DeKalb County
GEORGIA

Development Services Center
178 Sams Street
Decatur, GA 30030
www.dekalbcountyga.gov/planning
404-371-2155 (o); 404-371-4556 (f)

Chief Executive Officer
Michael Thurmond

DEPARTMENT OF PLANNING & SUSTAINABILITY

Interim Director
Cedric Hudson

ZONING BOARD OF APPEALS APPLICATION FOR PUBLIC HEARING (VARIANCES, SPECIAL EXCEPTIONS, APPEALS OF ADMINISTRATIVE DECISIONS)

Applicant and/or Authorized Representative: PDC Land Holdings, LLC

Mailing Address: 3715 Northside Pkwy NW Building 200,Suite 175

City/State/Zip Code: Atlanta, GA, 30327

Email: mkovtoun@prestwickcompanies.com

Telephone Home: 404-587-9119 Business: N/A

OWNER OF RECORD OF SUBJECT PROPERTY

Owner: VASANTI, INC.

Address (Mailing): 2164 Fairburn Rd. Douglasville , GA 30135

Email: emailsamirpatel@yahoo.com Telephone Home: NA Business: N/A

ADDRESS/LOCATION OF SUBJECT PROPERTY

Address: 3952 Covington Highway City: Decatur State: GA Zip: 30032

District(s): 15 Land Lot(s): 220 Block: 10 Parcel: 002

Zoning Classification: C-1 Commission District & Super District: 5 & 7

CHECK TYPE OF HEARING REQUESTED:

X VARIANCE (From Development Standards causing undue hardship upon owners of property.)

_____ SPECIAL EXCEPTIONS (To reduce or waive off-street parking or loading space requirements.)

_____ OFFICIAL APPEAL OF ADMINISTRATIVE DECISIONS.

PLEASE REVIEW THE FILING GUIDELINES ON PAGE 4. FAILURE TO FOLLOW GUIDELINES MAY RESULT IN SCHEDULING DELAYS.

Email plansustain@dekalbcountyga.gov with any questions.

DeKalb County
GEORGIA

DEPARTMENT OF PLANNING & SUSTAINABILITY

ZONING BOARD OF APPEALS APPLICATION

AUTHORIZATION OF THE PROPERTY OWNER

I hereby authorize the staff and members of the Zoning Board of Appeals to inspect the premises of the Subject Property.

I hereby certify that the information provided in the application is true and correct.

I hereby certify that I am the owner of the property subject to the application.

DATE: 06/25/2024 Applicant Signature: _____

DATE: _____ Applicant Signature: _____

DeKalb County
GEORGIA

DEPARTMENT OF PLANNING & SUSTAINABILITY

ZONING BOARD OF APPEALS APPLICATION

AUTHORIZATION TO REPRESENT THE PROPERTY OWNER

I hereby authorize the staff and members of the Zoning Board of Appeals to inspect the premises of the Subject Property.

I hereby certify that the information provided in the application is true and correct.

I hereby certify that I am the owner of the property and that I authorize the applicant/agent to apply for a hearing to the ZoningBoard of Appeals for the requests as shown in this application.

DATE: 06/~~25~~/26/2024 (SP)

Applicant/Agent Signature: [signature]

TO WHOM IT MAY CONCERN:

(I)/ ~~(WE)~~: SAMIR PATEL
(Name of Owners)

being (owner/owners) of the property described below or attached hereby delegate authority to the above signed agent/applicant.

[signature]
Notary Public

[signature]
Owner Signature

Notary Public

Owner Signature

Notary Public

Owner Signature

DeKalb County Department of Planning & Sustainability
178 Sams Street
Decatur, GA 30030
Attn: Lucas Carter

RE: Westbury Apartments (Parcel ID Number(s): 15 220 10 002)

Zoning Board of Appeals Application for Public Hearing – Letter of Intent

Greetings,

To the esteemed members of the Zoning Board of Appels for Dekalb County, we are here today on behalf of Prestwick Development Company as it pertains to our interest in the property located at 3952 Covington Highway. We intend to demolish the existing abandoned structure on the property opting to develop and construct three apartment buildings directly on the road frontage of Covington Highway and Paul Edwin Drive. The zoning codes we are asking for variances to are **Section 3.41.7.** – F, to reduce the required stoop height of two feet, and Section **3.41.8. – A**, to include fiber cement lap and fiber cement panel siding as acceptable exterior building materials, as an alternative to hard stucco and synthetic stucco.

Physical Conditions of the site: The site is naturally very flat, with slopes of less than 2% throughout. For example, in the undeveloped area of trees in the northwest corner, survey data shows a point in the center of the trees at an elevation of 992.8 feet. Measuring from the southeast corner at the edge of the pavement, where the elevation is 996 feet and the distance is approximately 230 feet, results in a grade change of 1.37%. Such minimal grade changes are consistent across the entire site.

Minimum Variance Necessary: We are requesting a variance to maintain the stoops at sidewalk level and use fiber cement lap and panel siding, which represents the minimum necessary adjustment to make our property usable. This request does not grant any special advantages unavailable to other property owners in our zoning district. Keeping a level entrance is crucial for accessibility, ensuring compliance with ADA requirements and making the property usable for individuals with disabilities. This necessity aligns with inclusivity standards, benefiting all community members without giving our property any undue advantage.

Additionally, choosing fiber cement lap and panel siding over hard or synthetic stucco is essential due to the latter materials' rapid deterioration. Fiber cement siding is more durable and requires less maintenance, ensuring the building remains in good condition and visually appealing over time. This choice is focused on achieving long-term usability and sustainability, rather than gaining an aesthetic advantage over neighboring properties.

Public Welfare: The proposed change to forgo building the stoops and keep the entrance at sidewalk level, rather than raising it two feet, will positively impact public welfare by enhancing accessibility and safety. A level entrance facilitates access for individuals with disabilities, ensuring compliance with the Americans with Disabilities Act (ADA) and promoting community inclusivity. Additionally, eliminating a small step reduces the risk of tripping, a common hazard for pedestrians, especially the elderly and those with mobility impairments. By prioritizing a smooth, step-free entry, we make the building more accessible and contribute to the overall safety and well-being of all neighborhood residents and visitors.

Ordinance Hardship: A strict interpretation of the zoning laws, requiring the stoops to be raised two feet above the sidewalk, would impose significant undue hardship in terms of practicality and effective property use. Raising the stoops to this height would necessitate importing a substantial amount of fill dirt to properly level and elevate the construction site. This process is labor-intensive, and logistically challenging, potentially leading to prolonged construction times and disruptions in the neighborhood.

Furthermore, adhering to the zoning requirement would force us to use materials like hard stucco or synthetic stucco as a part of building's facade. These materials are prone to rapid deterioration, including surface cracking and fading early in their lifecycle. This deterioration diminishes the building's aesthetic appeal and requires constant, maintenance to prevent the property from looking neglected. In contrast, fiber cement lap and panel siding offers a more durable and visually appealing alternative, requiring significantly less maintenance over time. This material ensures a long-lasting, attractive facade, reducing the need for frequent repairs and upkeep.

Therefore, a variance allowing us to keep the stoops at sidewalk level and use fiber cement siding will make the construction process more practical and efficient. It will also result in a higher-quality, more sustainable development that benefits the entire community.

Alignment with the Spirit of the Law: We believe our request for a variance to maintain the stoops at sidewalk level and use fiber cement lap and panel siding aligns with DeKalb County's goals for historic preservation, development, and maintaining the character of historic areas while accommodating new residential projects. Our proposal ensures the building blends seamlessly with the existing historic character of the neighborhood by avoiding the visual disruption a raised stoop could cause. Fiber cement siding, with its high-quality, durable appearance, enhances architectural aesthetics and ensures longevity, preserving the area's historic charm. Additionally, maintaining a level entrance ensures the building is accessible to all community members, fostering inclusivity and participation community activities while maintaining ADA compliance.

