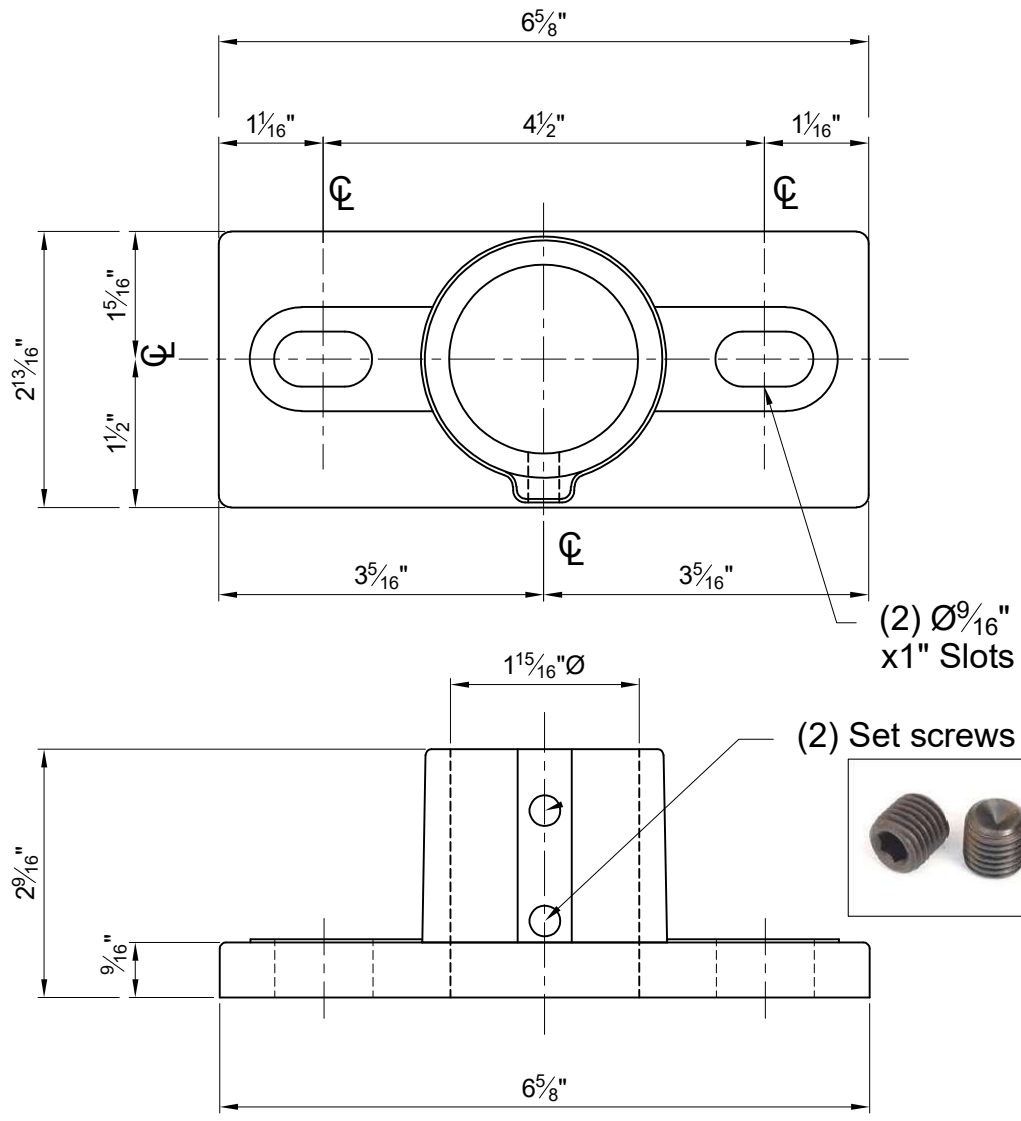
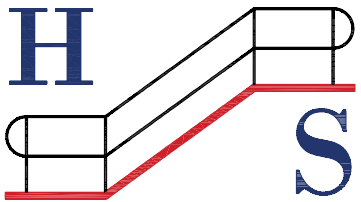


| | |
|------------------------------------|-----------------|
| STANDARD DETAILS | PIECE MARK F |
| DETAILS NAME FLOOR FLANGE 5"x5" | |

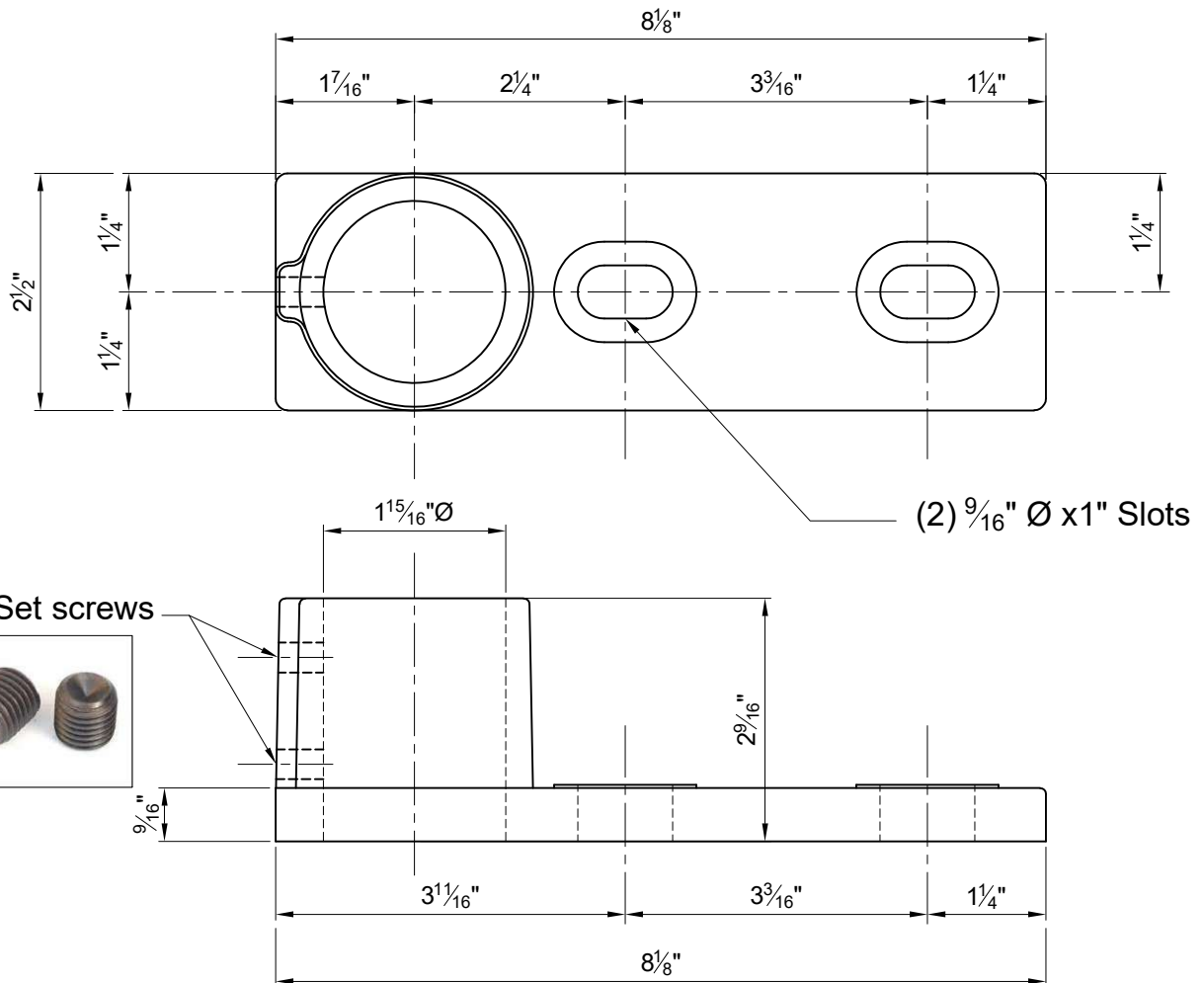
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| | |
|-------------------------------------|------------------|
| STANDARD DETAILS | PIECE MARK FN |
| DETAILS NAME NARROW FLOOR FLANGE | |

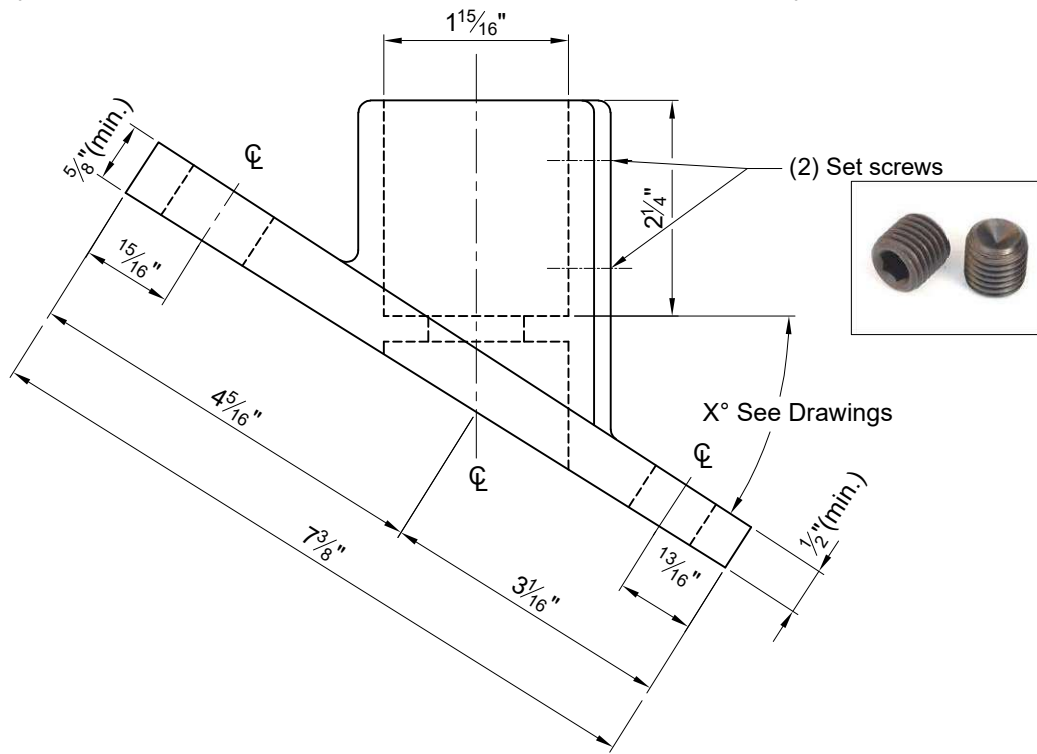
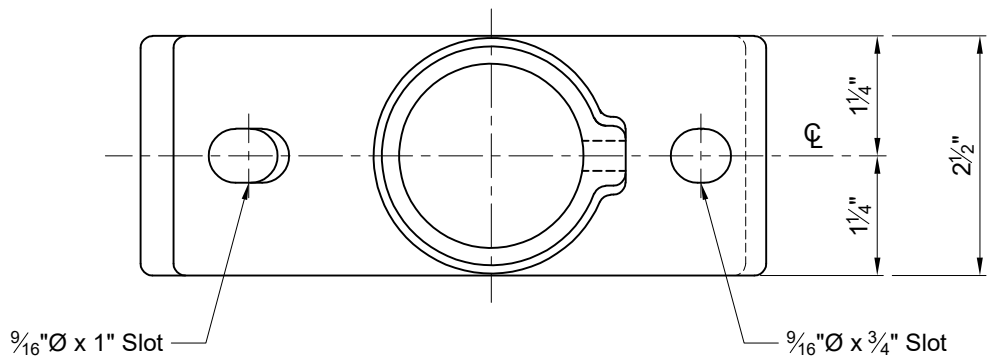
H  **S**

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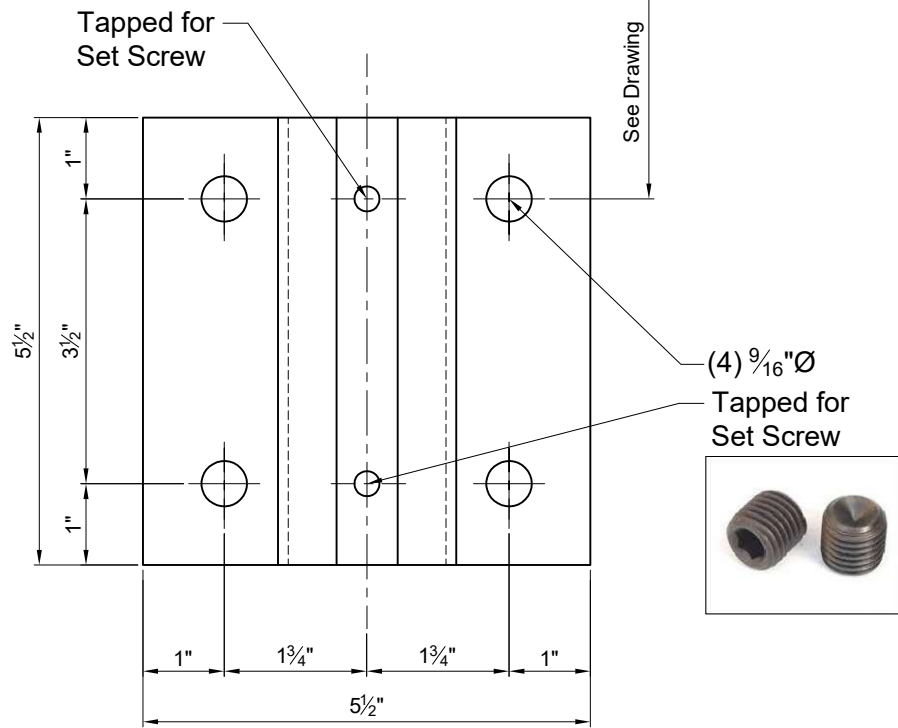
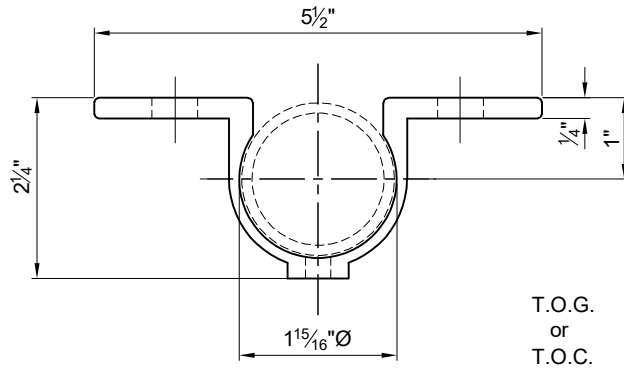
| | |
|-------------------------------------|------------------|
| STANDARD DETAILS | PIECE MARK FO |
| DETAILS NAME OFFSET FLOOR FLANGE | |

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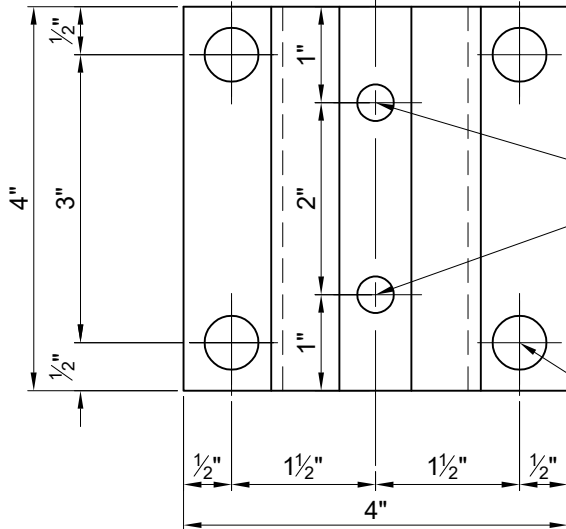
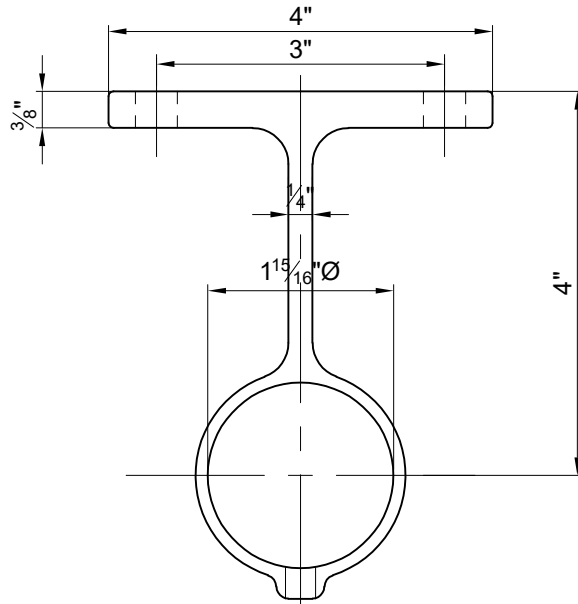
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|-------------------------------------|------------------|
| STANDARD DETAILS | PIECE MARK FX |
| DETAILS NAME SLOPED FLOOR FLANGE | |

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| | |
|--------------------------|--------------------------|
| STANDARD DETAILS | PIECE MARK FS2 |
| DETAILS NAME | |
| SIDE MOUNT FLANGE | |

