



# INSTALLATION INSTRUCTIONS

[crlaurence.com](http://crlaurence.com)

## **SERIES 487 CENTER GLAZED WITH 1-1/2" TRIM OFFICE PARTITIONS**



# GENERAL INSTALLATION NOTES

## Recommended Guidelines For All Installations:

1. **REVIEW CONTRACT DOCUMENTS.** Check Shop Drawings, installation instructions, architectural drawings, and shipping lists to become thoroughly familiar with the project. The Shop Drawings take precedence and include specific details for the project. Note any **field verified** notes on the Shop Drawings prior to installing. The installation instructions are of a general nature and cover most conditions.
2. **INSTALLATION.** All materials are to be installed plumb, level, and true. Install operable windows preglazed only.
3. **BENCH MARKS.** All work should start from bench marks and/or column lines as established by the architectural drawings and the general contractor with guaranteed accuracy. Working from these datum points and lines determine:
  - a) The plane of the wall in reference to offset lines provided on each floor.
  - b) The finish floor lines in reference to bench marks on the outer building columns.
  - c) Mullion spacing from both ends of masonry opening to prevent dimensional build-up of daylight opening.
4. **FIELD WELDING.** All field welding must be adequately shielded to avoid any splatter on glass or aluminum. Results will be unsightly and/or structurally unsound. Advise general contractor and other trades accordingly. All field welds of steel anchors must receive touch-up paint (zinc chromate) to avoid rust.
5. **SURROUNDING CONDITIONS.** Make certain that construction which will receive your materials is in accordance with the contract documents. If not, notify the general contractor in writing and resolve differences before proceeding with work.
6. **ISOLATION OF ALUMINUM.** Aluminum to be placed in direct contact with uncured masonry or incompatible materials should be isolated with a heavy coat of zinc chromate or bituminous paint.
7. **SEALANTS.** Sealants must be compatible with all materials with which they have contact, including other sealant surfaces. Consult with sealant manufacturer for recommendations relative to joint size, shelf life, compatibility, cleaning, priming, tooling, adhesion, etc. It is the responsibility of the **Glazing Contractor** to submit a statement from the sealant manufacturer indicating that glass and glazing materials have been tested for compatibility and adhesion with glazing sealants, and interpreting test results relative to material performance, including recommendations for primers and substrate preparation required to obtain adhesion. The chemical compatibility of all glazing materials and framing sealants with each other and with like materials used in glass fabrication must be established. This is required on every project.
8. **FASTENING.** Within the body of these instructions "fastening" means any method of securing one part to another or to adjacent materials. Only those fasteners used within the system are specified in these instructions. Due to the varying perimeter conditions and performance requirements, perimeter and anchor fasteners are not specified in these instructions. For perimeter and anchor fasteners refer to the Shop Drawings or consult the fastener supplier.
9. **BUILDING CODES.** Due to the diversity in state/provincial local, and federal laws and codes that govern the design and application of architectural products, it is the responsibility of the individual architect, owner, and installer to assure that products selected for use on projects comply with all the applicable building codes and laws. U.S. Aluminum exercises no control over the use or application of its products, glazing materials, and operating hardware and assumes no responsibility thereof.
10. **EXPANSION JOINTS.** Expansion joints and perimeter seals shown in these instructions and in the Shop Drawings are shown at normal size. Actual dimensions may vary due to perimeter conditions and/or difference in metal temperature between the time of fabrication and the time of installation. Gaps between expansion members should be based on temperature at time of installation.
11. **COORDINATION WITH OTHER TRADES.** Coordinate with the general contractor any sequence with other trades which offset curtain wall installation (i.e. fire proofing, back-up walls, partitions, ceilings, mechanical ducts, converters, etc.)
12. **CARE AND MAINTENANCE.** Final cleaning of exposed aluminum surfaces should be done in accordance with AAMA 609.1 for anodized aluminum and 610.1 for painted aluminum.

# HANDLING, STORAGE, AND PROTECTION OF ALUMINUM

The following precautions are recommended to protect the material against damage. Following these precautions will help ensure early acceptance of your products and workmanship.

**A. HANDLE CAREFULLY.**

All aluminum materials at job site must be stored in a safe place, well removed from possible damage by other trades. Cardboard wrapped or paper interleaved materials must be kept dry.

**B. CHECK ARRIVING MATERIALS.**

Check for quantities and keep records of where various materials are stored.

**C. KEEP MATERIALS AWAY FROM WATER, MUD, AND SPRAY.**

Prevent cement plaster or other materials from damaging the finish.

**D. PROTECT THE MATERIALS AFTER ERECTION.**

Protect erected frame with polyethylene or canvas splatter screen. Cement, plaster, terrazzo, other alkaline solutions, and acid based materials used to clean masonry are harmful to the finish. ***If any of these materials come in contact with the aluminum, immediately remove with water and mild soap.***

**IMPORTANT: READ THIS MANUAL THOROUGHLY BEFORE BEGINNING INSTALLATION.**

## SYSTEM REQUIREMENTS

Maximum wall thickness: 4-7/8" (124 mm).

Maximum unsupported total load on each sill: 50 lbs. (23 kg) each.

Note: Additional shim support under the sill member is required for any loads over 50 lbs (23 kg).

Interior use only.

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## INTRODUCTION

Thank you for your purchase of the C.R. Laurence Co., Inc. 487 Office Partition System. It has been engineered to install easily and efficiently. **Please take the time to review this manual before you begin.**

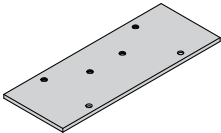
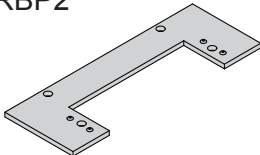
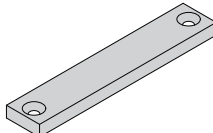
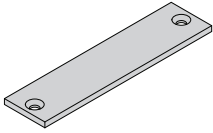
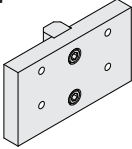
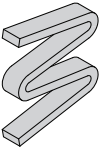
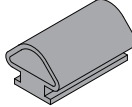
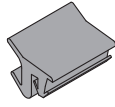
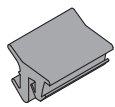
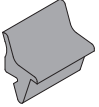
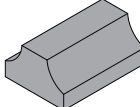
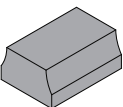
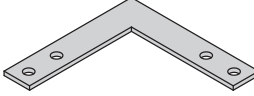
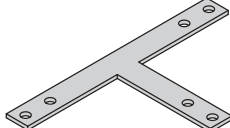
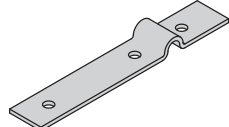
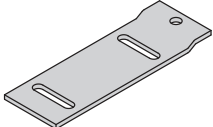
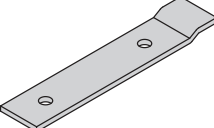
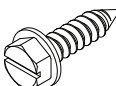
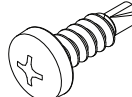
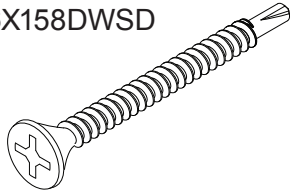
The 487 Office Partition System is an interior product that allows you to add finished doorways, sidelites and windows (borrowed lite) to conventional drywall construction walls with maximum 4-7/8" (124 mm) thickness.

Each 487 System has been custom prepared in our factory to the job site specifications with minor to no field fabrication required. Be sure to have the Shop Drawings handy for reference. Technical support is available online at [crlaurence.com](http://crlaurence.com) and by phone at (800) 262-5151. Please have your Sales Order Number for easy reference.

