

VIEW:

TOP

NOTES:

C-channel spans the main channel above water surface but below DAQ carriage. Mounts securely to walls of the channel.

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Steel

PART:

C-channel Tidal Turbine

K42HRFM-LEK-M2-00
Pacific Scientific stepper motor

30-tooth #25 chain
sprocket

Top plate is adjustable
up and down to allow
for tensioning of chain

Motor Mounting
Plate

Motor Mount
Attachment Plate

Motor Mount
Top Tube Ring

Weld Outer Ring
to outside of top
tube.

VIEW: SIDE, FRONT

NOTES: Motor Mounting setup for Tidal Turbine. The larger outer ring is designed to get welded to exterior of top tube. The horizontal plate then bolts to the outer ring, and allows for the motor mount plate to be bolted to the side of that.

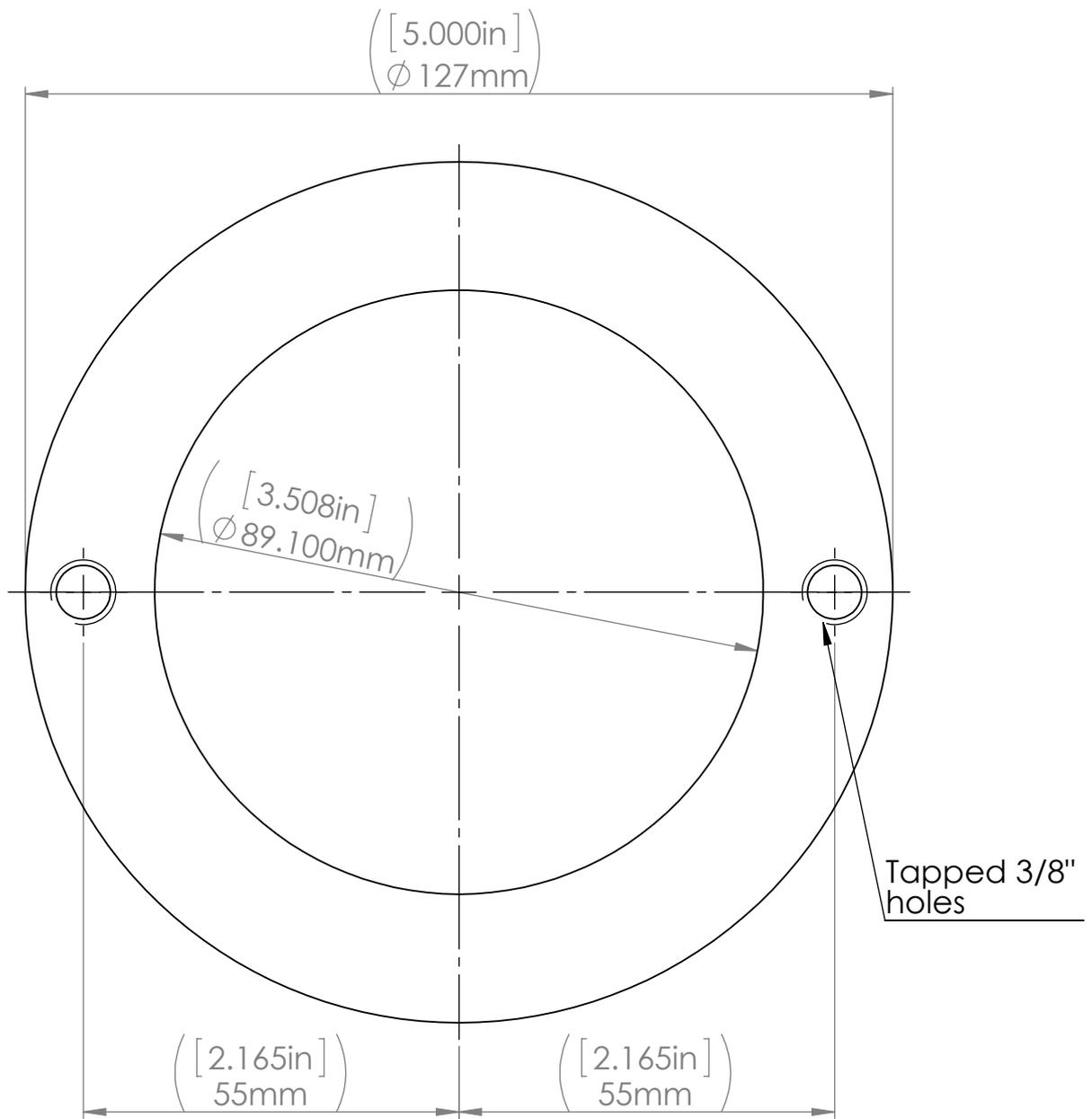
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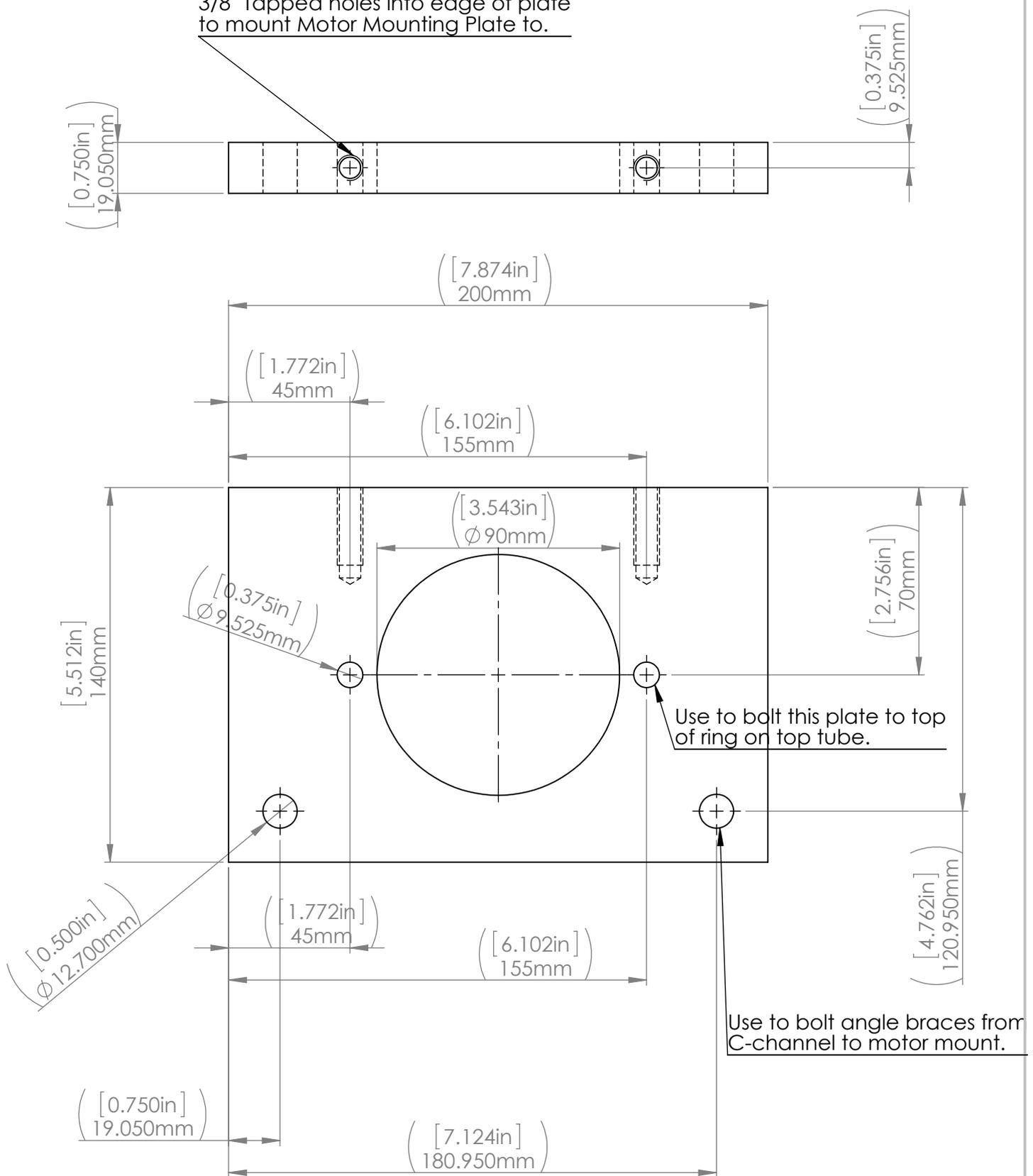
MATERIAL: Aluminum

PART: Tidal Turbine Motor Mount



VIEW: TOP, SIDE		NOTES: This ring slides onto the exterior of the tidal turbine top tube. Plan is to weld it to the top tube, unless there is a better method to attach. Allows for a mounting surface for the motor mount brackets.
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  		PART: Motor Mounting Ring Material: Aluminum
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3/8" Tapped holes into edge of plate to mount Motor Mounting Plate to.



