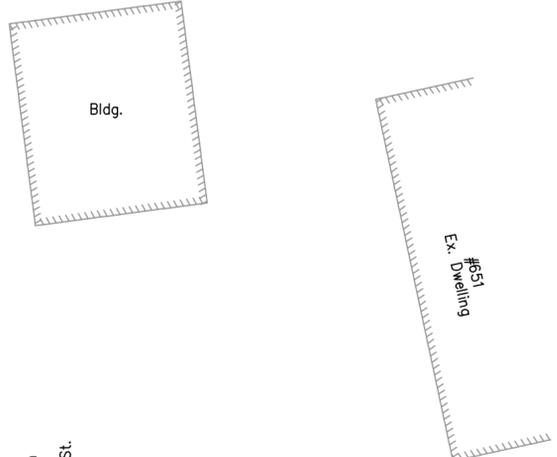
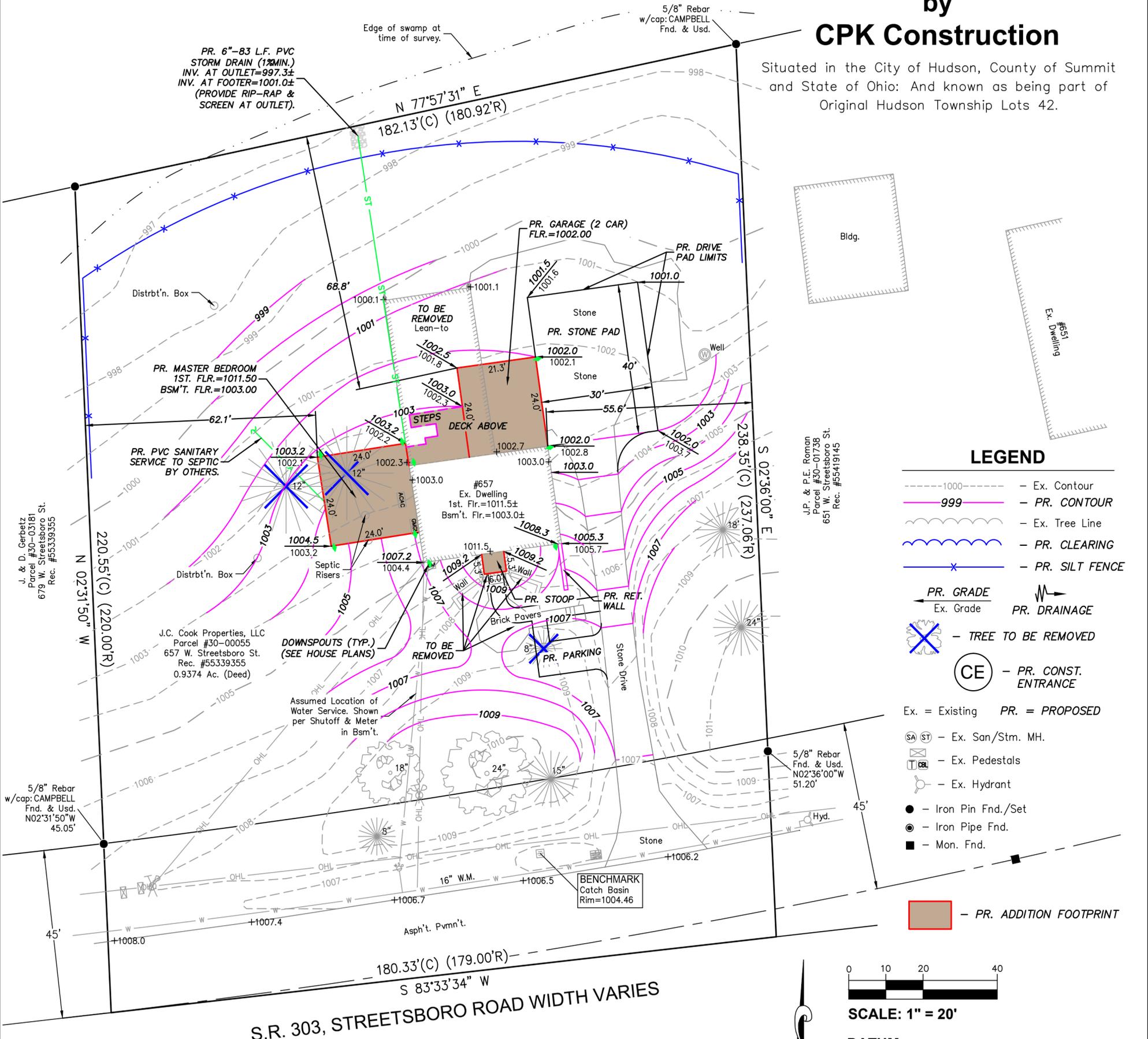


Pulte Homes of Ohio, LLC
Parcel #30-10238

TOPOGRAPHIC SURVEY & SITE PLAN

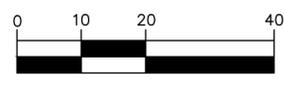
for The Cook Residence by CPK Construction

Situated in the City of Hudson, County of Summit and State of Ohio: And known as being part of Original Hudson Township Lots 42.



LEGEND

- Ex. Contour
- PR. CONTOUR
- Ex. Tree Line
- PR. CLEARING
- PR. SILT FENCE
- PR. GRADE
- Ex. Grade
- PR. DRAINAGE
- TREE TO BE REMOVED
- PR. CONST. ENTRANCE
- Ex. = Existing PR. = PROPOSED
- Ex. San/Strm. MH.
- Ex. Pedestals
- Ex. Hydrant
- Iron Pin Fnd./Set
- Iron Pipe Fnd.
- Mon. Fnd.
- PR. ADDITION FOOTPRINT



SCALE: 1" = 20'

DATUM:

- The horizontal datum for this survey is the Ohio State Plane, North Zone as observed by GPS via the ODOT VRS network, which is based on the NAD83(2011) reference frame. ALL DISTANCES SHOWN HEREON INDICATE GROUND DISTANCES IN US SURVEY FEET.
- The vertical datum for this survey is NAVD88 as observed by GPS via the ODOT VRS network.

CONSTRUCTION NOTES:

- The contractor must verify all foundation dimensions and proposed grades shown on this plan. Any errors resulting from failure to check or to notify the surveyor of any changes shall not be the responsibility of Apex Land Surveying.
- All grades shall comply w/corresponding government office.
- All swales must maintain a minimum slope of 1%.
- Maintain positive yard drainage away from house.
- Contractor to notify utilities protection services/ OUPS prior to construction.
- Contractor shall verify location and depths of existing laterals & verify if proper connections can be made to house. Contact corresponding government office if discrepancies occur.
- All sewer connections must maintain a minimum slope of 1%.
- A foundation sump pump is not required.
- Silt fence must surround any excavation areas so that no silt escapes site.
- There was no search for easements of record, right-of-ways, restrictive covenants, encumbrances, ownership title evidence, or any other facts that a title search may disclose.



Know what's below.
Call before you dig.

SURVEYED BY: KELLY D. DUNFORD, P.S. 8182 2858 FULMER DR., SILVER LAKE, OH (330) 928-7750 ps8182@sbcglobal.net www.apexlandsurveying.com	TITLE: TOPO & SITE PLAN	DATE: JULY 2018
	CLIENT: CPK CONSTRUCTION	PROJ.: 2018024
	SCALE: 1" = 20'	FILE: 2018024.dwg
	DRAWN BY: KDD	CHECKED BY: KDD
	CREW: KDD	SHEET: 1 OF 1
SHEET SIZE: 17" X 22"		

Additions & Renovation for:

Cook Residence

657 W. Streetsboro St.
Hudson, Ohio 44236

CONTRACTOR:
CPK Construction
8051 Vesta Ave. Suite 3
Northfield, Ohio 44067
p. 330-467-5918

DRAFTER:
PWB Technical Drafting
6229 Sunnywood Dr.
Solon, Ohio 44139
p. 440-709-6025

PROJECT DESCRIPTION

THE WORK SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT TO CONSTRUCT OF TWO ADDITIONS AND RENOVATION TO AN EXISTING RESIDENCE. EXISTING LEAN-TO STRUCTURE ON NORTH SIDE OF EXISTING BUILDING TO BE REMOVED AND EXISTING TIMBERS TO BE SALVAGED AND REUSED IN NEW CONSTRUCTION. WORK INCLUDES THE CONSTRUCTION OF ONE ADDITION WITH FULL BASEMENT AND ONE GARAGE ADDITION WITH A NEW DECK LEVEL ABOVE GARAGE ROOF. ALL NEW EXTERIOR FINISHES WILL BE INSTALLED OVER EXISTING STRUCTURE AS WELL AS NEW INTERIOR FINISHES.

INDEX TO DRAWINGS

T1.00 TITLE SHEET
1 of 1 TOPOGRAPHIC SURVEY & SITE PLAN
A2.00 OVERALL BASEMENT FLOOR PLAN
A2.01 OVERALL FIRST FLOOR PLAN
A2.02 OVERALL SECOND FLOOR PLAN
A2.20 OVERALL ROOF PLAN
A6.00 EXTERIOR ELEVATIONS
A6.01 EXTERIOR ELEVATIONS

CODE REVIEW

THE DESIGN AND CONSTRUCTION COMPLIES WITH THE REQUIREMENTS OF THE OHIO RESIDENTIAL CODE, CURRENT EDITION.

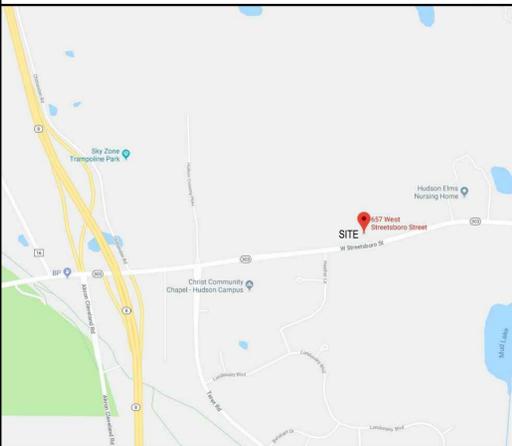
ABBREVIATIONS

ACT acoustical ceiling tile	GA gauge	SC solid core
ADA Americans W/ Disabilities Act	GALV galvanized	SCR screws
ADAAG Americans W/ Disabilities Act Accessibility Guidelines	GC general contractor	SCW solid core wood
ADJ adjustable	GFCI ground fault circuit interrupter	SECT section
AFF above finished floor	GWB gypsum wall board	SFM split face masonry
ALUM aluminum	GYP gypsum	SIM similar
ANC anchor	GYP BD gypsum wall board	SQ square
BD board	HDWR hardware	SRC sound reduction coefficient
BLDG building	HM hollow metal	SS stainless steel
BLK blocking	HORZ horizontal	STD standard
BOT bottom	HGT height	ST steel
BRD board	ID inside diameter	STL structural
BRG bearing	IN inch	STRUC structure
CG corner guard	INS insulation	SV sheet vinyl
CH channel	INT interior	T treats
CJ control joint	IST interior	T&B top & bottom
CPT carpet	JST joint	T&G tongue and groove
CI cast iron	JT joint	TEMP temporary
CL centerline	LAM laminated	THK thick
CLG ceiling	MAS masonry	TOS top of steel
CMU concrete masonry unit	MATL material	TS transition strip
COL column	MECH mechanical	TYP typical
CONC concrete	MO masonry opening	UC under counter
CONT continuous	MFR manufacturer	UNO unless noted otherwise
CORR corridor	MIN minimum	VCB vinyl cove base
CPT carpet	MTL metal	VCT vinyl composition tile
CRS course	NIC not in contract	VERT vertical
CT ceramic tile	NO number	VT vinyl tile
CTB ceramic tile base	NTS not to scale	VVC vinyl wall covering
CTR center	OC on center	W with
DBL double	OD outside diameter	WC wheelchair
DF drinking fountain (bubbler)	OFI owner furnish	WC water cooler
DIAG diagonal	OFI contractor install	WD wood
DIM (S) dimension	OH opposite hand	WF wide flange
DN down	OHV overhead	WXD width X depth
DR door	PLAM plastic laminate	XFMR transformer
DS down spout	PVMT pavement	
DTL detail	PERF perforated	
DWG drawing	POB painted gypsum board	
DWL dowel	PL plate	
EA each	PLAS plaster	
ELEC electrical	PLBG plumbing	
ELEV elevation	P paint	
EJ expansion joint	PNT paint	
EQ equal	PR pair	
ETR existing to remain	PSI pounds per square inch	
EW each way	QUAL quality	
EW electric water cooler	QUAN quantity	
EX existing	QT quarry tile	
EXIST existing	R risers	
EXP expansion	RB rubber base	
EXT exterior	RCP reflected ceiling plan	
FE fire extinguisher	R&S rod & shelf	
FEC fire extinguisher cabinet	RO rough opening	
FT fire-resistant treated	RAD radius	
FIN finish	RD round	
FLR floor	REQ require (d)	
FLUOR fluorescent	RM room	
FND foundation	RUB rubber	
FRP fiberglass reinforced panel		
FTG footing		

SYMBOLS LEGEND

	NORTH ARROW		ASPHALT
	ADDENDUM TAG		BATT INSULATION
	BULLETIN TAG		BRICK
	BUILDING SECTION		CERAMIC TILE
	WALL SECTION		CONCRETE
	NEW COLUMN TAG		CONCRETE BLOCK
	EXISTING COLUMN TAG		EARTH
	DATUM		FINISH WOOD
	DETAIL MARK		FIREBRICK
	DOOR NO.: REFER TO DOOR SCHEDULE		GRAVEL OR STONE
	ELEVATION NOTE		GYPSUM WALL BOARD
	EXTERIOR & INTERIOR ELEV.		LUMBER OR WOOD BLOCKING
	FLAG NOTES		PLYWOOD
	FINISH MATERIAL NOTE: REFER TO SCHEDULE		RIGID INSULATION
	REFLECTED CEILING PLAN TAG		SPRAY FOAM INSULATION
	LOUVER TAG: REFER TO SCHEDULE		STEEL
	TRUSS ARROW		
	WALL TYPE TAG		
	WINDOW TAG: REFER TO SCHEDULE		
	NEW ROOM DESIGNATION		
	EXISTING ROOM DESIGNATION		

LOCATION MAP



SHEET LEGEND:



SHEET TITLE:

TITLE SHEET

07/09/18	ADD. #01 - CITY COMMENTS
07/05/18	STRUCT. PROPOSAL
07/03/18	ZONING SUBMISSION
06/19/18	UPDATE/ REVIEW
06/06/18	UPDATE/ REVIEW
05/16/18	PRELIM. REVIEW

SHEET NUMBER:

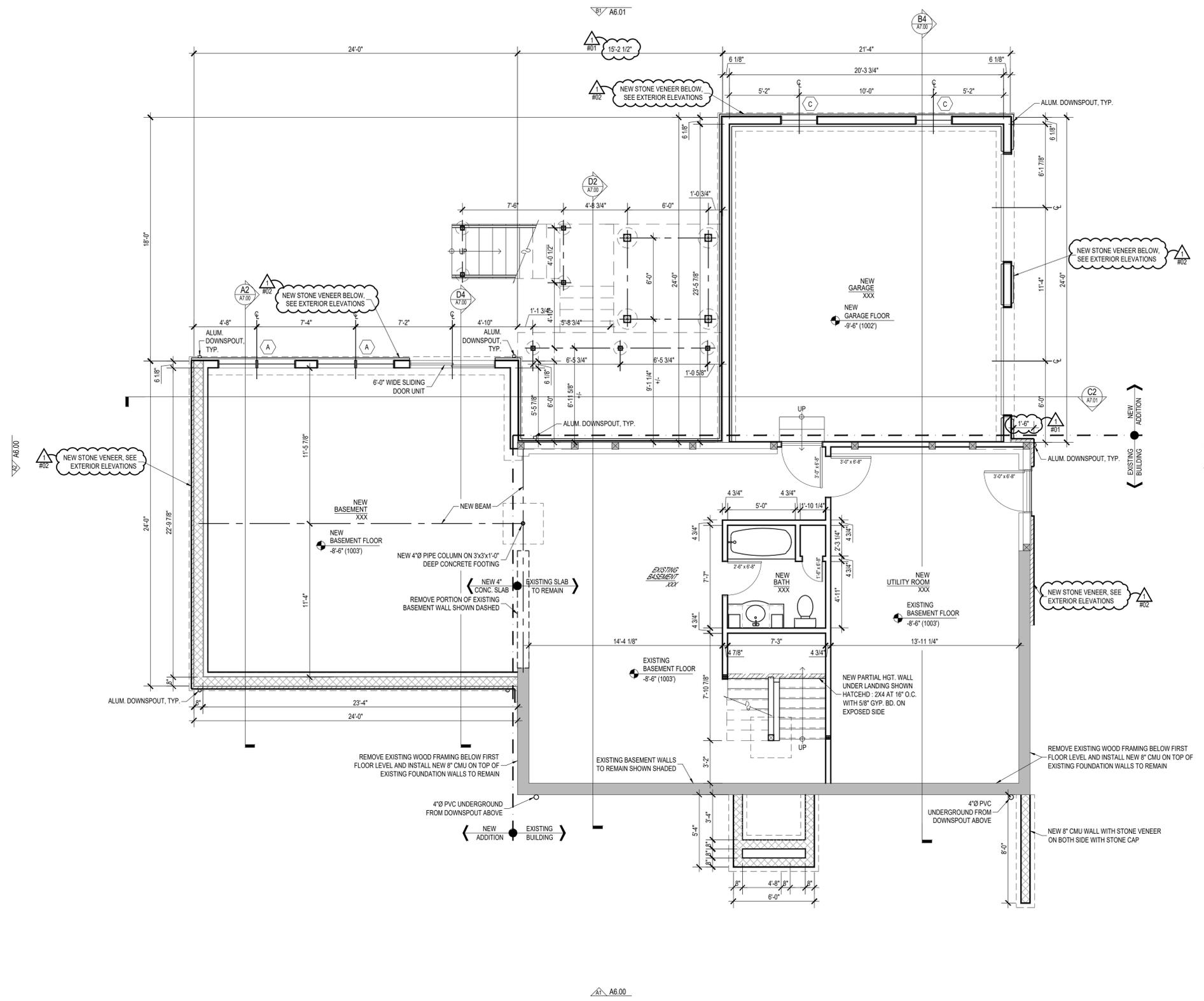
T1.00

ADDITION & RENOVATION TO THE COOK RESIDENCE

DIMENSION NOTES:

1. EXTERIOR BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF WALL FRAMING AND/OR CONCRETE BLOCK, UNLESS NOTED OTHERWISE.
2. ALL WINDOW AND DOOR DIMENSIONS ARE TO CENTERLINES.
3. ALL INTERIOR WALLS ARE DIMENSIONED TO THE OUTSIDE FACE OF THE 5/8" GYP. BD. UNLESS NOTED OTHERWISE.

SHEET LEGEND:
 #01 - GARAGE LOCATION REVISED
 #02 - HEIGHTS OR STONE VENEER REVISED



FWB TECHNICAL DRAFTING
 6223 Summwood Dr.
 Solon, Ohio 44139
 P. 440-709-6025
 E. pwbdrafting@gmail.com

CPK CONSTRUCTION
 8051 Vesta Avenue, Suite 3, Northfield, Ohio 44067
 P. 330-467-5918 F. 330-467-5070

SHEET TITLE:
OVERALL BASEMENT FLOOR PLAN

SHEET NUMBER:
A2.00

REVISIONS:

07/09/18	ADD. #01 - CITY COMMENTS
07/05/18	STRUCT. PROPOSAL
07/03/18	ZONING SUBMISSION
06/19/18	UPDATE/ REVIEW
06/06/18	UPDATE/ REVIEW
05/16/18	PRELIM. REVIEW

ADDITION & RENOVATION TO THE COOK RESIDENCE

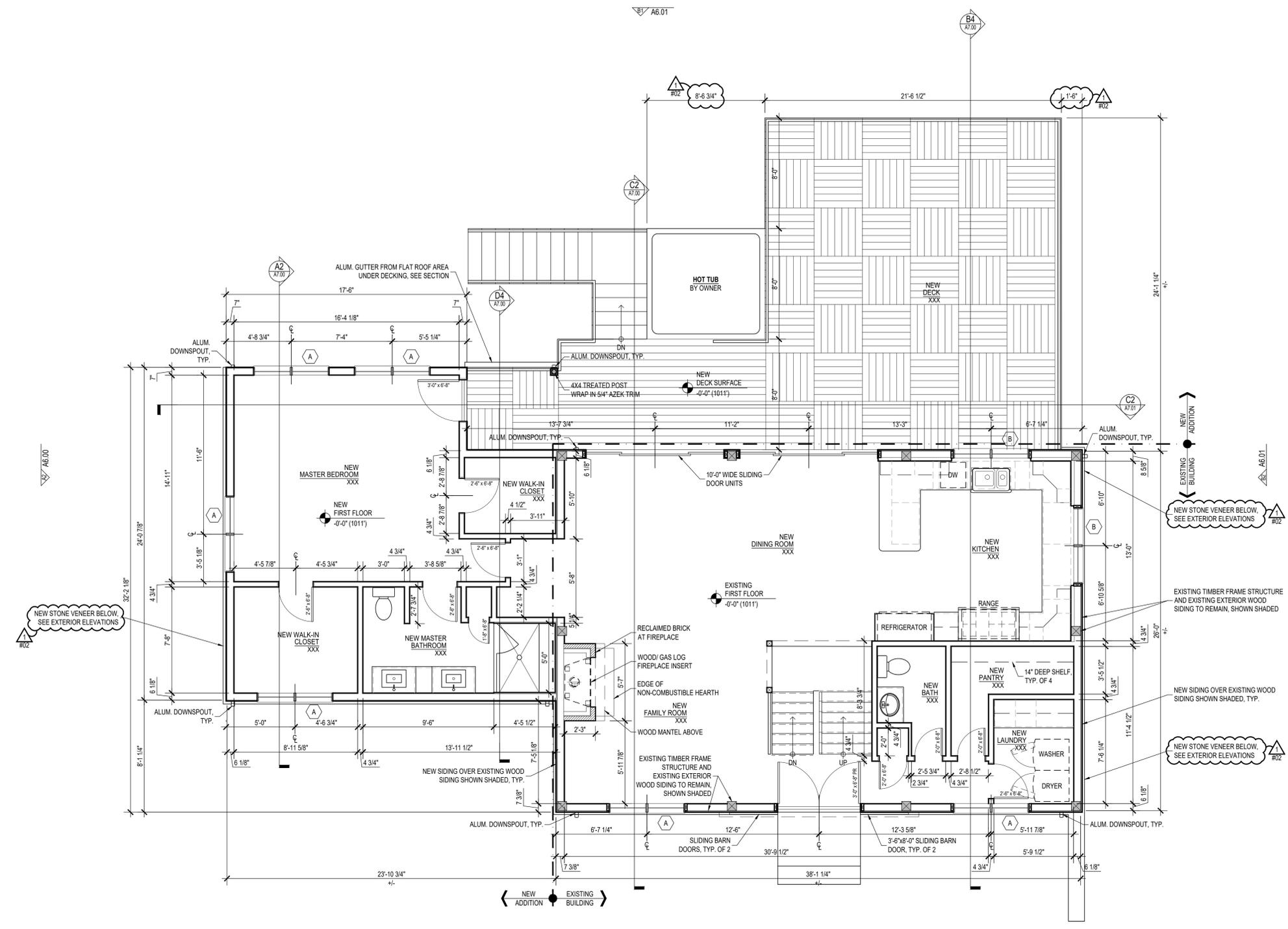
OVERALL BASEMENT FLOOR PLAN
 SCALE: 1/4" = 1'-0"



DIMENSION NOTES:

1. EXTERIOR BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF WALL FRAMING UNLESS NOTED OTHERWISE.
2. ALL WINDOW AND DOOR DIMENSIONS ARE TO CENTERLINES.
3. ALL INTERIOR WALLS ARE DIMENSIONED TO THE OUTSIDE FACE OF THE 5/8" GYP. BD. UNLESS NOTED OTHERWISE.

SHEET LEGEND:
 #01 - GARAGE LOCATION REVISED
 #02 - HEIGHTS OR STONE VENEER REVISED



Window Schedule								
No.	Unit Size (Frame)	Rough Opening	Model	Grille	Details			Remarks
					Head	Jamb	Sill	
A	3357 (x2)	5'-6 3/4" x 4'-9 3/4"	PELLA PROLINE 450					
B	3341 (x2)	5'-6-3/4" x 3'-5 3/4"	PELLA PROLINE 450					

OVERALL FIRST FLOOR PLAN
 SCALE: 1/4" = 1'-0"

PWB TECHNICAL DRAFTING
 6229 Sunnyside Dr.
 Solon, Ohio 44139
 P. 440-709-4025
 E. pwbtdrafting@gmail.com

CONSTRUCTION
 8051 Vesta Avenue, Suite 3, Northfield, Ohio 44067
 F. 330-467-5918 F. 330-467-5070

SHEET TITLE:
OVERALL FIRST FLOOR PLAN

07/09/18 ADD.#01 - CITY COMMENTS
 07/05/18 STRUCT. PROPOSAL
 07/03/18 ZONING SUBMISSION
 06/19/18 UPDATE/ REVIEW
 06/06/18 UPDATE/ REVIEW
 05/16/18 PRELIM. REVIEW

SHEET NUMBER:
A2.01

ADDITION & RENOVATION TO THE COOK RESIDENCE

DIMENSION NOTES:

1. EXTERIOR BUILDING DIMENSIONS ARE TO THE OUTSIDE FACE OF WALL FRAMING UNLESS NOTED OTHERWISE.
2. ALL WINDOW AND DOOR DIMENSIONS ARE TO CENTERLINES.
3. ALL INTERIOR WALLS ARE DIMENSIONED TO THE OUTSIDE FACE OF THE 5/8" GYP. BD. UNLESS NOTED OTHERWISE.

SHEET LEGEND:

PWB TECHNICAL DRAFTING
 6229 Summitwood Dr.
 Solon, Ohio 44139
 P. 440-709-4025
 E. pwbtdrafting@gmail.com

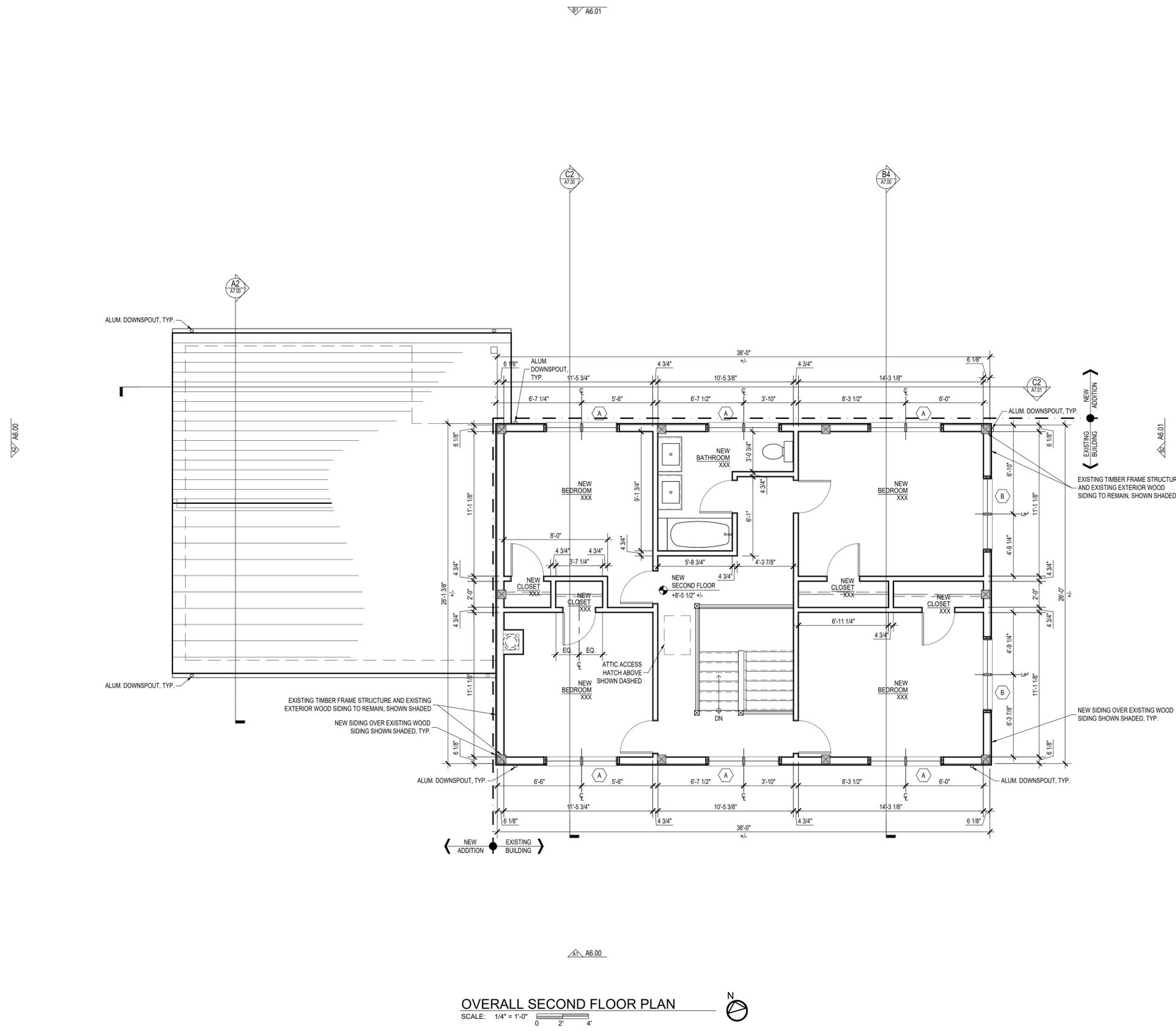
CPK CONSTRUCTION
 8051 Vesta Avenue, Suite 3, Northfield, Ohio 44067
 P. 330-467-5918 F. 330-467-5070

