

Certificate of Appropriateness
946 Grady Avenue; TMP 310060000
Individually Protected Property
Owner: Dairy Central Phase 1, LLC
Applicant: Mike Stoneking / Stoneking - von Storch Architects
Project: Exterior alterations at west elevation

Mr. Stoneking,

The CoA for the above referenced project was approved by the City of Charlottesville Board of Architectural Review on **November 19, 2024**. The following action was taken:

Having considered the standards set forth within the City Code, including the ADC District Design Guidelines, I move to find that the proposed door and window alterations at the west elevation satisfy the BAR's criteria and are compatible with this IPP, and that the BAR approves the request as submitted, with no preference for the folding or roll-up door selection*, and with the following conditions:

- That the horizontal muntins will line up with those on the north elevation
- That there will be muntins in the door
- That the sill at the existing door will be infilled with brick to match the existing.
- The new door and sidelights will match.

*The applicant requested that both options for door selection (the proposed roll-up door or the proposed folding door) be approved so that either could be selected at the time of procurement prior to installation.

Motion: Mr. Schwarz **Second:** Mr. Birle **Vote:** 8-0

For specifics of the discussion, the meeting video is on-line at:
<https://boxcast.tv/channel/vabaitzezuuv3iclkx1a?b=igq41zzipapayayui5to>

Per the provisions of City Code, this CoA is valid for 18 months from the date of BAR approval; upon written request and for reasonable cause, the director of NDS or the BAR may extend that period by one year; and this CoA does not, in and of itself, authorize any work or activity that requires a building permit or compliance with other provisions of the City Code.

If you have any questions, please contact me or Jeff Werner (wernerjb@charlottesville.gov). You may also remove the notice sign at this time. Thanks!

Sincerely,
Kate



Kate Richardson
Historic Preservation & Design Planner II
Neighborhood Development Services
City of Charlottesville
434.970.3515 | richardsonka@charlottesville.gov

**City of Charlottesville
Board of Architectural Review
Staff Report
November 19, 2024**



Certificate of Appropriateness Application

BAR # 24-11-04

946 Grady Avenue; TMP 310060000

Individually Protected Property

Owner: Dairy Central Phase 1, LLC

Applicant: Mike Stoneking / Stoneking - von Storch Architects

Project: Exterior alterations at west (10th St, NW) elevation



Background

Year Built: 1937-1964

District: IPP

The former Monticello Dairy building was designated an IPP in 2008. The original central 2-story (5-bay) portion of the building and flanking one-story (7-bay) portions are dated 1937. The east side addition (7-bay) was built in 1947/1964; the similar west side addition (6-bay) was built in 1959.

Prior BAR Reviews

(See appendix)

Application

- Submitted by applicant:
 - Stoneking/von Storch Architects, *Sunpins Bowling BAR Set*, dated October 16, 2024: 5 pages C1, A1, A-7 (Ramp Details), A8, and A-7 (Door Options).
 - Product information sheets: Overhead Door and Panda Windows & Doors.

Request for CoA to modify four existing, non-historic doors/windows at the NW elevation. No changes to masonry openings are proposed, except to modify the bottom courses at the relocated door and sidelites.

Applicant's Narrative:

Our client wishes to open a restaurant featuring duck-pin bowling in the space formerly occupied by the South and Central Restaurant at the Dairy Market. We envision a new entry on the 10th Street side using a single door with sidelights, relocating what we can from the existing door

further north on 10th Street. We also propose converting three large, glazed openings on the 10th Street side to new operable units. No other exterior changes are expected.

Two options proposed for the new, operable windows:

- Option A: Standard garage door type- Model 511 by Overhead Door doors.
- Option B: Folding, accordion style window- Model FTS60 by Panda.

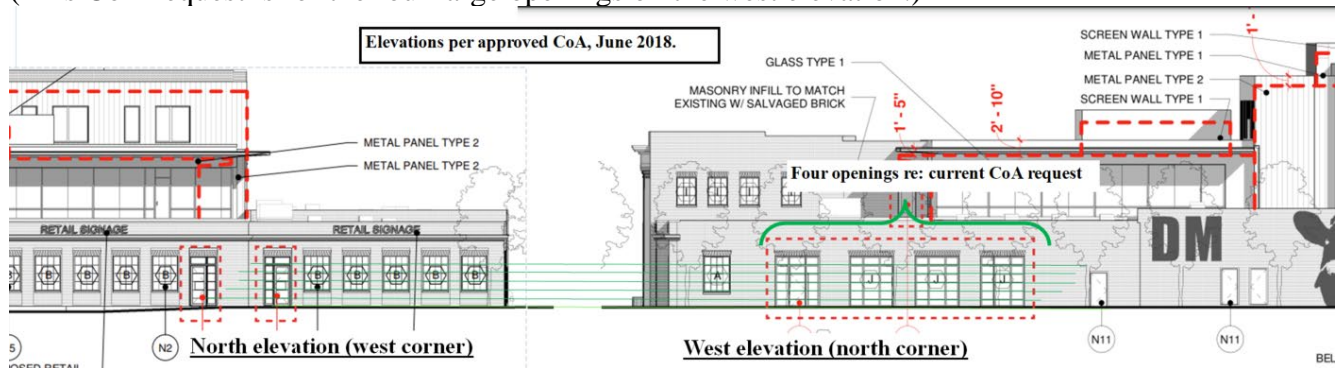
Discussion and recommendation

The entry door and windows to be modified are not original and were installed during the approved rehabilitation of the former Monticello Dairy building (BAR #17-09-02). Additionally, while the work was never done, in November 2020, the BAR approved rearranging the non-original doors and windows at the west elevation.

Staff recommends approval of the request in-concept, with either the folding or roll-up doors, provided the rails and muntins of the new windows and the relocated or new door and sidelites appropriately align with the existing doors and windows on the north and west elevations. (See below.) Prior to a formal approval, the BAR should discuss/resolve which option--folding or roll-up doors—best achieves that.

As a condition of approval, at the masonry opening where the entry door is being removed, the brick wall and sill should be infilled to match the existing.

From the approved design, June 2018. Segments of the north (left) and west (right) elevations. (This CoA request is for the four large openings on the west elevation.)



From current street view, showing as-built conditions at the west elevation.



Specific references to prior BAR discussions re: the windows and doors at 946 Grady Ave.
January 2018: Elevations pre-rehab, see pdf page 33.

[BAR January 2018](#)

June 2018: Approved doors/windows, see pdf pages 24 and 25.

[BAR June 2018](#)

November 2020: Changes to doors at NW corner. (Work was not done.)

[BAR November 2020](#)

Suggested Motion

Approval: Having considered the standards set forth within the City Code, including the ADC District Design Guidelines, I move to find that the proposed door and window alterations at the west elevation satisfy the BAR’s criteria and are compatible with this IPP, and that the BAR approves the request as submitted. [Note: indicate if the BAR prefers option A or option B]

Or ... as requested, with the following conditions: ...

Denial: Having considered the standards set forth within the City Code, including the ADC District Design Guidelines, I move to find that the proposed door and window alterations at the west elevation do not satisfy the BAR’s criteria and are not compatible with this IPP, and that for the following reasons the BAR denies the request as submitted...

Criteria, Standards, and Guidelines

Note re: BAR authority: Per Code, the BAR is charged only with the authority to approve or deny a design review CoA, following an evaluation applying the criteria under Code Sec. 34-5.2.7. Major Historic Review. The BAR does not evaluate a proposed use. Additionally, per Code Sec. 34-5.2.7.E.2., the issuance of a CoA “cannot, in and of itself, authorize any construction, reconstruction, alteration, repair, demolition, or other improvements or activities requiring a building permit. Where a building permit is required, no activity authorized by a [CoA] is lawful unless conducted in accordance with the required building permit and all applicable building code requirements.”

Review Criteria Generally

Per Chapter 34, Div. 5.2.7. C.2:

- a. In considering a particular application the BAR will approve the application unless it finds:
 - i. That the proposal does not meet specific standards set forth within this Section or applicable provisions of the City’s design guidelines; and
 - ii. The proposal is incompatible with the historic, cultural or architectural character of the district in which the property is located or the IPP that is the subject of the application.
- b. The BAR will approve, approve with conditions, or deny applications for Certificates of Appropriateness in accordance with the provisions of this Section.
- c. The BAR, or City Council on appeal, may require conditions of approval as are necessary or desirable to ensure that any new construction or addition is compatible with the scale and character of the Architecture Design Control District, Individually Protected Property, or Historic Conservation District. Prior to attaching conditions to an approval, due consideration will be given to the cost of compliance with the proposed conditions as well as the goals of the Comprehensive

Plan. Conditions may require a reduction in height or massing, consistent with the City’s design guidelines and subject to the following limitations:

- i. Along the Downtown Mall, the BAR may limit story height to within 2 stories of the prevailing story height of the block;
- ii. In all other areas subject to review, the BAR may reduce the allowed height by no more than 2 stories; and
- iii. The BAR may require upper story stepbacks of up to 25’.

Standards for Review and Decision

Per Chapter 34, Div. 5.2.7. D.1:

- a. Review of the proposed construction, reconstruction, alteration or restoration of a building or structure is limited to exterior architectural features, including signs, and the following features and factors:
 - i. Whether the material, texture, color, height, scale, mass, and placement of the proposed addition, modification or construction are visually and architecturally compatible with the site and the applicable District;
 - ii. The harmony of the proposed change in terms of overall proportion and the size and placement of entrances, windows, awnings, exterior stairs, and signs;
 - iii. The Secretary of the Interior Standards for Rehabilitation set forth within the Code of Federal Regulations (36 C.F.R. §67.7(b)), as may be relevant;
 - iv. The effect of the proposed change on the adjacent building or structures;
 - v. The impact of the proposed change on other protected features on the property, such as gardens, landscaping, fences, walls, and walks;
 - vi. Whether the proposed method of construction, renovation, or restoration could have an adverse impact on the structure or site, or adjacent buildings or structures;
 - vii. When reviewing any proposed sign as part of an application under consideration, the standards set forth within Div. 4.11. Signs will be applied; and
 - viii. Any applicable provisions of the City’s design guidelines.

Links to ADC District Design Guidelines

[Chapter 1 Introduction \(Part 1\)](#)

[Chapter 1 Introduction \(Part 2\)](#)

[Chapter 2 Site Design and Elements](#)

[Chapter 3 New Construction and Additions](#)

[Chapter 4 Rehabilitation](#)

[Chapter 5 Signs, Awnings, Vending, and Cafes](#)

[Chapter 6 Public Improvements](#)

[Chapter 7 Demolition and Moving](#)

Pertinent Guidelines for Rehabilitation

B. Facades and Storefronts

- 1) Conduct pictorial research to determine the design of the original building or early changes.
- 2) Conduct exploratory demolition to determine what original fabric remains and its condition.
- 3) Remove any inappropriate materials, signs, or canopies covering the façade.
- 4) Retain all elements, materials, and features that are original to the building or are contextual remodelings, and repair as necessary.

- 5) Restore as many original elements as possible, particularly the materials, windows, decorative details, and cornice.
- 6) When designing new building elements, base the design on the “Typical elements of a commercial façade and storefront.”
- 7) Reconstruct missing or original elements, such as cornices, windows, and storefronts, if documentation is available.
- 8) Design new elements that respect the character, materials, and design of the building, yet are distinguished from the original building.
- 9) Depending on the existing building’s age, originality of the design and architectural significance, in some cases there may be an opportunity to create a more contemporary façade design when undertaking a renovation project.
- 10) Avoid using materials that are incompatible with the building or within the specific districts, including textured wood siding, vinyl or aluminum siding, and pressure-treated wood,
- 11) Avoid introducing inappropriate architectural elements where they never previously existed.

H. Masonry

- 1) Retain masonry features, such as walls, brackets, railings, cornices, window surrounds, pediments, steps, and columns that are important in defining the overall character of the building.
- 2) When repairing or replacing a masonry feature, respect the size, texture, color, and pattern of masonry units, as well as mortar joint size and tooling.
- 3) When repointing masonry, duplicate mortar strength, composition, color, and texture.
 - a) Do not repoint with mortar that is stronger than the original mortar and the brick itself.
 - b) Do not repoint with a synthetic caulking compound.
- 4) Repoint to match original joints and retain the original joint width.
- 5) Do not paint unpainted masonry.

Appendix

Prior BAR Reviews

May 21, 2013- BAR approved restoration of windows and new Three Notch’d Brewing Co. patio.

September 19, 2017 – The BAR held a preliminary discussion on partial demolitions.

November 21, 2017 – Preliminary discussion. Rehabilitation of the former Monticello Dairy building.

January 17, 2018 –BAR approved demolition.

January 17, 2018 – BAR approved proposed new additions and landscape plan.

June 19, 2018 – BAR approved requested revisions, including:

- New retail doors and storefront to the east and west of the center bay of the Dairy on the north elevation, and on the west side (10th St.) will be a Kawneer (or similar), 2’ site line aluminum and glass system with applied Bacon Architectural (or similar) muntins in lieu of previously approved cold formed steel and glass Hopes Window system.

Application: http://weblink.charlottesville.org/public/0/edoc/757649/2018-06_946%20Grady%20Avenue_BAR.pdf

August 21, 2018 - BAR approved requested revisions related to glass VLT.

March 19, 2019 - BAR approved requested revisions.

November 21, 2019 – BAR recommended Council approve the Comprehensive Signage Plan.

November 17, 2020 – **BAR approved** Changes to doors at NW corner. (Work was not done.)

Minutes from BAR Discussion November 17, 2020

...

BAR Minutes
Excerpt re: BAR 20-11-04, 946 Grady Avenue
City Of Charlottesville
Board Of Architectural Review
Regular Meeting
November 17, 2020 – 5:30 p.m.

Certificate of Appropriateness Application
BAR 20-11-04
946 Grady Avenue
Tax Parcel 310060000
Dairy Central Phase 1, LLC, Owner
Robert Nichols, Formwork Design Office, Applicant
Modify window/door configurations

Jeff Werner, Staff Report – Request CoA to modify the NW corner of the building as follow:

- At the north elevation: Reconfigure an existing storefront entry and an existing window. (Reuse the existing, swapping their locations, with the associated alterations to the masonry openings.)
- At the west elevation: Replace an existing storefront entry and install a new storefront entry at an existing opening. (The lite configuration of the new differs from the existing; however, the configurations still align with the adjacent windows.)

At the end of the staff report, I looked at it in context of what had been approved for these elevations and whether or not this significantly changed anything. On the 10th Street side, there is a door with a panel being replaced with a full height door and maintaining the alignment of the lights. I am not concerned with that change. This isn't replicating anything original. There is the one original window that is still there on the far left. The intent was to align the lights, the windows, and the doors with that. I am OK as far as my recommendation with that. On the north elevation, there was the question about creating a new masonry opening and patching up one that had been there. As far as the alignment goes and using the original material, I am OK with that. You had asked about the changing of the masonry opening. I can't offer an opinion on that. It is probably subject to what the interior use proposed for this. That might be guiding some of this.

Robert Nichols, Formwork Design Office – My office is working for the tenant of this part of the building. This request and this idea to make this adjustment is born of the interior program

that we are working. That was all absent when the design development of the building took place and all of the work went into that design and getting approval from you for the current state of the approval. Our desire is to change where we have passage. This is situated in such a way that it reinforces the programmatic layout that is happening on the interior of the building. To the extent that you have reviewed profiles, materials, those parameters would be maintained and duplicated. The door system that is in place and relocated. That is new construction, new material. The windows are original. They have been given a good look from a window contractor. They're good candidates for relocating those windows. Those openings have good quality storms on the interior. That material would be switched over. My institutional knowledge of the development of the design is a little bit outside of my scope of recollection or involvement. Joshua Batman is the project manager of this. He is with Stony Point Development.

QUESTIONS FROM THE PUBLIC

No Questions from the Public

QUESTIONS FROM THE BOARD

No Questions from the Board

COMMENTS FROM THE PUBLIC

No Comments from the Public

COMMENTS FROM THE BOARD

Mr. Mohr – It seems rationale to me. It is staying within the rules of the game with that part of the building and making it functional and not violating the basic tenants of the aesthetics of it. I don't see any issue.

Mr. Gastinger – This project has been exemplary in a lot of ways for the way that they have adaptively reused and rehabilitated the structure. Everything that is being proposed here is in concert with the spirit that it was restored in the first place.

Motion – Mr. Mohr - Having considered the standards set forth within the City Code, including City Design Guidelines for Rehabilitation, I move to find that the proposed door and window changes satisfy the BAR's criteria and are compatible with this Individually Protected Property, and that the BAR approves the request as submitted. Cheri Lewis seconds. Motion passes (8-0).

Sunpins Bowling

946 Grady Ave, Charlottesville, VA 22903

ARCHITECT

Stoneking/ von Storch Architects

P.O. Box 1332 Charlottesville, VA 22902
300 West Main St ste 103 Charlottesville, VA 22903
434.981.4382 mds@s-vs.com

**Virginia Uniform Statewide Building Code (USBC)
International Building Code 2021**

PROJECT NARRATIVE

The tenant intends to open a restaurant featuring duck-pin bowling in the space formerly occupied by the South and Central Restaurant at the Dairy Market.

The project consists of 4378 total square feet. Granting 15 % of the 4000 square foot base limit would allow a project up to 4600 square feet. The project breaks down as follows; 3600 is the primary dining/ activity space, there are two employee bathrooms, a wait station and a 482 sq ft kitchen. There is also a 2400 sq ft patio space. There will be a new entry on the Tenth Street side using a single door with sidelights not unlike the existing door on Tenth Street. The three large, glazed openings on the 10th Street side will be converted to overhead doors. The existing door facing Preston will be locked and unused. No other exterior changes are expected.

DESIGN BUILD:

Certain work is often provided through the General Contractor via Design-Build Subcontractors.

These include:

- Mechanical
- Electrical
- Plumbing
- Sprinkler
- Security
- Kitchen and Bar Equipment.

Design-Build Subcontractor for each trade is responsible for their respective systems. These responsibilities include:

- Engineering the system(s)
- Code compliance
- Permit application, acquisition
- Warranties
- Coordination with the General Contractor
- Estimating the costs of their systems
- Developing alternatives
- Coordination with SvS and client
- Obtaining client approval
- Construction of their system(s)
- Adherence to construction schedule and approved cost
- Coordination with other Design-Build subcontractors



