Max. Width¹	Max. Height	Performance Values¹	
					U-Factor	SHGC
Flush Glazed Full Light²	30"	80"	36"	96"	0.25	0.16
Full Light²	30"	80"	36"	96"	0.25	0.16
3/4 Light²	32"	80"	36"	96"	0.25	0.21
3/4 Deluxe Oval Light²	32"	80"	36"	80"	0.24	0.15
1/2 Light 1 Panel Plank	32"	80"	36"	96"	0.23	0.16
Craftsman Light²	32"	80"	36"	96"	0.19	0.09
Twin Colonial Light	32"	80"	36"	80"	0.19	0.09
2 Panel Square	32"	80"	36"	96"	0.15	0.01
2 Panel Arch Plank	32"	80"	36"	96"	0.15	0.01
Craftsman²	32"	80"	36"	96"	0.15	0.01
6 Panel²	30"	80"	36"	96"	0.15	0.01
Flush	30"	80"	36"	96"	0.15	0.01

Panel Styles

Solid



2 Panel Square



2 Panel Arch Plank



Craftsman²



6 Panel²



Flush

Glazed



Craftsman Light²



1/2 Light 2 Panel²



1/2 Light 1 Panel²



1/2 Light 1 Panel Plank



3/4 Oval Light²



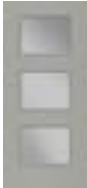
3/4 Deluxe Oval Light²



3/4 Light²



Full Light²



3 Light Equal



4 Light Equal



Twin Colonial Light



Fan Light



Fan Light Rectangle



1 Light Flush

Flush Glazed



Flushed Glazed 1/2 Light²



Flushed Glazed 3/4 Light²



Flushed Glazed Full Light



Flushed Glazed Craftsman

¹ Values shown are for a single door. See your Pella representative for more information.
² Availability may be limited. Please contact your local Pella representative for more information.
³ See written limited warranties for complete details, including exceptions and limitations, at pella.com/warranty or contact Pella Customer Service at 877-473-5527.

Colors

Finishes Find the color that coordinates best with your project, from modern to traditional styles, across the country. Our curated collection of on-trend colors was created in collaboration with the team at Sherwin-Williams DesignHouse for Performance Coatings.

Prefinished Stains



Golden Oak



Early American



Provincial



Red Mahogany

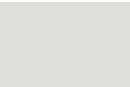


Dark Mahogany

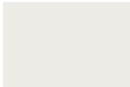


Charcoal

Painted Fiberglass or Steel



White



Classic White



Pearl Gray



Soft Linen



Wolf Gray



Almond



Putty



Fossil



Portobello



Brown



Brick Red



Spice Red



Sage



Pine Green



Frost Blue



Blue Ash

Glass

Glass

Low-E insulating glass is available on a broad range of glazed entry doors. It provides thermal protection for exceptional energy efficiency, insulating from both heat and cold — making it a great choice for all climates. Decorative and impact-resistant glass options are available.

Low-E Glass

Energy-saving Low-E insulating glass is a simple, elegant option that helps protect flooring and furniture from fade damage.



Low-E Glass

Low-E Obscure Glass

An elegant way to add privacy, Pella's obscure glass patterns provide unique design simplicity.



Chord



Double Water



Pear



Satin Etch



Narrow Reed

Added Peace of Mind

Integrated Security Sensors Integrated wireless security sensors maintain aesthetics, streamline security installation and ensure no warranty loss is caused by post-installation drilling. Sensors can be monitored via the free Pella Insynctive® mobile app and are compatible with major security panel systems.* For more information, go to connectpella.com.

* Requires the Pella Insynctive App on a smart device, an Insynctive Bridge and a wireless home internet router with internet connection.

