

CHASSIS:

- DRAWN OVER MANDREL SPACEFRAME STEEL CONSTRUCTION
- 2300 LB-FT/DEGREE TORSIONAL RIGIDITY

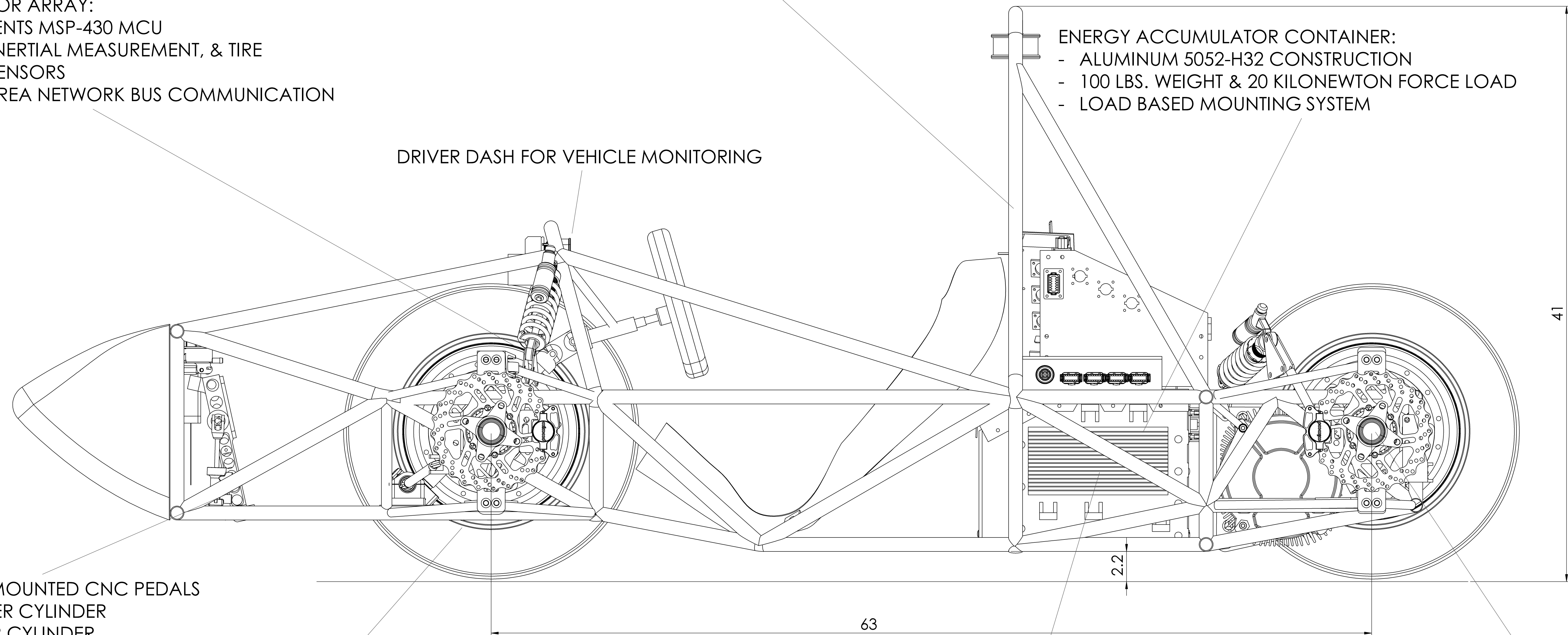
SUSPENSION SENSOR ARRAY:

- TEXAS INSTRUMENTS MSP-430 MCU
- WHEEL SPEED, INERTIAL MEASUREMENT, & TIRE TEMPERATURE SENSORS
- CONTROLLER AREA NETWORK BUS COMMUNICATION

ENERGY ACCUMULATOR CONTAINER:

- ALUMINUM 5052-H32 CONSTRUCTION
- 100 LBS. WEIGHT & 20 KILONEWTON FORCE LOAD
- LOAD BASED MOUNTING SYSTEM

DRIVER DASH FOR VEHICLE MONITORING



CUSTOM FLOOR-MOUNTED CNC PEDALS
5/8" FRONT MASTER CYLINDER
3/4" REAR MASTER CYLINDER

13" X 7" ALUMINUM RACING WHEELS

HIGH VOLTAGE SYSTEM:

- 18650 LITHIUM ION CELLS
- PASSIVE AND ACTIVE CELL BALANCING BATTERY MANAGEMENT SYSTEM WITH CUSTOM FUSE BOARDS

WHEEL HUB:

- WILWOOD GP200 1/4" BORE CALIPERS
- RCV PERFORMANCE WHEEL HUBS
- BILLET ALUMINUM UPRIGHTS

GENERAL VEHICLE SPECIFICATION:

WEIGHT	550 LBS. DRY, 55% REAR BIAS
ENERGY ACCUMULATOR	96V @ 400 AMP MAX DISCHARGE, 5.6 KWH CAPACITY
TORQUE RATING	120 NM COMBINED WITH TORQUE VECTORING ALGORITHM
SUSPENSION	550 LB-IN SPRINGS WITH ADJUSTABLE DAMPERS, CAMBER AND TOE

PERFORMANCE METRICS:

ACCELERATION	0-60 MPH IN 4.5 SECONDS
SKIDPAD TIME 50 FT RADIUS	5.81 SECONDS AT 1.5G
60 MPH BRAKING DISTANCE	68 FEET
TURNING RADIUS	14 FEET



SIDEVIEW V1.0
ANNOTATED
FALL 2019

ANTEATER ELECTRIC RACING

"AMPEATER 2020"

SCALE: 1:5, DIMENSIONS IN INCHES

UC Irvine Senior Design Projects