

STEELCRAFT®

ARCHITECTURAL STICK SYSTEMS



ABOUT THE STICK SYSTEMS:

The Steelcraft Architectural Stick Systems are designed to fit virtually all construction requirements for commercial building applications. These frame assemblies are fabricated (cut and welded) from various framing components, to meet the wide range of architectural requirements based on aesthetics, functionality, and durability. These frames and their components are specifically designed to meet the high usage levels of all commercial and institutional buildings.

This section of the manual is designed to give a broad overview of the flexibility available in the Steelcraft Architectural Stick Systems. For maximum flexibility and functionality, the perimeter framing (open sections which attach to the wall systems) is available in several frame series. Anchorage to the wall and floor may vary from the details shown in the applicable frame Specification Sheets.

The Steelcraft Architectural Stick Systems are available in the following frame series:

Flush Frames (F and FN-Series):

Available as transom lite/panel, side lite/panel, transom and side lite/panel, borrowed lites and frames with corner enclosures.

Drywall Frame (DW and K-Series):

Available only as borrowed lites. These frames are KD (knock down).

Multi-Use Frames (MU-Series):

Available as transom lite/panel, side lite/panel, transom and side lite/panel, borrowed lites and entrance frames with corner enclosures.

USAGE AND APPLICATION:

To help simplify the use, selection and specification of Steelcraft framing systems, the following guidelines for base material selection can be used:

Material gage – the following base material thickness are available:

- 16 gage (1.3 mm) – for Heavy Commercial and Institutional applications with high usage.
- 14 gage (1.7 mm) – for Extra-heavy Commercial and Institutional applications with potential of extremely high usage.

Material selection – in addition to the thickness of base material, the following base material types of metal are available:

- Commercial quality carbon steel conforming to ASTM specifications A568 and A569 is used mainly on interior openings.
- Galvannealed is recommended for use on exterior openings or for interior locations with high humidity present.

INSTALLATION:

Installation of all Steelcraft Framing Systems shall conform to the published Steelcraft installation instructions, SDI 105 *Recommended Installation Instructions for Steel Frames* and ANSI/DHI A115-IG *Installation Guide for Doors and Hardware*. All fire rated frames must be installed in accordance with NFPA Pamphlet 80, and/or the local *Authority Having Jurisdiction*.

Details are subject to change without prior notice.

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Spec Manual
Rev. 5/2002

S1-1

INTRODUCTION:

"Stick Sections", which are lengths of component frame material, are used to produce transom, transom & sidelite, sidelite and borrowed lites. The components are cut to length, notched and/or mitered, assembled and welded into an assembly to meet the requirements and specifications of the opening. The individual sections and the welded assembly can be fabricated at the factory or at the distributor's fabrication shop.

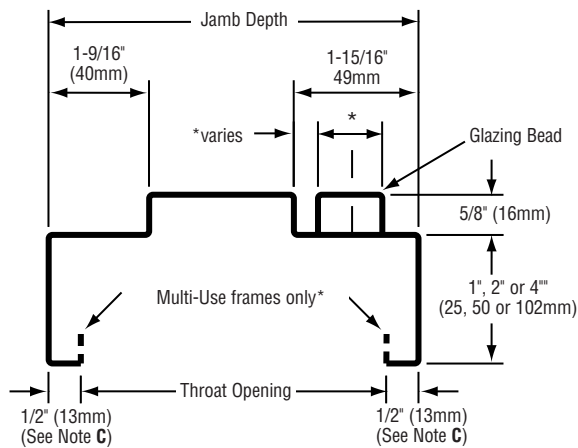
This publication is designed to show the assembly flexibility, and the components along with general cutting and assembly details. Other details include methods of splicing (for a frame when it exceeds shipping limitations), and other miscellaneous details.