SHEET TITLE:
OVERALL SECOND FLOOR PLAN

07/09/18 ADD. #01 - CITY COMMENTS
 07/05/18 STRUCT. PROPOSAL
 07/03/18 ZONING SUBMISSION
 06/19/18 UPDATE/ REVIEW
 06/06/18 UPDATE/ REVIEW
 05/16/18 PRELIM. REVIEW

SHEET NUMBER:
A2.02

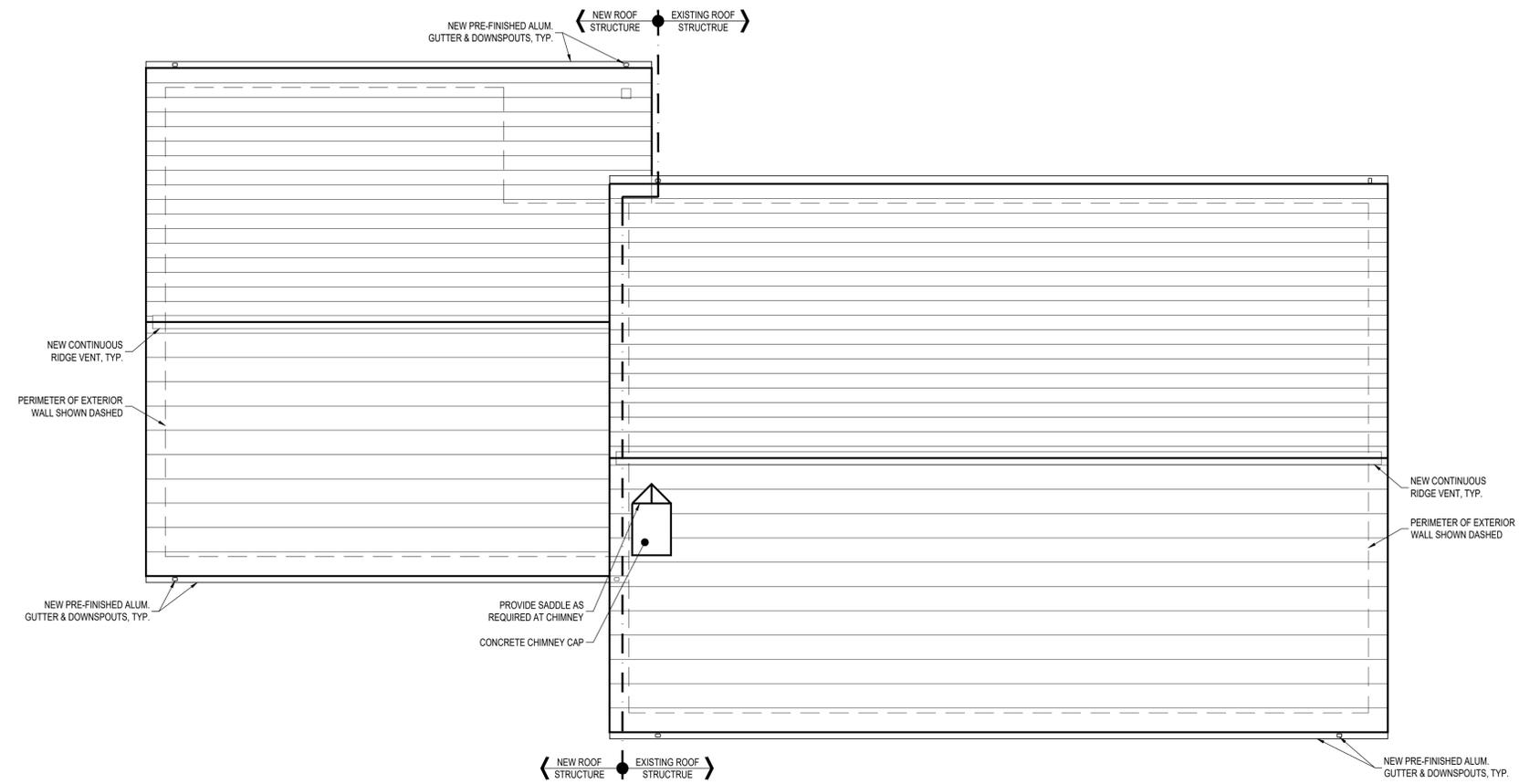
ADDITION & RENOVATION TO THE COOK RESIDENCE



OVERALL SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"
 0 2 4





PWB TECHNICAL DRAFTING
 6229 Sunnyside Dr.
 Solon, Ohio 44139
 P. 440-709-4025
 E. pwbtdrafting@gmail.com

CBK CONSTRUCTION
 8051 Vesta Avenue, Suite 3, Northfield, Ohio 44067
 P. 330-467-5918 F. 330-467-5070

SHEET TITLE:
OVERALL ROOF PLAN

07/09/18 ADD. #01 - CITY COMMENTS
 07/05/18 STRUCT. PROPOSAL
 07/03/18 ZONING SUBMISSION
 06/19/18 UPDATE/ REVIEW
 06/06/18 UPDATE/ REVIEW
 05/16/18 PRELIM. REVIEW

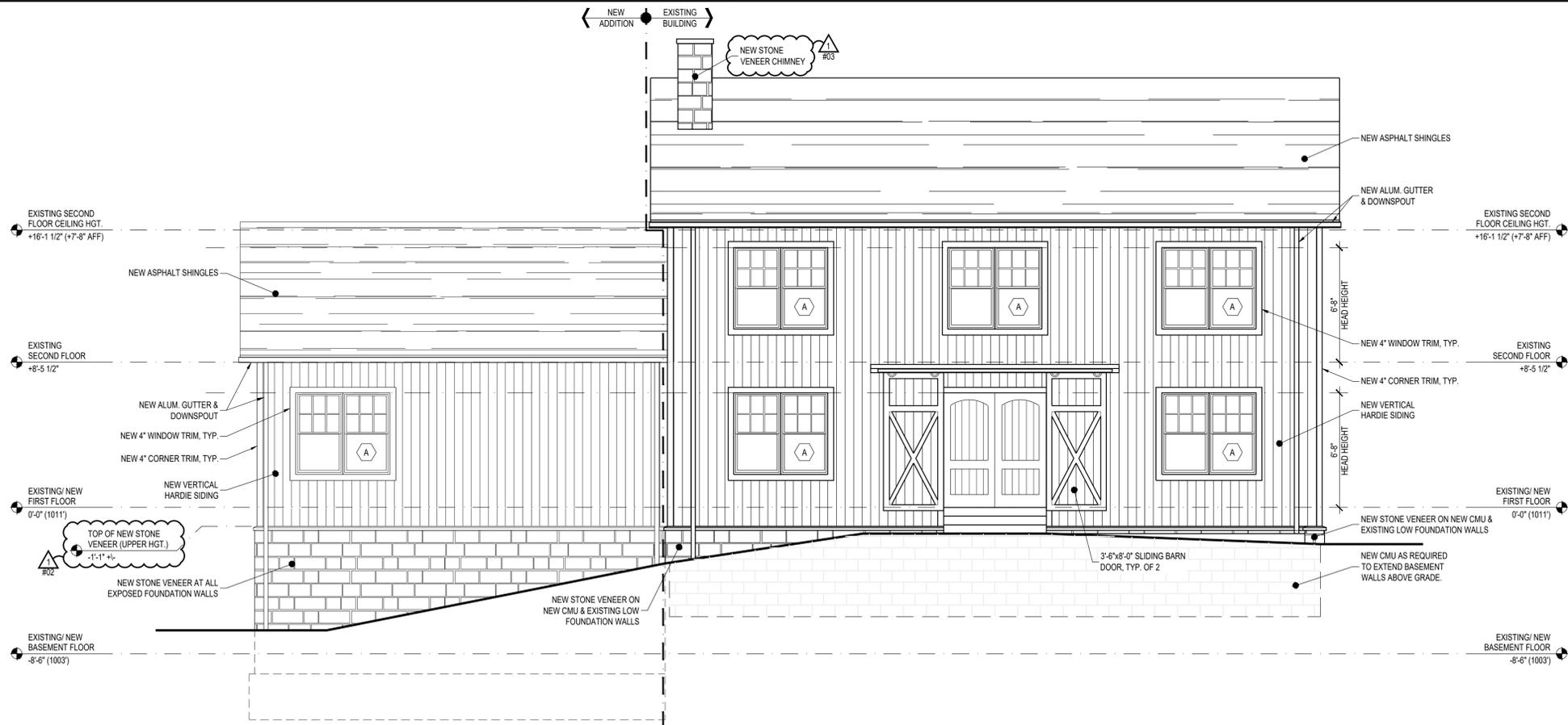
SHEET NUMBER:
A2.20

OVERALL ROOF PLAN
 SCALE: 1/4" = 1'-0"
 0 2 4

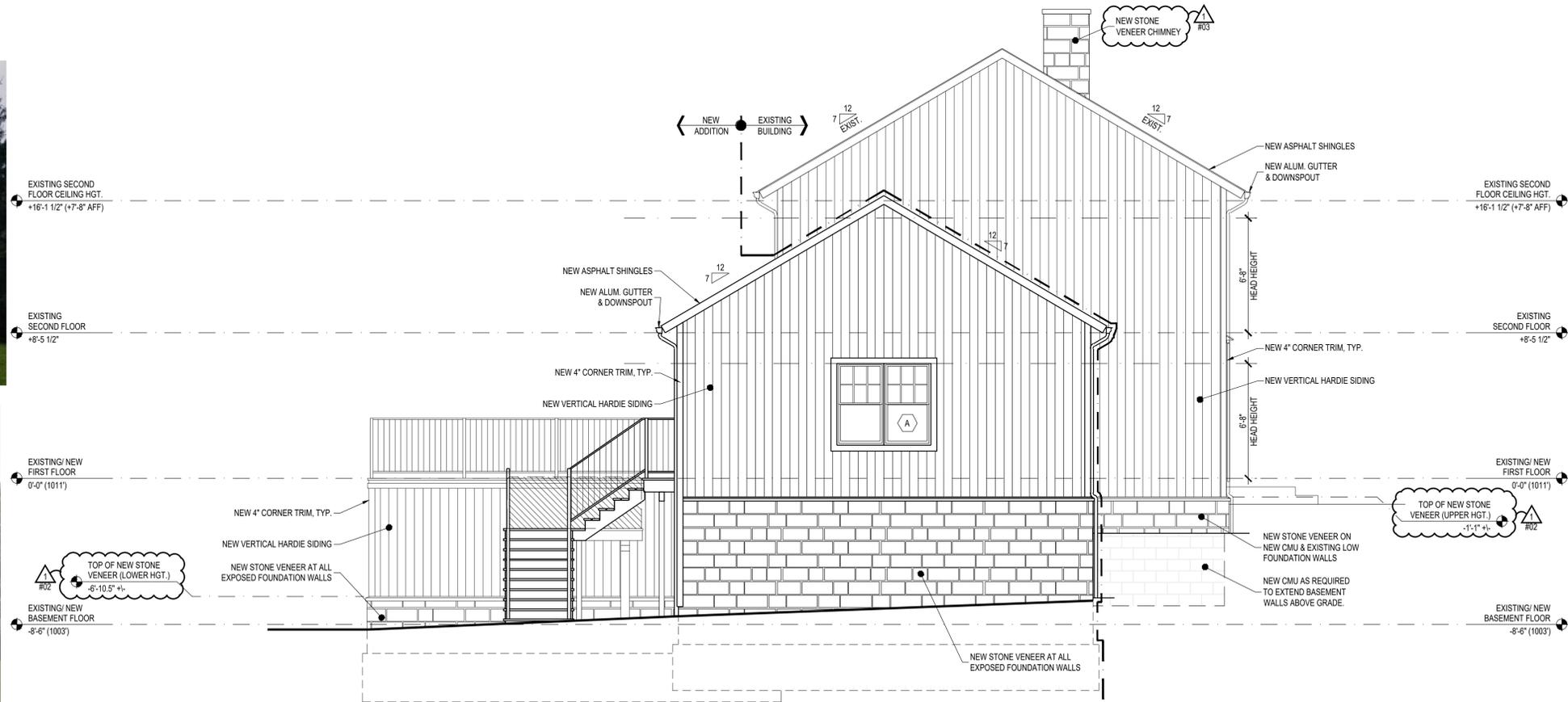


ADDITION & RENOVATION TO THE COOK RESIDENCE

PROJECT NUMBER



A1 FRONT EXTERIOR ELEVATION
SCALE: 1/4" = 1'-0" SOUTH



A2 SIDE EXTERIOR ELEVATION
SCALE: 1/4" = 1'-0" WEST

SHEET LEGEND:
 #01 - GARAGE LOCATION REVISD
 #02 - HEIGHTS OR STONE VENEER REVISED
 #03 - STONE VENEER ADDED TO CHIMNEY

PWB TECHNICAL DRAFTING
 6223 Summwood Dr.
 Solon, Ohio 44139
 P. 440-709-4025
 E. pwbdrafting@gmail.com