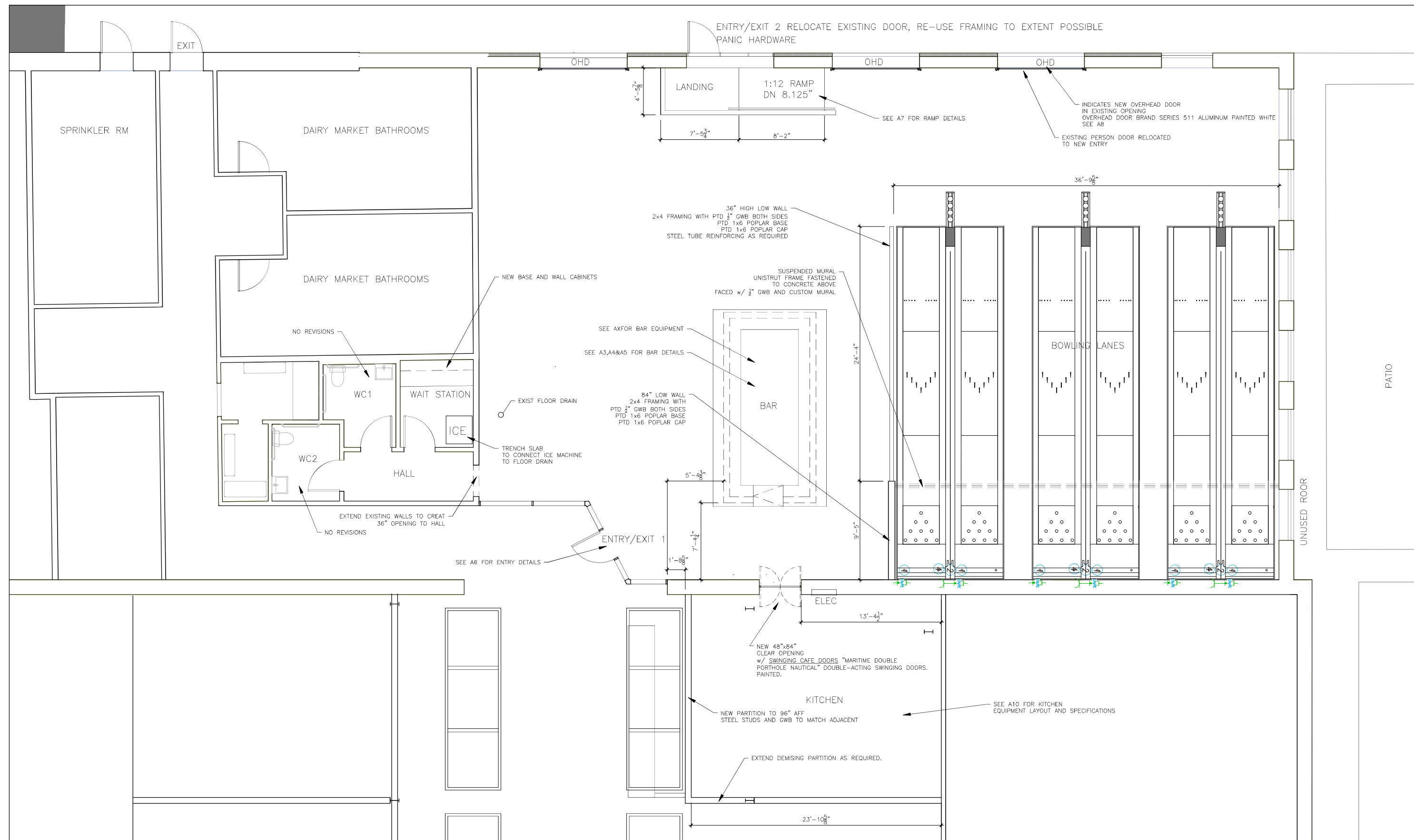
Sunpins Bowling

Stoneking/ von Storch Architects
434.981.4382 mds@s-vs.com

Cover Sheet

October 16, 2024 Permit Application

C1



Sunpins Bowling

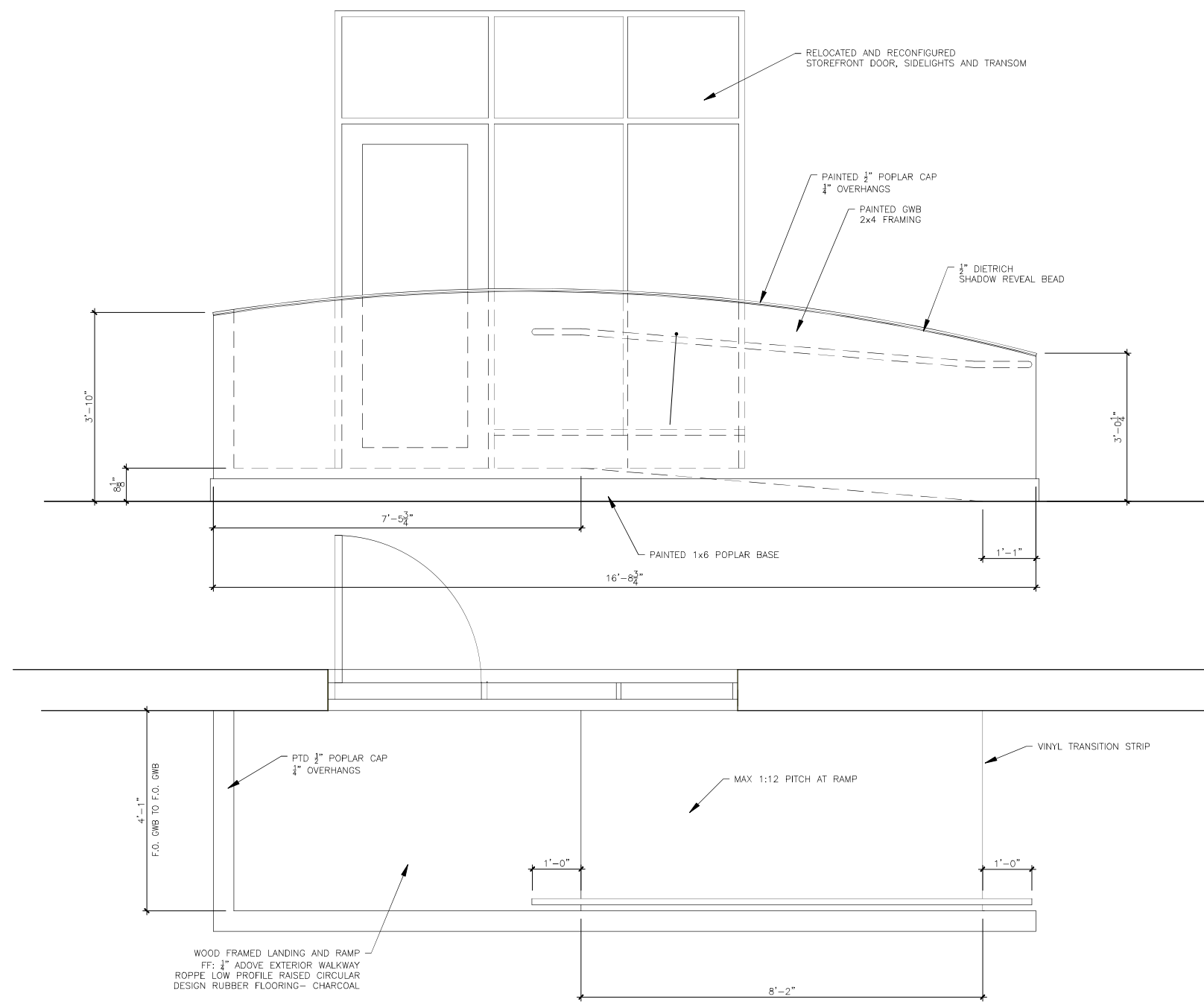
Stoneking/ von Storch Architects
434.981.4382 mds@s-vs.com

Floor Plan

1/4"=1'-0"

October 16, 2024 Permit Application

A1



Sunpins Bowling

Stoneking/ von Storch Architects

434.981.4382 mds@s-vs.com

Entry Ramp Details

3/4"=1'-0"

October 16, 2024 Permit Application

A7



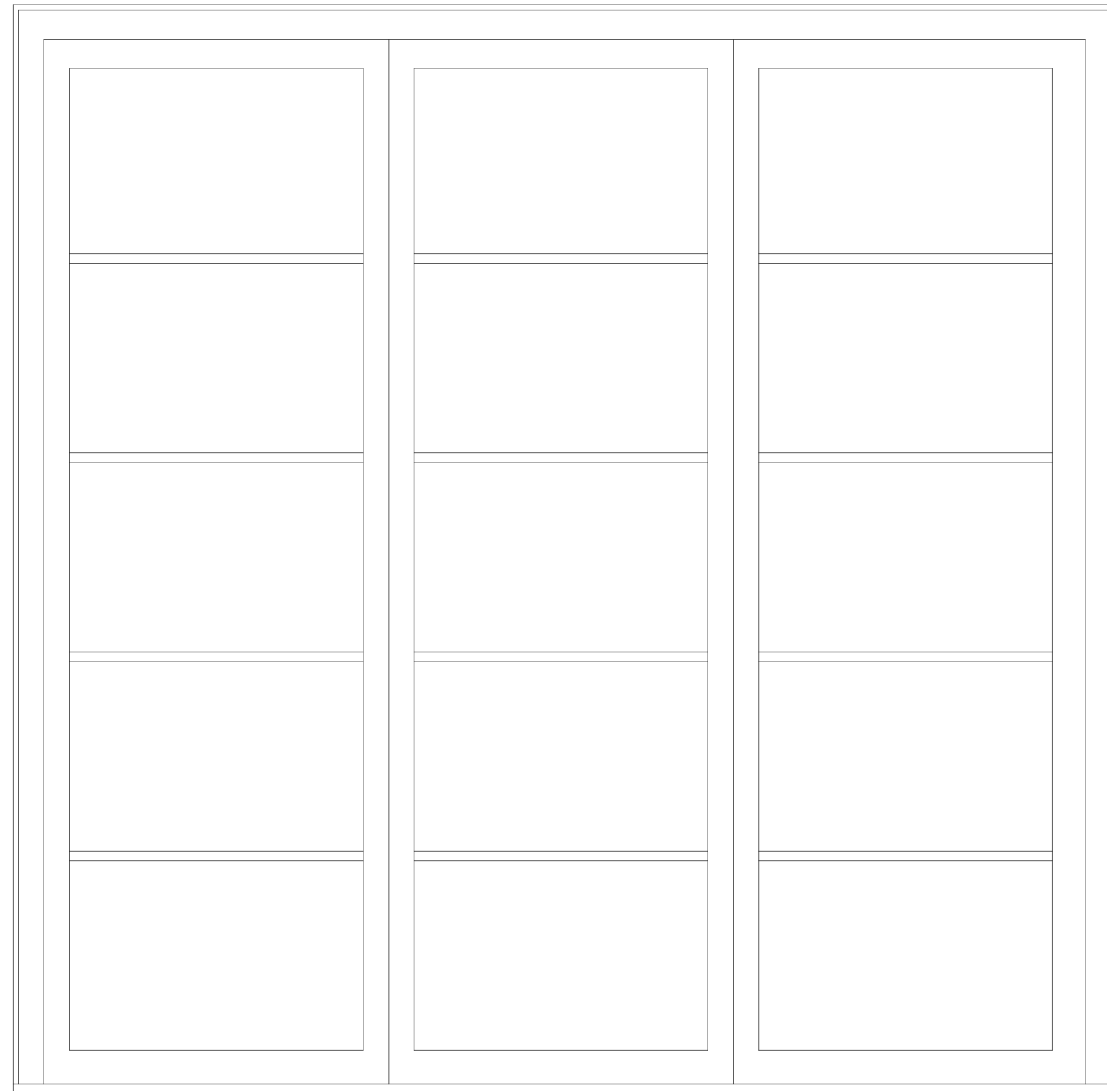
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434.981.4382 mds@s-vs.com

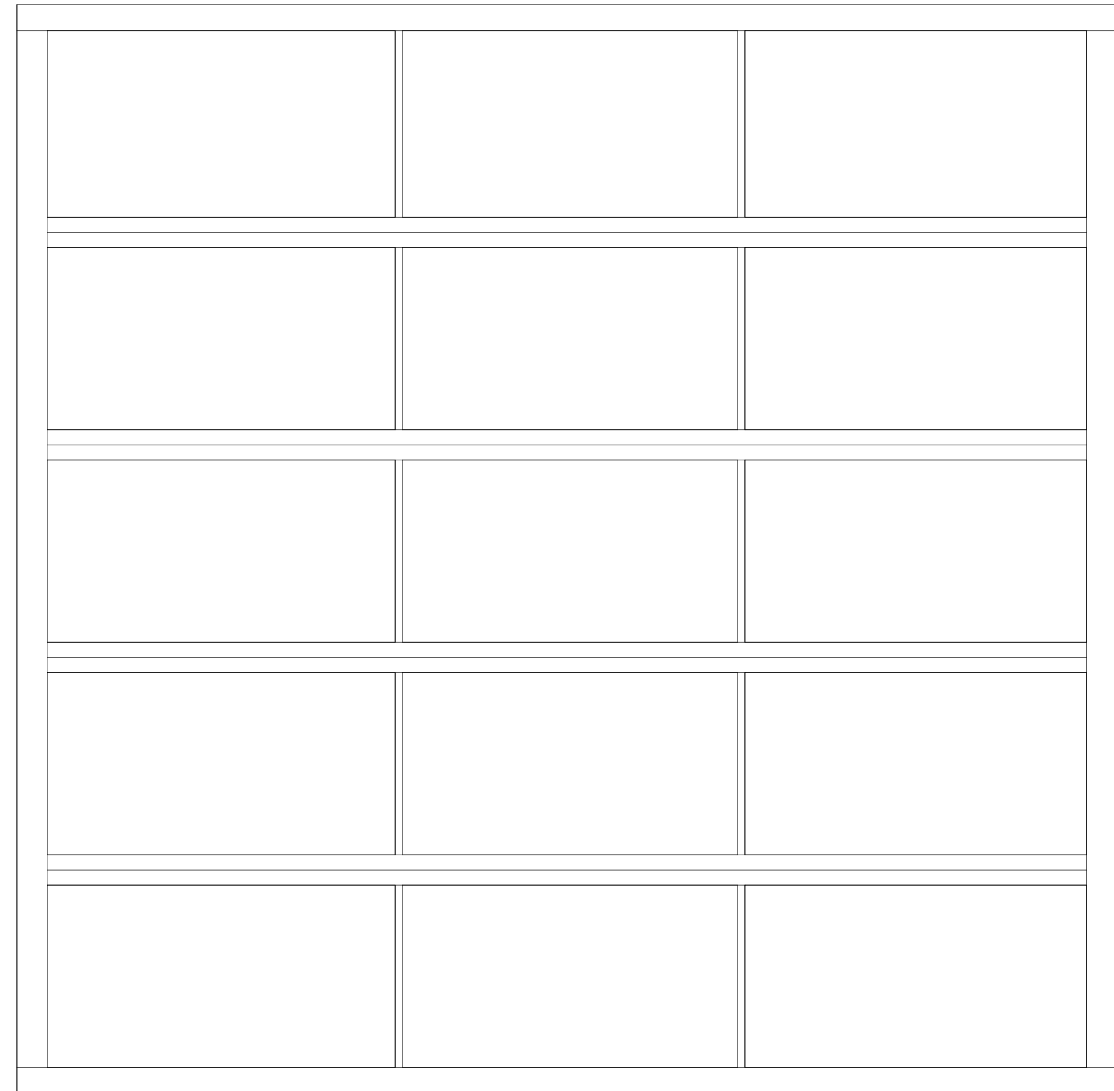
Tenth Street Facade

October 16, 2024 Permit Application

A8



Option B Tri-Fold Door Door
When open, panels extend 30" from face of building to the exterior.



Option A Overhead Door 511

FIND A DISTRIBUTOR



Home / Commercial / Aluminum Glass Door - 511

Aluminum Glass Door - 511

MODEL 511



[VIEW FULL GALLERY](#)

Aluminum Glass Door model 511 is designed in sizes up to 16'2" (4928 mm) wide and 16'1" high (4902 mm). Featuring a narrow center stile width of 21/32" (17 mm), these doors are sleek, attractive and permit maximum visibility. An array of glazing choices, top and bottom rail widths, finishes and special options customizes the 511 to satisfy nearly any project requirement.

[REQUEST A QUOTE](#)[FIND A DISTRIBUTOR](#)[Overview](#)[Options](#)[Brochures](#)[Documents](#)

Construction

Product Specifications

Standard Max Width	16'2" (4928 mm)
Standard Max Height	16'1" (4902 mm)
Panel thickness	1 3/4" (45 mm)
Material	6063-T6 aluminum
Standard finish	204R-1 clear anodized
Center stile width	21/32" (17 mm)
End stile width	2 3/4" (70 mm)
Top rail width	2 3/8" (60 mm) or 3 3/4" (95 mm)
Top intermediate rail width	3/4" (19 mm)
Bottom intermediate rail width	5/8" (16 mm)
Bottom rail width	2 3/8" (60 mm) or 3 3/4" (95 mm) or 4 1/2" (114 mm)
Weatherseals	Bottom, flexible PVC
Standard springs	10,000 cycle

Product Specifications

Track	2" (51 mm)
Mounting	Angle
Operation	Manual pull rope
Hinges and fixtures	Galvanized steel
Lock	Galvanized, interior-mounted single unit

Warranty

- 1-year limited



Architect's Corner

For architects, contractors, or building owner/manager, Architect's Corner contains comprehensive technical and resource materials to support your project from SPECS, drawings, and documents all in one place.

SEARCH TOOLS



Resources

From documents and manuals to programming instructions, FAQs, and customer support, all to enhance your experience with our products and services.

BROWSE RESOURCES

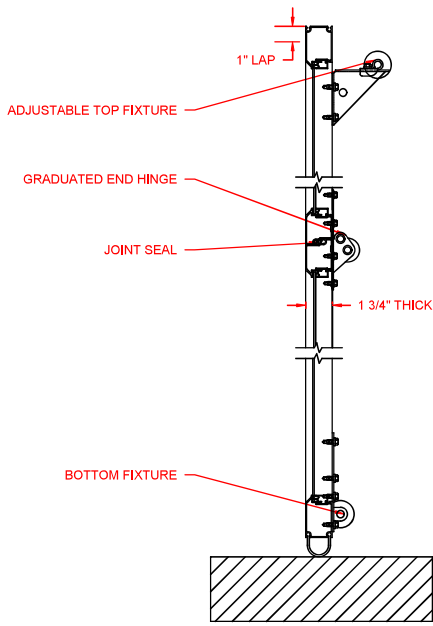


1 (800) 929-3667 (DOOR)

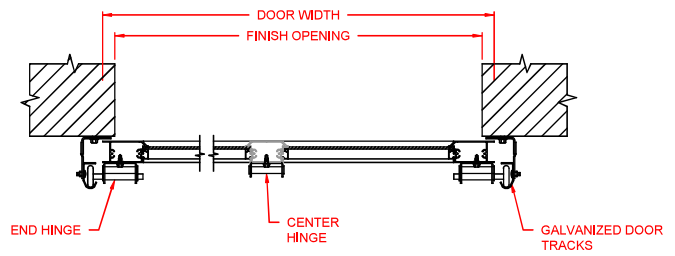
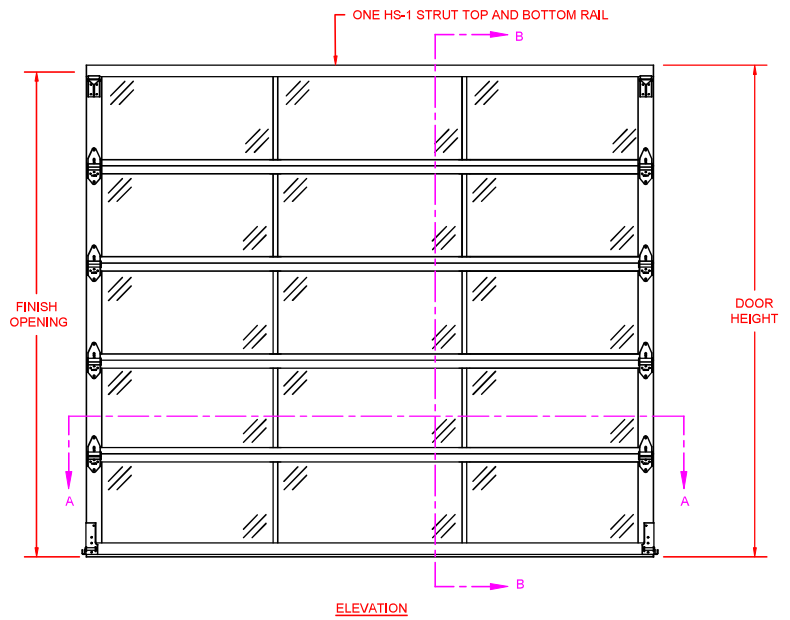
Homeowners

Professionals

Useful links



SECTION B-B



SECTION A-A

The Genuine. The Original.



SECTION 08360 [08 36 00]
MODEL 511 GLAZED ALUMINUM SECTIONAL OVERHEAD DOORS

Display hidden notes to specifier by using 'Tools'/'Options'/'View'/'Hidden Text'. On newer versions of Microsoft Word click on round Windows logo in top left corner, Click on 'Word Options' button at bottom of drop down menu. Click on 'Display' on left menu bar, and check the box for 'Hidden Text'.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Glazed Aluminum Sectional Overhead Doors
- B. Electric Operators and Controls.
- C. Operating Hardware, tracks, and support.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete.
- B. Section 04810 – Concrete Unit Masonry.
- C. Section 05500 - Metal Fabrications.
- D. Section 06114 – Wood Framing.
- E. Section 07900 - Joint Sealants.
- F. Section 08710 - Door Hardware.
- G. Section 09900 - Paints and Coatings.
- H. Section 11150 - Parking Control Equipment.
- I. Section 16130 - Raceway and Boxes.
- J. Section 16150 - Common Work Results for Electrical.

1.3 REFERENCES

- A. ANSI/DASMA 102 - American National Standard Specifications for Sectional Overhead Type Doors.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

- A. Wiring Connections: Requirements for electrical characteristics.
 - 1. 115 volts, single phase, 60 Hz.
 - 2. 230 volts, single phase, 60 Hz.
 - 3. 230 volts, three phase, 60 Hz.
 - 4. 460 volts, three phase, 60 Hz.
- B. Single-Source Responsibility: Provide doors, tracks, motors, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Indicate plans and elevations including opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- E. Operation and Maintenance Data.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- B. Installer Qualifications: Authorized representative of the manufacturer with minimum five years documented experience.
- C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened labeled packaging until ready for installation.
- B. Protect materials from exposure to moisture until ready for installation.
- C. Store materials in a dry, ventilated weathertight location.

1.8 PROJECT CONDITIONS

- A. Pre-Installation Conference: Convene a pre-installation conference just prior to commencement of field operations, to establish procedures to maintain optimum working conditions and to coordinate this work with related and adjacent work.