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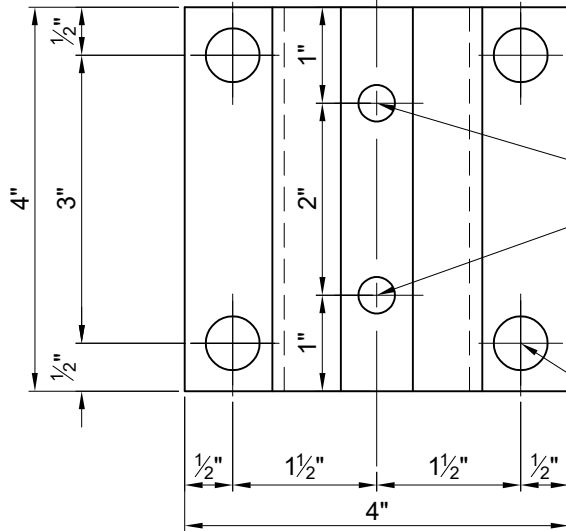
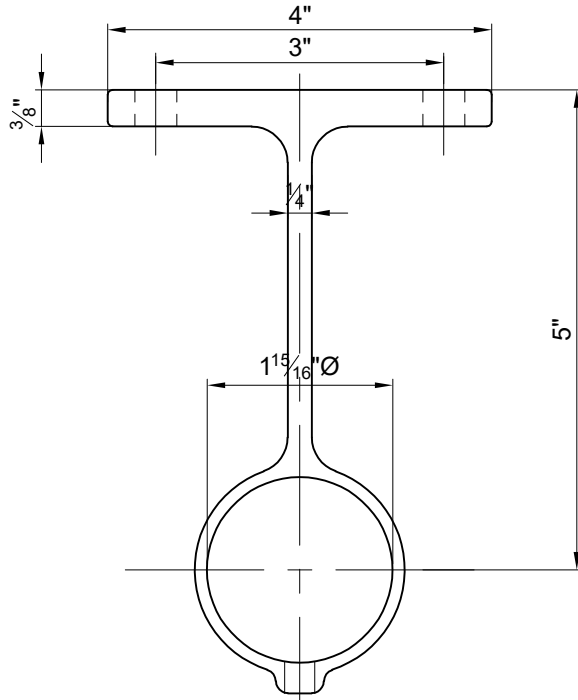
Tapped for 2 Set Screws



(4) $\frac{9}{16}$ " \varnothing

| | |
|------------------------------------|------------------|
| STANDARD DETAILS | PIECE MARK FW |
| DETAILS NAME Offset Wall Flange | |

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Tapped for 2 Set Screws



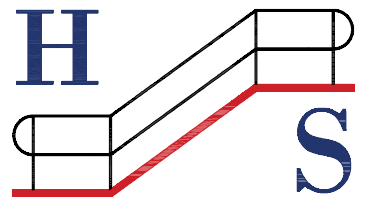
(4) $\frac{9}{16}$ " \varnothing

STANDARD DETAILS

PIECE MARK
FWL

DETAILS NAME

Long Offset Wall Flange



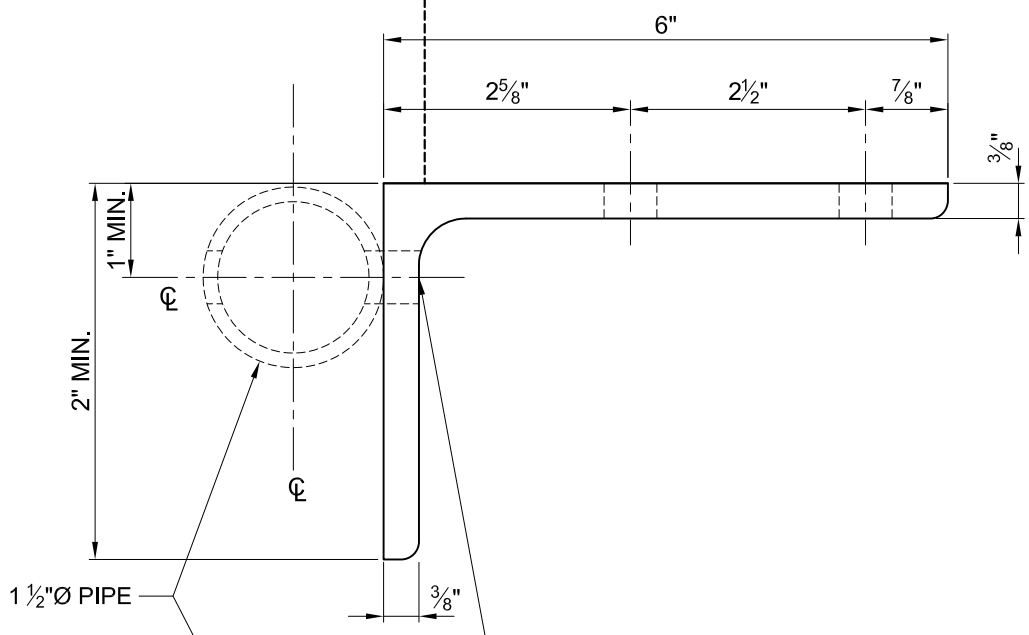
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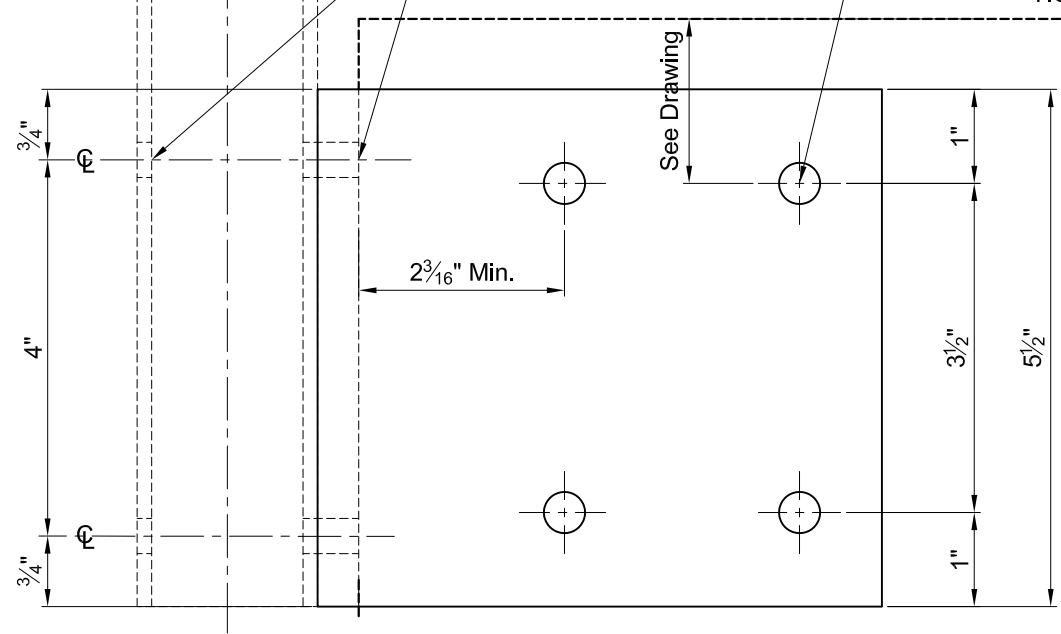
web: www.handrailsys.com

phone: 936-441-5680

email: info@handrailsys.com

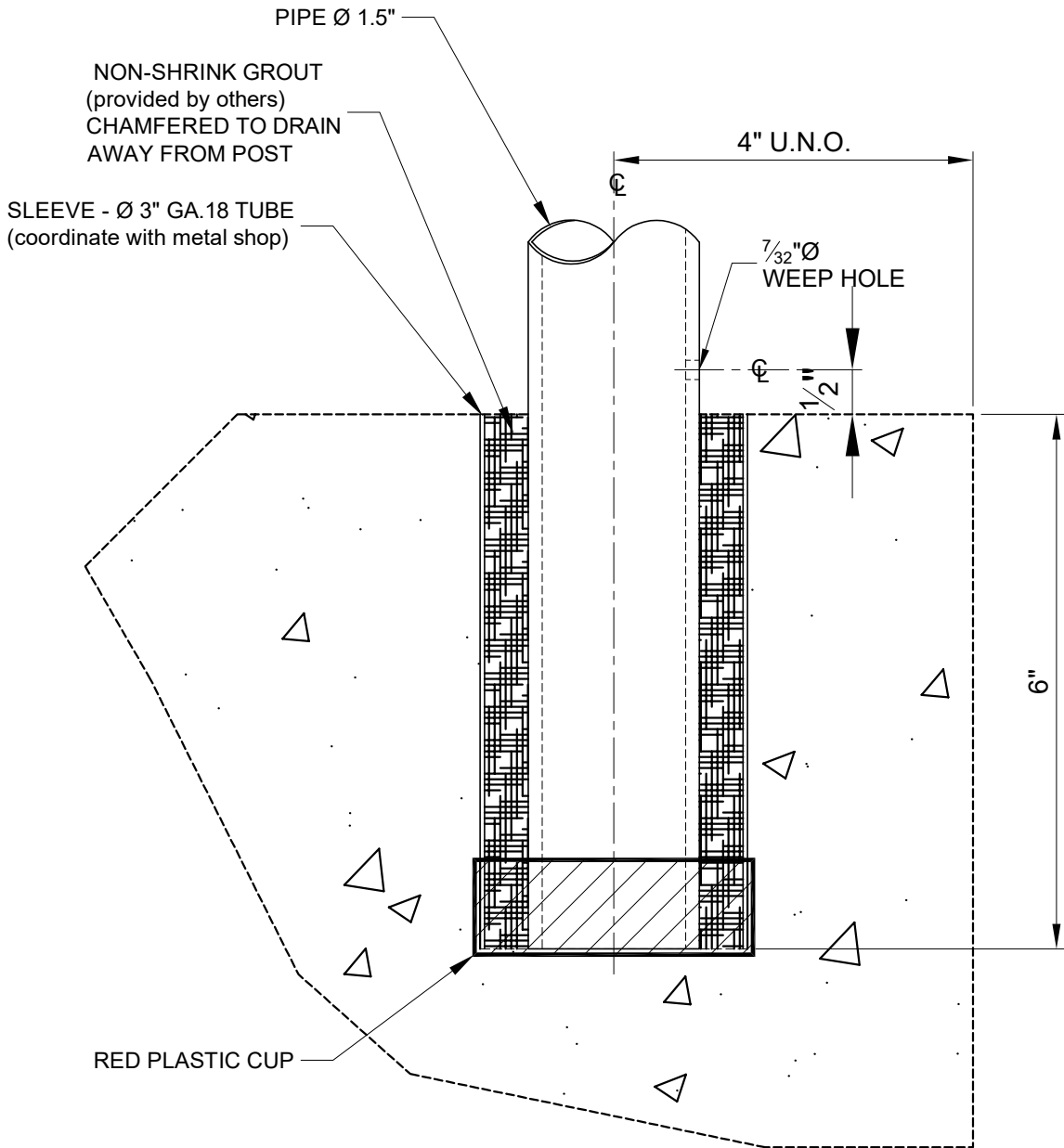


Field Drill (2) $\frac{3}{8}$ " \varnothing through holes for $\frac{5}{16}$ " \varnothing X $3\frac{1}{2}$ " Hex Head Through Bolt w/ washer&nut (Pipe and Plate)
 (4) $\frac{9}{16}$ " \varnothing T.O.G. or T.O.C.



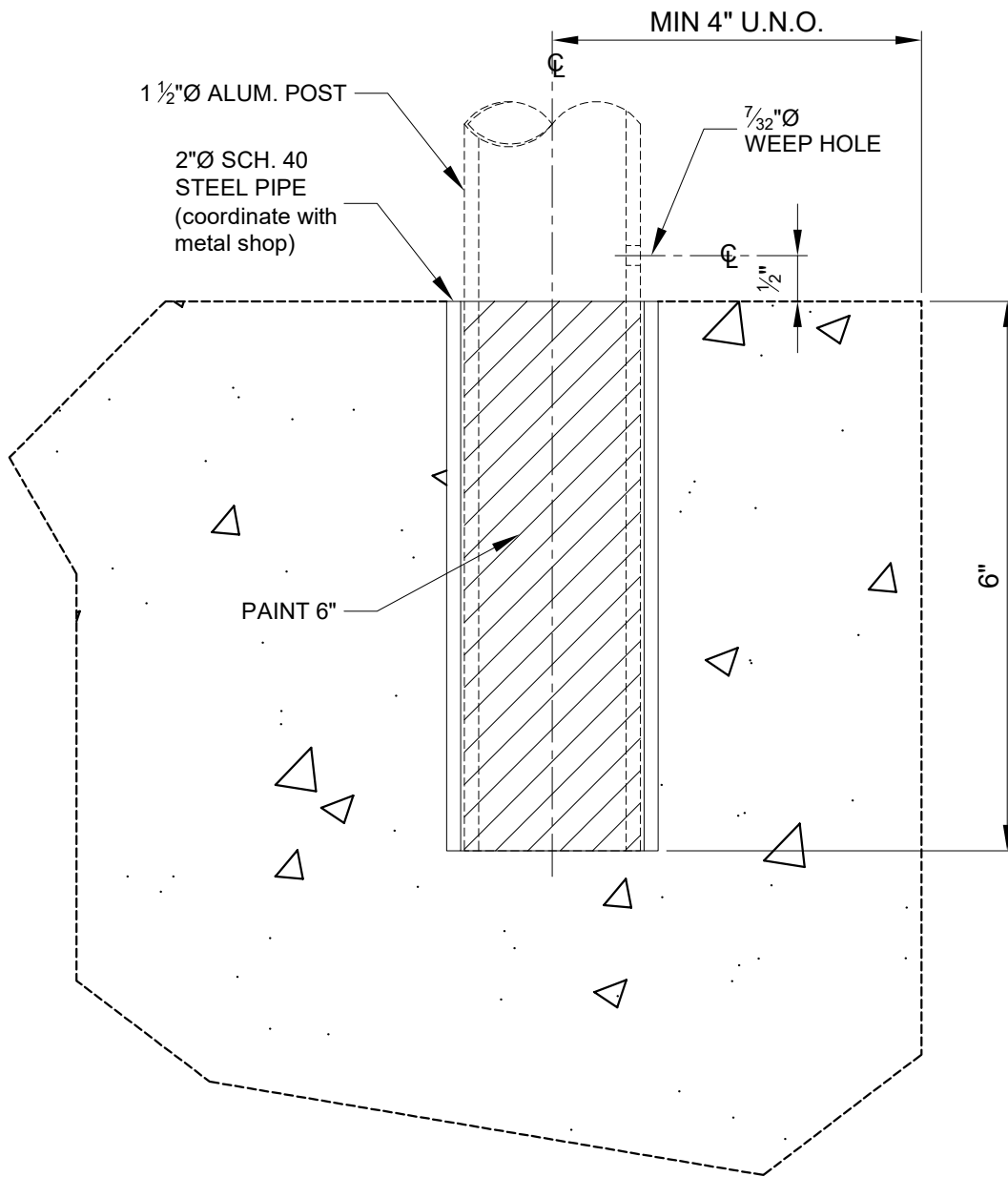
| | |
|--|-------------------|
| STANDARD DETAILS | PIECE MARK CSM |
| DETAILS NAME CORNER SIDE MOUNT FLANGE | |

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| | |
|---------------------------|-------------------|
| STANDARD DETAILS | PIECE MARK CUP |
| DETAILS NAME EMBED CUP | |

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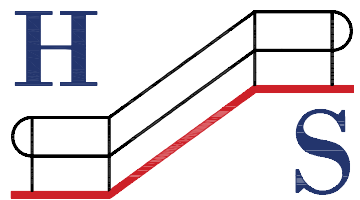


