

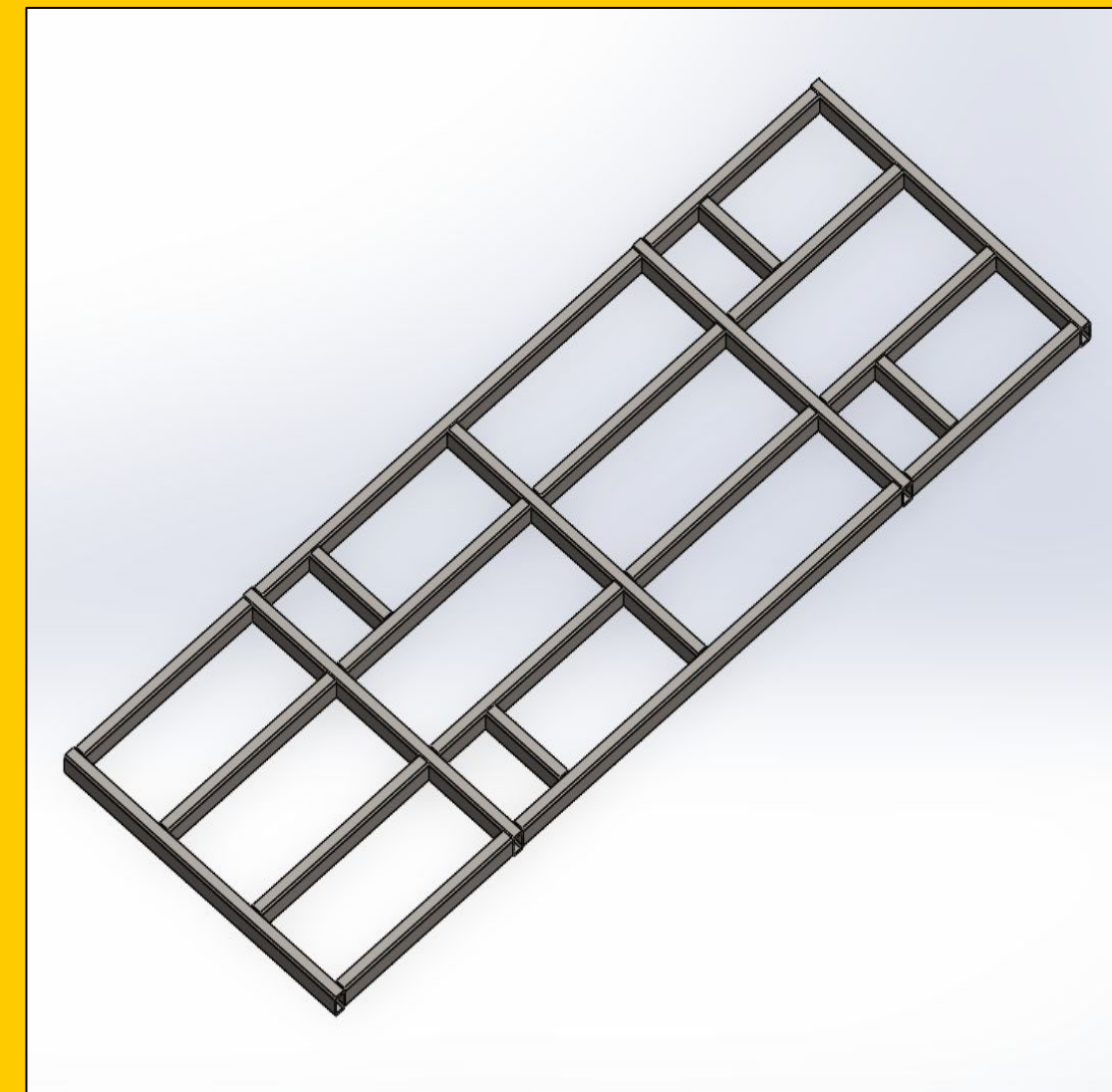
PROJECT OVERVIEW

This project focuses on **designing, fabricating, and validating** four steel-frame bases that support turbomachinery packages weighing **between 80,000 and 140,000 pounds**. (T130 Generator Set and T250 Compressor Set)

