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# DCI Hollow Metal

## Technical Data

DCI HOLLOW METAL  
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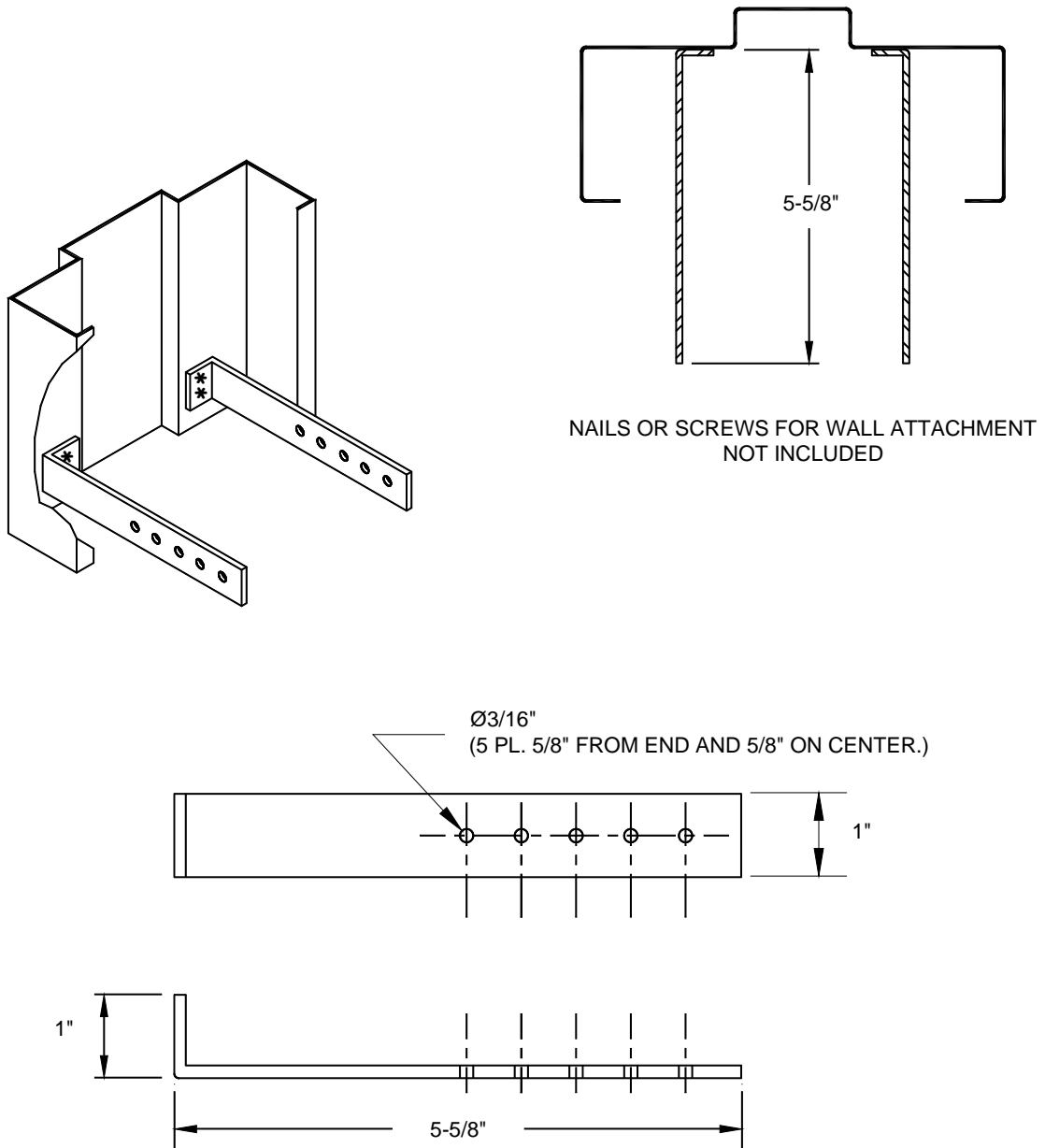
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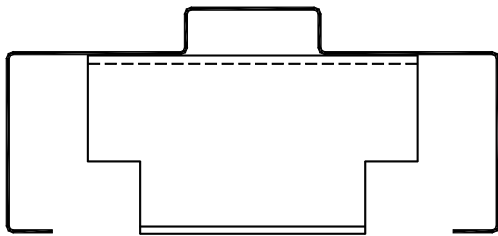
## A1 STANDARD STRAP ANCHOR

MATERIAL: GALVANNEAL  
GAUGE: 18  
TWO SPOTWELDS PER STRAP

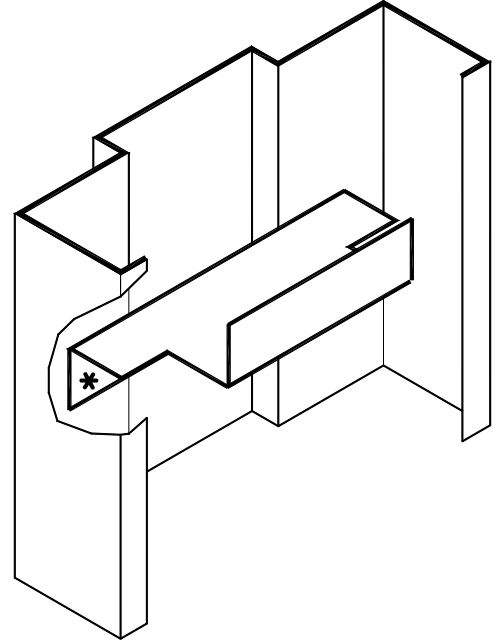


## A2 FLUSH METAL STUD ANCHOR

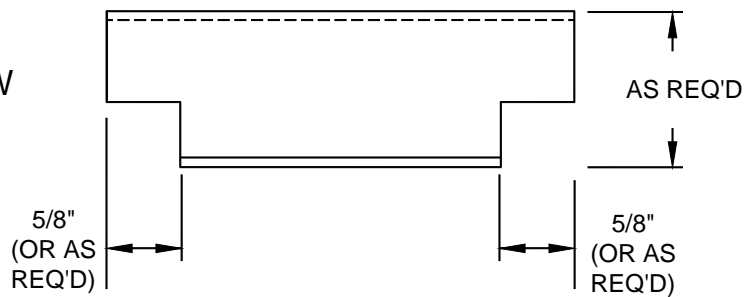
MATERIAL: GALVANNEAL  
GAUGE: 16  
TWO SPOTWELDS PER END



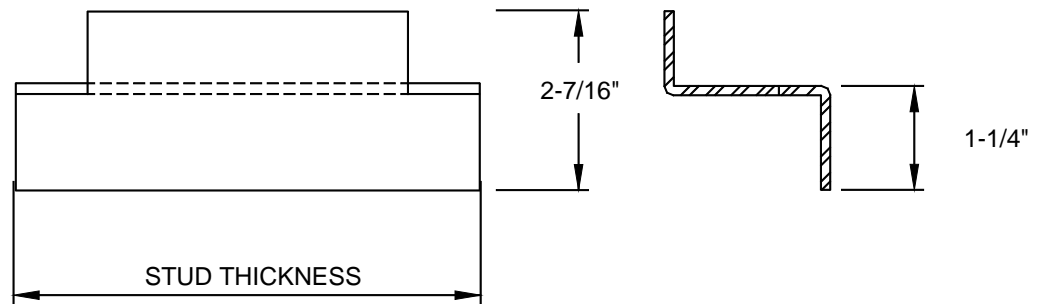
SCREWS USED TO FASTEN TO STUD  
NOT INCLUDED



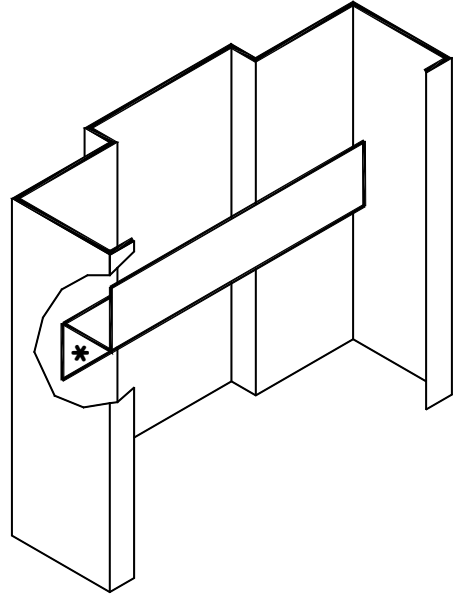
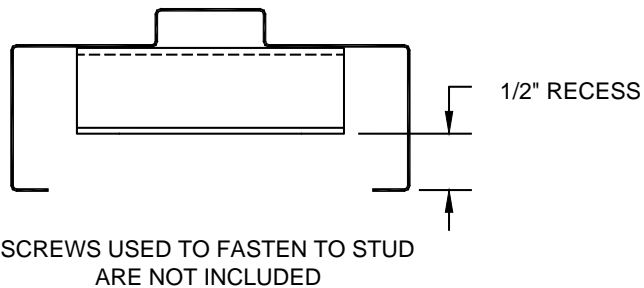
TOP VIEW



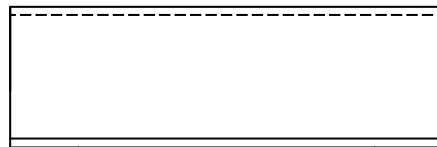
FRONT VIEW



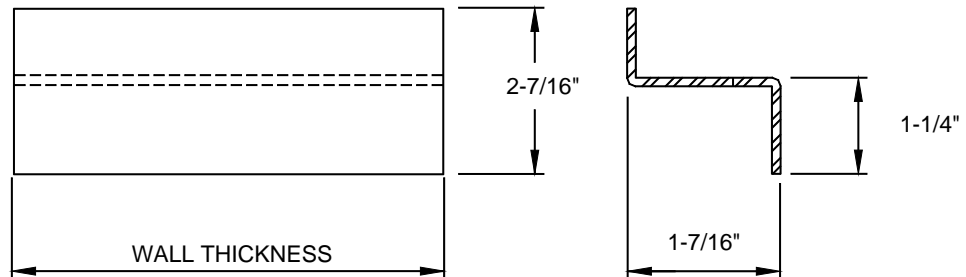
MATERIAL: GALVANNEAL  
GAUGE: 16  
TWO SPOTWELDS PER END



TOP VIEW

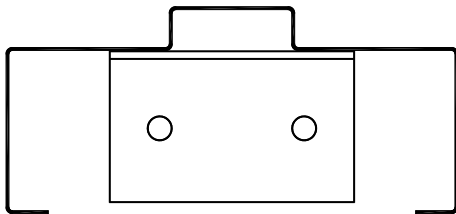


FRONT VIEW

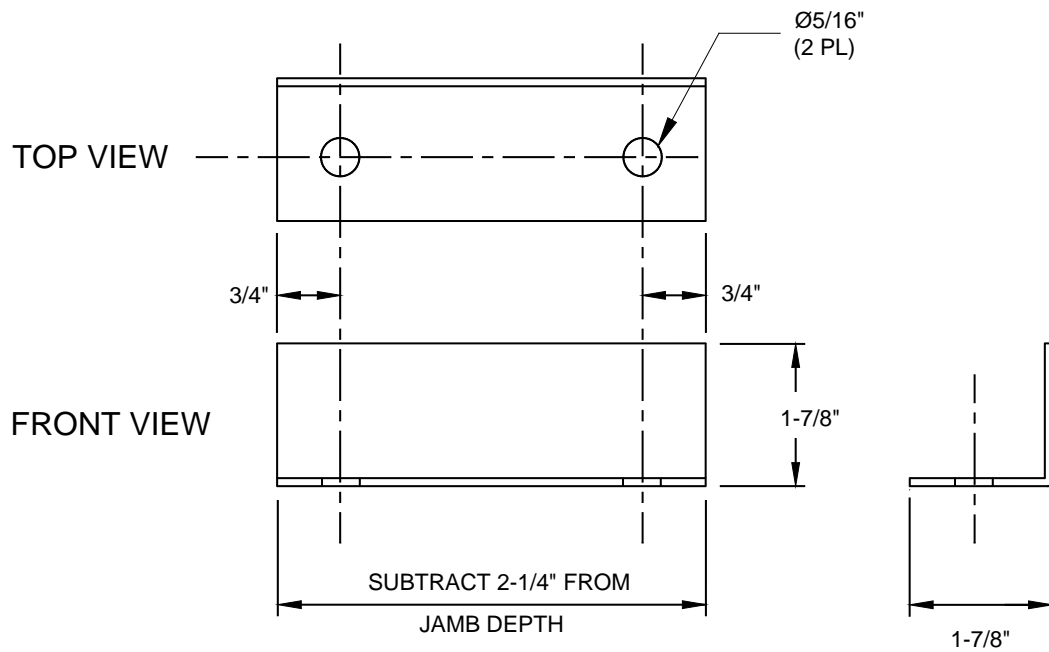
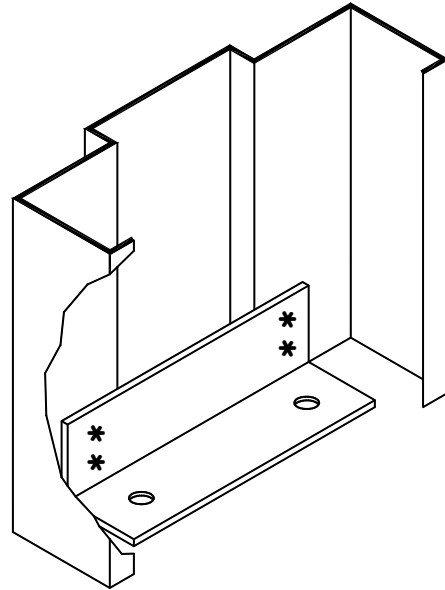


## A4 STANDARD BASE ANCHOR

MATERIAL: GALVANNEAL  
GAUGE: 16  
TWO SPOTWELDS PER END

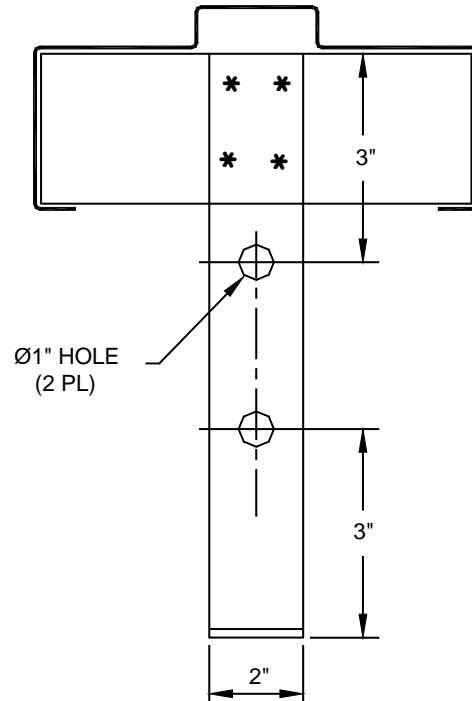
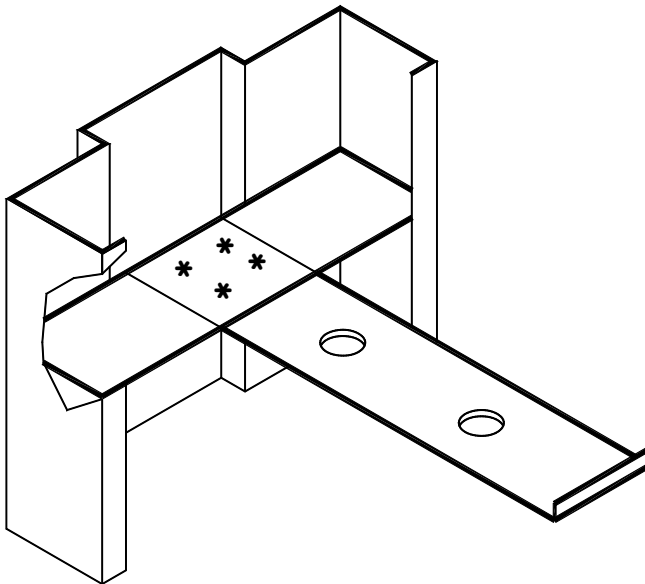


ANCHOR BOLTS FOR FLOOR  
ATTACHMENT NOT INCLUDED

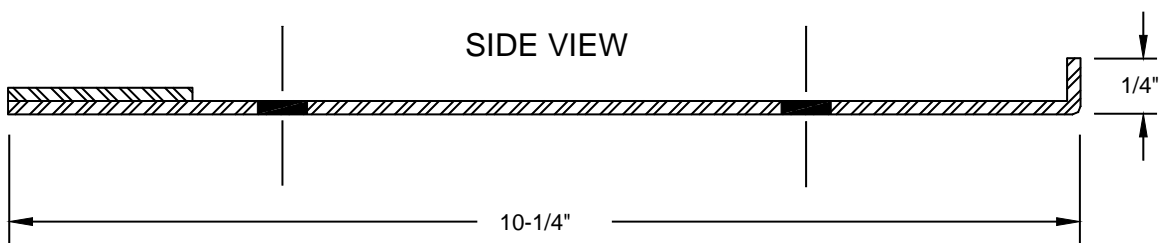
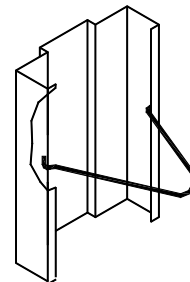


## A5 MASONRY "TEE" ANCHOR

MATERIAL: GALVANNEAL  
GAUGE: 16  
WELDED: (4) SPOTWELDS  
THIS ANCHOR SHIPS LOOSE



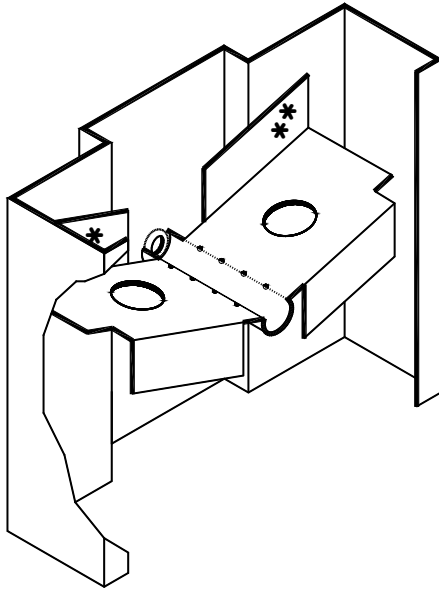
ALTERNATE  
A6 ANCHOR  
3/16" DIA  
WIRE ANCHOR



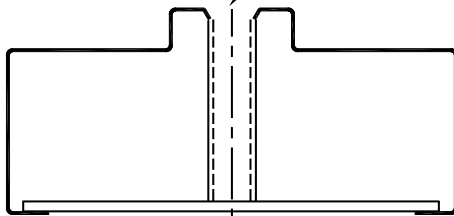
## A7B "BUTTERFLY ANCHOR"

18 GAUGE - 2 SPOT WELDS PER SIDE

STANDARD FOR JAMBS WITH 2" FACES  
AND UNDER 9" JAMB DEPTH



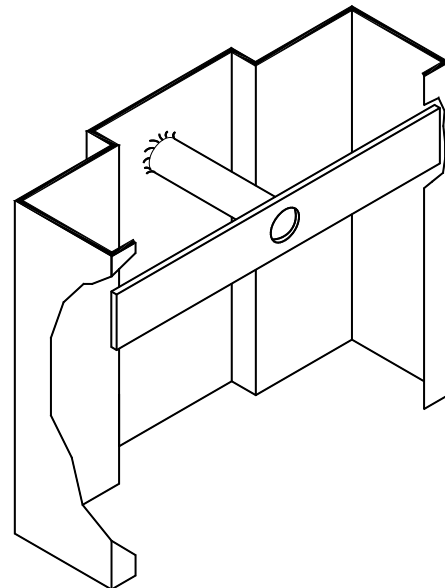
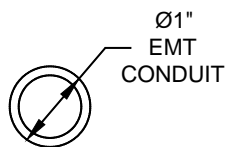
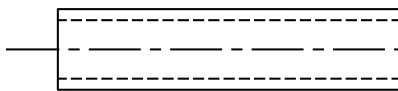
PREP FOR Ø3/8" BOLT  
STANDARD



ANCHOR BOLTS NOT INCLUDED

FACE + STOP MINUS  
METAL THICKNESS

PIPE SLEEVE

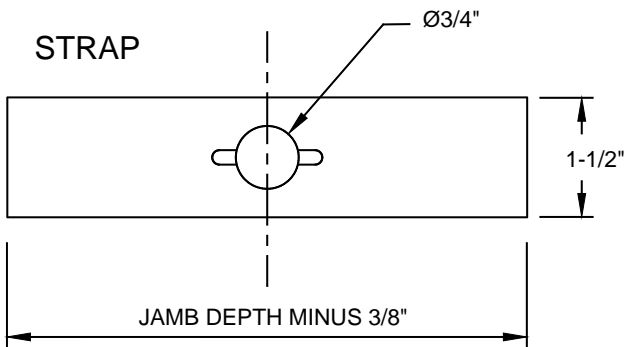


## A7P ALTERNATE ANCHOR "PIPE AND STRAP"

16 GAUGE - 2 TACK WELDS PER END

STANDARD ONLY FOR JAMBS WITH CUSTOM  
FACES AND PROFILES

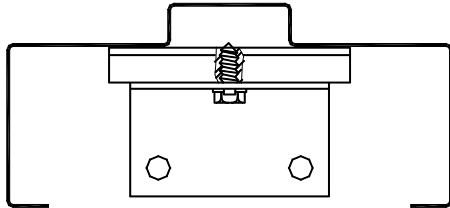
STRAP



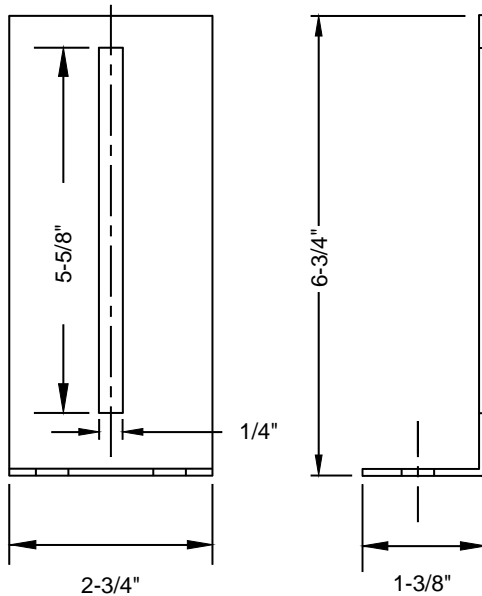
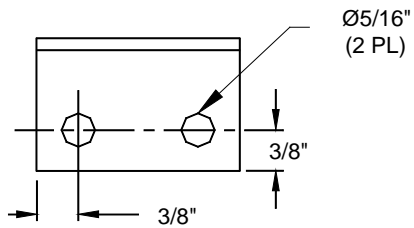
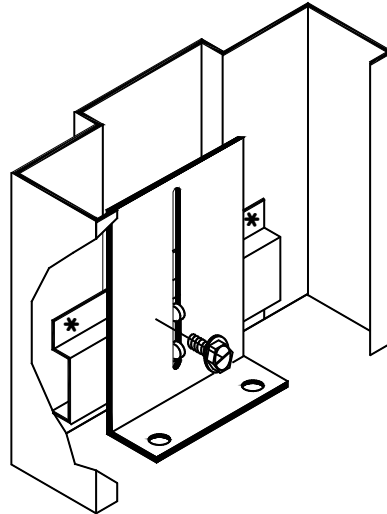


## A8 ADJUSTABLE BASE ANCHOR

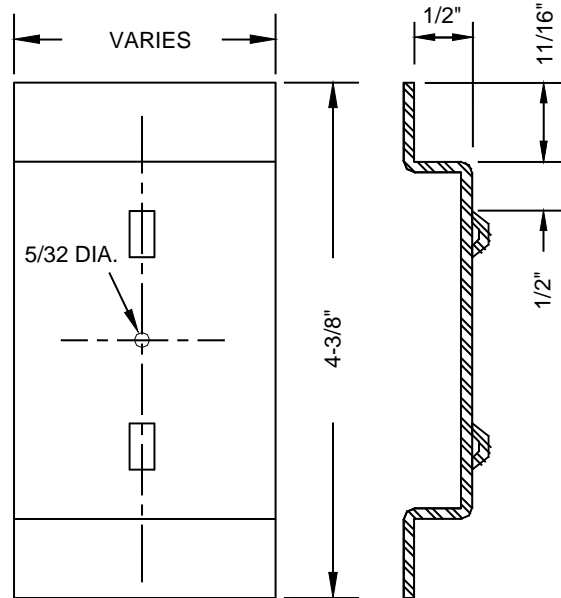
MATERIAL: GALVANNEAL  
GAUGE: 16  
TWO SPOT WELDS PER END



ANCHOR BOLTS USED FOR FLOOR  
CONNECTION ARE NOT INCLUDED



ADJUSTABLE ANGLE



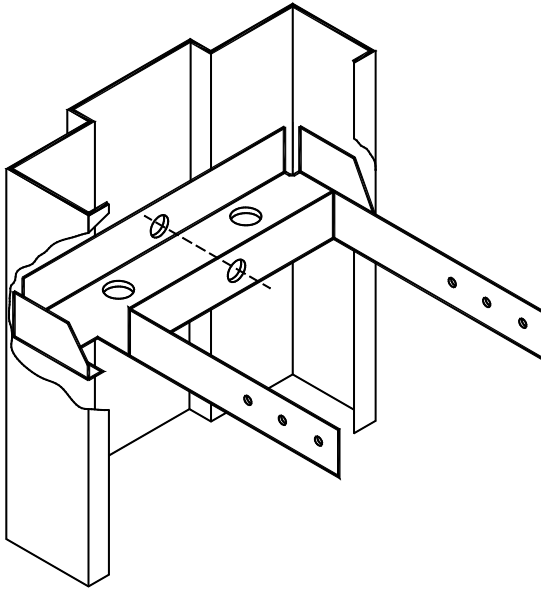
HAT STRAP

# A9T "TWIST-IN" UNIVERSAL ANCHOR

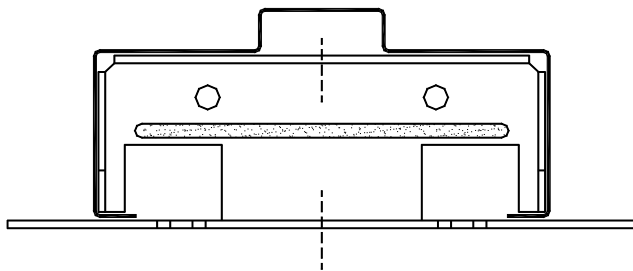
MATERIAL: GALVANNEAL  
GAUGE: 18

MAY BE MANUFACTURED FOR CUSTOM  
JAMB DEPTHS, FACES AND PROFILES.

STOCKED FOR THE FOLLOWING  
JAMB DEPTHS - SHIPS LOOSE.

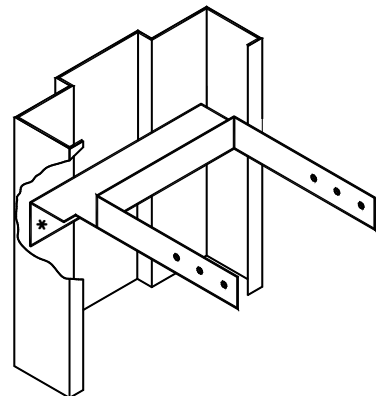
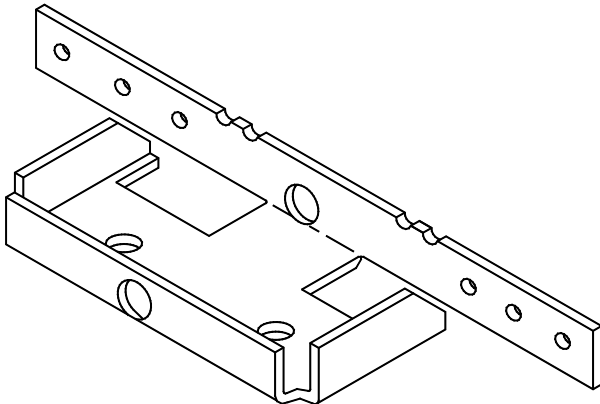


JAMB DEPTH	FACE
4-3/4"	2"
5-3/4"	2"
6-1/4"	2"
6-3/4"	2"
7-1/4"	2"
7-3/4"	2"
8-1/4"	2"
8-3/4"	2"



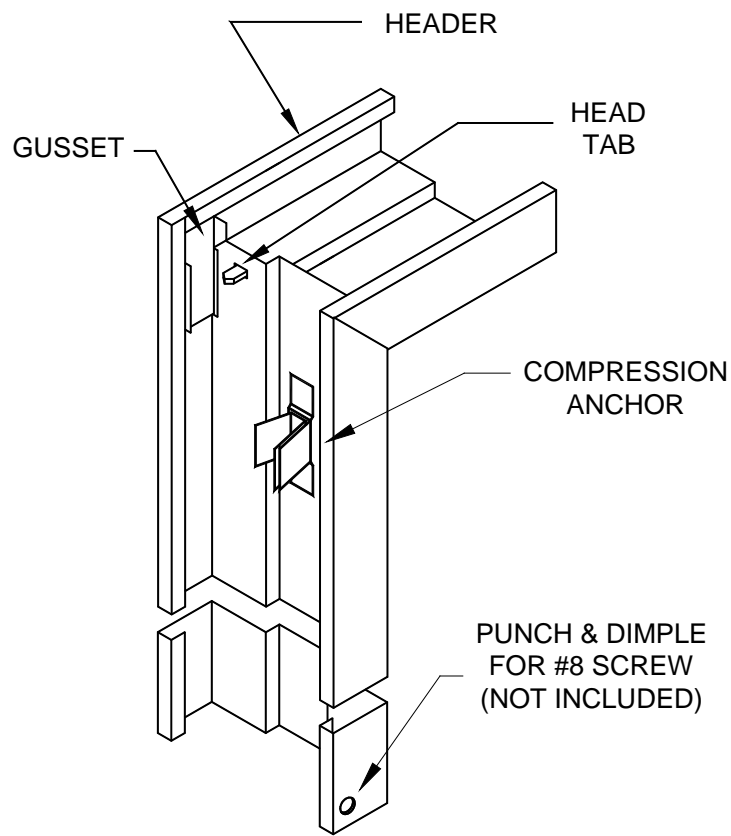
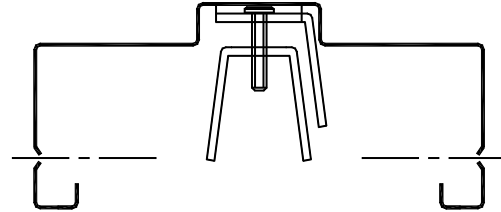
## ALTERNATE A9W ANCHOR

WELDED IN -  
FOR CUSTOM PROFILES

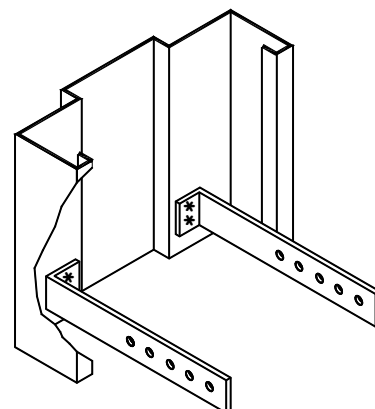


## A10 KDDW COMPRESSION ANCHOR

MATERIAL: GALVANNEAL  
GAUGE: 16  
TWO SPOTWELDS PER END



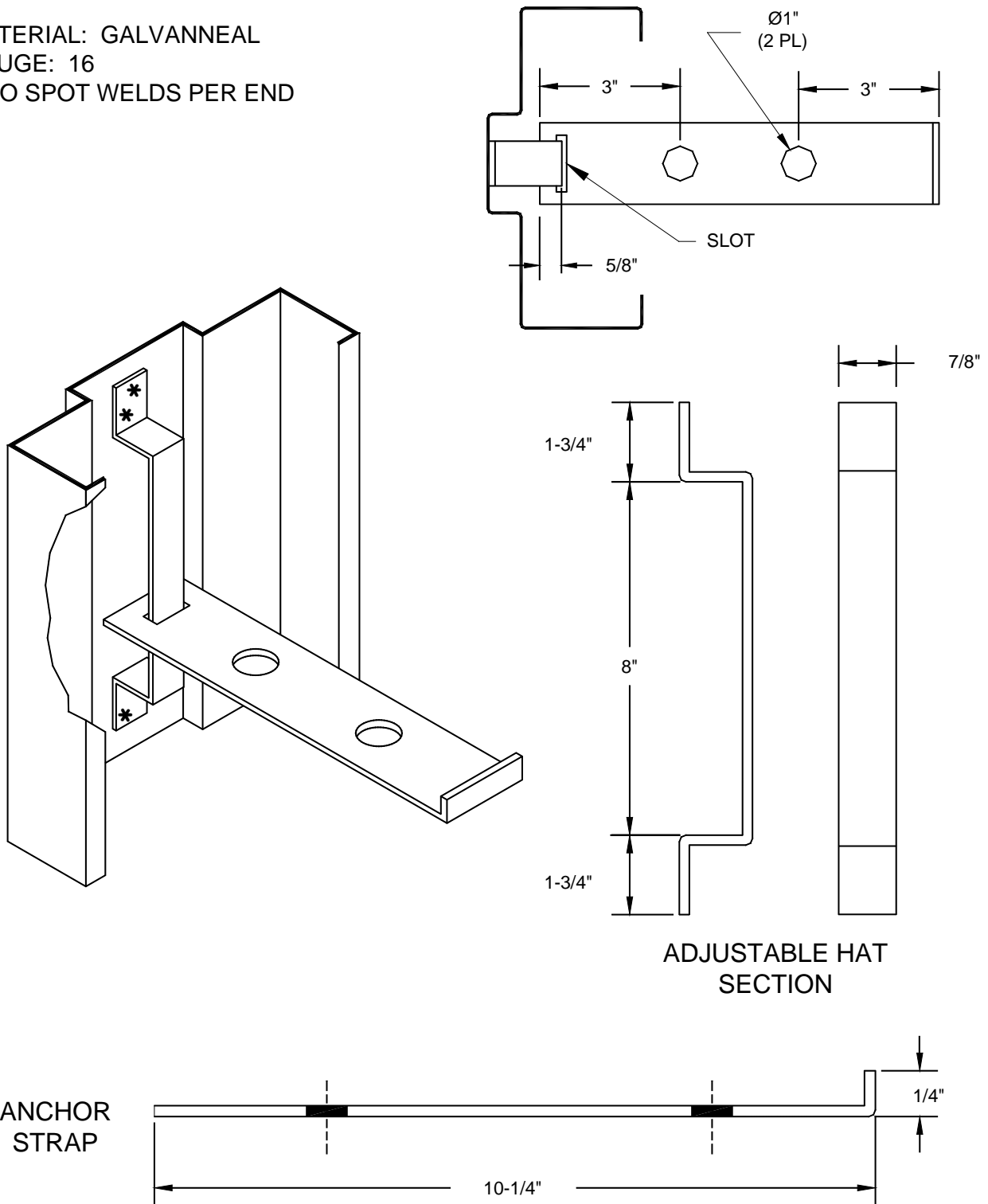
STANDARD BASE ANCHOR



ALTERNATE BASE ANCHOR  
(SEE TO PAGE 1 FOR DETAILS)

## A11 ADJUSTABLE MASONRY ANCHOR

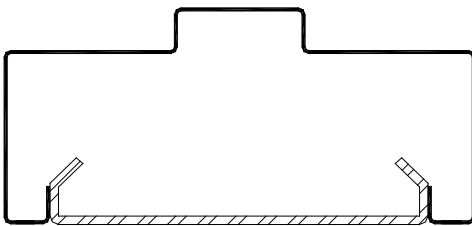
MATERIAL: GALVANNEAL  
GAUGE: 16  
TWO SPOT WELDS PER END



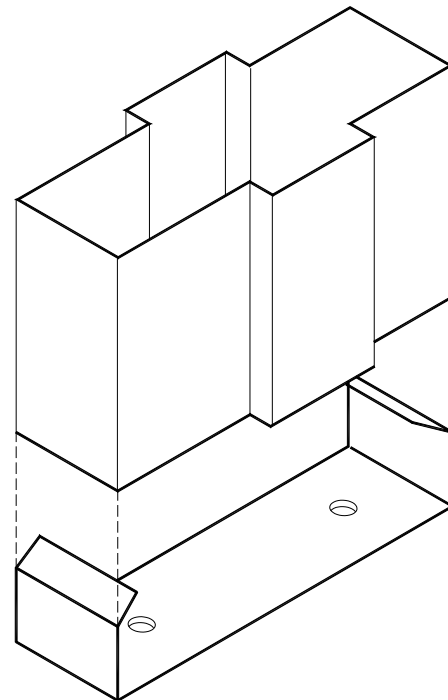
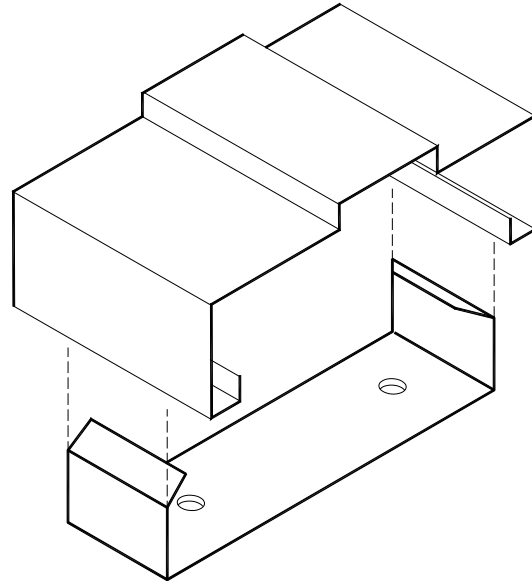
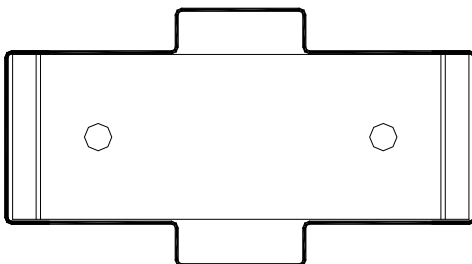
## A12 FLOOR ANCHOR

MATERIAL: GALVANNEAL  
GAUGE: 14  
THIS ANCHOR SHIPS LOOSE

SILL BASE ANCHOR



MULLION BASE ANCHOR

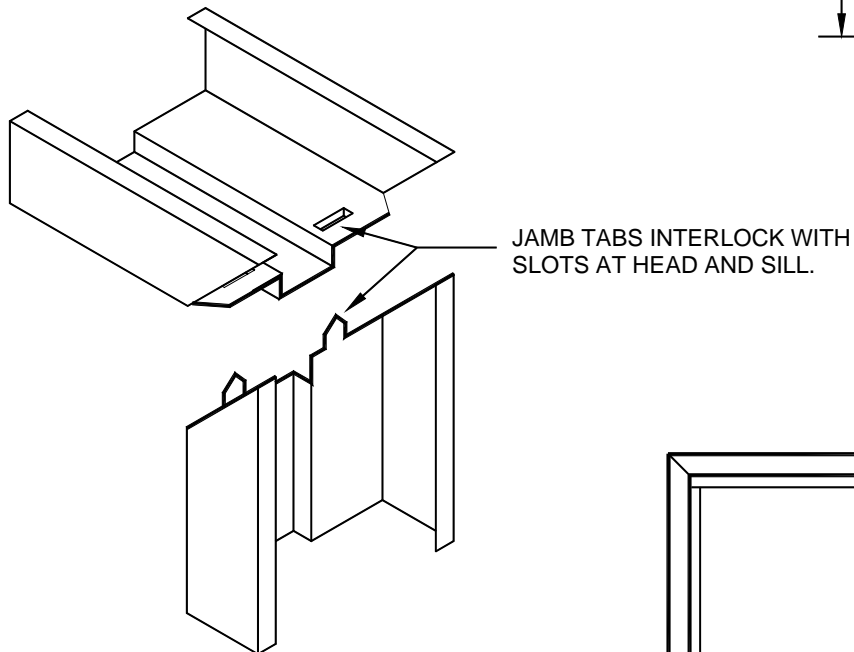
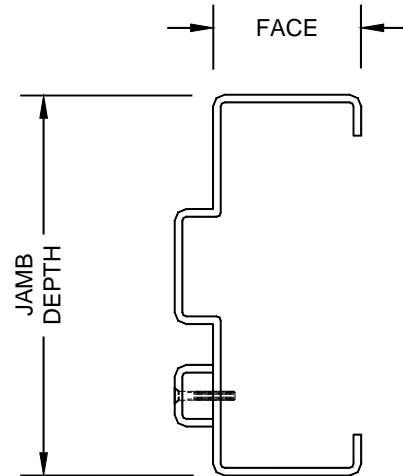


**BASE ANCHOR INSTALLATION INSTRUCTIONS:**

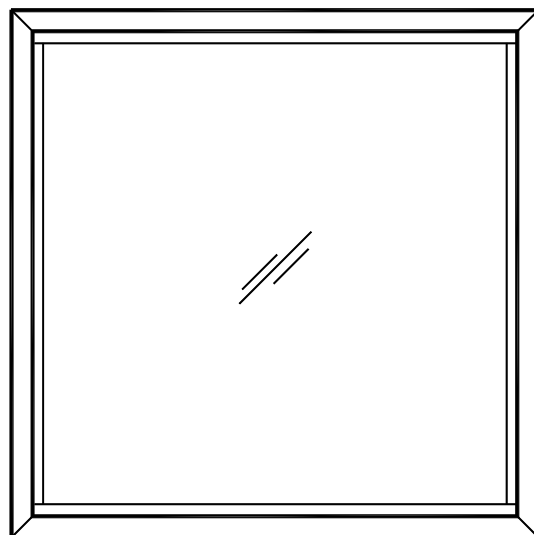
LOCATE ANCHOR CAREFULLY.  
FASTEN ANCHOR TO FLOOR WITH  
RAWLPLUGS OR EXPANSION BOLTS.  
SLIP SILL OR MULLION OVER ANCHOR.

ANCHOR BOLTS FOR FLOOR ATTACHMENT  
NOT INCLUDED

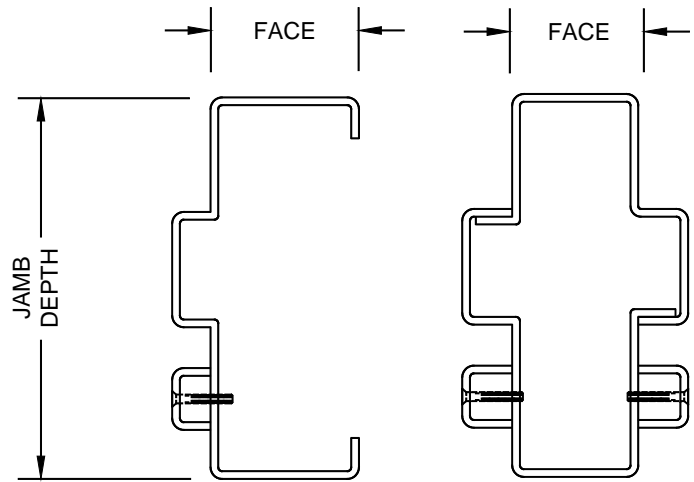
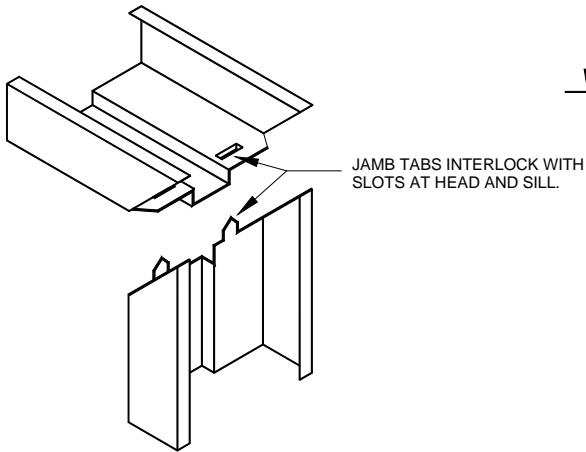
CONSTRUCTION: FULLY WELDED  
GLASS STOP: 5/8 x 5/8 x 16 GA.  
ANCHORS: AS REQUIRED  
FINISH: RUST INHIBITIVE BAKED-  
ON GREY PRIMER



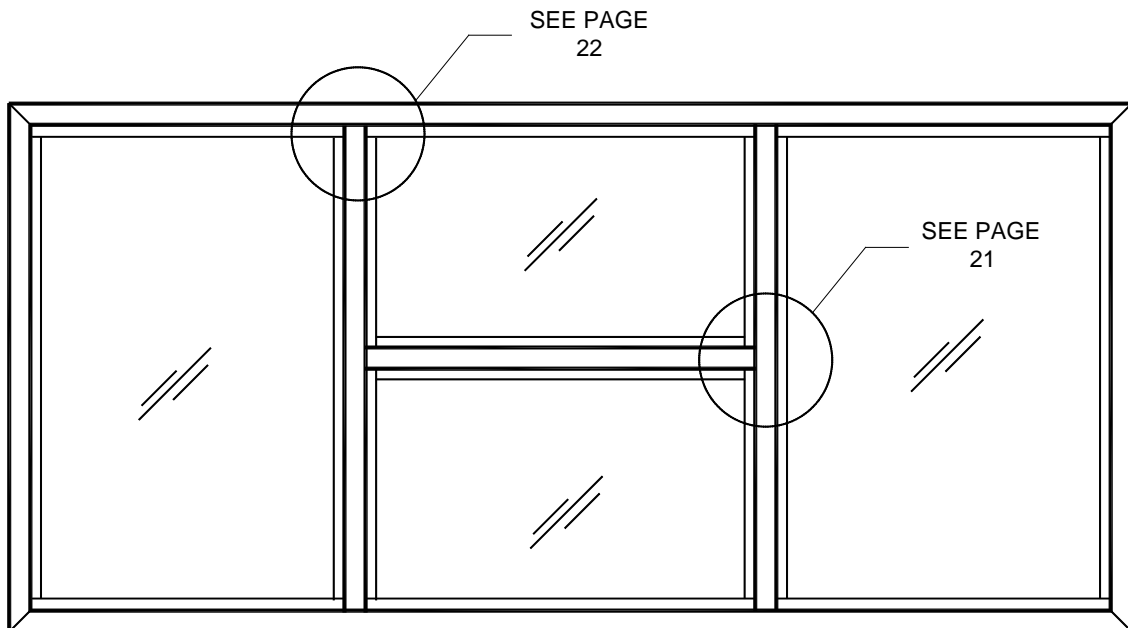
MACHINE-MITERED AND FULLY WELDED.  
(CONTINUOUSLY WELDED AT FACE AND  
RETURN. FACE GROUND SMOOTH AND  
FINISHED.)



CONSTRUCTION: FULLY WELDED  
GLASS STOP: 5/8 x 5/8 x 16 GA.  
ANCHORS: AS REQUIRED  
FINISH: RUST INHIBITIVE BAKED-ON GREY PRIMER

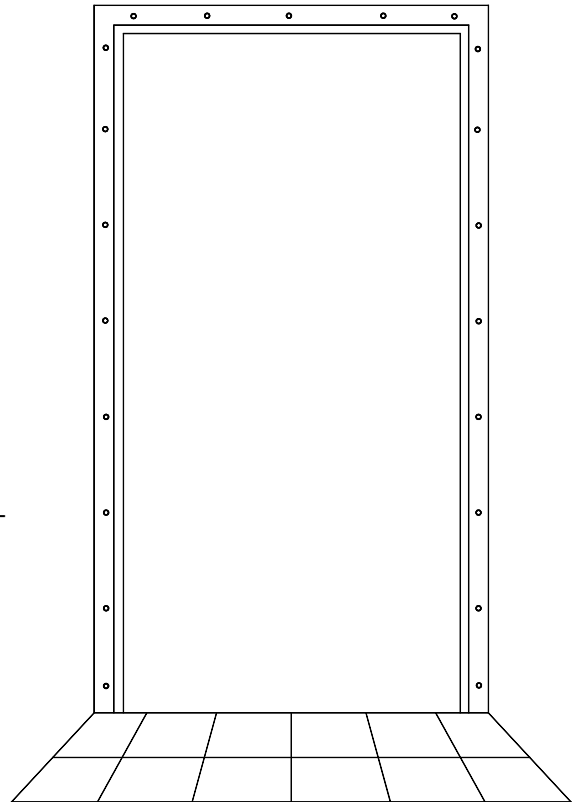
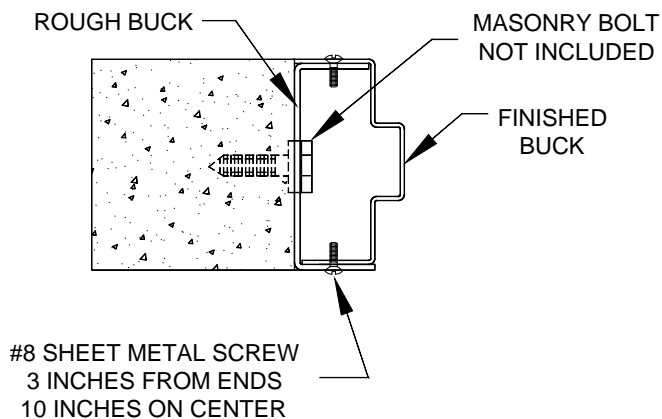
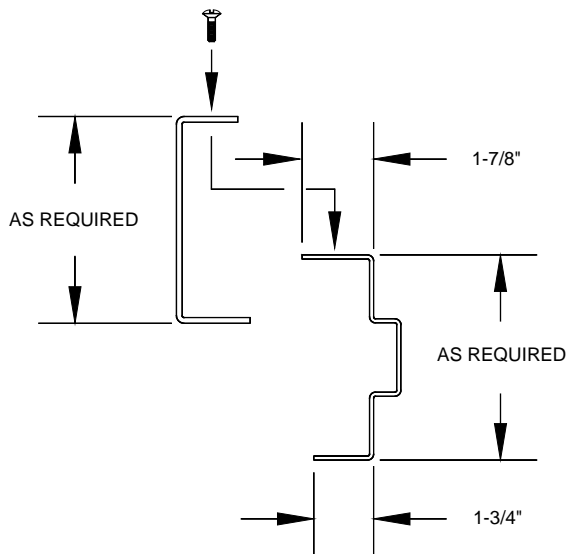


MACHINE-MITERED AND FULLY WELDED.  
(CONTINUOUSLY WELDED AT FACE AND RETURN. FACE GROUND SMOOTH AND FINISHED.)

