



DESIGN REVIEW BOARD APPLICATION

Administered by:
Design Review Board

Property Address*: 380 Beale Street

Applicant Name & Mailing Address: Nick Patel - 11227 Matthews Cove Lane, Knoxville TN 37934

Applicant Phone Number: 865-405-6425 Applicant Fax Number: _____

Property Owner's Name & Mailing Address: Nick Patel - 11227 Matthews Cove Lane, Knoxville TN 37934

Property Owner's Phone Number: 865-405-6425

The proposed work consists of the following (check all that apply):

Sign

Renovation

New Building

Other Exterior Alteration

Project Description: New hotel to be built at 380 Beale Street

Status of Project: Design Stage

A complete application must be submitted to the Development Department no later than two weeks before a regularly scheduled meeting of the Design Review Board. Please contact Abe Lueders at (901)575-0565 or alueders@downtownmemphis.com with any questions and to submit an application.

Owner/Applicant Signature: Nick Patel

Date: 1/20/21

*Applications for properties that are located within a Landmarks Historic District may require additional approval from the Landmarks Commission. Please contact the Shelby County Division of Planning & Development at (901) 576-6601 for more information.

February 1, 2021
The Beale Hotel – DRB Application
Design Narrative

To Whom it May Concern:

We appreciate the opportunity to present this new development on behalf of the owner, Nick Patel. While the site is currently zoned as Sports and Entertainment, we wanted to pay homage to the character and history of Beale Street, without replicating it. We hope this development can become an anchor for the east end of Beale Street.

In regards to the placement of the building, we wanted to extend the walkability of Beale Street to our site. We have opened up the corner to create a public plaza that extends to the hotel's front door. The automobile is secondary to our design, and we have not provided any parking adjacent to Beale Street. (Please note the owner does have an agreement for use of the parking lot North of the site).

For the design of the hotel, we felt it was important to pay attention to the pedestrian scale. We have provided ample transparency through the hotel along the ground floor, and have broken up the façade at the pedestrian level with use of awnings, cast stone base, Nichiha, and two different colors of brick. Along the façade of the building, we wanted to break the façade up by using different materials, similar to Historic Beale Street. We aligned windows vertically flanked by brick pilasters similar to 345 Beale Street (please reference our sheet DRB-08). We introduced Nichiha at the primary corner of the building to not only break up the massing, but also highlight the Primary entrance and roof top amenity. The roof top lounge is strategically placed to have views down Historic Beale Street from an elevated level. While we are using EIFS, it has been limited to specific areas to help break up the overall massing. Additionally, no EIFS is being proposed along the ground floor of the building, where a pedestrian can immediately see or touch the surface. All EIFS surfaces are recessed vs. protruding building elements to allow the adjacent material to take precedence. For the overall design of the building, we are currently utilizing 43.88% brick, 24.13% glass/fenestration, 17.23% Nichiha and 14.76% EIFS. Our goal is to find a common language through the design of the exterior by paying homage to Beale Street, while creatively incorporating newer materials that is welcomed in Downtown Memphis.

HOTEL AT BEALE STREET

DESIGN REVIEW BOARD SUBMISSION -
JANUARY 20, 2021



ARCHITECT

ELEVATE | architecture
studio

1398 MARSTON STREET SE | SMYRNA, GEORGIA 30080
PHONE: 770.820.3893

WWW.ELEVATEARCHITECT.COM

DEVELOPER

TCH MEMPHIS, LLC
KNOXVILLE, TN 37934

CONTACT: NICK PATEL - 865.405.6425

HOTEL AT BEALE STREET

380 BEALE STREET
MEMPHIS, TENNESSEE 38103

COVER SHEET

SHEET NUMBER:

DRB

DATE: 01/20/2021

FOR CONCEPTUAL DESIGN ONLY



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HOTEL AT BEALE STREET

380 BEALE STREET
MEMPHIS, TENNESSEE 38103

VIEW AT THE CORNER
OF BEALE STREET &
SOUTH 4TH STREET

SHEET NUMBER:

DRB-07

DATE: 01/20/2021

FOR CONCEPTUAL DESIGN ONLY



BEALE STREET BAPTIST CHURCH - 379 BEALE ST.

LINEAR / VERTICAL ELEMENTS
HISTORIC PRECEDENCE



345 BEALE STREET

HISTORIC PRECEDENCE
LINEAR / VERTICAL ELEMENTS
USE OF BRICK / PILLARS



191 BEALE STREET - FedExForum

CONTEMPORARY / COMMERCIAL PRECEDENCE
MIX USE OF MATERIALS
CONNECTIVITY WITH THE SITE - PEDESTRIAN FOOT TRAFFIC, LANDSCAPING



**183 BEALE STREET -
GALLINA EXCHANGE BUILDING**

USE OF BRICK / BRICK COLOR
LINEAR / VERTICAL ELEMENTS
HISTORIC DETAILS



118 S 2nd St - THE PEABODY MEMPHIS

USE OF BRICK / COLOR
LINEAR / VERTICAL ELEMENTS
SCALE / MASS
CONNECTIVITY TO PEDESTRIAN / STREET LEVEL



**170 Lt. GEORGE W LEE AVE -
THE WESTIN MEMPHIS BEALE STREET**

CONTEMPORARY PRECEDENCE
USE OF MATERIALS WITHIN THE AREA
MASSING / SCALE
CONNECTIVITY BETWEEN BUILDING AND PEDESTRIAN

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HOTEL AT BEALE STREET

380 BEALE STREET
MEMPHIS, TENNESSEE 38103

CONTEXT PHOTOS /
PRECEDENTS

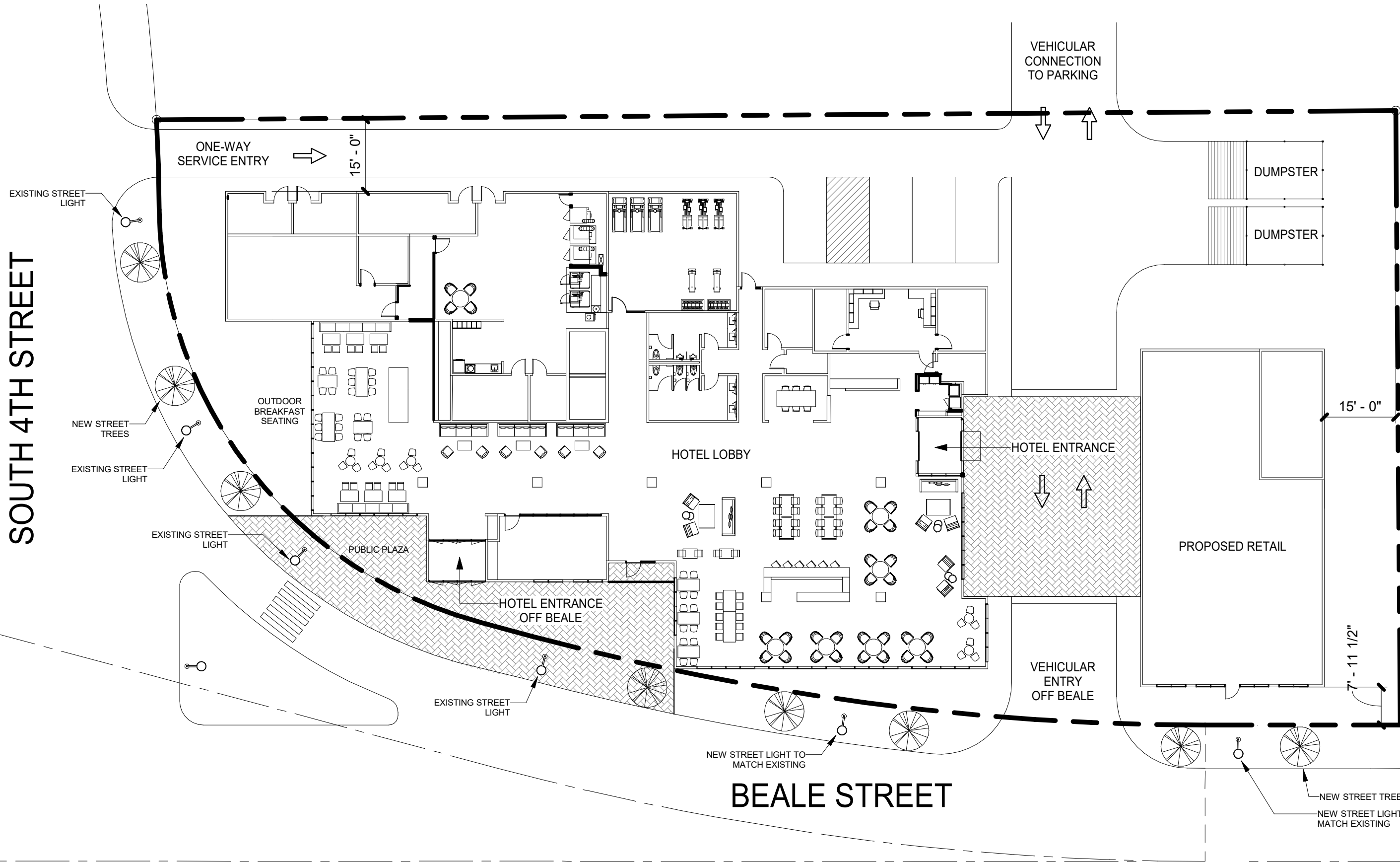
SHEET NUMBER:

DRB-08

DATE: 01/20/2021

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SOUTH 4TH STREET



NOTE: LANDSCAPE DESIGN FOR REFERENCE ONLY. LANDSCAPE ARCHITECT TO BE HIRED BY OWNER AT LATER DATE.