1.9 WARRANTY

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Overhead Door Corporation, 2501 S. State Hwy. 121, Suite 200, Lewisville, TX 75067. ASD. Tel. Toll Free: (800) 275-3290. Phone: (469) 549-7100. Fax: (972) 906-1499. Web Site: www.overheaddoor.com. E-mail: info@overheaddoor.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 GLAZED ALUMINUM SECTIONAL OVERHEAD DOORS

- A. Glazed Sectional Overhead Doors: Model 511 Aluminum Doors by Overhead Door Corporation. Units shall have the following characteristics:
 - 1. Door Assembly: Stile and rail assembly secured with 1/4 inch (6 mm) diameter through rods.
 - a. Panel Thickness: 1-3/4 inches (44 mm).
 - b. Center Stile Width: 21/32 inch (17 mm).
 - c. End Stile Width: 2-3/4 inches (70 mm).
 - d. Intermediate Rail Pair Width: 1-3/8 inches (35 mm).
 - e. Top Rail Width:
 - 1) 2-3/8 inches (60 mm).
 - 2) 3-3/4 inches (95 mm).
 - f. Bottom Rail Width:
 - 1) 2-3/8 inches (60 mm).
 - 2) 3-3/4 inches (95 mm).
 - 3) 4-1/2 inches (114 mm).
 - g. Aluminum Panels: 0.050 inch (1.3 mm) thick, aluminum.
 - h. Stiles and Rails: 6063 - T6 aluminum.
 - i. Springs:
 - 1) 10,000 cycles.
 - 2) 25,000 cycles.
 - 3) 50,000 cycles.
 - 4) 75,000 cycles.
 - 5) 100,000 cycles.
 - j. Glazing:
 - 1) 1/8 inch (3 mm) Acrylic glazing.
 - 2) 1/4 inch (6 mm) Acrylic glazing.
 - 3) 1/8 inch (3 mm) Clear Lexan glazing.
 - 4) 1/4 inch (6 mm) Clear Lexan glazing.
 - 5) 1/2 inch (12.5 mm) Clear Lexan Insulated glazing.
 - 6) 1/8 inch (3 mm) Tempered glass.
 - 7) 1/4 inch (6 mm) Tempered glass.
 - 8) 1/2 inch (12.5 mm) Tempered Insulating glass.
 - 9) 1/4 inch (6 mm) Wire glass.
 - 10) 1/8 inch (3 mm) Double Strength glass.
 - 11) 1/2 inch (12.5 mm) Double Strength Insulating glass.
 - 12) 1/8 inch (3 mm) Low E glazing.
 - 13) 1/4 inch (6 mm) Low E glazing.
 - 14) 1/2 inch (12.5 mm) Low E Insulated glazing.

- 15) 1/8 inch (3 mm) Solar Bronze glazing.
 - 16) 1/4 inch (6 mm) Solar Bronze glazing.
 - 17) 1/2 inch (12.5 mm) Solar Bronze Insulated glazing.
 - 18) 1/8 inch (3 mm) Obscure glazing.
 - 19) 1/4 inch (6 mm) Obscure glazing.
 - 20) 1/2 inch (12.5 mm) Obscure Insulated glazing.
 - 21) 1/4 inch (6 mm) Twin-Wall Polycarbonate (clear, bronze, white).
 - 22) 3/8 inch (9.5 mm) Twin-Wall Polycarbonate (clear, bronze, white).
 - 23) 5/8 inch (15.87 mm) Triple-Wall Polycarbonate (clear, bronze, white).
2. Finish and Color:
 - a. Anodized Finish: Clear anodized.
 - b. Anodized Finish: Bronze anodized.
 - c. Powder coat finish bronze light.
 - d. Powder coat finish bronze medium.
 - e. Powder coat finish bronze dark.
 - f. Powder Coating Finish: Color as selected by Architect from manufacturer's standard colors.
 3. Wind Load Design: Design as calculated in accordance with applicable code as follows:
 - a. Design pressure of _____ lb/sq ft (_____ kPa).
 4. Hardware: Galvanized steel hinges and fixtures. Ball bearing rollers with hardened steel races.
 5. Lock: Interior galvanized single unit.
 6. Weatherstripping:
 - a. Flexible bulb-type strip at bottom section.
 - b. Flexible Jamb seals.
 - c. Flexible Header seal.
 7. Track: Provide track as recommended by manufacturer to suit loading required and clearances available.
 8. Manual Operation: Pull rope.
 9. Manual Operation: Chain hoist.
 10. Electric Motor Operation: Provide UL listed electric operator, size and type as recommended by manufacturer to move door in either direction at not less than 2/3 foot nor more than 1 foot per second. Operator shall meet UL325/2010 requirements for continuous monitoring of safety devices.
 - a. Entrapment Protection: Required for momentary contact, includes radio control operation.
 - 1) Pneumatic sensing edge up to 18 feet (5.5 m) wide. Constant contact only complying with UL 325/2010.
 - 2) Electric sensing edge monitored to meet UL 325/2010.
 - 3) Photoelectric sensors monitored to meet UL 325/2010.
 - b. Operator Controls:
 - 1) Push-button operated control stations with open, close, and stop buttons.
 - 2) Key operated control stations with open, close, and stop buttons.
 - 3) Push-button and key operated control stations with open, close, and stop buttons.
 - 4) Flush mounting.
 - 5) Surface mounting.
 - 6) Interior location.
 - 7) Exterior location.
 - 8) Both interior and exterior location.
 - c. Special Operation:
 - 1) Pull switch.

- 2) Vehicle detector operation.
- 3) Radio control operation.
- 4) Card reader control.
- 5) Photocell operation.
- 6) Door timer operation.
- 7) Commercial light package.
- 8) Explosion and dust ignition proof control wiring.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until openings have been properly prepared.
- B. Verify wall openings are ready to receive work and opening dimensions and tolerances are within specified limits.
- C. Verify electric power is available and of correct characteristics.
- D. If preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean adjacent surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install overhead doors and track in accordance with approved shop drawings and the manufacturer's printed instructions.
- B. Coordinate installation with adjacent work to ensure proper clearances and allow for maintenance.
- C. Anchor assembly to wall construction and building framing without distortion or stress.
- D. Securely brace door tracks suspended from structure. Secure tracks to structural members only.
- E. Fit and align door assembly including hardware.
- F. Coordinate installation of electrical service. Complete power and control wiring from disconnect to unit components.

3.4 CLEANING AND ADJUSTING

- A. Adjust door assembly to smooth operation and in full contact with weatherstripping.
- B. Clean doors, frames, glass, and polycarbonate according to manufacturer's instructions.

- C. Remove temporary labels and visible markings. Do not remove polycarbonate care and maintenance label required to maintain warranty.

3.5 PROTECTION

- A. Do not permit construction traffic through overhead door openings after adjustment and cleaning.
- B. Protect installed products until completion of project.
- C. Touch-up, damaged coatings and finishes and repair minor damage before Substantial Completion.

END OF SECTION

511/521/522

ALUMINUM DOOR SYSTEMS



ALUMINUM SECTIONAL DOORS



VISUAL ACCESS.
LIGHT INFILTRATION.
CONTEMPORARY LOOK.



INDUSTRY LEADING
COMMERCIAL & INDUSTRIAL SOLUTIONS

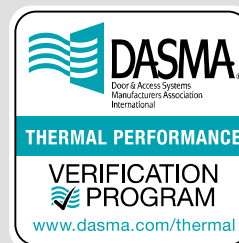


Model 511, Brown powder coat finish, Clear glass

General Features and Benefits – Models 511/521

- 1 3/4" (45 mm) thick, corrosion-resistant 6063-T6 aluminum sections with galvanized fixtures and hinges promotes durability and trouble-free operation
- 1/4" (6 mm) diameter through-rods on all stiles and rails enhances strength and sturdiness
- Top-quality materials, excellent field service and optional maintenance program contribute to extended door life, low maintenance costs and maximum productivity
- Glazing choices include DSB glass, acrylic, tempered glass, clear polycarbonate, multi-wall polycarbonate, wire glass, Low E, Lexan and laminate
- Standard clear anodized finish for low-maintenance and corrosion-resistance
- Optional finishes include a wide range of powder coat colors offering an attractive and durable finish
- Manual pull rope operation with optional chain hoist or electric motor operator
- Available in approximately 200 RAL powder coat colors to match the aesthetic and design of your project. This color optional upgrade includes a hardening additive that provides an attractive and durable finish and easy-to-clean surface.

Cover image: Model 521, Custom powder coat with Clear glass



Overhead Door™ Brand participates in the DASMA Thermal Performance Verification Program. The program verifies the thermal performance of sectional doors. The lower the U-factor rating, the better the thermal performance.



Symbol indicates verified U-factor rating in accordance with the DASMA Thermal Performance Verification Program.



Model 522, Mirrored Gray glass

General Features and Benefits – Model 522

- **Frameless design** – the ultimate sleek and modern aluminum full-view door
- **Vinyl seals** between the sections and the flexible bottom seal help to minimize air flow
- **Large glass panels**, mounted to the front of the door, allow maximum light and visibility
- **1 3/8" thick aluminum section** with patent pending design for long life and durability
- **2 1/4" integrated reinforcing rib** on upper intermediate rail for doors 10'3" wide and over
- **Meets ASHRAE 90.1 and IECC® air infiltration requirements** with a third-party tested value of less than 0.4 cfm/ft²
- **Meets California Code of Regulation, Title 24 air infiltration requirements** with a third-party tested value of less than 0.3 cfm/ft²



ALUMINUM DOOR SYSTEMS

MODELS 511/521/522 offer an attractive solution for commercial and industrial applications where visual access, light infiltration and aesthetics are key design considerations.

Model 521, Clear anodized finish with Clear glass



Glass Options for Models 511/521

Specialty Glass

- Laminated White – privacy
- Low E Glass** – thermal efficiency
- Tempered Glass – enhanced safety
- Tinted Glass** – color options:
Green, Gray, Bronze

Glass Alternatives

- Clear Lexan® Polycarbonate** – shatter resistant
- Multi Wall Polycarbonate – superior strength with UV protection; color options: Clear, White, Bronze
- Plexiglas® Acrylic** – shatter resistant
- Impact Clear and Frosted Polycarbonate - 0.250" minimum



Double Strength DSB** (Standard)



Obscure



Satin Etched



Gray Tint



Green Tint



Bronze Tint



Impact Frosted Polycarbonate

Actual glass may vary from brochure photos due to fluctuations in the printing process. Check with your Overhead Door™ Distributor to view a glass sample.

** Insulated options available.



Model 511, Clear Anodized finish with Clear glass

ALUMINUM DOOR SYSTEMS MODEL 511

doors are designed in sizes up to 16'2" wide and 16'1" high (4928 mm and 4902 mm). Featuring a narrow center stile width of 21/32" (17 mm), these doors are sleek, attractive and permit maximum visibility. An array of glazing choices, top and bottom rail widths, finishes and special options customizes the 511 Model to satisfy nearly any project requirement.

Model 511, Black powder coat finish, Clear glass.



Standard Features at a Glance

Panel Thickness	1 3/4" (45 mm)
Maximum Standard Height	16'1" (4902 mm)
Maximum Standard Width	16'2" (6147 mm)
Material	6063-T6 aluminum
Standard Finish	204R-1 clear anodized
Center Stile Width	2 1/32" (17 mm)
End Stile Width	2 3/4" (70 mm)
Top Rail Width	2 3/8" (60 mm) or 3 3/4" (95 mm)
Top Intermediate Rail Width	3/4" (19 mm)
Bottom Intermediate Rail Width	5/8" (16 mm)
Bottom Rail Width	2 3/8" (60 mm) or 3 3/4" (95 mm) or 4 1/2" (114 mm)
Weatherseals	Bottom, flexible PVC
Standard Springs	10,000 cycle
Track	2" (51 mm)
Mounting	Angle
Operation	Manual pull rope
Hinges and Fixtures	Galvanized steel
Lock	Galvanized, interior-mounted single unit
Warranty	1-Year Limited; 3-Year Limited powder coat finish

Options

Glazing Options*:
 1/8" (3 mm) DSB;
 1/8" (3 mm) or 1/4" (6 mm) acrylic;
 1/8" (3 mm) or 1/4" (6 mm) tempered;
 1/8" (3 mm) or 1/4" (6 mm) clear polycarbonate;
 1/4" (6mm) and 3/8" twin-wall polycarbonate, 5/8" triple-wall polycarbonate;
 1/4" (6 mm) 3/8" (10 mm) and 5/8" (16 mm) twin-wall polycarbonate, triple-wall polycarbonate 1/4" (6 mm) wire glass;
 1/2" (12 mm) insulated glass

Electric operator or chain hoist

Bottom sensing edge

3" track

Bracket mounting (not available on full vertical door tracks)

Higher-cycle springs in 25k, 50k, 75k, 100k cycles

Chain hoist

Posi-tension drums

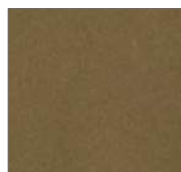
*Contact your local Overhead Door™ Distributor for special glazing requirements. Verify 1/4" (6 mm) glass applications with factory.

Structure Options

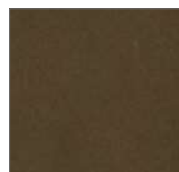
Anodized Finishes



Clear (standard)



Light Bronze



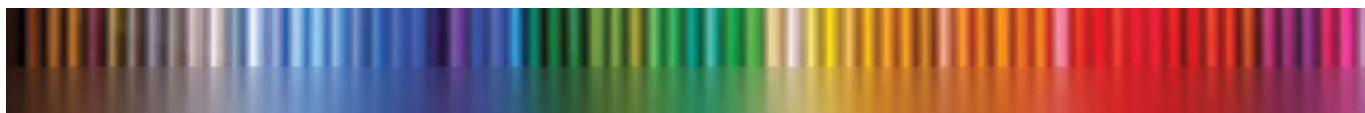
Medium Bronze



Dark Bronze

Powder Coat Finishes

Select from approximately 200 RAL powder coat color options to best match your home.



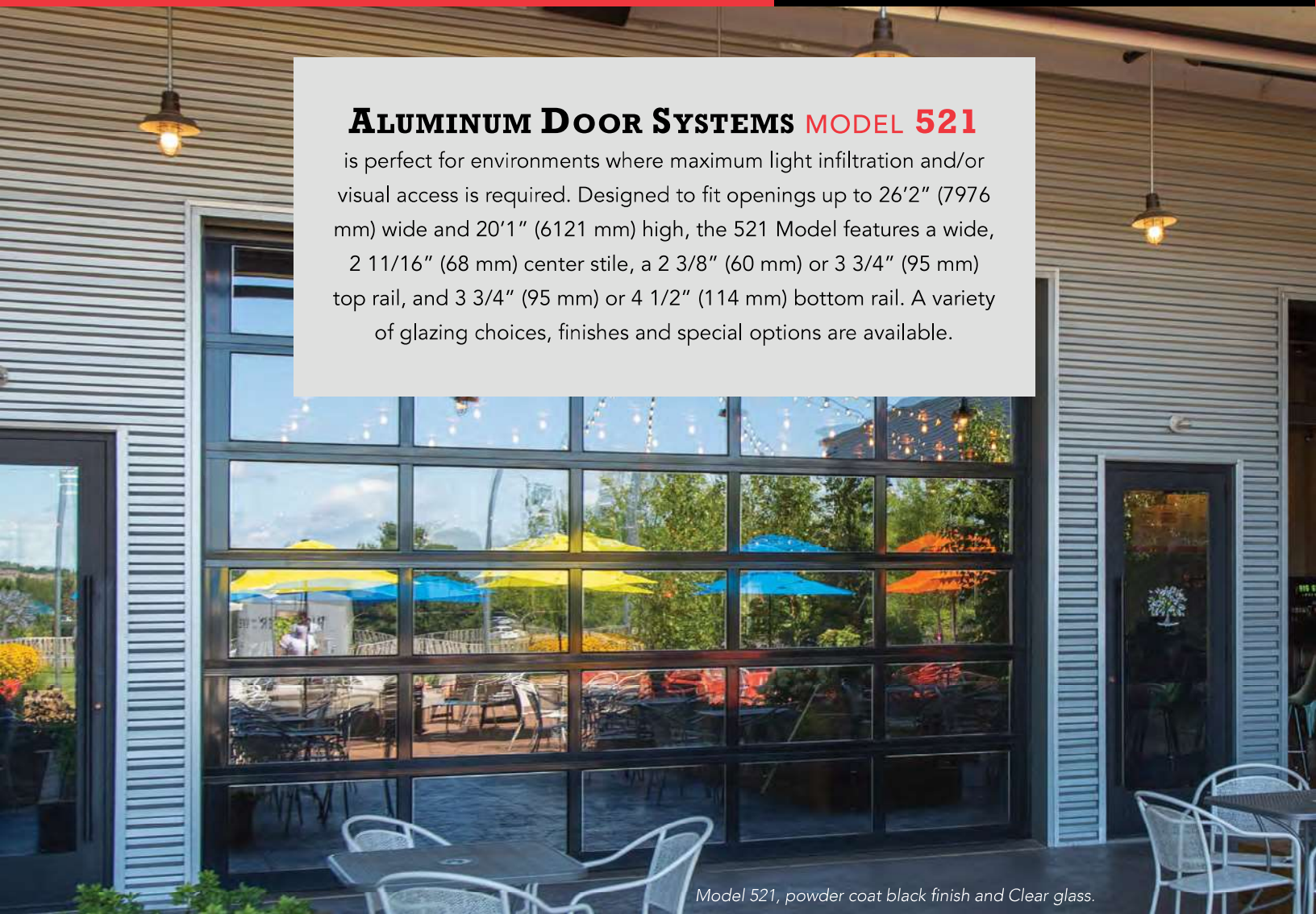
Actual door colors may vary from brochure photos due to fluctuations in the printing process. Always request a color sample from your Overhead Door™ Distributor for accurate color matching.

Panel Layout	
Door Width	Number of Panels
to 11'11" (3632 mm)	3
12'0" to 14'11" (3658 mm to 4547 mm)	4
15'0" to 16'2" (4572 mm to 4928 mm)	5

Section Stack	
Door Height	Number of Sections
to 8'6" (2591 mm)	4
8'7" to 10'1" (2616 mm to 3073 mm)	5
10'2" to 12'1" (3099 mm to 3683 mm)	6
12'2" to 14'1" (3708 mm to 4293 mm)	7
14'2" to 16'1" (4318 mm to 4902 mm)	8

ALUMINUM DOOR SYSTEMS MODEL 521

is perfect for environments where maximum light infiltration and/or visual access is required. Designed to fit openings up to 26'2" (7976 mm) wide and 20'1" (6121 mm) high, the 521 Model features a wide, 2 11/16" (68 mm) center stile, a 2 3/8" (60 mm) or 3 3/4" (95 mm) top rail, and 3 3/4" (95 mm) or 4 1/2" (114 mm) bottom rail. A variety of glazing choices, finishes and special options are available.



Model 521, powder coat black finish and Clear glass.

Optional Polyurethane Insulation for Stiles and Rails up to 18'2" Wide

1/2" Insulated Glazing Unit	Door U-factor ¹ ✓	Door R-value ²
DSB- Clear, Tempered, Obscure	0.30	2.87
Clear Polycarbonate		2.93
DSB - Solar Bronze		3.17
DSB - Low E coating	0.28	3.43
SolarBan 70XL Argon Filled		4.09
Multi-wall Polycarbonate	Door U-factor	Door R-value
1/4" Thick Unit		2.75
3/8" Thick Unit		3.21
5/8" Thick Unit		3.48
Insulated Panels	Door U-factor	Door R-value
3/8" EPS Solid Panels		2.60



Polyurethane filled rails and stiles

1 - U-factor is independently tested and verified per ANSI/DASMA 105 using solid doors and specific product sizes.
 2 - Overhead Door Corporation uses a calculated door section R-value for our insulated doors.



Standard Features at a Glance

Section Thickness	1 3/4" (45 mm)
Maximum Standard Height	20'1" (6121 mm)
Maximum Standard Width	26'2" (7976 mm)
Material	Extruded 6061-T6 aluminum
Standard Finish	204R-1 clear anodized (painted white at no charge)
Center Stile Width	2 1/16" (68 mm)
End Stile Width	3 5/16" (85 mm)
Top Rail Width	2 3/8" (60 mm) or 3 3/4" (95 mm)
Top Intermediate Rail Width	2 1/8" (54 mm)
Bottom Intermediate Rail Width	1 19/32" (40 mm)
Bottom Rail Width	3 3/4" (95 mm) or 4 1/2" (114 mm)
Weatherseals	Bottom, flexible PVC
Standard Springs	10,000 cycle
Track	2" (51 mm)
Mounting	Angle
Operation	Manual pull rope
Hinges and Fixtures	Galvanized steel
Lock	Galvanized, interior-mounted single unit
Warranty	1-Year Limited; 3-Year Limited on powder coat finish

Options

- Glazing Options†: 1/8" (3 mm) DSB; 1/8" (3 mm) or 1/4" (6 mm) acrylic; 1/8" (3 mm) or 1/4" (6 mm) tempered; 1/8" (3 mm) or 1/4" (6 mm) clear polycarbonate; 1/4" (6mm) and 3/8" twin-wall polycarbonate, 5/8" triple-wall polycarbonate; 1/4" (6 mm) 3/8" (10 mm) and 5/8" (16 mm) twin-wall polycarbonate, triple-wall polycarbonate 1/4" (6 mm) wire glass; 1/2" (12 mm) insulated glass
- Electric operator or chain hoist
- Bottom sensing edge
- 3" track
- Bracket mounting (not available on full vertical door tracks)
- Higher-cycle springs in 25k, 50k, 75k, 100k cycles
- Exhaust ports
- Four-section pass door
- Wind load and impact rated door available
- Posi-tension drums
- Bronze anodization
- Powder coat finish
- Pass door

†Contact your local Overhead Door™ Distributor for special glazing requirements. Verify 1/4" (6 mm) glass applications with factory.

Structure Options

Anodized Finishes



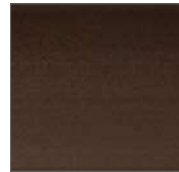
Clear (standard)



Light Bronze



Medium Bronze



Dark Bronze



Black

Actual door colors may vary from brochure photos due to fluctuations in the printing process. Always request a color sample from your Overhead Door™ Distributor for accurate color matching.

Powder Coat Finishes

Select from approximately 200 RAL powder coat color options to best match your home.



*Wood grain availability dependent upon location.

