



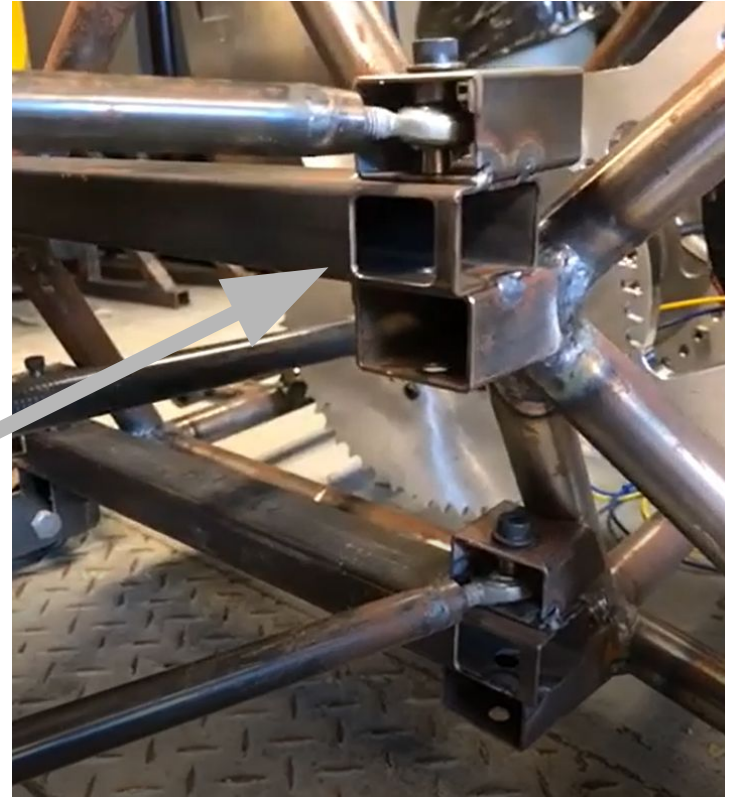
# Frame Design Review

Jack, Sam, Bert, Chris



# Identified Concerns

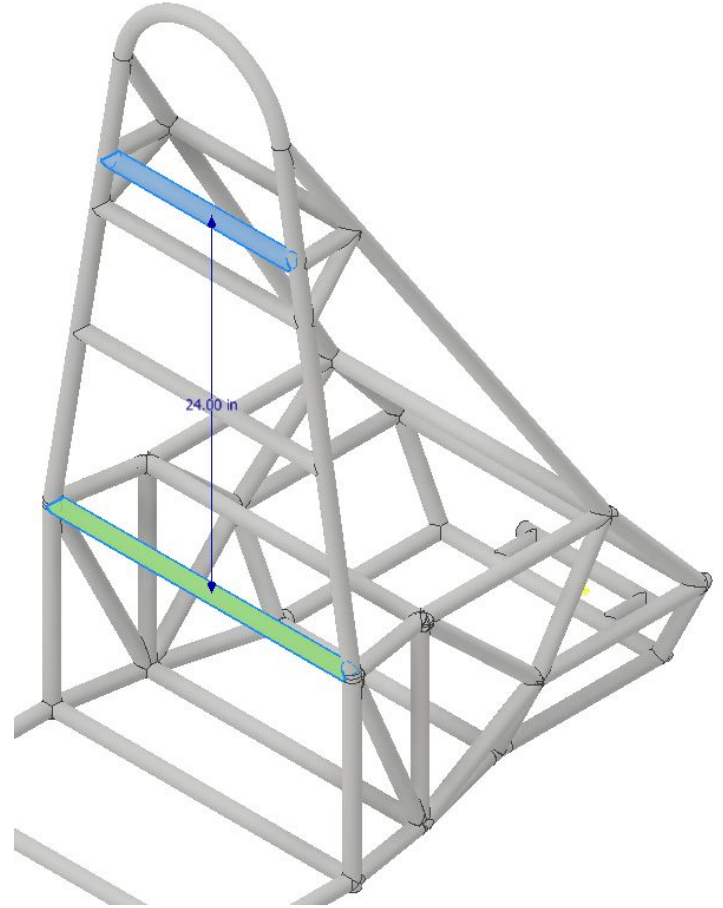
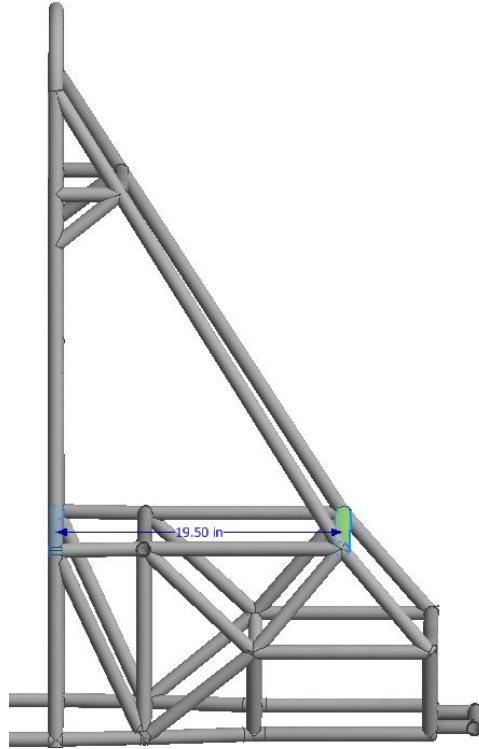
- Rear suspension pick-up point height
- Physical space / mounting options for:
  - Carman
  - Motor Controller
  - GLV Battery
  - Radiator and Fan
  - Water pump
  - Bell Cranks / Shocks
  - Wires and hoses
- Half-shaft vertical travel



