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ASTORIA FAIRFIELD

DESIGN REVIEW

PROJECT INFORMATION

Project Name:	Astoria Fairfield
Applicant:	Craig Riegelnegg – Carleton Hart Architecture 830 SW 10th Avenue, #200 Portland OR 97205 (503) 206-3191 craig.riegelnegg@carletonhart.com
Owner:	Hollander Hospitality Contact: Mark Hollander 119 North Commercial Street Bellingham, WA 98225
Property Address:	1 2nd St. Astoria OR 97103
Zoning Designation:	C-3 – General Commercial Bridge Vista Overlay Zone
Date Submitted:	Original Submittal: April 10, 2018 Revised: June 15, 2018 Revised: September 12, 2018

Project Description

The proposed Astoria Fairfield is a 66-unit hotel established under the Marriott brand. However, the project team's goal in crafting a design for the project is to draw on the storied history of river-based industry in the City of Astoria to house a new hotel use within a classic aesthetic. The team has researched and implemented the character of the late 19th century working waterfront in the town, updating methods and materials where needed but ultimately loyal to the context of the past.

Site

The project is in a C-3 (General Commercial) Zone, on a site northwest of the intersection of Marine Drive and Second Street. The site sits between the Columbia River estuary waterfront to the north and a 76 gas station/ convenience store and Josephson's Smokehouse to the south. The former Stephanie's Cabin, owned by Hollander Hospitality, sits at the southwest corner of the block. Though there is currently no plan in place for reuse, Hollander is exploring options and discussing the Stephanie's Cabin property with potential tenants.

This structure is a part of the overall property and as such is included in any calculations involving the entire project site. Given that it is currently unknown when and for what use Stephanie's Cabin will be rehabilitated, any future renovation will be a separately permitted project and all code requirements, including parking, will be addressed for that building at that time. The existing structure that formerly housed the Ship Inn restaurant and bar will be the only architecture to be demolished to prepare the site for the new project.

The site is in the Bridge Vista Overlay Zone. This zone has additional design guidelines established to honor and preserve the working waterfront character along this portion of the Columbia River frontage. The project's responses to BVO requirements are thoroughly documented below in Article 14, and their point-by-point adherence to the codified requirements as detailed. The development's overarching design approach draws from the aesthetic character, construction methods, durable material selection and simple functionally-minded detailing of applicable context to suit a new piece of architecture built for the City of Astoria.

Design Considerations

Though Marriott is a corporate hotel chain with standard prototypes, the proposed Fairfield Inn and Suites is a site-specific design that references the spirit of the City's past and the human-scale experience of visitors to and residents of the City. As prescribed by the BVO, the scale and size of the building is smaller than typical hotels to avoid crowding the River Trail or growing out of scale with the surrounding context. The architecture considers observers from all frontages and meets them with details and architectural elements specifically designed with their vantage points and experience in mind.

The building's north elevation faces the public River Trail/Riverwalk, a pedestrian pathway elevated over the water's edge on a trestle structure. The Riverwalk is frequently used by visitors to the City passing on foot or riding on the Riverfront Trolley. The building elevation facing this route is articulated to maximize visual interest while addressing the industrial historical context through material choice and articulation. A gray v-groove siding reminiscent of cladding on the old canneries wraps the main body of the building. It is contrasted by trim, roofing and other accent elements in black to enhance their depth and visual interest.

The red board and batten found in the historic industrial Union Fishermen's Cooperative buildings appears as a secondary cladding at the east form, a single story entry and lobby area, to enliven the other neutral base colors of the exterior. A patio sits to the north of this area, for guests to dine on during fair weather months, visually connected to the activity on the Riverwalk. These guests also look onto the low pitched roof, covered in black standing seam metal roofing for a classic industrial appearance, with a small line of clerestory glazing rising up at the roof peak.

The east elevation meets the river terminus of Second Street with a generously glazed exterior frontage, with large openings articulated with mullions dividing the lites into a three-bay 2'x4' grid, separated by pilasters and surrounded by trim details directly based on working waterfront precedents in Astoria. The roof of the low street-fronting form and the larger guestroom wing of the project beyond run at the same 3:12 pitch, with a gentle 2:12 awning extending over the southeast corner entry on a trim-clad timber frame.

The south elevation applies the red board-and-batten to a circulation tower, with the color reappearing at a steel-framed exterior egress stair at the opposite west end. The stair, a pure and functional design, nevertheless acts a sculptural elements and densely detailed anchor to the long south frontage on this side. Guestrooms span this middle section, with a similar trim composition to the storefront glazing, adapted from researched examples and painted black in a unique, site-specific touch.

The west elevation celebrates the steel stair, as well as the simple rectangular geometry of the building as it steps back from the Riverwalk to create deck elements for guests, while abiding by the requirements of the Development Code to allow relief and view clearance along the trestle. This elevation also clearly shows the board-formed concrete shell of the ground floor, a nod to industrial construction that merges the structural and

the aesthetic as it concealed covered parking behind. Black steel grates screen this parking area where openings are distributed in alignment with the windows above, for ventilation, light, and visual dialogue with the observer that recalls the same feeling of attractive and functional simplicity created on the floors above.

The project site is gracefully managed in order to provide for the building's parking needs while screening and buffering paved areas with vegetation. Green space is interspersed throughout the site to divide and accentuate the new hotel, the existing restaurant to remain, parking area, drives, streets, and the Columbia River. Sitework for the project is designed to facilitate the pedestrian connection to and across the hotel's lot, to introduce veins of natural growth to the riverfront block and to enhance the relationship of the project to the City.

ARTICLE 2: ZONING

Note: Citations from the Astoria Development Code are referenced as they are relevant to the proposed project. Where code sections are not relevant, they are omitted for brevity.

C-3: GENERAL COMMERCIAL ZONE

Citation: *2.385. PURPOSE. This zone is primarily for a wide range of commercial businesses, including most of those allowed in other commercial zones. Compared to the C-4 Zone, the C-3 Zone is more appropriate for uses requiring a high degree of accessibility to vehicular traffic, low intensity uses on large tracts of land, most repair services, and small warehousing and wholesaling operations. Unlike the C-4 Zone, there are maximum lot coverage, landscaping, and offstreet parking requirements for all uses.*

Response: The proposed use is a commercial business, meeting all requirements for lot coverage, landscaping, parking, and all other general and zone-specific requirements. Reference design documents in Part 2 and responses below.

Citation: *2.390. USES PERMITTED OUTRIGHT. The following uses and their accessory uses are permitted in a C-3 Zone if the Community Development Director determines that the uses will not violate standards referred to in Sections 2.400 through 2.415, additional Development Code provisions, the Comprehensive Plan, and other City laws:*

[Only applicable listings shown]

10. Motel, hotel, bed and breakfast, inn, or other tourist lodging facility and associated uses.

Response: Number 10 on the list of uses permitted outright includes "hotel" as the use.

Citation: *2.400. LOT COVERAGE. Buildings will not cover more than 90 percent of the lot area.*

Response: The project site includes six separate taxlots, or parcels. The Owner intends to consolidate parcels in conjunction with permitting for the Astoria Fairfield, and for the purposes of this submittal the property is addressed as one taxlot. Any work at Stephanie's Cabin will be permitted separately, but design and permitting will be coordinated as needed to satisfy permit

requirements for the Astoria Fairfield. Any renovation of Stephanie's Cabin will not modify the building footprint from the existing 4,573 square feet.

The footprint of the proposed project is 11,798 square feet. Lot coverage has been calculated based on the six parcels taken together as the Project site, at 56,140 square feet, as the combined lot coverage of the Astoria Fairfield and the former Stephanie's Cabin. This yields 21.0%.

Citation: *2.405. LANDSCAPED OPEN AREA. A minimum of 10 percent of the total lot area will be maintained as a landscaped open area.*

See also, from Section 1.400. DEFINITIONS:

LANDSCAPING: Preservation, planting and maintenance of trees, shrubs, groundcovers, and lawns, and associated walkways, benches, decks, fences, fountains, sculptures, courts or plazas in the proportions specified by the landscaping Code.

Response: 10% of the total site area is 5,614 square feet. Landscaped open area along the Astoria Fairfield and associated parking, including only vegetated area and excluding curbs, is 5,524 square feet (using the most conservative alternate). Landscaped open area along Stephanie's Cabin is not yet fully designed, but is estimated at 1,596 square feet. Reference Part 2, pp. 66. The existing landscaped area will be preserved in the interim, to ensure that this requirement is met at the time of permitting, and the Owner understands that future development will have to abide by the same open area requirements.

Landscaped open area coverage is 12.43%. Note that two configurations for the northeast patio are presented in the material. Landscape calculations are given for the more conservative scenario, with the patio boundary 5' from the property line, not the scenario that uses the existing stem wall of the Ship Inn as the patio boundary.

Citation: *2.410. HEIGHT OF STRUCTURES. No structure will exceed a height of 45 feet above grade.*

See also, from Section 1.400. DEFINITIONS:

HEIGHT, BUILDING: The vertical distance above a reference datum measured to the highest point of the coping of a flat roof, to the deckline of a mansard roof, or to the average height of the highest gable of a pitched or hipped roof. The height of a stepped or terraced building is the maximum height of any segment of that building. The reference datum shall be whichever of the following two measurements results in the greater building height (see Figure 1):

a. The reference datum is the lowest grade when the highest ground surface within a five (5) foot horizontal distance of the exterior wall of the building is not more than ten (10) feet above that lowest grade. (Note: Also see definition of "Grade".)

b. The reference datum is ten (10) feet higher than the lowest grade when the ground surface described in Item A above is ten (10) feet or more above that lowest grade. (Note: Also see definition of "Grade".)

Response: The average height of the highest gable (the main gable above the fourth floor of pitched roof of the building will be maximum 44'-6" above the grade datum per the definition above. Note that Scenario (a) in the Definitions will govern in determining building height. Therefore the maximum building height will represent the measurement from 15.5' spot elevation indicated along the west end of the building. Reference Grading Plan, Part 2 pp. 30.

Citation: *3.315.A.4. Cuts shall not remove the toe of any slope where a known potential or historic land slide exists as determined by the City Engineer.*

Response: No cuts will be made to the toe of any slope.

Citation: *3.315.A.5. Cuts shall be set back a minimum of five (5) feet from property lines so as to minimize danger and disturbance to adjoining property.*

Response: No cuts shall be made within five (5) feet of the property line. Note that the project is proposing an alternate boundary for the northeast patio, that uses the existing stem wall of the the Ship Inn as the boundary and structural support for the patio. The project team believes that this will be less invasive than constructing a new wall two feet south of the existing stem wall, and is requesting that the DRC allow this alternate if the existing wall is deemed adequate upon review by a structural engineer.

Citation: *3.315.A.6. Retaining walls shall be constructed in accordance with the Structural Specialty Codes as adopted by the City.*

Response: The retaining wall required south of the river's edge for the planting strip and patios to the north of the building shall be constructed in accordance with this code.

Citation: *3.315.B. Fills. The following Grading Standards shall be required for fills:*

1. The design shall minimize the need for fills.

Response: Existing grade shall be utilized wherever possible. Some site fill will be included in the project scope due to the need to establish a level slab with entries onto drives in proximity to neighboring and already developed sites. Regions of fill will transition to existing topography to the maximum extent possible after accounting for grading needs for interior slabs, parking areas, and other site features. Reference Grading Plan, Part 2 pp. 30.

Citation: *3.315.B.2. The slope of fill surfaces shall not be steeper than two horizontal to one vertical (2:1) unless an engineering geology report determines that a steeper slope will be reasonably stable and not create a hazard to public or private property. Fill slopes shall not be constructed on natural slopes steeper than two horizontal to one vertical.*

Response: Fill slope surfaces will not exceed 2:1. At any locations adjacent to the river where a greater grade change is present and not currently provided for by shoreline riprap, a retaining wall will be used. Reference Grading Plan, Part 2 pp. 30.

Response: Landscaped area within parking is calculated below, for component projects and the total site. Only vegetated landscaped area has been calculated, to provide the most conservative estimate. Percentages are conformant with requirements above in all cases. Reference Site Diagram in Part 2, pp. 66.

Project	Parking Area	Landscape in Parking	Area %
Hotel	13,375 SF	2,758 SF	20.62%
Stephanie's Cabin	5,342 SF	664 SF	12.43%
TOTAL	18,717 SF	3,422 SF	18.28%

3) The bottom of the sill shall be a minimum of 18 inches above the ground or floor elevation.

Response: Reference window details in Part 2, pp. 52 and 53. Windows have been detailed to provide all requirements listed above. Fiber cement trim boards are installed along all sides, minimum 5/4x4 inch nominal size. Crown moulding is provided in a configuration based on the most prevalent and appropriate working waterfront examples. It is a functional design, a simple compound trim section, without special milling, that includes a projecting water table on the top side. The crown moulding is contiguous with the floor line trim, which has the same projection. IT is also repeated at the window sill and the bottom of the PTHP grille. The recessed windows and deck doors are installed 3-1/2 inches in from the face of the wall. Window sills are consistently set at 30" above the finished floor, except for storefront glazing at the Lobby/Entry, which is at 32".

Citation: *14.115.E.2.b. The following types of windows or window treatments are prohibited:*

1) Residential-styled window bays;

2) Half-round windows;

3) Tinted and/or reflective glass;

4) Sliding windows;

5) Vinyl windows; and

6) Blocked-out windows; and

7) Windows that extend beyond the plane of the building facade.

Response: All of the prohibited window types are observed in the proposed design. Glass will be clear, not tinted or reflective. Operable windows shall be casements, not sliders. Windows shall be constructed of aluminum-clad wood at guestrooms and aluminum at ground floor assemblies, never vinyl. And all windows shall be recessed within trim details as noted above.

Citation: *14.115.E.3. Design Guidelines for All Uses.*

a. Windows, including transoms on existing buildings, should retain their original size and location as part of renovation activities.

Response: The building is entirely new construction and no window openings will be part of a renovation.

b. Windows that open by pivoting, casement, single hung, or other shuttering are encouraged.

Response: All operable windows in guestrooms shall be casement. Operable glazing in the Lobby/Entry, shall be a mix of awning and hopper units, distributed across the south, east and north elevations at a height to permit user operation.

c. Painted wood or stucco panels or tile clad panels below windows are encouraged.

KEYNOTES

100 EXISTING DRIVE ENTRIES TO BE IMPROVED AS NEEDED

101 TRASH ENCLOSURE

102 TRANSFORMER ENCLOSURE

103 EXTERIOR STAIR

104 CROSSWALK

105 MONUMENT SIGN

106 RETAINING WALL WITH PLANTER

107 CONCRETE PATIO

108 (3) BIKE RACKS

109 BENCH - MATCH RIVER TRAIL DESIGN

110 NEW CONCRETE PAVING IN R.O.W. - COORDINATE WITH CITY

111 42" STEEL RAIL - POWDER COAT BLACK

112 INFORMATIONAL SIGN ON POWDER COATED BLACK STEEL PODIUM/POST

113 MOUNTABLE CURB

114 LINE OF EXISTING STEM WALL - ALTERNATE PATIO PERIMETER - VERIFY COMPLIANCE W/ JURISDICTION.

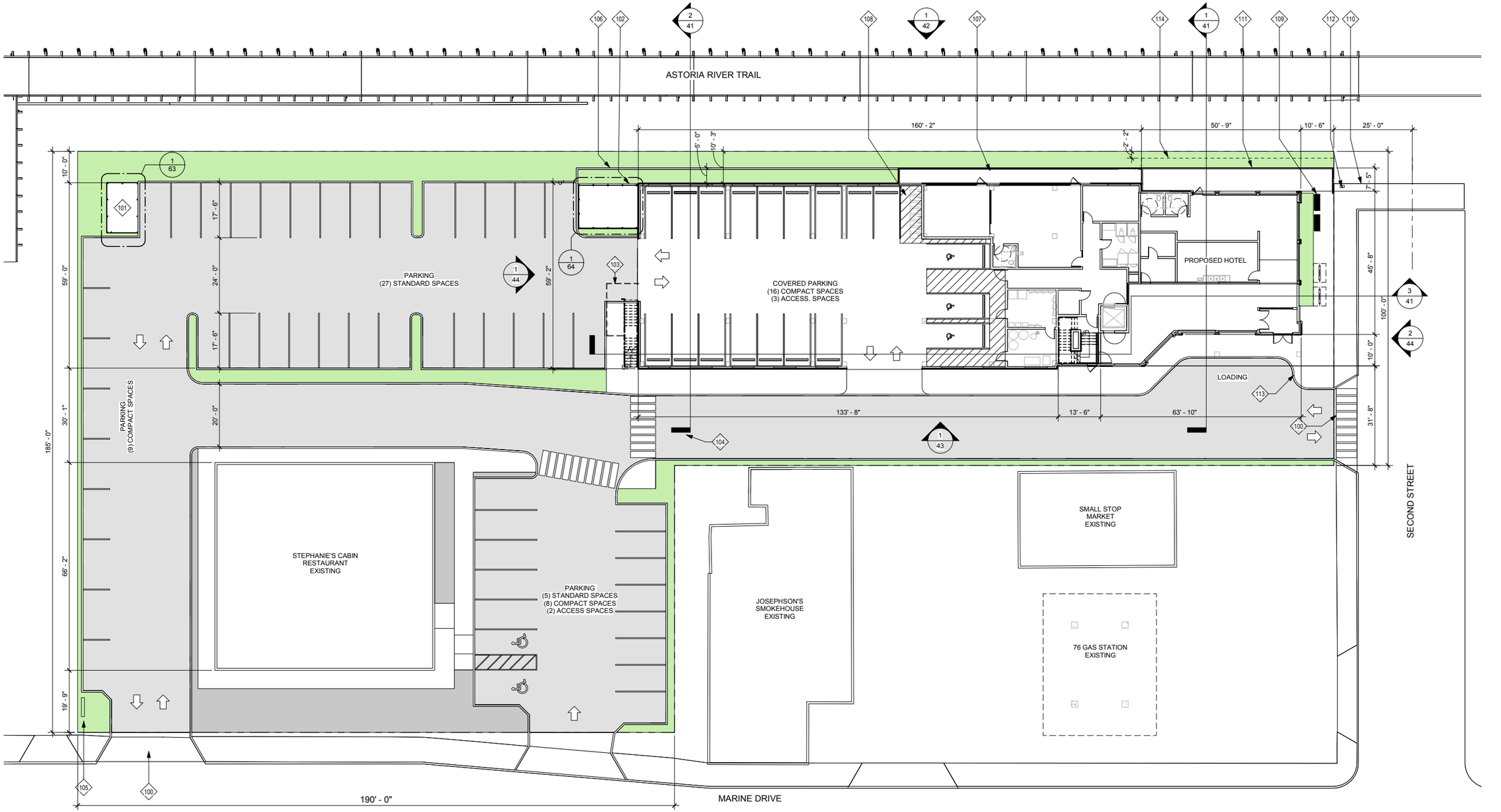
LEGEND

PROPERTY LINE

PARCEL / TAXLOT DIVISION

LANDSCAPED VEGETATED AREA

ASPHALT PAVING



REV: 10.01.2018

SITE PLAN

CARLETON HART ARCHITECTURE

HOLLANDER HOSPITALITY

ASTORIA FAIRFIELD
DESIGN REVIEW REVISION

0 16'-0" 32-0"

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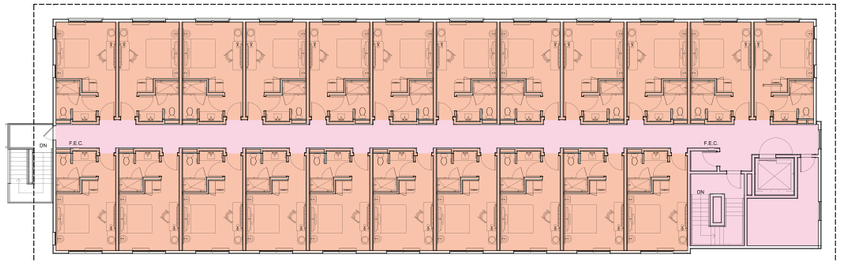
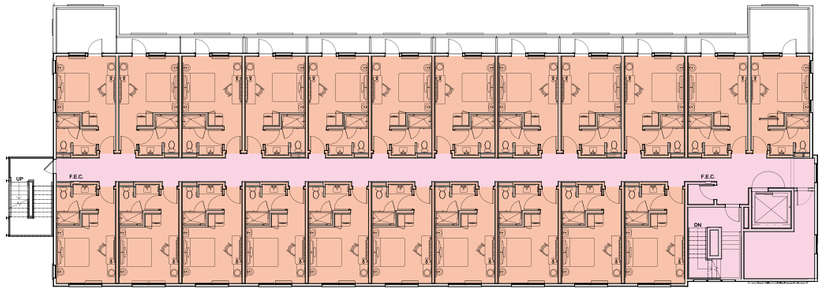
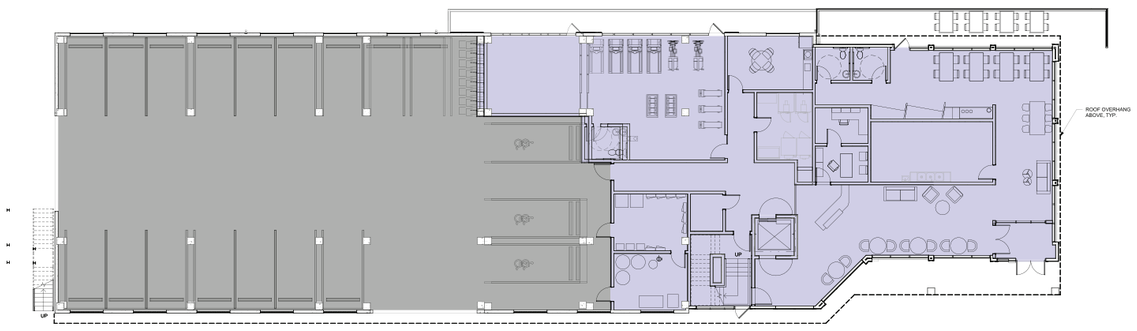


FOURTH FLOOR



THIRD FLOOR

SECOND FLOOR



FIRST FLOOR

FLOOR	AREA
FIRST FLOOR	5,399 SF
SECOND FLOOR	8,437 SF
THIRD FLOOR	7,889 SF
FOURTH FLOOR	7,889 SF
TOTAL FLOOR AREA	29,614 SF
FLOOR AREA ALLOWED	30,000 SF

GUEST ROOM TYPE	AREA	QTY
KING	283 SF	55
DOUBLE QUEEN	335 SF	7
ACCESIBLE KING	335 SF	2
ACCESIBLE DOUBLE QUEEN	425 SF	2

LEGEND

PROPERTY LINE

ENCLOSED BUILDING AREA - PROJECT

EXISTING BUILDING - NOT ON SITE

ASPHALT PAVING

ACCESSIBLE PARKING SPACE

STANDARD PARKING SPACE — ST

COMPACT PARKING SPACE — C

KEYNOTE ⟨x⟩

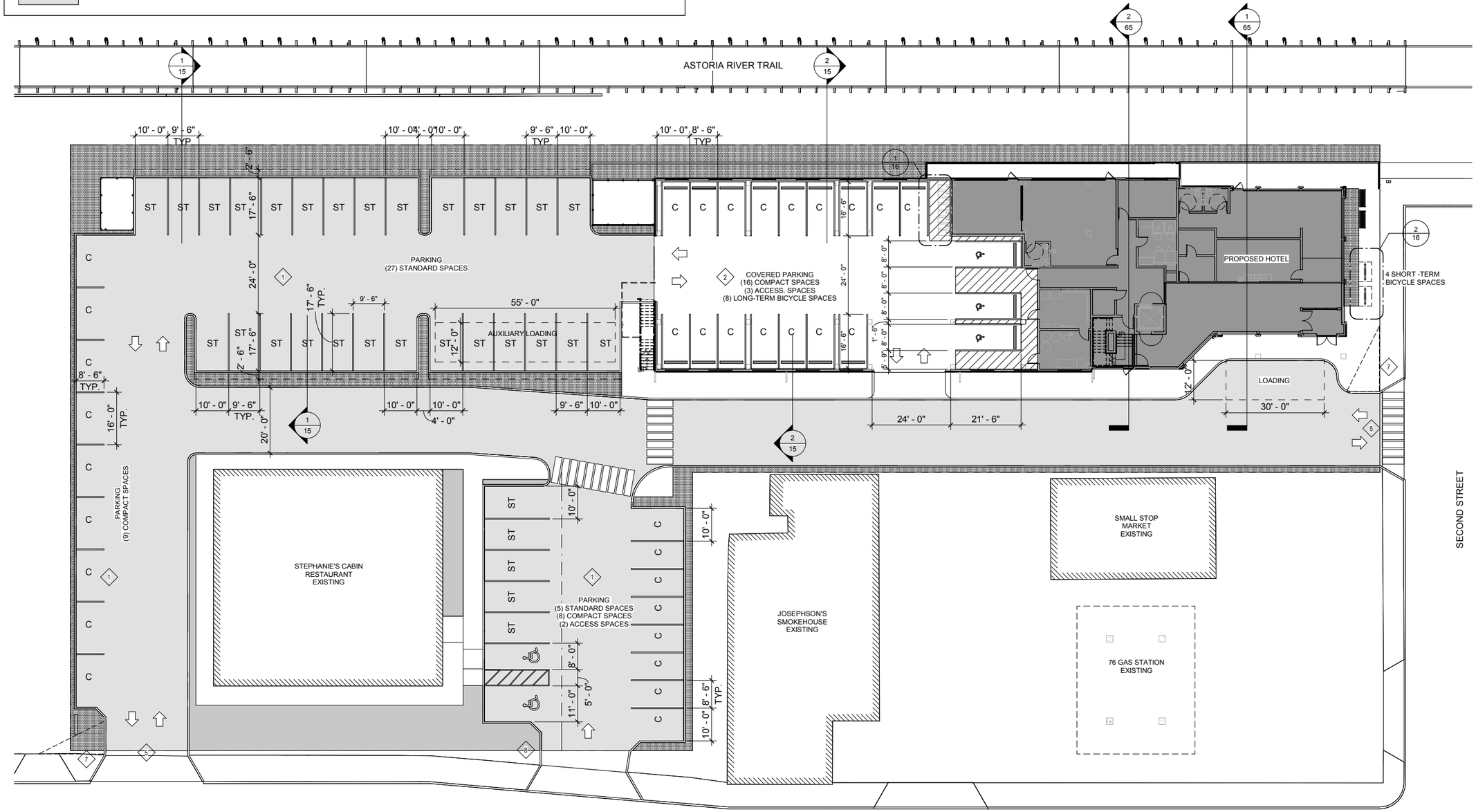
1 EXTERIOR PARKING LOT

2 COVERED PARKING AREA

5 PROJECT DRIVE ACCESS

7 VISION CLEARANCE TRIANGLE - 10' x 20'

8 SIGN FOR PARKING - INGRESS ONLY



REV: 10.01.2018

PARKING PLAN

CARLETON HART ARCHITECTURE

HOLLANDER HOSPITALITY

ASTORIA FAIRFIELD
DESIGN REVIEW REVISION

0 16'-0" 32-0"

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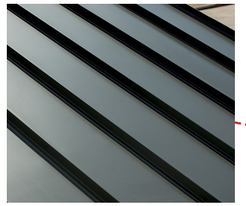
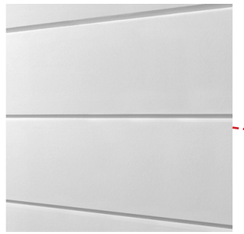
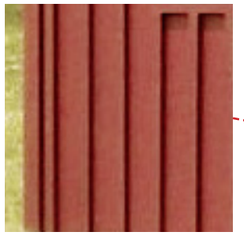


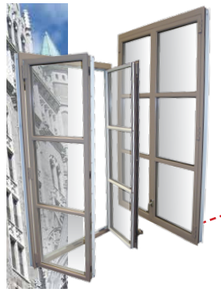
standing seam
metal roof



v-groove siding

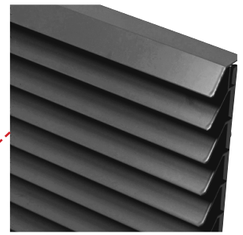


board and
batten siding



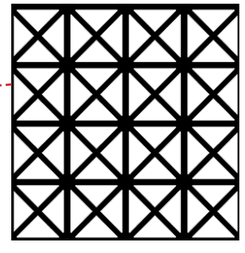
aluminum
glazing
assemblies

aluminum
clad wood
casement
window

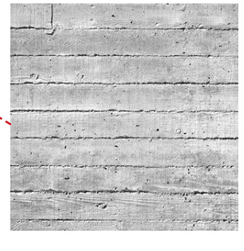


PTHP
architectural
grille

cementitious
deck coating



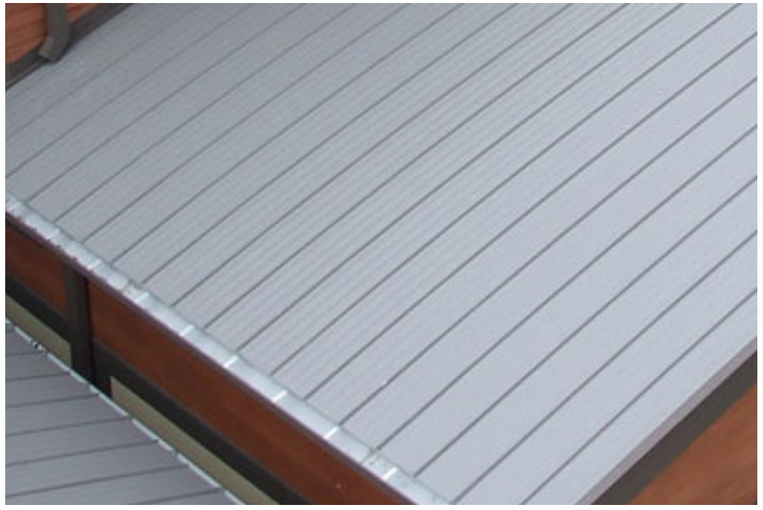
decorative
metal grate



horizontal
board-formed
concrete

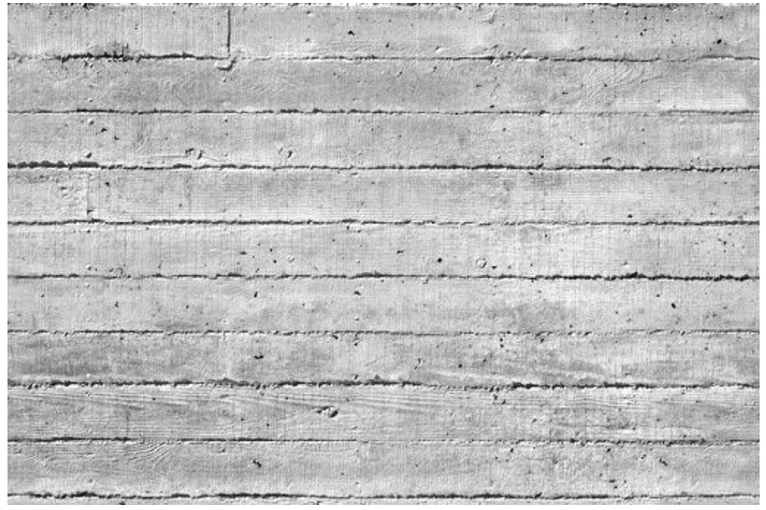
DATE 09.12.2018

MATERIALS ELEVATION



standing seam metal roofing

cementitious deck coating



horizontal board-formed concrete

v-groove siding

board and batten siding

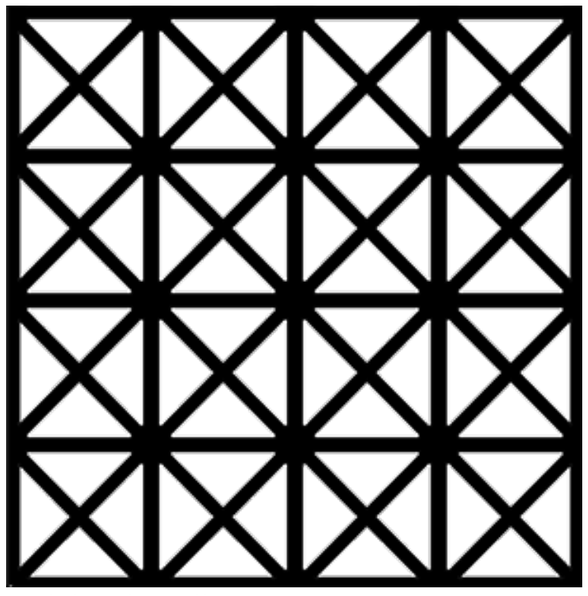
Cedar texture

outdoor plaza bench

aluminum clad wood window

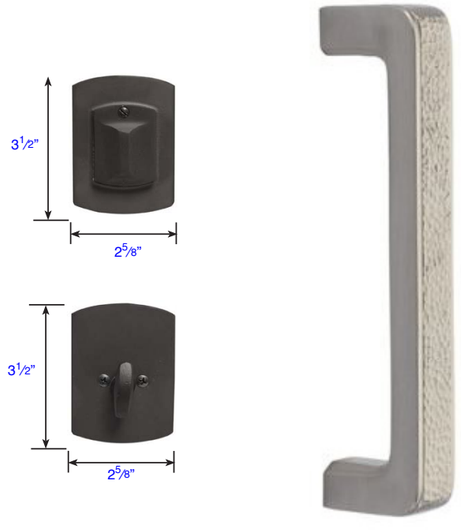
simulated divided window lites

patio hardware (to be satin chrome finish)

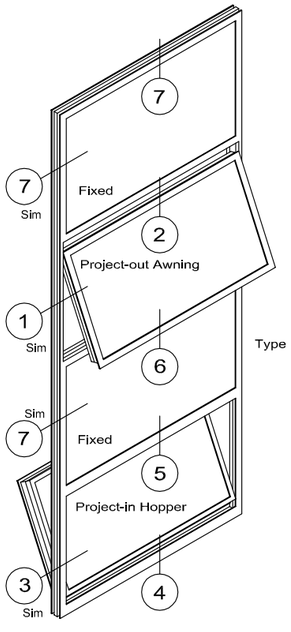


metal grate pattern

PTHP architectural grille

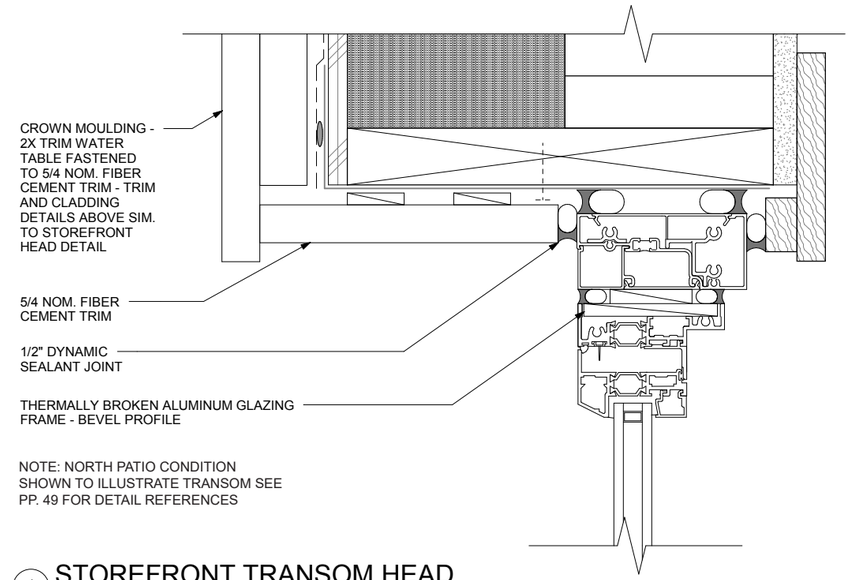


entry hardware (to be pewter finish)