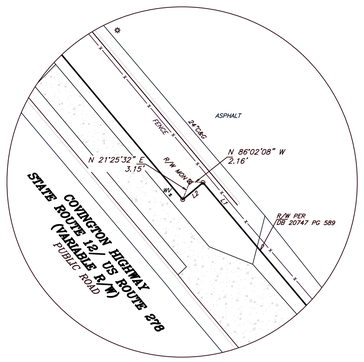
Conclusion: In conclusion, our request for variances at 3952 Covington Highway is essential for ensuring accessibility, safety, and sustainability. By keeping the stoops at sidewalk level and using fiber cement lap and panel siding, we comply with ADA requirements, enhance public welfare, and preserve the neighborhood's aesthetic and historic character. These adjustments are the minimum necessary for effective property use and do not provide any special advantages over other properties in the zoning district. We appreciate the Zoning Board of Appeals' time and consideration in supporting our proposal to create a more inclusive and durable development. Thank you.

LEGEND

IPF	IRON PIN FOUND
IPS	IRON PIN SET
PID	PARCEL I.D.
RB	REBAR
OTP	OPEN TOP PIPE
R/W	RIGHT OF WAY
DB	DEED BOOK
PB	PLAT BOOK
PG	PAGE
PID	TAX PARCEL ID
TBM	TEMPORARY BENCHMARK
MH	MANHOLE
CB	CATCH BASIN
DI	DROP INLET
JB	JUNCTION BOX
RTDI	RAISED TOP DROP INLET
HW	HEADWALL
CMP	CORRUGATED METAL PIPE
RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE
FH	FIRE HYDRANT
WM	WATER METER
WV	WATER VALVE
GV	GAS VALVE
24" C&G	24" CURB & GUTTER
GUY	GUY WIRE
PP	POWER POLE
LP	LIGHT POLE
-S-	SEWER LINE
-FM-	FORCE MAIN
-X-	FENCE
-T-	TELEPHONE LINE
-UT-	UNDERGROUND TELEPHONE LINE
-P-	POWER LINE
-UP-	UNDERGROUND POWER LINE
-W-	WATER LINE
-G-	GAS LINE
900.0	SPOT ELEVATION
	11 REGULAR PARKING SPACES
	1 HANDICAP PARKING SPACE
	TRANSFORMER
	CONCRETE PAVING

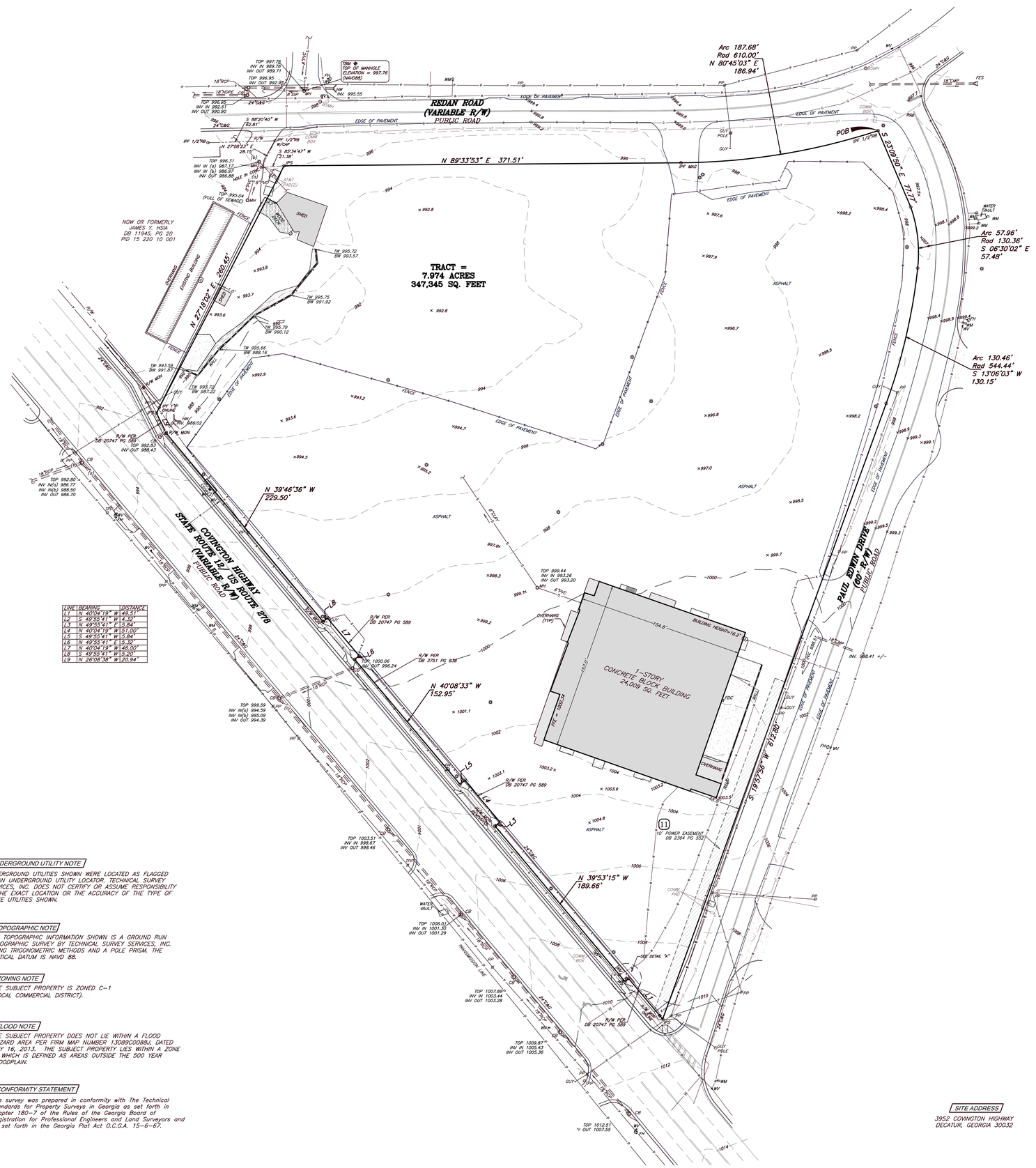
GRID NORTH
GA WEST NAD 83

40 0 40 80 120
GRAPHIC SCALE – FEET



DETAIL "A"
SCALE: 1" = 10'

LINE	BEARING	DISTANCE
L1	N 40°04'19" W	49.51'
L2	S 49°55'41" W	4.32'
L3	N 49°55'41" E	5.84'
L4	N 40°04'19" W	51.00'
L5	S 49°55'41" W	5.84'
L6	N 49°55'41" E	5.32'
L7	N 40°04'19" W	46.00'
L8	S 49°55'41" W	5.20'
L9	N 26°08'38" W	20.94'



VICINITY MAP

EXCEPTIONS IN TITLE COMMITMENT

FIDELITY NATIONAL TITLE INSURANCE COMPANY
COMMITMENT NUMBER: 9.1792–0
COMMITMENT DATE: FEBRUARY 3, 2024

10. Rights of way boundaries as established for Redan Road, Covington Road, and Paul Edwin Drive in that certain Quitclaim Deed from Horace J. Pendley to DeKalb County, Georgia, dated May 2, 1966, recorded May 11, 1966, in Deed Book 2100, page 215, aforesaid records. **(Does Affect Subject Property; Not Plottable)**
11. Easement from The Kroger Co., to Georgia Power Company, dated October 11, 1968, recorded November 8, 1968, in Deed Book 2364, page 552, aforesaid records. **(Does Affect Subject Property As Shown Hereon)**
12. Right of Way Deed and Grant of Temporary Easement from Gramarco Inc. to Department of Transportation, dated November 30, 1977, recorded February 20, 1978, in Deed Book 3751, page 838, aforesaid records. **(Does Not Affect Subject Property; R/W As Shown, Temporary Easements Have Expired)**
13. Easement from William M. Hagood to Georgia Power Company, dated December 16, 1991, recorded April 14, 1992, in Deed Book 7243, page 440, aforesaid records. **(Does Affect Subject Property; Not Plottable)**
14. Right of Way Deed from P.T. Investments, LLC to Georgia Department of Transportation, dated March 24, 2008, recorded April 10, 2008, in Deed Book 20747, page 589, aforesaid records. **(Does Affect Subject Property As Shown Hereon)**
15. All matters shown on the following:
a. Plat Book 44, page 149; and
b. Plat Book 82, page 52, aforesaid records.
(No Plottable Matters)

LEGAL DESCRIPTION

All that tract or parcel of land lying and being in Land Lot 220, 15th District, Dekalb County, Georgia and being more particularly described as follows:

Beginning at a 1/2 inch rebar found at the intersection of the southerly Right of Way of Redan Road (Variable R/W) and the westerly Right of Way of Paul Edwin Drive (60' R/W); thence running along said Right of Way of Paul Edwin Drive South 23° 09' 50" East a distance of 77.77 feet to a point; thence continuing along the aforementioned Right of Way the following courses: along a curve to the right an arc length of 57.96 feet, (said curve having a radius of 130.36 feet, with a chord bearing of South 06° 30' 02" East, and a chord length of 57.48 feet) to a point; thence following a curve to the right an arc length of 130.46 feet, (said curve having a radius of 544.44 feet, with a chord bearing of South 13° 06' 03" West, and a chord length of 130.15 feet) to a point; thence South 19° 57' 56" West a distance of 612.80 feet to an iron pin set on the westerly Right of Way of Paul Edwin Drive and the easterly Right of Way of Covington Highway, also known as State Route 12, also known as US Route 278 (Variable R/W); thence running along said Right of Way of Covington Highway North 40° 04' 19" West a distance of 49.51 feet to a point; thence continuing along said Right of Way the following courses: South 49° 55' 41" West a distance of 4.32 feet to a point; thence North 39° 53' 15" West a distance of 189.66 feet to R/W monument remnants found; thence North 49° 55' 41" East a distance of 5.84 feet to a point; thence North 40° 04' 19" West a distance of 51.00 feet to a point; thence South 49° 55' 41" West a distance of 5.84 feet to a point; thence North 40° 08' 33" West a distance of 152.95 feet to a point; thence North 49° 55' 41" East a distance of 5.32 feet to a point; thence North 40° 04' 19" West a distance of 46.00 feet to a point; thence South 49° 55' 41" West a distance of 5.20 feet to a R/W monument found; thence North 39° 46' 36" West a distance of 229.50 feet to a R/W monument found; thence North 26° 08' 38" West a distance of 20.94 feet to an iron pin set; thence leaving said Right of Way and running North 27° 18' 02" East a distance of 260.45 feet to an iron pin set on the aforementioned southerly Right of Way of Redan Road; thence running along said Right of Way North 89° 33' 53" East a distance of 371.51 feet to a magnetic nail found; thence continuing along the aforementioned Right of Way following a curve to the left an arc length of 187.68 feet, (said curve having a radius of 610.00 feet, with a chord bearing of North 80° 45' 03" East, and a chord length of 186.94 feet) to the TRUE POINT OF BEGINNING. Said tract contains 7.974 Acres (347,345 Square Feet).

SITE ADDRESS

3952 COVINGTON HIGHWAY
DECATUR, GEORGIA 30032

REFERENCES

1. LIMITED WARRANTY DEED FROM CXA–16 CORPORATION TO VASANTI INC DATED APRIL 11, 2014 AND RECORDED IN DEED BOOK 24330, PAGE 420 DEKALB COUNTY RECORDS.

SURVEY NOTES

1. NO OBSERVED EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS
2. NO KNOWN PROPOSED CHANGES IN STREET RIGHT OF WAY LINES. NO OBSERVED EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.
3. TECHNICAL SURVEY SERVICES, INC. AT THE TIME OF THIS SURVEY HAS A PROFESSIONAL LIABILITY POLICY IN THE AMOUNT OF $1,000,000 PER CLAIM AND $1,000,000 POLICY AGGREGATE, WITH A $5,000 DEDUCTIBLE PER CLAIM.
4. NO STRIPED PARKING WAS OBSERVED IN THE PROCESS OF CONDUCTING THE FIELD WORK ON THE SUBJECT PROPERTY.

CLOSURE STATEMENT

THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN ____192,734____ FEET AND AN ANGULAR ERROR OF __1"__ PER ANGLE AND WAS ADJUSTED USING THE COMPASS RULE.

A ____LEICA TS12____ TOTAL STATION AND AN__CARLSON__ DATA COLLECTOR WERE USED TO OBTAIN THE LINEAR AND ANGULAR MEASUREMENTS USED IN THE PREPARATION OF THIS PLAT.

THIS MAP OR PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE TO WITHIN ONE FOOT IN ____714,051____ FEET.

UNDERGROUND UTILITY NOTE

UNDERGROUND UTILITIES SHOWN WERE LOCATED AS FLAGGED BY AN UNDERGROUND UTILITY LOCATOR. TECHNICAL SURVEY SERVICES, INC. DOES NOT CERTIFY OR ASSUME RESPONSIBILITY TO THE EXACT LOCATION OR THE ACCURACY OF THE TYPE OF THOSE UTILITIES SHOWN.

TOPOGRAPHIC NOTE

THE TOPOGRAPHIC INFORMATION SHOWN IS A GROUND RUN TOPOGRAPHIC SURVEY BY TECHNICAL SURVEY SERVICES, INC. USING TRIGONOMETRIC METHODS AND A POLE PRISM. THE VERTICAL DATUM IS NAVD 88.

ZONING NOTE

THE SUBJECT PROPERTY IS ZONED C–1 (LOCAL COMMERCIAL DISTRICT).

FLOOD NOTE

THE SUBJECT PROPERTY DOES NOT LIE WITHIN A FLOOD HAZARD AREA PER FIRM MAP NUMBER 13089C0088J, DATED MAY 16, 2013. THE SUBJECT PROPERTY LIES WITHIN A ZONE X, WHICH IS DEFINED AS AREAS OUTSIDE THE 500 YEAR FLOODPLAIN.

CONFORMITY STATEMENT

This survey was prepared in conformity with The Technical Standards for Property Surveys in Georgia as set forth in Chapter 180–7 of the Rules of the Georgia Board of Registration for Professional Engineers and Land Surveyors and as set forth in the Georgia Plat Act O.C.G.A. 15–6–67.

SURVEYOR'S CERTIFICATION

To **PDC Land Acquisition, LLC, a Georgia limited liability company & Fidelity National Title Insurance Company**:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items __1, 2, 3, 4, 5, 6(a), 7(a), 7(b)(1), 7(c), 8, 9, 11(a), 13, 16, 17, & 19_ of Table A thereof. The fieldwork was completed on _March 16, 2024_.

GEORGIA REGISTERED LAND SURVEYOR JONATHAN AKIN

_____ _March 25, 2024_
Aubrey J. Akin, R.L.S. #3138 Date of Plat

TSS
TECHNICAL SURVEY SERVICES, INC.
1641 Autumn Blvd, SW
Conyers, Georgia 30012
(770) 922-6391 Office
info@tss-atl.com
www.tss-atl.com