STANDARD DETAILS

PIECE MARK
RCUP

DETAILS NAME

Removable Embed Post



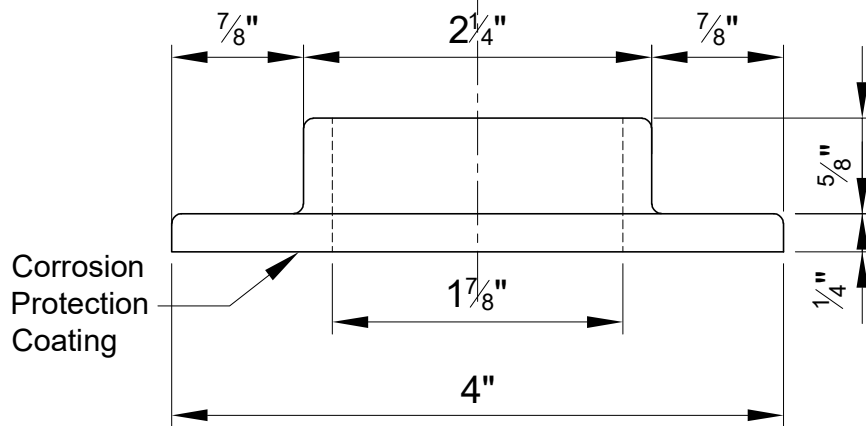
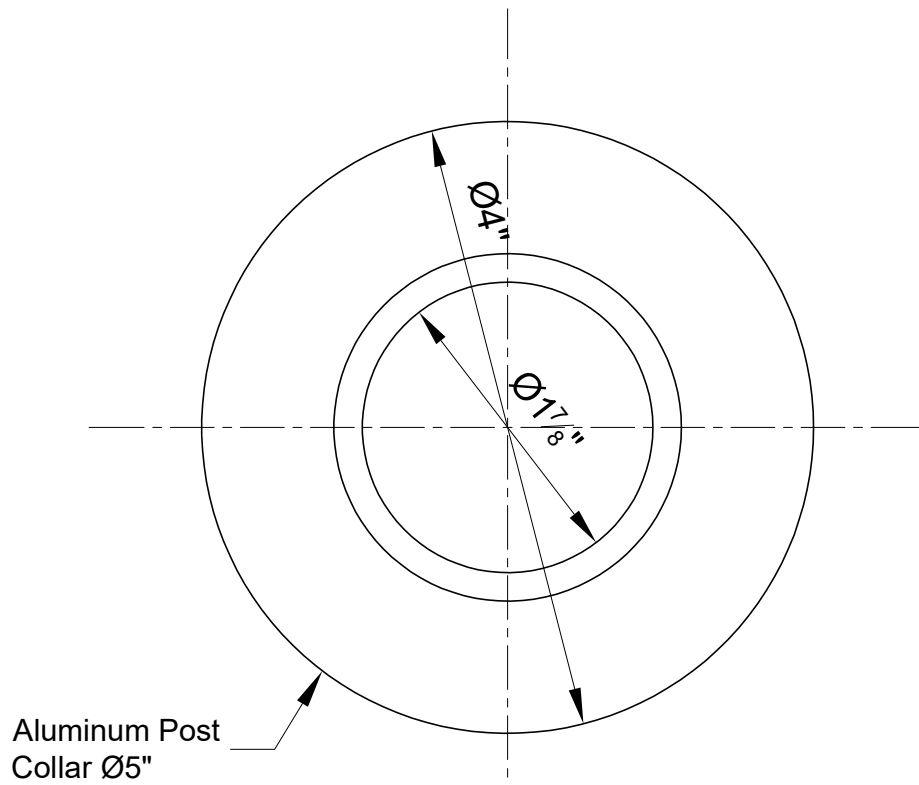
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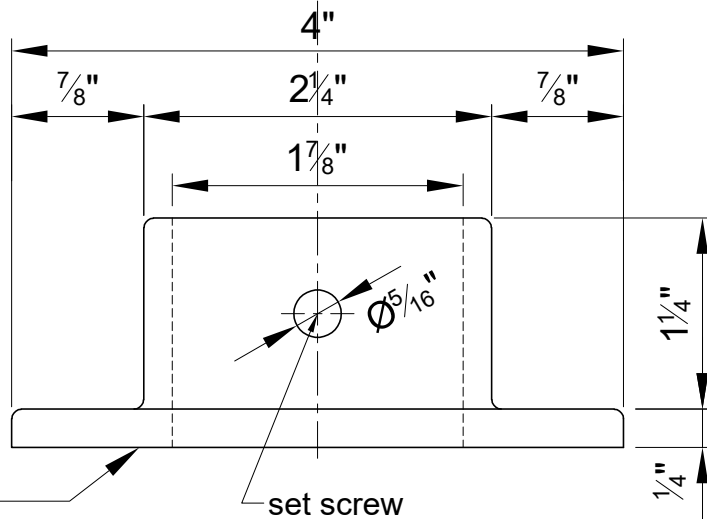
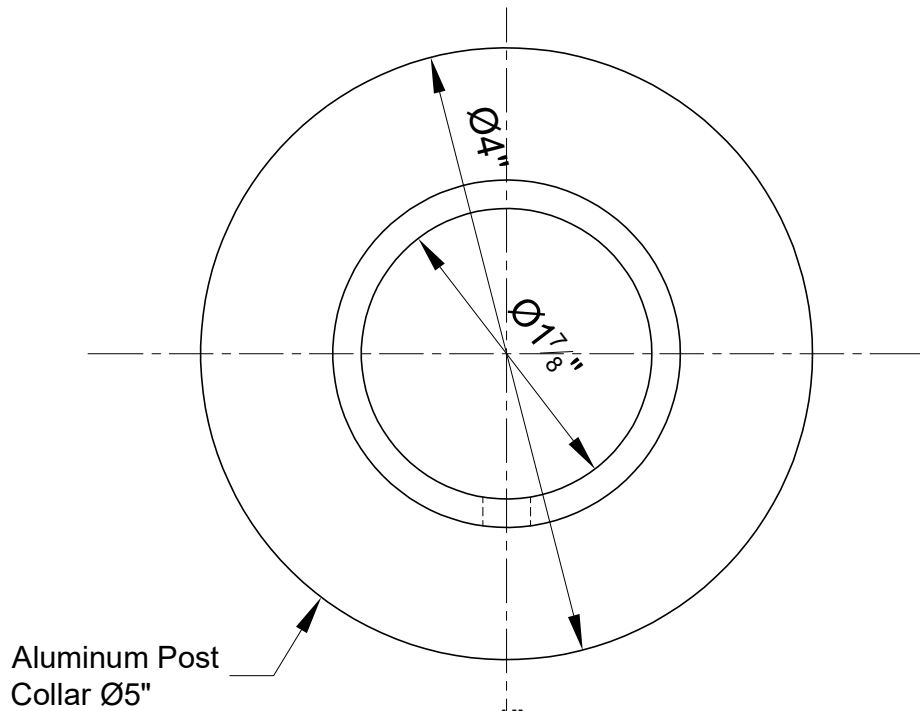
phone: 936-441-5680

email: info@handrailsys.com



| | |
|--------------------------------------|--------------------|
| STANDARD DETAILS | PIECE MARK COL2 |
| DETAILS NAME STANDARD POST COLLAR | |

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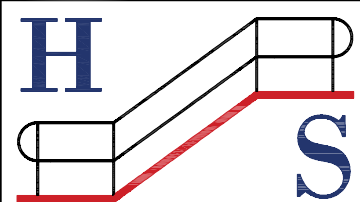
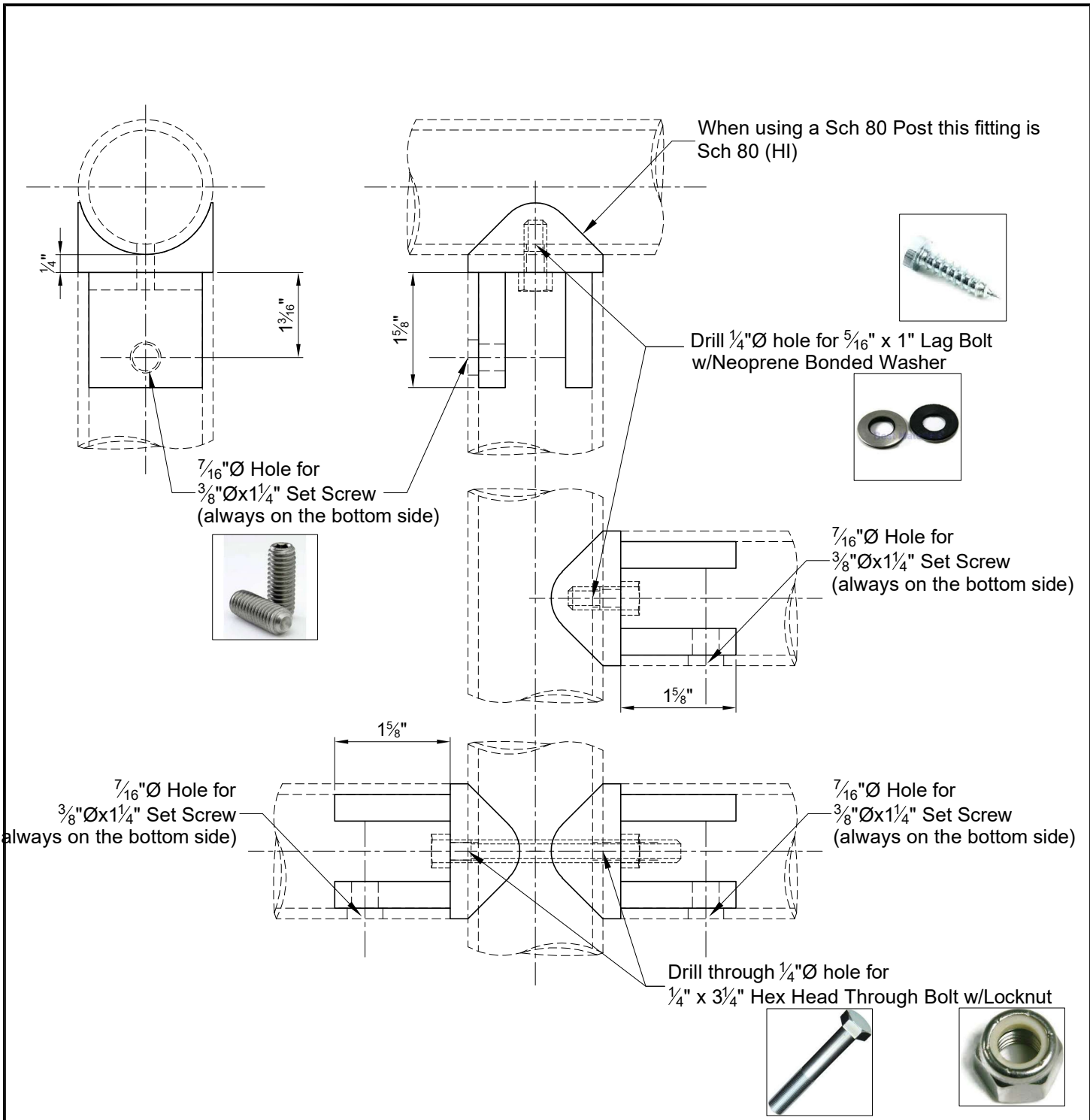


Corrosion Protection Coating



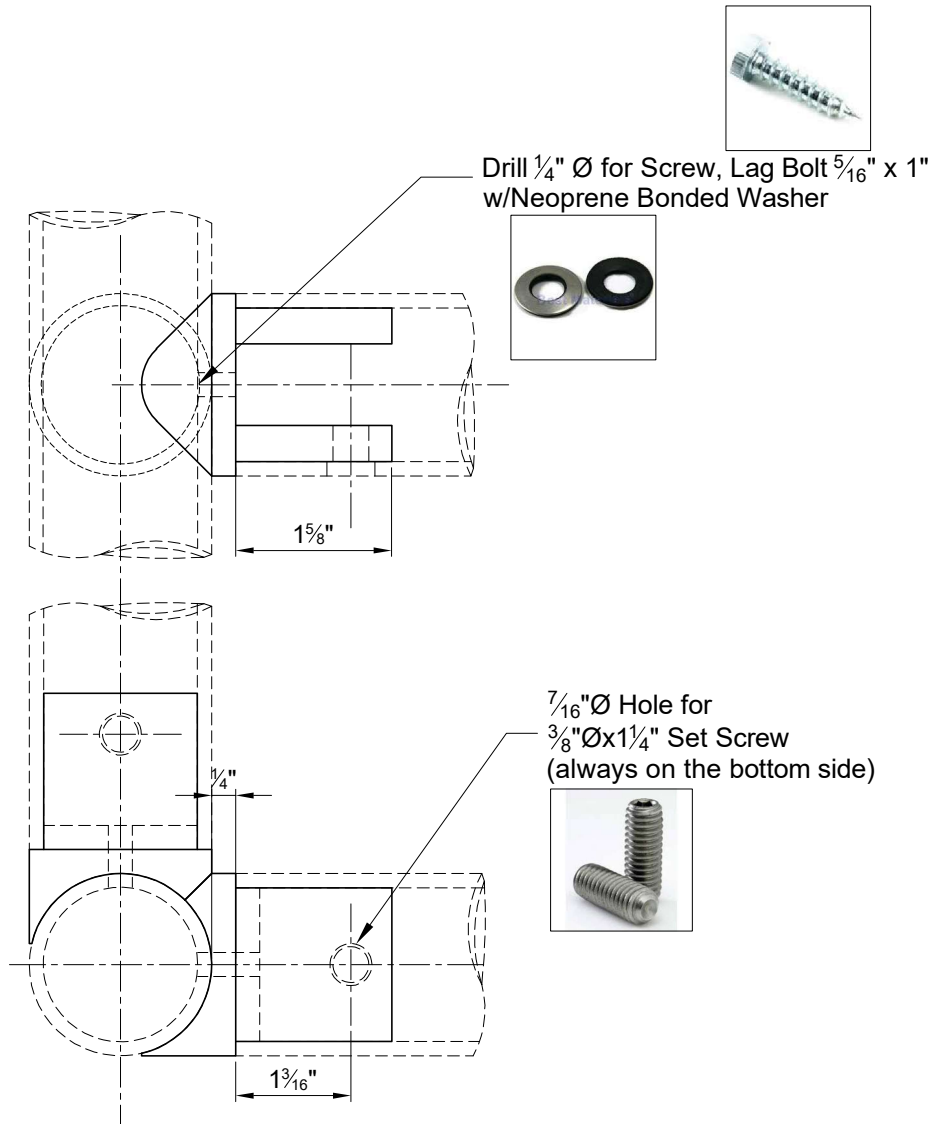
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|--------------------------------------|--------------------|
| STANDARD DETAILS | PIECE MARK COL3 |
| DETAILS NAME STANDARD POST COLLAR | |

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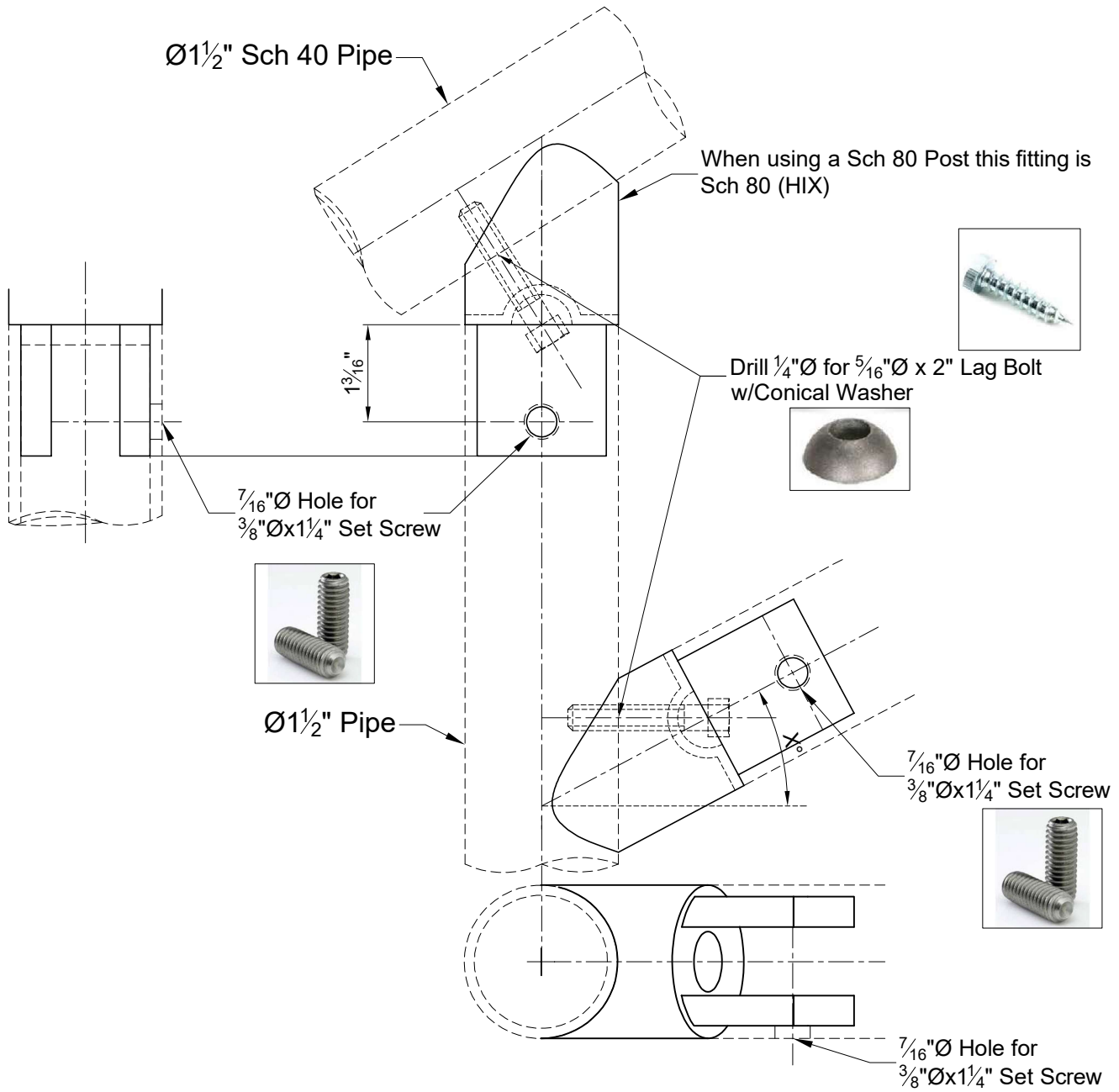
| | |
|---------------------------------------|------------------------|
| STANDARD DETAILS | PIECE MARK I |
| DETAILS NAME Rail Tee, 90° | |
| Internally fastened connection | |

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| | |
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| STANDARD DETAILS | PIECE MARK IC |
| DETAILS NAME Corner Tee, 90° Internally fastened connection | |

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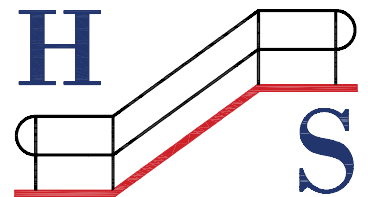
STANDARD DETAILS