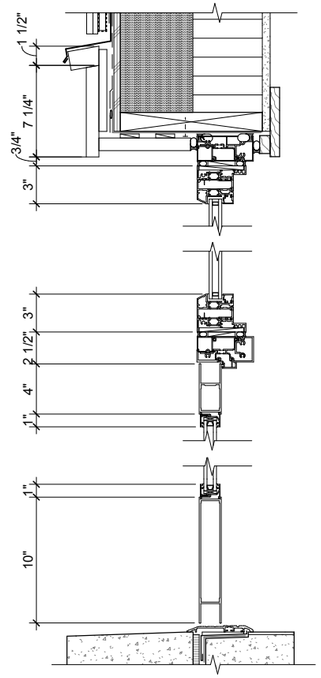
aluminum glazing assembly

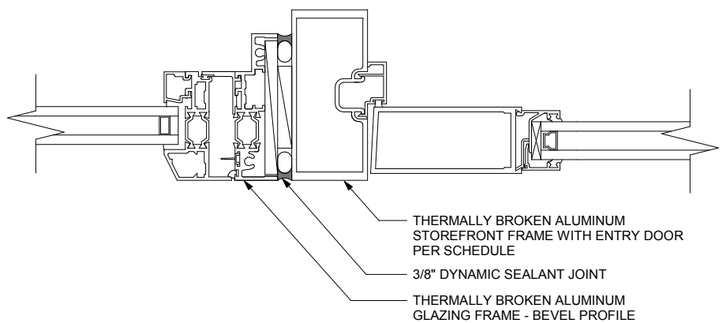
view of southeast entry condition



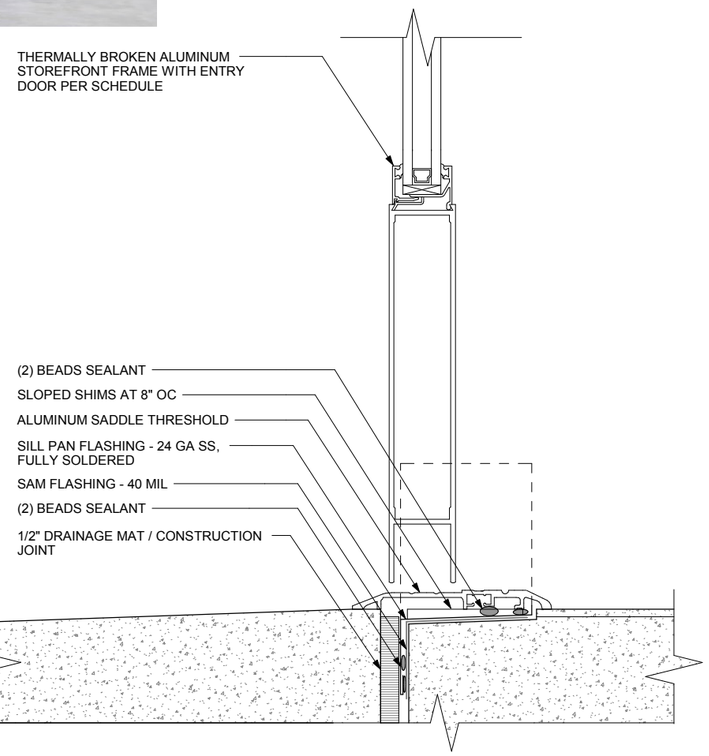
1 STOREFRONT TRANSOM HEAD
SCALE: 3"=1'-0"

2 STOREFRONT ASSEMBLY SECTION
SCALE: 1"=1'-0"

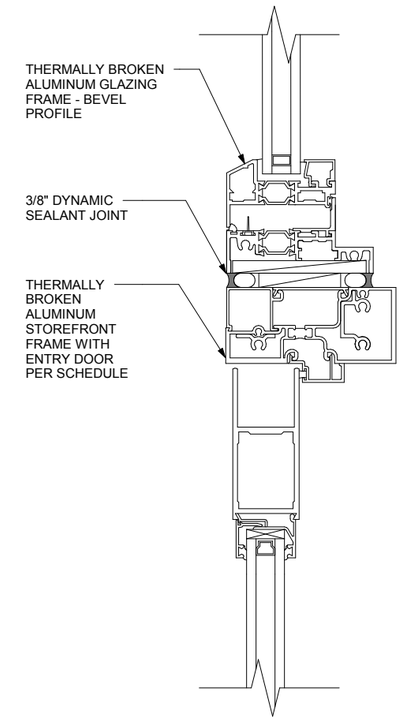




3 STOREFRONT ENTRY TO GLAZING JAMB
SCALE: 3"=1'-0"

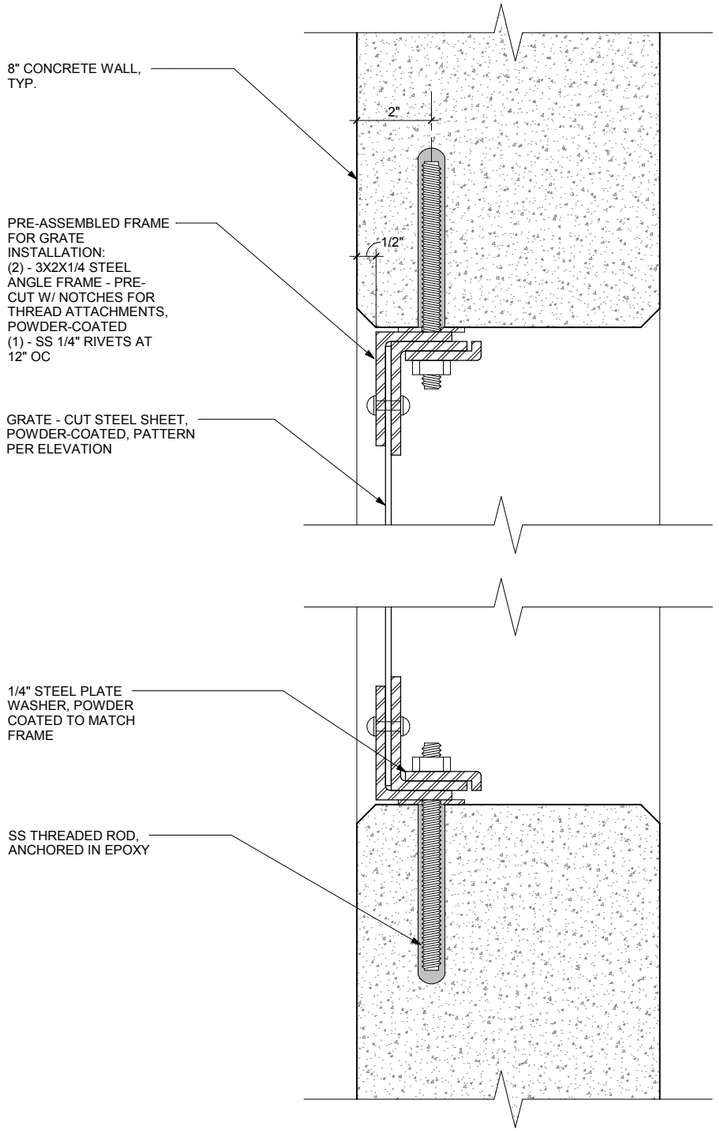


4 STOREFRONT ENTRY SILL
SCALE: 3"=1'-0"

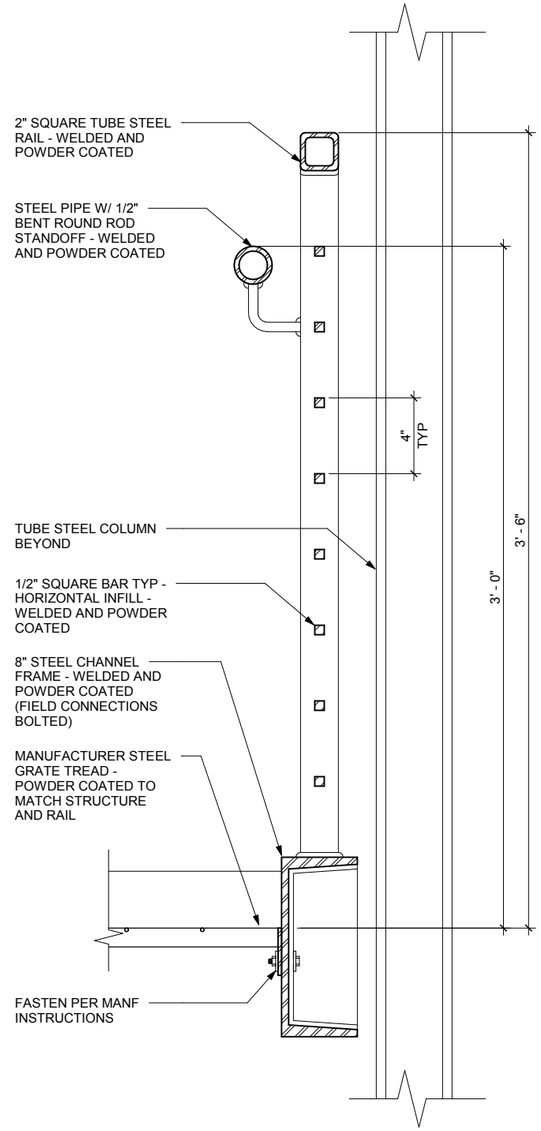


5 STOREFRONT ENTRY HEAD/TRANSOM
SCALE: 3"=1'-0"

DETAILS - Storefront / Entry



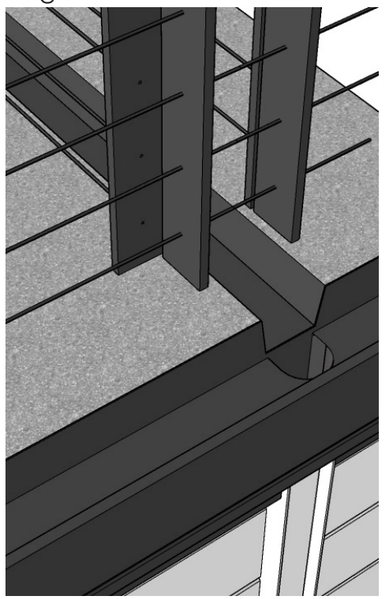
1 METAL GRATE HEAD/SILL
SCALE: 3"=1'-0"

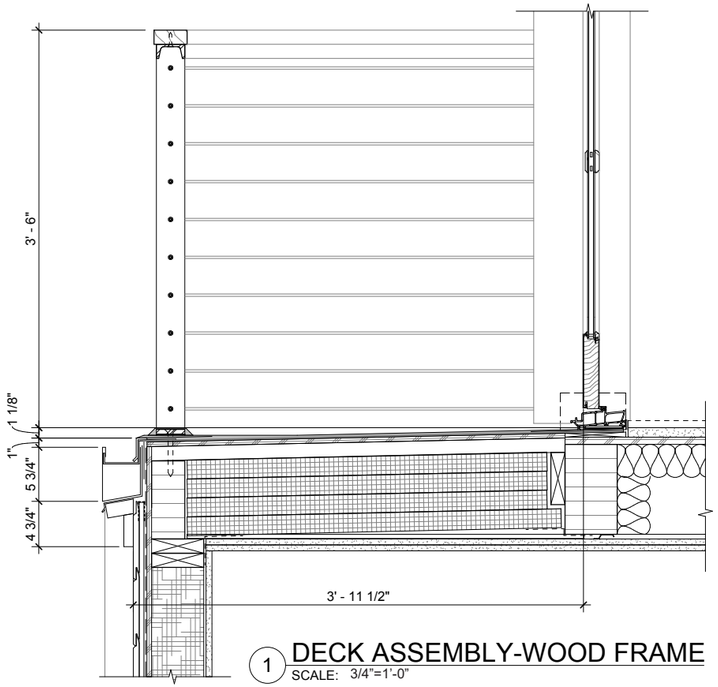


2 WEST EGRESS STAIR SECTION
SCALE: 1-1/2"=1'-0"

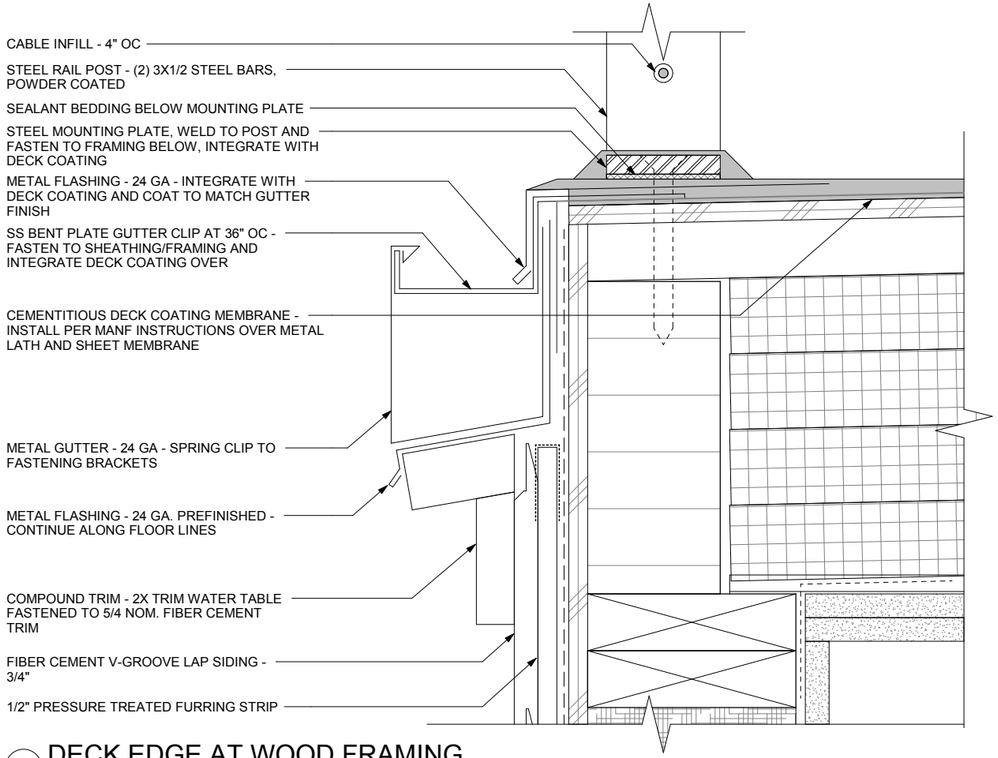
view of exterior west stair

typical rail corner at deck edge

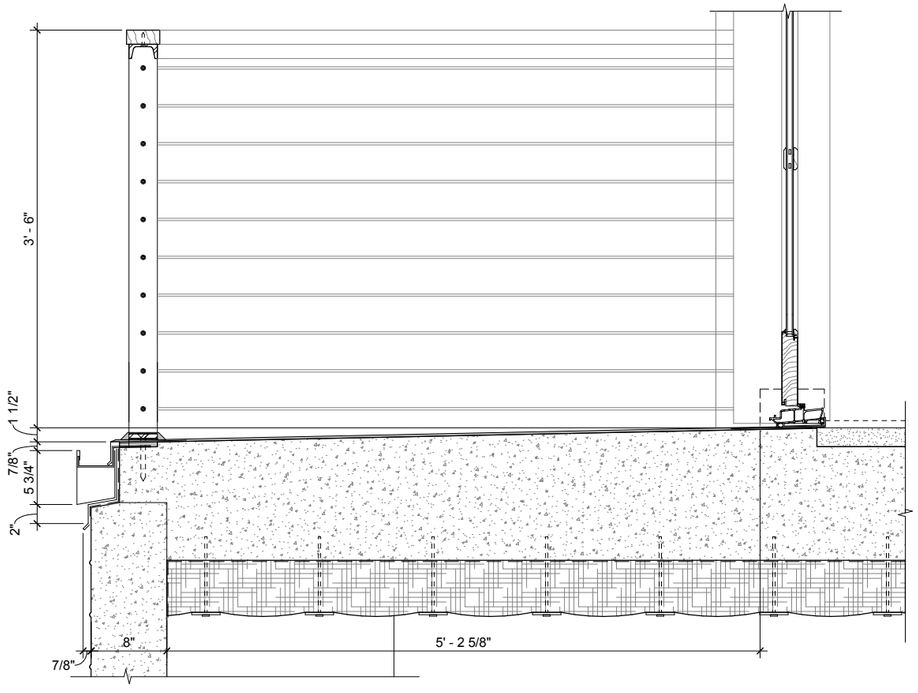




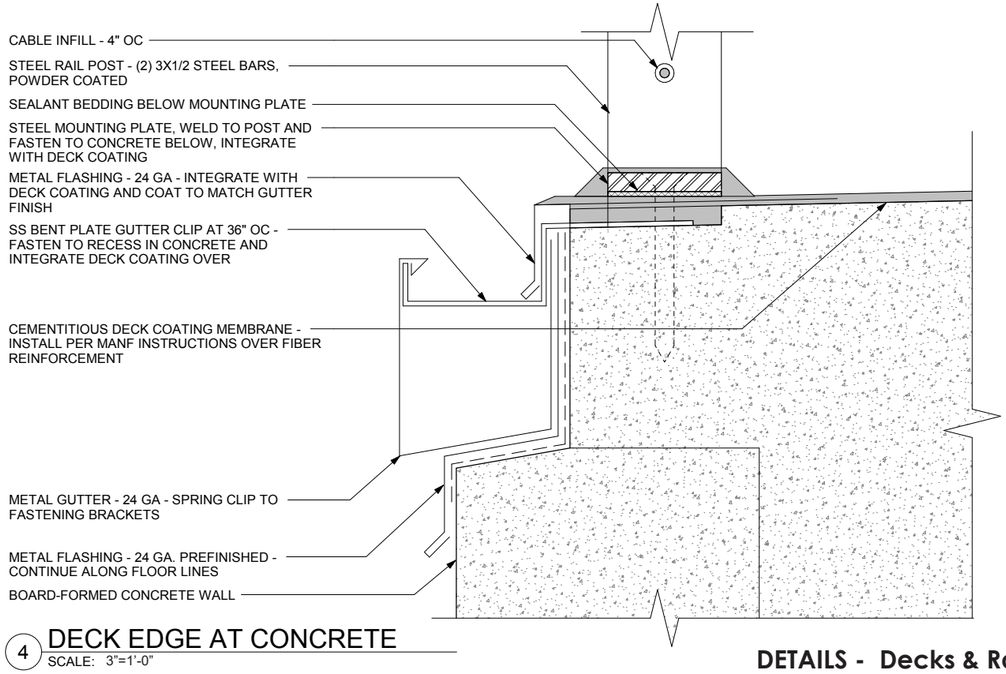
1 DECK ASSEMBLY-WOOD FRAME
SCALE: 3/4"=1'-0"



3 DECK EDGE AT WOOD FRAMING
SCALE: 3"=1'-0"



2 DECK ASSEMBLY-CONCRETE
SCALE: 3/4"=1'-0"



4 DECK EDGE AT CONCRETE
SCALE: 3"=1'-0"

REVISED 09.26.2018

DETAILS - Decks & Rails

LEGEND

PROPERTY LINE

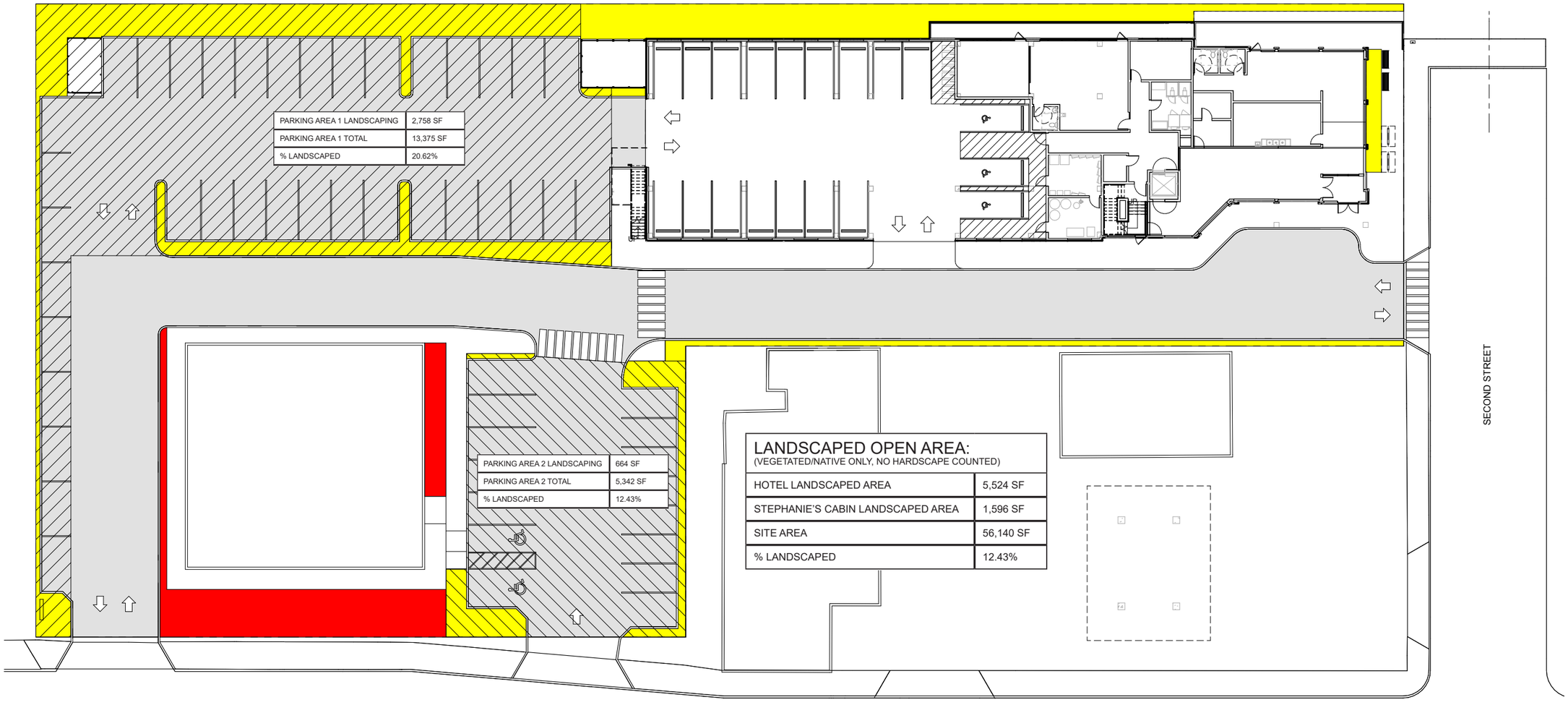
HOTEL LANDSCAPED (VEG) AREA PER PARCEL

STEPHANIE'S CABIN LANDSCAPED AREA PER PARCEL

PARKING AREA 1

PARKING AREA 2

ASPHALT PAVING

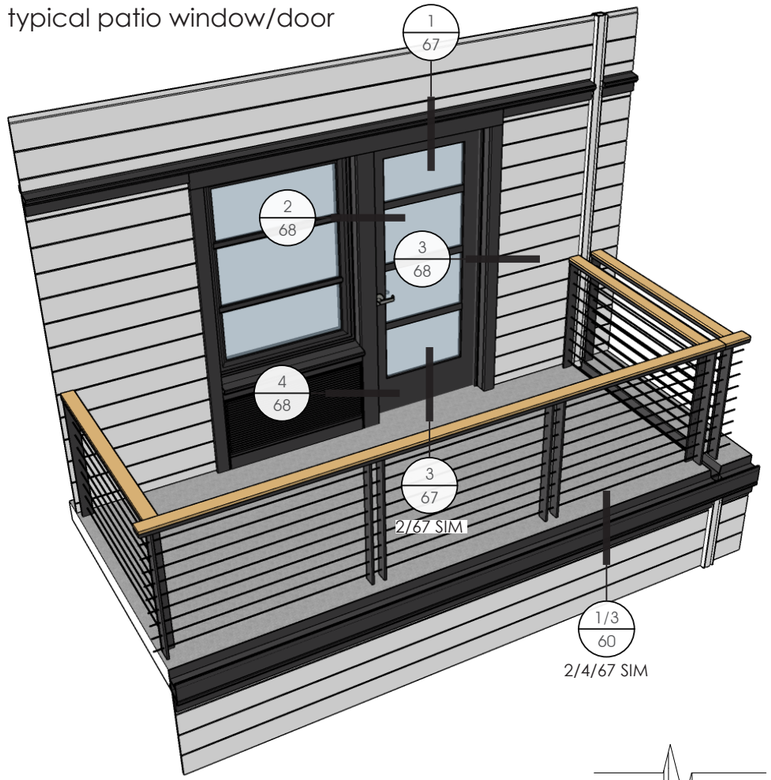


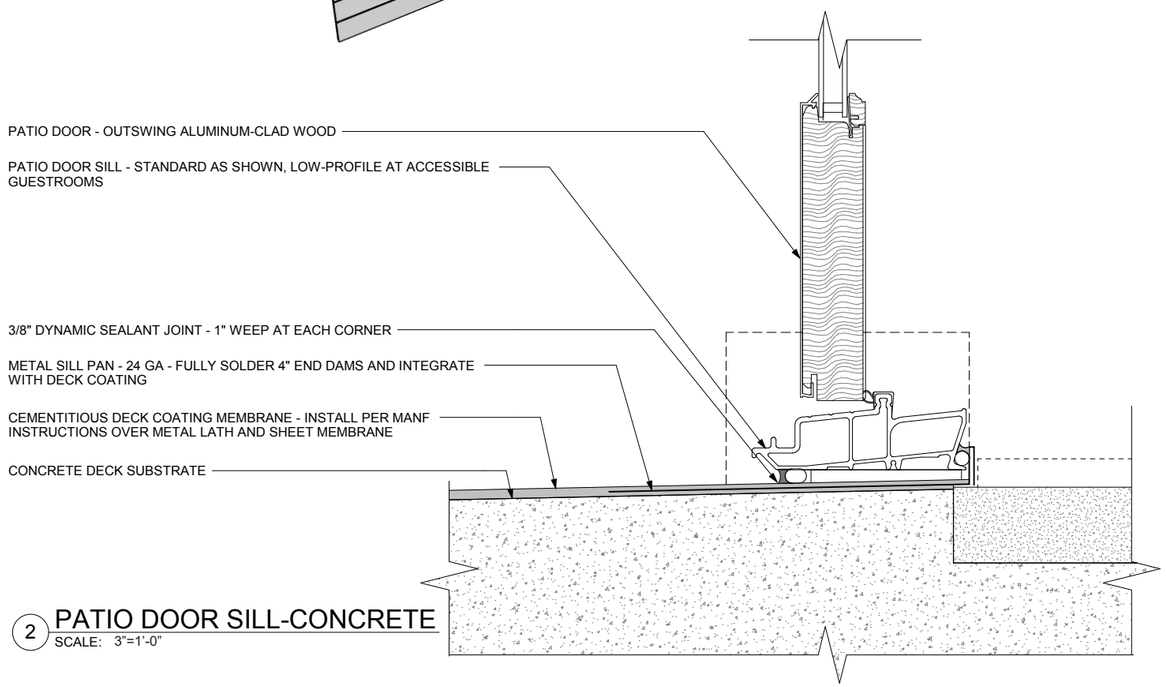
1 SITE DIAGRAM - PLANTING AREA
SCALE: 1/16" = 1'-0"

DATE 09.12.2018

SITE DIAGRAM - LANDSCAPED OPEN AREA

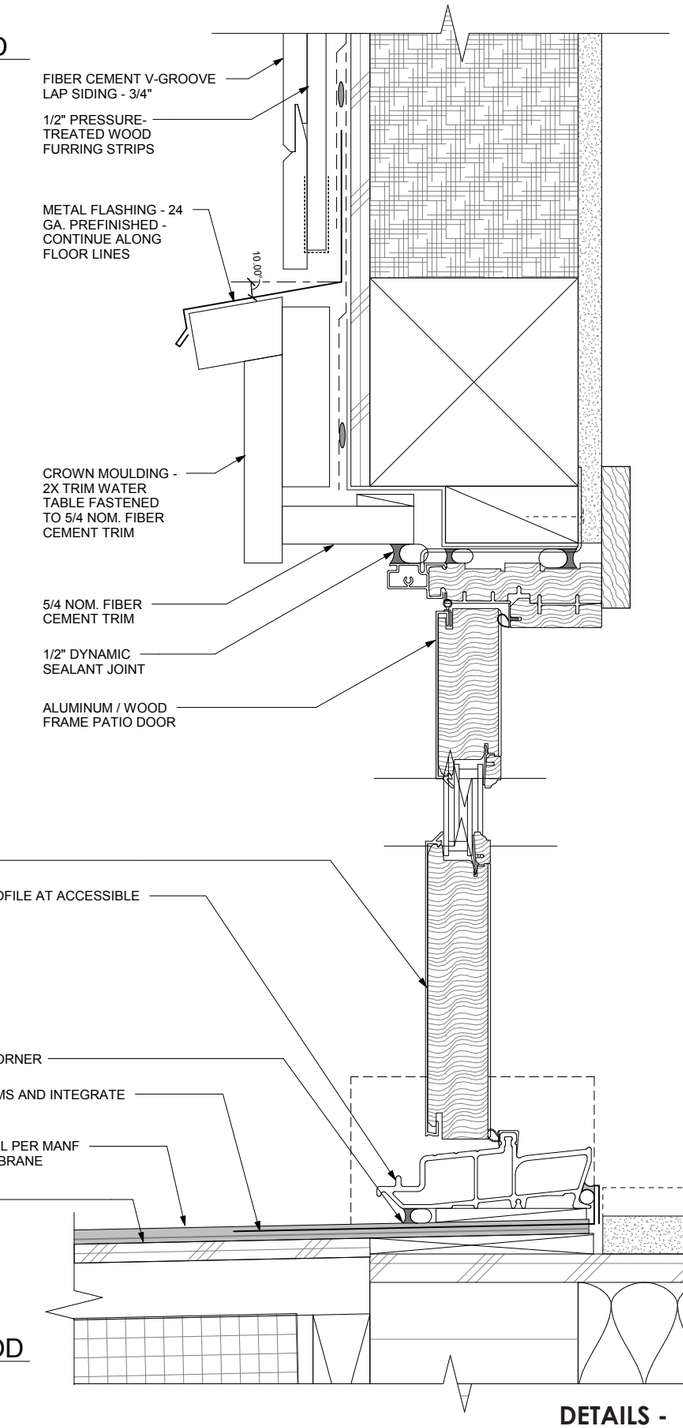
typical patio window/door

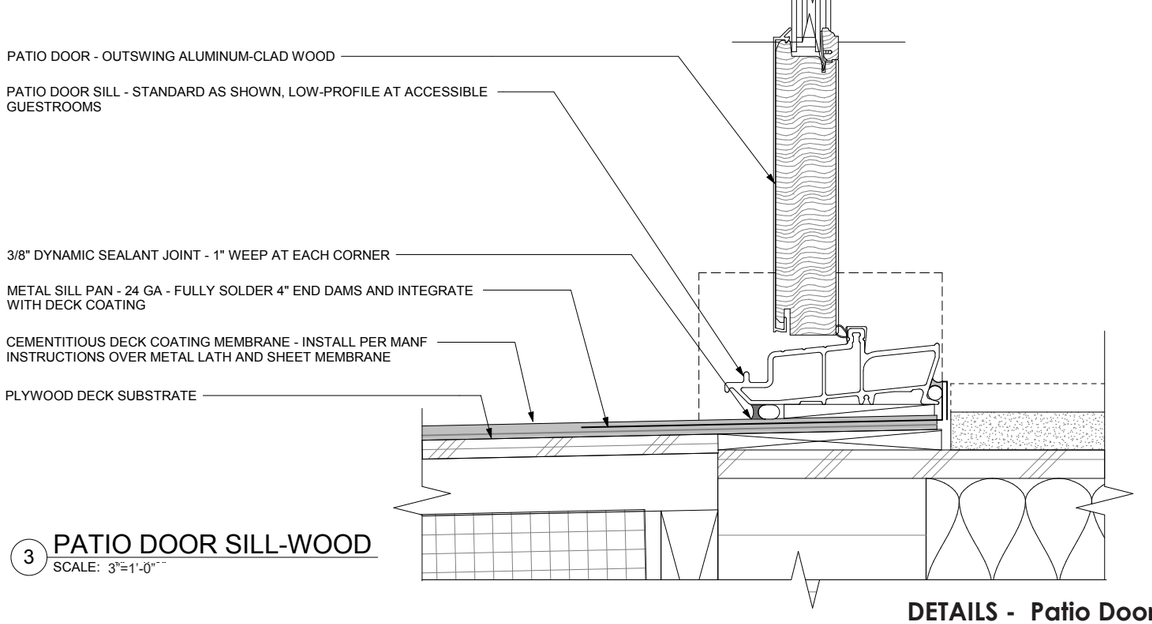




2 PATIO DOOR SILL-CONCRETE
SCALE: 3"=1'-0"

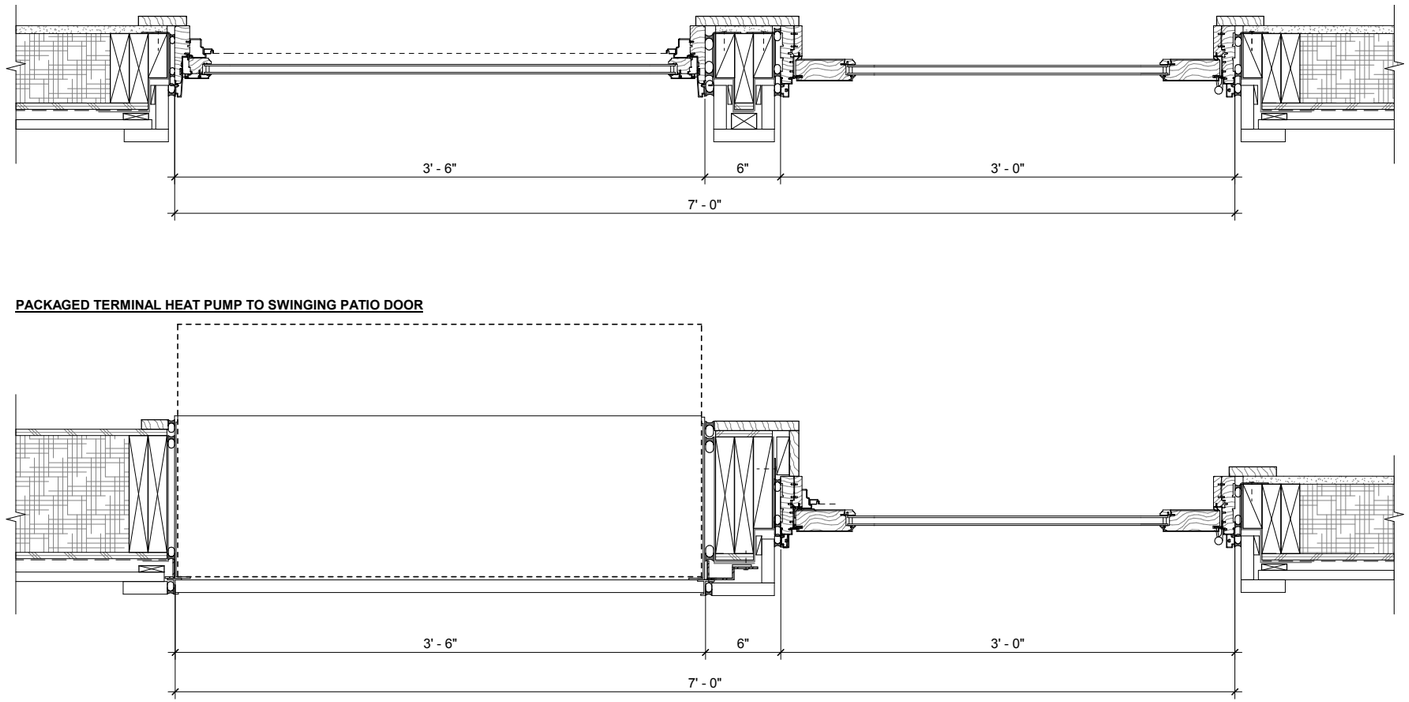
1 TYP PATIO DOOR HEAD
SCALE: 3"=1'-0"



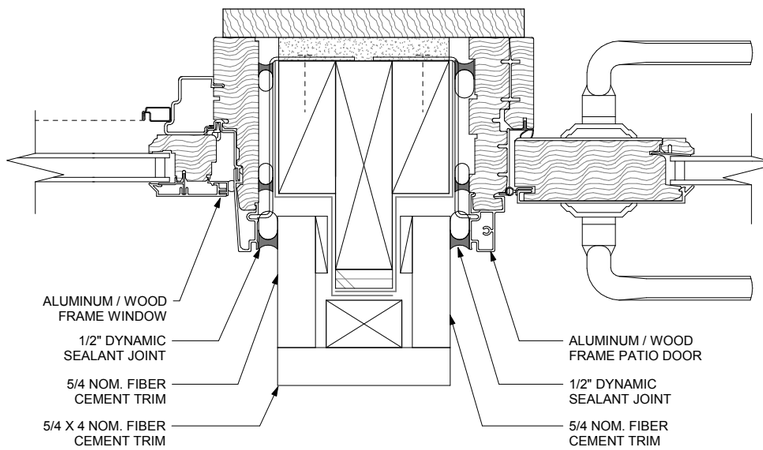


3 PATIO DOOR SILL-WOOD
SCALE: 3"=1'-0"

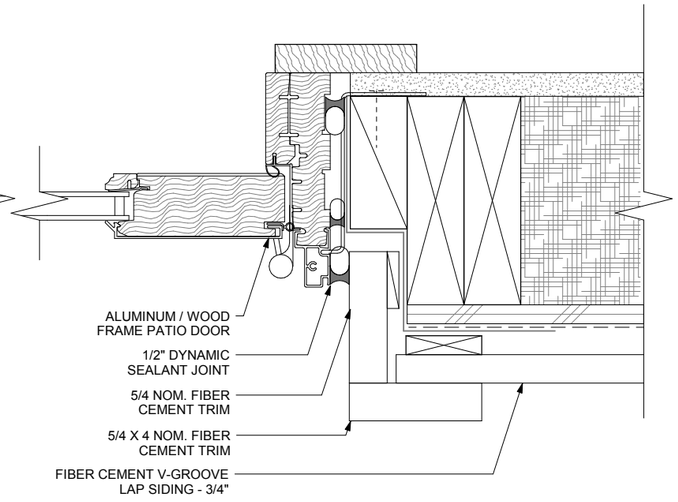
DETAILS - Patio Doors



1 PATIO DOOR ASSEMBLY PLANS
SCALE: 1"=1'-0"

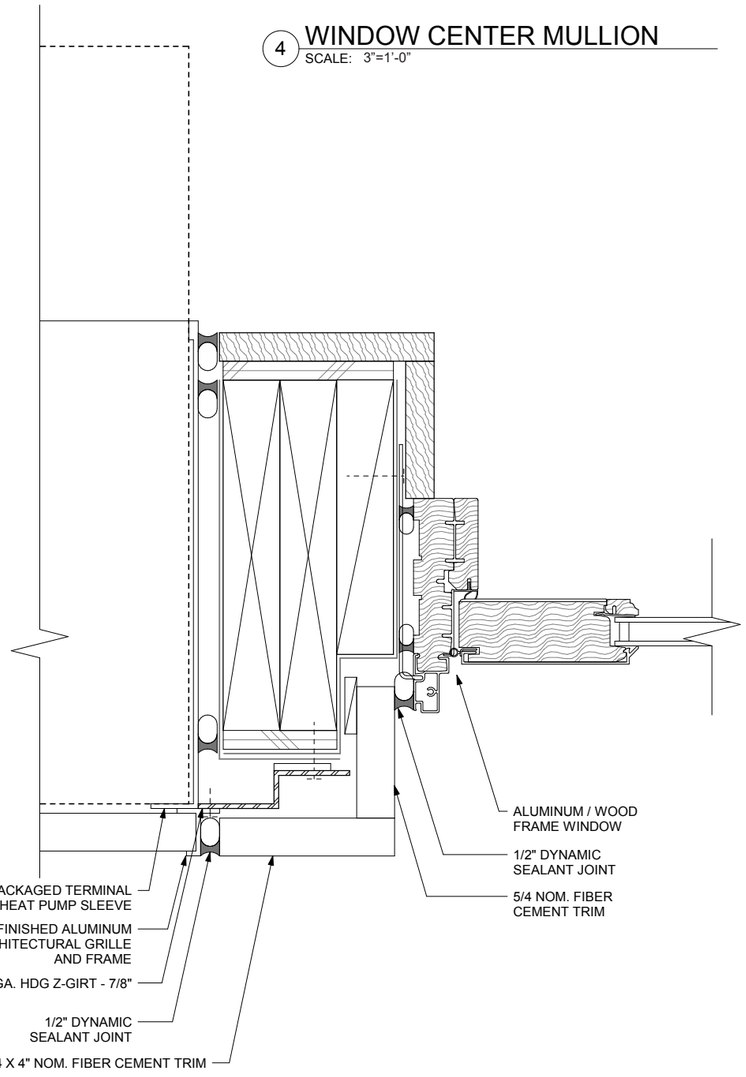


2 WINDOW CENTER MULLION
SCALE: 3"=1'-0"



3 TYP WINDOW JAMB
SCALE: 3"=1'-0"

4 WINDOW CENTER MULLION
SCALE: 3"=1'-0"



DETAILS - Patio Doors

CARLETON HART ARCHITECTURE P.C.
830 sw 10th avenue #200 portland oregon 97205
503 243 2252 | www.carletonhart.com

APPENDIX F:
PRODUCT DATA

NEW! LP® SmartSide® Cedar Texture Vertical Siding

- Vertical siding creates a versatile charming or modern aesthetic
- 16' length allows for one piece installation and eliminates horizontal joints*
- Use in combination with 16' SmartSide Cedar Texture or Reversible Trim for a Board & Batten look
- For entire structure, or used as accent panel on tall walls, vertical columns, gable ends and more
- No Groove Square Edge
- Treated engineered wood strand substrate

TREATED WITH SMART GUARD® ZINC BORATE-BASED PROCESS

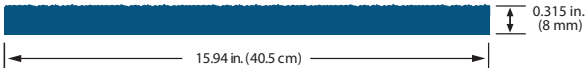
LP® SmartSide® 5/50 Warranty
5 YEAR 100% labor and material replacement
50 YEAR prorated limited warranty on substrate

Complete warranty details available at lpcorp.com

**Vertical Siding may only span one plate-to-plate. Each vertical application is not to span beyond one floor to ceiling distance, or one floor to top of gable distance. Refer to the LP Vertical Siding Application Instructions at lpcorp.com for additional limitations.*

Cedar texture

38 Series Cedar Texture Vertical Siding (strand)

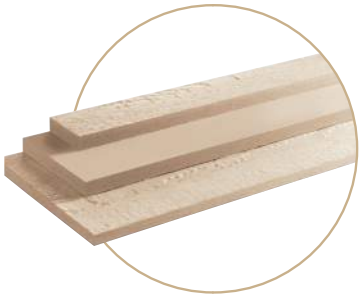


LENGTH	ACTUAL WIDTH	MINIMUM THICKNESS
16 ft. (192 in.)(4.9 m)	15.94 in. (40.5 cm)	0.315 in. (8 mm)

Visit LPSmartSide.com for full product catalog

LP SmartSide® TRIM & SIDING

20TH ANNIVERSARY



Board & Batten

Pair LP® SmartSide® Vertical Siding with LP SmartSide Trim for your next Board & Batten project

38 Series Cedar Texture Vertical Siding (strand)

LENGTH	ACTUAL WIDTH	MINIMUM THICKNESS
16 ft. (192 in.)(4.9 m)	15.94 in. (40.5 cm)	0.315 in. (8 mm)

**Vertical Siding may only span one plate-to-plate. Each vertical application is not to span beyond one floor to ceiling distance, or one floor to top of gable distance.*
Refer to the LP Vertical Siding Application Instructions at lpcorp.com for additional limitations.