GENERAL INFORMATION:

1. Standard components are either open (anchoring into the wall), or closed (mullions and dividers) sections.
2. Components are available in 16 and 14 gage non galvaneal or optional galvanealed steel (except as noted otherwise).
3. Components are available as either single or double rabbet. For the purpose of simplicity, all details are shown as double rabbeted.
4. Hardware preparations and reinforcements are in accordance with ANSI A250.6-1997. Locations are in accordance with ANSI/DHI A115.
5. All sill section (members attached to the floor) are recommended to be galvanealed steel

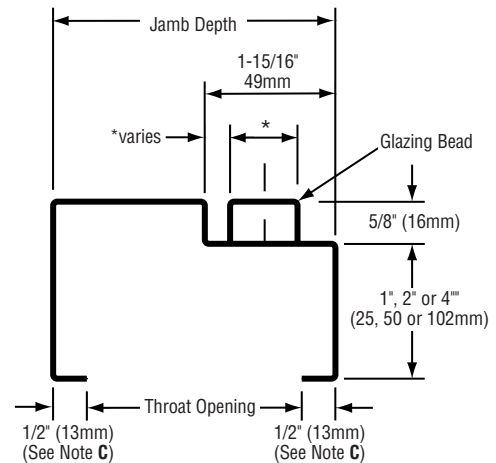
OPEN SECTIONS

Double Rabbet



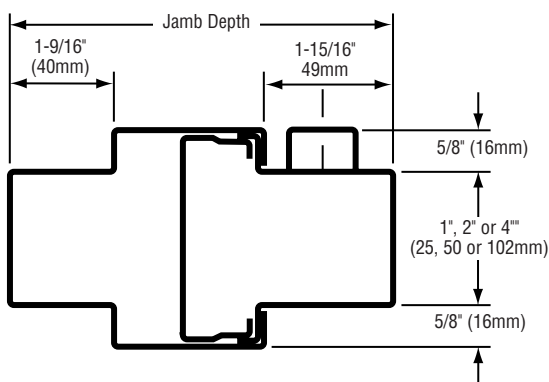
*Varies with glass thickness

Single Rabbet

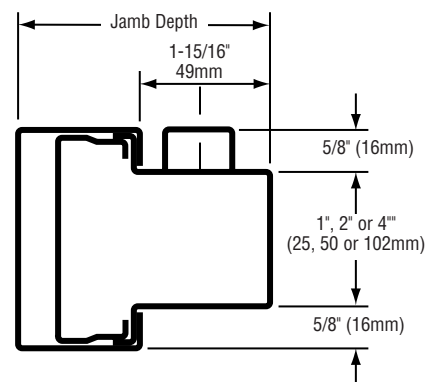


CLOSED SECTIONS

Double Rabbet



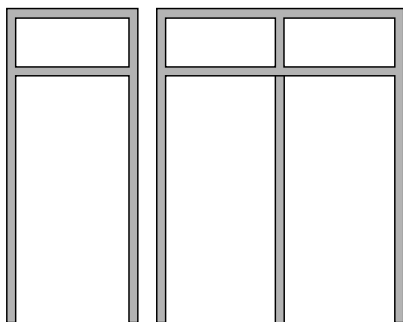
Single Rabbet



NOTES:

- A. Closed section shown for 3³/₄" (95mm) jamb depth. 3" (76mm) jamb depth section has two-piece continuous retaining clips.
- B. All specifications are subject to change without notice.
- C. 5³/₄" (146mm) jamb depth frame has 7¹/₁₆" (11mm) backbends (except multi-use [MU-] Series).

ELEVATIONS



Transom Frame

Door frame having a transom bar and glass, panel or louver above the door opening. The transom bar separates the door opening from the transom opening. The frame height will vary but normally extends to the ceiling above.



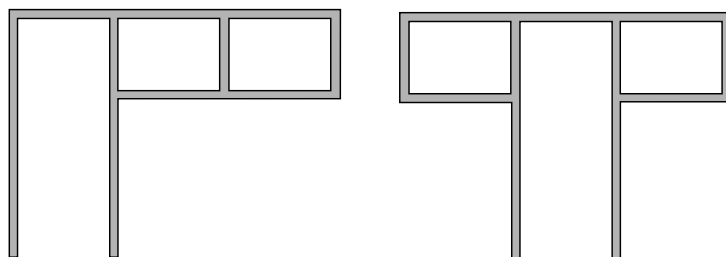
Ceiling Height Frame

Door frame without a transom bar and a panel mounted above the door. The panel is normally the same thickness and material as the door. The frame height will vary but normally extends to the ceiling above.