Hardie® Shingle Siding

Submittal Form

03

Submitted to:

Project Name:

Submitted by:

Date:

☐ HZ5® Product Zone ☐ HZ10® Product Zone

Product : ☒ Straight Edge Panel ☐ Staggered Edge Panel
☐ Half Round Panel ☐ Individual

Product Finish: ☒ Primed ☐ ColorPlus® Technology

Product Texture: ☐ Select Cedarmill®

Hardie® Shingle Siding

Specification Sheet

03

DIVISION: 07 00 00 THERMAL AND MOISTURE PROTECTION

SECTION: 07 46 46 FIBER CEMENT SIDING

HARDIE® SHINGLE SIDING

Manufacturer

James Hardie Building Products Inc.

The products are manufactured at the following locations, with quality control inspections by ICC-ES:

- Cleburne, Texas
- Plant City, Florida
- Reno, Nevada
- Waxahachie, Texas
- Prattville, Alabama
- Peru, Illinois
- Pulaski, Virginia
- Tacoma, Washington
- Fontana, California
- Summerville, South Carolina

Compliance with the following codes

- 2006 thru 2021 International Building Code (IBC)
- 2006 thru 2021 International Residential Code (IRC)

For more information about other compliances and applicable uses, refer to ICC-ES ESR-2290

Features

- Noncombustible
- Dimensionally Stable
- Resistant to damage caused by pests
- Weather Resistant-Engineered for Climate®
- Impact resistant
- Sustainable

Use

James Hardie fiber-cement cladding shingles are used as exterior wall covering. The product complies with IBC Section 1403.9 and IRC Section R703.10. The product may be used on exterior walls of buildings of Type I, II, III and IV construction (IBC).

Description

Hardie® Shingle siding is a single-faced, cellulose fiber-reinforced cement (fiber-cement) product. Hardie® Shingle siding complies with ASTM C1186, as Grade II, Type A; has a flame-spread index of 0 and a smoke-developed index of 5 when tested in accordance with ASTM E84; and is classified as noncombustible when tested in accordance with ASTM E136.

Available Sizes

Product	Width (in)	Height (in)	Thickness (in)
Shingle Panel 5 inch exposure (Straight edge)	48	14	1/4
Shingle Panel 6 inch Exposure (Staggered Edge)	48	15-1/4	1/4
Shingle Panel 7 inch exposure (Straight Edge & Half Round)	48	15-1/4	1/4
Individual shingles 5 inch exposure	3-1/2, 4-1/2, 5-1/2, 7, 8-3/4	14	1/4
Individual shingles 7 inch exposure	4-3/16, 5-1/2, 6-3/4, 7-1/4, 10	15-1/4	1/4

Weight: 2.12 lbs. per square foot

Texture & Finish

Hardie® Shingle siding is available in wood grain texture. Finish options are primed for field paint, or factory finished with ColorPlus® Technology. Color and exposure availability varies by region.

Engineered for Climate®

Hardie® Shingle siding is engineered for performance to specific weather conditions by climate zones as identified by the following map.



Performance Properties

General Property		Test Method	Unit or Characteristic	Requirement	Result
PHYSICAL ATTRIBUTES	Dimensional Tolerances	ASTM C1185	Length	± 0.5% or ± 1/4in	Pass
			Width	± 0.5% or ± 1/4 in	
			Thickness	± 0.04 in	
			Squareness	Δ in diagonals ≤ 1/32 in/ft of sheet length. Opposite sheet sides shall not vary in length by more than 1/32 in/ft	
			Edge Straightness	≤ 1/32 in/ft of length	
	Density, lb/ft³	ASTM C1185		As reported	83
	Water Absorption, % by mass	ASTM C1185		As reported	36
	Water Tightness	ASTM C1185	Physical Observations	No drop formation	Pass
THERMAL	Flexural Strength	ASTM C1185	Wet conditioned, psi	>1015 psi	Pass
			Equilibrium conditioned, psi	>1450 psi	
	Thermal Conductivity	ASTM C177	(BTU/(hr·ft²·F))/inch	As reported	2.07
	Actual Thermal Conductivity		(K _{eff})		6.62
DURABILITY	Thermal Resistance		R=1/ K _{eff}		0.48
	Actual Thermal Resistance		(R)		0.15
	Warm Water Resistance	ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
	Heat/Rain Resistance	ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
	Freeze/Thaw Resistance	ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
			Mass Loss, %	≤ 3.0%	
			Freeze/Thaw, % strength retention	≥ 80%	
	UV Accelerated Weathering Test	ASTM G23	Physical Observations	No cracking, checking, or crazing	Pass
FIRE CHARACTERISTICS	Surface Burning Characteristics	ASTM E84	Flame Spread Index (FSI)		0
			Smoke Developed Index (SDI)		≤ 5
			Fuel Contributed		0
			NFPA Class		A
			Uniform Building Code Class	As reported	1
			International Building Code® class		A
	Noncombustibility	ASTM E136	Noncombustible	Pass/fail	Pass
	Fire Resistance Rated Construction	ASTM E119	Fire Resistance Rating	1-hour	Note 1

