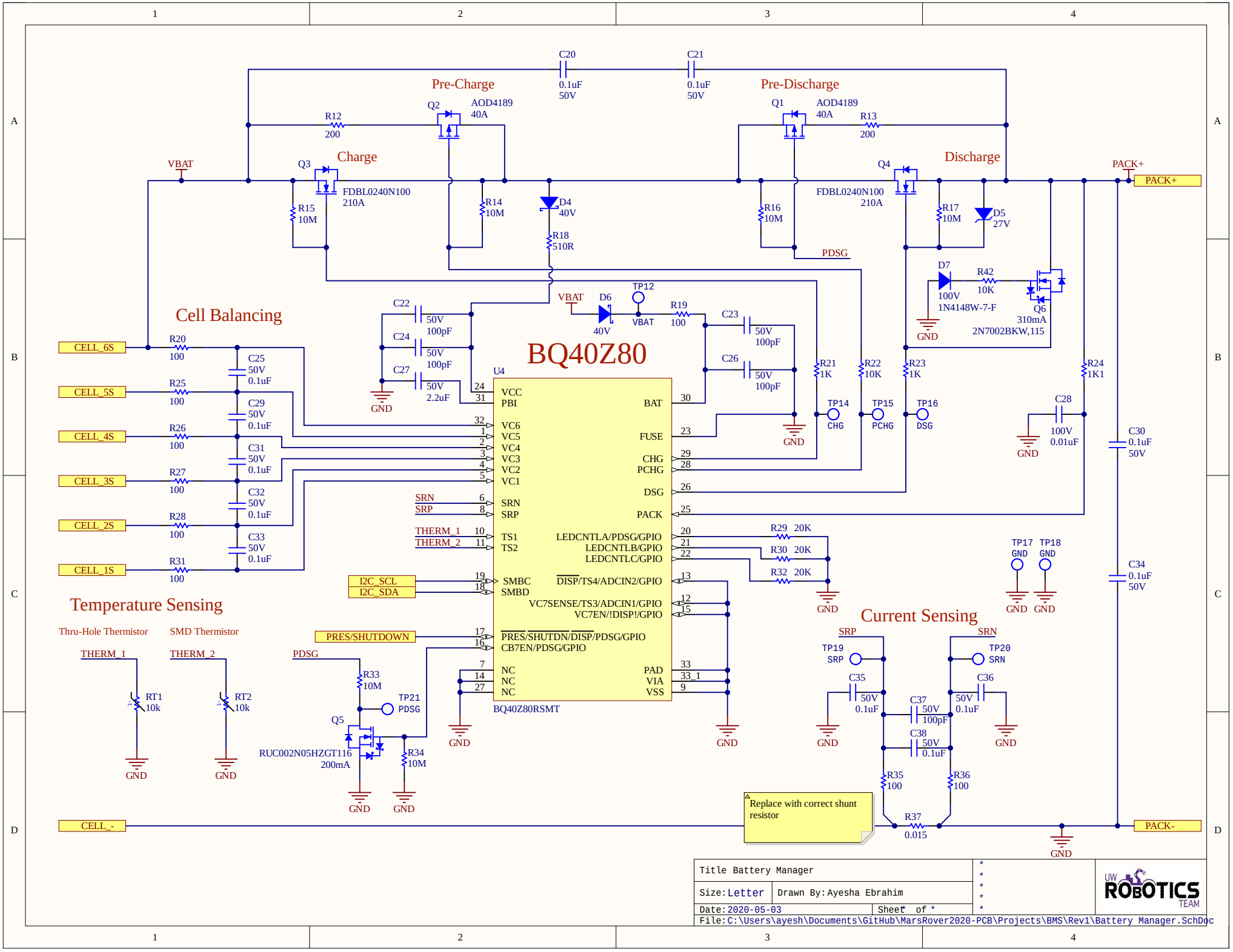
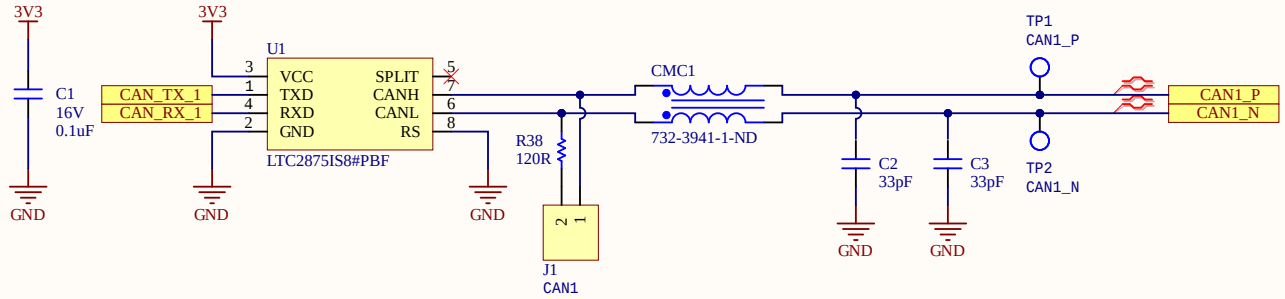
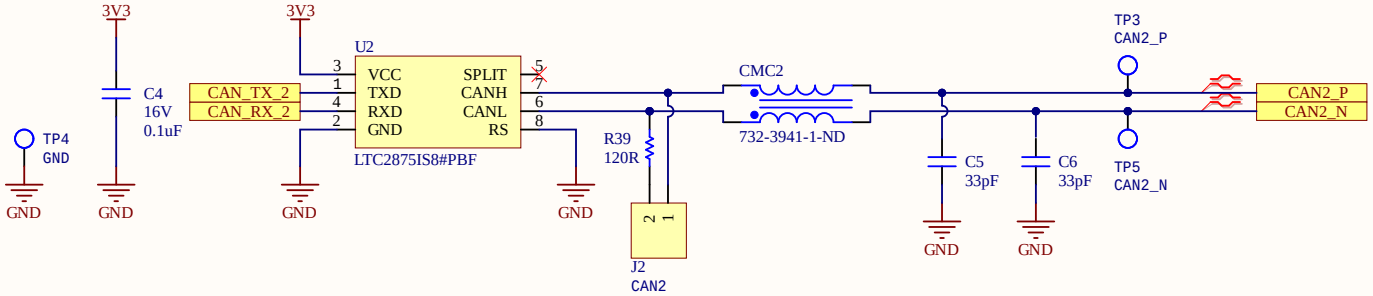

