Lockheed Martin Deployable Trainer

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LOCKHEED MARTIN

Main Parameters

Metric:	Measure:	Target:
Case and Mechanism	Weight	≤ 88 lbs.
Mounted Simulator	Weight	60 lbs.
Support User	Weight	214 lbs.
Maximum Frame Deflection from Joystick	Length	0.12"
Assemble/ Disassemble	Time	≤ 10 mins.

Problem Statement

- Lockheed Martin has the need for a weaponized ground vehicle trainer that can emulate a variety of vehicles and deploy conveniently in the field.

  There are 5 modules currently on the market

Objective

- The objective of this project is to create a mechanism that supports an adjustable weaponized ground vehicle training simulator that will be set up by two individuals.

Key Requirements

- Eliminate the need to source a chair/table
- Require two people or less to carry
- Assemble/Disassemble in a timely manner
- Adjustable dimensions between seat and mounted simulator
- Meet the required weight specification
- Require a maximum of three cases for storage
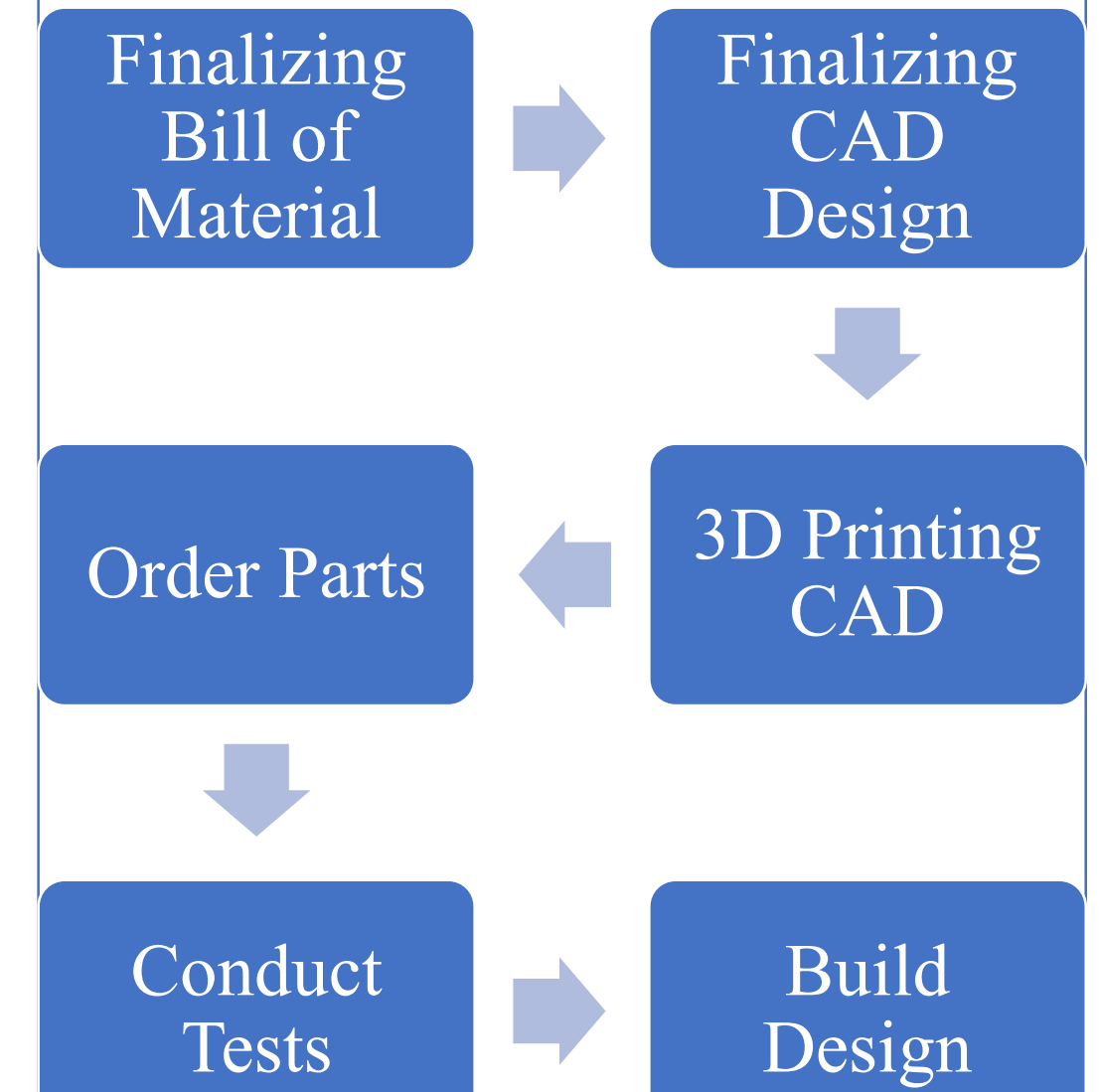
Features
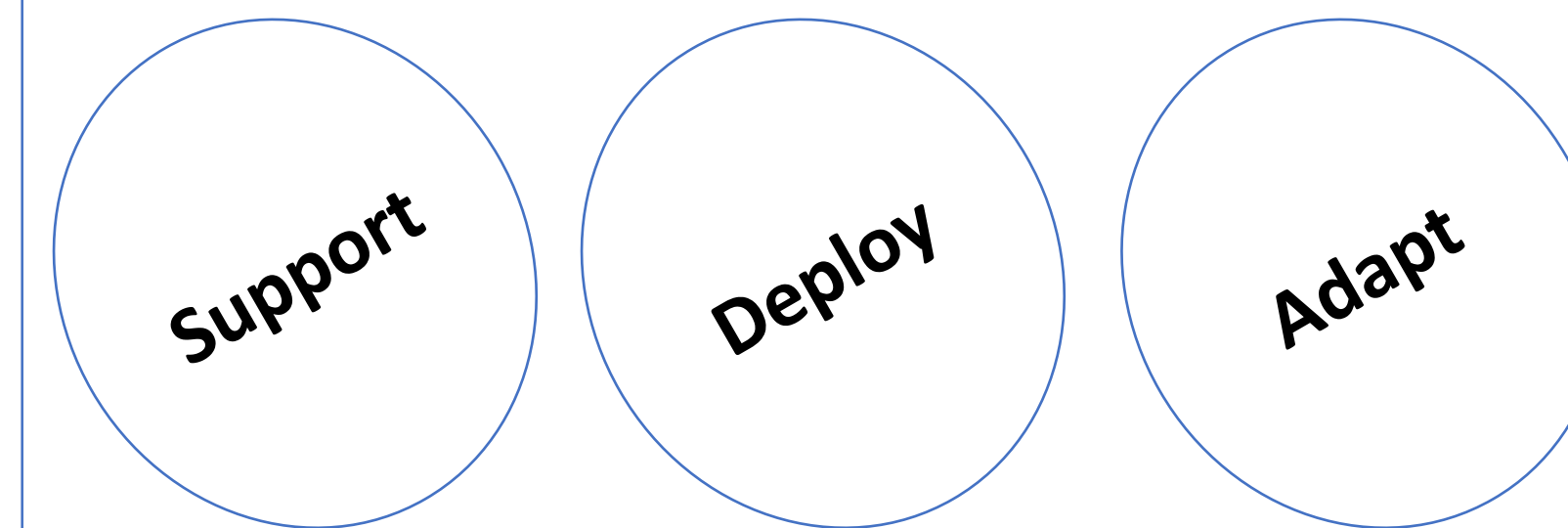
Support — Hold individual and simulator weight