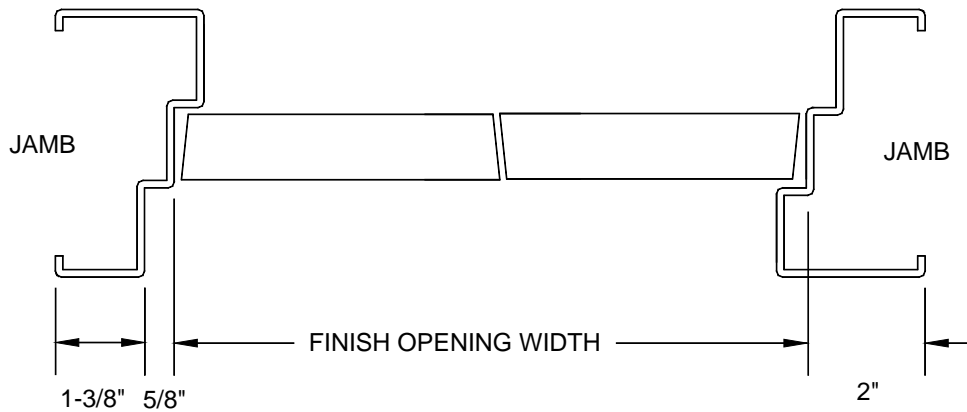
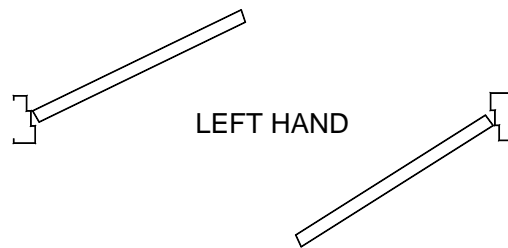
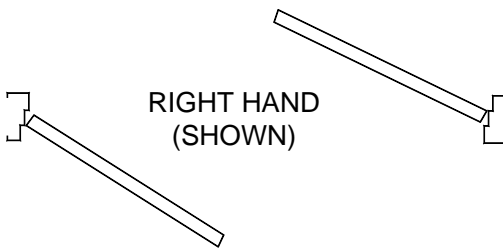
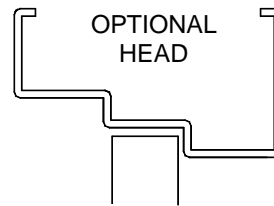
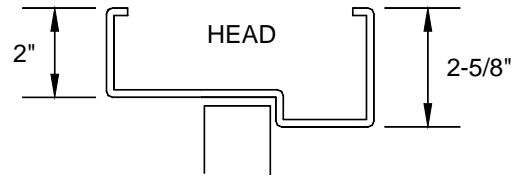
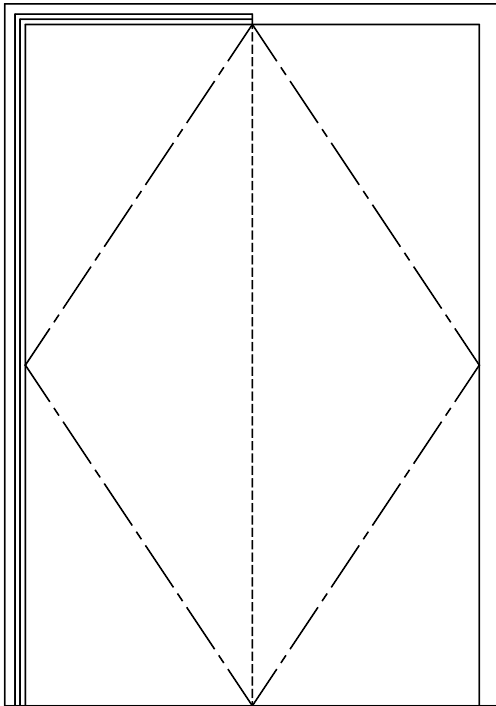


## ROUGH BUCK

MATERIAL: GALVANNEAL  
GAUGE: 16  
CONSTRUCTION:  
COMPOSED OF 3 LOOSE CHANNELS  
WITH WELDED FINISHED BUCK



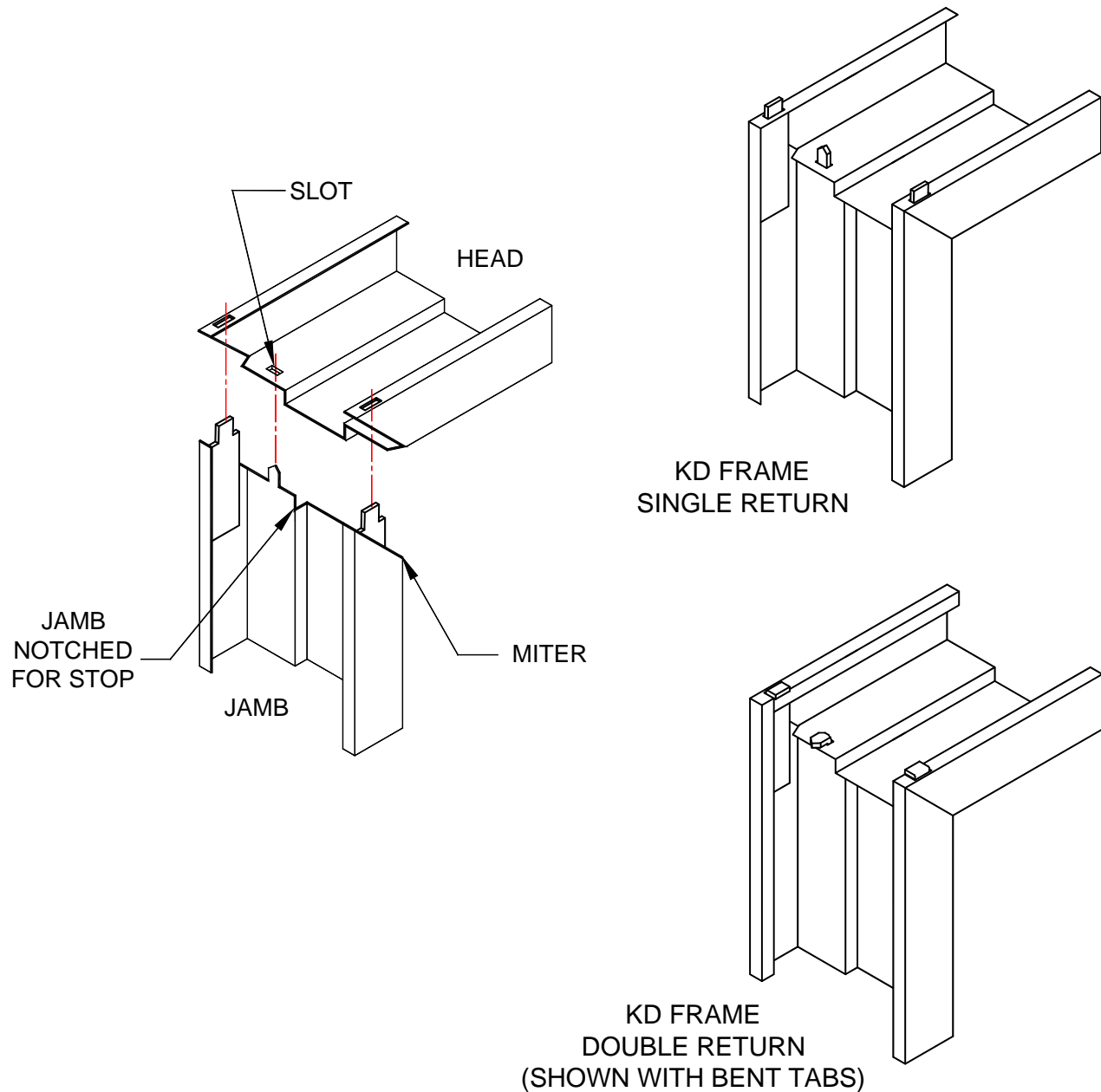


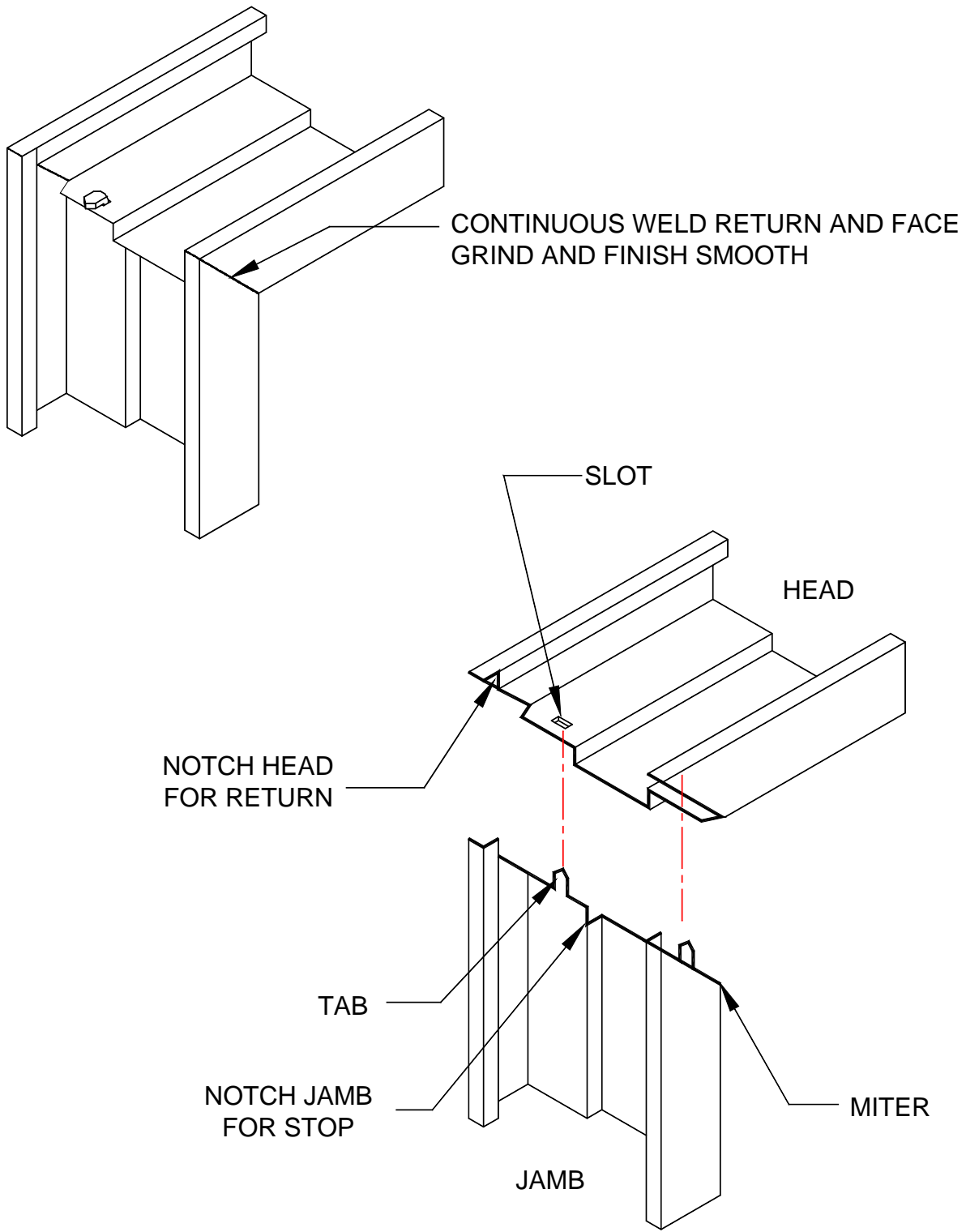


## KD-COMPLETE FRAME CORNER

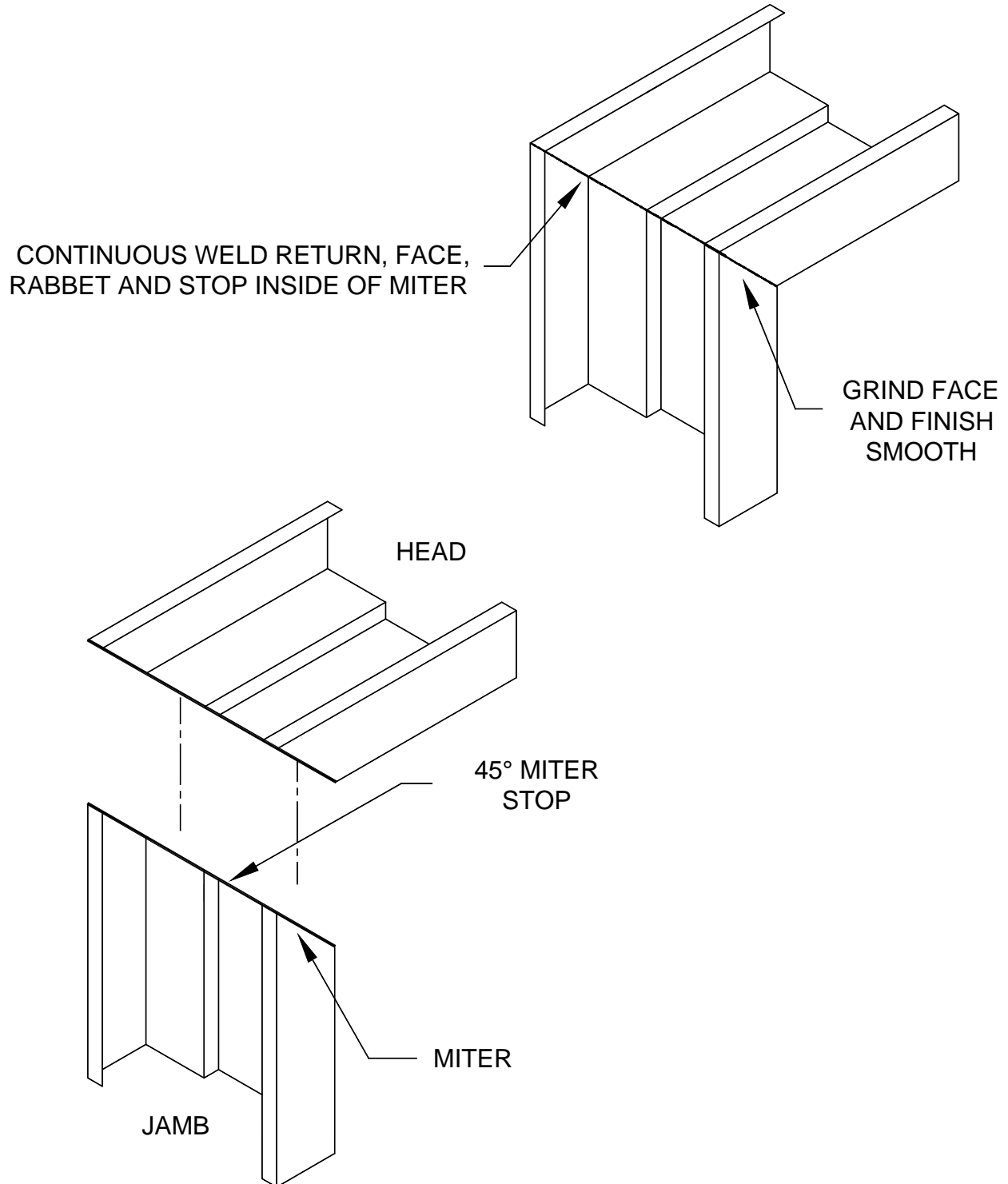
KD COMPLETE 3-SIDED FRAME  
FIELD ASSEMBLED - JAMB AND GUSSET TABS TO BE BENT IN FIELD  
AFTER ASSEMBLY, INSTALLATION SIMILAR TO WELDED FRAMES  
INSTALLED WITH THE SAME HARDWARE AND ANCHORS AS WELDED FRAMES

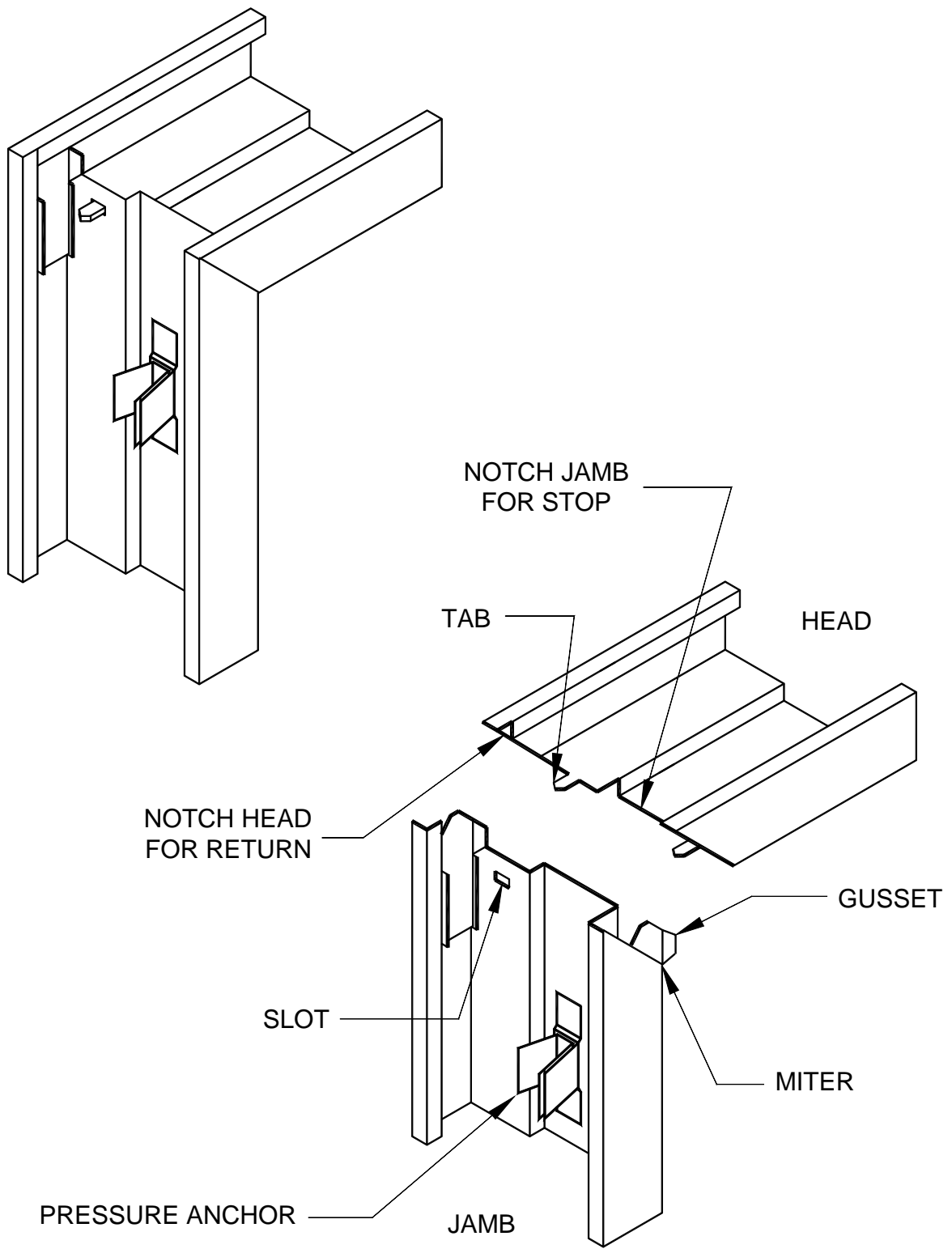
WHI FIRE RATINGS AVAILABLE - SEE FIRE RATED FRAMES SECTION

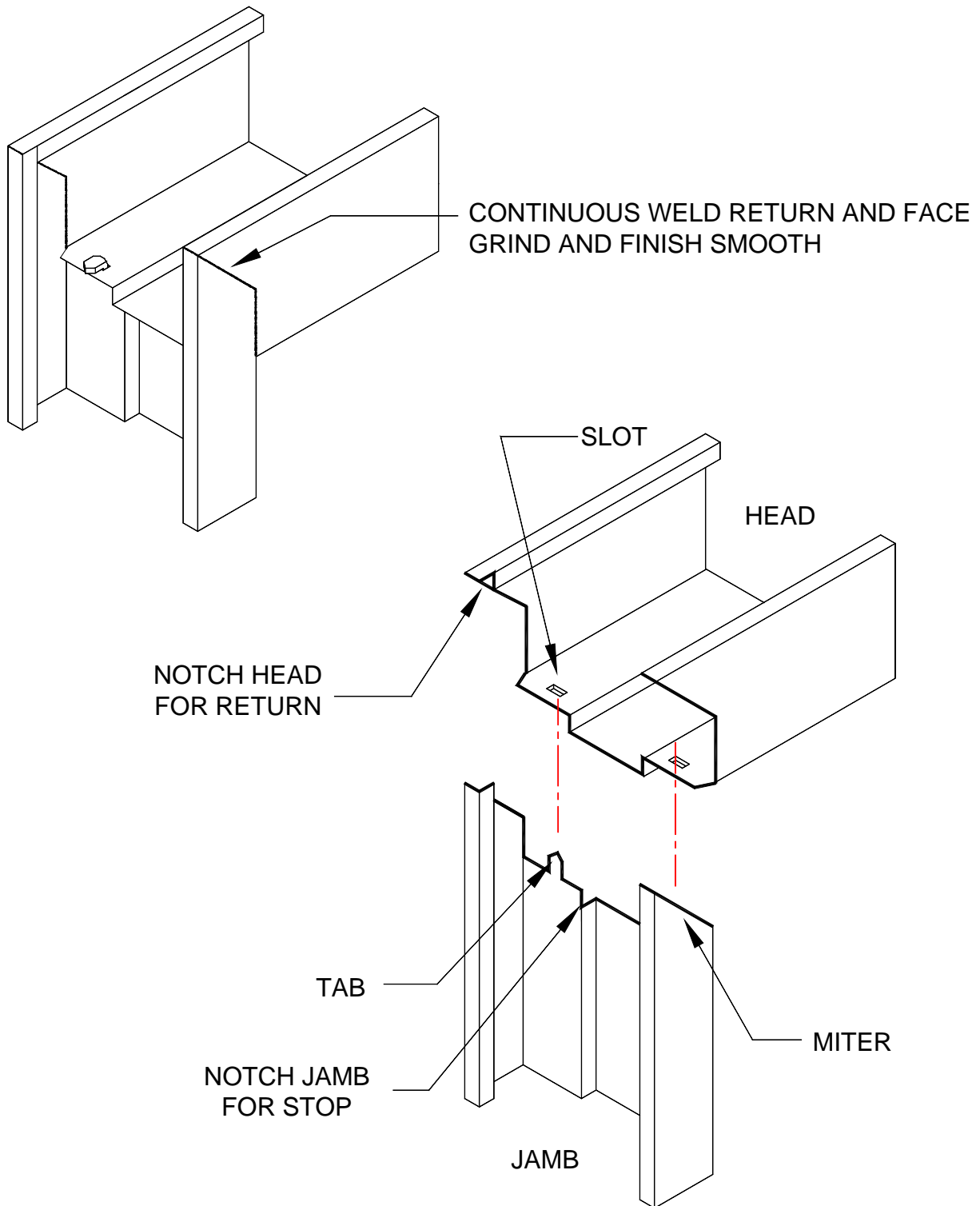




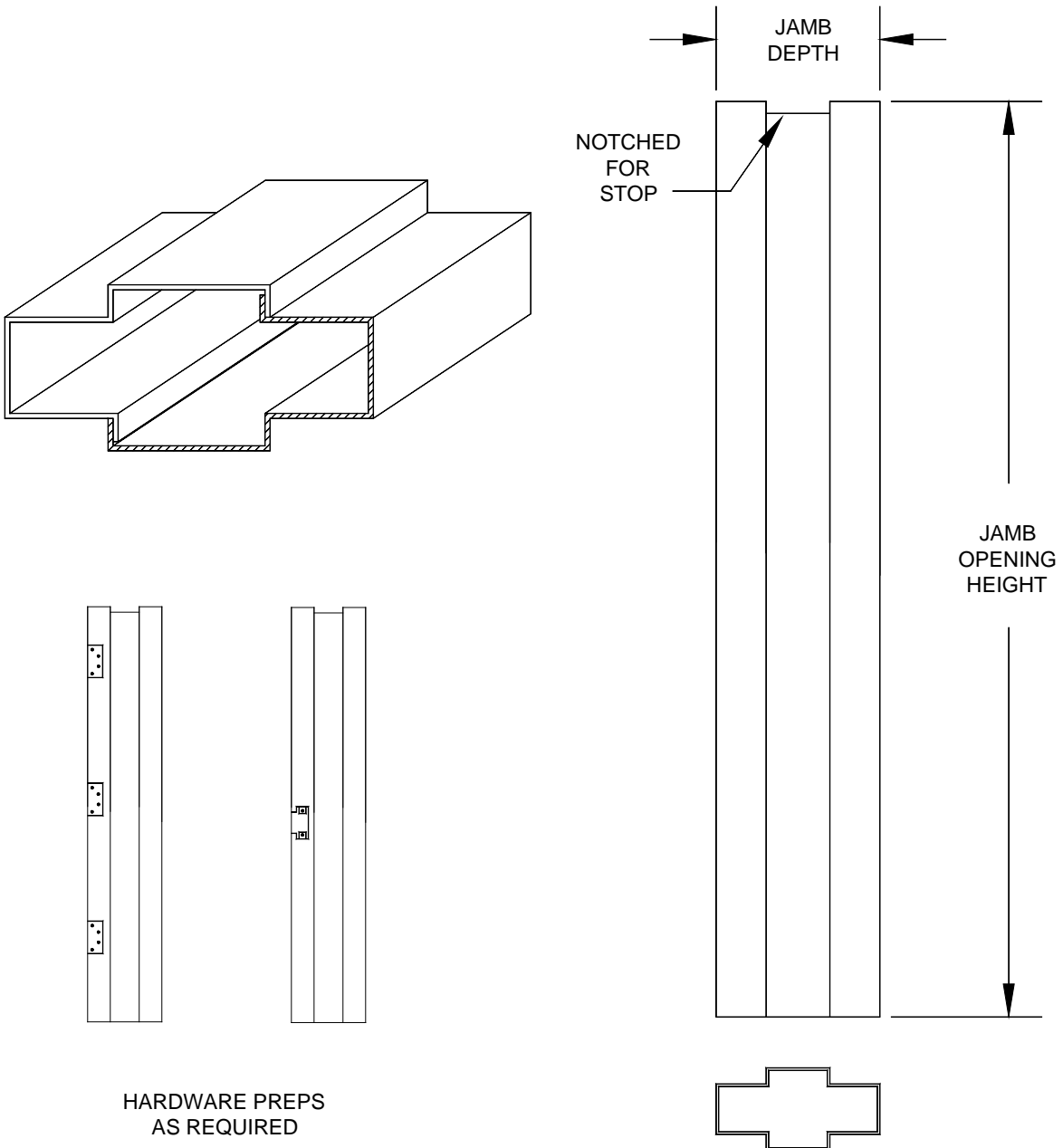
## CONTINUOUSLY WELDED CORNER

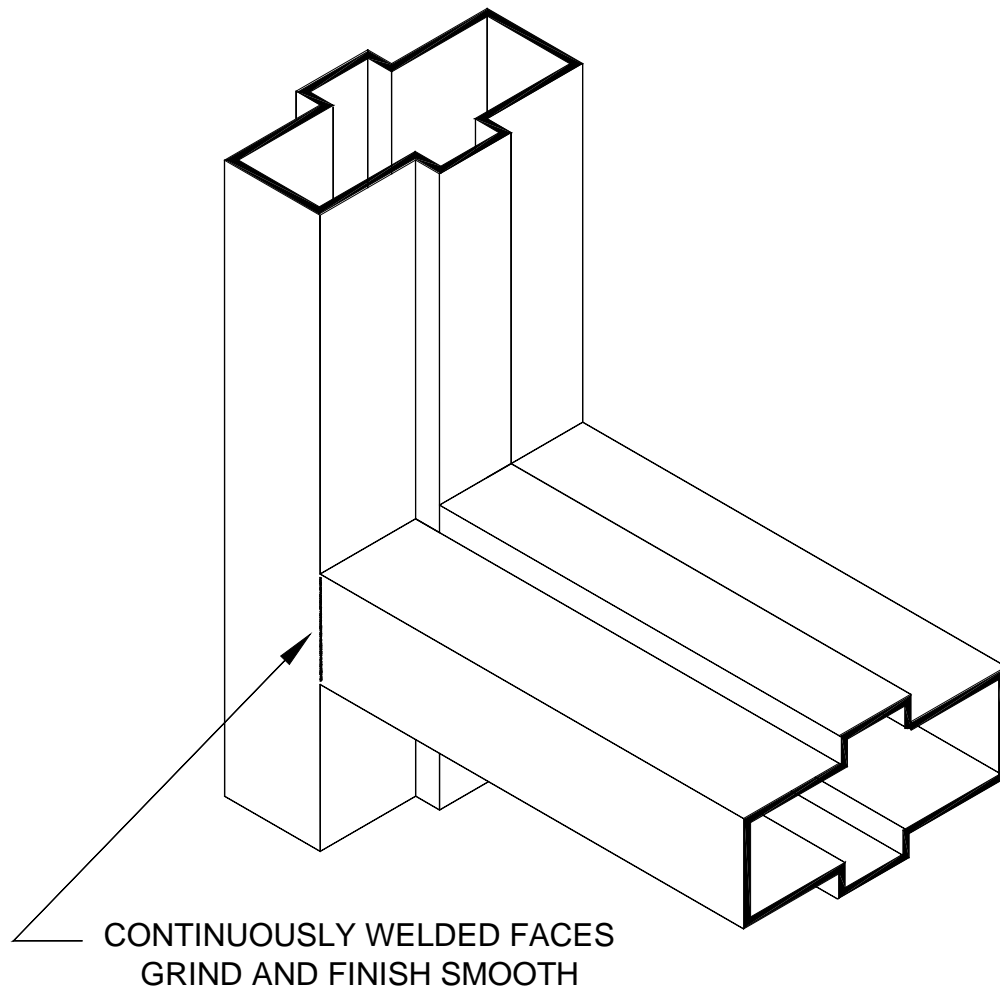
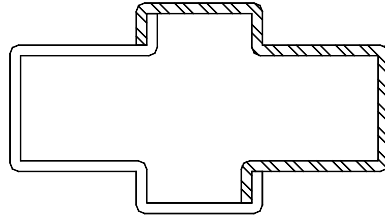




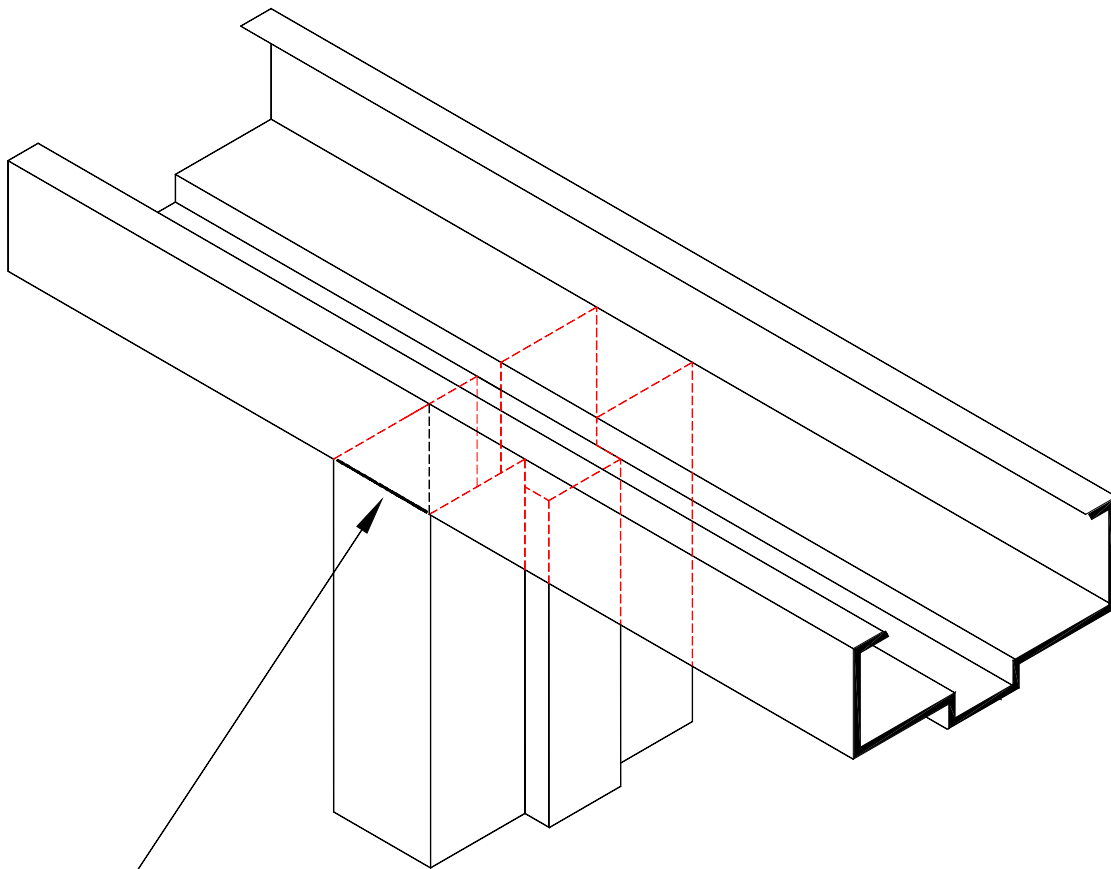
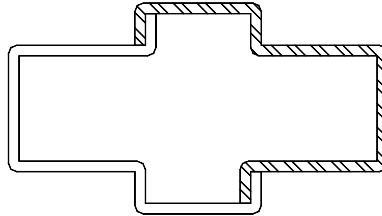


## STANDARD MULLION

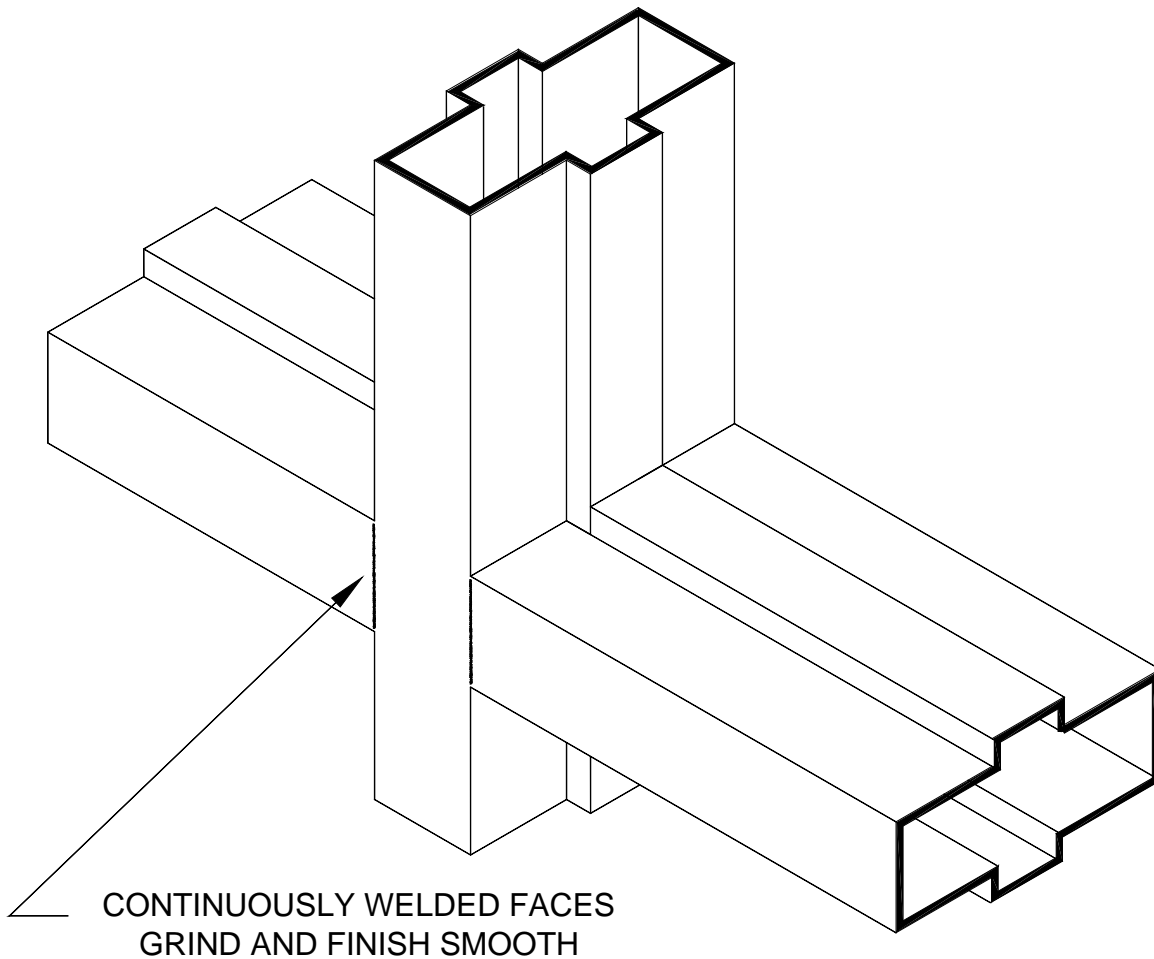
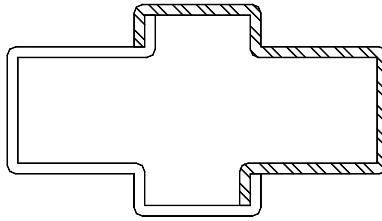




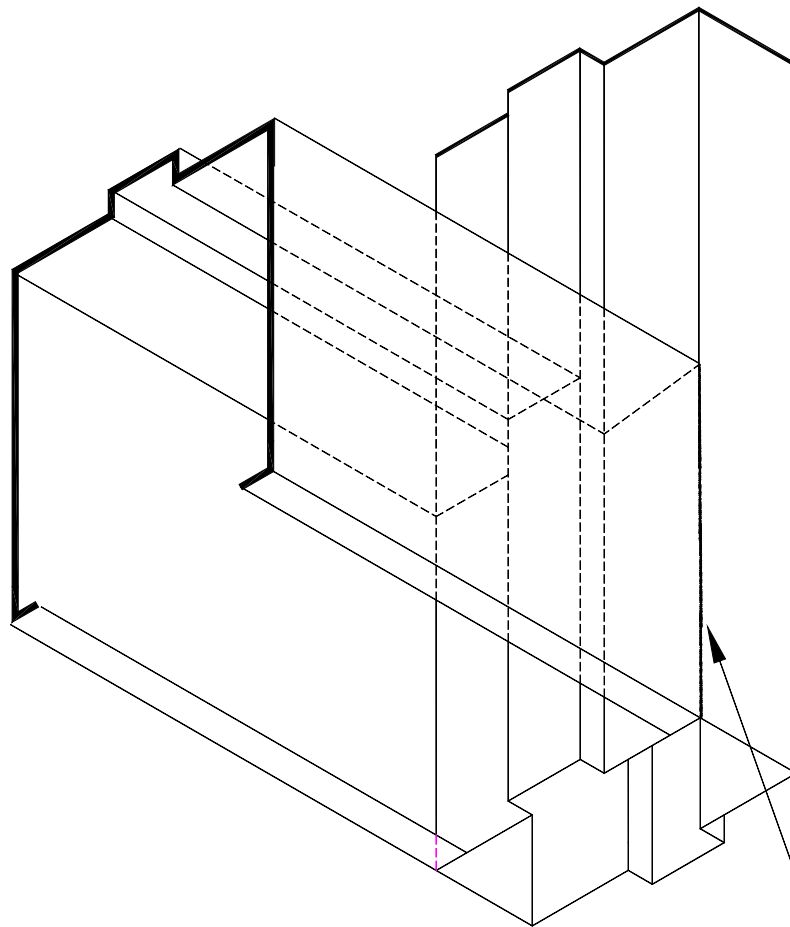
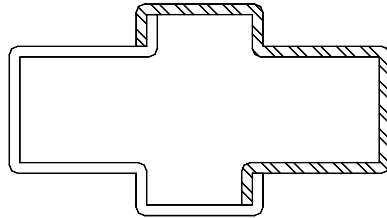




CONTINUOUSLY WELDED FACES  
GRIND AND FINISH SMOOTH

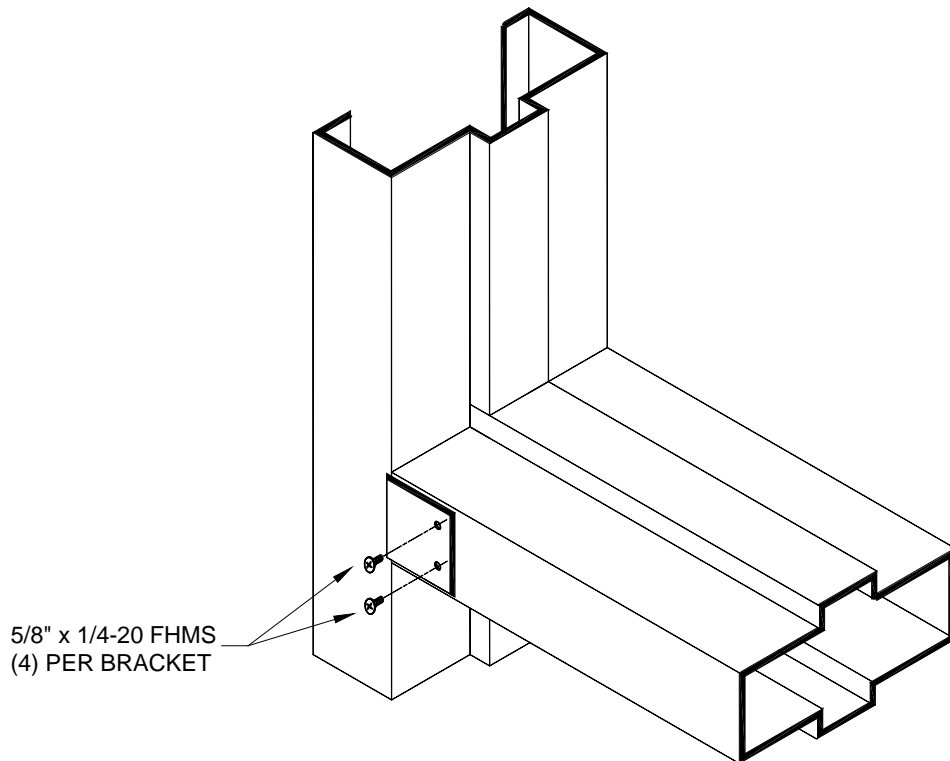
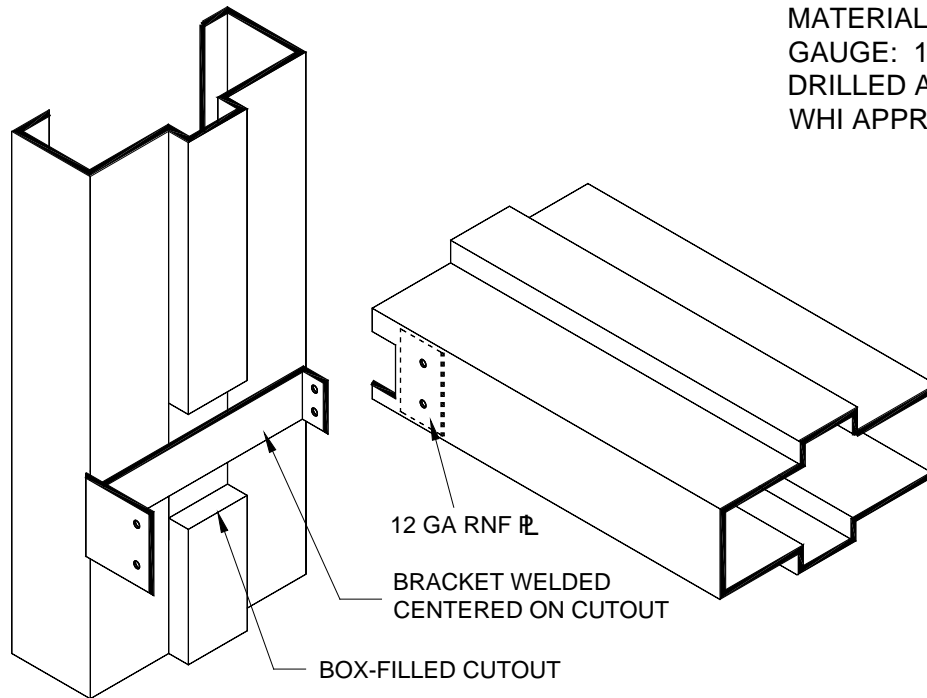


CONTINUOUSLY WELDED FACES  
GRIND AND FINISH SMOOTH

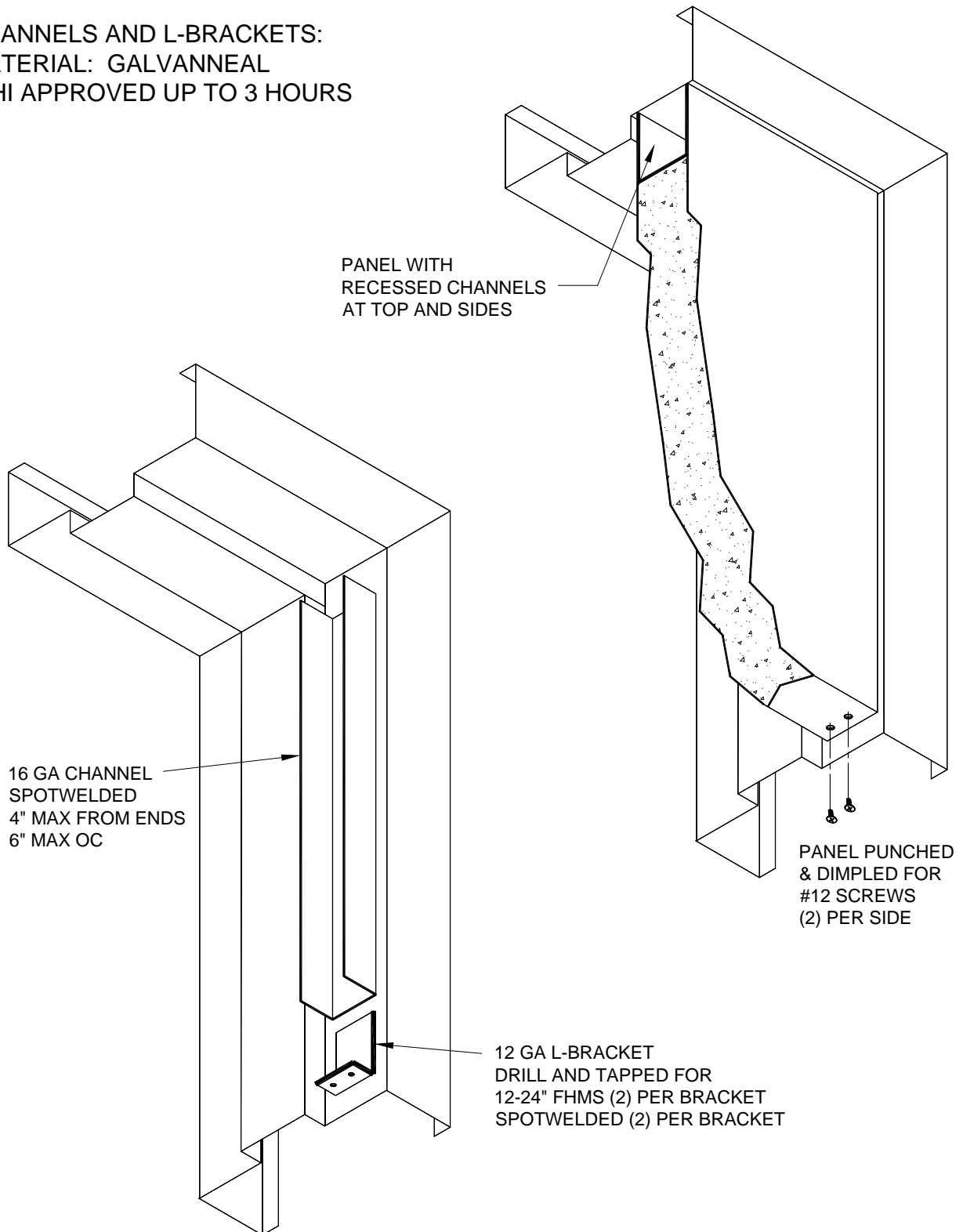


CONTINUOUSLY WELDED FACES  
GRIND AND FINISH SMOOTH

## REMOVABLE MULLION



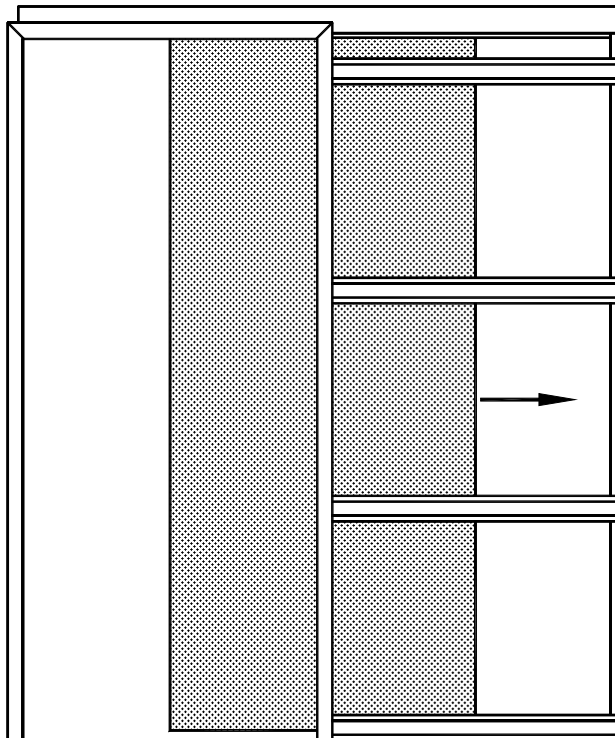
CHANNELS AND L-BRACKETS:  
MATERIAL: GALVANNEAL  
WHI APPROVED UP TO 3 HOURS



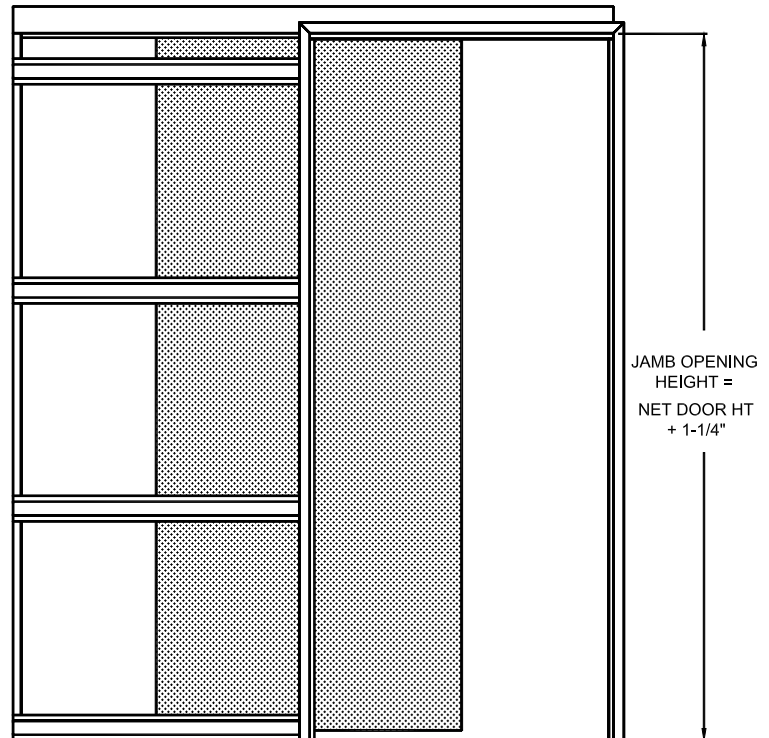
## NOTES:

- 1.) TRACK POCKET DESIGNED TO ACCEPT GRANT 1230 / HAGER 9110 ASSEMBLIES (BY OTHERS)
- 2.) POCKET SLIDER FOR 1-3/4"
- 3.) SINGLE ELEVATION SHOWN (PAIR SIMILAR)
- 4.) MATERIAL: 16GA A60 GALVANNEAL
- 5.) SPECIFY STEEL STUD OR WOOD STUD ANCHORS

VIEW FROM EXTERIOR SIDE



VIEW FROM INTERIOR SIDE



HANDING:

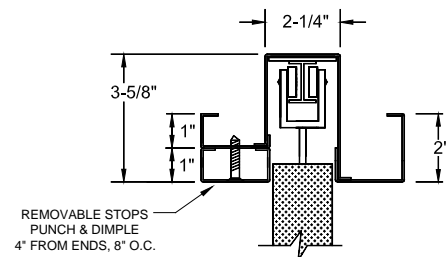
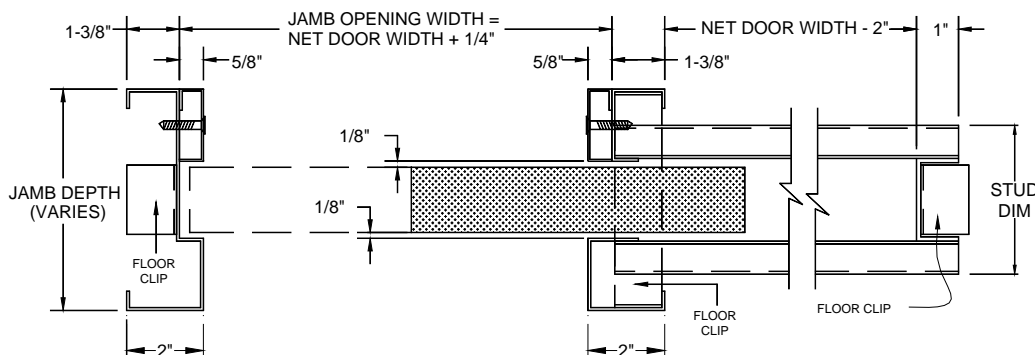
**RIGHT HAND SHOWN**

(OPENS TO THE **RIGHT** WHEN VIEWED FROM **EXTERIOR**)

HANDING:

**RIGHT HAND SHOWN**

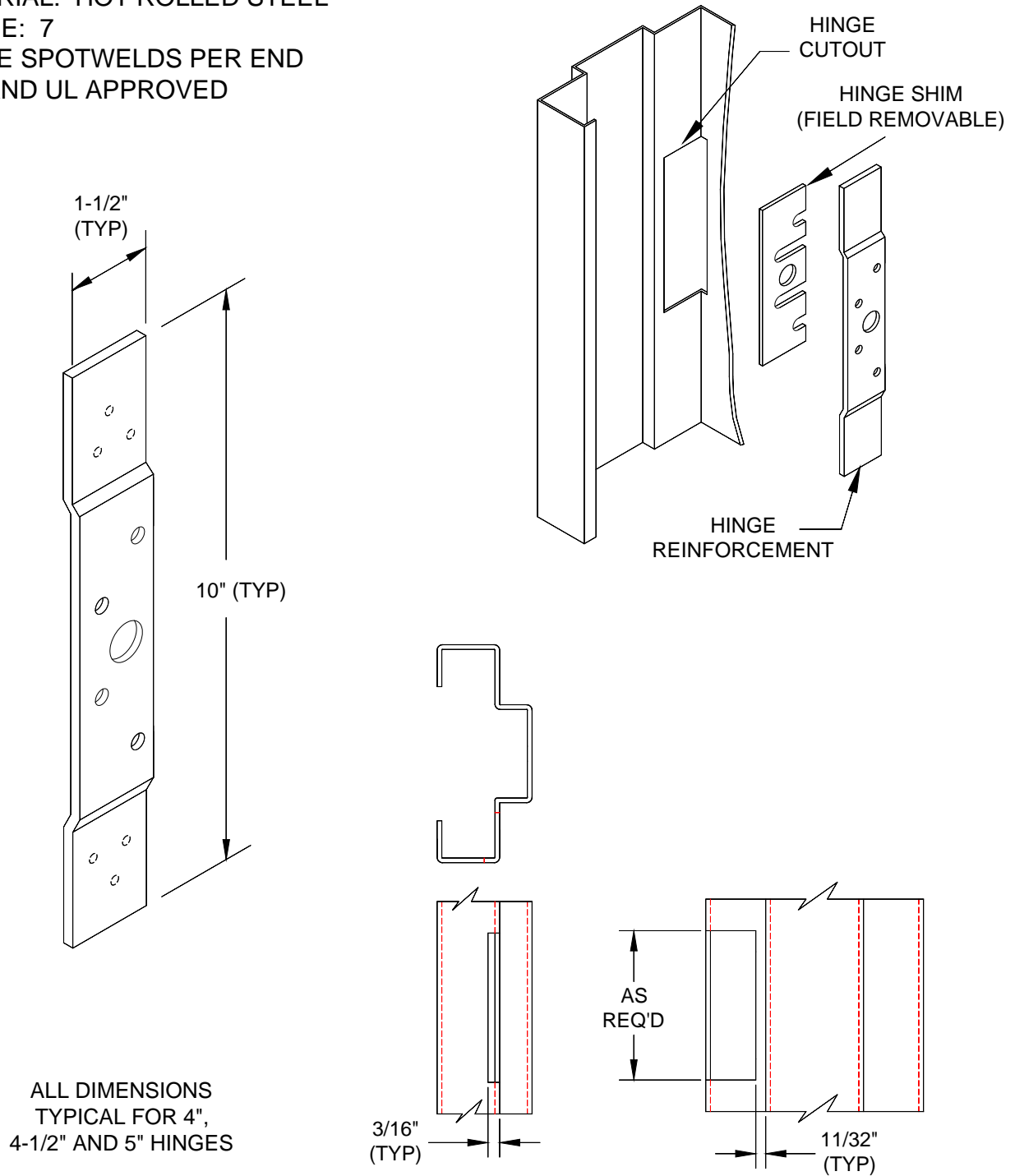
(OPENS TO THE **LEFT** WHEN VIEWED FROM **INTERIOR**)



HEADER AND TRACK HANGING SYSTEM

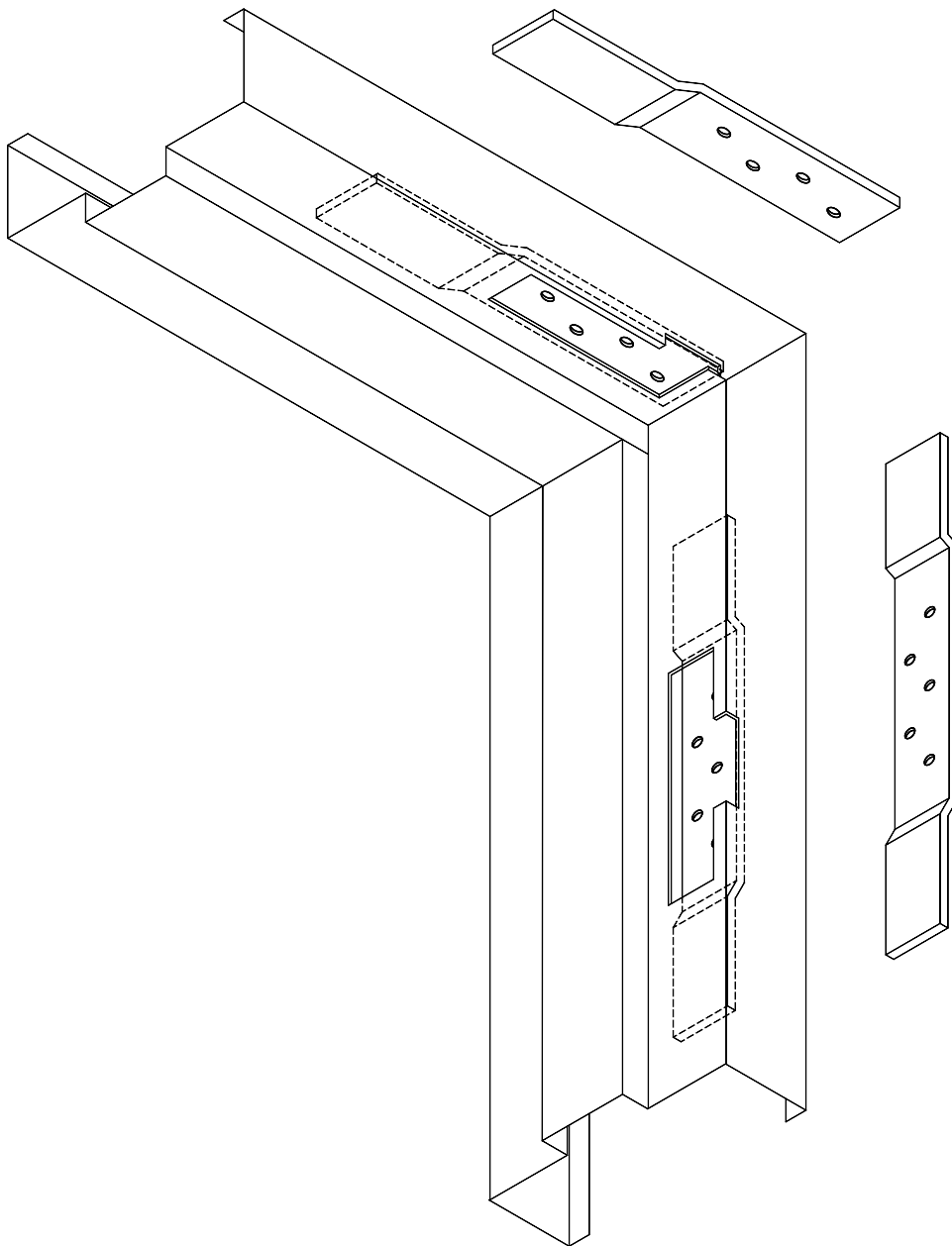
## STANDARD FRAME HINGE REINF

MATERIAL: HOT ROLLED STEEL  
GAUGE: 7  
THREE SPOTWELDS PER END  
WHI AND UL APPROVED



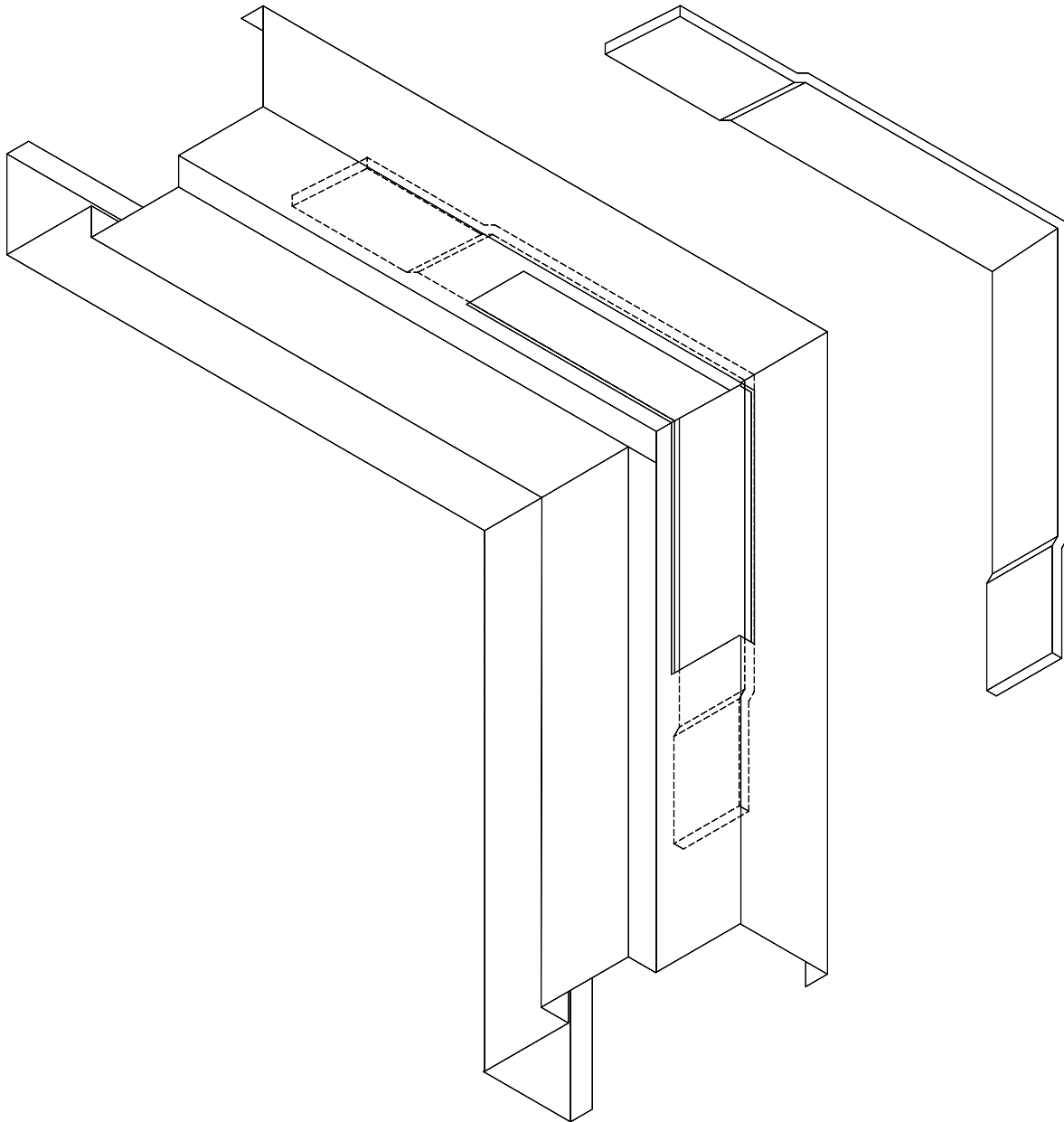
## TOP/INTERMEDIATE PIVOTS

MATERIAL: HOT ROLLED STEEL  
GAUGE: 7  
THREE SPOTWELDS PER END  
DRILLED AND TAPPED PER TEMPLATE  
DUST BOXES OPTIONAL

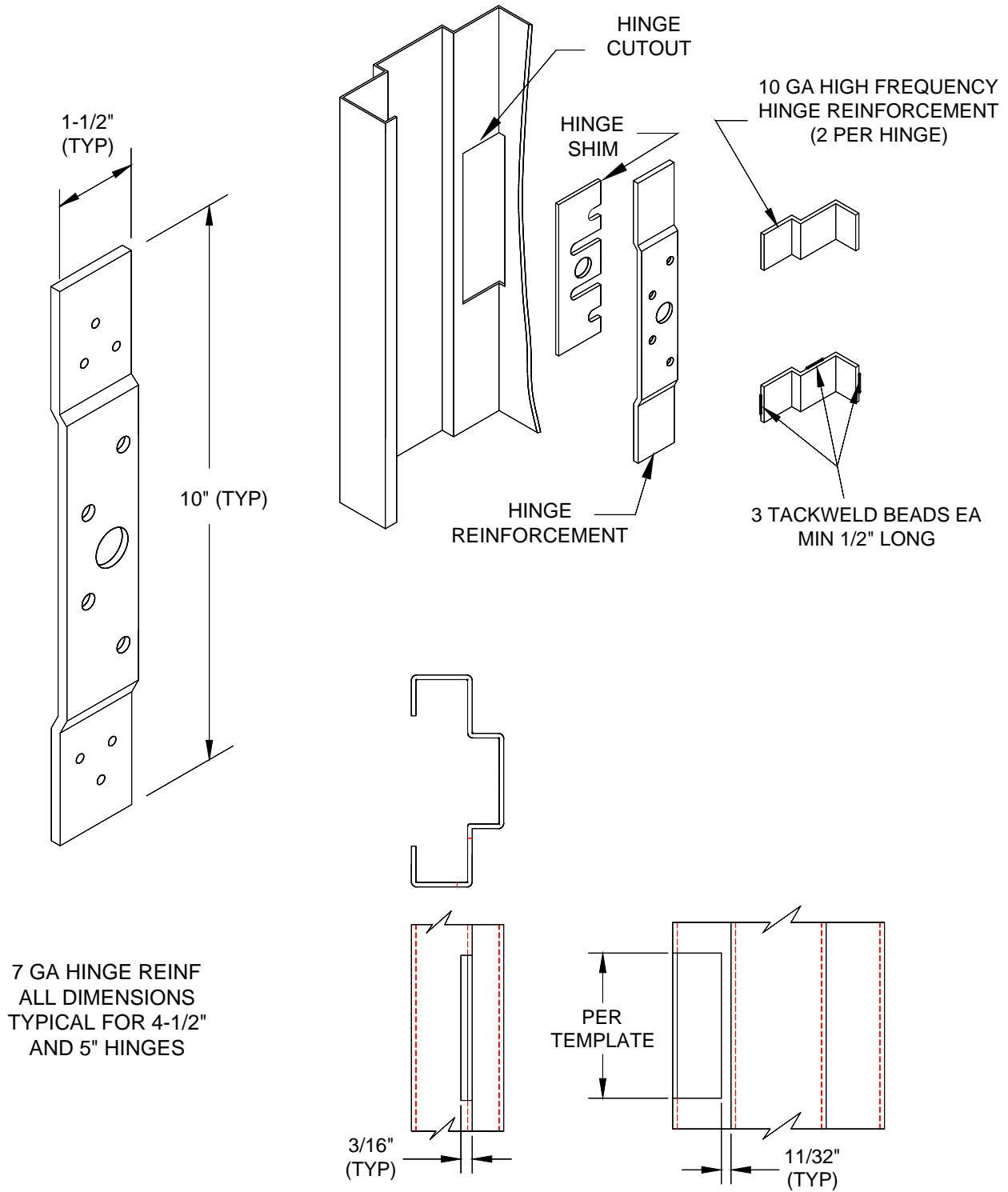




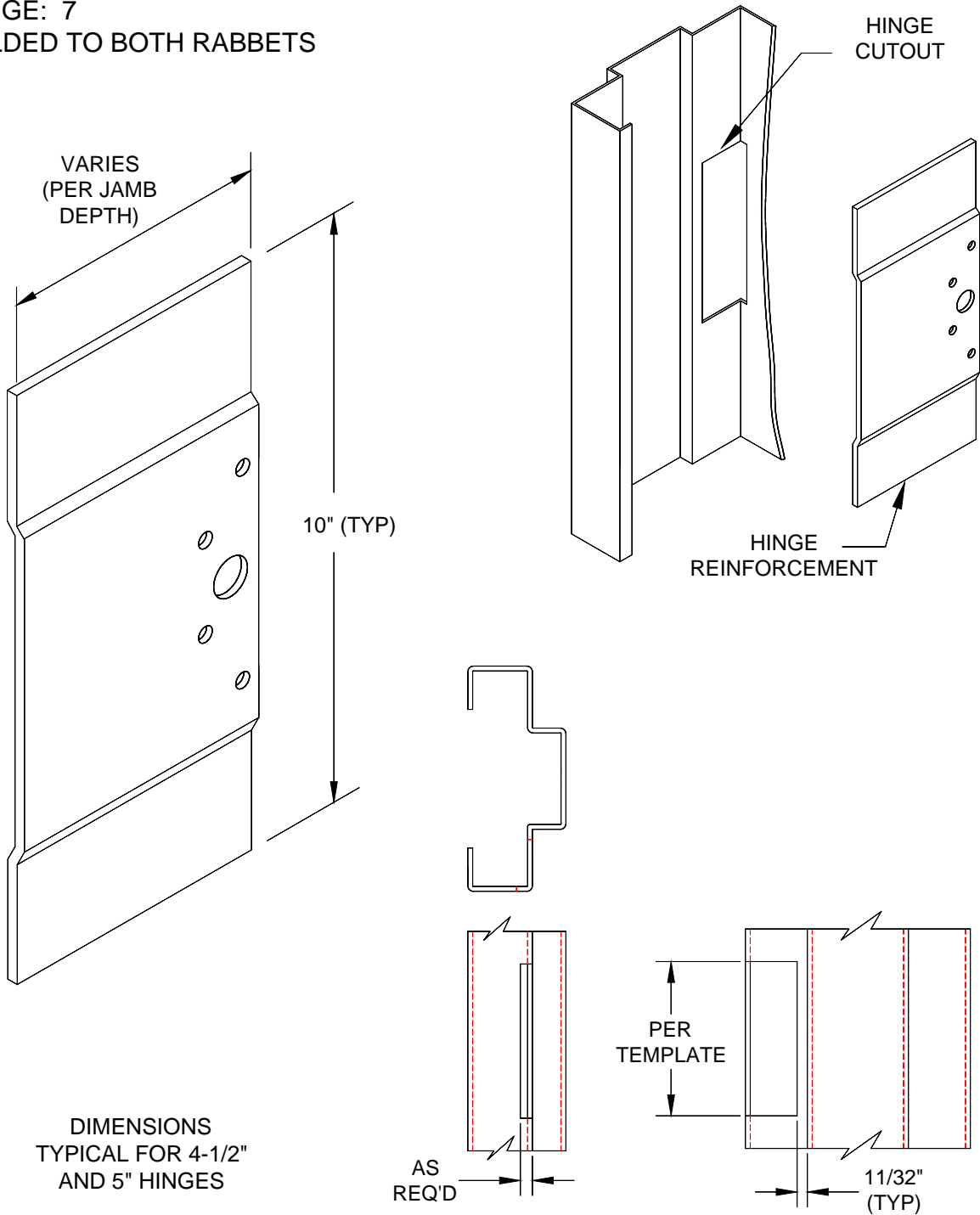
MATERIAL: HOT ROLLED STEEL  
GAUGE: 7  
THREE SPOTWELDS PER END  
DRILLED AND TAPPED BY OTHERS



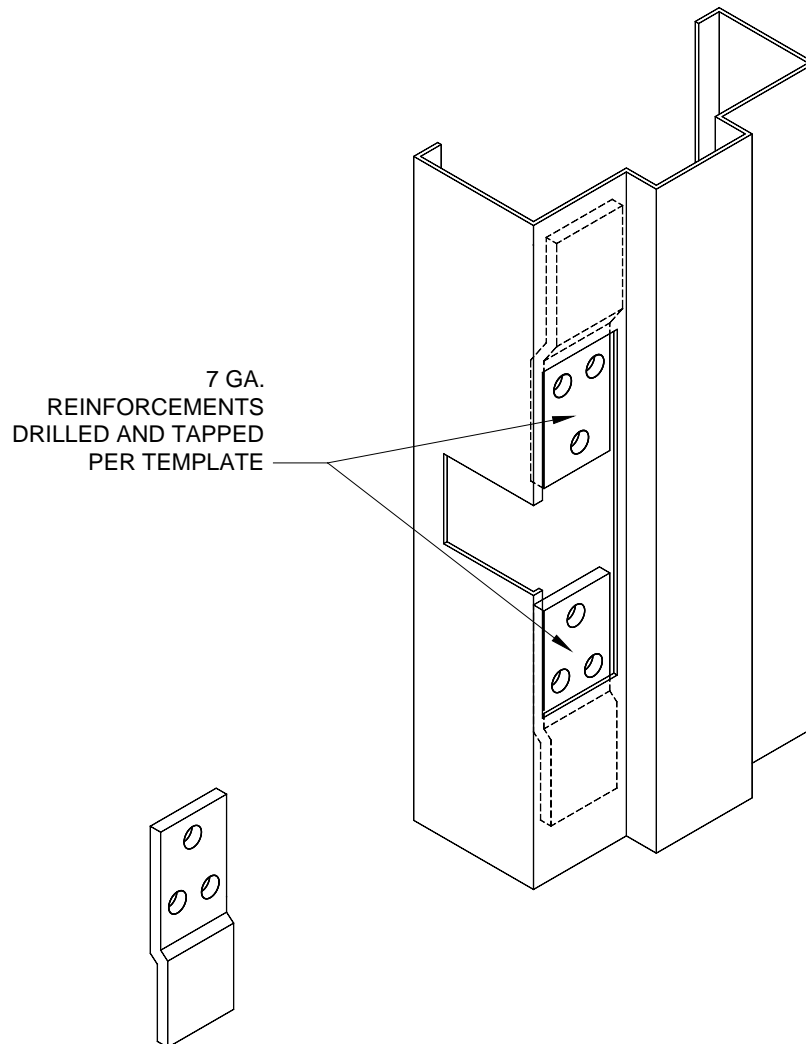
## HIGH FREQUENCY HINGE REINF



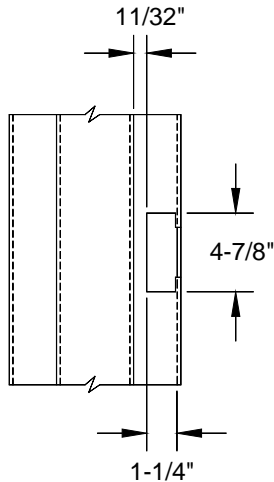
MATERIAL: HOT ROLLED STEEL  
GAUGE: 7  
WELDED TO BOTH RABBETS



MATERIAL: HOT ROLLED STEEL  
GAUGE: 7  
THREE SPOTWELDS PER END  
2-1/2" MIN FACE DIM FOR FIRE RATED OPENINGS  
DUST BOXES OPTIONAL

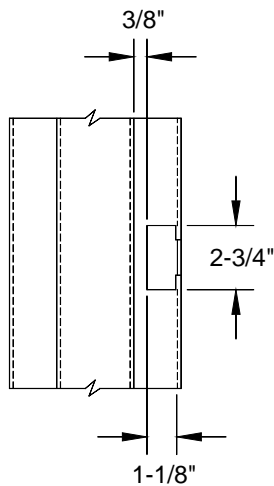
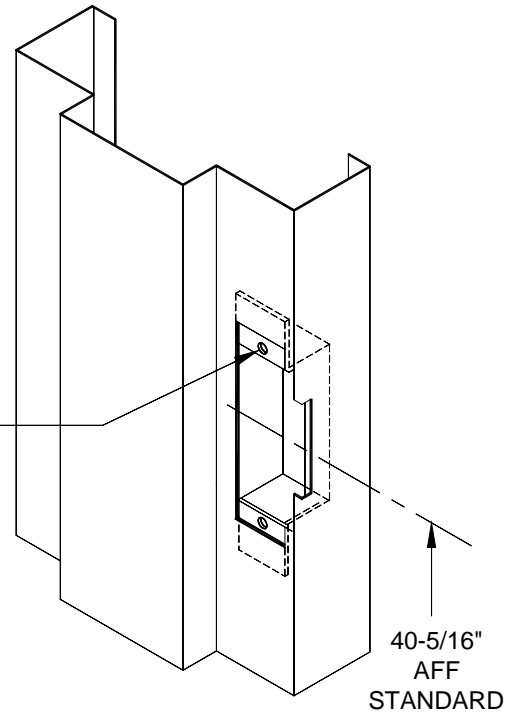


MATERIAL: GALVANNEAL  
GAUGE: 16  
TWO SPOTWELDS PER END



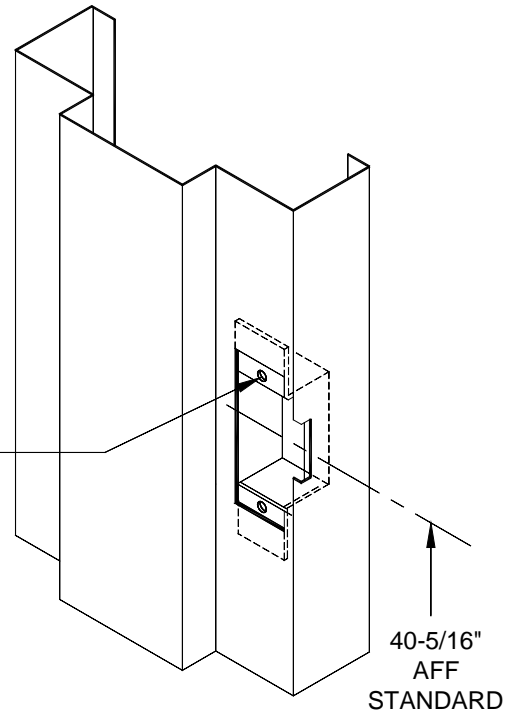
4-7/8" ASA STRIKE REINF  
(ANSI A115.1 AND A115.2)

SCREW HOLES EXTRUDED TO  
ACCOMMODATE 12-24 FHMS  
EQUAL TO 12 GA



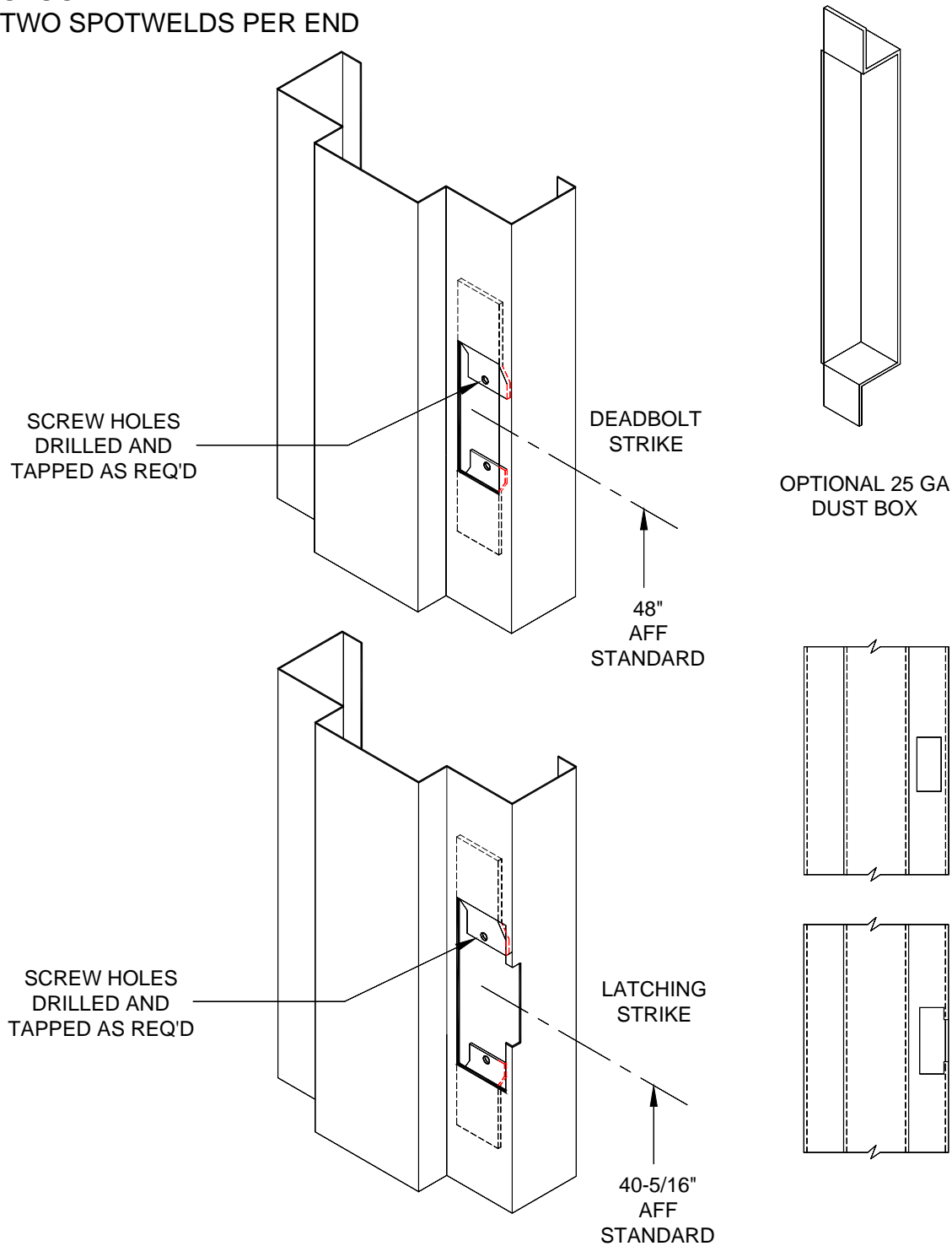
2-3/4" T-STRIKE REINF  
(ANSI A115.3)

SCREW HOLES EXTRUDED TO  
ACCOMMODATE 8-32 FHMS  
EQUAL TO 12 GA

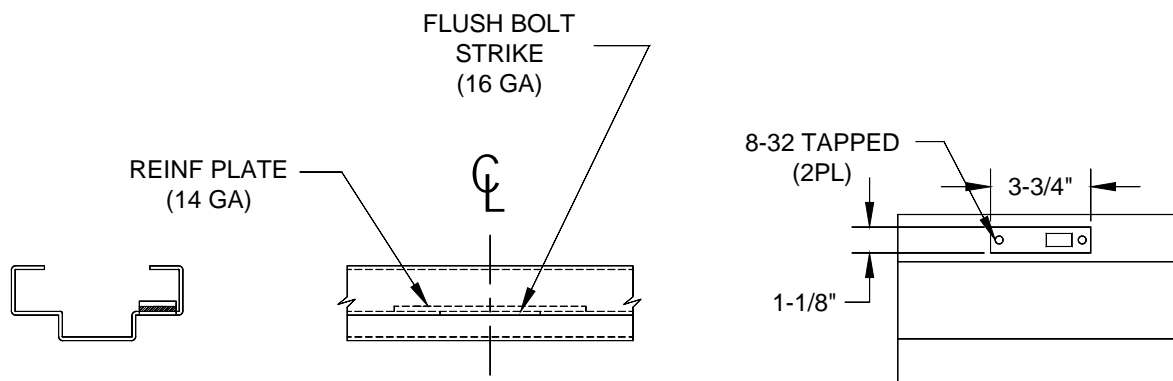
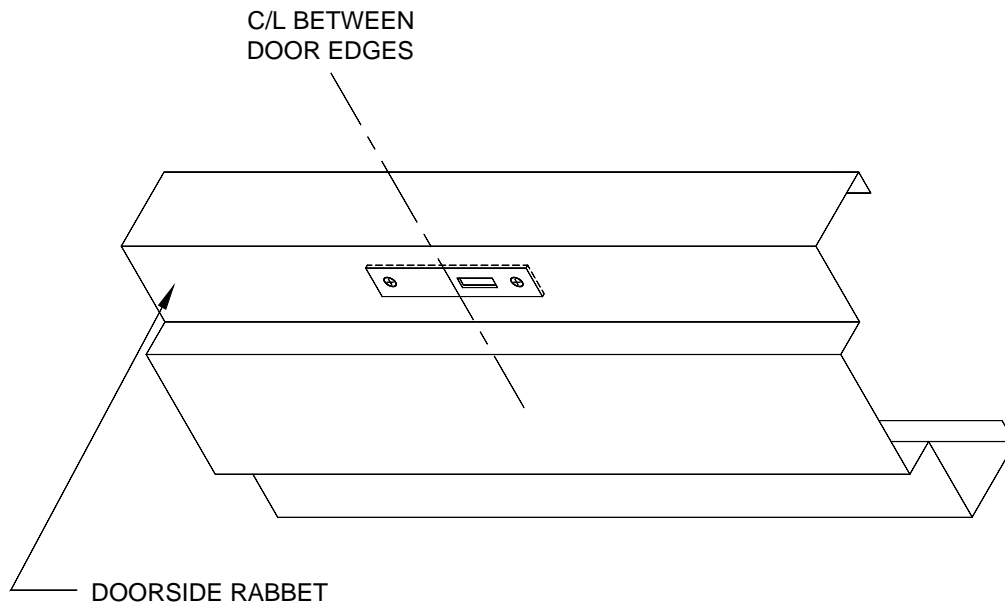


## OPTIONAL STRIKE REINFORCING TABS

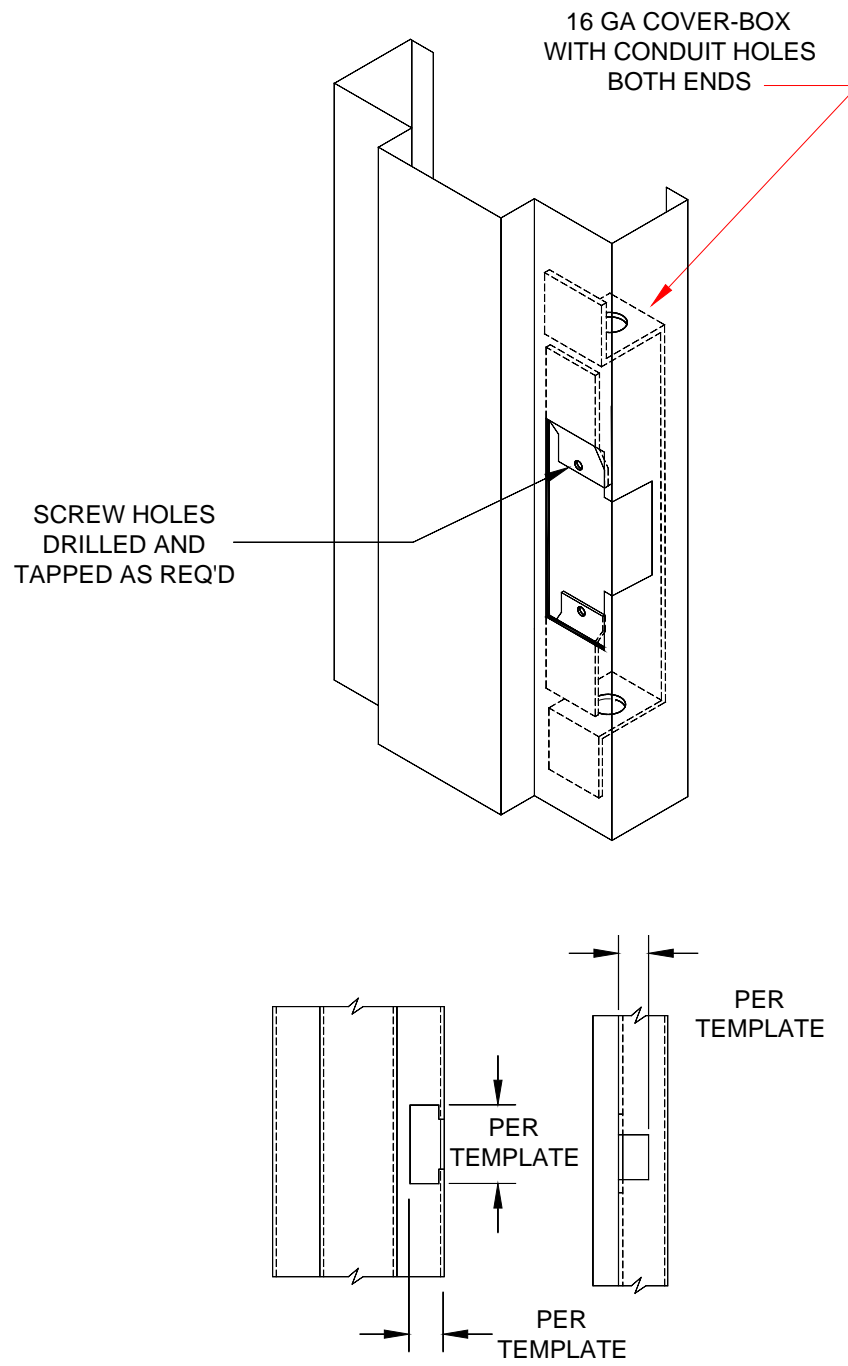
MATERIAL: HOT ROLLED BAR STOCK  
GAUGE: 11  
TWO SPOTWELDS PER END



MATERIAL: GALVANNEAL  
TWO SPOTWELDS PER END



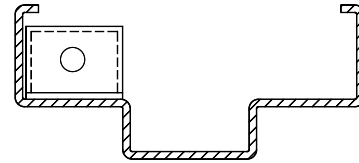
MATERIAL: HOT ROLLED STEEL  
GAUGE: 11  
TWO SPOTWELDS PER END



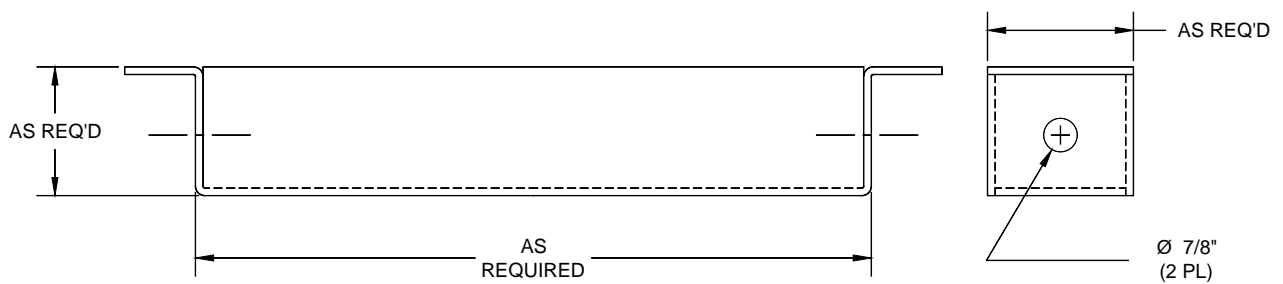


## CONDUIT COVERBOX

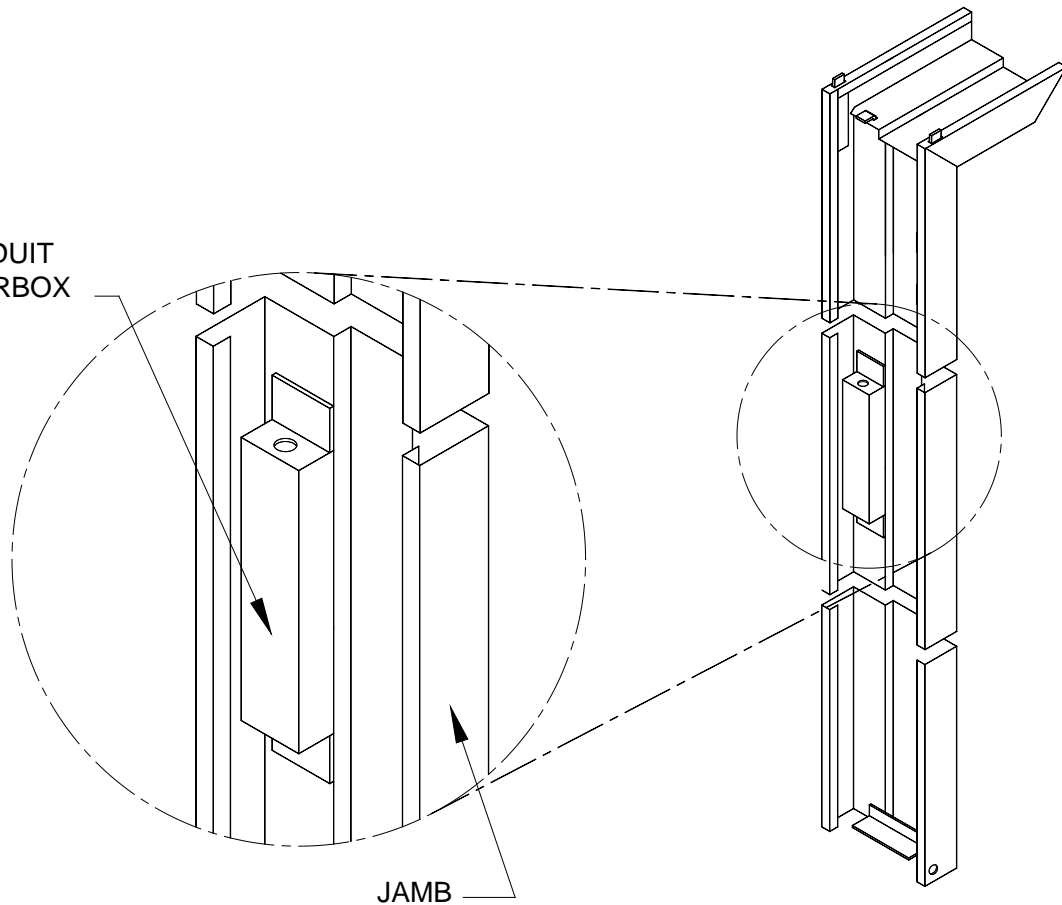
MATERIAL: GALVANNEAL  
GAUGE: 16  
TWO SPOTWELDS PER END  
TYPICAL AT ELECTRIC HINGE PREPS



TOP SECTION VIEW

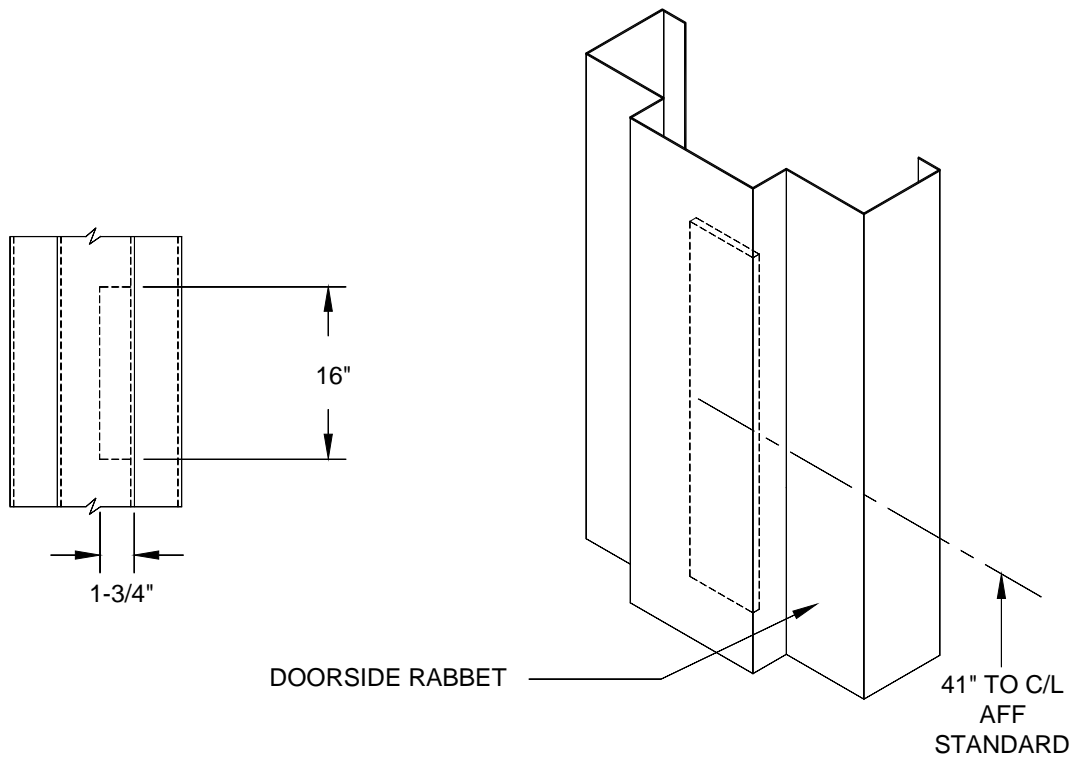


CONDUIT  
COVERBOX

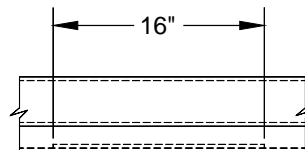
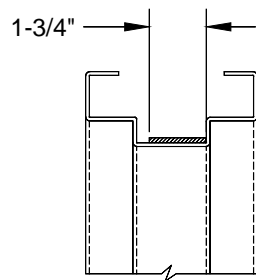
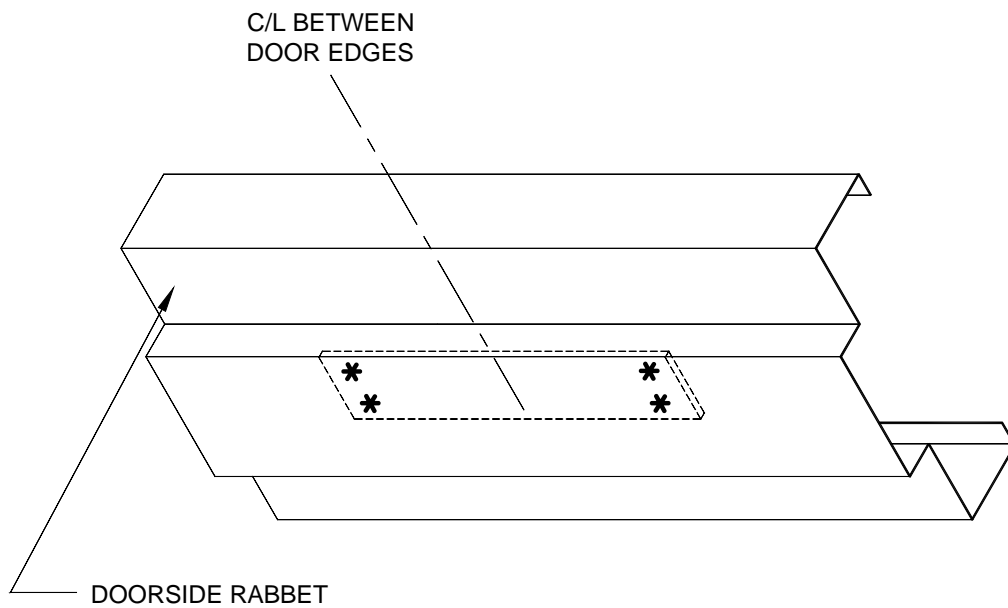


JAMB

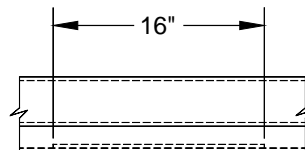
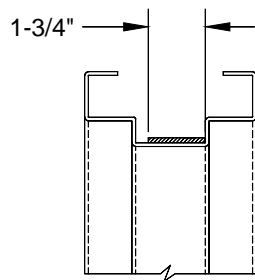
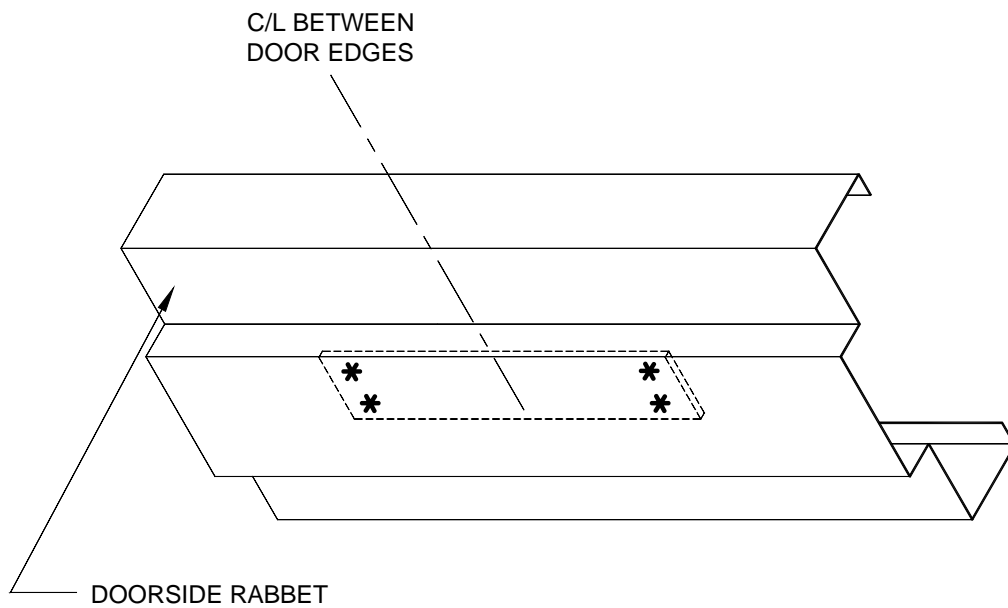
MATERIAL: GALVANNEAL  
GAUGE: 12  
TWO SPOTWELDS PER END



MATERIAL: GALVANNEAL  
GAUGE: 12  
TWO SPOTWELDS PER END

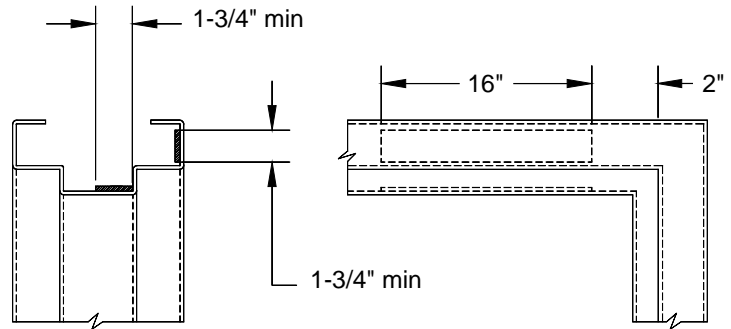


MATERIAL: GALVANNEAL  
GAUGE: 12  
TWO SPOTWELDS PER END

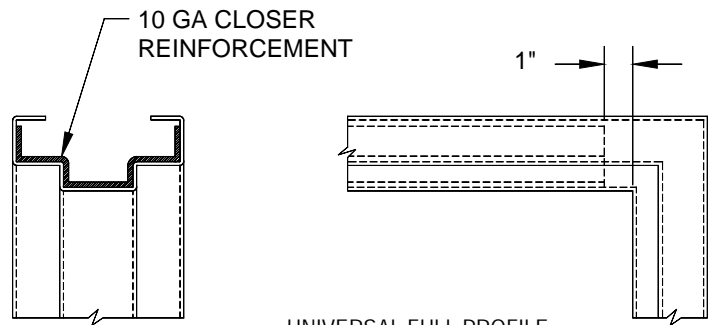
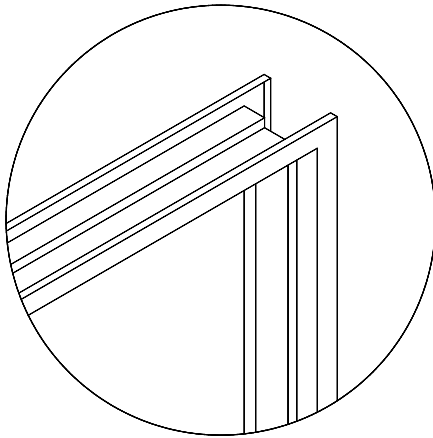


## STANDARD CLOSER REINFORCEMENTS

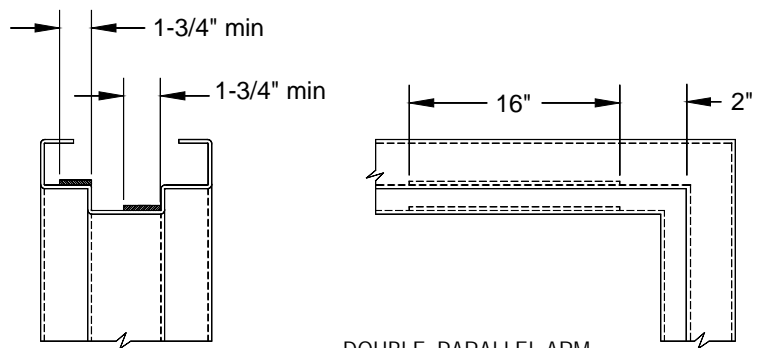
MATERIAL: GALVANNEAL  
GAUGE: 12  
TWO SPOTWELDS PER END



REGULAR ARM AND PARALLEL  
ARM REINFORCEMENT  
(BOTH APPLIED STANDARD)