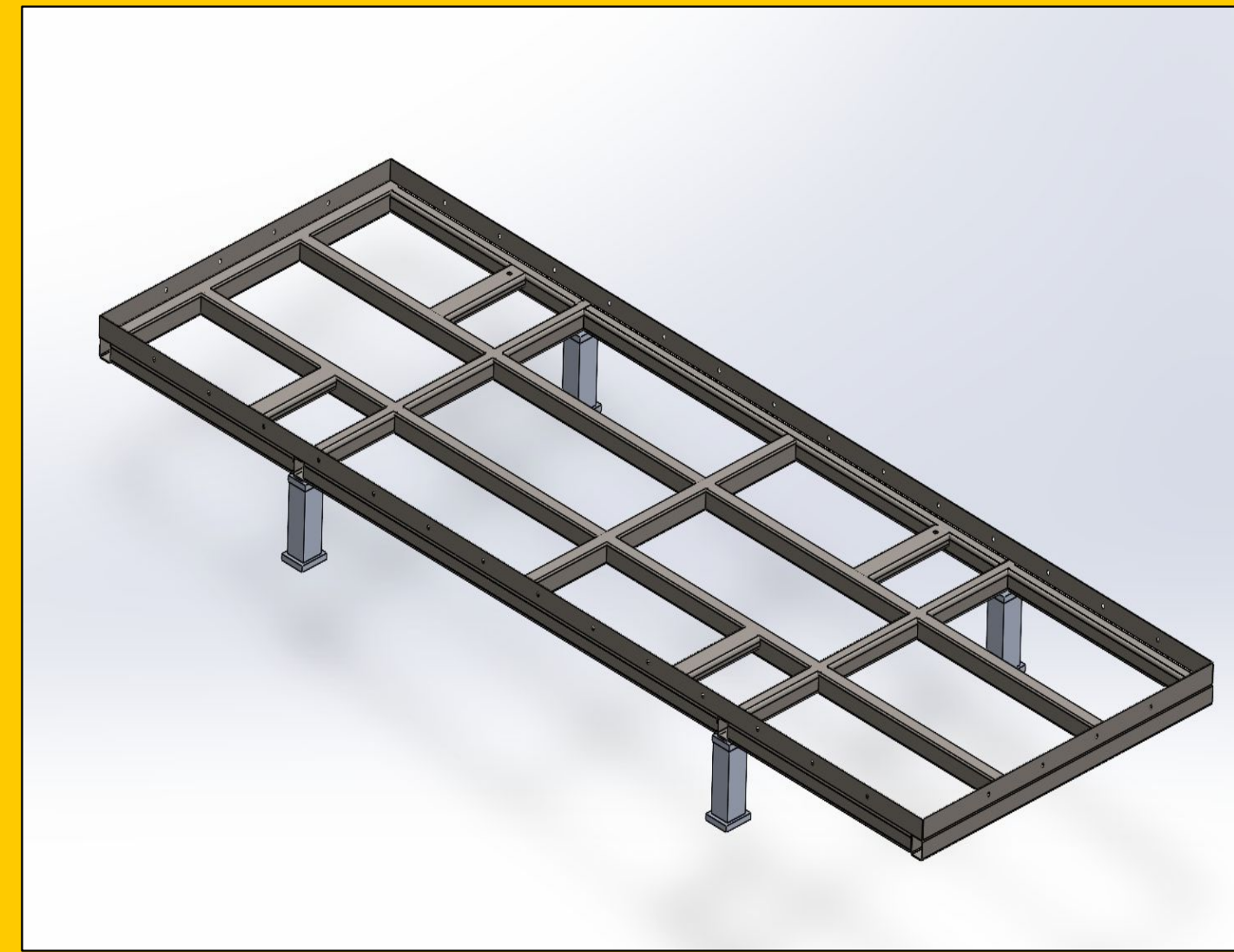
Each package is split into **Driver** and **Driven** sections, requiring **four unique base designs** due to size and weight differences.

