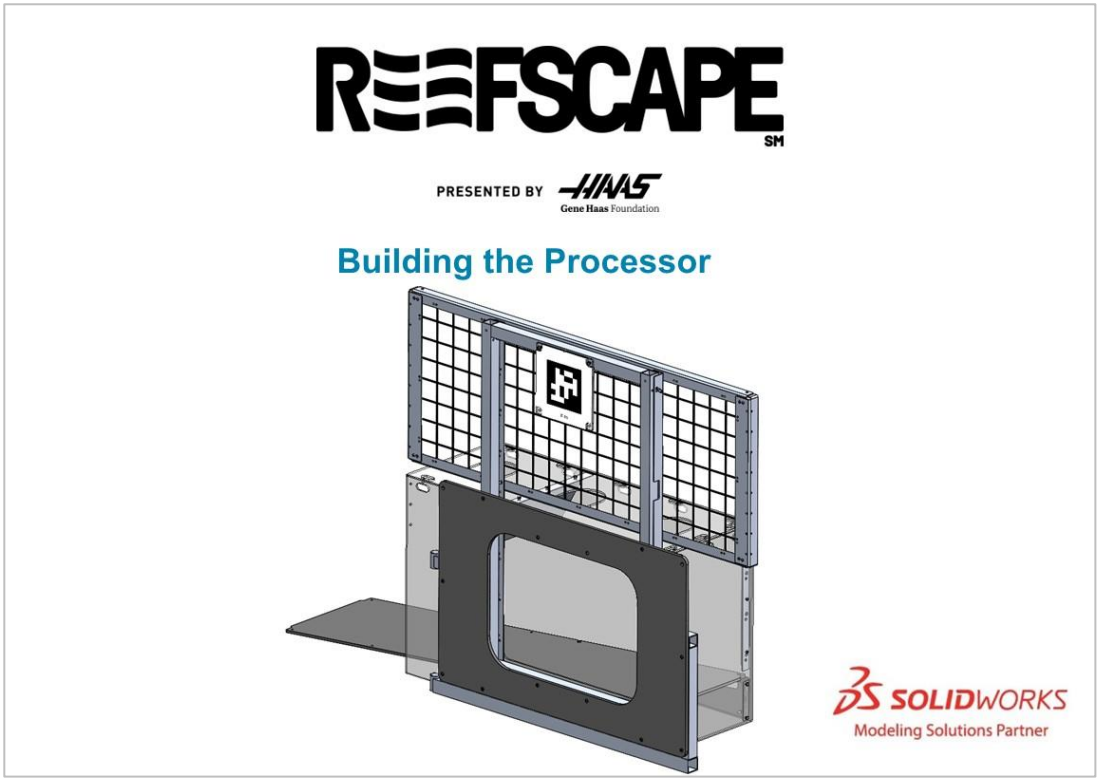
3.7 Processor

A total of 2 Processor Stations need to be built. The large weldment and side border adapter should be installed during assembly of the Field border. Most of the assembly work can be done away from the Field if convenient.

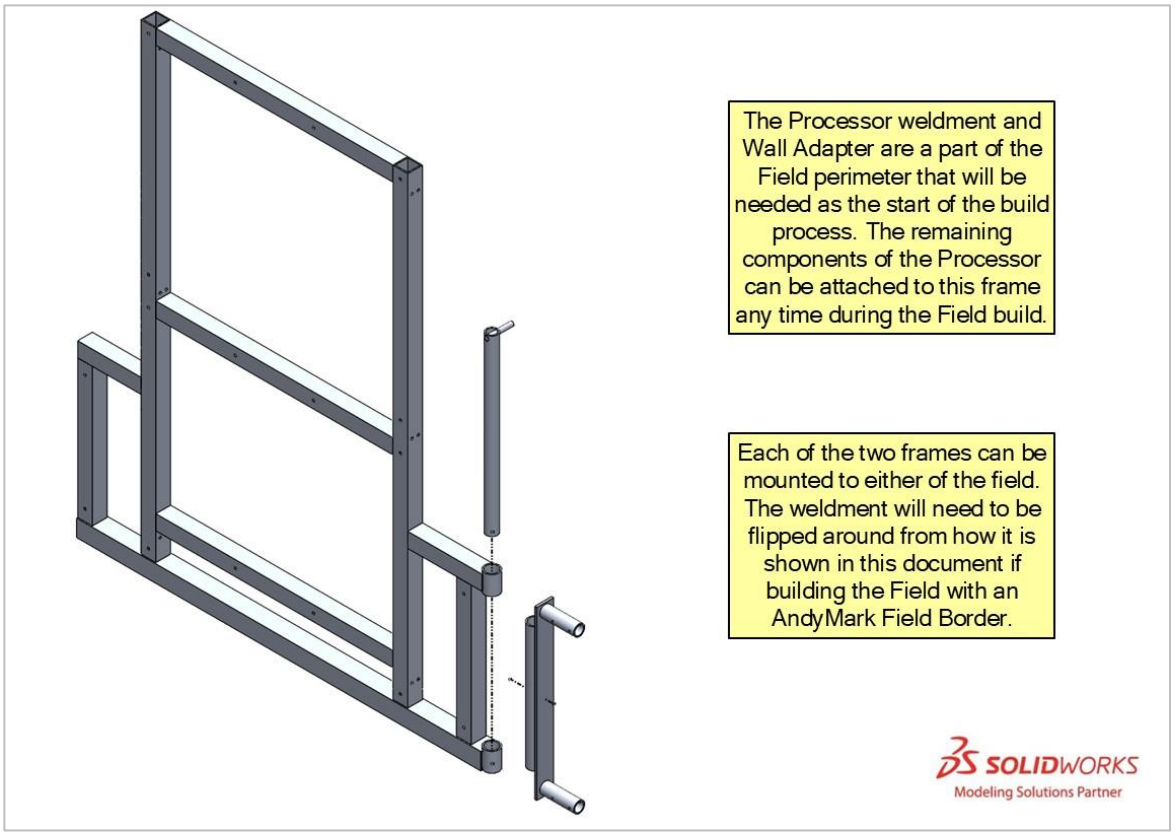
3.7.1 Tools & Equipment (For 1x Processor)

- 2x 7/16” wrenches
- 1x Phillips head (#3) screwdriver
- 39x ¼-20 x 1” hex head bolts
- 2x ¼-20 x 2.5” hex head bolts
- 12x ¼-20 x 2.5” counter sunk Phillips bolts
- 14x ¼-20 Nylock nuts
- 6x 2-5/16” quick release pins
- 45x 50lb cable ties
- 4x 120lb cable ties
- White Gaffers tape

3.7.2 Assembly

1. 

2.