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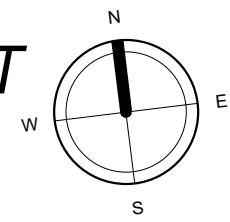
DEVELOPER

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HOTEL AT BEALE STREET

380 BEALE STREET
MEMPHIS, TENNESSEE 38103



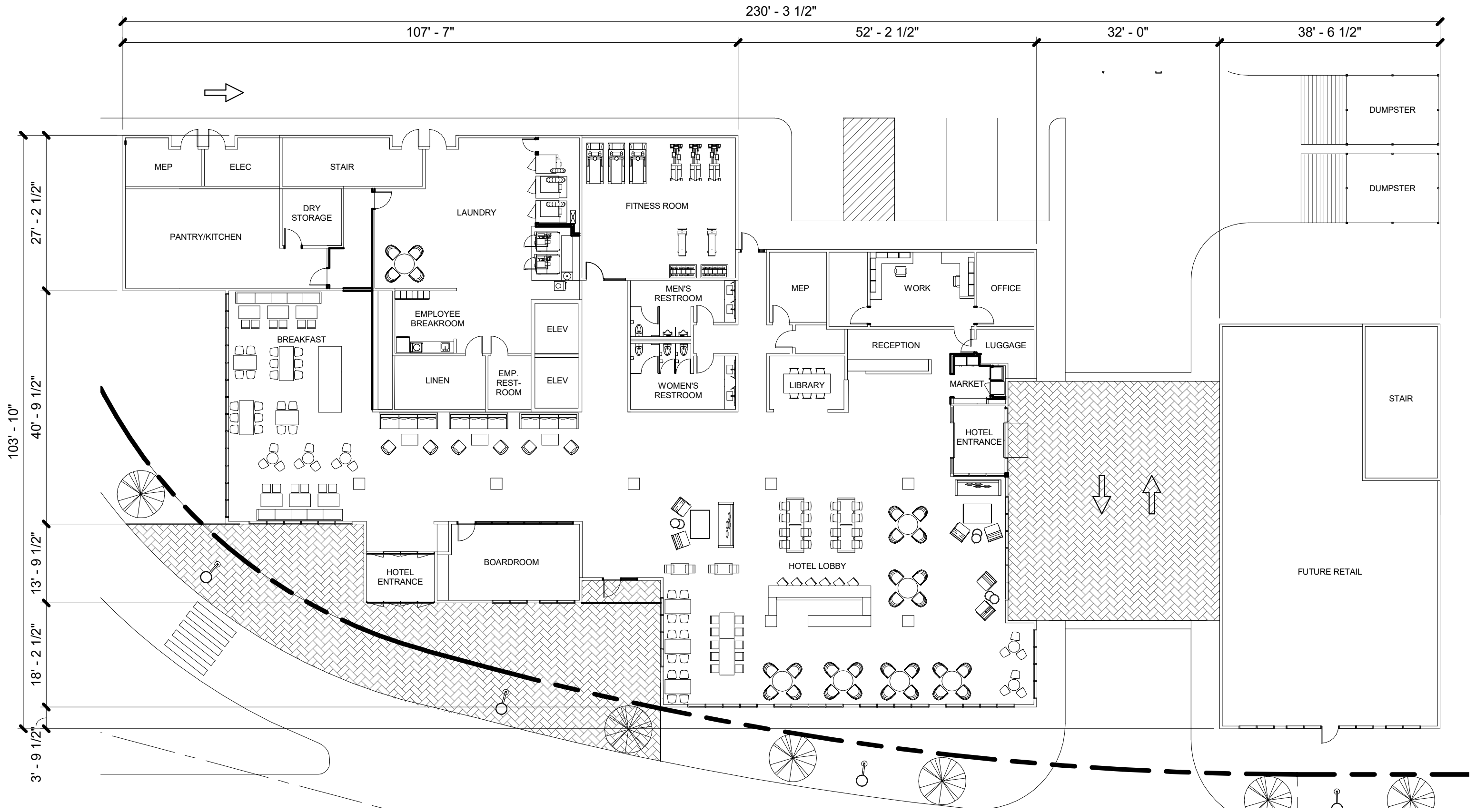
SITE PLAN
1" = 20'

SHEET NUMBER:

DRB - 00

DATE: 01/20/2021

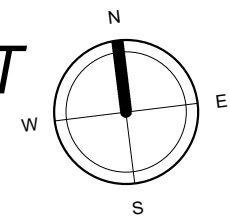
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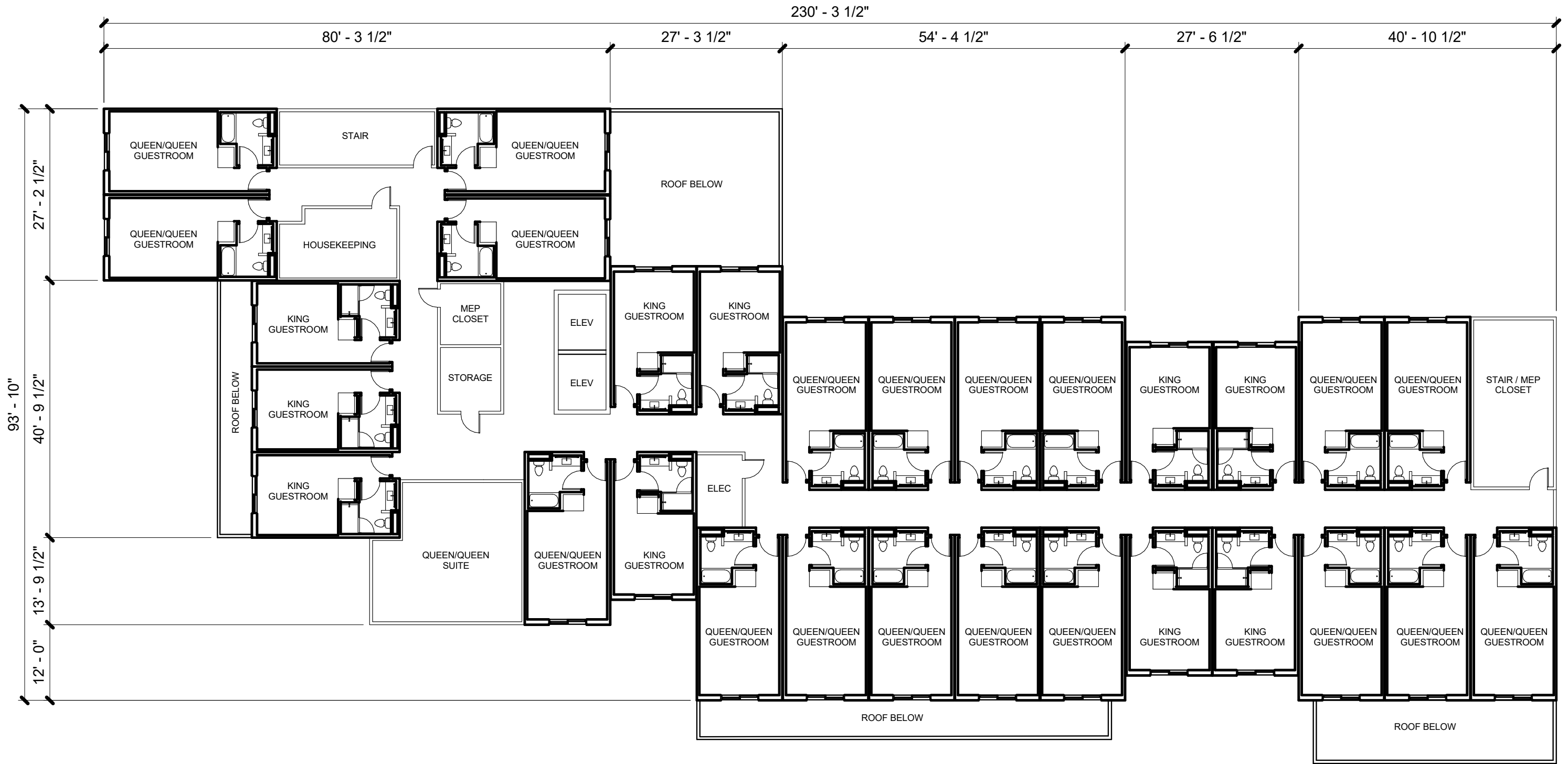
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HOTEL AT BEALE STREET
 380 BEALE STREET
 MEMPHIS, TENNESSEE 38103



FLOOR PLAN - LEVEL 1
 1/16" - 1'-0"

SHEET NUMBER:
DRB - 01
 DATE: 01/20/2021
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DEVELOPER