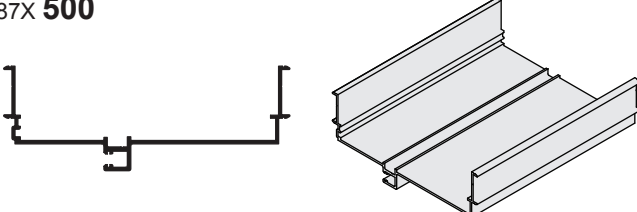
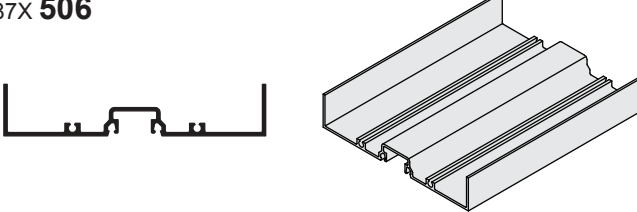
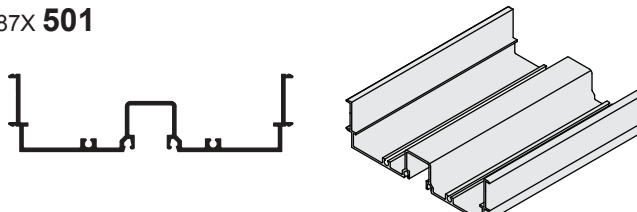
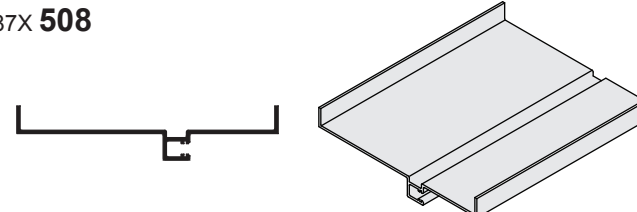
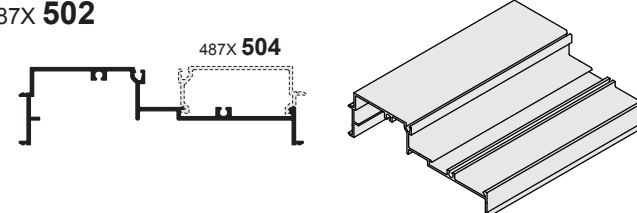
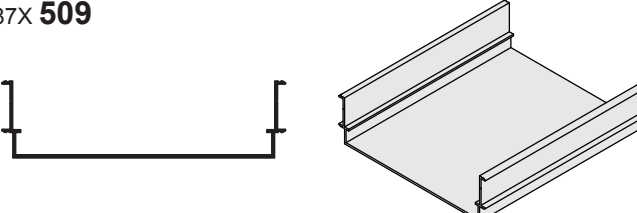
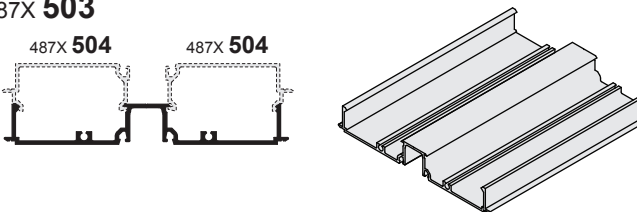
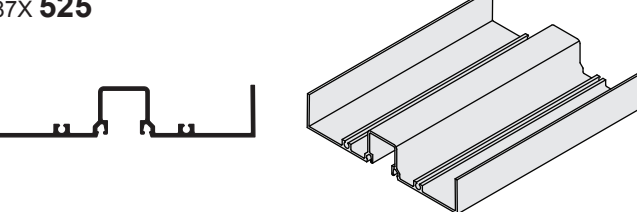
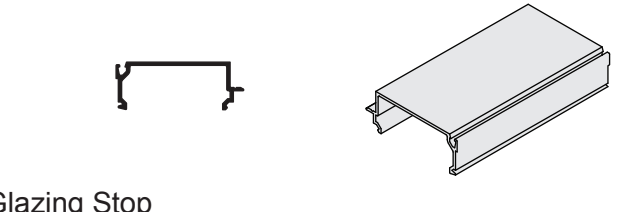
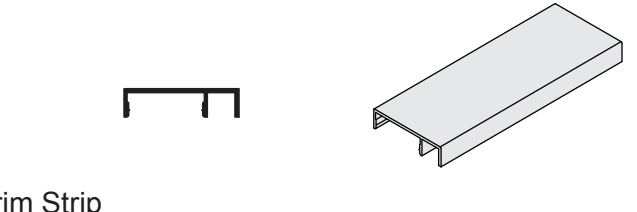
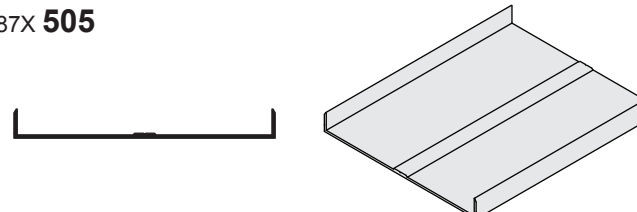
## EXTRUSION IDENTIFICATION

Your order has been carefully fabricated, inspected, and packaged to the work order specifications. We have placed an Indicator Label on the inside or back side of each part before final packaging. Use the Identification numbers found on the order specific drawings that accompany this set of instructions. They will help you to organize and layout each opening before proceeding with the assembly process.

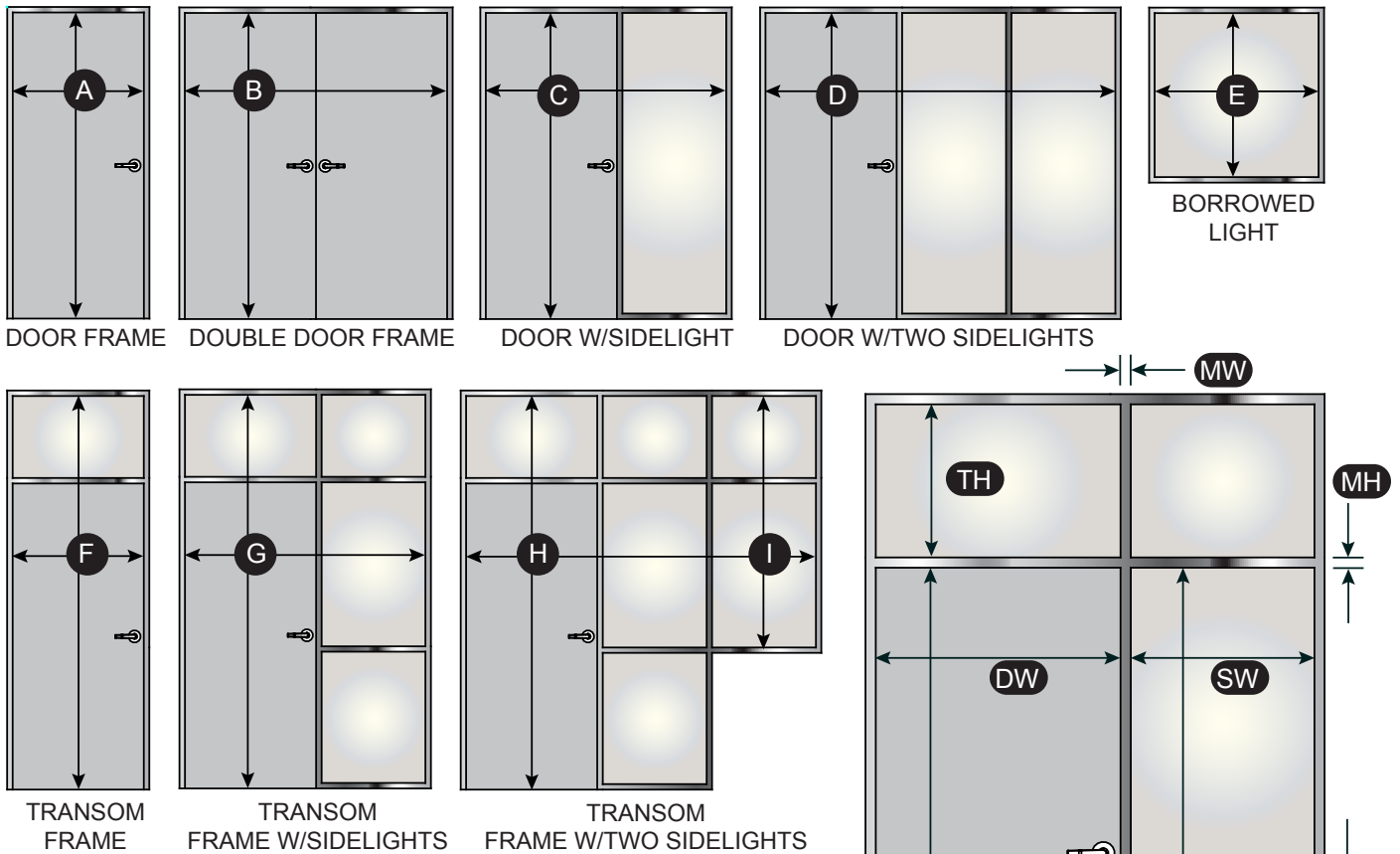
## PARTS LIST

PART NUMBER	PART NUMBER	PART NUMBER	PART NUMBER
487RBP1 	487RBP2 	487RBP3 	487RBP4 
DJ487 	WB452 	NP600C 	NP225 
NP238 	NP563 	SB513 	SB514 
487C1 	487C2 	487C3 	487C4 
487C5 	8X58HWSMS 	20061601 	6X158DWSD 

## PARTS LIST (CONTINUED)

PART NUMBER		PART NUMBER	
487X <b>500</b>		487X <b>506</b>	
Door Frame Cap		Shallow Pocket Insert	
487X <b>501</b>		487X <b>508</b>	
Deep Pocket Cap		Door Frame Insert	
487X <b>502</b>		487X <b>509</b>	
Sill Cap		Casing Cap	
487X <b>503</b>		487X <b>525</b>	
Horizontal Mullion		Deep Pocket Insert	
487X <b>504</b>		487X <b>015</b>	
Glazing Stop		Trim Strip	
487X <b>505</b>			
Sub Sill			

# ROUGH OPENING FORMULA SHEET



## ROUGH OPENING FORMULAS

<b>A</b>	Width = $DW + 1\text{'}/2\text{'}$ Height = $DH + 3\text{'}/4\text{'}$	<b>DW</b> Door Opening Width (D.L.O.) <b>DH</b> Door Opening Height (D.L.O.) <b>MW</b> Mullion Width (1-1/2") <b>MH</b> Mullion Height (1-1/2") <b>SW</b> Sidelight Opening Width (D.L.O.) <b>SH</b> Sidelight Height (D.L.O.) <b>BW</b> Borrowed Light Width (D.L.O.) <b>BH</b> Borrowed Light Height (D.L.O.)
<b>B</b>	Width = $DW + DW + 1\text{'}/2\text{'}$ Height = $DH + 3\text{'}/4\text{'}$	
<b>C</b>	Width = $DW + MW + SW + 1\text{'}/2\text{'}$ Height = $DH + 3\text{'}/4\text{'}$	
<b>D</b>	Width = $DW + MW + SW + MW + SW + 1\text{'}/2\text{'}$ Height = $DH + 3\text{'}/4\text{'}$ <small>REPEAT FOR EACH SIDELIGHT</small>	
<b>E</b>	Width = $BW + 1\text{'}/2\text{'}$ Height = $BH + 1\text{'}/2\text{'}$	
<b>F</b>	Width = $DW + 1\text{'}/2\text{'}$ Height = $DH + MH + TH + 3\text{'}/4\text{'}$	
<b>G</b>	Width = $DW + MW + SW + 1\text{'}/2\text{'}$ Height = $DH + MH + TH + 3\text{'}/4\text{'}$	
<b>H</b>	Width = $DW + MW + SW + MW + SW + 1\text{'}/2\text{'}$ Height = $DH + MH + TH + 3\text{'}/4\text{'}$	
<b>I</b>	Height = $SH + 1\text{'}/2\text{'}$	