Pre-Charge
Pre-Discharge
Charge
Discharge
Cell Balancing
Temperature Sensing
Current Sensing
BQ40Z80
BQ40Z80RSMT
U4
VBAT
PACK+
PACK-
CELL_6S
CELL_5S
CELL_4S
CELL_3S
CELL_2S
CELL_1S
CELL_-
SRN
SRP
THERM_1
THERM_2
I2C_SCL
I2C_SDA
PRES/SHUTDOWN
PDSG
Thru-Hole Thermistor
SMD Thermistor
RUC002N05HZGT116
200mA
FDBL0240N100
210A
AOD4189
40A
100V
1N4148W-7-F
310mA
2N7002BKW,115
Replace with correct shunt resistor
Title Battery Manager
Size: Letter
Drawn By: Ayesha Ebrahim
Date: 2020-05-03
Sheet * of *
File: C:\Users\ayesh\Documents\GitHub\MarsRover2020-PCB\Projects\BMS\Rev1\Battery Manager.SchDoc
UW ROBOTICS TEAM

CAN 1



CAN 2



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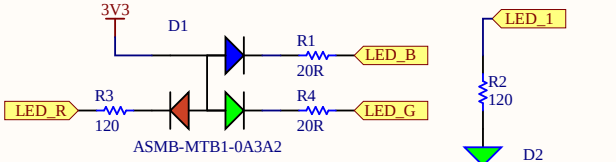
Size: Letter	Drawn By: Ayesha Ebrahim		
Date: 2020-05-03	Sheet * of *		
File: C:\Users\ayesh\Documents\GitHub\MarsRover2020-PCB\Projects\BMS\Rev1\CAN.SchDoc			