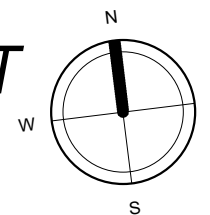
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380 BEALE STREET
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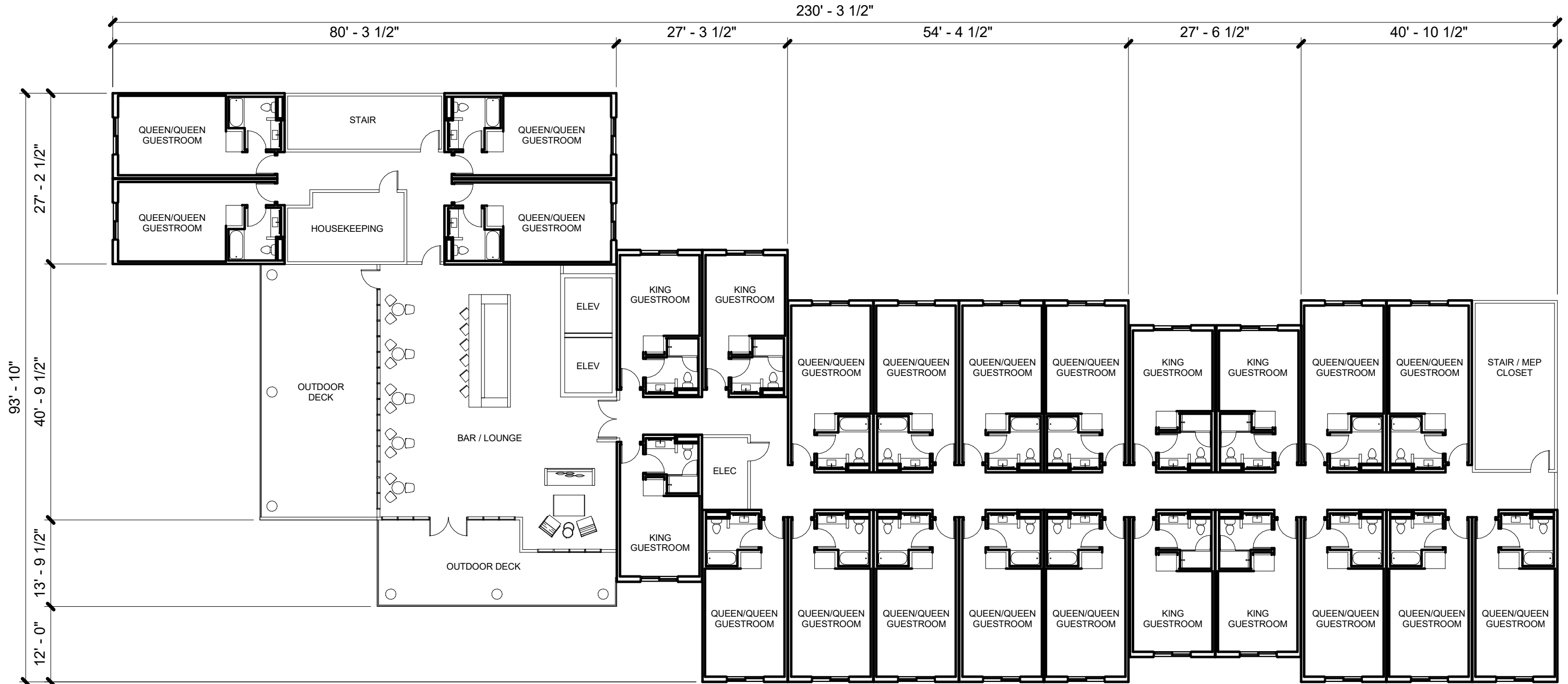
FLOOR PLAN -
LEVELS 2-5
1/16" - 1'-0"

SHEET NUMBER:

DRB - 02

DATE: 01/20/2021

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DEVELOPER

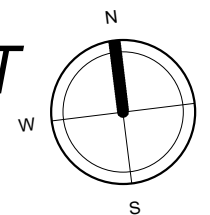
TCH MEMPHIS, LLC

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HOTEL AT BEALE STREET

380 BEALE STREET
MEMPHIS, TENNESSEE 38103



FLOOR PLAN - LEVEL 6
1/16" - 1'-0"

SHEET NUMBER:

DRB-03

DATE: 01/20/2021

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SOUTH ELEVATION

TOTAL BRICK A	TOTAL BRICK B	TOTAL NICHHA A	TOTAL NICHHA B	TOTAL STUCCO/EIFS	TOTAL GLASS	TOTAL (SF)
34.65%	4.19%	15.62%	1.81%	16.36%	27.37%	16,466.28

NORTH ELEVATION

TOTAL BRICK A	TOTAL BRICK B	TOTAL NICHHA A	TOTAL NICHHA B	TOTAL STUCCO/EIFS	TOTAL GLASS	TOTAL (SF)
53.00%	0.00%	16.57%	0.00%	8.29%	22.15%	16,523.60

EAST ELEVATION

TOTAL BRICK A	TOTAL BRICK B	TOTAL NICHHA A	TOTAL NICHHA B	TOTAL STUCCO/EIFS	TOTAL GLASS	TOTAL (SF)
43.29%	0.00%	15.97%	0.00%	16.60%	24.14%	7,152.24

WEST ELEVATIONS

TOTAL BRICK A	TOTAL BRICK B	TOTAL NICHHA A	TOTAL NICHHA B	TOTAL STUCCO/EIFS	TOTAL GLASS	TOTAL (SF)	
34.97%	0.00%	1	5.41%	4.18%	24.22%	21.22%	7131.83

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HOTEL AT BEALE STREET
 380 BEALE STREET
 MEMPHIS, TENNESSEE 38103

BUILDING ELEVATIONS
 - SOUTH ELEVATION
 1/16" = 1' - 0"

SHEET NUMBER:
DRB-04
 DATE: 01/20/2021
 FOR CONCEPTUAL DESIGN ONLY



EAST ELEVATION

SOUTH ELEVATION

TOTAL BRICK A	TOTAL BRICK B	TOTAL NICHIBA A	TOTAL NICHIBA B	TOTAL STUCCO/EIFS	TOTAL GLASS	TOTAL (SF)
34.65%	4.19%	15.62%	1.81%	16.36%	27.37%	16,466.28

NORTH ELEVATION

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WEST ELEVATION

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BUILDING ELEVATIONS
 - SIDE ELEVATIONS
 1/16" = 1' - 0"

SHEET NUMBER:
DRB-05
 DATE: 01/20/2021
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SOUTH ELEVATION

TOTAL BRICK A	TOTAL BRICK B	TOTAL NICHIIHA A	TOTAL NICHIIHA B	TOTAL STUCCO/EIFS	TOTAL GLASS	TOTAL (SF)
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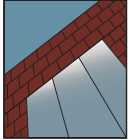
HOTEL AT BEALE STREET
 380 BEALE STREET
 MEMPHIS, TENNESSEE 38103

BUILDING ELEVATIONS
 - NORTH ELEVATION
 1/16" = 1' - 0"

SHEET NUMBER:
DRB-06
 DATE: 01/20/2021
 FOR CONCEPTUAL DESIGN ONLY

YES 60 TU

Large Span, Thermally Broken Offset Storefront System



STOREFRONT SYSTEM

Product Description

The YES 60 TU is a thermally broken, offset, flush glazed storefront system for insulating glass. This system uses a pour and debridged pocket that employs a patented process, ThermaBond Plus®, to greatly improve adhesion of the polyurethane to the extruded aluminum. Combining science with technology, ThermaBond Plus® resolves the problem of adhesion and the resultant dry shrinkage associated with typical poured and debridged systems. The system can deliver the thermal performance necessary for climate zones 1-3, and climate zones 4-6 when complying with ASHRAE 90.1 versions of the energy code thru 2013 using 1" low E IGU's. This system was also built to achieve taller spans while keeping great energy performance.

Product Options & Features

- ThermaBond Plus® Thermal Break
- Diamond-shaped Screw Spline assembly
- Integrates with 20D/35D/50D Single & Pair Doors
- High performance sill flashing
- Integrates with YES 45 Series storefronts
- Compatible with ThermaShade® and Luminance® Sun Control systems

U-Factor Values as low as 0.33*

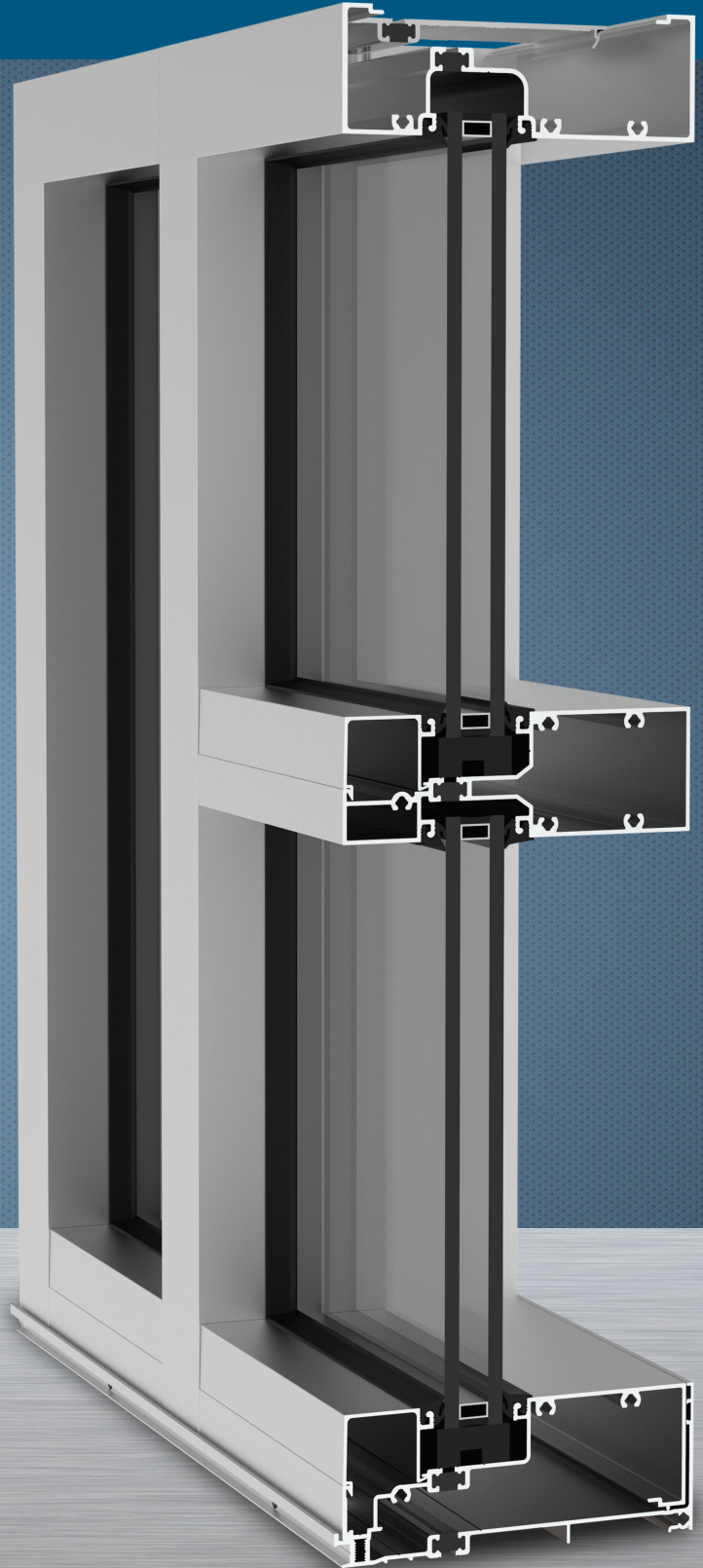
CRF Minimum 69_{frame} & 68_{glass}

*Based on AAMA 507. Lower values may be achieved through further simulation.