UNIVERSAL FULL PROFILE  
CLOSER REINFORCEMENT

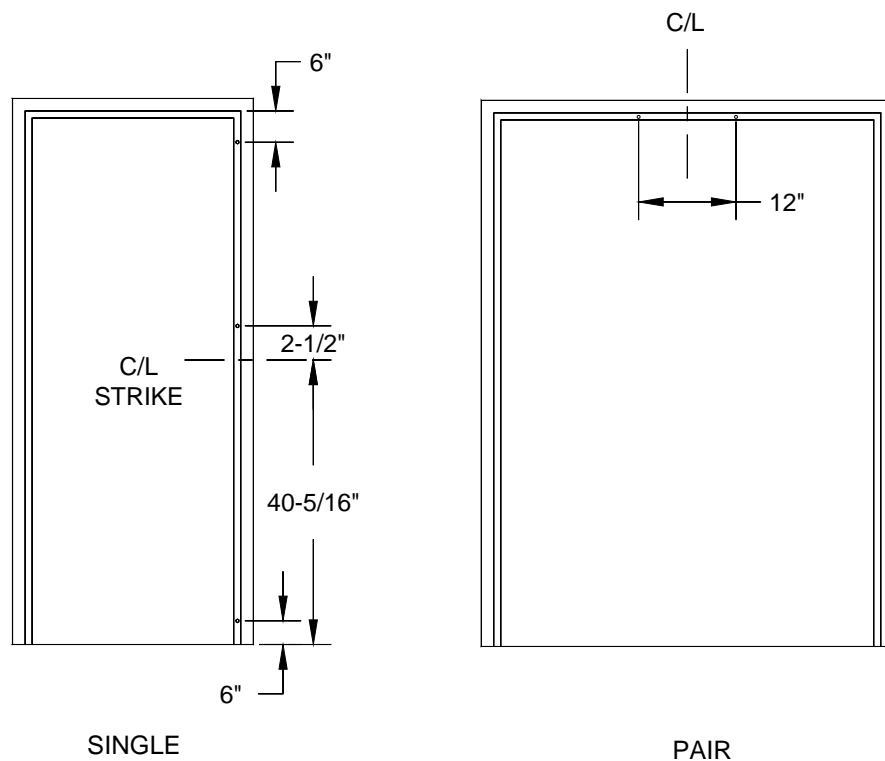
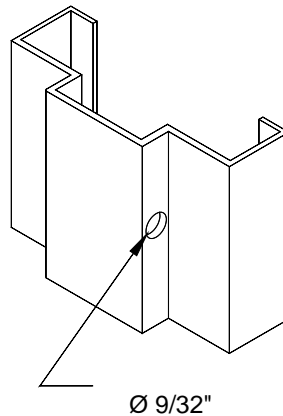


DOUBLE PARALLEL ARM  
REINFORCEMENT

## DOOR SILENCER PREPARATION

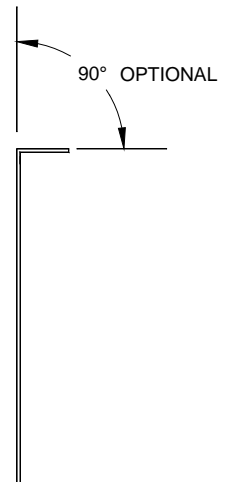
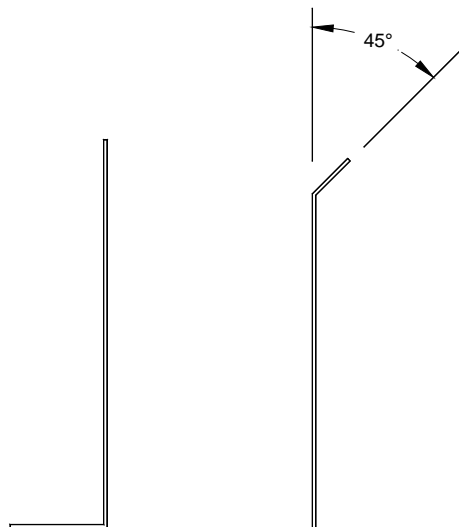
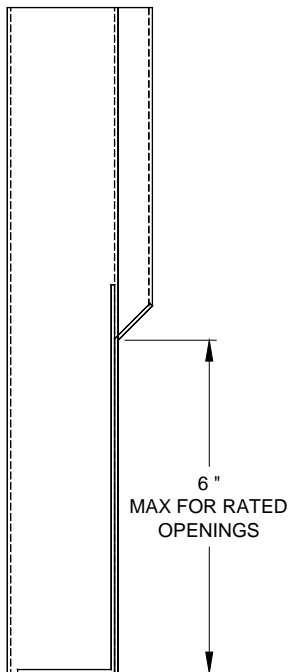
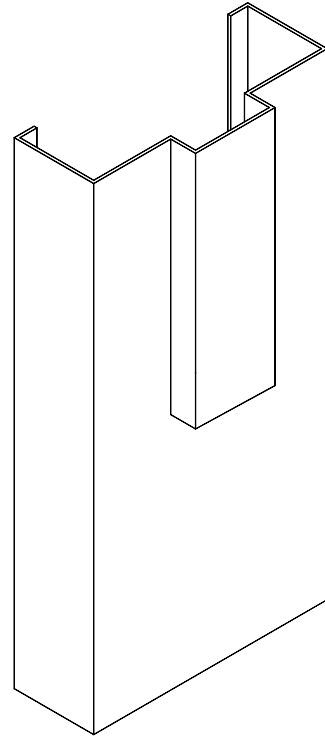
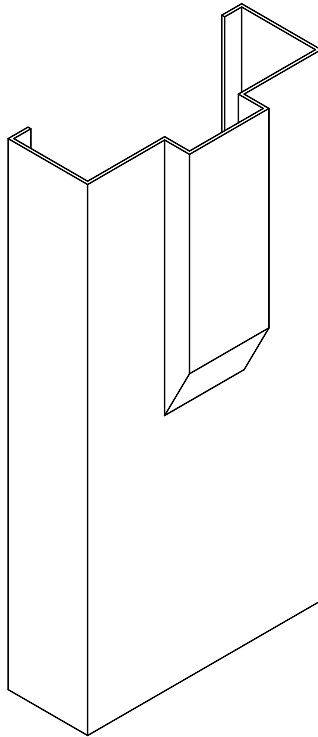
SILENCERS ARE PUNCHED  
ONLY UPON REQUEST

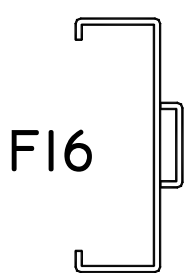
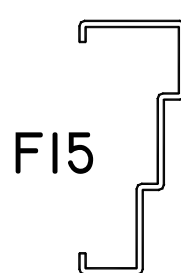
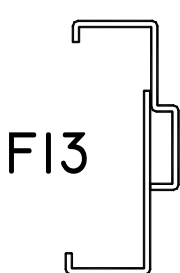
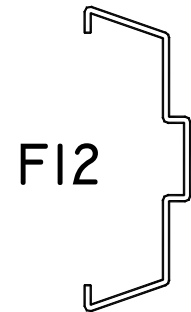
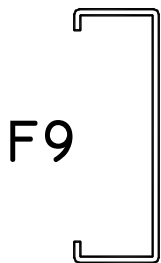
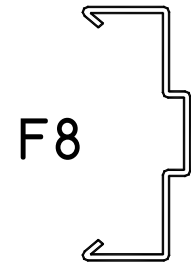
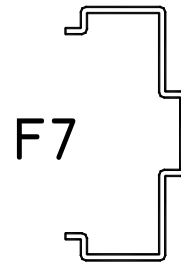
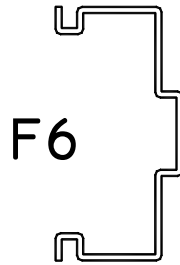
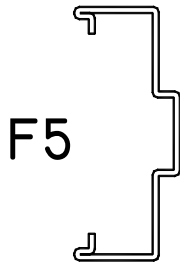
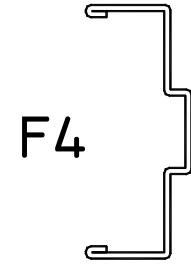
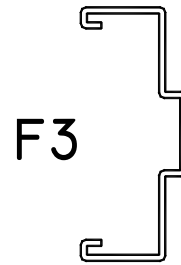
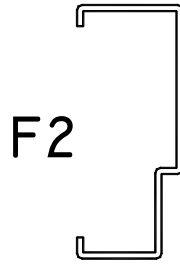
3 EA AT SINGLE SWING  
2 EA AT PAIR SWING



## HOSPITAL STOP

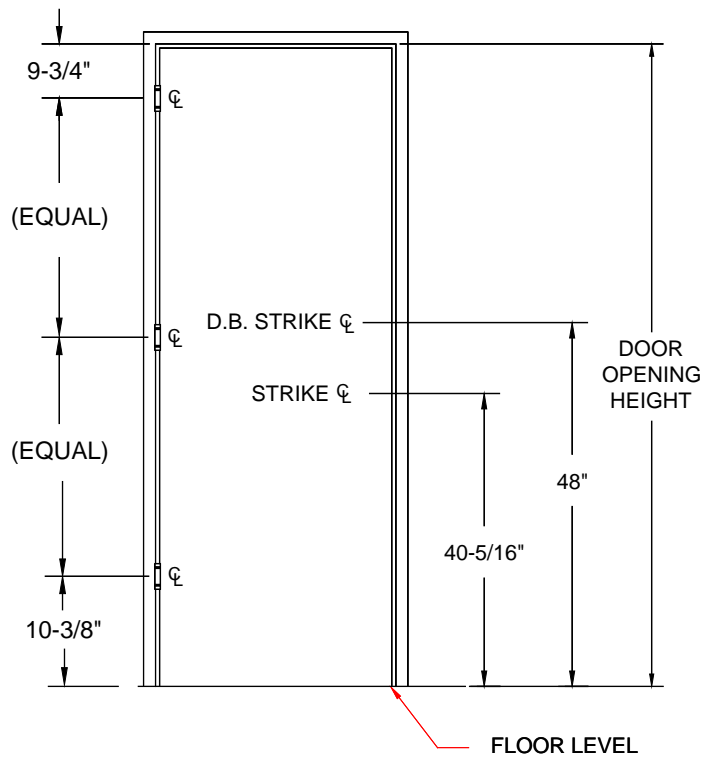
GAUGE: 16  
AVAILABLE FOR 45° OR 90°



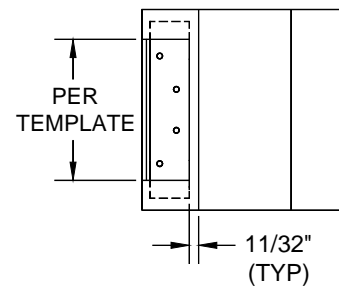
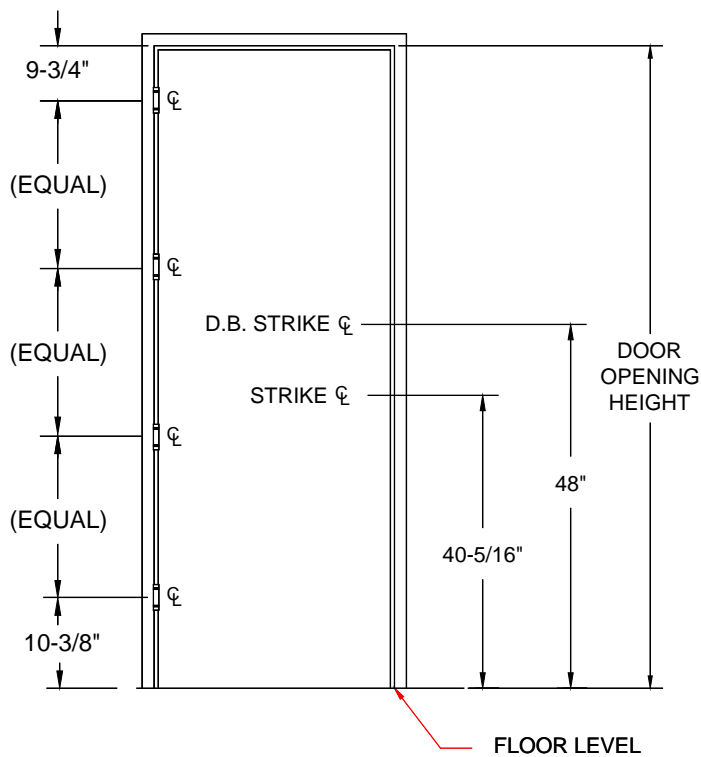
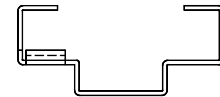


FRAME PROFILES SHOWN MAY HAVE ANY BACKBEND  
STYLE OR COMBINATION OF BACKBEND STYLES

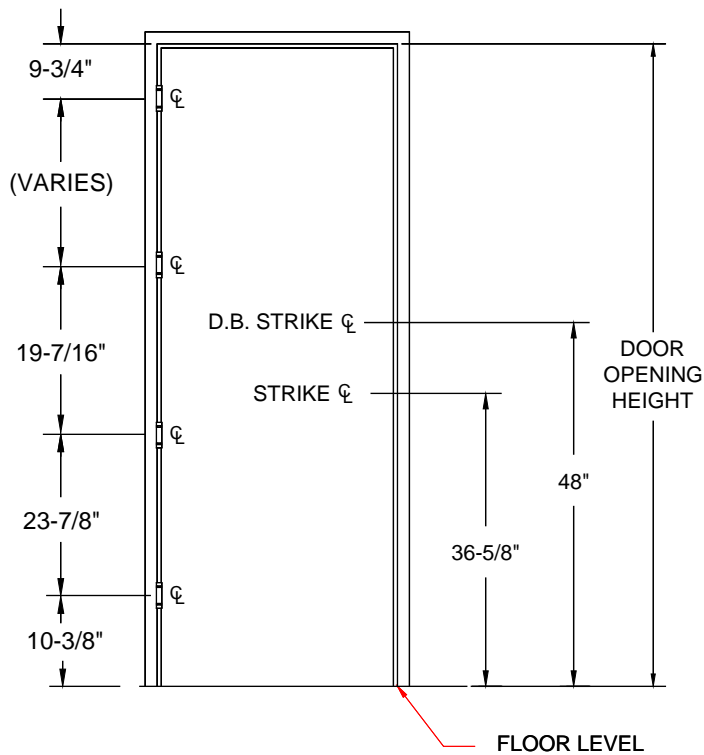




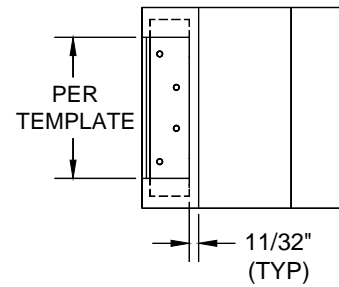
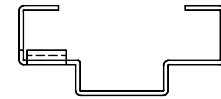
## 3-HINGES

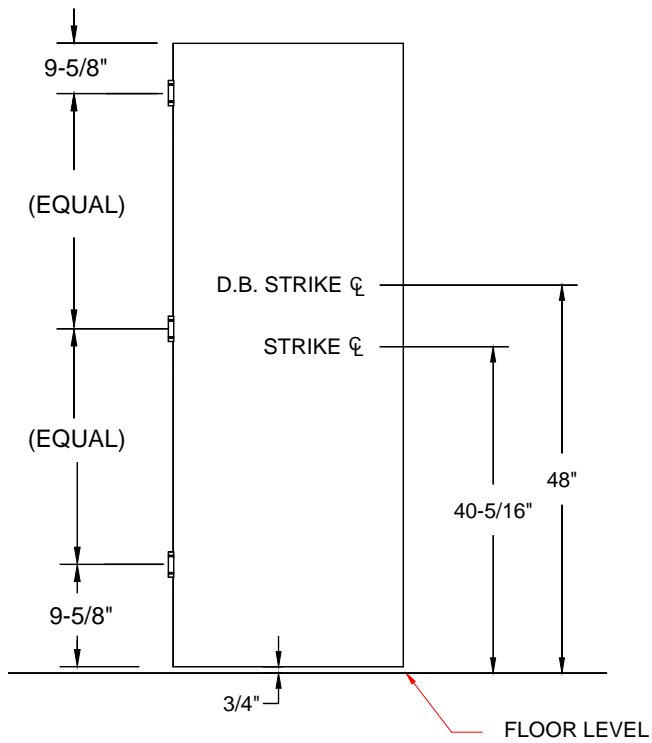


## 4-HINGES

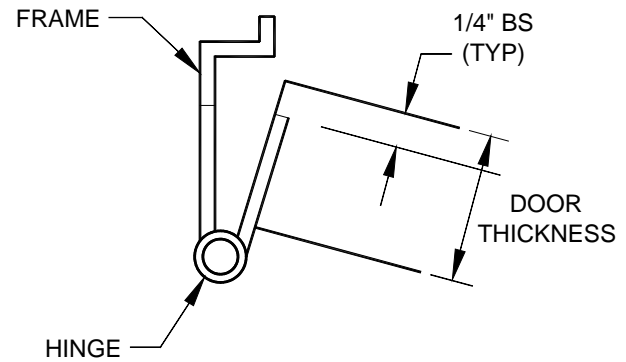


**DUTCH**

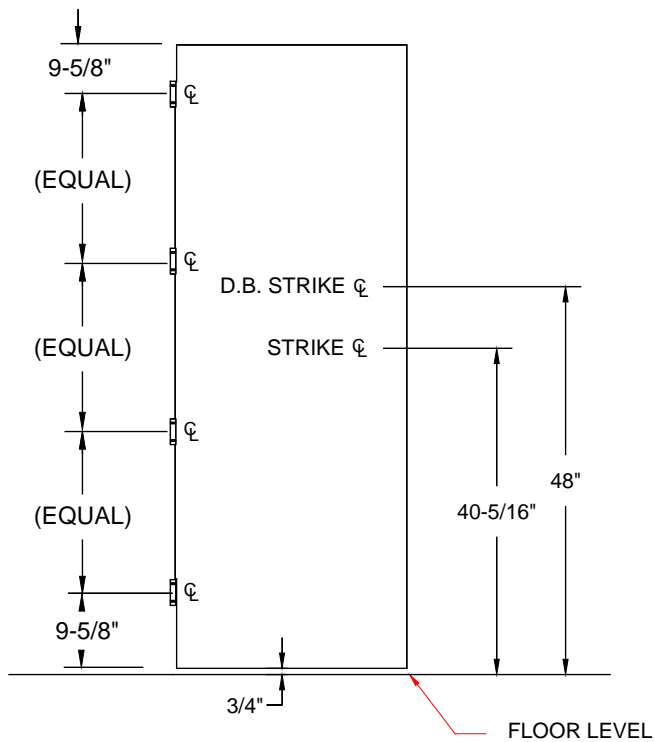


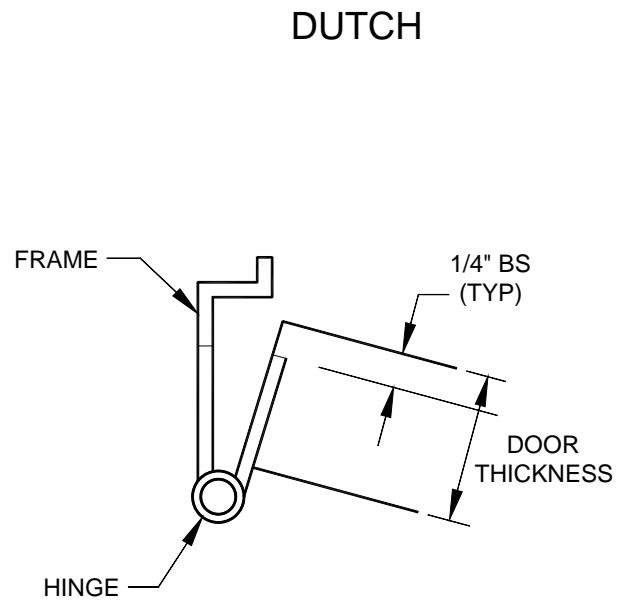
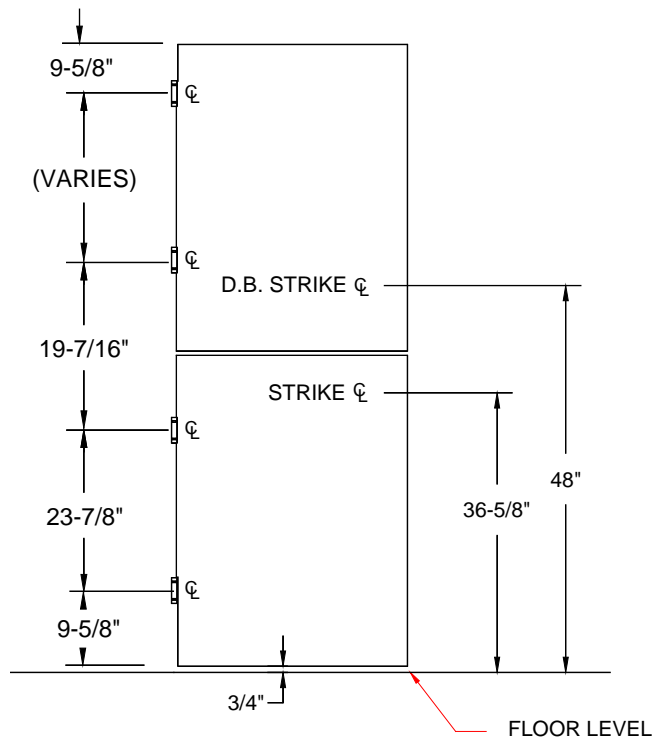


### 3-HINGES



## 4-HINGES

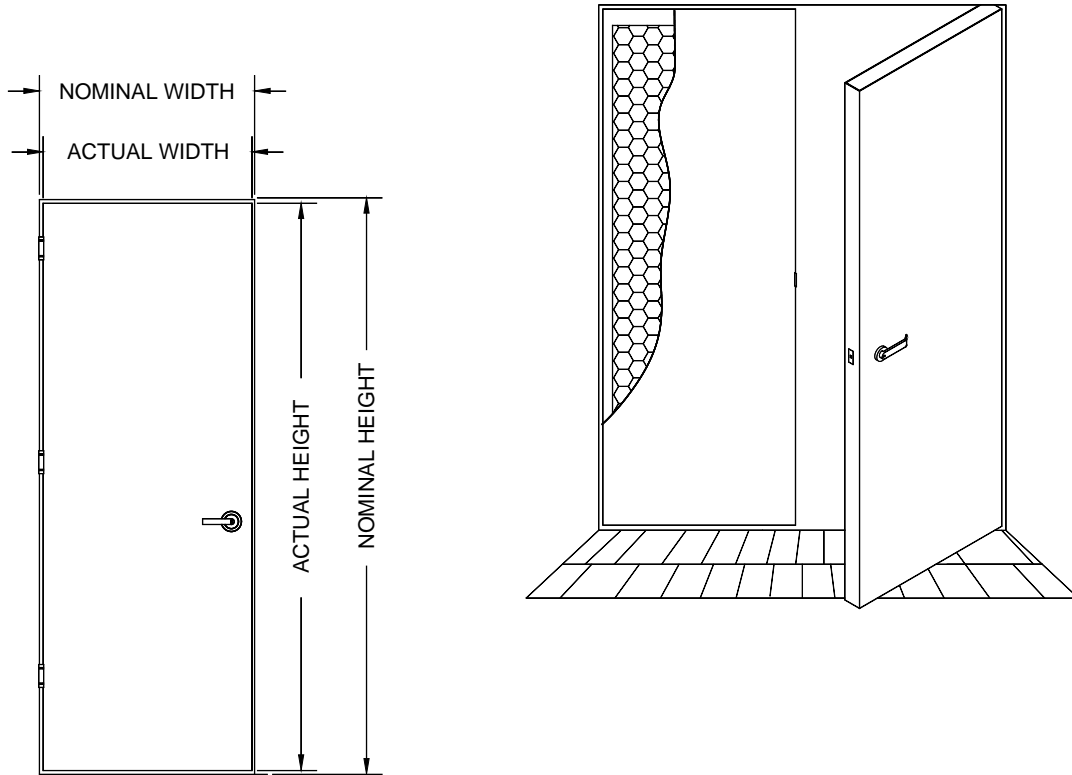




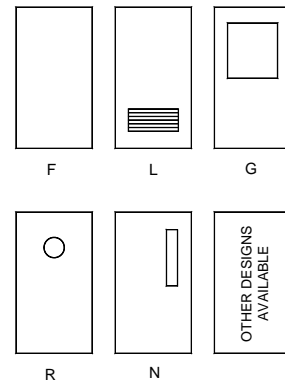
## STANDARD SPECIFICATION

MATERIAL: GALVANNEAL

GAUGE: 18



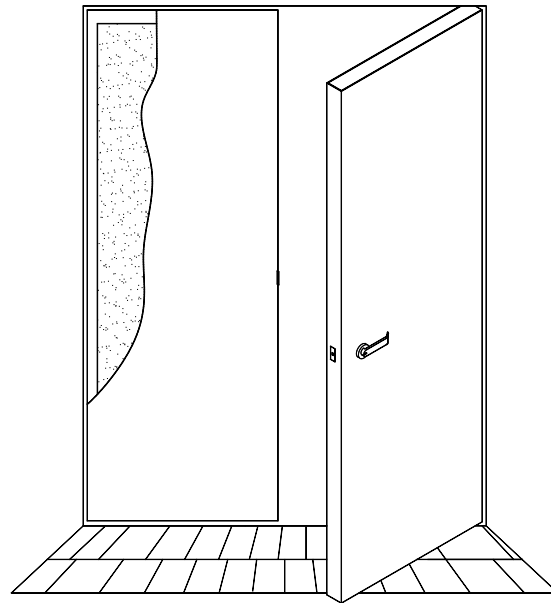
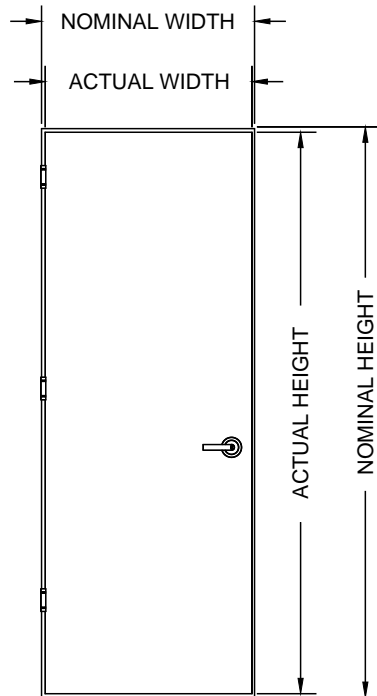
- 1.) 1-3/4" STANDARD DOOR THICKNESS, OTHER THICKNESSES AVAILABLE.
- 2.) 16, 14 AND 12 GAUGE AVAILABLE.
- 3.) G90 GALVANIZED AVAILABLE. STAINLESS STEELS 304 AND 316 AVAILABLE IN #4-SATIN, #2B-MILL OR #8-MIRROR FINISHES.
- 4.) 1" HONEYCOMB HEX CELLS PERMANENTLY BONDED TO BOTH FACE SHEETS. IMPACT RESISTANT (HONEYCOMB IS CRUSH RESISTANT TO 45 PSI).
- 5.) RESIN IMPREGNATED HONEYCOMB OPTIONAL
- 6.) 18 GA TOP AND BOTTOM CHANNELS SPOTWELDED TO FACE SHEETS.
- 7.) CONTINUOUS WELD SEAMLESS EDGE (STANDARD FOR MILD STEEL - OPEN SEAM AVAILABLE).  
OPEN SEAM EDGE (STANDARD FOR STAINLESS STEEL - SEAMLESS AVAILABLE).
- 8.) HARDWARE REINFORCEMENTS:  
3/16" FOR HINGES  
12 GA FOR LOCKS  
14 GA FOR CLOSER
- 9.) WHI LABELS AVAILABLE



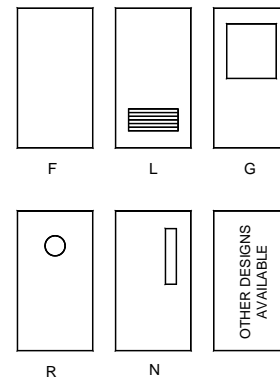
## STANDARD SPECIFICATION

MATERIAL: GALVANNEAL

GAUGE: 18



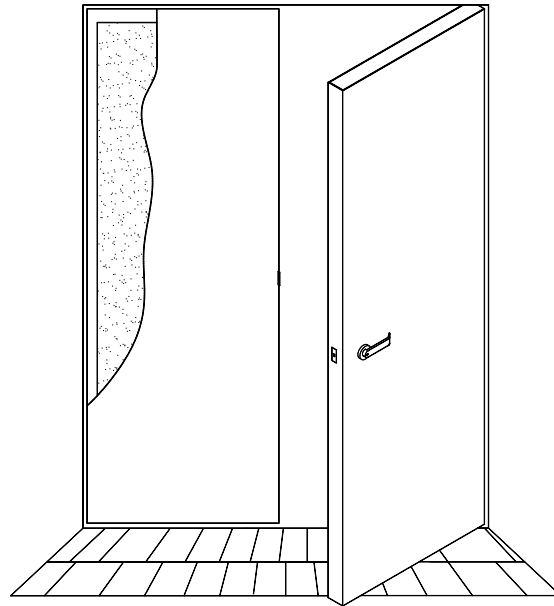
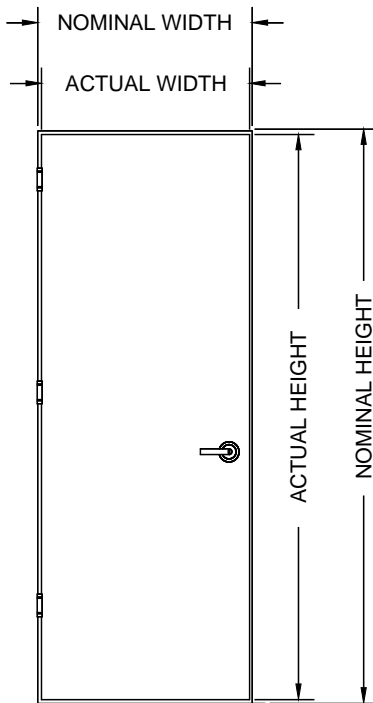
- 1.) 1-3/4" STANDARD DOOR THICKNESS, OTHER THICKNESSES AVAILABLE.
- 2.) 16, 14 AND 12 GAUGE AVAILABLE.
- 3.) G90 GALVANIZED AVAILABLE. STAINLESS STEELS 304 AND 316 AVAILABLE IN #4-SATIN, #2B-MILL OR #8-MIRROR FINISHES.
- 4.) 0.7 LB DENSITY POLYSTYRENE CORE PERMANENTLY BONDED TO BOTH FACE SHEETS. 1.0 LB DENSITY CORE AVAILABLE.
- 5.) THERMAL BARRIER FOR 0.7 LB CORE: R-VALUE = 2.39 / U-FACTOR = 0.42 TESTED PER ASTM C1199/E1423
- 6.) 18 GA TOP AND BOTTOM CHANNELS SPOTWELDED TO FACE SHEETS.
- 7.) CONTINUOUS WELD SEAMLESS EDGE (STANDARD FOR MILD STEEL - OPEN SEAM AVAILABLE).  
OPEN SEAM EDGE (STANDARD FOR STAINLESS STEEL - SEAMLESS AVAILABLE).
- 8.) HARDWARE REINFORCEMENTS:  
3/16" FOR HINGES  
12 GA FOR LOCKS  
14 GA FOR CLOSER
- 9.) WHI LABELS AVAILABLE



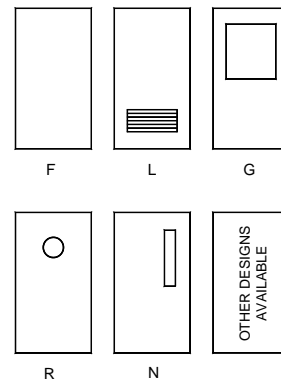
## STANDARD SPECIFICATION

MATERIAL: GALVANNEAL

GAUGE: 18



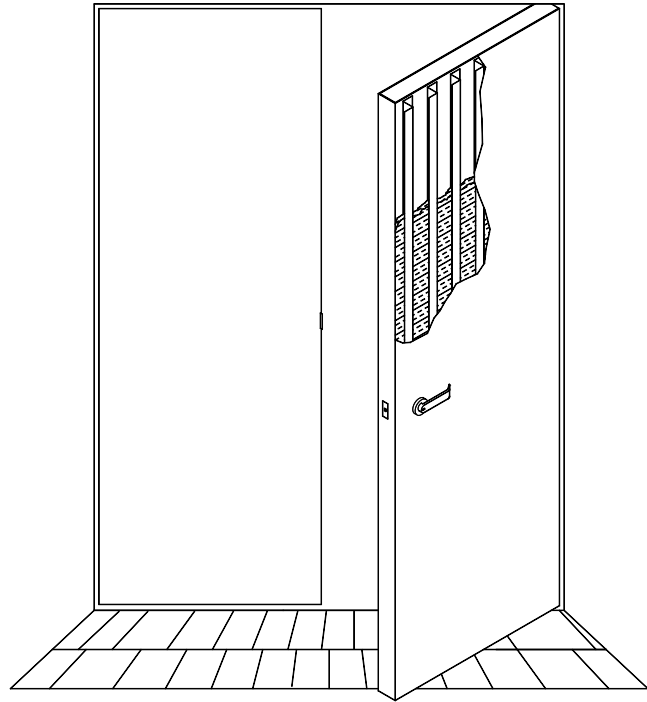
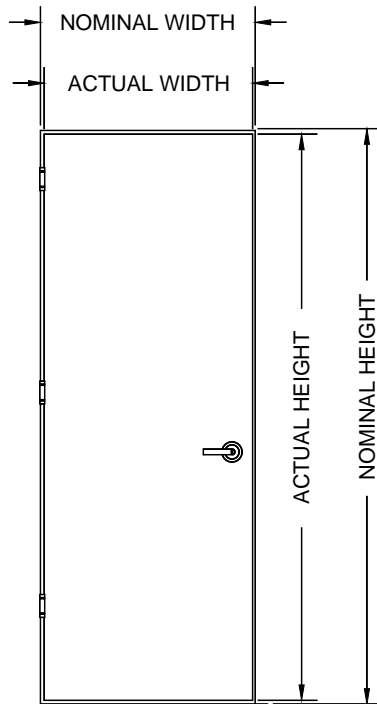
- 1.) 1-3/4" STANDARD DOOR THICKNESS, OTHER THICKNESSES AVAILABLE.
- 2.) 16, 14 AND 12 GAUGE AVAILABLE.
- 3.) G90 GALVANIZED AVAILABLE. STAINLESS STEELS 304 AND 316 AVAILABLE IN #4-SATIN, #2B-MILL OR #8-MIRROR FINISHES.
- 4.) 2 LB DENSITY POLYURETHANE CORE PERMANENTLY BONDED TO BOTH FACE SHEETS.
- 5.) THERMAL BARRIER R-FACTOR: 2.77 TESTED PER SDI-113, ASTM C1199/E1423
- 6.) 18 GA TOP AND BOTTOM CHANNELS SPOTWELDED TO FACE SHEETS.
- 7.) CONTINUOUS WELD SEAMLESS EDGE (STANDARD FOR MILD STEEL - OPEN SEAM AVAILABLE).  
OPEN SEAM EDGE (STANDARD FOR STAINLESS STEEL - SEAMLESS AVAILABLE).
- 8.) HARDWARE REINFORCEMENTS:  
3/16" FOR HINGES  
12 GA FOR LOCKS  
14 GA FOR CLOSER



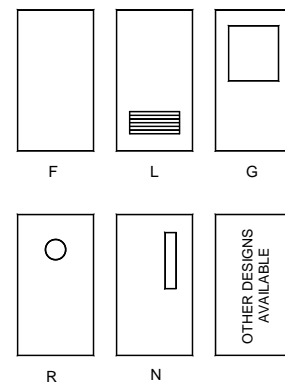
## STANDARD SPECIFICATION

MATERIAL: GALVANNEAL

GAUGE: 18



- 1.) 1-3/4" STANDARD DOOR THICKNESS, OTHER THICKNESSES AVAILABLE.
- 2.) 16, 14, 12 AND 10 GAUGE AVAILABLE.
- 3.) G90 GALVANIZED AVAILABLE. STAINLESS STEELS 304 AND 316 AVAILABLE IN #4-SATIN, #2B-MILL OR #8-MIRROR FINISHES.
- 4.) 20 GA STIFFENERS 6" ON CENTER WITH FIBERGLASS INSULATION BETWEEN. (OTHER GAUGES AVAILABLE)
- 5.) 18 GA TOP AND BOTTOM CHANNELS SPOTWELDED TO FACE SHEETS. (OTHER GAUGES AVAILABLE)
- 6.) CONTINUOUS WELD SEAMLESS EDGE (STANDARD FOR MILD STEEL - OPEN SEAM AVAILABLE).  
OPEN SEAM EDGE (STANDARD FOR STAINLESS STEEL - SEAMLESS AVAILABLE).
- 7.) HARDWARE REINFORCEMENTS:  
3/16" FOR HINGES  
12 GA FOR LOCKS  
14 GA FOR CLOSER
- 8.) WHI LABELS AVAILABLE

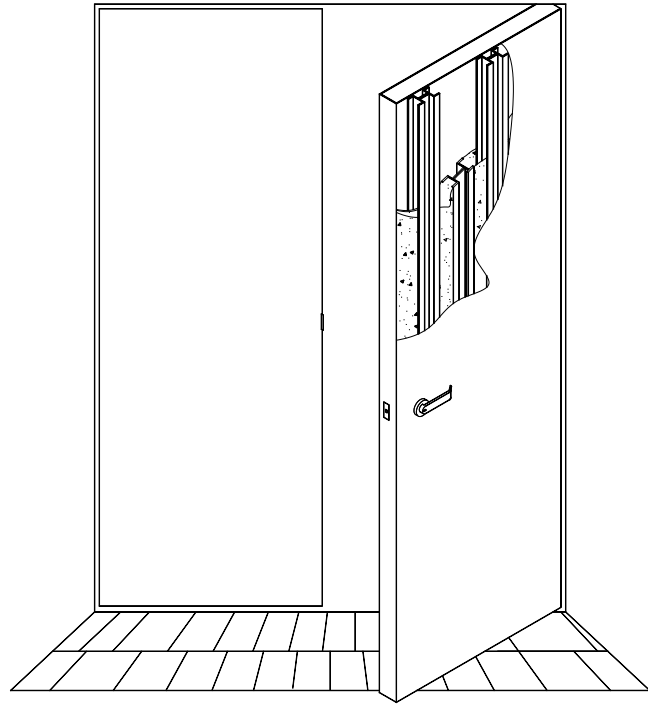
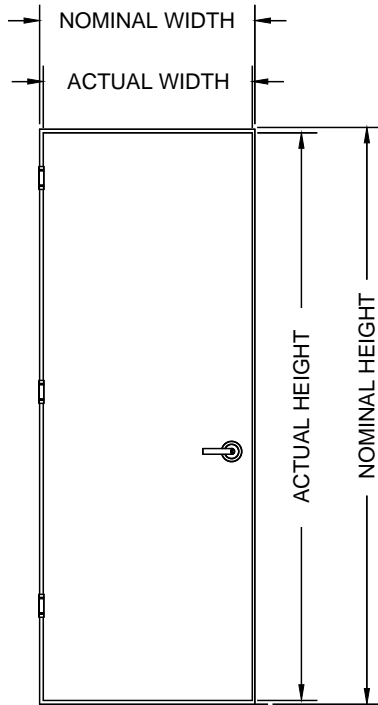




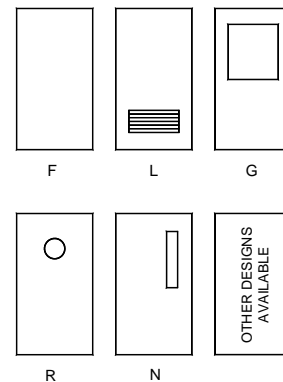
## STANDARD SPECIFICATION

MATERIAL: GALVANNEAL

GAUGE: 18



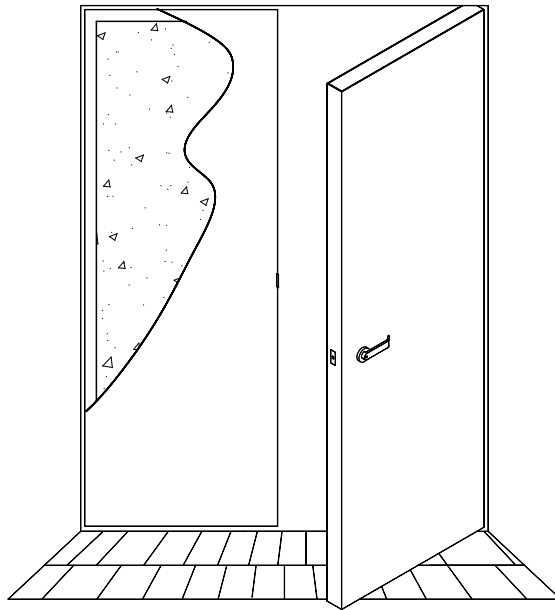
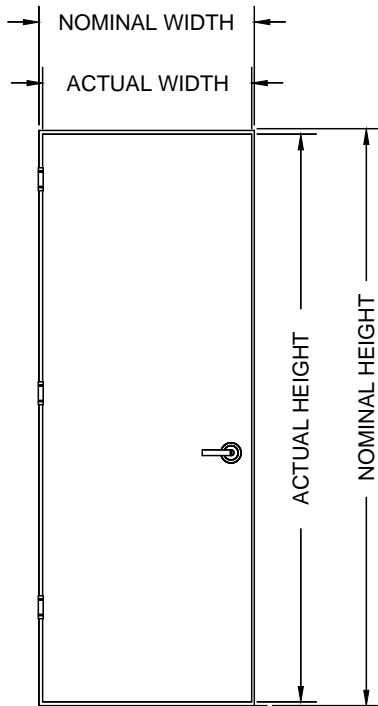
- 1.) 1-3/4" STANDARD DOOR THICKNESS, OTHER THICKNESSES AVAILABLE.
- 2.) 16, 14, 12 AND 10 GAUGE AVAILABLE.
- 3.) G90 GALVANIZED AVAILABLE. STAINLESS STEELS 304 AND 316 AVAILABLE IN #4-SATIN, #2B-MILL OR #8-MIRROR FINISHES.
- 4.) 20 GA STIFFENERS 6" ON CENTER WITH FIBERGLASS INSULATION BETWEEN. (OTHER GAUGES AVAILABLE)
- 5.) 18 GA TOP AND BOTTOM CHANNELS SPOTWELDED TO FACE SHEETS. (OTHER GAUGES AVAILABLE)
- 6.) CONTINUOUS WELD SEAMLESS EDGE (STANDARD FOR MILD STEEL - OPEN SEAM AVAILABLE).  
OPEN SEAM EDGE (STANDARD FOR STAINLESS STEEL - SEAMLESS AVAILABLE).
- 7.) HARDWARE REINFORCEMENTS:  
3/16" FOR HINGES  
12 GA FOR LOCKS  
14 GA FOR CLOSER
- 8.) WHI LABELS AVAILABLE



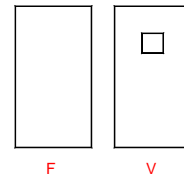
## STANDARD SPECIFICATION

MATERIAL: GALVANNEAL

GAUGE: 18



- 1.) 1-3/4" STANDARD DOOR THICKNESS.
- 2.) 16 AND 14 GAUGE AVAILABLE.
- 3.) G90 GALVANIZED AVAILABLE.
- 4.) PROPRIETARY TEMP RISE CORE PERMANENTLY BONDED TO BOTH FACE SHEETS.
- 5.) 18 GA TOP AND BOTTOM CHANNELS SPOTWELDED TO FACE SHEETS.
- 6.) CONTINUOUS WELD SEAMLESS EDGE STANDARD (OPEN SEAM AVAILABLE).
- 7.) HARDWARE REINFORCEMENTS:
  - 3/16" FOR HINGES
  - 12 GA FOR LOCKS
  - 14 GA FOR CLOSER
- 8.) 60-180 MIN WHI LABELS AVAILABLE FOR 450° AND 250° TEMP RISE AT 30 MIN.
- 9.) SIZES AVAILABLE UP TO 5'-0" x 12'-0" SINGLE SWING  
10'-0" x 12'-0" PAIR SWING.

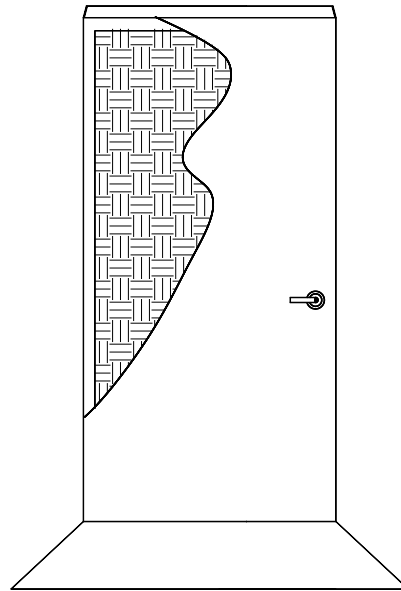
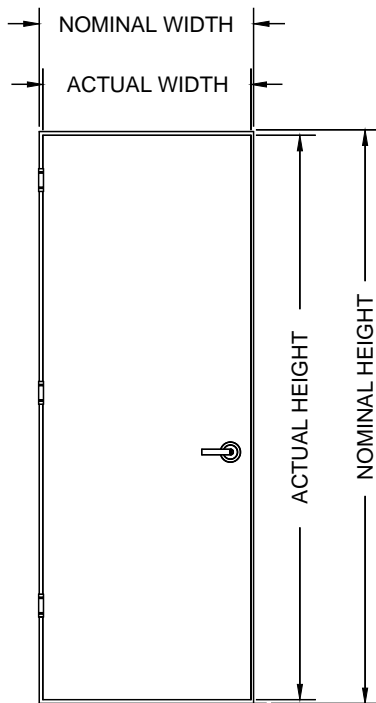


## STANDARD SPECIFICATION

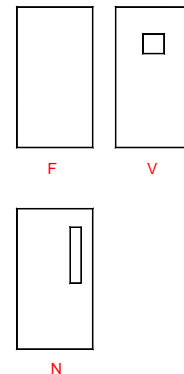
MATERIAL: GALVANNEAL

GAUGE: 16

UL 752 LEVELS 1 - 8 AVAILABLE



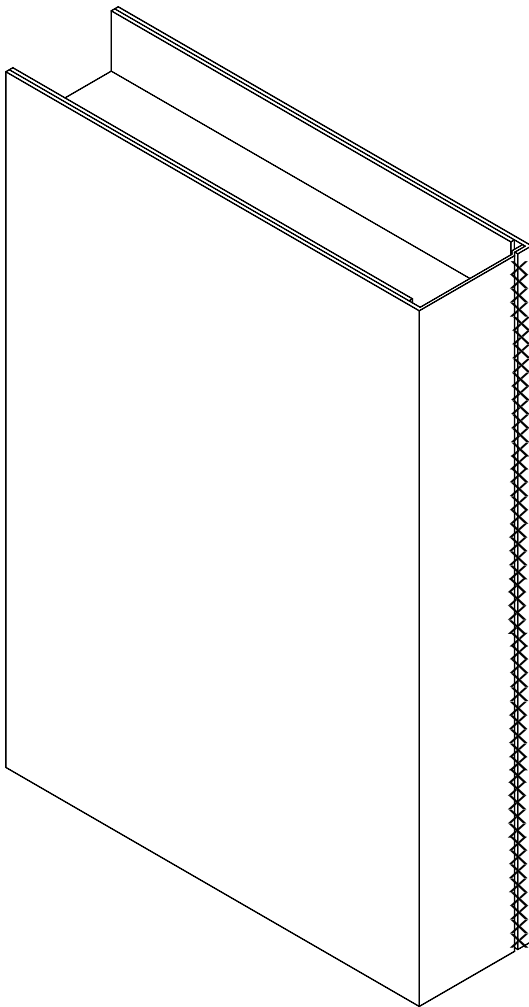
- 1.) 1-3/4" STANDARD DOOR THICKNESS.
- 2.) 14 GAUGE AVAILABLE.
- 3.) G90 GALVANIZED AVAILABLE. STAINLESS STEELS 304 AND 316  
AVAILABLE IN #4-SATIN, #2B-MILL OR #8-MIRROR FINISHES.
- 4.) PROPRIETARY BULLET RESISTANT CORE.
- 5.) 18 GA FLUSH TOP AND BOTTOM CHANNELS WELDED TO FACE SHEETS.
- 6.) CONTINUOUS WELD SEAMLESS EDGE STANDARD.
- 7.) HARDWARE REINFORCEMENTS:  
3/16" FOR HINGES  
12 GA FOR LOCKS  
14 GA FOR CLOSER
- 8.) SIZES AVAILABLE UP TO 4'-0" x 8'-0" SINGLE SWING.
- 9.) LEVELS I - III  
APPROXIMATELY 9 LBS/SQ FT  
LITES AVAILABLE UP TO 100 SQ INCHES (GLASS BY OTHERS)  
CYLINDRICAL LOCKS, MORTISE LOCKS, SURFACE  
MOUNTED AND MORTISE EXIT HARDWARE AVAILABLE
- 10.) LEVELS IV - VIII  
APPROXIMATELY 22 LBS/SQ FT  
FLUSH DOORS  
CYLINDRICAL LOCKS OR SURFACE MOUNTED EXIT HARDWARE  
AVAILABLE



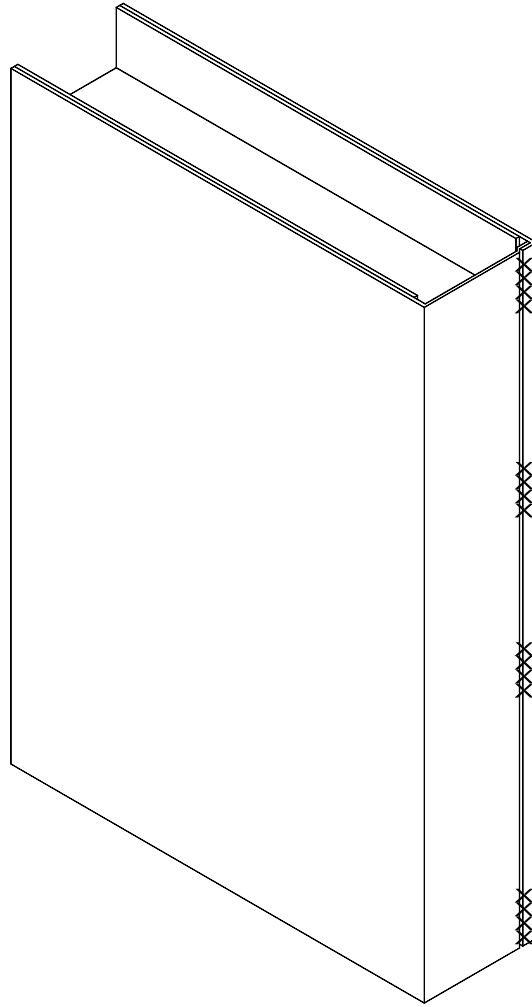
## STANDARD DOOR EDGE SEAM



BEVELED AND SQUARE EDGES ARE AVAILABLE IN ANY COMBINATION

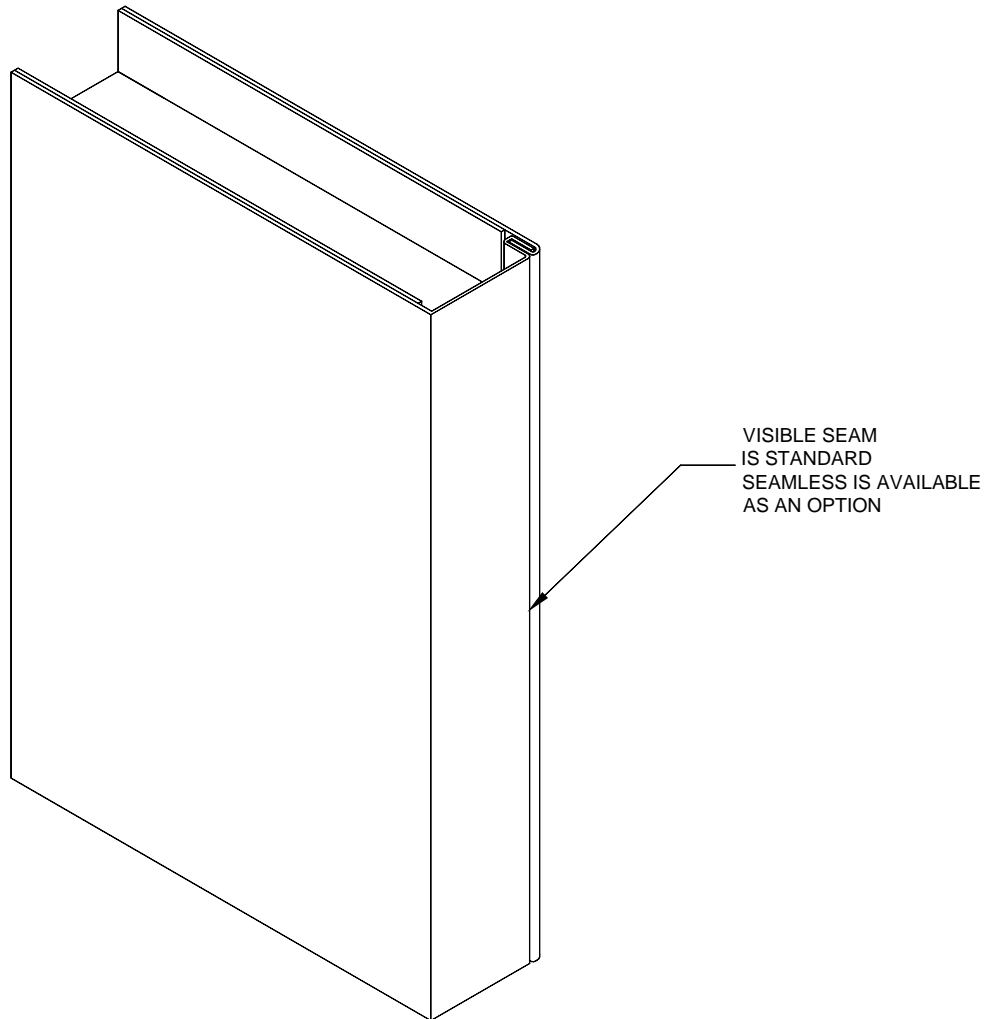


CONTINUOUSLY WELDED EDGE SEAM  
DRESSED SMOOTH  
(STANDARD)