440 and 540 Series Cedar Texture Trim (strand)

LENGTH	ACTUAL WIDTH	MINIMUM THICKNESS
16 ft. (192 in.)(4.9 m)	2.50 in. (6.4 cm)	0.625 in. (16 mm)
16 ft. (192 in.)(4.9 m)	3.50 in. (8.9 cm)	0.625 in. (16 mm)
16 ft. (192 in.)(4.9 m)	2.50 in. (6.4 cm)	0.910 in. (23 mm)
16 ft. (192 in.)(4.9 m)	3.50 in. (8.9 cm)	0.910 in. (23 mm)

440 and 540 Series Reversible Trim (fiber)

LENGTH	ACTUAL WIDTH	MINIMUM THICKNESS
16 ft. (192 in.)(4.9 m)	3.50 in. (8.9 cm)	0.625 in. (16 mm)
16 ft. (192 in.)(4.9 m)	3.50 in. (8.9 cm)	0.910 in. (23 mm)

TREATED WITH SMART GUARD® ZINC BORATE-BASED PROCESS

LP® SmartSide® 5/50 Warranty
5 YEAR 100% labor and material replacement
50 YEAR prorated limited warranty on substrate

Complete warranty details available at lpcorp.com

Visit LPSmartSide.com for full product catalog

Cal. Prop 65 Warning: Use of this product may result in exposure to wood dust, known to the State of California to cause cancer.

lpsmartside.com | BUILD WITH US.®

A DIFFERENCE YOU CAN SEE

With less durable siding, unsightly damage can happen merely from everyday bumps and exposure to the elements.

LP® SmartSide® products combine the rich cedar-grain texture of traditional wood siding with the advanced performance of treated engineered wood – to help extend its curb appeal for years to come.

Read on for powerful evidence of LP SmartSide products' toughness.

All LP® SmartSide® products are treated to the core through our proprietary SmartGuard® process. With four components of protection, the SmartGuard process adds strength and helps LP SmartSide products withstand impacts, damage of freeze-thaw cycles, high humidity, fungal decay and more. See more about how LP SmartSide is made at **youtube.com/lpsmartside**.

BIG-TIME BREAK RESISTANCE

Testing shows that LP® SmartSide® strand products offer outstanding impact resistance – better than vinyl and fiber cement siding – which means they can stand up better against everything from everyday bumps to airborne storm debris.

A STRONG DEFENSE AGAINST HAIL

Third-party test results demonstrate that LP SmartSide lap siding resisted hail damage better than fiber cement and vinyl. In fact, the LP SmartSide warranty covers impacts from hail up to 1.75" in diameter.

LESS BREAKAGE FOR EASIER INSTALLATION

Because LP SmartSide is less fragile than fiber cement, it's less prone to accidental breakage during handling and installation. It's also lighter than fiber cement siding and can be carried by just one person without breaking under its own weight. All this helps make LP SmartSide siding faster and easier to handle and install, and results in less waste.

NASA IMPACT DAMAGE RESISTANCE EVALUATION

To help prove the superior durability of LP SmartSide strand siding, LP Building Products asked the National Aeronautics and Space Administration (NASA) to evaluate the impact damage resistance of both engineered wood strand siding from the LP SmartSide brand and fiber cement siding. **Here's a summary of some key findings.**

LP SmartSide *Fiber Cement*

When Hit by Small Rocks

Small rocks shot at LP SmartSide strand siding at 107 miles per hour have barely left a mark. The same kinds of rocks can visibly damage fiber cement even at lower speeds.

LP SmartSide *Fiber Cement*

When Hit by Golf Balls

A golf ball traveling at 63 miles per hour left no visible damage to LP SmartSide strand siding. Golf balls moving at less than 50 miles per hour can visibly damage fiber cement.

LP SmartSide *Fiber Cement*

When Hit by Baseballs

LP SmartSide strand siding has been hit by a baseball at 77 miles per hour and shown no visible damage. Slower-moving baseballs have put holes in fiber cement.

Video of the NASA evaluation can be found at **lpsmartside.com/advantages/durability**.

NO FEAR OF NATURE

STAYS PUT IN HIGH WINDS

LP® SmartSide® Lap Siding is designed to withstand tough storms with wind gusts of up to 200 miles per hour.

Refer to ESR-1301, Table 2B, Lap Siding.

ROT RESISTANT DESPITE MOISTURE & HUMIDITY

Since 1996, LP SmartSide strand substrate siding has undergone brutal testing in Hilo, Hawaii. An average temperature of more than 70 degrees, high levels of humidity and almost 170 inches of annual rainfall make Hilo's climate the perfect breeding ground for fungal decay. Yet our Exterior Exposure Program continues to validate that LP SmartSide siding performs over time.

RESISTS WARPING & CRACKING FROM HEAT & SUN EXPOSURE

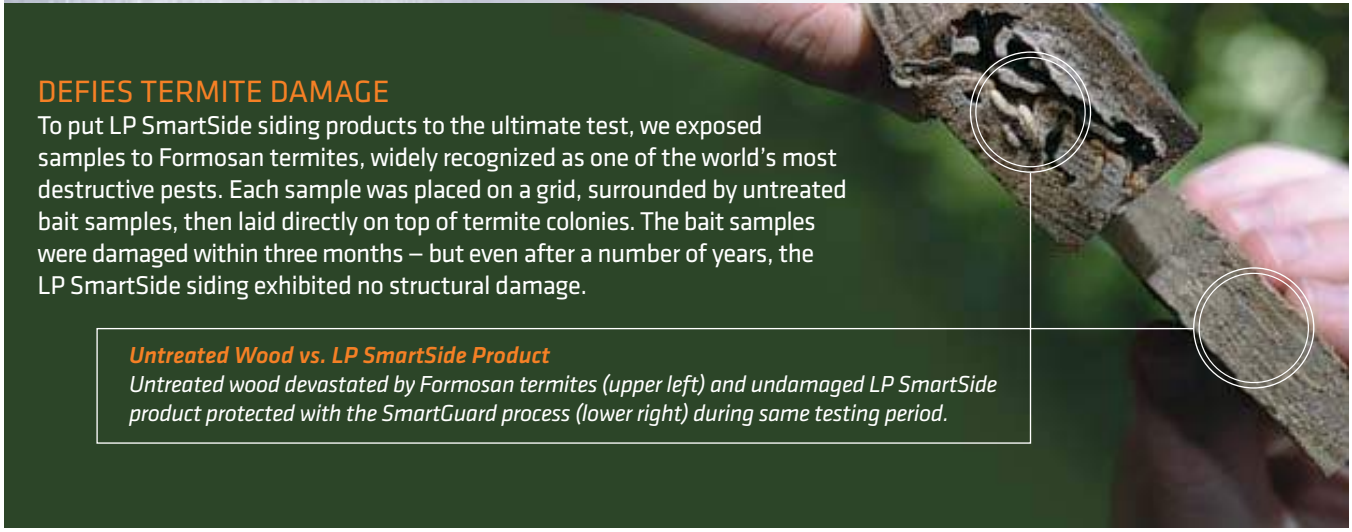
Thanks to industrial-grade binders and resins and a durable primed overlay, LP SmartSide siding has been shown to remain strong when well maintained, even after prolonged exposure to intense sunlight.

RESISTS DAMAGE THROUGH FREEZE-THAW CYCLES

Many substrates delaminate when water is absorbed, then freezes and expands. LP SmartSide products, made with the SmartGuard® process, resist water and therefore are less subject to freeze-thaw cycle damage.

DEFIES TERMITE DAMAGE

To put LP SmartSide siding products to the ultimate test, we exposed samples to Formosan termites, widely recognized as one of the world's most destructive pests. Each sample was placed on a grid, surrounded by untreated bait samples, then laid directly on top of termite colonies. The bait samples were damaged within three months – but even after a number of years, the LP SmartSide siding exhibited no structural damage.



Untreated Wood vs. LP SmartSide Product

Untreated wood devastated by Formosan termites (upper left) and undamaged LP SmartSide product protected with the SmartGuard process (lower right) during same testing period.

Start using LP SmartSide products now.
Call **(888) 820-0325** or go to **lpsmartside.com/advantages/durability**.

LP SMARTSIDE® TRIM & SIDING

lpsmartside.com

Cal. Prop 65 Warning: Use of this product may result in exposure to wood dust, known to the State of California to cause cancer.

Specifications subject to change without notice.

LPZB0763 5/17

LP® SMARTSIDE® ADVANTAGES

With 20 years of successful performance, it's easy to see why the LP® SmartSide® brand is one of the fastest-growing brands for siding materials in the U.S. LP has redefined traditional building materials with treated engineered wood products that are designed to offer game-changing durability, beauty and workability.

LP Has Workability Nailed

Our treated engineered wood siding cuts out the time you spend dealing with warped and split pieces when properly stored and applied. Virtually every piece leaves the mill straight and ready to use.

- Works and cuts like traditional wood
- Easier to install than fiber cement
- Requires fewer tools
- Weighs less, easier to carry, less breakage than fiber cement
- 16' lengths vs. fiber cement's shorter 12' lengths, often resulting in fewer seams or joints on your structure

Beauty Designed for Peace of Mind

Choose your style to get the look you want with the beauty of treated engineered wood trim and siding. Our products offer you the versatility to achieve stunning results.

- Pre-primed for optimal paint adhesion
- No efflorescence
- Realistic woodgrain texture
- Longer lengths may mean fewer seams for better aesthetics
- Created with the renewable resource of wood, procured using processes certified by the Sustainable Forestry Initiative (SFI®)
- The LP SmartSide Siding 5/50 year limited warranty is longer and covers more than most fiber cement product warranties
- LP SmartSide limited warranty also includes damage from hail - see warranty for details

Our Durability Difference

Our products have the advanced performance of treated engineered wood for durability. Our SmartGuard® process adds strength and helps withstand impacts.

- The LP SmartSide limited warranty is longer than most fiber cement product warranties
- LP SmartSide Lap Siding products are more resistant to impact damage from common projectiles like golf balls and baseballs than fiber cement products
- Resists damage of freeze-thaw cycles
- Even with moisture and humidity SmartSide resists fungal decay

www.LPSmartSide.com

Cal. Prop 65 Warning: Use of this product may result in exposure to wood dust, known to the State of California to cause cancer.

02/18 LPZB0658

LP SmartSide® TRIM & SIDING

Prorated 50-Year Limited Warranty

This warranty is limited to SmartSide® Strand and Fiber Substrate Lap Siding, Panel Siding (including panels with or without SmartFinish® or SilverTech®), Shake, Perfection Shingle, Trim & Fascia, Soffit, and ArmorStrand® Panel ("the Product(s)") installed on structures permanently located in the contiguous United States, Alaska, Hawaii, or Canada.

1. Warranty Coverage–Limited 50-Year Substrate Warranty Louisiana-Pacific Corporation

("LP")'s warranty is made to the original purchaser of the Product(s) ("Purchaser"); the original owner of the structure on which the Product(s) are installed; and to the next owner of that structure (together "Owner"). LP's express warranties may not be assigned to any subsequent owners of the structure.

a) LP warrants that the Product(s) will remain free from: (i) fungal degradation; (ii) buckling; and (iii) cracking, peeling, separating, chipping, flaking or rupturing of the resin-impregnated surface overlay for a period of 50 years from the date application is completed, when the Product(s) has been stored, handled, applied, finished and maintained in accordance with LP's application, finishing, and maintenance instructions in effect at the time of application.

LP SmartSide Strand Substrate Lap and Panel Siding product(s), LP SmartSide Fiber Substrate Lap and Panel Siding product(s), and ArmorStrand Panel are warranted against buckling when installed up to 16 inches o.c. stud spacing and when stored, transported, handled and maintained in accordance with applicable LP Application Instructions. Buckling is defined as 1/4 inch out of plane covering a distance no greater than 16 inches between studs. Waviness due to misaligned framing, crooked or bowed studs, foundation or wall settling, or improper nailing is not considered buckling.

THIS WARRANTY DOES NOT COVER PERFORMANCE OF SIXTEEN (16) FOOT LONG 76 SERIES FIBER SUBSTRATE LAP SIDING IN ALASKA, BRITISH COLUMBIA, HAWAII, NORTHERN CALIFORNIA NORTH OF I-80, OR WEST OF THE CASCADES IN WASHINGTON, OREGON AND CALIFORNIA.

THIS WARRANTY DOES NOT COVER COATINGS APPLIED TO SMARTSIDE PRODUCTS.

LP SmartSide Strand Substrate 76 Series lap siding product(s) and LP SmartSide Strand Substrate 190 Series panel product(s) are warranted against buckling when installed up to 24 inches o.c. stud spacing and when stored, transported, handled and maintained in accordance with applicable LP Application Instructions. Buckling is defined as 3/8 inch out of plane covering a distance no greater than 24 inches between studs. Waviness due to misaligned framing, crooked or bowed studs, foundation or wall settling, or improper nailing is not considered buckling.

LP further warrants that the Product(s) have been treated with the borate-based SmartGuard® process during their manufacture to enhance their ability to resist structural damage due to termites and fungal decay.

LP® SmartSide®

5/50 YEAR LIMITED WARRANTY

b) Hail Damage Limited Warranty. LP warrants that its LP® SmartSide® Products will resist damage from hail when properly installed and maintained according to the LP application instructions in effect at the time of installation. Damage under this Hail Damage Limited Warranty is defined as a crack, chip or dent in the surface overlay exceeding 3/8 inch in length or diameter and is subject to the exclusions listed below.

Reimbursement by LP for damage to the SmartSide product is limited to the remedies in this Hail Damage Limited Warranty, and the property owner must follow the procedure in this Hail Damage Limited Warranty.

The following damages are excluded:

(i) Any damage caused by hail greater than 1.75 inches in diameter;

(ii) Any damage to the paint on the SmartSide products; and

(ii) Any injury to persons or property caused by hail damaged SmartSide siding products.

Procedure; Proof of Damages; and Amounts to be paid by LP:

(i) The property owner shall first make a claim on their property owners insurance, or other applicable insurance policy, and pursue the cost of replacement or repair of the damaged siding. Proof of such claim and its disposition for less than the full cost of replacement or repair for the damaged siding must be provided to LP, and property owner must also affirm that no other claims for the hail damage occurrence were made or are pending.

(ii) The property owner shall provide evidence to LP through are liable third party such as the National Oceanic and Atmospheric Administration Storm Prediction Center (NOAASPC) that the hail that caused the SmartSide product damage was 1.75 inch in diameter or less.

(iii) Upon receipt of evidence that the insurance claim proceeds for repair or replacement of the SmartSide product were insufficient to fully repair or replace the SmartSide products, and the evidence that the hail causing the damage was 1.75 inches or less, LP will pay the property owner an amountcalculated as follows:

Amount of payment by LP to property owner = A – B + C

Where the variables A, B and C are defined as:

A is the product replacement cost defined as the then current sales price per square foot for the same or similar SmartSide products, in the same geographic region as the property, multiplied by the square feet of damaged SmartSide product;

B is the homeowner's deductible (if one is applied by the insurance company) plus the portion of the insurance payment received by the property owner specifically for the hail-damaged SmartSide products;

C is the prorated deductible determined by multiplying the total deductible applied by the insurance company and the fraction created by dividing the amount of insurance payment paid specifically for the SmartSide products by the total amount of insurance paid for the hail damage claim. If there is no deductible applied, then C will be zero, and if there is no damage other than SmartSide products, then the fraction will be one (1).

(iv) The amount to be paid by LP, as calculated above, will be reduced according to the proration schedule in Section 2 of the LP® SmartSide® Siding and Trim Limited Warranty. No other costs incurred by the property owner relating to damaged siding, including but not limited to siding removal, disposal, house wrap, or labor costs will be reimbursed under this limited warranty.

2. Remedies for Breach of Limited Express Substrate Warranty

THIS SECTION 2 PROVIDES THE SOLE AND EXCLUSIVE REMEDY AVAILABLE TO A PURCHASER OR OWNER OF A STRUCTURE ON WHICH PRODUCT(S) HAS BEEN APPLIED.

In the event of a breach of this Limited Express Warranty (or of any implied warranty not otherwise disclaimed herein), LP will:

a) during the first 5 years from the date of installation, pay an amount equal to the cost (as established by an independent construction estimator, such as R.S. Means) of repairing or replacing any Product(s) that fails to comply with the provisions of Section 1 a) or 1 b) above, or

b) during the 6th through the 49th years from the date of installation, pay an amount equal to the cost of similar wood based replacement product, (no labor or other charges shall be paid) less an annual pro rata reduction of 2.22% per year (6th year, 2.22%; 7th year, 4.44%, etc.) such that from and after the 50th year the amount payable under this warranty will be zero.

Any dispute concerning the applicability of the warranty or whether the Product(s) met the manufacturer's standards in accordance with Section 1 shall be submitted to binding arbitration under the Commercial Arbitration Rules of the American Arbitration Association. The jurisdiction of the arbitrator over the dispute shall be exclusive and the decision of the arbitrator shall be binding and non-appealable.

3. Exclusion of Other Remedies

IN NO EVENT WILL LP BE LIABLE FOR ANY INCIDENTAL, SPECIAL, MULTIPLE, PUNITIVE, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY DEFECT IN THE PRODUCT(S) SUPPLIED, INCLUDING, BUT NOT LIMITED TO, DAMAGE TO PROPERTY OR LOST PROFITS.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

4. Exclusion of All Other Warranties, Express or Implied

a) THIS LIMITED EXPRESS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO THIS PRODUCT(S) AND EXCLUDES ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTIES OTHERWISE ARISING FROM THE COURSE OF DEALING OR USAGE OF TRADE OR ADVERTISING, EXCEPT WHERE SUCH WARRANTIES ARISE UNDER APPLICABLE CONSUMER PRODUCT WARRANTY LAWS, AND CANNOT BE LAWFULLY DISCLAIMED, IN WHICH EVENT SUCH WARRANTIES ARE LIMITED TO THE MAXIMUM EXTENT PERMITTED BY SUCH LAWS.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

b) NO OTHER EXPRESS WARRANTY HAS BEEN MADE OR WILL BE MADE ON BEHALF OF LP WITH RESPECT TO THESE PRODUCT(S).

5. Certain Damages Excluded from Warranty Coverage

This Limited Express Warranty does not cover or provide a remedy for damage that results from:

a) misuse or improper storage, handling, application, finishing or maintenance; alterations to the structure after the original application of the Product(s); acts of God, such as hurricane, tornado, earthquake, flood or other similar cause beyond the control of LP; design, application or construction of the wall system on which the Product(s) is applied; transport, storage or handling of the Product(s) prior to application;

b) product(s) that is not applied, finished and maintained in strict accordance with LP's instructions in effect at the time of original application;

c) swelling and/or edge checking. Such swelling and/or checking normally occurs in all wood products as they expand and contract in response to changes in climactic conditions;

d) termite damage which does not affect the structural integrity of the Product(s); or

e) design, application or construction of the structure on which the Product(s) are installed including but not limited to any damage or condition arising from the use of foam sheathing.

f) use of Fiber Substrate Panel Siding on prefabricated or manufactured homes or structures.

g) use of ArmorStrand panels on prefabricated or manufactured homes or structures.

h) textured finish coatings applied to ArmorStrand Panels.

6. Responsibility of Purchaser or Owner

COMPLIANCE WITH EACH OF THE REQUIREMENTS SET OUT BELOW IN SECTIONS (a) AND (b) IS A CONDITION TO LP'S OBLIGATIONS UNDER THIS WARRANTY AND THE FAILURE TO COMPLY WITH ANY ONE OR MORE OF THE ITEMS SHALL VOID ANY RIGHTS OWNER AND PURCHASER MAY HAVE AGAINST LP:

a) Any Purchaser or Owner seeking remedies under this warranty must notify LP, at the number listed below, within 90 days after discovering a possible nonconformity of the Product(s), and before beginning any permanent repair. This notice should include the date on which the Product(s) application was completed. It is the Owner's responsibility to establish the date of installation.

b) LP must be given a 90-day opportunity to inspect the siding. Upon reasonable notice, the Purchaser or Owner must allow LP's agents to enter the property and structure on which the Product(s) is applied to inspect such Product(s).

7. Governing Law

All questions concerning the meaning or applicability of this limited warranty are to be decided under the laws of the State of Tennessee without reference to its choice-of-law rules.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For further information, please call Customer Support at (800)450-6106, or write to: LP Corporation, 414 Union Street Suite 2000, Nashville, TN 37219.

Cal. Prop 65 Warning: Use of this product may result in exposure to wood dust, known to the State of California to cause cancer.

LP BUILDING PRODUCTS SMARTSIDE® TRIM & SIDING

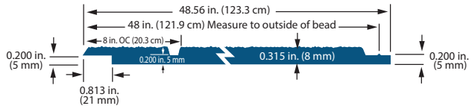
Note: Louisiana-Pacific Corporation periodically updates and revises its product information. To verify that this version is current, call (800)450-6106.

LPZB0523 5/17

CEDAR TEXTURE PANEL

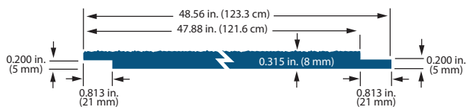
- Rated for structural use by the Engineered Wood Association
- Ideal exterior for high winds or seismic activity
- Eliminates need for additional bracing on load-bearing walls
- Available in Groove or No Groove Cedar Texture panels
- Treated engineered wood strand substrate
- 5-/50-year Limited Warranty, including hail damage coverage*

38 SERIES CEDAR TEXTURE PANEL 8" O.C. (STRAND)



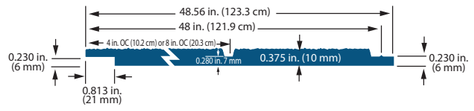
LENGTH	GROOVE	GROOVE WIDTH	ACTUAL WIDTH	MINIMUM THICKNESS
6 ft. (72 in.)(1.8 m)	8 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.315 in. (8 mm)
7 ft. (84 in.)(2.1 m)	8 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.315 in. (8 mm)
8 ft. (96 in.)(2.4 m)	8 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.315 in. (8 mm)
9 ft. (108 in.)(2.7 m)	8 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.315 in. (8 mm)
10 ft. (120 in.)(3.0 m)	8 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.315 in. (8 mm)

38 SERIES CEDAR TEXTURE PANEL—NO GROOVE (STRAND)



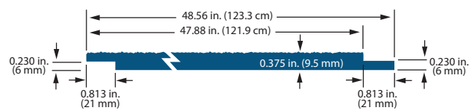
LENGTH	GROOVE	GROOVE WIDTH	ACTUAL WIDTH	MINIMUM THICKNESS
8 ft. (96 in.)(2.4 m)	No Groove	N/A	48.56 in. (123.3 cm)	0.315 in. (8 mm)

76 SERIES CEDAR TEXTURE PANEL 4" & 8" O.C. (STRAND)



LENGTH	GROOVE	GROOVE WIDTH	ACTUAL WIDTH	MINIMUM THICKNESS
8 ft. (96 in.)(2.4 m)	4 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.375 in. (10 mm)
9 ft. (108 in.)(2.7 m)	4 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.375 in. (10 mm)
10 ft. (120 in.)(3.0 m)	4 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.375 in. (10 mm)
8 ft. (96 in.)(2.4 m)	8 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.375 in. (10 mm)
9 ft. (108 in.)(2.7 m)	8 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.375 in. (10 mm)
10 ft. (120 in.)(3.0 m)	8 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.375 in. (10 mm)

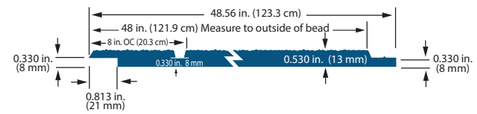
76 SERIES CEDAR TEXTURE PANEL—NO GROOVE (STRAND)



LENGTH	GROOVE	GROOVE WIDTH	ACTUAL WIDTH	MINIMUM THICKNESS
8 ft. (96 in.)(2.4 m)	No Groove	N/A	48.56 in. (123.3 cm)	0.375 in. (10 mm)

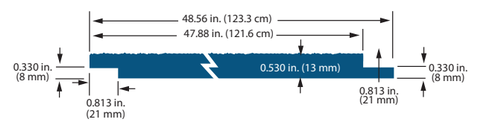
Famous Dave's, Timonium, MD
The Roberts Group, architect
Holland Construction, builder

190 SERIES CEDAR TEXTURE PANEL 8" O.C. (STRAND)



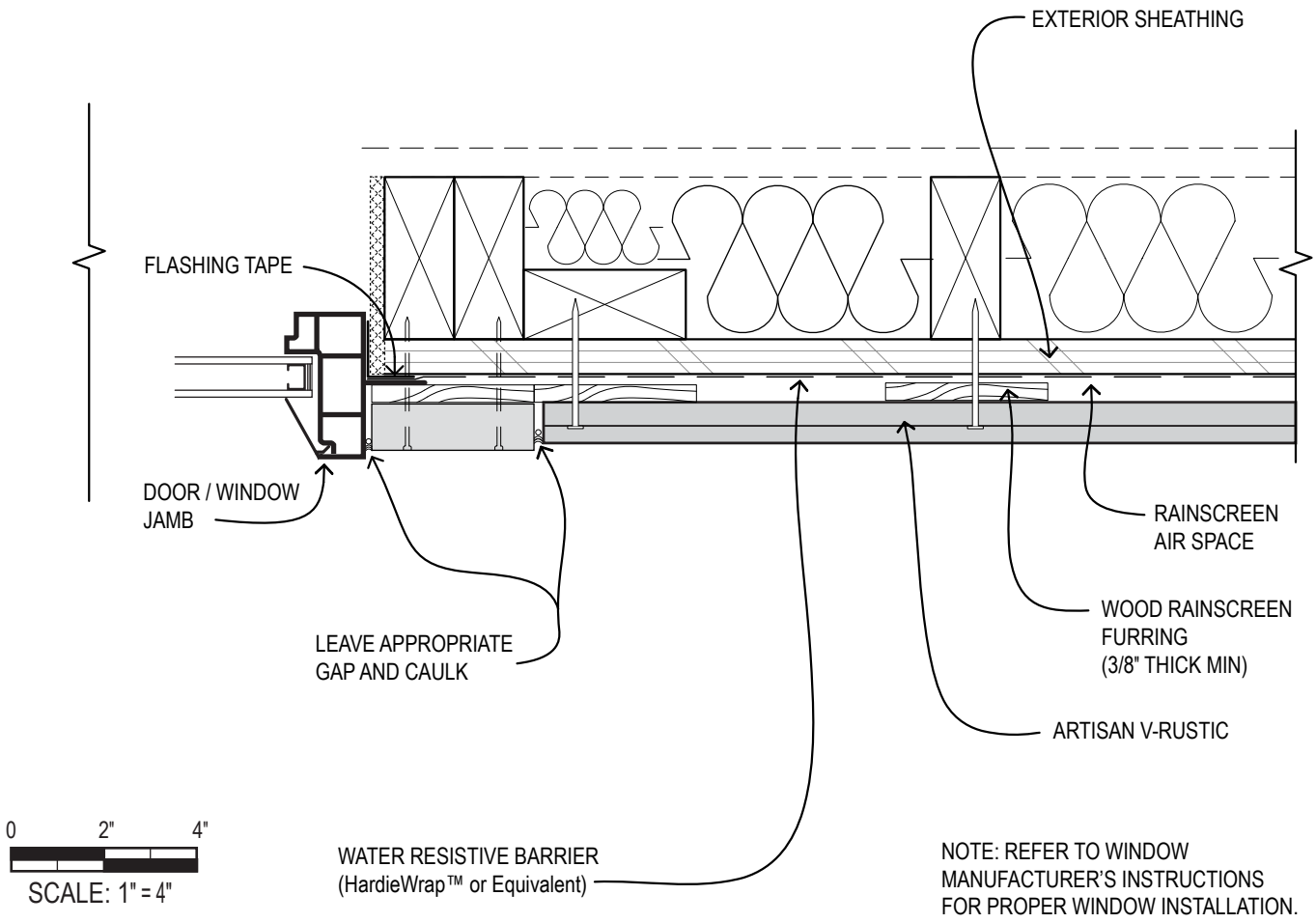
LENGTH	GROOVE	GROOVE WIDTH	ACTUAL WIDTH	MINIMUM THICKNESS
8 ft. (96 in.)(2.4 m)	8 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.530 in. (13 mm)
9 ft. (108 in.)(2.7 m)	8 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.530 in. (13 mm)
10 ft. (120 in.)(3.0 m)	8 in. o.c.	3/8 in. (10 mm)	48.56 in. (123.3 cm)	0.530 in. (13 mm)

190 SERIES CEDAR TEXTURE PANEL—NO GROOVE (STRAND)



LENGTH	GROOVE	GROOVE WIDTH	ACTUAL WIDTH	MINIMUM THICKNESS
8 ft. (96 in.)(2.4 m)	No Groove	N/A	48.56 in. (123.3 cm)	0.530 in. (13 mm)
9 ft. (108 in.)(2.7 m)	No Groove	N/A	48.56 in. (123.3 cm)	0.530 in. (13 mm)
10 ft. (120 in.)(3.0 m)	No Groove	N/A	48.56 in. (123.3 cm)	0.530 in. (13 mm)

*The full warranty and exclusions can be found at **LPCorp.com.**



DOOR / WINDOW JAMB - RAINSCREEN

DETAIL:

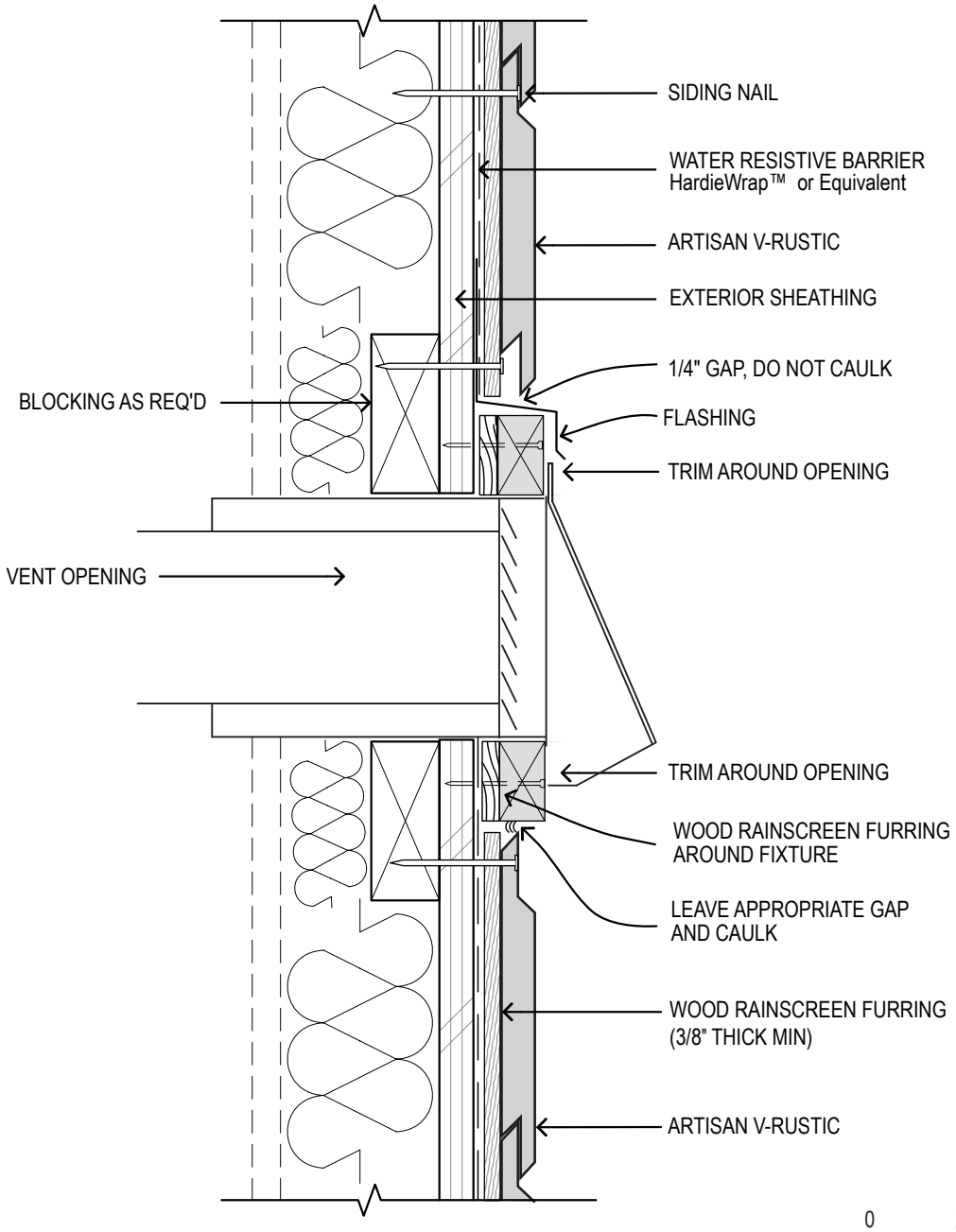
Artisan V-Rustic 1.10

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

JamesHardie Commercial



FIXTURE PENETRATION - RAINSCREEN

0 2" 4"

