



Timely is pleased to provide the following information, and wishes to thank you for your interest in our Timely line of products

# Learning Objectives

- Identify the benefits of Prefinished Frames versus jobsite finished and hollow metal frames when selecting a suitable frame for your project.
- Calculate an estimate of the lower labor costs of Prefinished Frames.
- Discover the unmatched design flexibility you have with Prefinished Steel Door Frames.
- Use specification information to consider appropriate options and designs when choosing a Prefinished Frame for successful installation.
- Identify appropriate applications and uses for the different types of Prefinished Steel Door Frames.

# AIA Best Practices

**Timely Industries** is a Registered Provider with the American Institute of Architects Continuing Education Systems. Credit earned upon completion of this program will be reported to CES Records for all AIA-members. Certificates of completion are available for non-members for self-reporting and recordkeeping purposes.

This program is registered with AIA/CES for continuing professional education. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the AIA of any material of construction or any method or manner of handling, using, distributing, or dealing in any material product.

Questions related to specific materials, methods and services presented in the learning unit should be directed to **Timely Industries** upon completion of this program.

# Copyright

This program is protected by U.S. and international copyright laws. Reproduction and distribution of this presentation without written consent from Timely Doors is prohibited.



© 2013, Timely Industries

# Prefinished Opening Systems

Superior  
Performance

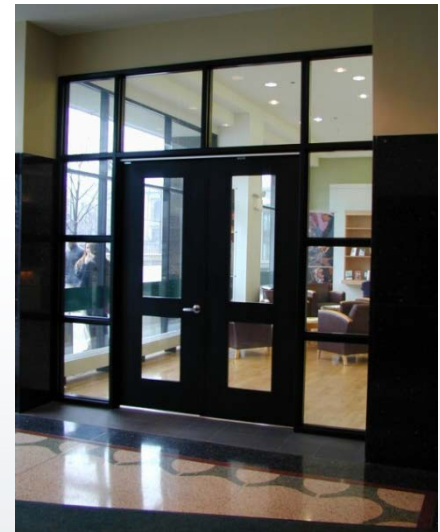
Design  
Flexibility

Reduced  
Cost



# Prefinished Opening System

- Originated over 50 years ago
- 16 gauge hollow metal frames still commonly used
- Pre-finished opening system provides lower cost, sustainability and considerable design flexibility
- Many misconceptions still abound about 20 gauge steel frames
- As more people use frames, concept has gained acceptance and benefits are being realized by more and more industry professionals



# Superior Performance

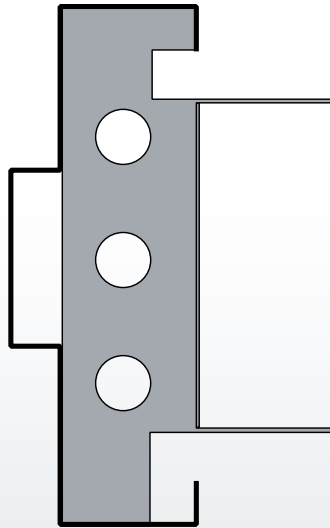
## Hollow Metal Frames vs Prefinished Drywall Frames Differences, Installation and Performance



# Steel Frame Types

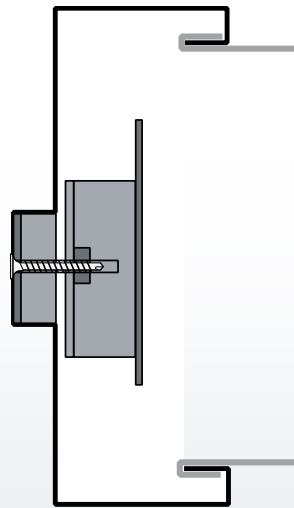
## Masonry Frames

16 gauge Welded  
or Knocked Down



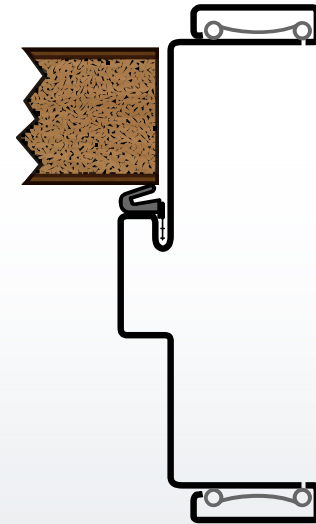
## Knocked Down Drywall Frames

16 or 18 gauge



## Pre-finished Drywall Frames

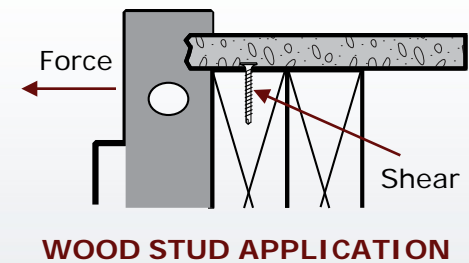
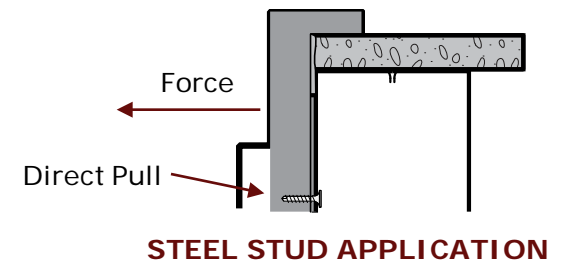
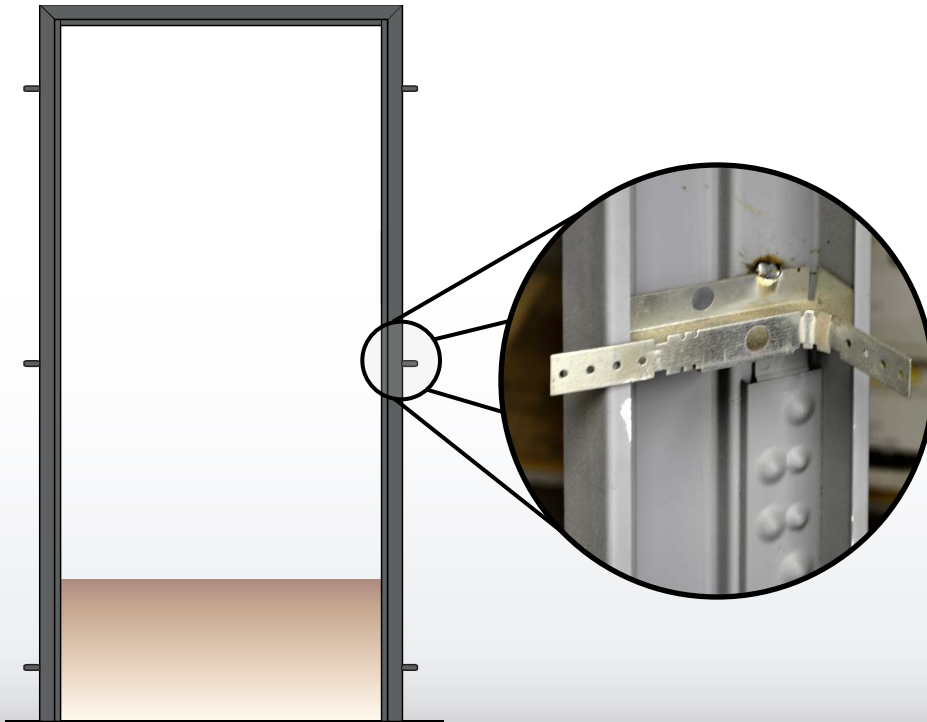
18 or 20 gauge  
(with applied casings)





