



Promoting Electric Propulsion

Team Members: *Ethan McNally, Stuart Davis, Robby McCool, Joe Abdelsayed, Karrington Payan Johnson, Michael Sheppard*
Faculty Advisor: *Dr. Pidaparti*

Project Objective

- Construct a fully electric vessel that is steered by one person
- Compete in the PEP race in Occoquan, Virginia at Pohick Bay against other teams



Final Design

- 14 ft aluminum jon-boat
- Powered by a 10 kW Motoenergy motor
- Uses four 12V lead batteries
- Tiller-style steering



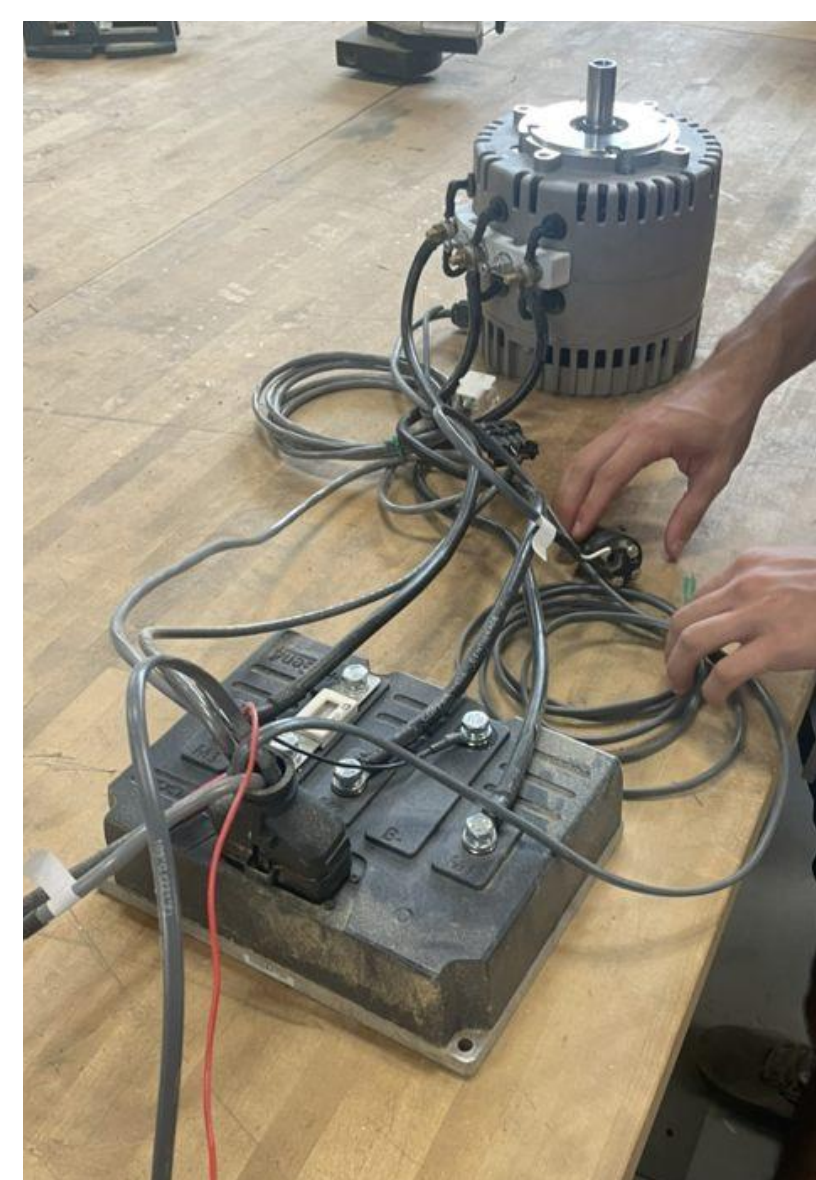
Engineering Standards



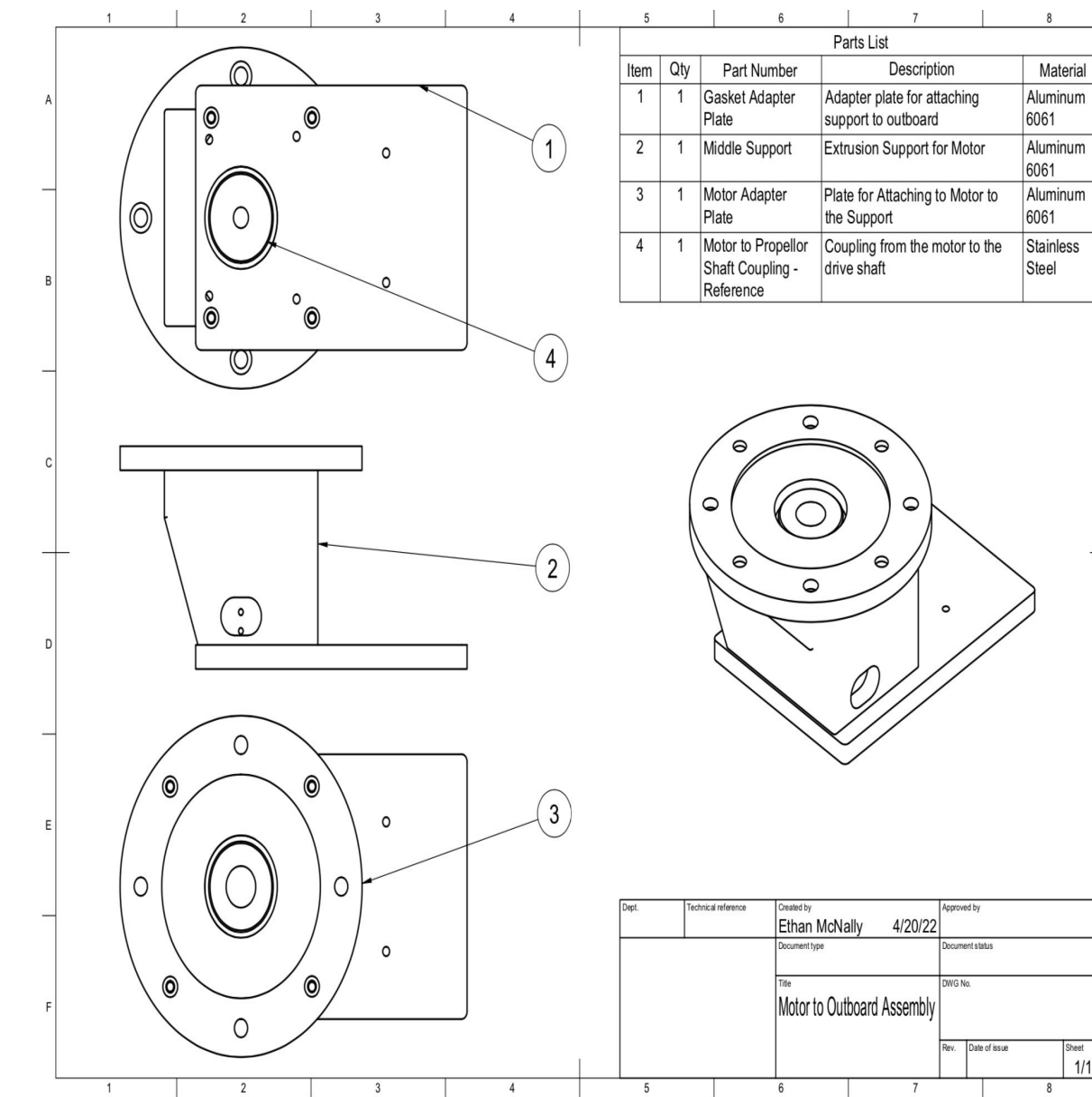
- Adhere to all ASNE safety and engineering regulations
- All electronics firmly secured in the case of a tip over

Functional Requirements

- Meet range requirement of 5+ miles
- Successfully complete the 5 laps in the race
- Attain a competitive speed of 10+ knots



Design Specifications



- Replaced combustion engine on Mercury outboard with electric motor
- Connected transmission to tiller steering using self-fabricated coupling
- Mounted batteries and electronics

Testing and Analysis

- All testing done in Lake Herrick
- Boat floats, can be easily driven, and is safe for one person
- Ensured that engineering standards and safety requirements are met