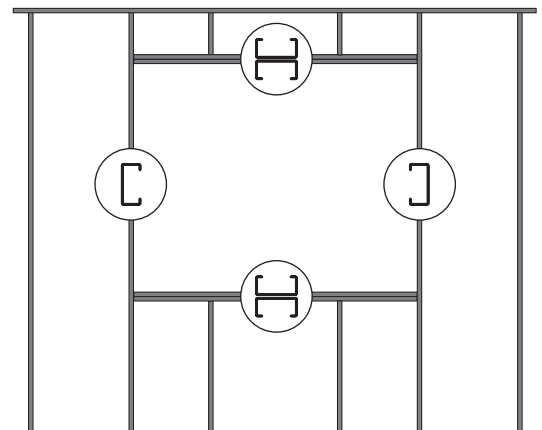
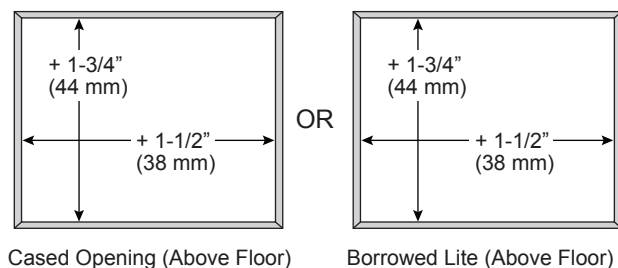
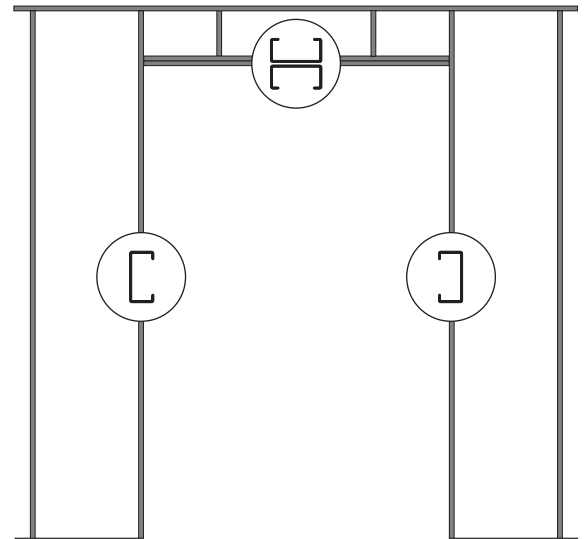
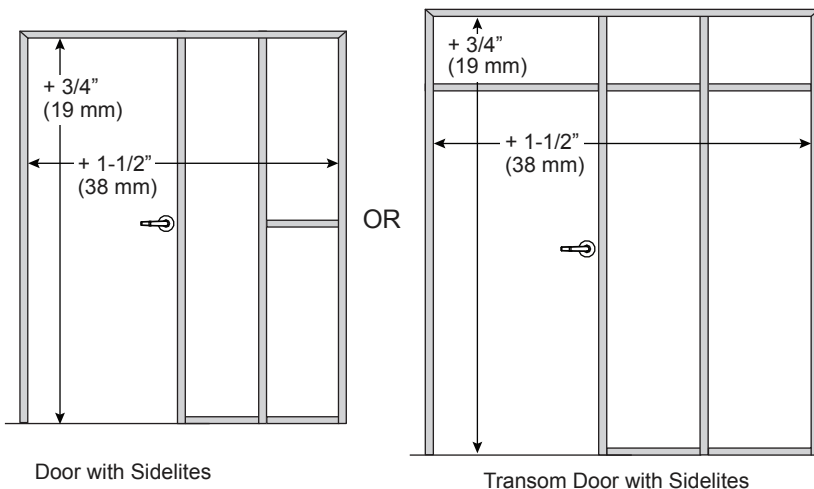
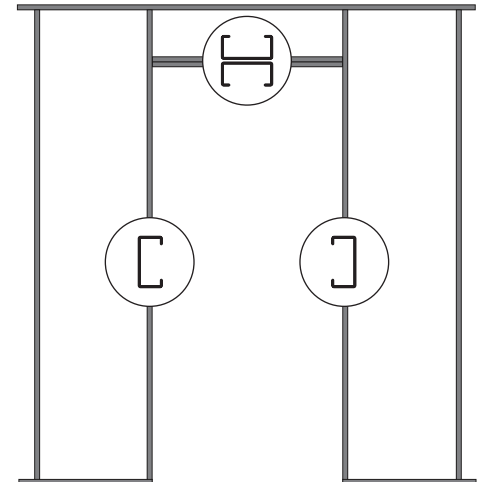
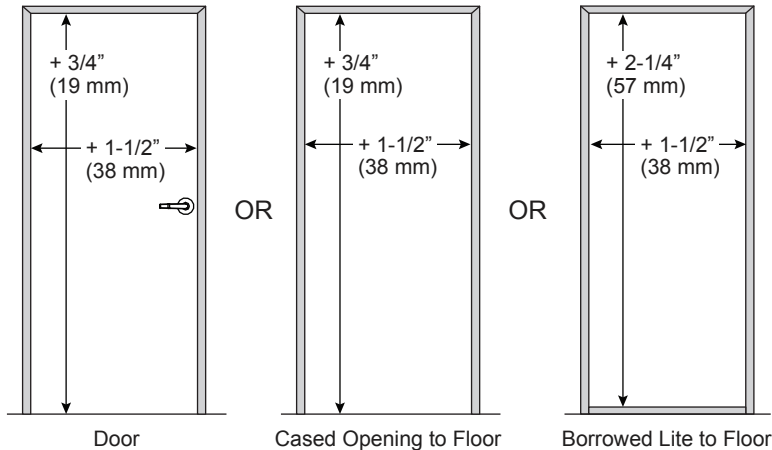
## DRYWALL PREPARATION

When framing, position all metal studs so that the open side faces the rough opening. Use two sets of studs, back to back for horizontals. The icons in the illustrations below show the correct orientation.

Refer to the CRL Shop Drawings for overall layout and to confirm dimensions.

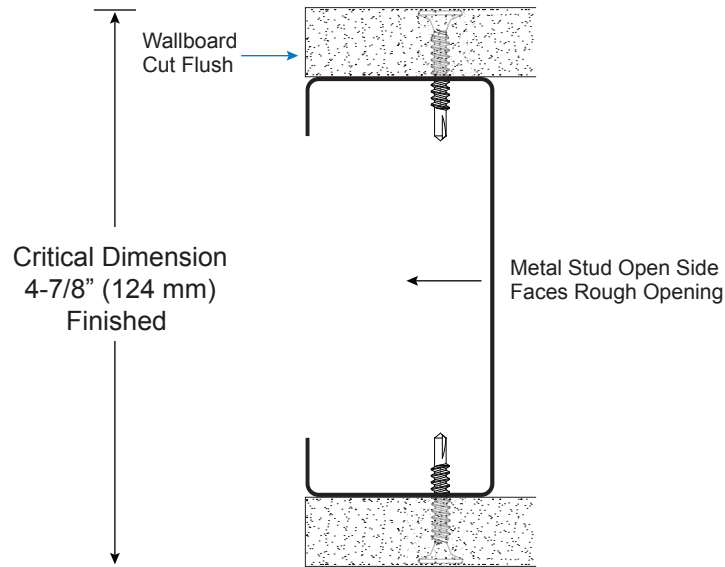
### Rough Opening Calculation

### Metal Stud Orientation



## DRYWALL INSTALLATION

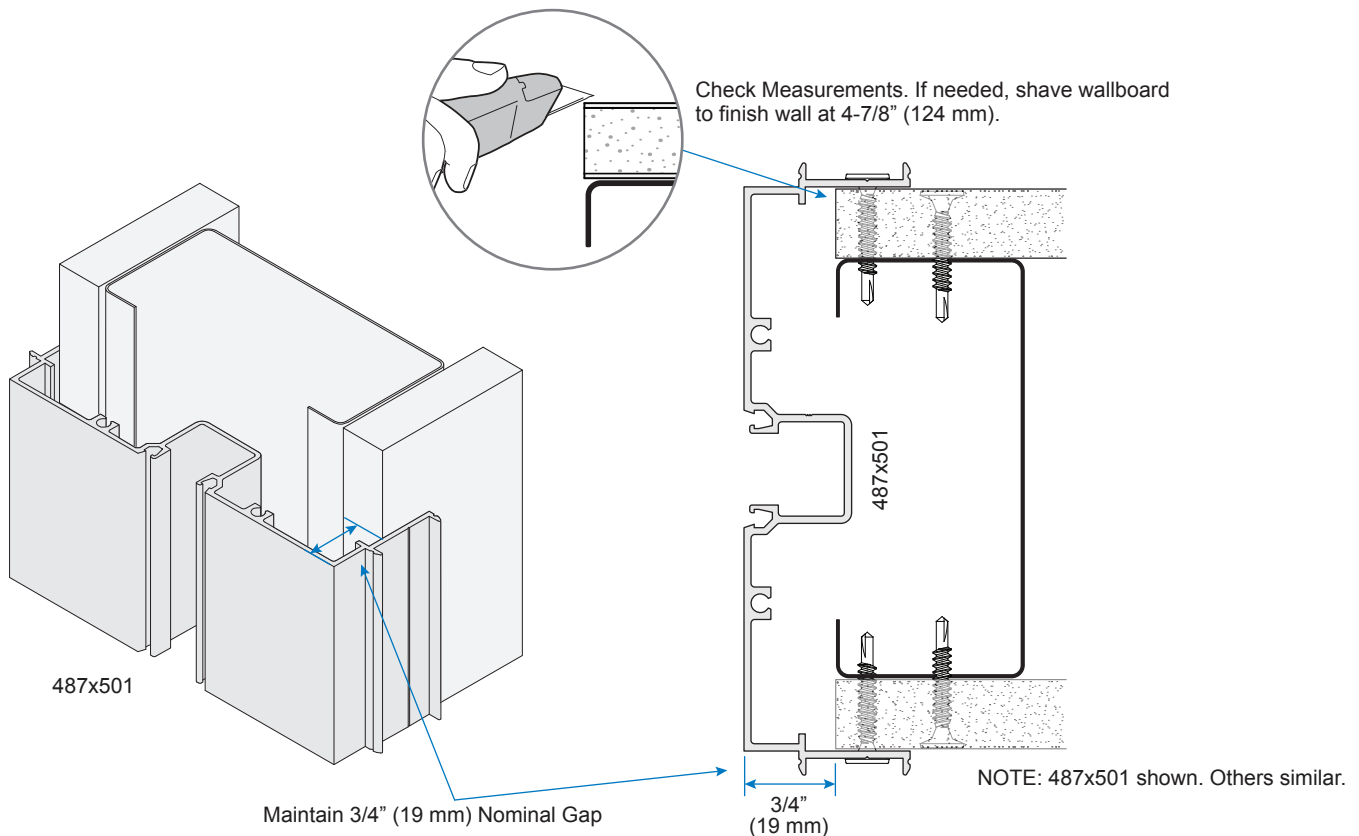
Ensure drywall thickness finishes at a standard 4-7/8" (124 mm). Cut the wallboard flush with the metal stud. Ensure the drywall is square and plumb. Note: The critical limitation for the finished wall is 4-7/8" (124 mm).