The Processor weldment and Wall Adapter are a part of the Field perimeter that will be needed as the start of the build process. The remaining components of the Processor can be attached to this frame any time during the Field build.
Each of the two frames can be mounted to either of the field. The weldment will need to be flipped around from how it is shown in this document if building the Field with an AndyMark Field Border.
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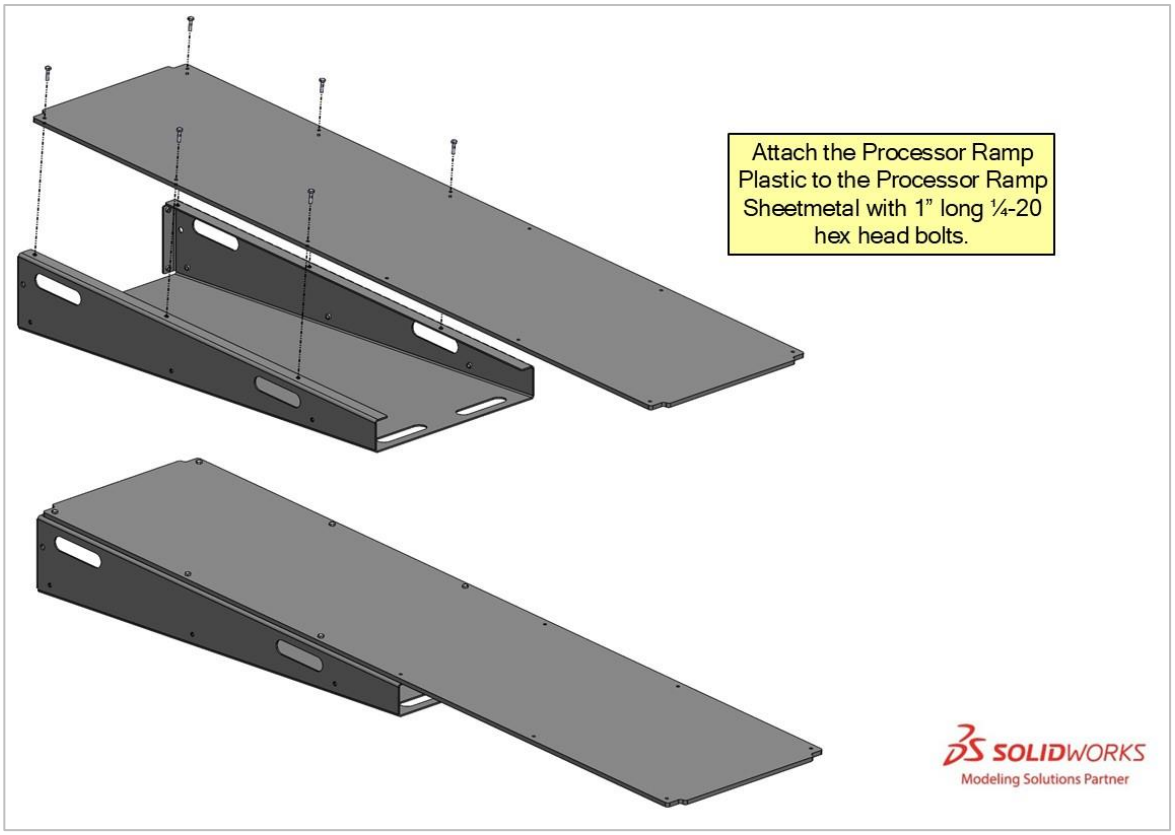
3.


Attach the Processor Ramp Plastic to the Processor Ramp Sheetmetal with 1” long ¼-20 hex head bolts.
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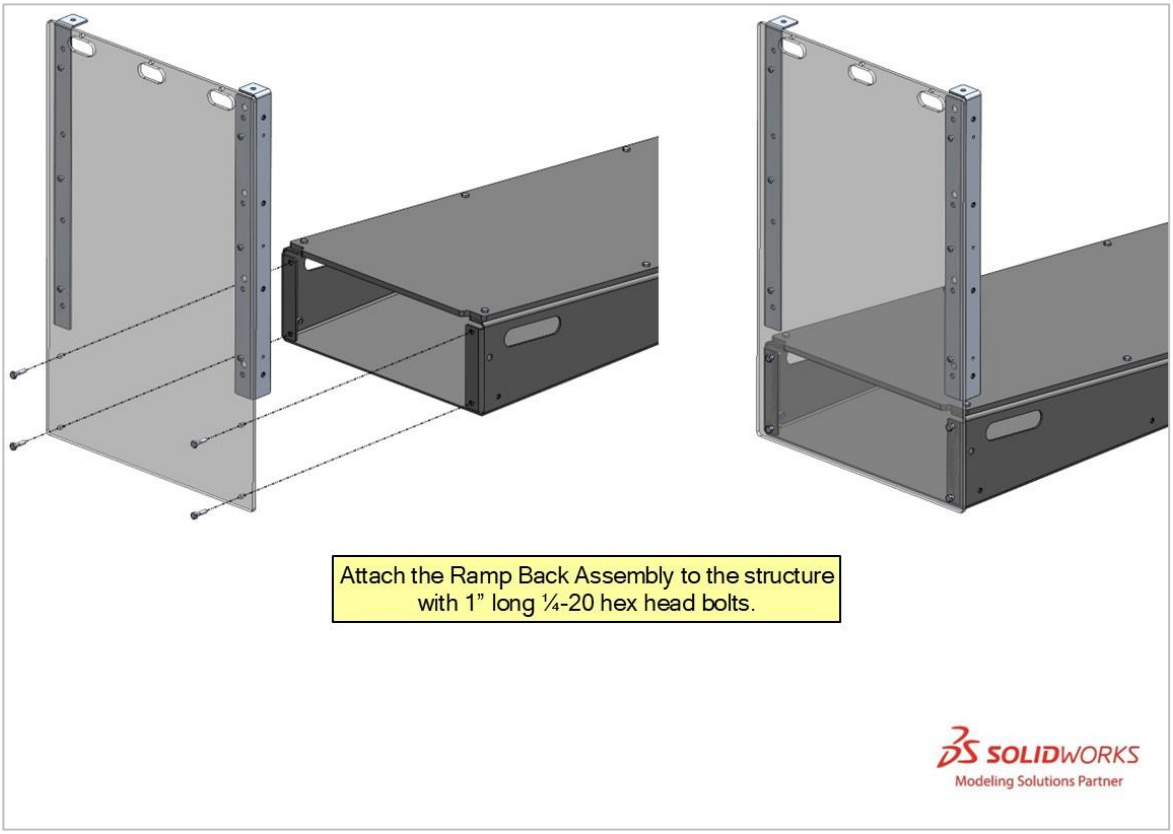
4.


Attach the Ramp Back Assembly to the structure with 1" long ¼-20 hex head bolts.
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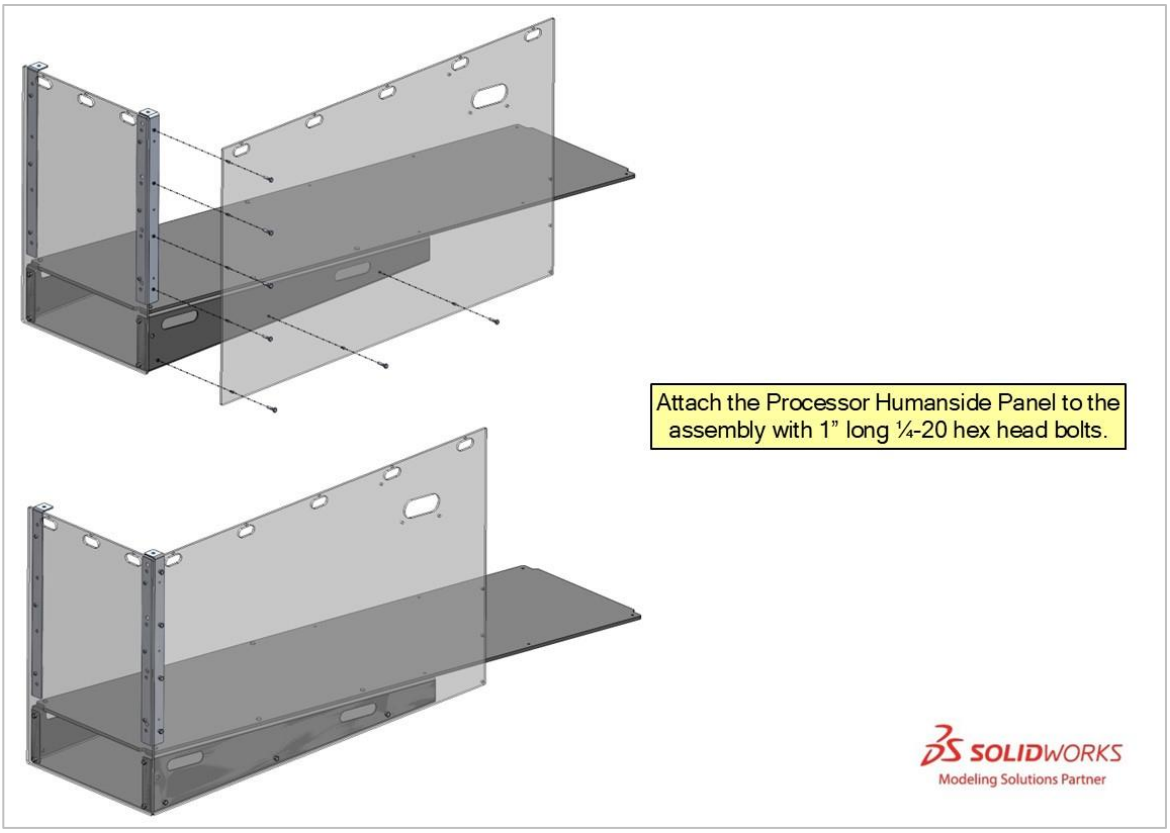
5.