No	Revision	Date

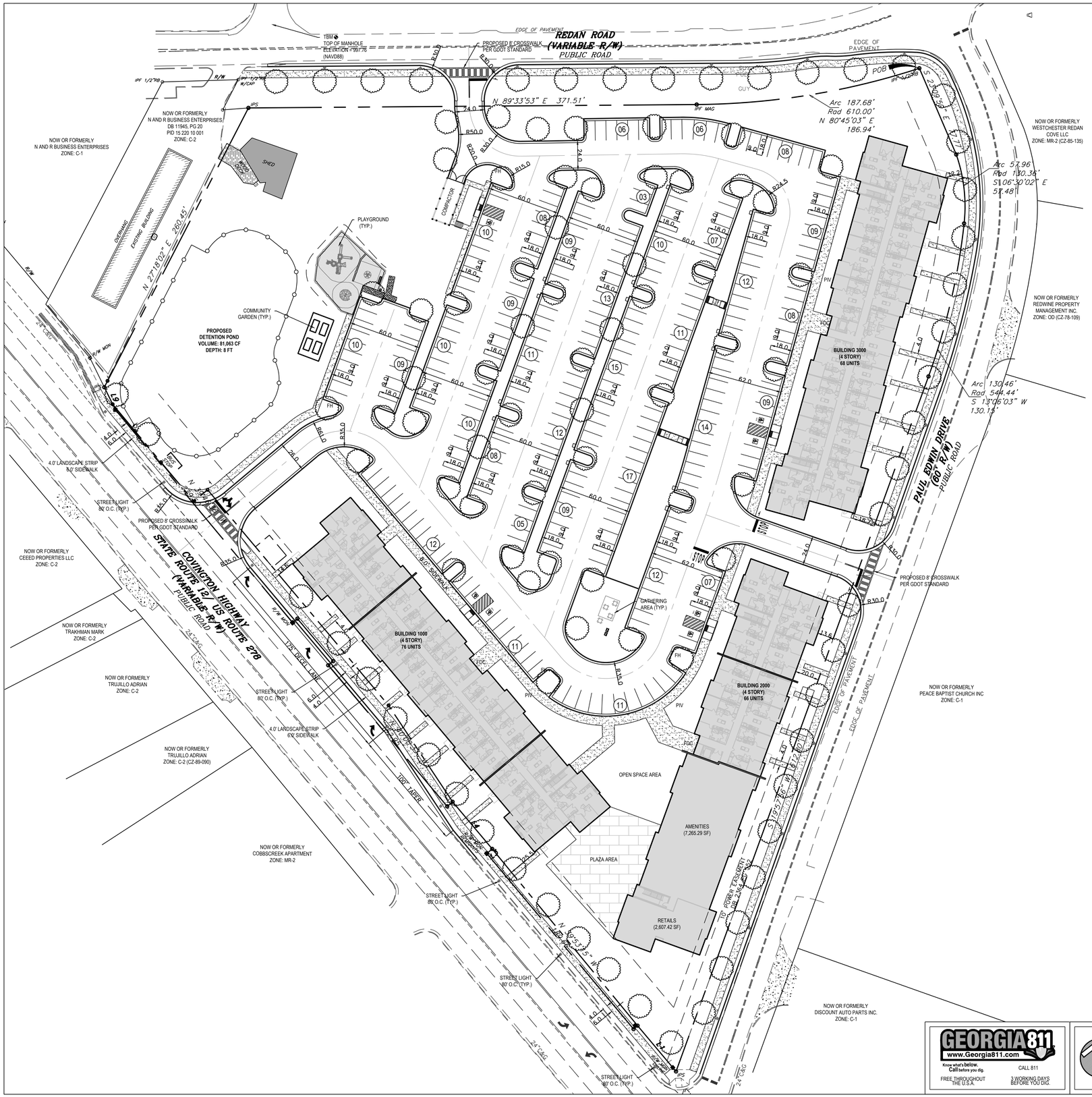
Field Date: 03/16/2024
Plat Date: 03/22/2024
Scale: 1" =40'

ALTA/NSPS LAND TITLE SURVEY
FOR
PDC LAND ACQUISITIONS, LLC
OF
3952 COVINGTON HIGHWAY
LAND LOT 220 15th DISTRICT
DEKALB COUNTY, GEORGIA

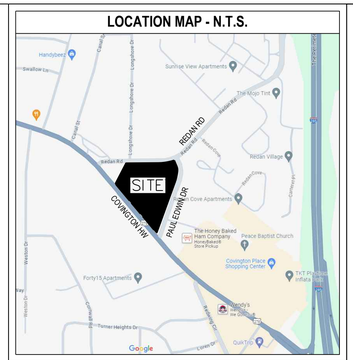
1
SHEET 1 OF 1

JOB #: 2024-1077
CRD: 3952 COVINGTON
DWG: PRESTWICK COVING
LSV:

01/31/2024



LOCATION MAP - N.T.S.



COUNTY STAMP

LAYOUT LEGEND

- PROPOSED BUILDING
- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- PROPOSED H.D. ASPHALT PAVING
- PROPOSED GDOT ASPHALT PAVING
- PROPOSED L.D. ASPHALT PAVING
- PROPOSED ADA CONCRETE PAVING
- PROPOSED CONCRETE PAVING
- PROPOSED CONCRETE SIDEWALK
- PROPOSED FENCING
- PROPOSED RETAINING WALL
- PROPOSED STRIPING
- BUILDING SETBACK LINE

NOTES

1. USE ARCHITECTURAL PLANS FOR BUILDING STAKE OUT.
2. ALL DIMENSIONS SHOWN ARE FROM FACE OF BUILDING, CURB, OR WALL UNLESS OTHERWISE NOTED.

OWNER/DEVELOPER

PRESTWICK COMPANIES
3715 NORTHSIDE PARKWAY NW
BUILDING 200, SUITE 175
ATLANTA, GA 30327
404-587-9119
MKOVTOUN@PRESTWICKCOMPANIES.COM

ENGINEER

JEREMIAH PHILLIPS
EBERLY & ASSOCIATES, INC.
2951 FLOWERS ROAD SOUTH
SUITE 119
ATLANTA, GEORGIA 30341
(770) 452-7849
PROJECT MANAGER:
MICHAEL WRIGHT
678-287-4733
MWRIGHT@EBERLY.NET

24 HOUR CONTACT

MAX KOVTOUN
404-587-9119
MKOVTOUN@PRESTWICKCOMPANIES.COM

GEORGIA811 www.Georgia811.com
Know what's below. Call before you dig.
CALL 811
FREE THROUGHOUT THE U.S.A.
3 WORKING DAYS BEFORE YOU DIG.

GRAPHIC SCALE
-40 0 20 40 80 160
(IN FEET)
1 INCH = 40 FT.

EBERLY & ASSOCIATES
TEL770.452.7849 FAX770.452.0086
2951 FLOWERS ROAD SOUTH, STE
119 ATLANTA, GEORGIA 30341
WWW.EBERLY.NET
LAND PLANNING
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE

PROJECT NAME:
WESTBURY MIXED USE DEVELOPMENT
LAND LOT 220
15TH DISTRICT
DEKALB COUNTY, GEORGIA
3952 COVINGTON HIGHWAY

REVISION

SITE PLAN	SCALE:	1" = 40'
	DATE:	05/09/2024
	DRAWN BY:	CHUNG Q. LE
	PROJECT ENGINEER:	MICHAEL WRIGHT
	QA/QC-REVIEWER:	ANTONIO SAMPLE

EBERLY PROJECT NUMBER:
24-047

SHEET NUMBER:
C3.0
NOT ISSUED FOR CONSTRUCTION

G:\PROJECTS\2024\24-047 Prestwick Westbury Multi-Family\5.0 Drawing\24-047 Base New.dwg May 30, 2024

TOTAL = 12,896.04 SF
30% = 3,868.81 SF
BRICK TOTAL = 4,746.91 SF

1 / A6-02.1 SOUTH Elevation

1/16" = 1'-0"

TOTAL = 12,554.01 SF
30% = 3,766.20 SF
BRICK TOTAL = 4,408.5 SF

2 / A6-02.1 NORTH Elevation

1/16" = 1'-0"

TOTAL = 3,023.11 SF
30% = 906.93 SF
BRICK TOTAL = 1,296.35 SF

3 / A6-02.1 EAST Elevation

1/16" = 1'-0"

TOTAL = 2,951.11 SF
30% = 885.33 SF
BRICK TOTAL = 1,224.35 SF

4 / A6-02.1 WEST Elevation

1/16" = 1'-0"

GEHEBER LEWIS ARCHITECTS

GLAATL.COM

1325 LOGAN CIRCLE
ATLANTA, GA 30318

PHONE: 404.228.1958
FAX: 404.228.8350

STAMP:

REVISION

ID	DATE	DESCRIPTION
	05/24/24	SD SET

CLIENT:

Prestwick companies

PRESTWICK DEVELOPMENT

PROJECT:

WESTBURY

LAND LOT 220 15TH DISTRICT 3952
COVINGTON HIGHWAY DEKALB COUNTY
GEORGIA

PROJECT NUMBER: 23028

DRAWN BY: TS,JM

CHECKED BY: RL

SCALE: AS NOTED

DATE: 05/24/2024

DRAWING TITLE:

BUILDING 2 - ELEVATIONS

DRAWING NUMBER:

A6-02.1

NOT RELEASED FOR CONSTRUCTION

(Drawings intended to be viewed in color)
Published: Tuesday, May 28, 2024 7:57 AM

The following table was first published in 1965 by the SMA and been recently updated. The SMA offers this as a general troubleshooting guide of problems or unwanted conditions found or related to portland cement plaster/stucco walls. The chart lists the conditions, possible causes, preventions or possible remedies. Not all of these conditions are in the control of the plastering contractor. This chart can also be used as a pre-installation discussion guide for plaster/stucco projects to help avoid unwanted conditions.