# Money Conscious

- Two frames are not exclusive
  - Extremes
    - Best of both worlds
- First tries to save pieces where we can, as well as using in-shop welding
- Second is a full redesign and outsource the manufacturing

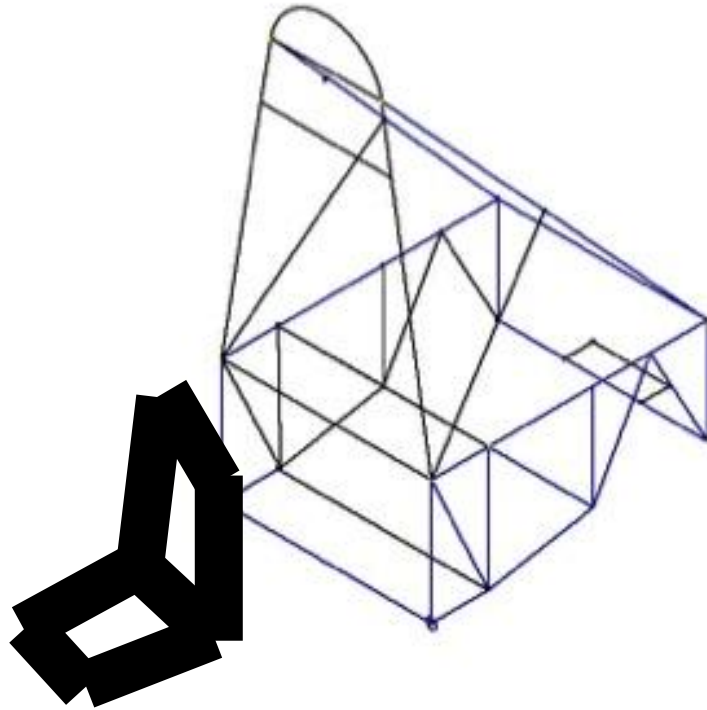
# Old Chassis



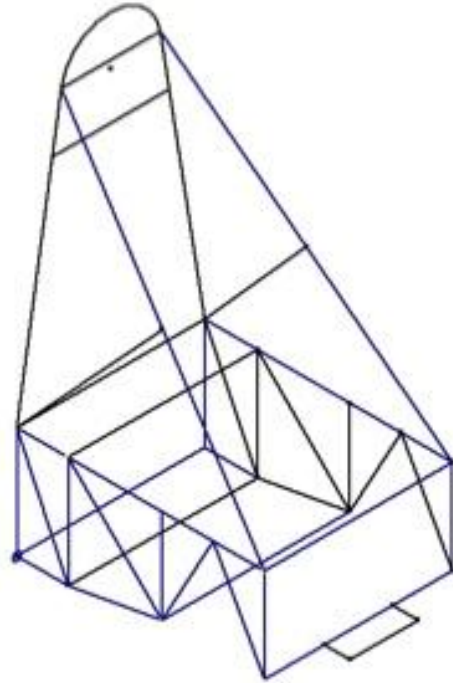
# Budget Friendly

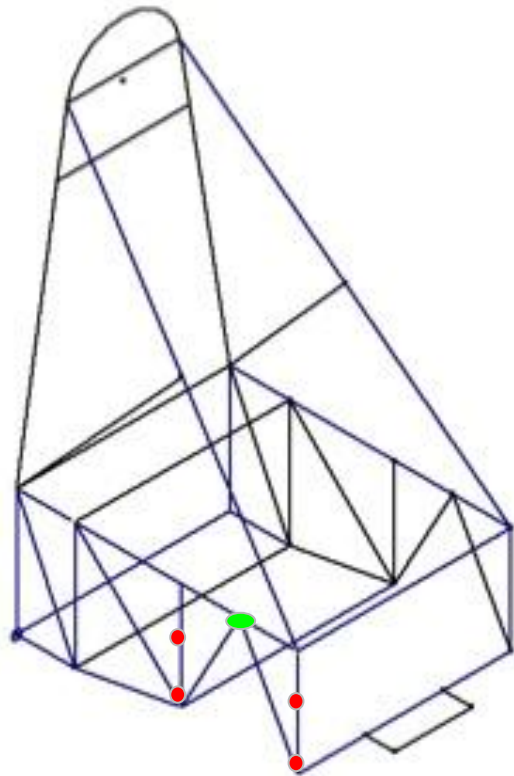
- Push the rear end up 2 inches to avoid shimmying up the suspension with a piece of metal.