Note 1: listed on Warnock Hersey

Installation

Install Hardie® Shingle siding in accordance with:

- Hardie® Shingle siding installation instructions
- ICC-ES ESR 2290
- Requirements of authorities having jurisdiction

Warranty

Hardie® Shingle siding: 30-year, Non-Prorated, Limited Warranty
ColorPlus® Technology: 15-year Limited Finish Warranty

Sustainable Design Contribution

- Regionally sourced content- varies by project location
- Avoidance of certain chemicals or Red List Compliance

Detailed product information for LEED projects, or other state or regional sustainability programs is available through James Hardie Technical Services.

Storage and Handling

Store flat and keep dry and covered prior to installation.

Technical Services

Contact James Hardie Technical Services online at JamesHardie.com, or by phone at (800)426-4051

IMPORTANT: Failure to install and finish this product in accordance with applicable building codes and James Hardie written application instructions may affect system performance, violate local building codes, void the product-only warranty and lead to personal injury. **DESIGN ADVICE:** Any information or assistance provided by James Hardie in relation to specific projects must be approved by the relevant specialists engaged for the project eg. builder, architect or engineer. James Hardie will not be responsible in connection with any such information or assistance.

Hardie® Trim

Submittal Form

09

Project Name:

Date:

Submitted to:

Submitted by:

Product:	☐ ColorPlus® Technology finish ☒ Primed for Paint
Zone:	☐ HZ5® ☐ HZ10®
Texture:	☒ Smooth ☐ Roughsawn ☐ Rustic Grain
Width:	☐ 2.5 in. ☐ 3.5 in. ☐ 4.5 in. ☐ 5.5 in. ☐ 7.25 in. ☐ 9.25 in. ☐ 11.25 in.
Length:	☒ 12 ft.
Thickness:	☒ 3/4 in. ☒ 1 in. ☐ 1.5 in.

Hardie® Trim

Specification Sheet

09

DIVISION: 07 00 00 THERMAL AND MOISTURE PROTECTION

SECTION: 07 46 46 FIBER CEMENT SIDING

HARDIE® TRIM

Manufacturer

James Hardie Building Products Inc.

The products are manufactured at the following locations, which receive regular quality control inspections by ICC-ES.

- Cleburne, Texas
- Prattville, Alabama
- Plant City, Florida
- Peru, Illinois
- Reno, Nevada

For more information about compliances, refer to Intertek Spec ID# 39758.

Features

- Class-A Fire Rated
- Flood Damage Resistant
- Dimensionally Stable
- Resists damage from pests
- Zero Flame Spread
- Engineered for Climate®
- Weather Resistant
- Impact resistant
- Sustainable

Use

Hardie® fiber cement trim is used as an exterior wall accessory. The product complies with 2024 IBC Section 1403.9; 2018, 2021 IBC Section 1403.10; 2012, 2015 IBC Section 1404.10.