Panel Layout

Door Width	Number of Panels
to 9'2" (to 2794 mm)	2 or 3 (standard)
9'3" to 12'2" (2819 mm to 3708 mm)	3
12'3" to 16'2" (3734 mm to 4953 mm)	4
16'3" to 18'2" (4978 mm to 5537 mm)	4 or 5 (standard)
18'3" to 19'2" (5562 mm to 5842 mm)	5
19'3" to 20'11" (5867 mm to 6375 mm)	6**
21'0" to 23'11" (6401 mm to 7290 mm)	8**
24'0" to 26'2" (7315 mm to 7976 mm)	10**

Section Stack

Door Height	Number of Sections
to 8'6" (2591 mm)	4
8'7" to 10'1" (2616 mm to 3073 mm)	5
10'2" to 12'1" (3099 mm to 3683 mm)	6
12'2" to 14'1" (3708 mm to 4293 mm)	7
14'2" to 16'1" (4318 mm to 4902 mm)	8
16'2" to 18'1" (4928 mm to 5512 mm)	9
18'2" to 20'1" (5537 mm to 6121 mm)	10

**Special construction. Consult your local Overhead™ Door Distributor for additional information.

ALUMINUM DOOR SYSTEMS MODEL 522

This aluminum full-view door is ideal for restaurants, auto dealerships and any application where the door needs to integrate seamlessly with the aesthetics of the building.

Model 522, Mirrored Bronze glass



Standard Features at a Glance

Section Thickness	1 3/8" (35 mm)
Maximum Standard Height	14'1" (4318 mm)
Maximum Standard Width	18'2" (5486 mm)
Material	6063-T6 aluminum
Standard Finish	White, Black or Bronze Powder Coat
Center Stile Width	3" (76 mm)
End Stile Width	3 1/2" (89 mm)
Top Rail Width	3 1/2" (89 mm)
Top Intermediate Rail Width	1 5/8" (41 mm)
Bottom Intermediate Rail Width	1 3/8" (35 mm)
Bottom Rail Width	3 1/2" (89 mm)
Standard Springs	10,000 cycle
Track	Provide track as recommended by manufacturer to suit loading required and clearances available
Mounting	Angle
Operation	Manual pull rope
Hinges and Fixtures	Galvanized steel
Lock	Galvanized, interior-mounted single unit
Warranty	1-Year Limited

Options

- Springs: 25,000, 50,000, 75,000 or 100,000 cycles
- Weather stripping: jamb and header seals
- White or Black powder coat track

Glass Options



Opaque White



Opaque Black



Mirrored Gray



Mirrored Bronze



Translucent Black

Structure Options

Powder Coat Finishes



White



Black



Bronze

Anodized Finishes



Black



Bronze

Actual colors may vary from brochure due to fluctuations in the printing process. Always request a color sample from your Overhead Door™ Distributor for accurate color matching.

Aluminum and Glass Pairing

Aluminum Options

White Powder Coat

Black Powder Coat / Bronze Powder Coat /
Black Anodized / Bronze Anodized

Glass Color

Opaque White

Opaque Black / Mirrored Gray / Mirrored Bronze /
Translucent Black

Each door is unique and built to order, therefore a slight deviation in glass alignment is possible. These doors may become hot to the touch in sustained hot weather. See website for door sizes, section selection and other details.

Track Detail

Any of the following track configurations can be selected for 511, 521 and 522 Aluminum door models.

O.H.=Opening height L.C.=Lift clearance D.H.=Door height

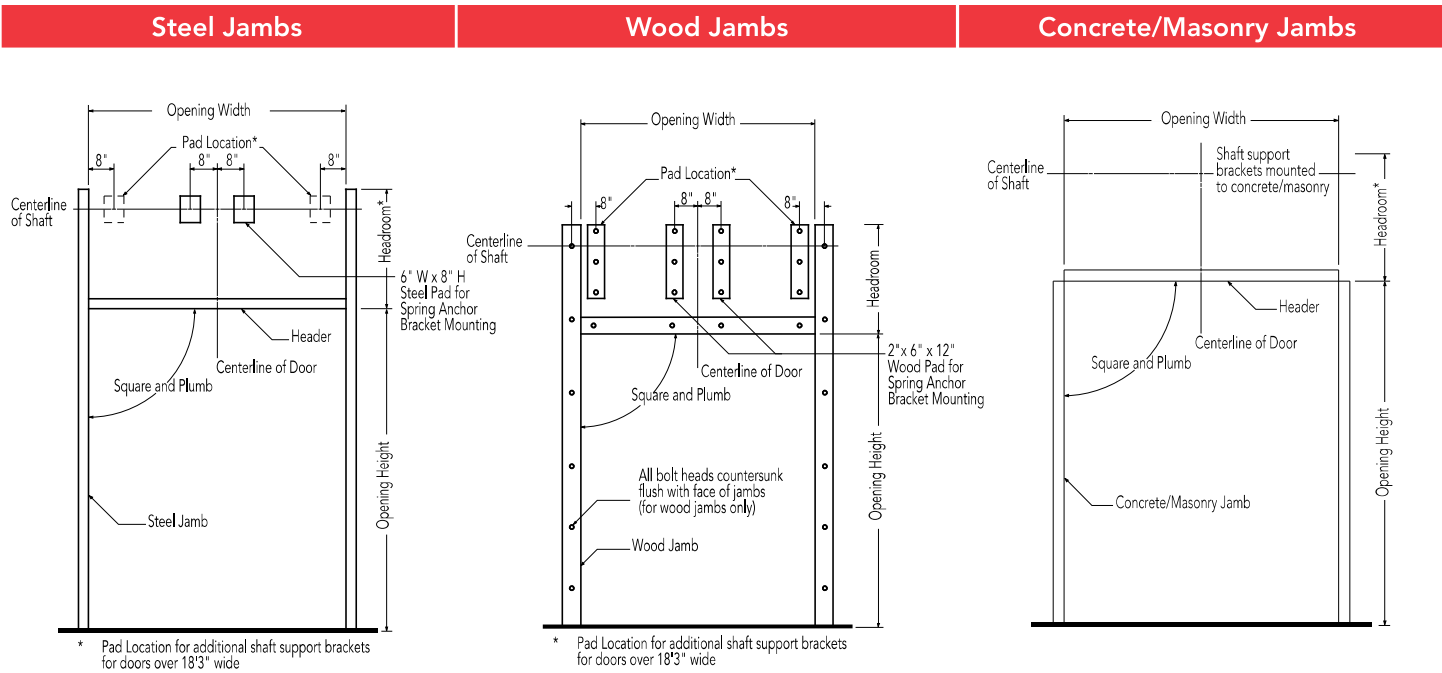
Standard Lift Track			Lift Clearance Track Standard			Full Vertical Track		
2" (51 mm) Track [15" (381 mm) radius]			2" (51 mm) Track [15" (381 mm) radius]			2" (51 mm) Track [15" (381 mm) radius]		
Door Height	Centerline of Shaft	Minimum Headroom	Door Height	Centerline of Shaft	Minimum Headroom	Door Height	Centerline of Shaft	Minimum Headroom
Thru 12'0" (3658 mm)	O.H. + 11 5/8" (295 mm)	14 1/4" (362 mm)	Thru 12'0" (3658 mm)	O.H. + L.C. + 5 5/8" (143 mm)	L.C. + 8 3/4" (222 mm)	Thru 11'0" (3353 mm)	O.H. + O.H. + 3/8" (10 mm)	O.H. + 10 1/4" (260 mm)
Thru 16'0" (4877 mm)	O.H. + 12 5/8" (321 mm)	20 1/2" (521 mm)	Thru 16'0" (4877 mm)	O.H. + L.C. + 5 5/8" (143 mm)	L.C. + 11 1/4" (286 mm)	Thru 16'0" (4877 mm)	O.H. + O.H. + 3/8" (10 mm)	O.H. + 10 1/4" (260 mm)
3" (76 mm) Track [15" (381 mm) radius]			3" (76 mm) Track [15" (381 mm) radius]			3" (76 mm) Track [15" (381 mm) radius]		
Door Height	Centerline of Shaft	Minimum Headroom	Door Height	Centerline of Shaft	Minimum Headroom	Door Height	Centerline of Shaft	Minimum Headroom
Thru 18'0" (5486 mm)	O.H. + 14 5/8" (372 mm)	18" (457 mm)	Thru 22'0" (6706 mm)	O.H. + L.C. + 6 5/8" (168 mm)	L.C. + 11 1/2" (292 mm)	Thru 18'0" (5486 mm)	O.H. + O.H. + 3/8" (10 mm)	O.H. + 10 1/4" (260 mm)
Thru 32'0" (9754 mm)	O.H. + 16 7/8" (429 mm)	21 1/2" (546 mm)	Thru 32'0" (9754 mm)	O.H. + L.C. + 6 5/8" (168 mm)	L.C. + 12 1/4" (311 mm)			

Low Headroom Track Springs to Front			Low Headroom Track Springs to Rear		
2" (51 mm) Track [15" (381 mm) radius]			2" (51 mm) Track [15" (381 mm) radius]		
Door height	Centerline of shaft	Minimum headroom	Door height	Centerline of shaft	Minimum headroom
Thru 12'0" (3658 mm)	D.H. + 8" (203 mm)	11 3/4" (299 mm)	Thru 12'0" (3658 mm)	O.H. + 2" (51 mm)	7 1/2" (191 mm)
Thru 16'0" (4877 mm)	D.H. + 8" (203 mm)	12 1/2" (318 mm)	Thru 16'0" (4866 mm)	O.H. 2" (51 mm)	8" (203 mm)
3" (76 mm) Track [15" (381 mm) radius]			3" (76 mm) Track [15" (381 mm) radius]		
Door height	Centerline of shaft	Minimum headroom	Door height	Centerline of shaft	Minimum headroom
Thru 12'0" (3658 mm)	D.H. + 9" (229 mm)	13" (330 mm)	Thru 18'0" (5486 mm)	O.H. 6 3/4" (171 mm)	9 3/4" (248 mm)
Thru 32'0" (5486 mm)	D.H. + 9" (229 mm)	13 3/4" (349 mm)			

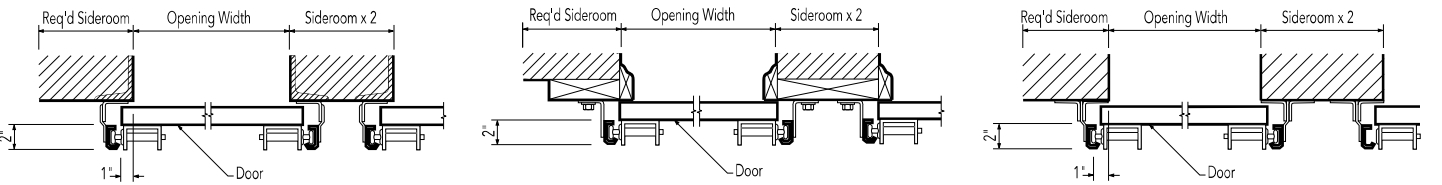


Framing and Pad Detail

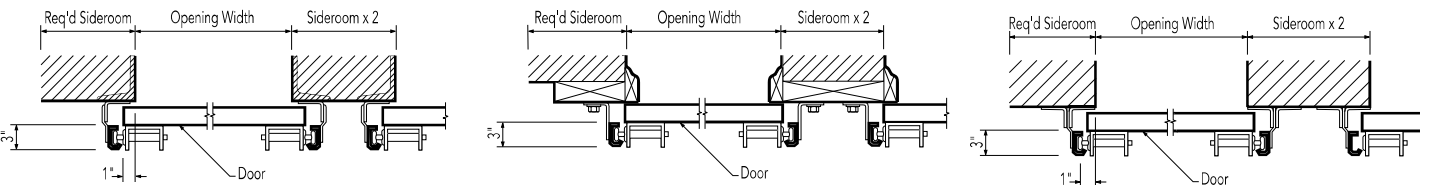
Framing and pad details for common installation of Aluminum doors in steel, wood, concrete and masonry jambs are provided here. If you require additional information or have special project requirements, refer to the Architectural Design Manual, (www.overheaddoor.com/ADM/base.html) or consult with the Applications Engineering Group or your local Overhead Door™ Distributor.



2" (51 mm) Track	2" (51 mm) Track	2" (51 mm) Track
------------------	------------------	------------------



3" (76 mm) Track	3" (76 mm) Track	3" (76 mm) Track
------------------	------------------	------------------



Minimum Required Sideroom		
Track Type	2" Track (51 mm)	3" Track (76 mm)
Standard Lift	4 1/2" (114 mm)	6 1/2" (165 mm)
Low Headroom	9" (229 mm)	10" (254 mm)
Lift Clearance	4 1/2" (114 mm)	6 1/2" (165 mm)
Full Vertical	4 1/2" (114 mm)	6 1/2" (165 mm)

Minimum Required Sideroom		
Track Type	2" Track (51 mm)	3" Track (76 mm)
Standard Lift	3 1/2" (89 mm)	5 1/2" (140 mm)
Low Headroom	8" (203 mm)	9" (229 mm)
Lift Clearance	3 1/2" (89 mm)	5 1/2" (140 mm)
Full Vertical	3 1/2" (89 mm)	5 1/2" (140 mm)

Minimum Required Sideroom		
Track Type	2" Track (51 mm)	3" Track (76 mm)
Standard Lift	4 1/2" (114 mm)	6 1/2" (165 mm)
Low Headroom	9" (229 mm)	10" (254 mm)
Lift Clearance	4 1/2" (114 mm)	5 1/2" (140 mm)
Full Vertical	4 1/2" (114 mm)	5 1/2" (140 mm)

Electric Operators

We offer a broad line of electric operators to suit new construction and retrofit applications, as well as unusual or special requirements. In order to improve safety and enhance door and motor life, industry quality assurance guidelines recommend the choice of a single manufacturer for both door and operator applications.

We are one of the only national manufacturers to offer a full line of commercial and industrial doors and operators specifically designed for integral applications.

Model RHX®

Model RHX® is a heavy duty commercial operator designed to operate doors up to 24' (7315 mm) in height and 3696 pounds (1676 kg). Available as either a trolley, sidemount or centermount.



Model RMZ®

Model RMZ® is our most advanced medium-duty operator. It is designed for quicker installation and hassle-free operation and operates doors up to 14' (4267 mm) in height and 620 pounds (282 kg). It is available as a trolley-type or side-mounted unit.



Model RSX®

Model RSX® is a standard duty commercial operator designed to operate doors up to 24' (7315 mm) in height and 1620 pounds (735 kg). It offers unique features like LimitLock®, SuperBelt™ and 16 digit menu setup.



Operator Control Options

- Push-button, key or combination stations; surface- or flush-mounted for interior and/or exterior locations
- Vehicle detectors, key card reader, photocell and door timer controls
- Treadle or pull switch stations
- Telephone entry and coded keyboard stations
- Universal programmable door timer
- Radio control systems (24 VAC or 120 VAC)
- Explosion and dust ignition-proof systems

Electric operator selection guide										
	Horsepower/ Newtons	Max. Height of Door	Max. Weight of Door	Super Belt™/ Polybelt	Worm Gear	Adjustable Clutch	Totally Enclosed	Continuous Duty	Explosion Proof	Mounting Type
RHX®	1/2 HP, 3/4 HP, 1 HP, 3 HP	24' (7315 mm)	3696 lbs (1676 kg)		•	•		•	•	T, S, C
RSX®	1/2 HP, 3/4 HP, 1 HP	24' (7315 mm)	1620 (735 kg)	•		•	•	•		T, S, C
RMZ®	1/2 HP	14' (4267 mm)	620 (281 kg)	•						T, S

Mounting options:
T=Trolley S=Side mount C= Center mount

Safety Recommendations

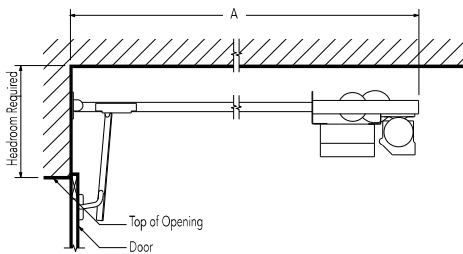
We strongly recommend the use of a primary safety device as defined by UL325 2010. A primary safety device can be approved monitored photo-eyes or an approved monitored sensing edge. If a primary safety device is not installed, a constant contact control switch must be used to close the door. Contact your Overhead Door™ Distributor for more information.



Mounting Details

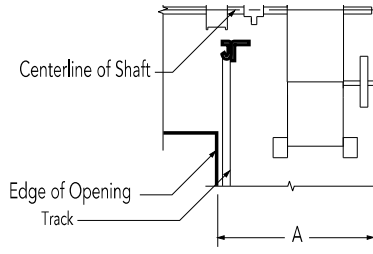
Trolley Type (Drawbar) RMZ®, RSX®, RHX®

Trolley-type (Drawbar) operators feature a power unit mounted between, above and to the rear of the horizontal tracks. The drawbar drive provides positive control of the door at all times, making this operator the preferred choice whenever possible. Maximum door width is 20' per drawbar. Door width over 20' requires dual drawbar installation. Available on Models RMX®, RSX® and RHX®.



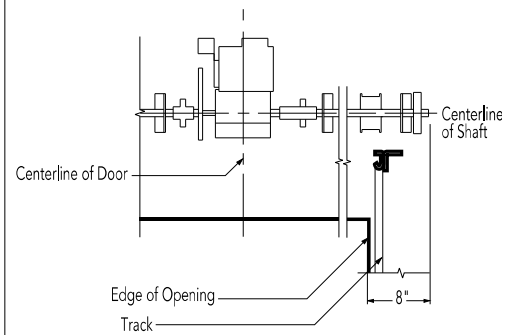
Side Mount Type (Jackshaft) RMZ®, RSX®, RHX®

Side-mounted (Jackshaft) RMX®, RSX®, and RHX® operators feature a power unit mounted on the inside front wall and connected to the crosshead shaft, with an adjustable coupling or drive chain and sprockets.



Center Mount Type/Jackshaft RSX®, RHX®

Center-mounted (Jackshaft) operators feature a power unit on the front wall above the door opening. No additional backroom is required. Available on models RSX® and RHX®.



Minimum Headroom Requirements	
RMZ®	Track requirements +4 1/2" (114 mm)
RSX®	Track requirements +5" (127 mm)
RHX®	Track requirements +5" (127 mm)

Depth Requirements - "A" Dimension (Backroom)	
RMZ®	Door height +4' 0" (1219 mm)
RSX®	Door height +4' 0" (1219 mm)
RHX®	Door height +4' 10" (1219 mm)

"A" Dimension - Minimum (Sideroom)		
	2" Track (51 mm)	3" Track (76 mm)
RMZ®	18 1/2" (470 mm)	19 1/2" (495 mm)
RSX®	21" (533 mm)	22" (559 mm)
RHX®	21" (533 mm)	22" (559 mm)

Minimum Headroom Requirements	
RSX®	Track requirements +14" (356 mm)
RHX®	Track requirements +23 5/8" (600 mm)



Model 521, solid panel, custom powder coat finish



Architect's Corner

A resource for architects, containing comprehensive technical and resource materials to support your project, including drawings and specifications for commercial doors.

www.overhaddoor.com

The original, innovative choice for unequalled quality and service.

Overhead Door Corporation pioneered the sectional garage door industry, inventing the first sectional garage door in 1921 and the first electric door operator in 1926. Today, we continue to be the industry leader through the strength of our product innovation, superior craftsmanship and outstanding customer support, underscoring a legacy of quality, expertise and integrity. That's why design and construction professionals specify Overhead Door™ products more often than any other brand. Our family of over 400 Overhead Door™ Distributors across the U.S. and Canada not only share our name and logo, but also our commitment to excellence.



INDUSTRY LEADING
COMMERCIAL & INDUSTRIAL SOLUTIONS



2501 S. State Hwy. 121 Bus., Suite 200, Lewisville, TX 75067
1-800-929-DOOR • sales@overhaddoor.com
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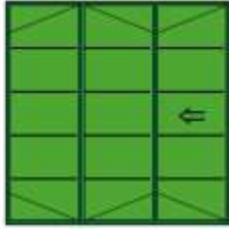
Prct. Name: **(#CM 82446) Sunpins**

SALES ORDER

10/21/2024

To: George Ordway
Work Phone: (612) 280-6039
 : ordway.george@gmail.com

Address: 946 Grady Ave.
 Charlottesville, VA. 22903

CC	Type	Pos.	Width	Height	Area	Unit Price	Qty	Total
		1	100 "	100 "	69.44 ft ²	8,872 \$	3	26,616 \$
								

Product Type: Folding Window
System ID: FTS.60 All Aluminum Thermally Broken
Configuration: 3 Panels - 3L or 3R, Single Operation (Inswing or Outswing), **Exterior View**
Finish Type: Powder Coat (2604)
Finish Color: Tech White #20
Hardware Type: Panda 100/200 - PC to Match
Track Type: Surface Mount, Recessed or Recessed Drainage Track - TBD
Glass Type: Clear Temp 1" OA Glass (Cardinal 366)
 3/16" Temp Low-E + 5/8" Black Spacer + 3/16" Clear
Includes: 5 SDL/GBG's per panel (grid pattern 1x5)

Total Sq Ft: 208.33

Subtotal	26,616 \$
Crating	1,260 \$
Est. Shipping	2,700 \$
Total General	30,576 \$

Sales Tax Not Included (Calculated on Final Invoice)
Deposit (50% of Total General) = \$15,288.00
 Deposit Due Within 7 Days of Signature
 Pricing Valid for 30 Days

By signing below, you acknowledge and agree that this Sales Order is subject to the applicable Terms and Conditions available at <https://www.panda-windows.com/terms-and-conditions>, which is deemed incorporated herein by reference. For any questions regarding terms and conditions of this Sales Order, please contact your Panda sales representative or contact us directly at (888) 246-1651 before you approve your order.