## INSTALLATION NOTES

The 487 Office Partition system requires that all rough openings have a maximum 4-7/8" (124 mm) finished wall thickness. Maintaining a 3/4" (19 mm) nominal gap allows plus or minus adjustments for leveling and plumbing jamb members.

NOTE: For sill on not-to-floor sidelite or borrowed lite, allow 1" (25.4 mm) nominal gap.



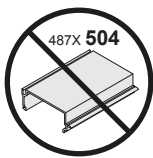


# INSTALLATION OVERVIEW

**NOTE:** For general reference only. Refer to detailed instructions for your configuration before beginning.



50 lb. maximum load on Sill without additional support.



Do NOT install before glazing.

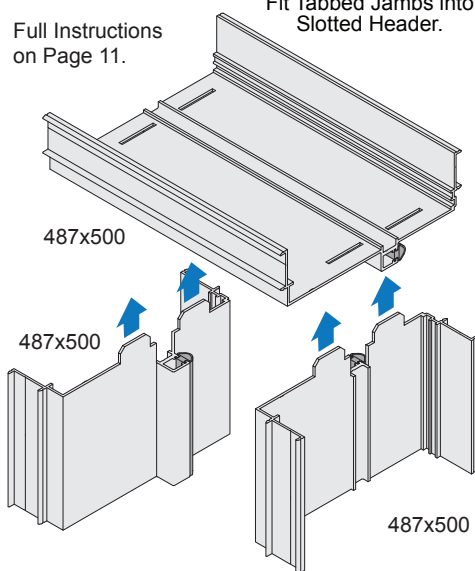
**Glazing**  
See Page 19.

**Trim**  
Notch and install on Page 20.

## Door Installation

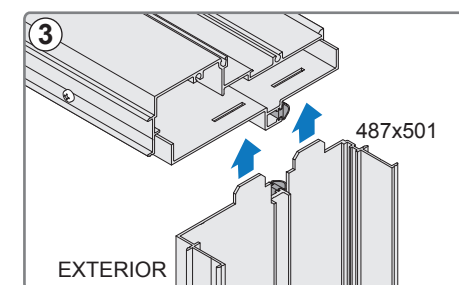
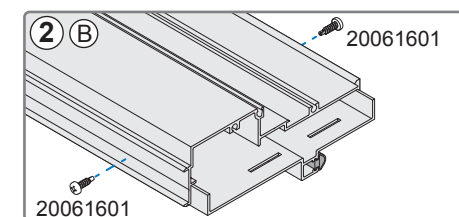
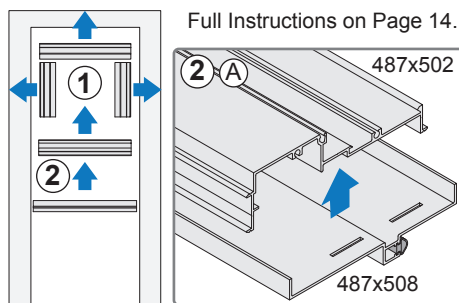
Full Instructions on Page 11.

Fit Tabbed Jamb into Slotted Header.



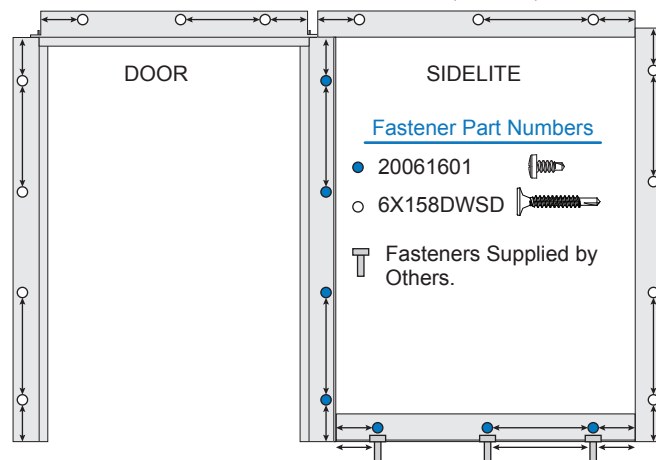
## Transom Door Installation

Full Instructions on Page 14.



## Anchor Type and Spacing

Space All Fasteners 2" (51 mm) at Ends 12" (305 mm) On Center



### Fastener Part Numbers

- 20061601
- 6X158DWSD
- Fasteners Supplied by Others.

**NOTE:** If applicable, measure and cut Scribe from bottom (straight end) of Jamb, Vertical Intermediates and vertical Trim before installing.

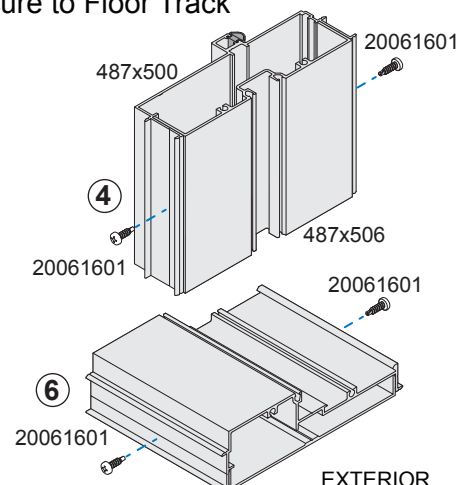
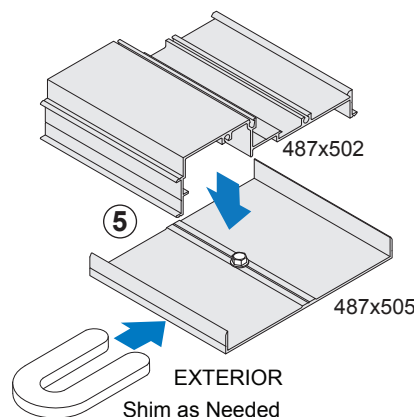
## Assembly Clip Installation

Install Clips as you level and secure each section. Refer to layout icons on the installation page for each configuration. Match letters on icon to chart on Page 10 for correct Clip location and orientation. Install Clips on both sides of frame with 20061601 Screws.

## Sidelite Installation

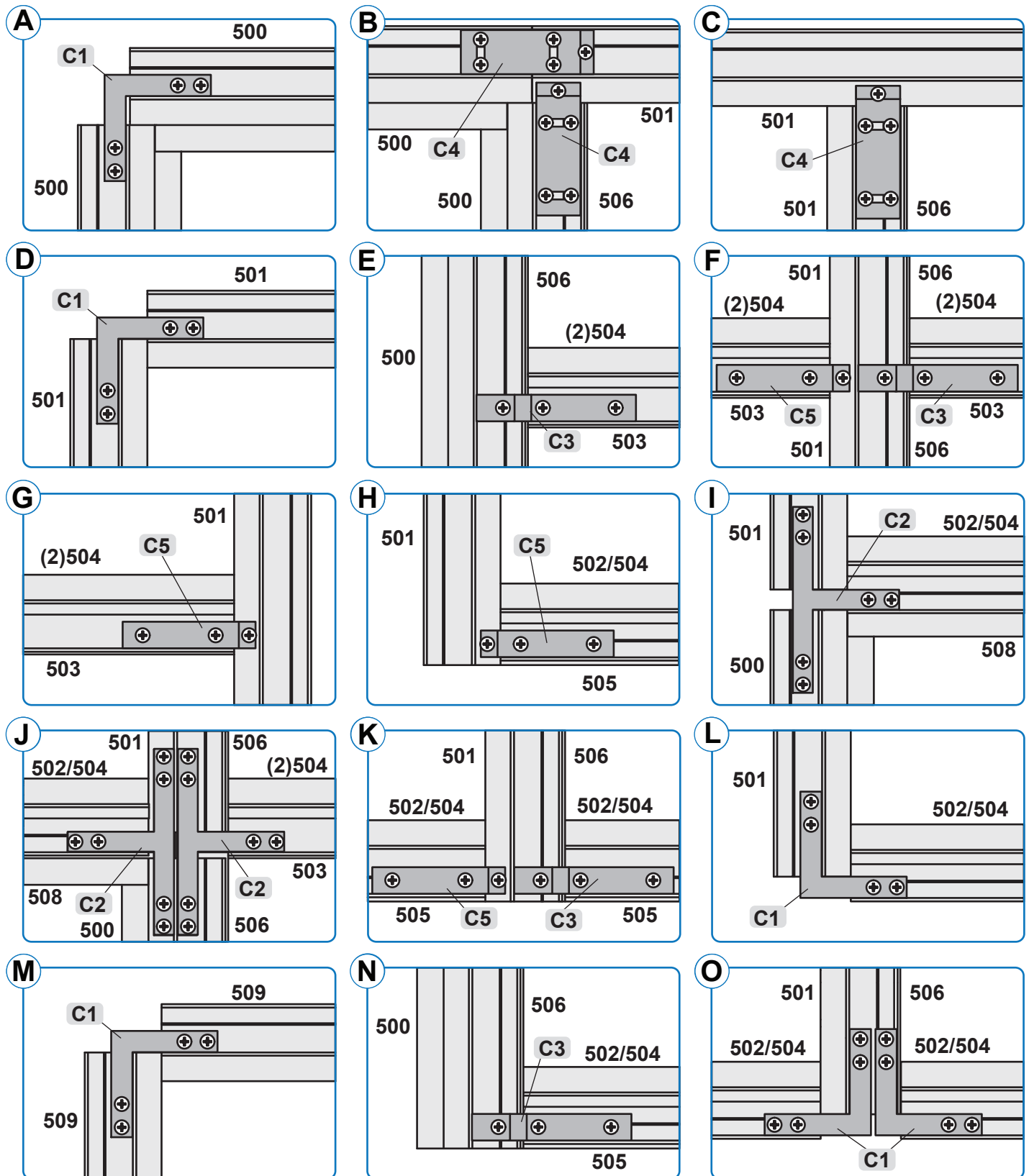
Full Instructions on Page 12. Multiple Sidelites on Page 13.