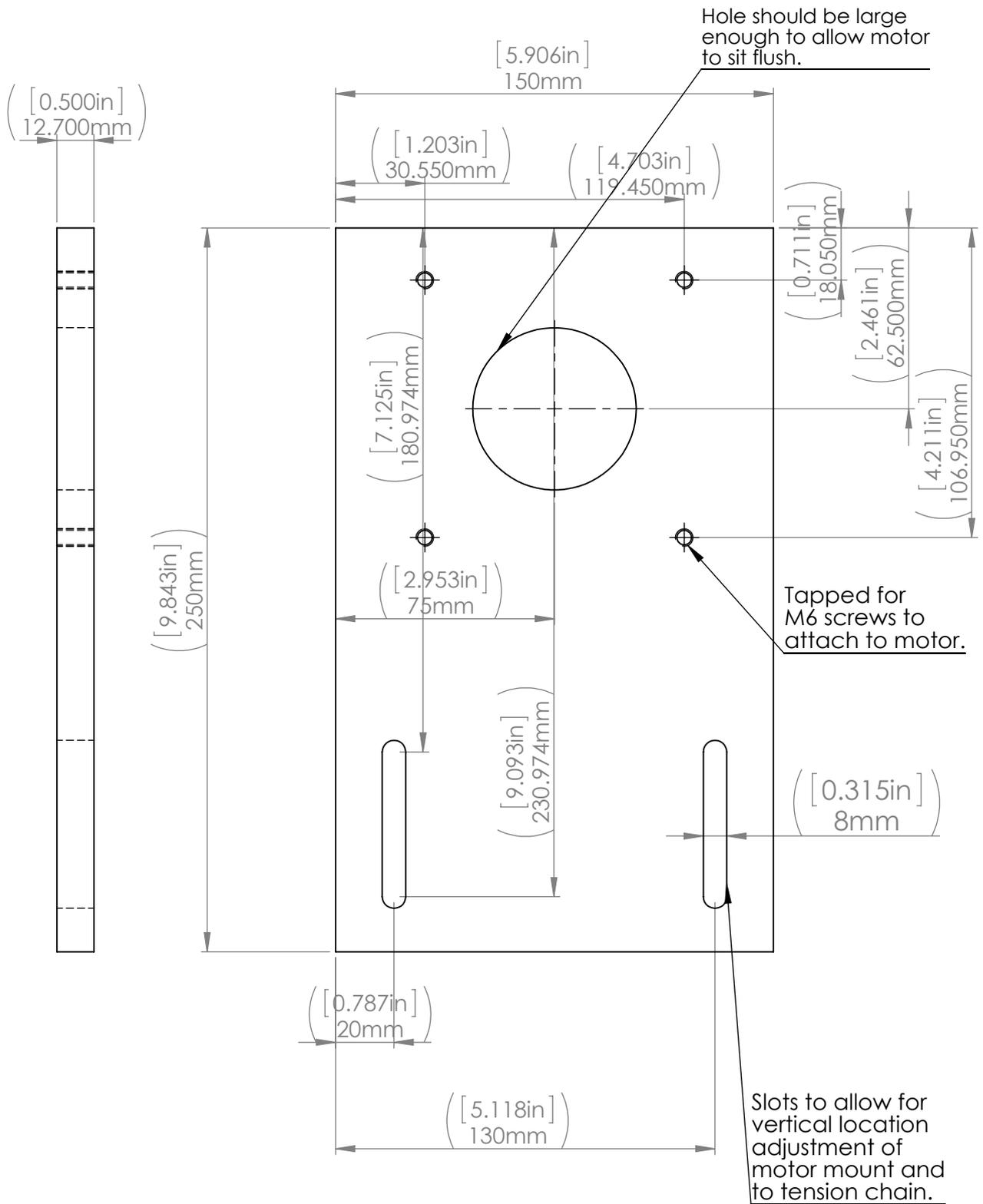
VIEW: TOP, SIDE

NOTES: This top plate bolts to the top of the external ring on the top tube. The motor mounting plate then bolts into the edge of this plate and allows for vertical adjustment.