**YKK
ap**

Quality
inspires®



YES 60 TU

SYSTEM SPECIFICATIONS

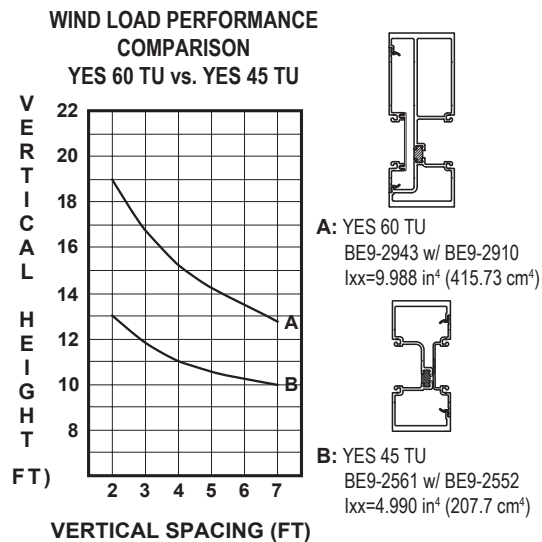
System Sightline	Base Depth	Glazing & Config	Glass	Air Infiltration	Water Infiltration	Acoustical Performance
2"	6"	Outside & Offset	1" IGU with Low-E (C.O.G. U-factor: 0.29)	0.06 CFM/FT ² (1.10 m ³ /h·m ²) @ 6.24 PSF (299 Pa)	Static: 12 PSF (574 Pa) Dynamic: 12 PSF (574 Pa)	Std STC: 31 Std OITC: 25
Testing Standards				ASTM E 283	ASTM E 331 & AAMA 501	ASTM E 90 & 1425
Installation Options				Screw Spline with Insulating Glass		
Available Finishes				Factory Anodized (AAMA 612) and Organic Paints (AAMA 2604 & AAMA 2605)		

Thermal Performance						
1" IGU	BTU/hr·ft ² ·°F					
C.O.G U-Factor	0.30	0.28	0.26	0.24	0.22	0.20
2" x 6"	0.41	0.40	0.38	0.36	0.35	0.33
Testing Standards	AAMA 507					

CRF	
Frame	Glass
69	68
AAMA 1503	

STRUCTURAL INTEGRITY

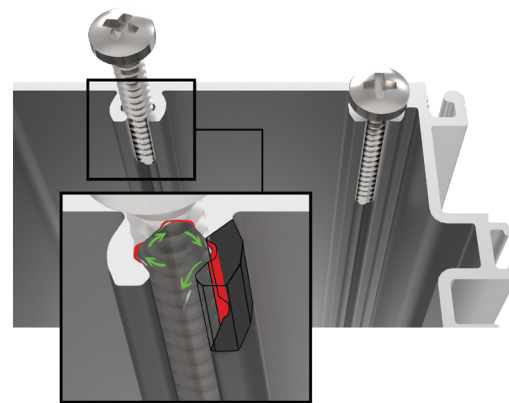
Longer horizontal mullions resulting in greater spans for projects.
Chart based on 20 PSF windload.



FASTER INSTALLATION

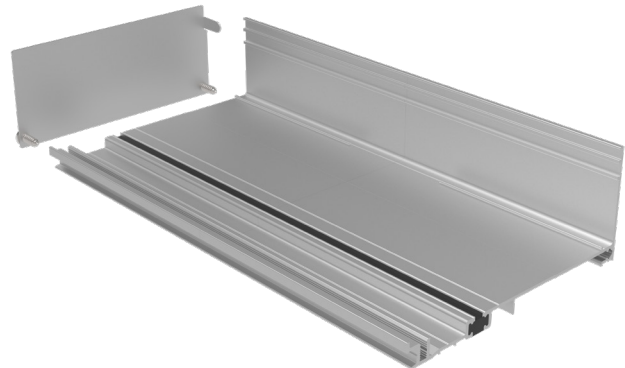
Diamond Shaped Screw Splines

- Reducing structural stress at fastener head connection helps prevent any screw breaks
- Eliminates the need for wax dipping
- Chip relief allows for quicker screw driving, resulting in reduced fabrication time



INDUSTRY LEADING SILL FLASHING

- No Blind Seals - no secondary penetration of sill and flashing
- Taller back leg - enhanced water resistance (10 PSF) in the field, and in field water testing
- Patented 3 point attachment of end dam for reduced transit damage. Remains intact and sealed throughout life of the building
- No sill anchoring required if end reaction less than 500 lbs.



Additional information including CAD details, CSI specifications, Test Reports and Installation instructions are available online at:

www.ykkap.com/commercial/product/storefronts/yes-60-tu/

StoTherm® ci XPS Classic

Decorative cladding with continuous insulation and continuous air/moisture barrier for heat, air and moisture control



Substrate: Glass Mat Gypsum sheathing in compliance with ASTM C 1177, Exterior or Exposure I wood-based sheathing (plywood or OSB), code compliant concrete, concrete masonry, or portland cement plaster, existing structurally sound, uncoated brick or other masonry wall construction.

1)	StoGuard® Air and Moisture Barrier
2)	Sto TurboStick™ Spray Foam Adhesive
3)	Foamular® CI-C or Dow STYROFOAM™ Panel Core 20 Insulation Board
4)	Sto Mesh (embedded in Sto Base Coat)
5)	Sto BTS® Xtra Base Coat
6)	Sto Primer Sand (optional)
7)	Sto Textured Finish: Stolit® or Stolit® X

System Description

StoTherm ci XPS Classic is a decorative and protective exterior wall cladding that provides superior air and weather tightness with excellent thermal performance and durability. It incorporates continuous insulation and a continuous air/moisture barrier with Sto's high performance finishes in a fully tested wall cladding assembly.

Uses

StoTherm ci XPS Classic can be used in residential or commercial wall construction where energy efficiency, superior aesthetics, air and moisture control are essential. The superior compressive strength and low water absorption of XPS insulation make it appropriate for institutional, military or other construction where increased durability is desired.

Features

Design versatility

Benefits

Aesthetic and curb appeal easy to achieve

Continuous XPS insulation, R-5 per inch

Increased durability, reduced heating and cooling costs, thinner wall sections

Quick set adhesive, no mechanical fasteners

Fast installation, no thermal bridging

Continuous air and moisture barrier

Protects against mold and moisture problems

Fully tested compatible Components

No experimenting with untested designs

Properties

Weight (not including sheathing and frame)

< 2 psf (10 kg/m²)

Thickness (insulation)

1 - 6 inches (25-152 mm)

R-value (not including sheathing and frame)

5.0 – 30 ft²·h·°F / Btu (0.88 – 5.28 m²·K / W)

Wind Load Resistance

Tested up to ± 175 psf (8.37 kPa)

Construction Types

I-V, NFPA 285 tested for Types I-IV

Warranty

12 year Limited Warranty

Maintenance

Requires periodic cleaning to maintain appearance, repair to cracks and impact damage if they occur, recoating to enhance appearance of weathered finish. Sealants and other façade components must be maintained to prevent water infiltration.

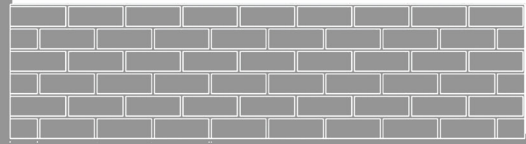
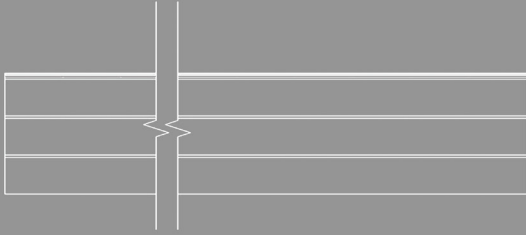
StoTherm® ci XPS Classic

Decorative cladding with continuous insulation and continuous air/moisture barrier for heat, air and moisture control