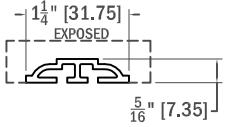
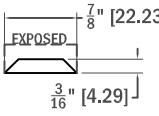
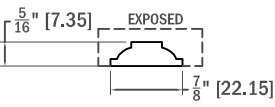
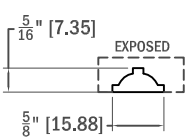
Name _____ Signature _____ Date _____



SALES ORDER

We look forward to working with you on this exciting project!

SDL

DIE	DIE NUMBER	DESCRIPTION	W/FT.	ZONE	NOTES
	FU10554	SDL			
	P10313	SDL			
	P8788	SDL			
	P8785	SDL			



The Panda SERIES TS60 Folding Door System is custom made to order and has been designed specifically for use in very cold climates where gaskets and thermal insulation are of importance in this type of product.

System:

The system contains $\frac{15}{16}$ " polyamide thermal break bars. The top track, bottom track and side profiles form a closed frame. Together with the doors, having aluminum rebates and gaskets, all act in compression.

Profiles:

Profiles are made of extruded aluminum with special ribs that ensure maximum hardness. The rounded forms and exclusive design make these glass folding door systems extremely pleasant and original. They allow a better surface treatment and are less subject to damage during transportation and installation.

Accessories:

Wheel carriages have stainless steel sealed ball bearings with four delrin fiber reinforced laminated double sliding rollers, exclusively designed handles with ergonomic grips, stainless steel screws and pin, special hinge channels keeping the hinges in place, 10mm hinge pins double gasketed on both side of the panels.

Running:

The TS60 can operate with either top hung or bottom running carriages along a single inline track.

Folding:

The folding door system quickly, easily and silently folds to either side. There are 26 operational door typologies and when in the open position they maximize 90% of the total rough opening.

Dimension:

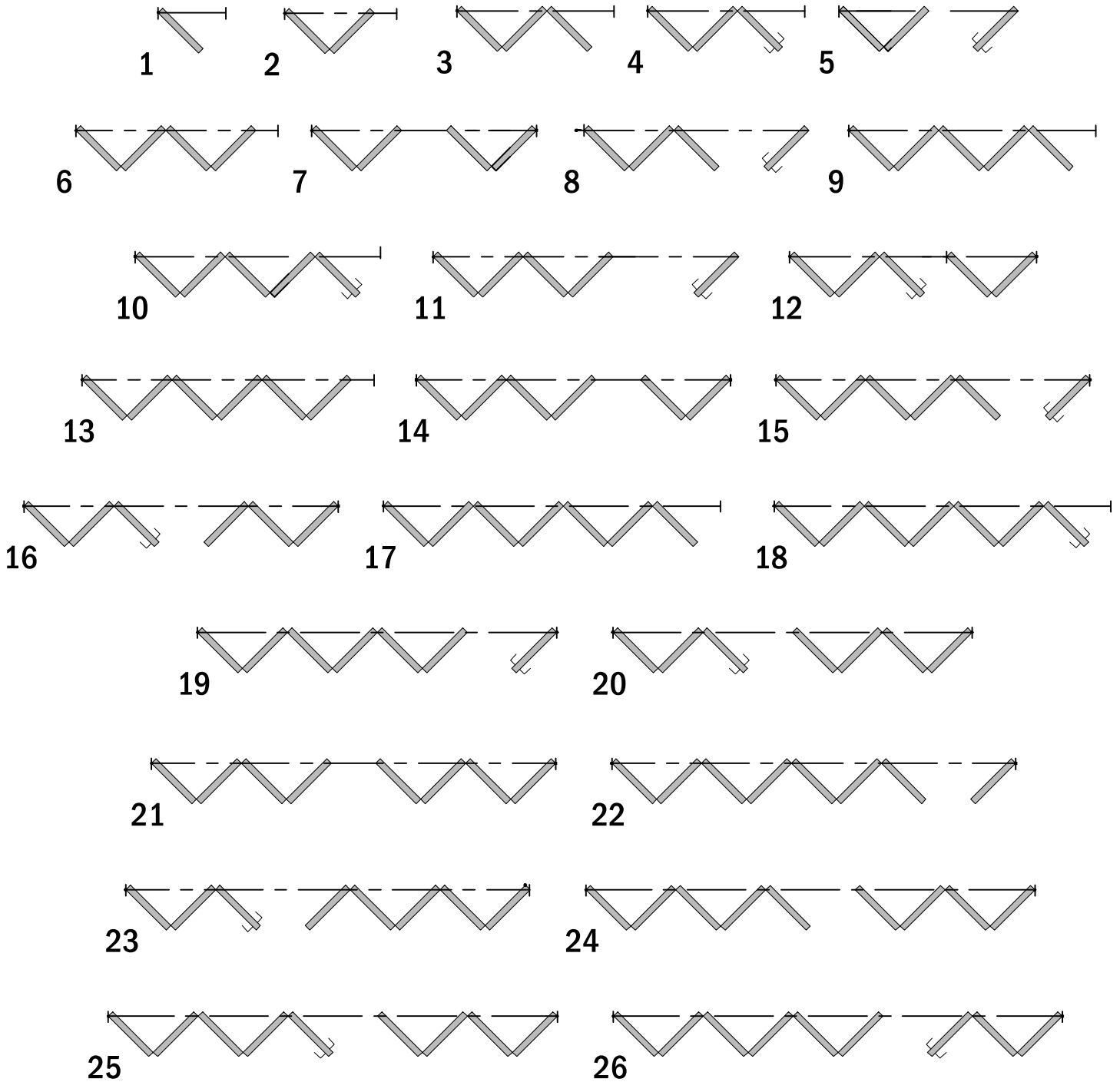
The individual panels in a system are always equal in size and can be a maximum of 42" wide and 144" high. Folding door systems can be as long as you like, as countless panel groups can be built which slide along the tracks and are connected with special joints and seals.

Glazing:

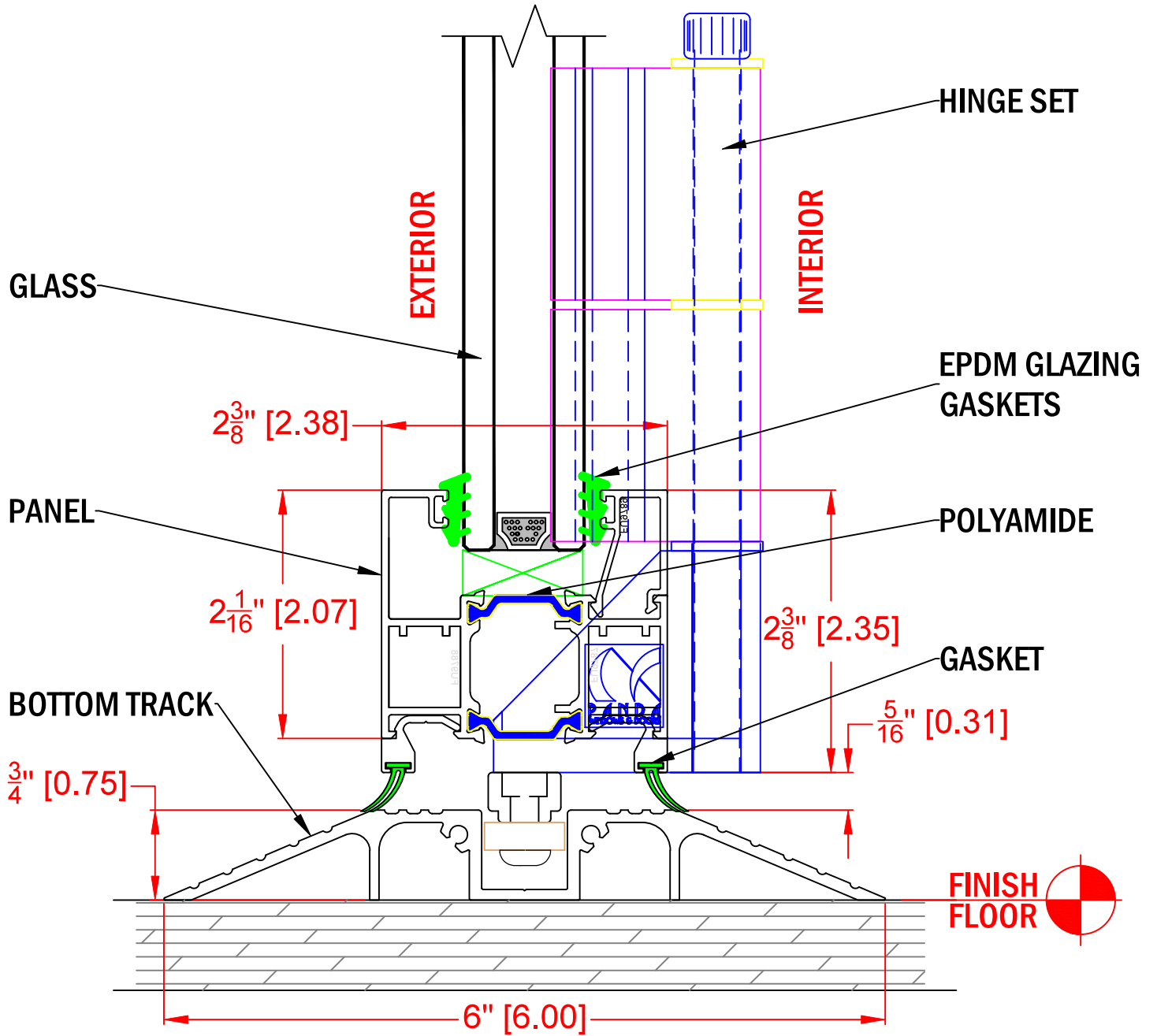
Various types of glass with a typical thickness of 1", may be used. The glass is shimmed by means of accessories located in the corners of the doors and is externally adjustable at any time.

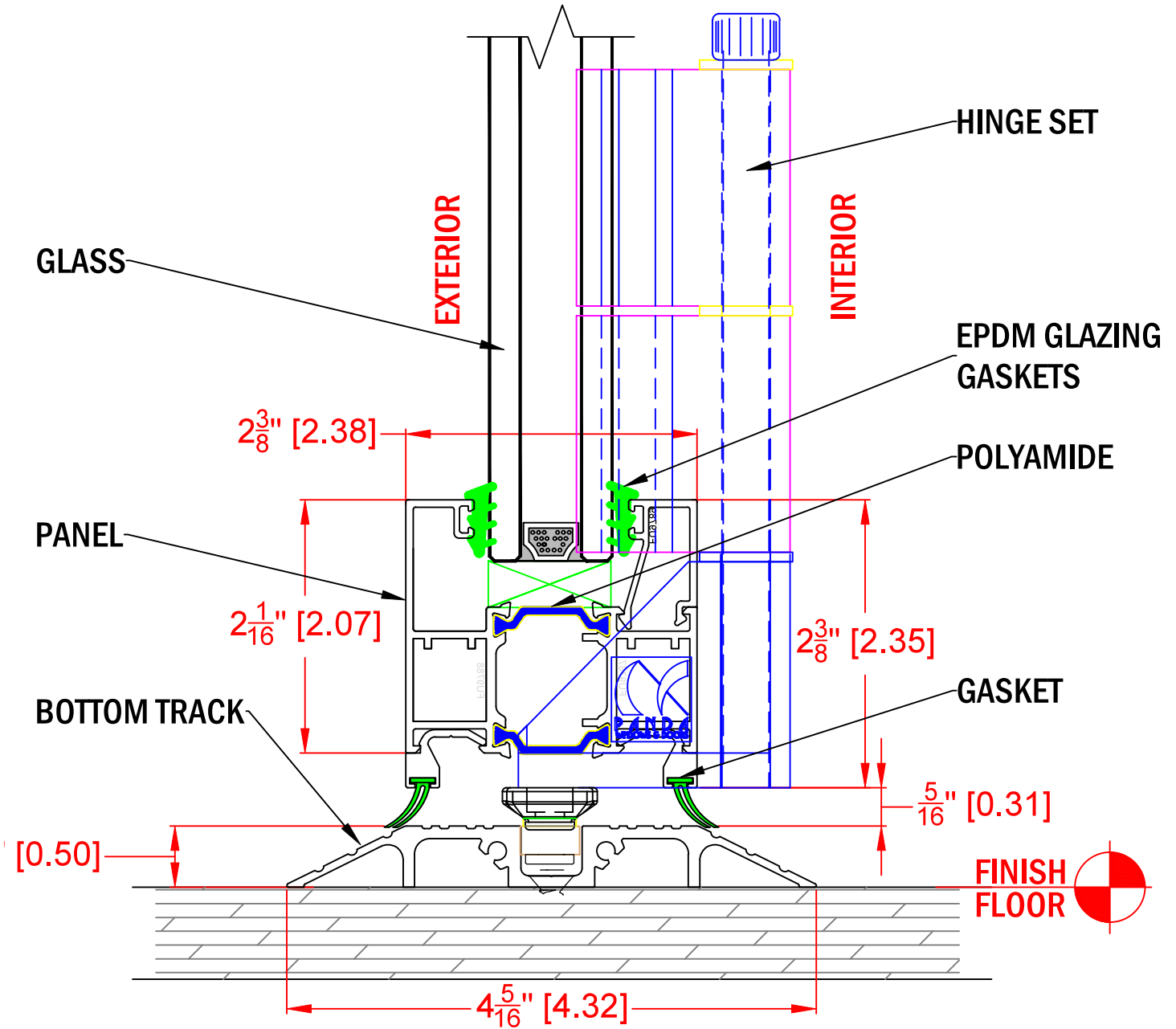
Weight:

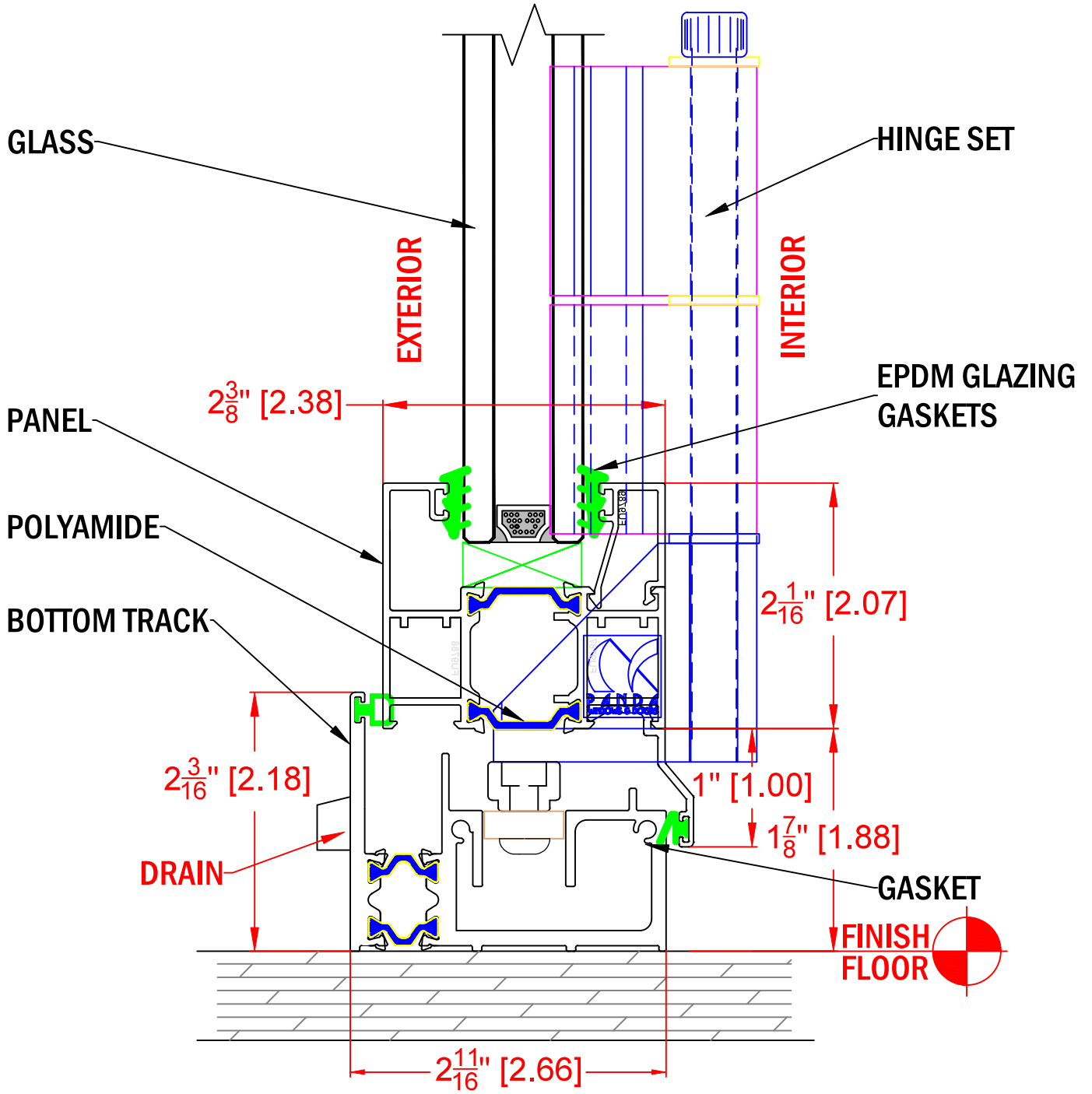
Folding door systems, excluding fitting materials, weigh approx. 6 to 8 lbs/sqft, changing with the height and width of the panels.

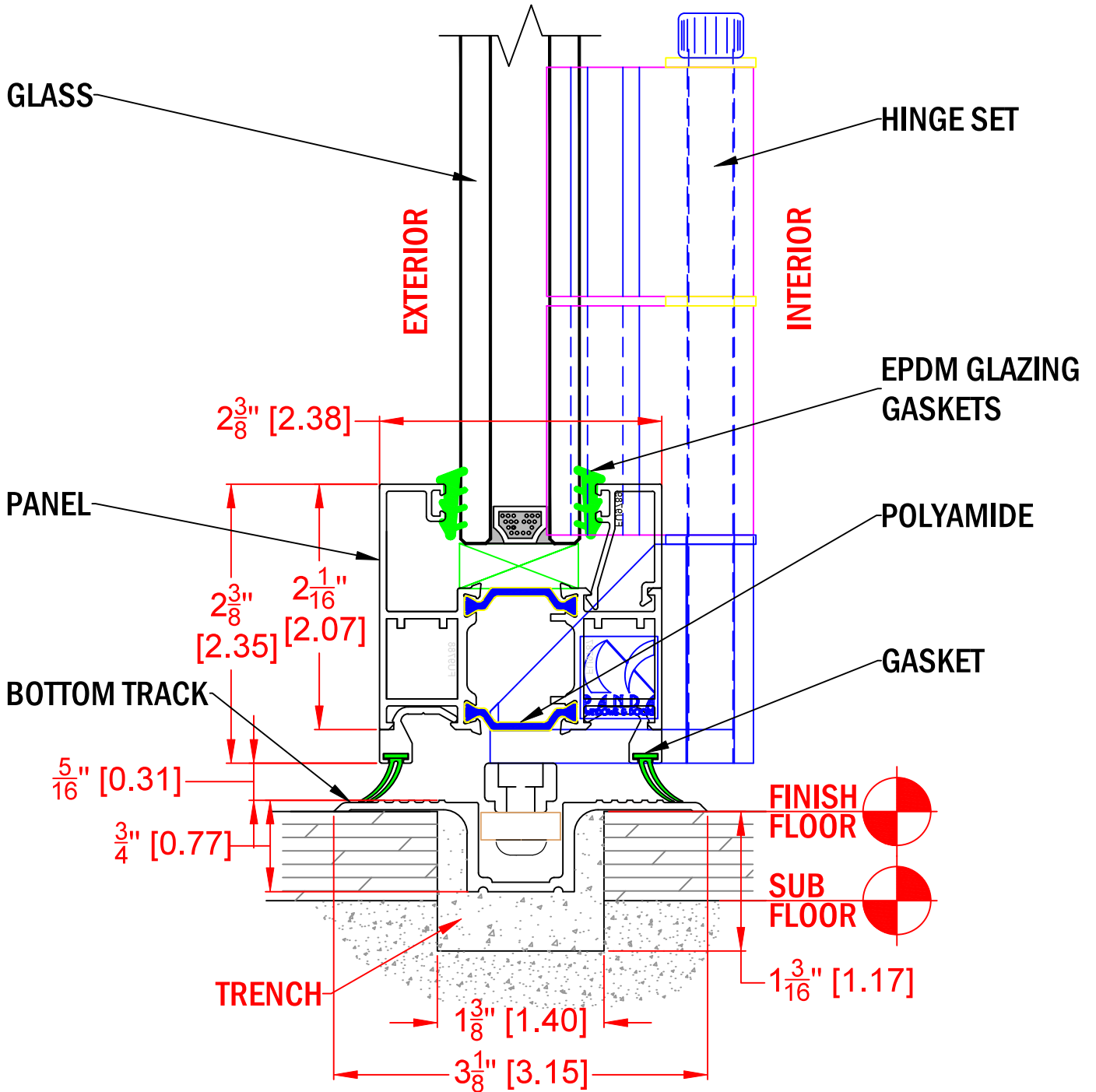


- PANEL WIDTHS UP TO 42 INCHES
- PANEL HEIGHTS UP TO 144 INCHES
- INSIDE AND OUTSIDE 90° CORNER CONFIGURATION ALSO AVAILABLE