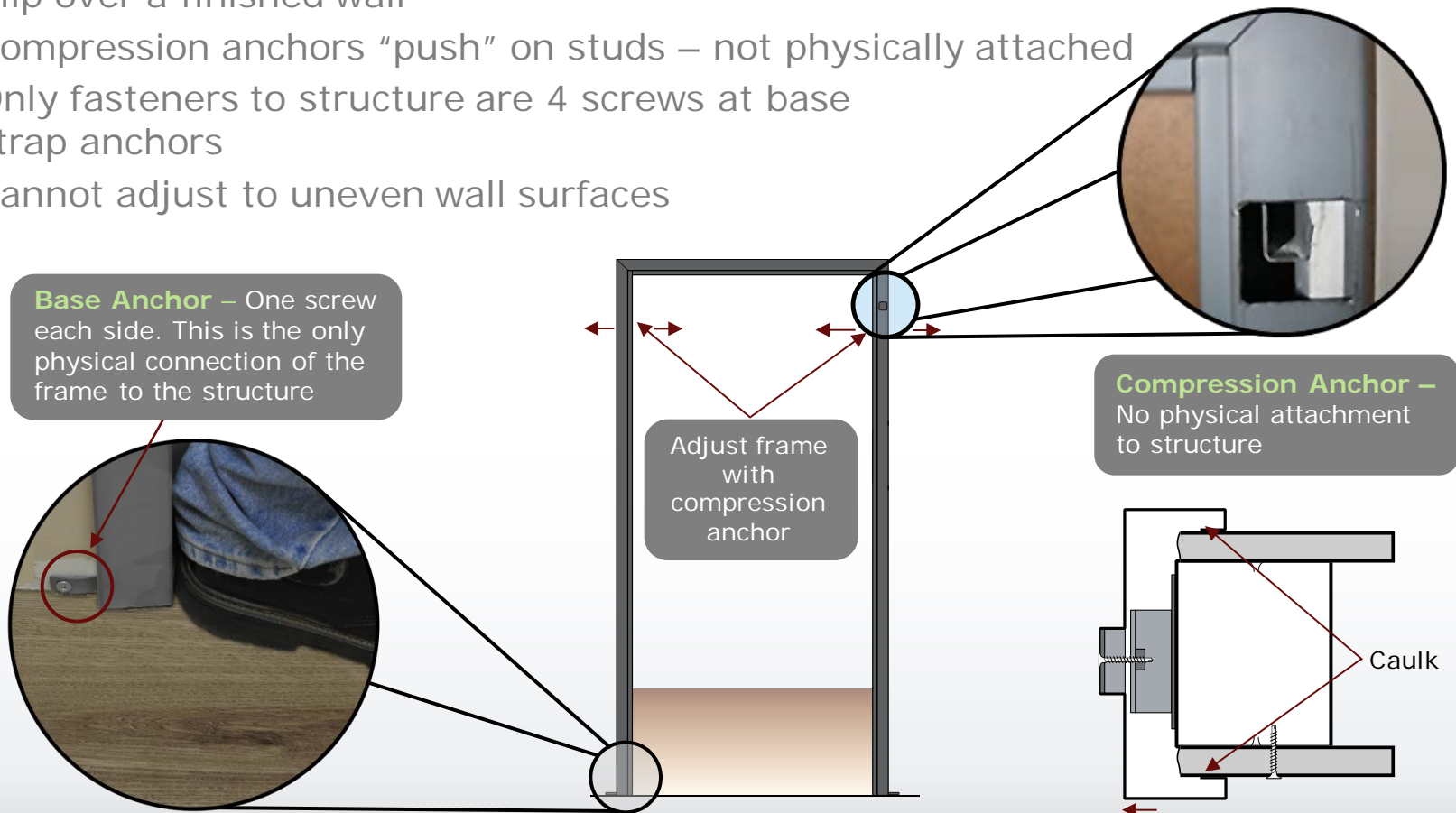
# Masonry Frames – Welded or Knocked Down (KD)

- 6 Anchors to wall
- 2 Floor anchors
- Steel Studs – screws in “pull” configuration instead of “shear”
- Wood Studs – fastener heads project on wall



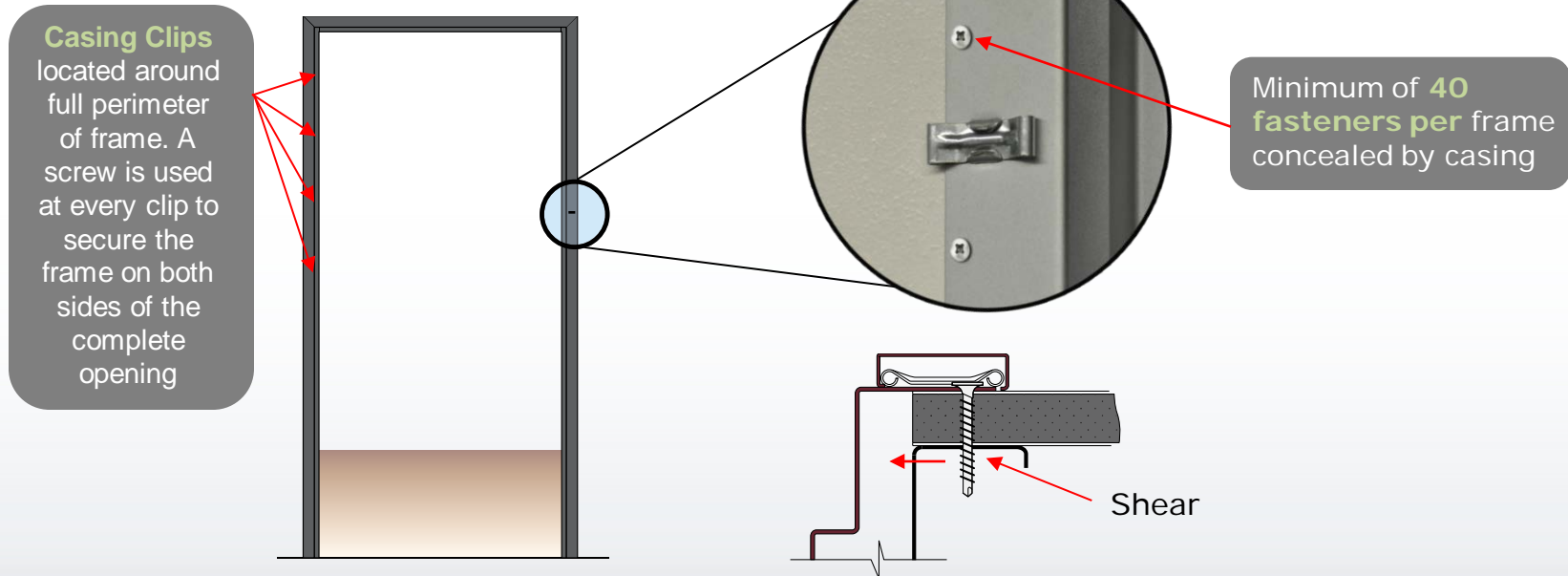
# Hollow Metal Drywall Frames

- Slip over a finished wall
- Compression anchors “push” on studs – not physically attached
- Only fasteners to structure are 4 screws at base strap anchors
- Cannot adjust to uneven wall surfaces



# Prefinished Drywall Frame with Applied Casing

- Anchors every 11" around full perimeter of frame on both sides
- Minimum of 40 anchors to structure for 3'0" x 7'0" frame
- All fasteners in shear to the force of the door weight
- Applied casing conceals all fasteners



# Performance Myths – 20 Gauge Steel Frames

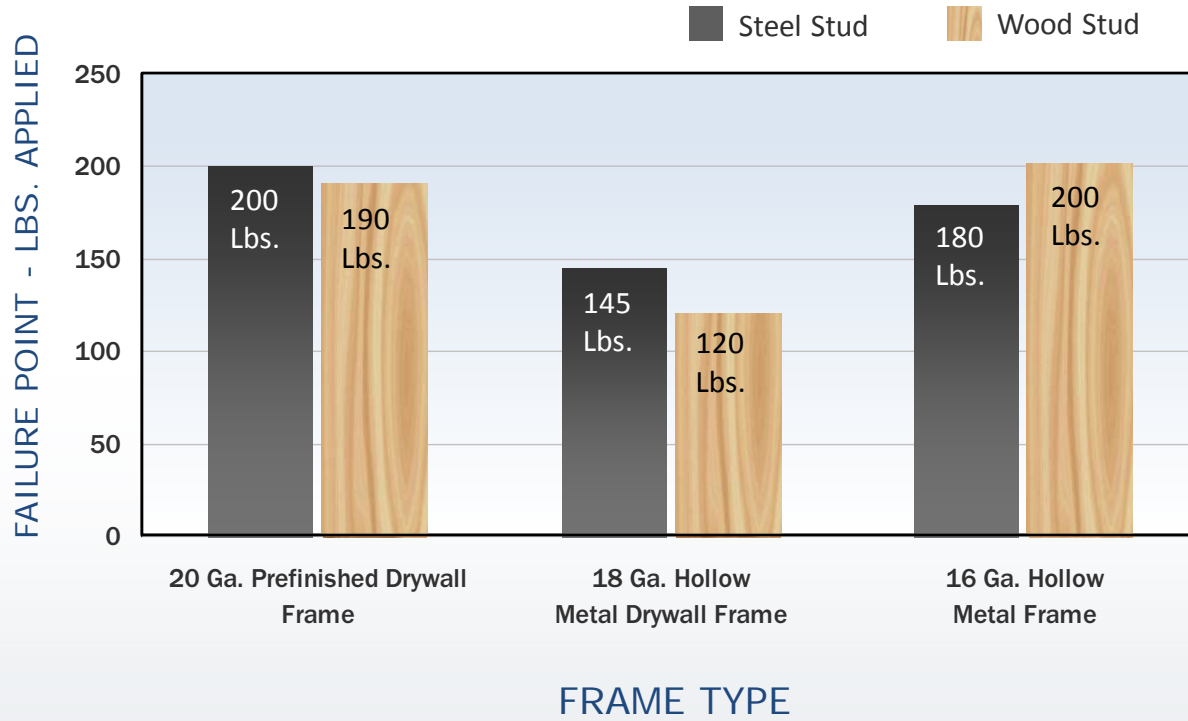


1. Light gauge steel frames **cannot withstand impact**
2. Cannot use on **heavy** doors
3. Door **sags** in opening
4. Light gauge steel is **easily broken into by intruders**
5. Cannot use on **wide** doors
6. **Added steel thickness improves performance**