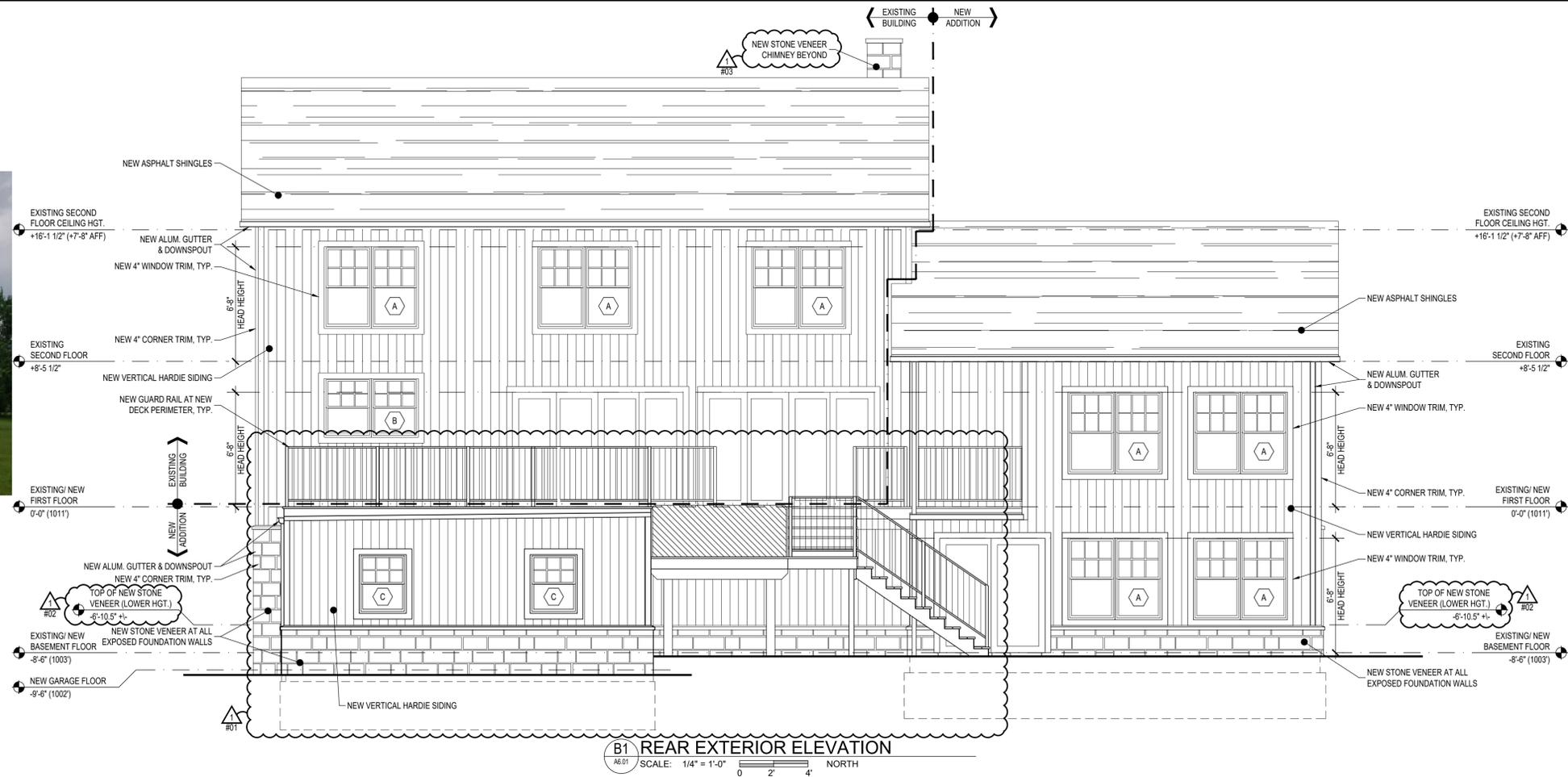
CPK CONSTRUCTION
 8051 Vesta Avenue, Suite 3, Northfield, Ohio 44067
 P. 330-467-5918 F. 330-467-5070

SHEET TITLE:
EXTERIOR ELEVATIONS

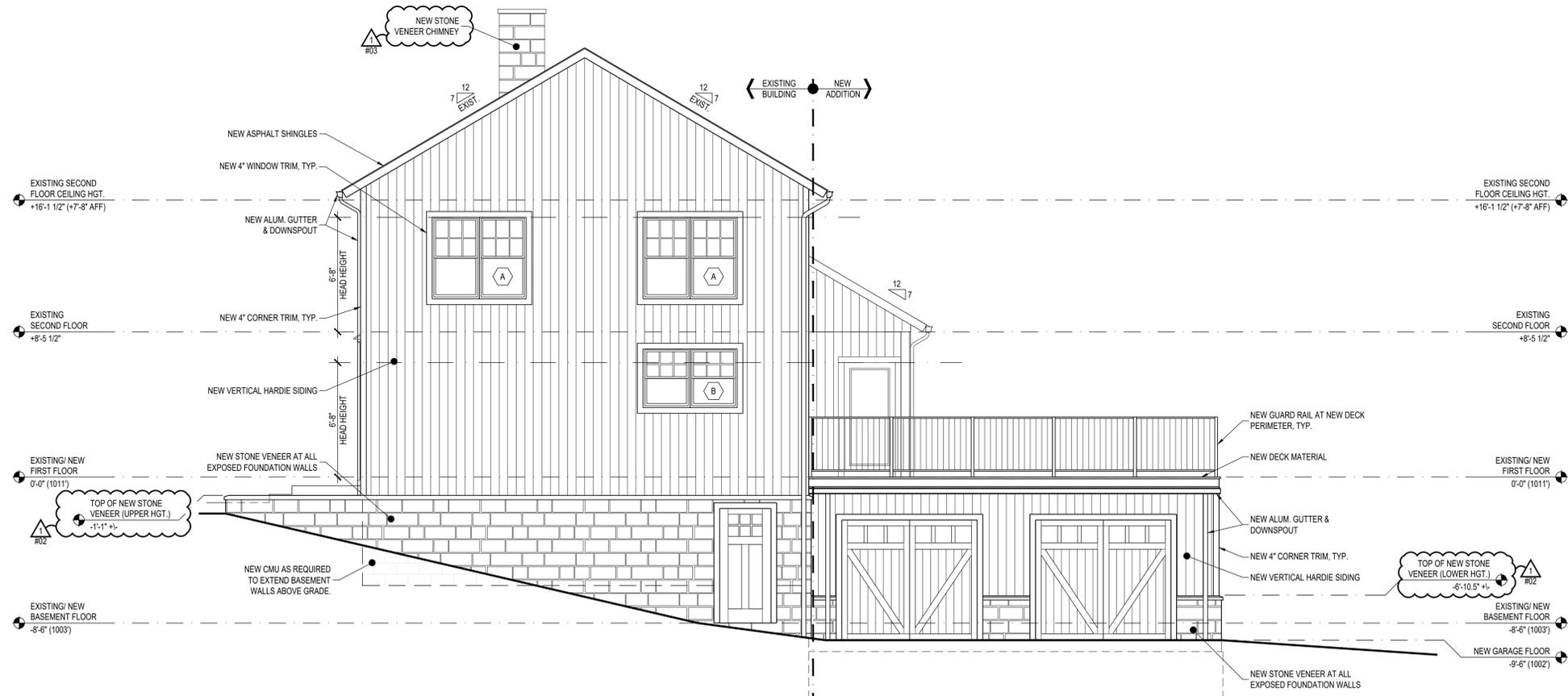
07/09/18 ADD. #01 - CITY COMMENTS
 07/05/18 STRUCT. PROPOSAL
 07/03/18 ZONING SUBMISSION
 06/19/18 UPDATE/ REVIEW
 06/06/18 UPDATE/ REVIEW
 05/16/18 PRELIM. REVIEW

SHEET NUMBER:
A6.00

ADDITION & RENOVATION TO THE COOK RESIDENCE



B1 REAR EXTERIOR ELEVATION
 SCALE: 1/4" = 1'-0" NORTH



B2 SIDE EXTERIOR ELEVATION
 SCALE: 1/4" = 1'-0" EAST

SHEET LEGEND:
 #01 - GARAGE LOCATION REVISED
 #02 - HEIGHTS OR STONE VENEER REVISED
 #03 - STONE VENEER ADDED TO CHIMNEY

PWB TECHNICAL DRAFTING
 6229 Sunnyside Dr.
 Solon, Ohio 44139
 P. 440-709-4025
 E. pwbtdrafting@gmail.com

CPK CONSTRUCTION
 8051 Vesta Avenue, Suite 3, Northfield, Ohio 44067
 P. 330-467-5918 F. 330-467-5070

SHEET TITLE:
EXTERIOR ELEVATIONS

07/09/18 ADD. #01 - CITY COMMENTS
 07/05/18 STRUCT. PROPOSAL
 07/03/18 ZONING SUBMISSION
 06/19/18 UPDATE/ REVIEW
 06/06/18 UPDATE/ REVIEW
 05/16/18 PRELIM. REVIEW

SHEET NUMBER:
A6.01

ADDITION & RENOVATION TO THE COOK RESIDENCE



Southwest Exterior View (Addition #1)



West Exterior View (Addition #1)



Northwest Exterior View (Both Additions)



South Exterior View (Both Additions)



Southeast Exterior View (Addition #2 Garage)



East Exterior View (Addition #2 Garage)



Northeast Exterior View

Cook Residence—657 W. Streetsboro St. Hudson, Ohio



SIMULATED STONE SPECIFICATION DATA

1. Product Name

Casa Di Sassi

2. Manufacturer

Casa di Sassi
167 Maple St.
Apple Creek, Ohio 44606
Toll Free: (866) 995-CASA
Phone: (330) 830-9760
Fax: (330) 830-9790
Web: www.casadisassi.com



Barn Stone

Barnstones are considered to be artifacts of early American life. Originally used to form the foundation of homes and barns, early settlers would quarry the stones from slopes, rivers and creeks. Each stone was hand honed using a hammer, pick and chisel to create the correct size and shape. Casa di Sassi Barnstone is cast from these historical stones, capturing the texture, wear and feel of the original foundation stones. Casa di Sassi has brought the beauty and history of Barnstone to the modern world in easy to install patterns of three heights (10", 12") with varying lengths.



3. Product Description

Basic Use

Casa di Sassi is a lightweight concrete facade, designed for cosmetic use on interior and exterior walls. The product is intended for non-structural use, and because of its lightweight, requires no additional footings. Veneer or manufactured stone can be applied to almost any load-bearing wall, wood frame, steel, or masonry.

Composition & Materials

Casa di Sassi is produced from a combination of Portland cement, lightweight aggregates and permanent mineral oxides. It is formed in molds produced from natural stone.

Types

Stone Veneer – 35 Types

Hearthstones - 3 Types

Window Treatments – Window Trim and Trim Stone

Wall / Column Caps - 3 Types

Utilities – 4 Types

Page 1 of 6



Sizes & Shapes

Casa di Sassi will vary greatly in size and shape. See manufacturer's current literature for detailed sizing information on each stone product. Stone thickness will vary from 1" - 2" (25.4 - 51 mm)

Styles & Textures

Old World
Ledgestone
Blends
Limestone
Barnstone
Granite
EZ Ledge
Fieldstone
Country Rubble
Kwik Stack
Brick



Catania



Modena

Barn Stone

Barnstones are considered to be artifacts of early American life. Originally used to form the foundation of homes and barns, early settlers would quarry the stones from slopes, rivers and creeks. Each stone was hand honed using a hammer, pick and chisel to create the correct size and shape. Casa di Sassi Barnstone is cast from these historical stones, capturing the texture, wear and feel of the original foundation stones. Casa di Sassi has brought the beauty and history of Barnstone to the modern world in easy to install patterns of three heights (10", 12") with varying lengths.



Colors

Many color options are available for the different styles of stone. See manufacturer's brochure for current color selections.

Limitations

Casa di Sassi should not be used in areas that may come in contact with harsh chemicals and/or de-icing materials. Hearthstones are not intended for, and will not hold up to, foot traffic. Do not sandblast, pressure wash, or use wire brushes or acidic compounds to clean the stone.

4. Technical Data

Physical / Chemical Properties

Absorption: < 18%

Compression Strength (ASTM C39) > 1800 psi (12.4 MPa)

Thickness - 1" - 2" (25.4 - 51 mm)

Fire rating – Zero flame spread, zero fuel contributed, zero smoke developed

Veneer unit weight: < 15 pounds per square foot (73 kg/m²)



5. Installation

Installation of Casa di Sassi shall be in strict accordance with the MVMA's instructions and local building code requirements.

Application to Sheathed Wood Frame Construction:

Studs shall be spaced a maximum of 16 in. (406 mm) on center. The sheathed surface shall be covered with two layers of a water-resistive barrier complying with either ASTM D 226 for Type 1 No. 15 felt, UBC 14-1, or a water-resistive barrier meeting the requirements of ICC Acceptance Criteria AC38. Galvanized 2.5lb/yd² (1.4 kg/m²) expanded metal lath complying with ASTM C847, or 18 gauge woven wire mesh complying with ASTM C1032, shall be attached to the studs spaced 16 in. (406mm) on center with galvanized roofing nails or galvanized staples. The lath or mesh must be self-furred or use self-furred fasteners. The fasteners shall be spaced 6 in. (152mm) on center vertically and shall have sufficient length to penetrate into the studs a minimum of 1 in. (25mm). A nominal 1/2 in. (12.7mm) thick scratch coat of Type S or Type N mortar complying with ASTM C270 shall be applied to the metal lath with enough pressure to key into the lath. When the mortar has become thumbprint dry, score surface horizontally to create a rough surface. The stones shall be adhered to the scratch coat with a nominal 1/2 in. (12.7mm) thick bed of Type S or Type N mortar with enough mortar to squeeze around the edges. The exposed scratch coat or surface shall not be visible in the joints between the stones.

Application to Open Wood Frame Construction:

Studs shall be spaced a maximum of 16 in. (406 mm) on center. Open stud framing shall be spaced a maximum of 16 in. (406mm) on center. The stud framing shall be covered with a minimum of one layer of a water-resistive barrier complying with either ASTM D 226 for Type 1 No. 15 felt, UBC 14-1, or a non-perforated water-resistive barrier meeting the requirements of ICC Acceptance Criteria AC38. Paperbacked galvanized expanded 3/8 in. (9.5mm) rib metal lath complying with ASTM C847, with a minimum weight of 3.4 lb/yd² (1.8 kg/mm²), shall be attached to studs 6 in. (152.4 mm) on center vertically with galvanized roofing nails or galvanized staples. The fasteners must penetrate the stud by a minimum



of 1 in. (25 mm). The lath paper must be equivalent to the requirements of the water-resistive barrier listed above. If the lath paper does not meet the water-resistive barrier requirements, apply a second layer of water-resistive barrier meeting the requirements above. The fasteners shall be spaced 6 in. (152mm) on center vertically and shall have sufficient length to penetrate into the studs a minimum of 1 in. (25mm). A nominal 1/2 in. (12.7mm) thick scratch coat of Type S or Type N mortar complying with ASTM C270 shall be applied to the metal lath with enough pressure to key into the lath. When the mortar has become thumbprint dry, score surface horizontally to create a rough surface. The scratch coat shall cure for a minimum of 48 hours. The stone shall be adhered to the scratch coat with a nominal 1/2 in. (12.7mm) thick bed of Type S or Type N mortar with enough mortar to squeeze around the edges of the stone. The exposed scratch coat or surface shall not be visible in the joints between the stones.

Application to Masonry Surfaces:

Ensure the masonry surface is clean of debris, paint, release agents or other bond break material that could affect the adherence of the stone veneer. The surface can be cleaned by acid washing or by sand or bead blasting. Spray water onto the surface after cleaning to see if water beads on the surface. If it does, clean again or apply 2.5lb/yd² (1.4 kg/m²) metal lath meeting the requirements of ASTM C847 before applying the scratch coat and stone.

A nominal 1/2 in. (12.7mm) thick scratch coat of Type S or Type N mortar complying with ASTM C270 shall be applied to the concrete or masonry surface and scored horizontally. The stone shall be adhered to the scratch coat with a nominal 1/2 in. (12.7mm) thick bed of Type S or Type N mortar with enough mortar to squeeze around the edges. The exposed scratch coat, concrete or masonry surface shall not be visible in the joints between the stones. The exposed scratch coat or surface shall not be visible in the joints between the stones.