Transom Sidelite Frame

Door frame with transom bars and mullions dividing the entire frame into door and glass or panel openings. The frame height will vary but normally extends to the ceiling above.



Sidelite Frame

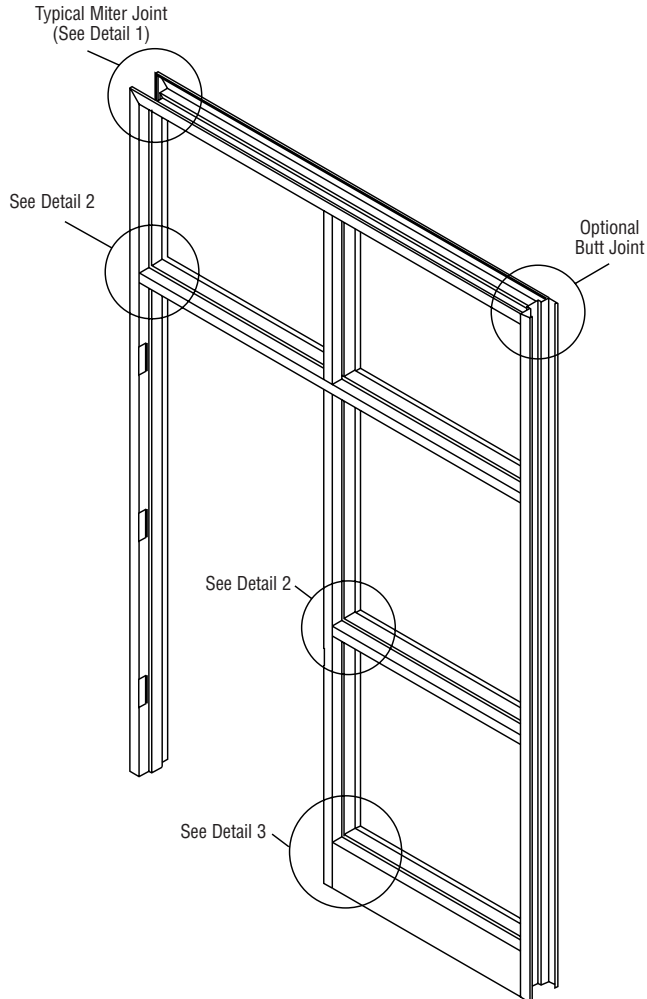
Door frame with glass openings attached to one or both sides of the door opening. The sidelite portion can be partial height of the door opening or extend the entire height of the door. The frame is only the door height. If the frame is greater than the door height the frame is defined as a transom sidelite frame.



Borrowed Lite

Four-sided frame without a door opening, prepared for glass installation in the field. The borrowed lite can be designed for one or multiple peices of glass. The frame can be located in the wall off the floor or sit on the floor and extend to the ceiling above.

ELEVATION 1 – TRANSOM AND SIDELITE ASSEMBLY

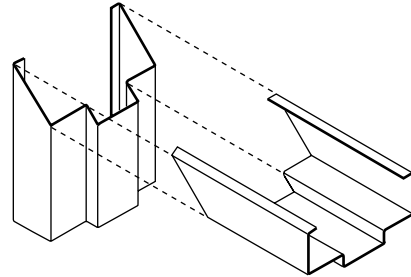


ELEVATION 1 NOTES:

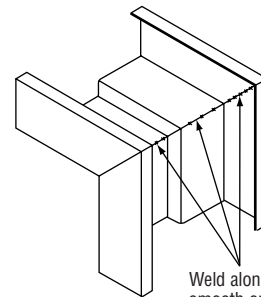
Transom and Side Panel/Lite Assemblies are supplied in a multitude of elevation designs and sizes. The elevation and related details shown above are for reference.