- ① Install Door Header and Jamb.
- ② Install, level and secure 487x501 Sidelite Header with 6X158DWSD Drywall Screws.
- ③ Install 487x501 Sidelite Jamb at wall. Level and secure with 6X158DWSD Drywall Screws.
- ④ Install 487x506 Sidelite Jamb at Door and secure with 20061601 Screws.
- ⑤ Install, level and secure 487x505 Floor Track with fasteners suitable for substrate.
- ⑥ Install 487x502 Sill and secure to Floor Track with 20061601 Screws.



# CLIP ASSEMBLY CHART (For Use with Pages 11-17)

The instructions in this manual pertain to installation using clips to secure the members. Refer to the letters shown on each installation page and match them with the illustrations on this page to find the correct clip and orientation. All clips are installed on BOTH sides of the frame with 20061601 Screws.



# SINGLE DOOR FRAME

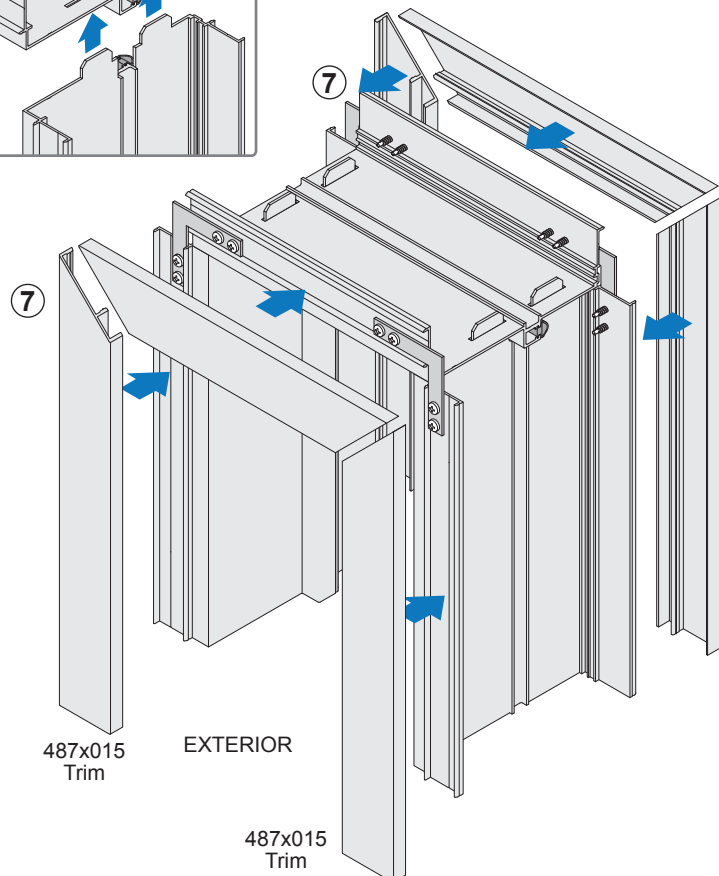
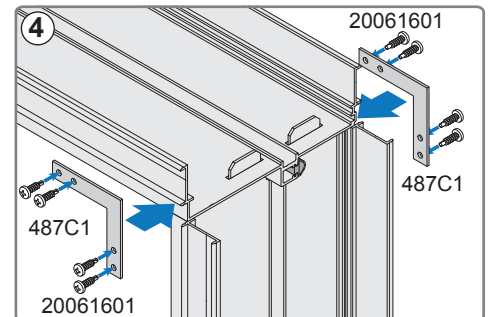
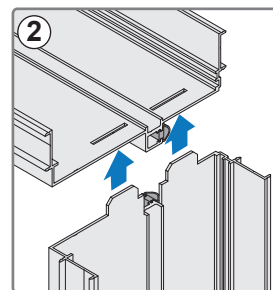
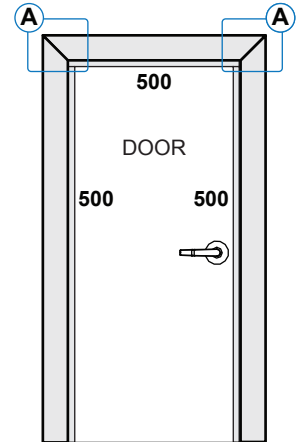
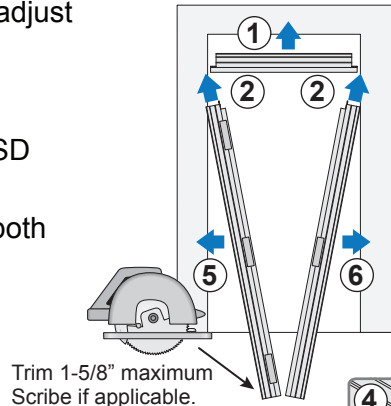
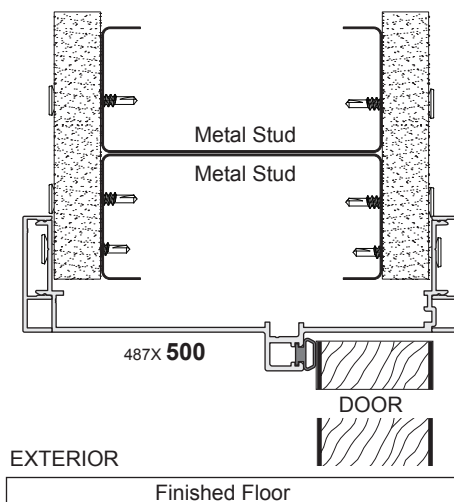
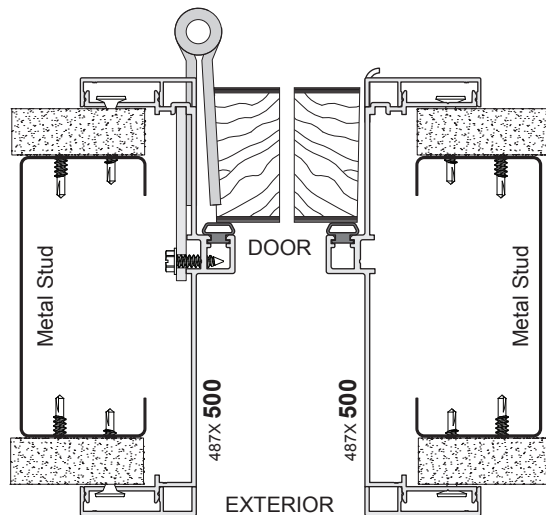
All vertical members are cut with an additional 1-5/8" (41.3 mm) Scribe length for field cutting to allow for varying unlevel floor conditions. Fabricated frames can be ordered to exact dimensions for "cut-free" installation.

NOTE: If applicable, measure and cut Scribe from bottom (straight end) of Jambs and vertical Trim before installing.

- ① Lift 487x500 Door Header into place and adjust to proper height. **Do not secure.**
- ② Insert tabbed Jambs into slotted Header.
- ③ Level and secure Header with 6X158DWSD Drywall Screws.
- ④ Install C1 Corner Clips at top corners on both sides of frame.
- ⑤ Plumb, square and secure Hinge Jamb with 6X158DWSD Drywall Screws.
- ⑥ Plumb, square and secure Strike Jamb with 6X158DWSD Drywall Screws.
- ⑦ Install factory-prepped Trim on both sides of frame.

NOTE: Space all fasteners 2" (51 mm) at ends and 12" (305 mm) on center.

Match Letters with Clip Chart on Page 10.  
NOTE: This drawing shown with Trim installed.