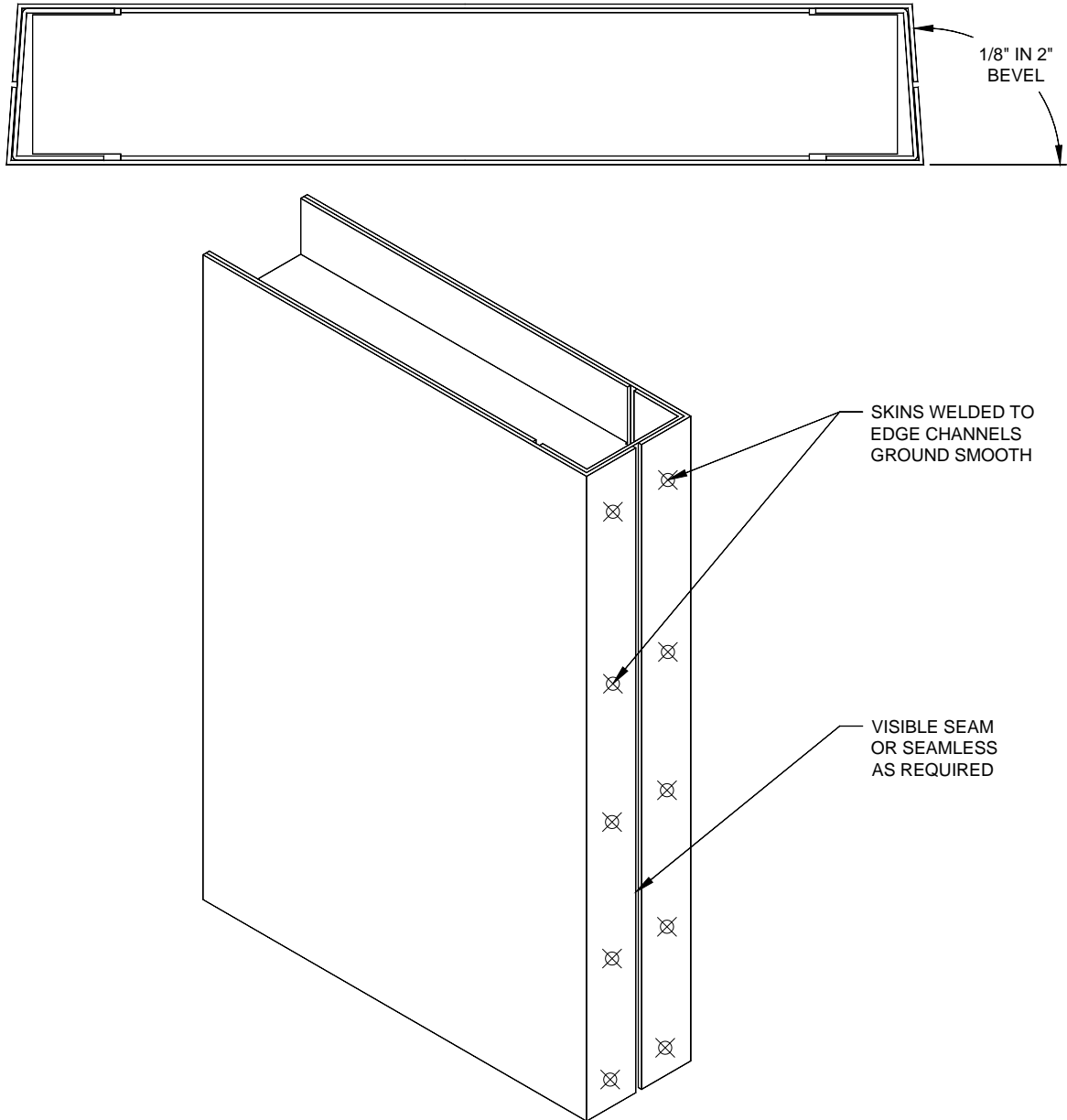
SKINS WELDED AT STRESS POINTS  
DRESSED AND GROUND SMOOTH  
(OPTIONAL)

## INTERLOCKING DOOR EDGE SEAM

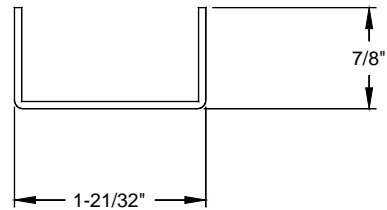
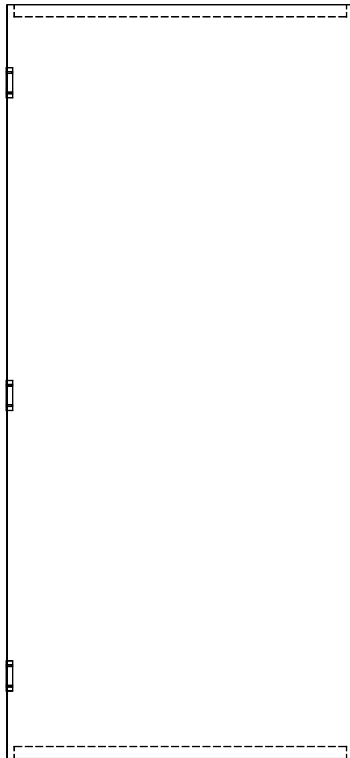
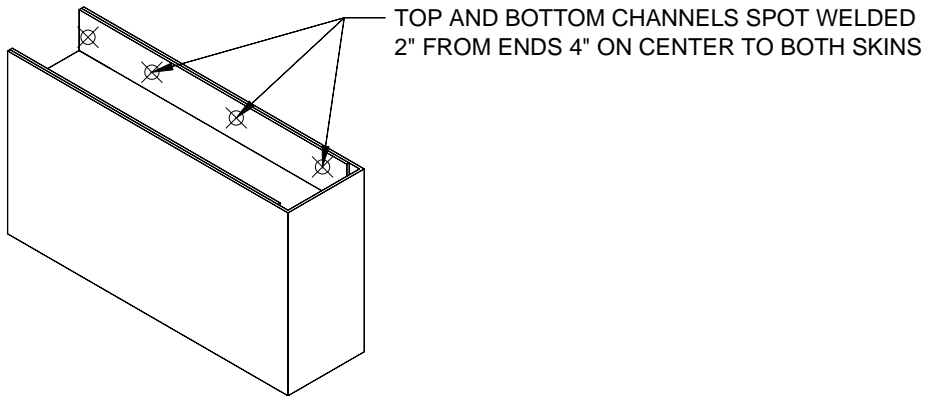


- 1.) BEVELED AND SQUARE EDGES ARE AVAILABLE IN ANY COMBINATION
- 2.) ONLY 18 AND 16 GAUGES AVAILABLE WITH THIS DOOR EDGE

## CHANNELED DOOR EDGE SEAM

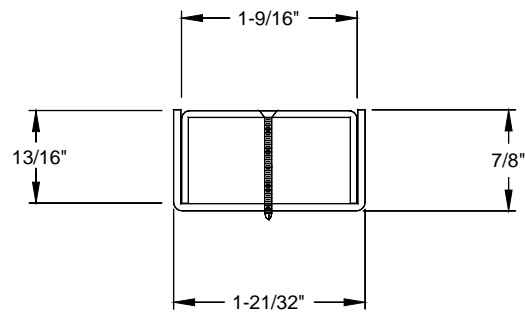
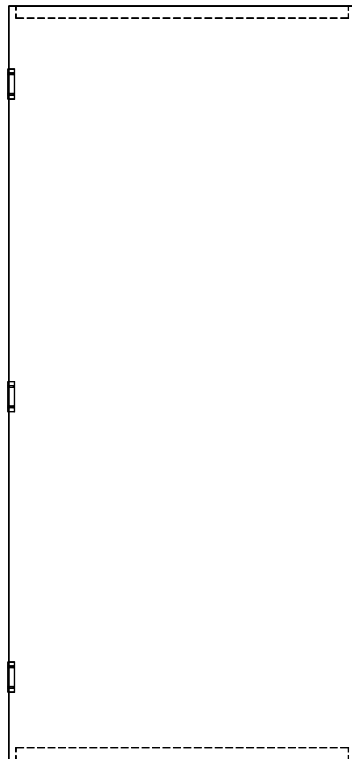
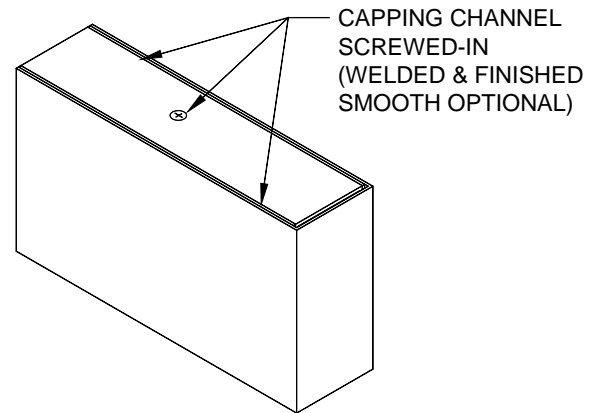
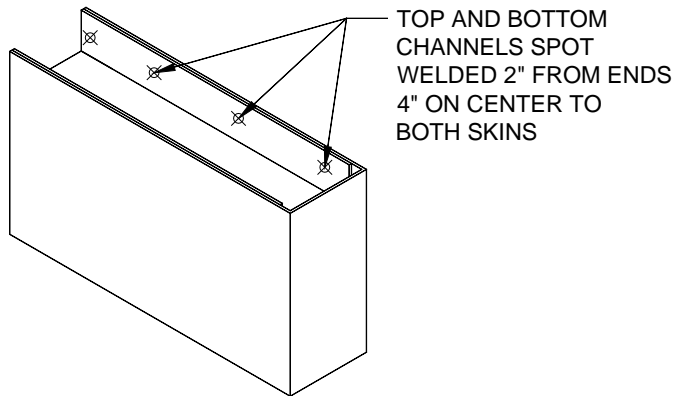


- 1.) BEVELED, BULL NOSED AND SQUARE EDGE ARE AVAILABLE IN ANY COMBINATION
- 2.) INTERNAL EDGE CHANNEL 18 GA STANDARD (UP TO 10 GA AVAILABLE)
- 3.) ALSO AVAILABLE WITH CONTINUOUSLY WELDED EDGE SEAM DRESSED SMOOTH



TOP AND BOTTOM CHANNELS  
ARE 18 GA STANDARD  
(OTHER GAUGES AVAILABLE  
AS AN OPTION)

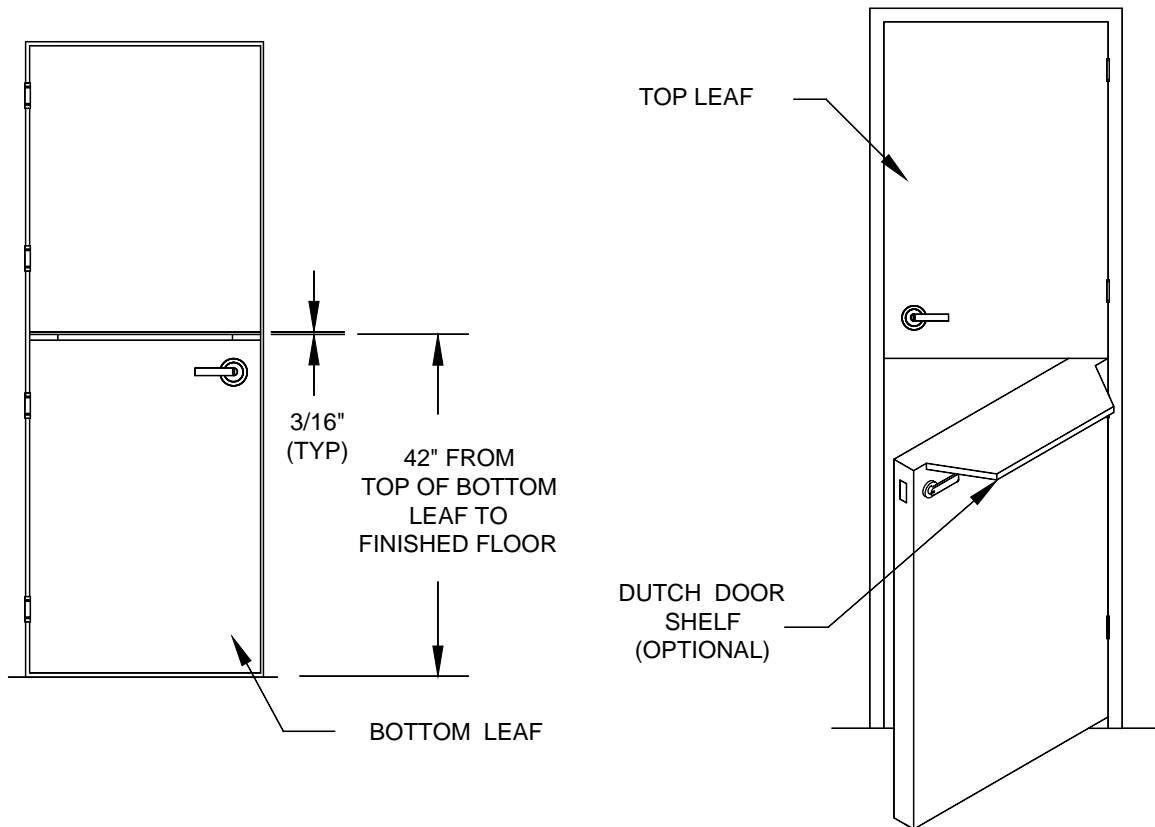
## CAP TOP FLUSH



RECESSED AND CAPPING CHANNELS ARE 18 GA STANDARD (OTHER GAUGES AVAILABLE AS AN OPTION)

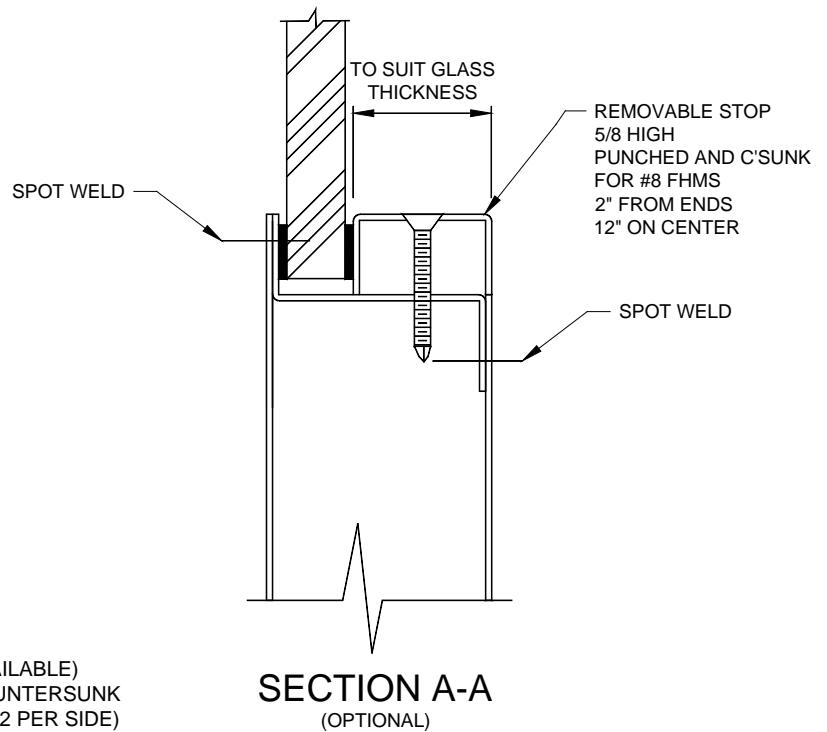
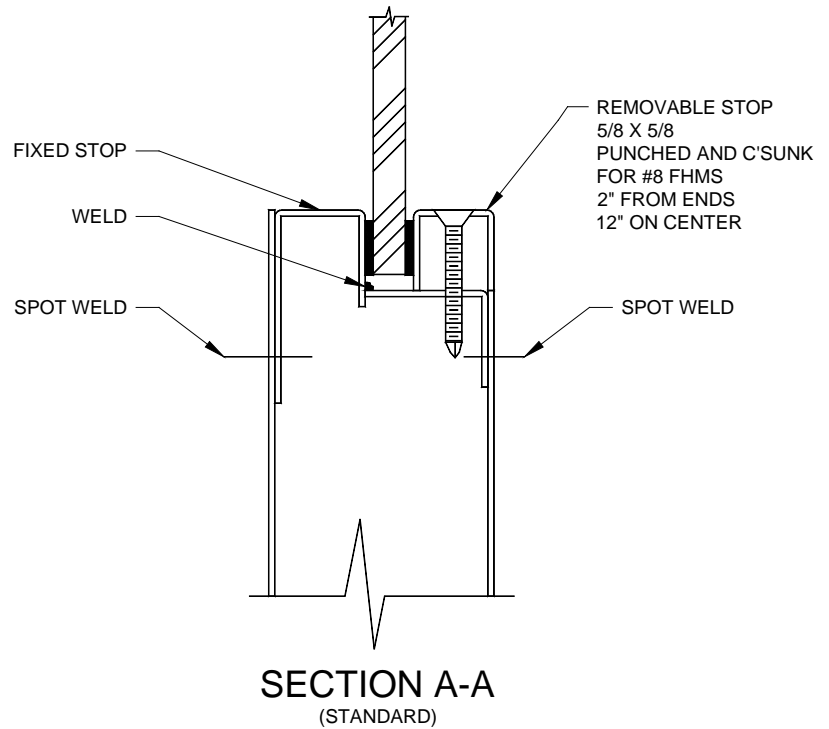
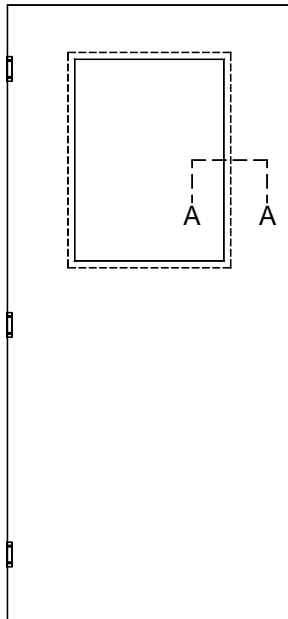


## DUTCH DOOR



- 1.) 1-3/4" DOOR STANDARD, OTHER THICKNESSES AVAILABLE
- 2.) CAP BOTTOM CHANNEL OF TOP LEAF AND TOP CHANNEL OF BOTTOM LEAF.
- 3.) ASTRAGAL OPTIONAL
- 4.) STRIKE PREP IN TOP OF BOTTOM LEAF AND/OR SHELF.

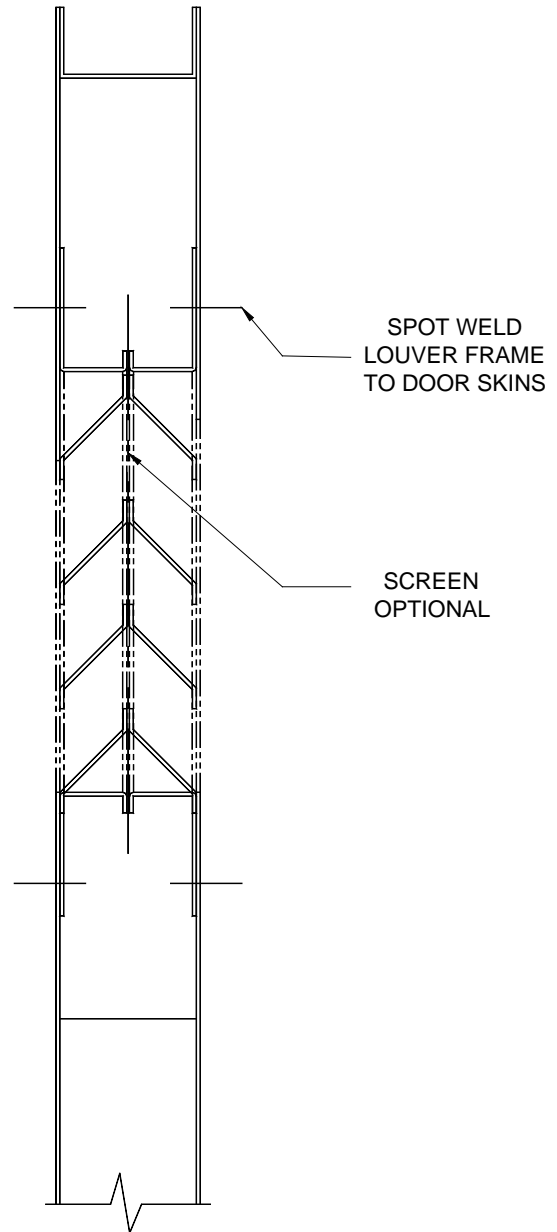
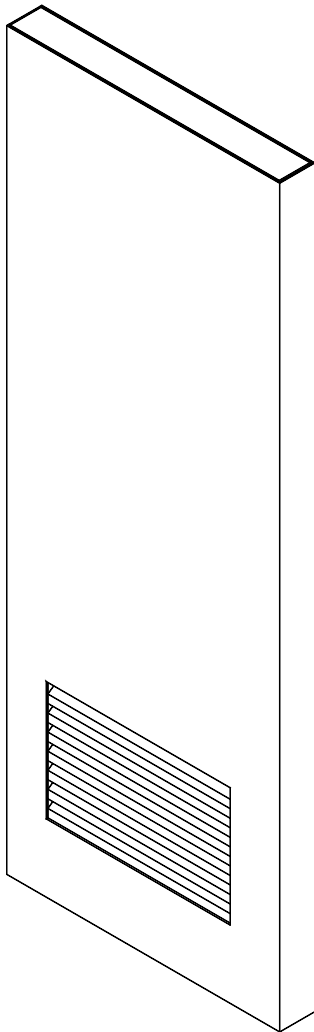
## INTEGRAL LITE



- 1.) 16 GA GLASS STOP (OTHER GAUGES AVAILABLE)
- 2.) REMOVABLE STOP IS PUNCHED AND COUNTERSUNK  
2" FROM ENDS AND 12" ON CENTER (MIN 2 PER SIDE)

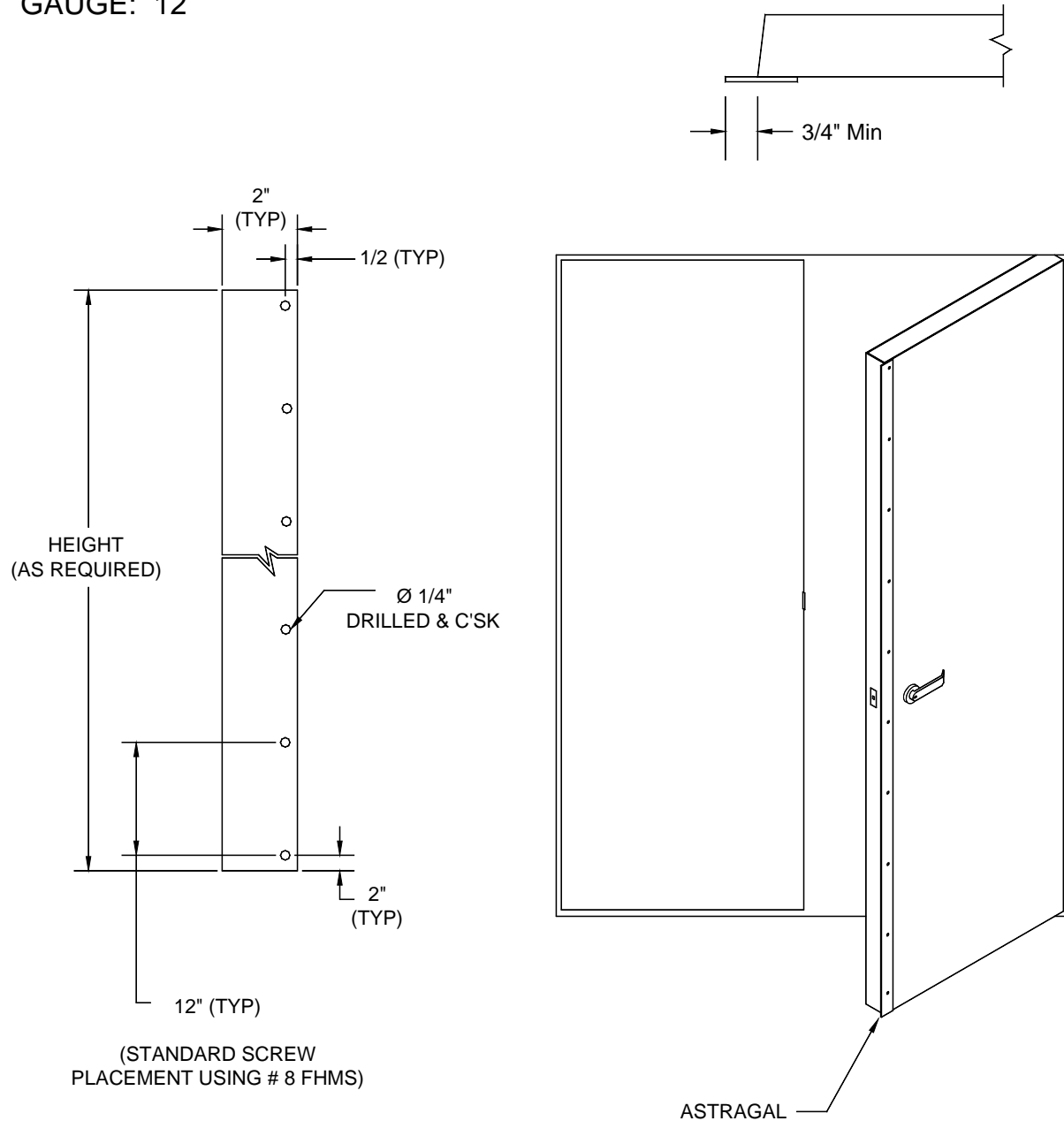
## INTEGRAL LOUVER

REINFORCEMENTS: GALVANNEAL  
GAUGE: 18  
SPOTWELDED TO DOOR SKIN  
FREE AIR FLOW: 50% FREE AREA

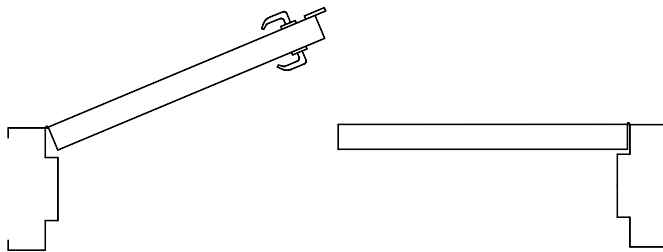


## FLAT BAR ASTRAGAL

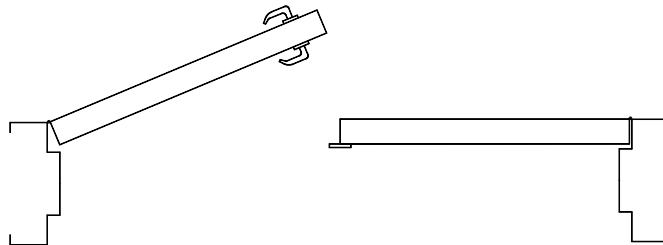
MATERIAL: GALVANNEAL  
GAUGE: 12



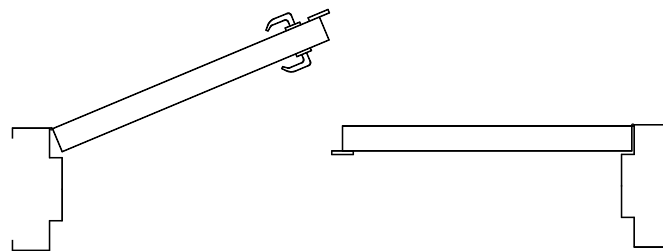
MATERIAL: GALVANNEAL  
GAUGE: 12



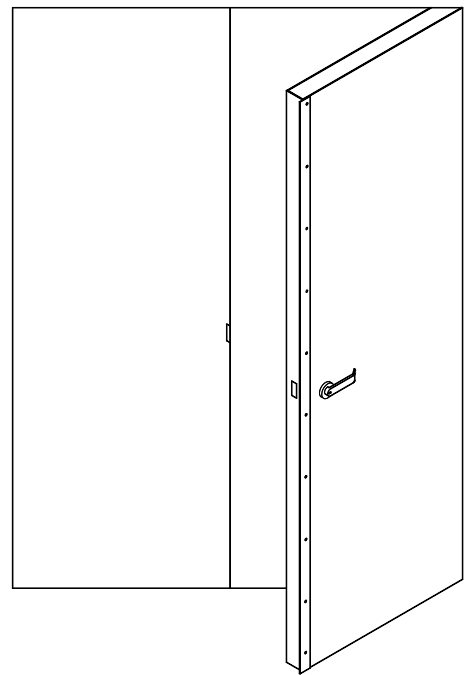
ASTRAGAL AT ACTIVE LEAF



ASTRAGAL AT INACTIVE LEAF

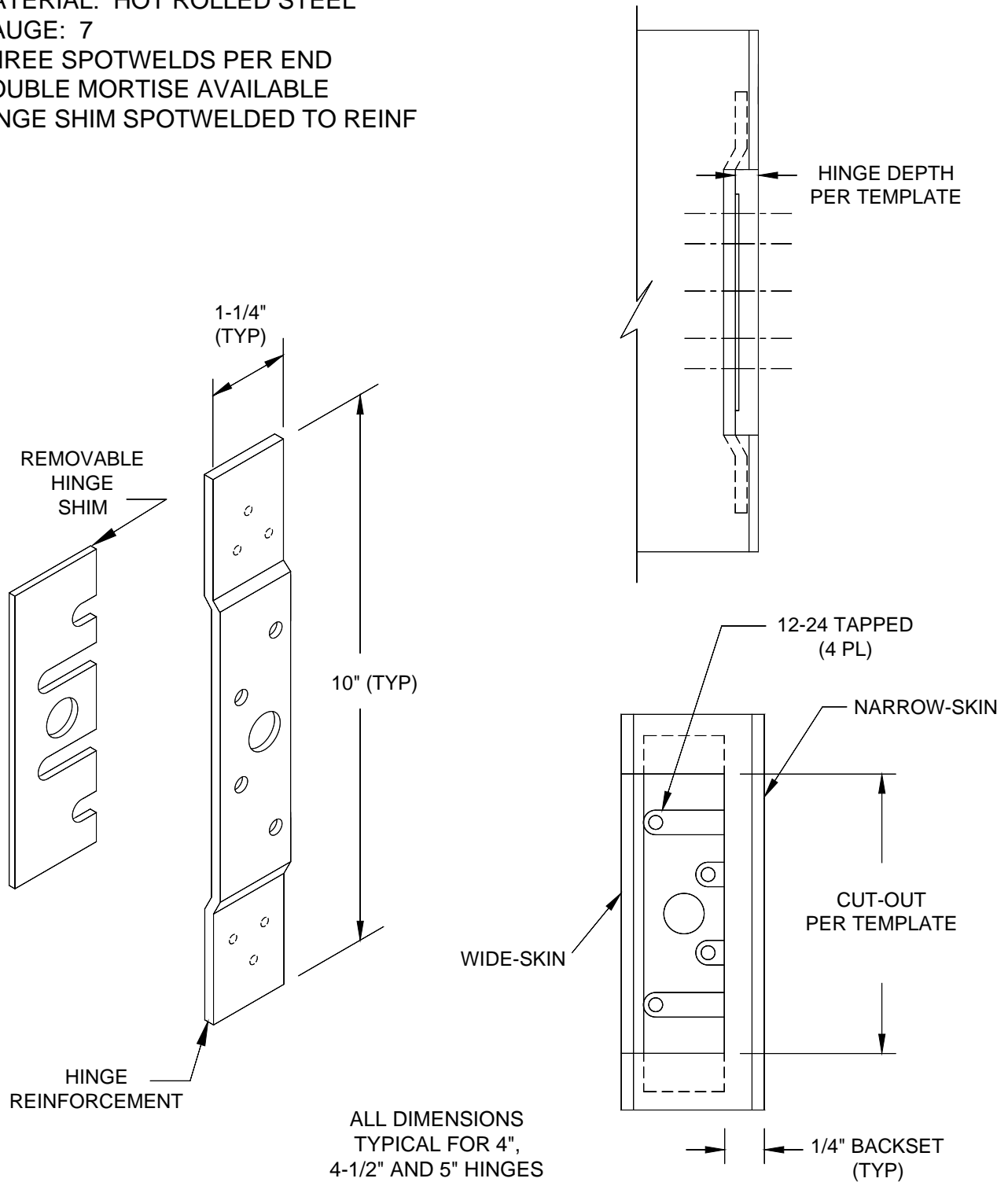


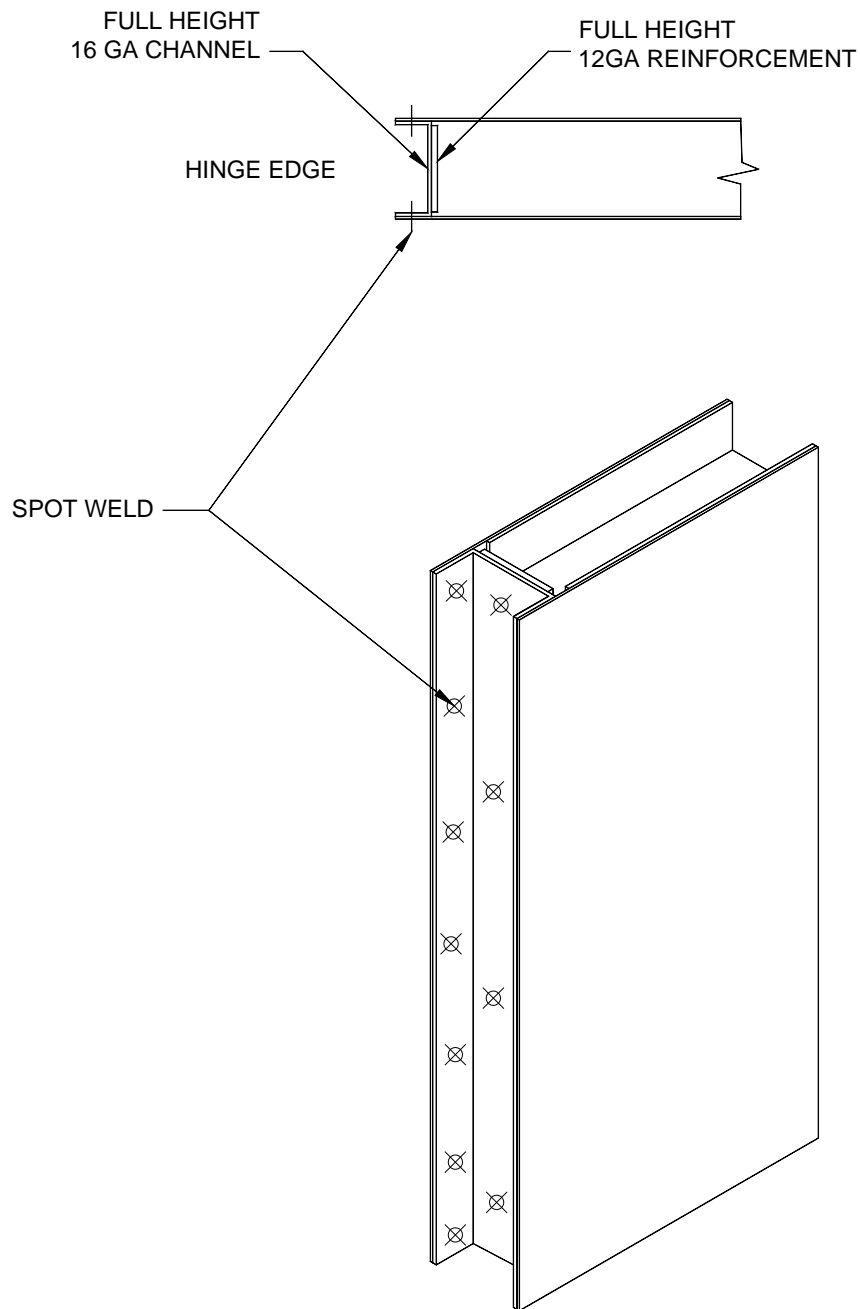
(OPTIONAL)  
ASTRAGAL AT BOTH LEAVES



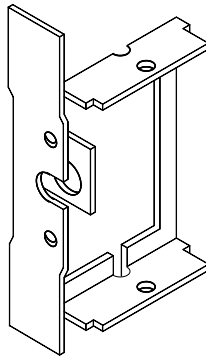
## STANDARD DOOR HINGE REINF

MATERIAL: HOT ROLLED STEEL  
 GAUGE: 7  
 THREE SPOTWELDS PER END  
 DOUBLE MORTISE AVAILABLE  
 HINGE SHIM SPOTWELDED TO REINF

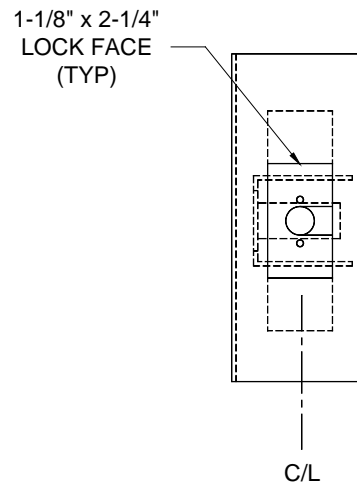
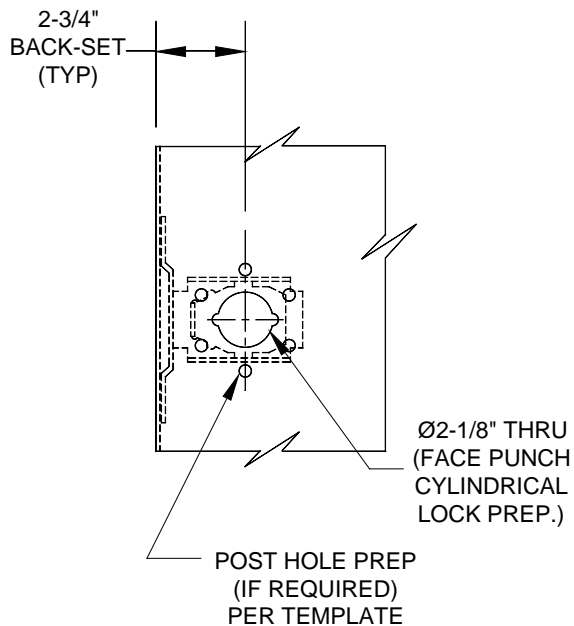




REINFORCEMENT: COLD ROLLED STEEL  
GAUGE: 16 (EXTRUDED TO 12 GA AT SCREW HOLES)  
TWO SPOTWELDS PER END



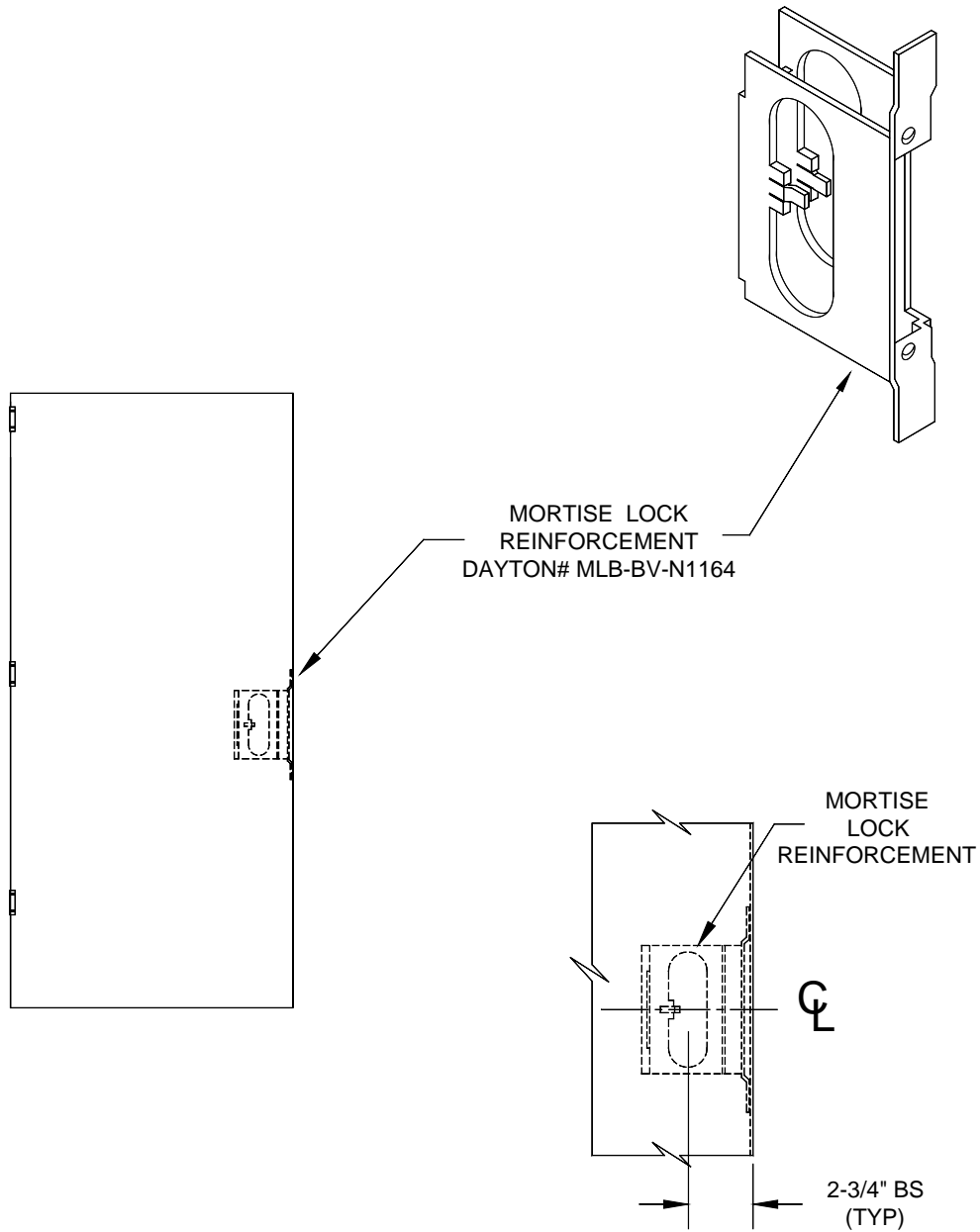
CYLINDRICAL LOCK  
REINFORCEMENT  
DAYTON# CLB-BV-N158





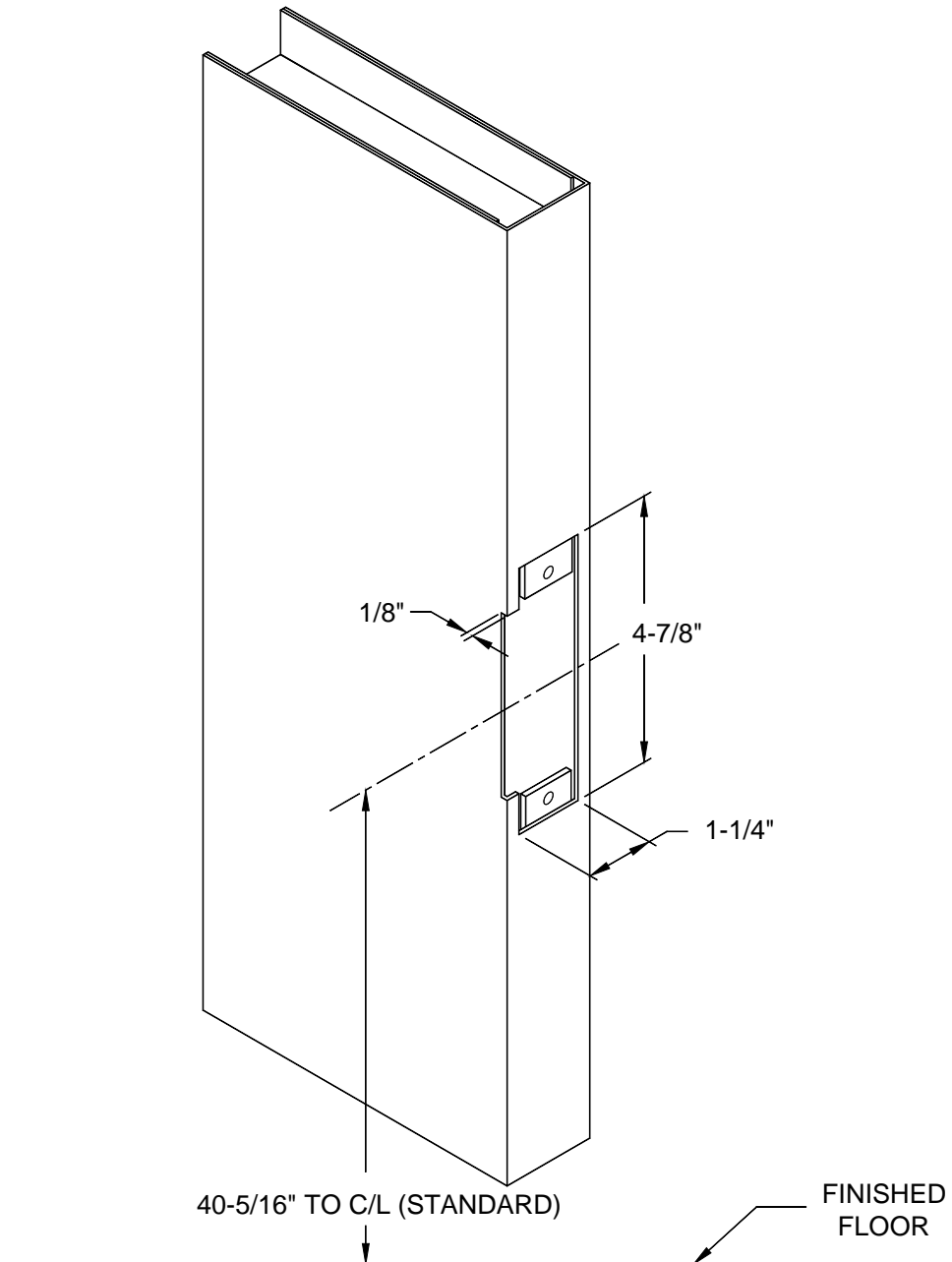
## MORTISE LOCK REINFORCEMENT

REINFORCEMENTS: GALVANNEAL  
GAUGE: 16 (EXTRUDED TO 12 GA AT SCREW HOLES)  
TWO SPOTWELDS PER END  
FACE PREP PER HARDWARE MANUFACTURER'S TEMPLATE