Description

Made from durable fiber cement, Hardie® Trim comes in a variety of textures and are available primed and ready for paint, or pre-finished with ColorPlus® Technology, providing the perfect finishing touch to your project. Hardie® Trim complies with ASTM C1186, Type A; and Class A Fire Rated per ASTM E84, with a flame spread index / smoke developed index of less than 0/5.

Engineered for Climate®

Hardie® Trim is engineered for performance to specific weather conditions by climate zones as identified by the following map.



Performance Properties

	General Property	Test Method	Unit or Characteristic	Requirement	Result
PHYSICAL ATTRIBUTES	Dimensional Tolerances	ASTM C1185	Length	± 0.5% or ± 1/4 in	Pass
			Width	± 0.5% or ± 1/4 in	
			Thickness	For 3/4 in, ± 0.06 in. For greater than 3/4 in, ±10%.	
			Squareness	Δ in diagonals ≤ 1/32 in/ft of sheet length. Opposite sheet sides shall not vary in length by more than 1/32 in/ft	
			Edge Straightness	≤ 1/32 in/ft of length	
	Density, lb/ft³	ASTM C1185		As reported	70
	Water Absorption, % by mass	ASTM C1185		As reported	≤ 40.2
	Water Tightness	ASTM C1185	Physical Observations	No drop formation	Pass
DURABILITY	Flexural Strength	ASTM C1185	Wet conditioned, psi	>580 psi	Pass
			Equilibrium conditioned, psi	>580 psi	
	Warm Water Resistance	ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
	Heat/Rain Resistance	ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
	Freeze/Thaw Resistance	ASTM C1185	Physical Observations	No visible cracks or structural alteration	Pass
			Mass Loss, %	≤ 3.0%	
			Freeze/Thaw, % strength retention	≥ 80%	
	UV Accelerated Weathering Test	ASTM G23	Physical Observations	No cracking, checking, or crazing	Pass
FIRE CHARACTERISTICS	Surface Burning Characteristics	ASTM E84	Flame Spread Index (FSI)		0
			Smoke Developed Index (SDI)		≤ 5
			Fuel Contributed		0
			NFPA Class		A
			Uniform Building Code Class	As reported	1
			International Building Code® class		A

Note 1: listed on Warnock Hersey and ESR 2290

Installation

Install Hardie® Trim in accordance with:

- Hardie® Trim installation instructions
- Requirements of authorities having jurisdiction

Warranty

Hardie® Trim: 30-year, Non-Prorated, Substrate Limited Warranty
ColorPlus® Technology finishes: 15-year, Limited Finish Warranty

Sustainable Design Contribution

- Regionally sourced content - varies by project location
- Avoidance of certain chemicals

Detailed product information for LEED® projects, Environmental Product Declaration, or other state or regional sustainability programs is available through James Hardie Technical Services or JamesHardie.com.

Storage and Handling

Store flat and keep dry and covered prior to installation.

Technical Services

Contact James Hardie Technical Services by phone at 1-888-J-HARDIE (1-888-542-7343).

IMPORTANT: Failure to install and finish this product in accordance with applicable building codes and James Hardie written application instructions may affect system performance, violate local building codes, void the product-only warranty and lead to personal injury. **DESIGN ADVICE:** Any information or assistance provided by James Hardie in relation to specific projects must be approved by the relevant specialists engaged for the project eg. builder, architect or engineer. James Hardie will not be responsible in connection with any such information or assistance.