Stucco Manufacturers Association (SMA)

PORTLAND CEMENT PLASTER TROUBLESHOOTING - CAUSE AND CURE

CONDITION	CAUSE	PREVENTION OR POSSIBLE REMEDY
SOFT PLASTER	Cement fails to set	Do not use old cement, shelf life is typically one year.
	Excessive aggregate	Measure aggregate (calibrated box) to establish proper shovel count or use pre-blended mix.
	Inadequate damp curing	Keep damp for 24 hours. Fresh soft plaster may be redeemed by continuous wetting until proper set and hardness are obtained.
	Inadequate or excessive mixing	After all materials are in the mixer, minimum two (2) but not more than ten (10) minutes.
	Impurities in water or aggregate	Test water and aggregate. Use washed plaster sand
	Freezing temperatures	Plaster may harden upon resumption of damp curing above 40 degrees F. If plaster does not harden, remove and re-plaster.
	Improper use of admixtures (soap, gypsum, detergents, etc.)	Do not add ad-mixtures not approved by manufacturer of cement/stucco.
	Low temperatures (retarding hydration)	Damp cure above 40 degrees F. until plaster hardens. Do not damp cure below 40 F.
	Poor quality or improperly graded aggregates.	Specify ASTM standards for aggregates. Use clean, angular and graded sand.
SHRINKAGE CRACKS	Excessive cement/lime in mortar mix	Adhere to ASTM ratios of sand to cement/lime. Lime is cementitious
	Inadequate curing	Enforce moist curing of plaster to avoid rapid evaporation, particularly in warm windy weather. Refer to manufacturer SMA. curing
	Too much suction in base material	Control suction by pre-wetting base ahead of plaster application.
	Over-restraint	Wherever possible use unrestrained construction. (relieve stress)
	Improper aggregate	Follow ASTM C 897 for gradation & use washed plaster sand
	Hot, dry, windy weather	Shield or spray with water to keep moist. Or delay work until cooler
	Finish coat harder or denser than basecoats	Provide uniform density (hard float) of brown (base) coat. Smooth trowel finish stucco will tend to crack more. If possible use texture cement finishes or specify a lamina.
	Variations in plaster thickness	Apply in uniform and trowel even
STRUCTURAL CRACKS	Transfer of structural stresses (thermal, wind-load, seismic, dimensional change, creep, plastic flow, deflection, wood shrinkage and warping, sheathed backing,	Separate plaster membrane from structural members wherever possible to inhibit transfer of stresses greater than plaster membrane can absorb.

	impact, vibration, etc.)	
	Foundation settlement Expanding soil	Provide solid firm foundation (dimension, reinforcing, pad, etc.) Provide adequate foundation stabilization for soil conditions.
	Insufficient or irregular plaster thickness	Use grounds to establish nominal thickness of plaster. Substrate and framing in-plane tolerances must meet industries standards.
	Reinforcement (lath) not properly embedded in plaster membrane	Avoid over fastening, attach lath along framing supports per code (6 to 8 inches o.c.)
	Re-entrant cracks (cracks at corners of openings, i.e. windows/doors etc).	Avoid panel sheathing and lath joints aligning at corners. Specify control joints or lamina. Consider butterflies per SMA recommendations
	Improper framing-design	Deflection, use L/360. Do not bind floor line deflection joints.
PLASTER DETERIORATION	Alkalinity (sulfates)	Stop plaster above soil grade or control moisture in adjacent soil.
	Freeze-thaw deterioration	Seal larger cracks and joints in plaster.
	Reactive aggregate	Use low alkali cement and prohibit use of reactive aggregates.
	Painting with oil paint or non-breathing type coatings	Avoid non-breathing type (low perm) coatings over stucco. SMA recommends 7 or higher.

PORTLAND CEMENT PLASTER CRAZE CRACKING-EFFLORESCENCE

UNWANTED CONDITION	POSSIBLE CAUSE	POSSIBLE REMEDY OR FUTURE PREVENTIVE CONDITION
Crazing (alligator or check-cracking).	Improper and inadequate curing.	Avoid rapid evaporation of moisture for a minimum 24 hours. Control suction, pre-wet absorptive bases
	Rich mixes.	Do not use mixes with excessive cement or lime ratios.
	Overworking surface.	Do not over-work or over trowel finish. Smooth texture is recommend to have a lamina specified
	Too thick application	Install plaster coats not to exceed manufacturers or SMA recommendations
Efflorescence (discoloration or bloom created by salts traveling in solution).	Water-borne contaminants.	Use only clean potable (drinking) water. If needed, check water for salts (ASTM).
	Aggregate-borne contaminants.	Check aggregates for impurities (ASTM).
	Base-borne contaminants.	Check surface to be plastered; alkali: salts may be present in material to which plaster is applied and may be brought out in solution with the water in plaster.
	Cement.	Avoid additives not recommended by cement manufacturer
	Moisture migration brings soil salts into plaster membrane.	Install weep screed for framed walls at floor line. Masonry-avoid stucco contacting soil with alkalinity issues (check masonry prior to plastering for signs of efflorescence)
	Excessive evaporation drawing water out, carrying salts to the surface	Dark color can increase evaporation. Encourage lighter tones to minimize hot walls and accelerated evaporation

DISCOLORATION OF STUCCO

Discoloration - uneven color	Color pigment unevenly mixed.	Add all pigment and mix thoroughly. Encourage proprietary pre-mixed finish coats whenever possible.
	Trowel burning or dry floating finish coat.	Do not over-trowel or float without water in one area.

	Control of water.	**Use water as uniform as possible in cement finish. Basecoat surface must be uniformly moistened to control suction for cement. Primers may be used for acrylics to insure color uniformity.**
	Finish mixed with inconsistent water additions	**Acrylic: Paint per manufacturers recommendations** **Cement: Fog coat**
	Curing (cement finish coat should not be damp cured)	**If extreme wind or heat require color coat to be cured, it should be done with a very fine fog spray. Do not allow water to run down the wall face.**
	Dirty tools or floating water.	**Keep tools and working water clean.**
	Scaffold Lines	**Work to maintain a wet workable joint. The longer the time to plaster a lower level of a wall panel increases the likelihood of scaffold lines. Use adequate clean water when floating cement finish.**
	Rain on fresh finish coat.	**Avoid plastering either immediately before or after rain. Do not apply acrylic to up facing horizontal surfaces**
	Stains from flashings, rusted screeds, roofs and untreated wood, etc	**Protect from staining from drip and run-off from adjacent materials. Use non-corrosive flashing, lath, trims and fasteners.**
	Dark colors, pigment separation (migration).	**Avoid dark, heavily pigmented colors in floated cement sand or smooth trowel finish**
	Uneven thickness of basecoat.	**Provide for uniform thickness of all coats.**
Dark stains or spots appearing after heavy rains	**Possible material incompatibility, bituminous leaching issue**	**Insure building paper, house wraps, flashings, sealants and PVC windows are all chemically compatible to each other**
Rust stains on corners	**Possibly a rusty nail. Acrylic finish coat over wire nose aid will rust in damp regions**	**Use corrosion resistant fasteners. For acrylic finish coats use PVC nose or pre-prime wire nose in damp regions.**

LACK OF BOND

Lack of Bond to Masonry/Concrete	**Surface to be plastered is too smooth.**	**Specify scoring to create proper mechanical key. Blast, chip, apply cement dash bond coat or bonding agent if needed. Test patches are recommended to insure bond.**
	Residue or coating on substrate inhibiting a good.	**Remove any coating that will inhibit plaster bond to masonry or concrete. Building papers are not recommended between CMU and cement plaster. Do not plaster over elastomeric type coatings.**
	Insufficient suction.	**Insure surface is not pulling moisture "too" fast from plaster. Moisture is needed for hydration and a chemical bond.**
	Improper bonding agent	**Use bonders for cement or concrete on exteriors.**
Cement Finish popping off Corners	**Cement will stick to PVC nose, but not bond long term**	**Recommend using wire nose aid for cement finish coats**

PORTLAND CEMENT PLASTER – LEAKS

UNWANTED CONDITION	POSSIBLE CAUSE	POSSIBLE REMEDY OR FUTURE PREVENTIVE CONDITION
Floor line leaks Framed Walls	**Failure to install weep screed at framed wall to concrete slab. Water cannot exit .**	**Install weep or flashing to prevent water damming and allow for exit at framing to concrete slab or wall**
	Reverse lap of WRB and Flashing.	**Insure WRB laps over flange of weep screed or flashing**
Wall Leaks	**Windows not properly rated for wall condition or improperly flashed**	**Select windows per AAMA standards. Flash per SMA or manufacturers recommendations**
	Penetrations/Terminations allowing water entry	**Flash or seal all penetrations exposed to rain entry**
	Roof to wall leaks	**Provide proper counter flashing (Z bar), drips, kick outs or/and diverter.**