# Performance Comparison

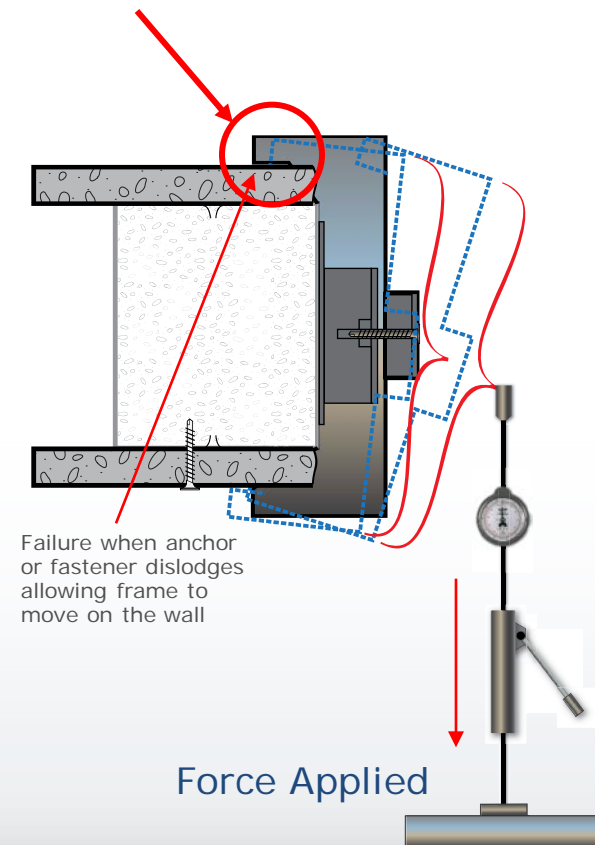
## LATERAL IMPACT (TWIST)

Force applied to frame until frame, anchors, or fasteners dislodged



## TWIST TEST APPARATUS

Simulated Impact Direction

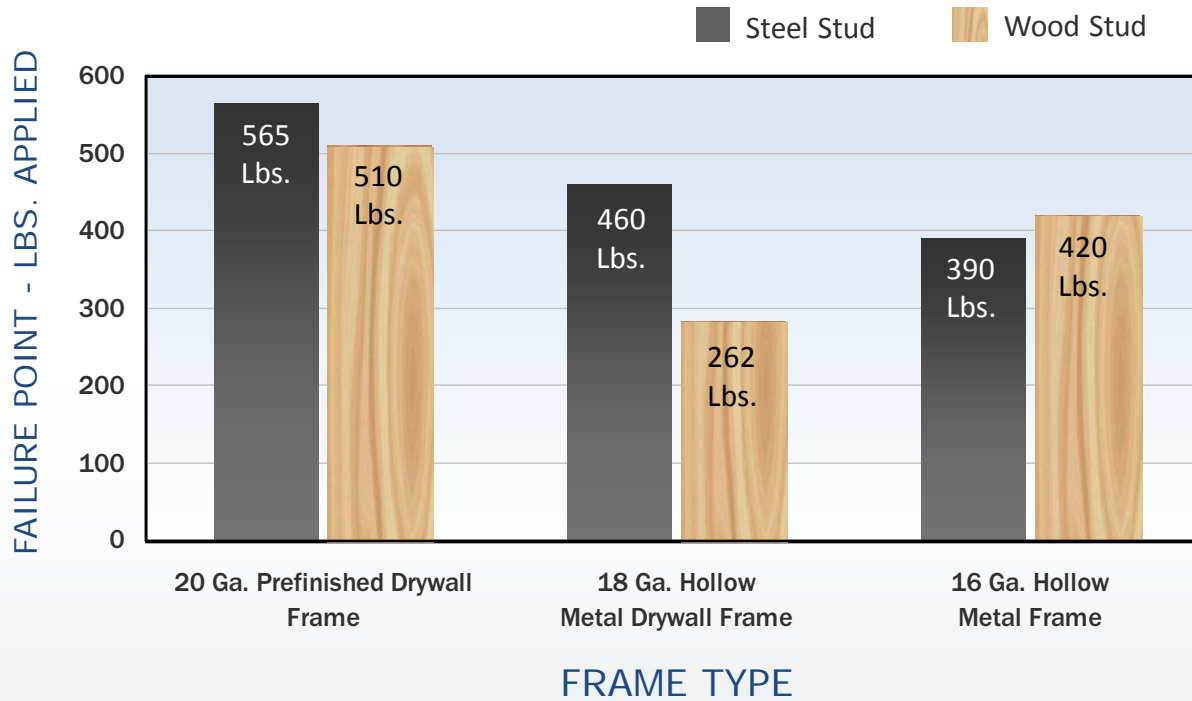


Independent testing conducted and Certified by Product Evaluation & Certification, Inc. (PEC) - 4/24/86

# Performance Comparison

## SECURITY (SPREAD TEST)

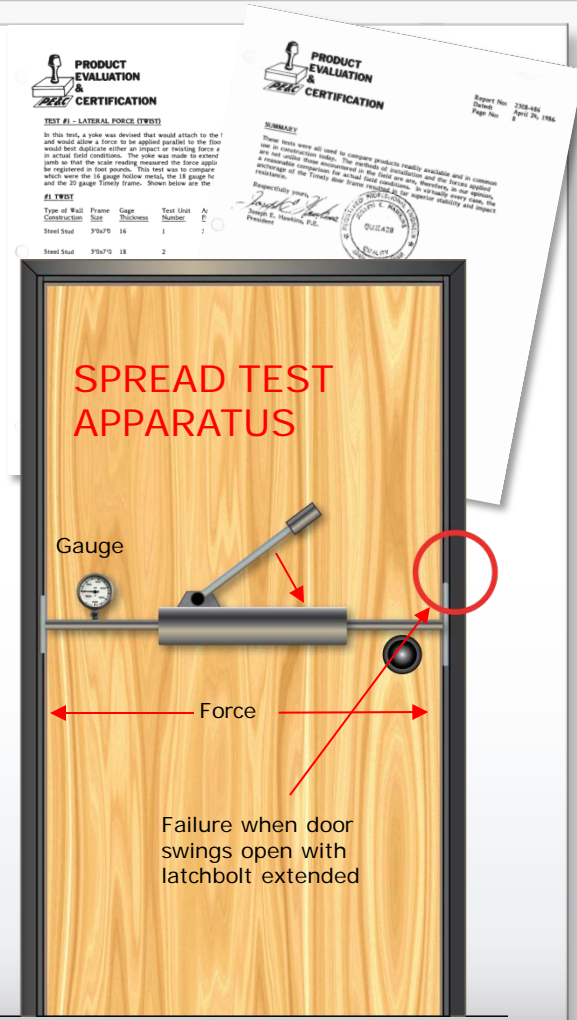
Force applied to frame stops –  
failure point occurred when door unlatched



FAILURE POINT - LBS. APPLIED

FRAME TYPE

Independent testing conducted and Certified by Product Evaluation & Certification, Inc. (PEC) – 4/24/86



PRODUCT EVALUATION & CERTIFICATION

TEST #1 - LATERAL FORCE (TWIST)

In this test, a yoke was devised that would attach to the door and would allow a force to be applied parallel to the floor and would be applied after an impact or twisting force is applied in normal field conditions. The yoke was made to extend far enough so that the scale reading measured the force applied to the door frame. This test was to compare which was the 18 gauge hollow metal, the 18 gauge hc and the 20 gauge Tinsley frame. Shown below are the:

Type of Wall Construction	Frame Size	Gauge Thickness	Test Unit No.	A	B
Steel Stud	20x70	18	1	1	2

PRODUCT EVALUATION & CERTIFICATION

Report No. 208-86  
Date: April 24, 1986  
Page No. 8

SUMMARY

Some tests were all used to compare products readily available and in common use in construction today. The method of construction and the force applied and the force shown measured by the field use scale, however, in our laboratory a reasonable comparison for actual field conditions. In various ways with the assistance of the Tinsley door frame factory in the appearance quality and impact.