Attach the Processor Humanside Panel to the assembly with 1" long ¼-20 hex head bolts.
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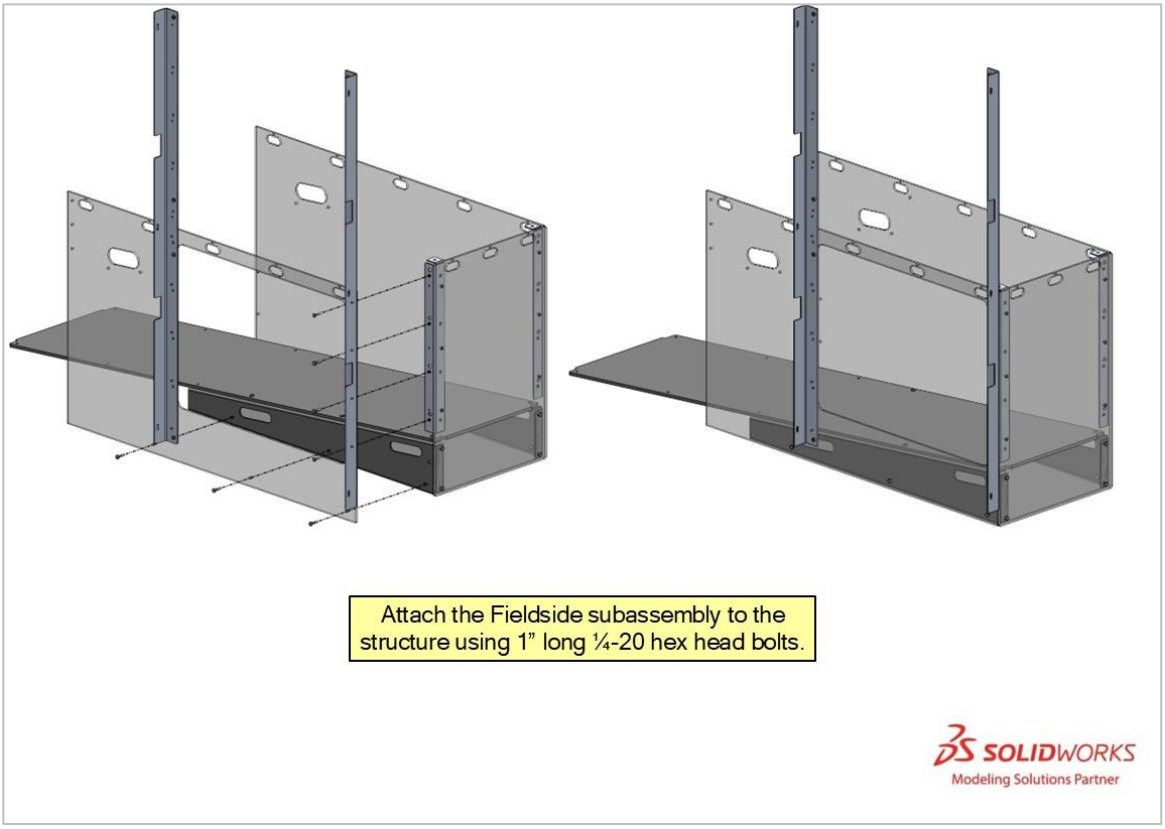
6.


Attach the Fieldside subassembly to the structure using 1" long ¼-20 hex head bolts.
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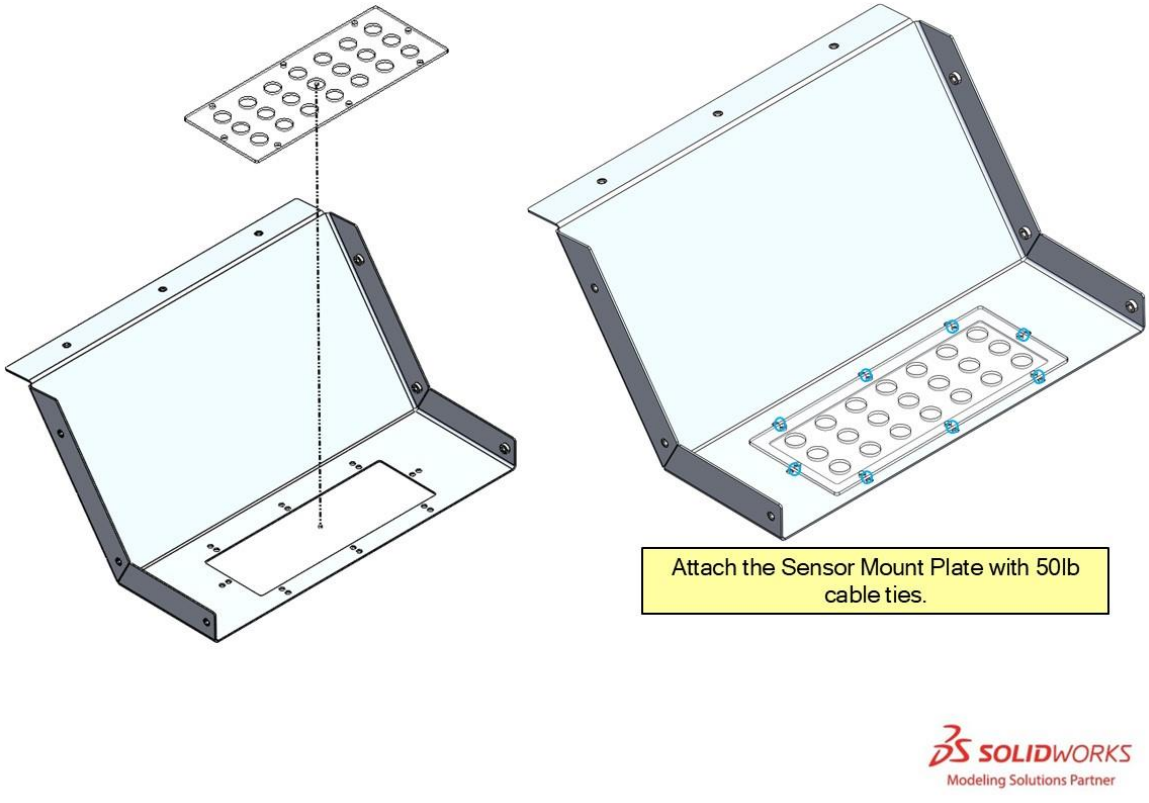
7.