	Wind-Driven rain over whelming the assembly. (Not common).	**Occurs in conditions of frequent rain and high winds. Increase legs of flashings and overlaps in WRB from two (2) to four (4) or six (6) inches as needed.**
	Porous Plaster (not common)	**Cement plaster is not typically porous. Compact (hard float) brown coat; use SMA or ASTM mix ratios.**
	Large Cracks.	**Hairline cracks are not known to leak. Larger cracks can allow enough water in to overwhelm a concealed barrier system. Use control or expansion joints. Seal wider than hairline cracks in rain prone regions.**
	Trim Miters can open and allow enough water entry, to overwhelm the concealed barrier systems design.	**Seal all gaps that can allow water entry, leave exit points open. Install or "back-seal" trims with sealant prior to plastering is best practice. This protects the sealant form UV and the wall against excessive water entry.**

GENERAL COMMENTS

Flashing with corrosion-resistant metal is important to prevent water penetration of the wall at vulnerable points such as at openings, at tops and sides of trim, under copings and sills, at intersections of walls and roof, under built-in gutters, and at any places where water might gain entrance.

WRB (Water Resistant Barrier) is generally not recommended over masonry/concrete substrates or on ceiling and soffits. Two layers WRB are recommended over sheathings.

Lamina, a fiber re-enforced mesh embedded into a polymer enriched skim coat of cement. Generally used on cement basecoat or a finish stucco. Insure polymer skim coat is compatible with finish coats.

Materials used for plaster must be of good quality. Mixture must be designed to provide a workable, cohesive mixture with low water-cement ratio.

Curing deserves special attention during warm dry weather. It is essential that portland cement plaster retain enough moisture for hydration until setting and hardening has taken place. Moist curing helps develop maximum strength, density and impermeability, reduces shrinkage and offsets crazing and cracking.

Approved Windows should be flashed per the SMA document "Flashing an Nail Flange Window" see SMA details

Use sufficient pressure when applying plaster to insure a bond to substrates and between coats Portland cement plaster must be applied with sufficient pressure to obtain full bond between successive coats.

When lath reinforcement is applied to structure it supports plaster in place and restrains initial shrinkage; one-piece control joints help control minor stress cracking. Two-piece expansion joints allow for greater stress relief.

The brown coat must be compacted and hard floated to densify. This improves water resistance, reduces cracking and provides a good key for the finish coat.

Painting Stucco is an acceptable method to change color. A finish coat of stucco over painted stucco depends on, condition (bond) of the paint, type of paint, and the finish coat being applied. Ask the stucco manufacturer of the finish coat for recommendations.

Decorative foam shapes can be adhesively applied to the basecoat. Then a lamina to coat the shape and apply finish coat to walls and shapes.

Is Fiber Cement Siding Right for You?

By Waldman Engineering Consultants

How do you decide what type of siding to use on your home? Cost, esthetics, maintenance, and durability all are items to be considered when deciding on the exterior cladding for your home. One option that has become increasingly popular is fiber cement siding. This type of cladding comes with a 30-50 year warranty; however, it also comes with a big price tag. In order to decide if this is the right product for your home, we need to explore the pros and cons associated with fiber cement siding.

Fiber cement siding is made from inert (chemically inactive) materials, typically a combination of sand, cement, and cellulose (wood) fibers. It is designed to look like wood siding but has much less required maintenance.

What are the advantages of fiber cement siding?

Low maintenance: This product typically comes with a 30-50 year manufacturer warranty. The siding can come prefinished, with a 10-15 year warranty on the finish, or be painted after installation. There is little to no maintenance required on a yearly basis.

Durable: Due to the materials used to make fiber cement, it is extremely resistant to dents and scratches. Fiber cement siding resists thermal expansion and contraction so it holds up in extremely hot or cold climates. Since one of the main components in this siding is concrete, it resists rot, mold, and mildew. There is also no risk of structural damage due to termites as the material is impervious to wood-boring insects. Fiber cement siding is resistant to deterioration from salt and ultraviolet rays. This product has been recognized by the US Green Building Council fort its durability and sustainability.

Aesthetics: The fiber cement siding can have a smooth or wood grain appearance allowing it to simulate real wood siding. The manufacturers offer a wide variety of factory applied color options or the siding can be painted after installation allowing for unlimited color choices. Unlike aluminum or vinyl siding, the color can be easily altered as needed by simply repainting.

Fire resistant: The cement properties make fiber cement siding practically fire resistant and usually allows for a Class 1A fire rating. Some insurance companies are able to provide lower home owners insurance premiums due to this classification.

What are the disadvantages of fiber cement siding?

Cost: The material cost is typically less than wood siding and more than vinyl or aluminum siding. Due to the heavy weight of fiber cement siding, additional manpower is need, which also increases the installation costs. Generally, you can expect to pay about 40% more for fiber cement siding than you would for vinyl siding.

Installation issues: This is not a typical do-it-yourself project. The manufacturers have very specific installation requirements. The warranty on the product can be voided if the installer does not follow all of these guidelines. The installation requires special tools, additional manpower, and pre-installation planning. Due to the weight of the siding, it is important that it is fastened to the structural framing members. Failure to secure the siding appropriately can cause the siding to break at the fastener locations resulting in siding boards that sag or fall off the building. The materials are brittle and may break if not handled properly. The product absolutely must be kept dry prior to installation, which complicates the pre-installation storage and handling requirements. Another important installation issue to mention is that the dust that is produced when cutting fiber cement siding contains silica, which has been known to cause lung damage. Installers need to wear masks or use dust-collecting attachments on their saws to minimize any exposure to this dust.

In order to decide if fiber cement siding is the right choice for your home, the advantages and disadvantages listed above should be weighed. For many people, the initial cost increase is offset by the low maintenance required each year.

We should note that factory defects resulted in a class action lawsuit against one of the major manufacturers of fiber cement siding. Over 103 million dollars is currently being paid out to claimants who had this defective siding installed on their homes prior to September 30, 2013. If you had siding installed prior to this date, contact our office to see if you may qualify for compensation.

HardiePanel® Vertical Siding

MULTIFAMILY / COMMERCIAL INSTALLATION REQUIREMENTS

EFFECTIVE DECEMBER 2020

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

STORAGE & HANDLING:

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

⚠ CUTTING INSTRUCTIONS

OUTDOORS

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

INDOORS

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

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

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

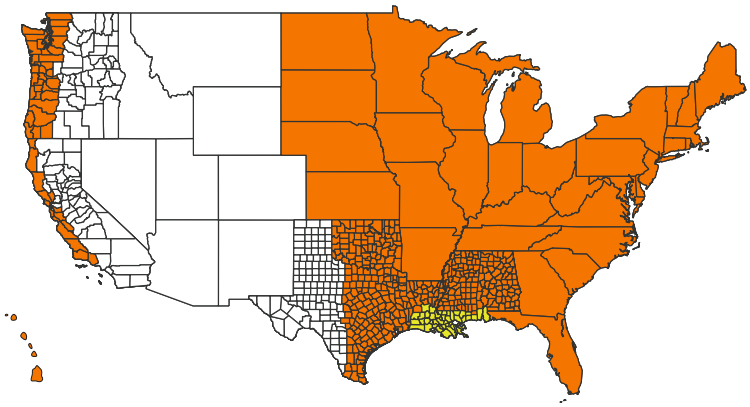
If you are unsure about how to comply with OSHA silica dust regulations, consult a qualified industrial hygienist or safety professional, or contact your James Hardie technical sales representative for assistance. James Hardie makes no representation or warranty that adopting a particular cutting practice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

GENERAL REQUIREMENTS:

- Refer to table 1 for multifamily/commercial drainage requirements for James Hardie® vertical siding.
- HardiePanel® vertical siding can be installed over furring strips (in accordance with local building code requirements). HardiePanel vertical siding can be installed over braced wood or steel studs, 20 gauge (0.836 mm) minimum to 16 gauge (1.367 mm) maximum, spaced a maximum of 610mm (24 in) o.c
- Consult ESR1844 for fastener schedule as well as additional technical information at www.jameshardiecommercial.com.
- A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. The manufacturer will assume no responsibility for water infiltration.
- Information on installing James Hardie products over non-nailable substrates (ex: gypsum, foam,etc.) can be located in JH Tech Bulletin 19 at www.jamehardie.com
- Do not install James Hardie products such that they may remain in contact with standing water.
- HardiePanel vertical siding may be installed on vertical wall applications only.
- DO NOT use HardiePanel vertical siding in Fascia or Trim applications.
- The designer and/or architect shall take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin #8 "Expansion Characteristics of James Hardie® Siding Products" at www.jameshardiecommercial.com.
- James Hardie Building Products provides installation /wind load information for buildings with a maximum mean roof height of 85 feet. For information on installations above 60 feet, please contact JH technical support.
- Minimum standard panel design size is 12" x 16". Note:Panels may be notched and cut to size to fit between windows,doors, corners, etc.