Respectfully yours,  
James E. Heston, P.E.  
President

PEC

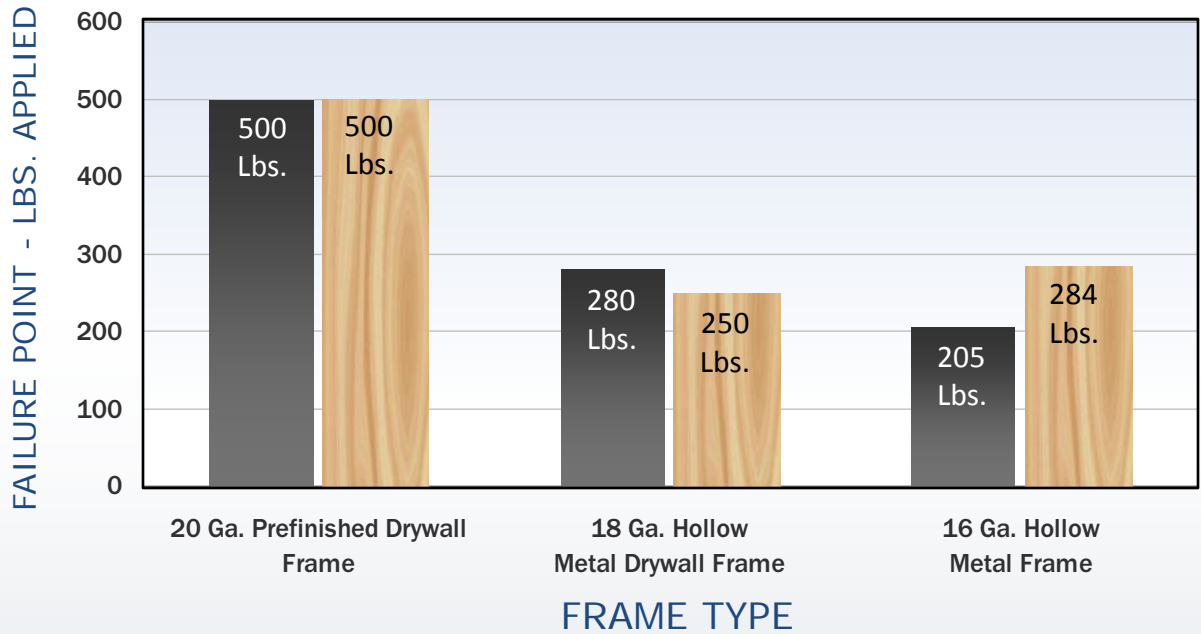
# Performance Comparison

## TOTAL DOOR WEIGHT

Weight added to door until door closing was impaired

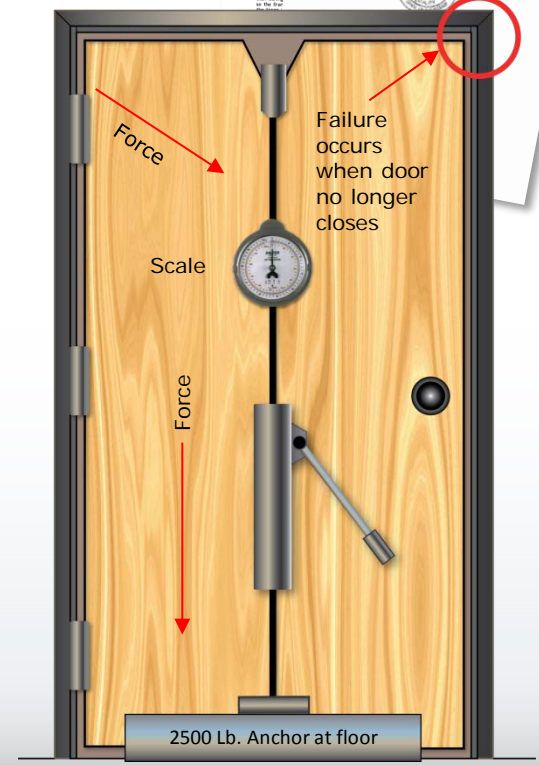
Note: 500 Pounds was the maximum scale measurement – door continued to operate in Timely Frame

■ Steel Stud    ■ Wood Stud



Independent testing conducted and Certified by Product Evaluation & Certification, Inc. (PEC) – 4/24/86

## TOTAL WEIGHT TEST APPARATUS



# Performance Under Stress



## Performance Summary

- Frame performance is based on how the frame attaches to the structure, not on the thickness of steel
- Prefinished drywall frame anchors around the full perimeter on both sides making the frame part of the structure
- Hollow Metal Masonry frames rely on six (sometimes eight) 18 ga. anchors that can be easily torn loose or deflect
- Hollow Metal Drywall frames only anchor to the structure at two points at the base of the frame



# Performance Under Fire

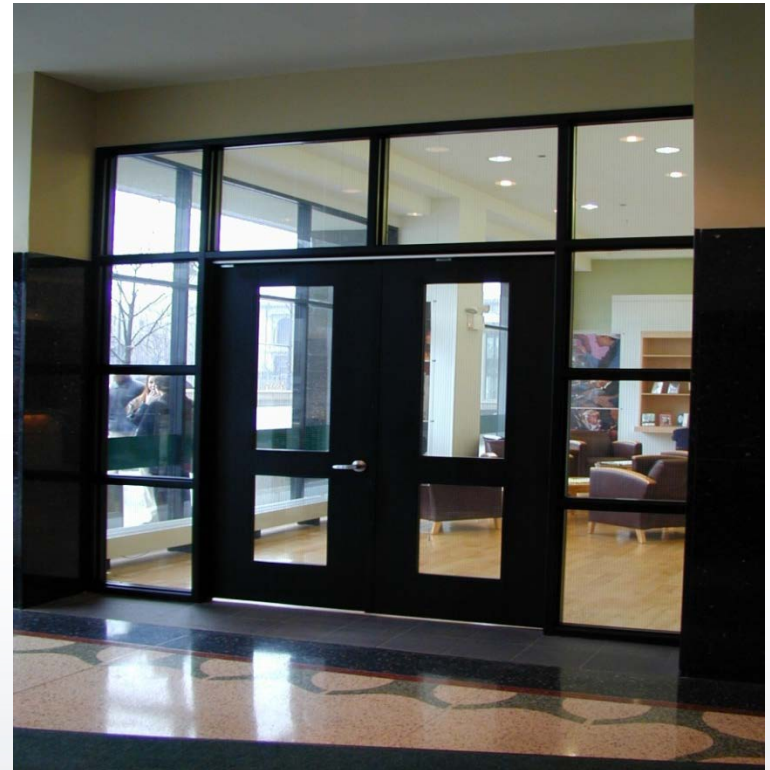


## Fire Ratings

- 90 Minute Rating – Positive Pressure
  - Single and Pair Frames
    - 20 ga., 18 ga.
    - Up to 8'0" x 9'0"
- 45 Minute Rating – Positive Pressure
  - Sidelight and Borrowed light
    - 36" width – up to 1296 sq. in.
    - 24" width – up to 2568 sq. in.

# Design Flexibility

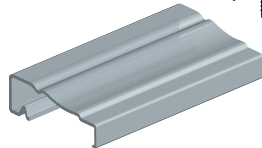
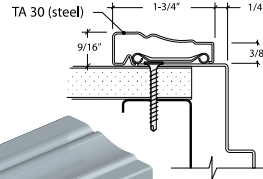
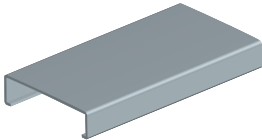
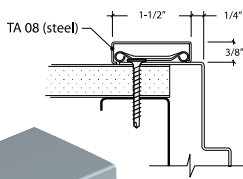
Colors, Casings, and Creativity



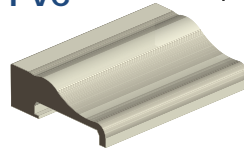
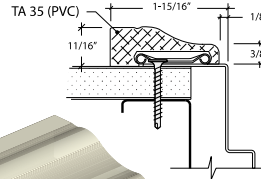
# Design Flexibility

## CASINGS

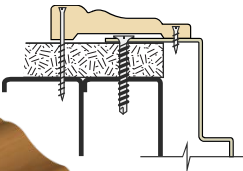
### STEEL



### PVC

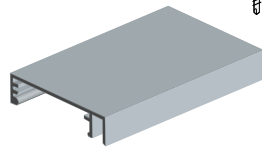
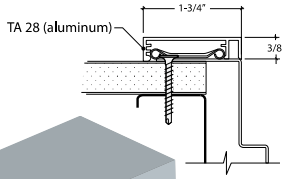
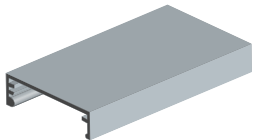
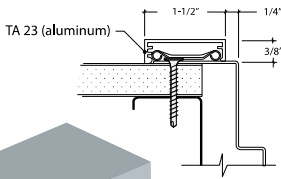


### WOOD



(Supplied by others)

### ALUMINUM



Casing availability varies by manufacturer. Some manufacturers may have fewer types available.