1. The most common elevations used are with lites (windows). Glass can be of varying thickness which must be specified.
2. Perimeter jambs and head can be supplied either factory die mitered or saw mitered. Corner connections are usually supplied as welded (SUA).
3. **Removable transom bars** (above the door opening) can be supplied (when specified), to allow for passage of large equipment or objects through the door opening. If required, this feature must be specified, and the unit above the door would be a panel and not a lite (glass).
4. **Transom panels** (above the door) are the same thickness as the door, and can be supplied (when specified) as:
 - With Transom Bar (fixed or removable) as shown above.
 - Without the Transom Bar (fixed or removable) for aesthetics or functionality.
5. **Removable mullions** (separating double doors) can be supplied (when specified), to allow for passage of large equipment or objects through the door opening.
6. All joints between meeting frame members are to be welded and finished in accordance with ANSI A250.8-1998.

**Saw Miter (Shown)
(Die Miter similar)**



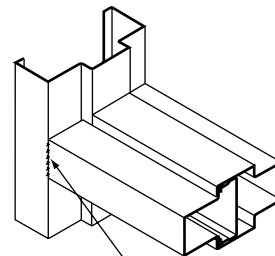
**Detail 1
Typical Corner Assembly**



Weld along inside of miter and grind smooth on outside face. Tack weld the rabbets and soffit on inside at jambs.

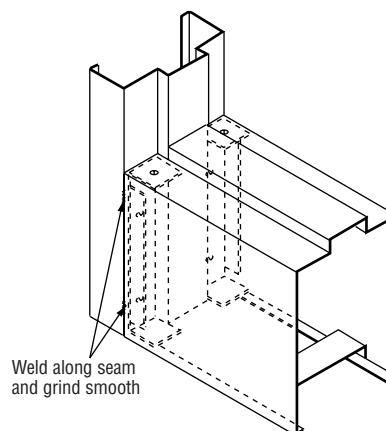
- For saw-mitered tack weld rabbets and soffit on inside of jamb
- For die-miter, bend interlocking miter tabs

**Detail 2
Mullion Connection**



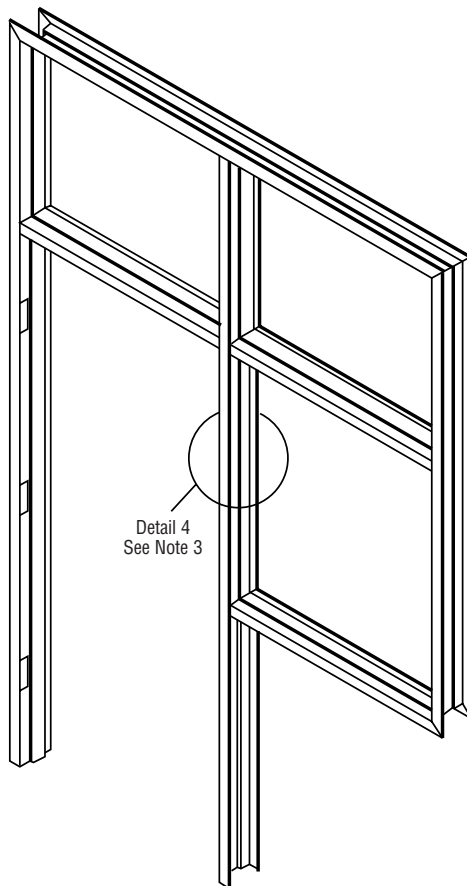
Weld at joint along face and grind smooth