FRONT ELEVATION



FRONT ELEVATION



RIGHT ELEVATION



REAR ELEVATION



LEFT ELEVATION



RIGHT ELEVATION



SIDE GARAGE ELEVATION



REAR GARAGE ELEVATION



CONCRETE TO BE REMOVED/REPLACED - BUSH TO BE REMOVED



CONCRETE TO BE REMOVED



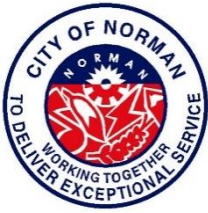
FRONT ELEVATION WITH STRUCTURE SHOWN



AERIAL VIEW



REAR YARD AND EXISTING FENCE



CITY OF NORMAN, OK STAFF REPORT

MEETING DATE: November 3, 2025

REQUESTER: Devon Miller

PRESENTER: Anais Starr, Planner II/Historic District Preservation Officer

ITEM TITLE: (HD 25-36) CONSIDERATION OF APPROVAL, REJECTION, AMENDMENT, AND/OR POSTPONEMENT OF THE CERTIFICATE OF APPROPRIATENESS REQUEST FOR THE PROPERTY LOCATED AT 720 S LAHOMA AVENUE FOR THE FOLLOWING MODIFICATION: A) INSTALLATION OF A COVERED PERGOLA IN THE REAR YARD.

Background

Historical Information

2004 Chautauqua Historic District Nomination Survey Information:

Chautauqua Historic District Nomination Survey Information:

720 S Lahoma Avenue. Circa 1950. Modern. This noncontributing, one-story, asbestos-sided single dwelling has a combination flat and shed roof. The foundation is concrete. The metal windows are casement. The wood door is a slab with a wood screen. The partial porch features a flat roof supported by metal braces, creating a carport as well. Other exterior features include a broad brick chimney on the rear. Decorative details include ribbon windows and a stone veneer wainscoting under the porch. The house is noncontributing due to insufficient age.

Sanborn Insurance Map Information

This parcel is vacant on the 1944 Sanborn Insurance Map, indicating the present structures were built after 1944.

Previous Actions

July 5, 2022 – A COA was granted for the repair and/or restoration of all existing windows, glass, glazing, and hardware, or replacement with steel casement windows with the same profile and windowpane configuration, and for the demolition of an existing shed and replacement with a free-standing covered patio as submitted. It should be noted the shed was demolished, while the remainder of the approved COA-requested items were not installed.

REQUEST

a) Installation of a covered pergola in the rear yard.

Project Description:

The applicant proposes installing a 13' by 19' metal pergola on the existing concrete pad. The 247 square foot covered pergola will setback 5' from the side and rear property lines. This meets the Zoning Ordinance requirements for setbacks.

Reference

Historic District Ordinance

36-535.a.2.g: Purpose. *To safeguard the heritage of the City by preserving and regulating historic district structures in such a way that maintains or restores their historic integrity while allowing modern-day uses and conveniences for their residents.*

36.535.c.3: Reviewing non-contributing structures. *Non-contributing structures should be controlled only to the degree necessary to make them compatible with the general atmosphere of any district with regard to exterior alteration, additions, signs, site work, and related activities.*

Preservation Guidelines

2.2 Guidelines for Site Features

A review by the Historic District Commission will use the following criteria for the issuance of a Certificate of Appropriateness (COA):

.1 Garden Structures. *Garden structures, such as pergolas and trellis, larger than 120 square feet, are to be located behind the principal structure with very limited or no visibility from the front right-of-way. Front or side yard installation can be considered if documentation shows one existed historically. Structures abutting or attached to the principal structure will be reviewed as a building addition. Structures that have a roof and/or sides will be reviewed as accessory structures.*

.2 Materials. *Structures are to be comprised of wood. Metal, composite wood, or cement fiberboard will be considered on a case-by-case basis. Vinyl is prohibited.*

.3 Height. *The structure shall be no taller than the height of the principal structure.*

Considerations/Issues:

The applicant proposes installing the covered pergola on the existing concrete pad located in the back corner of the property, where a metal storage shed once stood. The proposed metal pergola will be located 5' from the side property line, which will place it in line with the south edge of the house, thereby eliminating most of the pergola's visibility from the front streetscape. Since the covered pergola will have little to no visibility from the streetscape, it meets the location criteria found in the *Guidelines for Site Features*.

Per the *Guidelines*, metal is an allowed material for garden structures on a case-by-case review by the Commission. The Commission has previously approved covered pergolas. The Commission approved a 300-square-foot wood-covered pergola with limited visibility from the front streetscape on June 3, 2024, for the property at 423 S. Lahoma Avenue. A 285-square-foot metal-covered pergola, which, when constructed, will have limited visibility from the front streetscape, was approved on March 3, 2025, for the property at 1320 Oklahoma Avenue.