Table 1: HardiePanel® Vertical Siding Wall Drainage Requirements

All national, state, and local building codes must be followed, and where they are more stringent than James Hardie Installation requirements, state and local requirements will take precedence. Consult the "Exterior Wall Drainage Requirements" bulletin at www.jameshardiecommercial.com for additional guidance and a more detailed list of drainage required areas.



MINIMUM REQUIREMENTS BY STATE/COUNTY

A	WRB[1] *Dry Climates*
B	DRAINAGE PLANE (E.G. DRAINABLE WRB) WITH 90% DRAINAGE EFFICIENCY[2] *Moist and Marine Climates*
C	RAINSCREEN (MIN. 3/8 IN. AIR GAP)[3] *Severe Wind Driven Rain Climate*

[1] Water-resistive Barrier and drainage requirements as defined by building code.
[2] Water-resistive Barrier as defined by local building code that is manufactured in a manner to enhance drainage; must meet minimum 90% drainage efficiency when tested in accordance with ASTM E2273 or other recognized national standards.
[3] Water-resistive Barrier (WRB) as defined by building code and a minimum 3/8 in. (10mm) air space between the WRB and the panel siding (formed by minimum 3/8 in. furring).

Table 1 Cont.

A: Water Resistive Barrier Condition

Figure 1

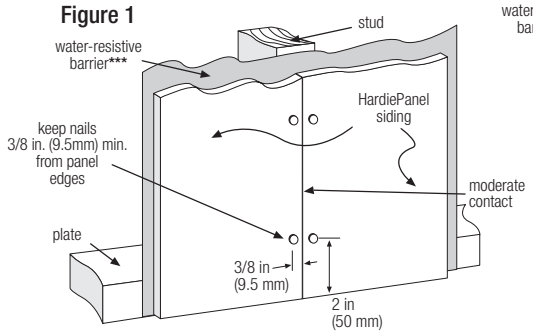


Figure 2

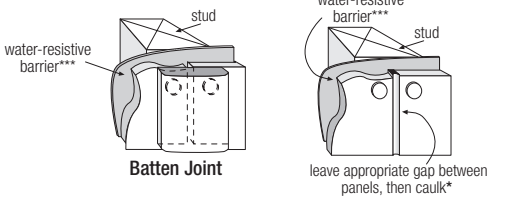


Figure 3

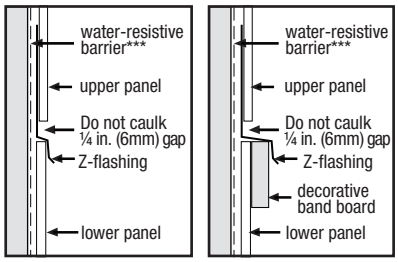
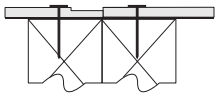


Figure 4



Recommendation: When installing Sierra 8 panel, provide a double stud at panel joints to avoid nailing through grooves.

B: Drainage Plane/Wrap Condition

Figure 1

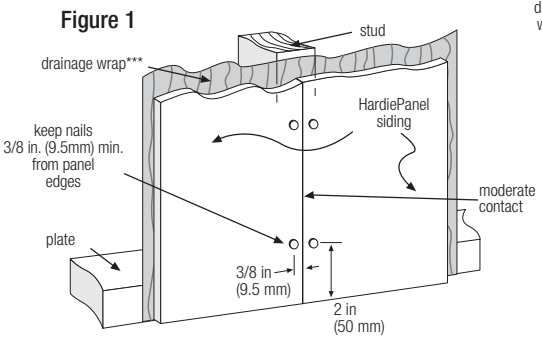


Figure 2

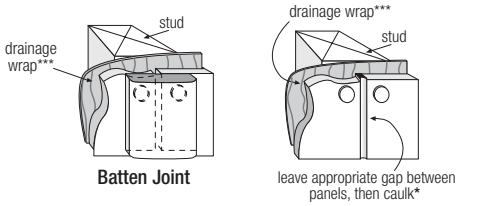


Figure 3

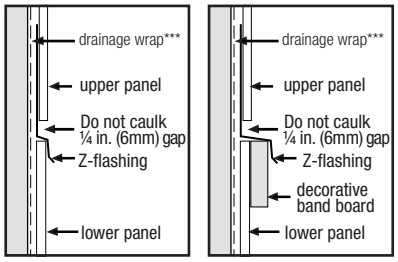
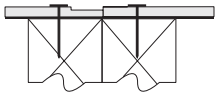


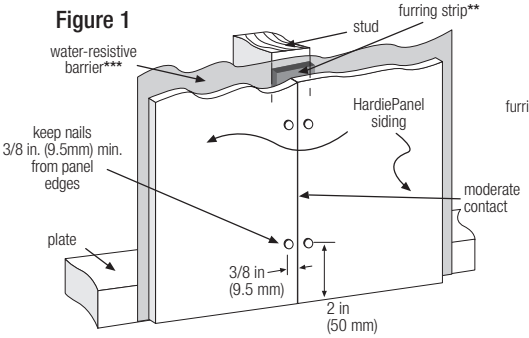
Figure 4



Recommendation: When installing Sierra 8 panel, provide a double stud at panel joints to avoid nailing through grooves.

C: Furring/Rainscreen Condition

Figure 1



* Apply caulk in accordance with caulk manufacturer's written application instructions.
** Furring as prescribed in Table 1.
*** WRB or Drainage Plane as prescribed in Table 1.

Figure 2

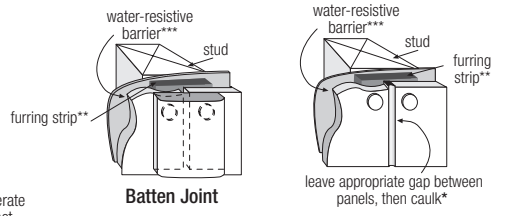


Figure 3

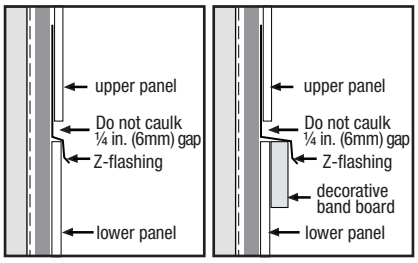
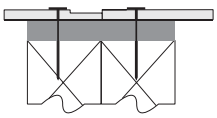


Figure 4



Recommendation: When installing Sierra 8 panel, provide a double stud at panel joints to avoid nailing through grooves.

INSTALLATION:

Fastener

Position fasteners 3/8 in from panel edges and no closer than 2 in away from corners. Do not nail into corners.

- HardiePanel vertical siding must be joined on stud.
- Double stud may be required to maintain minimum edge nailing distances.
- When screws are used to attach panels to steel studs/furring, the screws shall have wing tips. If screws do not have wing tips, then pre-drilling is required. (Not applicable when using pins) Follow screw chart for pre-drilling:

SCREW CHART

SCREW	PRE-DRILL	HEAD DIAMETER
No. 8	7/32 in	Min 0.323 in
No. 10	1/4 in	Min 0.323 in

Joint Treatment

- Vertical Joints - Install panels in moderate contact (fig. 1), alternatively joints may also be covered with battens, PVC or metal jointers or caulked (Not applicable to ColorPlus® Finish) (fig. 2).
- Horizontal Joints - Provide Z-flashing at all horizontal joints (fig. 3).