- Changed bars so that there is less unused metal, and more space for moving parts (Suspension and drivetrain mostly)
- Extend the rear of the car 3.5 inches for more mounting space.
- Potential change to the rear (have the bar in the end be two bars instead of one across to free up space for free movement of the axle).

# ISOMETRIC SIDE VIEW



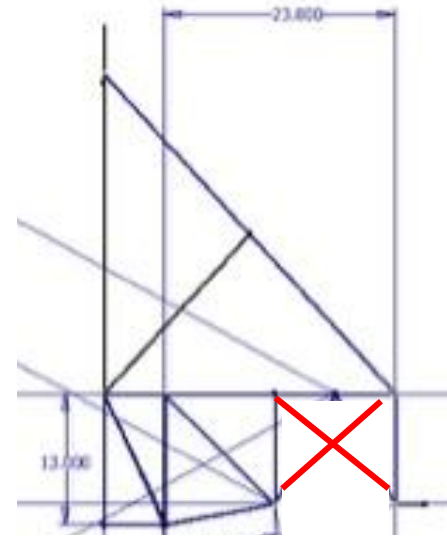
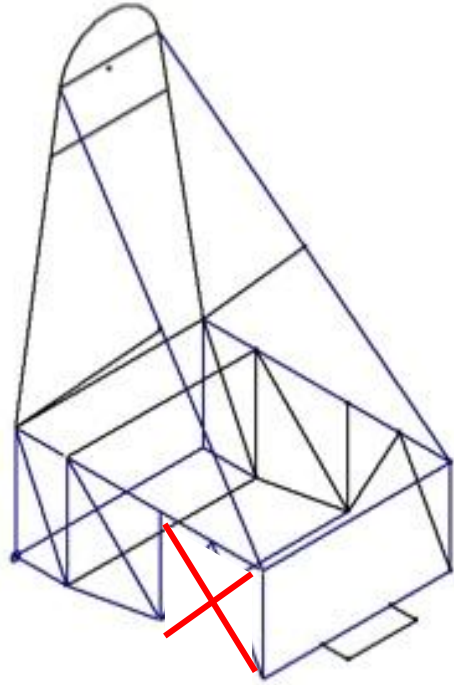
# ISOMETRIC REAR VIEW