- Designed for **transport and long-term storage**
- Built to withstand **handling procedures, truck vibrations, and oceanic cargo conditions**
- Allows for **secure mounting** to the packages using aligned fastener holes
- Includes features for **wooden panel attachments and shipping stand columns**

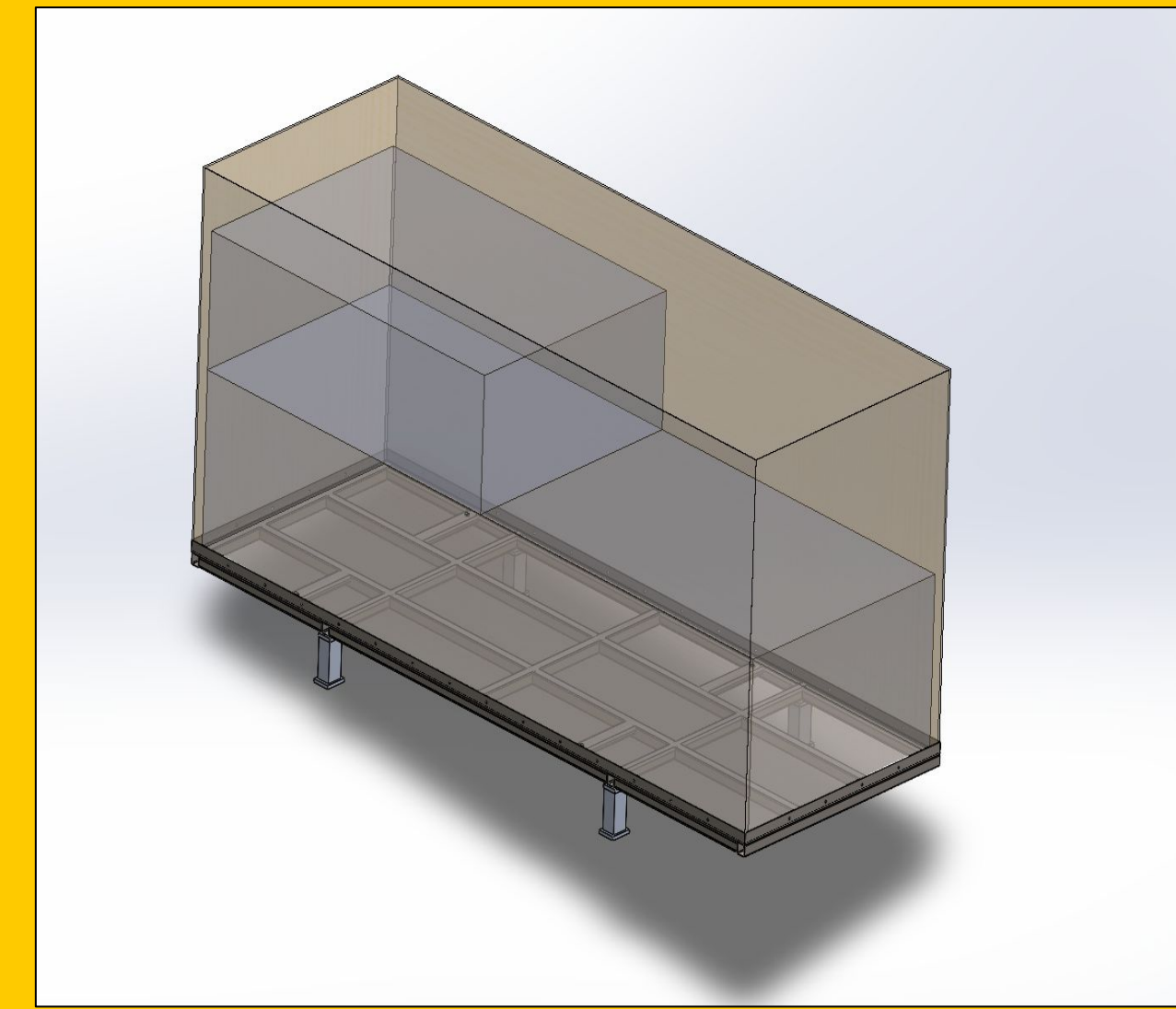
3D CAD MODELS



Physical Prototype

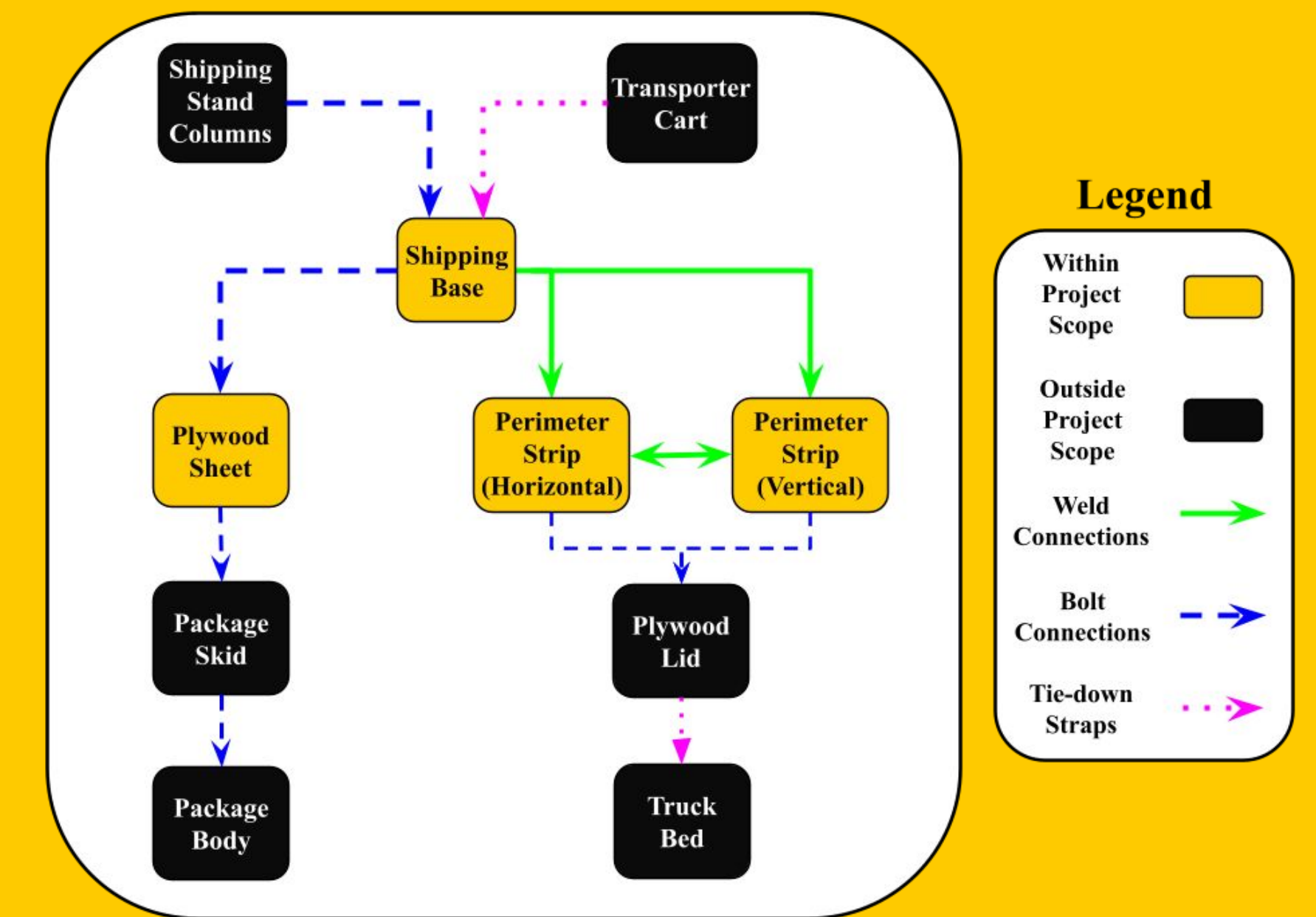