Deploy — Fit into 3 cases and assemble/disassemble in a timely manner

Adapt — Adjust to various distances and weight. Emulate different vehicles
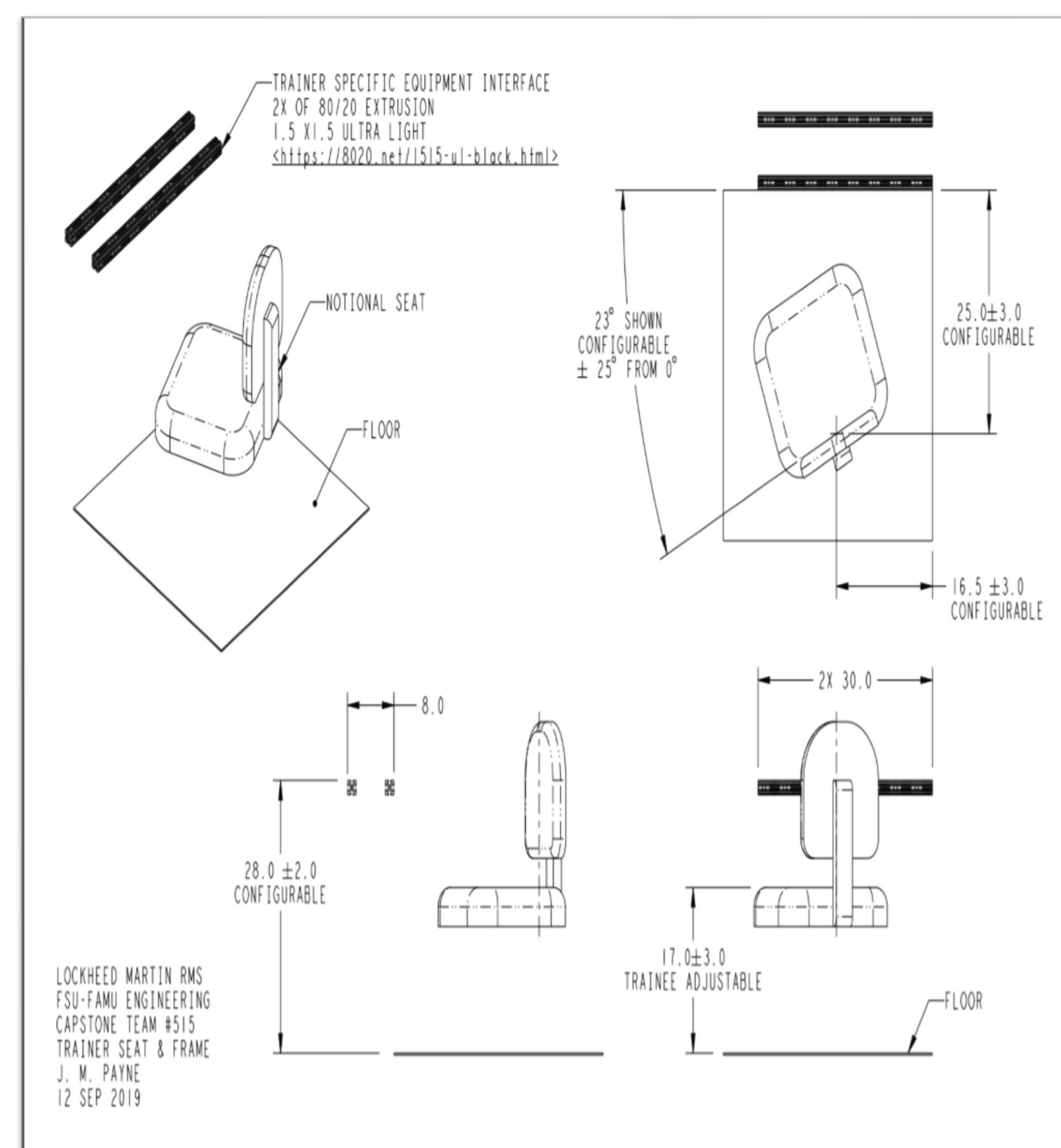
Future Work

Finalizing Bill of Material → Finalizing CAD Design → 3D Printing CAD → Order Parts → Conduct Tests → Build Design

Our Design

1 Seat
2 Adjustable Base
3 Mount
4 Adjustable Frame