Precautions and Limitations	
Minimum insulation board thickness 1 inch (25 mm). Maximum insulation board thickness 6 inches (152 mm). Hourly rated walls: maximum thickness limited to 2.75 inches (70 mm) over CMU, concrete, and non-load bearing frame walls. Thickness in excess of 4 inches (102 mm) requires two layers of insulation.	
Structural back-up wall must be level to within ¼ inch in 10 ft (6 mm in 3.0 m)	
Wind load resistance: ± 175 psf (8.37 kPA) ultimate loads achieved. Ultimate wind load resistance also depends on sheathing, sheathing attachment, and stiffness of supporting construction. Design for maximum allowable deflection of L/240.	
Impact resistance: supplemental reinforcing mesh layers, cement board overlay or other design adjustments may be prudent for areas adjacent to heavy pedestrian traffic or other areas of high impact or abuse. Refer to Sto Guide Details.	
For use on vertical above grade walls only. Do not use below grade or on roofs or roof-like surfaces.	
Insulation material is flammable. Keep away from flame, ignition sources, high heat and temperatures in excess of 165°F (74° C)].	
Dark finish colors with LRV (Light Reflectance Value) < 20 are not recommended.	
Air Barrier, insulation board, and base coat materials are not intended for prolonged weather exposure. Allow 180 days maximum between application of air barrier and insulation board.	
Refer to specific component product bulletins and packaging for other limitations that may apply involving use, handling and storage of component materials.	
Sustainable Design	
Air Quality and VOC Compliance	
All finish coatings, adhesives, air barrier joint treatments and coatings meet US EPA (40 CFR 59) and SCAQMD (Rule 1113) emission standards for architectural coatings.	
LEED Credit Eligibility	
System has high potential for LEED and other sustainability program credits based on efficient and effective use of continuous exterior insulation and resulting reductions in greenhouse gas emissions.	
Regulatory Compliance and Standards Testing	
ICC ESR 1748 covering StoTherm ci Systems	Complies with 2009, 2012, 2015 IBC, IRC and IECC (ICC ESR revisions pending)
ICC ESR No. 1233 covering StoGuard Air & Moisture Barrier	Complies with 2009, 2012, 2015 IBC, IRC and IECC
ICC AC 212	Complies with abbreviated format <i>Acceptance Criteria For Water-Resistive Barrier Coatings used as Water-Resistive Barriers over Exterior Sheathing</i>
ASHRAE 90.1-2016¹	Complies with Section 5, Building Envelope, air barrier and continuous insulation requirements
ASTM E 2357²	Air/Moisture barrier meets air leakage resistance criteria of ≤ 0.04 cfm/ft ² at 1.57 psf (0.2 L/s·m ² at 75 Pa)
NFPA 285³	Meets flame propagation criteria for use on Types I, II, III, IV construction with up to 6 inches (152 mm) of Foamular® CI-C or Dow STYROFOAM™ Panel Core 20 insulation board
ASTM E 119⁴	Meets requirements for 1-hour rated wall assembly

1. Energy Standard for Buildings Except Low-Rise Residential Buildings
2. Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
3. Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components
4. Standard Test Methods for Fire Test of Building Construction and Materials

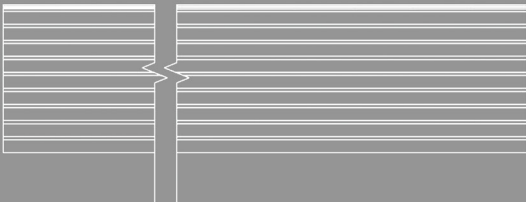
<p>Sto Corp. 3800 Camp Creek Parkway Building 1400, Suite 120 Atlanta, GA 30331</p> <p>Tel: 404-346-3666 Toll Free: 1-800-221-2397 Fax: 404 346-3119</p> <p>www.stocorp.com</p>	<p>SB-A100X Revision: 005 Date: 11/2019</p>	<p style="text-align: center;">Attention</p> <p>Sto products are intended for use by qualified professional contractors, not consumers, as a component of a larger construction assembly as specified by a qualified design professional, general contractor or builder. They should be installed in accordance with those specifications and Sto's instructions. Sto Corp. disclaims all, and assumes no, liability for on-site inspections, for its products applied improperly, or by unqualified persons or entities, or as part of an improperly designed or constructed building, for the nonperformance of adjacent building components or assemblies, or for other construction activities beyond Sto's control. Improper use of Sto products or use as part of an improperly designed or constructed larger assembly or building may result in serious damage to this product, and to the structure of the building or its components. STO CORP. DISCLAIMS ALL WARRANTIES EXPRESS OR IMPLIED EXCEPT FOR EXPLICIT LIMITED WRITTEN WARRANTIES ISSUED TO AND ACCEPTED BY BUILDING OWNERS IN ACCORDANCE WITH ST O ' S WARR ANT Y PROG R A M S W H I C H A R E S U B J E C T T O C H A N G E F R O M T I M E T O T I M E . For the fullest, most current information on proper application, clean-up, mixing and other specifications and warranties, cautions and disclaimers, please refer to the Sto Corp. website, www.stocorp.com.</p>
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NICHIHA ARCHITECTURAL WALL PANELS

DESIGN REVIEW GUIDE

AWP 1818
AWP 3030 - HORIZONTAL
AWP 3030 - VERTICAL



AWP DESIGN GUIDE

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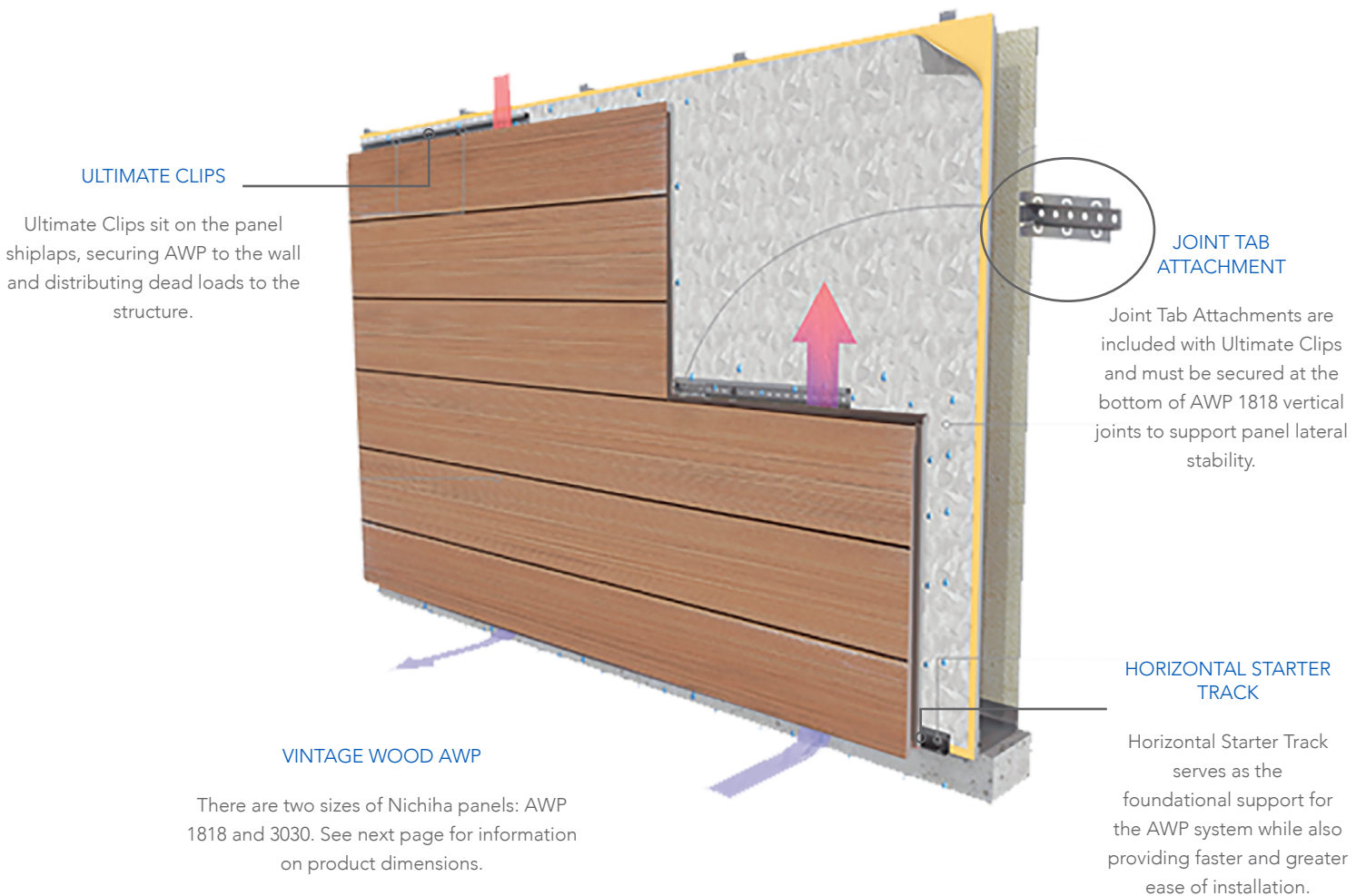
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Always install products in accordance with the latest installation guidelines and all applicable building codes and other laws, rules, regulations and ordinances. Review all installation instructions and other applicable product documents before installation. This design guide does not include KuraStone: Stacked Stone or Ledge Stone products.

THE NICHIIHA RAINSCREEN

Moisture intrusion in a wall system can be the cause of building defects, as well as health ailments for the building's occupants, making rainscreens a very important tool in water mitigation. Rather than attacking the symptoms of moisture intrusion, rainscreens tackle the source – the forces that drive water into the building shell. Nichiha's concealed installation system creates a 10mm (3/8") drainage and ventilation plane behind our panels.



THE PRODUCTS

Before you jump into the design process, we recommend taking a minute to familiarize yourself with the dimensions of Nichiha's family of Architectural Wall Panels.