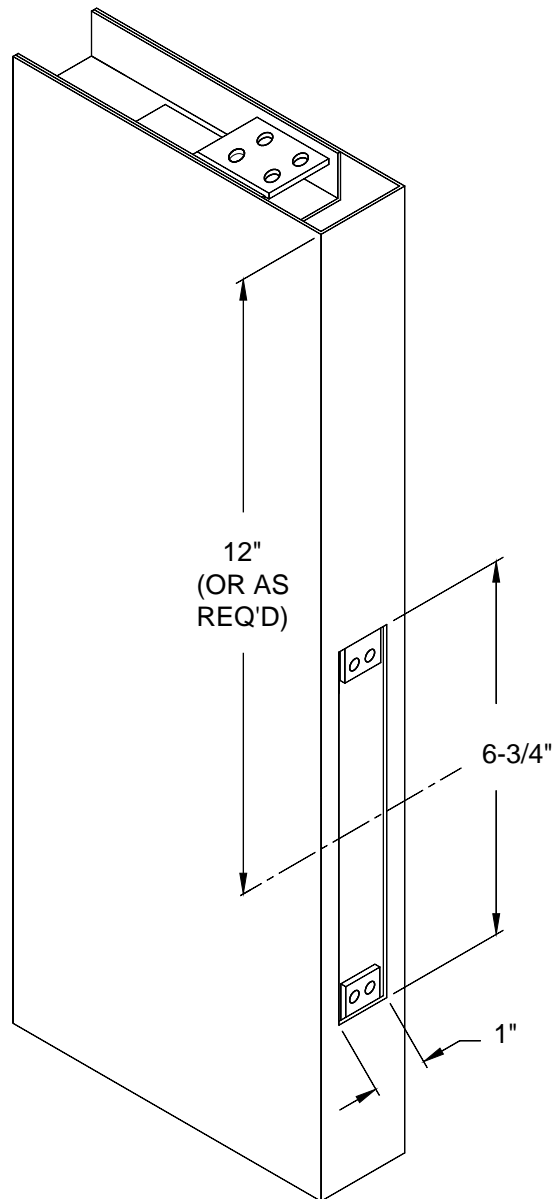


## DOOR STRIKE PREPARATION

2-1/2" x 1" x 11 GAUGE  
DRILLED AND TAPPED FOR 12-24 FHMS  
TWO SPOTWELDS PER END

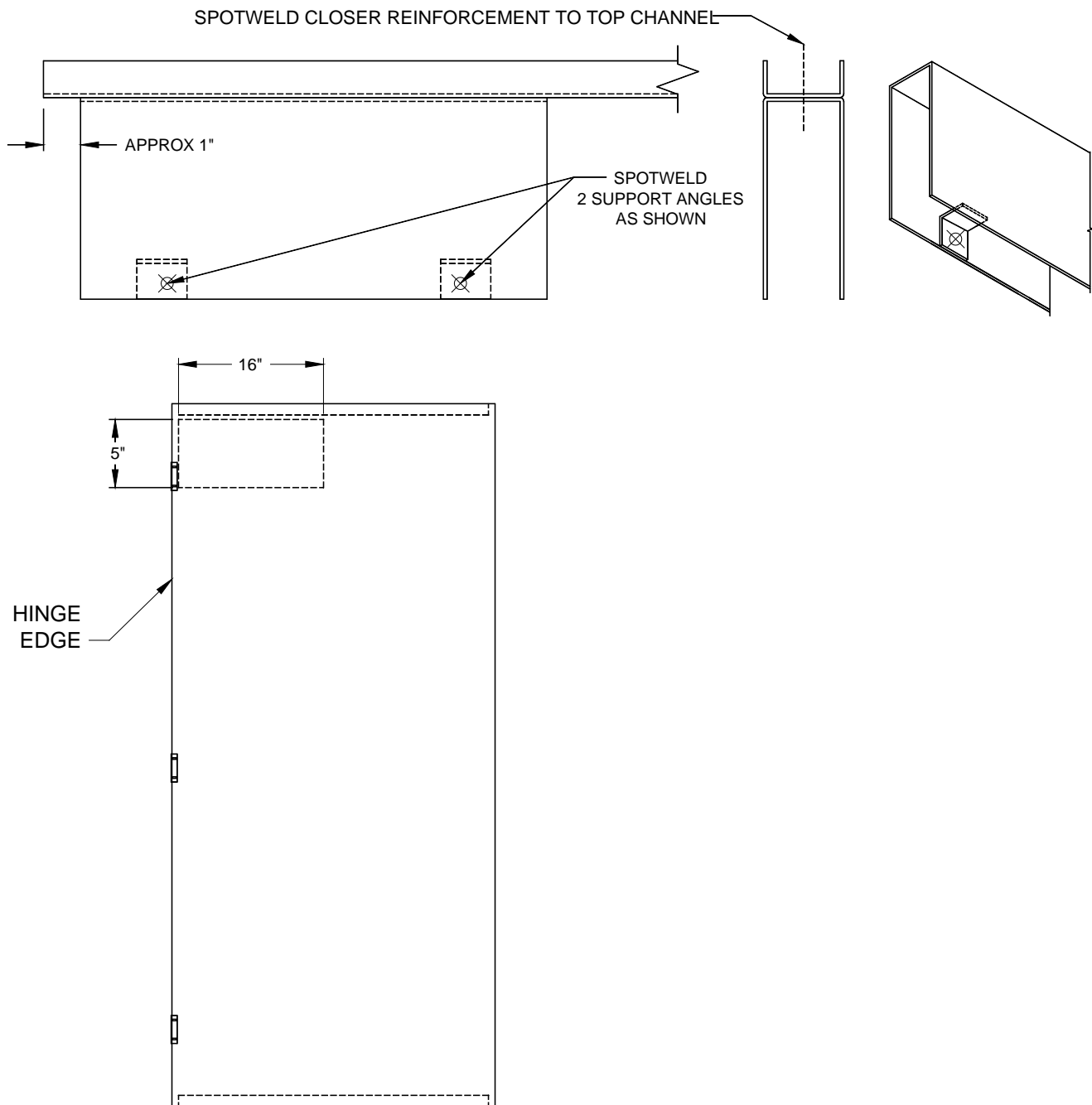


2-1/2" x 1" x 11 GAUGE  
DRILLED AND TAPPED AS REQ'D  
TWO SPOTWELDS PER END

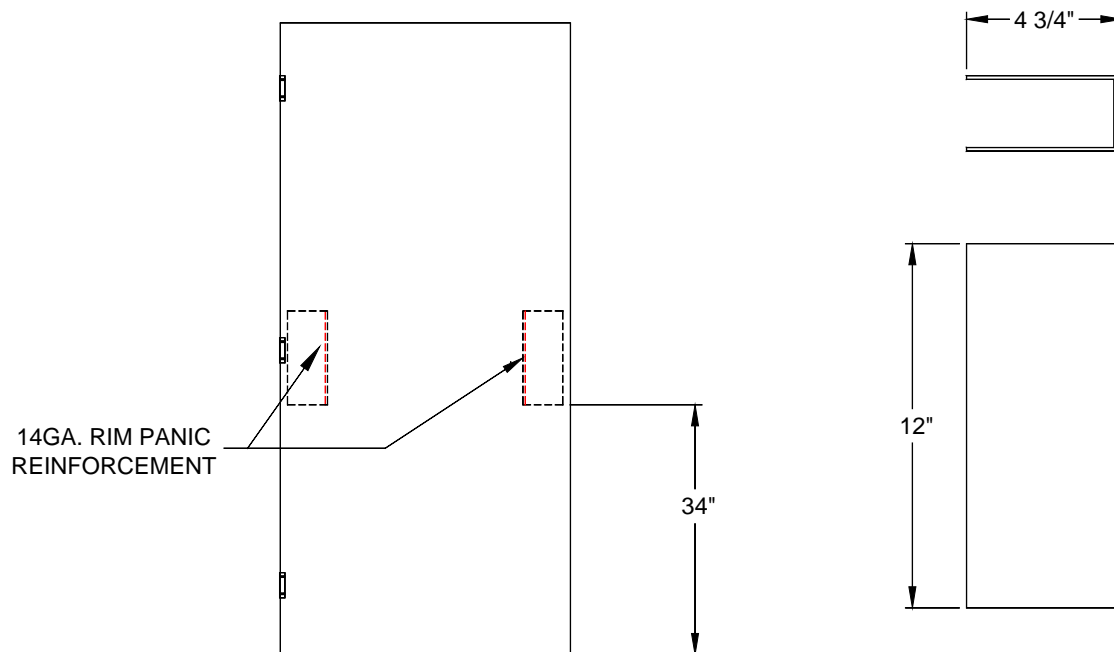


## DOOR CLOSER REINFORCEMENT

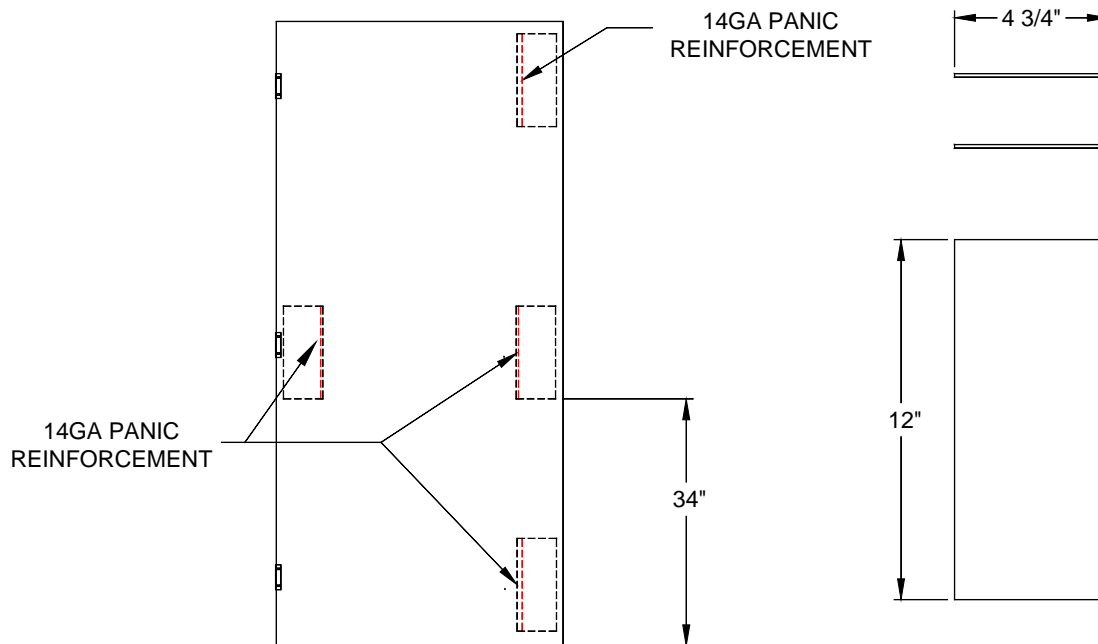
MATERIAL: GALVANNEAL  
GAUGE: 14  
WHI APPROVED



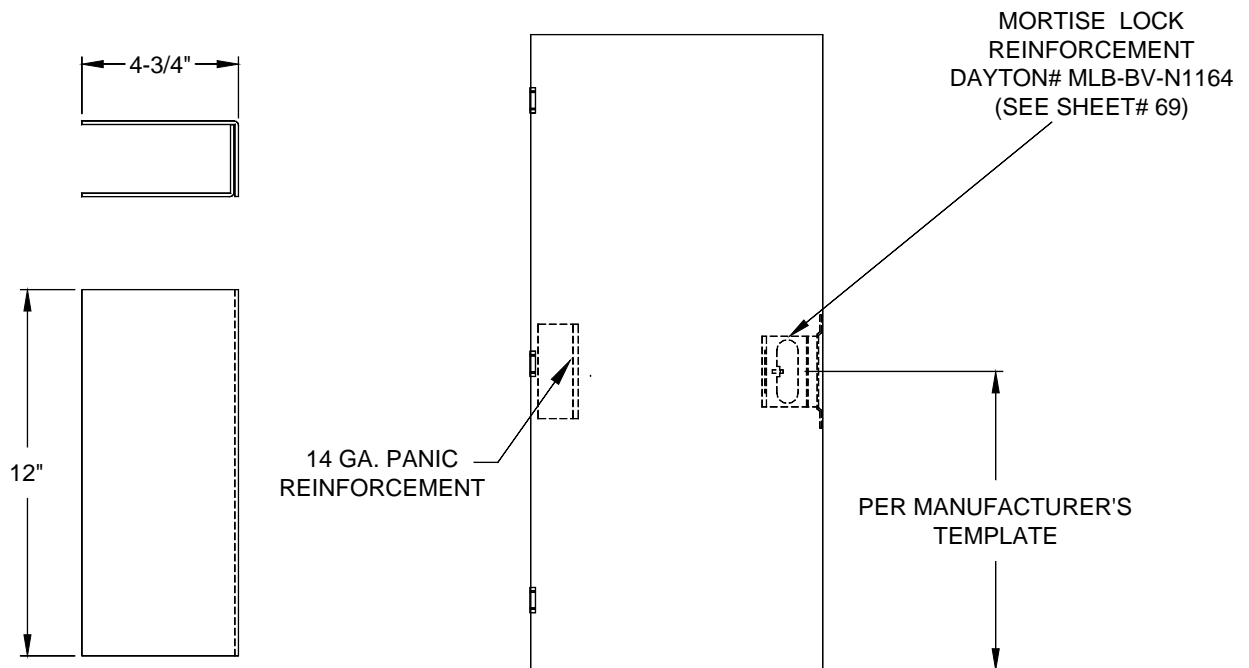
REINFORCEMENTS: GALVANNEAL  
GAUGE: 14  
SPOTWELDED TO DOOR SKIN



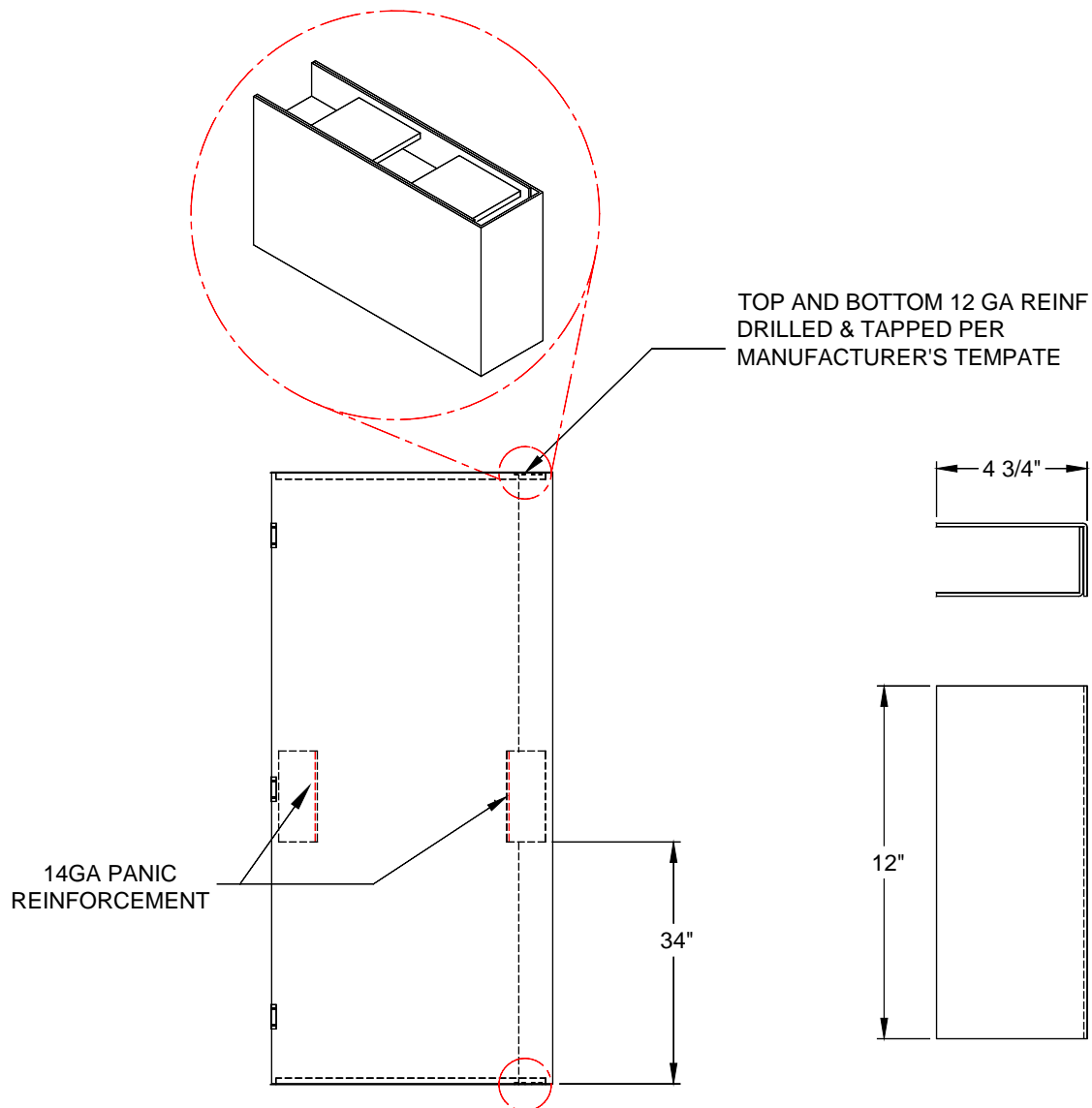
REINFORCEMENTS: GALVANNEAL  
GAUGE: 14  
SPOTWELDED TO DOOR SKIN



## PANIC REINFORCEMENT

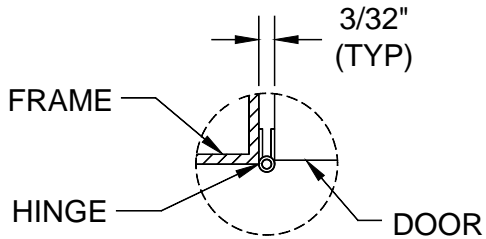


REINFORCEMENTS: GALVANNEAL  
GAUGE: AS SHOWN BELOW  
SPOTWELDED TO DOOR SKIN/  
TACKWELDED INTO TOP CHANNEL

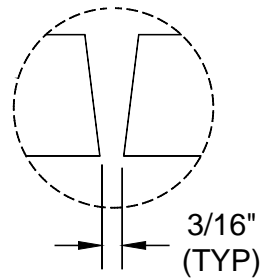




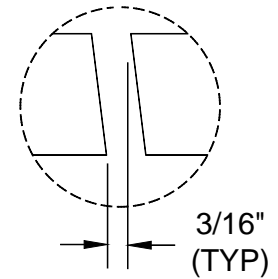
DETAIL "A"



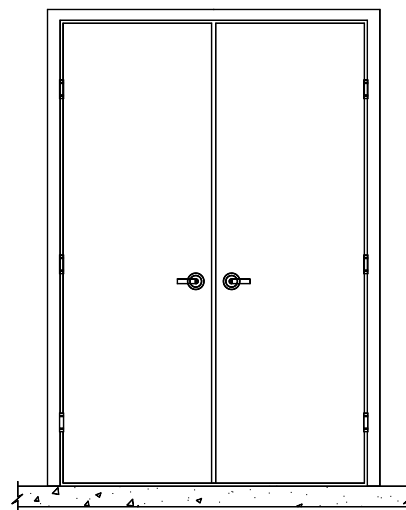
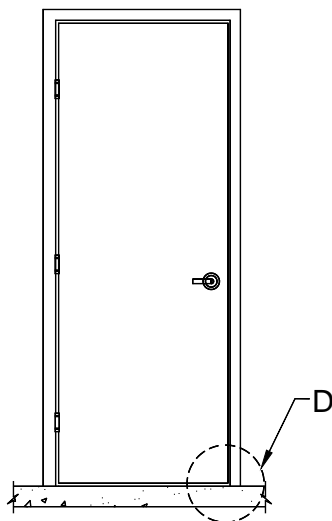
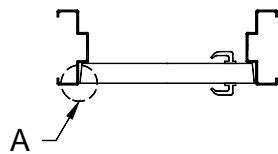
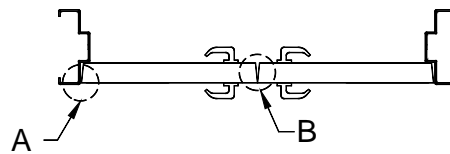
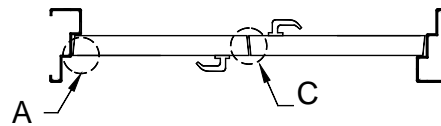
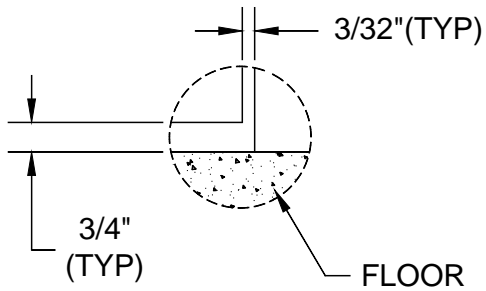
DETAIL "B"



DETAIL "C"



DETAIL "D"

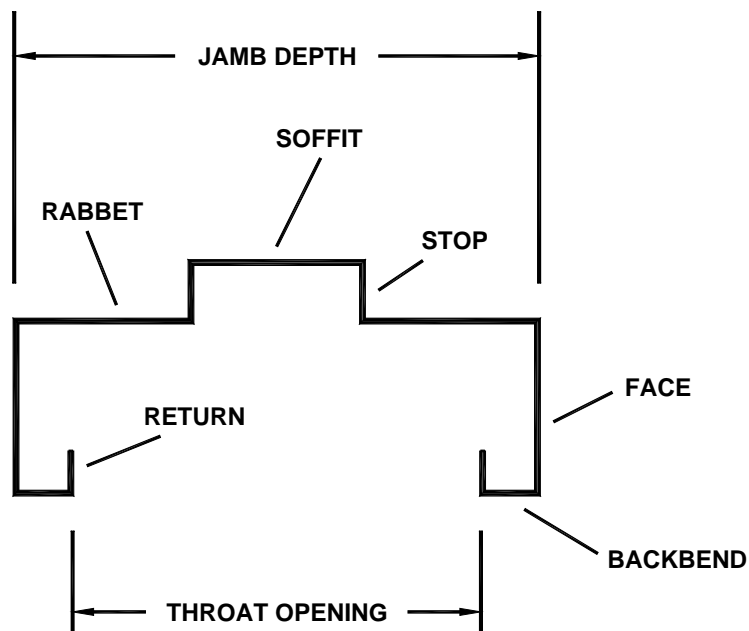




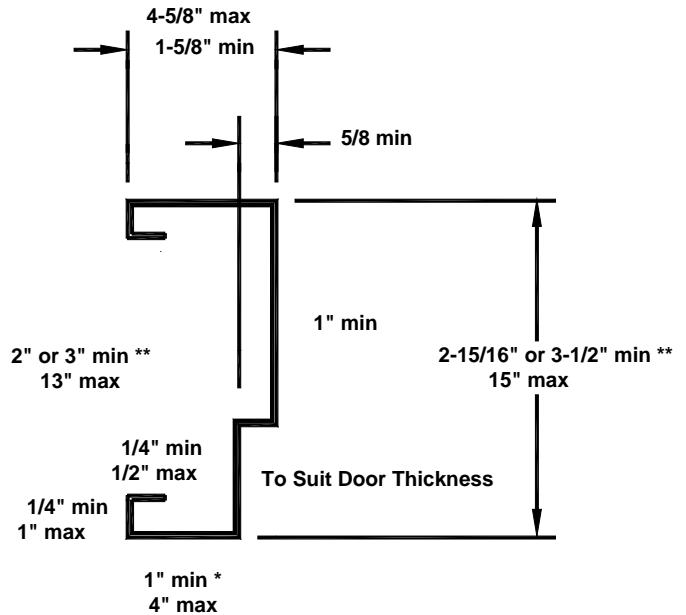
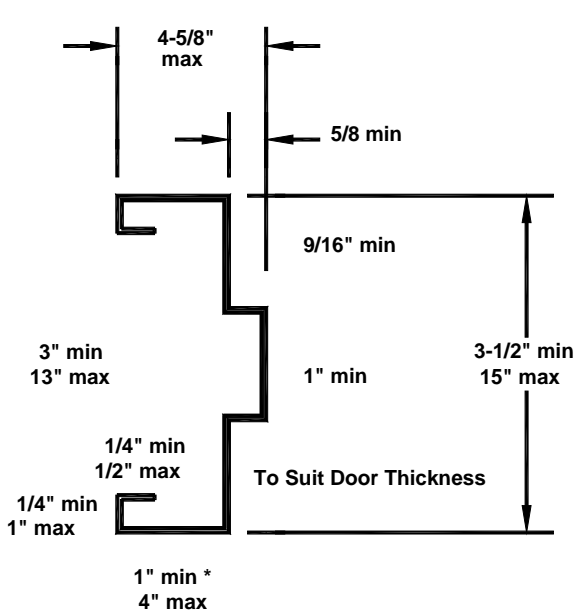
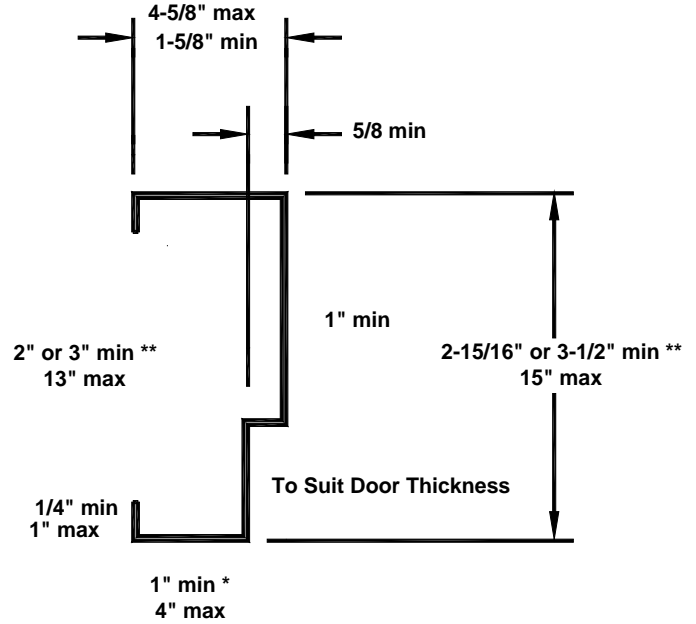
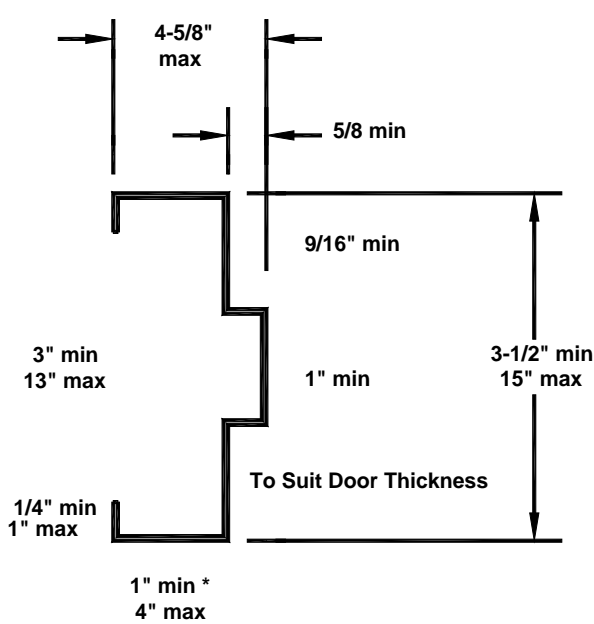
These requirements apply to all fire rated doors, frames, and windows.

Requirements for the installation of these assemblies are included in the Standard of the National Fire Protection Association for Fire Doors and Fire Windows, NFPA-80 and the Door Components' installation instructions.

Terminology used in describing these frames follows as closely as possible the American National Standard for Nomenclature for Steel Doors and Steel Door Frames, ANSI A250.7.

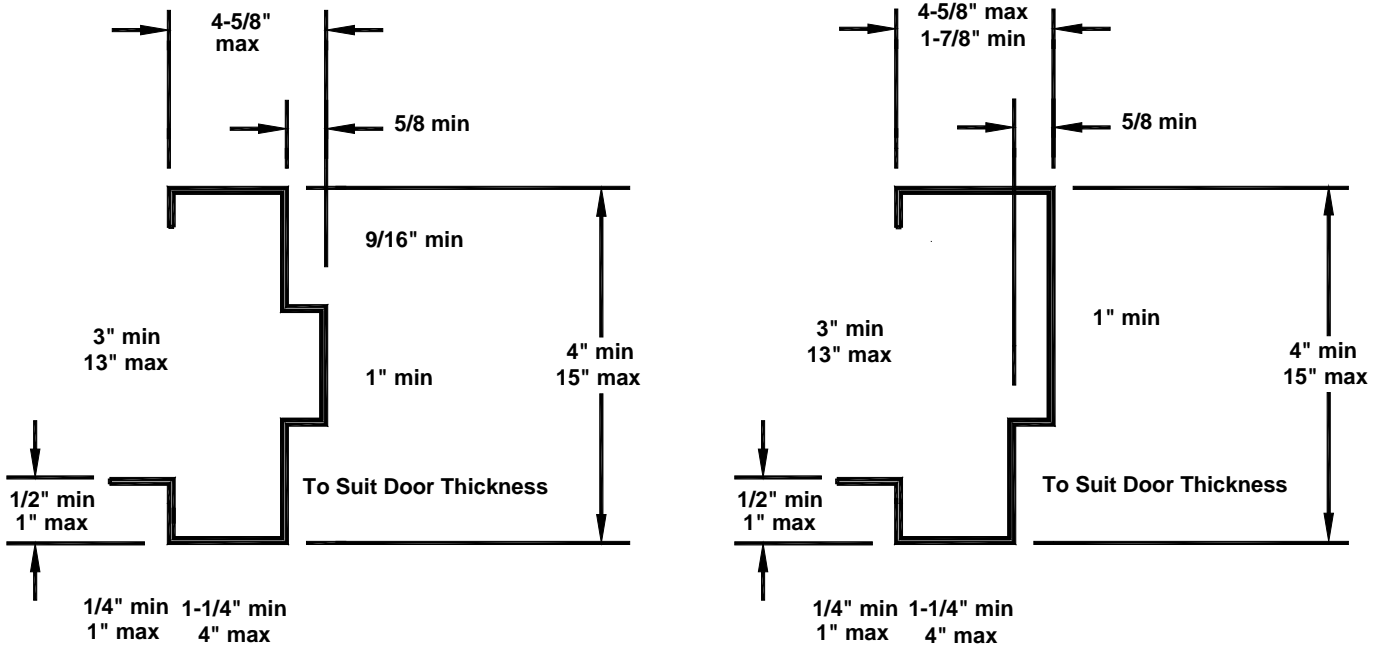


*Note: Minimum and maximum dimensions shown in this section may be further restricted by frame elevation and wall type.*

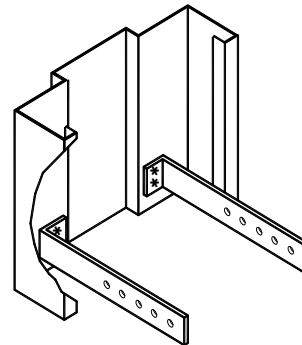
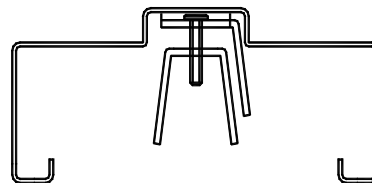
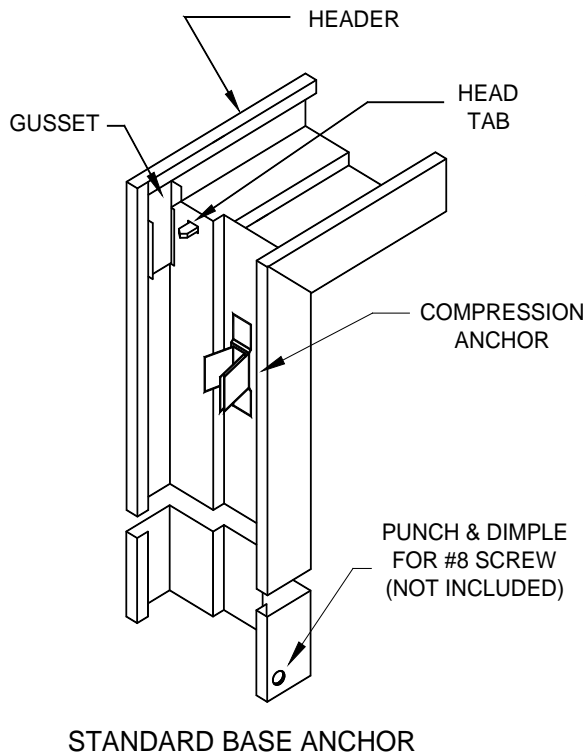
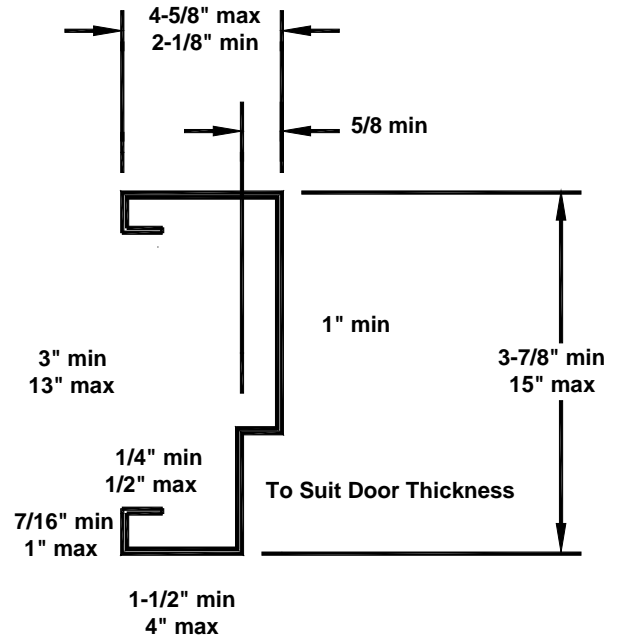
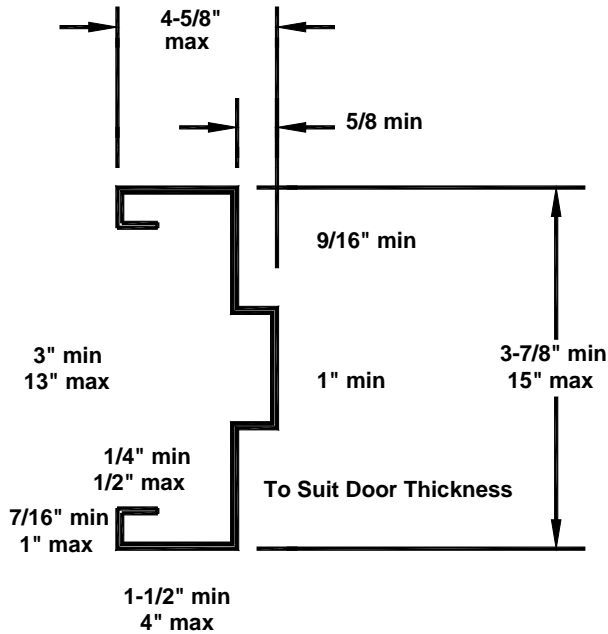


\* 1" min face permitted at masonry, 1-1/4" min at drywall

\*\* 2" throat permitted when door side face is min 2" and opposite face is min 2-5/8"

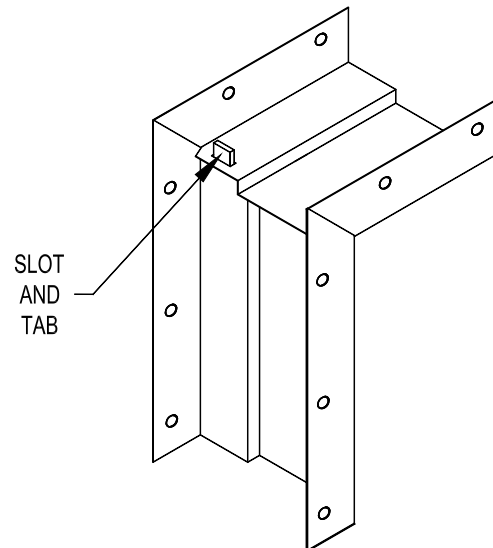
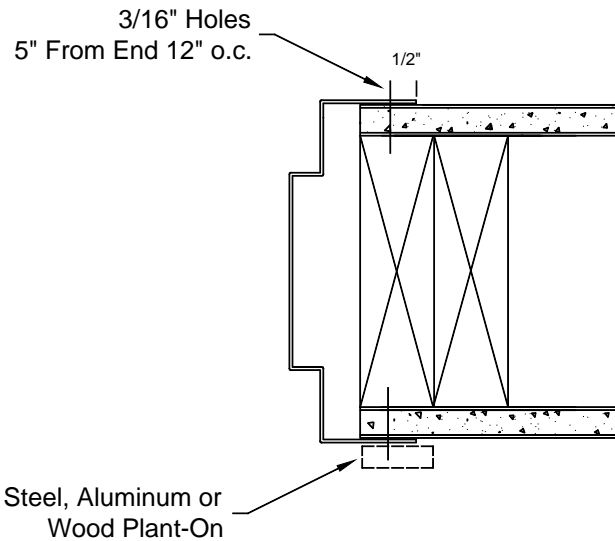
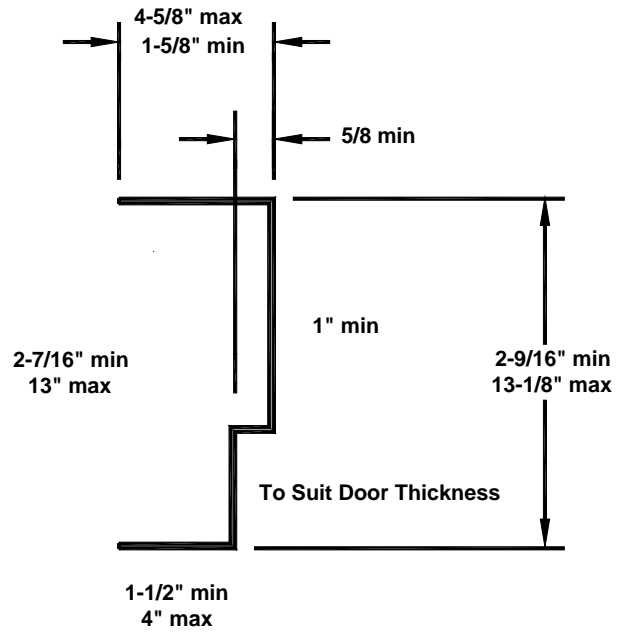
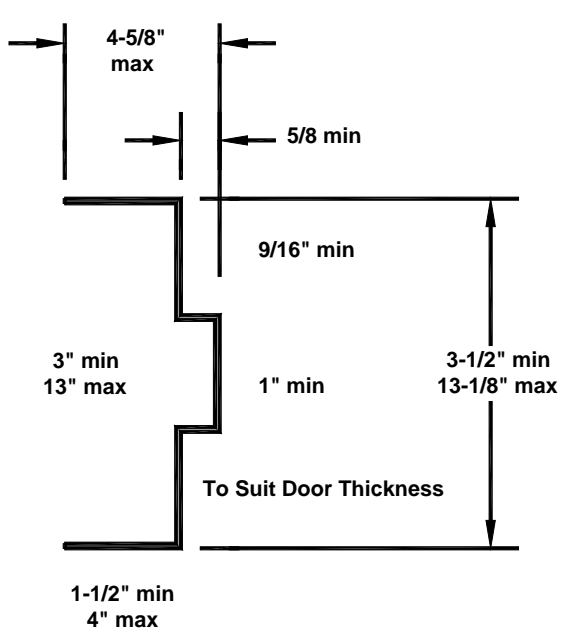


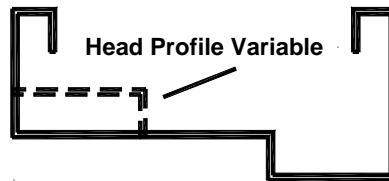
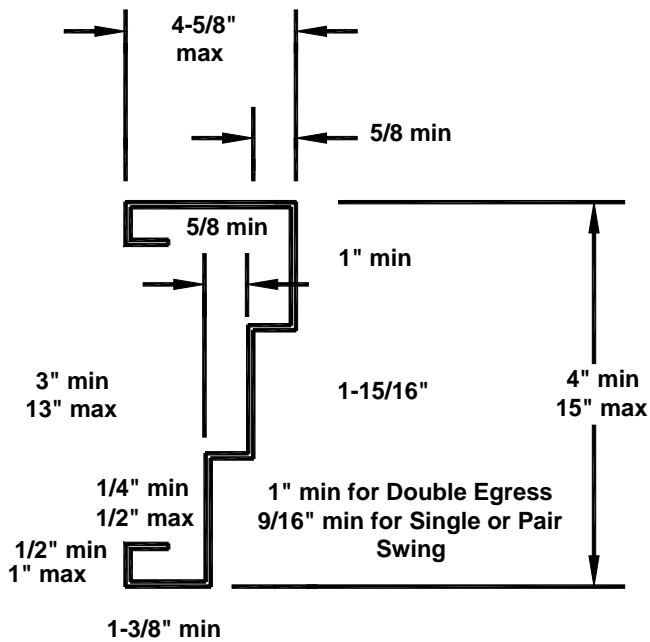
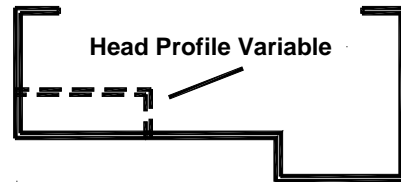
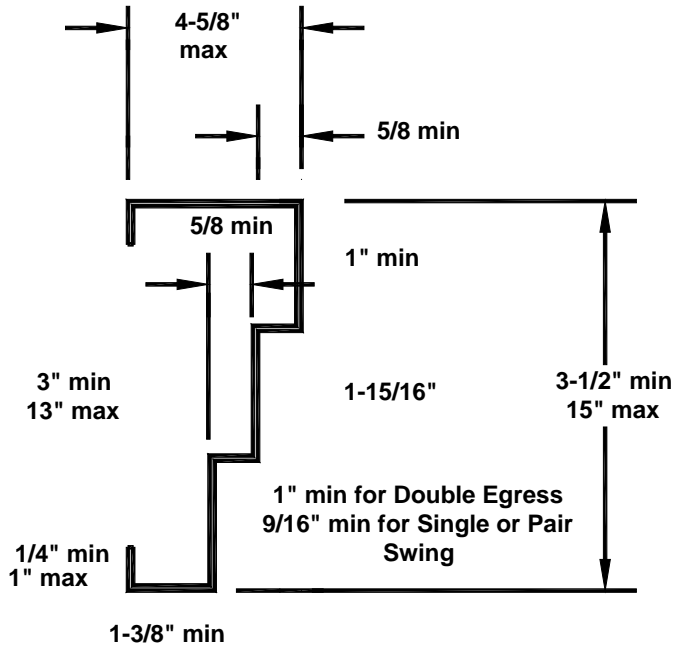
Standard profile frames may have combinations of the above backband types.



ALTERNATE BASE ANCHOR

## NAIL-IN FACE FRAMES

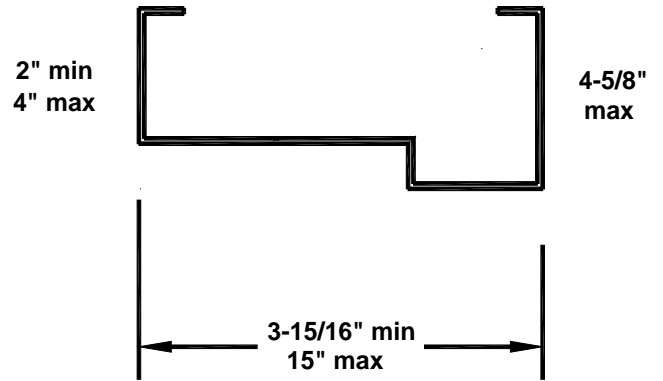
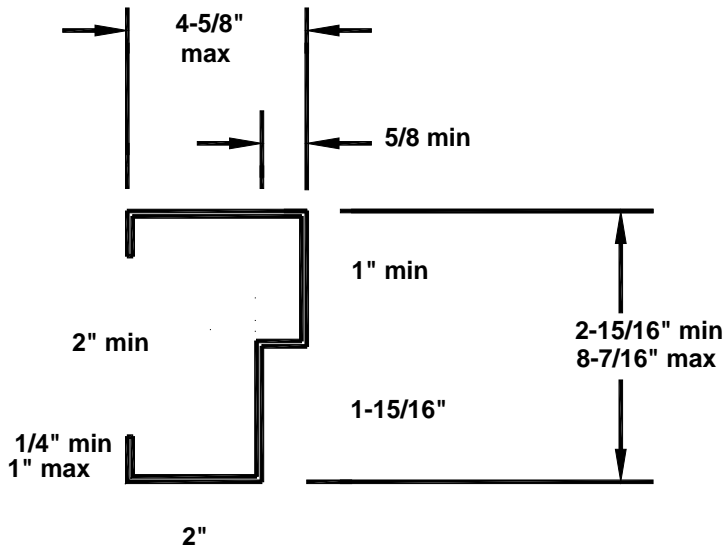




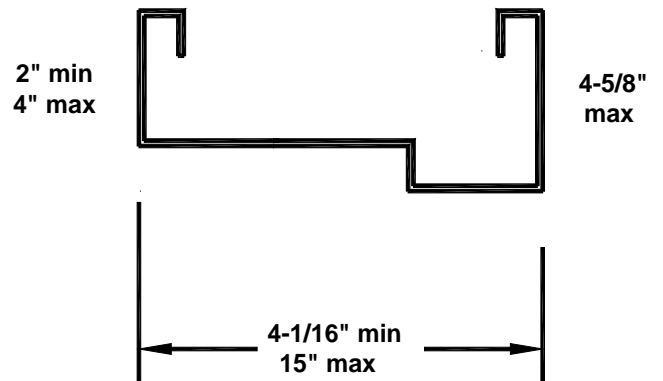
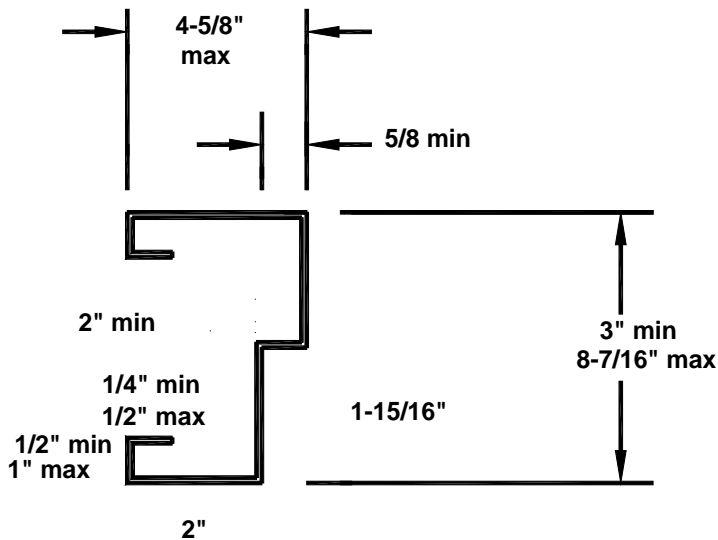
Frames may have combinations of the previous backbend types.



## SWING CLEAR DOUBLE EGRESS



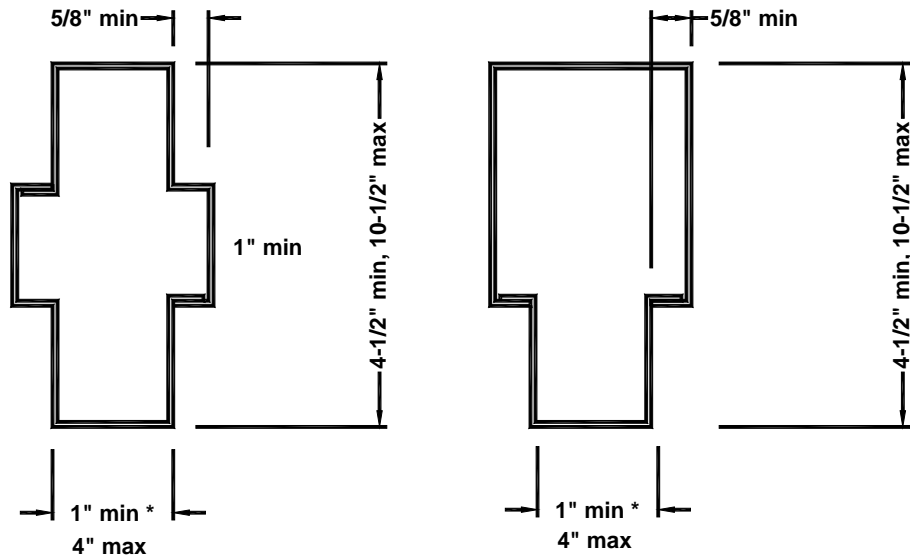
$$\text{Head Jamb Depth} = (2 \times \text{Jamb Soffit}) + 1 \frac{15}{16}$$



$$\text{Head Jamb Depth} = (2 \times \text{Jamb Soffit}) + 1 \frac{15}{16}$$

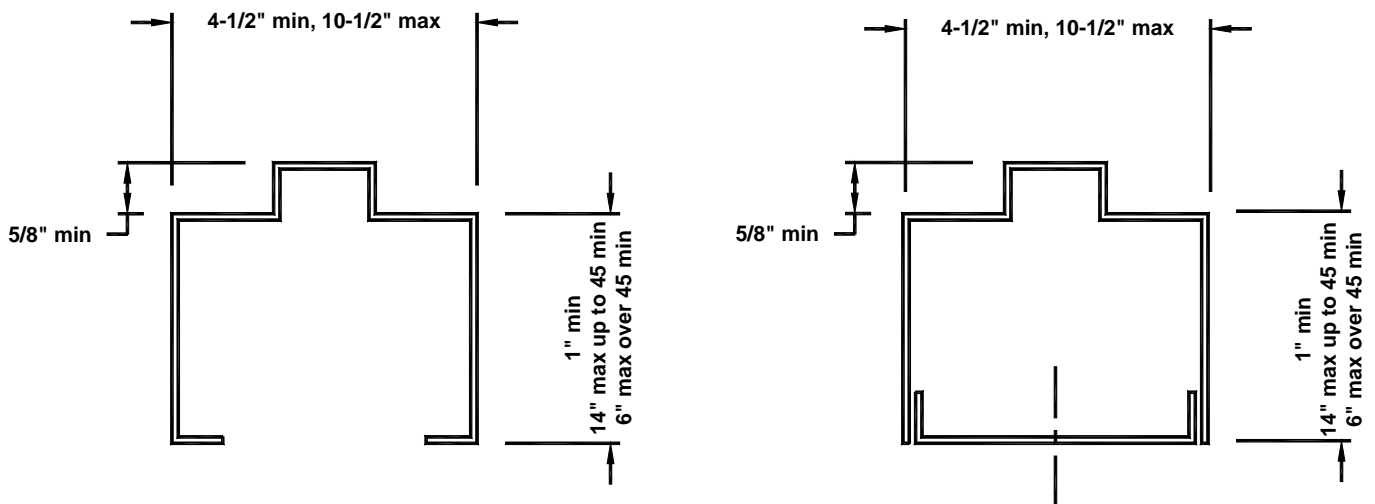
Frames may have combinations of the previous backbend types.

## MULLIONS AND SILLS



\* 1" minimum at members surrounding glazed openings in sidelight or window frames. 1-1/4" minimum at all transom frames and at members surrounding door openings in sidelight frames.

### Mullions

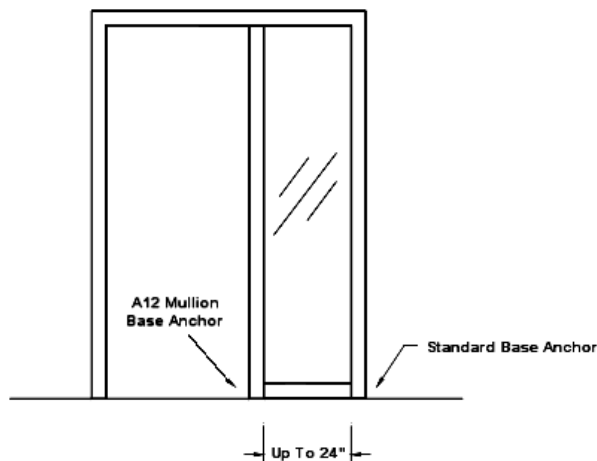


### Sills

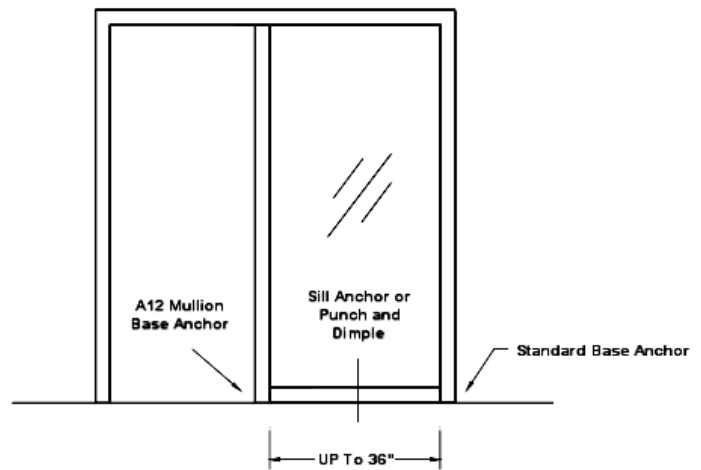
## Approved Methods for Anchoring Mullions and Sills

Standard anchorage for sills is one anchor for every foot with a minimum of two anchors.

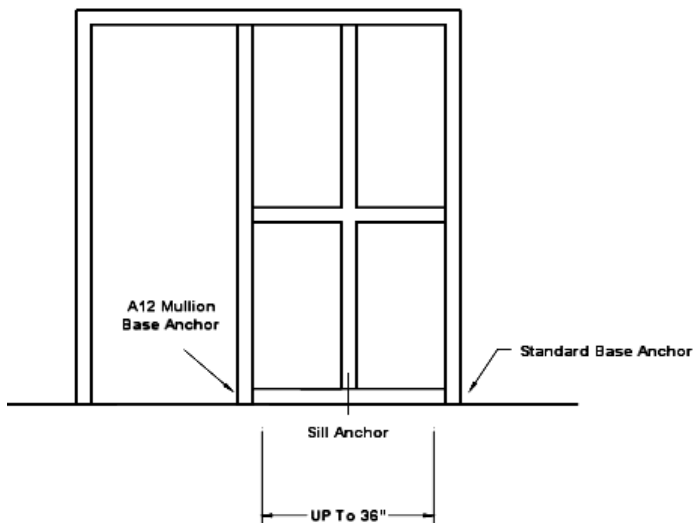
This can include an A12 mullion base anchor and a standard jamb base anchor for the appropriate wall type.  
Sill anchors are to be spaced evenly.