PIECE MARK

IX

DETAILS NAME

Rail Tee, X°



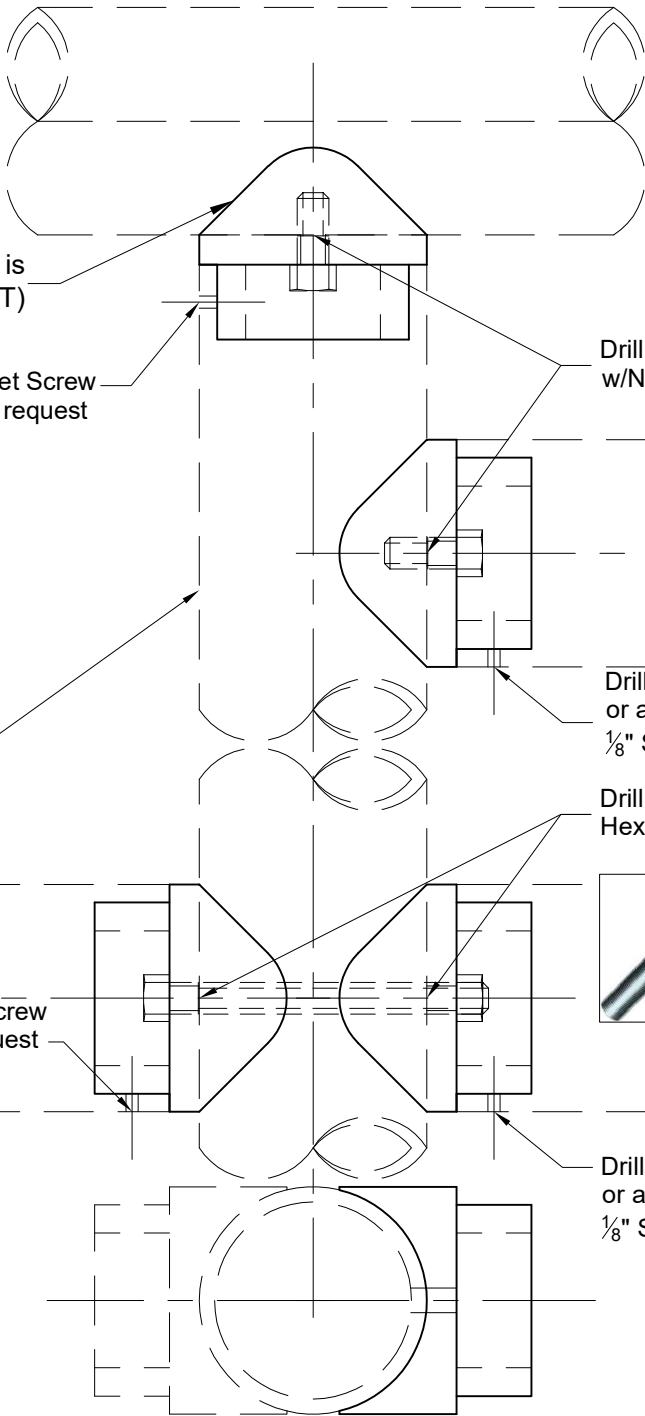
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When using a Sch 80 Post this fitting is Sch 80 (HT)

Drill $\frac{5}{32}$ " \varnothing for #10 Set Screw
or upon contractors request
 $\frac{1}{8}$ " SS Rivet



$1\frac{1}{2}$ " \varnothing PIPE

Drill $\frac{1}{4}$ " \varnothing hole for $\varnothing\frac{5}{16}$ " x 1" Lag Bolt
w/Neoprene Bonded Washer



Drill $\frac{5}{32}$ " \varnothing for #10 Set Screw
or upon contractors request
 $\frac{1}{8}$ " SS Rivet

Drill through $\frac{1}{4}$ " \varnothing hole for $\varnothing\frac{1}{4}$ " x $3\frac{1}{4}$ "
Hex Head Through Bolt w/Locknut



Drill $\frac{5}{32}$ " \varnothing for #10 Set Screw
or upon contractors request
 $\frac{1}{8}$ " SS Rivet

Drill $\frac{5}{32}$ " \varnothing for #10 Set Screw
or upon contractors request
 $\frac{1}{8}$ " SS Rivet

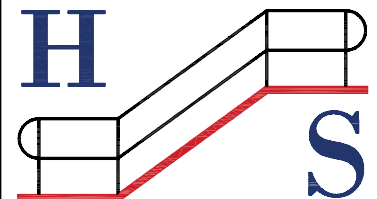
STANDARD DETAILS

PIECE MARK

T

DETAILS NAME

**Tee, 90°
Ribet Rail**



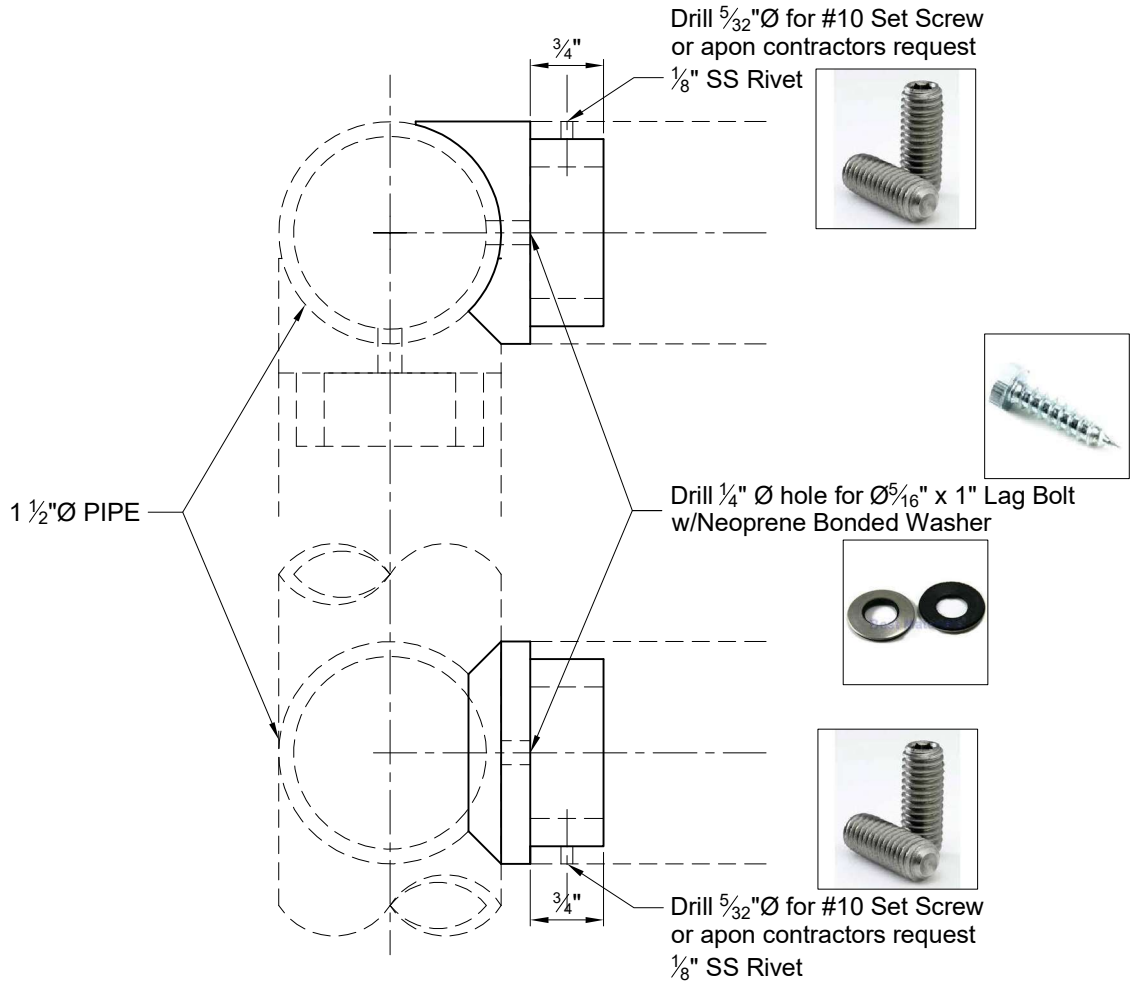
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web: www.handrailsys.com

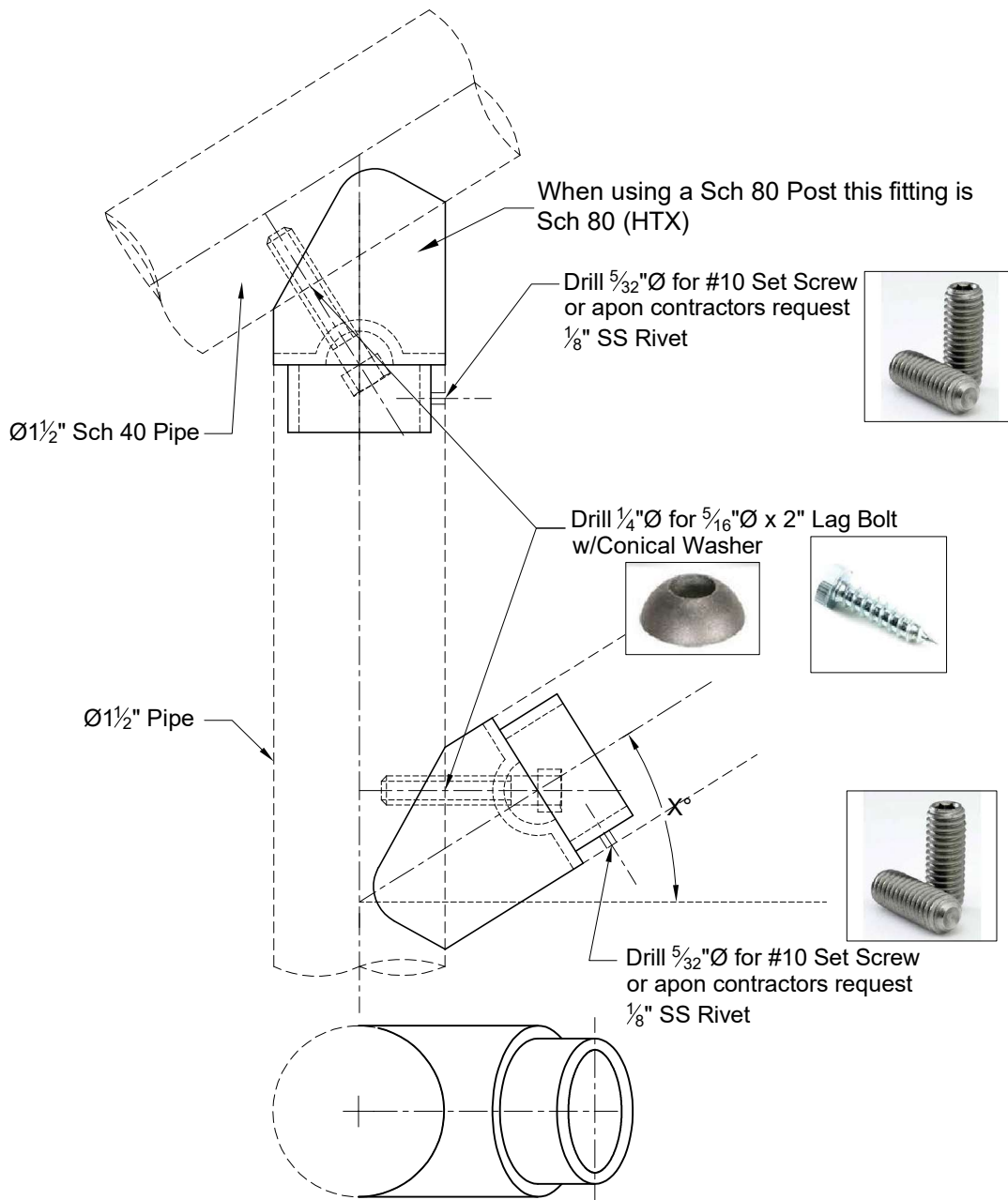
phone: 936-441-5680

email: info@handrailsys.com



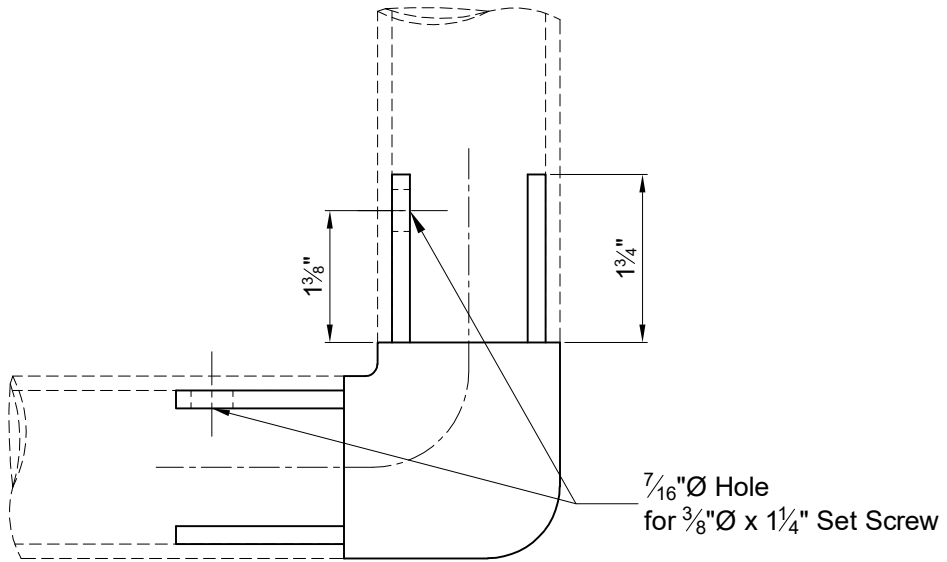
| | |
|---|-------------------------|
| STANDARD DETAILS | PIECE MARK TC |
| DETAILS NAME Corner Tee, 90° Ribet Rail | |

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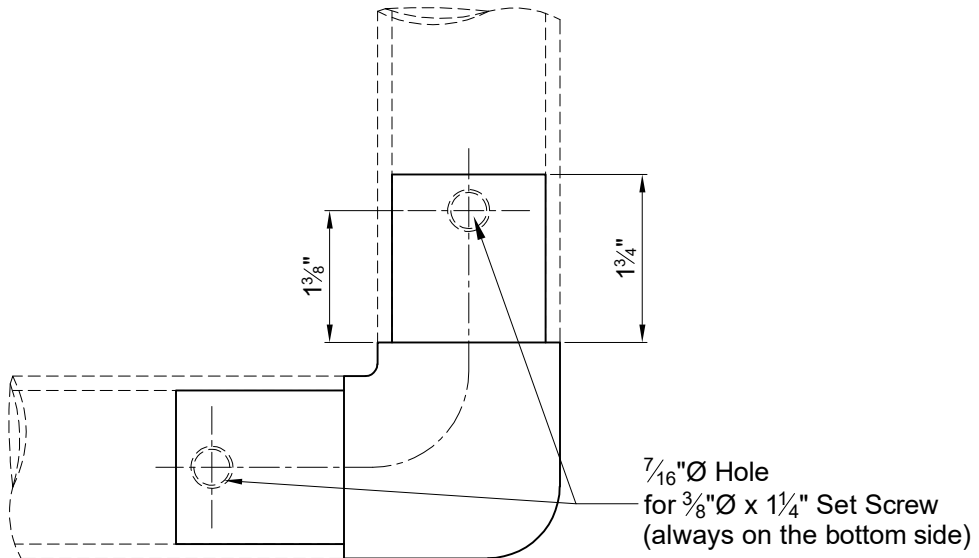
| | |
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| STANDARD DETAILS | PIECE MARK |
| DETAILS NAME | TX |
| Tee, X° Ribet Rail | |

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| | |
|-----------------------|-------------------|
| STANDARD DETAILS | PIECE MARK EL2 |
| DETAILS NAME Elbow | |

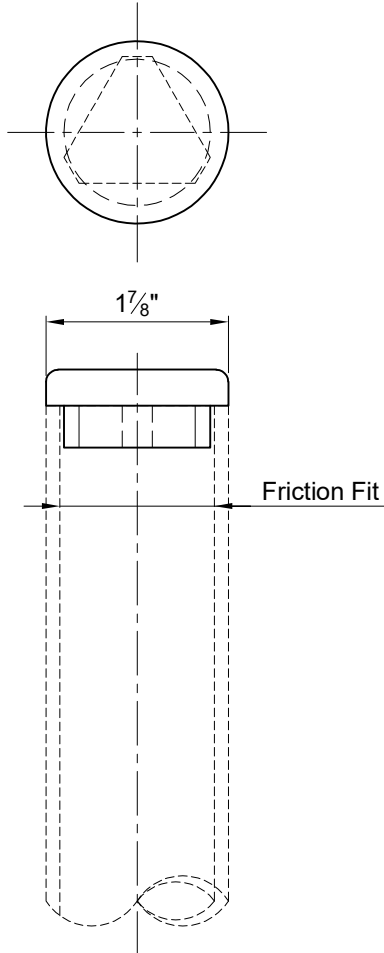
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| | |
|------------------------------|-------------------------|
| STANDARD DETAILS | PIECE MARK EL |
| DETAILS NAME Elbow | |