AWP1818

Horizontal Installation Allowed (only)
Stacked or Staggered Layout

Dimensions#: 17-7/8" [H] x 71-9/16" [L]

455mm [H] x 1818mm [L]

Thickness (unless noted): 5/8" (16mm)

Architectural Block⁺

Canyon Brick

Illumination^{+c}

Miraia

Novenary Tile 7/8" (21 mm) Thickness

PlymouthBrick

SandStone 3/4" (18mm) Thickness

Tuff Block^{+c}

VintageBrick 3/4" (18mm) Thickness

VintageWood (new)

AWP3030

Horizontal or Vertical Installation Allowed
Stacked Layout Only

Dimensions#: 17-7/8" [H] x 119-5/16" [L]

455mm [H] x 3030mm [L]

Thickness: 5/8" (16mm)

EmpireBlock

Illumination^{+c}

IndustrialBlock

Ribbed^c

RoughSawn

VintageWood

+ Factory Joint profiles of Illumination 1818 and ArchitecturalBlock differ from TuffBlock's, which has a wide perimeter reveal.

** Illumination 3030 panels have a wider, soft-U factory joint profile.*

Only panels of the same dimension and thickness may be used directly together without separation via control and/or compression joints.

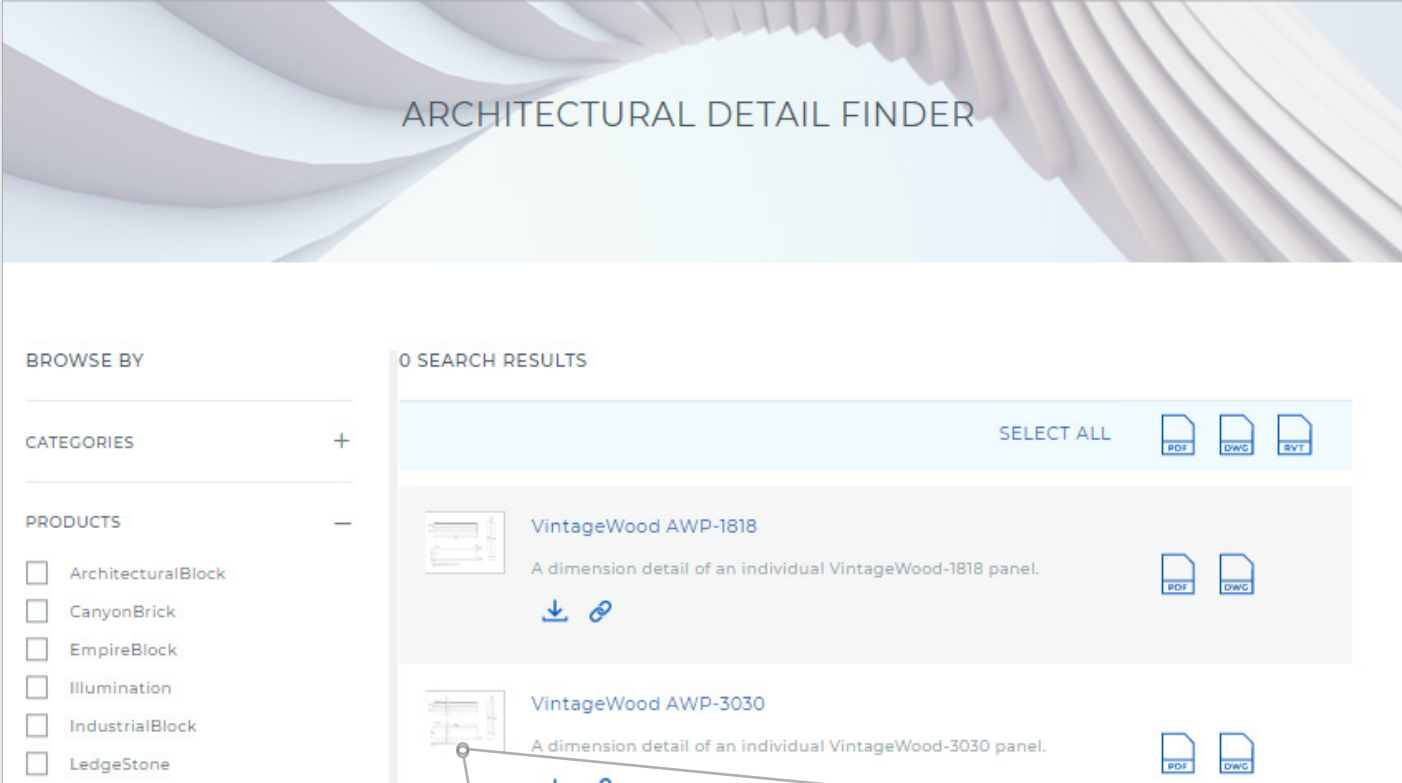
^c Custom color finish of Illumination, Ribbed, and TuffBlock panels requires a lead-time.

Contact a Sales Representative for more information.



THE DETAILS

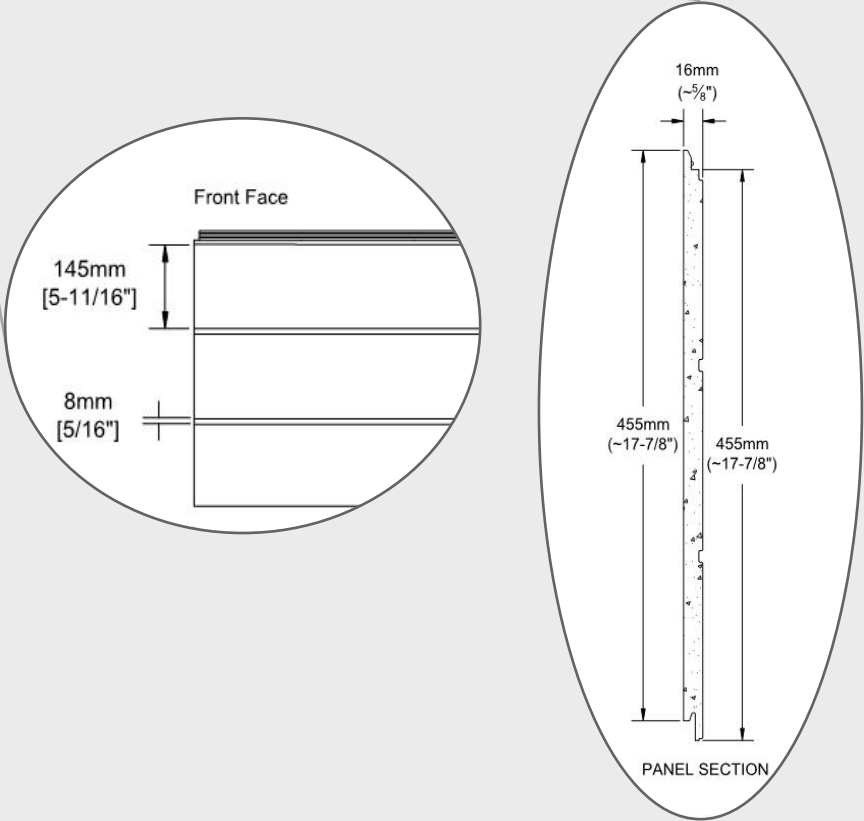
Nichiha's new Architectural Detail Finder is ready to help with all your detailing needs and is found at nichiha.com/architectural-details.



The architectural detail finder will help you with your specification. Just filter down to what you need. You can search by detail Categories, Products, Framing type, etc. Not sure what you need to filter by? You can grab all the details or search on the top.

On the architectural detail finder, you'll find anything from installation over continuous insulation, various types of wall assemblies, and even individual panel and clip dimensions. Looking for a specific product? We've got details for more than just our AWP panels on the site.

nichiha.com/architectural-details



PLANNING & LAYOUT

The Nichiha system works most efficiently when full panels are used. Designing panel layouts symmetrically from a wall center, outwards will help to create less product waste. It is important to keep in mind the actual metric dimensions when considering the modular panel layout, including placement of control and compression joints, and also with respect to sizing window and door openings.

Detailing around openings involves a number of variables such as the depth of the opening and the overall thickness of the wall assembly. For example, a continuous insulation and furring condition with recessed windows will necessitate a jamb, head, and sill return material/finish. Depending on the dimensions, Nichiha factory Corners or cut panels may be used at jambs, or an alternate material such as metal may be necessary. Nichiha Corners and panel segments may not be used for head and sill return conditions. Please reach out to Nichiha Technical for detailing recommendations.

VERTICAL CONTROL/EXPANSION JOINT REQUIREMENTS

On walls wider than 30 feet, when using AWP1818 panels and metal trim outside corners, Vertical Control/Expansion Joints (Double Flange Sealant Backers) are required within 2 to 12 feet of outside corners (on both sides of corner) and then approximately every 30 feet thereafter.

When using AWP1818 panels and Nichiha factory Corners, control joints are required at the factory Corner and then approximately every 30 feet thereafter.

When using AWP3030 panels installed horizontally, vertical control joints or H-molds are required at each vertical joint. Panels may not be butted together and these vertical joints may not be split up or staggered.

Control/Expansion Joints are 10mm (3/8") wide.

HORIZONTAL/COMPRESSION JOINT REQUIREMENTS

Metal Framed projects taller than three stories/45 feet:
Place compression joints approximately every 25 feet.

Wood Framed projects three stories or taller: Compression Joints required at each floor.

Compression Joint requirements:

Compression Joint Flashing - heavy gauge z-shaped metal flashing or similar, 1/2" (min.) gap between panels at floor lines/plate, and Starter Track.



Installed Horizontal/Compression Joint examples

CONTINUOUS INSULATION

Nichiha AWP (horizontal) may be installed directly over up to one inch of foam plastic insulation such as polyiso or EPS over wood or gypsum sheathing. Insulation compressive strength of 25 psi or greater is strongly recommended. **For horizontal panels**, continuous insulation (c.i.) thicker than one inch and mineral wool c.i. of any thickness must be paired with a furring or other solution* to satisfy the *Framing & Sheathing Requirements* set out in the AWP install guides. **For vertical panels**, the presence of any c.i. requires an assembly adjustment and is subject to a required Technical Review process. Refer to the guides for complete installation requirements and instructions. This guide is not intended to prohibit options or furring combinations not covered herein. Please contact the Technical Department for assistance.