## COLORS

- Standard Colors
- Custom Colors
- Alumatone –Clear anodized aluminum
- Brass and Stainless Steel
- Black Nickel



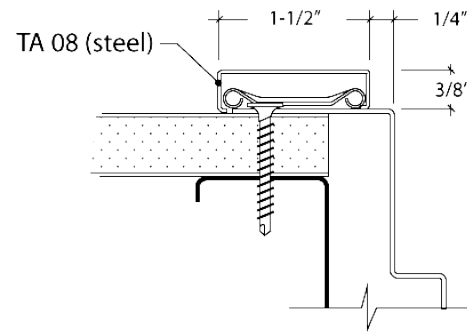
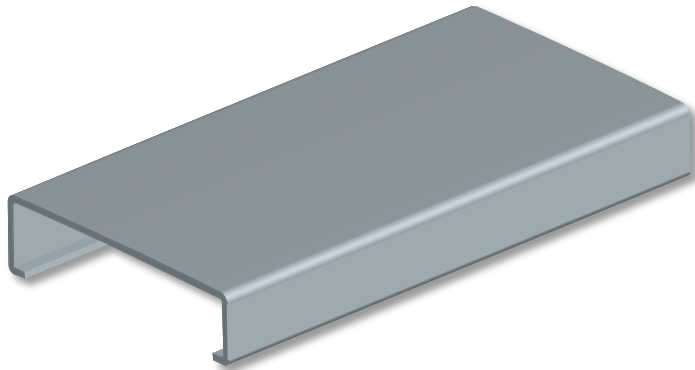
## CREATIVITY

- Sidelights
- Borrowed Lights
- Transoms and Clerestories
- 90° Corner Post Cover

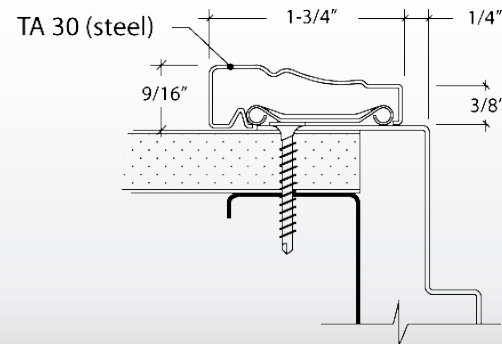
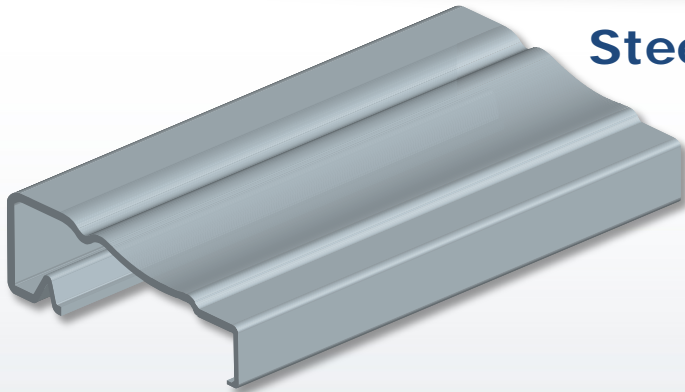


# Casing Options

## 3/8" Steel - 1/4" reveal



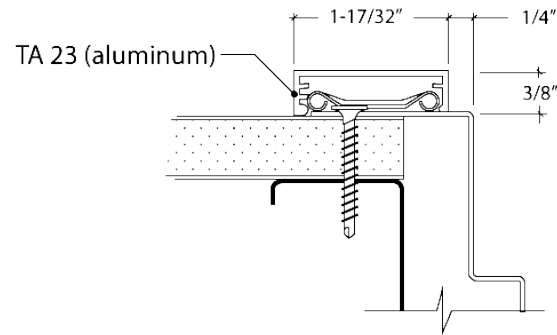
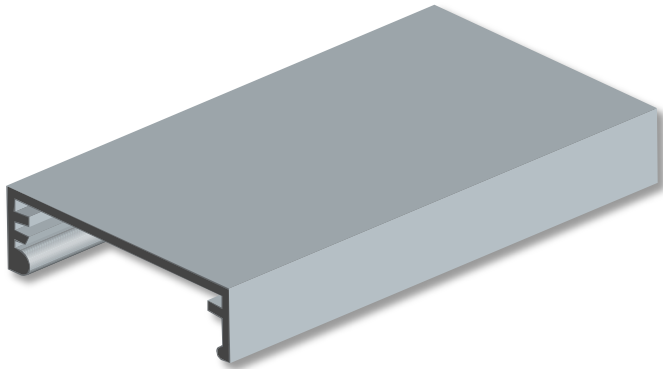
## Steel Colonial - 1/4" reveal



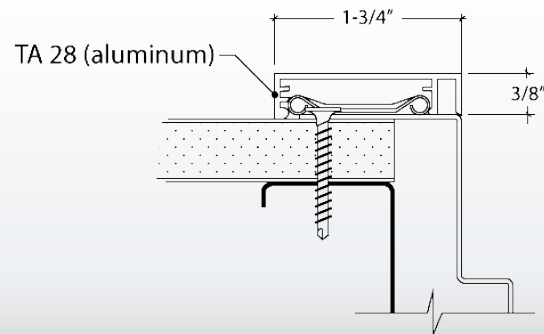
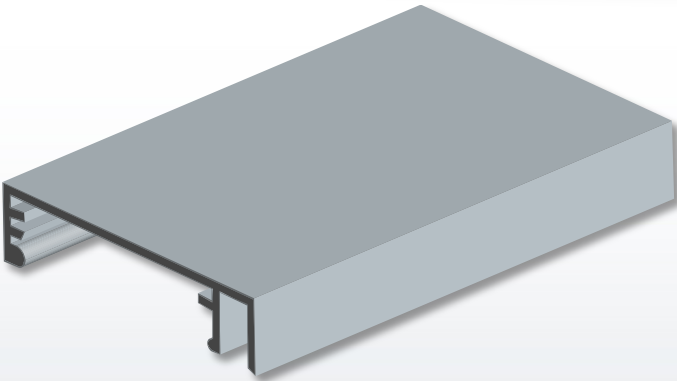
Casing availability varies by manufacturer. Not all casing types are available from some manufacturers

# Casing Options

## Aluminum - 1/4" reveal



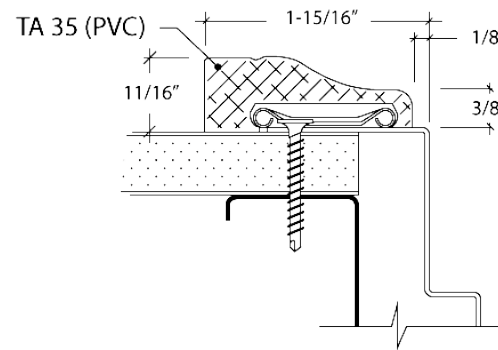
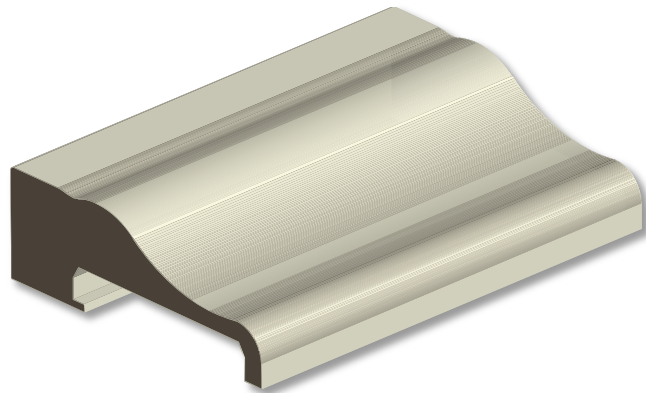
## Aluminum - No reveal



Casing availability varies by manufacturer. Not all casing types are available from some manufacturers

# Casing Options

## Colonial PVC - 1/8" Reveal



Casing availability varies by manufacturer. Not all casing types are available from some manufacturers

# Casing Options

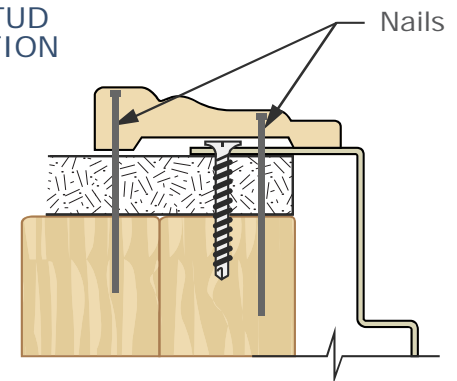
## Wood Casing – (Supplied by others)



Wood casing can easily be applied to prefinished steel door frames. This requires a frame without Casing Retainer Clips. Specify frames with nail holes and oval slots (NHOS) only. Wood casing is then installed over the frame face using a nail gun or trim head screws. Casing profile must provide back clearance for screw heads used to install frame.