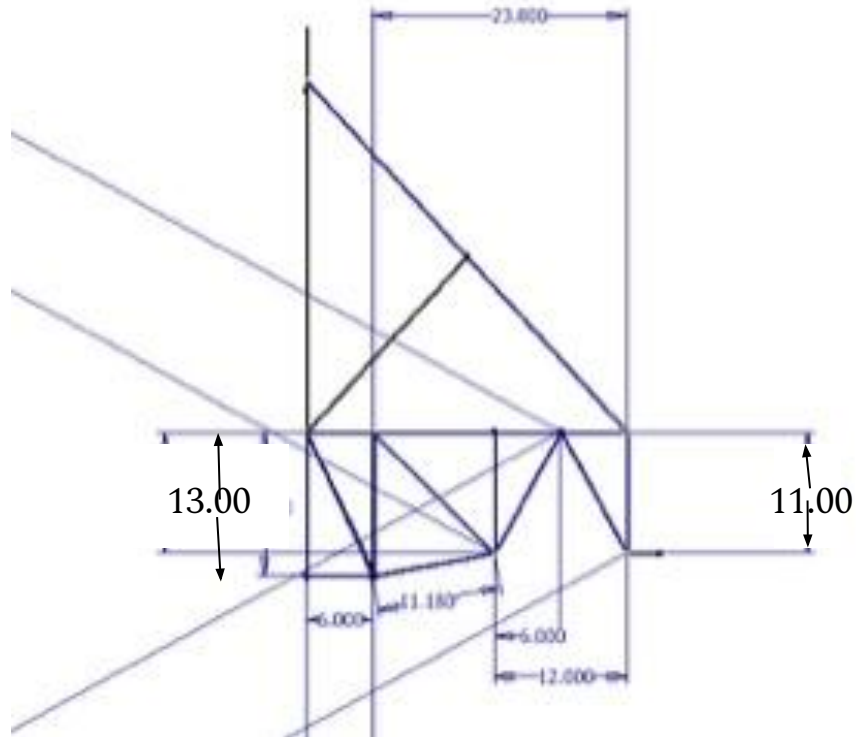




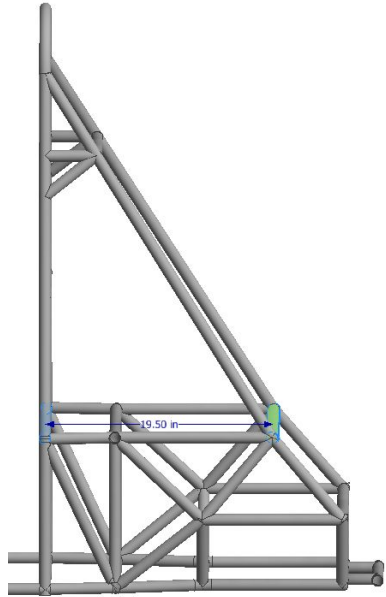
# Improvement



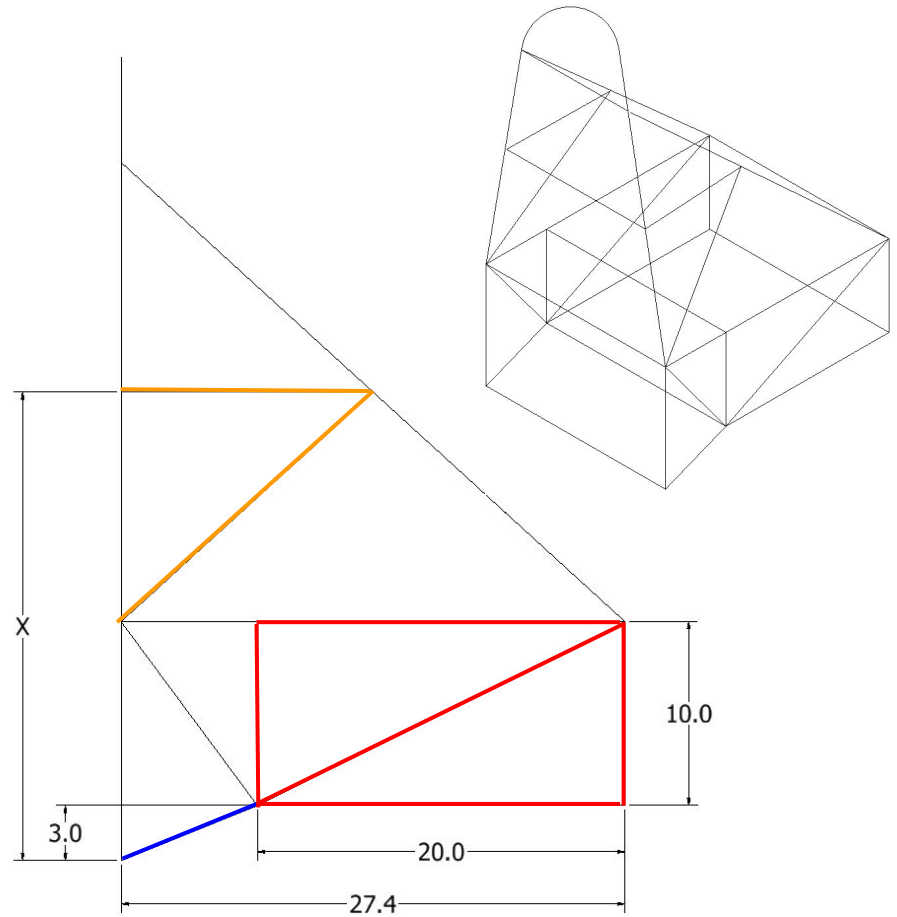
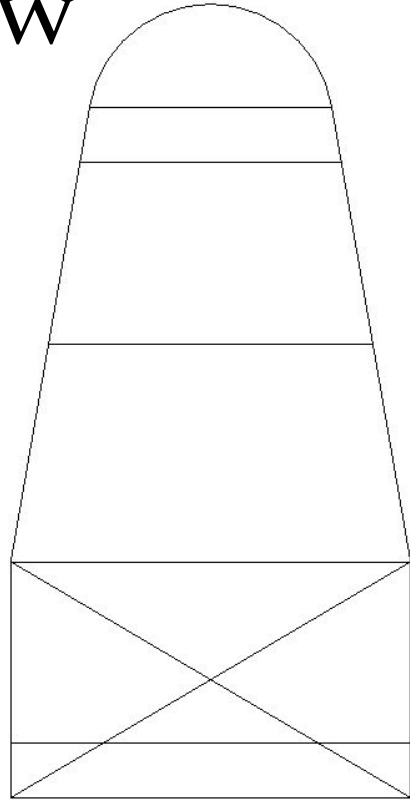
# DIMENSIONED SIDE VIEW



# All - New



Old Frame



# All - New: Pros and Cons

## Advantages:

- It's a box
  - Quicker setups / easier welds
- Avoiding compound angles
- Extending the rear envelope
  - Without lengthening wheelbase
- Adding tiers to the rear envelope
- Node simplification
- Allows suspension to be creative with their new redesign

## Disadvantages:

- Is the motor envelope weak?
  - 20" x 10"
- Is there enough play for half-shafts?

# What comes out of this?

- Presented two extremes
  - We are a team
- The delivered chassis will not exclusively be one person's vision
- Make a design that works for everyone