SCALE: 1" = 4"

DETAIL:

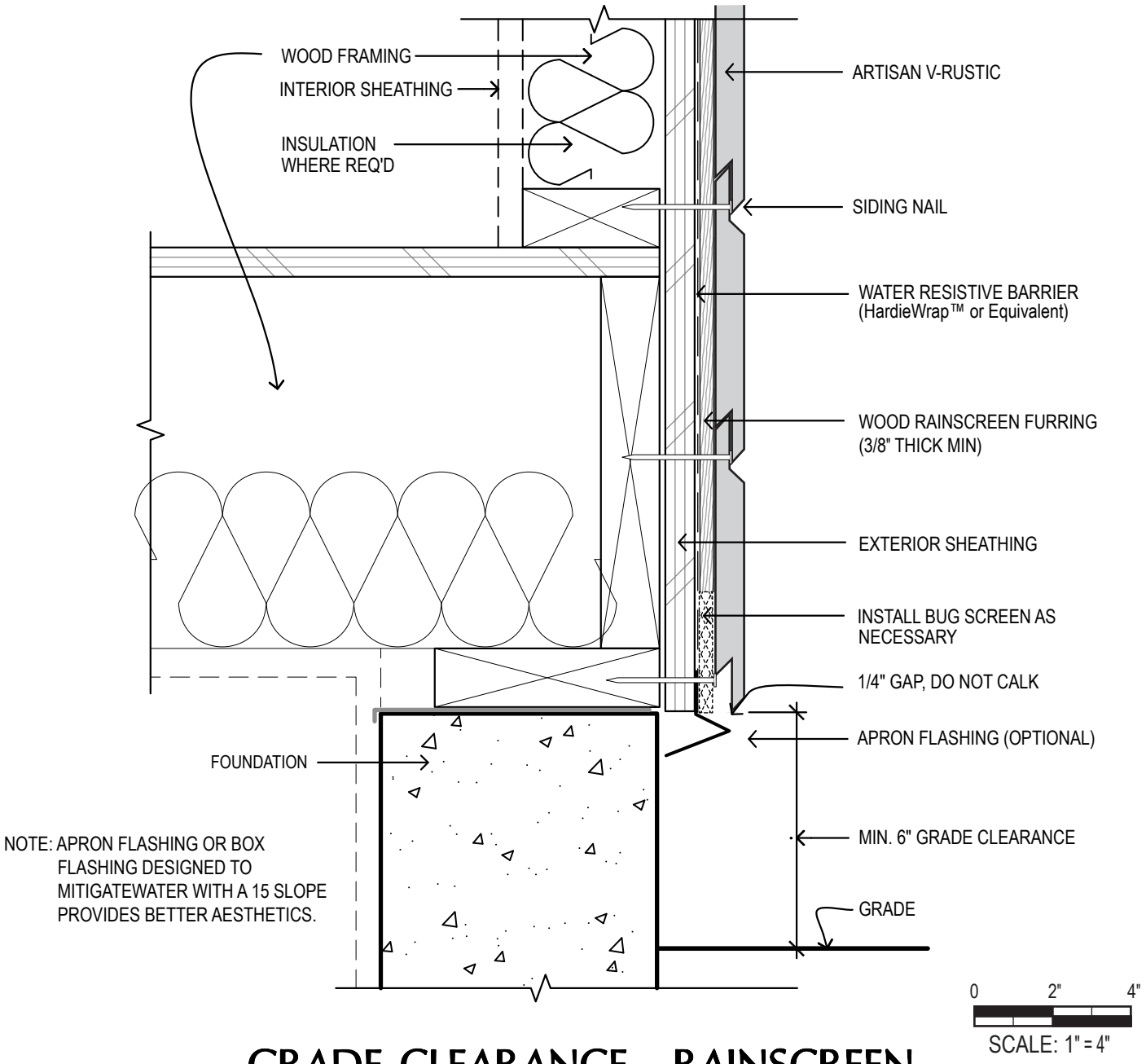
Artisan V-Rustic 1.07

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

JamesHardie Commercial



GRADE CLEARANCE - RAINSCREEN

DETAIL:

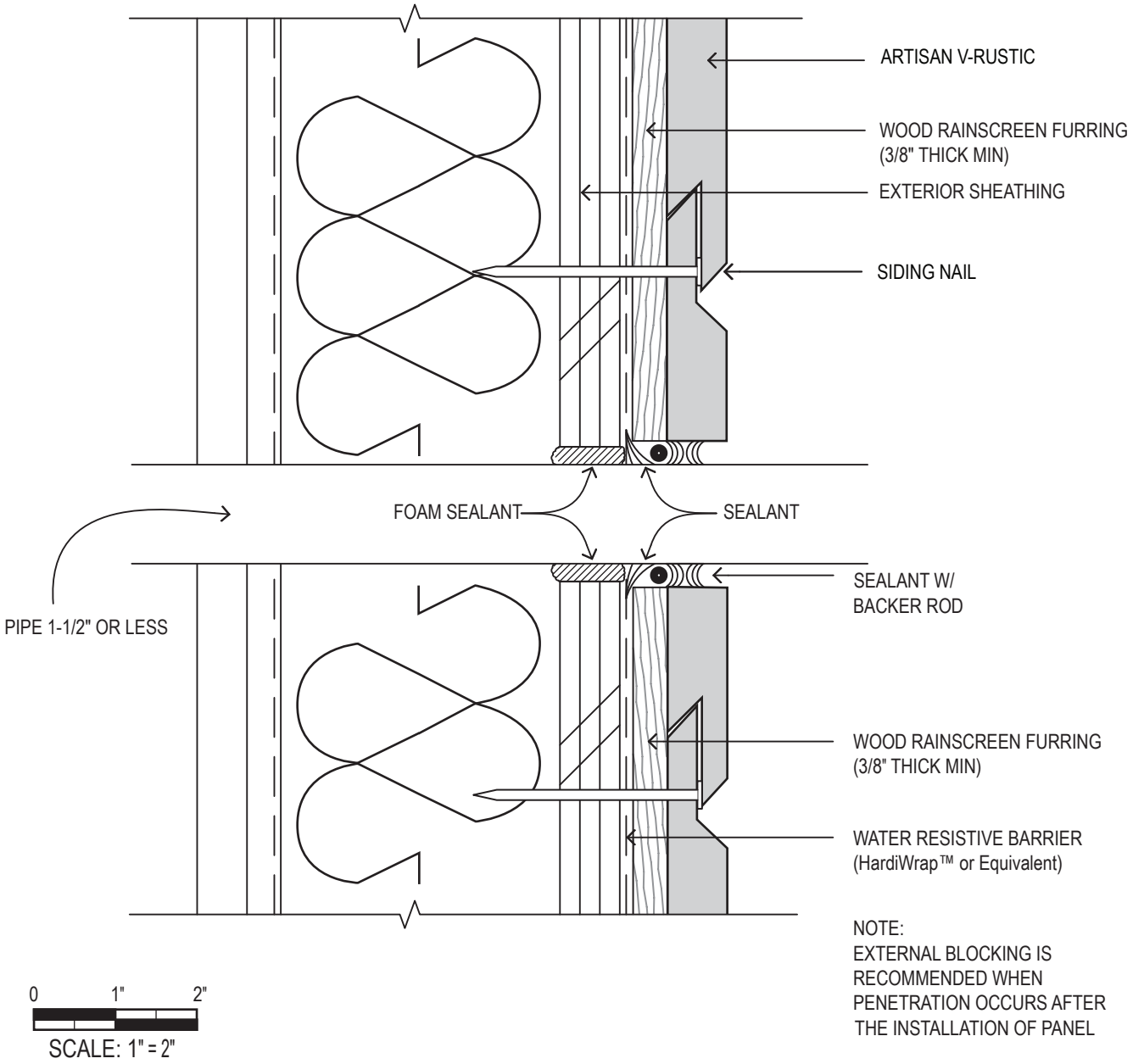
Artisan V-Rustic 1.01

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

JamesHardie Commercial



1-1/2″ OR LESS PENETRATION TREATMENT – RAIN SCREEN

For fastener specifications and complete installation instructions refer to appropriate documentation at www.-JamesHardieCommercial.com.

DETAIL:

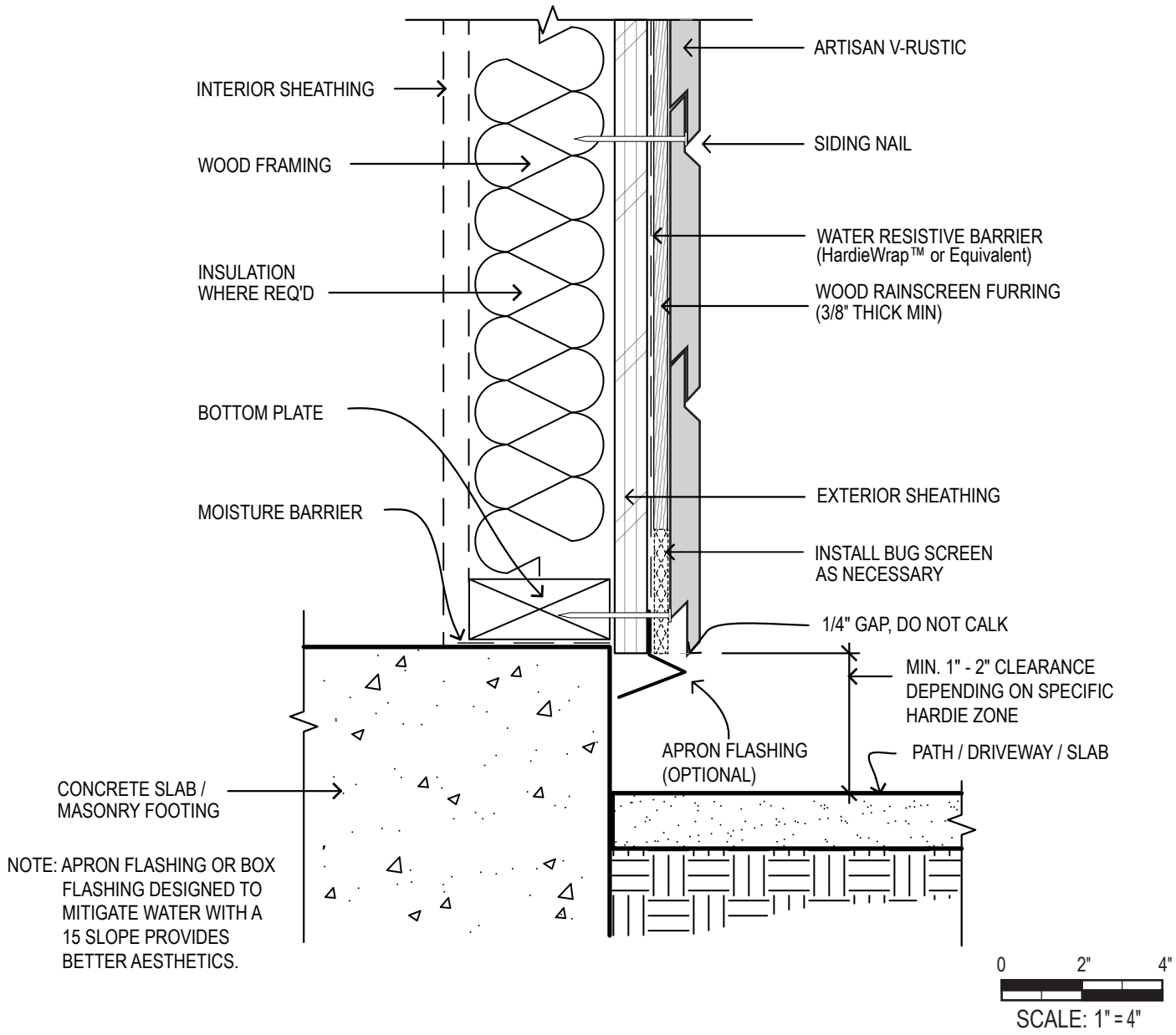
Artisan V-Rustic 1.06

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

JamesHardie Commercial



HARDSCAPE CLEARANCES - RAINSCREEN

DETAIL:

Artisan V-Rustic 1.02

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

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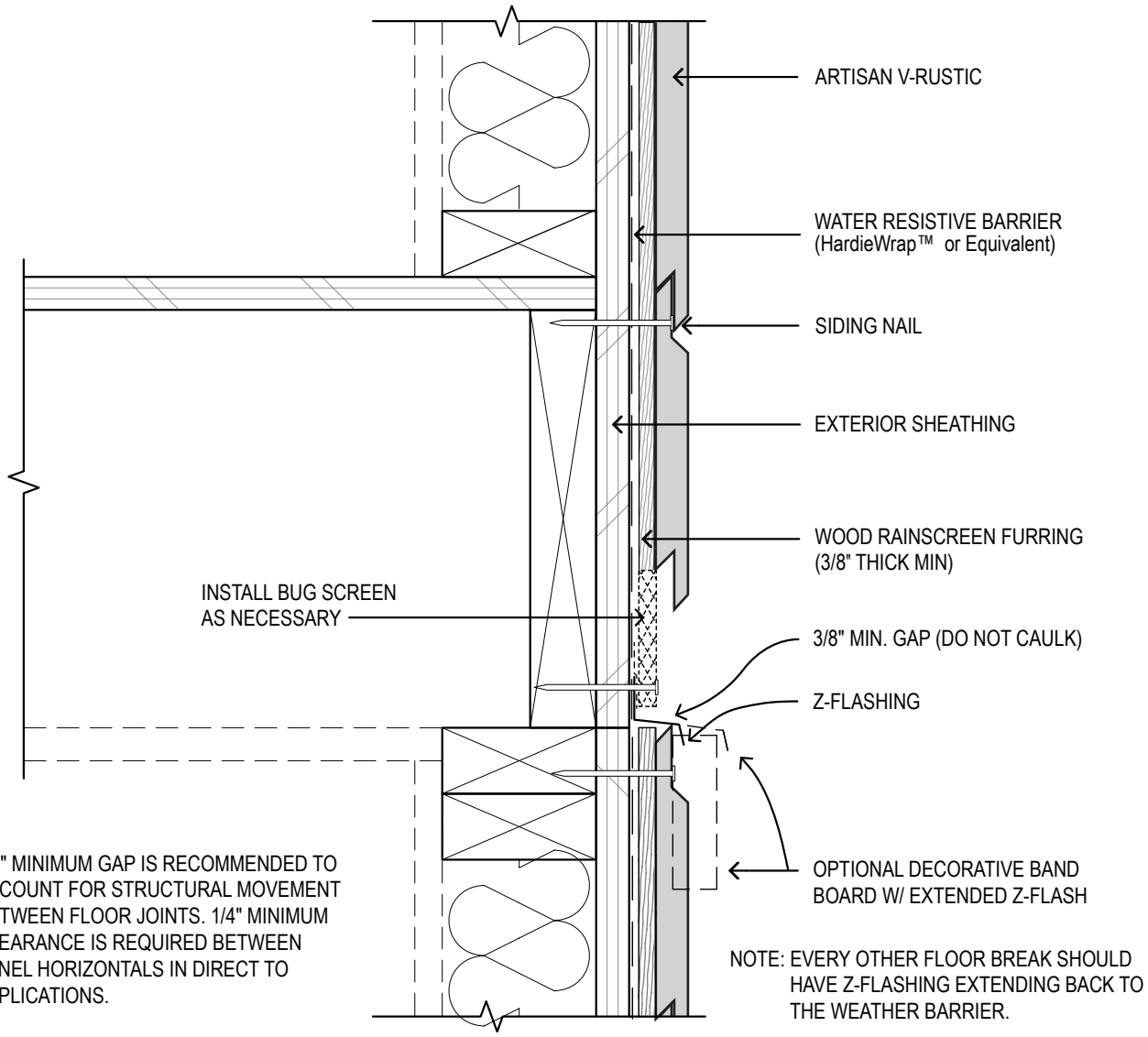

HORIZONTAL BREAK @ FLOOR TRANSITION– RAINSCREEN

DETAIL:

Artisan V-Rustic 1.05

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

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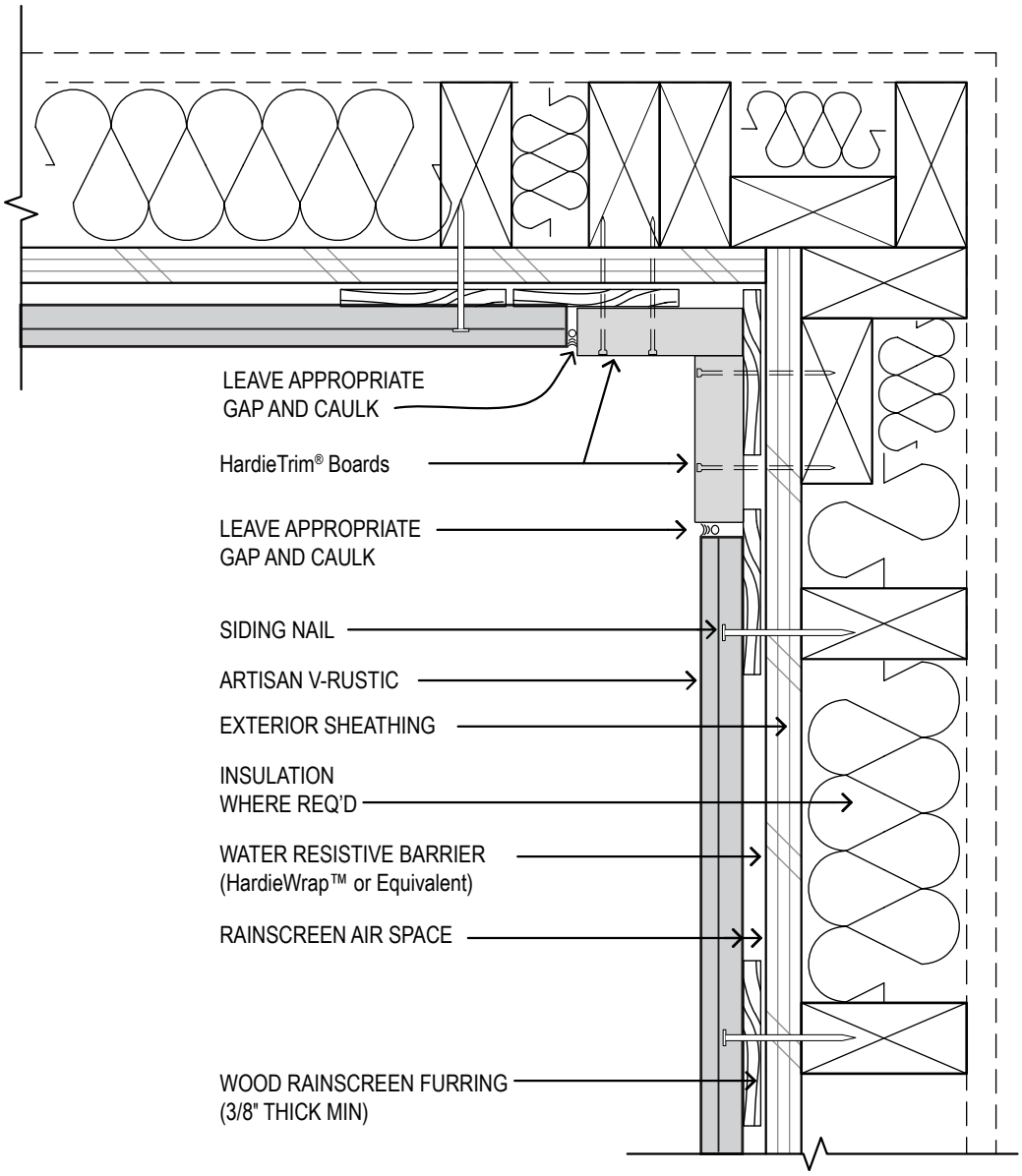


0 2" 4"

SCALE: 1" = 4"

INSIDE CORNER - RAINSCREEN

DETAIL:

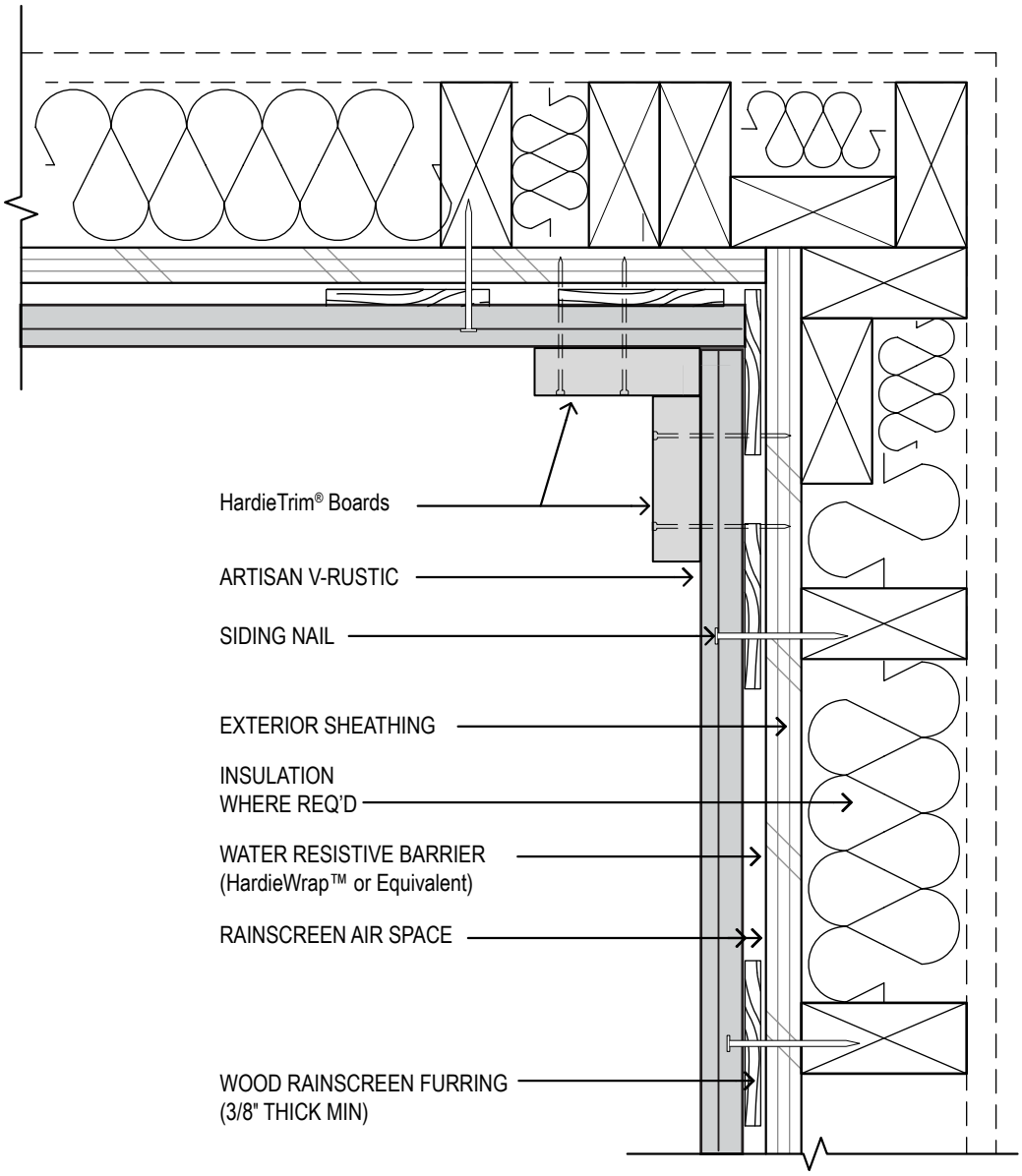
Artisan V-Rustic 1.03a

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

JamesHardie Commercial



INSIDE CORNER - RAINSCREEN

0 2" 4"

SCALE: 1" = 4"

These drawings are published as an information guide only. These CAD drawings are intended as templates to assist the designer. They do not contain the full details required for construction and must be read in conjunction with the installation instructions on www.jameshardie.com. You should obtain architectural, engineering or other technical advice to assess the suitability of these drawings to the requirements of your particular project. James Hardie accepts no liability in respect to the use of these drawings.

For fastener specifications and complete installation instructions refer to appropriate documentation at www.JamesHardie.com

DETAIL:

Artisan V-Rustic 1.03b

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

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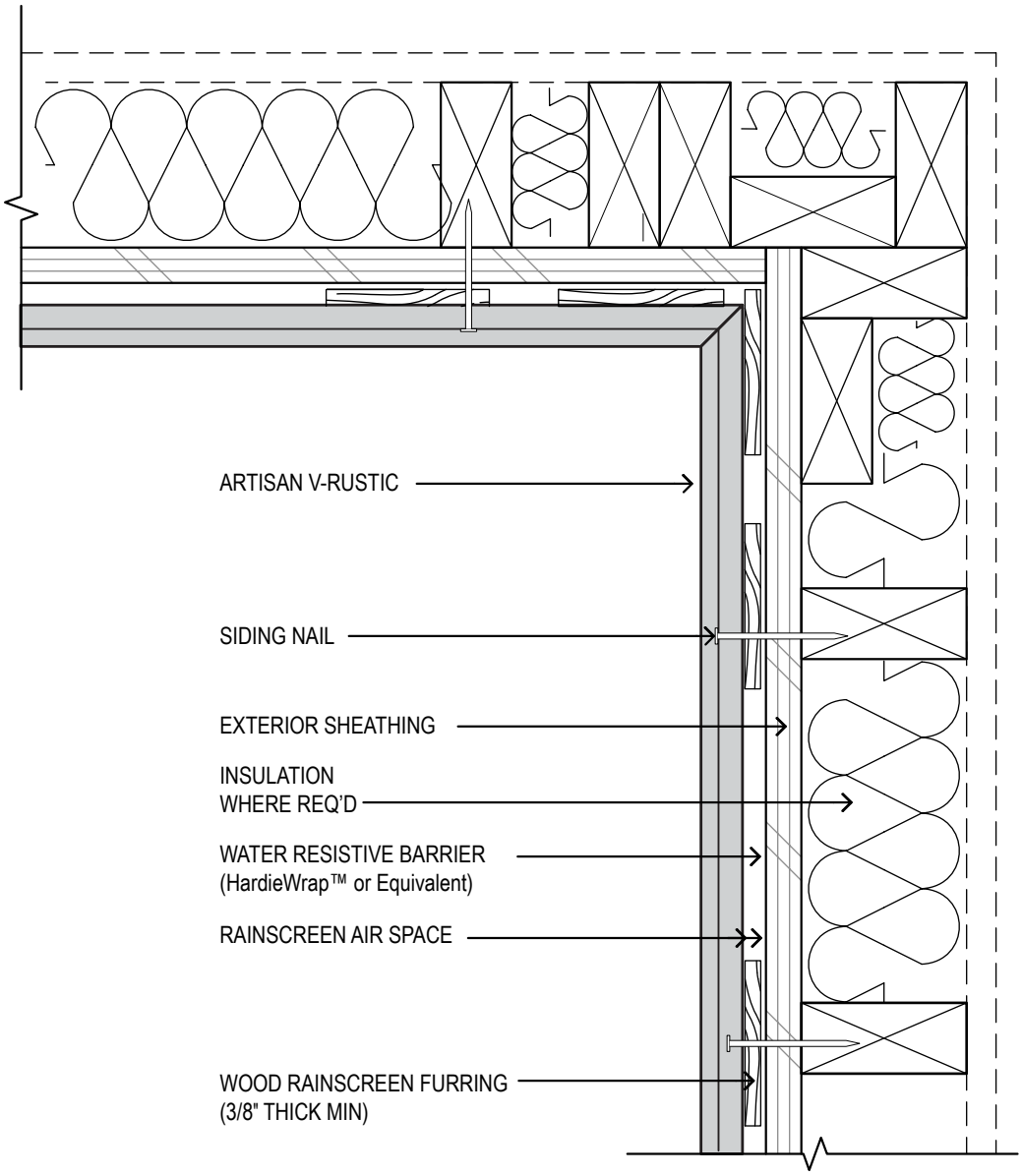

INSIDE CORNER - RAINSCREEN

0 2" 4"

SCALE: 1" = 4"

These drawings are published as an information guide only. These CAD drawings are intended as templates to assist the designer. They do not contain the full details required for construction and must be read in conjunction with the installation instructions on www.jameshardie.com. You should obtain architectural, engineering or other technical advice to assess the suitability of these drawings to the requirements of your particular project. James Hardie accepts no liability in respect to the use of these drawings.

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DETAIL:

Artisan V-Rustic 1.03c

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

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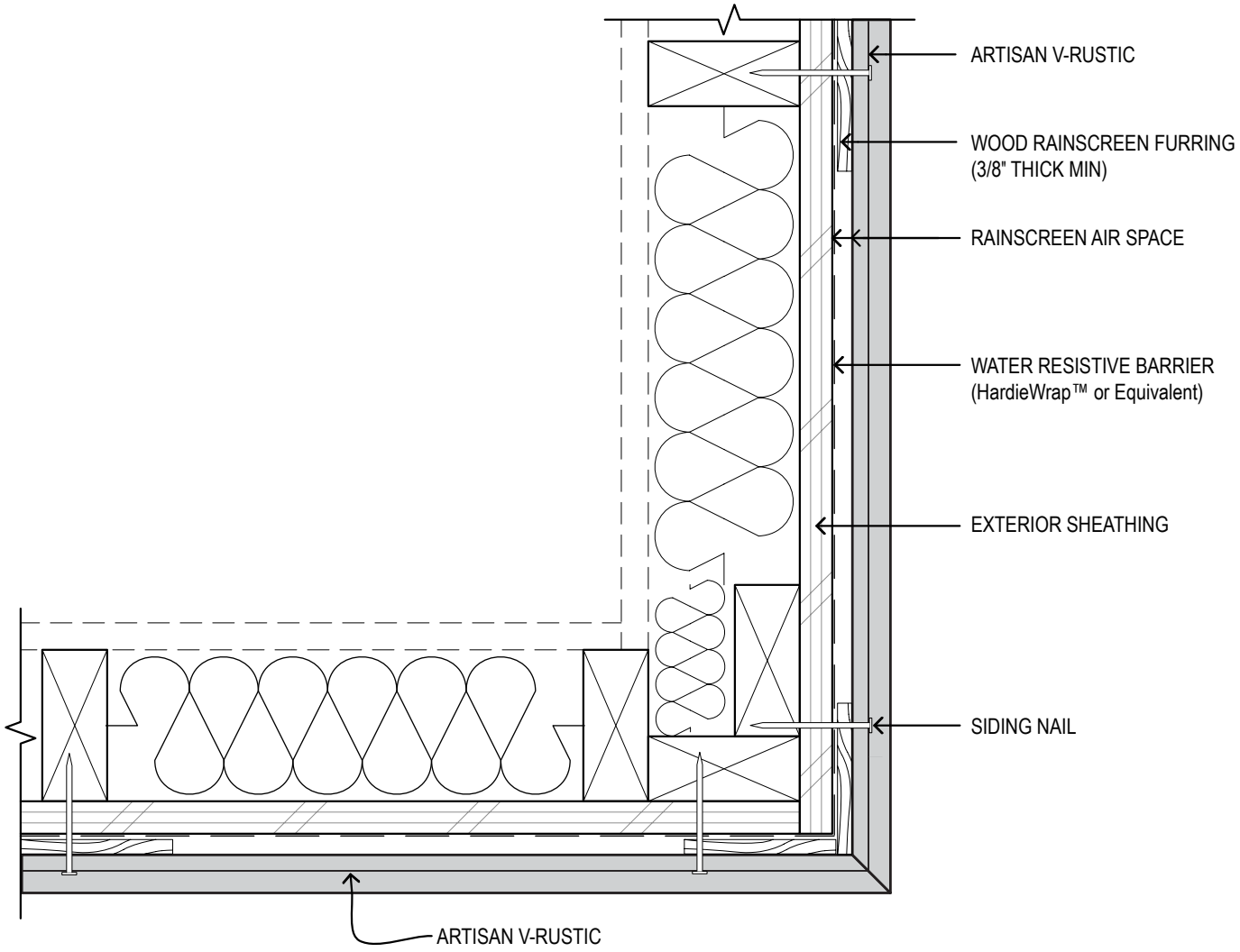

OUTSIDE CORNER - RAINSCREEN

0 2" 4"

SCALE: 1" = 4"

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For fastener specifications and complete installation instructions refer to appropriate documentation at www.JamesHardie.com

DETAIL:

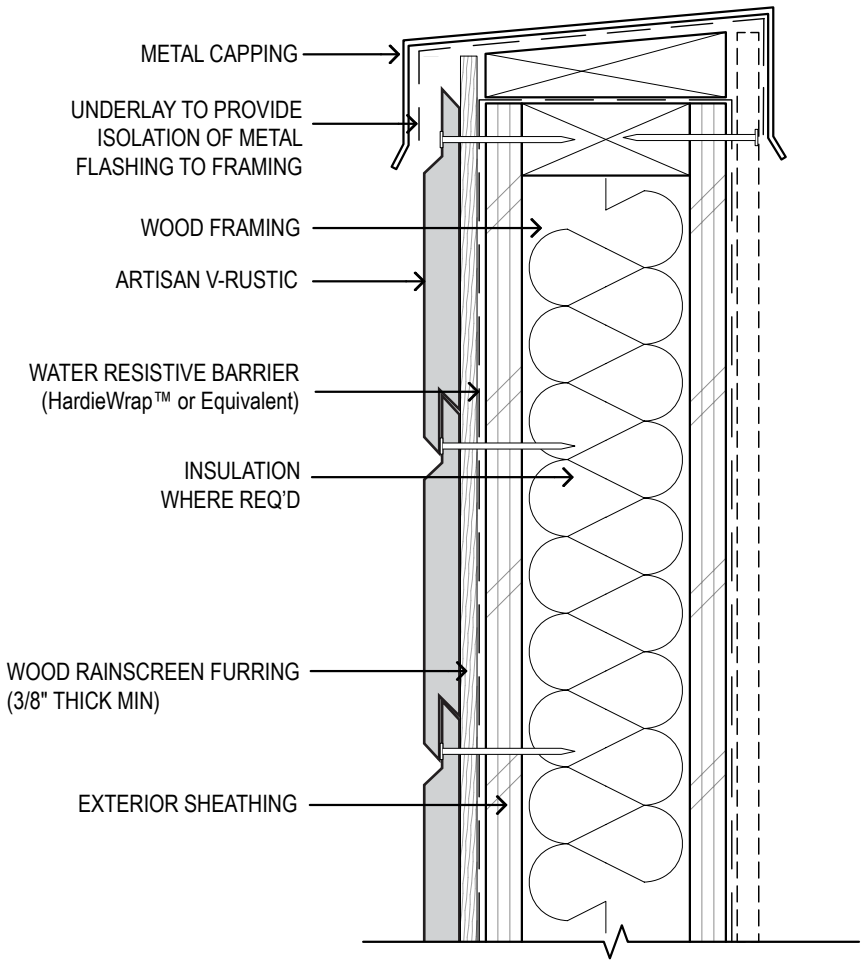
Artisan V-Rustic 1.04c

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

JamesHardie Commercial



0 2" 4"

SCALE: 1" = 4"

VENTED PAPAPET

DETAIL:

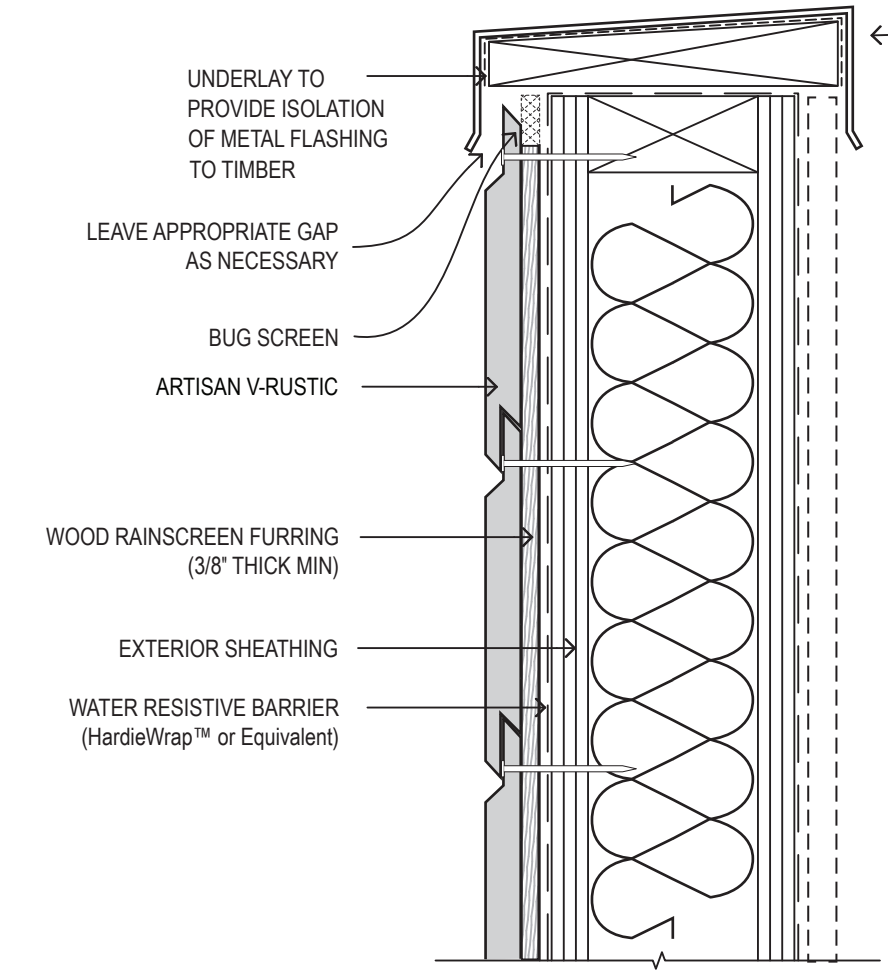
Artisan V-Rustic 1.13

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

JamesHardie Commercial



SCALE: 1" = 4"

VENTILATED PARAPET WALL

For fastener specifications and complete installation instructions refer to appropriate documentation at www.-JamesHardieCommercial.com.