Add XTAL Connector and Battery Balancing Connector, CAN Connections, Chip Programmer connector

Title Connectors		UW Robotics 200 University Avenue Waterloo Ontario Canada N2L 3G6
Size: Letter	Drawn By: Ayesha Ebrahim	
Date: 2020-05-03	Sheet of	
File: C:\Users\ayesh\Documents\GitHub\MarsRover2020-PCB\Projects\BMS\Rev1\Connectors.SchDoc		

Test LEDs

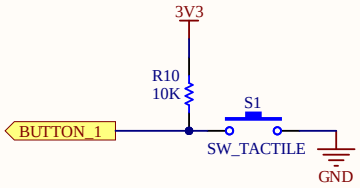


Current Calculations

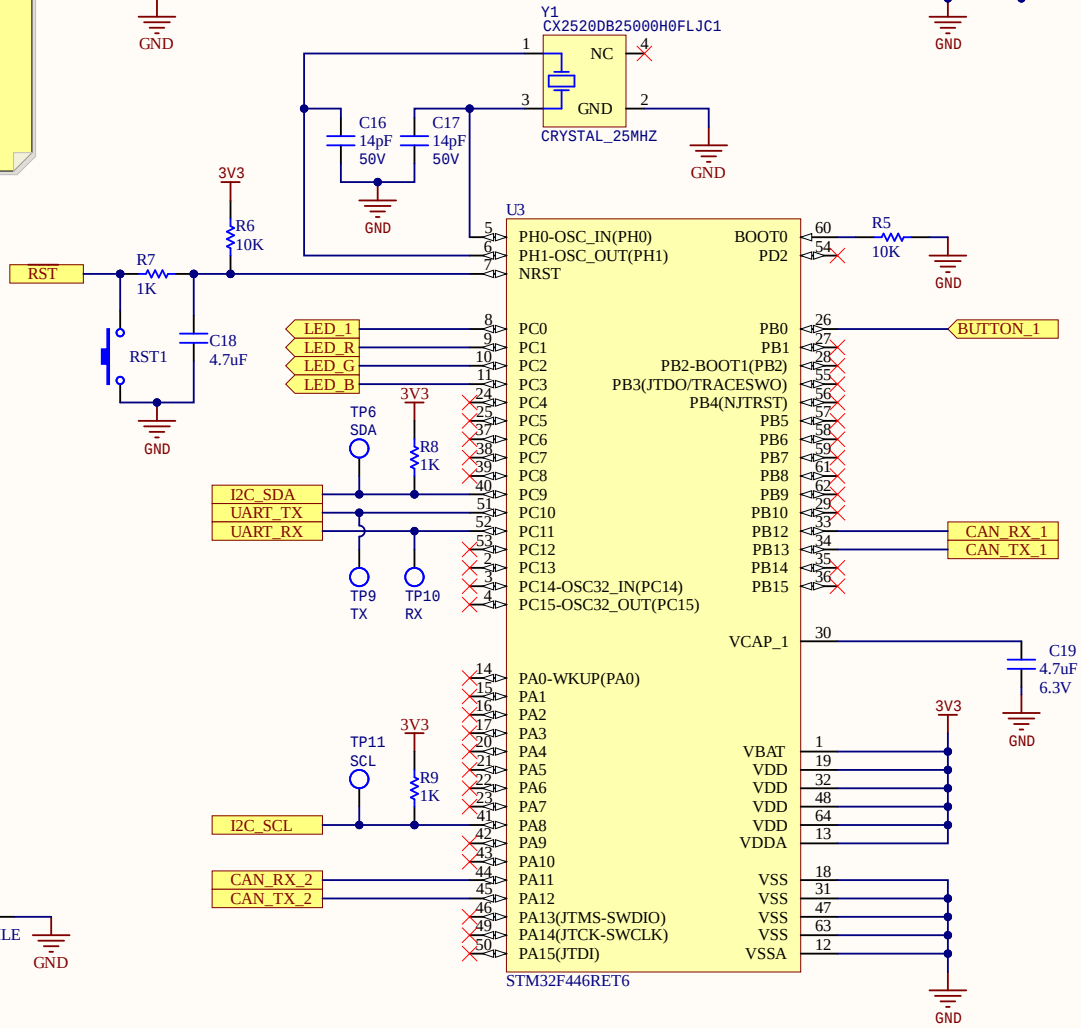
Green LED voltage drop: 2.2V
- I = (3.3-2.2V)/120 = 10.83mA