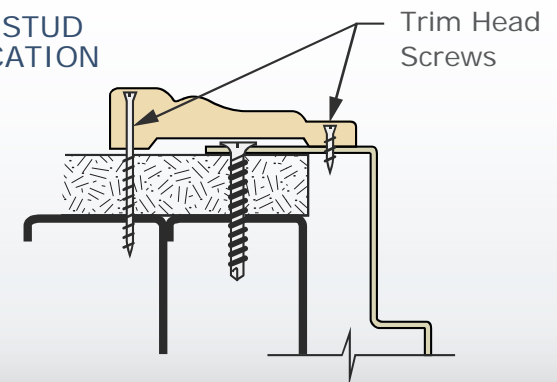
Casing availability varies by manufacturer. Not all casing types are available from some manufacturers

### WOOD STUD APPLICATION



Note: Should use 20 gage Frame for easy Nailing with gun.

### STEEL STUD APPLICATION



# Total Opening Cost

Reduced Costs, LEED and Sustainability





# Reduced Cost

## TRIPS TO EACH OPENING – Primed Hollow Metal Frames

### Material Distribution:

One trip each for frame, door and hardware

3 \*

### Install:

One trip each for frame, door and hardware

3

### Finish Preparation:

One trip to opening

1

### Painting:

One trip per coat of paint

2

### Finish Touch-up and Cleaning:

Final trip to opening

1

15 minutes per trip plus installation labor time!

**10 Trips**

\* Number is total trips to opening required



# Reduced Cost

## TRIPS TO EACH OPENING REQUIRED

– Prefinished Frames with applied casings

### Material Distribution:

Door, Frame and Hardware in one trip to the opening

1\*

### Installation Labor:

Pre-finished Door, Frame and Hardware in one trip to the opening

1

---

2



\* Number is total trips to opening required

# Reduced Cost

## Frame Cost

5% savings

## Finishing Labor

100% savings

## Distribution Labor

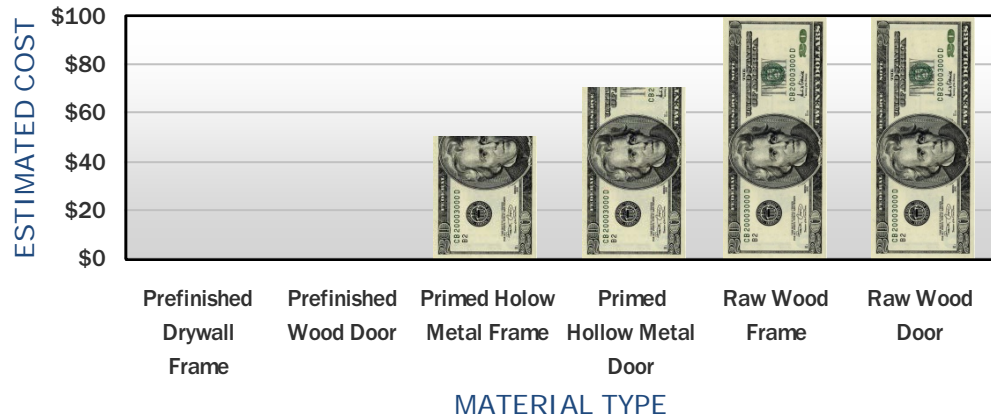
Up to 2/3 savings

## Installation Labor

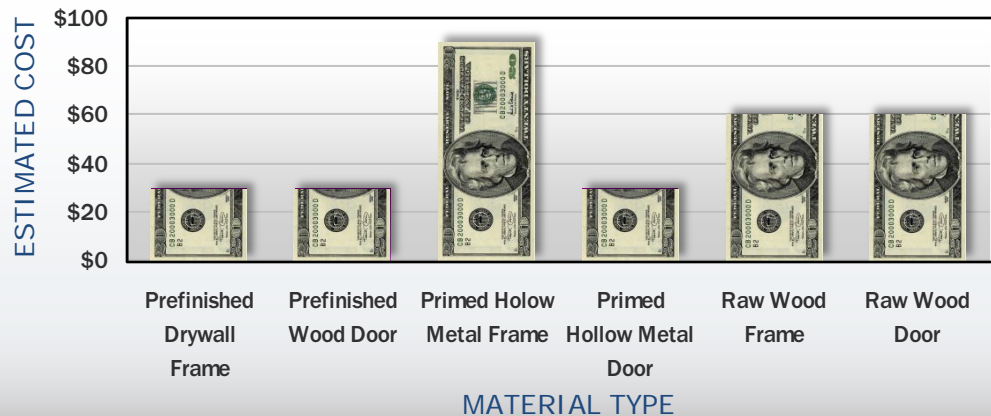
Up to 2/3 savings

*Total Opening Savings of at least 40%!*

### FINISHING COST COMPARISON



### LABOR COST - DISTRIBUTION AND INSTALLATION



# LEED and Sustainability

## LEED Contribution

- MR4.1, MR4.2 – Recycled Content
  - Steel Frame with Steel Casing
    - 28.9% of Material cost
  - Steel Frame with Aluminum Casing
    - 41.2% – 45% of Material cost
- Daylighting and Views
  - Contributes to Daylighting and Views using sidelights, borrowed lights and transoms
- Proximity
  - Manufactured in Pacoima, CA 91331 (MR5.1)
- Jobsite Contribution
  - All packaging recyclable
  - No jobsite VOC issues



## Sustainability

- Easily re-installed in new openings
- 100% recyclable product

# Specifications

## Projects, Details and Specifications



# Project Applications



Hospitality



Assisted Living



Office-Professional



Multi-Family



Medical Office



Schools



Dormitories



Hospital Non-Surgical



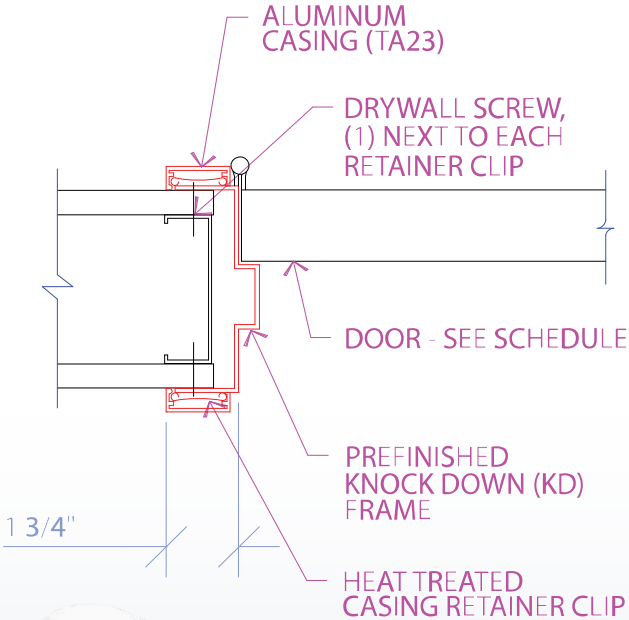
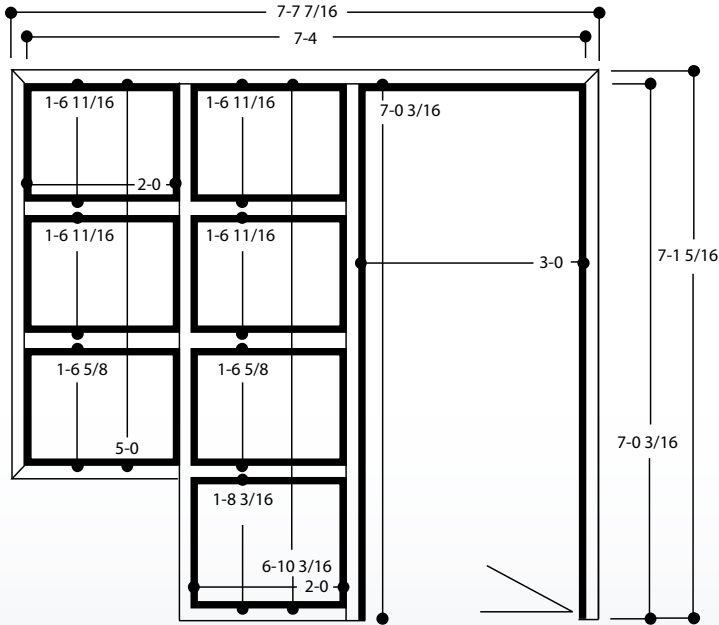
Buildings Of Worship