**Detail 3
Sill Connection**

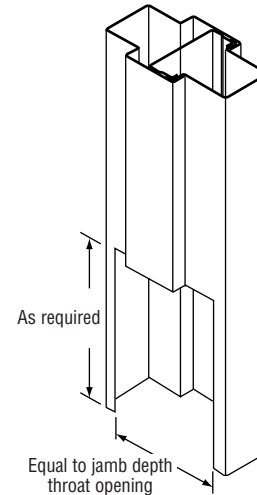


Weld along seam and grind smooth

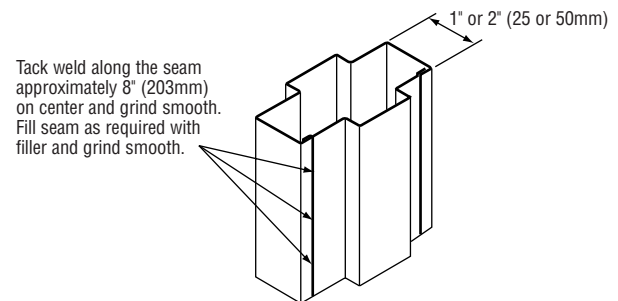
ELEVATION 2 – PARTIAL SIDE PANEL LITE ASSEMBLIES



**Detail 4 – Closed Section
(with partial side lite option)**



Detail 5 – Throat Filler Option

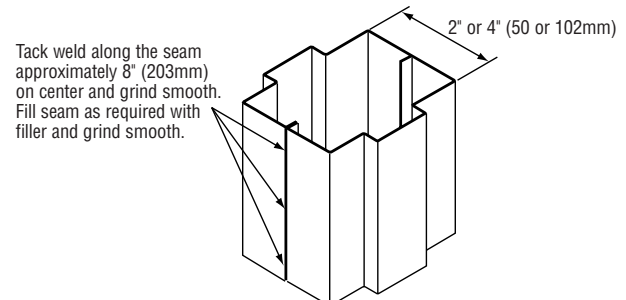


ELEVATION 2 NOTES:

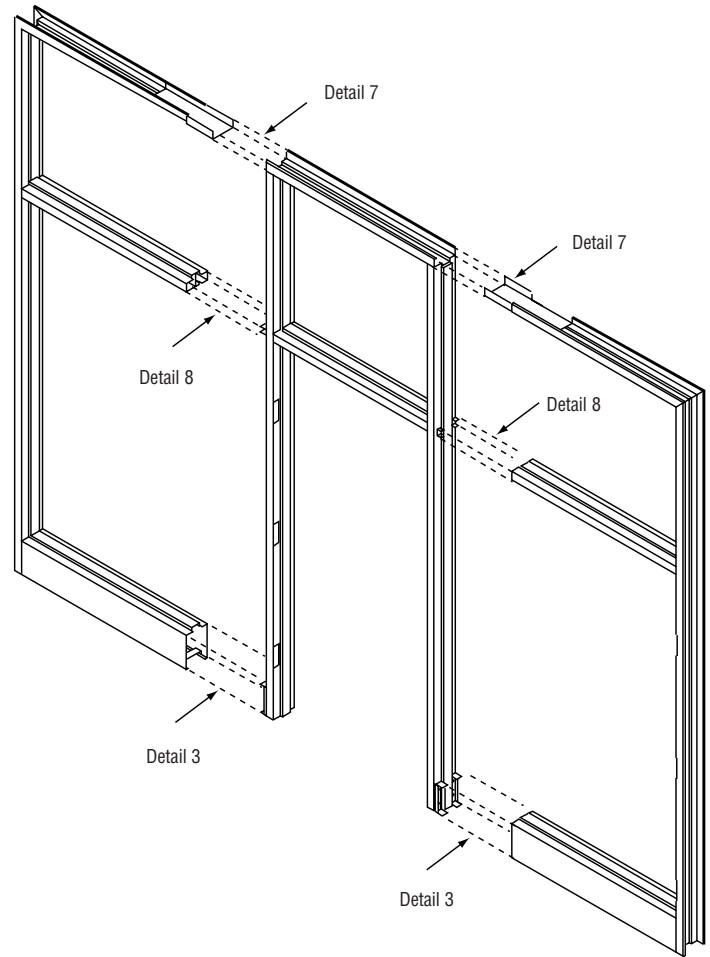
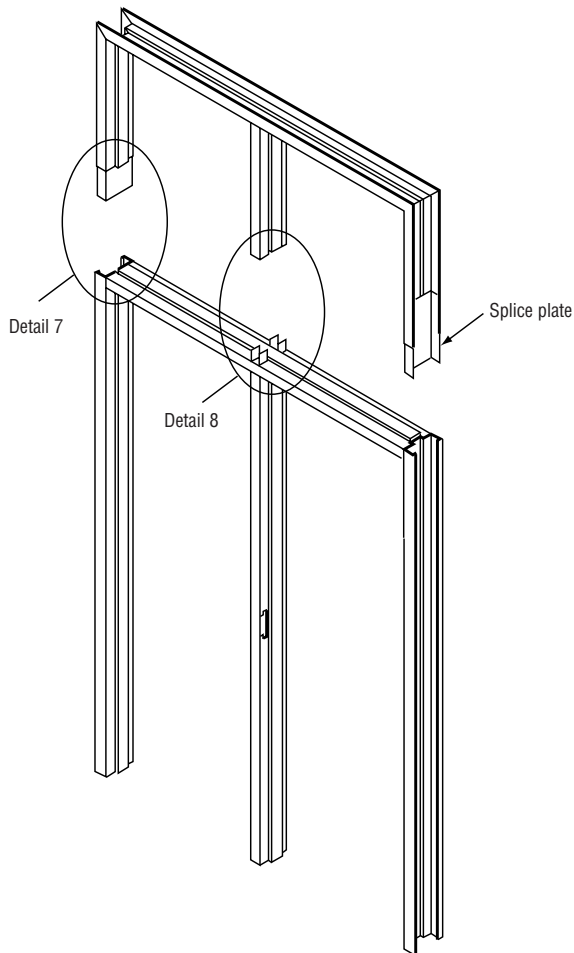
Partial Side Lite Assemblies are supplied in a multitude of elevation designs and sizes. The elevation and related details shown above are for reference.