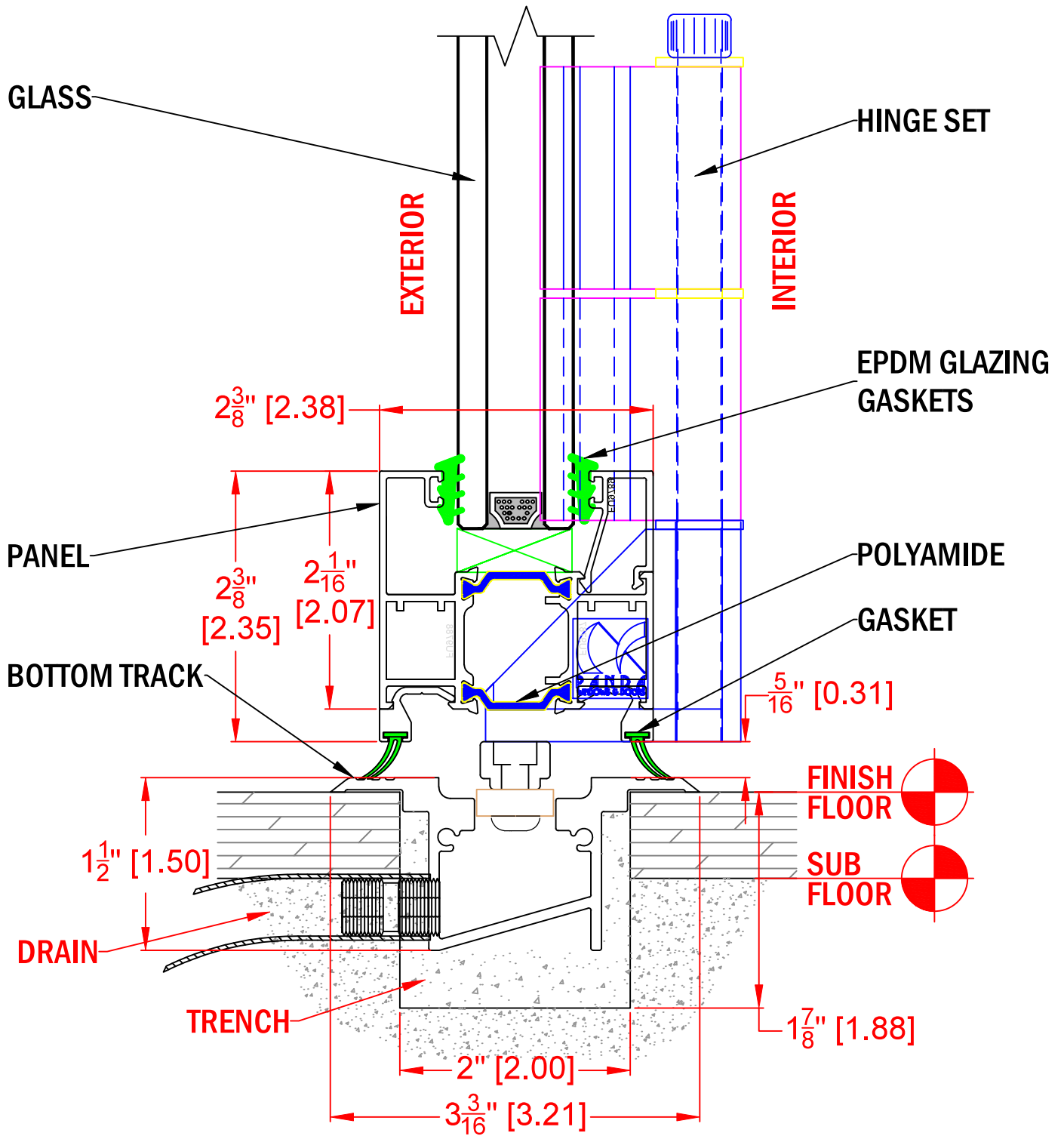


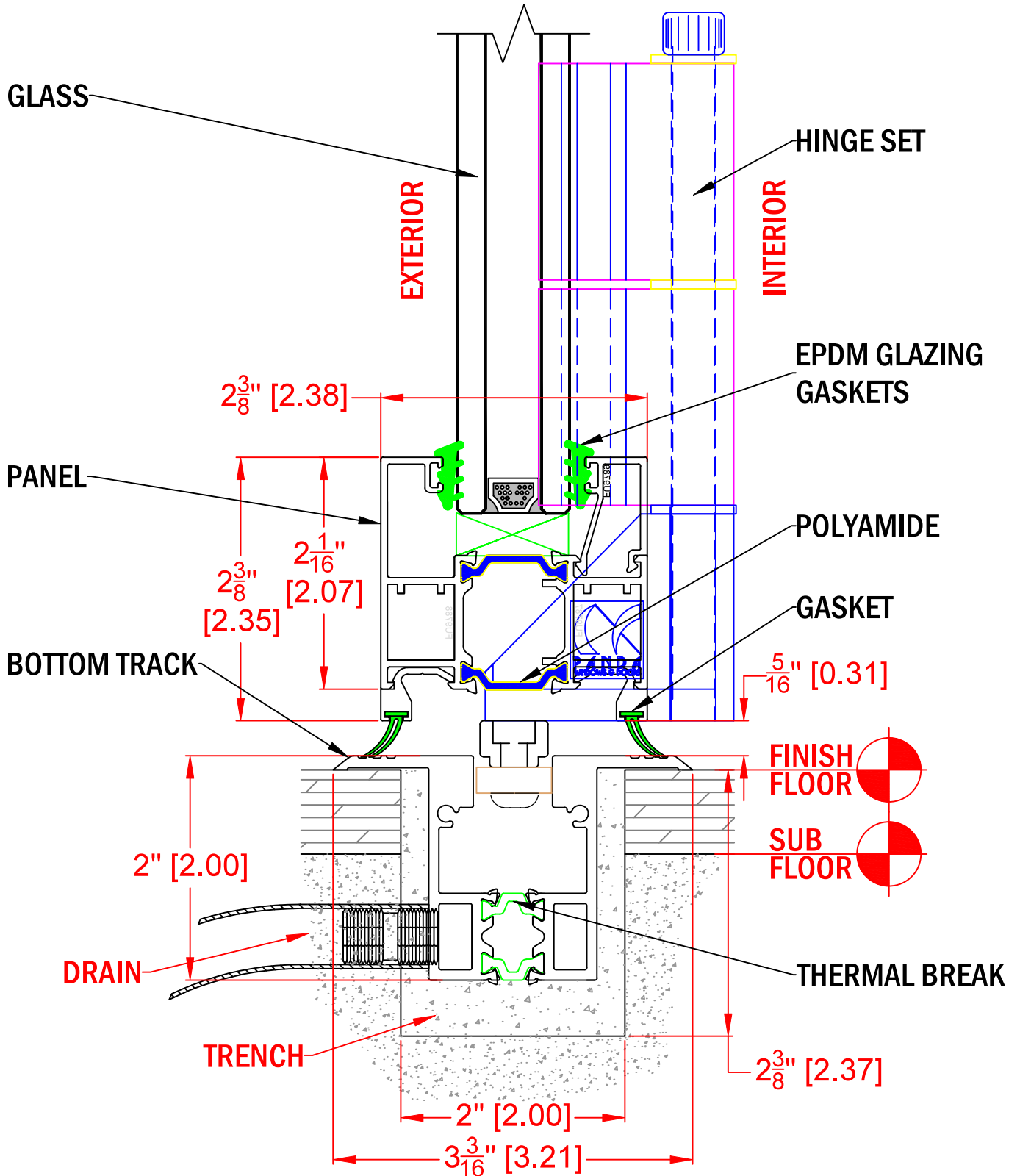




TS60 THERMALLY BROKEN AA
1 1/2" RECESSED DRAIN TRACK

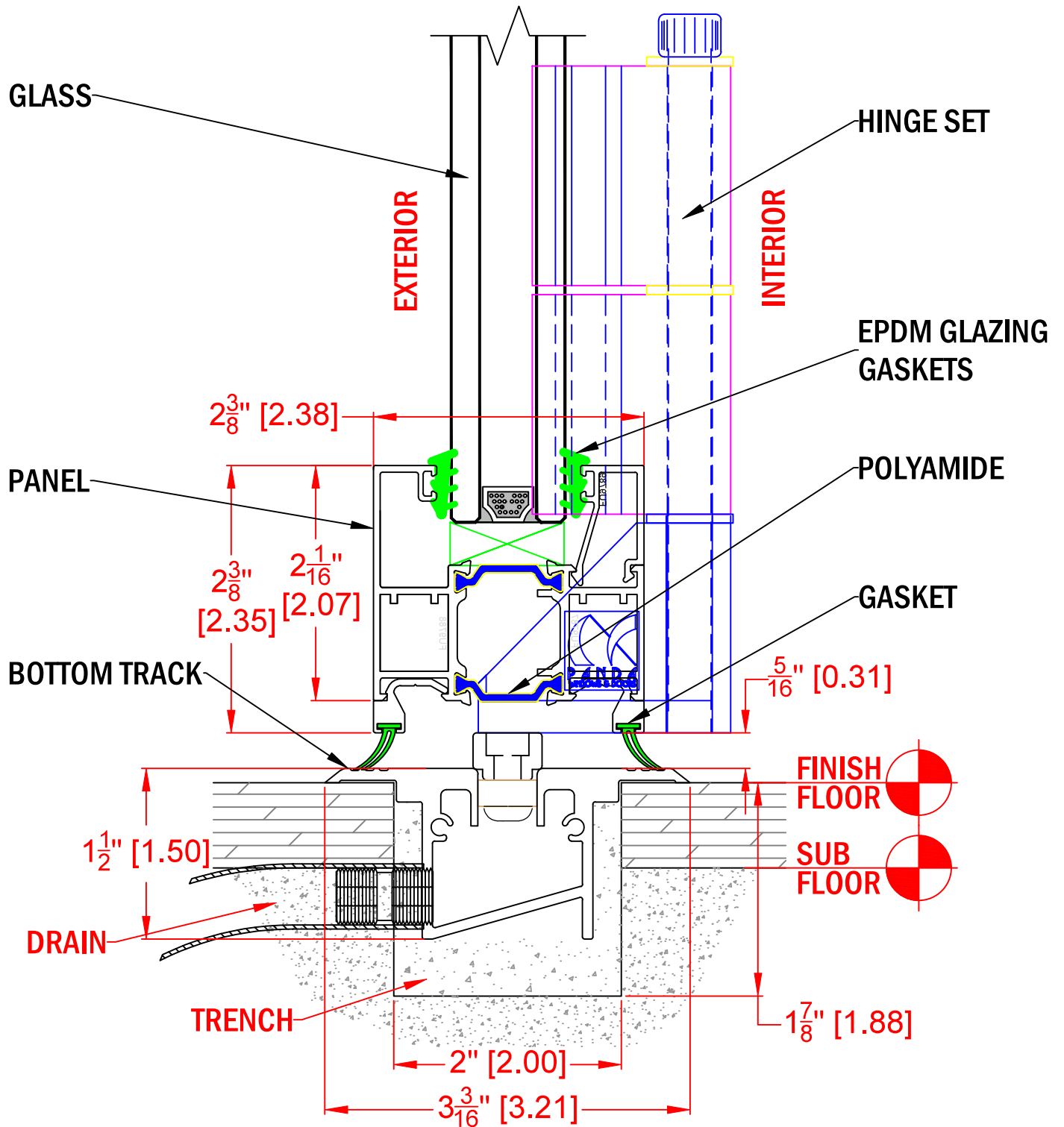
TRACK CONFIGURATION

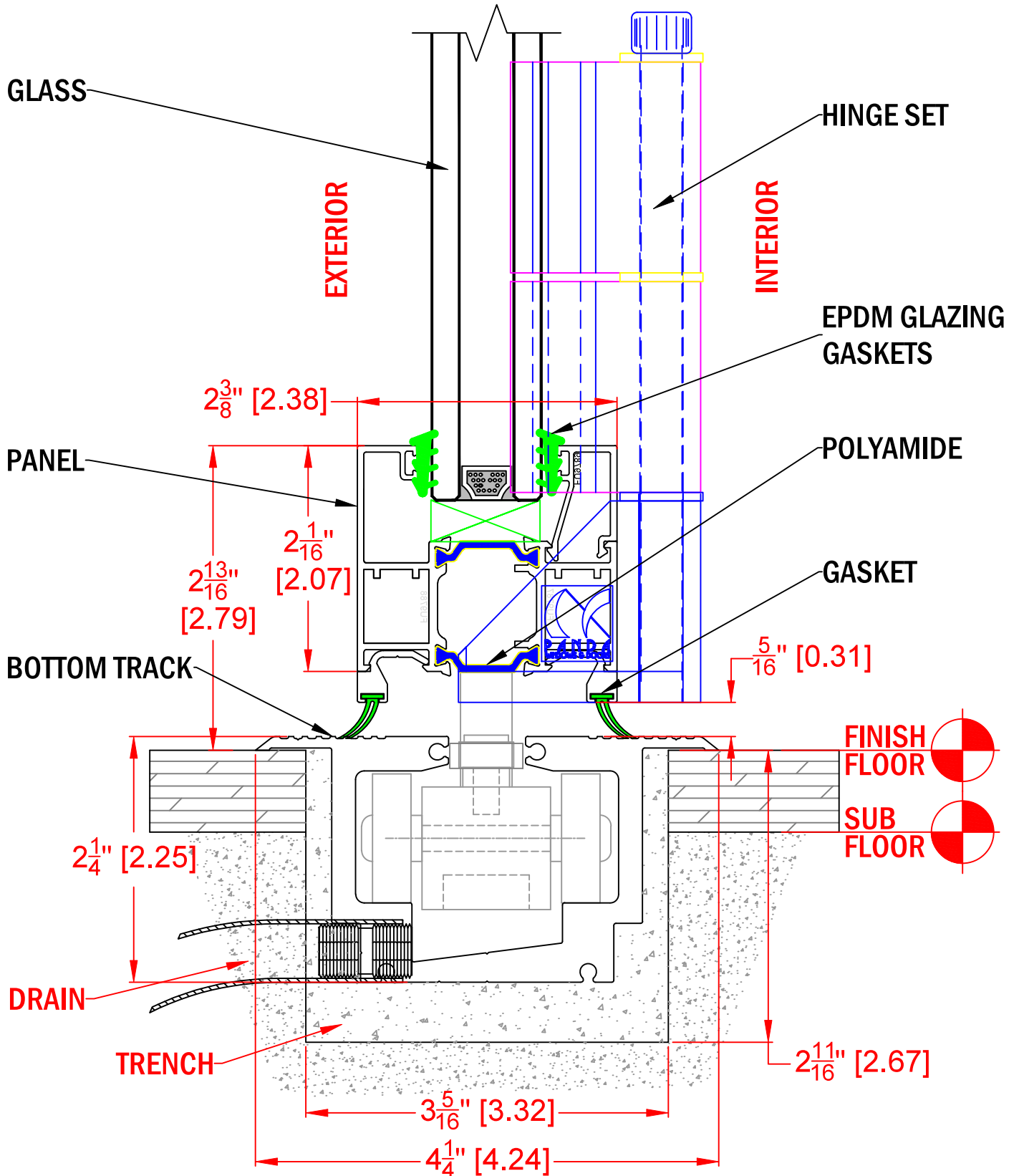


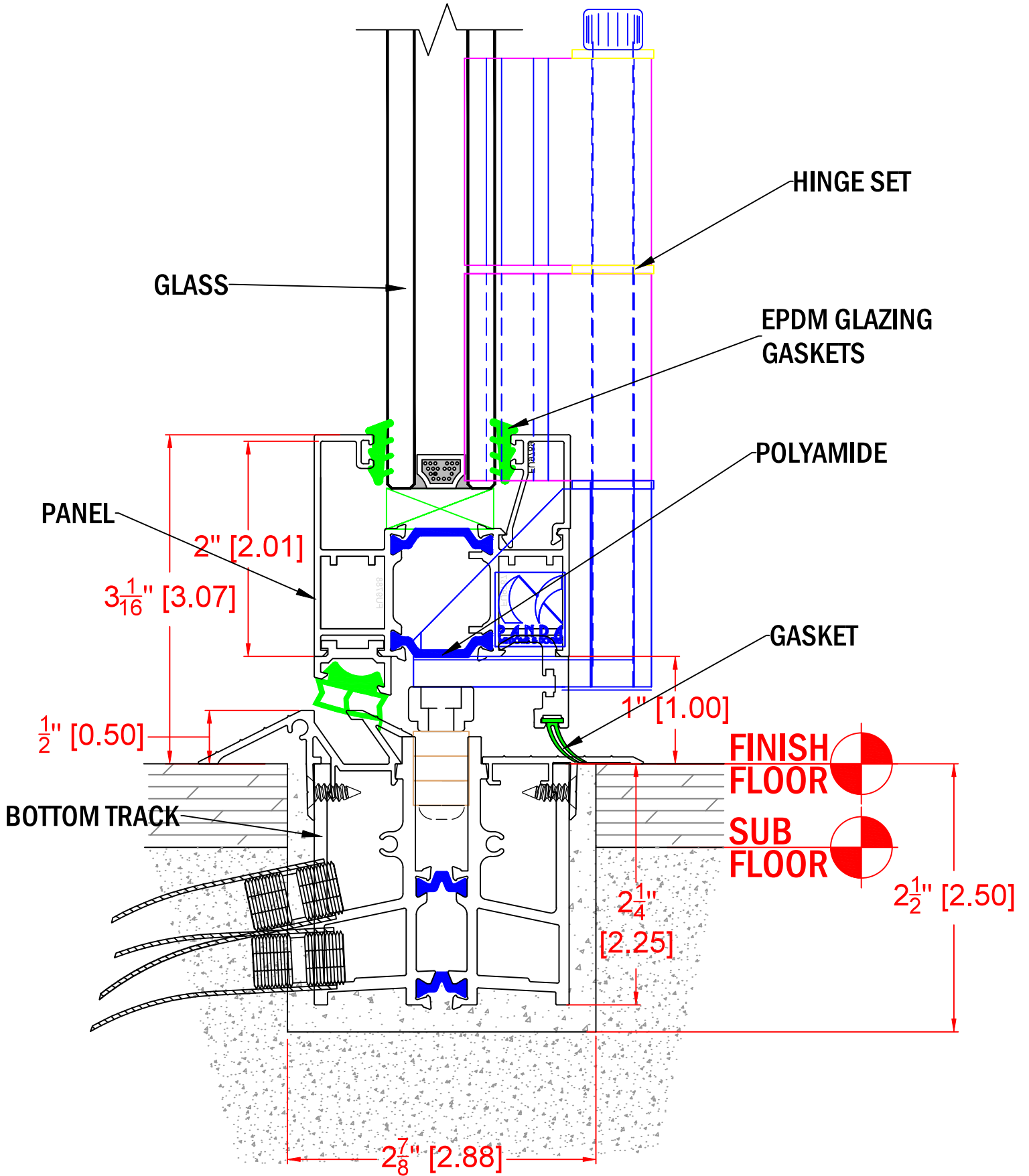


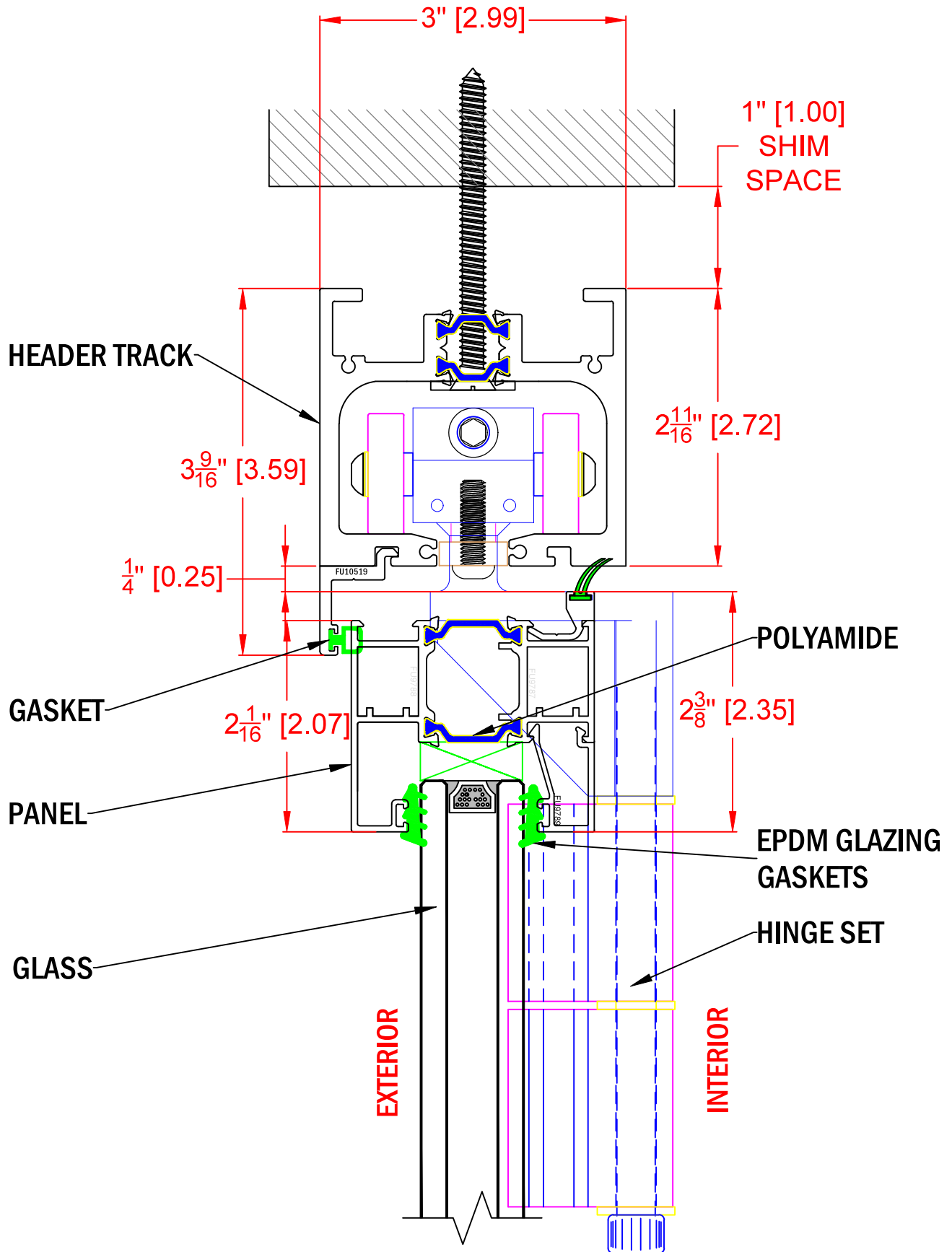
TS60 THERMALLY BROKEN AA
 1 1/2" RECESSED ADA DRAIN TRACK

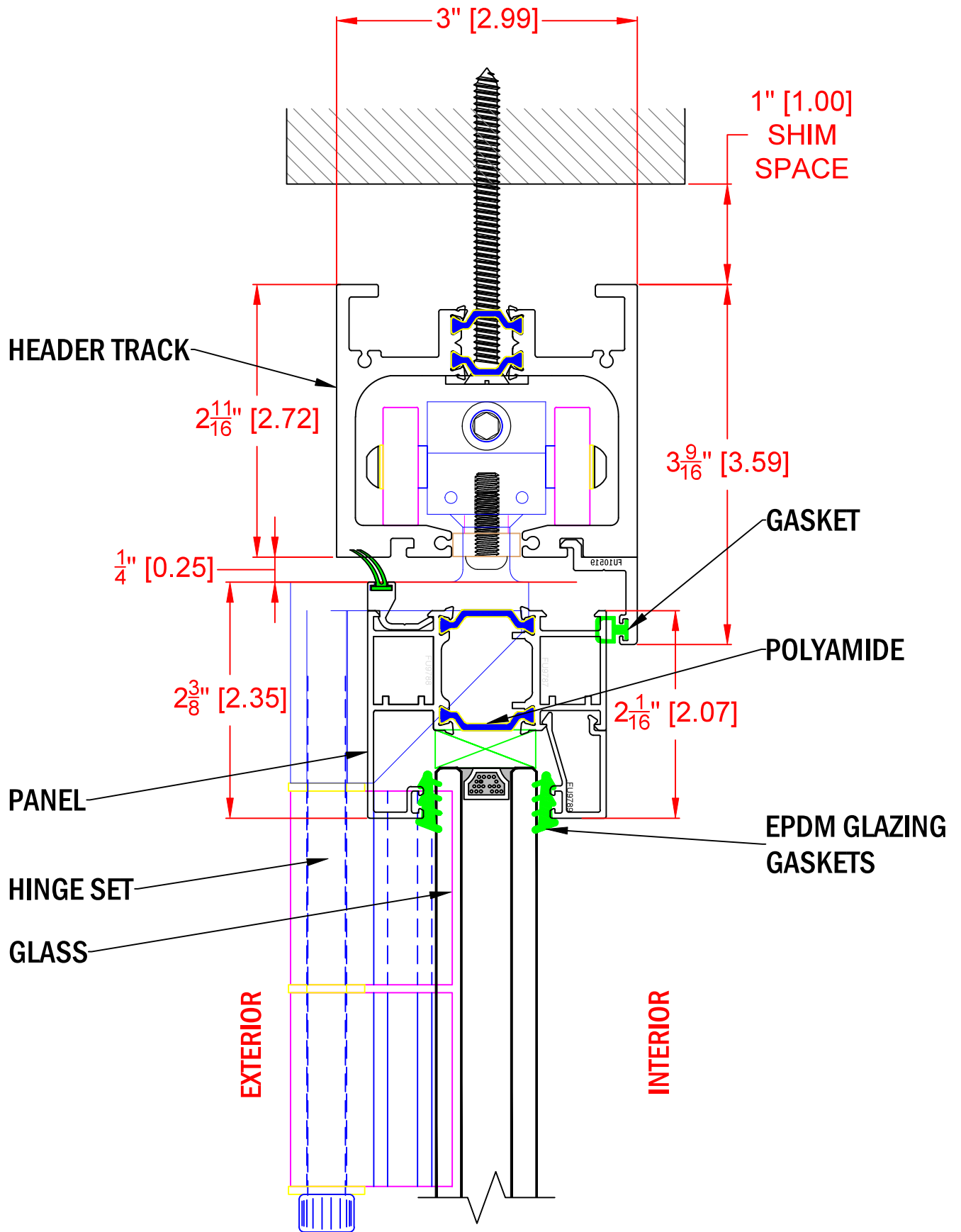
TRACK CONFIGURATION

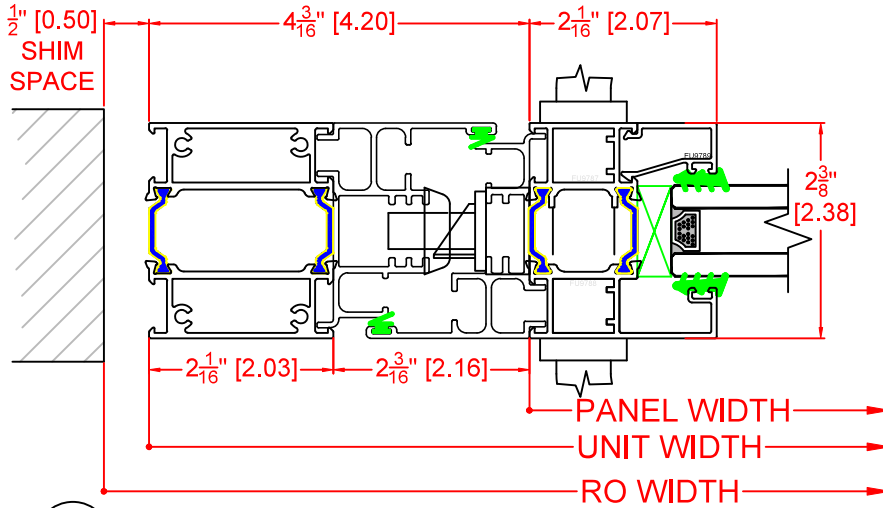






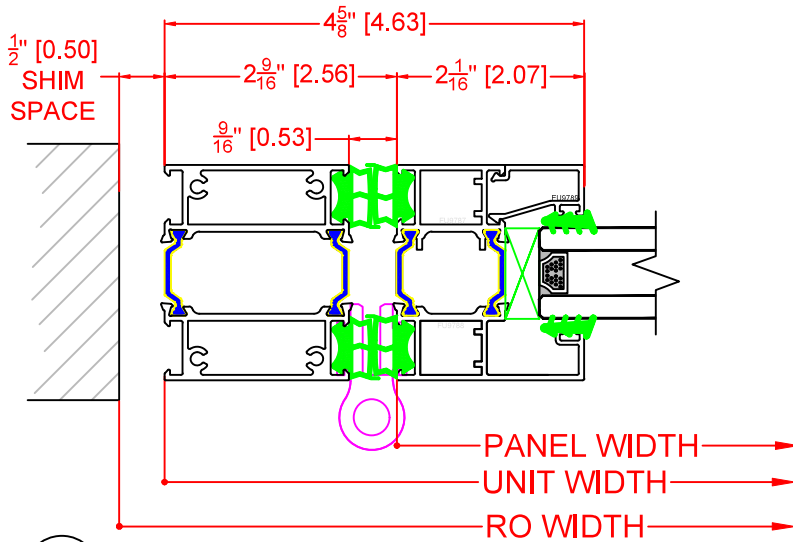