Single Family

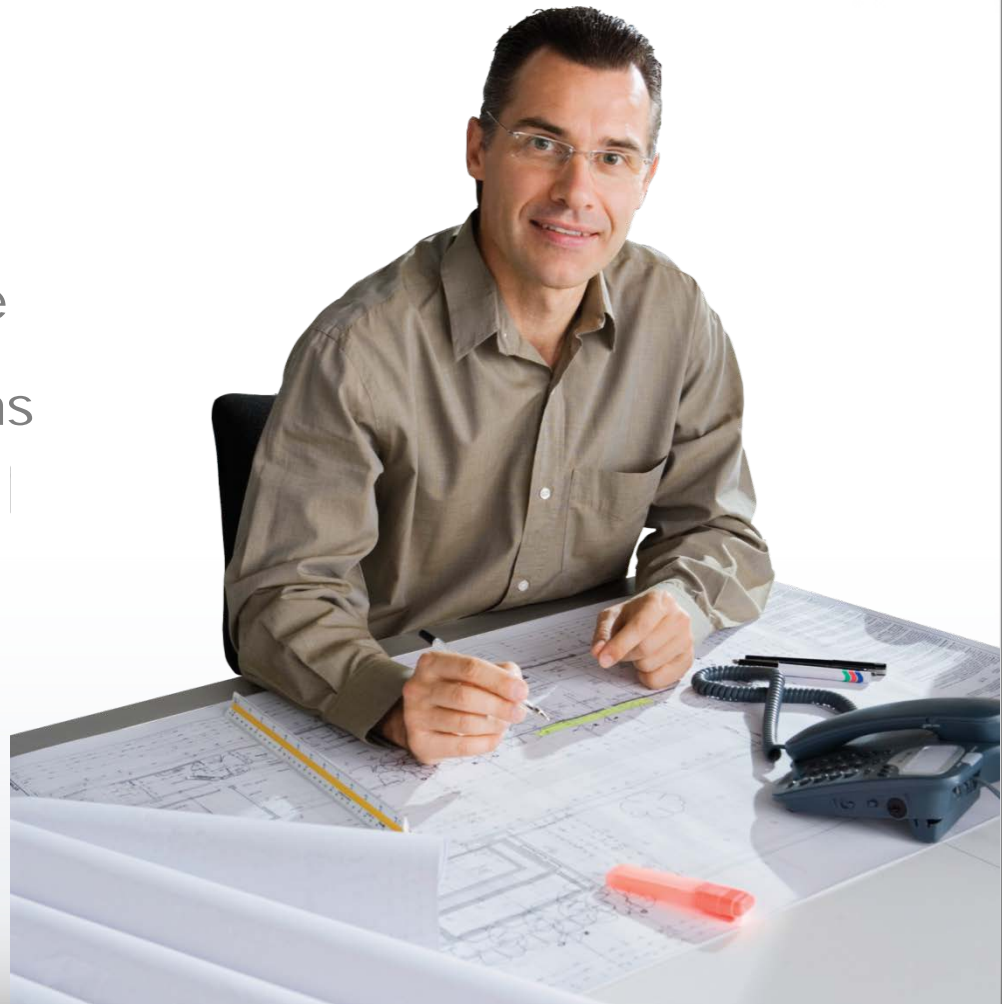
# Plan Details and Elevations

## CAD Details – Manufacturers' websites



# Specifications

- 4.Specs<sup>©</sup>
- SpecLink<sup>©</sup>
- Factory Specification Service
- Project Specific Specifications
  - Steel Gauge
  - Frame types - profiles
  - Finishes
  - Casing Options
  - Galvanizing

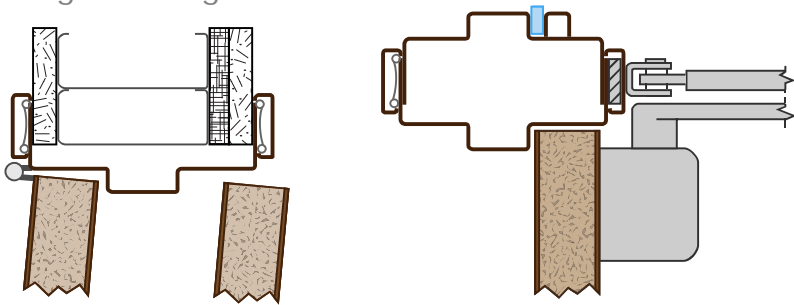




# Frame Profiles

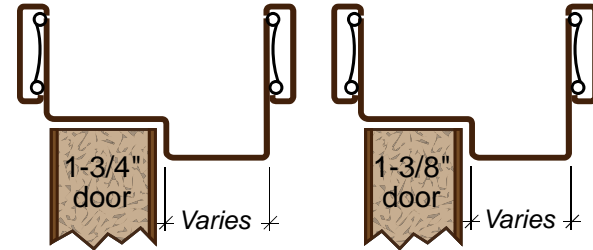
## UNEQUAL RABBET (Standard)

- Use with 1 3/4" or 1 3/8" doors
- 18 ga. or 20 ga.



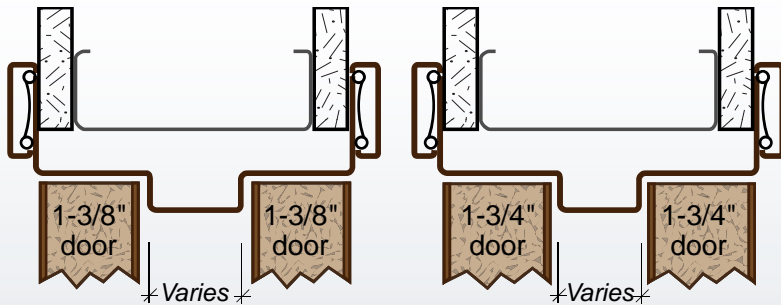
## SINGLE RABBET

- Use with 1 3/4" or 1 3/8" door
- 18 ga. only



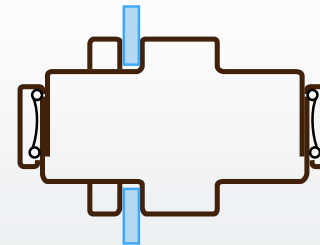
## EQUAL RABBET

- Use with 2 ea. 1 3/4" doors or 2 ea. 1 3/8" doors
- 18 ga. only



## MULLIONS

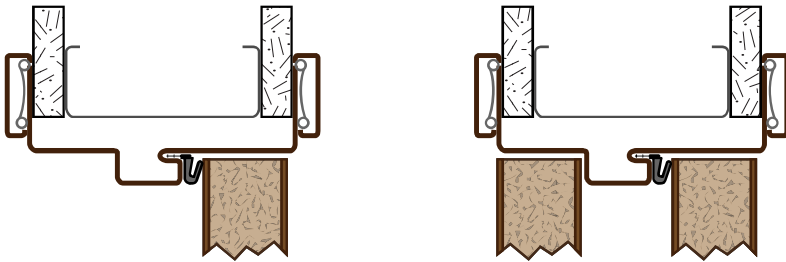
- 18 ga. or 20 ga.
- For sidelight, borrowed light, and transom frame



# Frame Profiles

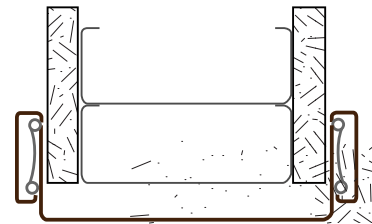
## KERFED, DOUBLE RABBET

- 1 3/4" door only
- Smoke gasket/weatherstrip factory installed



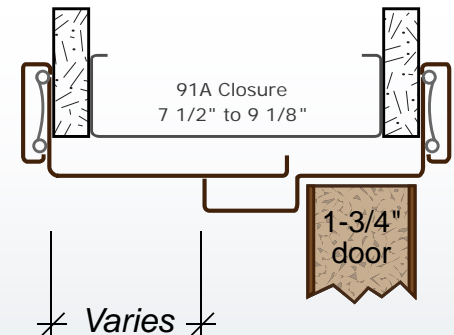
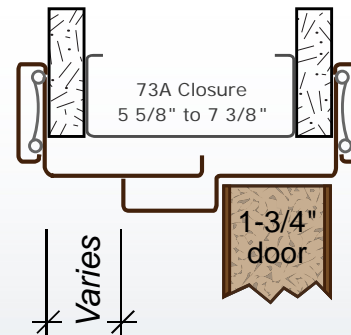
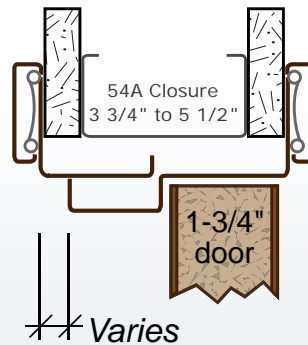
## CASED OPENING