Exterior Continuous Insulation Requirements

Horizontal Panel Installation (With foam plastic >1" or any mineral wool)

Shaped Metal Furrings
(Z, hat channel, C, etc.), Min. 18 ga.

-or-

2x P.T. Lumber

-or-

Energy Code Option

-with-

Furring aligned vertically at 16" o.c.
(max)

Vertical Panel Installation (With any c.i., contact Nichiha Technical Services)

Shaped Metal Furrings
(Z, hat channel, C, etc.), Min. 18 ga.

Layer One:

Minimum 18 gauge

Aligned horizontally

Spaced per engineer's design

Layer Two:

Minimum 18 gauge

Aligned vertically at 17-7/8" o.c.

Additional vertical furring segments at Vertical Starter Track locations to enable 9" o.c. fastener spacing for track

Energy Code Friendly Options

Engineered third party systems

Cascadia Clips®

CL Talon®

FERO Cladding Support®

ISO Clip®

Knight Wall Systems®

SmartCI Green Girt®

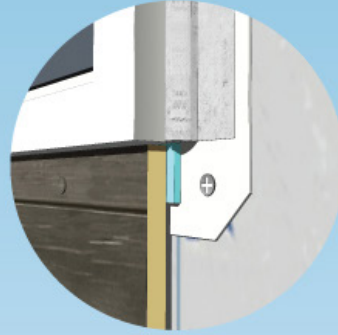
IBC 2015 Table 2603.12.2

The model building code for 2015 includes information in Chapter 26 about foam plastic insulation/sheathing and furring minimum fastening requirements. Table 2603.12.2 shows various configurations depending upon framing gauge and spacing, fastener size and spacing, thickness of insulation and cladding weight. As an example, according to the table, 3 inches is the maximum thickness of foam sheathing on which a furring can be added directly on top, spaced at 16" o.c. and fastened with #8 screws every 12"-16" (into 18 gauge wall framing), that can support a cladding weight of 3 psf.



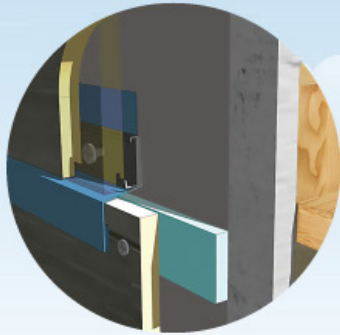
*Consult a structural engineer to design the furring system to manage the AWP system dead load of minimum 4 psf and also meet the project wind load design criteria. Furring must account for expected building compression. Nichiha does not provide fastener design for anchoring the furring to structure. Refer to IBC 2015 Table 2603.12.2 for more info.

ARCHITECTURAL LAYOUT



WINDOW SILL

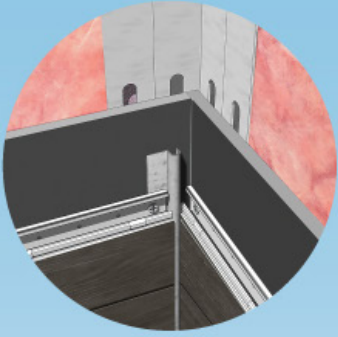
Face fasten 1" from cut edges with 10mm Spacer at framing/furring @ 16" o.c.



COMPRESSION JOINT

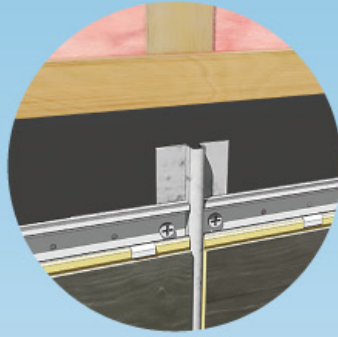
Add compression joint flashing at min. 1/2" breaks between courses at floor framing for multi-story applications.





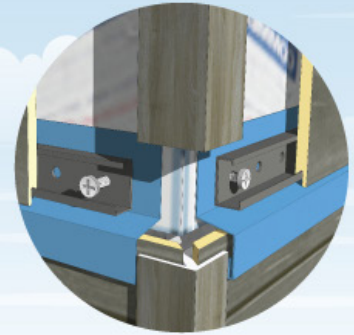
INSIDE CORNER

Butt line-of-sight panels to corner.
On opposite wall, add Single Flange Sealant Backer and caulk or use Inside Corner metal trim.



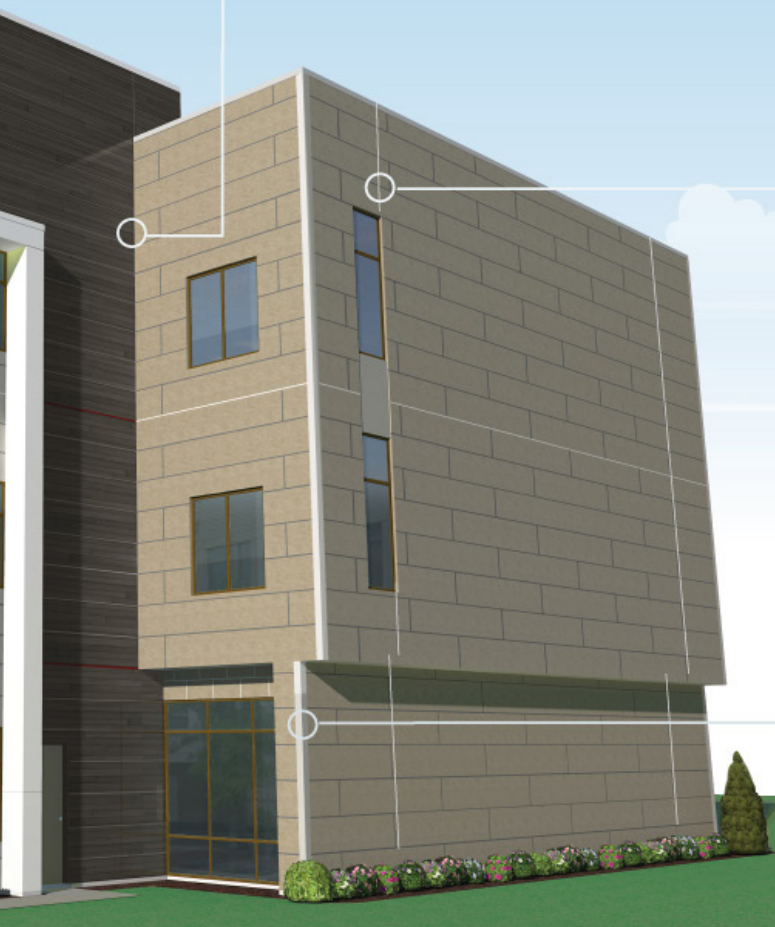
VERTICAL CONTROL JOINT

Often aligned with window jambs, Double Flange Sealant Backer is fastened to framing/furring, wood sheathing, or blocking.



OUTSIDE CORNER

- Factory Corners with 3-1/2" Face Returns
- Corner Key Trim
- Open Outside Corner Trim
- Fiber Cement Trim Boards



HORIZONTAL DESIGN REQUIREMENTS

AWP1818 - HORIZONTAL

- Ultimate Horizontal Starter Track - *always level*
- Ultimate Clip II – JEL778 for most panels (JEL788 for SandStone and VintageBrick only) - 2-1/2 clips per panel edge | 10mm (~3/8") rain screen
- Joint Tab Attachments required between panels at vertical factory joints
- Vertical Control/Expansion Joints (Double Flange Sealant Backer) on 30'+ walls with metal trim outside corners: 2'-12' from edges + every ~30' thereafter
- Vertical Control/Expansion Joints with Nichiha Corners plus every ~30' thereafter
- Vertical Control/Expansion Joints every ~30' on walls with no outside corners.
- Horizontal/Compression Joints: *Wood Framing* three stories or more = joint at every floor
- Horizontal/Compression Joints: *Metal Framing* over three stories/45' = joint about every 25'
- Sealant Joints (Single Flange Sealant Backer) or Inside Corner trim at inside corners
- Horizontally cut edges require face fastening with Spacer
- MIN. Clearances: 6" above soil grade, 2" above hardscape and decking, 1" above roof
- 1/4" clearance between the panel edge and flashings
- Panel Thickness – 16-21mm | 5/8" - 7/8"
- Total System Depth – 26mm - 31mm | 1-1/32" - 1-7/32"

See table for Framing & Sheathing Requirements
Reference page 4 for panel thickness

HORIZONTAL AWP CONTINUOUS INSULATION REQUIREMENTS

Exterior
Continuous Insulation
Requirements
Greater than 1 inch

Horizontal Panel Installation

Shaped Metal Furrings
(Z, hat channel, C, etc.), Min. 18 ga.
-or-
2x P.T. Lumber
-or-
Energy Code Option
-with-
Furring aligned vertically
at 16" o.c. (max)

Energy Code Friendly Options

Engineered third party systems:

Cascadia Clips®
CL Talon®
FERO Cladding Support®
ISO Clip®
Knight Wall Systems®
SmartCI Green Girt®



AWP3030 - HORIZONTAL

- Ultimate Horizontal Starter Track - *always level*
- Ultimate Clip II – JEL778 for all 3030mm panels - 4 clips per panel edge | 10mm (~3/8") rain screen
- Vertical Control/Expansion Joints (Double Flange Sealant Backer) or H-Mold trim at each vertical joint
- Stacked layout only - no staggering of vertical joints
- Horizontal/Compression Joints: **Wood Framing** three stories or more = joint at every floor
- Horizontal/Compression Joints: **Metal Framing** over three stories/45' = joint about every 25'
- Sealant Joints (Single Flange Sealant Backer) or Inside Corner trim at inside corners
- Horizontally cut edges require face fastening with Spacer
- MIN. Clearances: 6" above soil grade, 2" above hardscape and decking, 1" above roof
- 1/4" clearance between the panel edge and flashings
- Panel Thickness – 16mm | 5/8"
- Total Wall System Depth – 26mm | 1-1/32"

See table for Framing & Sheathing Requirements

HORIZONTAL AWP FRAMING & SHEATHING REQUIREMENTS

WALL TYPES	ATTRIBUTES	STUD SPACING	SHEATHING
Metal Studs	18 gauge min.	16" o.c. max.	Min. 7/16" OSB/Plywood 1/2" or 5/8" Gypsum
Wood Studs	2X Lumber	16" o.c. max.	Min. 7/16" OSB/Plywood 1/2" or 5/8" Gypsum
Concrete Furring is required	18 ga shaped metal or P.T. 2X Lumber	16" o.c. max.	N/A
SIPs	Per SIP Standard (sips.org) w/ min. four (4), evenly spaced screws per clip		
PEMBs	24 gauge up to -31.41 PSF 22 gauge up to -39.29 PSF	Deflection Criteria: L/120 max. Fastening: #10 fastener @12" o.c.	