DETAIL:

Artisan V-Rustic 1.14

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

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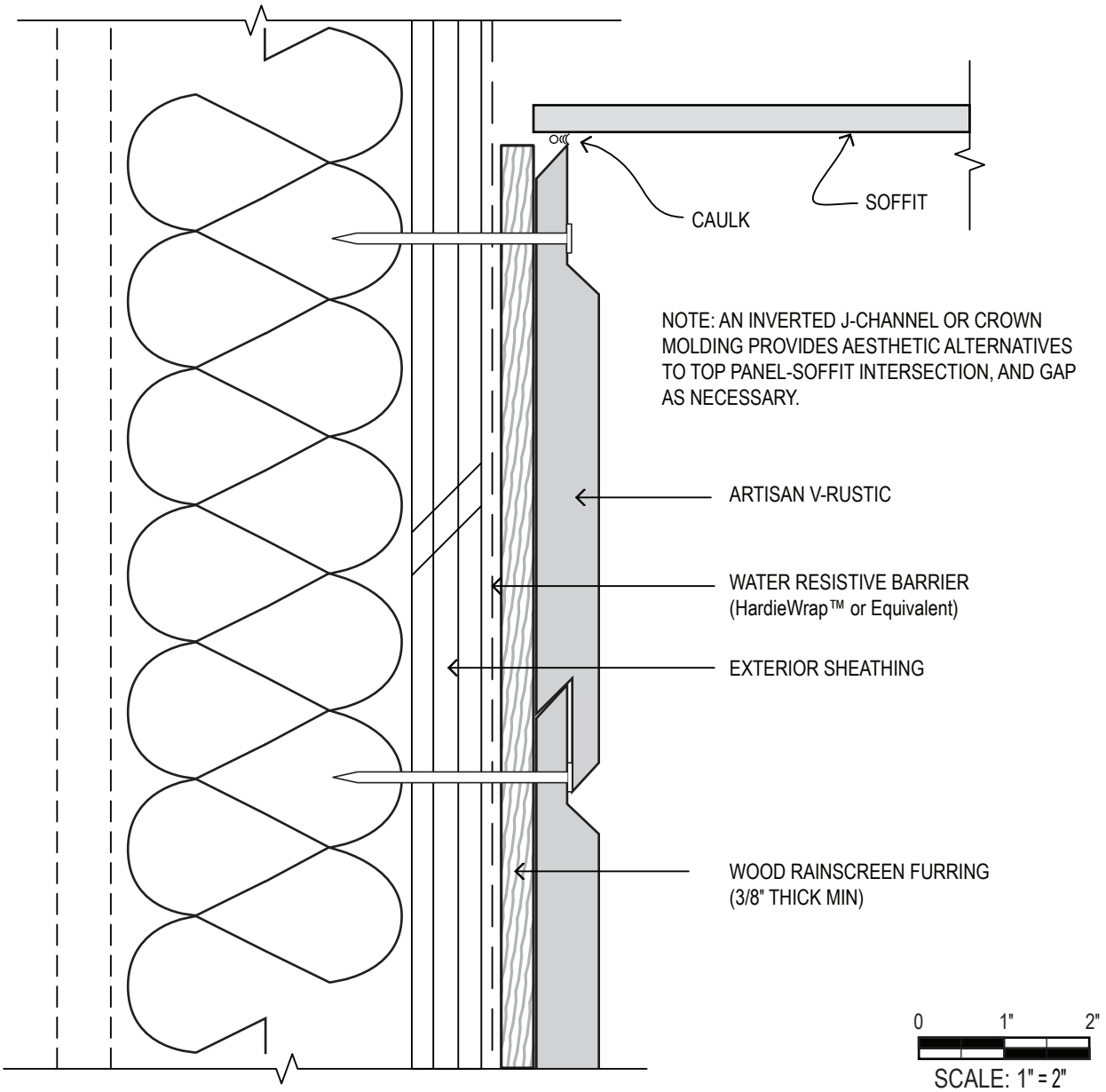


WALL & SOFFIT FOR VENTED RAINSCREEN

For fastener specifications and complete installation instructions refer to appropriate documentation at www.-JamesHardieCommercial.com.

DETAIL:

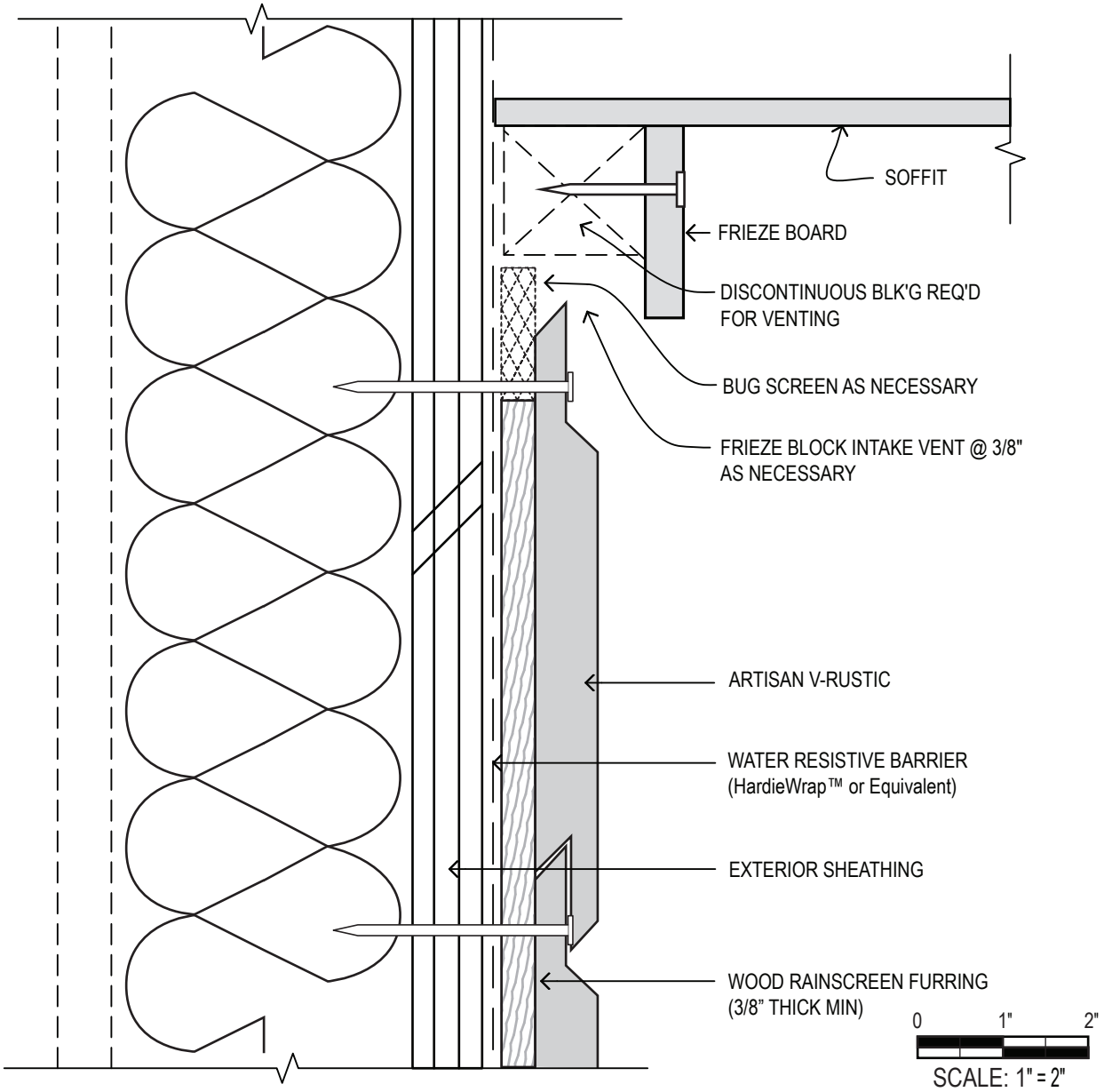
Artisan V-Rustic 1.11

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

JamesHardie Commercial



WALL & SOFFIT FOR VENTILATED RAINSCREEN

For fastener specifications and complete installation instructions refer to appropriate documentation at www.-JamesHardieCommercial.com.

DETAIL:

Artisan V-Rustic 1.12

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

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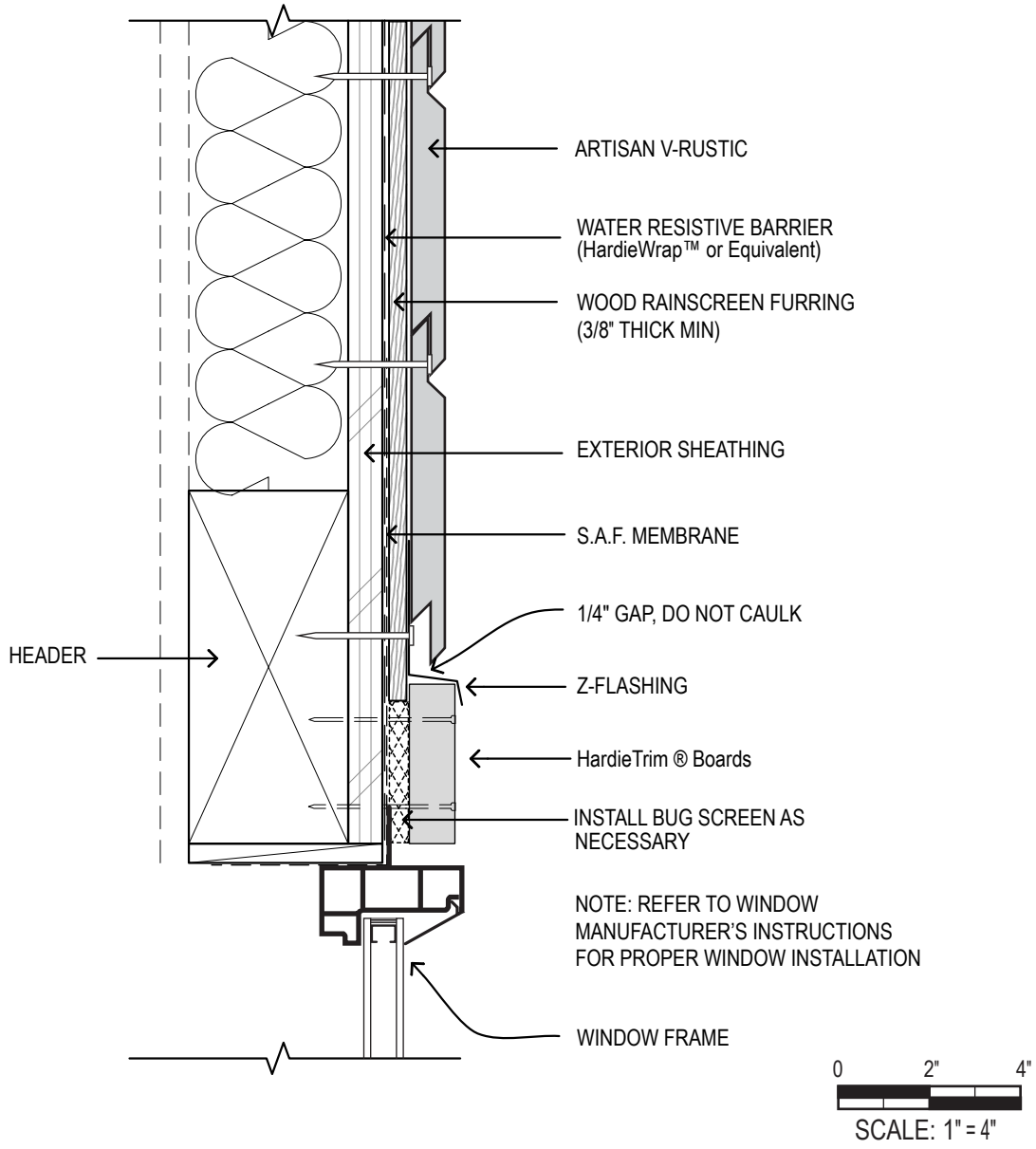

WINDOW/DOOR HEAD - RAINSCREEN

DETAIL:

Artisan V-Rustic 1.08

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

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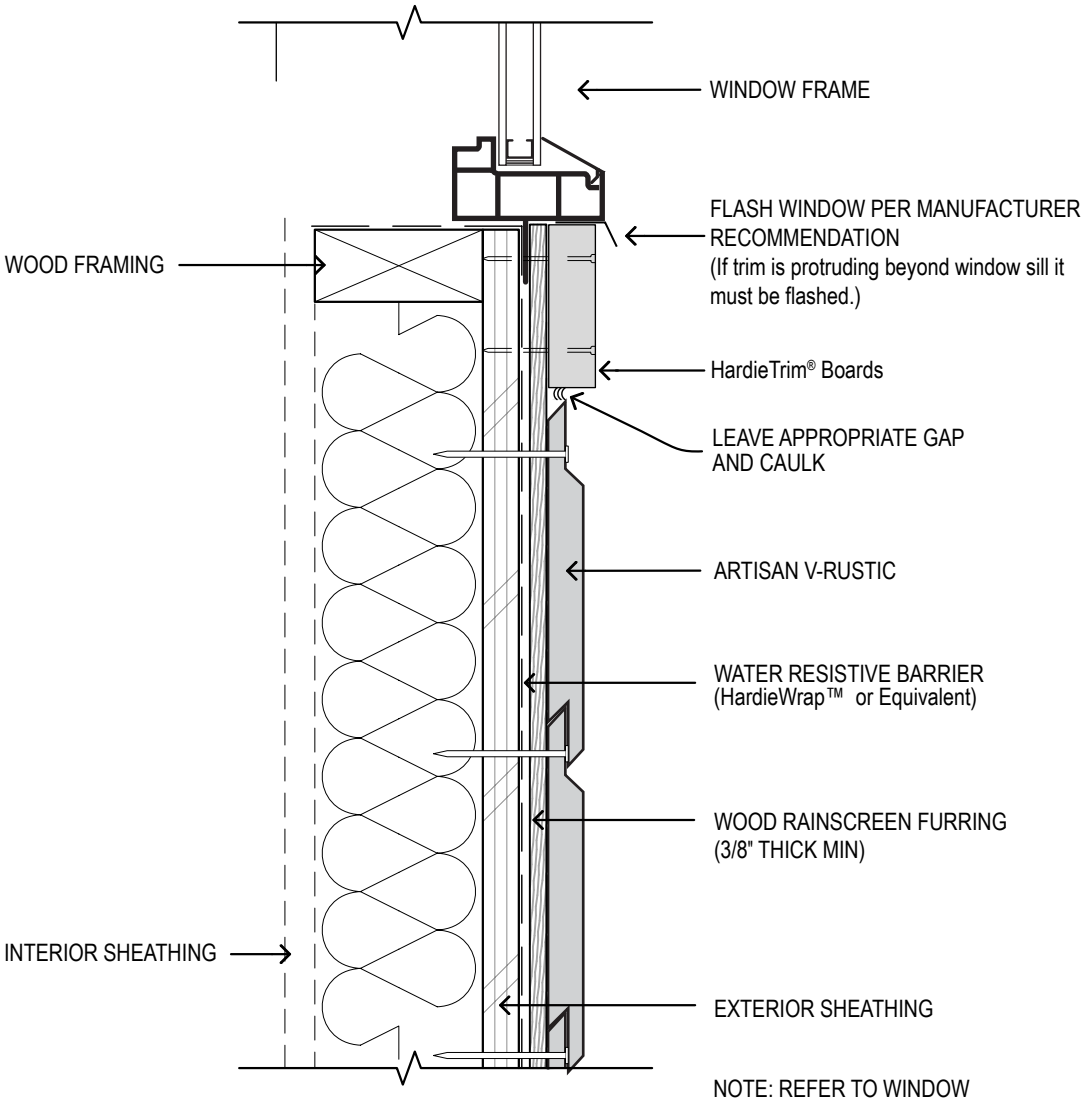


0 2" 4"

SCALE: 1" = 4"

WINDOW SILL - RAINSCREEN

These drawings are published as an information guide only. These CAD drawings are intended as templates to assist the designer. They do not contain the full details required for construction and must be read in conjunction with the installation instructions on www.jameshardie.com. You should obtain architectural, engineering or other technical advice to assess the suitability of these drawings to the requirements of your particular project. James Hardie accepts no liability in respect to the use of these drawings.

For fastener specifications and complete installation instructions refer to appropriate documentation at www.JamesHardie.com

DETAIL:

Artisan V-Rustic 1.09

Rev. 2 (2015)

Artisan V-Rustic Siding

- Wood Framing with Wood Furring Strips
- OSB or Plywood Sheathing

JamesHardie Commercial

BUILT AROUND YOU

OWNER'S MANUAL

Painting, Staining, Care and Maintenance

MARVIN®
Windows and Doors

Built around you.®

Table of Contents

MARVIN Windows and Doors
Built around you.

Introduction

Thank you for your recent purchase of Marvin® windows and doors.

At Marvin, we build windows and doors the only way they should be built. One at a time. Made to order. No shortcuts. It's this philosophy of doing it the right way that makes us who we are at Marvin. From the moment we began back in 1912, in Warroad, Minnesota, right up through breakfast this morning. Our commitment to providing customers with unparalleled value and service doesn't stop after the purchase. We're proud to create windows and doors that are truly Built around you®.

How to Use this Manual

This manual provides an overview on how to care for and maintain your new Marvin windows and doors. For information on Signature Products or for questions on service or maintenance not covered in this manual, please contact your local Marvin dealer or visit our website at www.marvin.com.

Warranty

Marvin is committed to bringing you products of the highest quality and value. Our made-to-order manufacturing philosophy is one example of our commitment. Our warranty, another.

Please visit the warranty section of our website (www.marvin.com) for full warranty details on your product.

Windows

Window Part Identification

In the following pages you'll find operation and maintenance information on Marvin window products. Refer to the product illustrations for the names of your particular windows, and use the illustration below to help identify window components. Please refer to the Glossary Chapter for terms and their meanings.

* Next Generation Ultimate Double Hung shown for illustrative purposes only.

Window Styles

Ultimate Casement

Ultimate Awning

Ultimate Push Out Casement

Ultimate Push Out Awning

Ultimate Double Hung Next Generation

Ultimate Glider

Ultimate Venting Picture

Magnum Tilt Turn

Magnum Hopper

Round Top/Polygon Direct Glaze

Ultimate French Casement

Ultimate Push Out French Casement

Ultimate Casement and Ultimate Awning

Operation and Maintenance

The powerful single-arm operator is the mechanism that you crank to open and close the Ultimate Casement and Ultimate Awning. To operate the window, first unlock it by pushing the lock handle 'up'. Crank the handle to open the window sash.

Lock handle

Unfold the folding handle to open the sash.

Lock handle Folding handle

To lock the window, crank the window sash closed. Press down on the lock handle. The lock pulls the sash tightly against the weather strip and seals the window.

To keep your Casement or Awning operating smoothly, clean the window track occasionally with a dry brush. To help prevent the sash from sticking, apply a small amount of dry lubricant to the track (available at most home improvement stores) if necessary. Do not use oily lubricants.

Using the Wash-Mode Feature

The Ultimate Casement and Ultimate Replacement Casement feature a wash mode system which allows the entire window to be washed from inside the home.

NOTE: Wash mode available on Casement product with 20" widths and greater. Not available on Awning windows.

Crank the handle a couple times. Push down on the arm and push the window away. The arm can be disconnected anywhere within the first 45 degrees of opening. Crank the arm back to the closed position.

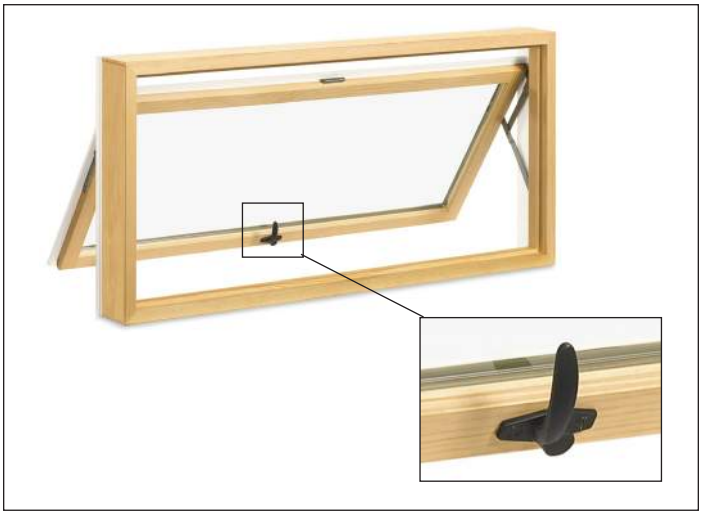
Swing the window all the way open and pull it across toward the lock. You now have access to the exterior of the window.

Ultimate Push Out Casement
Ultimate Push Out Awning

Operation and Maintenance

Ultimate Push Out products offer a universal look and a more traditional alternative to crank out casements and awnings. To open, turn the lock handle horizontally and push the window sash open. To close, grab the handle and pull the sash to a closed position. Turn the handle downward to lock. The Push Out Casement features a friction limiter which holds the sash in place and allows the sash to lock open at multiple locations. To adjust the friction limiter, follow the Marvin Ultimate Push Out Supplemental instructions (part number 19970045) which can be found on www.marvin.com

To operate the Ultimate Push Out Awning, rotate the lock handle vertically and push the window open. To close, grasp the handle and pull the window sash shut. Lock the window by rotating the lock handle horizontally.



To keep your Ultimate Push Out Casement or Awning operating smoothly, clean the window track occasionally with a dry brush. To help prevent the sash from sticking, apply a small amount of dry lubricant to the track (available at most home improvement stores) if necessary. Do not use oily lubricants.

Wash-Mode Feature on the Push Out Casement

The Ultimate Push Out Casement features the revolutionary wash mode system which allows the entire window to be washed from inside the home.

Unlock and open the sash. Swing the window all the way open and pull it across toward the lock. You now have access to the exterior of the window.

Wash Mode on Ultimate Push Out Casement

To place sash in wash mode unlock and open the sash. Disconnect friction limiter arm from the sash and push it back under the hardware cover. Swing the window all the way open and pull it across toward the lock. You now have access to the exterior of the window.

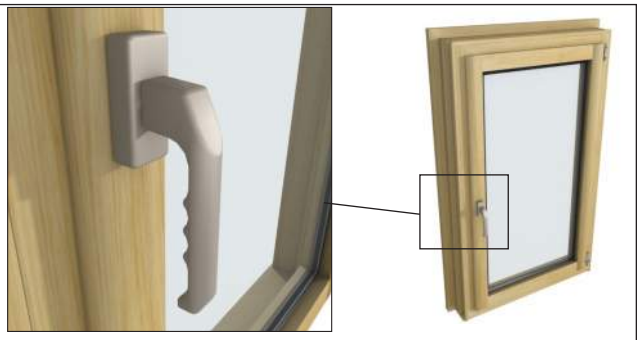
Magnum Tilt-Turn

Operation and Maintenance

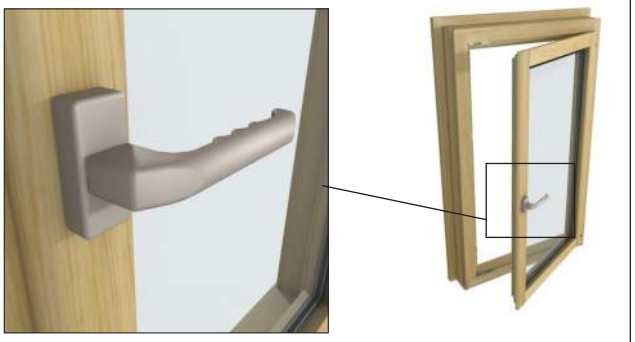
Marvin Tilt-Turn windows offer a unique operating system that allows you to open the window in one of two ways. Turning the window handle from the downward "locked" position to a 90 degree angle (horizontal) lets the window swing open on the hinges. To open to a tilt position, close the window and turn the handle upright to a vertical position. Now the window will tilt on the hinges along the bottom of the unit.

WARNING

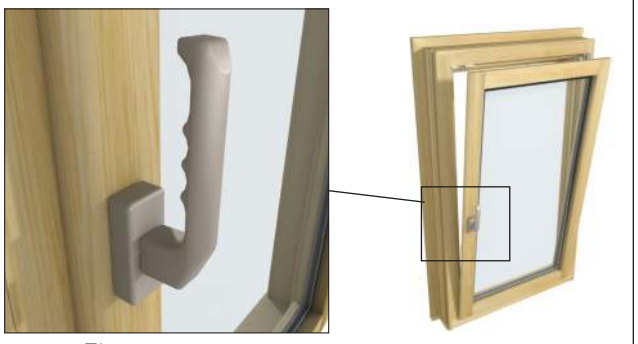
Failure to close the sash completely before rotating the handle could result in sash removal.



Closed position



Swing-open position



Tilt-open position

To watch a video on how to operate the Magnum Tilt-Turn, log on to www.marvin.com and navigate to the video gallery. Or, scan the code with your smart phone or similar device.

Occasionally use a silicone spray lubricant on the hinges and locking mechanism to keep the operation smooth. Be careful not to allow oil to come in contact with window surfaces. Occasionally clean the sill weep and drain channel area out with a vacuum. Interior and exterior finishes can be cared for in the same manner as any other Marvin window or door.

Magnum Hopper and Magnum Inswing Casement

The Magnum Hopper and Magnum Inswing each offer one half of the operation features of the Magnum Tilt-Turn. The Magnum Hopper tilts open at the top while the Magnum Inswing Casement swings open like a door. Follow the care recommendations in the Magnum Tilt-Turn section.

Magnum Hopper

Round Top, Polygon and Direct Glaze

Maintenance

Most Marvin Round Top and Polygon windows and all Direct Glaze windows are non-operational, meaning they do not open or close, so there are no maintenance requirements for hardware or weather stripping. Clean the glass occasionally, and maintain the interior wood or exterior surfaces on the same schedule as your other windows. For maintenance on operational units, refer to specific product sections.

Window Options

Casement Window Opening Control Device

Marvin offers a factory applied Window Opening Control Device for crank-out Ultimate Casement Products. See the Marvin website for safety and operating information for this optional feature

To watch a video on how to operate the Window Opening Control Device, log on to www.marvin.com and navigate to the video gallery. Or, scan this code with your smart phone or similar device.

Clad Ultimate Double Hung Next Generation Window Opening Control Device

Marvin offers a Window Opening Control Device for the Clad Ultimate Double Hung Next Generation. See the Marvin website for safety and operating information for this optional feature.

To watch a video on how to operate the Window Opening Control Device, log on to www.marvin.com and navigate to the video gallery. Or, scan this code with your smart phone or similar device.

Wood Ultimate Double Hung Window Opening Control Device

Marvin offers a Window Opening Control Device for the Wood Ultimate Double Hung. See the Marvin website for safety and operating information for this optional feature.

Ultimate Glider Window Opening Control Device

Marvin offers a Window Opening Control Device for the Ultimate Glider. See the Marvin website for safety and operating information for this optional feature

To watch a video on how to remove the Ultimate Glider sash, log on to www.marvin.com and navigate to the video gallery. Or, scan this code with your smart phone or similar device.

Doors

Door Part Identification

In the following pages you'll find operation and maintenance information on Marvin door products. Refer to the product illustrations for the names of your particular doors, and use the illustration below to help identify door components. Please refer to the Glossary Chapter for terms and their meanings.

Ultimate Sliding French Door shown for illustrative purposes only.

Door Styles

Ultimate Inswing French Door

Ultimate Outswing French Door

Ultimate Sliding French Door

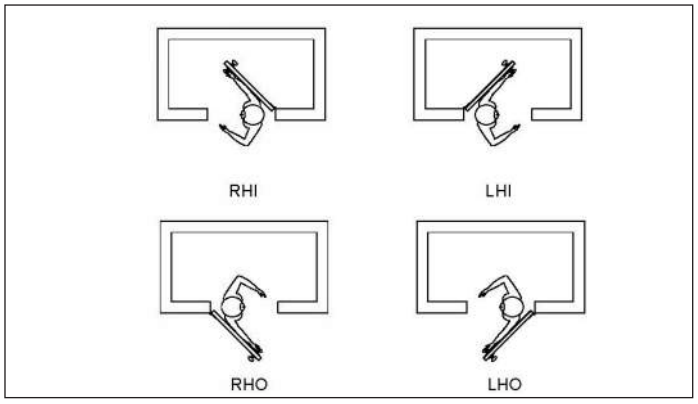
Sliding Patio Door

Bi-fold Door

Ultimate Lift and Slide Door

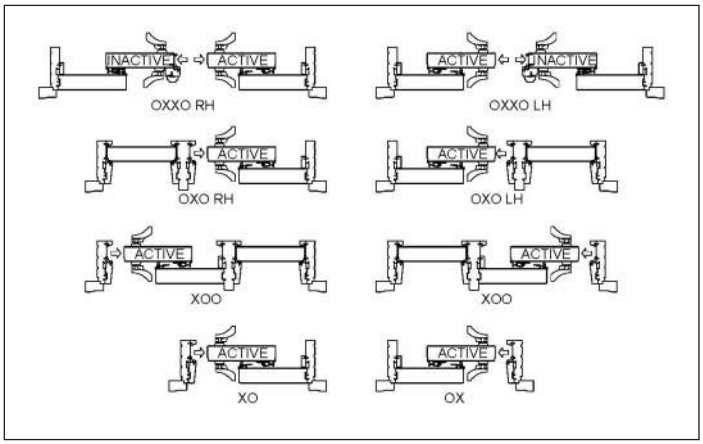
How to Determine Handing of Swinging Doors

1. Stand on the side of the door swinging away from you with your back to the hinge of the door.
2. Reach out with your closest hand to the door handle
3. If your left hand is on the door handle and the door swings into the building, the operation of the door is Left Hand Inswing (LHI).
4. If your right hand is on the door handle and the door swings into the building, the operation of the door is Right Hand Inswing (RHI).
5. If your right hand is on the door handle and the door swings to the exterior of the building, the operation of the door is Right Hand Outswing (RHO).
6. If your left hand is on the door handle and the door swings to the exterior of the building, the operation of the door is Left Hand Outswing (LHO).
7. Use the same procedure to determine handing on the active panel of the XX doors standing with your back to the active panel hinge.



How to Determine Handing of Sliding Doors

To determine the handing of Sliding Doors, face the door from the exterior. If the panel travels toward the right, the door would be called out as a Right Hand (RH) active. If it moves toward the left it would be a Left Hand (LH) active. The stationary panel is designated with an "O". The active and inactive panels are designated with an "X".



For operating configurations for the Ultimate Lift and Slide door, please refer to the Marvin Architectural Detail Manual chapter online or contact your local dealer.

Operation of Marvin Residential Doors

To determine the Stationary and Active/Inactive panels of Marvin residential doors, view the door from the exterior of the building.

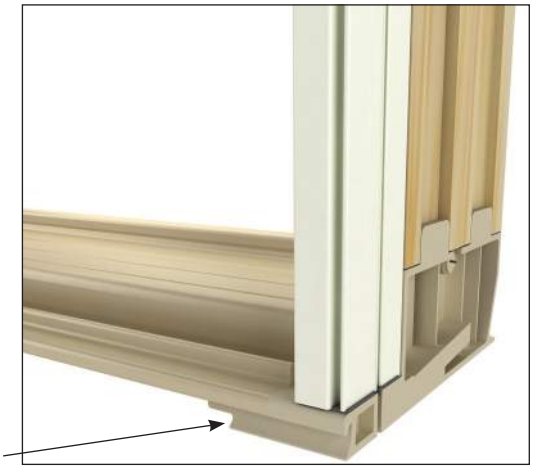
Swinging Doors

Operation and Maintenance

To operate the door from the interior, grasp the active panel's handle lever and rotate it downwards. Pull the door panel towards you for an Inswing door, or push the door outwards for an Outswing door.

Doors require very little maintenance to keep them functioning efficiently. Most problems can be eliminated by keeping the sill clean, ensuring smooth door operation. Chemicals, solvents, paints, and other harsh substances should never come in contact with the sill. Remove any paint, grease or sealant with 50% isopropyl alcohol. Finished wood doors need to adjust to humidity levels in a home and may warp slightly as seasons change - allow one full year for your door to go through this process. Door handles can be wiped down with a damp cloth to remove fingerprints and smudges.

Marvin doors have a special weep drainage system incorporated into the sill design. Periodically check the sill to be sure the weep system is free from debris. To maintain sill appearance, wash only with mild soap and water solution.



Be sure to keep weep holes free from debris.

Handle Operation for the Multi-Point Lock

Always close and lock your passive panel first and the operating panel (with thumb turn) second. Marvin's multi-point hardware has locking bolts at the head and base of the door. Lifting the handle 45 degrees upward will set the head and foot bolts in place for a secure seal. A 90 degree turn of the key from the outside or the thumb turn on the inside will lock the deadbolt in the handle assembly. When the deadbolt is unlocked, downward pressure on the handle will release the bolts and latch, and the door will open. Engaging only the deadbolt will offer some security. However, to obtain full security and full performance against air and water infiltration, engage the head and foot bolt along with the dead bolt.

Lifting the handle upward will engage both the head bolt and foot bolt.

NOTE: An operating passive panel will have either manual head and foot bolts or multi-point hardware.

To watch a video on multi-point lock operation, log on to www.marvin.com and navigate to the video gallery. Or, scan the code to the left with your smart phone or similar device.

Scenic Doors - Ultimate Outswing Bi-Fold Door

Operation and Maintenance

The Ultimate Outswing Bi-fold Doors require very little maintenance to keep them functioning efficiently. Most problems can be eliminated by keeping the sill clean, ensuring smooth door operation. Chemicals, solvents, paints, and other harsh substances should never come in contact with the sill. Remove any paint, grease or sealant with 50% isopropyl alcohol, refer to the Ultrex cleaning instructions for further instructions. Finished wood doors need to adjust to humidity levels in a home and may warp slightly as seasons change - allow one full year for your door to go through this process. Door handles can be wiped down with a damp cloth to remove fingerprints and smudges.

Minimum requirement for the maintenance of hardware is as follows:

Bearings: Apply a light spray of lubricant. Lubricant reduces wear, improves smoothness and further protects against corrosion of the track and bearings. Note that the stainless steel bearings also require periodical cleaning and lubrication that prevent corrosion.

Hangers, Pivots and Brackets: Wipe down with warm soapy water and a soft rag, rinse clean and dry all exposed surfaces well. Apply a light spray of lubricant. Remove excess with a dry cloth.

Hinges: Use warm soapy water on a soft rag. Wipe down the exposed surfaces. Follow with wiping with a clean damp rag. Maintain the original luster of the metal finish by application of a thin film of light machine oil or a corrosion preventing spray. Note that these materials may stain wood material and it's finish.

For operating configurations for the Ultimate Outswing Bi-Fold door, please refer to the Marvin Architectural Detail Manual chapter online or contact your local dealer.

General Care and Maintenance

Semi-Annual Inspection List

- ❑ Inspect weather strip for damage or loss of performance. Contact your local Marvin dealer for parts if your weather strip requires replacement.
- ❑ Inspect exposed hardware screws; tighten if needed.
- ❑ Inspect exterior sealant around the outer edges of the window or door frame. Trim any loose sealant and reseal any gaps with a good quality sealant.
- ❑ Examine the window or door's interior and exterior finish. Periodic cleaning and touch-up can extend the life of your finish.
- ❑ Clean sand, dirt or dust from door and window hinges, sills and tracks.
- ❑ When soiled, wash the exterior of your doors and windows with warm soapy water; rinse with clean water and dry.

