



The design in figure 3 featured a thin design for low weight and high propulsion. The design holds the pulley in the middle of the AEV to maintain a level balance between either side of the vehicle. The arduino would be placed on top of the AEV to protect the vehicle from impact in the case that the vehicle were to dislodge itself from the track. The wire management and sensors would also be centered around the middle of the vehicle, allowing it to have a much more efficient management of the circuitry. However, the vehicle would only have one motor to propel itself forward or backward along the track. To resolve this lack of propulsion, the design allowed the body of the AEV to be much smaller and condensed to account for the use of a single motor. Having only one 3x6 addition to the body in the front to allow the motor to be placed in the front of the vehicle. The blade would also feature a twin-blade contour, which would allow for a strong propulsion along the track. However, depending on the load weight that would be required for the AEV the propeller could be exchanged for a tri-blade to account for this. This allows the AEV to be flexible in a variety of different scenarios to adapt to the requirements given within the experiment.