CLEARANCE AND FLASHING REQUIREMENTS

Figure 5
Roof to Wall

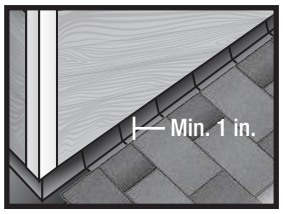


Figure 6
Horizontal Flashing

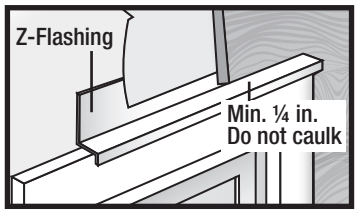


Figure 7
Kickout Flashing

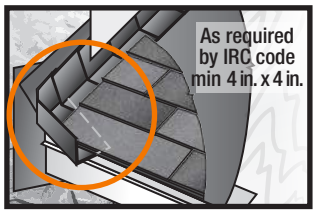


Figure 8
Slabs, Path, Steps to Siding

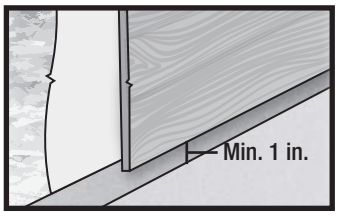


Figure 9
Deck to Wall

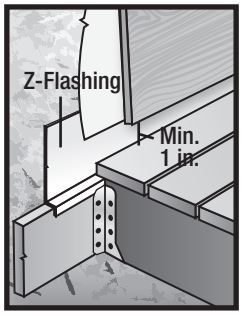


Figure 10
Ground to Siding

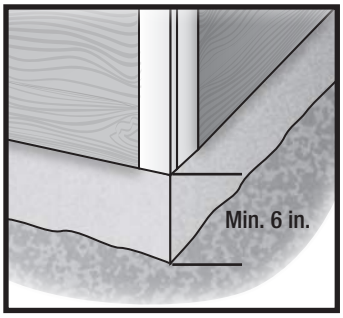


Figure 11
Gutter to Siding

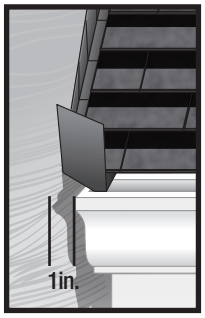


Figure 12
Sheltered Areas

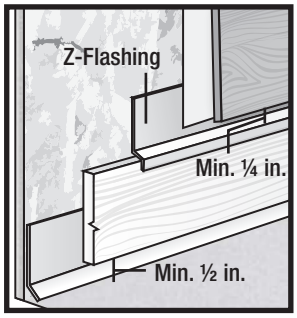


Figure 13
Mortar/Masonry

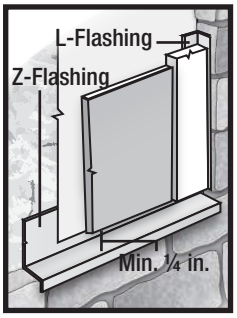


Figure 14
Drip Edge

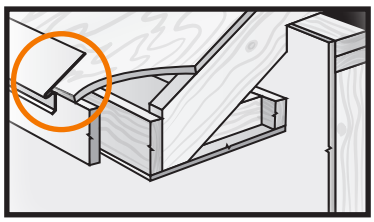


Figure 15
Block Penetration
(Recommended in HZ10 zones)

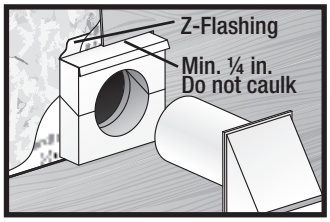
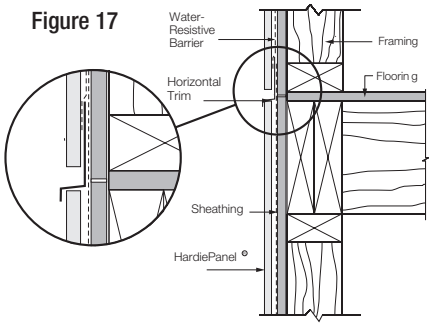


Figure 16
Valley/Shingle Extension

Do not bridge floors with HardiePanel® siding. Horizontal joints should always be created between floors, see below).

Figure 17



GENERAL FASTENING REQUIREMENTS

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

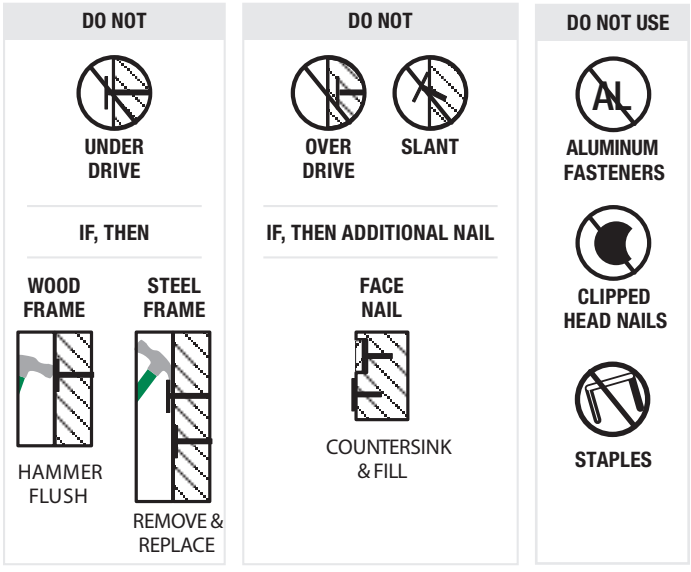
Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion; use quality, hot-dipped galvanized nails. The manufacturer makes no warranty or representation with respect to the corrosion resistance or performance of fasteners. Stainless steel fasteners are recommended when installing James Hardie products near the ocean, large bodies of water, or in very humid climates.

Note: When utilizing express seam joints, ensure adequate nailable substrate width is available.

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

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

Note: Furring shown is as a best practice or as prescribed per Table 1.



BLOCKED PENETRATIONS

Penetrations such as hose bibs and holes 1 ½" or larger such as dryer vents are recommended to have a block of trim around point of penetration.

PNEUMATIC FASTENING

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

CUT EDGE TREATMENT

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

CAULKING

For best results, use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher, such as Quad® Max or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions. **Note: DO NOT caulk nail heads when using ColorPlus products; refer to the ColorPlus touch-up section.**

PAINTING

DO NOT use stain on James Hardie products. James Hardie products must be painted within 180 days. 100% acrylic topcoats are recommended.
Do not paint when wet. For application rates, refer to paint manufacturer's specifications. Back-rolling is recommended if a paint sprayer is used.

COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE

- Care should be taken when handling and cutting James Hardie ColorPlus products.
- Laminate sheet must be removed immediately after installation of each course. Gently wipe any residue or construction dust left on the product using a soft cloth.
- Touch up nicks, scrapes and nail heads using the ColorPlus Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with new HardiePanel siding with ColorPlus Technology.
- Terminate non-factory cut edges into trim where possible, and caulk. Color matched caulks are available from your ColorPlus product dealer.
- Treat all other non-factory cut edges using the ColorPlus Technology edge coaters, available from your ColorPlus product dealer.

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

Not all designs will be suitable for every application.

REPAINTING JAMES HARDIE SIDING AND TRIM PRODUCTS WITH COLORPLUS TECHNOLOGY

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

- Ensure the surface is clean, dry, and free of any dust, dirt, or mildew
- Repriming is normally not necessary
- 100% acrylic topcoats are recommended
- DO NOT use stain or oil/alkyd base paints on James Hardie products
- Apply finish coat in accordance with paint manufacturer's written instructions regarding coverage, application methods, and application temperature

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SILICA WARNING

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

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

RECOGNITION: In accordance with ICC-ES Evaluation Report ESR-1844, HardiePanel® vertical siding is recognized as a suitable alternate to that specified in the 2006, 2009, 2012 & 2015 International Residential Code for One-and Two-Family Dwellings and the 2006, 2009, 2012 & 2015 International Building Code. HardiePanel vertical siding is also recognized for application in the following: City of Los Angeles Research Report No. 24862, State of Florida Product Approval FL#13223, Miami-Dade County Florida NOA No. 17-0406.06, U.S. Dept. of HUD Materials Release 1263f, Texas Department of Insurance Product Evaluation EC-23, City of New York MEA 223-93-M, and California DSA PA-019. These documents should also be consulted for additional information concerning the suitability of this product for specific applications.