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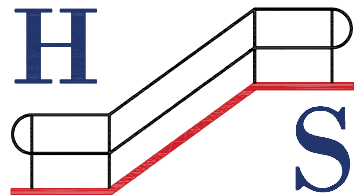
STANDARD DETAILS

PIECE MARK

E

DETAILS NAME

End Cap



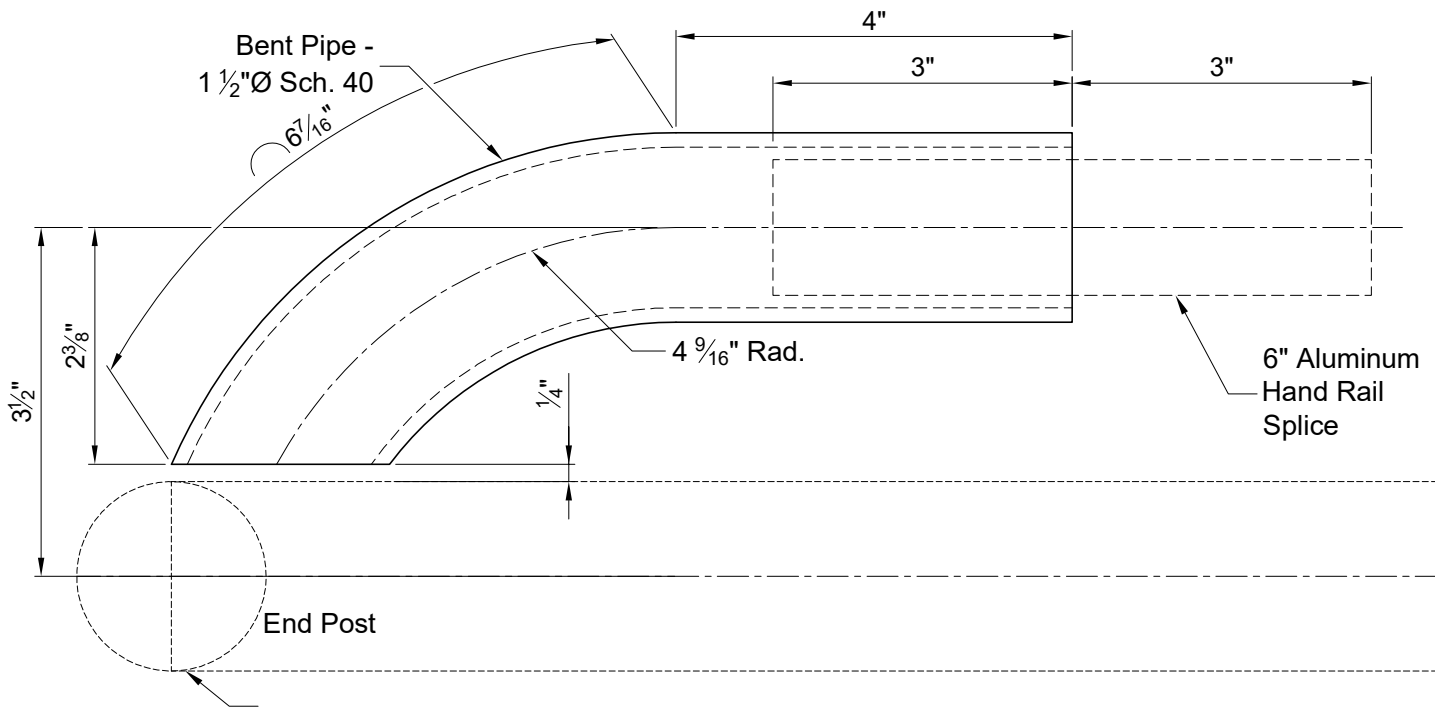
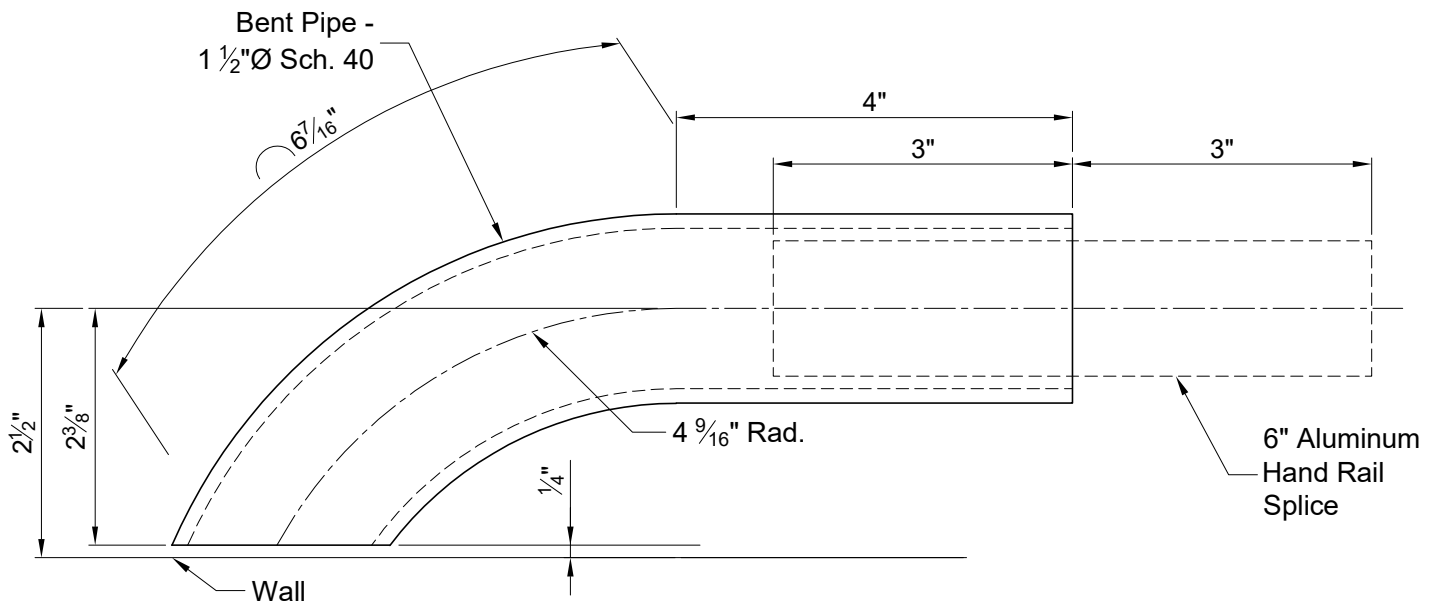
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email: info@handrailsys.com

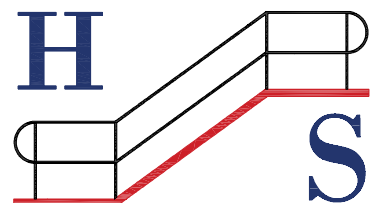


STANDARD DETAILS

PIECE MARK
WR

DETAILS NAME

Wall Return



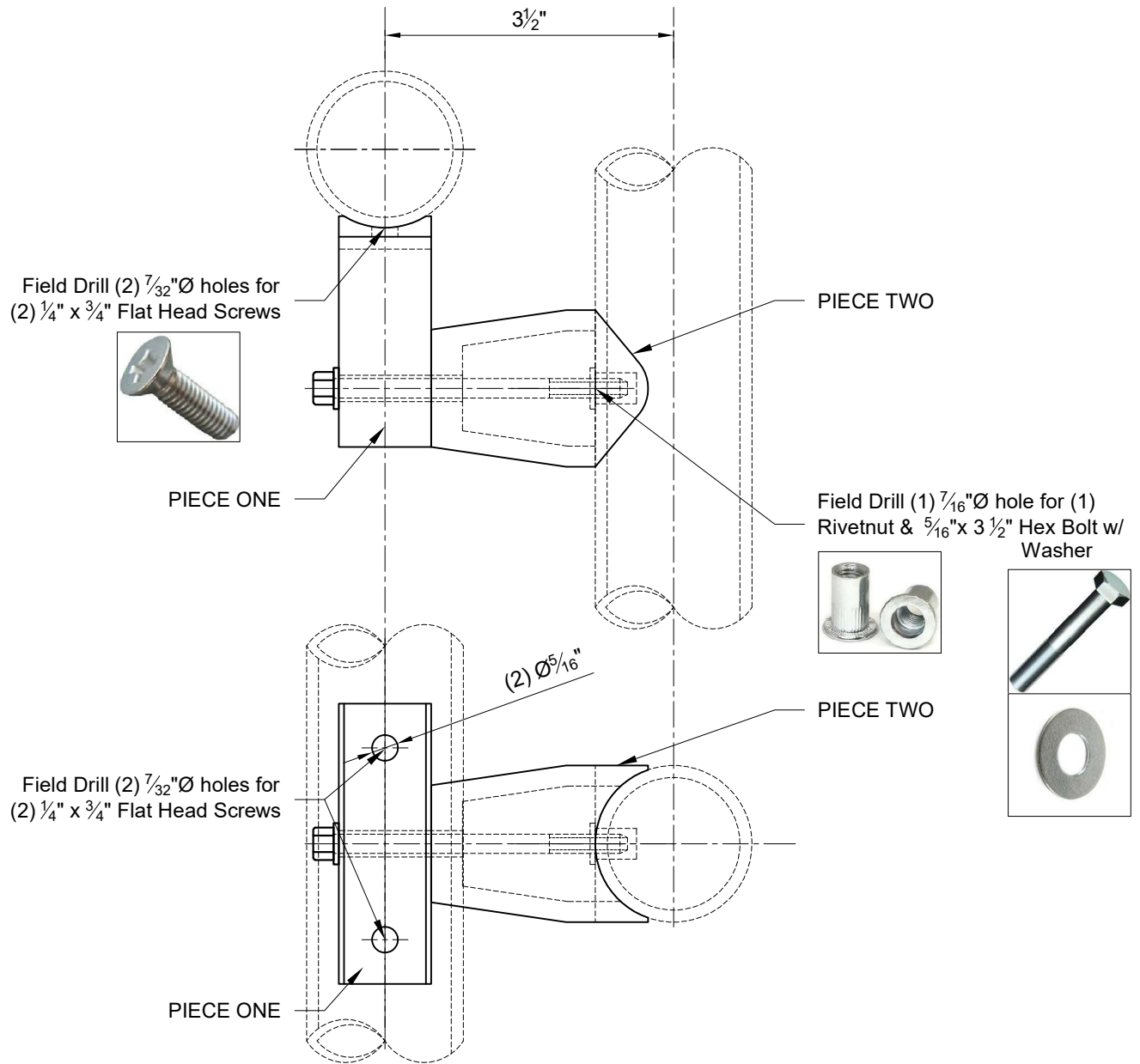
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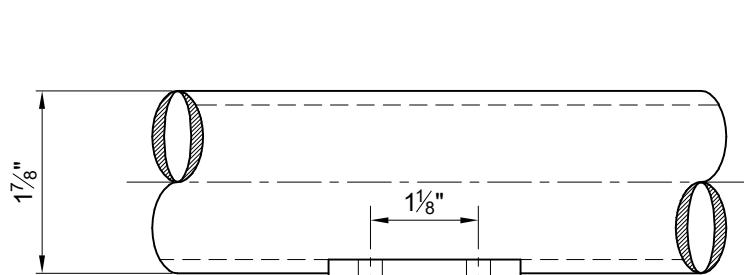
phone: 936-441-5680

email: info@handrailsys.com



| | |
|-------------------------------------|-------------------------|
| STANDARD DETAILS | PIECE MARK PB |
| DETAILS NAME Post Bracket | |

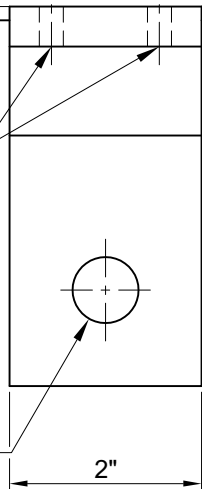
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Field Drill (2) $\frac{7}{32}$ " \varnothing holes
for (2) $\frac{1}{4}$ " x $\frac{3}{4}$ " Flat Head
Screw



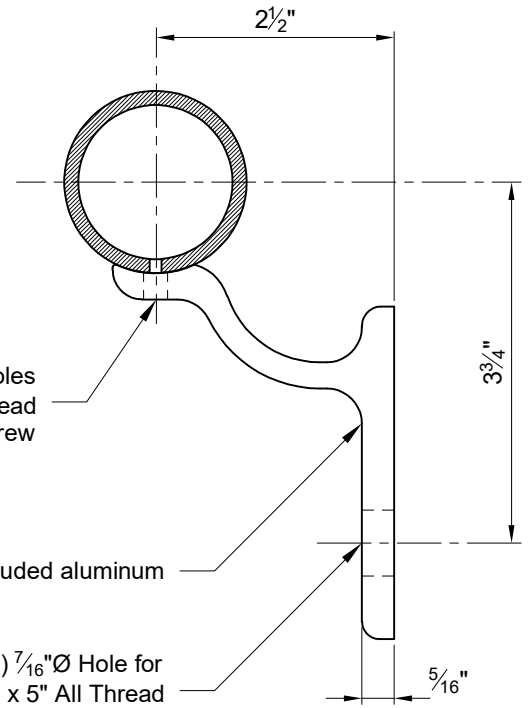
(1) $\frac{7}{16}$ " \varnothing Hole for
(1) $\frac{3}{8}$ " \varnothing x 5" All Thread
w/ Nut & Washer



Field Drill (2) $\frac{7}{32}$ " \varnothing holes
for (2) $\frac{1}{4}$ " x $\frac{3}{4}$ " Flat Head
Screw

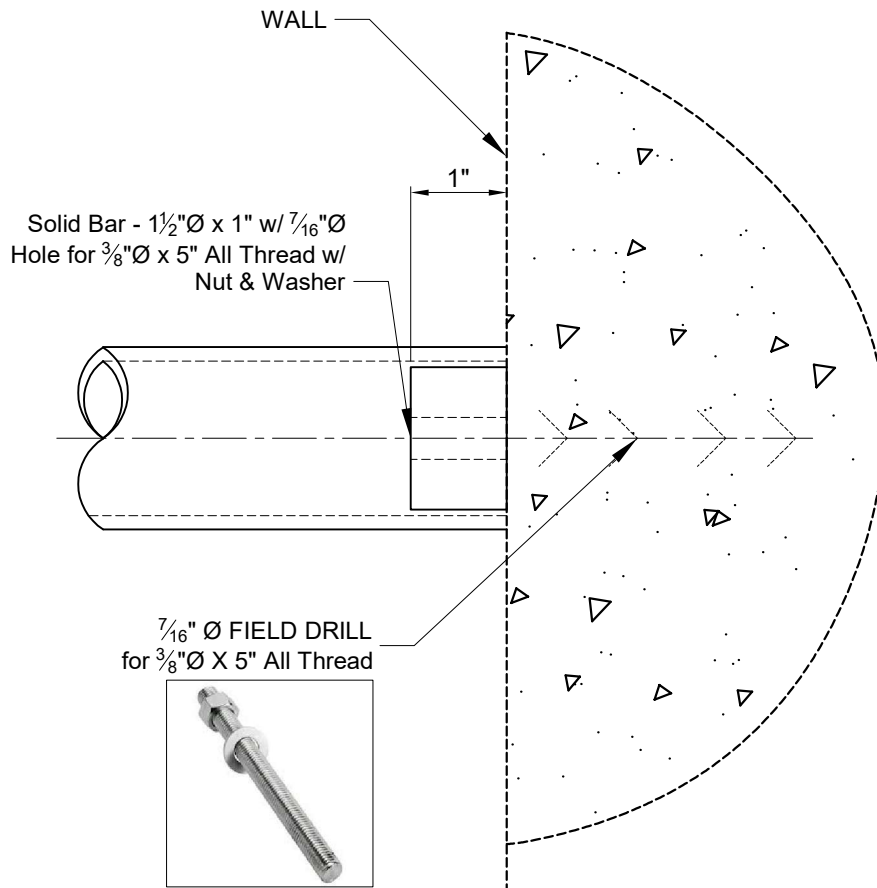
Extruded aluminum

(1) $\frac{7}{16}$ " \varnothing Hole for
(1) $\frac{3}{8}$ " \varnothing x 5" All Thread
w/ Nut & Washer



| | |
|-------------------------------------|-------------------------|
| STANDARD DETAILS | PIECE MARK WB |
| DETAILS NAME Wall Bracket | |

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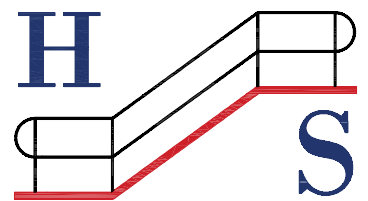