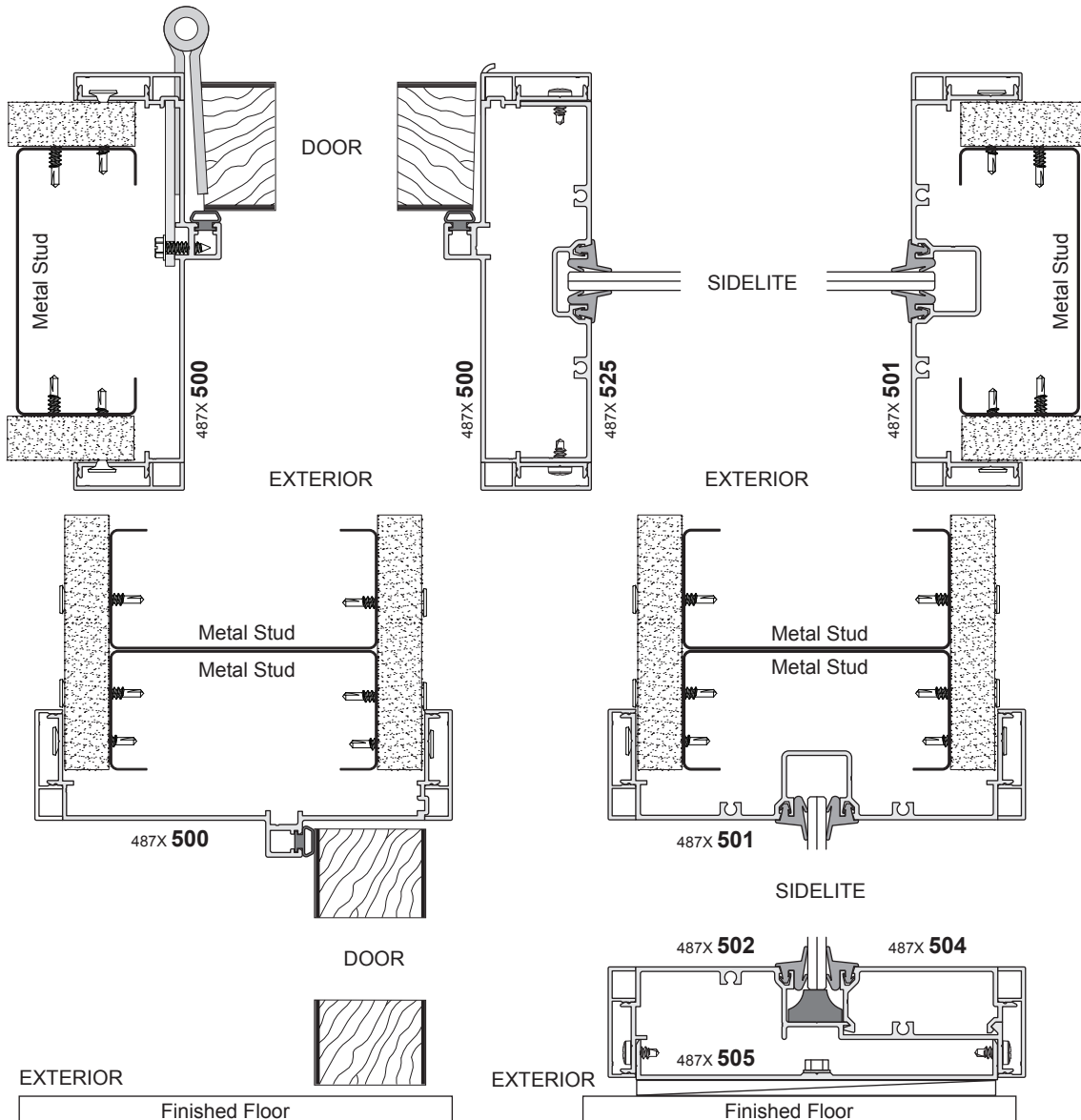
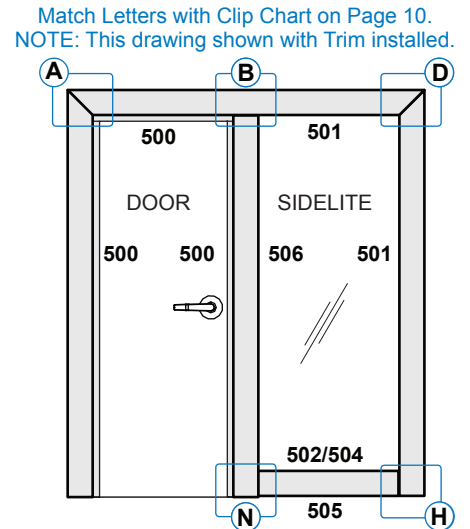


## DOOR WITH SIDELITE

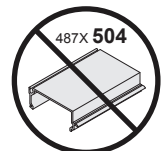
- ① Install 487x500 Door Header and Jambs as shown on Page 11. Refer to this drawing for correct Clips.
- ② Install, level and secure 487x501 Sidelite Header with 6X158DWSD Drywall Screws.
- ③ Install 487x501 Sidelite Jamb at wall. Level and secure with 6X158DWSD Drywall Screws.
- ④ Install 487x506 Sidelite Jamb at Door and secure with 20061601 Screws.
- ⑤ Install, level and secure 487x505 Floor Track with fasteners suitable for substrate.
- ⑥ Install 487x502 Sill and secure to Floor Track with 20061601 Screws.

NOTE: Space all fasteners 2" (51 mm) at ends and 12" (305 mm) on center.

NOTE: Install Clips as you level and secure each section. Match letters to chart on Page 10 for correct Clip location and orientation. Install Clips on both sides of frame with 20061601 Screws. Follow instructions on Page 18 to Glaze Sidelite. Refer to Page 19 to notch and install Trim.



50 lb. maximum  
load on Sill without  
additional support.



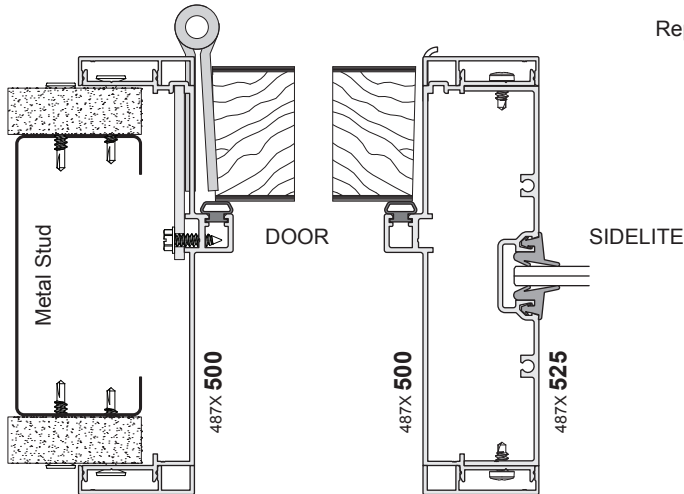
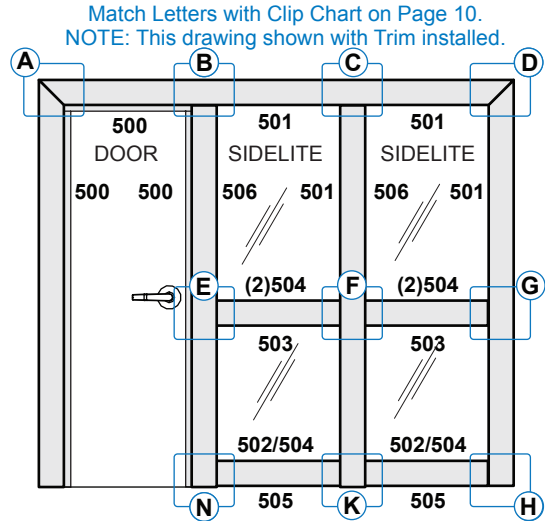
Do NOT install  
before glazing.

# DOOR WITH MULTIPLE SIDELITES AND HORIZONTAL MULLIONS

- ① Follow Steps 1 - 4 on Page 12 to install Door frame and Sidelite Header and Jamb.
- ② Continue with Steps 5 and 6 to install Floor Track and Sill next to Door.
- ③ Install and secure 487x501 with 487x506 Intermediate Vertical with 20061601 Screws.
- ④ Repeat Step 2 above to install and secure Floor Track and Sill next to wall.
- ⑤ Install 487x503 Intermediate Horizontals.

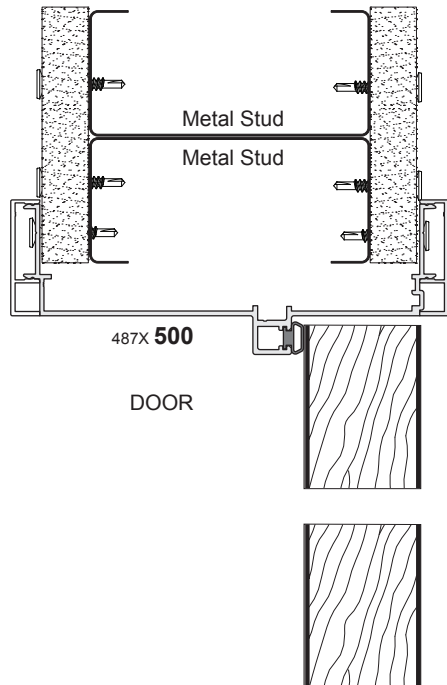
NOTE: Space all fasteners 2" (51 mm) at ends and 12" (305 mm) on center.

NOTE: Install Clips as you level and secure each section. Match letters to chart on Page 10 for correct Clip location and orientation. Install Clips on both sides of frame with 20061601 Screws. Follow instructions on Page 18 to Glaze Sidelites. Refer to Page 19 to notch and install 487x015 Trim.

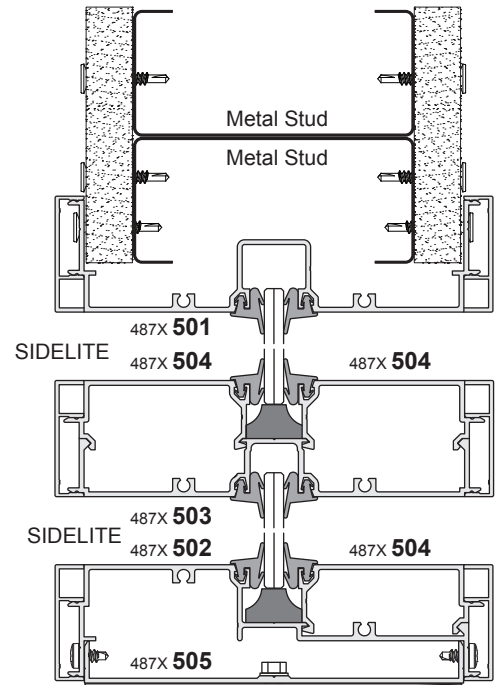


Repeat this section for each additional sidelite.

EXTERIOR



EXTERIOR Finished Floor



EXTERIOR Finished Floor



Match Letters with Clip Chart on Page 10.  
NOTE: This drawing shown with Trim installed.