1. All notes shown on the previous page also apply to this type of elevation.
2. Since the side lites do not extend the full height of the mullion (which separate the door and transom area), care must be taken in fabricating the assembly.
3. Vertical mullions (separating the door and transom areas) must include provisions for glazing the sidelite unit, and can be accomplished in different ways:
 - **Closed section** – this section offers the best appearance, but must be supplied with an open frame throat to accommodate the wall construction below the side lite.
 - **Throat opening filler plate** – can be installed, welded and finished to provide a closed section in the partial sidelite area of the elevation.
 - **Double frame sections** – can be utilized. For these elevations, the door frame and sidelite are one unit, but there is a visible seam separating the units.

Detail 6 – Double Frame Section Option



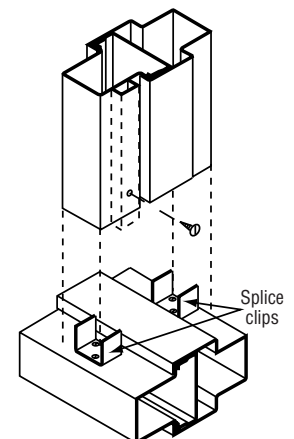
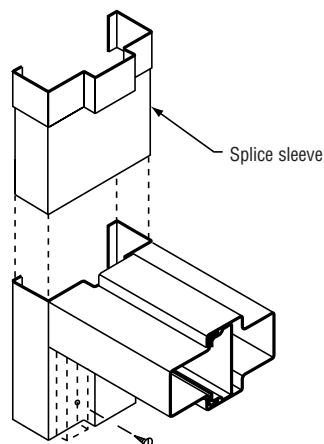
FIELD JOINTS (*Splice Details*)