Check with your local building code to determining if there is a requirement for weather protection for the masonry wall.



Application to Metal Building Panels:

Installation shall be as described in section 2 of the PROCEDURES section, with the exception that the lath shall be attached with corrosion-resistant self-drilling, self-tapping screws having a minimum 1/2 in (12.7mm) length with a 3/8 in. (9.5mm) diameter head. The fastener must have enough length to penetrate past the inside metal surface by a minimum of 3/8" (9.5 mm). The metal panels shall be a minimum of No. 18 gage galvanized steel with a minimum base metal thickness of 0.0478 in. (1.21 mm).

Flashing

All flashing must be installed in accordance with building code requirements. To maintain the weather- resistance of the exterior wall on which the stone products are installed, rigid, corrosion-resistant flashing and a means of drainage shall be installed at all penetrations and terminations of the stone cladding. Flashing type and locations shall be in accordance with the requirements of the applicable code. Casa di Sassi recommends terminating stone installations 4" above the earth and 2" above paved surfaces with a weep screed or code approved flashing to provide for drainage.

Cleanup

To remove mortar and light scuffing, clean immediately with water and a soft nylon brush. Mortar is difficult to remove once bonded to the face of the stone; therefore, it is important to clean the day of installation.

Precautions

Casa di Sassi recommends using a water repellent in exterior application with above average moisture exposure to help seal mortar joints and to limit the amount of moisture penetration. Sealer should be penetrating, breathable, and suitable for use with manufactured stone veneer. Test sealer in an inconspicuous location for any color change. On exterior applications, the improper use or absence of flashing and the improper termination of stone can create a higher risk of damage by water



infiltration. Flash all penetrations, sills, and terminations in accordance with your local building code. Casa di Sassi should not be used in conjunction with any interior vapor barrier rated less permeable than 1. Stone should be installed no closer than 4" (102 mm) to paved surfaces and 2" above earth surfaces. The stone installation should terminate by using either code approved flashing or a weep screed. This will provide proper drainage help keep the stone clean.

Building Codes Installation must comply with requirements local, state and national code jurisdictions.

6. Availability & Cost

Casa di Sassi is available for purchase through an established dealer network. Contact manufacturer for information on local distributors. Budget installed cost information may be obtained from a local distributor, as cost varies greatly by region

7. Warranty

Casa di Sassi, Inc., warrants, subject to the terms and conditions of the full written warranty, that its manufactured concrete products shall be free from defects in materials manufacturing and workmanship for a period of 50 years from the date of purchase. The manufacturer will not be liable for any cracked or damaged product due to mishandling, building settlement, improper installation, discoloration due to airborne contaminants or acts of God beyond the control of the manufacturer. This warranty is limited to the original purchaser and may not be transferred. Complete manufacturer's warranty is available upon request.

8. Maintenance

Most applications require little to no maintenance. Complete maintenance information and recommendations are available from the manufacturer. Consult Casa di Sassi for details.

9. Technical Services

A staff of factory trained service personnel offers design assistance and technical support. For technical assistance, contact Casa di Sassi.



COMPOSITE DECKING

Display hidden notes to specifier. (Don't know how? [Click Here](#))

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Composite decking.

1.2 RELATED SECTIONS

- A. Section 06-1100 - Wood Framing.

1.3 REFERENCES

- A. ASTM D-1413-99: Test Method for Wood Preservatives by Laboratory Soil-block Cultures, ASTM International.
- B. ASTM D-2565-99: Practice for Operating Xenon Arc-type Light-exposure Apparatus With or Without Water for Exposure of Plastics, ASTM International.
- C. ASTM D-2915-98: Practice for Evaluating Allowable Properties for Grades of Structural Lumber, ASTM International.
- D. ASTM D-2990-95: Test Method for Tensile, Compressive, and Flexural Creep and Creep-rupture of Plastics, ASTM International.
- E. ASTM D-3345-74 (1999): Test Method for Laboratory Evaluation of Wood and Other Cellulose Materials for Resistance to Termites, ASTM International.
- F. ASTM D-5456-99a: Specification for Evaluation of Structural Composite Lumber Products, ASTM International.
- G. ASTM D-6109-97: Standard Test Method for Flexural Properties of Un-reinforced and Reinforced Plastic Lumber, ASTM International.
- H. ASTM D-7031-04: Standard Guide for Evaluating Mechanical and Physical Properties of Wood-Plastic Composite Products, ASTM International.
- I. ASTM D-7032-04: Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail systems (Guards or Handrails), ASTM International.
- J. ASTM E-4-99: Practices for Force Verification of Testing Machines, ASTM International.
- K. ASTM E-84-01: Test Method for Surface Burning Characteristics of Building

Materials, ASTM International.

- L. ASTM E-330-97: Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference, ASTM International.
- M. ASTM F-1679: Standard Test Method for Using a Variable Incidence Tribometer (VIT).

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Structural Performance:
 - 1. Deck: Uniform Load: 100 lb/sq. ft.
 - 2. Treads of Stairs: Concentrated Load: 750 lb/sq. ft., and 1/8" max. deflection with a concentrated load of 300 lb on area of 4 sq. in
- B. Fire-Test-Response Characteristics per ASTM E-84:

1.5 SUBMITTALS

- A. Product Data: Indicate sizes, profiles, surface style, and performance characteristics.
- B. Samples: For each product specified, one sample, minimum size 4 inches long, representing actual product, color, and finish.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Storage and Handling:
 - 1. Never dump TimberTech materials when unloading.
 - 2. Store on a flat surface and cover with non-translucent material.
 - 3. When carrying TimberTech planks, carry on edge for better support.
 - 4. Refer to installation instructions for additional guidelines on each product.

1.7 WARRANTY

- A. Warranty: Limited Residential Warranty against rot, decay, splitting, checking, splintering, or termite damage for a period of 25 years beginning from date of purchase under normal conditions of use and exposure.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on products by: TimberTech Limited, 894 Prairie Avenue, Wilmington, Ohio 45177.
- B. Substitutions: Not permitted under Division 01.

2.2 APPLICATIONS/SCOPE

- A. Wood/Plastic Composite Lumber:
 - 1. Material Description: Composite plank consisting of high density polyethylene (HDPE) and wood flour, extruded into sizes and shapes indicated with the following physical properties:
 - a. ValuPlank, Earthwood, and TwinFinish Decking Boards: 1 inch x 5-7/16 inches wide.
 - 1) Lengths-12, 16, and 20 feet.

- b. Color:
 - 1) ValuPlank- Cedar and Grey.
 - a) Surface texture-Brushed
 - b) Edges are Smooth for face fastening
 - 2) Earthwood- Tropical Rosewood, Tropical Teak, and Tropical Walnut.
 - a) Surface texture- One side serrated, one side embossed
 - b) Edges are Smooth for face fastening, or Grooved for CONCEALoc.
 - 3) TwinFinish- Grey, Cedar, and Rosewood.
 - a) Surface texture- One side brushed, one side embossed
 - b) Edges are Smooth for face fastening, or Grooved for CONCEALoc.
- c. Specific Gravity: 1.2 g/cu. cm. when tested in accordance with ASTM D-792.
- d. Flexural Properties when tested in accordance with ASTM D-6109:
 - Solid Profiles
 - 1) Modulus of Elasticity (MOE): 542,200 psi.- Ultimate
 - 2) Modulus of Rupture (MOR): 3157 psi. - Ultimate
 - Floorizon Plank
 - 1) Flexural Stiffness 426,508 lb·in²
 - 2) Moment Capacity 3157 in·lb
- e. Hardness when tested in accordance with ASTM D-143: 225 lb (101.25 kg).
- f. Water Absorption when tested in accordance with ASTM D-1037, %vol. <1.35%, %mass <1.29%.
- g. Flame Spread Index when tested in accordance with ASTM E-84: 75
- h. Direct Screw Withdrawal Force when tested in accordance with ASTM D-1761: 787 lbs/in.
- i. Slip resistance when tested in accordance with ASTM F-1679:
 - 1) Vertigrain Dry: 0.63 Wet: 0.55
 - 2) Brushed Dry: 0.77 Wet: 0.56
 - 3) Woodgrain Dry: 0.54 Wet: 0.43
- j. Smoke Development when tested in accordance with ASTM E-84, 200.
- k. Flash Ignition Temperature when tested in accordance with ASTM D-1929, 651 degrees F.
- l. Spontaneous Ignition Temperature when tested in accordance with ASTM D-1929, 788 degrees F.
- m. Coefficient of Linear Thermal Expansion when tested in accordance with ASTM D-696: length 2.0×10^{-5} in/in/°F, width 3.4×10^{-5} in/in/°F.
- n. Fungus Resistance (Brown/White Rot Fungus) when tested in accordance with ASTM D-1413: No decay.

2.3 ACCESSORIES

- A. Fasteners:
 - a. Concealed Fasteners: CONCEALoc hidden fasteners
 - b. Screws: No. 8, 2-1/2 inch stainless steel or high quality coated composite deck screws.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Install according to manufactures instructions.
- B. Cut, drill, and rout using carbide tipped blades.
- C. Pre-drill holes located closer than 1 1/2 inches from ends of plank.
- D. Cut ends square.
- E. Do not use composite wood material for structural applications.

3.2 CLEANING

- A. Clean surfaces regularly with a composite wood/plastic cleaner such as Corte Clean (www.corteclean.com) .
- B. Power wash with a fan tipped nozzle in the direction of the grain of the planks with a maximum of 1500 psi.

END OF SECTION

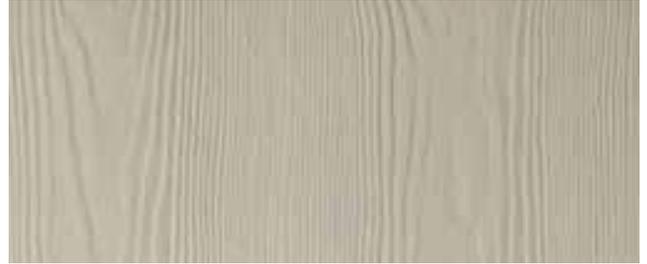
HardiePanel® Vertical Siding Product Description

HardiePanel siding is factory-primed fiber-cement vertical siding available in a variety of sizes and textures. Examples of these are shown below. Textures include smooth, stucco, Cedarmill® and Sierra 8. HardiePanel vertical siding is $\frac{5}{16}$ -in. thick and is available in 4x8, 4x9 and 4x10 sizes. Please see your local James Hardie dealer for texture and size availability.

HardiePanel vertical siding is available as a prefinished James Hardie® product with ColorPlus® Technology. The ColorPlus coating is a factory applied, oven baked finish available on a variety of James Hardie siding and trim products. See your local dealer for availability of products, color and accessories.



Stucco



Cedarmill®



Sierra 8



Smooth



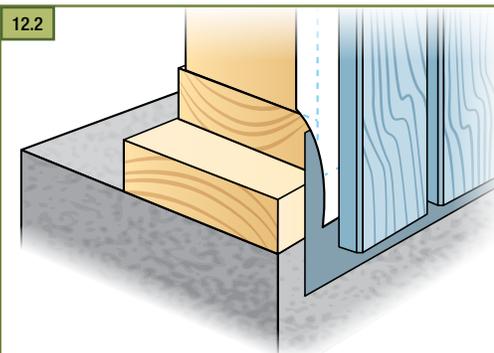
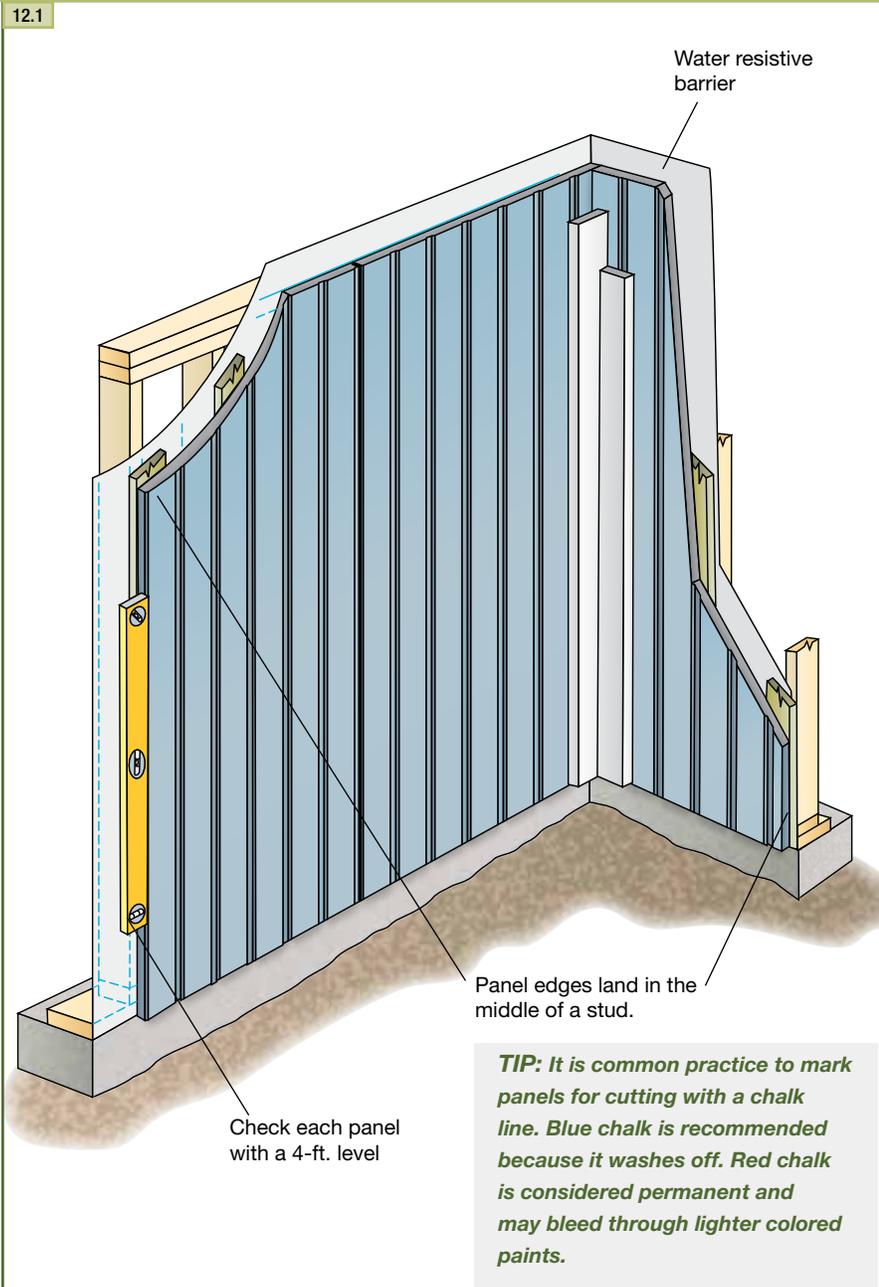
Installation of HardiePanel® Vertical Siding

Note: James Hardie requires a minimum 3/8" capillary break (Rainscreens, Furring, Etc.), when installing HardiePanel on a Multi-Family/Commercial project.