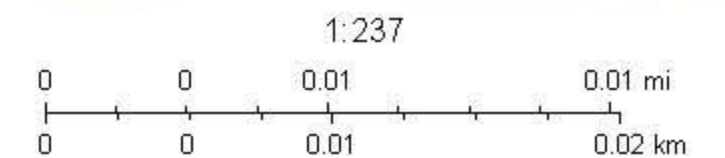
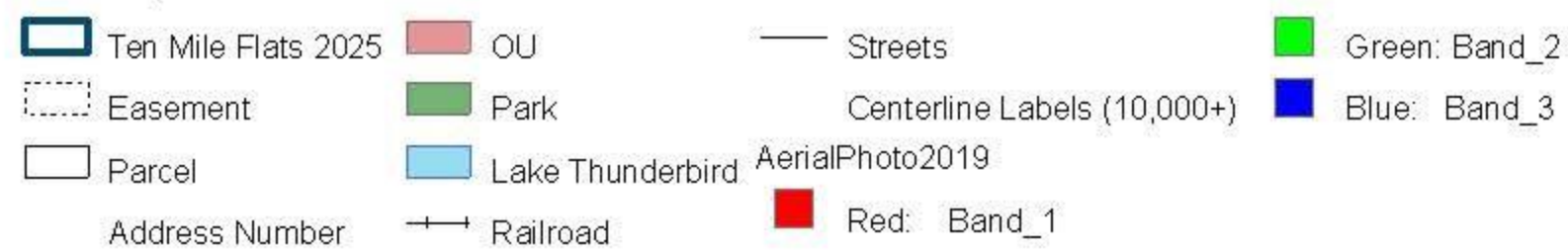
The Commission needs to determine if the installation of a covered pergola meets the *Preservation Guidelines* and is compatible with the Chautauqua Historic District.

Commission Action: (HD 25-36) Consideration of approval, rejection, amendment, and/or postponement of a Certificate of Appropriateness request for the property located at 720 S Lahoma Avenue for the following modification: a) installation of a covered pergola in the rear yard.