FIELD JOINT/SPLICE DETAILS

Detail 7
End Jamb Connection

Detail 8
Mullion Connection



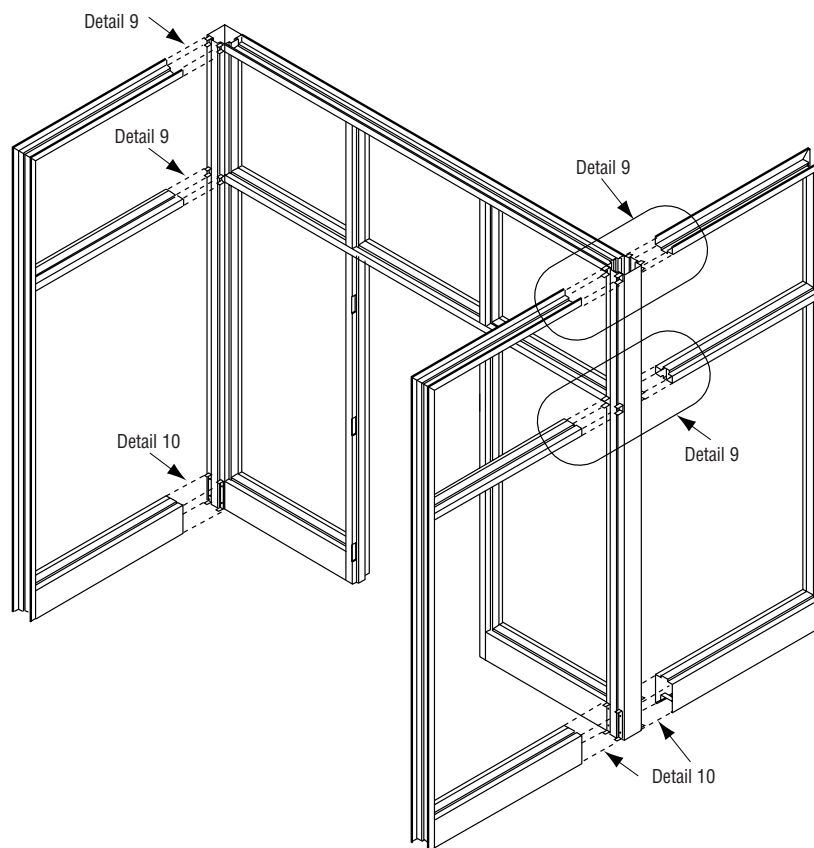
NOTES:

Field joint/splices of elevations are required when the assembly is too large to be fabricated in one piece. Some of the reasons for this practice are as follows:

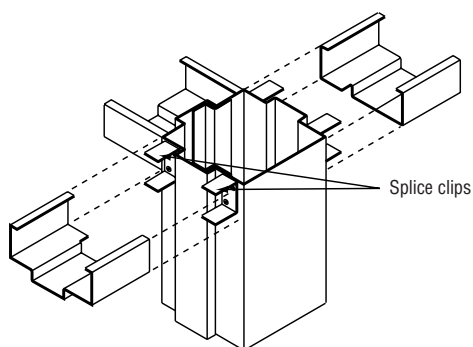
1. **Transportation** limitations
2. **Handling** issues related to either the jobsite or during fabrication
3. **Installation** limitations

FIELD JOINTS (*Splice Details*)

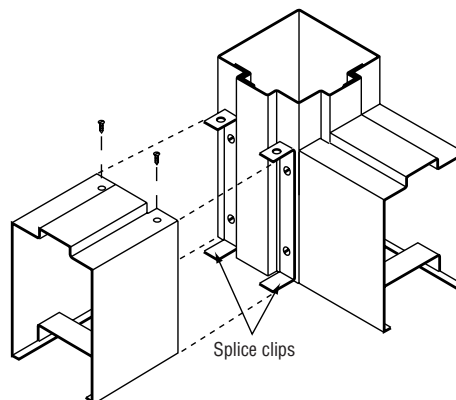
Corridor and Room Enclosures



Detail 9
Corner Post Connection



Detail 10
Sill Connection



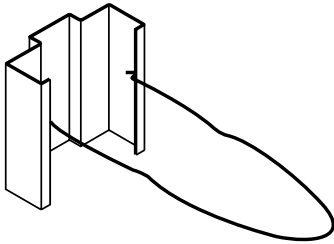
CORRIDOR AND ROOM ENCLOSURES:

Corridor and room enclosures are accomplished with the use of "corner posts" (a frame stick component), and field joint/splices. The following notes apply.