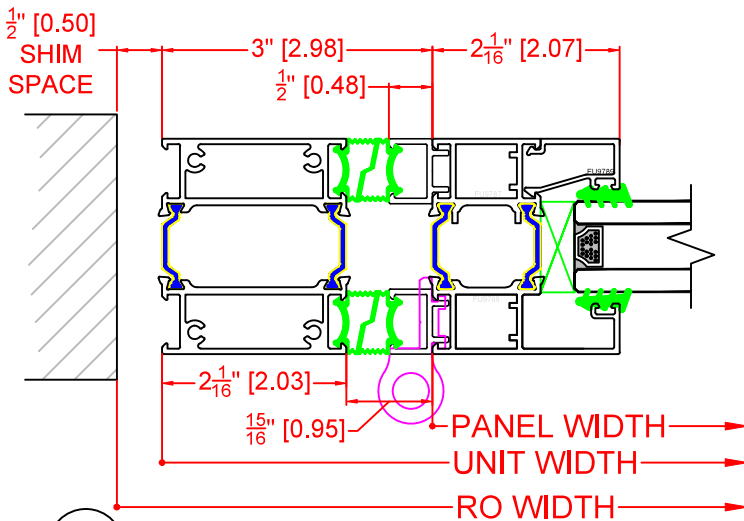
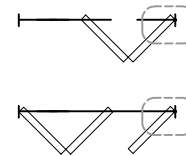
A SWING SIDE JAMB

CONFIGURATION



B HINGE SIDE JAMB

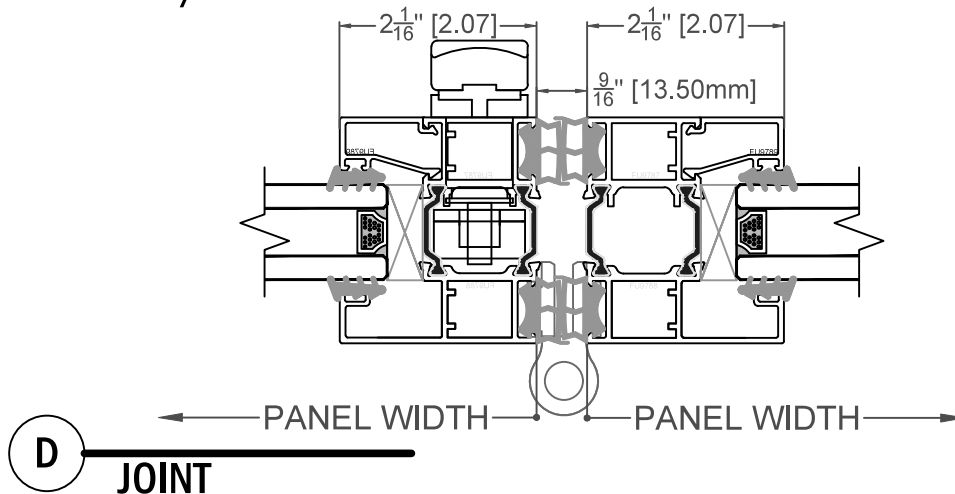
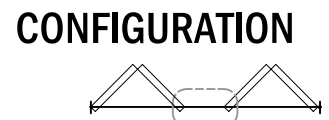
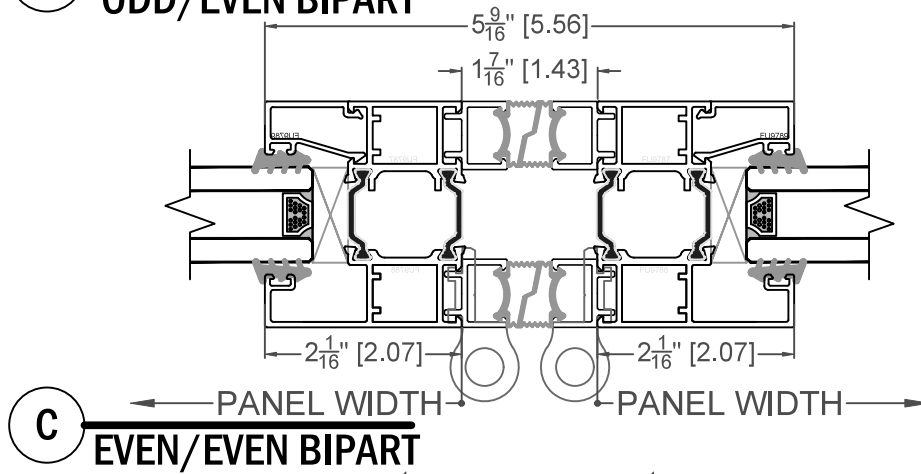
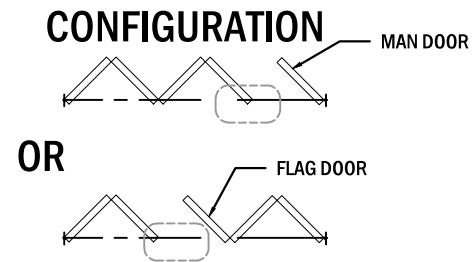
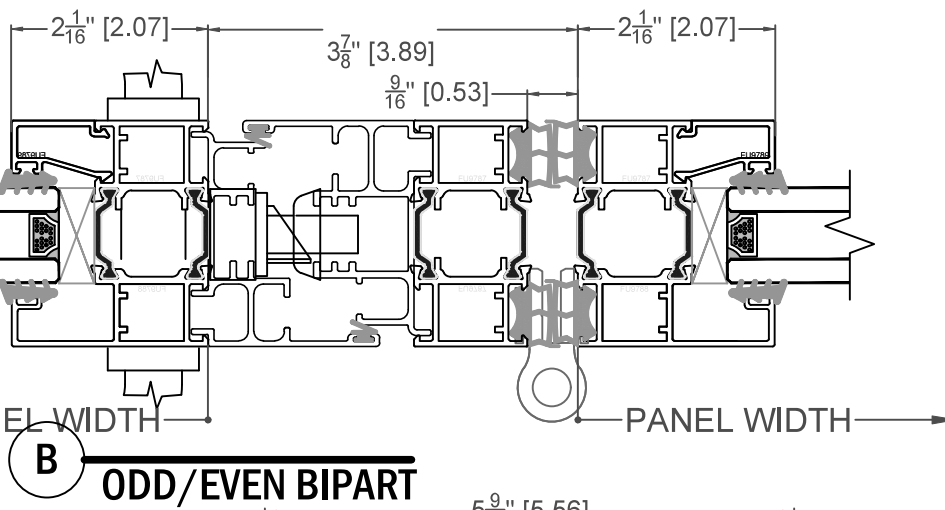
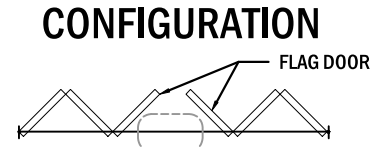
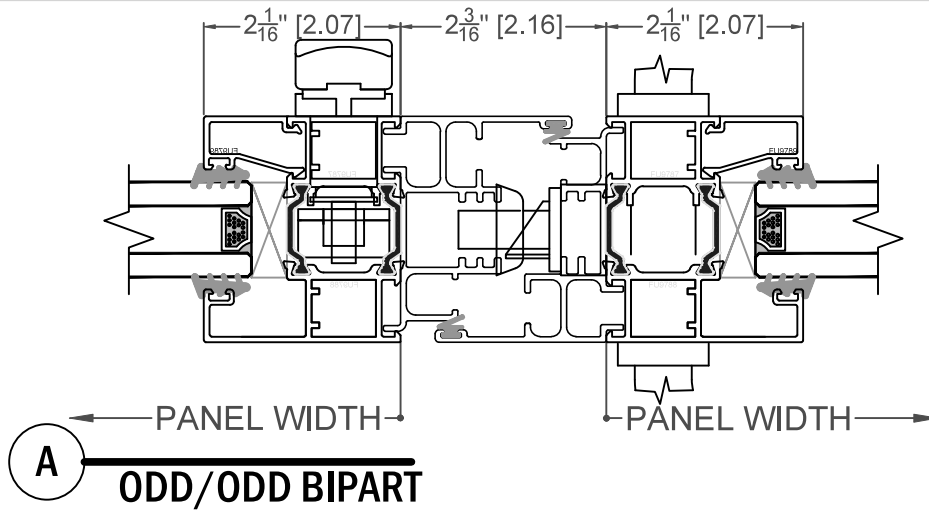
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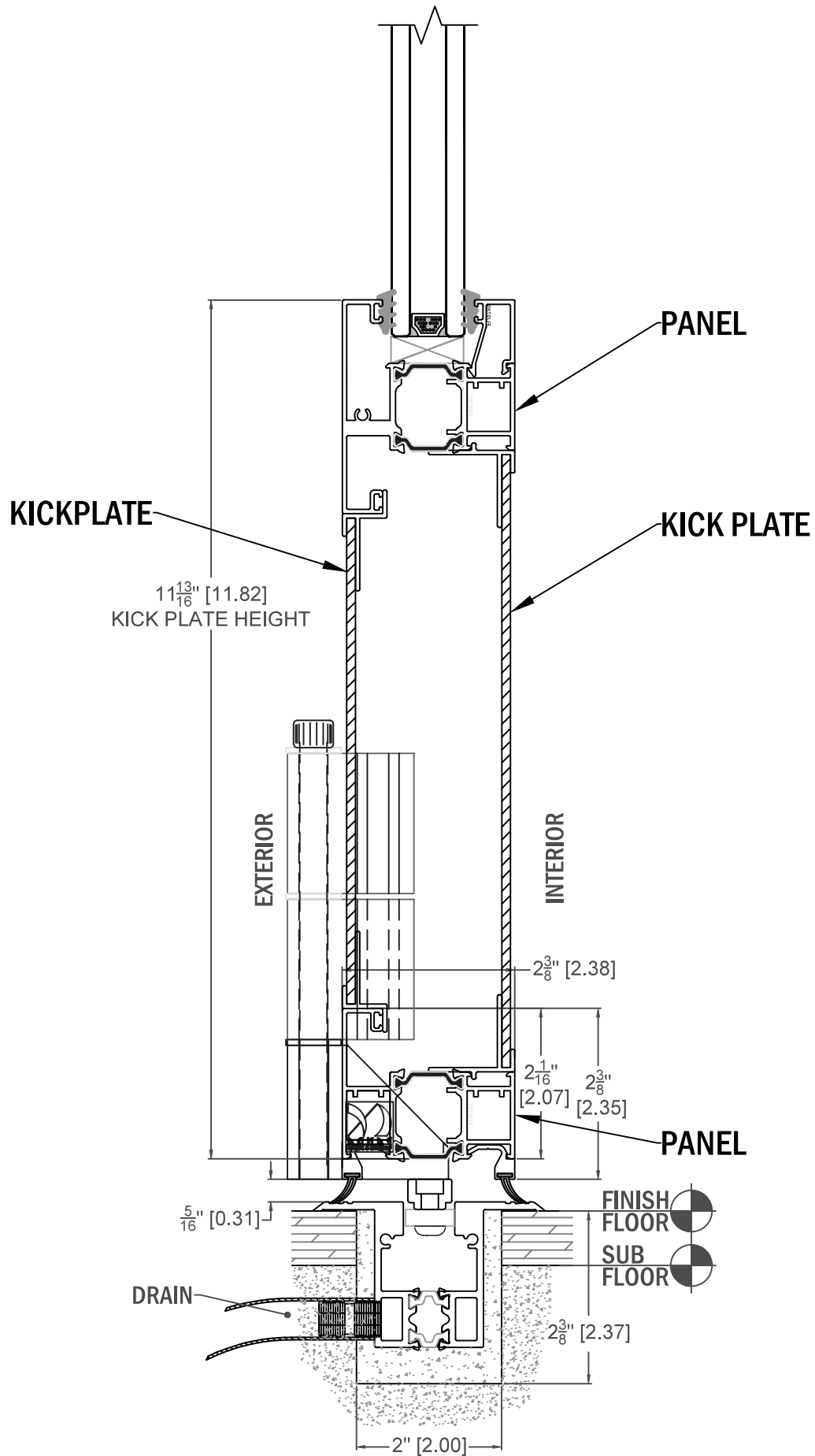