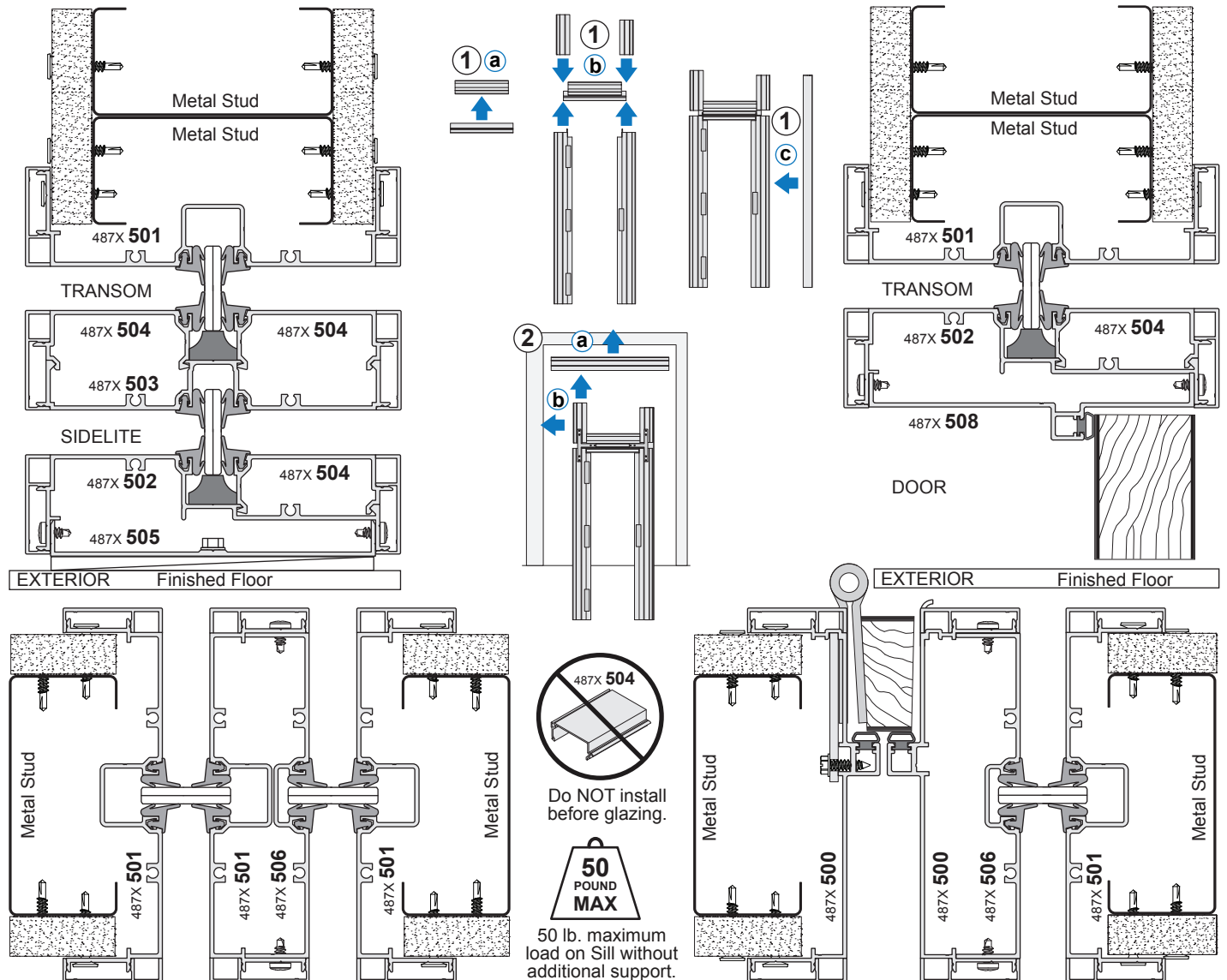
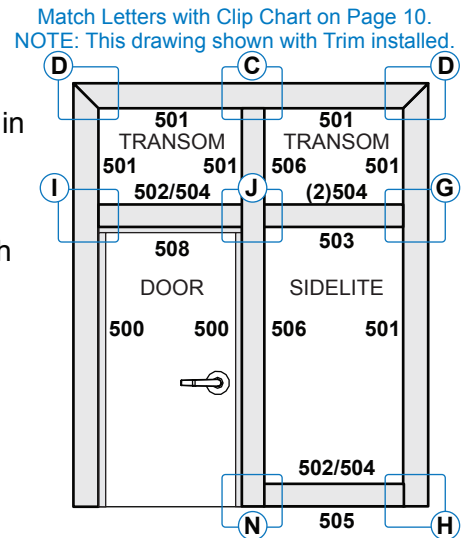
# TRANSOM DOOR WITH SIDELITE

NOTE: Transom Header runs the length of the Sidelite. If applicable, measure and cut Scribe from bottom (straight end) of Jambs and vertical Trim before installing.

- 1 Assemble Transom Door on ground. Center 487x508 Slotted Header in 487x502 and secure with 20061601 Screws. Rest 487x501 Transom Jambs on top and insert 487x500 Tabbed Door Jambs into bottom of Header. Insert 487x506 Sidelite Jamb into Transom and Door Jamb. Square and secure with 20061601 Screws. Install 487C2 Clips at both sides of Header.
- 2 Position 487x501 Transom Header in opening and temporarily hold in place. Lift Transom Door into opening and slide into place. Level and secure with 6X158DWSD Drywall Screws.
- 3 Install 487x501 Sidelite Jamb with 6X158DWSD Drywall Screws.
- 4 Continue with Steps 5 and 6 on Page 12 to install Floor Track and Subsill next to Door. Then install 487x503 Sidelite Header.

NOTE: Space all fasteners 2" (51 mm) at ends and 12" (305 mm) on center.

NOTE: Install Clips as you level and secure each section. Match letters to chart on Page 10 for correct Clip location and orientation. Install Clips on both sides of frame with 20061601 Screws. Follow instructions on Page 19 to Glaze Sidelite and Transom. Refer to Page 19 to notch and install 487x015 Trim.



## BORROWED LITE

NOTE: If applicable, measure and cut Scribe from bottom (straight end) of Jambs and vertical Trim before installing.

### BORROWED LIGHT TO FLOOR

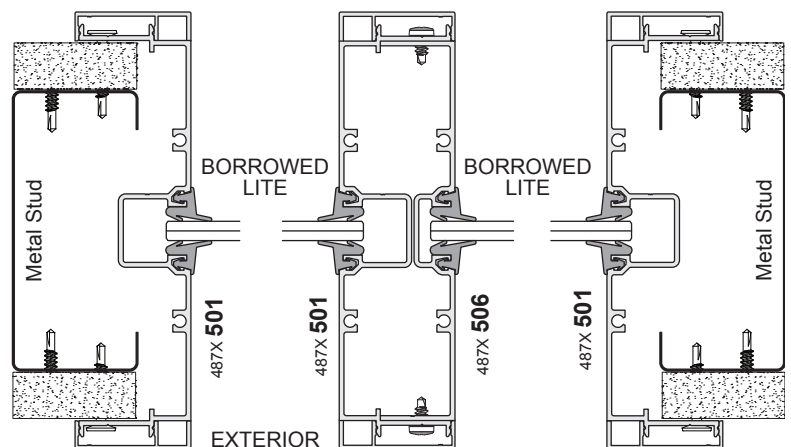
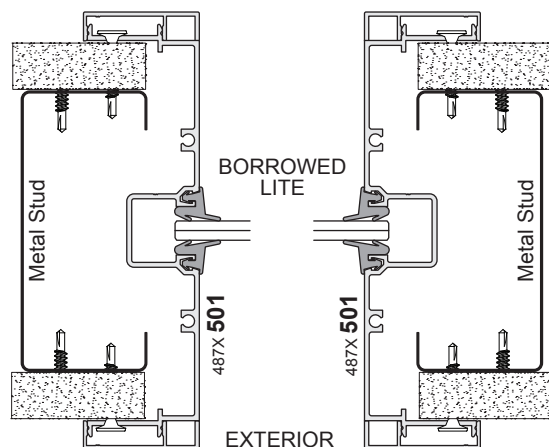
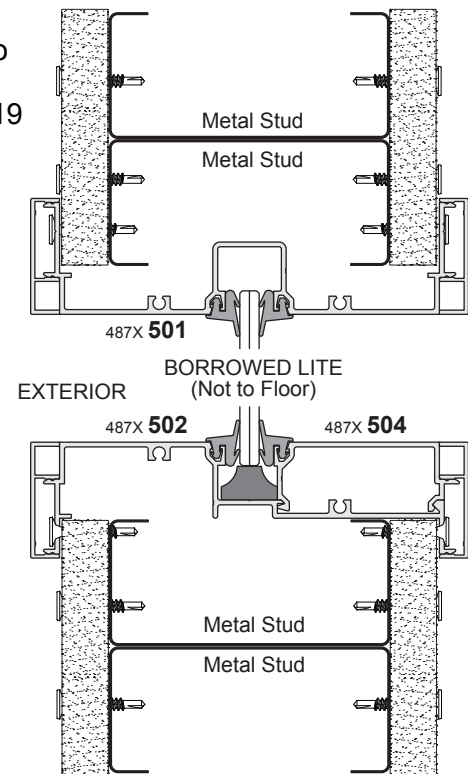
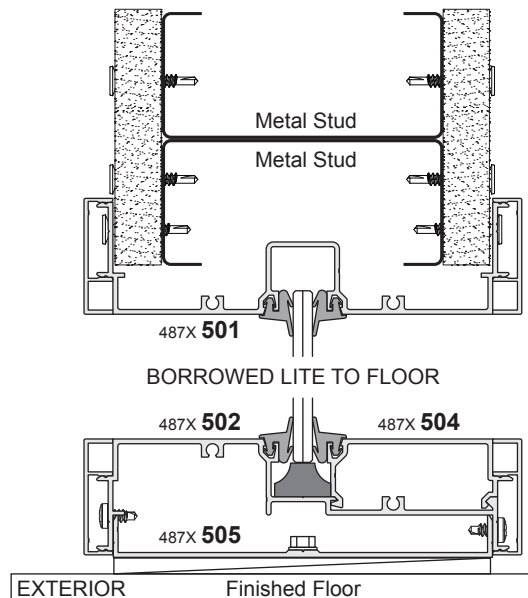
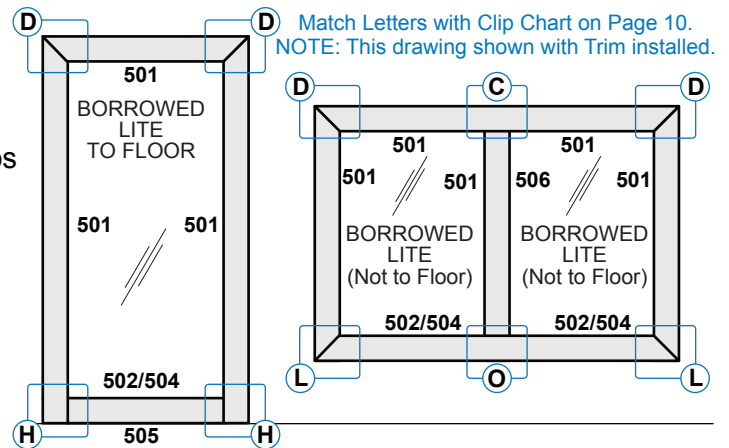
- ① Position 487x501 Header and 487x501 Wall Jambs into opening. Level and secure with 6X158DWS Drywall Screws.
- ② Install, level and secure 487x505 Floor Track with fasteners suitable for substrate.
- ③ Install 487x502 Sill and secure to Floor Track with 20061601 Screws.

### BORROWED LIGHT (Not to Floor)

- ④ Follow Step 1 above to install Header and Jambs. Then install 487x502 Sill next to one Jamb with 6X158DWS Drywall Screws.
- ⑤ Fit 487x506 and 487x501 Intermediate Vertical together and secure with 20061601 Screws. Install next to Sill. Then install 487x502 Sill on other side.

NOTE: Space all fasteners 2" (51 mm) at ends and 12" (305 mm) on center.

NOTE: Install Clips as you level and secure each section. Match letters to chart on Page 10 for correct Clip location and orientation. Install Clips on both sides of frame with 20061601 Screws. Follow instructions on Page 19 to glaze each lite. Refer to Page 19 to notch and install 487x015 Trim.





## CASED OPENINGS

NOTE: If applicable, measure and cut Scribe from bottom (straight end) of Jambs and vertical Trim before installing.

### BORROWED LIGHT TO FLOOR

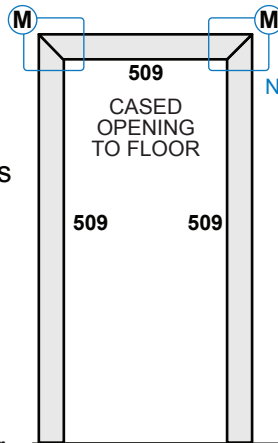
- ① Position 487x509 Header and 487x509 Wall Jambs into opening. Level and secure with 6X158DWSD Drywall Screws.

### BORROWED LIGHT (Not to Floor)

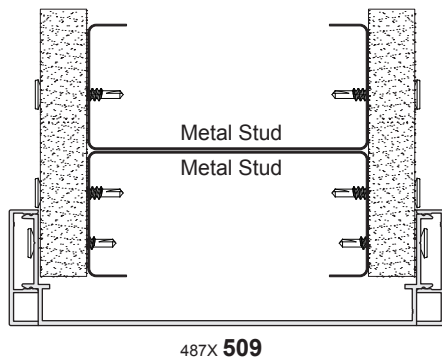
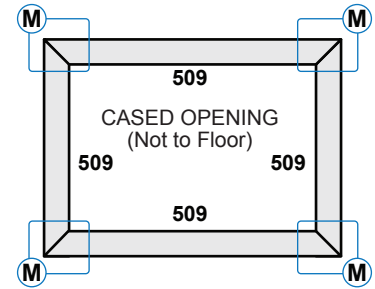
- ② Follow Step 1 above to install Header and Jambs. Then install 487x509 Sill and secure with 6X158DWSD Drywall Screws.

NOTE: Space all fasteners 2" (51 mm) at ends and 12" (305 mm) on center.

NOTE: Install Clips as you level and secure each section. Match letters to chart on Page 10 for correct Clip location and orientation. Install Clips on both sides of frame with 20061601 Screws. Refer to Page 19 to notch and install 487x015 Trim.

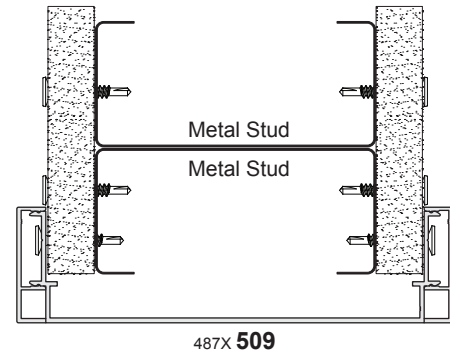


Match Letters with Clip Chart on Page 10.  
NOTE: This drawing shown with Trim installed.



CASED OPENING TO FLOOR

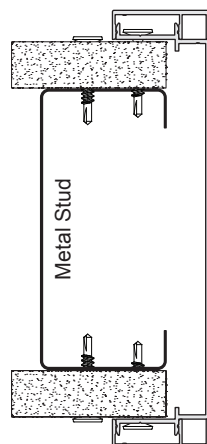
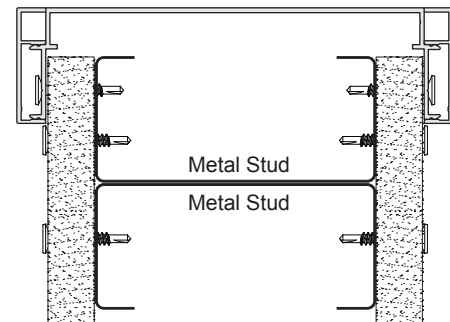
EXTERIOR Finished Floor



CASED OPENING (Not to Floor)

EXTERIOR

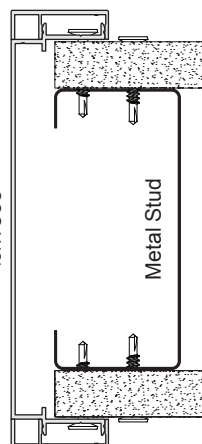
487X 509



CASED OPENING

487X 509

EXTERIOR

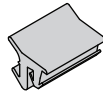
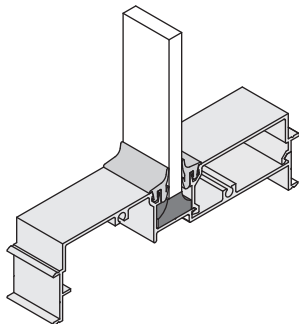


487X 509

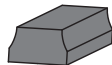
## GLASS SIZING AND GLAZING

GLASS SIZE = D.L.O. + 5/8" or 5/16" GLASS BITE EACH POCKET

1/4" Glass

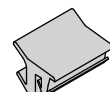
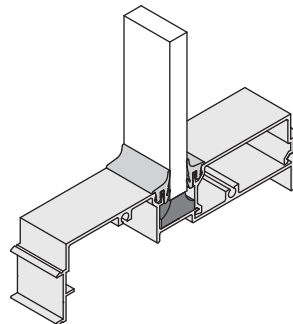


NP225

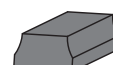


SB513

3/8" Glass

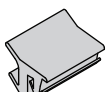


NP238

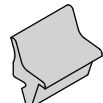
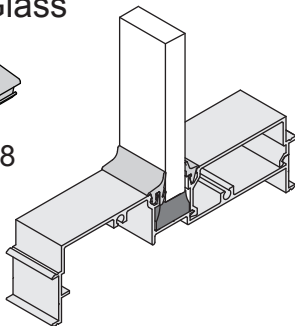


SB513

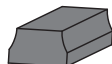
1/2" Glass



NP238

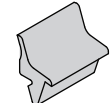
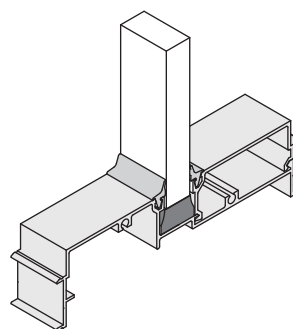


NP563

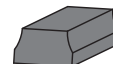


SB514

9/16" Glass



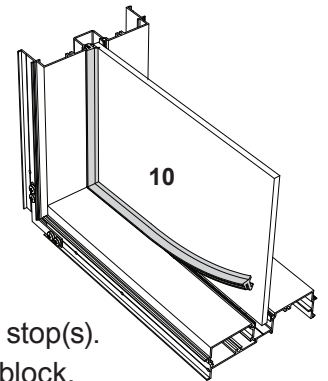
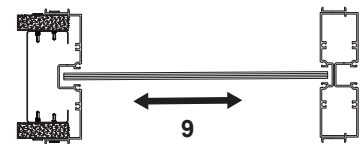
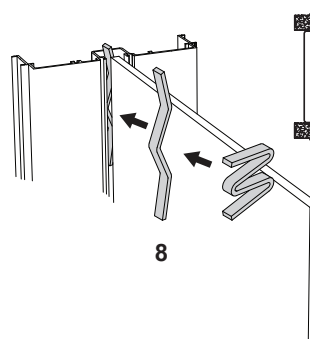
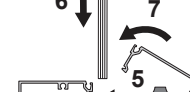
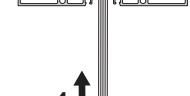
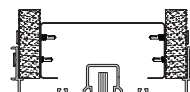
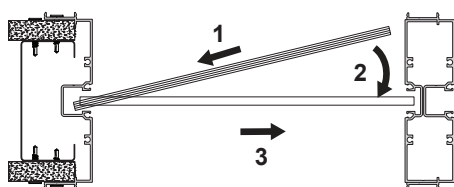
NP563



SB514

Important: Maximum 50 LB (23 KG) each Sidelite. Note: Additional shim support under the sill member is required for any loads over 50 lbs (23 KG).

## Glazing Sequence



1. Insert glass into deep pocket.
2. Swing into place.
3. Slide into shallow pocket.
4. Lift up into top pocket.
5. Position setting blocks.

6. Lower glass.
7. Install 487x **504** glass stop(s).
8. Install WB452 edge block.
9. Center glass.
10. Cut and install glazing gaskets.

## 1-1/2" TRIM STRIP NOTCHING AND INSTALLATION (CLIPS ONLY)

CRL fabricated frames come standard with trim that is mitered at the outer top corners of the frame. Intermediate vertical trim is straight cut to underside of header and runs through the sill. All vertical trim has an additional 1-5/8" (41.3 mm) scribe added at the bottom to allow for unlevel floor conditions. Cut trim to desired length at the scribe end only. Trim for hinge and strike jambs is factory notched for hinges and strike plates (S). Customer is responsible for notching over all clips (P,Q and R).