Attach the Sensor Mount Plate with 50lb cable ties.
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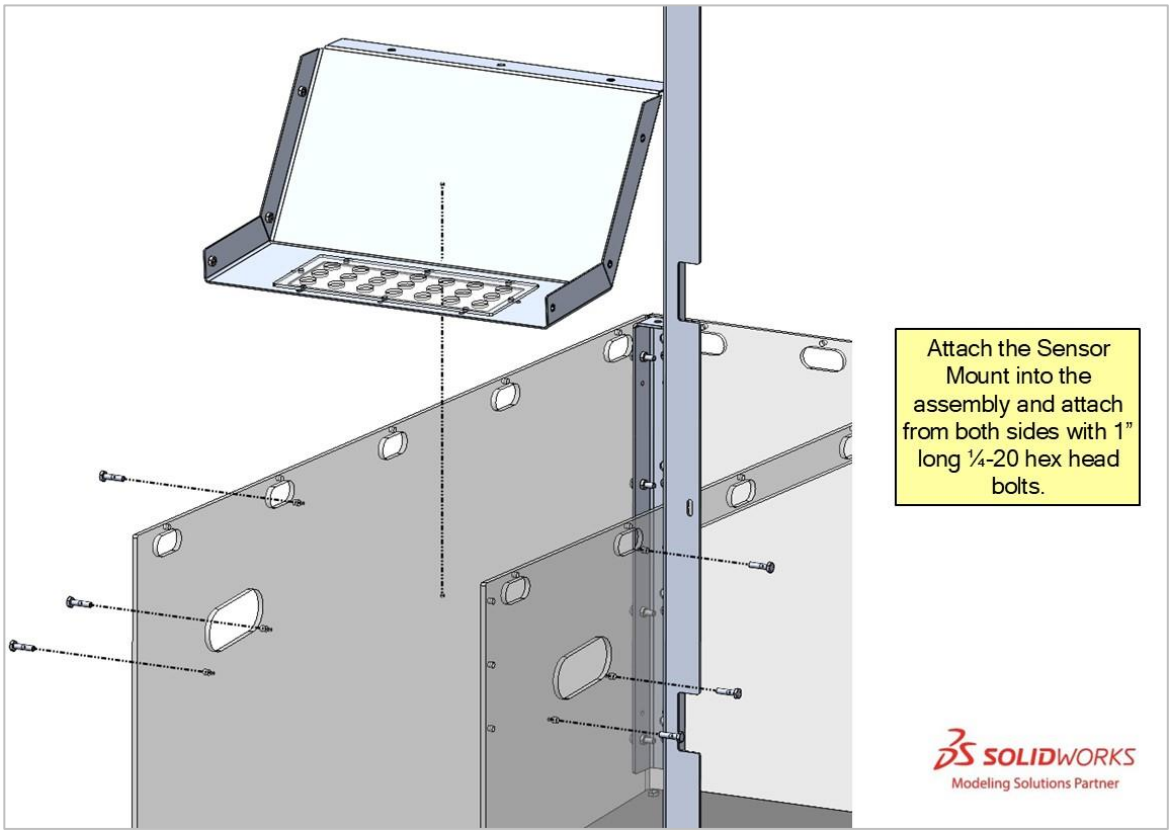
8.


Attach the Sensor Mount into the assembly and attach from both sides with 1" long ¼-20 hex head bolts.
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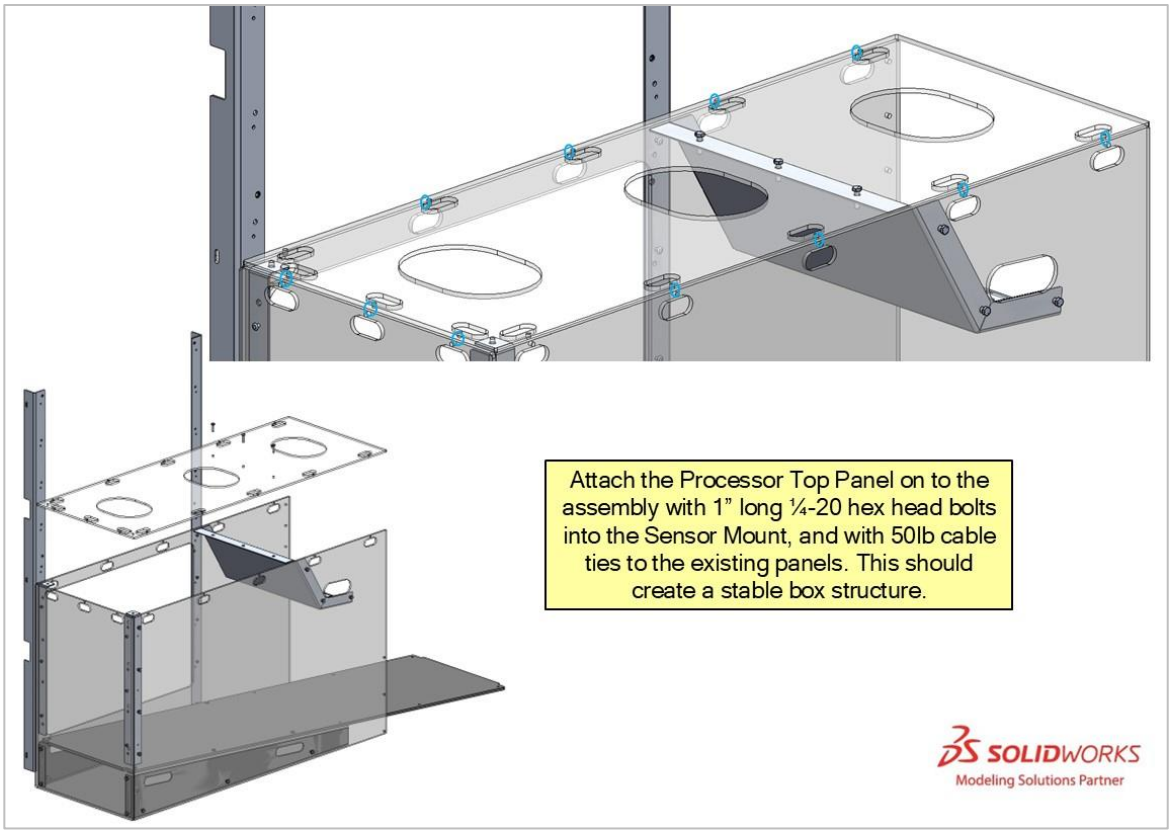
9.


Attach the Processor Top Panel on to the assembly with 1" long ¼-20 hex head bolts into the Sensor Mount, and with 50lb cable ties to the existing panels. This should create a stable box structure.
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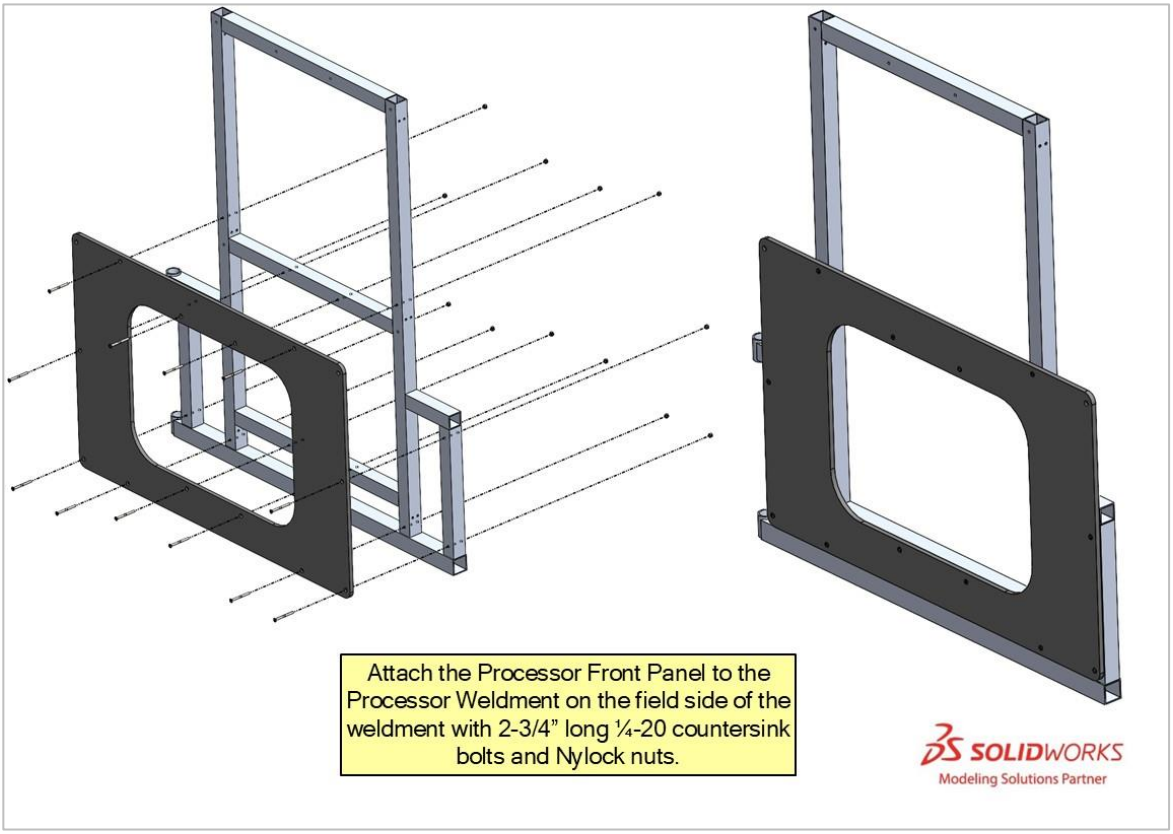
10.


Attach the Processor Front Panel to the Processor Weldment on the field side of the weldment with 2-3/4" long ¼-20 countersink bolts and Nylock nuts.
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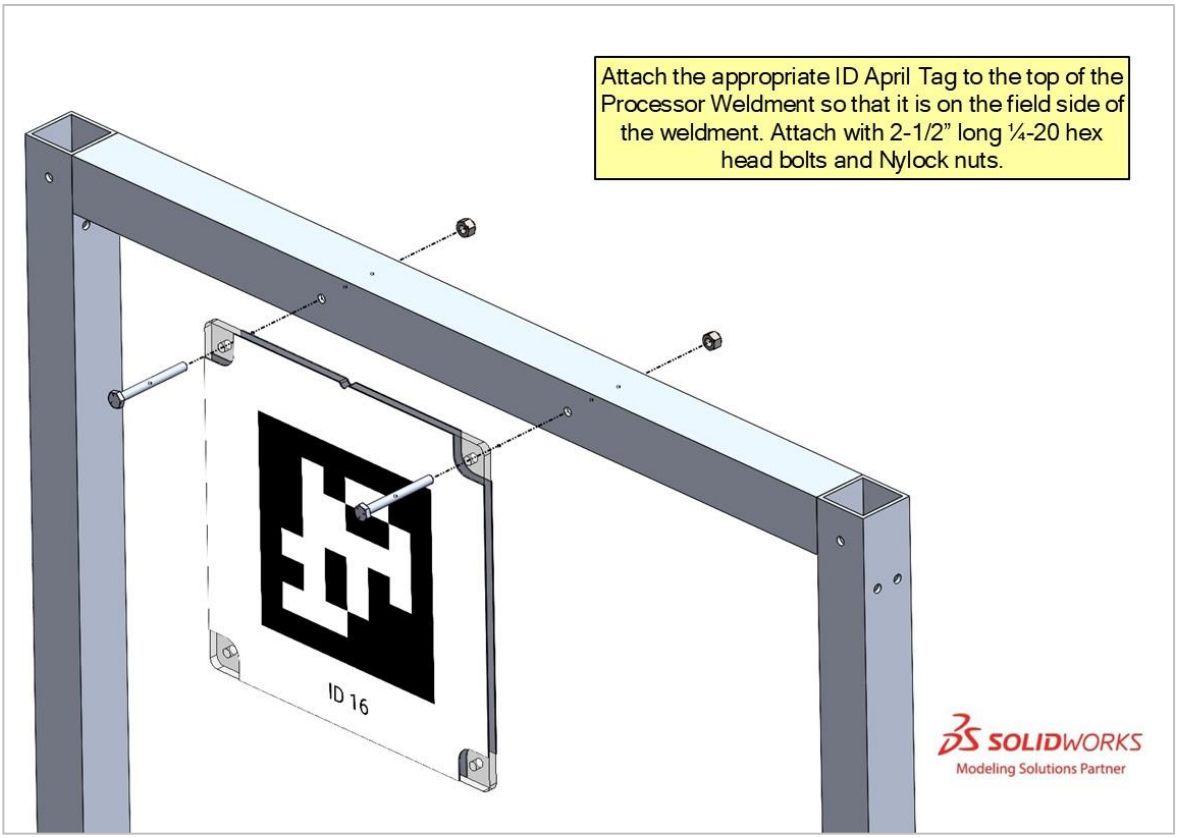
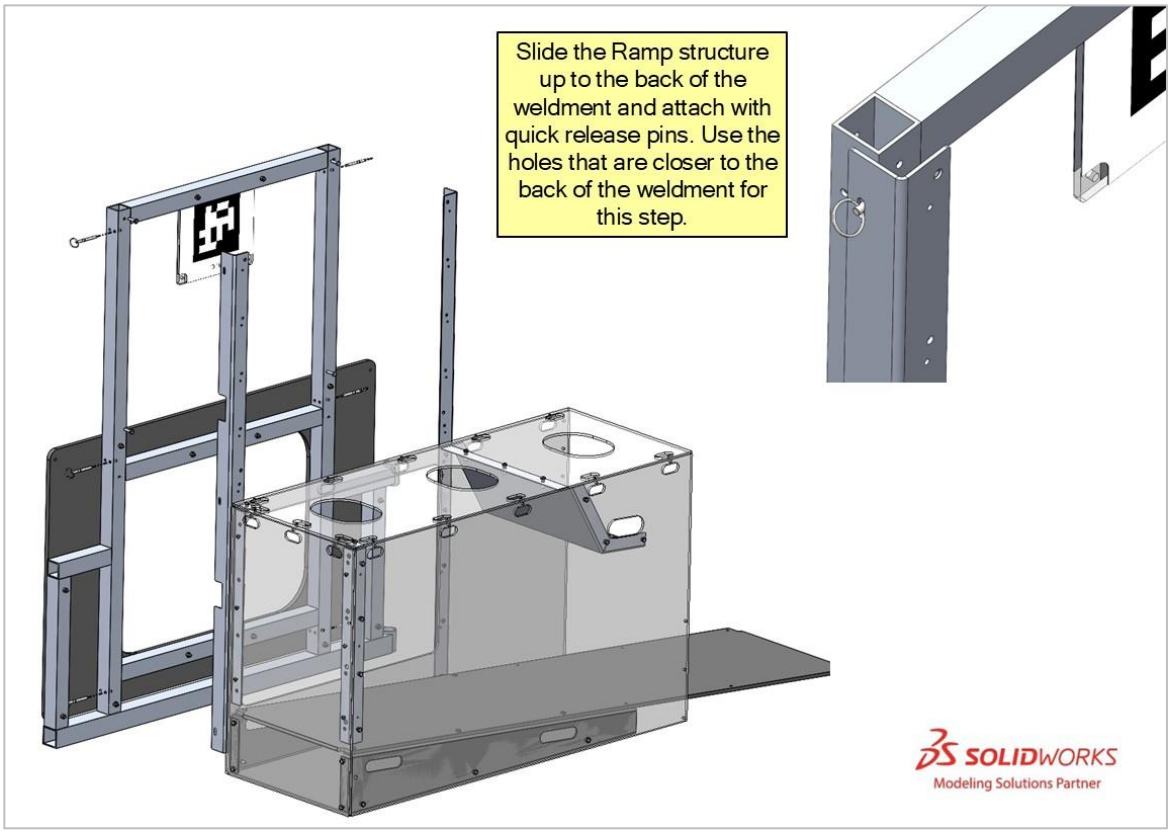
11.


Attach the appropriate ID April Tag to the top of the Processor Weldment so that it is on the field side of the weldment. Attach with 2-1/2" long ¼-20 hex head bolts and Nylock nuts.
ID 16
SOLIDWORKS
Modeling Solutions Partner

12.


Slide the Ramp structure up to the back of the weldment and attach with quick release pins. Use the holes that are closer to the back of the weldment for this step.
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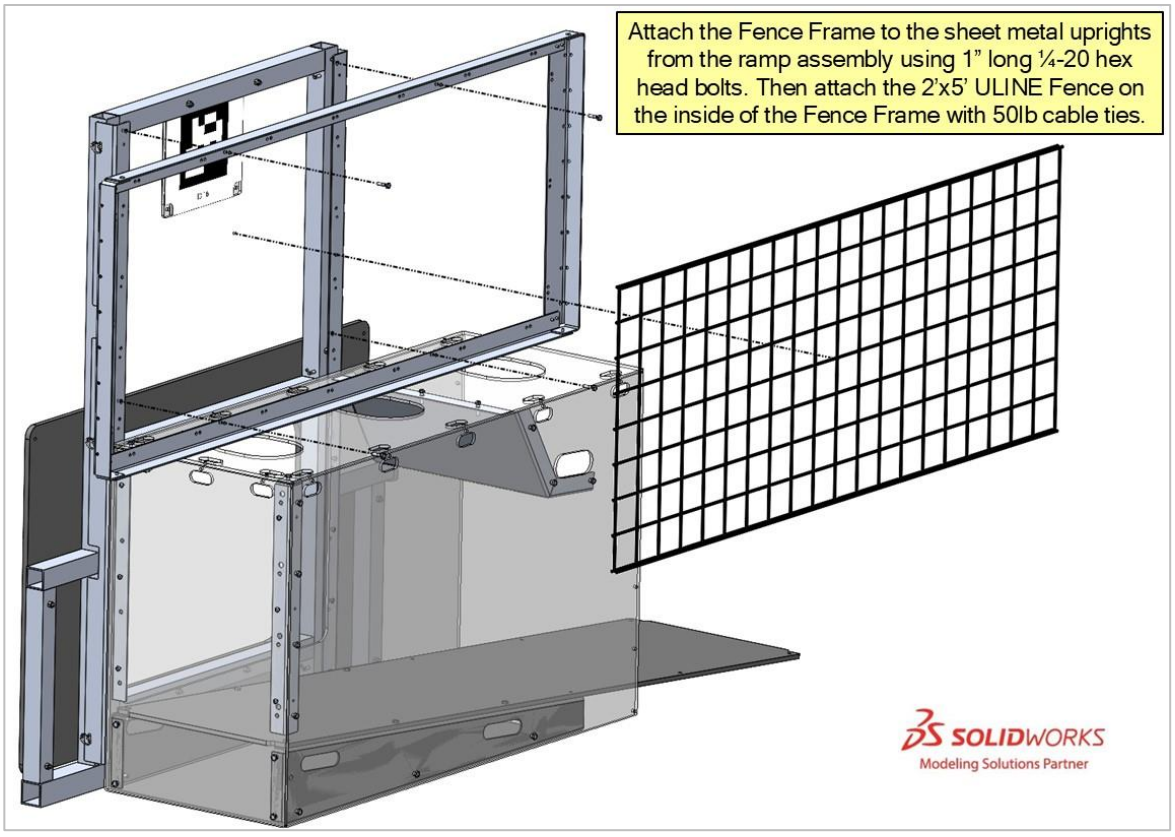
13.


Attach the Fence Frame to the sheet metal uprights from the ramp assembly using 1" long ¼-20 hex head bolts. Then attach the 2'x5' ULINE Fence on the inside of the Fence Frame with 50lb cable ties.
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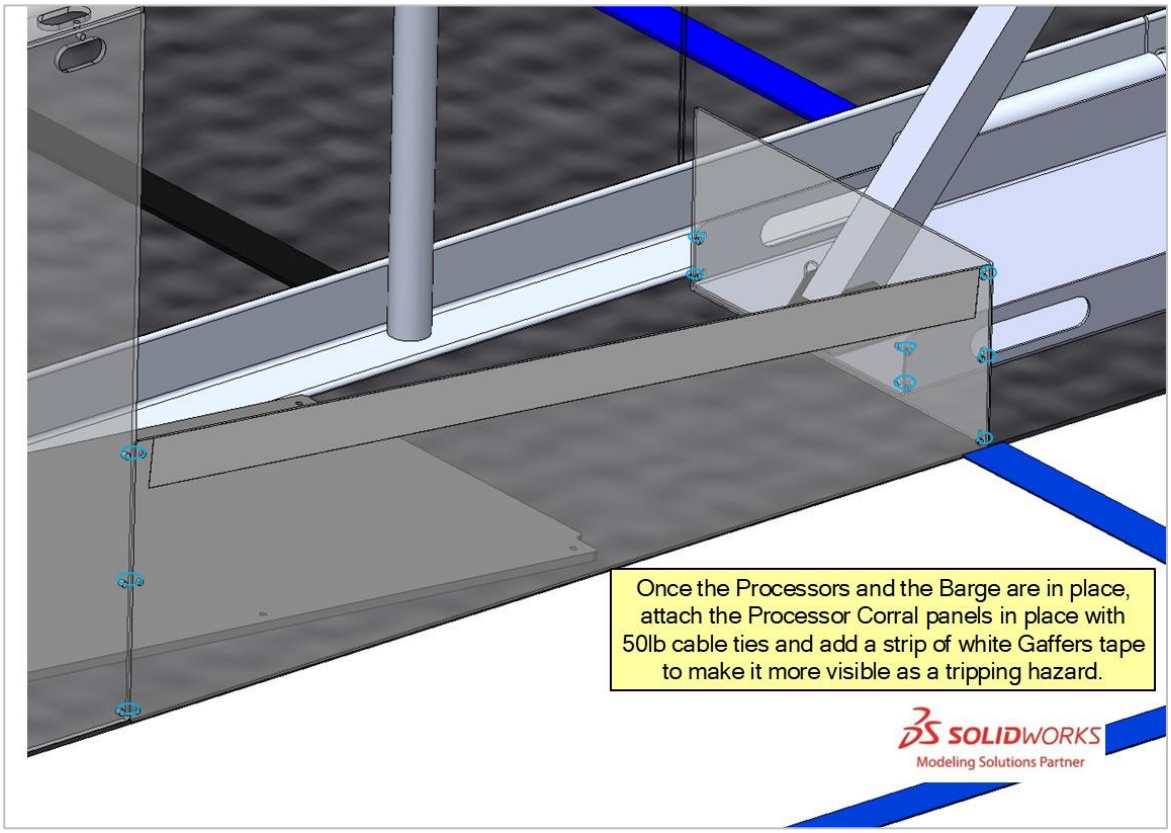
14.


Once the Processors and the Barge are in place, attach the Processor Corral panels in place with 50lb cable ties and add a strip of white Gaffers tape to make it more visible as a tripping hazard.
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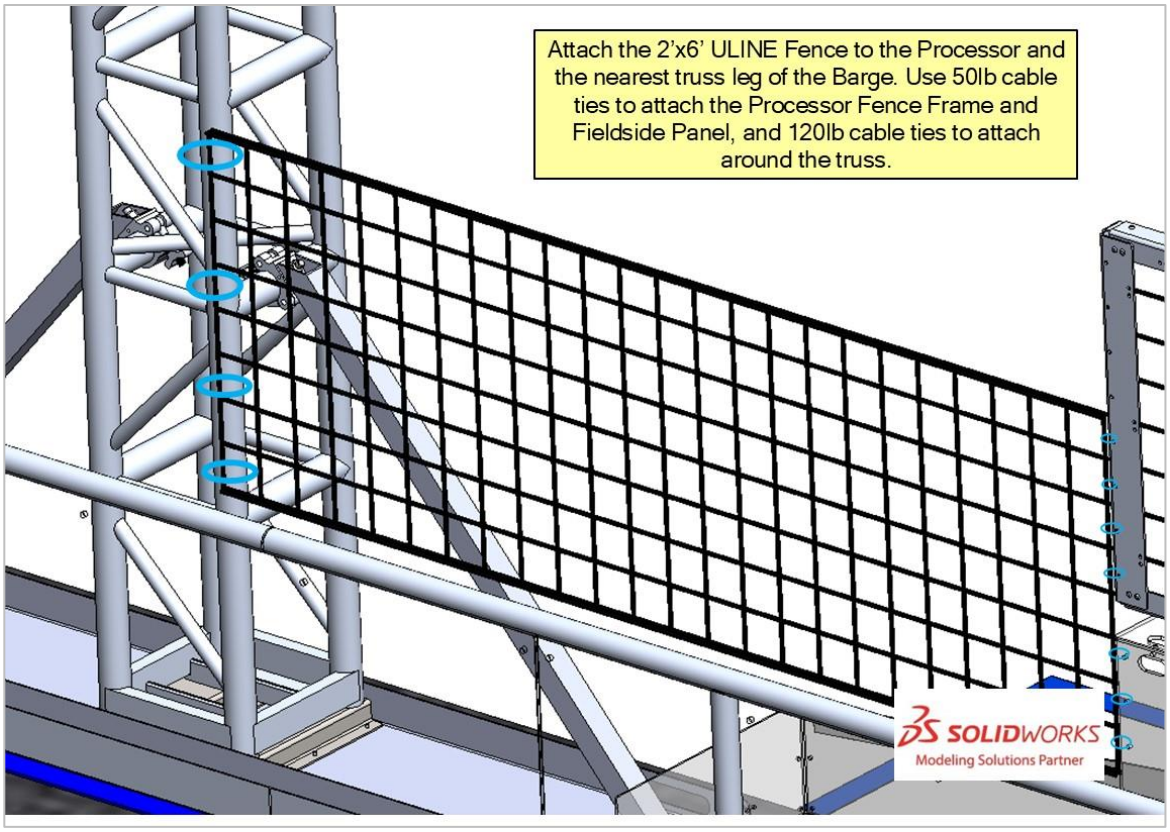
15.


Attach the 2'x6' ULINE Fence to the Processor and the nearest truss leg of the Barge. Use 50lb cable ties to attach the Processor Fence Frame and Fieldside Panel, and 120lb cable ties to attach around the truss.
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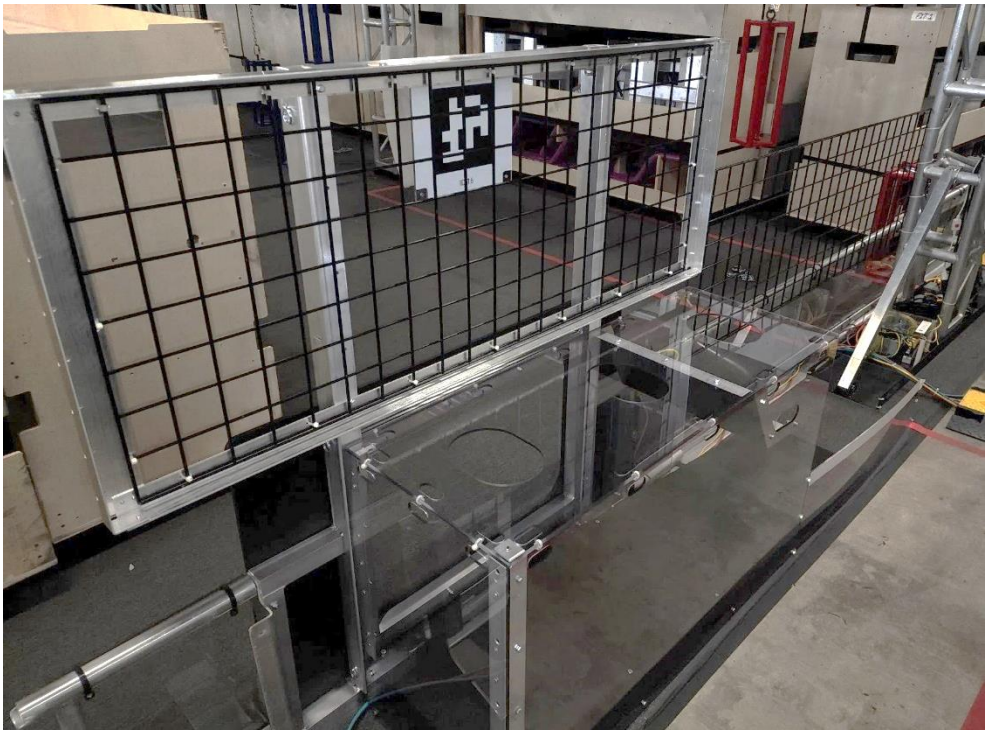
Modeling Solutions Partner

3.7.3 Electronics



3.7.3.1 Equipment

Sensor Wiring

- Case 7 - 2025 Game Specific – Both Processors
  - 2 - Smart IO boxes w/IEC power cable
  - 2 - GFCI power adapters
  - 6 - Barge Light relay box
  - 2 – 8 outlet power strips
  - 2 - Main power extension cord (5’ for Red, 25’ for Blue)
  - 2 - A-B Y Cables
  - 8 - 5m A-B cables
  - 2 - 30m black Ethernet
  - 2 - Processor Station Sensor units

3.7.3.2 Processor wiring

- The Smart IO, 8-outlet power strips, and relay boxes go in the Long Truss Base.
- The Processor extension cord plugs into the GFCI adapter, and then to the power strip, then the SmartIO and all 3 relay boxes plug into the power strip.
  - Blue processor power connect to the Scoring Table.
  - Red processor power connects to the red alliance wall.

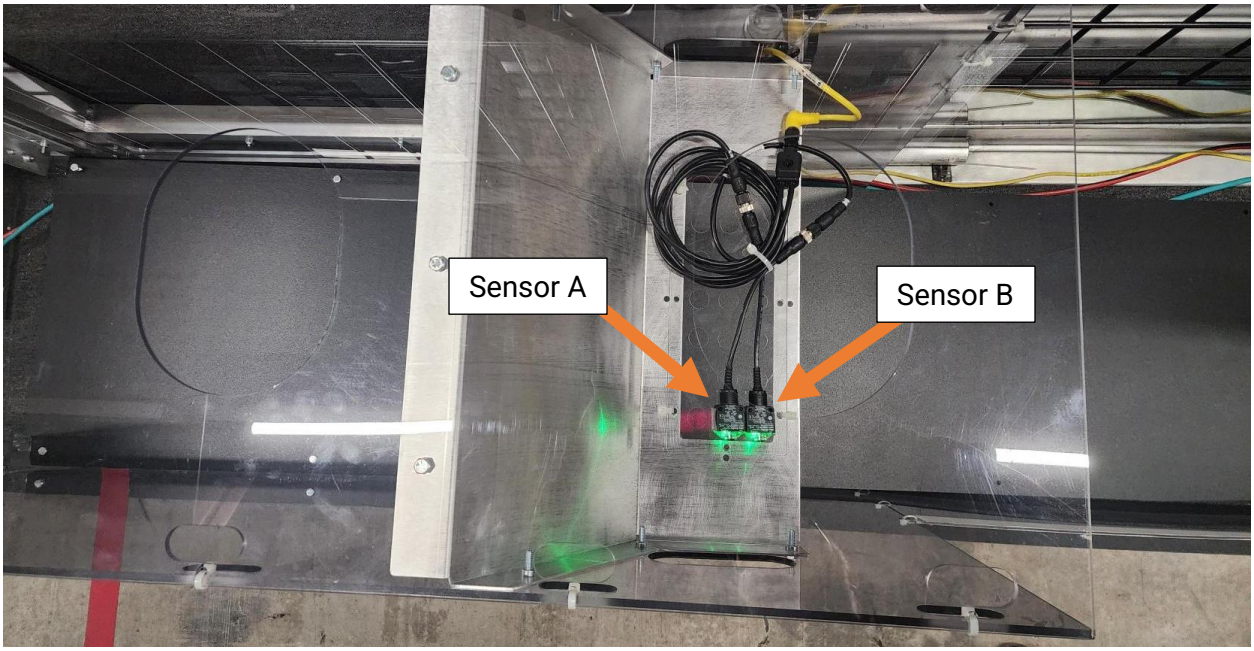
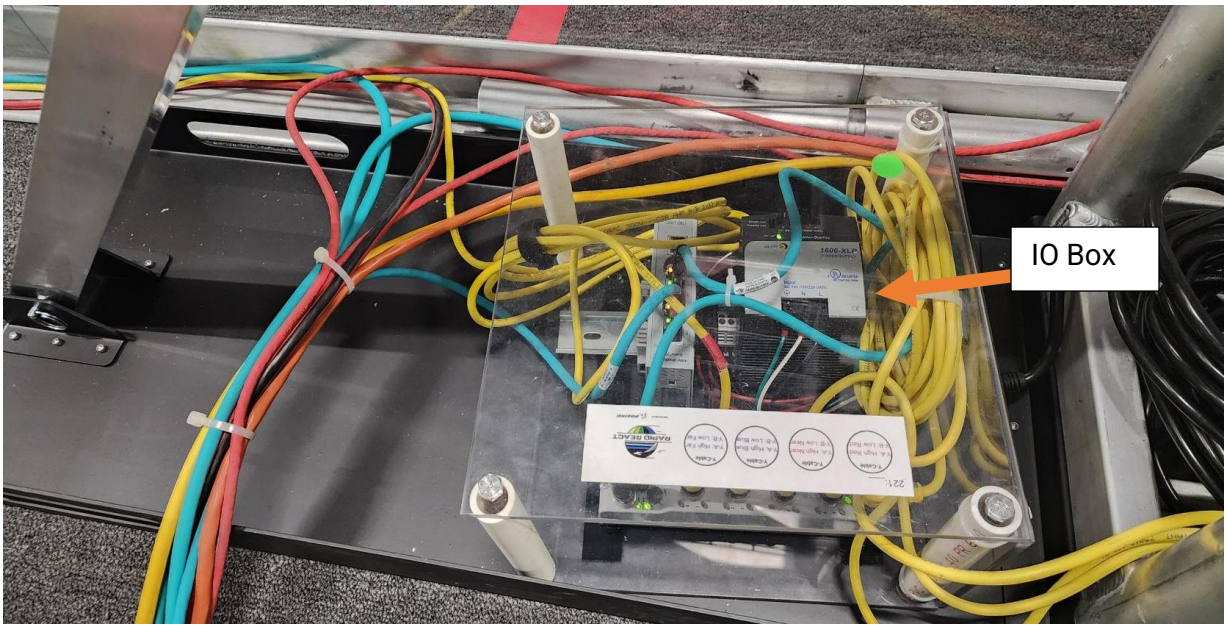
- The 30m ethernet cable gets plugged into the Smart IO and the closest SCC to that processor.
- Take the processor station sensor units and attach them to the processor such that the sensors are in the farthest positions from the processor opening. (Shown below)
- 

Figure 3-11 Sensor Assembly

- The sensors plug into the A-B Y-Cable with the sensor closest to the opening getting attached the lead marked as “A” and the other getting “B”
- The Y-cable then plugs into one of the 5m A-B cables routed similarly to the figure below. Then plugging into the 0/1 port of the Smart IO, labeled Processor Sensors
- The other 3 5m A-B cables plug into the remaining 3 Smart IO ports each labeled for the Inner, Middle, and Outer lights.

> The “Inner light” is closest to the middle of the field and “Outer light” is on the field border.


GFCI Adapter
Relay Box
8-Outlet
Power Strip
TRIPP-LITE


IO Box

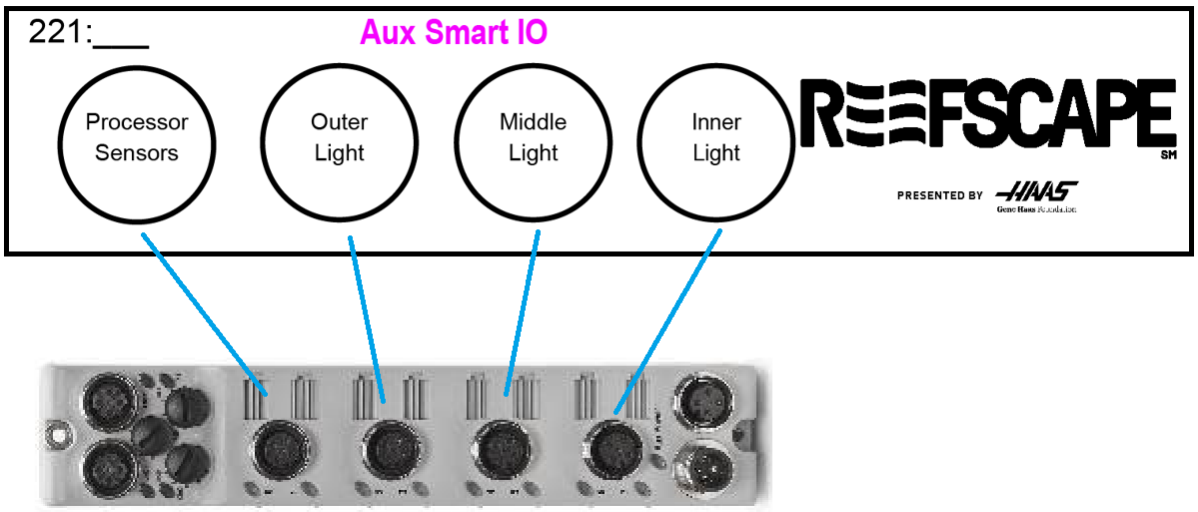
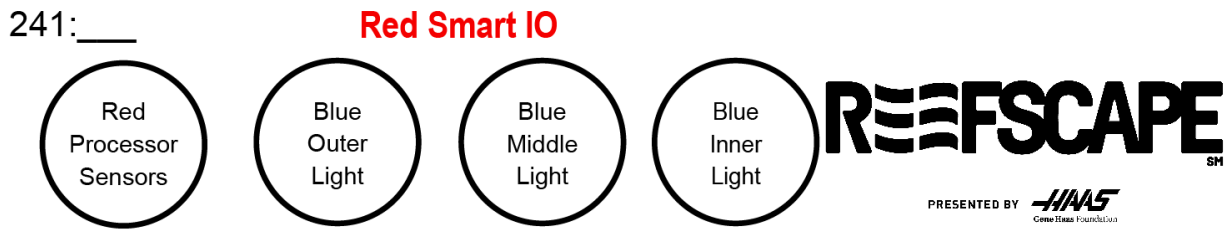

221:___
Aux Smart IO
Processor Sensors
Outer Light
Middle Light
Inner Light
REEFSCAPE SM
PRESENTED BY HAAS

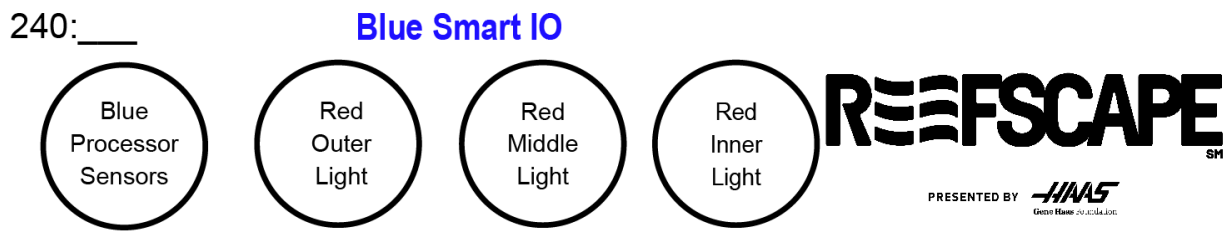
Figure 3-12 Truss Base Wiring (Blue Processor)

- The relay boxes plug into the extension leads coming from the Barge lights. See 3.8 for more details on installing Barge lighting.

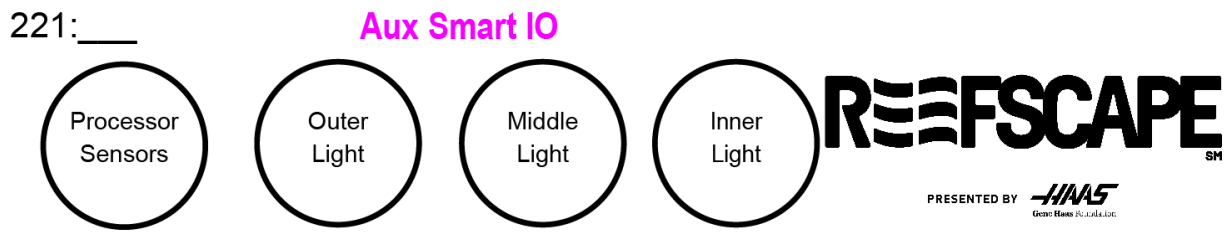
Red Smart IO



Blue Smart IO



Aux Smart IO



3.7.3.3 Wire Management

All wires should be kept as clean and neat as possible. In the Long Truss Base excess wires can be stored in the Truss as this is out of the way of people walking by. Behind the Alliance Station, excess wiring can be stored behind the SCC.

3.7.3.4 Processor Sensor Calibration and Adjustment

Both Sensors should be set at their absolute minimum. As shown below