STANDARD DETAILS

PIECE MARK
WT

DETAILS NAME

WALL TERMINATION



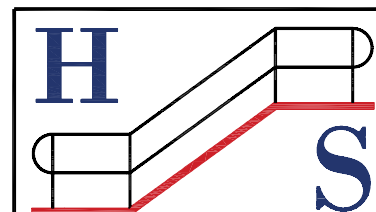
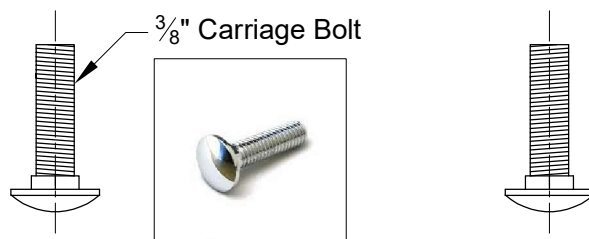
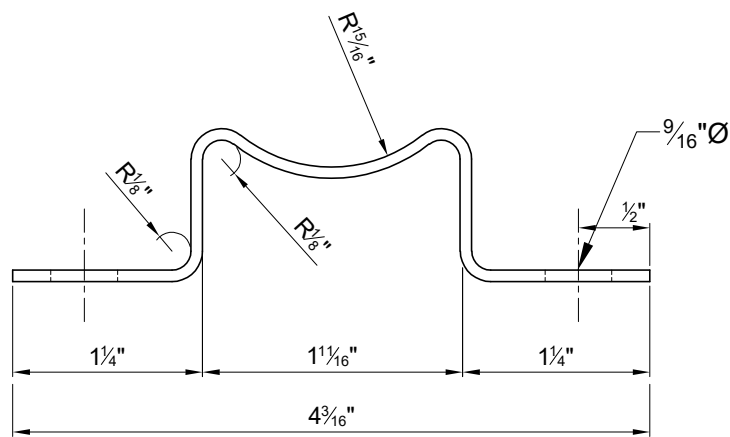
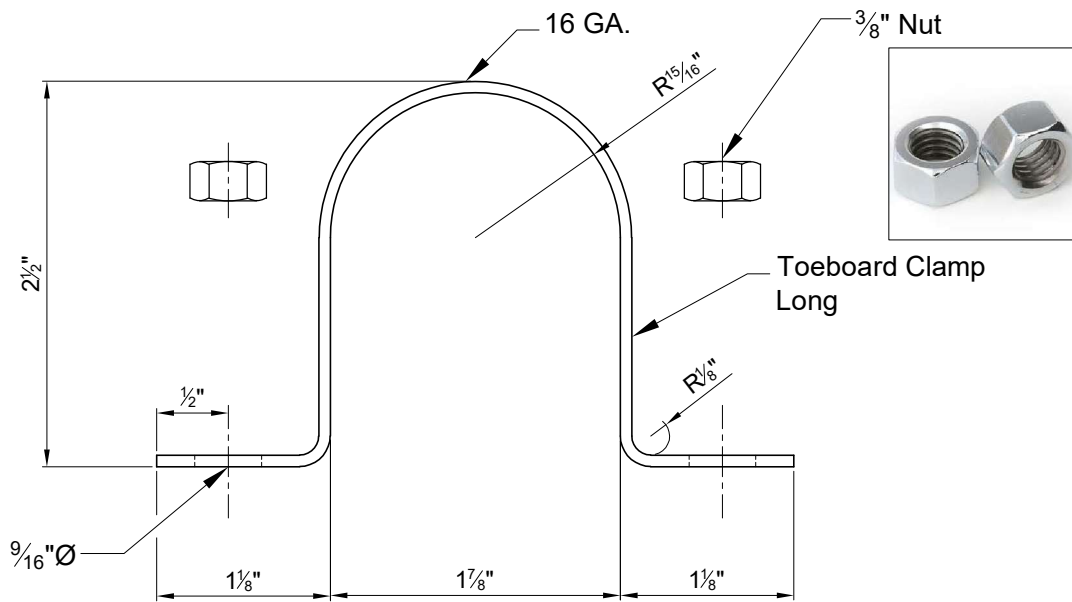
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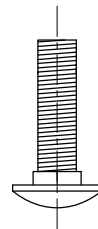
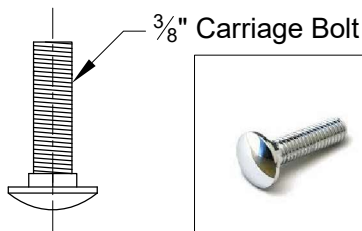
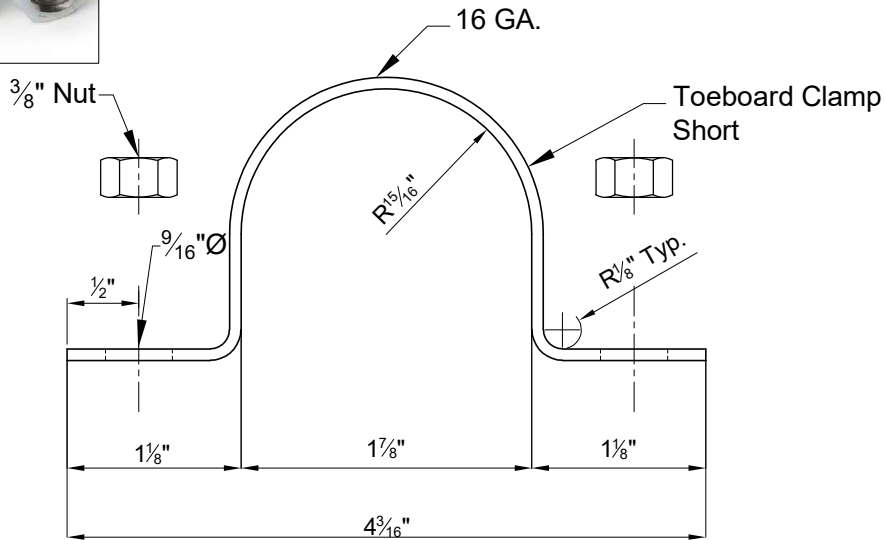
email: info@handrailsys.com

STANDARD DETAILS

PIECE MARK
TBCL

DETAILS NAME

Toeboard Clamp, Long

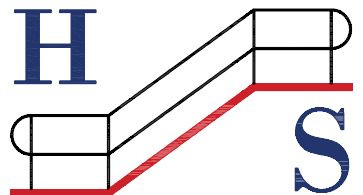


STANDARD DETAILS

PIECE MARK
TBCS

DETAILS NAME

Toeboard Clamp, Short



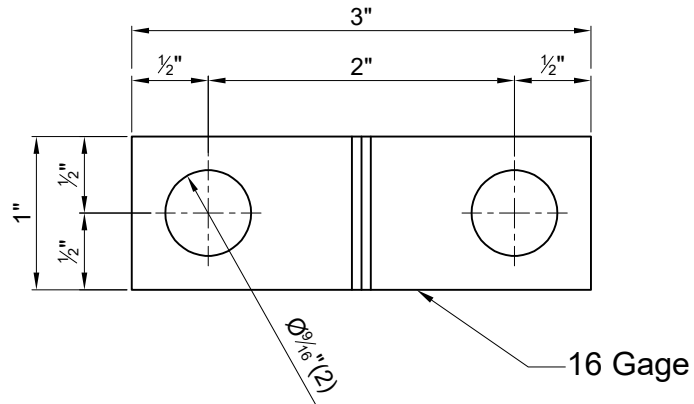
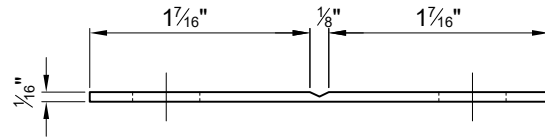
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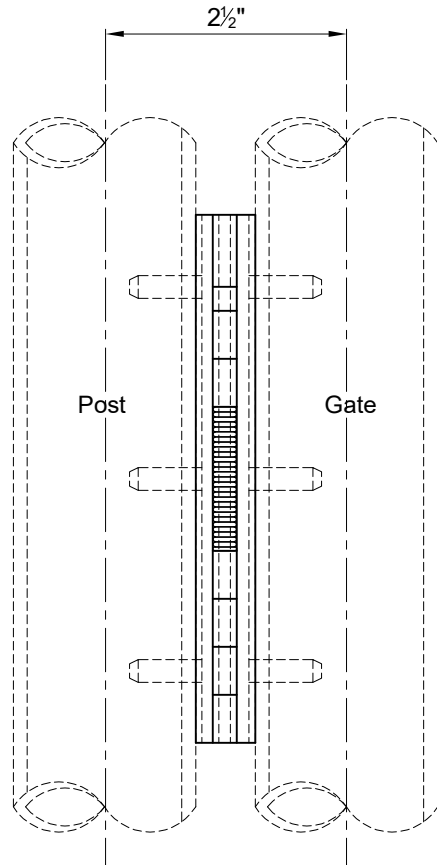
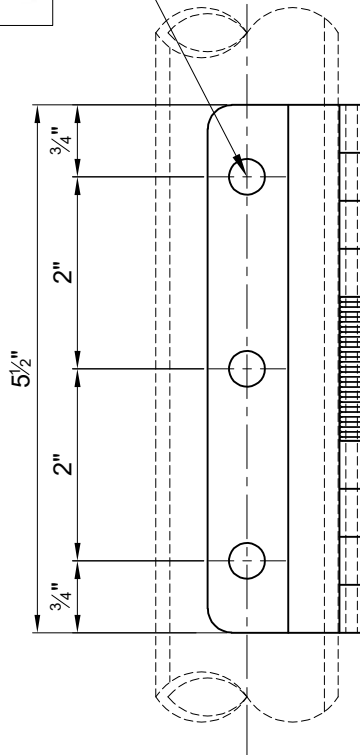
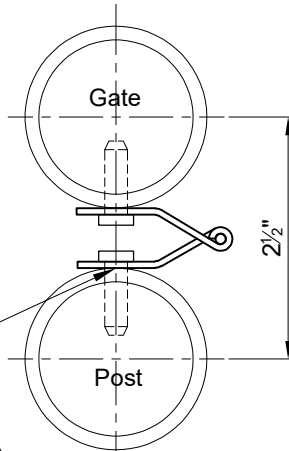
| | |
|--|--------------------------|
| STANDARD DETAILS | PIECE MARK TBS |
| DETAILS NAME Toeboard Splice | |



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 email: info@handrailsys.com

Drill (3) $\frac{3}{16}$ " \varnothing holes
for $\varnothing\frac{1}{4}$ " x 1" Lag Bolts

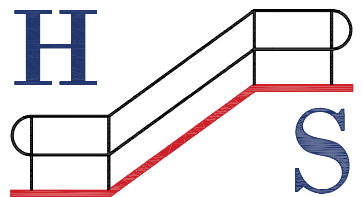


STANDARD DETAILS

PIECE MARK
HINGE

DETAILS NAME

Spring Hinge Assembly



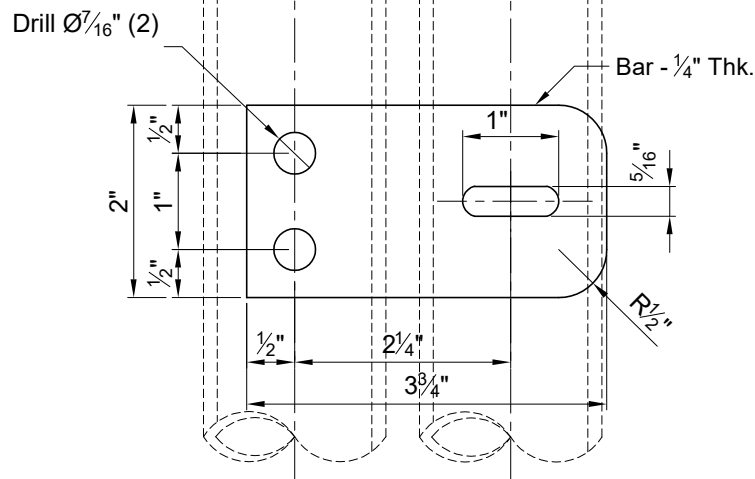
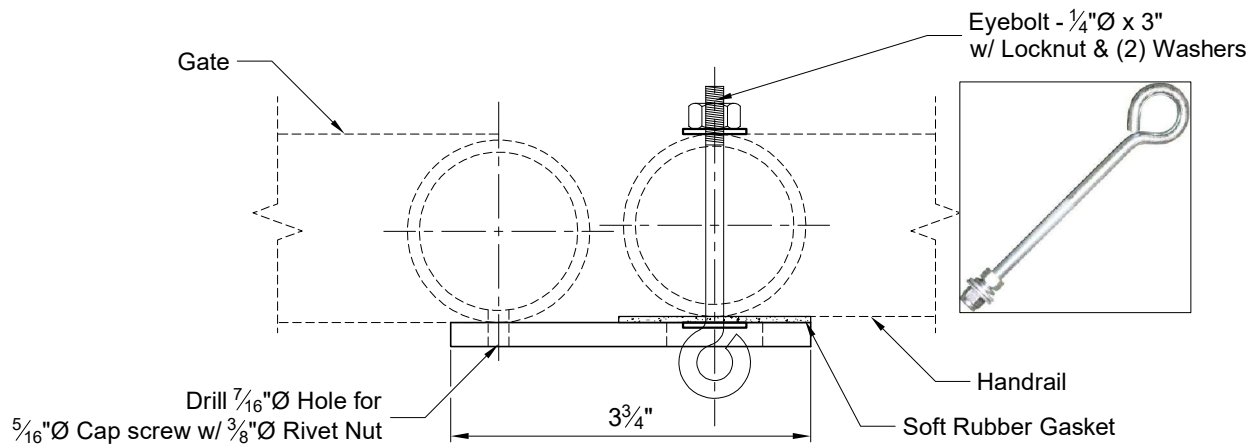
HANDRAIL SYSTEMS, Inc.

2523 Northline Rd, Conroe, TX 77384

web: www.handrailsys.com

phone: 936-441-5680

email: info@handrailsys.com



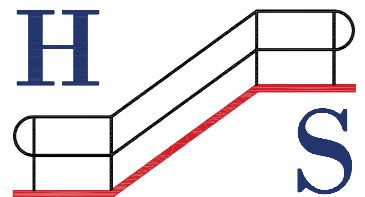
STANDARD DETAILS

PIECE MARK

Latch

DETAILS NAME

Latch Assembly



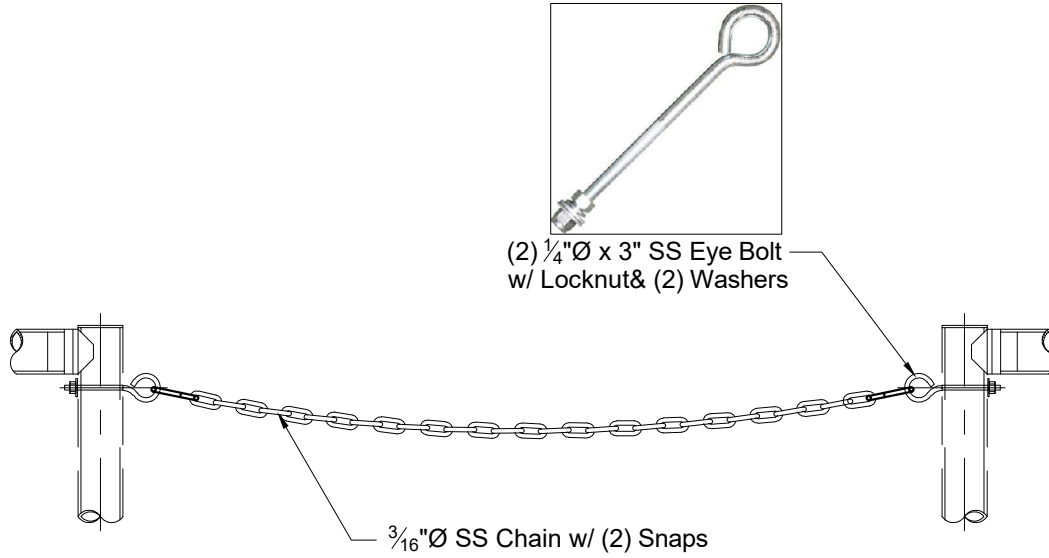
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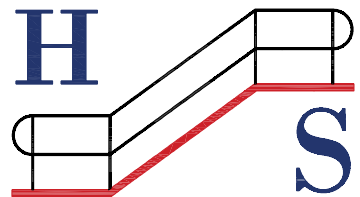


STANDARD DETAILS

PIECE MARK
CH

DETAILS NAME

Safety Chain Assembly



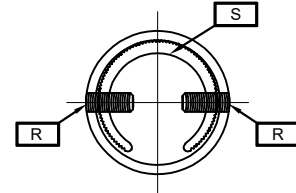
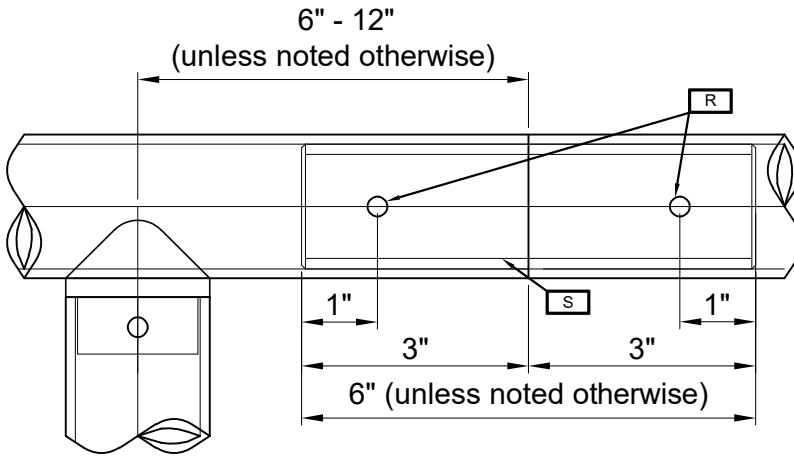
HANDRAIL SYSTEMS, Inc.