- No stop – double acting doors, pocket trim jamb



## ADJUSTABLE

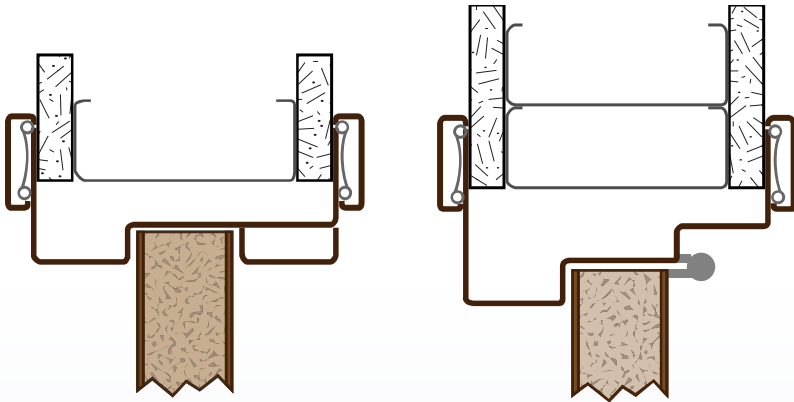
- 18 gauge, 1 3/4" door only
- 54A – 3 3/4" through 5 1/2" Wall
- 73A – 5 5/8" through 7 3/8" Wall
- 91A – 7 1/2" through 9 1/8" Wall



# Frame Profiles

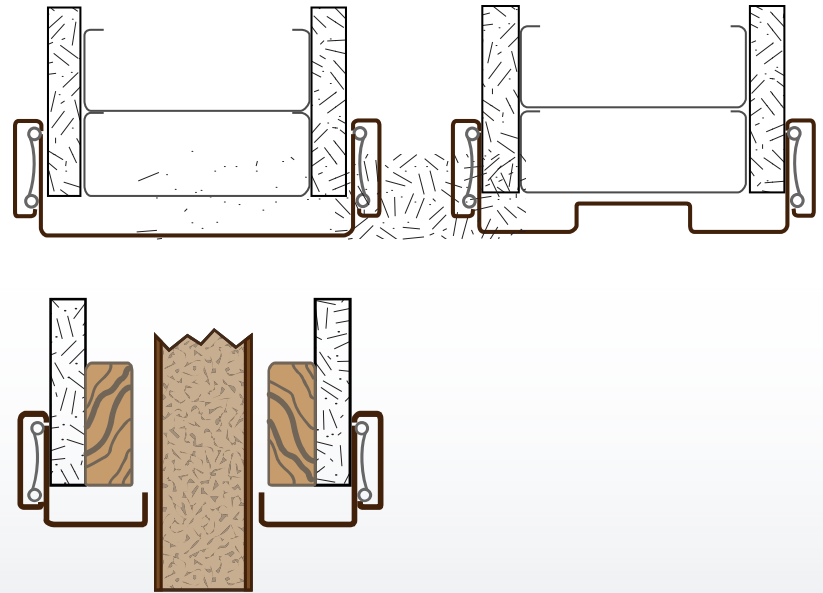
## DOUBLE EGRESS

- 1 3/4" door only
- 18 ga. only



## POCKET TRIM

- J-Trim for 1 3/4" or 1 3/8" pocket doors



# Finishes



## COLORS

- 6 Standard Finishes



- 29 Pre-Matched Custom Colors
- Can match virtually any color
- Added cost for custom colors – finishing cost still substantially lower than field finishing

# Hardware Preparation

## HINGES

3 1/2", 4", 4 1/2", 5"

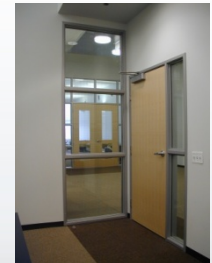
- 0.180 4 1/2" Hinge Prep
- Electric Hinge Prep available

- Radius or Square corner
- Residential and Commercial weight

## STRIKES

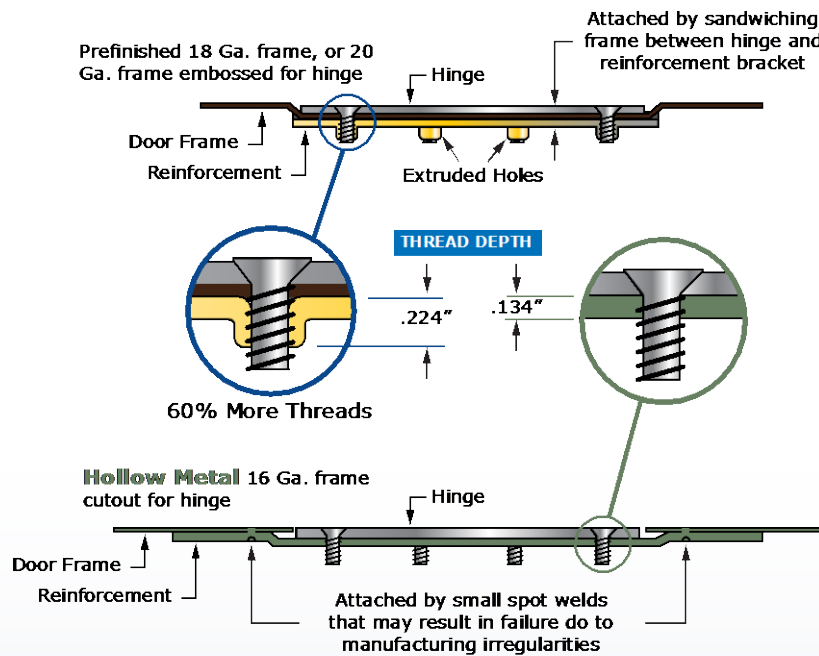
- Adjustable "T" Strike
- ASA Strike – Mortise Lock
- Electric Strikes
- Flush Bolt Strike

- Deadbolt Strike
- Roller Latch Strike
- 2 1/4" Full Lip Strike
- Euro Mortise Lock Strike



# Hardware Preparation

## Why Timely's Hinge Preps are so strong



### PREFINISHED STEEL FRAME HINGE PREPARATION

- Extruded Screw holes
- Rolled threads instead of traditional tapping
- 0.224" Depth of thread capture
- No welds to fail – 100 % performance guarantee over the life of the building
- Embossed instead of cutting out metal – frame material is sandwiched between the hinge and reinforcement bracket for maximum strength

### HOLLOW METAL HINGE PREPARATION

- Screw holes drilled in 10 ga. (0.134") steel reinforcement plate
- Threads tapped with traditional tapping machinery
- 0.134" Depth of thread capture (same as thickness of reinforcement)
- 6 spot welds are the only connection between the reinforcement plate and frame
- Failure of welds cause total failure of opening

# Hardware Preparation

## FRAME REINFORCEMENTS – Exceeds ASTM A250.8 (SDI)



- Regular Arm Closer
- Door Guard
- Parallel Arm Closer
- Rim Exit Device Strike
- Coordinator Reinforcement
- Surface overhead stops and holders
- Double Acting Spring Hinges
- Continuous Hinges



# Custom Hardware Prep Capabilities



Electronic  
Power  
Transfers



- Concealed Vertical Rod Exit Device strikes
- Electronic Power Transfers (EPT)
- Overhead Concealed Stops and holders
- Overhead Concealed Closers
- Center Hung Pivot sets
- Rescue hardware
- Recessed Magnetic contacts and switches



# Double Egress Frame



- The introduction of the Double Egress (DE) frame
- Your project requirements can be achieved with a frame that is consistent with the rest of the project.

# Asymmetrical Window



- Recently, we introduced a borrowed light with a sloped sill.
- Can now create corner connections at a multitude of angles
- No longer limiting us to traditional square or rectangular borrowed lights.

# Inverted Stop Pocket Jamb



- Door closes into a recess on the jamb creating privacy desired for these applications
- The jamb can be prepared for the lock strike making the opening both private and secure

# Extended Sill



- A sill face of up to 12" high is now available from Timely
- Much easier to keep the sidelight glass clean
- The flat surface meets ADA requirements

# Summary



# Summary

## OUTPERFORMS TRADITIONAL HOLLOW METAL FRAMES



Lateral Impact  
Security  
Total Door Weight  
Hinge Reinforcement



## UNMATCHED DESIGN FLEXIBILITY



Finishes  
Casing Options  
Borrowed lights, transoms  
and sidelights



## LOWER TOTAL OPENING COST



Reduces Distribution  
and Installation  
Eliminates  
finishing labor  
Lower material costs  
Sustainability





## Registered Provider Program Summary

**Provider Name:** Timely Prefinished Steel Door Frames

**Program Title:** Prefinished Opening Concept

**Program Number:** T00002

**AIA/CES Learning Units:** 1

**This course qualifies for:** HSW

**Length:** 1 Hour





Thank you for your time.

- Contact info: Timely Industries, Inc.  
10241 Norris Ave.  
Pacoima, CA 91331
- Website: [www.timelyframes.com](http://www.timelyframes.com)
- Phone: (800)247-6242  
818-492-3447 (Direct)
- Email: [techdept@timelyframes.com](mailto:techdept@timelyframes.com)
- Name: Dennis Nichols  
Technical Services Manager