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 Aluminum

PART: Motor mount top plate



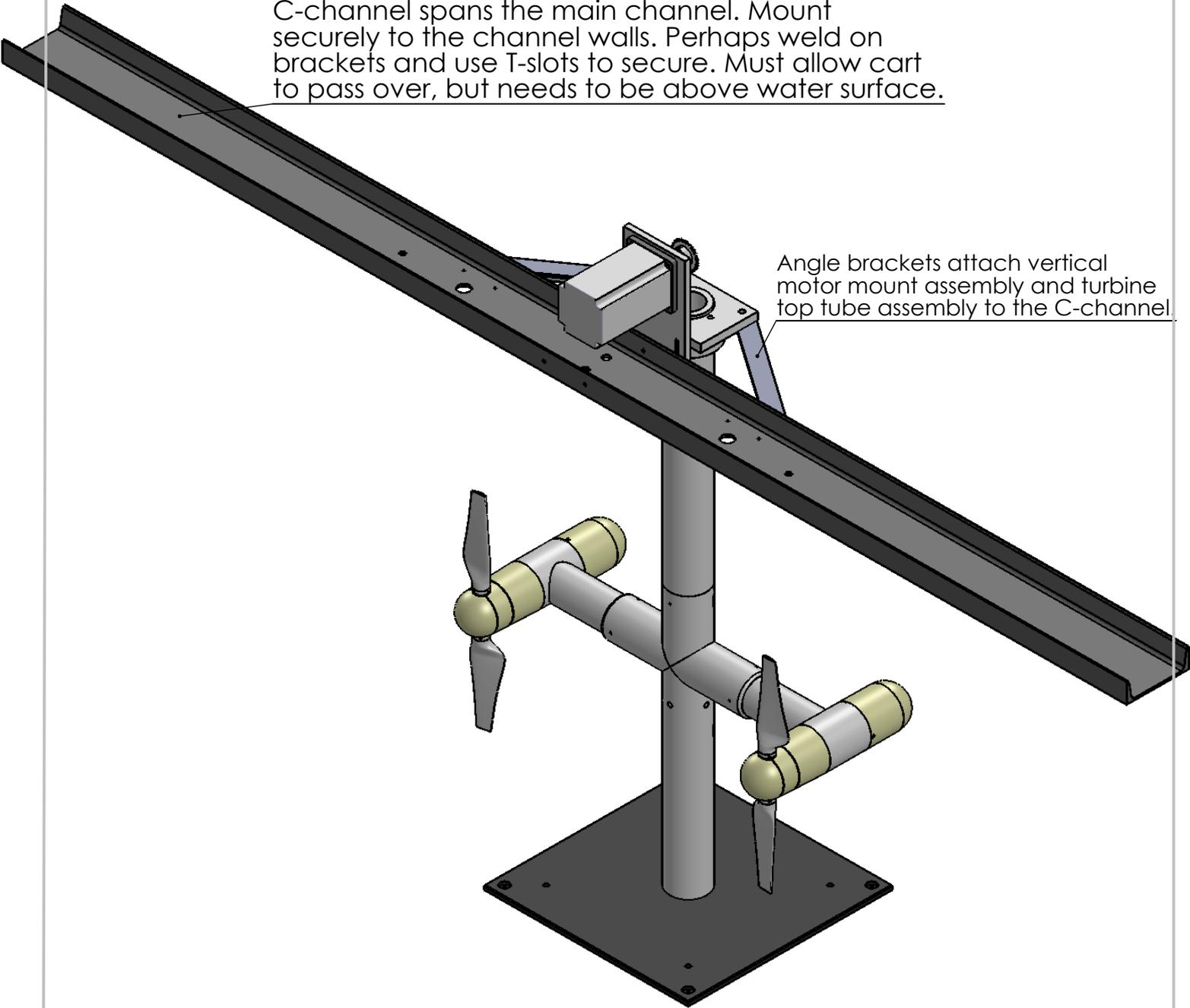
VIEW: SIDE, FRONT NOTES: Mounting Plate for the K42HRFM-LEK-M2-00 Pacific Scientific stepper motor.

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UNIVERSITY OF MINNESOTA (UMN) - ST. ANTHONY FALLS LABORATORY (SAFL) PART: Motor Mounting Plate Aluminum

C-channel spans the main channel. Mount securely to the channel walls. Perhaps weld on brackets and use T-slots to secure. Must allow cart to pass over, but needs to be above water surface.

Angle brackets attach vertical motor mount assembly and turbine top tube assembly to the C-channel



VIEW: Setup View

NOTES: Shows C-channel that spans the main channel. This and the motor will need to sit low enough to let the DAQ cart pass overhead, but needs to be out of the water. Needs to mount securely to channel walls, use T-slots and brackets.

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PART: Tidal Turbine