VERTICAL DESIGN REQUIREMENTS



AWP3030 - VERTICAL

- Ultimate Vertical Starter Track - *always level and continuous, bearing the dead loads of vertical AWP3030, fastened @ 9" o.c. to structure*
 - *No vertical panel staggering*
 - Ultimate Clip II – JEL778 for all 3030mm panels - 4 clips per panel edge | 10mm (~3/8") rain screen
 - Vertical Control/Expansion Joints not required
 - Horizontal/Compression Joints after each course
 - Don't span floors
 - Sealant Joints (Single Flange Sealant Backer) or Inside Corner trim at inside corners
 - Vertically cut edges require face fastening to structure, through Spacer
 - MIN. Clearances: 6" above soil grade, 2" over hardscape and decking, 1" over roof
 - 1/4" clearance between the panel edge and flashings
 - Panel Thickness – 16mm | 5/8"
 - Total System Depth – 26mm | 1-1/32"
 - Structural Sheathing Method or Custom Stud/ Furring Spacing Method required for installation
- See table for Framing & Sheathing requirements*

WALL TYPES	ATTRIBUTES	STUD SPACING	SHEATHING
Metal Studs	18 gauge min.	16" o.c. max.	Min. 7/16" OSB/Plywood
Wood Studs	2X lumber	16" o.c. max.	Min. 7/16" OSB/Plywood
Concrete Furring is required	18 ga shaped metal or p.t. 2X lumber	17-7/8" o.c. max plus additional 9" o.c. Furring at Starter Track	N/A
SIPs	Per SIP Standard (sips.org) and Vertical Starter Track must be fastened directly into solid lumber with min. 1" penetration		
PEMBs	Product not intended for this application		



VERTICAL AWP CONTINUOUS INSULATION REQUIREMENTS

Continuous Insulation – refer to [Technical Bulletin - AWP and Continuous Insulation](#) and the [installation guides](#). For vertical AWP, the presence of *any* c.i. necessitates adjustments. Please contact the Technical Department.

Exterior Continuous Insulation Requirements	<p>Standard Stud Walls w/ C.I. Shaped Metal Furring Grid</p> <p>Layer One: Minimum 18 gauge Aligned Horizontally Spaced per engineer's design -and- Layer Two: Minimum 18 gauge Aligned Vertically at 17-7/8" o.c. -and- Additional vertical furring segments at Vertical Starter Track locations to enable 9" o.c. fastener spacing for track</p>	<p>Standard Stud Walls w/ C.I. Wood Sheathing added to Vertical Furring</p> <p>Furring: minimum 18 gauge shaped metal or 2X lumber -and- Furring aligned vertically at 16" o.c. (max) - secured to wall framing -and- Min. 7/16" APA Rated Plywood/OSB - secured to furring -and- Code-approved WRB</p>
	<p>CMU and Concrete Shaped Metal Furring or 2X Lumber</p> <p>Minimum 18 gauge or 2X lumber -and- Aligned Vertically at 17-7/8" o.c. -and- Additional vertical furring segments at Vertical Starter Track locations to enable 9" o.c. fastener spacing for track</p>	<p>Specialty 3rd Party Systems</p> <p>CL Talon® SmartCI Green Girt® Custom Engineered Options*</p> <p>Nail-Base Insulation Sheathing*: Additional furring segments or blocking may be necessary for Vertical Starter Track fastening (max. 9" o.c.)</p> <p>*Contact Nichiha Technical Department</p>

TECHNICAL REQUIREMENTS

STANDARD REQUIREMENTS

Let's start with the basics. Each of the following criteria must be met in order for Nichiha Architectural Wall Panels to perform as intended.

- Refer to [Intertek CCRR-0299](#) for product building code compliance certification as well as wind load engineering requirements. For this and other Nichiha product approvals for Florida, Miami-Dade, Texas TDI, and L.A.R.R., visit nichiha.com/resource-center, and select Product Certifications under the Design Support filter
- Continuous Insulation — refer to [Technical Bulletin - AWP and Continuous Insulation](#) and the [installation guides](#)
- Vapor Permeable Weather Resistive Barriers — required over stud walls and SIPs. CMU/concrete - defer to local code. Sheathings and C.I. with integrated code compliant WRB are acceptable
- Flashing/Furring/Corners/Trim — See install guide for various options
- Minimum Clearances — a minimum of 6" above soil grade, 2" above hard surfaces, 1" above roofing, or per local building codes
- Single Flange Sealant Backers — at inside corners, along window & door jambs and transition points with other cladding
- Double Flange Sealant Backers — Vertical Control/Expansion joints, Non-90-Degree Corners and at Nichiha Corners
- Sealants — refer to [Technical Bulletin - Sealants](#)
- 10mm Spacer — required at all face fastening locations
- Face fastening — every 12-16" o.c. to framing/furring spaced min. 1" distance from the panel edge
- Fasteners must penetrate: Wood Studs a min. 1", Metal Studs a min. 1/2" with three threads needed for grab
- Fasteners — must be stainless steel or corrosion resistant such as hot dipped zinc or ceramic coated - pan, wafer, or hex head required for clip and track fastening (min. #8)
- Equipment/Mechanical Screens - must be fully enclosed wall system
- Soffit applications limited to install guide parameters and are not covered by warranty

ADDITIONAL REQUIREMENTS

- Structural Insulating Panels (SIPs)
- Nail-base insulation sheathings
- Continuous Insulation (C.I.) greater than one inch in thickness
- Insulated Concrete Forms (ICFs) require additional measures
- Retrofits and atypical applications

All of the above require a technical review by Nichiha to evaluate feasibility via our Technical Design Review (TDR) process. Submission of a TDR does not imply or guarantee project approval.

TECHNICAL DESIGN REVIEWS

If your project meets any of the criteria listed below, or you simply wish to take advantage of the service, your Nichiha Sales Representative can connect you to Technical Department staff for a Technical Design Review. It's our way of making your specification of Nichiha AWP as easy as possible. Refer to nichiha.com/technical-design-review.

- Any project of more than three stories or 45 feet
- Those located in high wind coastal areas (Exposure Categories C and D with Wind Speed in excess of 130 mph (Vult) per ASCE 7-10)
- Those with any wall assembly not described in the *Framing & Sheathing Requirements*
- *Continuous Insulation* projects (thicker than 1")

NOs

Even *the power of possibilities* has limitations. If your project includes any of the following attributes, contact Nichiha Technical Services for clarification and advice. Refer also to Technical Bulletins in our Resource Center under the Install Support filter.

- No Radius/Curved Walls, Sloped/Tilted Walls
- No existing or new masonry w/o furring
- No remodels over hard coat & synthetic stucco/ EIFS
- No Pre Engineered Metal Building retrofits. New construction only with horizontal installation, no vertical installation allowed
- Do not use AWP on open screen walls
- Do not cut panels to less than 4" in width or length
- Do not use AWP on modular structures that are factory-constructed and then transported to a final site (Installation on site is allowed)
- For Vertical Panels: do not span floors with panels. Place compression joints at each floor line. No staggering of joints

DETAILS

For complete offerings of AutoCAD and Revit details visit nichiha.com/architectural-details

For Code Compliance, product testing, installation hardware, accessories, and full installation requirements/details visit: nichiha.com/resource-center

TechnicalServices@nichiha.com | Phone: 866-424-4421

THE POWER OF POSSIBILITIES AND PARTNERSHIPS

The way we see it, we're in this together. Our mutual success is the only real success. If you have questions or concerns let your Nichiha Sales Representative know and they'll do everything they can to keep your project moving in the right direction... up.

If you're not sure who your local sales representative is, visit nichiha.com/contact-a-rep and we'll direct you to the representative closest to you.



the power of possibilities™

Silica Dust Warning: NICHHA products may contain some amounts of crystalline silica [a.k.a. sand, silicon dioxide], which is a naturally occurring mineral. The amount will vary from product to product. Inhalation of crystalline silica into the lungs and repeated exposure to silica can cause health disorders, such as silicosis, lung cancer, or death depending upon various factors. To be conservative, Nichiha recommends that whenever cutting, sawing, sanding, sniping or abrading the product, users observe Safety Instructions. For further information or questions, please consult the SDS, your employer, or visit www.osha.gov/SLTC/silicacrystalline/index.html and www.cdc.gov/niosh/topics/silica. The MSDS for Nichiha products are available at www.nichiha.com, at your local Nichiha dealer or through Nichiha directly at 1.866.424.4421. FAILURE TO ADHERE TO OUR WARNINGS, SDS, AND OTHER INSTRUCTION MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.

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