T130 Driver Base Assembly

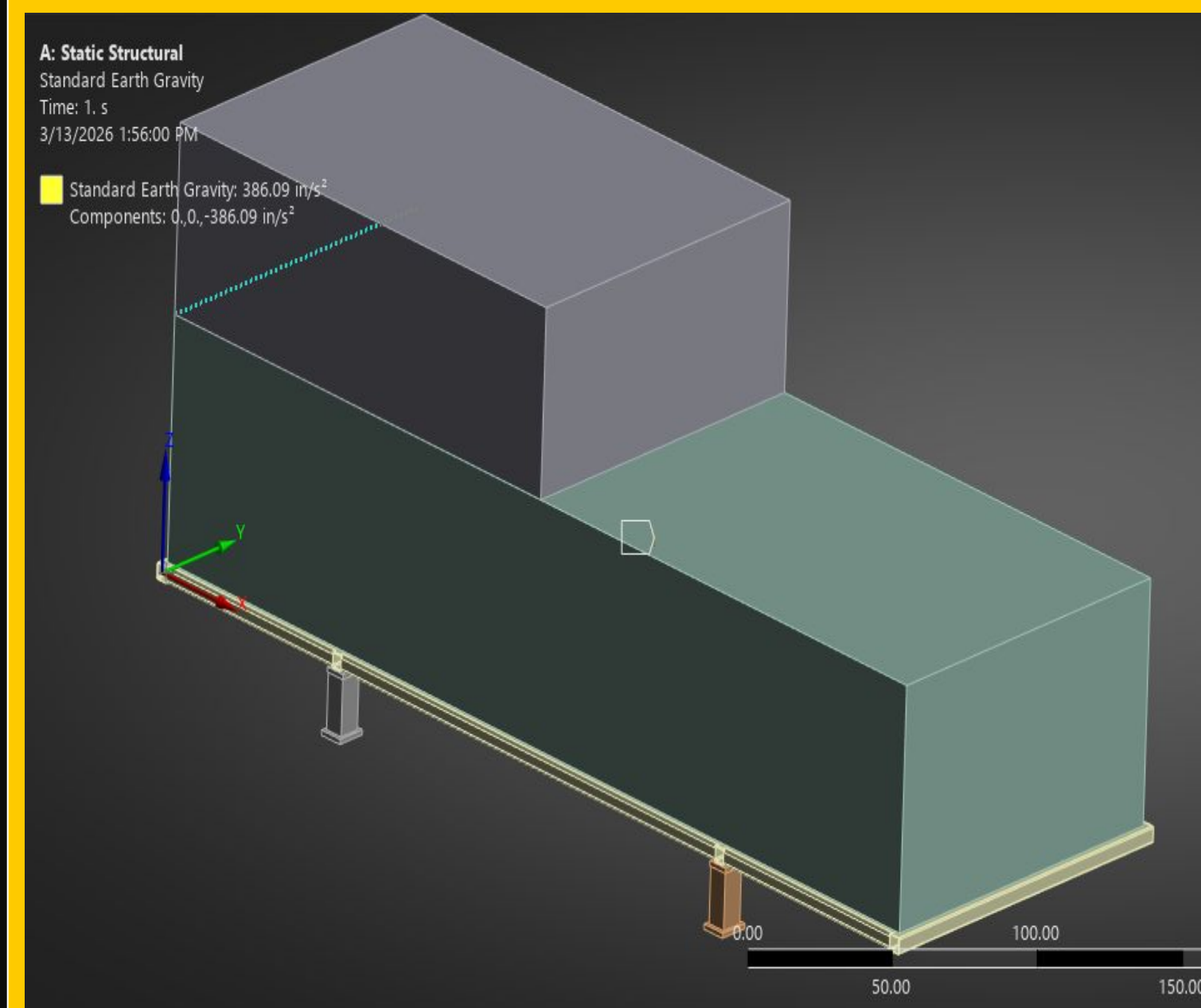


Crated Package

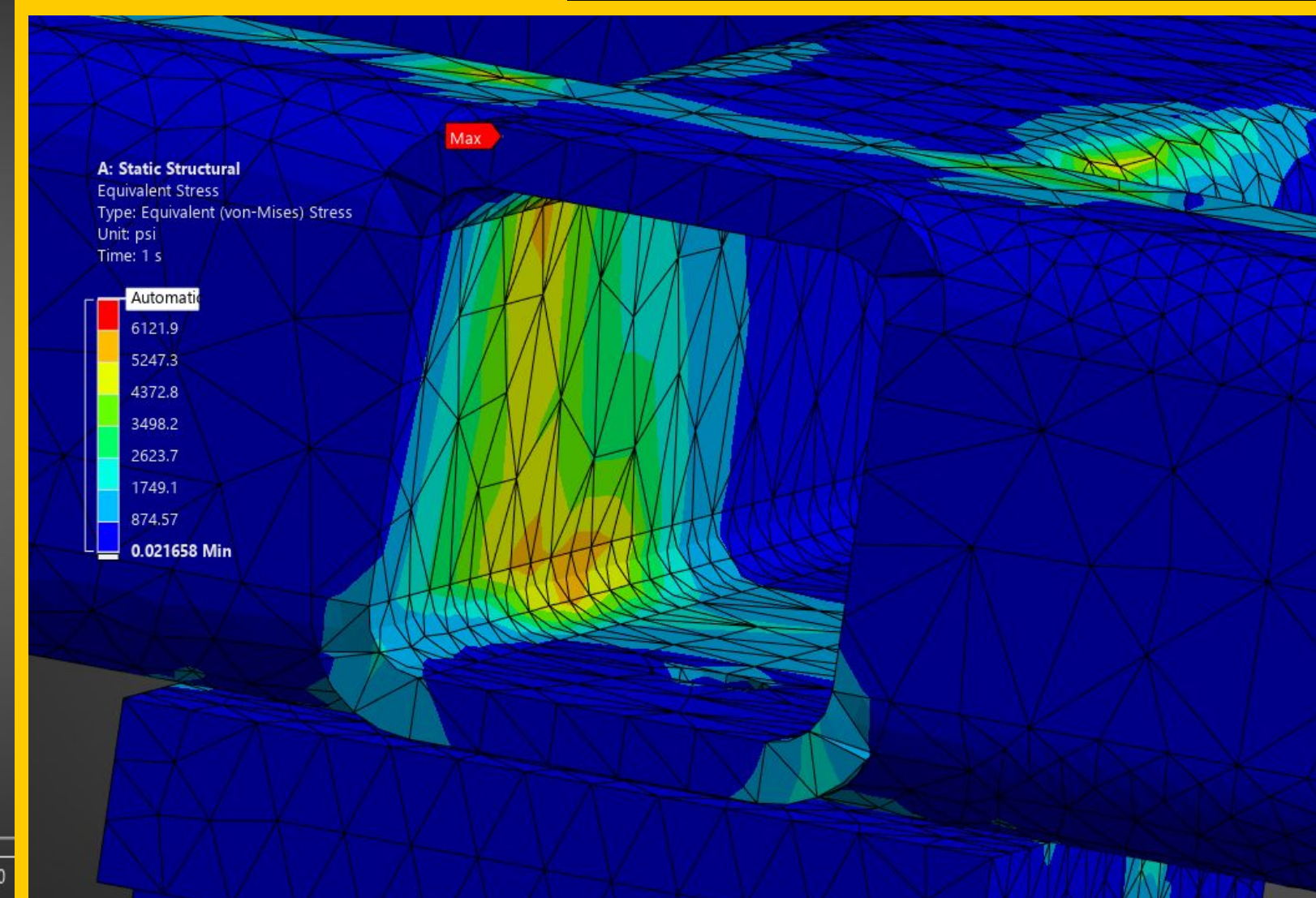
SYSTEM LEVEL DIAGRAM



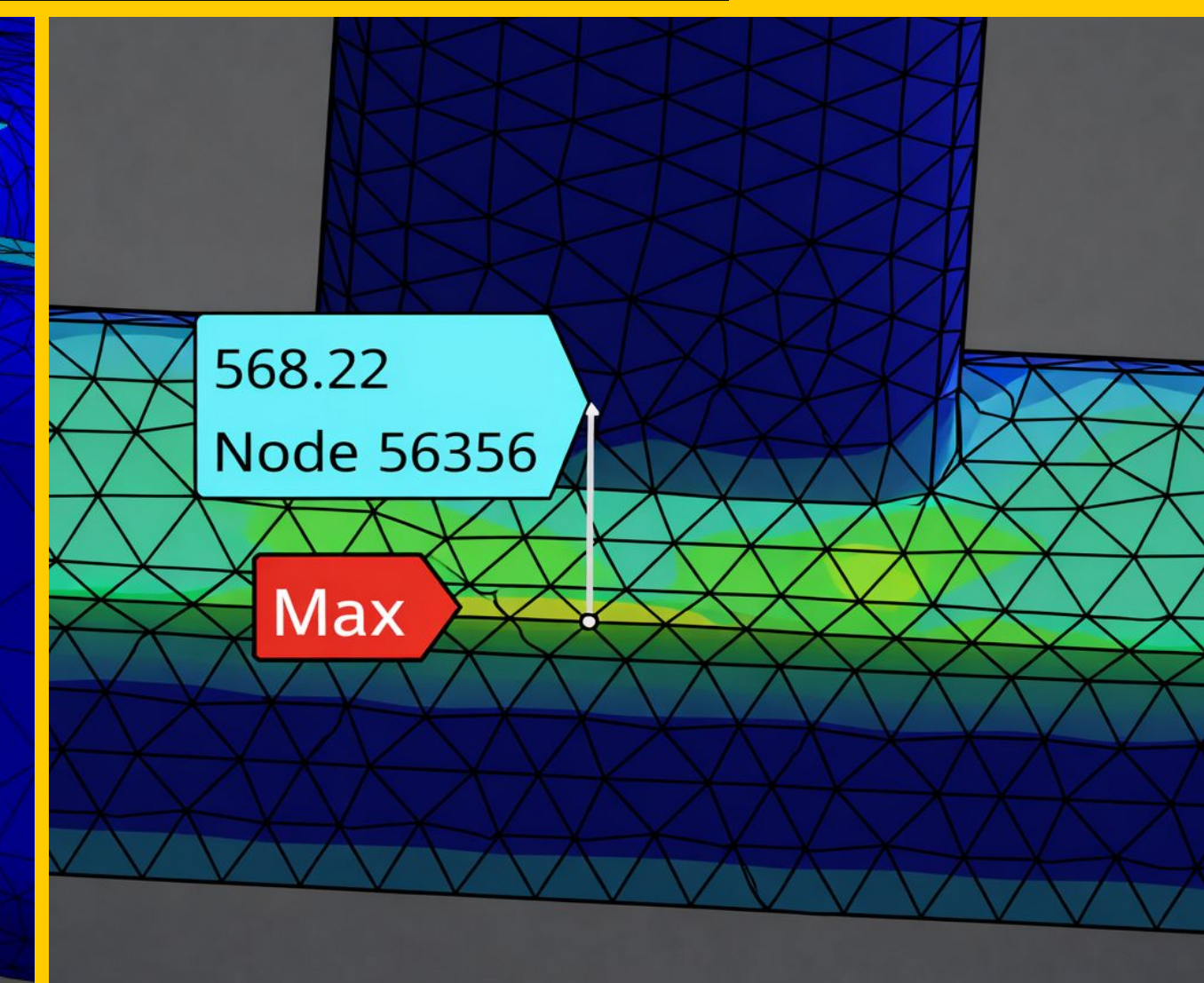
STRUCTURAL ANALYSIS