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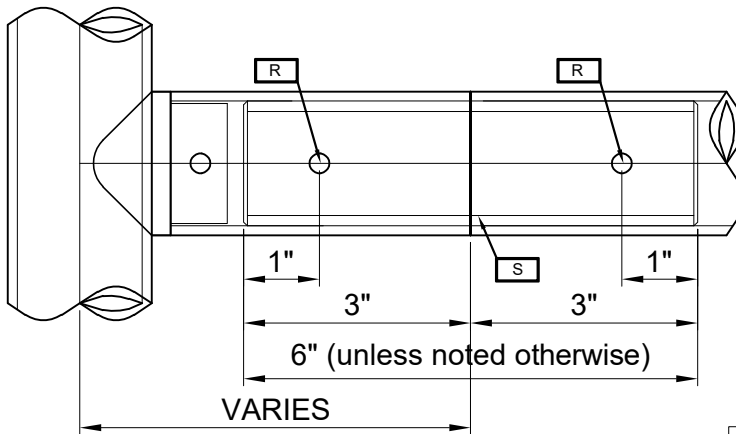
web: www.handrailsys.com

phone: 936-441-5680

email: info@handrailsys.com



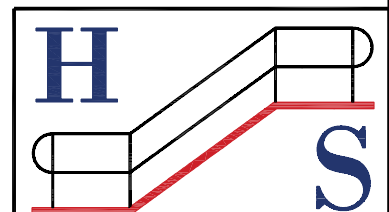
Field drill (4) $\frac{5}{32}$ " \varnothing holes thru railing and splice S for (4) #10 set screws R using $\frac{5}{32}$ " \varnothing drill bit



LEGEND
 R = #10 Set Screw (SS)



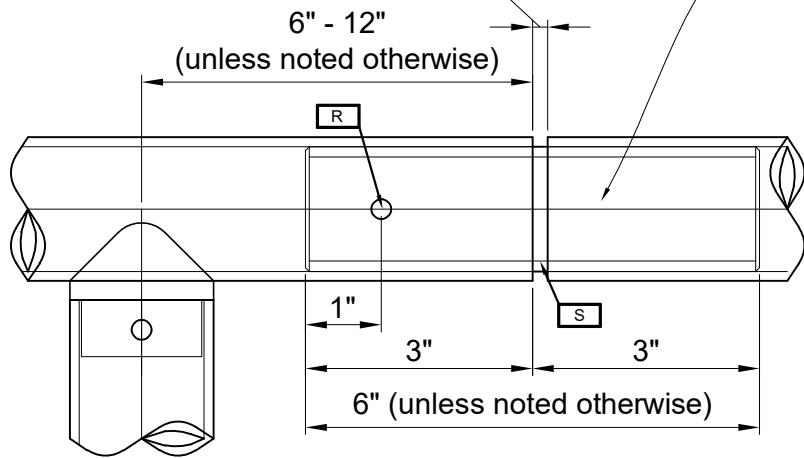
S = 6" Splice for Pipe $\varnothing 1 \frac{1}{2}$ "



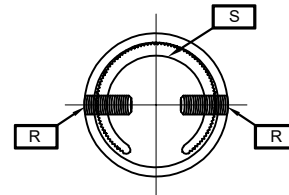
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| | |
|---------------------------------------|------------------------|
| STANDARD DETAILS | PIECE MARK S |
| DETAILS NAME Splice Joint Assembly | |

See "Expansion Joint Chart"



Note: This condition occurs at top rail only. Field locate at building expansion joint and/or 22'-0" +/- on center. Locate expansion joints at the mid and bottom rails below the top rail. An Optional Expansion method for mid and bottom rails is to eliminate the splice and not fasten one end of the mid or bottom rails to the post fitting (this method may require additional pipe to be purchased and requires good construction methods to eliminate the potential disconnection of the rail during extreme expansion/contraction conditions. Install toeboard expansion joint below top rail expansion.

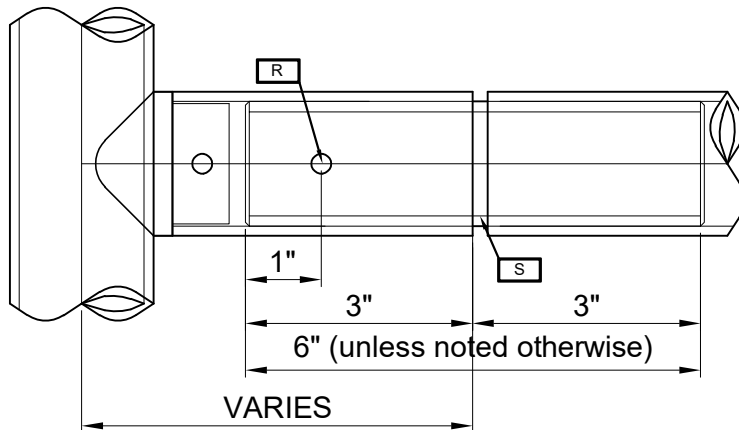


Field drill (2) $\frac{5}{32}$ " \varnothing holes thru railing and splice S for (2) #10 set screws R using $\frac{5}{32}$ " \varnothing drill bit

"Expansion Joint Chart"

| -- temperature (F°) -- | -- required gap -- |
|------------------------|--------------------|
| 120° | 0" |
| 107.5° | $\frac{1}{16}$ " |
| 95° | $\frac{1}{8}$ " |
| 82.5° | $\frac{3}{16}$ " |
| 70° | $\frac{1}{4}$ " |
| 57.5° | $\frac{5}{16}$ " |
| 45° | $\frac{3}{8}$ " |
| 32.5° | $\frac{7}{16}$ " |
| 20° | $\frac{1}{2}$ " |
| 7.5° | $\frac{9}{16}$ " |
| (-15°) | $\frac{5}{8}$ " |

Expansion joint spacing not to exceed 22'-0"



Railing w/ S installed as FIELD EXPANSION JOINT ON INTERMEDIATE RAIL MUST BE LOCATED ANY WHERE BETWEEN THE POSTS BELOW THE TOP RAIL EXPANSION JOINT

LEGEND

R = #10 Set Screw (SS)



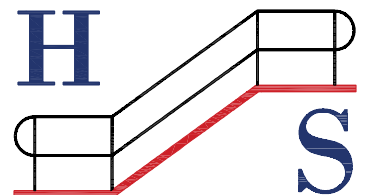
S = 6" Splice for Pipe $\varnothing 1 \frac{1}{2}$ "

STANDARD DETAILS

PIECE MARK
ESA

DETAILS NAME

Expansion Joint Assembly



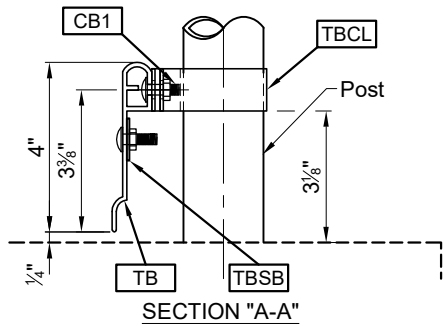
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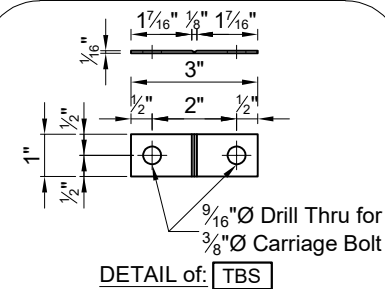
phone: 936-441-5680

email: info@handrailsys.com

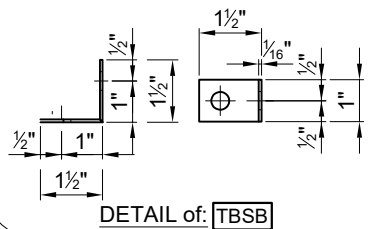


LEGEND

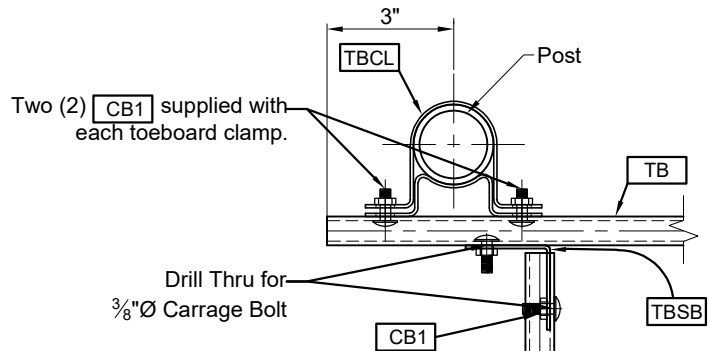
- TB = Toeboard as supplied (ALUM)
- TBCL = Toeboard Clamp, Short (SS)
- TBS = Toeboard Splice (SS)
- CB1 = Carriage Bolt, 3/8"Ø x 3/4" w/ nut (SS)
- AT6 = All-Thread, 3/8"Ø x 6" w/ Nut (SS)



DETAIL of: **TBS**



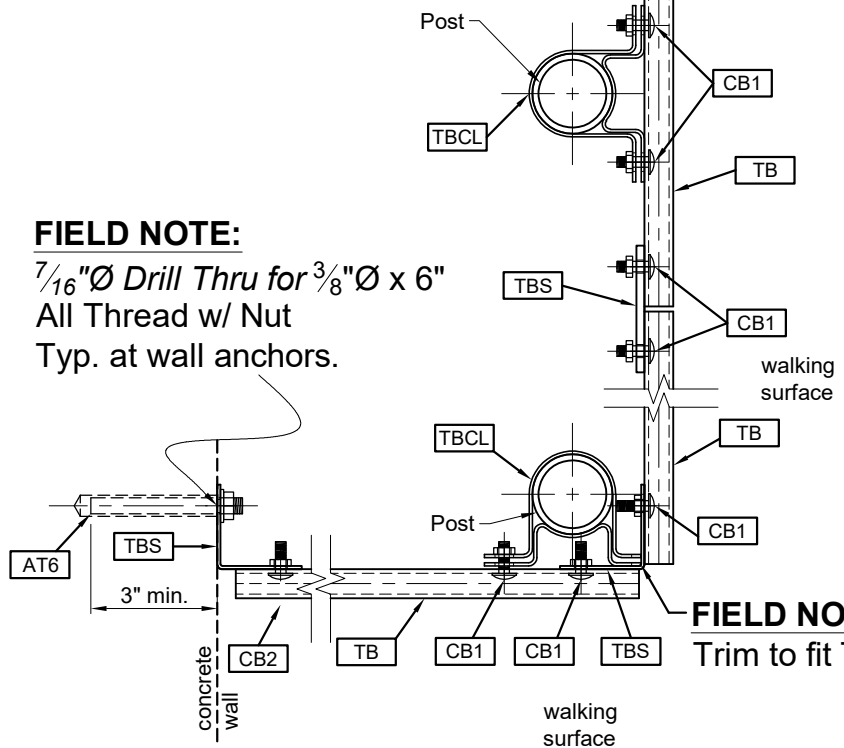
DETAIL of: **TBSB**



Drill Thru for 3/8"Ø Carriage Bolt

FIELD NOTE:

7/16"Ø Drill Thru for 3/8"Ø x 6" All Thread w/ Nut Typ. at wall anchors.



FIELD NOTE:
Trim to fit TBCL

TOEBOARD ASSEMBLY FOR "F" FLANGE

OUTSIDE CORNER, 90°

INSIDE CORNER, 90°

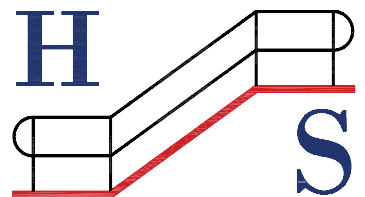
WALL TERMINATION

STANDARD DETAILS

PIECE MARK
TB

DETAILS NAME

Toeboard Assembly w/TBCL



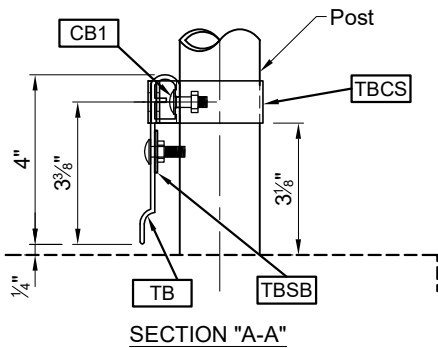
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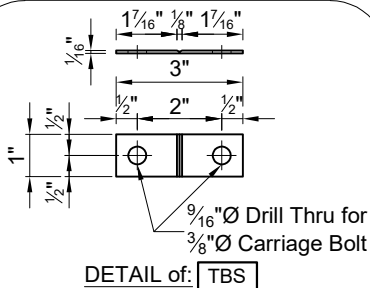
phone: 936-441-5680

email: info@handrailsys.com

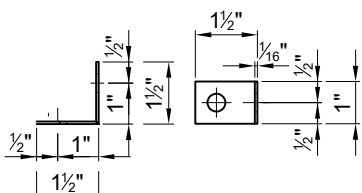


LEGEND

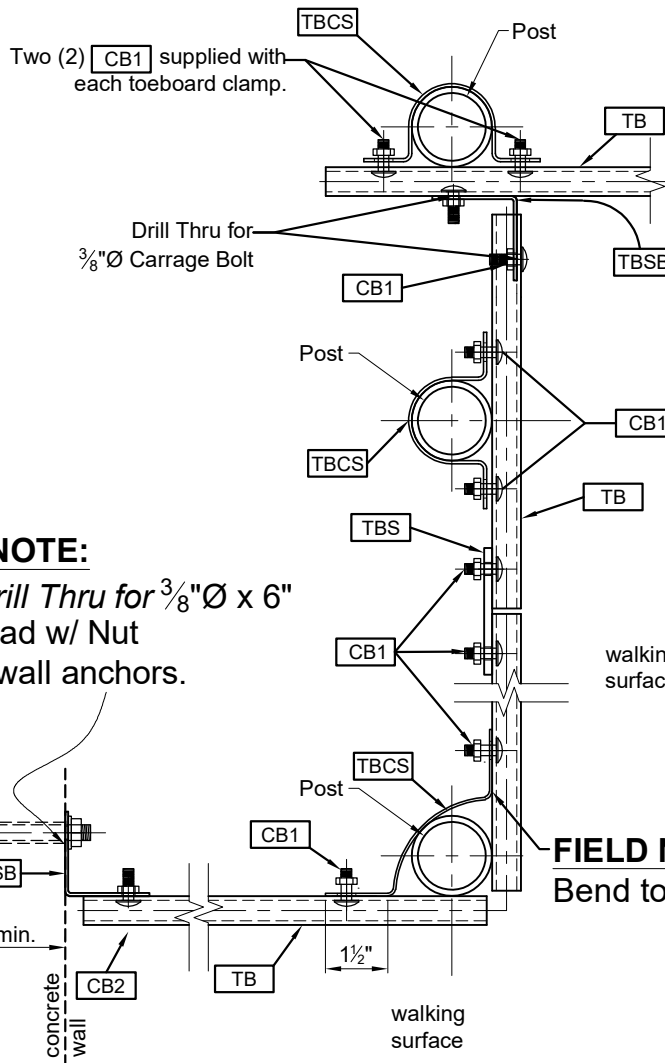
- TB = Toeboard as supplied (ALUM)
- TBCS = Toeboard Clamp, Short (SS)
- TBS = Toeboard Splice (SS)
- CB1 = Carriage Bolt, 3/8"Ø x 3/4" w/ nut (SS)
- AT6 = All-Thread, 3/8"Ø x 6" w/ Nut (SS)



DETAIL of: TBS



DETAIL of: TBSB



FIELD NOTE:

7/16"Ø Drill Thru for 3/8"Ø x 6" All Thread w/ Nut Typ. at wall anchors.