RGB LED voltage drops:
- Red: 2.1V: I = (3.3-2.1V)/120 = 10mA
- Blue: 3.1V: I = (3.3-3.1V)/20 = 10mA
- Green: 3.1V: I = (3.3-3.1V)/20 = 10mA

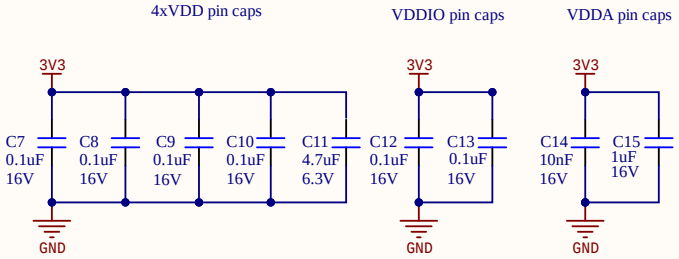
Test Button



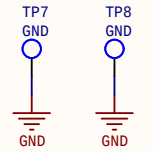
STM32F446RET6



Decoupling Caps

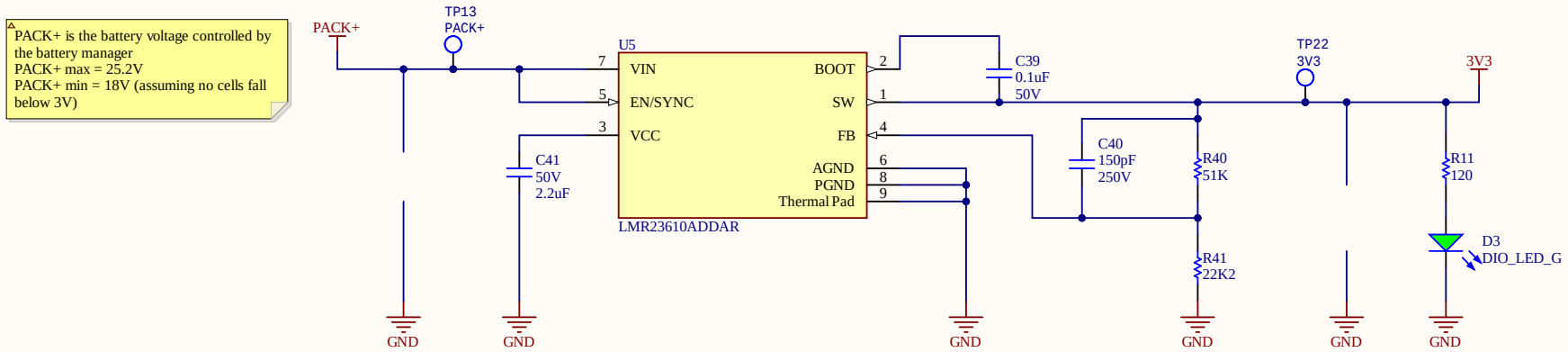


GND Test Points



Title MCU			
Size: Letter	Drawn By: Ayesha Ebrahim		
Date: 2020-05-03	Sheet * of *		
File: C:\Users\ayesh\Documents\GitHub\MarsRover2020-PCB\Projects\BMS\Rev1\MCU.SchDoc			

Pack Voltage to 3V3 Buck @ 1A Max



Title Power			
Size: Letter	Drawn By: Ayesha Ebrahim		
Date: 2020-05-03	Sheet * of *		
File: C:\Users\ayesh\Documents\GitHub\MarsRover2020-PCB\Projects\BMS\Rev1\Power.SchDoc			