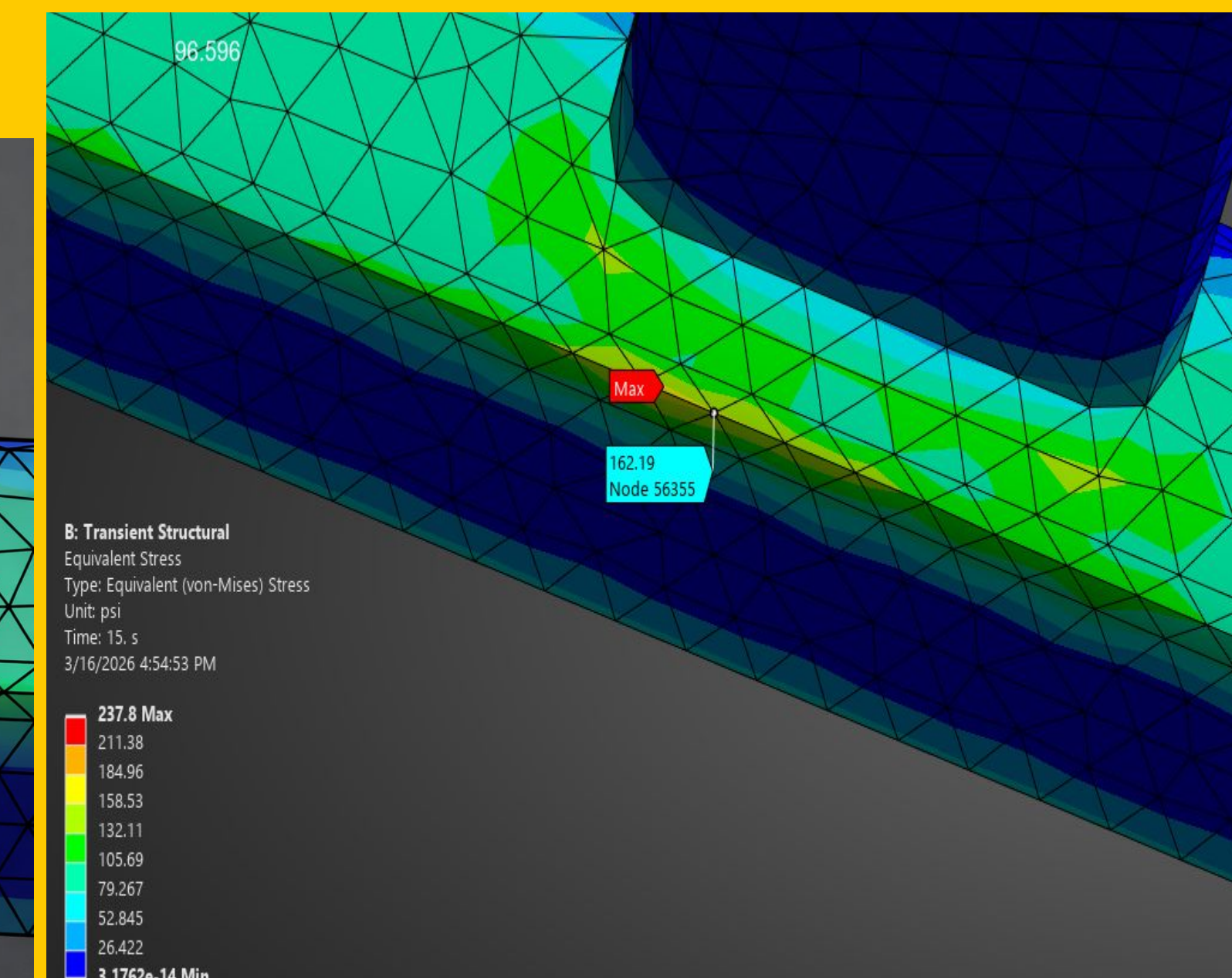
T130 Driver Static Structural



Static Stress Analysis



4g Shock Impact



Dynamic Sea States

MEET THE TEAM



Jose Elizalde
Team Lead



Ahmet Mutafoglu
Manufacturing Engineer



Justin Stillwagon
R&D Engineer



Matthew Brinkmeier
Quality Engineer



Ryan Pors
Design Engineer

SMALL-SCALE PROTOTYPE FABRICATION



SMALL-SCALE PROTOTYPE TESTING & INSPECTION



ACKNOWLEDGEMENTS

Team Heavy Metal would like to thank the following people for their continued support and guidance.

Solar Turbines: **Aileen Fahme, Antonio Jimenez, Jim Hickle, & Bruce Gould**

SDSU: **Dr. Scott Shaffar**