GETTING STARTED

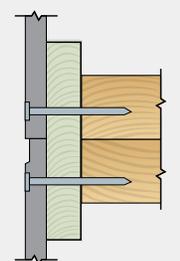
First locate the lowest point of the sheathing or sill plate, and begin installation on that wall.

- 1) Measure up from the sill plate the height of the panels at either end of the wall and snap a straight, level chalk line between the marks as a reference line. That line is for guidance in positioning the top edge of the panels. Check the reference line with a 4-ft. level.
- 2) Starting on one end and working across the wall, measure and trim the first panel making sure that the edge falls in the middle of a stud.
- 3) Using the chalk line as a guide along the panel's top edge, carefully position the panel and secure it with suitable fasteners and fastener spacing for the particular application as noted in the ESR-1844.
- 4) As installation continues, check the vertical edge of each panel with a 4-ft. level.



TIP: Install flashing over the footing/foundation and extend the panel over the flashing just below the sill plate. Do not extend siding beyond the required grade clearances.

TIP: For Sierra 8 panels, double studs at each panel joint allows fasteners to be placed outside of panel grooves.



General Product Information

Working Safely

Tools for Cutting and Fastening

General Installation Requirements

General Fastener Requirements

Finishing and Maintenance

HardieWrap® Weather Barrier

HardieTrim® Boards/Battens

HardieSoft® Panels

HardiePlank® Lap Siding

HardieShingle® Siding

HardiePanel® Vertical Siding

Appendix/Glossary

ESR-1844 & 2290 Report

Installation of HardiePanel® Vertical Siding (continued)

VERTICAL JOINT TREATMENT

Treat vertical joints in HardiePanel® vertical siding by using one of the following four methods:

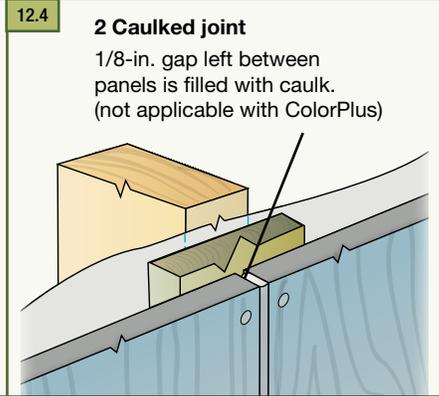
- 1) Install the panels in moderate contact.
- 2) Leave an appropriate gap between panels (1/8 in. is the most common), and caulk using a high-quality paintable caulk, that meets ASTM C-834 or C-920 requirements. (Not recommended for ColorPlus)

Panels may be installed first with caulk applied in the joints after installation; or as an option, after the first panel is installed, apply a bead of caulk along the panel edge. When the next panel is installed, the edge embeds in the applied caulk creating a thorough seal between the edges of the panels.

WARNING
The caulk joint method is not recommended for the ColorPlus® products

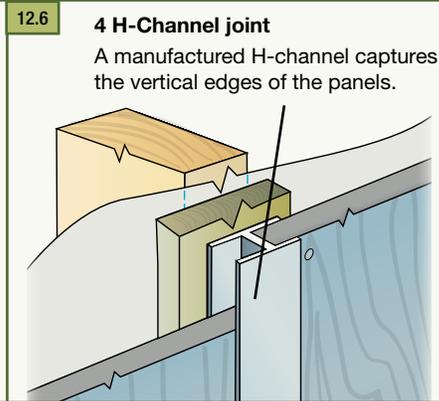
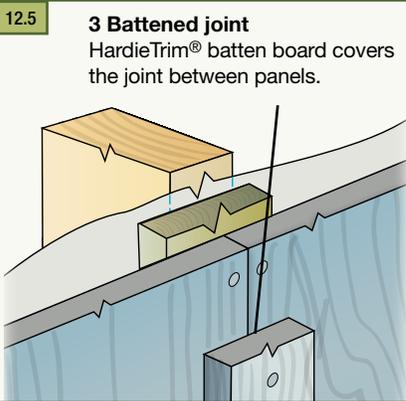
- 3) Vertical joints may be covered with wood or fiber-cement batten strips. If James Hardie® siding or trim products are ripped and used as batten strips, paint or prime the cut edges. Batten strips should span the vertical joint by at least 3/4 in. on each side.
- 4) Metal or PVC “H” moldings can be used to join two sections of HardiePanel siding.

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



Note: The following outlines the recommended applications for ColorPlus and Primed panels. Not all designs will be suitable for every application:

- Exposed fasteners or battens is the recommended application for ColorPlus products
- Do not use touch-up over fastener heads for smooth ColorPlus products - primed panel recommended
- For ColorPlus panel applications that require fasteners in the field, it is acceptable to use touch-up over fasteners for Cedarmill and Stucco panel only, but correct touch-up application is important. Some colors may show touch-up when applied over fasteners. Trim is recommended to cover joints when appropriate.



HARDIEPANEL SIDING FASTENER SPECIFICATIONS

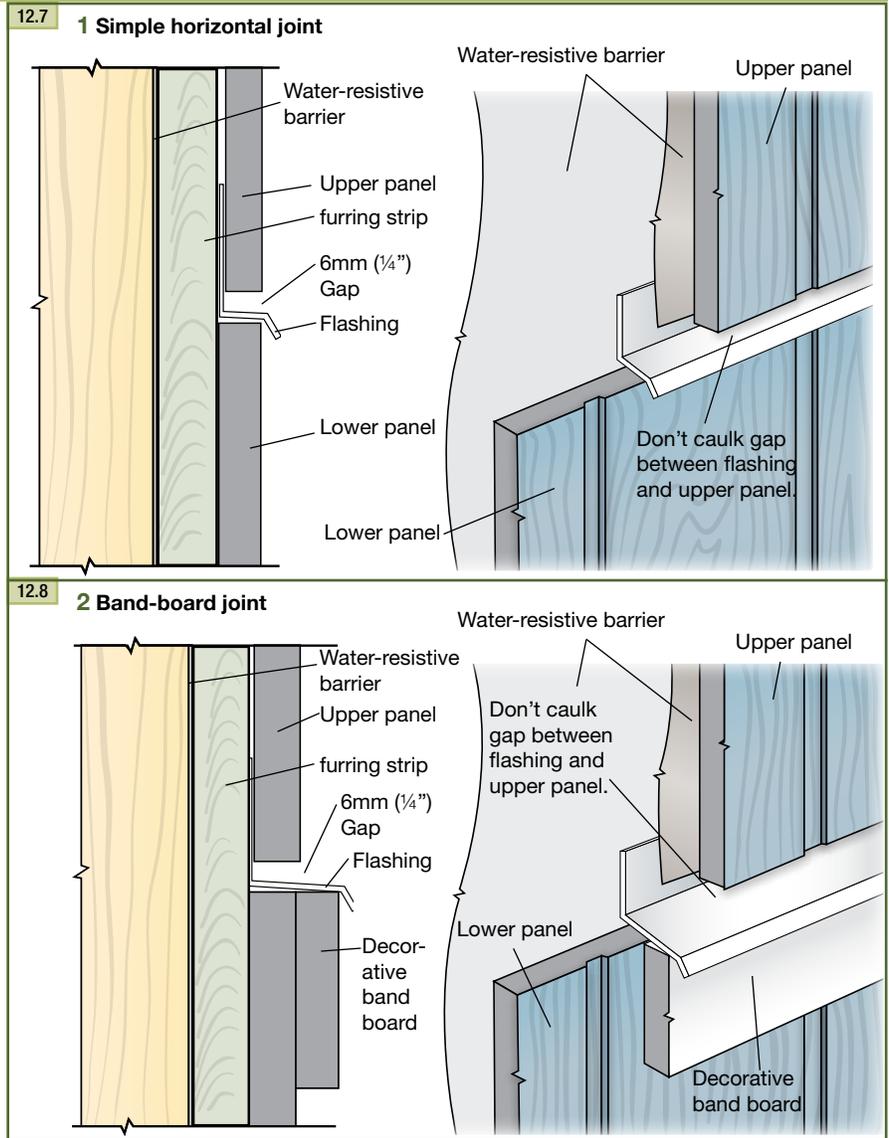
The Fastener Specifications table shows fastener options for a variety of different nailing substrates. Please refer to the applicable ESR report online (see back page) to determine which fastener meets your wind load

Fastening Substrate	Approved Fastener	Fastening Types	
wood studs	16" o.c.	① ② ⑤ ⑨	① 4d common .113" x .267" x 1.5"
		②	② 6d common .113" x .267" x 2"
	24" o.c.	① ② ⑨	⑤ ring shank siding nail .091" x .225" x 1.5"
		⑨	⑨ roofing nail No. 11ga 1.25" long
steel studs	16" o.c. or 24" o.c.	⑦ ⑬	⑦ screw Ribbed Bugle-Head No. 8 (.323" x 1")
		⑬	⑬ ET&F [AKN100-0150NA] .100" x .25" x 1.5"

HORIZONTAL JOINT TREATMENT

In some applications such as multi-story structures or at gable ends, it may be necessary to stack HardiePanel® siding. The horizontal joints created between panels must be flashed properly to minimize water penetration. Treat horizontal panel joints by using one of the following methods:

- 1) After installing the lower course of panel siding, install vinyl or coated aluminum “Z” flashing at the top edge of the panel. Make sure that the flashing is sloped away from the wall and does not rest flat on the top edge of the panel. Install the second level or gable panels leaving a 1/4-in. minimum gap between the bottom of the panel and the Z flashing. This gap should never be caulked.
- 2) As an alternative, if a horizontal band board is used at the horizontal joint, flashing must extend over the panel edge and trim attachment. Flashing for both treatments must slip behind the water-resistive barrier.

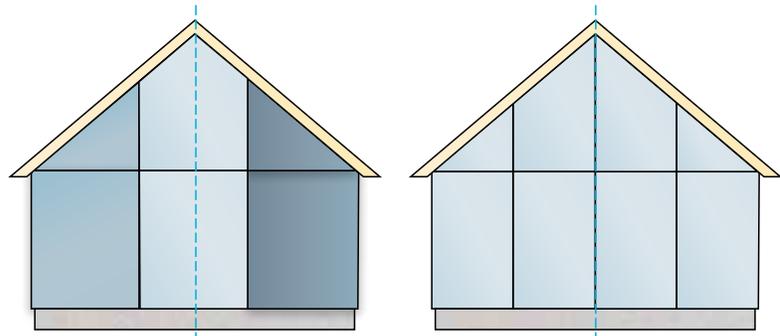


TIP: For best looking installation of HardiePanel Select Sierra 8 siding, carefully align vertical panel grooves at 1st to 2nd story or gable junctures.

WARNING

Do not bridge floors with panel siding. A horizontal joint shall always be created between floors.

TIP: For the most symmetrical looking wall, plan the installation so that a full panel is centered on the wall or gable with equal-size panels cut for each end. As an alternative, plan the installation so that a full panel is located on either side of the wall center, again leaving equal-size panels on each end. These strategies might entail a centered framing layout. Choose the strategy that looks the best and uses material most efficiently.



Installation of HardiePanel® Vertical Siding (continued)

WINDOWS, DOORS, AND OTHER WALL PENETRATIONS

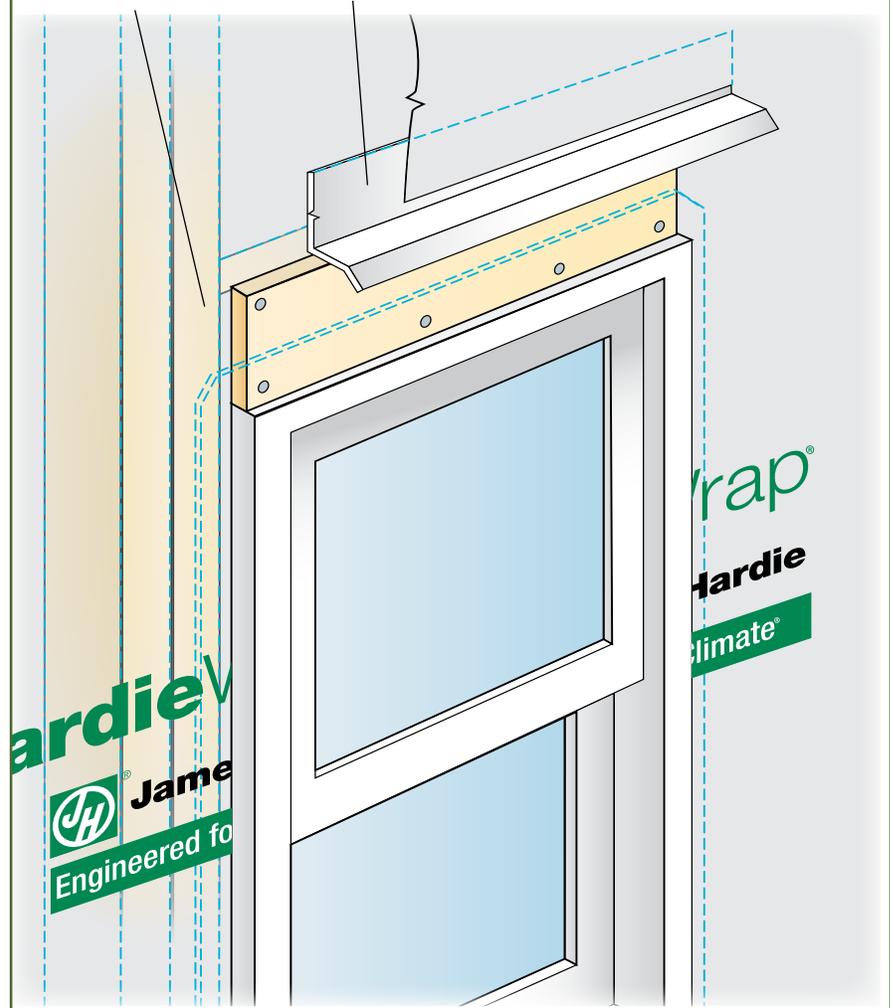
In panel installations, trim is typically overlaid on top of the panel. Special attention needs to be paid to trim flashing at the tops of openings. Below is one method for properly flashing trim in a panel application:

- 1) After installing the window, cut and install a 1/4-in. thick shim above the window. The shim should be the same width as the trim, and it should be as long as the width of the window.
- 2) Over the shim, install flashing wide enough to cover thickness of the trim and long enough to cover the trim head piece.
- 3) Install the panel to the window and around the shim taking care not to damage the flashing and leaving a 1/4-in. gap between the panel and the horizontal part of the flashing.
- 4) Install the trim around the window, slipping the head piece under the installed flashing.