NOTE: In harsh environments, such as near salt water, Marvin Windows and Doors recommends quarterly inspections and maintenance. Salt and other corrosive or abrasive substances must not be allowed to build up on exterior surfaces.

Salt Water Care

If you live near a sea coast (salt water), make sure salt and other corrosive or abrasive materials do not build up on the exterior surfaces. Clean the exterior with a mild detergent soap and water at least every three months and more frequently if necessary to prevent build up. Any scratches, chips or areas of abrasion to the exterior coating must be repaired immediately.

Condensation

During cold winters, there is a large temperature difference between the interior and exterior of your home. When the temperature drops outdoors, the glass on your windows tend to have a lower surface temperature than other surfaces in your home and is the first place that you'll notice condensation in your home. This is not due to any defect in your window or door, it's simply a sign of needing to reduce the humidity in your home.

If condensation is a chronic occurrence in your home, chances are that you have excessive humidity. If water is accumulating on glass, chances are it is accumulating on other harder to see surfaces such as wall and roof cavities. If left uncontrolled, excess moisture can have serious consequences, including:

- Mold or mildew
- Warping
- Roof ice build-up
- Damp, ineffective insulation
- Discolored or blistered paint
- Moisture inside walls and attic

Excessive interior humidity is more likely to occur in newer or recently remodeled homes with tight, energy efficient construction, causing a build up of moisture to the interior. Information on excessive humidity and how to reduce condensation on your windows can be found on the internet by searching for "window condensation".

Cleaning the Glass

The best method to clean the glass on your Marvin window or door is to first soak the glass surface with a clean water and soap solution to loosen dirt or debris; rinse clean. Next, wash your window or door with a mild glass cleaning solution and a non-abrasive applicator. Use a clean dry cloth to remove cleaning solution from the glass. Finally, wipe off any cleaning solution that made contact with the weather strip, sash or frame.

Do not use razor blades, knives or scrapers for cleaning glass surfaces.

For more information on cleaning the glass or for instructions on how to properly remove the labels from the glass, see the Removing Labels from Glass section of our website (www.marvin.com).

Glass Care Do's and Don'ts

Tempered Glass

Certain Marvin windows and doors use tempered glass for safety reasons. Tempered glass is heated, then cooled at an accelerated rate, adding strength and shatter resistance. You may notice some distortion - this is normal and due to the tempered glass fabrication process. The logo in the corner of each piece of tempered glass is required by code and safety regulation.

DO	DON'T
• Clean glass when dirt and residue appear	• Use scrapers of any size or type for cleaning glass
• Determine if coated glass surfaces are exposed*	• Allow dirt and residue to remain on glass for an extended period of time.
• Exercise special care when cleaning coated glass surfaces*	• Trap abrasive particles between the cleaning materials and the glass surface
• Start cleaning at the top of the building and continue to lower levels	• Allow water or cleaning residue to remain on the glass or adjacent materials
• Soak the glass surface with a clean water and soap solution to loosen dirt and debris	• Begin cleaning without rinsing excessive dirt and debris
• Use a mild, non-abrasive commercial window cleaning solution	• Use abrasive cleaning solutions or materials
• Wipe all cleaning solution from window gaskets, sealants and frames	• Allow metal parts of cleaning equipment to contact the glass
• Remove any labels on the glass immediately after product installation	• Clean glass in direct sunlight
	• Allow splashed materials to dry on the glass surface

** Such as an energy panel with hard coat Low E.*

Finishing or Painting Bare Interior Wood

If you have a brand new, bare wood Marvin window or door, you must finish it immediately to prevent possible damage to the wood. Make sure the bare interior surface is clean and dry. Remove any handling marks, debris, or effects of exposure to moisture by sanding lightly with fine sandpaper and wiping clean before applying your choice of finish. Marvin uses a rubber-like material between glass panes and wood sash frames to ensure a weather tight seal. Occasionally, an excess of this silicone sealant, called "squeeze-out", appears around the edge of the glass. You can safely but gently scrape off squeeze-out with a plastic putty knife without damaging the weather tightness of your door or window.

When applying a finish, it is imperative that you do not come in contact with weather strip, vinyl, plastic, metal or any other non-wood parts. Do not apply a finish to any surface which has an abrasive or sliding contact with another surface such as Double Hung and Single Hung Tilt Pacs; Clad Ultimate Double Next Generation, Magnum Double Hung and Single Hung Tilt Pacs, and Magnum Panning Systems. Solvents in paints, stains and varnishes will cause plastic or vinyl parts, in particular, to become brittle and require replacement.

Prior to staining it may be desirable to apply a wood conditioner to obtain a more even finish. Follow the manufacturer's recommended instructions.

Lock Status Sensor

If your window or door incorporates a wireless lock status sensor option, do not paint or caulk over the joint between the head jamb part stop and the frame. Wireless transmitters use a small battery that you will need to change at some time.

Staining

Apply stain according to the manufacturer's instructions. Apply as many coats of stain as necessary to achieve the desired color. After the stain is thoroughly dry, apply at least two coats of sealer (i.e. varnish or polyurethane).

Painting

Use only high quality primer and paint. To provide a good adhesion of paint, a compatible prime coat should be applied. Paint with sash or panels open (or removed) and do not close until thoroughly dry. Apply primer and paint according to the manufacturer's instructions.

Factory Applied Interior Finishes

(Painted, Stained, Clear Coat)

If your product came with one of Marvin's factory-applied interior finishes, avoid getting any cleaning solutions (such as glass cleaner) on the wood as they may discolor the finish. To clean marks off of the wood, use a soft cloth dampened with water. Rub gently to remove the mark. Once the mark has been removed, dry the area with a clean, soft, dry cloth. If the mark is still evident, add 3-5 drops of non-abrasive detergent to a pint of water and mix it well. Rub gently with a damp cloth to remove the mark. Rinse the detergent from the area then dry clean with a soft dry cloth.

If touch-up repair is needed for any scratches or minor dents, follow the instructions on our website.

Exterior Wood and Cladding

The exteriors of Marvin windows and doors are made from either wood or extruded aluminum cladding. There are different ways to care for each - make sure you follow cleaning instructions closely to prevent any inadvertent damage to your exteriors.

Periodically inspect sealant around the exterior perimeter of the unit, remove any loose sealant and apply new sealant.

Finishing a Wood Exterior

A bare wood, brand new Marvin window or door must be painted immediately to prevent possible damage to the wood, even if the window or door is already primed. Primers function to maximize adhesion between the wood and the paint; they do not offer any protective qualities.

Make sure all bare wood window and door surfaces are clean and dry. Fill exterior nail holes with an exterior grade wood filler and sand smooth. Remove any handling marks, debris, or effects of exposure to moisture by sanding lightly with fine sandpaper and wipe clean before applying paint.

Before finishing, run a strip of masking tape along the edge of the glass, leaving a 1/16" (2 mm) gap between the tape and the wood. This will allow you to lap the finish coat onto the glass for a proper seal. To make sure you get good paint adhesion, high quality primer should be used. Apply one coat of primer and two coats of top quality paint. Follow the paint manufacturer's instructions. use only a high quality oil base or latex paint. Paint windows with sash or panels opened (or removed) and do not close or reinstall until thoroughly dry. Carefully follow paint instructions, and make sure you wear adequate hand and eye protection.

Windows and doors with a wood exterior should be inspected and repainted periodically. Any signs of blistering, peeling or cracking in the finish should be immediately repaired to protect the wood. Consult with a local paint store or house painting contractor for the best solution for your needs. If you notice any cracks, they should be filled prior to repainting with a high quality paintable sealant. Smaller cracks may be filled with an exterior grade wood filler.

NOTE: Marvin does not recommend the use of stain or clear coat finishes on exterior surfaces.

Attention

Paints, stains and varnishes contain solvents which, when coming in contact with plastics and vinyls used in weather stripping, cause these materials to lose their flexible qualities, making them brittle. Even momentary contact between the finish and the plastic will cause this to occur. Also, do not allow strong detergents, ammonia, solvents, chemicals or other harsh cleaning substances to come in contact with painted exterior surfaces as they can be damaged.

Aluminum Clad Exterior Care

Marvin clad products have a tough armor of extruded aluminum coated with a minimum of 70% Kynar®, a fluoropolymer resin enhanced with ceramic pigmentation. This coating translates into a beautiful, low maintenance exterior that retains its original color for years to come.

Use a soft brush such as a long-handled car washing brush, with clear water to remove any bugs, grime, dirt or dust that may gather on the aluminum cladding. Before using any cleaners, test the solution on an inconspicuous area. A thorough clear water rinse should follow.

Mildew on Exterior Surfaces

Mildew thrives on warmth and moisture and will grow best under these conditions. It is so adaptable, however, that it can flourish to some degree under all climatic conditions. Mildew growth is usually brown or black in color and, for this reason, may be mistaken for dirt. The presence of mildew on your exterior can be confirmed by placing a drop of household bleach on the suspected mildew area. If small gas bubbles develop in the droplet of bleach and the area bleaches out, mildew does exist and should be removed.

Use this basic solution for controlling exterior mildew problems:

- 1/3 cup (79 ml) powder laundry detergent
- 2/3 cup (158 ml) trisodium phosphate (TSP)
- 1 quart (946 ml) household bleach
- 3 quarts (2839 ml) water

Apply solution with a soft bristle brush using medium pressure. Rinse well with clear water after cleaning.

Attention

Stronger concentration of cleaner can damage the coating surface or finish. Always wear protective eyewear and skin protection when using harsh cleaning products.

Caring for Hardware

General Guidelines

- Use a clean, soft, damp cloth to polish and remove finger prints and dirt from the window and door hardware.
- Do not use household cleaners, window cleaning solutions, abrasive cleansers, bleaches, solvents, polishes or other chemical compounds to clean your window or door hardware unless specifically recommended by the hardware's manufacturer. These products may remove protective coatings or scratch and remove finishes. Keys, rings or other sharp objects should be kept from striking the hardware.

Solid Brass Hardware Maintenance

NOTE: If your window's or door's solid, bright-brass lacquered hardware does not have a PVD finish, please follow the directions below to care and maintain your bright-brass hardware. These instructions do not apply to antique brass, chrome-plated or nickel-plated brass finishes, oil-rubbed bronze hardware or PVD hardware finishes.

Solid brass hardware is typically factory-finished with clear lacquer. The durability of lacquer depends on the specific manufacturer involved and the circumstances of wear and environment. Lacquers are affected by pollutants, temperature extremes, ultraviolet light, marine salt air or spray, paint fumes, and household cleaning solutions which contain bleaches, abrasive, or solvents. Ordinary wear from frequent handling is also a factor. The harsh salt air environment of beach-front properties is perhaps the most severe condition frequently encountered, where lacquers can fail in a matter of weeks.

It is STRONGLY RECOMMENDED that ANY BRASS HARDWARE USED OUTDOORS BE COATED WITH WAX - either a nonabrasive paste furniture wax or a nonabrasive automotive wax. This waxing should be done immediately when the hardware is installed, and maintained frequently thereafter.

For more information on the care and maintenance of solid brass hardware, see the Caring for Window and Door Hardware section of our website.

Oil Rubbed Bronze Hardware Maintenance

Your dark oil rubbed bronze finish is not coated with lacquer and is designed to age naturally over a period of time. How quickly this process occurs is both dependant upon usage and whether the product is used externally. The natural ageing process will allow the brass color of the underlying metal to show through along areas of wear.

To retain luster to the product, clean periodically once every 2 or 3 months with a soft cloth and apply a light coating of bee's wax to the product and buff up using a soft cloth. Alternatively you can leave the product to naturally age with elegance.

Do not use any abrasive or non abrasive cleaning materials or solvents when cleaning your oil rubbed bronze product or the Bronze color may be removed completely.

Hardware with a Physical Vapor Deposition (PVD) Finish

Your PVD finished product has undergone a state of the art process known as Physical Vapor Deposition. A layer of hard-wearing metals are deposited onto the solid brass substrate which means it has been given a tough finish to resist fading and discoloration by direct sunlight, humidity, and most other environmental factors, even in coastal areas.

To help retain the appearance of your PVD products for many years to come, a little periodic maintenance is required to remove any atmospheric deposits from the surface of the product.

- Once every two months clean the surface of the product thoroughly with a soft cloth moistened with light soapy water.
- To remove heavier deposits, a spot of non-abrasive kitchen cleaner may be used with a moistened cloth. Remove traces of water and cleaner and dry thoroughly with a soft cloth.
- When using any proprietary cleaner always follow the advice given by the manufacturers in handling cleaning materials.
- Do not use any abrasive cleaning materials or solvents when cleaning your PVD products.

Gallery Collection Hardware

Marvin Gallery Collection Hardware features designer handle sets from leading hardware manufacturers that compliment a wide variety of architectural and design styles. For care and maintenance recommendations, please consult the specific hardware manufacturer.

Bouvet® - www.bouvet.com

Rocky Mountain - www.rockymountainhardware.com

Ashley Norton® - www.AshleyNorton.com

Baldwin® - www.baldwinhardware.com

Lacquer Failure

The initial symptom of lacquer failure consists of tiny darkened spots on the brass. If tarnishing is allowed to continue, the brass will eventually acquire an overall greenish brown "antique" look which some people enjoy. To restore a bright brass appearance, the hardware must be stripped of any remaining lacquer, buffed to luster, then either relacquered, waxed or routinely polished.

Old lacquer can be stripped using very fine #0000 steel wool soaked in a light oil or soapy solution to reduce abrasion marks. Soaking the hardware in lacquer thinner might be necessary to loosen stubborn lacquer, but be certain the hardware contains no plastic parts, which the thinner will destroy. Then the brass can be polished either by hand with a soft cloth, or on a buffing machine, using brass polish or "wadding" compounds. Appropriate supplies can sometimes be obtained in kit form, such as Gillespie Refinishing Kit.

Do-it-yourself aerosol lacquers are seldom successful, and professional lacquers require very specialized equipment an facilities to be safely applied. The best lacquers are often two component "epoxy" type and are applied by opposite electrostatic charges on the metal and spray equipment. Special air cleaning, fume evacuation and explosion proof equipment is needed. A number of commercial plating or metal refinishing shops can be found in most large cities, and are apt to have the necessary equipment and experience to refinish your hardware. After re-lacquering, the hardware should be waxed just like new hardware.

Screens, Interior Shades and Energy Panels

Screen Maintenance

If you live in a cold climate, it is recommended that during the winter months, you remove any exterior screens to avoid snow and ice from collecting, causing the mesh to sag.

The most effective method of cleaning the screens on your windows and doors is to remove the screens, lay them on a flat clean area (such as a sidewalk), and spray off any dust or debris with water from your garden hose. Allow the screens to completely air dry before replacing in the window or door. Contact your Marvin dealer if you require assistance with screen replacement.

Attention

Marvin screens are designed to stand up to everyday use. However, these screens are not intended to act as a safety device. Every screen installed on Marvin products has a non-removable label affixed to it that states the following: "WARNING: Screen will not stop child from falling out window. Keep child away from open window."

NOTE: Certain size screens have a factory bow in the frame; this is to ensure a snug fit and is NOT a defect.

Window Screen Removal and Installation

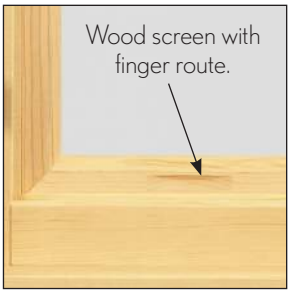
Some screens utilize screen lifts located on the bottom of the screen. To remove the screen, simply pull up on the screen lift and pivot the screen toward you from the bottom and remove. Release tension and guide the screen from the window. To install, reverse the procedure.

Other screens utilize a plunger pin system. To remove the screen, grasp the plunger pins and pull inward until the pins clear the screen lip on the frame cladding. On the Clad Ultimate Double Hung, push the screen outward, grasp the screen frame and pull down slightly. Turn the screen sideways and bring it into the dwelling. To reinstall the screen, place the screen sideways through the window frame, turn to an upright position and place the top plunger pins against the screen lip at the head jamb. Pull the screen toward the interior, holding the plunger in the open position. Once flush against the frame, release the plunger to lock against the screen lip.

NOTE: For easier removal of the screen, Marvin recommends that you remove the operating sash on double hung units.

Wood Swinging Screen - Windows

For information on how to install or remove the Wood Swinging Screen, please refer to the Marvin Push Out Casement Wood Screen Installation Instruction (part number 19970098) on www.marvin.com.



Retractable Screen - Ultimate Double Hung Next Generation

To operate the Retractable Screen on the Next Generation Double Hung product, grasp the pull bar with one hand placed on both ends of the pull bar. With a downward motion, pull the screen down to the desired latch point, at the check rail or sill. Latches will bypass the check rail latch point when pulling the screen down.

To return the screen to the concealed position, retract the latches, by pulling inwards on the finger tabs, at both ends of the pull bar simultaneously. Lift the pull bar past the latch points at the sill or check rail. Latches must be fully retracted at the sill and check rail latch points when lifting the screen up. Gently assist the screen to the concealed position by pushing the pull bar upward to the top of the unit.

Retractable Screen - Ultimate Casement, Ultimate Awning

To operate the Retractable Screen on a Casement product, grasp the pull bar and slide the screen horizontally until the pull bar meets the opposite jamb. For an Ultimate Awning, the screen operates vertically from top to bottom. To close, slide the pull bar back to its original position.

For information on how to install or remove the Retractable Screen, please refer to the Retractable Screen Installation and Service instruction (part number 19970288) on www.marvin.com.

Operating the Retractable Screen

Operating the Retractable Screen (Ultimate Casement shown)

Interior Shade - Ultimate Casement, Direct Glaze, Double Hung, Sliding Door and Swinging Door

To operate the Interior Shade, grasp the pull bar with both hands and slide interior shade vertically on Ultimate Casement, Direct Glaze, Double Hung and Swinging Door. Grasp Sliding Door pull bar at handle height and move horizontally. To close, slide the pull bar back into its original position.

For information on care and cleaning of your Interior Shade please refer to the Marvin Interior Shade Care and Cleaning Instruction (part number 19915280).

For information on installing of your Interior Shade please refer to the Marvin Interior Shade Sliding Door installation Instruction (part number 19915668), Marvin Interior Shade Swinging Door installation instruction (part number 19915149), or the Marvin Interior Shade UCA/DG installation instruction (part number 19915147).

For any further information please refer to marvin.com.

Standard Swinging Screen - Doors

To remove the standard swinging screen door, first open the active screen panel and disconnect the autocloser. Remove the #6 x 1/2" (13mm) screw attaching the closer to the head jamb bracket. Then, remove the hinge pins from the active screen panel hinges, remove the panel from the hinges and store. On XX configurations, open the passive screen panel and remove the hinge pins in the same manner as the active.

Adjust the closing tension on your swinging screen door by loosening the two screws attaching the door bracket to the screen panel. Slide the bracket and closer left or right as needed and tighten the screws. Adjust the closing speed by tightening or loosening the adjusting screw located on the cylinder assembly.

Ultimate Swinging Screen - Doors

The Ultimate Swinging Screen for Inswing Doors has a mesh screen option which can be removed and replaced by a storm insert. Directions on how to remove one and install the other can be found in the installation instructions (part number 19970256) or by visiting the installation section of the marvin website (www.marvin.com).

Standard Sliding Screen - Doors

Panel guide

To remove the Standard Sliding Screen panel, start at the bottom corner and pry the screen panel guide up with a putty knife. Pull the guide off the screen sill track and work your way to the other end. Once the sill end of the screen panel is completely released from the sill track, pivot the bottom of the screen out and push the panel toward the head jamb. This will release the screen panel rollers from the head jamb screen track. Remove the panel from the door.

The screen can be adjusted from the interior by loosening or tightening the top roller screw nearest the locking jamb. Adjust the screen so that it is parallel to the locking jamb or casing. An even reveal should be achieved along the entire height of the jamb. If more adjustment is necessary, the other roller adjustment screw can be used but the screen panel will need to be removed for access.

More information on how to install or remove the screen can be found in the instructions (part number 11701015) or by visiting the installation section of the marvin website www.marvin.com.

To watch a video on how to remove the standard sliding screen, log on to www.marvin.com and navigate to the video gallery. Or, scan this code with your smart phone or similar device.

Ultimate Sliding Screen - Doors

To remove the Ultimate Sliding Screen, simply remove the plugs from the screen track to reveal the access hole. Remove the screws attaching the screen to the roller bar and lift it off the guide.

Screen adjustment is possible by loosening or tightening the adjustment screw found in the roller bar assembly. Slide screen panel so that adjustment screw lines up with access hole. Turn the adjustment screw(s) counterclockwise or clockwise. An even reveal should be achieved along the entire height of the jamb. For detailed instructions on how to install the screen, see our installation instructions or go to our website www.marvin.com.

To watch a video on how to remove the Ultimate Sliding Screen, log on to www.marvin.com and navigate to the video gallery. Or, scan this code with your smart phone or similar device.

Wood Combination for Wood Inswing Door

A Wood Combination is a wood framed assembly containing an interchangeable storm panel and screen. This door is installed on the exterior of the Marvin Swinging French Door. For assembly and installation information see the installation instructions (part number 19970612) or visit www.marvin.com.

Energy Panels

Occasionally make sure that all fasteners on your energy panels are closed securely. Clean and maintain glass the same way as your other windows for regular interior and exterior care.

NOTE: Hard coat Low E energy panels require a cleaning solution of one part vinegar with ten parts water.

Lock Status Sensor

If you have any questions regarding our lock status sensor option, visit our website, www.marvin.com and search for "lock status sensor".

Contact Marvin

If you are having a problem not explained in this manual, or if the solution seems inappropriate for your situation, contact your local Marvin dealer. If you are unsure who your local dealer is, visit our website and use the "Find a Dealer" locator tool in the upper right hand corner of the home page. While there, visit our troubleshooting section to find more information on your problem.

If you need help identifying the appropriate dealer or distributor, or if you feel the timeliness of the response was not adequate, please contact Marvin Windows and Doors to initiate the service request resolution. You may contact Marvin at 1-888-537-7828 or visit our website (www.marvin.com) and select "Contact Us".

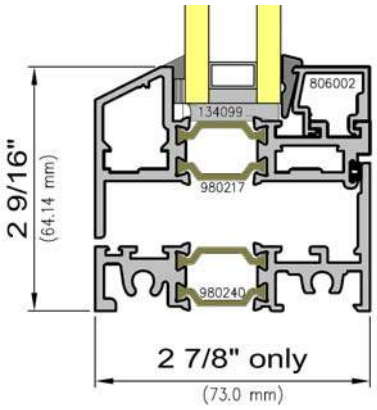
When contacting your Marvin dealer, please provide them with the "Customer Service Serial Number" etched on the corner of your Marvin window or door. Also if you know the approximate purchase date of your products, please provide that information as well.

WAUSAU
WINDOW AND WALL SYSTEMS

TECHNICAL GUIDE

PROJECTED, CASEMENT and FIXED

Architectural Windows **2250i, 3250i** and **4250i-XLT INvent™ Retro** Series



Features

- ✓ 2 7/8", 3 7/8" and 4 7/8" frame depth with extra-wide polyamide thermal barrier
- ✓ AAMA AW-100 Performance Class
- ✓ Beveled, cove, ogee or square exterior face to replicate putty-glazed window profiles
- ✓ Equal sight line option at vents and fixed lites (2250i-XLT)
- ✓ Fixed, project-out awning, project-in hopper, or casement
- ✓ Flush vent construction reduces collection of dust and debris
- ✓ Muntins available for historical renovation – choose from true divided lites, removable grids, between-glass, or tape-applied options
- ✓ Dual glazed option with hinged or lift-out access panels
- ✓ 5/8" or 1" between-glass Venetian blinds available
- ✓ Slide-in heavy duty steel anchors
- ✓ 1/8" principal wall thickness
- ✓ Multi-lock hardware option for improved accessibility
- ✓ Head, sill and jamb receptors available
- ✓ Broad selection of renovation panning
- ✓ Offered through Advantage by Wausau
- ✓ NFRC labeled
- ✓ High recycled content aluminum framing

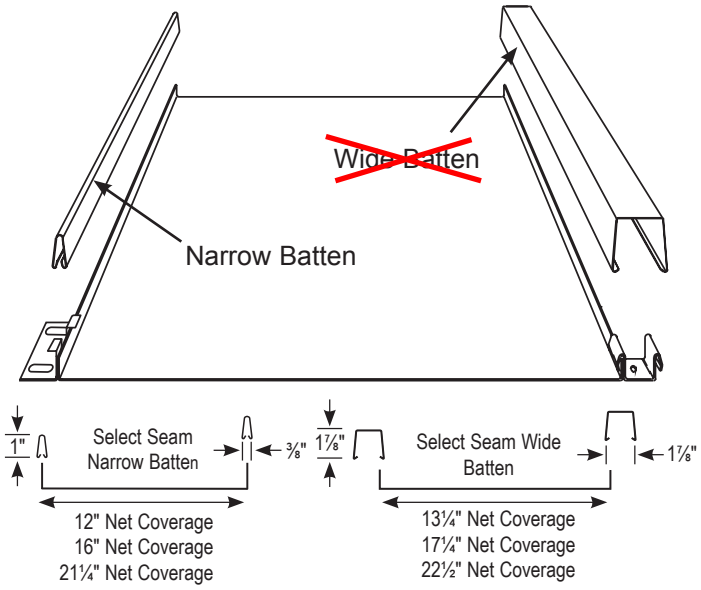
Performance

Allowable Air	0.10 cfm/sqft at 6.24 psf
Water	15 psf
NFRC U-Factor	0.21 to 0.63 BTU/hr.sqft.°F
CRF_f	43 to 67 (est.).
STC	31 to 40

Select Seam®

Select Seam is a concealed fastener, non-structural, batten seam metal roof system.

Select Seam's wide pan appearance offers a clean, classic architectural effect ideal for institutional and commercial work, such as educational facilities, commercial office buildings, hotels, fire stations and retrofit applications.



Section Properties								
Gauge	Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Wt. (lbs/ft²)	I+ (in⁴/ft)	S+ (in³/ft)	I- (in³/ft)	S- (in³/ft)
12" Select Seam (13¼" Wide Batten)								
24	0.0232	50	65	1.49	0.0039	0.0032	0.0063	0.0073
22	0.0294	50	65	1.86	0.0039	0.0032	0.0063	0.0096
16" Select Seam (17¼" Wide Batten)								
24	0.0232	50	65	1.36	0.0029	0.0024	0.0047	0.0055
22	0.0294	50	65	1.71	0.0029	0.0024	0.0047	0.0072
21¼" Select Seam (22½" Wide Batten)								
24	0.0232	50	65	1.25	0.0021	0.0019	0.0036	0.0042
22	0.0294	50	65	1.57	0.0021	0.0019	0.0036	0.0054

NOTES: The moments of inertia, I^+ and I^-, presented for determining deflection are: $(2I_{Effective} + I_{Gross})/3$

standard features

- Factory applied sealant is a standard for Narrow Batten, except for curved applications and short cuts.
- Available Batten width options:
  Narrow Batten: 12", 16" and 21¼"
  Wide Batten: 13¼", 17¼" and 22½"
- Available in 24ga and 22ga in standard finishes. (Refer to AEP Span Color Charts for full range of color options, prints textures, finishes and paint systems).
- Custom manufactured sheet lengths from 5'-0" to 45'-0".
- Recommended minimum slope of 3:12.
- Performance testing (ratings based on specific assemblies):
  Wind uplift – Meets UL 580- Class 90 wind uplift requirements (24 ga minimum). Per ASTM E1592: 12", 16" Narrow Batten, 17¼" Wide Batten.
  Air & water infiltration per ASTM E283 and ASTM E331: Narrow Batten only with sealant.
- Panel (12" and 16") evaluated by accredited third party. All structural performance data is contained within an IBC/IRC 2015 code compliance report.

optional features

- Short cut sheets from 5'-0" to 1'-0". Additional fees and lead times may apply.
- Longer lengths available up to 60'-0". Additional fees and lead times may apply.
- Subtle striations available between ribs to reduce the appearance of oil canning.
- Stucco embossed – Subject to 500 square feet minimum. Additional fees and lead times may apply.
- Available tapered for unique architectural applications.
- Factory applied butyl sealant for ease of installation and weathertightness.
- Narrow Batten panels can be field curved to a 4' radiused application.

Customer Service Center
Tacoma, WA.
Phone: 800-733-4955
Fax: 253-272-0791

DESCRIPTION

The EPIC Collection delivers custom luminaire flexibility with high quality, yet availability expectations of standard specification grade product. The EPIC Collection can be dressed to suit any application. Recognizing evolving environmental and legislative trends, the EPIC Collection delivers world class LED optical and performance solutions to the decorative luminaire marketplace.

Catalog #		Type
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction

TOP: Cast aluminum top housing attaches to cast aluminum mounting arm hub with four stainless steel fasteners. One-piece silicone gasket between mounting hub and top casting seals out moisture and contaminants. (See the mounting accessories section for a full selection of mounting arms. (Only these arms are compatible with the Epic luminaire). MIDSECTION: Continuous silicone gaskets seal lens to top casting and shade. The mid section features cast aluminum construction and stainless steel assembly. SHADES: Heavy gauge precision spun aluminum shades offer superior surface finish and consistency in form. DOORFRAME: Die-cast aluminum 1/8" thick door and doorframe seal to underside of shade with a thick wall continuous silicone gasket. Mounting hub ships attached to mounting arm.

Optics

Choice of twelve patented, high-efficiency AccuLED Optic™ technology manufactured from injection-molded acrylic. Optics are precisely designed to shape the optics, maximizing efficiency and application spacing. AccuLED Optic technology, creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and nominal 70 CRI. Optional 3000K CCT and 5000K CC. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical

LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation, greater than 0.9 power factor, less that 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Finish

Housing is finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR™ cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection.

Warranty

Five-year warranty.

ECM/EMM
EPIC MEDIUM LED

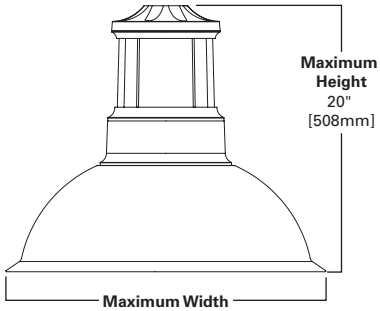
1 - 4 LightBARs

Solid State LED

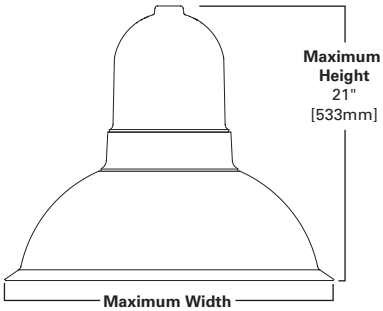
DECORATIVE AREA LUMINAIRE

DIMENSIONS

ECM Classical



EMM Modern



See configurations for more detailed information.

CERTIFICATION DATA

UL/cUL Listed
IP66 LIghtBARs
LM79 / LM80 Compliant
2G Vibration Tested
ISO 9001

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V 50/60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating

EPA

Effective Projected Area: (Sq. Ft.) 0.94

SHIPPING DATA

Approximate Net Weight:
45 lbs. [20 kgs.]

Powering Business Worldwide

CONFIGURATIONS

HOUSING

Classical
8-5/8" H x 8-3/4" W

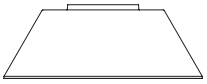
Modern
9-3/8" H
x 8-7/8" W

MID SECTION

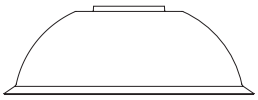
Solid
3-7/16" H x 9-15/16" W

Solid Rings
3-7/16" H x 12" W

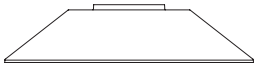
SHADE



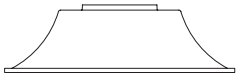
Straight Narrow
6-5/8" H x 19-1/8" W



Bell
8" H x 24" W

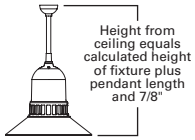


Straight Wide
5-1/8" H x 23-15/16" W



Flute
6" H x 22-1/2" W

MOUNTING OPTION



POWER AND LUMENS BY BAR COUNT (21 LED LIGHTBARS)

Number of LightBARs		E01	E02	E03	E04
Drive Current		350mA Drive Current			
Power (Watts)		25W	52W	75W	97W
Current @ 120V (A)		0.22	0.44	0.63	0.82
Current @ 277V (A)		0.10	0.20	0.28	0.36
Power (Watts)		31W	58W	82W	99W
Current @ 347V (A)		0.11	0.19	0.28	0.29
Current @ 480V (A)		0.09	0.15	0.20	0.21
T2	Lumens	2,948	5,896	8,844	11,792
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3
T3	Lumens	2,936	5,873	8,809	11,745
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3
T4	Lumens	2,876	5,752	8,627	11,503
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G3
5MQ	Lumens	3,054	6,108	9,161	12,215
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2
5WQ	Lumens	2,987	5,975	8,962	11,949
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2
5XQ	Lumens	2,982	5,963	8,945	11,926
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G3	B4-U0-G3
SL2	Lumens	2,878	5,756	8,634	11,512
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2
SL3	Lumens	2,894	5,788	8,682	11,576
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2
SL4	Lumens	2,823	5,647	8,470	11,294
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2
RW	Lumens	2,957	5,915	8,872	11,829
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3
SLL/SLR	Lumens	2,616	5,231	7,847	10,462
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3

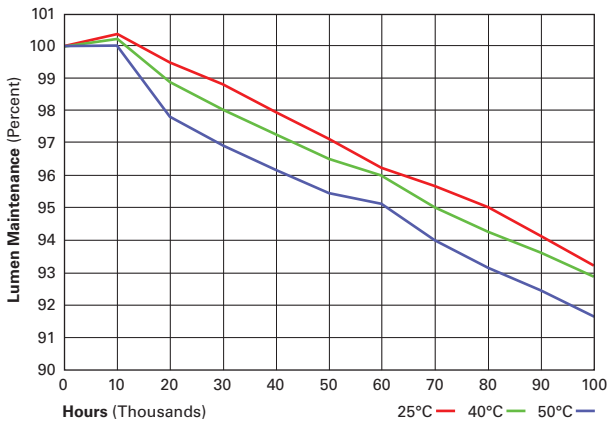
POWER AND LUMENS BY BAR COUNT (7 LED LIGHTBARS)

Number of LightBARs		F01	F02	F03	F04
Drive Current		1A Drive Current			
Power (Watts)		26W	55W	78W	102W
Current @ 120V (A)		0.22	0.46	0.66	0.86
Current @ 277V (A)		0.10	0.21	0.29	0.37
Power (Watts)		32W	60W	85W	105W
Current @ 347V (A)		0.11	0.19	0.28	0.30
Current @ 480V (A)		0.09	0.15	0.21	0.22
T2	Lumens	2,434	4,867	7,301	9,735
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3
T3	Lumens	2,424	4,848	7,272	9,696
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3
T4	Lumens	2,374	4,748	7,122	9,496
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2
5MQ	Lumens	2,521	5,042	7,563	10,084
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2
5WQ	Lumens	2,466	4,932	7,398	9,864
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2
5XQ	Lumens	2,461	4,923	7,384	9,845
	BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G3
SL2	Lumens	2,376	4,752	7,127	9,503
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2
SL3	Lumens	2,389	4,778	7,167	9,556
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B2-U0-G2
SL4	Lumens	2,331	4,662	6,993	9,323
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2
RW	Lumens	2,441	4,883	7,324	9,765
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G3	B3-U0-G3
SLL/SLR	Lumens	2,159	4,318	6,478	8,637
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G3	B1-U0-G3

LUMEN MAINTENANCE

Ambient Temperature	25,000 Hours*	50,000 Hours*	60,000 Hours*	100,000 Hours	Theoretical L70 (Hours)
25ºC	> 99%	> 97%	> 96%	> 93%	> 450,000
40ºC	> 98%	> 97%	> 96%	> 92%	> 425,000
50ºC	> 97%	> 96%	> 95%	> 91%	> 400,000

* Per IESNA TM-21 data.



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
10ºC	1.02
15ºC	1.01
25ºC	1.00
40ºC	0.99
50ºC	0.96

Powering Business Worldwide

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

CONTROL OPTIONS

0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

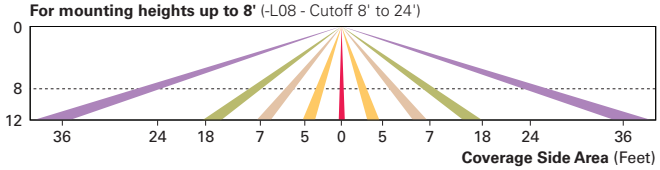
Photocontrol (PC, PER and PER7)
Optional button-type photocontrol (PC) and photocontrol receptacles (PER and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

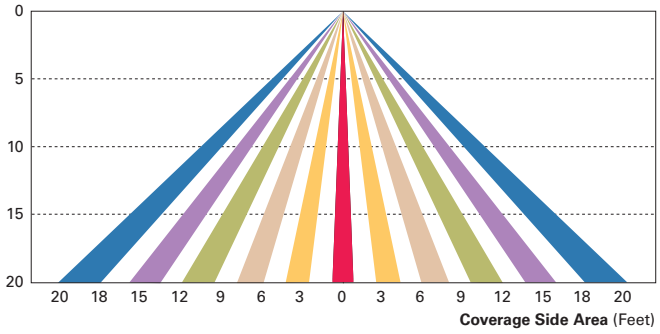
These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-40'.