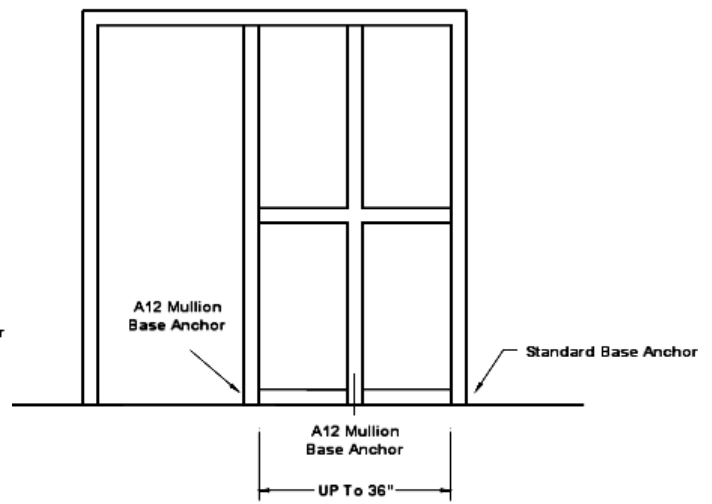
**2 Anchors Total**



**3 Anchors Total**

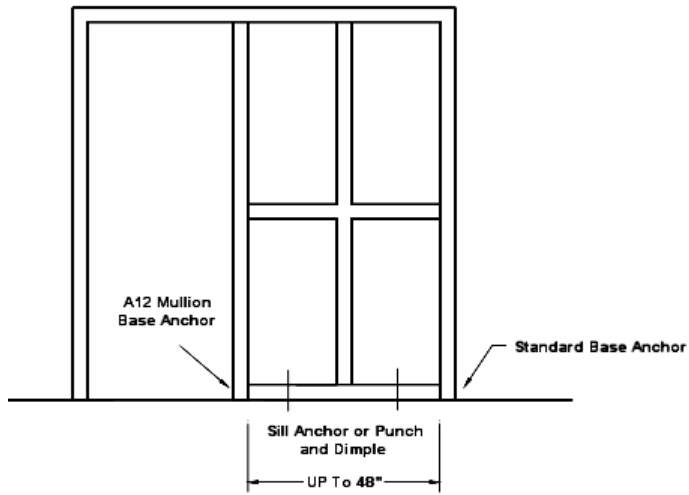


**3 Anchors Total**

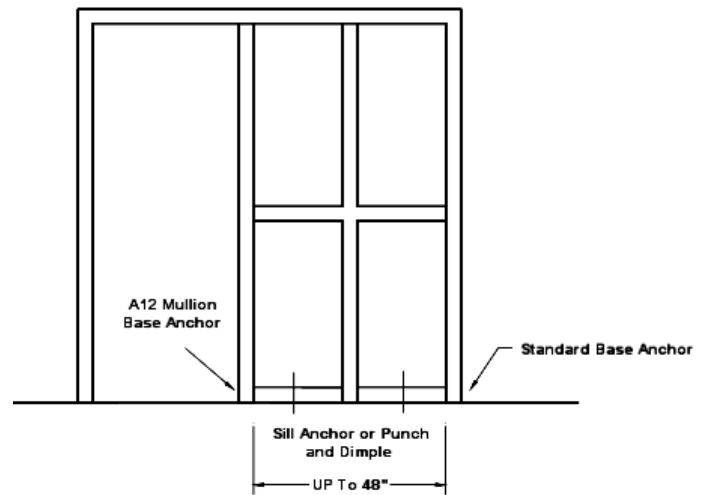


**3 Anchors Total**

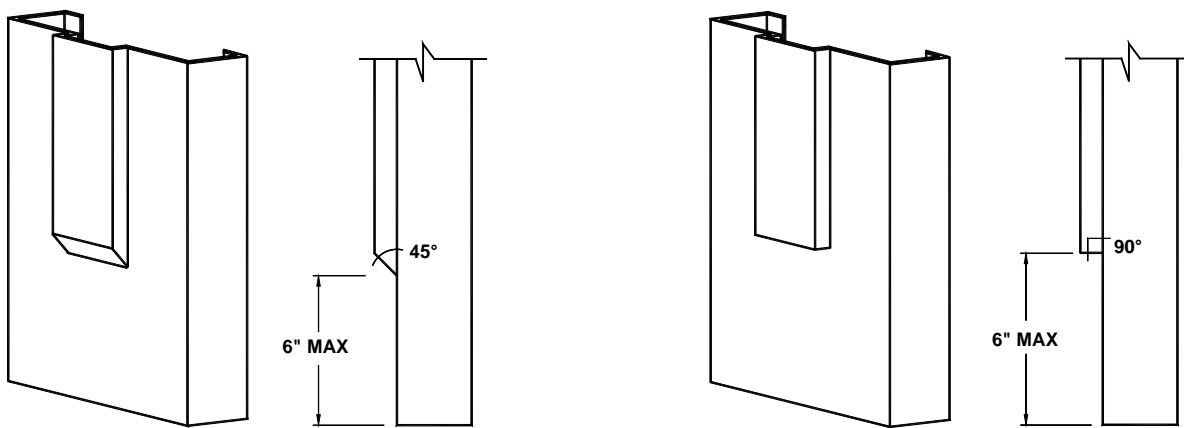
Mullions may be run to the top of the sill or to the floor ... mullion or sill anchors to be supplied accordingly.



**4 Anchors Total**

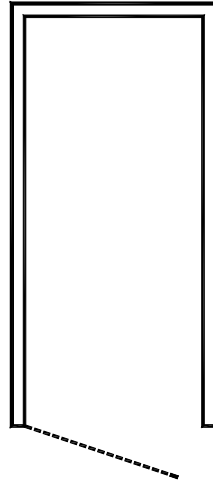


**4 Anchors Total**



**Hospital stops available for 20 min to 180 min frames**

**Maximum 6" above the floor line, 45° and 90° only**



## Standard Profile Frames -

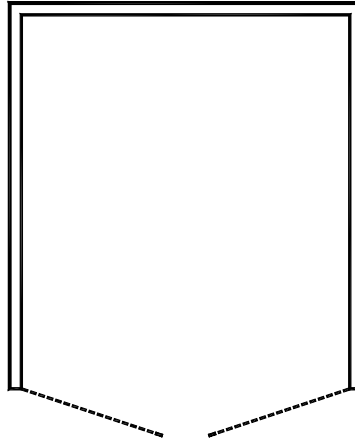
Maximum Jamb Opening Size:	4'-0" x 10'-0"	5'-0" x 12'-0"
Minimum Jamb Depth:	Per Section Detail	4"
Maximum Jamb Depth:	15"	15"
Minimum Gage:	16	16
Maximum Gage:	12	12
Maximum Rating Steel/Wood Stud:	3 Hour	1-1/2 Hour
Maximum Rating Masonry:	3 Hour	1-1/2 Hour
Construction:	Knock-Down or Welded	Welded
Minimum Face:	Per Section Detail	1-1/2"

## Drywall Pressure Anchor Frames -

Maximum Jamb Opening Size:	4'-0" x 9'-0"
Minimum Jamb Depth:	3-7/8"
Maximum Jamb Depth:	15"
Minimum Gage:	16
Maximum Gage:	14
Maximum Rating Steel/Wood Stud:	1-1/2 Hour
Maximum Rating Masonry:	N/A
Construction:	Knock-Down

## Nail-In Face Frames -

Maximum Jamb Opening Size:	3'-6" x 7'-6"
Minimum Jamb Depth:	2-9/16"
Maximum Jamb Depth:	13-1/8"
Minimum Gage:	16
Maximum Gage:	12
Maximum Rating Steel/Wood Stud:	1-1/2 Hour
Maximum Rating Masonry:	N/A
Construction:	Knock-Down

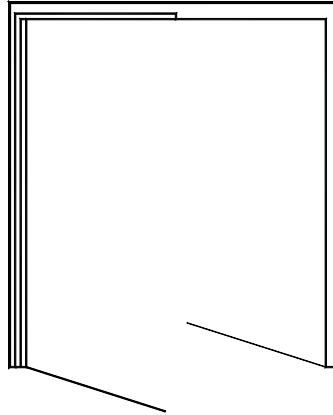


## Standard Profile Frames -

Maximum Jamb Opening Size:	8'-0" x 10'-0"	10'-0" x 12'-0"
Minimum Jamb Depth:	Per Section Detail	4"
Maximum Jamb Depth:	15"	15"
Minimum Gage:	16	16
Maximum Gage:	12	12
Maximum Rating Steel/Wood Stud:	3 Hour	1-1/2 Hour
Maximum Rating Masonry:	3 Hour	1-1/2 Hour
Construction:	Knock-Down or Welded	Welded
Minimum Face:	Per Section Detail	1-1/2"

## Drywall Pressure Anchor Frames -

Maximum Jamb Opening Size:	8'-0" x 9'-0"
Minimum Jamb Depth:	3-7/8"
Maximum Jamb Depth:	15"
Minimum Gage:	16
Maximum Gage:	14
Maximum Rating Steel/Wood Stud:	1-1/2 Hour
Maximum Rating Masonry:	N/A
Construction:	Knock-Down



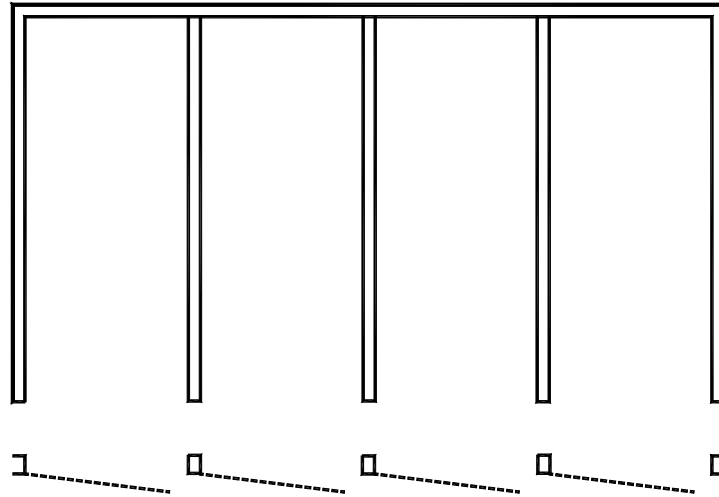
## Double Egress Frames -

Maximum Jamb Opening Size:	8'-0" x 8'-0"		8'-0" x 10'-0"
Minimum Jamb Depth:	3-1/2"		3-1/2"
Maximum Jamb Depth:	14-1/2"		14-1/2"
Minimum Gage:	16	OR	16
Maximum Gage:	12		12
Maximum Rating Steel/Wood Stud:	1-1/2 Hour		3 Hour
Maximum Rating Masonry:	1-1/2 Hour		3 Hour
Construction:	Knock-Down		Welded

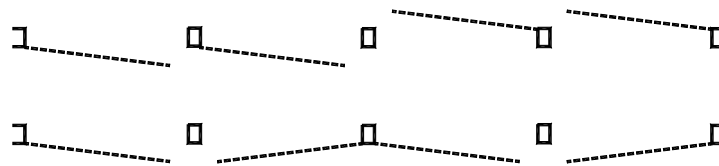
## Swing Clear Double Egress Frames -

Maximum Jamb Opening Size:	8'-0" x 8'-0"
Minimum Jamb Depth:	2-15/16" Legs, 3-15/16" Head
Maximum Jamb Depth:	8-7/16" Legs, 15" Head
Minimum Gage:	16
Maximum Gage:	12
Maximum Rating Steel/Wood Stud:	1-1/2 Hour
Maximum Rating Masonry:	1-1/2 Hour
Construction:	Welded

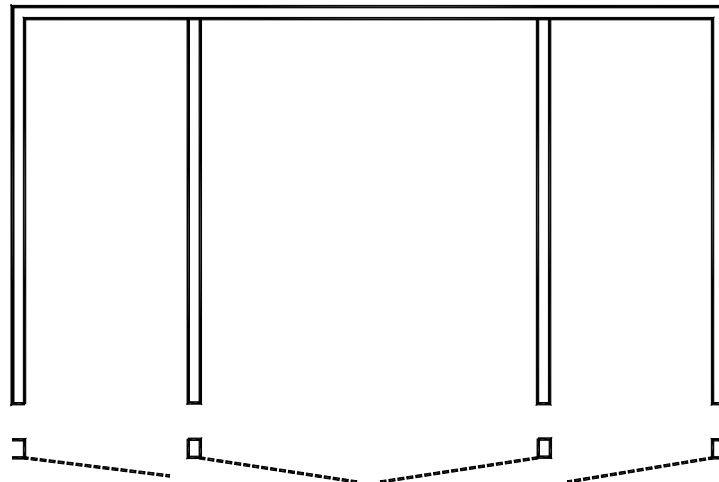




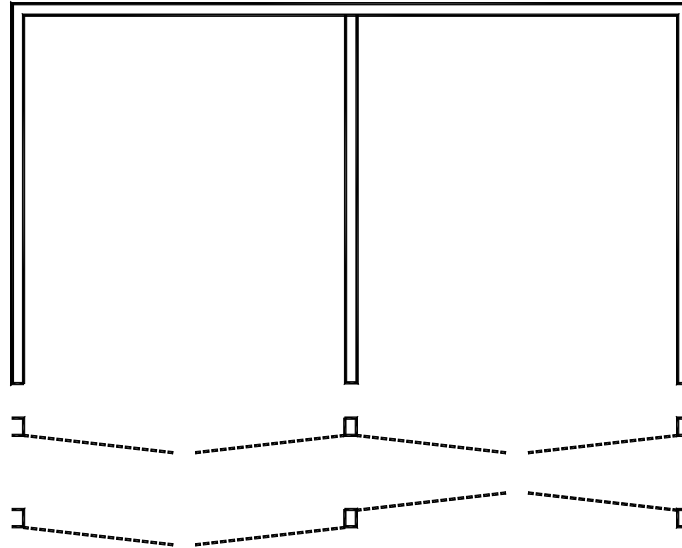
**Welded Mullions**  
(Doors may be hinged on welded mullions only)



**Welded or Removable Mullions**  
(Doors may be hinged on welded mullions only)



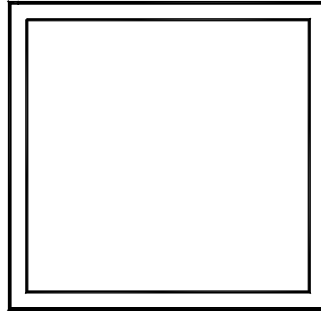
**Welded Mullions**  
(Doors may be hinged on welded mullions only)



**Welded Mullions**  
(Doors may be hinged on welded mullions only)

### Standard Profile Frames -

Maximum Overall Frame Size:	12'-8" x 8'-4" Outside Dimensions
Maximum Opening Size:	4'-0" x 8'-0" singles, 8'-0" x 8'-0" pairs
Minimum Jamb Depth:	4-1/2"
Maximum Jamb Depth:	10-1/2"
Minimum Gage:	16
Maximum Gage:	12
Maximum Rating Steel/Wood Stud:	1-1/2 Hour
Maximum Rating Masonry:	1-1/2 Hour
Construction:	Welded
Mullion:	Removable or Welded

**1/4" Wired Glass**

Maximum Opening Width:	54" (20 - 45 min)
Maximum Opening Height:	54" (20 - 45 min)
Maximum Clear Glass Area:	1296 sq inches (20 - 45 min)
Minimum Jamb Depth:	4-1/2"
Maximum Jamb Depth:	15"
Minimum Face:	1"
Minimum Gage:	16
Maximum Gage:	14
Construction:	Welded
Glass Stop:	Min. 18 Gage 5/8" x 5/8" with #8 screws 4" from ends and 12" on center

**Pilkington Wired Glass with Pemko FG3000 Fireglaze (or equal)**

Maximum Opening Width:	98" (20 - 45 min)
Maximum Opening Height:	106" (20 - 45 min)
Maximum Clear Glass Area:	4704 sq inches (20 - 45 min)
Minimum Jamb Depth:	5-3/4"
Maximum Jamb Depth:	15"
Minimum Face:	2"
Minimum Gage:	16
Maximum Gage:	14
Construction:	Welded
Glass Stop:	Min. 18 Gage 5/8" x 5/8" with #8 screws 4" from ends and 9" on center

\* 20 minute without hose stream



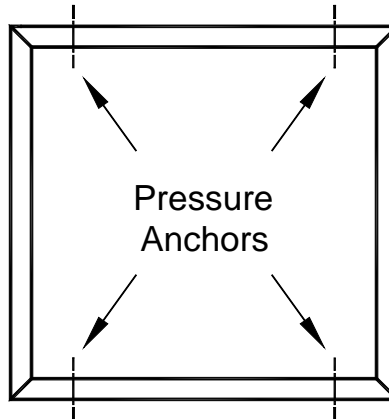
## SINGLE BORROWED LITE LIMITATIONS

---

### FireLite® (or equal)

Maximum Opening Width:	95" (20 - 60 min) 56½" (90 min)
Maximum Opening Height:	95" (20 - 60 min) 56½" (90 min)
Maximum Clear Glass Area:	3325 sq inches (20 - 60 min) 2627 sq inches (90 min)
Minimum Jamb Depth:	4-3/4"
Maximum Jamb Depth:	14-1/2"
Minimum Face:	1"
Minimum Gage:	16
Maximum Gage:	14
Construction:	Welded
Glass Stop:	Min. 18 Gage 5/8" x 5/8" with #8 screws 4" from ends and 12" on center

\* 20 minute without hose stream



### Drywall Pressure Anchor Frames -

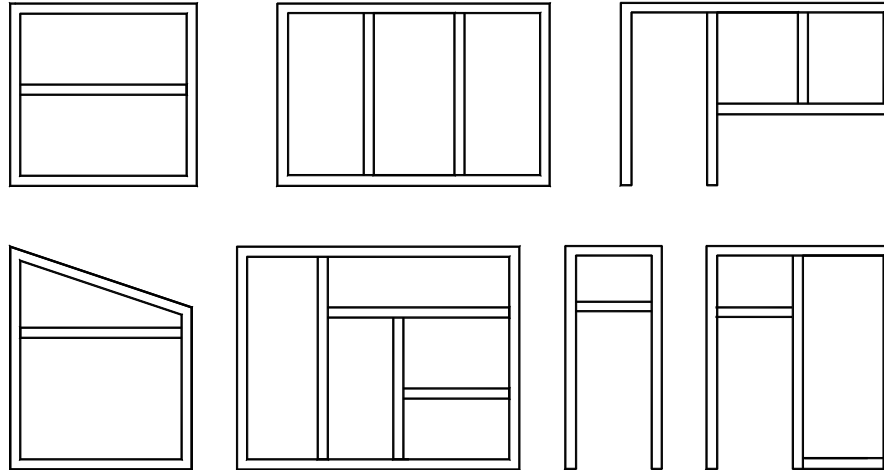
#### **1/4" Wired Glass**

Maximum Opening Width:	54" (20 - 45 min)
Maximum Opening Height:	54" (20 - 45 min)
Maximum Clear Glass Area:	1296 sq inches (20 - 45 min)
Minimum Jamb Depth:	4-3/4"
Maximum Jamb Depth:	15"
Minimum Face:	1-1/2"
Minimum Gage:	16
Maximum Gage:	14
Construction:	Knock-Down
Glass Stop:	Min. 18 Gage 5/8" x 5/8" with #8 screws 4" from ends and 12" on center

#### **FireLite® (or equal)**

Maximum Opening Width:	54" (20 - 45 min)
Maximum Opening Height:	96" (20 - 45 min)
Maximum Clear Glass Area:	3325 sq inches (20 - 45 min)
Minimum Jamb Depth:	4-3/4"
Maximum Jamb Depth:	15"
Minimum Face:	1-1/2"
Minimum Gage:	16
Maximum Gage:	14
Construction:	Knock-Down
Glass Stop:	Min. 18 Gage 5/8" x 5/8" with #8 screws 4" from ends and 12" on center

\* 20 minute without hose stream



## ¼" Wired Glass

Maximum Overall Frame Size:	174"x 120"
Maximum Opening Width:	54" (20 - 45 min)
Maximum Opening Height:	54" (20 - 45 min)
Maximum Clear Glass Area:	1296 sq inches (20 - 45 min)
Minimum Jamb Depth:	4-1/2"
Maximum Jamb Depth:	15"
Minimum Face:	1"
Minimum Gage:	16
Maximum Gage:	14
Construction:	Welded
Glass Stop:	Min. 18 Gage 5/8" x 5/8" with #8 screws 4" from ends and 12" on center

## Pilkington Wired Glass with Pemko FG3000 Fireglaze (or equal)

Maximum Overall Frame Size:	174"x 136" Drywall 174"x 144" Masonry
Maximum Opening Width:	98" (20 - 45 min)
Maximum Opening Height:	106" (20 - 45 min)
Maximum Clear Glass Area:	4704 sq inches (20 - 45 min)
Minimum Jamb Depth:	5-3/4"
Maximum Jamb Depth:	15"
Minimum Face:	2"
Minimum Gage:	16
Maximum Gage:	14
Construction:	Welded
Glass Stop:	Min. 18 Gage 5/8" x 5/8" with #8 screws 4" from ends and 9" on center

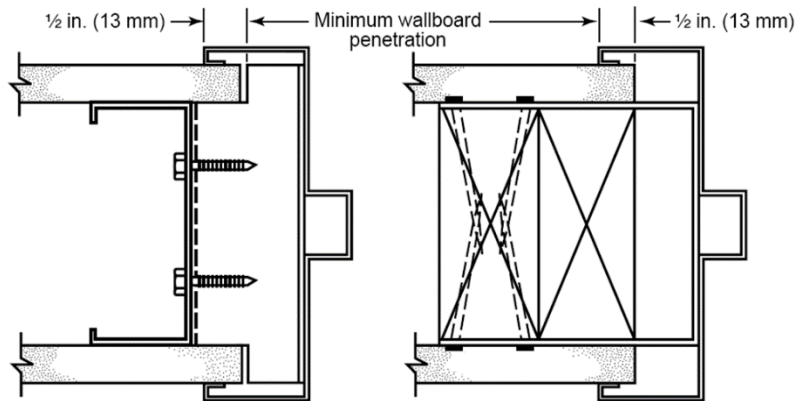
\* 20 minute without hose stream

### FireLite® (or equal)

Maximum Overall Frame Size:	174"x 120"
Maximum Opening Width:	95" (20 - 60 min) 56½" (90 min)
Maximum Opening Height:	95" (20 - 60 min) 56½" (90 min)
Maximum Clear Glass Area:	3325 sq inches (20 - 60 min) 2627 sq inches (90 min)
Minimum Jamb Depth:	4-3/4"
Maximum Jamb Depth:	15"
Minimum Face:	1"
Minimum Gage:	16
Maximum Gage:	14
Construction:	Welded
Glass Stop:	Min. 18 Gage 5/8" x 5/8" with #8 screws 4" from ends and 12" on center

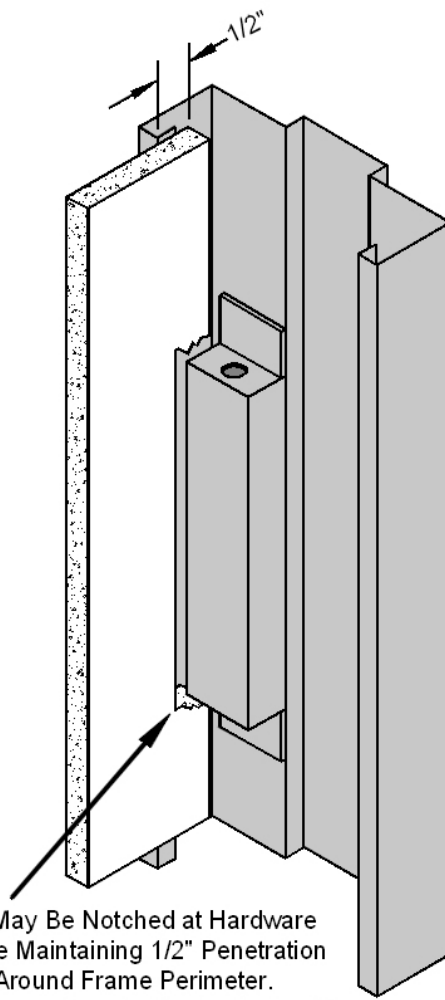
\* 20 minute without hose stream

## WALLBOARD PENETRATION PER NFPA-80

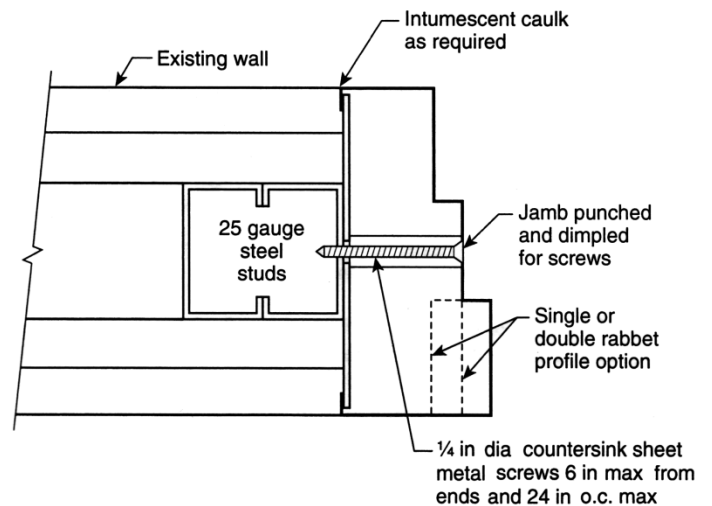


Pressed steel door frame with steel stud anchors

Pressed steel door frame with wood stud anchors

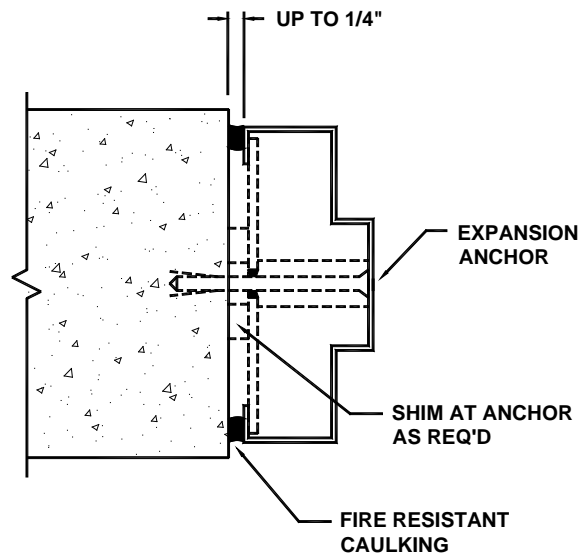
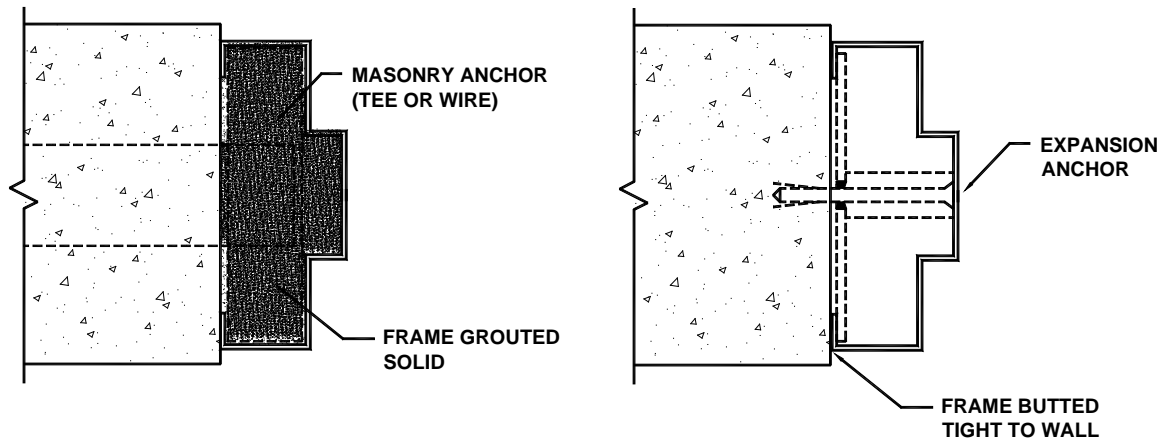


Wallboard May Be Notched at Hardware Boxes While Maintaining 1/2" Penetration Elsewhere Around Frame Perimeter. Exposed Seams May Be Filled with Fire Calk.



Alternate Flush Mount Method for Steel Stud Walls with No Wallboard Penetration Required.

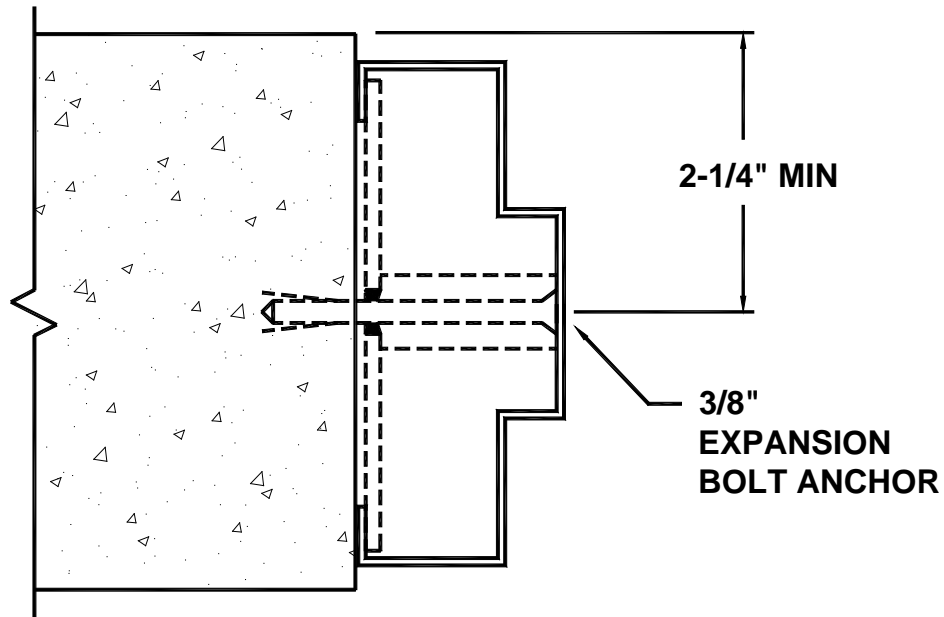




## EXPANSION BOLT ANCHORS

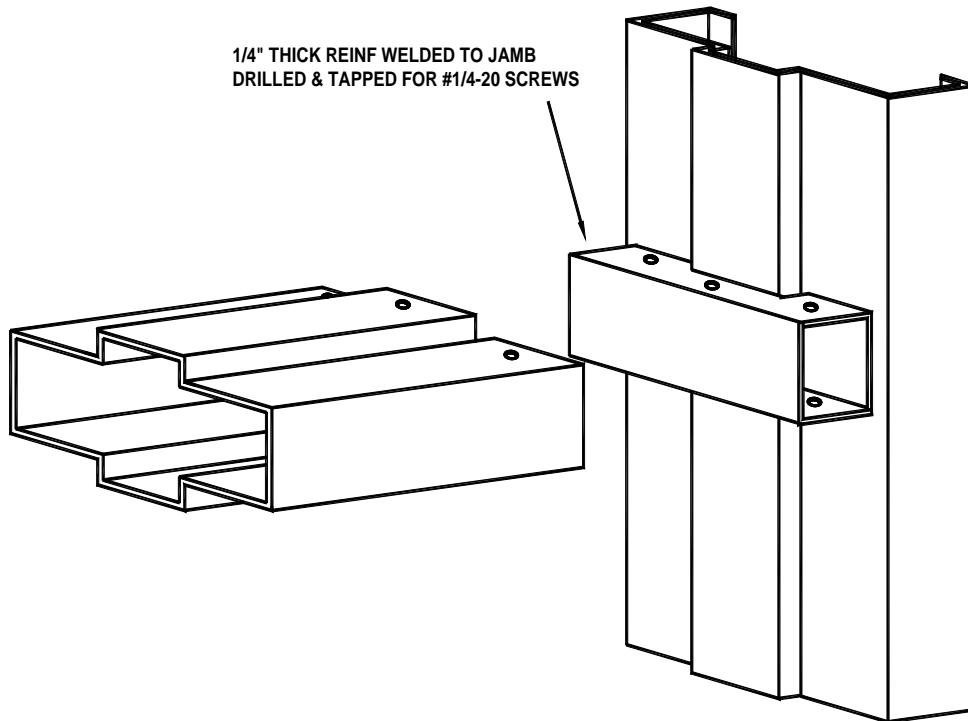
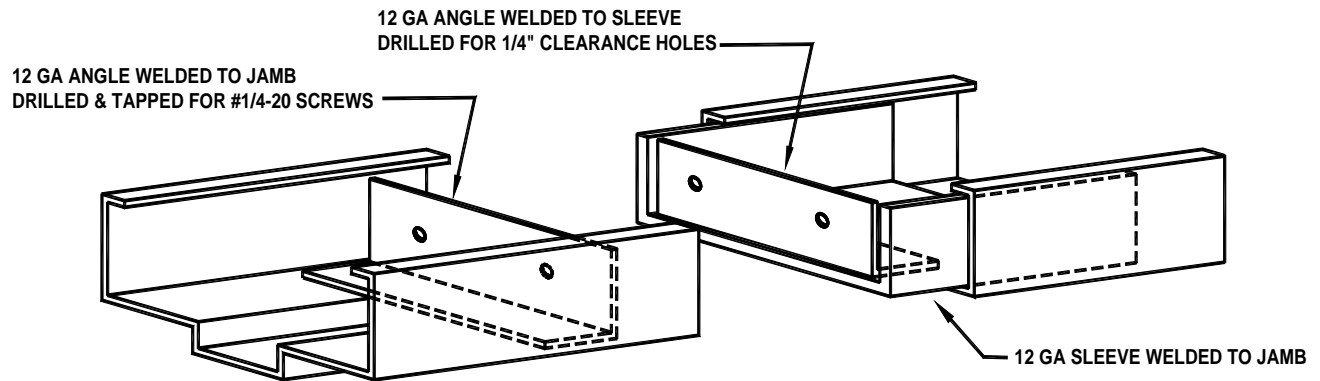
If expansion bolt anchors are to be used, the soffit shall be provided with 7/16" dimpled holes located not more than **6" from the top and bottom** with intermediate holes spaced no more than **26" on center**. The installer is to provide each hole with a minimum 3/8" roundhead bolt.

The bottom bolt acts as the base anchor. As such, adjustable type base anchors are not permitted at these frames as they would conflict with the required location of the bottom bolt.
















No expansion bolt anchor shall be set closer to the edge of the wall opening than six times the diameter of the anchor or closer to another anchor than eight times the diameter of the anchor.

## Mechanical Field Splices for Oversized Frames (45 Minute Maximum Rating)



## FIRE-RATED DOOR TYPES

		CORES <sup>1</sup>	H	P	S	TR-250 <sup>P</sup>	TR-250 <sup>G</sup>	TR-450
DOOR TYPE		RATINGS (MINUTES)	MAXIMUM OPENING SIZE					
	SINGLE	20 45 60 90	4-0x10-0	4-0x8-0	5-0x12-0	4-0x8-0	4-0x9-0	5-0x12-0
	SINGLE	180	4-0x10-0	3-0x7-0	4-0x10-0	4-0x8-0		
	PAIR	20 45 60 90	8-0x10-0	6-0x8-0	10-0x12-0	8-0x8-0	8-0x9-0	10-0x12-0
	PAIR	180	8-0x10-0		8-0x9-0	8-0x8-0		
	DOUBLE EGRESS	20 45 60 90 180	8-0x10-0		8-0x10-0	8-0x8-0		
	SINGLE LOUVER <sup>3</sup>	45 60 90	4-0x10-0		5-0x12-0			
	PAIR LOUVER <sup>3</sup>	45 60 90	8-0x10-0		10-0x12-0			
	SINGLE w/ LITE <sup>4</sup>	20 45 60 90	4-0x10-0	4-0x8-0	5-0x12-0	4-0x8-0	4-0x9-0	5-0x12-0
	PAIR w/ LITE <sup>4</sup>	20 45 60 90	8-0x10-0	6-0x8-0	10-0x12-0	8-0x8-0	8-0x9-0	10-0x12-0
	DUTCH DOOR	20 45 60 90 180	4-0x10-0		4-0x10-0			
	STC-40	20 45 60 90 180				4-0x8-0		
	STC-48 <sup>5</sup>	20 45 60 90		3-2x7-0				
	STC-50 - STC-53	20 45 60 90		3-0x7-0				

1. H=HONEYCOMB P=POLYSTYRENE(EPS) S=STEEL STIFFENED TR-250<sup>P</sup>=STANDARD TEMP RISE CORE  
TR-250<sup>G</sup>=SPECIAL TEMP RISE CORE TR-450=STEEL STIFFENED W/ HIGH DENSITY INSULATION
2. ALL DOORS AVAILABLE 1-3/4" THICK FOR 14, 16, 18 GAUGES
3. SEE LOUVER AND GLAZING SPECIFICATIONS FOR MAXIMUM SIZES FOR THOSE COMPONENTS
4. LIMITED GLAZING AVAILABLE FOR 180 MIN DOORS – SEE GLAZING SPECIFICATIONS OR CALL FOR AVAILABILITY.
5. STC48 AVAILABLE IN PAIRS UP TO 6470 OR SINGLES WITH LITES UP TO 100 SQ INCHES

## RATED DOORS WITH LITES

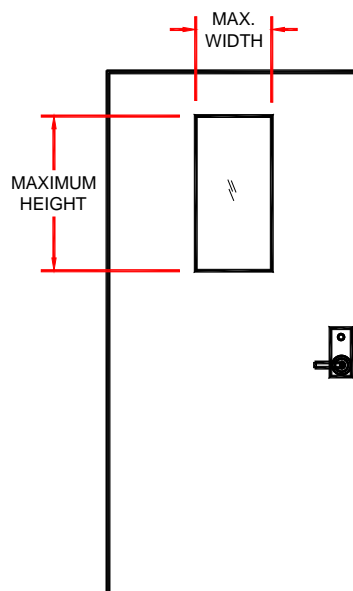
### Maximum Glass Opening Sizes Permitted for Doors

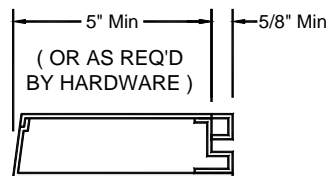
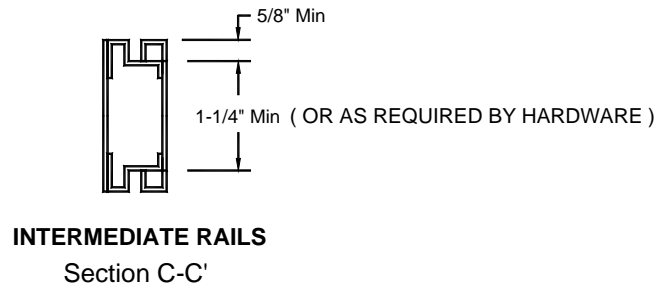
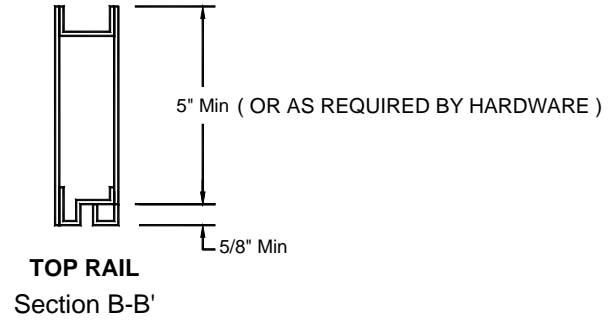
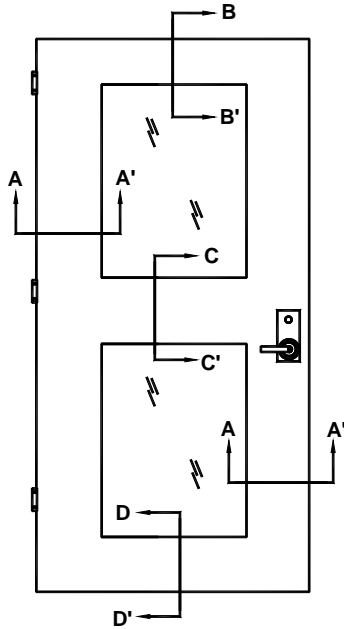
RATING (MINUTES)	MAX WIDTH	MAX HEIGHT	MAX AREA PER LITE	MAX AREA PER LEAF	MAX WIDTH	MAX HEIGHT	MAX AREA PER LITE	MAX AREA PER LEAF	MAX WIDTH	MAX HEIGHT	MAX AREA PER LITE	MAX AREA PER LEAF
20	36	54	1296	2400	34	84	2856	2856	36	89	3204	3204
45	36	54	1296	2400	34	84	2856	2856	36	89	3204	3204
60	12	33	100	100	12	46	1716	1716	36	89	3204	3204
90	12	33	100	100	12	46	1716	1716	36	56-1/2	2034	2034
180	-	-	-	-	-	-	-	-	12	33	100	100
60 TR	12	33	100	100	12	33	100	100	12	33	100	100
90 TR	12	33	100	100	12	33	100	100	12	33	100	100
180 TR	-	-	-	-	-	-	-	-	-	-	-	-

WIRE GLASS

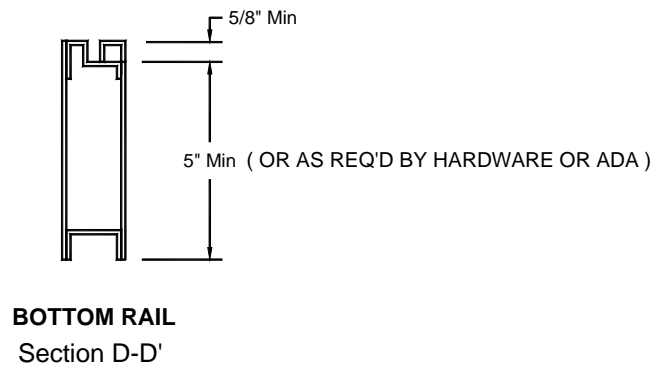
PILKINGTON GLASS  
w/ PEMKO FIREGLAZE  
(OR EQUAL)

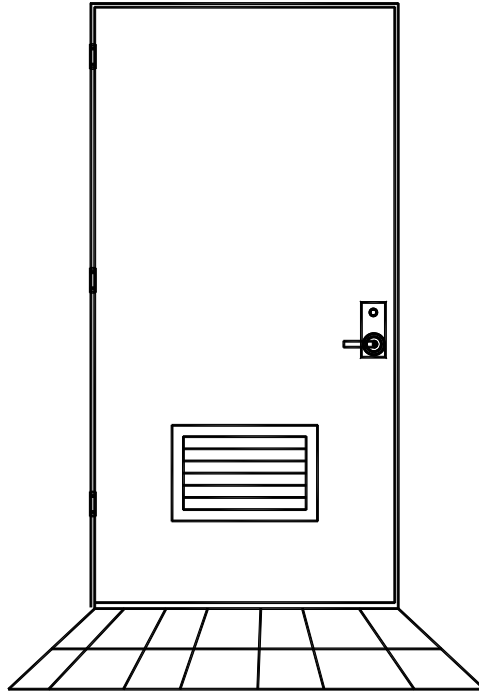
FIRELITE  
(OR EQUAL)





**STILES**  
Section A-A'





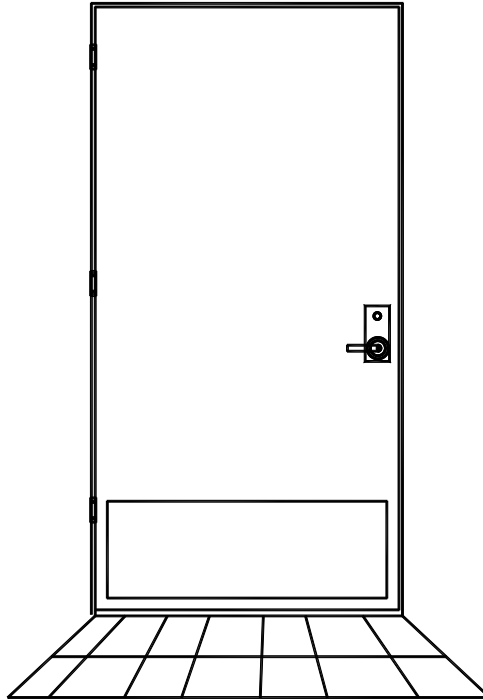
Louvers are **NOT** permitted in the following :

- 20 Minute Doors
  - 3 Hour Doors
- Doors with Exit Devices
  - Doors with Lites
- The Top Half of a Door
- Temperature Rise Doors
- Transoms of Frames

Louvers are restricted to use in 45, 60 and 90 min doors where smoke control is not a consideration. They must be listed Fusible Link types and may not exceed 24"x 24".

Per DCI Installation Instructions, the "S" indicated on the label for this door is voided by the use of louvers.

Cutout in door does not need to be channeled when using Anemostat FLDL-UL with HM-Clips.



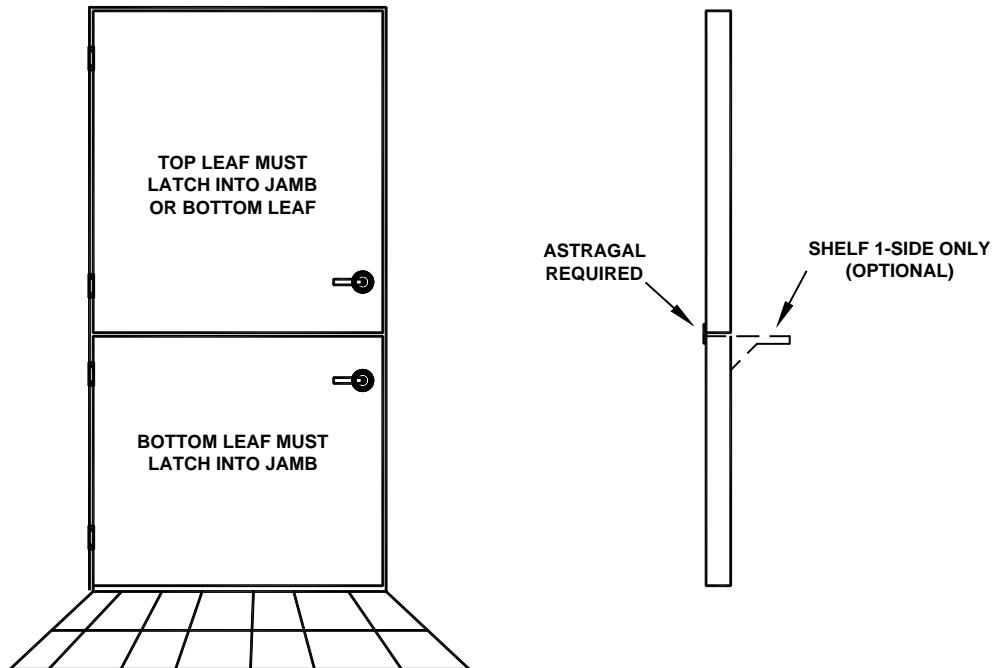
Per HMMA 850 & NFPA 80:

"The top of the plate shall be a maximum of 16 inches above the bottom of the door unless otherwise tested and labeled.  
Such plates may be on both faces. No other plates shall be installed."

*Exception:*

Life Safety Code NFPA 101 permits the following for Health Care Facilities only:  
"Nonrated, factory- or field-applied protective plates, unlimited in height, shall be permitted."





Rated up to 3 hours

4'-0" x 10'-0" maximum opening size

Dead latch is permitted in top leaf when not in a means of egress.

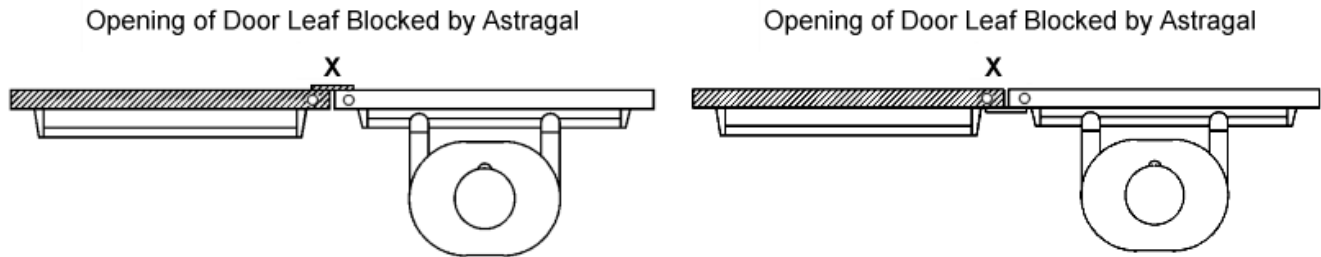
Dead bolt (in addition to latches) is permitted when not in a means of egress.

1. Overlapping flat bar astragals are not required on standard pairs of doors or double egress doors up to 8'-0" x 10'-0" in size and up to a 3-hour fire rating.
2. Astragals are NOT permitted on pairs of doors with vertical rod exit devices on both leaves, or when rim panic devices are used on both leaves with a hardware mullion.
3. Overlapping flat bar astragals ARE required on all standard pairs over 10'-0" high or when one leaf exceeds 4'-0" in width. (Therefore, exit devices may not be used on standard pairs of doors over 10'-0" high or when either door leaf is over 4'-0" wide)
4. The customer may need to provide additional gasketing/smoke-seal type astragals to comply with UL1784 smoke and draft control requirements where required by code.

### Standard swing pairs of doors with vertical rod devices:

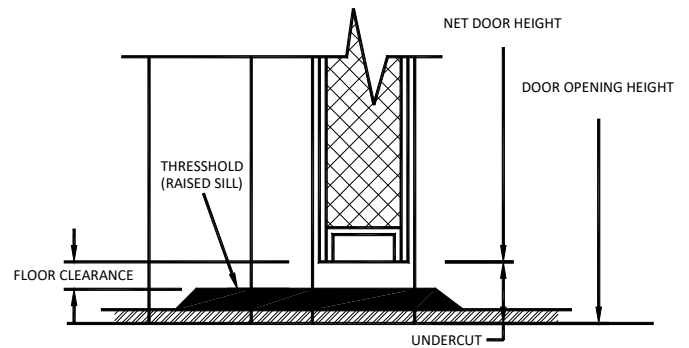
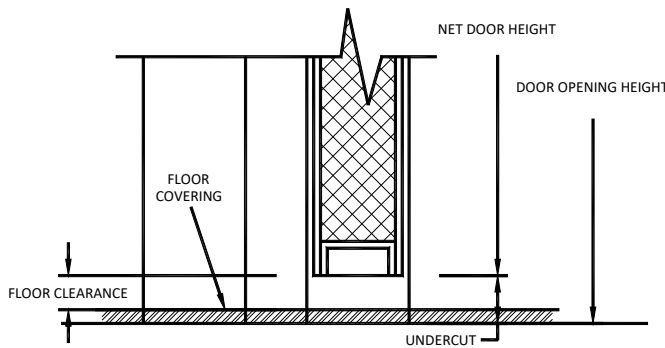
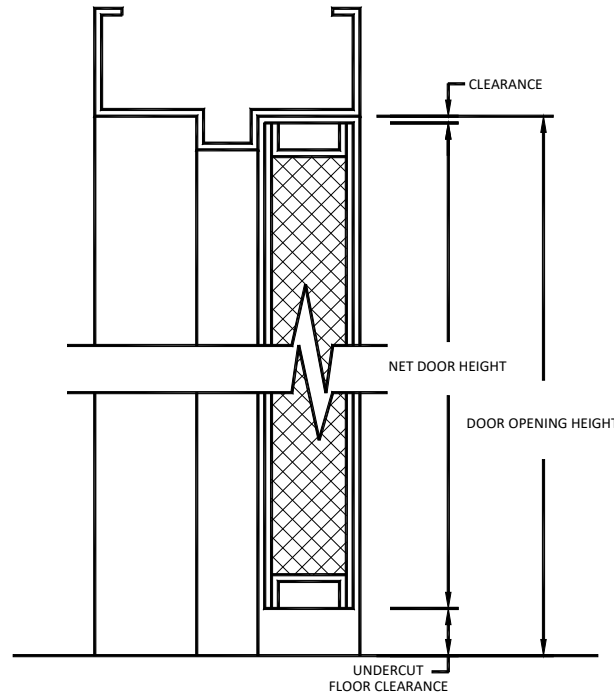
With two vertical rods, an astragal applied to the pull side of one leaf would disable the leaf without the astragal.

An astragal applied to the push side of one leaf would also disable the leaf with the astragal.



Astragals **ARE** permitted when a door with a vertical rod device is used with an inactive leaf equipped with flush bolts.

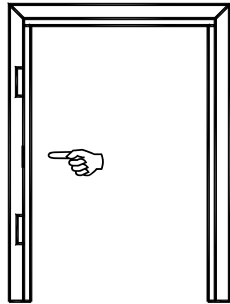
(Where only one leaf is needed to satisfy egress requirements)



## Maximum Clearances allowed:

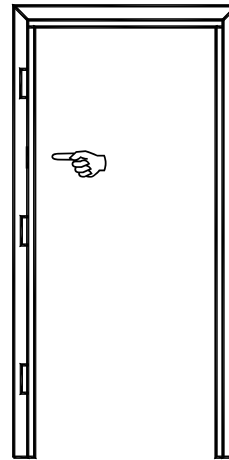
Clearance Between Bottom of Door and ...	
raised sill *	3/4"
floor without sill	3/4"
rigid floor tiles	3/4"

\* Life Safety Code, NFPA 101 limits sill height to 1/2" in a means of egress.  
 ADA limits sill height to 1/2" at all accessible doors.