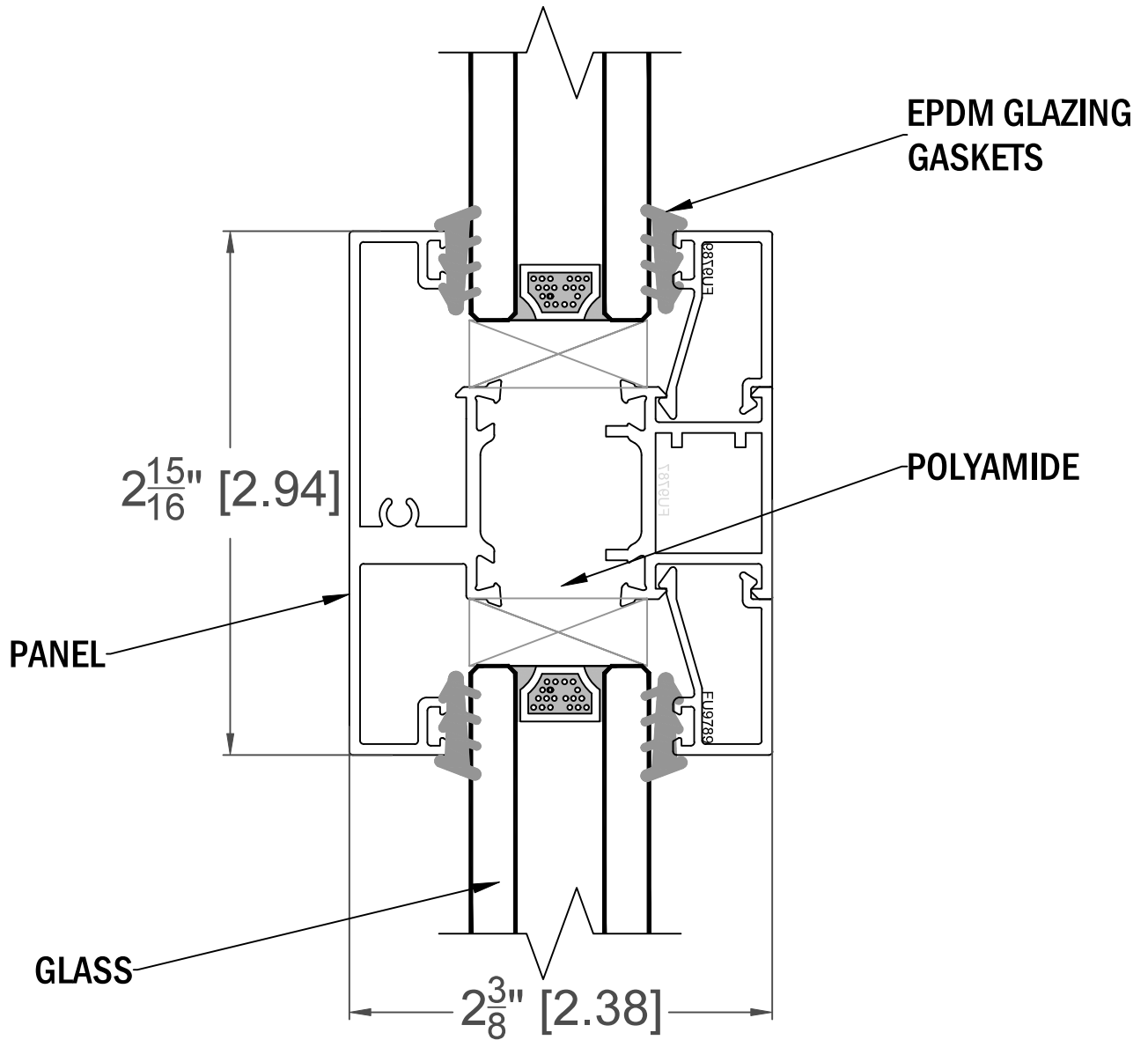
C FREE SIDE JAMB

CONFIGURATION









Because modern design trends demanded it

Introducing FlexCounter™

The window-wall combination that creates stunning indoor-outdoor transitions in kitchens, bars and pass-through areas.



FlexCounter™ consists in a countertop-mounted window system that runs along a recessed track. Often combined with a matching full size glass door system, this unique configuration expands indoor living spaces and blends them to the outdoors, creating functional entertaining areas in kitchens, bar and restaurants.

Residential Application

An open outdoor kitchen is ideal for entertaining

FlexCounter™ transforms an indoor kitchen into a unique multi-use kitchen that allows for food preparation and guest entertaining in the patio, terrace or backyard. Homeowners can cook and prepare food at the kitchen's interior and pass the food through the opening directly from the countertop for easy interaction with guests.

Commercial Application

An outdoor bar area propels traffic

In restaurants and lounges, FlexCounter™ helps create practical and stylish alfresco bar areas for maximum seating and service capacity, drawing more visitors and increasing revenue all year round. By bringing socialization outside and drawing positive attention to the establishment, outdoor bar areas can add great value to a restaurant.

Contact us:
702-643-5700
panda@panda-windows.com



FlexCounter™ creates spacious, bright and flexible 4-season spaces that respond to the ever growing indoor-outdoor living trend. This unique glass wall system solution adds chic and luxury to the modern lifestyles of today.



Window Wall FlexCounter™

This window and door combination runs along a recessed track for an unobstructed countertop surface on the window level and a barefoot friendly passage on the floor level.

When the FlexCounter™ assembly is closed, the window strip seamlessly connects with the glass door system to cover the entire opening while offering a secured waterproof shelter.

When fully opened, the panels disappear into pockets or fold away creating a flawless transition into the outdoors and adding a greater sense of openness to the space.

Window FlexCounter™

The window system strip runs along a recessed track for an unobstructed countertop surface. A window style FlexCounter™ is often used in restaurants and lounges with outdoor bar seating areas. It creates an open space where bartenders can easily interact with customers.

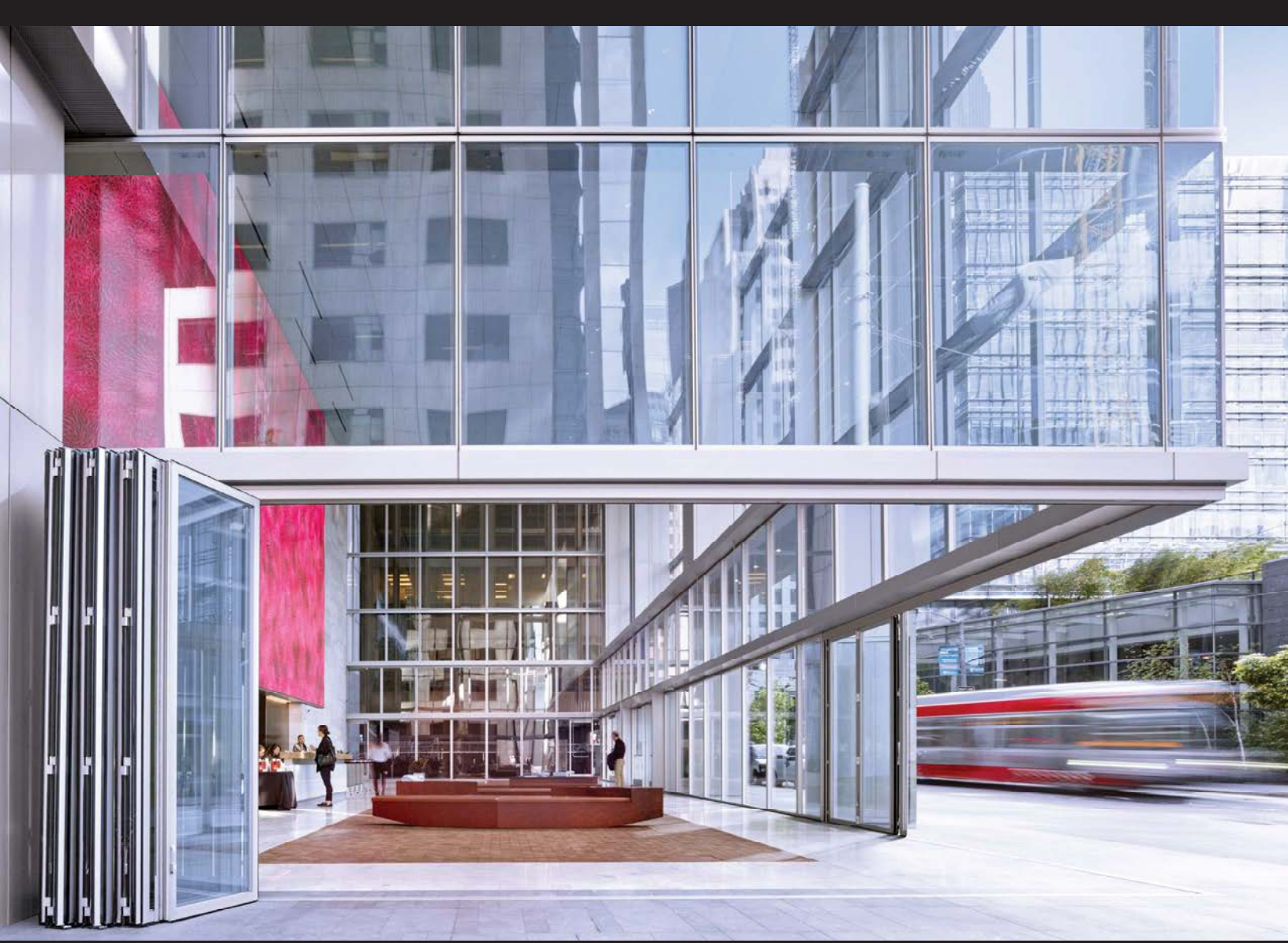
- FlexCounter™ configurations include straight and 90 degree corner.
- Available as Lift & Slide, Multi-slide, Horizontal Sliding Wall and Folding Systems.
- All mechanisms offer smooth operation and superior performance.
- Frame materials include all aluminum, solid wood and aluminum with wood clad interior.



FOLDING DOORS

The Architects' Choice

 TECHNICAL INFORMATION



 **PANDA**
WINDOWS & DOORS



FOLDING DOORS



For a seamless transition from indoor to outdoor spaces, Panda Folding Doors are the perfect design choice. Also referred to as bi-fold or accordion doors, these innovative Folding Doors feature a proprietary top-hung design that allows individual panels to stack or “fold” against one another on either side or both sides of the door frame. When fully open, the stacked door panels provide a 90% unobstructed view of the outdoor space beyond.

Applications and Uses

Innovative engineering, unlimited design options, safety and security features, and easy-to-use functionality make Panda's Folding Door systems a popular choice for both commercial and residential projects.

Features and Benefits

- State-of-the-art engineering featuring 6063-T6 aluminum extrusions, European hardware, and Delrin polymer rollers makes Panda Folding Doors remarkably lightweight, durable, and weather-resistant - even with repetitive, daily use.
- Daily doors (swing, egress, or flag doors) can be integrated into the system, allowing for easy entry and exit without having to open the entire system.



→ Limitless customization options include radius or “curved” options, multidirectional and unidirectional layouts, zero-post corner designs, and both inswing and outswing options.

→ As with our extensive portfolio of aluminum glass doors, Panda’s Folding Door Systems are available in a wide variety of finishes to complement any décor. We also offer coastal applications where corrosion from salt and seawater is a potential concern.

→ Child-safe features such as multiple pinch-proof EPDM bubble gaskets layered between each panel.

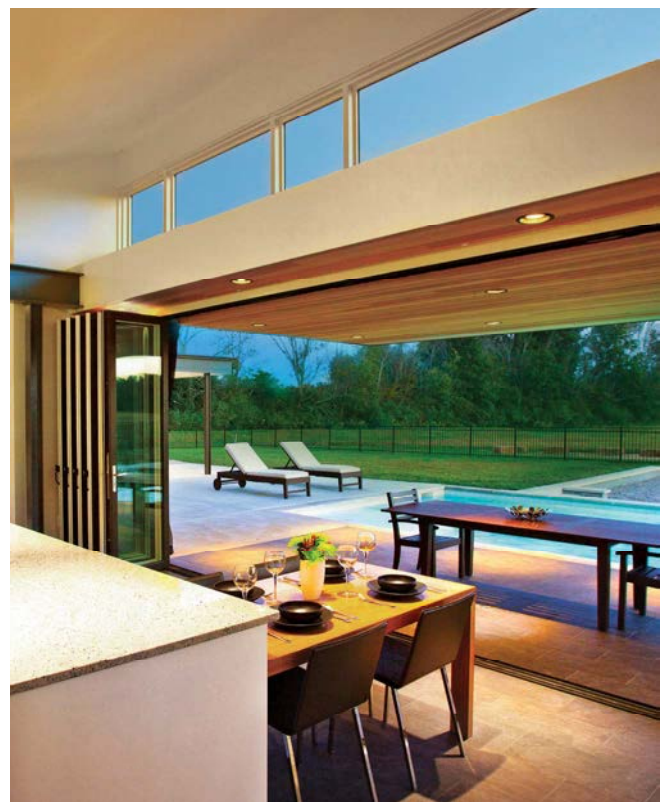
→ For especially large openings requiring taller or heavier panels, Panda offers ‘Ultra’ designs fabricated with a heavy-duty, European groove-hinge anchoring system with 10mm stainless steel pins.

→ Panda also offers countless standard and ADA-compliant track options and hardware selections based on project specific requirements and preferences.

→ Multi-point locking mechanisms and concealed throw-pins in the top and bottom tracks make Panda Folding Doors reliably durable and maximally secure against forced entry.

Customizations

Panda fabricates every system according to exact design and specifications. Choose from a variety of options for wood, track, handles, glass, finish, and even curved systems.



FINISH OPTIONS

**Actual colors may appear different from finish options shown. Color samples available upon request.*



Powder Coat Finishes

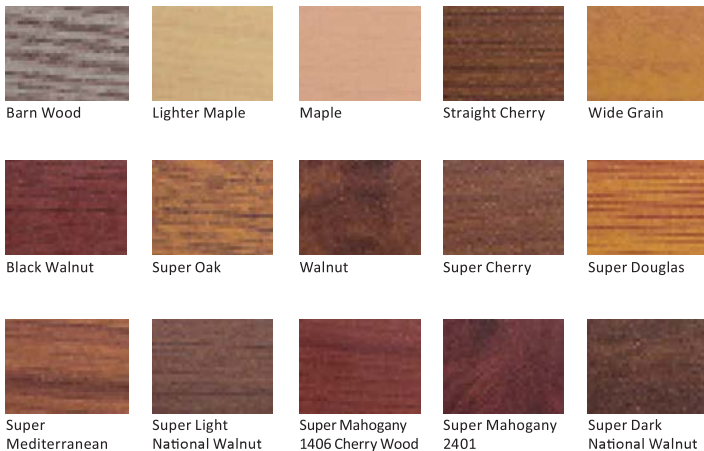
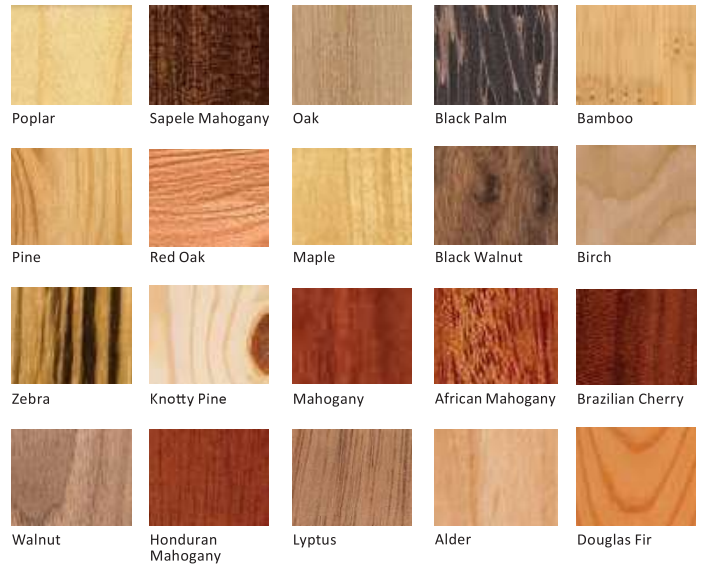
Choose from numerous finish options to make your window or door system your very own. If you would like to create or match custom colors beyond the standard options, our team is ready to assist you.

Twenty-five powder coat finish options are available as standard AAMA 2604. Also available are AAMA 2605 powder coat, metallic/bonded powder coat, anodized, Kynar, and Duranar finishes. A two-tone color scheme is available for all thermally-broken systems. Rest assured, our team is here to help you choose the right finish for the environment in which your system will be installed.

Wood

Panda offers many different species for our wood-clad and solid wood systems. Available options are: Stain Grade Pine, Paint Grade Poplar, African Mahogany, Clear Pine, Douglas Fir, Vertical Grain Douglas Fir, Maple, Birch, Cherry, Oak, Alder, Knotty Alder, Teak, and Walnut.

For options not listed or custom wood detailing requests, our team is ready to help meet your design goals.



Faux Wood

When your space needs more than a standard stock color, elevate your design with our wood grain textures.

In response to the growing demand for LEED and GREEN builds, Panda is proud to be one of the first companies in the United States to incorporate this cutting-edge design into our aluminum products.

Providing the look of wood and durability of aluminum, faux wood provides a no-compromise solution that will surely exceed all expectations.

TRACK OPTIONS

3/4" Recessed Track

This smallest recessed track available for folding doors. recommended for interior applications or applications where the door system features full coverage.



1-1/2" Recessed Drainage Track

This track is ideal when the 2" Thermally Broken Recessed Drainage Track is too large.



1-1/2" ADA Recessed Drainage Track

An ADA compliant recessed drainage track ideal for commercial applications.



2" Thermally Broken Recessed Drainage Track

Thanks to thermally isolating properties that create a barrier between inside and outside temperatures, this track offers excellent energy efficiency performance.



2-1/4" Recessed Drainage Bottom Running Track

This track carries most of the weight of the system on the track itself to lessen the load on the header (enabling larger panel sizes). A no-drain option also available.



1/2" ADA Surface Track

An ADA compliant surface mounted track ideal for interior or full coverage applications. Ramps come as standard on the interior and exterior.



3/4" Surface Track

Best for interior or full coverage applications, the ramps come as standard on the interior and exterior. A weep drainage option is available.



2-3/16" Thermally Broken Standard Surface Track (High Performance Track)

Thanks to thermally isolating properties to divide inside and outside temperatures, this track offers improved energy efficiency performance. It is installed directly on top of the flooring and can be powder coated to match the system finish.



2-3/16" Standard Surface Track (High Performance Track)

Similar in design and installation to the 2-3/16" Thermally Broken Standard Surface Track, this is an option for non-thermally broken units. Can be powder coated to match the system finish.



2-3/16" Standard Surface Track (High Performance Track)

Similar in design to the 2-3/16" Thermally Broken Standard Surface Track, but created with the ability to have a wood-clad interior surface. Perfect for installation that requires the track to be exposed.



HANDLE OPTIONS

Choose from several handle designs and finishes for your Folding Door system. Interested in specifying a handle not pictured below? Our engineering and design team is here to assist you with customizable options.

Panda 150



Our standard throw handle. The finish is powder coated to match the system.

Panda 200



This pull handle (also known as a D-Ring) is used on every Folding Door system to pull door panels together to operate the throw handle when closing the system. Finish is powder coated to match the system.

Panda 300



An alternative throw handle designed specifically for Ultra Folding Doors. Finish is powder coated to match the system.

Panda-V



An alternative throw handle design for wood systems. Finish is powder coated to coordinate with the system.

Panda-V (Lock)



An alternate throw handle designed for wood systems. Finish is powder coated to match the system.

Aria



Swing door handle used on systems that incorporate daily-use doors. Choose from White, Bronze, Black, Brushed Chrome, and Satin Chrome.

Acacia



Swing door handle used on systems that incorporate daily-use doors. Choose from White, Bronze, Black, Brushed Chrome, and Satin Chrome.

Summit



An alternate swing door handle used on systems that incorporate daily-use doors. Choose from Bronze, Silver, Brushed Chrome, and Satin Chrome.

Verona



ADA-compliant swing door handle used on systems that incorporate daily-use doors. Choose from White, Bronze, Black, Brushed Chrome, and Satin Chrome.

GLASS OPTIONS

Low-E glass comes standard for all units. If you require a specific Low-E or non Low-E option, we will be happy to advise you on the best type of glass for your project.



SEGMENTED RADIUS

Panda is pleased to offer a segmented, curved Folding Door system, also known as a segmented radius system. Intended for projects designed with a radius system where the client prefers a folding door over a sliding system. Panda is ready to work with you to design, customize, and build the right system for your project.



STILES/PANEL INFO

Model	Material & Construction	Panel Thickness	Stile & Rail Profile
S.51 Aluminum	Aluminum extrusions with wall thickness of up to 1/8".	2 3/8"	2 1/16"
US.51 Aluminum Ultra	Additional stile support to withstand heavier loads.	2 3/8"	2 1/16"
TS.60 Thermally Broken	Thermal breaks create non-conductive bridge using polyamide iso-bars.	2 3/8"	2 1/16"
UTS.60 Thermally Broken Ultra	Additional thermally-broken stile support to withstand heavier loads.	2 3/8"	2 1/16"
S.66 Solid Wood	Solid Exterior/LVL Wood Core.	2 1/2"	4"
S.74 Aluminum Wood Clad	Wood panels are taped onto the aluminum extrusion with VHB Tape.	2 5/8"	2 13/16"
TS.75 Aluminum/ Wood Clad Thermally Broken	Thermal breaks with wood cladding provide superior insulation and weather performance.	2 5/8"	2 13/16"

Click or scan QR code to view Technical Specs.

S.51 Aluminum



US.51 Aluminum ULTRA



TS.60 Thermally Broken



UTS.60 Thermally Broken ULTRA



S.66 Solid Wood



S.74 Aluminum/Wood Clad



TS.75 Aluminum/Wood Clad Thermally Broken



Folding Door Animation