FIELD NOTE:
Bend to fit TBCS

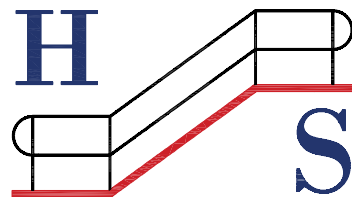
TOE BOARD ASSEMBLY ALL FLANGES EX. "F"
INSIDE CORNER, 90° OUTSIDE CORNER, 90° WALL TERMINATION

STANDARD DETAILS

PIECE MARK
TB

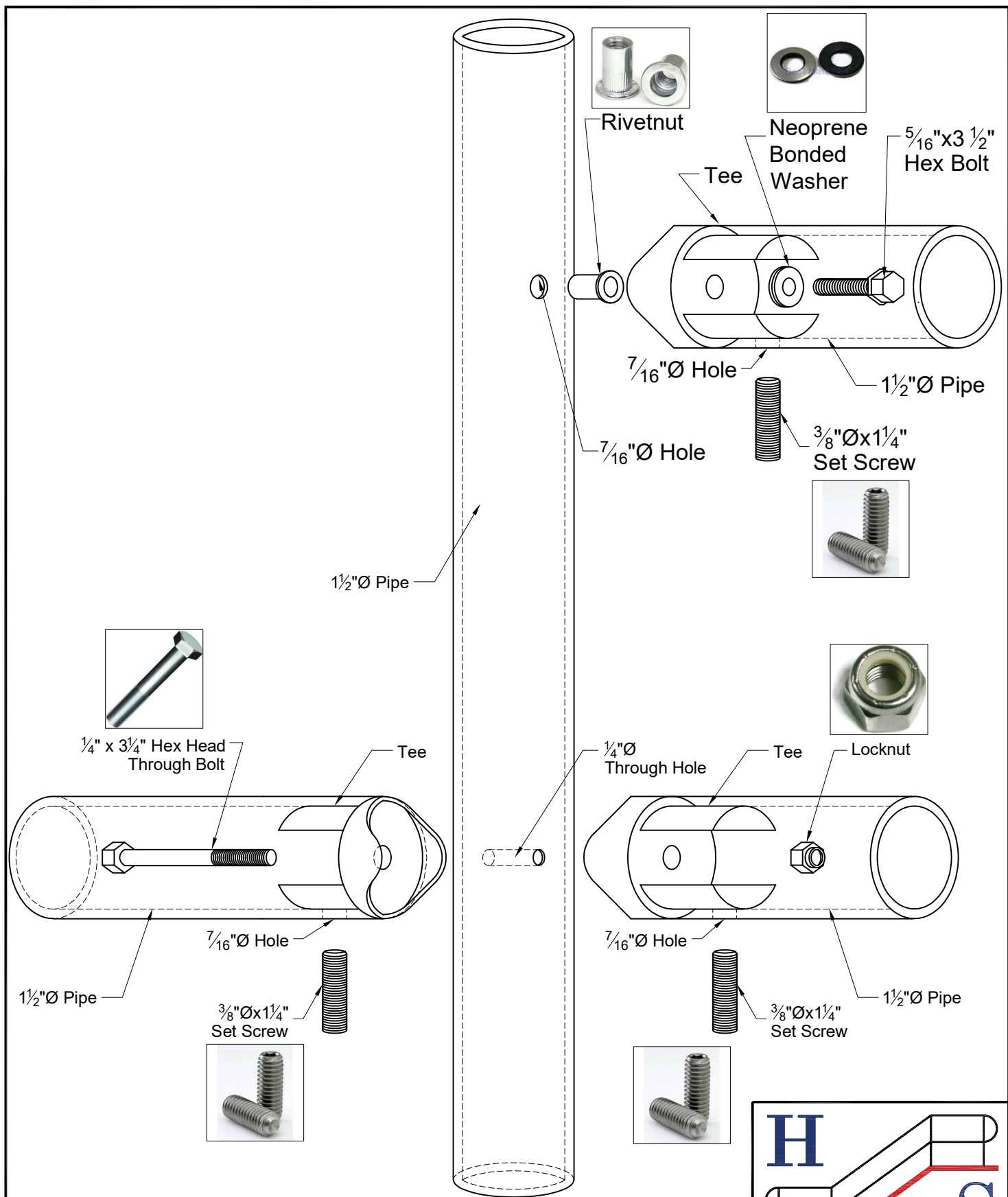
DETAILS NAME

Toeboard Assembly w/TBCS



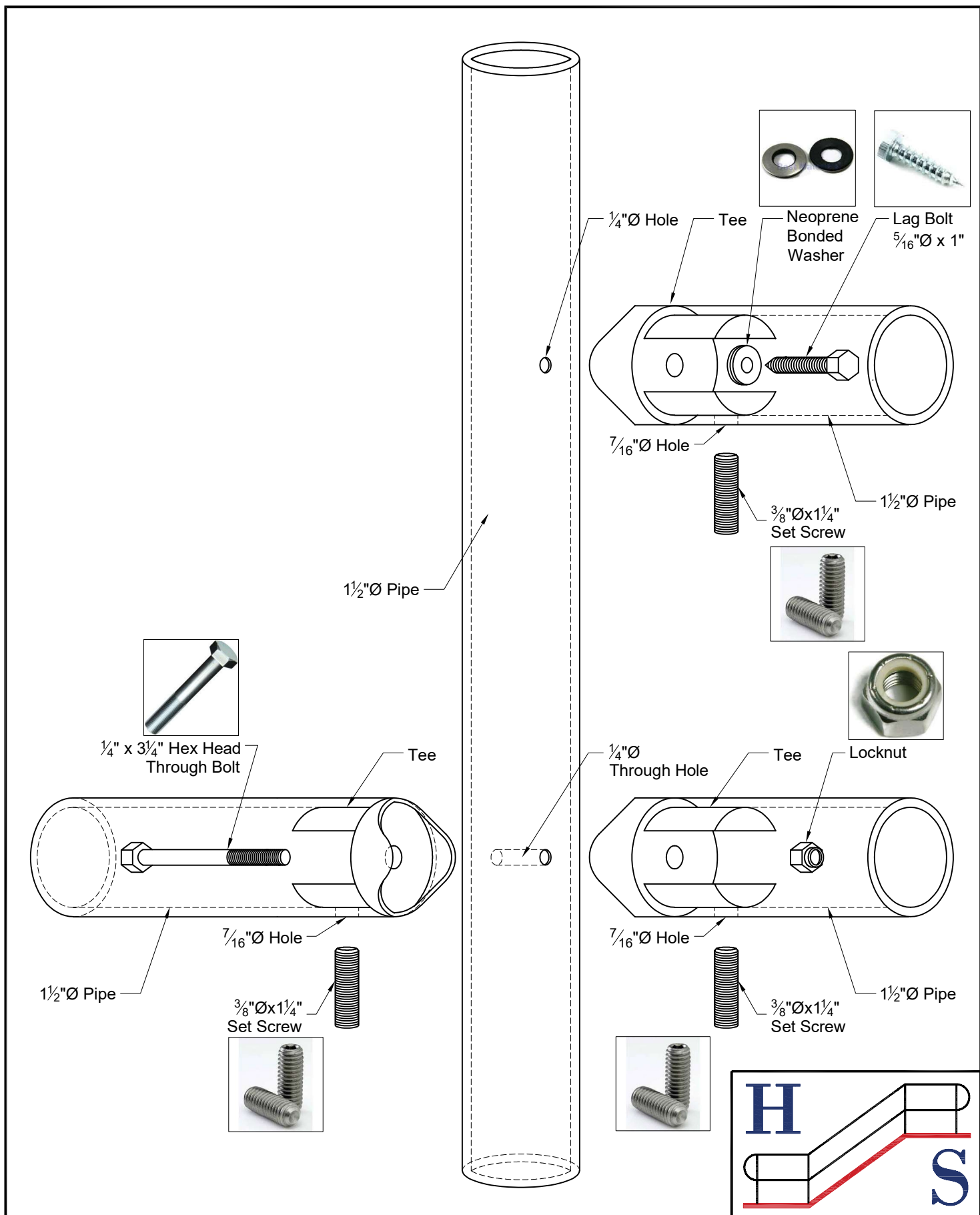
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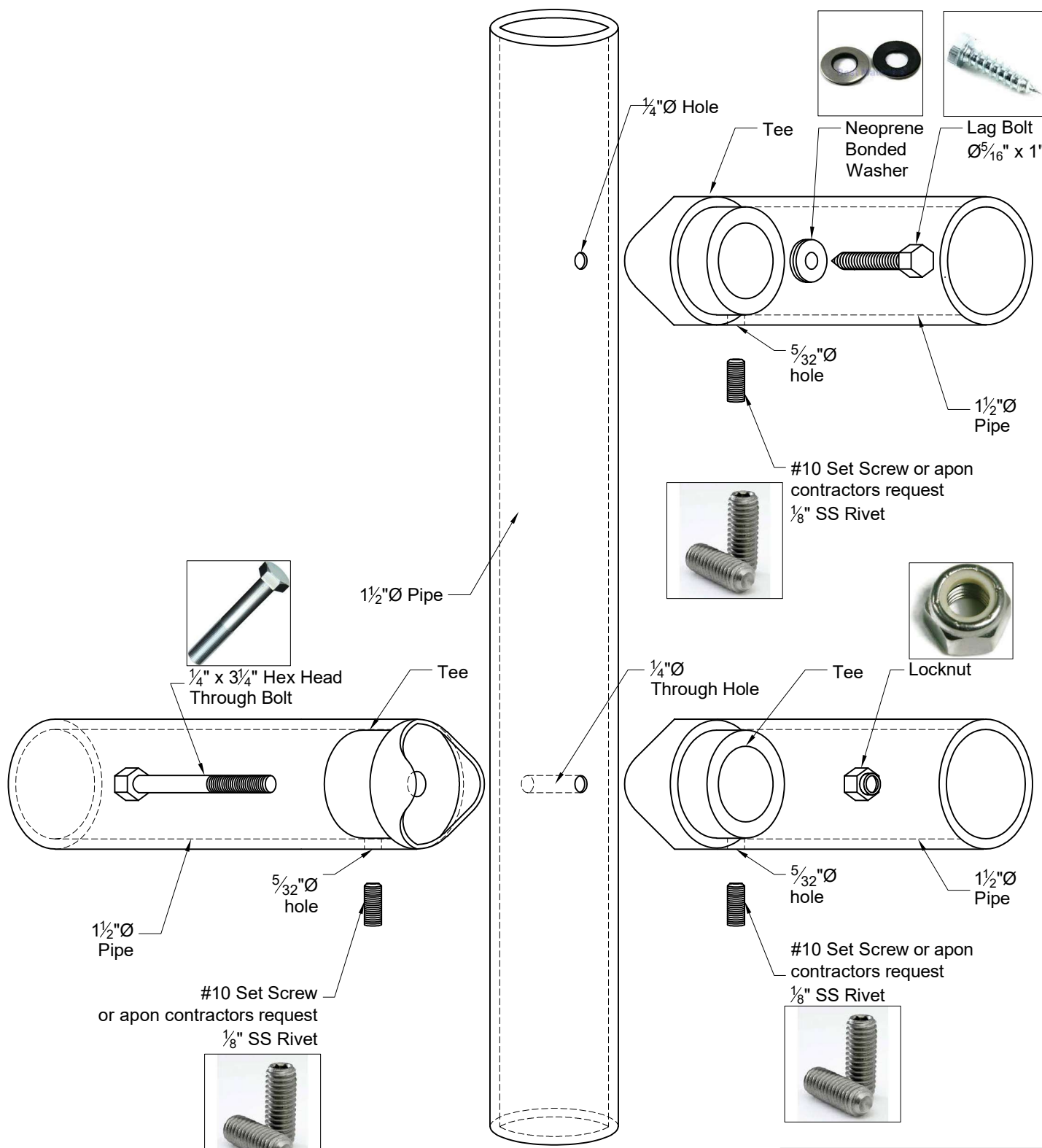
| | |
|--|-------------------------------|
| STANDARD DETAILS | PIECE MARK Info (I) |
| DETAILS NAME Internally Fastened System Assembly | |

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| | |
|--|------------------------|
| STANDARD DETAILS | PIECE MARK Info (I) |
| DETAILS NAME Internally Fastened System Assembly | |

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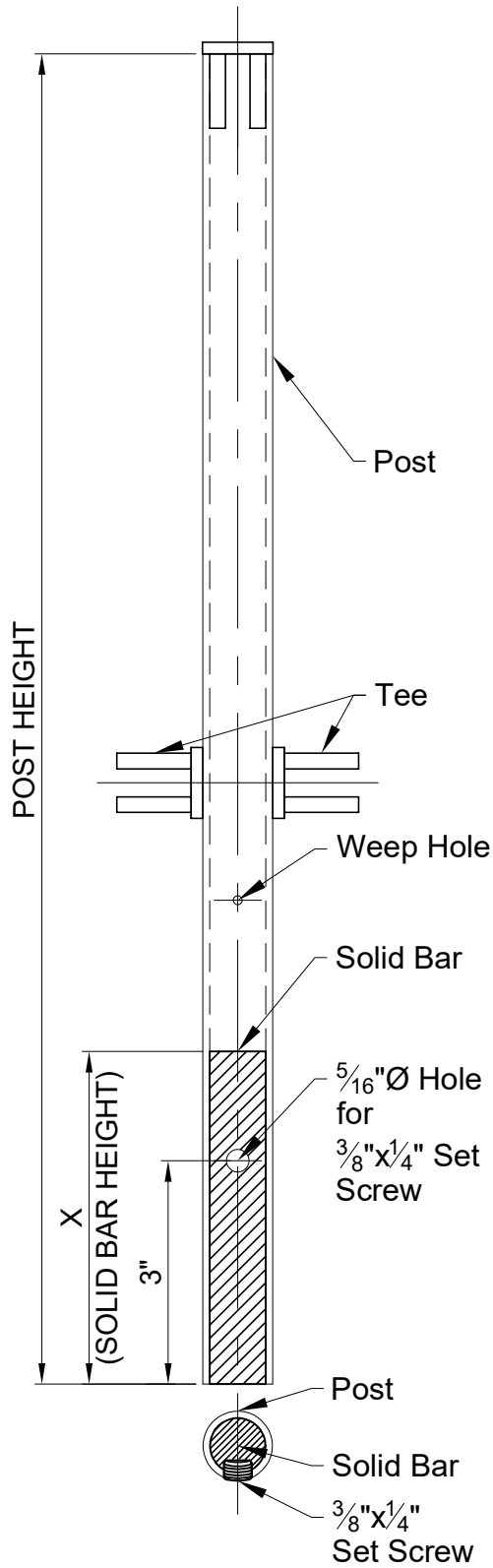


| | |
|-----------------------------------|-------------------------------|
| STANDARD DETAILS | PIECE MARK Info (T) |
| DETAILS NAME Ribet Rail | |

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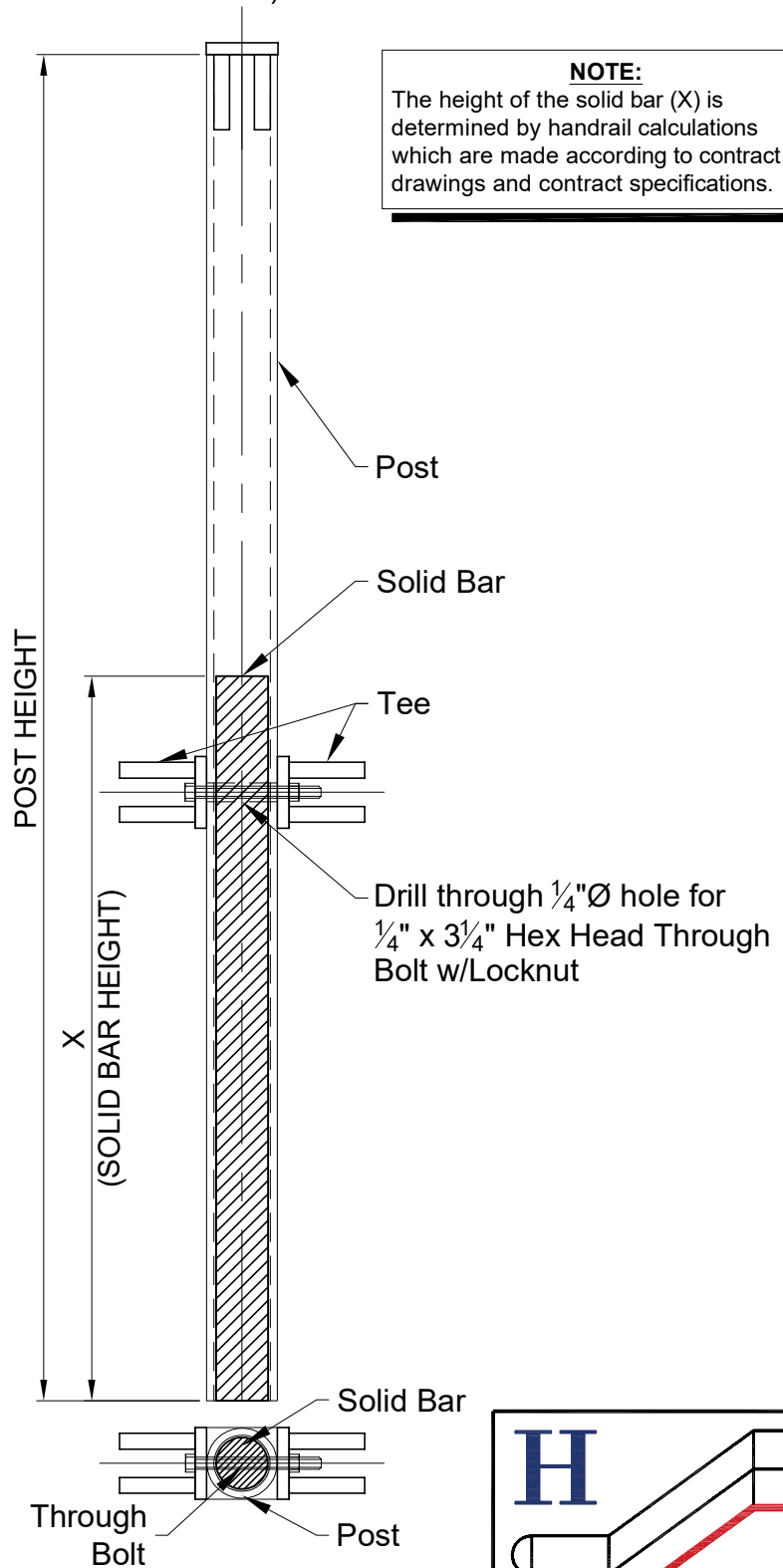
Type A

(used when solid bar is under the first tee's)



Type B

(used when solid bar is above the height of the first tee's)



NOTE:

The height of the solid bar (X) is determined by handrail calculations which are made according to contract drawings and contract specifications.

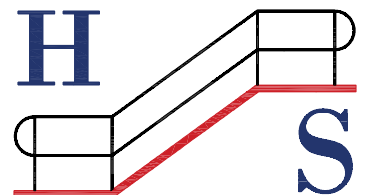
STANDARD DETAILS

PIECE MARK

SBA

DETAILS NAME

Solid Bar Assembly



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