12.9

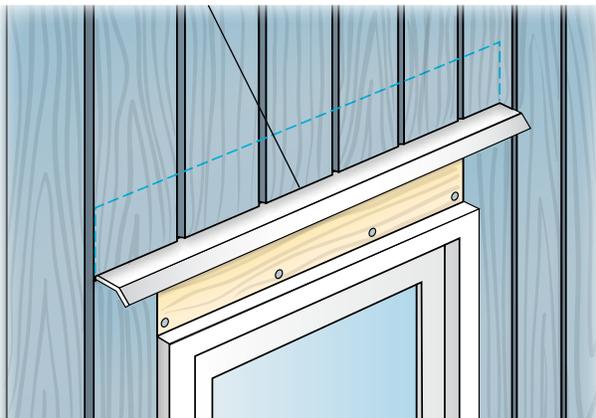
1 Install 1/4-in. thick shim over the window.

2 Install flashing over the shim and under the water-resistant barrier.



12.10

3 Cut and fit panel around the shim and flashing. Leave 1/4-in. gap between the flashing and the upper panel.



12.11

4 Install window trim under the flashing.



RAIN SCREENS

The Use of Rain Screen Systems:

James Hardie will support the use of its exterior siding products with rainscreen systems, but does not take sole responsibility for the entire wall assembly or system. James Hardie expects the designer or builder using our components as part of the rainscreen system to:

- Adhere to all the installation requirements listed in the relevant product installation instructions.
- Provide adequate details for water management.
- Make the decision about the use of rainscreen.
- James Hardie products does not recommend “drainage mats” or drainage boards” to provide the necessary capillary break behind our siding. These products can compress during the installation process, impairing the drainage channels and further causing a “wavy” appearance in the plank or panel products.
- Understand the interaction between system components and how each of the components in the system interacts.
- Design of the building envelope accounting for both interior and exterior moisture control.

Installation Over Furring:

When installing James Hardie Siding products over furring the question arises what thickness of furring can be used as an alternate to normal metal or wood studs specified in the ESR 1844 & 2290 Report. General rule of thumb is, the specific ESR 1844 & 2290 fastener must be installed into a material that has the same or better holding power than that specified in the ESR 1844 & 2290 and with the same penetration as the ESR 1844 & 2290 fastener. Note: The ESR 1844 & 2290 is the primary code compliance document James Hardie utilizes, but for other common applications and/or products, additional code compliance documentation and/or fastener specifications may exist. For special circumstances out side the scope of the ESR 1844 & 2290, please contact James Hardie's Technical Services.

When reviewing the following details for attaching to wood furring or framing, an important consideration is that the fastener chosen must be fully encompassed by a wood substrate - the furring may count as all or part of the necessary penetration if it has been proven that the furring and/or wood substrate has the same or better holding power as a timber stud.

Design responsibility

In all cases it is the sole responsibility of the architect, envelope engineer or specifier to identify moisture related risks associated with any particular building design and to make any appropriate adjustments or modifications to the installation guidelines given by manufacturers. Wall construction and design must effectively manage moisture, considering both the interior and exterior environment of the building.

Attaching panel siding to wood furring:

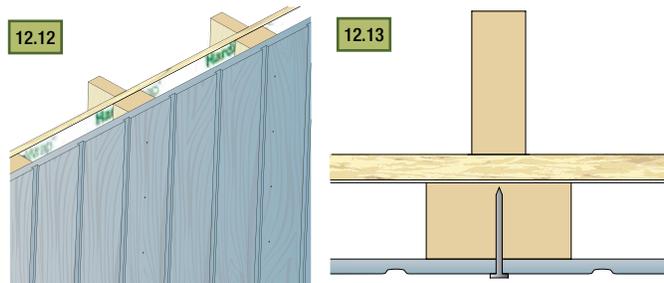
When attaching panel siding products over wood furring, the typical fastener used is the 6d common 2” long nail. This fastener is going to be the shortest fastener approved for fastening panel siding products into wood, therefore the furring must be a minimum of 1-11/16” thick to achieve the same values as ESR 1844, Table 4, given stud spacing, building height, and exposure category.

It is deemed an acceptable practice to not fasten along the top and bottom plates for the 5/16” HardiePanel configurations listed in the ESR 1844, Table 4 using the following fastener type:

- 0.091” shank X 0.225” HD X 1.5” long ring shank nail
- Min. No. 8 X 0.311 HD X 1” ribbed bugle head screw
- 0.10 X 0.25” HD X 1.5” long ET&F pin or equivalent
- 6d common 2” long nail

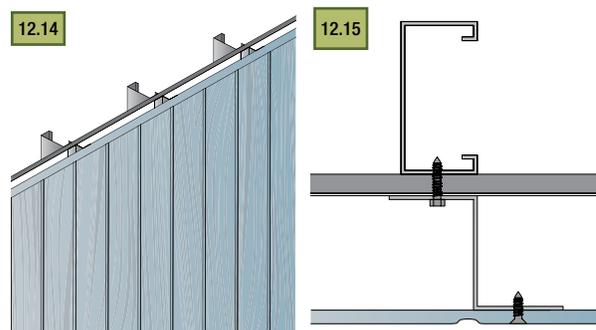
Attaching panel siding to steel furring:

When attaching panel siding products to metal furring, the steel furring must be a minimum 20 gauge steel. A fastener should be chosen out of the ESR 1844, Table 4, which is approved for attaching to steel framing. Two general rules that should be considered when choosing a fastener is that a nail (pin) must penetrate steel furring ¼”, and screws must penetrate steel furring 3 full threads. Therefore, if the rules for steel fastening are followed – given stud spacing, building height, and exposure category – the values are the same as ESR 1844, Table 4 states for the chosen fastener.



Conditions of use:

- This practice is acceptable for transverse load only.
- This practice is not acceptable for racking shear values or in-plane forces other than perpendicular/normal wind forces.
- All vertical joints shall occur over framing.
- All other James Hardie Installation Requirements shall be followed.



SMOOTH ▪ CEDARMILL® ▪ SELECT SIERRA 8 ▪ STUCCO

IMPORTANT: FAILURE TO INSTALL AND FINISH THIS PRODUCT IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND JAMES HARDIE WRITTEN APPLICATION INSTRUCTIONS MAY LEAD TO PERSONAL INJURY, AFFECT SYSTEM PERFORMANCE, VIOLATE LOCAL BUILDING CODES, AND VOID THE PRODUCT ONLY WARRANTY. BEFORE INSTALLATION, CONFIRM THAT YOU ARE USING THE CORRECT HARDIEZONE INSTRUCTIONS. INSTALLATION OF HZ10™ PRODUCTS OUTSIDE AN HZ10® LOCATION WILL VOID YOUR WARRANTY. TO DETERMINE WHICH HARDIEZONE APPLIES TO YOUR LOCATION, VISIT WWW.HARDIEZONE.COM OR CALL 1-866-942-7343 (866 9HARDIE)

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 wind will blow dust away from user and others in working area.
2. Use one of the following methods:
 - a. Best:
 - i. Score and snap
 - ii. Shears (manual, electric or pneumatic)
 - b. Better:
 - i. Dust reducing circular saw equipped with a HardieBlade® saw blade and HEPA vacuum extraction
 - c. Good:
 - i. Dust reducing circular saw with a HardieBlade saw blade (only use for low to moderate cutting)

INDOORS

1. Cut only using score and snap, or shears (manual, electric or pneumatic).
 2. Position cutting station in well-ventilated area
- NEVER use a power saw indoors
 - NEVER use a circular saw blade that does not carry the HardieBlade saw blade trademark
 - NEVER dry sweep – Use wet suppression or HEPA Vacuum

Important Note: For maximum protection (lowest respirable dust production), James Hardie recommends always using "Best"-level cutting methods where feasible.

NIOSH-approved respirators can be used in conjunction with above cutting practices to further reduce dust exposures. Additional exposure information is available at www.jameshardie.com to help you determine the most appropriate cutting method for your job requirements. If concern still exists about exposure levels or if you do not comply with the above practices, you should always consult a qualified industrial hygienist or contact James Hardie for further information. S0083105

GENERAL REQUIREMENTS:

- These instructions to be used for residential single family installations only. For Commercial / Multi-Family installation requirements go to www.JamesHardieCommercial.com
- HardiePanel® vertical siding can be installed over braced wood or steel studs spaced a maximum of 24" o.c. See general fastening requirements. Irregularities in framing and sheathing can mirror through the finished application. James Hardie recommends installing HardiePanel on a capillary break (rainscreen/furring) as a best practice.
- Information on installing James Hardie products over foam can be located in **JH Tech Bulletin 19** at www.jamehardie.com
- A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. James Hardie will assume no responsibility for water infiltration. James Hardie does manufacture HardieWrap® Weather Barrier, a non-woven non-perforated housewrap¹, which complies with building code requirements.
- When installing James Hardie products all clearance details in figs. 5,6,7,8,9,10&11 must be followed.
- Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6" in the first 10'.
- 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.
- Some application are not suitable for ColorPlus. Refer to ColorPlus section page 3.
- DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.
- For larger projects, including commercial and multi-family projects, where the span of the wall is significant in length, the designer and/or architect should take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin #8 "Expansion Characteristics" at www.JamesHardie.com.

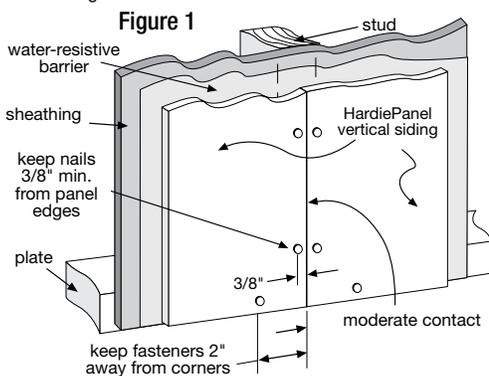
INSTALLATION:

Fastener Requirements

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

HardiePanel Vertical Siding Installation

- Framing must be provided at horizontal and vertical edges for nailing.
- HardiePanel vertical siding must be joined on stud.
- Double stud may be required to maintain minimum edge nailing distances.



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).

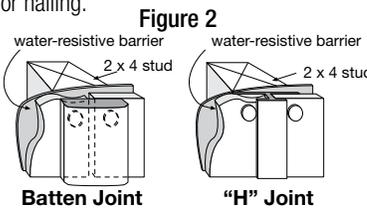


Figure 2

leave appropriate gap between panels, then caulk*
(Not applicable to ColorPlus® Finish)
*Apply caulk in accordance with caulk manufacturer's written application instructions.

Caulk Joint

(Not applicable to ColorPlus® Finish)

*Apply caulk in accordance with caulk manufacturer's written application instructions.

Figure 3

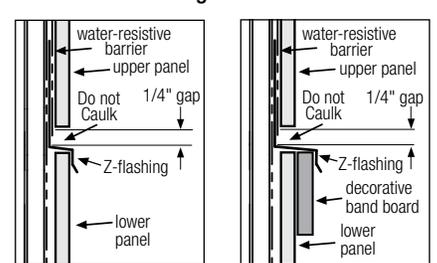
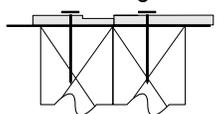


Figure 4

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



¹ For additional information on HardieWrap™ Weather Barrier, consult James Hardie at 1-866-4Hardie or www.hardiewrap.com

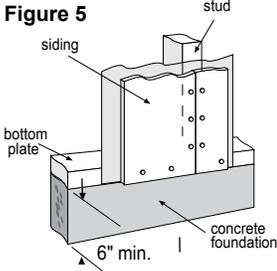
WARNING: AVOID BREATHING SILICA DUST

James Hardie® products contain respirable crystalline silica, which is known to the State of California to cause cancer and is considered by IARC and NIOSH to be a cause of cancer from some occupational sources. Breathing excessive amounts of respirable silica dust can also cause a disabling and potentially fatal lung disease called silicosis, and has been linked with other diseases. Some studies suggest smoking may increase these risks. During installation or handling: (1) work in outdoor areas with ample ventilation; (2) use fiber cement shears for cutting or, where not feasible, use a HardieBlade® saw blade and dust-reducing circular saw attached to a HEPA vacuum; (3) warn others in the immediate area; (4) wear a properly-fitted, NIOSH-approved dust mask or respirator (e.g. N-95) in accordance with applicable government regulations and manufacturer instructions to further limit respirable silica exposures. During clean-up, use HEPA vacuums or wet cleanup methods - never dry sweep. For further information, refer to our installation instructions and Material Safety Data Sheet available at www.jameshardie.com or by calling 1-800-9HARDIE (1-800-942-7343). FAILURE TO ADHERE TO OUR WARNINGS, MSDS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.

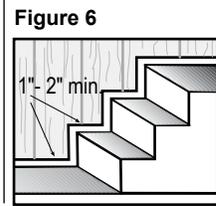
S0083105

CLEARANCES

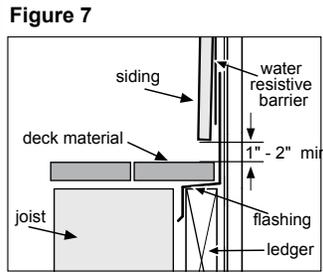
Install siding and trim products in compliance with local building code requirements for clearance between the bottom edge of the siding and the adjacent finished grade.



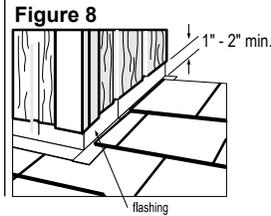
Maintain a minimum 1" - 2" clearance between James Hardie® products and paths, steps and driveways.



Maintain a minimum 1" - 2" clearance between James Hardie products and decking material.

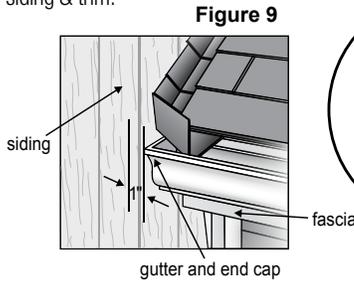


At the juncture of the roof and vertical surfaces, flashing and counterflashing shall be installed per the roofing manufacturer's instructions. Provide a minimum 1" - 2" clearance between the roofing and the bottom edge of the siding and trim.

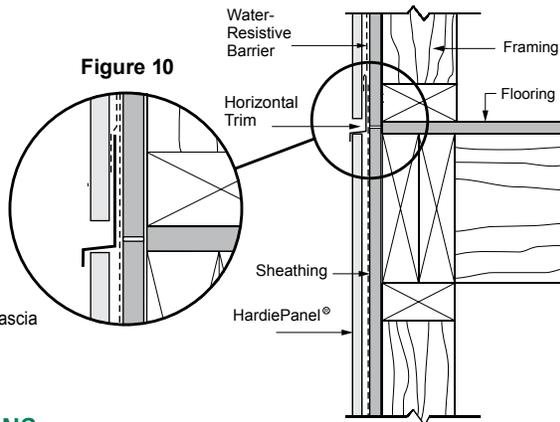


Maintain a 1/4" clearance between the bottom of James Hardie products and horizontal flashing. Do not caulk gap. Refer to fig. 3 on page 1.

Maintain a minimum 1" gap between gutter end caps and siding & trim.