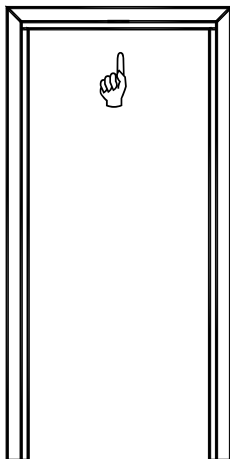
2 HINGES OR PIVOTS

-----  
MIDDLE OF HINGE JAMB RABBET  
(PLUS OR MINUS 8 INCHES)



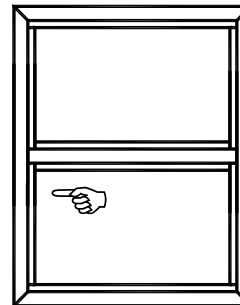
3 OR 4 HINGES OR PIVOTS

-----  
HINGE JAMB RABBET AT 52" TO  
68" FROM BOTTOM OF FRAME



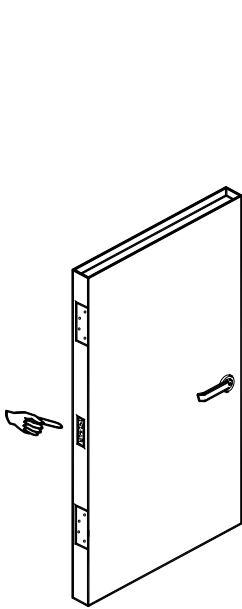
NO HINGES (CONTINUOUS OR  
SURFACE HINGES)

-----  
DOOR SIDE RABBET OF HEAD  
CENTERED IN WIDTH AT SINGLES  
CENTERED OVER INACTIVE LEAF AT PAIRS



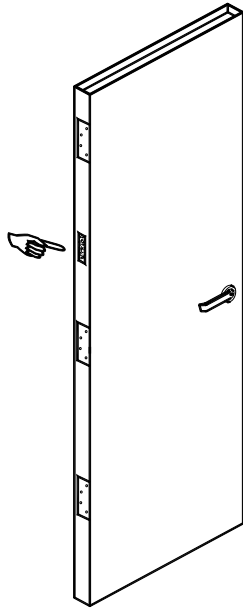
BORROWED LITE

-----  
ANYWHERE VISIBLE -  
PREFERABLY ON SIDE JAMB,  
ON RABBET OPPOSITE GLASS,  
ABOUT HALFWAY UP



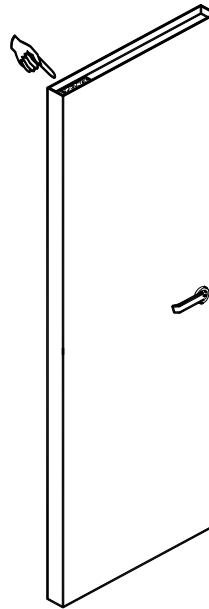
2 HINGES OR PIVOTS

-----  
MIDDLE OF HINGE EDGE  
(PLUS OR MINUS 8 INCHES)



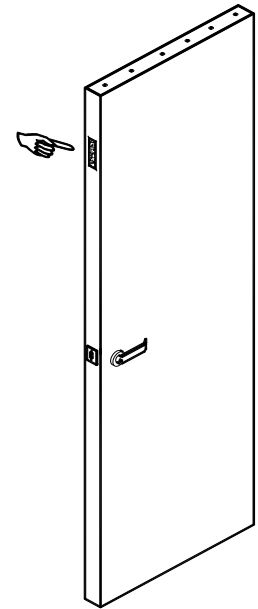
3 OR 4 HINGES OR PIVOT:

-----  
HINGE EDGE 52" TO 68"  
FROM BOTTOM OF DOOR



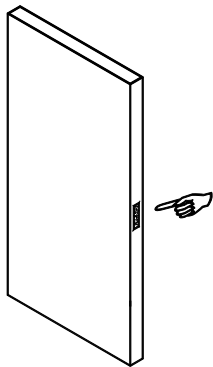
CONTINUOUS OR SURFACE  
HINGES OR POCKET PIVOTS

-----  
TOP OF DOOR AS TIGHT AS  
POSSIBLE TO THE HINGE EDGE  
FOR EITHER STANDARD CHANNEL  
OR FOR FLUSH AND SEAL



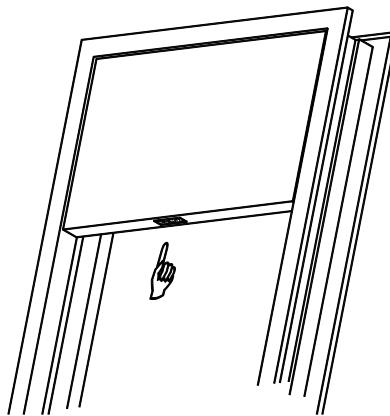
DOOR WITH REMOVABLE TOP CAP  
& CONTINUOUS OR SURFACE  
HINGES OR POCKET PIVOTS

-----  
LOCK EDGE AT 6" DOWN  
FROM TOP OF DOOR



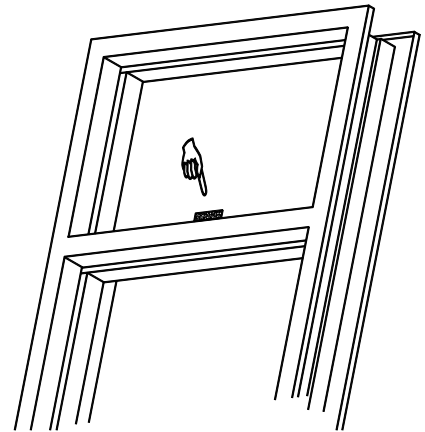
LOOSE PANEL

-----  
ON ANY EDGE



WELDED IN FRAME  
NO TRANSOM BAR

-----  
ON BOTTOM EDGE  
CENTERED IN WIDTH  
(PLUS OR MINUS 8 INCHES)



WELDED IN FRAME  
WITH TRANSOM BAR

-----  
ON FACE OF PANEL  
STOP SIDE - CENTERED IN WIDTH  
(PLUS OR MINUS 8 INCHES)

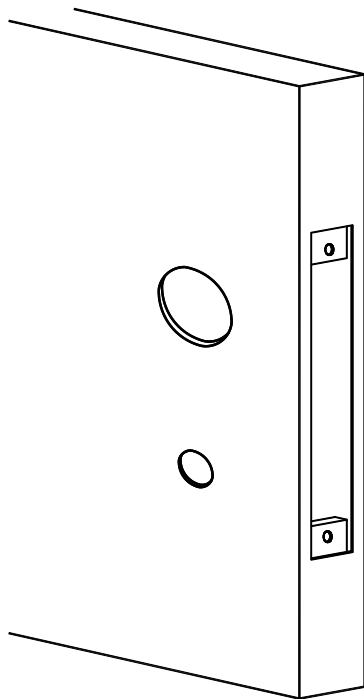
### FIELD PREPS PERMITTED ON RATED HOLLOW METAL FRAMES AND DOORS

THE FOLLOWING IS PERMITTED PER NFPA 80 (2013 EDITION) SECTIONS 4.1.3.2 – 4.1.3.4.

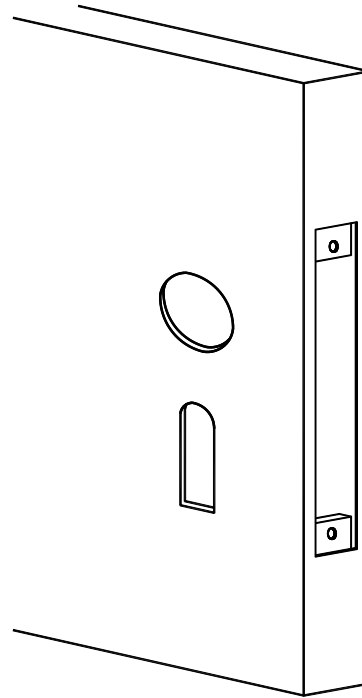
FOR JOB SITE PREPARATION OF SURFACE-APPLIED HARDWARE, FUNCTION HOLES FOR MORTISE LOCKS, AND HOLES FOR LABELED VIEWERS, AND PROTECTION PLATES:

SURFACE-APPLIED HARDWARE SHALL BE APPLIED TO THE FACE OF THE DOOR OR FRAME WITHOUT REMOVING MATERIAL OTHER THAN DRILLING **ROUND HOLES**.

THE HOLES SHALL NOT BE PERMITTED TO EXCEED A DIAMETER OF 1" WITH THE EXCEPTION OF CYLINDERS.

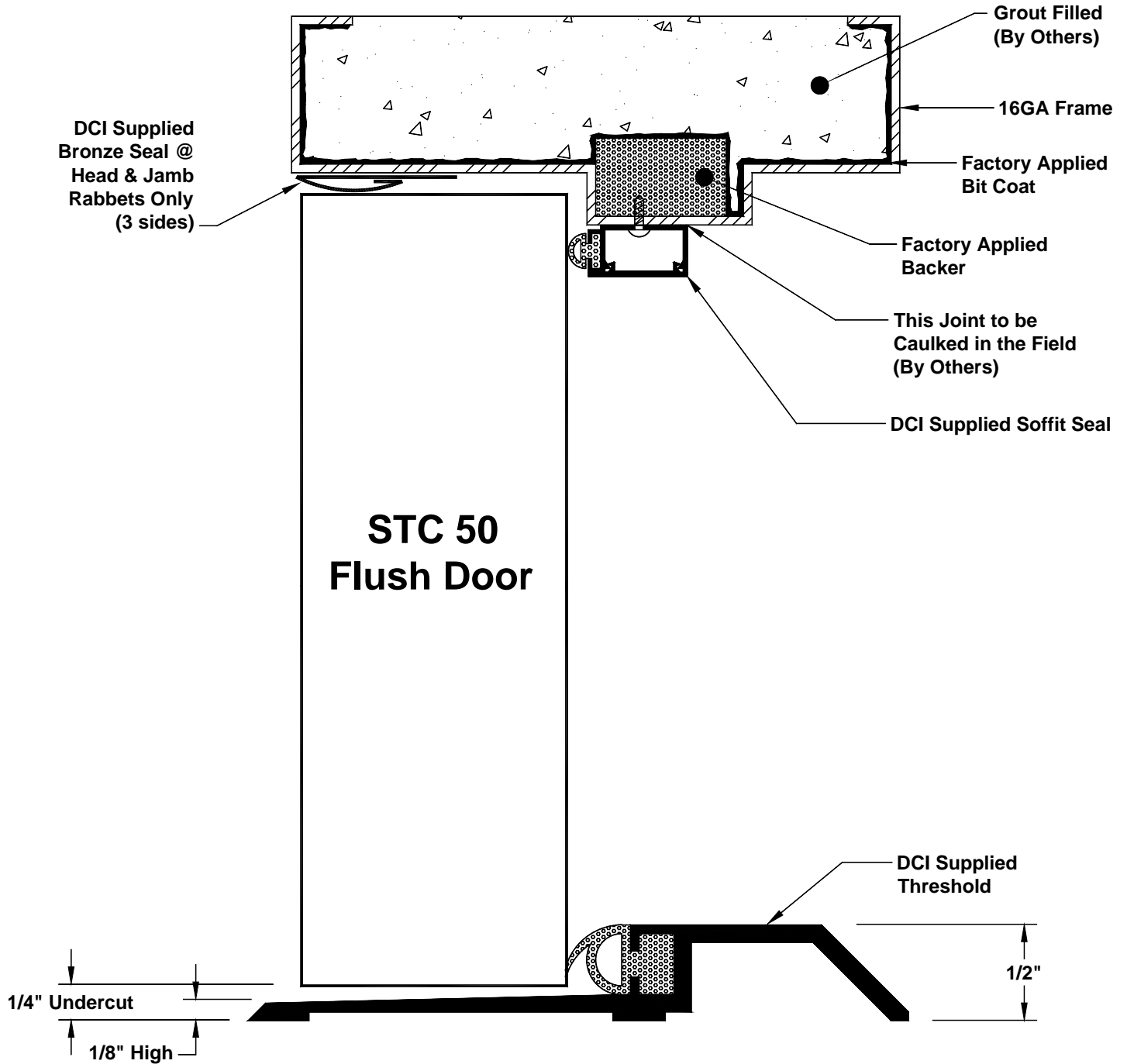


**PERMITTED**



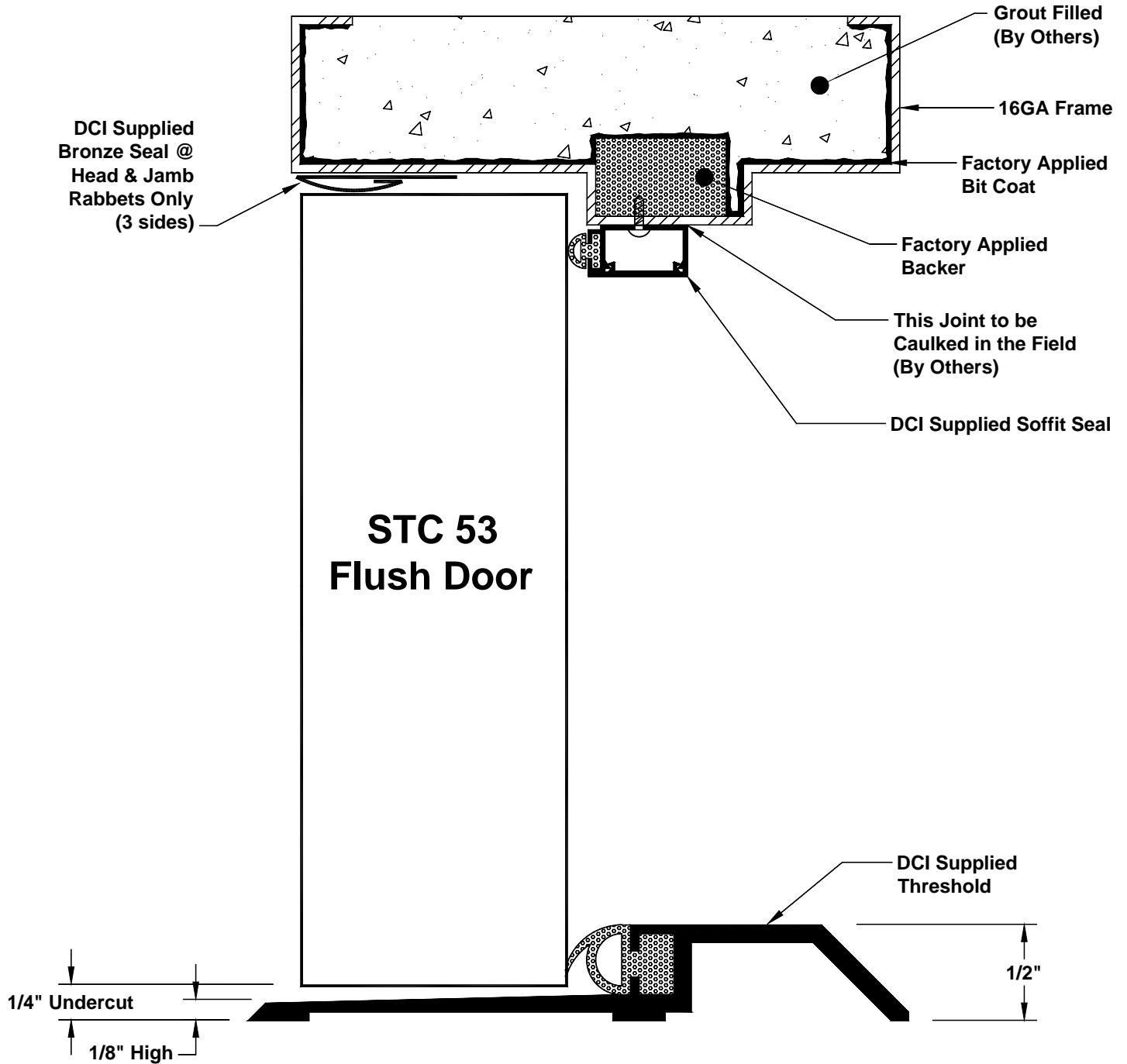
**NOT PERMITTED**

## STC 50 FLUSH DOOR ASSEMBLY



Tested as 3'0"x7'0" with (3) 4-1/2" Hinges, Cylindrical Lock

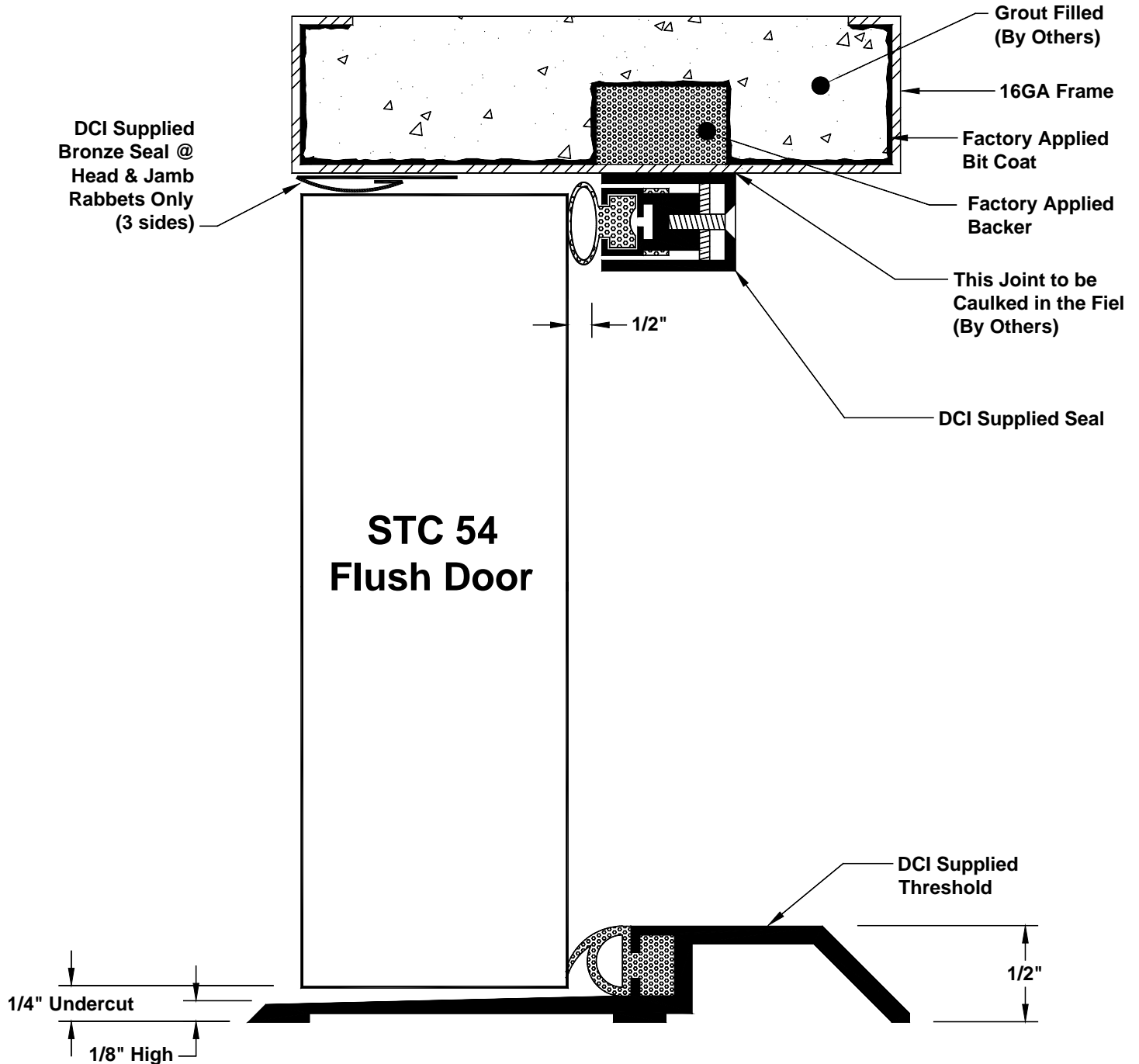
## STC 53 FLUSH DOOR ASSEMBLY



Tested as 3'0"x7'0" with (3) 4-1/2" Hinges, Cylindrical Lock

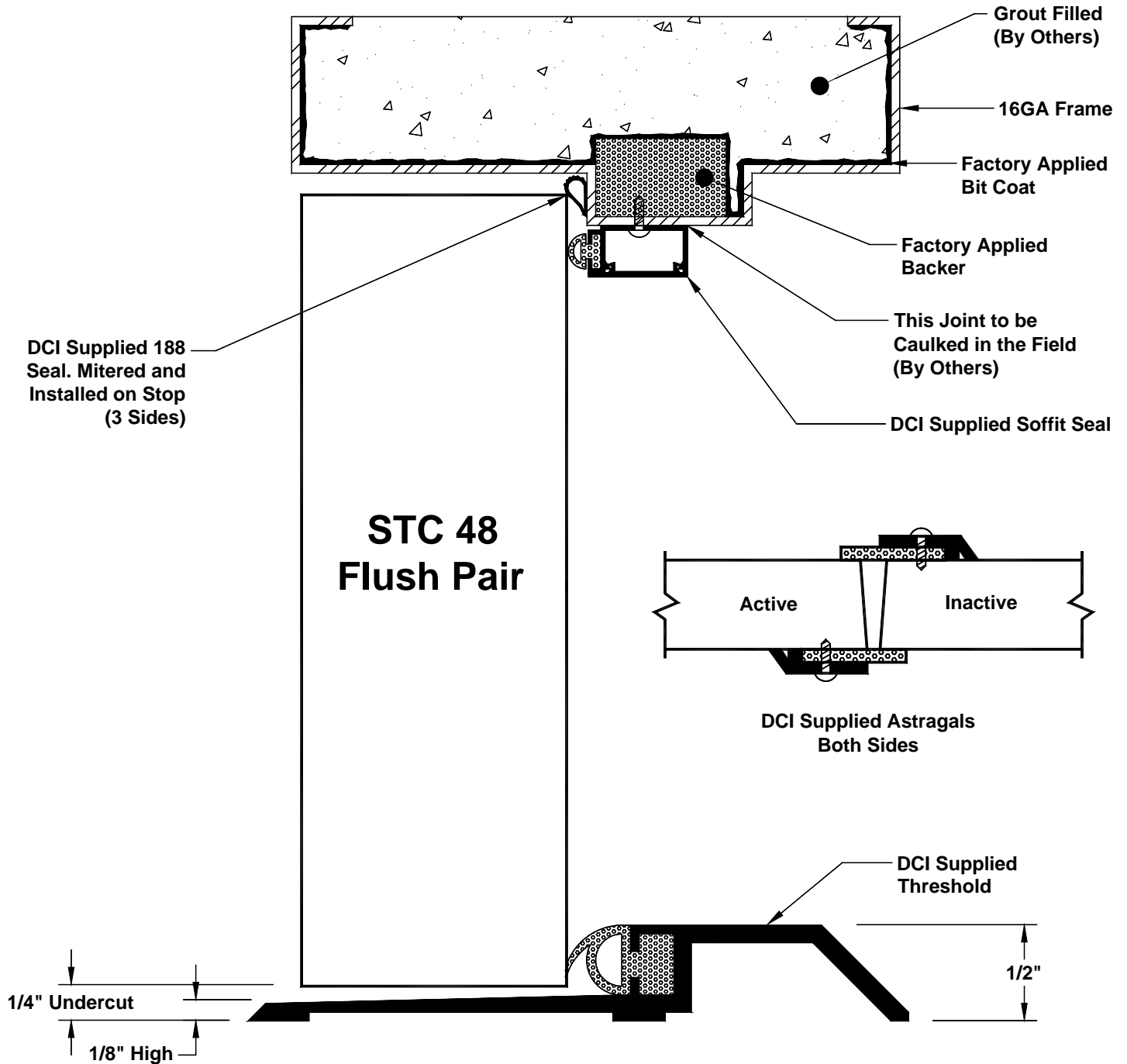


## STC 54 FLUSH DOOR ASSEMBLY

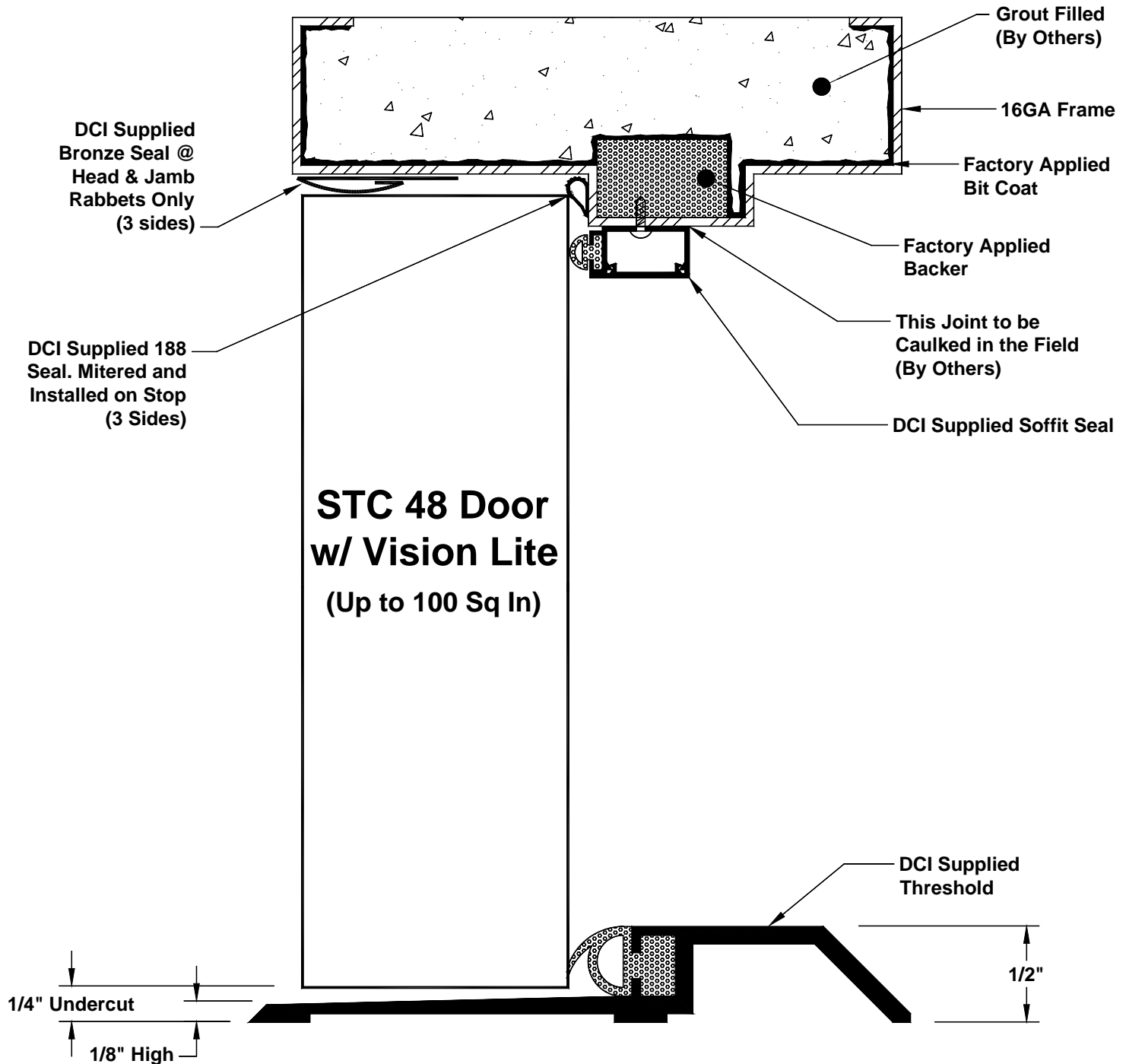


Tested as 3'0"x7'0" with (3) 4-1/2" Hinges, Cylindrical Lock

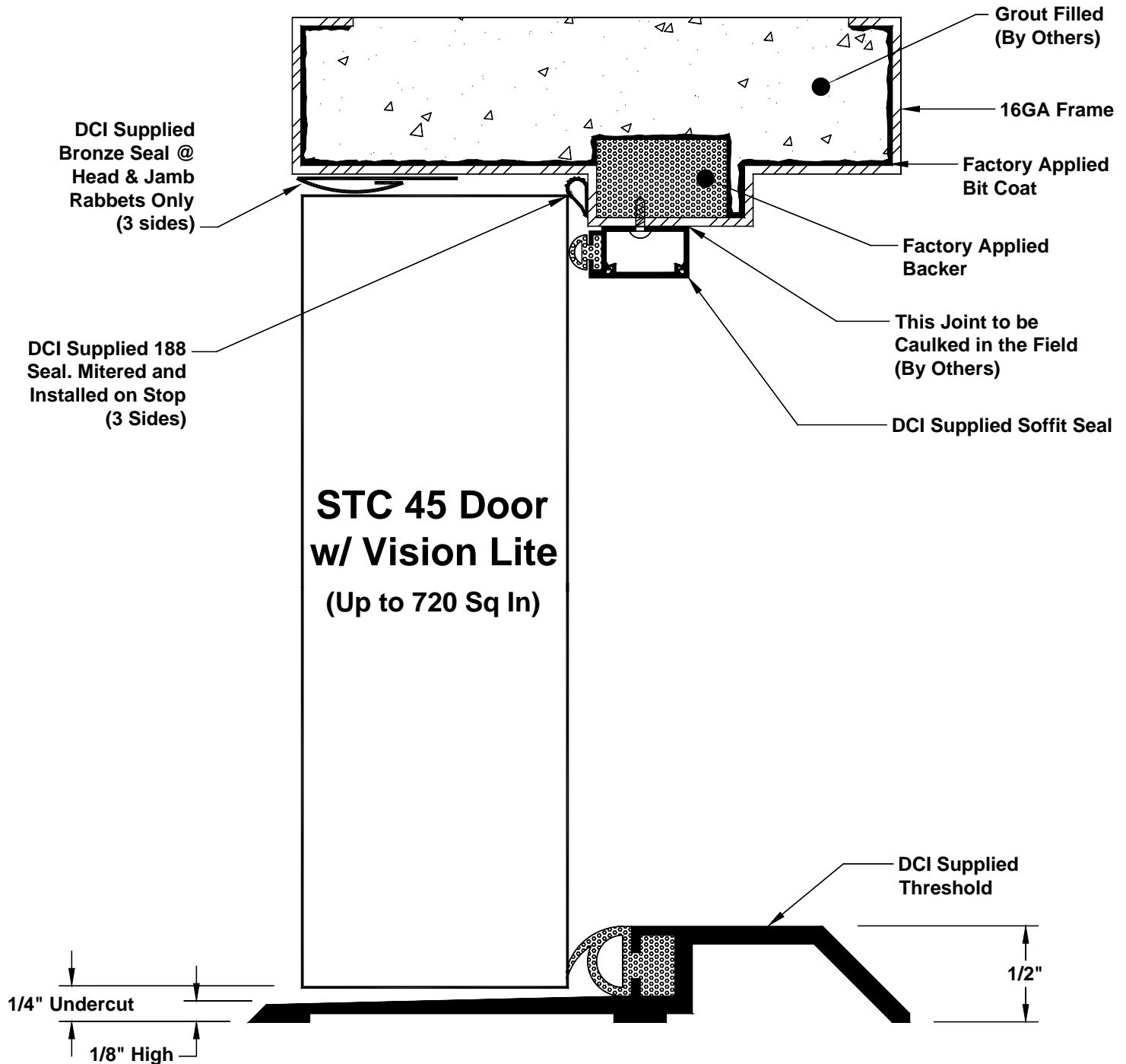
## STC 48 FLUSH DOOR PAIR ASSEMBLY



Tested as 6'0"x7'0" with (6) 4-1/2" Hinges, Cylindrical Lock, (2) 6" Manual Flush Bolts

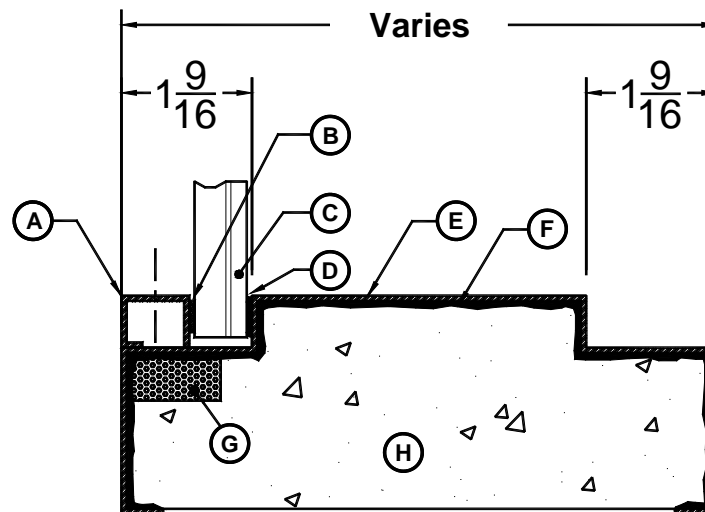
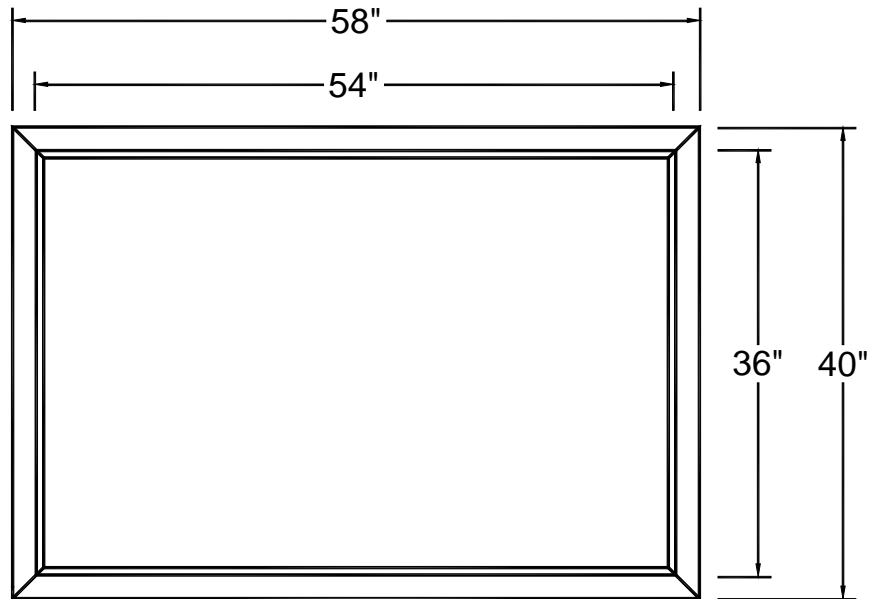


Tested as 3'0"x7'0" with (3) 4-1/2" Hinges, Cylindrical Lock



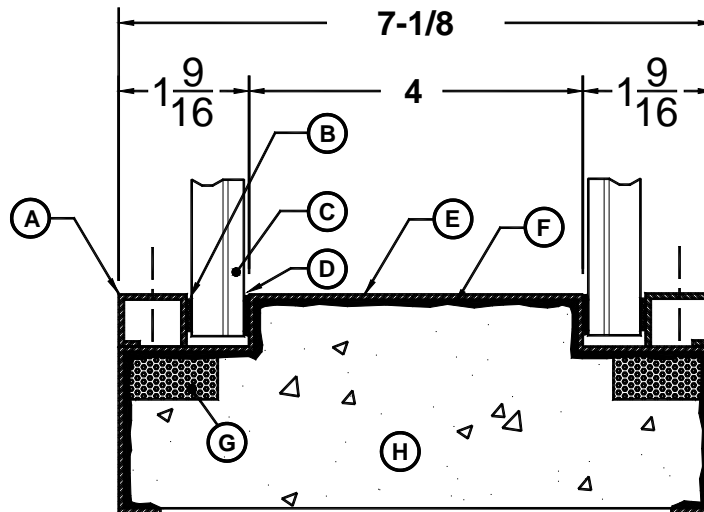
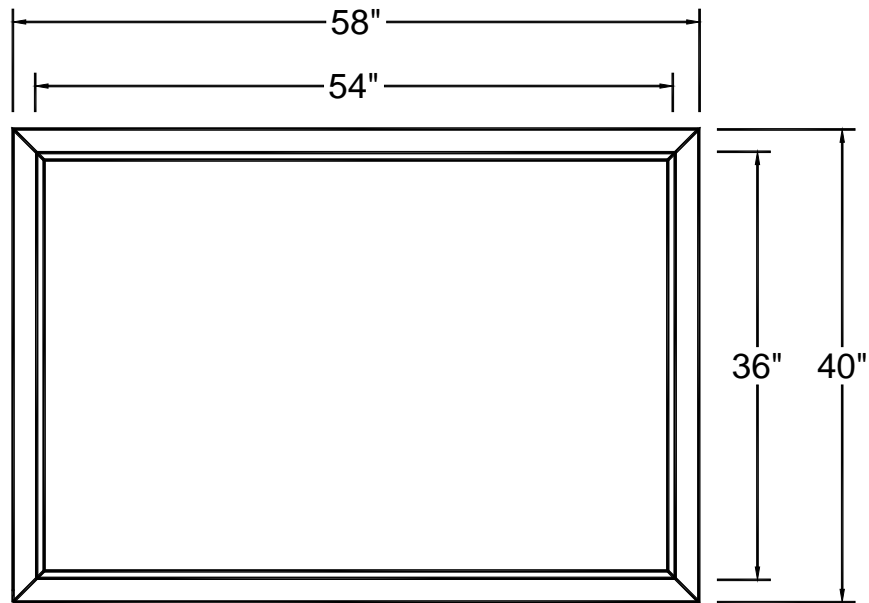
Tested as 3'0"x7'0" with (3) 4-1/2" Hinges, Cylindrical Lock

Maximum Size Tested:



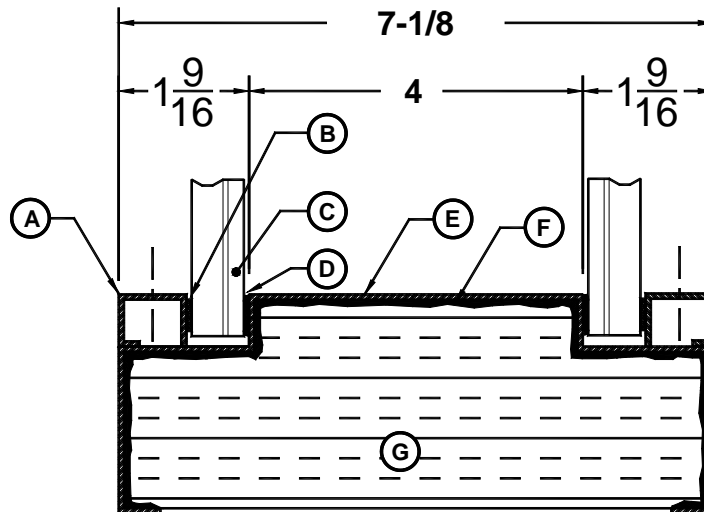
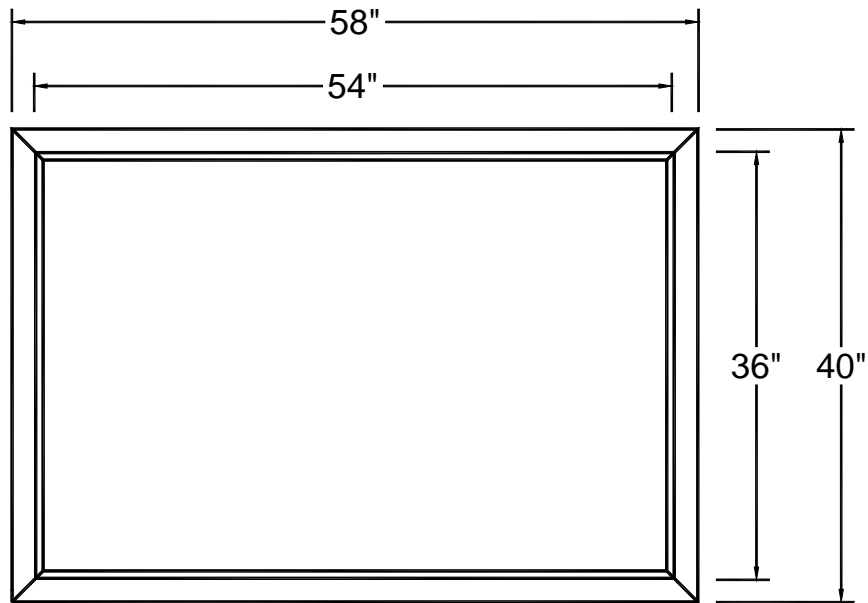
- A.  $13/16"$  x  $5/8"$  Glass Stop
- B. CR Laurence  $1/8"$  x  $3/8"$  Norseal® V730 Acoustical Sealant Tape (By Others)
- C.  $5/8"$  Lam Glass ( $3/8"$  +  $3/16"$  with  $.060"$  Interlayer) - (By Others)
- D. Stay-Soft Glazing Rope -  $1/4"$  Diameter (By Others)
- E. 16 GA Frame
- F. Factory Applied Bit Coat
- G. Factory Applied Backer
- H. Grout Filled (By Others)

Maximum Size Tested:



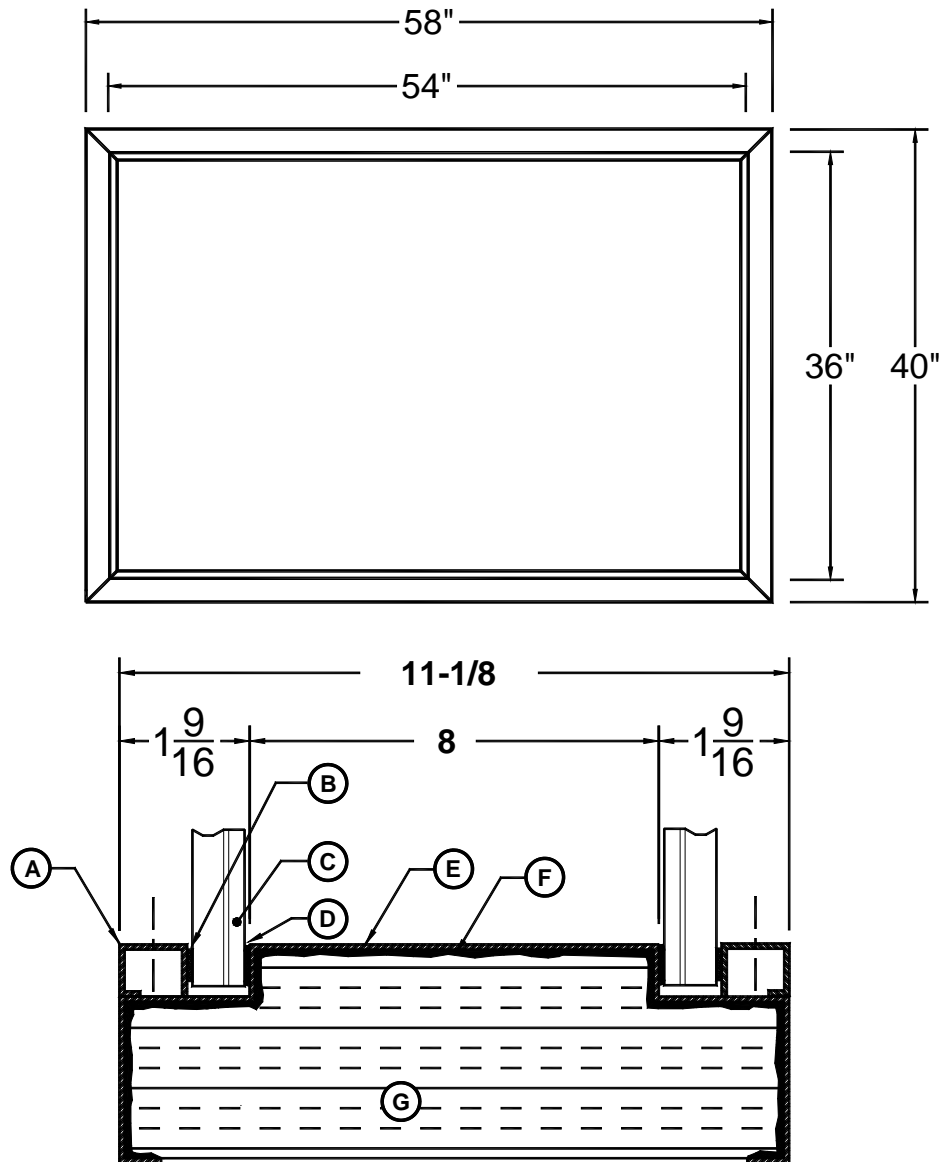
- A. 13/16" x 5/8" Glass Stop
- B. CR Laurence 1/8" x 3/8" Norseal® V730 Acoustical Sealant Tape (By Others)
- C. 5/8" Lam Glass (3/8" + 3/16" with .060" Interlayer) - (By Others)
- D. Stay-Soft Glazing Rope - 1/4" Diameter (By Others)
- E. 16 GA Frame
- F. Factory Applied Bit Coat
- G. Factory Applied Backer
- H. Grout Filled (By Others)

Maximum Size Tested:



- A. 13/16" x 5/8" Glass Stop
- B. CR Laurence 1/8" x 3/8" Norseal® V730 Acoustical Sealant Tape (By Others)
- C. 5/8" Lam Glass (3/8" + 3/16" with .060" Interlayer) - (By Others)
- D. Stay-Soft Glazing Rope - 1/4" Diameter (By Others)
- E. 16 GA Frame
- F. Factory Applied Bit Coat
- G. Factory Installed Insulation

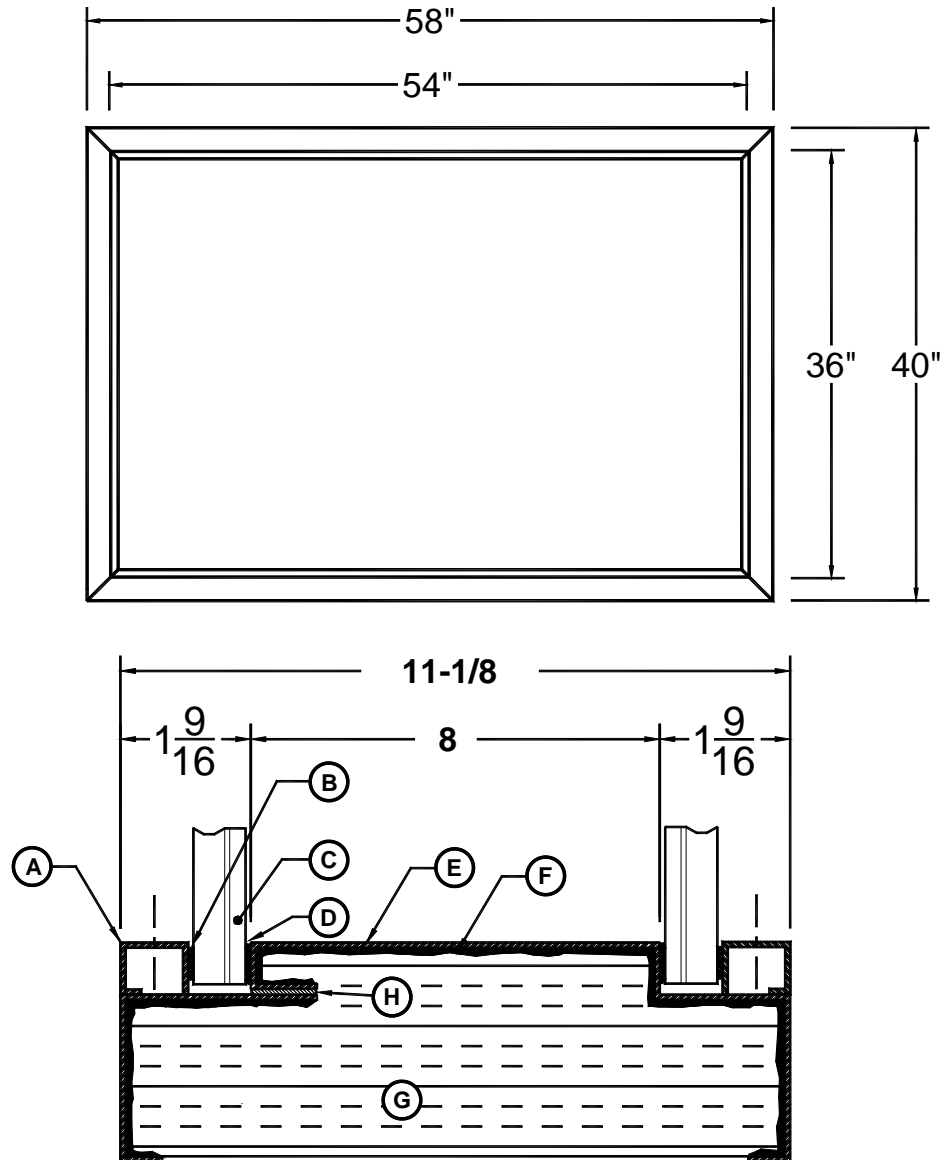
Maximum Size Tested:



- A. 13/16" x 5/8" Glass Stop
- B. CR Laurence 1/8" x 3/8" Norseal® V730 Acoustical Sealant Tape (By Others)
- C. 5/8" Lam Glass (3/8" + 3/16" with .060" Interlayer) - (By Others)
- D. Stay-Soft Glazing Rope - 1/4" Diameter (By Others)
- E. 16 GA Frame
- F. Factory Applied Bit Coat
- G. Factory Installed Insulation

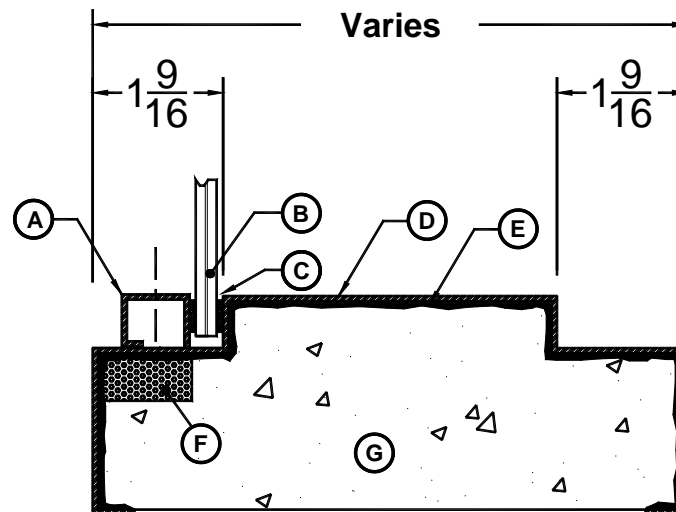
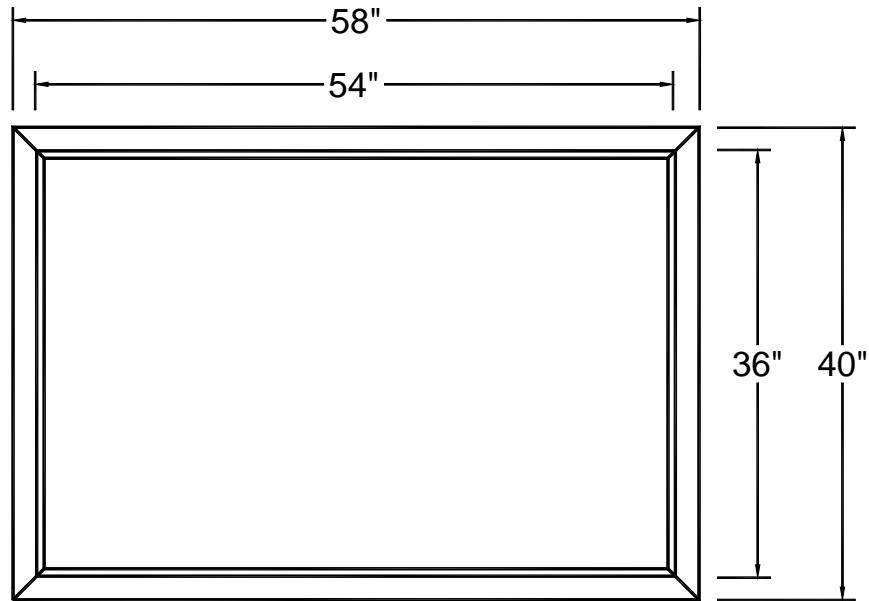


Maximum Size Tested:



- A. 13/16" x 5/8" Glass Stop
- B. CR Laurence 1/8" x 3/8" Norseal® V730 Acoustical Sealant Tape (By Others)
- C. 5/8" Lam Glass (3/8" + 3/16" with .060" Interlayer) - (By Others)
- D. Stay-Soft Glazing Rope - 1/4" Diameter (By Others)
- E. 16 GA Frame
- F. Factory Applied Bit Coat
- G. Factory Installed Insulation
- H. Sound/Thermal Break

Maximum Size Tested:



- A.  $13/16"$  x  $5/8"$  Glass Stop
- B.  $5/16"$  FireLite Plus® Glazing (By Others)
- C. Rated Glazing Tape (By Others)
- D. 16 GA Frame
- E. Factory Applied Bit Coat
- F. Factory Applied Backer
- G. Grout Filled (By Others)