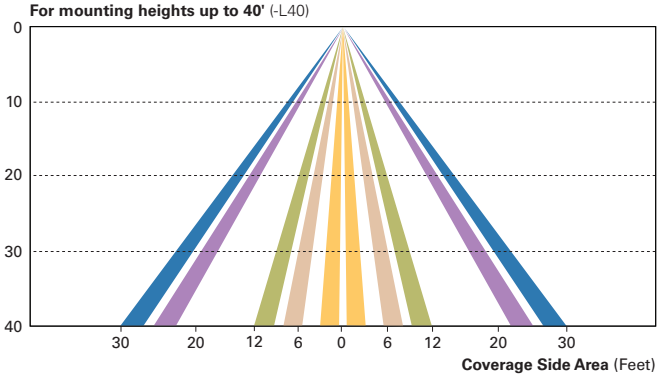
For mounting heights up to 8' (-L08 - Cutoff 8' to 24')



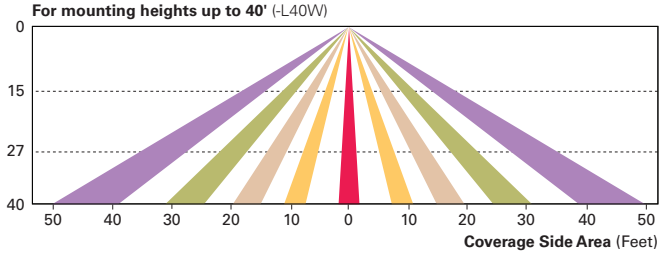
For mounting heights up to 20' (-L20)



For mounting heights up to 40' (-L40)



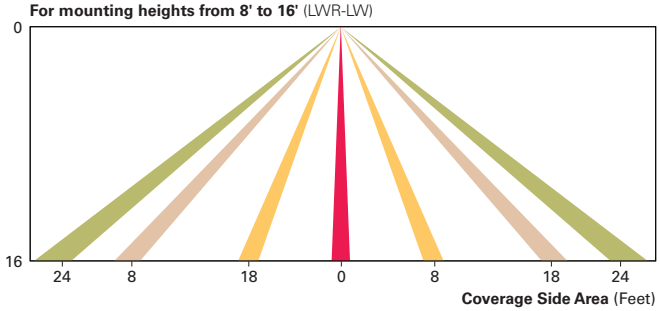
For mounting heights up to 40' (-L40W)



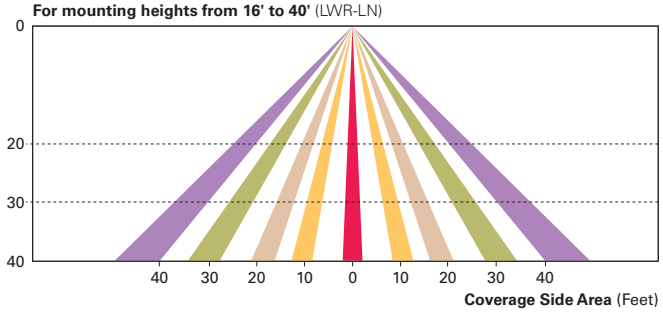
LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)
The LumaWatt Pro system is a peer-to-peer wireless network of luminaire-integral sensors for any sized project. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. The end-user can securely create and manage sensor profiles with browser-based management software. The software will automatically broadcast to the sensors via wireless gateways for zone-based and individual luminaire control. The LumaWatt Pro software provides smart building solutions by utilizing the sensor to provide easy-to-use dashboard and analytic capabilities such as improved energy savings, traffic flow analysis, building management software integration and more.

For additional details, refer to the LumaWatt Pro product guides.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)



ORDERING INFORMATION

Sample Number: ECM-E04-LED-E1-T2-FL-GM

Product Family [1]	Number of LightBARs [2, 3]	Lamp Type	Voltage	Distribution	Mid Section Type	Shade Type	Color [5]
ECM=Epic Classical Medium **EMM**=Epic Modern Medium	**E01**=(1) 21 LED LightBAR **E02**=(2) 21 LED LightBARs **E03**=(3) 21 LED LightBARs **E04**=(4) 21 LED LightBARs **F01**=(1) 7 LED LightBAR **F02**=(2) 7 LED LightBARs **F03**=(3) 7 LED LightBARs **F04**=(4) 7 LED LightBARs	**LED**=Solid State Light Emitting Diodes	**E1**=Electronic (120-277V) **347**=347V **480**=480V [4]	**T2**=Type II **T3**=Type III **T4**=Type IV **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **5XQ**=Type V Square Extra Wide **RW**=Rectangular Wide **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right	**SO**=Solid **SR**=Solid Rings	**SN**=Straight Narrow **SW**=Straight Wide **BL**=Bell **FL**=Flute	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White

Options (Add as Suffix)

2L=Two Circuits [6]
7030=70 CRI / 3000K CCT [7]
7050=70 CRI / 5000K CCT [7]
8030=80 CRI / 3000K CCT [7]
LCF=LightBAR Cover Plate Matches Housing Finish
MS-LXX=Motion Sensor for ON/OFF Operation [8]
MS/X-LXX=Motion Sensor for Bi-Level Switching [9]
PMXX=Pendant Mount (XX=Pendant Length in Inches, 9.5" min - 48.0" max) [10]
HSS=Factory Installed House Side Shield [11]
DIM=0-10V Dimming Driver [12]
LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [13]
LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [13]

Accessories (Order Separately) [14]

Classical
VA6150-XX=Bishop Wall Mount Arm
VA6151-XX=Bishop Wall Mount Arm with Cross Rod
VA6152-XX=Traditional Wall Mount Arm
VA6153-XX=Traditional Wall Mount Arm with 45° Strap
VA6154-XX=Bishop Single Pole Mount Arm
VA6155-XX=Bishop Single Pole Mount Arm with Cross Rod
VA6156-XX=Bishop Twin Pole Mount Arm
VA6157-XX=Bishop Twin Pole Mount Arm with Cross Rods
VA6158-XX=Traditional Single Pole Mount Arm
VA6159-XX=Traditional Single Pole Mount Arm with Rounded Upper Bar
VA6160-XX=Traditional Single Pole Mount Arm with Rounded Lower Bar [15]
VA6161-XX=Traditional Single Pole Mount Arm with 45° Upper Bar
VA6162-XX=Traditional Single Pole Mount Arm with 45° Lower Bar [15]
VA6163-XX=Traditional Single Pole Mount Arm with 45° Upper Strap
VA6165-XX=Traditional Twin Pole Mount Arm
VA6166-XX=Traditional Twin Pole Mount Arm with Rounded Upper Bars
VA6167-XX=Traditional Twin Pole Mount Arm with Rounded Lower Bars [15]
VA6168-XX=Traditional Twin Pole Mount Arm with 45° Upper Bars
VA6169-XX=Traditional Twin Pole Mount Arm with 45° Lower Bars [15]
VA6170-XX=Traditional Twin Pole Mount Arm with 45° Upper Straps
VA6171-XX=Mast Arm Adapter

Modern
VA6101-XX=Bishop Wall Mount Arm
VA6102-XX=Bishop Wall Mount Arm with Cross Rod
VA6103-XX=Traditional Wall Mount Arm
VA6104-XX=Traditional Wall Mount Arm with 45° Strap
VA6105-XX=Bishop Single Pole Mount Arm
VA6106-XX=Bishop Single Pole Mount Arm with Cross Rod
VA6107-XX=Bishop Twin Pole Mount Arm
VA6108-XX=Bishop Twin Pole Mount Arm with Cross Rods
VA6109-XX=Traditional Single Pole Mount Arm
VA6110-XX=Traditional Single Pole Mount Arm with Rounded Upper Bar
VA6111-XX=Traditional Single Pole Mount Arm with Rounded Lower Bar [15]
VA6112-XX=Traditional Single Pole Mount Arm with 45° Upper Bar
VA6113-XX=Traditional Single Pole Mount Arm with 45° Lower Bar [15]
VA6114-XX=Traditional Single Pole Mount Arm with 45° Upper Strap
VA6116-XX=Traditional Twin Pole Mount Arm
VA6117-XX=Traditional Twin Pole Mount Arm with Rounded Upper Bars
VA6118-XX=Traditional Twin Pole Mount Arm with Rounded Lower Bars [15]
VA6119-XX=Traditional Twin Pole Mount Arm with 45° Upper Bars
VA6120-XX=Traditional Twin Pole Mount Arm with 45° Lower Bars [15]
VA6121-XX=Traditional Twin Pole Mount Arm with 45° Upper Straps
VA6122-XX=Mast Arm Adapter

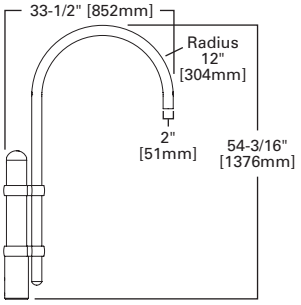
OA/RA1016=NEMA Twistlock Photocontrol - Multi-Tap
OA/RA1027=NEMA Twistlock Photocontrol - 480V
OA/RA1201=NEMA Twistlock Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
LB/HSS-21=Field Installed House Side Shield for "E" LightBARs [11, 16]
LB/HSS-07=Field Installed House Side Shield for "F" LightBARs [11, 16]

Accessory Options [17]
V=Victorian Finial [18]
M=Modern Finial [18]
A=Architectural Finial [18]
N=Nostalgic Finial [18]
R=NEMA Twistlock Photocontrol Receptacle [19]

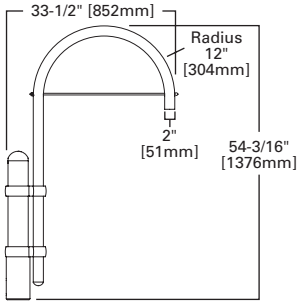
NOTES:
1. Arm not included. Order separately. See accessories.
2. Standard 4000K CCT and greater than 70 RI.
3. 21 LED LightBAR powered by 350mA and 7 LED LightBAR powered by 1A.
4. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
5. Custom and RAL color matching available upon request. Consult your lighting representative at Eaton for more information.
6. Low-level output varies by bar count. Consult factory. Requires quantity of two or more LightBARs.
7. Consult customer service for lead times and multiplier.
8. Sensor mounted to the luminaire. Available in E01-E04 and F01-F04 configurations. Replace "XX" with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
9. Sensor mounted to the luminaire. Available in E02-E04 and F02-F04 configurations. Replace "X" with number of LightBARs operating in low output mode and replace XX with mounting height in feet for proper lens selection, (e.g., MS/3-L25). Maximum four bars in low output mode. Consult factory for additional information.
10. Pendant mount option "PMXX" must be used with Invue Pendant mount kit only. Includes pendant pipe, swivel hangar and canopy cover. Other pendant lengths can be specified in inches (XX). Minimum pendant length is 9-1/2". For lengths above 48", consult your lighting representative at Eaton for more information.
11. Only for use with SL2, SL3 and SL4 distributions.
12. Dimming leads provide for external 0-10V control system (by others).
13. LumaWatt wireless sensors are factory installed only, requiring network components LWP-EM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt application information.
14. Replace XX with color suffix.
15. Only available with traditional arms.
16. One required for each LightBAR.
17. Add as suffix to accessory. Example: VA6109-BK-R.
18. Not available with finials, pendant mount "PM48" or bishop wall mounts.
19. Requires use of 4" O.D. round straight pole.

MOUNTING ACCESSORIES

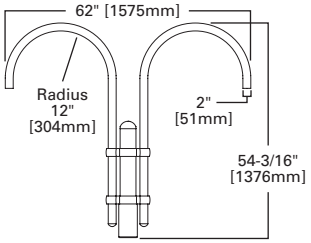
Pole mount arms are designed to fit both medium ECM/EMM housings. (Only these arms are compatible with the Epic luminaire). Arms feature a precision welded cast aluminum mounting hub for attachment of fixture head to arm with four stainless steel fasteners. Wall mount arms compliment pole mount luminaires and attractively transition fixture scale in lower mounting height pedestrian environments. Wall mount arms are designed to fit both medium ECM/EMM housings. Arms feature a precision welded cast aluminum mounting hub for attachment of fixture head to arm with four stainless steel fasteners.



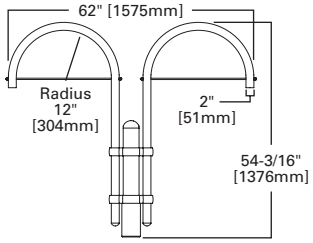
BISHOP SINGLE POLE MOUNT ARM
VA6105 (Modern), VA6154 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 24 lbs. E.P.A: 0.92



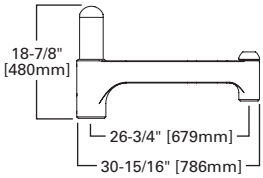
BISHOP SINGLE POLE MOUNT ARM WITH CROSS ROD
VA6106 (Modern), VA6155 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 25 lbs. E.P.A: 0.98



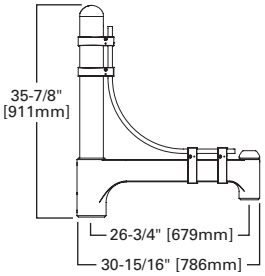
BISHOP TWIN POLE MOUNT ARM
VA6107 (Modern), VA6156 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 37 lbs. E.P.A: 1.43



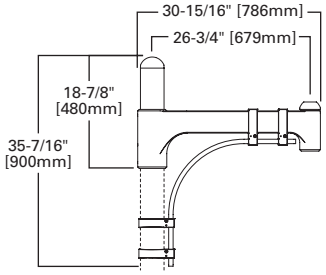
BISHOP TWIN POLE MOUNT ARM WITH CROSS RODS
VA6108 (Modern), VA6157 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 39 lbs. E.P.A: 1.55



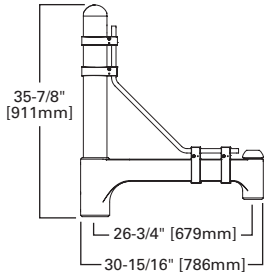
TRADITIONAL SINGLE POLE MOUNT ARM
VA6109 (Modern), VA6158 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 20 lbs. E.P.A: 0.86



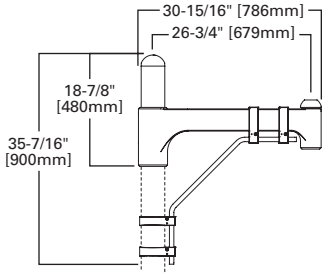
TRADITIONAL SINGLE POLE MOUNT ARM WITH ROUNDED UPPER BAR
VA6110 (Modern), VA6159 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 28 lbs. E.P.A: 1.4



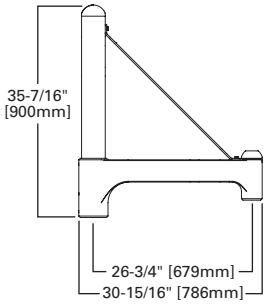
TRADITIONAL SINGLE POLE MOUNT ARM WITH ROUNDED LOWER BAR
VA6111 (Modern), VA6160 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 25 lbs. E.P.A: 1.16



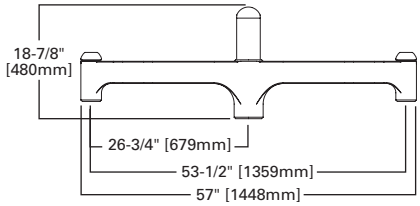
TRADITIONAL SINGLE POLE MOUNT ARM WITH 45° UPPER BAR
VA6112 (Modern), VA6161 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 28 lbs. E.P.A: 1.38



TRADITIONAL SINGLE POLE MOUNT ARM WITH 45° LOWER BAR
VA6113 (Modern), VA6162 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 24 lbs. E.P.A: 1.17

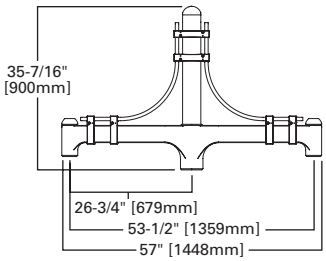


TRADITIONAL SINGLE POLE MOUNT ARM WITH 45° UPPER STRAP
VA6114 (Modern), VA6163 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 24 lbs. E.P.A: 1.17

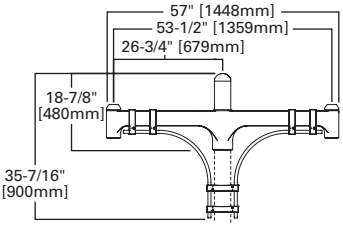


TRADITIONAL TWIN POLE MOUNT ARM
VA6116 (Modern), VA6165 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 30 lbs. E.P.A: 1.44

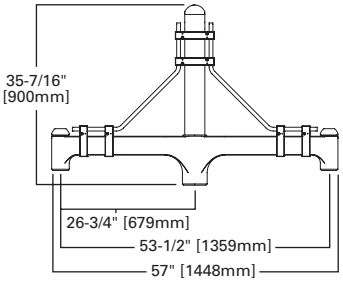
MOUNTING ACCESSORIES



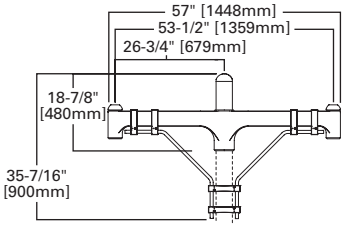
TRADITIONAL TWIN POLE MOUNT ARM WITH ROUNDED UPPER BARS
VA6117 (Modern), VA6166 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 43 lbs. E.P.A: 2.28



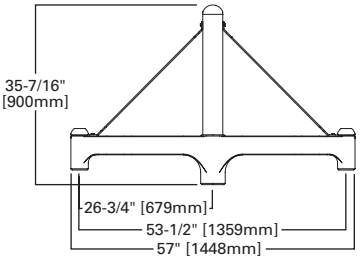
TRADITIONAL TWIN POLE MOUNT ARM WITH ROUNDED LOWER BARS
VA6118 (Modern), VA6167 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 40 lbs. E.P.A: 2.04



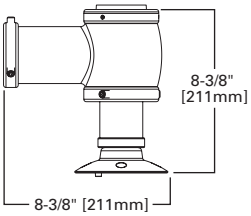
TRADITIONAL TWIN POLE MOUNT ARM WITH 45° UPPER BARS
VA6119 (Modern), VA6168 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 43 lbs. E.P.A: 2.24



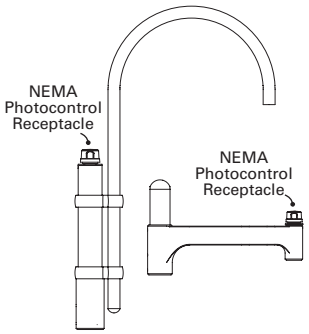
TRADITIONAL TWIN POLE MOUNT ARM WITH 45° LOWER BARS
VA6120 (Modern), VA6169 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 40 lbs. E.P.A: 2.0



TRADITIONAL TWIN POLE MOUNT ARM WITH 45° UPPER STRAPS
VA6121 (Modern), VA6170 (Classical)
Slipfits over 4" round straight pole, or 4" O.D. by 6" tall tenon.
Weight: 37 lbs. E.P.A: 1.81

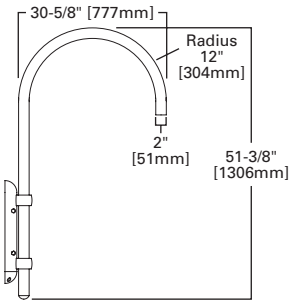


MAST ARM ADAPTER
VA6122 (Modern), VA6171 (Classical)
Secures fixture to nominal 2" pipe (2-3/8" horizontal O.D.)
Weight: 4 lbs.

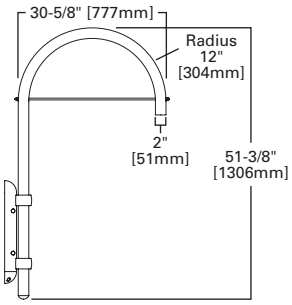


NEMA TWISTLOCK PHOTOCONTROL (R)
Order separately (Not compatible with finials or wall mount bishop arms)

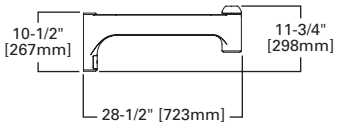
Wall Mount Accessories



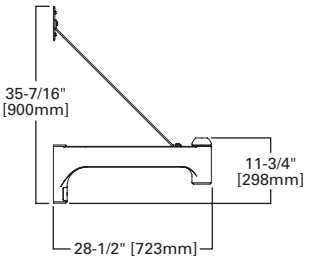
BISHOP WALL MOUNT ARM
VA6101 (Modern), VA6150 (Classical)
Mounts to wall with four stainless steel lag bolts (provided by other).
Weight: 16 lbs.



BISHOP WALL MOUNT ARM WITH CROSS ROD
VA6102 (Modern), VA6151 (Classical)
Mounts to wall with four stainless steel lag bolts (provided by other).
Weight: 17 lbs.



TRADITIONAL WALL MOUNT ARM
VA6103 (Modern), VA6152 (Classical)
Mounts to wall with four stainless steel lag bolts (provided by other).
Weight: 17 lbs.



TRADITIONAL WALL MOUNT ARM WITH 45° STRAP
VA6104 (Modern), VA6153 (Classical)
Mounts to wall with four stainless steel lag bolts (provided by other).
Weight: 18 lbs.

PITCH SINGLE WALL SCONCE

TECH LIGHTING®

An architectural profile reminiscent of beautifully classic roof lines delivers significant light output in this modern LED wall sconce suitable for both indoor and outdoor applications. The Pitch Single's die-cast metal body houses powerful LED light sources that create visual appeal as light cascades down along a wall.

High quality LM80-tested LEDs
for consistent long-life performance and color

Outstanding protection against the elements:
- Marine-grade powder coat finishes
- Stainless Steel mounting hardware
- Impact-resistant, UV stabilized frosted acrylic lensing

Can be mounted for up lighting or down lighting

SPECIFICATIONS

DELIVERED LUMENS	823
WATTS	26.1
VOLTAGE	120V, 277V
DIMMING	ELV
LIGHT DISTRIBUTION	Symmetric
MOUNTING OPTIONS	Downlight or Uplight
CCT	3000K
CRI	80+
COLOR BINNING	3 Step
BUG RATING	B1-U0-G0
DARK SKY	Compliant (Downlight)
WET LISTED	IP65
GENERAL LISTING	ETL
CALIFORNIA TITLE 24	Can be used to comply with CEC 2016 Title 24 Part 6 for outdoor use. Registration with CEC Appliance Database not required.
START TEMP	-30°C
FIELD SERVICEABLE LED	No
CONSTRUCTION	Aluminum
HARDWARE	Stainless Steel
FINISH	Marine Grade Powder Coat
LED LIFETIME	L70; 70,000 Hours
WARRANTY*	5 Years

* Visit techlighting.com for specific warranty limitations and details.

PITCH SINGLE
shown in black

PITCH SINGLE
shown in bronze

PITCH SINGLE
shown in charcoal

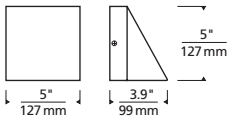
PITCH SINGLE
shown in silver

ORDERING INFORMATION

700WSPIT	SIZE	FINISH	LAMP	
	S SINGLE	**B** BLACK	**-LED830**	LED 80 CRI, 3000K 120V
		Z BRONZE	**-LED830277**	LED 80 CRI, 3000K 277V
		H CHARCOAL		
		I SILVER		

PITCH SINGLE WALL SCONCE

TECH LIGHTING®



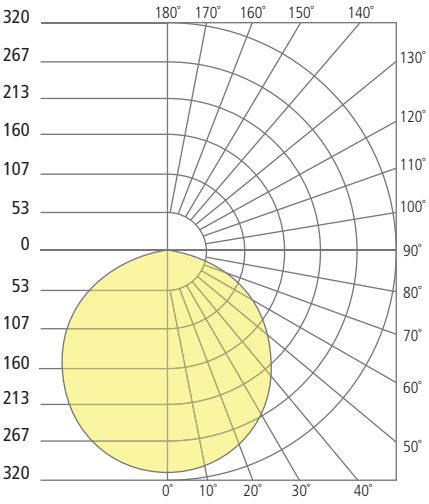
Pitch Single

PHOTOMETRICS*

*For latest photometrics, please visit www. techlighting.com/OUTDOOR

PITCH SINGLE

Total Lumen Output:	823
Total Power:	26.2
Luminaire Efficacy:	31.4
Color Temp:	3000K
CRI:	80+
BUG Rating:	B1-U0-G0



PROJECT INFO

FIXTURE TYPE & QUANTITY

JOB NAME & INFO

NOTES

TECH LIGHTING®

GENERATION BRANDS

7400 Linder Avenue, Skokie, Illinois 60077
T 847.410.4400 F 847.410.4500

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — Our recessed LED module is the most economical means to create a well lit environment with exceptional energy efficiency and near zero maintenance. Great for retrofit into existing downlight cans or new construction and remodel applications. Unique torsion spring and friction clip retention allows fitment into nearly 100% of installed cans. The LED module maintains at least 70% light output for 50,000 hours.

CONSTRUCTION — Aluminum die cast reflector with deep baffle configuration for reduced glare. Combined LED and driver printed circuit board attached. Inner reflector cone funnels light through the pressed-in diffused lens.

Baffle and open trim inserts are available in multiple finishes.

OPTICS — Diffused lens at end of mixing chamber to provide even light distribution for general illumination, equivalent to 65W BR30 or 100W BR30 lamp.

Wide flood beam angle at >45°.

ELECTRICAL — Center 2 Edge™ (patent pending) technology created for a single point source. Primary power disconnect provided for simple connection to a dedicated LED connector in the housing.

Dimming down to 10%. For compatible dimmers, refer to Compatible Dimmers Chart.

725-lumen P series has an input wattage of 12.7 watts, 57 lumens per watt, equivalent to 65-watt incandescent.

P Series' patent pending driver has zero inrush, which allows power loads to be calculated with actual rated wattages.

Example: 47 units of 6BPMW LED fixtures can be installed in line with a 600-watt dimmer. 600W/12.7W = 47 fixtures.

950-lumen P series has an input wattage of 15.2 watts, 63 lumens per watt, equivalent to 100-watt incandescent.

*Actual wattage may differ by +/-5% when operating at 120V +/-10%.

INSTALLATION — Suitable for installation in standard and shallow-height rough-in sections.

E26 socket adapter and splice kit ships standard. This enables easy installation or permanent conversion to an LED source for Title 24 compliance.

Twin torsion springs ensure easy installation.

Friction clips included to allow fitment into cans without torsion brackets from an inside diameter of 6.0" to 7.0".

LISTINGS — CSA certified to US and Canadian safety standards. ENERGY STAR® qualified; California T24 compliant. Wet location listed for indoor use only. WSEC ASTM E283 for Air-Tight (with IC housings).

WARRANTY — 5-year limited warranty. Complete warranty terms located at www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Actual performance may differ as a result of end-user environment and application.

Note: Specifications subject to change without notice.

PATENTS PENDING.

Torsion mount shown

LED Recessed Downlighting

6BP/60P

6" LED Module

IC/Non-IC
Retrofit

Friction clip shown
(included)

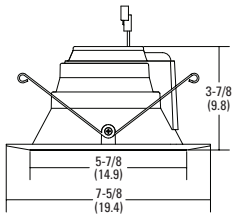
E26 adaptor
(included)

Splice kit
(included)

Specifications

Aperture: 5-7/8 (14.9)
Ceiling opening: Determined by rough-in
Overlap trim: 7-5/8 (19.4)
Height: 3-7/8 (9.8)

All dimensions are inches (centimeters) unless otherwise indicated.



ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative.

Example: 6BP TRMW LED 27K 90CRI

Series/Finish		Lamp	CCT / CRI / W / Lumens[1]		Voltage		Options	
6BPMW	6" Baffle LED module, matte white	LED	(blank)	3000 K / 83 CRI / 12.7W / 725L	(blank)	120V	L7XLED T24	New construction rough-in LED base
6BP TRMW	6" Baffle LED module, black baffle, matte white flange		27K 90CRI	2700 K / 93 CRI / 10.25W / 600L			L7XRLED T24	Remodel rough-in LED base
6BPBN	6" Baffle LED module, brushed nickel		30K 90CRI	3000 K / 93 CRI / 10.25W / 600L			LC6LED T24	New construction rough-in LED base
6BPORB	6" Baffle LED module, oil-rubbed bronze		40K 90CRI	4000K / 92CRI / 9.9W / 650L			L7X	New construction rough-in[2]
							L7XR	Remodel rough-in[2]
		HL LED	(blank)	3000 K / 83 CRI / 15.2W / 950L			L7XP	New construction shallow rough-in[2]
			27K 90CRI	2700 K / 93 CRI / 16.7W / 860L			L7XPR	Remodel shallow rough-in[2]
			30K 90CRI	3000 K / 93 CRI / 16.7W / 860L			LC6	New construction rough-in[2]
			40K 90CRI	4000K / 92CRI / 16.4W / 950L			LCP	New construction shallow rough-in[2]
60PA	6" Open LED module, clear diffuse	LED	(blank)	3000 K / 83 CRI / 12.7W / 725L	(blank)	120V	L7XLED T24	New construction rough-in LED base
60PAZ	6" Open LED module, clear specular		27K 90CRI	2700 K / 93 CRI / 10.25W / 600L			L7XRLED T24	Remodel rough-in LED base
60PA TRMW	6" Open LED module, clear diffuse, matte white flange		30K 90CRI	3000 K / 93 CRI / 10.25W / 600L			LC6LED T24	New construction rough-in LED base
60PAZ TRMW	6" Open LED module, clear specular, matte white flange		40K 90CRI	4000K/ 92CRI / 9.9W / 650L			L7X	New construction rough-in[2]
							L7XR	Remodel rough-in[2]
		HL LED	(blank)	3000 K / 83 CRI / 15.2W / 950L			L7XP	New construction shallow rough-in[2]
			27K 90CRI	2700 K / 93 CRI / 16.7W / 860L			L7XPR	Remodel shallow rough-in[2]
			30K 90CRI	3000 K / 93 CRI / 16.7W / 860L			LC6	New construction rough-in[2]
			40K 90CRI	4000K/ 92CRI / 16.4W / 950L			LCP	New construction shallow rough-in[2]

Accessories: *Order as separate catalog number.*

TSA6	Makes non-bracket housing compatible with the LED module; ships as units, J6 or J25
FL2LED	Makes L7XF housings compatible with the LED module

Notes
1 Total system delivered lumens.
2 Must be ordered on a separate line.

See page 2 for Trim Inserts.

6" LED Module

TRIM INSERTS

TRIM INSERTS (for field configuration; ordered separately) **Example:** 6BP TRMW R12

Series/Finish				Packaging	
6BP TRMW	6" Baffle black, matte white flange insert	6OPAZ	6" Open clear specular insert	R12	Retail pack of 12 units
6BPBN	6" Baffle brush nickel insert	6OPA TRMW	6" Open clear diffuse, matte white flange insert	U	Unit
6BPORB	6" Baffle oil-rubbed bronze insert	6OPAZ TRMW	6" Open clear specular, matte white flange insert		
6OPA	6" Open clear diffuse insert				

Black Baffle with Mattte White Trim Ring **(TRMW)**

Brushed Nickel Baffle **(BN)**

Oil-rubbed Bronze Baffle **(ORB)**

Clear Diffuse with Matte White Trim Ring **(A TRMW)**

Clear Diffuse **(A)**

Clear Specular with Matte White Trim Ring **(AZ TRMW)**

Clear Specular **(AZ)**

ADDITIONAL DATA

ENERGY DATA* - 3000K Standard Lumens		
	CRI - 83	CRI - 93
Lumens	725	600
Min. starting temp	-18°C (0°F)	-18°C (0°F)
Max. temp	46°C (115°F)	46°C (115°F)
EMI/RFI	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B
Sound rating	A standards	A standards
Input voltage	120V	120V
Min. power factor	0.97	0.97
Input frequency	50/60 Hz	50/60 Hz
Rated wattage	12.7W	10.5W
Input power	12.7W	10.5W
Input current	.11A	.09A

*Values at non-dimming line voltage.

ENERGY DATA* - 3000K Hi Lumens		
	CRI - 83	CRI - 93
Lumens	950	860
Min. starting temp	-18°C (0°F)	-18°C (0°F)
Max. temp	46°C (115°F)	46°C (115°F)
EMI/RFI	FCC Title 47 CFR, Part 15, Class B	FCC Title 47 CFR, Part 15, Class B
Sound rating	A standards	A standards
Input voltage	120V	120V
Min. power factor	0.97	0.97
Input frequency	50/60 Hz	50/60 Hz
Rated wattage	15.2W	16.7W
Input power	15.2W	16.7W
Input current	.13A	.14A

*Values at non-dimming line voltage.