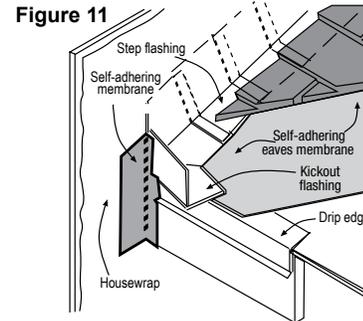
Do not bridge floors with HardiePanel® siding. Horizontal joints should always be created between floors (fig. 10).



KICKOUT FLASHING

Because of the volume of water that can pour down a sloped roof, one of the most critical flashing details occurs where a roof intersects a sidewall. The roof must be flashed with step flashing. Where the roof terminates, install a kickout to deflect water away from the siding. It is best to install a self-adhering membrane on the wall before the subfascia and trim boards are nailed in place, and then come back to install the kickout.

Figure 11, Kickout Flashing To prevent water from dumping behind the siding and the end of the roof intersection, install a "kickout" as required by IRC code R905.2.8.3 : "...flashing shall be a min. of 4" high and 4" wide." James Hardie recommends the kickout be angled between 100° - 110° to maximize water deflection



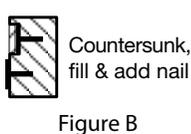
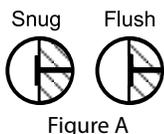
BLOCKED PENETRATIONS

Penetrations such as hose bibs and holes 1 1/2" or larger such as dryer vents should have a block of trim around point of penetration.

GENERAL FASTENING REQUIREMENTS

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

- Consult applicable product evaluation or listing for correct fastener type and placement to achieve specific 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). (fig. A)
- Do not over-drive nail heads or drive nails at an angle.
- If nail is countersunk, fill nail hole and add a nail. (fig. B)
- For wood framing, under driven nails should be hit flush to the plank with a hammer (for steel framing, remove and replace nail).
- NOTE: Whenever a structural member is present, HardiePlank should be fastened with even spacing to the structural member. The tables allowing direct to OSB orplywood should only be used when traditional framing is not available.
- Do not use aluminum fasteners, staples, or clipped head nails.



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).

CAULKING

For best results use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions. **Note: OSI Quad as well as some other caulking manufacturers do not allow tooling.**

DO NOT caulk nail heads when using ColorPlus products, refer to the ColorPlus touch-up section

CUT EDGE TREATMENT

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

PAINTING

DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products. James Hardie products must be painted within 180 days for primed product and 90 days for unprimed. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE

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

Note: James Hardie does not warrant the usage of third party touch-up or paints used as touch-up on James Hardie ColorPlus products.

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

The following outlines the recommended applications for ColorPlus and Primed panels. Not all designs will be suitable for every application:

- Exposed fasteners or battens is the recommended application for ColorPlus panel products
- Do not use touch-up over fastener heads for smooth ColorPlus products - primed panel recommended
- For ColorPlus panel applications that require fasteners in the field, it is acceptable to use touch-up over fasteners for Cedarmill and Stucco panel only, but correct touch-up application is important. Some colors may show touch-up when applied over fasteners. Trim is recommended to cover joints when appropriate.

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

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

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

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 International Residential Code for One- and Two-Family Dwellings and the 2006, 2009, & 2012 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 listing FL#889, Dade County, Florida NOA No. 02-0729.02, U.S. Dept. of HUD Materials Release 1263c, 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.

© 2013 James Hardie Building Products. All rights reserved. TM, SM, and ® denote trademarks or registered trademarks of James Hardie Technology Limited. ® is a registered trademark of James Hardie Technology Limited.

Additional Installation Information, Warranties, and Warnings are available at www.jameshardie.com



Technical Data Sheet

Landmark® Premium Shingles

Landmark® PRO/Architect 80 Shingles (NW Region only)

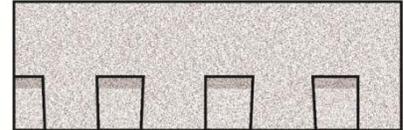
Landmark® PRO Shingles

Landmark® Shingles



PRODUCT INFORMATION

Landmark shingles reflect the same high manufacturing standards and superior warranty protection as the rest of CertainTeed's line of roofing products. Landmark Premium (and Algae Resistant-AR), Landmark PRO (and AR) and Landmark (and AR) are built with the industry's toughest fiber glass mat base, and their strict dimensional tolerance assures consistency. Complex granule color blends and subtle shadow lines produce a distinctive color selection. Landmark is produced with the unique NailTrak® nailing feature. **Please see the installation instruction section below for important information regarding NailTrak.**



In the Northwest Region Landmark PRO (AR) is double-branded as Landmark PRO/Architect 80 (AR).

Landmark algae-resistant (AR) shingles have the additional attribute of resisting the growth of algae especially in damp regions. AR shingles are not available in all regions

Colors: Please refer to the product brochure or CertainTeed website for the colors available in your region.

Limitations: Use on roofs with slopes greater than 2" per foot. Low-slope applications (2" to 4" per foot) require additional underlayment. In areas where icing along eaves can cause the back-up of water, apply CertainTeed WinterGuard® Waterproofing Shingle Underlayment, or its equivalent, according to application instructions provided with the product and on the shingle package.

Product Composition: Landmark Series shingles are composed of a fiber glass mat base. Ceramic-coated mineral granules are tightly embedded in carefully refined, water-resistant asphalt. Two pieces of the shingle are firmly laminated together in a special, tough asphaltic cement. All Landmark shingles have self-sealing adhesive strips.

Applicable Standards

ASTM D3018 Type I

ASTM D3462

ASTM E108 Class A Fire Resistance

ASTM D3161 Class F Wind Resistance

ASTM D7158 Class H Wind Resistance

UL 790 Class A Fire Resistance

ICC-ES ESR-1389 and ESR-3537

CSA Standard A123.5 (Regional)

Miami-Dade Product Control Approved (Regional)

Florida Product Approval # FL5444 (Regional)

TDI Windstorm Resistance (Regional)

Technical Data:

	Landmark (and AR)	Landmark PRO* (and AR)	Landmark Premium (and AR)
Weight/Square (approx.)	229 / 240 lb.**	250 / 270 lb.**	300 lb.
Dimensions (overall)	13 1/4" x 38 3/4"	13 1/4" x 38 3/4"	13 1/4" x 38 3/4"
Shingles/Square (approx.)	65	66	66
Weather Exposure	5 5/8"	5 5/8"	5 5/8"

*Includes Landmark PRO AR/Architect 80

**Dependent on manufacturing location

INSTALLATION

The following is a general summary of the installation methods. Detailed installation instructions are supplied on each bundle of Landmark shingles and must be followed. Separate application sheets may also be obtained from CertainTeed.

Roof Deck Requirements: Apply shingles to minimum 3/8" thick plywood, minimum 7/16" thick non-veneer (e.g. OSB), or minimum 1" thick (nominal) wood decks. The plywood or non-veneer decks must comply with the specifications of APA-The Engineered Wood Association.

Ventilation: Provisions for ventilation should meet or exceed current HUD Standards. To ensure adequate balance ventilation, use a combination of continuous ridge ventilation (using CertainTeed Ridge Vent products, or a comparable product with an external baffle) combined with soffit venting.

Valleys: Valley liner must be applied before shingles. The Closed-Cut valley application method is recommended, using CertainTeed WinterGuard Waterproofing Shingle Underlayment or its equivalent to line the valley prior to being fully covered by the shingles.

Underlayment:

On slopes 4" per foot or greater, CertainTeed recommends one layer of DiamondDeck® Synthetic Underlayment, or Roofers' Select™ High-Performance shingle underlayment, or shingle underlayment meeting ASTM D226, D4869 or ASTM D6757. Always ensure sufficient deck ventilation, and take particular care when DiamondDeck or other synthetic underlayment is installed. For UL fire rating, underlayment may be required. Corrosion-resistant drip edge is recommended and should be placed over the underlayment at the rake and beneath the underlayment at the eaves. Follow manufacturer's application instructions.

On low slopes (2" up to 4" per foot), one layer of CertainTeed's WinterGuard Waterproofing Shingle Underlayment (or equivalent meeting ASTM D1970) or two layers of 36" wide felt shingle underlayment (Roofers' Select® High-Performance Underlayment or product meeting ASTM D226, D4869 or ASTM D6757) lapped 19" must be applied over the entire roof, ensure sufficient deck ventilation. When DiamondDeck or other synthetic underlayment is installed, weather-lap at least 20" and ensure sufficient deck ventilation. When WinterGuard is applied to the rake area, the drip edge may be installed under or over WinterGuard. At the eave, when WinterGuard does not overlap the gutter or fascia, the drip edge should be installed under WinterGuard. When WinterGuard overlaps the fascia or gutter, the drip edge or other metal must be installed over it. Follow manufacturer's application instructions.

Fastening (NailTrak):

Low & Standard Slopes: On low and standard slopes, four nails are required per shingle. There are three nail lines on NailTrak shingles. Position nails vertically between the upper and lower nailing-guide lines. It is acceptable to nail between either the middle and lower lines, or between the upper and middle lines. Nails must be of sufficient length to penetrate into the deck 3/4" or through the thickness of the decking, whichever is less. They are to be located 1" and 12" in from each side of the shingle (see instructions on product wraps.) Nails are to be 11 or 12 gauge, corrosion-resistant roofing nails with 3/8" heads.

Steep Slopes: On slopes greater than 21" per foot, fasten each shingle with six nails and four spots of roofing cement placed under each shingle according to application instructions provided on the shingle package. Fasteners must penetrate the two-layer common bond area that is indicated by the middle and lower NailTrak lines, also illustrated on the shingle package.

Application: The recommended application method is the 'Five-Course, Diagonal Method' found on each bundle of shingles. In this method, shingle course offsets are 6" and 11". Instructions also may be obtained from CertainTeed. These shingles may be used for new construction or for reroofing over existing Metric-sized shingles.

Flashing: Use corrosion-resistant metal flashing.

Hips and Ridges: For capping hip and ridge apply CertainTeed Shadow Ridge®, Cedar Crest® or Mountain Ridge® shingles of a like color.

MAINTENANCE

These shingles do not require maintenance when installed according to manufacturer's application instructions. However, to protect the investment, any roof should be routinely inspected at least once a year. Older roofs should be looked at more frequently.

WARRANTY

Landmark Premium (and AR), Landmark PRO/Architect 80 AR, Landmark PRO (and AR), and Landmark (and AR) shingles carry a lifetime limited, transferable warranty to the consumer against manufacturing defects. In addition, Landmark Premium (and AR), Landmark Premium/Architect 80, Landmark PRO (and AR), and Landmark (and AR) carry 10-years of SureStart™ Protection. For specific warranty details and limitations, refer to the warranty itself (available from the local supplier, roofing contractor or on-line at www.certainteed.com).

FOR MORE INFORMATION

Sales Support Group: 800-233-8990

Web site: www.certainteed.com

See us at our on-line specification writing tool, CertaSpec, at www.certainteed.com/certaspec.

CertainTeed Roofing

20 Moores Road
Malvern, PA 19355



WOOD

Pella® 450 Series

\$\$-\$\$\$



Pella 450 Series double-hung window

FEATURES

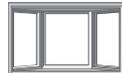
Natural beauty of wood with low-maintenance aluminum-clad exteriors
 Unique, factory-assembled combinations without the custom price tag
 Most popular features and options, including stains and grilles

WINDOW STYLES

Special sizes and configurations are also available.



AWNING



BAY OR BOW



CASEMENT



DOUBLE-HUNG

PATIO DOOR STYLES



SLIDING



HINGED



Colors & Finishes PELLA® 450 SERIES

WOOD TYPE

The wood species that best complements your home's interior.



PREFINISHED PINE INTERIOR COLORS

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



ALUMINUM-CLAD EXTERIOR COLORS

Our low-maintenance EnduraClad® exterior finish resists fading and helps protect your windows and patio doors for years.



Grilles PELLA® 450 SERIES

GRILLES

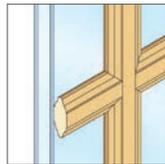
Choose the look of true divided light, removable roomside grilles or make cleaning easier by selecting grilles-between-the-glass.



SIMULATED-DIVIDED-LIGHT WITH SPACER
7/8"



SIMULATED-DIVIDED-LIGHT WITHOUT SPACER
7/8"



ROOMSIDE REMOVABLE GRILLES
3/4"



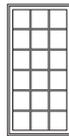
ALUMINUM GRILLES-BETWEEN-THE-GLASS¹
3/4"

GRILLES-BETWEEN-THE-GLASS INTERIOR COLORS:

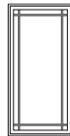


GRILLE PATTERNS

Choose from a variety of grille patterns for the traditional look of divided light. Custom patterns are available.



TRADITIONAL



9-LITE PRAIRIE



TOP ROW



CROSS



CUSTOM

¹ Aluminum grilles-between-the-glass feature the option of the interior grille colors shown. The exterior will match the EnduraClad® color you choose. Appearance of exterior grille color may vary depending on the Low-E insulating glass selection.

² Only available with matching interior and exterior colors.

Window Hardware PELLA® 450 SERIES

ESSENTIAL COLLECTION

Select from popular designs and finishes to suit every style.



FOLD-AWAY
CRANK



CAM-ACTION
LOCK

FINISHES:

CHAMPAGNE

WHITE

BROWN

BRIGHT
BRASS

OIL-RUBBED
BRONZE

SATIN
NICKEL

Patio Door Hardware

ESSENTIAL COLLECTION

Elevate your style and transform your home with elegant selections.



HINGED PATIO
DOOR HANDLE



SLIDING PATIO
DOOR HANDLE

FINISHES:

CHAMPAGNE¹

WHITE¹

BROWN

BRIGHT
BRASS

OIL-RUBBED
BRONZE

SATIN
NICKEL

¹ Available on sliding patio doors only.

Glass PELLA® 450 SERIES

INSULSHIELD® LOW-E GLASS

Advanced Low-E insulating glass with argon¹

AdvancedComfort Low-E insulating dual-pane glass with argon¹

NaturalSun Low-E insulating glass with argon¹

SunDefense™ Low-E insulating glass with argon¹

ADDITIONAL GLASS OPTIONS

Annealed or tempered glass

Obscure glass also available on select products

Screens²

FLAT

InView™ screens are clearer than conventional screens. Vivid View® window screens offer the sharpest view.

¹ Optional high-altitude Low-E insulating glass does not contain argon on most products. Please see your local Pella sales representative for more information.

² Warning: Screen will not stop child or pet from falling out of window or door. Keep child or pet away from open window or door.

Want to learn more? Call us at 833-44-PELLA or visit pella.com



The confidence of Pella's warranty.

Pella® 450 Series products are covered by the best limited lifetime warranty for wood windows and patio doors.¹ See written limited warranty for details, including exceptions and limitations, at pella.com/warranty.

¹ Based on comparing written limited warranties of leading national wood window and wood patio door brands.



Connect with Pella:

