

End Wall Installation Issue

The Issue

- Each end wall is connected to one CPA bridge beam and one APA bridge beam at the top
- The clevis which facilitates the connection on the CPA bridge beam, needs to accommodate 2 EWs:



- The single fin plate should attach inside the clevis with a sleeve (hollow pin) first
- Next the double fin plate should attach around the outside of the clevis with a pin that goes through all the plates, the clevis, and the sleeve
- ***The problem*** is that the installation sequence requires the downstream beam right (double fin plate) EW to be installed before the downstream beam left (single fin plate)

Possible Approaches (many proposed plans)

1. Modify the fins to accommodate attaching double before single

- E.g. cutting the single fin in half and installing half on the clevis first and attach to the end wall after; putting notches into the single fin to slip over the pin in the clevis
- Not preferred: Would cost too much time to redesign and get the appropriate approval; compromises mechanical integrity

2. Swap double and single fins on BR and BL end walls

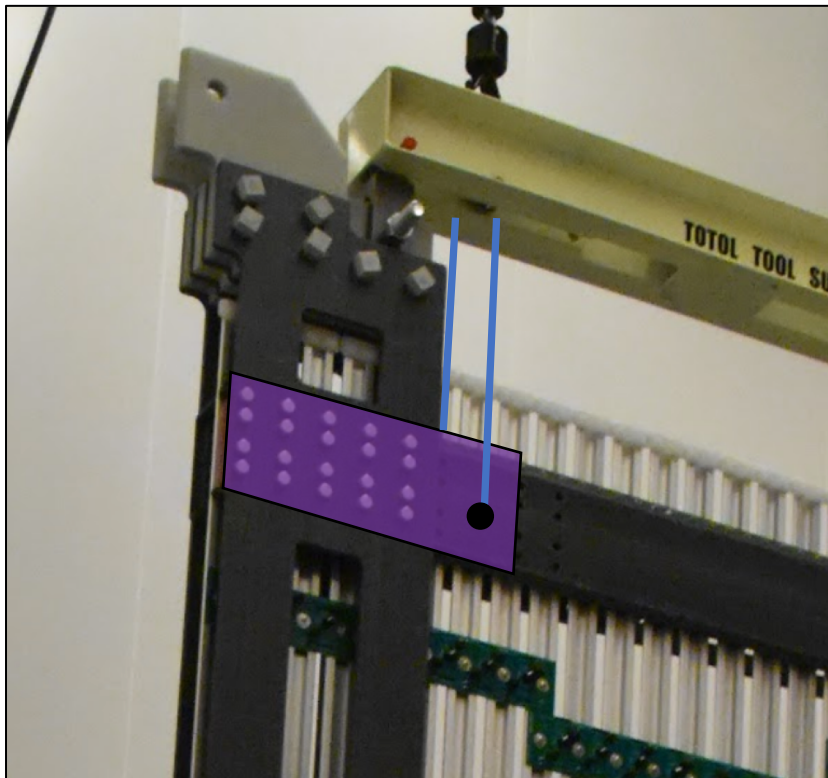
- Requires coming up with a new lifting point on the CPA-side of the end wall (the current is on one of the plate we want to replace)

3. Keep the yellow spreader beam on the DS-BR end wall until the very end to allow the DS-BL to go into the clevis first

- Requires obtaining another (custom made) spreader beam

Swapping fins on BR and BL DS end walls

- Proposed new lifting point to support CPA side of end wall:



- Insert lifting plates underneath the 20 SS bolts shown to the right and another on the opposite side where we have 8 bolt holes
- To 0th order this isn't adding any stress to the system
 - There is some additional stress on the bolts due to the torque from the plate
- Transfer the load with a turn buckle to free the plates for replacement

Attach BL DS end wall first

- If we can obtain another yellow lift beam, we can keep the BR DS load on its lift beam and wait to transfer to the CPA and APA bridge beams until after the BL DS is installed.
- Another lift beam exists at Ash River and will take ~ 2 weeks to get here.
- This allows us to proceed w/o impacting the schedule, and is the smallest deviation from the original installation procedure