Trim finish	Lumen multiplier
Matte White	1.00 (Baseline)
Clear Diffuse	0.99
Clear Specular	0.99
Brushed Nickel	0.83
Black Baffle	0.76
Oil Rubbed Bronze	0.78

Color temperature	Lumen multiplier
2700K	0.97
3000K	1.00 (Baseline)
4000K	1.08

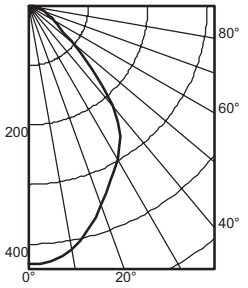
DOWNLIGHTING: One Lithonia Way, Conyers, GA 30012 Phone: 800-315-4935 Fax: 770-860-3129 www.lithonia.com

6" LED Module

PHOTOMETRICS

Distribution Curve | **Distribution Data** | **Output Data** | **Coefficient of Utilization** | **Illuminance Data at 30" Above Floor for a Single Luminaire**

6BPMW LED, 3000 K LEDs, input watts: 12.7, delivered lumens: 703, LM/W=55.4 , test no. LTL25711P, tested in accordance with IESNA LM 79-08



	Ave	Lumens
0	434	
5	430	41
15	388	109
25	325	150
35	267	164
45	149	115
55	63	59
65	38	38
75	20	21
85	5	6
90	0	

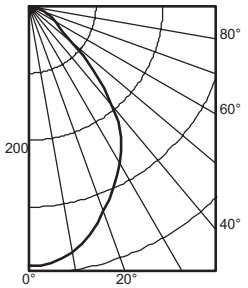
Zone	Lumens	% Lamp
0° - 30°	299.1	42.6
0° - 40°	463.5	66.0
0° - 60°	637.8	90.8
0° - 90°	702.6	100.0
90° - 180°	0.0	0.0
0° - 180°	702.6	*100.0

*Efficiency

pf	80%			20%			50%		
pc				70%					
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	107	104	101	105	102	99	101	98	96
2	97	91	86	95	90	85	91	87	84
3	87	81	75	86	80	75	83	78	73
4	79	72	66	78	71	66	76	70	65
5	72	65	59	71	64	59	69	63	58
6	66	59	53	65	58	53	64	57	52
7	61	53	48	60	53	48	59	52	48
8	56	49	44	56	49	44	54	48	43
9	52	45	40	52	45	40	51	44	40
10	49	42	37	48	41	37	47	41	37

		50% beam - 55.1°		10% beam - 92.6°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	14.3	5.7	7.2	11.5	1.4
10.0	7.7	7.8	3.9	15.7	0.8
12.0	4.8	9.9	2.4	19.9	0.5
14.0	3.3	12.0	1.6	24.1	0.3
16.0	2.4	14.1	1.2	28.3	0.2

6BPMW LED 90CRI, 3000 K LEDs, input watts: 10.3, delivered lumens: 634, LM/W= 62, test no. LTL 23864P, tested in accordance with IESNA LM 79-08



	Ave	Lumens
0	389	
5	384	36
15	353	99
25	299	137
35	239	148
45	137	106
55	57	54
65	33	33
75	16	17
85	4	4
90	0	

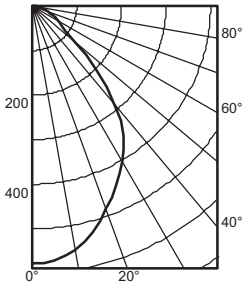
Zone	Lumens	% Lamp
0° - 30°	272.6	43.0
0° - 40°	420.3	66.2
0° - 60°	579.6	91.4
0° - 90°	634.5	100.0
90° - 180°	0.0	0.0
0° - 180°	634.5	*100.0

*Efficiency

pf	80%			20%			50%		
pc				70%					
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	107	104	101	105	102	99	101	99	96
2	97	91	87	95	90	86	92	87	84
3	87	81	76	86	80	75	83	78	74
4	79	72	67	78	71	66	76	70	65
5	72	65	59	71	64	59	69	63	58
6	66	59	53	66	58	53	64	57	53
7	61	54	48	60	53	48	59	52	48
8	57	49	44	56	49	44	55	48	44
9	52	45	40	52	45	40	51	44	40
10	49	42	37	48	42	37	47	41	37

		50% beam - 56.0°		10% beam - 93.1°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	12.8	5.8	6.4	11.6	1.3
10.0	6.9	8.0	3.5	15.8	0.7
12.0	4.3	10.1	2.2	20.1	0.4
14.0	2.9	12.2	1.5	24.3	0.3
16.0	2.1	14.4	1.1	28.5	0.2

6BPMW HL LED 80CRI, 3000 K LEDs, input watts: 15.2, delivered lumens: 950, LM/W=63 , test no. LTL23864, tested in accordance with IESNA LM 79-80



	Ave	Lumens
0	578	
5	572	54
15	525	147
25	444	204
35	355	220
45	204	157
55	85	80
65	50	49
75	24	26
85	5	6
90	0	

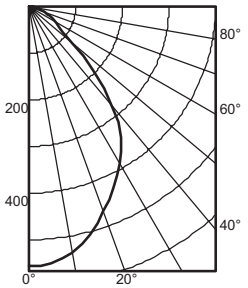
Zone	Lumens	% Lamp
0° - 30°	405.5	43.0
0° - 40°	625.2	66.2
0° - 60°	862.2	91.4
0° - 90°	943.9	100.0
90° - 180°	0.0	0.0
0° - 180°	943.9	*100.0

*Efficiency

pf	80%			20%			50%		
pc				70%					
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	107	104	101	105	102	99	101	99	96
2	97	91	87	95	90	86	92	87	84
3	87	81	76	86	80	75	83	78	74
4	79	72	67	78	71	66	76	70	65
5	72	65	59	71	64	59	69	63	58
6	66	59	53	66	58	53	64	57	53
7	61	54	48	60	53	48	59	52	48
8	57	49	44	56	49	44	55	48	44
9	52	45	40	52	45	40	51	44	40
10	49	42	37	48	42	37	47	41	37

		50% beam - 56.0°		10% beam - 93.1°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	19.1	5.8	9.6	11.6	1.9
10.0	10.3	8.0	5.1	15.8	1.0
12.0	6.4	10.1	3.2	20.1	0.6
14.0	4.4	12.2	2.2	24.3	0.4
16.0	3.2	14.4	1.6	28.5	0.3

6BPMW HL LED 90CRI, 3000 K LEDs, input watts: 16.6, delivered lumens: 910, LM/W= 55, test no. LTL 23864P1, tested in accordance with IESNA LM 79-08



	Ave	Lumens
0	557	
5	551	52
15	506	142
25	428	197
35	343	212
45	196	151
55	82	77
65	48	48
75	23	25
85	5	6
90	0	

Zone	Lumens	% Lamp
0° - 30°	390.9	43.0
0° - 40°	602.6	66.2
0° - 60°	831.1	91.4
0° - 90°	909.8	100.0
90° - 180°	0.0	0.0
0° - 180°	909.8	*100.0

*Efficiency

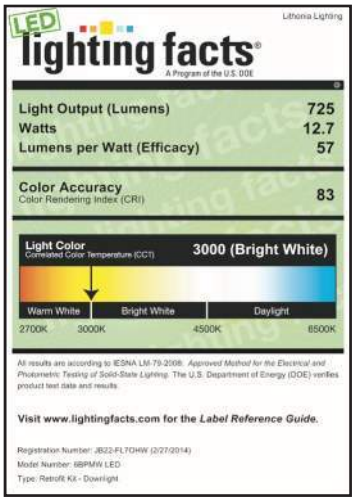
pf	80%			20%			50%		
pc				70%					
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	107	104	101	105	102	99	101	99	96
2	97	91	87	95	90	86	92	87	84
3	87	81	76	86	80	75	83	78	74
4	79	72	67	78	71	66	76	70	65
5	72	65	59	71	64	59	69	63	58
6	66	59	53	66	58	53	64	57	53
7	61	54	48	60	53	48	59	52	48
8	57	49	44	56	49	44	55	48	44
9	52	45	40	52	45	40	51	44	40
10	49	42	37	48	42	37	47	41	37

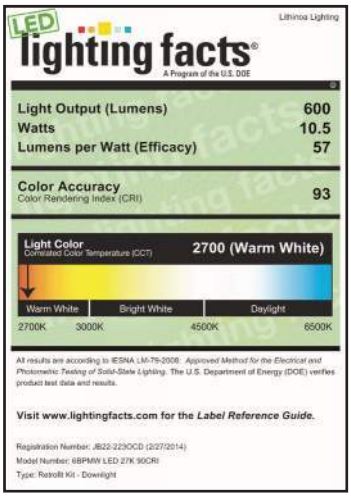
		50% beam - 56.0°		10% beam - 93.1°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	18.4	5.8	9.2	11.6	1.8
10.0	9.9	8.0	5.0	15.8	1.0
12.0	6.2	10.1	3.1	20.1	0.6
14.0	4.2	12.2	2.1	24.3	0.4
16.0	3.1	14.4	1.5	28.5	0.3

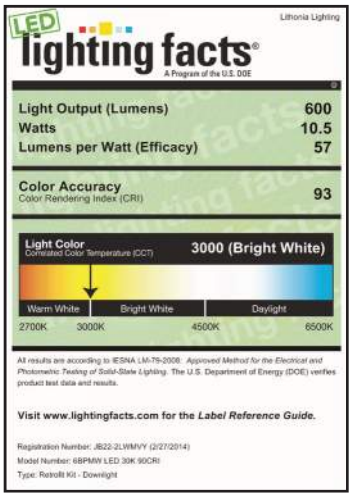
DOWNLIGHTING: One Lithonia Way, Conyers, GA 30012 Phone: 800-315-4935 Fax: 770-860-3129 www.lithonia.com

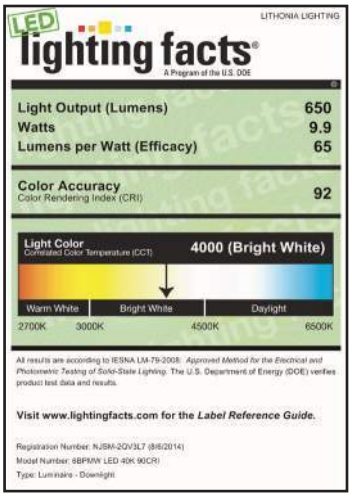
6" LED Module

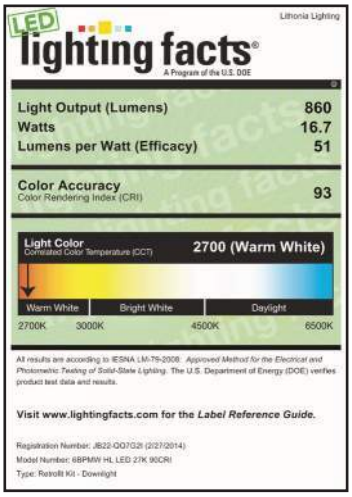
LIGHTING FACTS

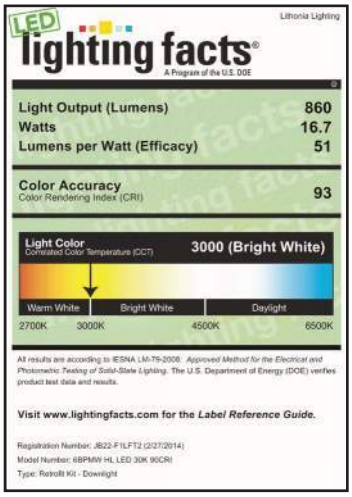


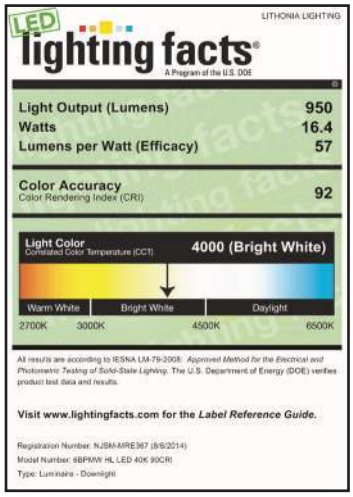












Catalog #: Type:

Project: Date:

Notes:

2-1/2” x 4-3/4” LED Step Light

120V Input

Fits a single gang box

Electrical Data

Catalog Number	Wattage	Source Lumens	Efficacy
SS3006	3W	120lm	40lpw

Construction

Die-cast aluminum housing with solite lens. Surface mount luminaire illuminates stairs, steps or pathways. Energy-saving LED emits through the solite glass lens.

LED Light Engine

- Wattage: 3W
- Lumens: 120lm
- Color Temperature: 2700K (available in amber, see SS3006-AMB)
- Color Rendering Index: 90 CRI

Electrical

- Integral 120V input driver
- Consult factory for dimming options

Finishes

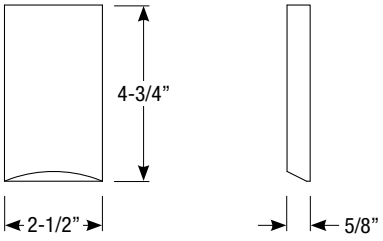
Available in bronze, silver metallic or white.

Installation

Fits in standard single-switch box, and a 2” x 3” handy box.
Junction box mounts vertically.

Listings

- UL listed to US and Canadian standards for wet locations
- ADA compliant



Order Matrix

Step Light Order Matrix (Example: SS3006-BZ)

Series
SS3006-BZ (Bronze LED Step Light) **SS3006-SM** (Silver Metallic LED Step Light) **SS3006-WT** (White LED Step Light)

Revised 06/16/17

14508 Nelson Ave. City of Industry, CA 91744 • tel: 626.336.4511 • fax: 626.330.4266 • www.csllighting.com

Get Connected

Optional connectors allow simple plug 'n play installation and connection.

A Perfect Blend

Patented optical system provides close-to-fixture illumination with short mixing distance and blended color.

With a wide lateral throw, even large spaces and turns are filled in with even light.

Too wide? We have baffles too.

Versatile Mounting

Adjustable (shown), hinged, and fixed brackets make mounting simple.

Additional extension brackets make sign lighting and wall washing simple.

Proper Finish

Black or Clear anodized aluminum.

Lumens / ft

400 lms / ft

51 lms / watt

MEASURED AT 3000°K

Emitting Angles

30° 65° 82°

Lengths

12″
18″
24″
36″
48″

Advanced Engineering

Designed & Made in the USA

Thousands of Architectural LED installations worldwide since 2006.

100% Inspected
Burned-in
Leak Tested
Family Owned

1% Dimming

With patented LightLink™ technology, dim hundreds of Gen3 fixtures to 1% with a single 0-10V interface. No trimming, no flicker, no worries.

Active Thermal

Patent-pending on-board temperature monitoring discreetly dims the fixture upon signs of overheat. Constantly protecting your investment.

Perfect Color

- LEDs Placed In-House
- 3-Step MacAdam Ellipse binning*
- 85 typical CRI

for CCT <= 4500˚K

LED COLORS AVAILABLE

2700°K• 4500°K
3000°K• 5000°K
3500°K 5700°K
4000°K• 6500°K
Green, Blue, Red

• **90+ CRI** option available

More Online

Visit our website for Spec Sheets, Installation Guides, IES & REVIT files and more.

www.i2Systems.com

Gen3™ MiniWasher™

PROJECT NAME

MODEL V3285 | LED LINEAR LUMINAIRE | WET LOCATION†

Gen3 is an architectural-grade, wet-location LED luminaire engineered for the illumination & highlighting of walls & surfaces.

US 8,255,487 | US 8,264,172
Additional Patents Pending

LIGHTLINK™ | 1% DIMMING | ★★★★★ MADE IN THE USA | RoHS COMPLIANT 2002/95/EC | c UL us | FC | ANSI LED BINNING | IP 66 | LM 79 TESTED | LM 80 TESTED LEDS

FIXTURE BUILDER

V3285	A	–			OPTIONS *Select one of each option below*

FIXTURE TYPE

Gen3 MiniWasher

**factory defaults*

OUTPUT

A 8W / Ft

LENGTH

1 12″
8 18″
2 24″
3 36″
4 48″

BEAM ANGLE

3 30°
6 65°
8 82°

LED COLOR

AAH Cool White – 6500°K
AAG Cool White – 5700°K*
AAF Cool White – 5000°K
BBE Neutral White – 4500°K
BBD Neutral White – 4000°K*
BBDR Neutral White – 4000°K - 90+ CRI
CBC Warm White – 3500°K
CBB Warm White – 3000°K*
CBBR Warm White – 3000°K - 90+ CRI
CBA Warm White – 2700°K
CBAR Warm White – 2700°K - 90+ CRI
DC Green
EC Blue
HC Red

LOCATION

☐ Outdoor*
☐ Indoor

FINISH

☐ Black Anodize*
☐ Clear Anodize

ACCESSORIES

DIMMING CONTROL

LIGHTLINK

☐ LL-205-10V 0-10V Bridge & Dimmer

DIMMING CABLE

☐ 685-01561-100 Indoor, 100ft, Plenum
☐ 685-02026-100 Outdoor, 100ft, Water/UV

POWER BOXES

INDOOR RATED

		VOLTAGE	POWERS
☐ E05P	75W	120-277V AC	10 ft

OUTDOOR RATED

☐ E05PW	75W	120-277V AC	10 ft

BRACKETS & BAFFLES

BRACKETS

☐ VLA-14 Rotational Adjustable
☐ VLA-5 Hinge Adjustable
☐ VLA-15 Fixed

EXTENDED BRACKETS

☐ VLAX2-6 6″ Adjustable
☐ VLAX2-12 12″ Adjustable

BAFFLES (INDOOR ONLY)

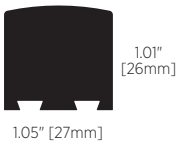
☐ Black 810-02663-**xx**B
☐ White 810-02663-**xx**W

xx *= fixture length*

QUICK SPECS

Input Voltage	20-30V DC, 24V nom.
Power / Ft	8 Watts
Lumens / Ft	400 lms typ. @ 3000°K
Efficiency	51 lms / W typ. @ 3000°K
Operating Temp	-20°C to 40°C
Max. Case Temp	50°C
Humidity	0 to 95% Non Condensing
CRI	85 typ. 90+ Optional
Max. Wire Distance	50 Feet from Last Light to Power Box using 16 AWG
Housing	Mil-Spec Anodized Aluminum
Lens	UV Resistant Acrylic

12.42″ [316mm]
18.42″ [468mm]
24.42″ [621mm]
36.42″ [926mm]
48.42″ [1230mm]



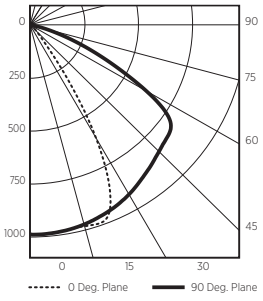
Outdoor Lengths Shown. Subtract .15 inches [3.8mm] for Indoor Lengths.

For complete technical information refer to the Gen3 Installation Guide available at www.i2Systems.com

PHOTOMETRICS

Additional Angles at i2Systems.com

48″ GEN3 MINIWASHER (V3285A-46CBB) RESULTS



Mounting Height	*fc* @ Center Beam	Diameter of Lighted Plane
4.0 ft	61.1 *fc*	4.78 ft
6.0 ft	27.2 *fc*	7.18 ft
8.0 ft	15.3 *fc*	9.57 ft
10.0 ft	9.78 *fc*	12.0 ft
12.0 ft	6.79 *fc*	14.4 ft
14.0 ft	4.99 *fc*	16.7 ft
16.0 ft	3.82 *fc*	19.1 ft

for lux, multiply by 10.8

Multiplier Table	3000°K	4000°K	5700°K
Standard CRI		x1.05	x1.10
High CRI	x0.90	x0.95	x1.00

All results are according to IESNA LM-79-2008: Approved Method for the Electrical and Photometric Testing of Solid-State Lighting.

i2Systems
355 Bantam Lake Rd.
Morris, CT 06763 USA
www.i2Systems.com
tel +1.860.567.0708
fax +1.860.567.2501
sales@i2Systems.com

092-02334B

†Product specified as "Outdoor" is rated for exterior applications, however it is not rated for submersible applications and should not be mounted in conditions where there is, or is a possibility of, standing water. When installing in wet or damp locations, it is good practice to seal all fixtures and junction boxes with electronics-grade RTV silicone sealant to ensure that moisture cannot enter or accumulate in wiring compartments, cables, or other electrical parts. Product should not be installed in extreme locations, including but not limited to those outside of its temperature/humidity rating, environments subject to greater-than-average temperature shifts, and/or applications where product is subject to water runoff or downspouts. For more information, please refer to the Gen3 Installation Guide available at www.i2systems.com.

*Visit **www.timberform.com** to view and download drawings (PDF or DWG), product specifications and placement guidelines.*

CYCLOOPS® TWIST™

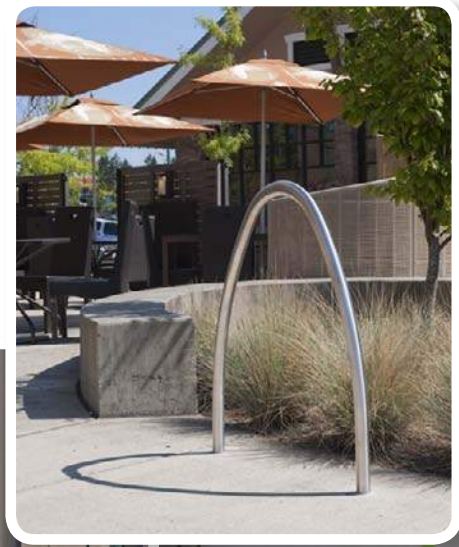
U.S. Design Patent D665,709 (2) 2178-83-E-C

Formed from a single 1-1/2" (38mm) I.D. ASTM schedule 40 steel pipe.

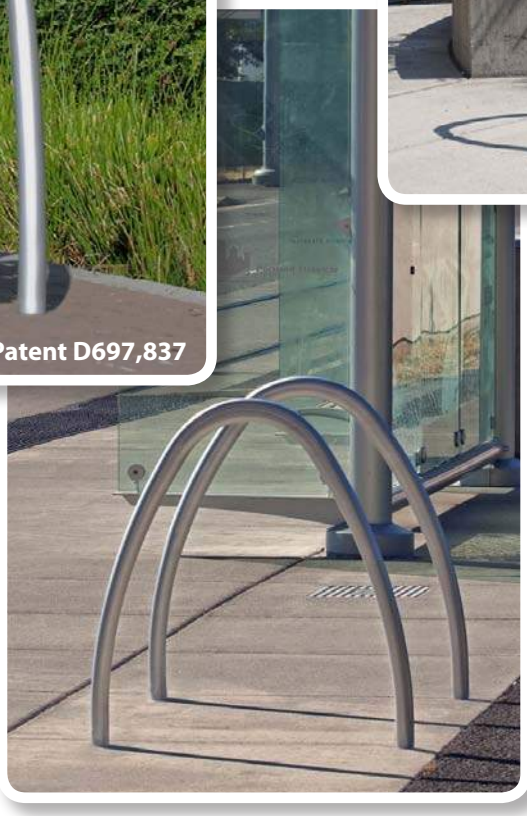
2 POINT CONTACT

CYCLOOPS® ARCH™

(2) 2178-84-E-C U.S. Design Patent D697,837

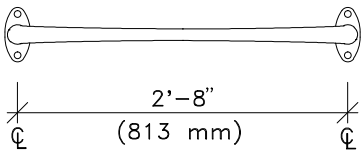


2 POINT CONTACT

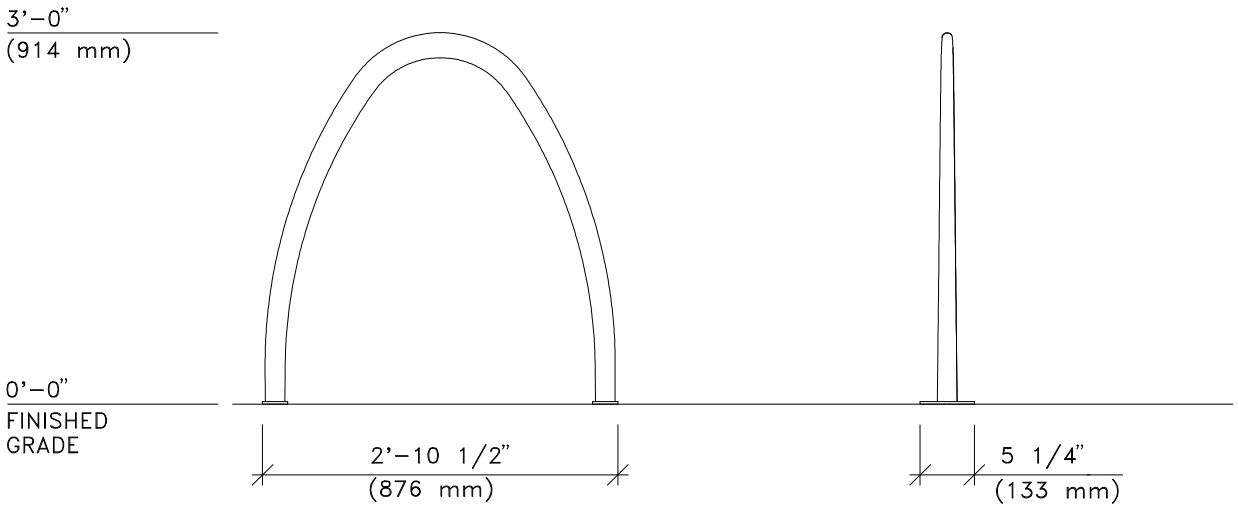


Formed from a 1-1/2" (38mm) I.D. ASTM schedule 40 steel pipe.

Designs marked "2 POINT CONTACT" provide two bicycle contact points for increased stability and security.

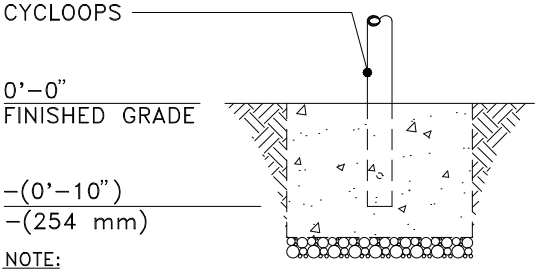


TOP VIEW



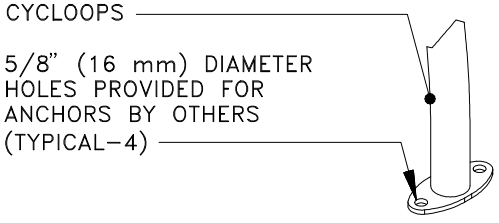
FRONT VIEW

SIDE VIEW



NOTE:
CONCRETE FOOTING AND NO. 4 REBAR (BY OTHERS) PER LOCAL SOIL CONDITIONS. CONSULT PROJECT ENGINEER FOR EXACT REQUIREMENTS.

2178-84-E (EMBEDMENT)



2178-84-SM (SURFACE MOUNT)

△

Scale	Drawn by: CL	09-10-11
3/4"=1'-0"	Ck'd by:	

COLUMBIA CASCADE COMPANY
Makers of TimberForm®, PipeLine® RePlay,® TimberForm®-2, InterPlay® CycLoops® and CycLocker® Products.
1300 S.W. Sixth Avenue, Suite 310 Telephone 503/223-1157
Portland, Oregon 97201-3464 Facsimile 503/223-4530
U.S.A.
WWW.TIMBERFORM.COM

Title:
TIMBERFORM
MODEL NO. 2178-84
CYCLOOPS ARCH

Drawing No.	Sheet
W-2178-84	1 of 1

CYCLE RACKS

SARIS

BIKE TRACS

The bike tracs provide full bike coverage to protect the walls, while also providing freedom for capacity and mounting configuration. Available in locking (2 systems to choose from) and non-locking options.

Specifications							
Model #	# Bikes	Description	weight	length	width	height	Space Requirement
6006	1	Wall Mount	16.7 lbs	18.6"	4.9"	53.3"	71"h x 45"w

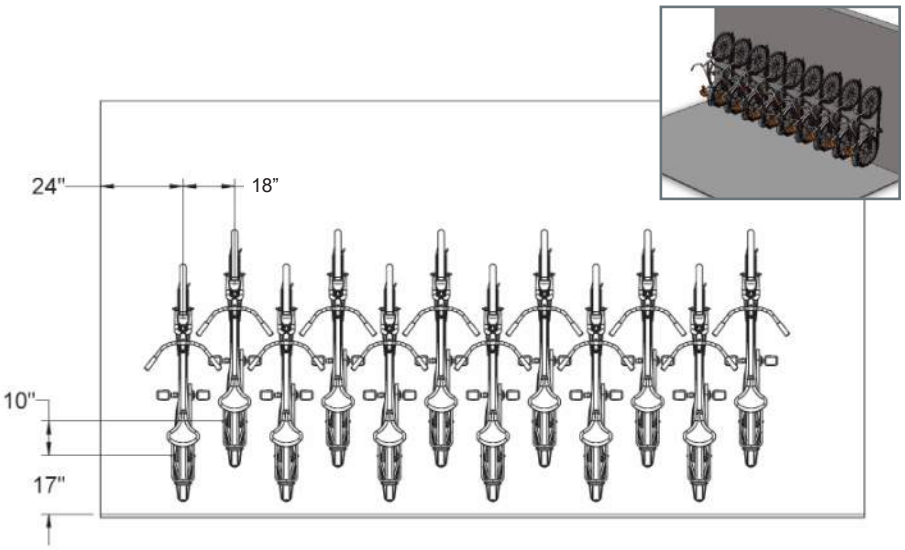
Specifications							
Model #	# Bikes	Description	weight	length	width	height	Space Requirement
6003C	1	Wall Mount	10 lbs.	5.3"	2.9"	53.3"	71"h x 45"w

Specifications							
Model #	# Bikes	Description	weight	length	width	height	Space Requirement
6003T	1	Wall Mount	9 lbs.	5.3"	2.9"	53"	71"h x 45"w

Note: Saris Parking Systems representatives can assist with custom layout and spacing to meet your room dimensions and desired bike capacity.

Bike Tracs

Recommended Spacing



Product Details

- Wide wheel track accepts all bikes
- Full length tray keeps bike in place and protects wall surface
- Two locking mechanism options available

Product Information
Bike Tracs as manufactured by Saris

# of Bikes
1 bike per trac

Finish
Powder coat black only

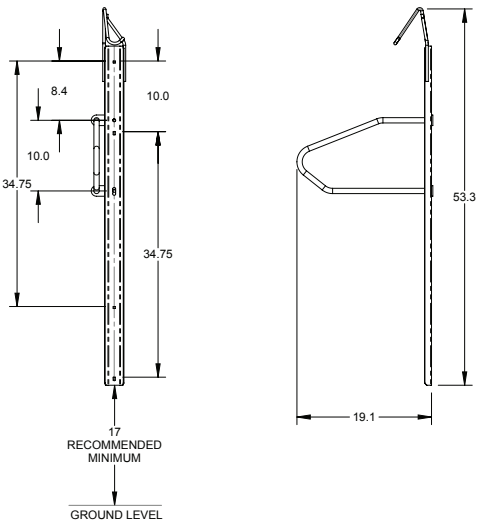
Hardware
Recommended anchor: #6264

Spacing
At 18" Spacing, stagger Tracs 10"
At 21" Spacing, Tracs can be installed at the same height.

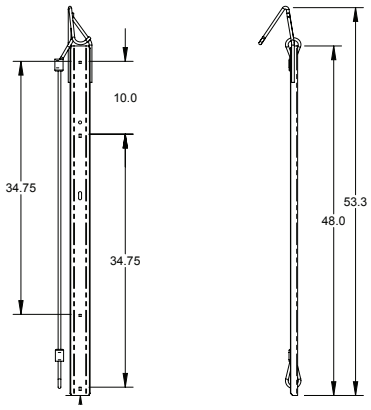
80" minimum ceiling height

Anchors must be purchased separately

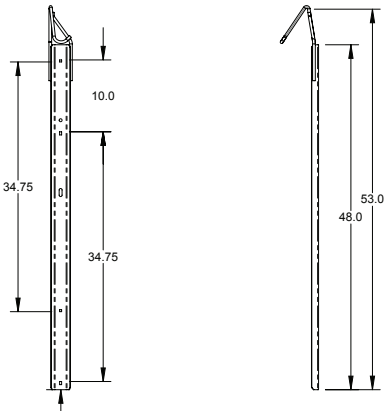
6006



6003C

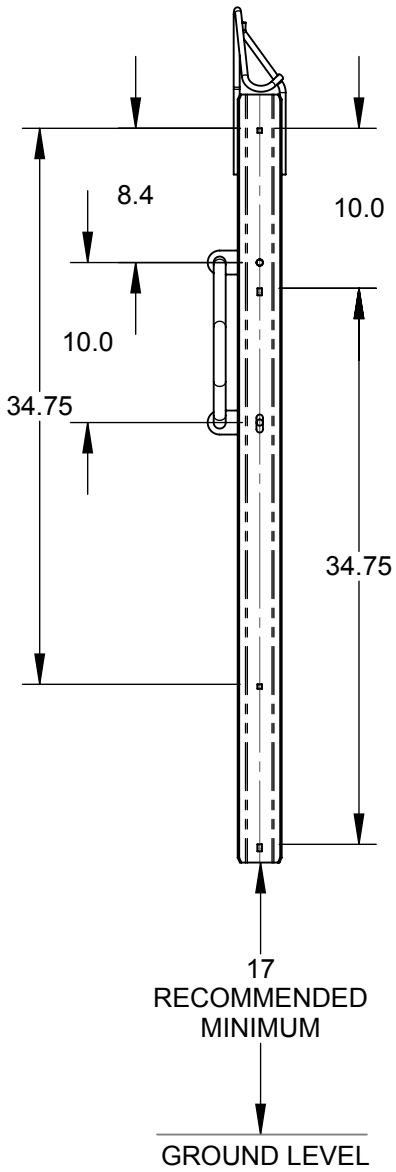


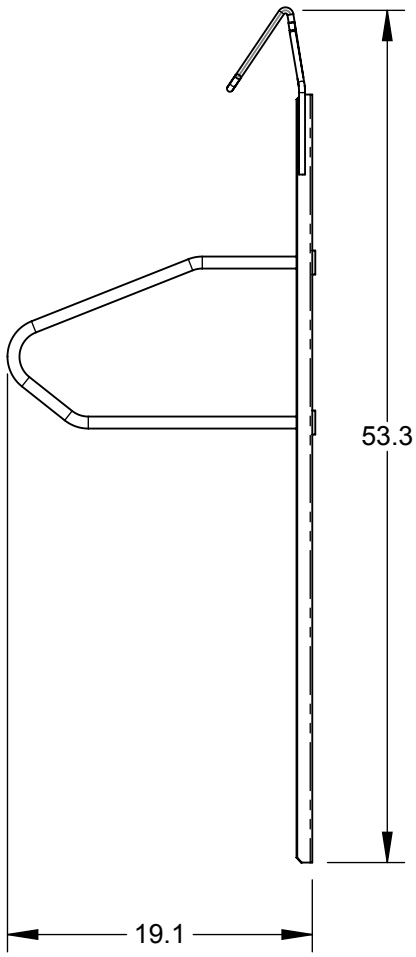
6003T

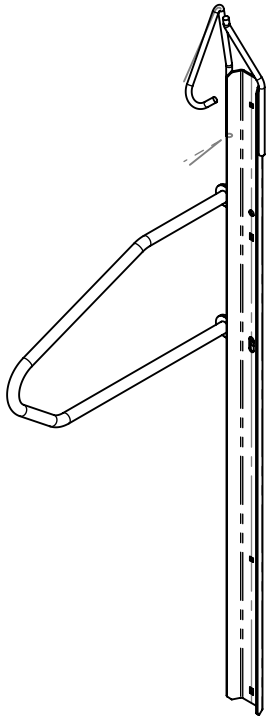


Downloadable product resources available online:

CAD Files
SketchUp Files
Written Specs
Photos







NOTES:

1. DO NOT SCALE DRAWING
2. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS

SARIS CYCLING GROUP
WE BRING CYCLING TO LIFE

powertap

CycleOps

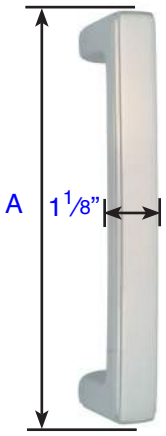
SARIS CYCLING GROUP

5253 VERONA RD., MADISON WI. 53711
1-800-783-7257 / 1-608-274-6550
WWW.SARIS.COM WWW.CYCLEOPS.COM
WWW.POWERTAP.COM

TITLE:

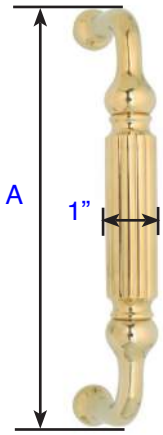
6006 - LOCKING VERTICAL RACK

EMTEK
ASSA ABLOY



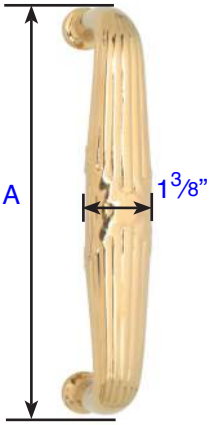
Wilshire Pull (86078)

Projection: 2⅛”
A= 8⅞”
Base: 1⅛” Diameter



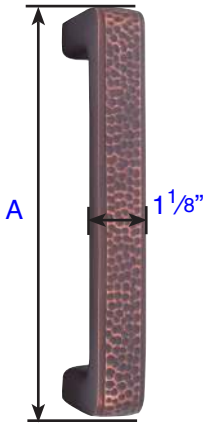
Knoxville Pull (86077)

Projection: 2½”
A= 8 13⁄16”
Base: ¾” Diameter



Ribbon & Reed Pull (86080)

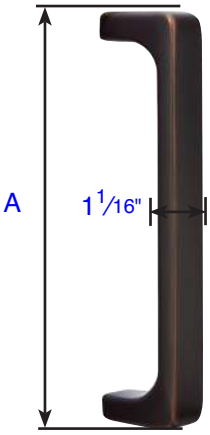
Projection: 2⅜”
A= 8 15⁄16”
Base: 1” Diameter



Arts & Crafts Pull (86079)

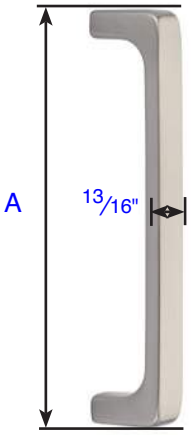
Projection: 2⅛”
A= 8⅞”
Base: 1⅛” Diameter

PEWTER FINISH



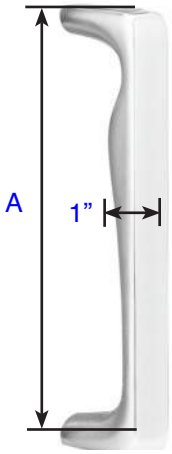
Baden Pull (86184)
Stainless Steel Baden Pull (S86002)

Projection: 2 ⅛”
A= 8 ⅝”
Base: 1" x 1⁄16"



Brisbane Pull (86170)

Projection: 1 13⁄16”
A= 8 9⁄16”
Base: 13⁄16" x 9⁄16"



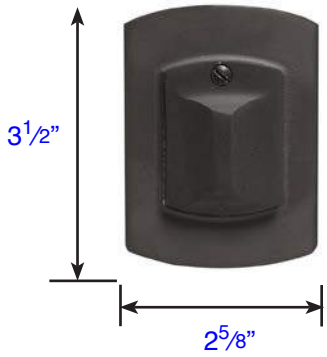
Zeus Pull (86183)
Stainless Steel Zeus Pull (S86001)

Projection: 2 ⅛”
A= 8 ⅝”
Base: 1" x 1⁄16"

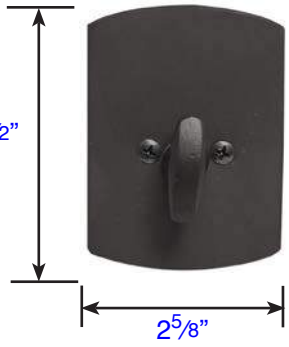
Screw Specifications - Brass 8” Pulls

Standard Components:
- 1”, 10-32 Screws
- 1”, ¼"-20 Screws
- Inserts for ¼"-20 screws
- Inserts for 10-32 screws

#4 Style Plate with Flap Deadbolt



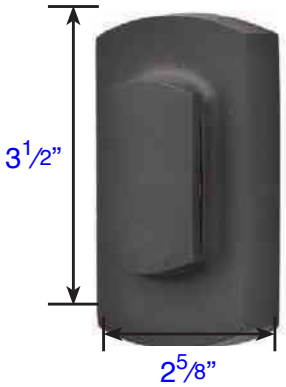
Exterior Trim (8474)
- Projection is 11/16"
- 8374 same on both sides



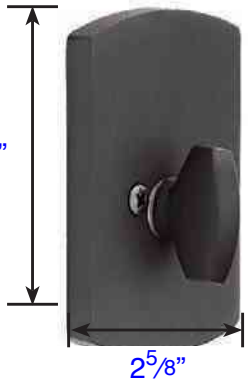
Interior Trim (8474)
- Projection is 1 1/4"
- Thickness is 3/8"

PEWTER FINISH

#6 Ridgemont Style Plate with Flap Deadbolt



Exterior Trim (8476)
- Projection is 15/16"
- 8376 same on both sides



Interior Trim (8476)
- Projection is 1 5/16"
- Thickness is 1/2"

Standard with Sandcast Bronze Deadbolt Locks
- Schlage C Keyway
- Standard Door Prep and Installation
- Solid Brass Cylinder
- Sandcast Bronze Collar and Inside Rosette
- Hardened Steel Bolt
- Heavy Gauge Steel Understrike and Brass Trim Strike Shipped with Every Deadbolt