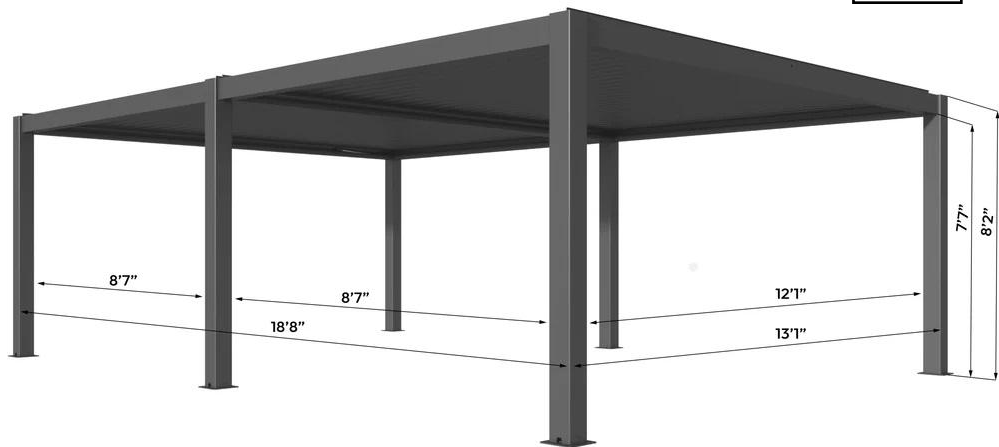
The City of Norman Historic District Commission		Staff Only Use:	
APPLICATION FOR CERTIFICATE OF APPROPRIATENESS (COA)		HD Case # _____	
		Date _____	
		Received by: _____	
Note: Any relevant building permits must be applied for and paid for separately in the Planning and Community Development Office 405-366-5311.			
Address of Proposed Work:		720 S Lahoma Ave, Norman, OK 73069	
Applicant's Contact Information:			
Applicant's Name: Devon Miller			
Applicant's Phone Number(s): 918-791-8589			
Applicant's E-mail address: millertime09@gmail.com			
Applicant's Address: 3324 NE 32nd St, Fort Lauderdale, FL 33308			
Applicant's relationship to owner: ☐ Contractor ☐ Engineer ☐ Architect			
Owner's Contact Information: (if different than applicant)			
Owner's Name: Devon Miller			
Owner's Phone Number(s): 918-791-8589			
Owner's E-mail: millertime09@gmail.com			
Project(s) proposed: (List each item of work proposed. Work not listed here cannot be reviewed.)			
1) Install Hanso Pergola on existing slab in backyard, [REDACTED]			
2) _____			
3) _____			
4) _____			
Supporting documents such as project descriptions, drawings and pictures are required see checklist page for requirements.			
Authorization: I hereby certify that all statements contained within this application, attached documents and transmitted exhibits are true to the best of my knowledge and belief. In the event this proposal is approved and begun, I agree to complete the changes in accordance with the approved plans and to follow all City of Norman regulations for such construction. I authorize the City of Norman to enter the property for the purpose of observing and photographing the project for the presentations and to ensure consistency between the approved proposal and the completed project. I understand that no changes to approved plans are permitted without prior approval from the Historic Preservation Commission or Historic Preservation Officer			
Property Owner's Signature: 			Date: 9/28/2025
☐ (If applicable): I authorize my representative to speak in matters regarding this application. Any agreement made by my representative regarding this proposal will be binding upon me.			
Authorized Representative's Printed Name:			
Authorized Representative's Signature:			Date:



5/27/2022, 8:45:37 AM



City of Norman, GIS Services Division







- Item 6. Info
- Outliner
- Instructor
- 3D Warehouse
- Materials
- Styles
- Tags
- Shadows
- Scenes
- Display
- Soften / Smooth
- Model Info
- Solid Inspector



Item 6.

Entity Info



Outliner



Instructor



3D Warehouse



Materials



Styles



Tags



Shadows



Scenes



Display



Soften / Smooth



Model Info



Solid Inspector





CERTIFICATE OF SURVEY

PART OF THE SW1/4 OF SECTION 31, T9N, R2W, I.M.,
NORMAN, CLEVELAND COUNTY, OKLAHOMA
(720 LAHOMA AVENUE)

Book 4117 Page 809
Fence is on Property line
1.2'-
3.6'-
50'x 90' Tract
W 90' Lot 1 & 2
Lindsey's Addition
Book 5605 Page 311

50'x 140.02' Tract
Book 5724 Page 57
Fence is 0.3' North of Property line
46.8'-
10.4'-
38.9'-
16.40'-
Subject Tract
One Story Frame House
24.0'-
38.6'-
20.6'-
12.8'-
17.6'-
13.8'-
6.7'-
10.4'-
Fence is 0.2' North of Property Line
140.20'-
589°49'44"E
5.4'-
Concrete
21.6' Shed
Concrete
30.8'-
50.00'-
150.00'-
500°01'14"W
Concrete
50'x 90.2' Tract
E 90.2' Lot 1 & 2
Lindsey's Addition
Book 5712 Page 1036

353.14'
500°01'14"W
Ex. 3/8" IP

Concrete

Lahoma Avenue

Concrete

500°01'14"W

150.00'

500°01'14"W

50.00'

30.8'

20.6'

24.0'

38.6'

12.8'

17.6'

13.8'

6.7'

10.4'

38.9'

16.40'

589°49'44"E

5.4'

Fence is 0.2' North of Property Line

140.20'

Concrete

21.6' Shed

Concrete

30.8'

50.00'

150.00'

500°01'14"W

Concrete

Lahoma Avenue

500°01'14"W

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