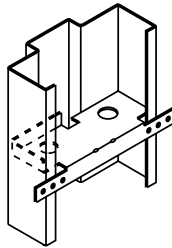
1. All notes shown on the previous pages also apply to this type of elevation.
2. **Corner posts** are specially designed stick sections that allow for the connection of two Transom and Sidelite Elevations to be field joined to make a corner.
3. At this time, corner connections are not Fire Rated applications.

INSTALLATION AND ANCHOR DETAILS

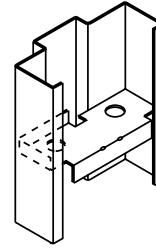
Wire Masonry Anchor



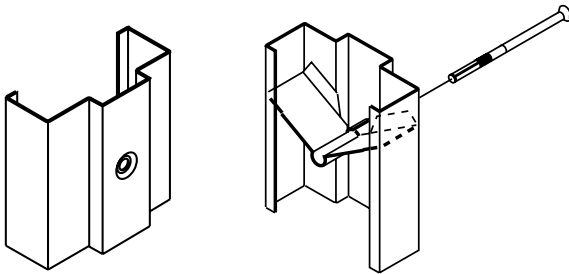
Anchor for Wood Stud Partition



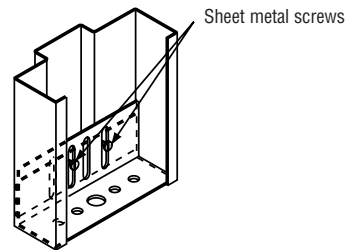
Anchor for Steel Stud



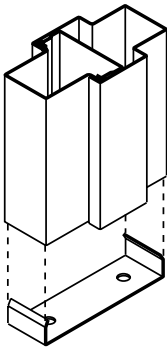
Existing Masonry Wall Anchor



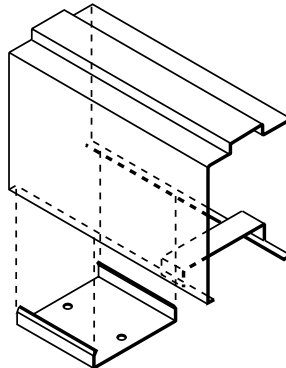
Jamb Base Anchor



Mullion Base Anchor

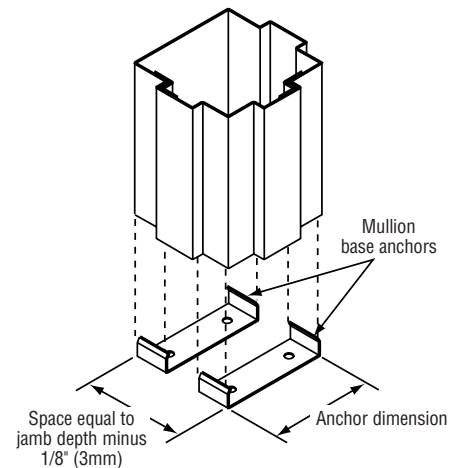


Sill Section Base Anchor



Anchors are recommended for sills that exceed 5'0" (1524mm) in length. Attach the anchor to the floor following directions shown for mullion base anchors.

Corner Post Anchor
(2- and 3-way posts)



Fastening procedure same as mullion base anchor

NOTES:

1. Installation of all Steelcraft framing systems shall conform to the published Steelcraft installation instructions, SDI 105 *Recommended Installation Instructions for Steel Frames* and ANSI/DHI A115-IG *Installation Guide for Doors and Hardware*. All fire rated frames must be installed in accordance with NFPA Pamphlet 80 and/or the local *Authority Having Jurisdiction*.
2. Wall anchors are in accordance with the Specification Sheets applicable to the frame series used.
3. Base (for vertical members) and Sill Anchors (for members along the floor), must be fastened to the floor with expansion shell, or rawl plugs and machine screws (ram-setting, shells, plugs and ram setting is by others). Adjust frame so the head is level, vertical members are plumb, and tighten the adjustable base anchors.