

A

A

B

B

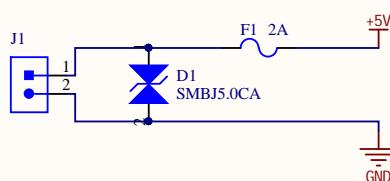
C

C

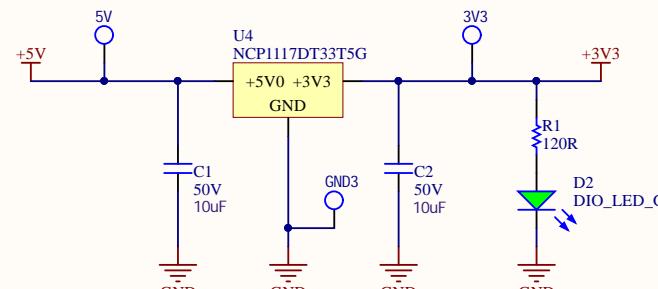
D

D

Power In



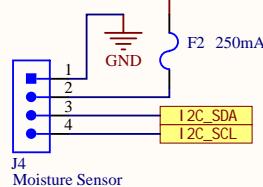
LDO Voltage Regulator



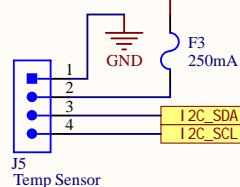
- V2: Replace LDO with an LDO with less ESR requirements
- Explore adding bulk capacitor

Sensors

A



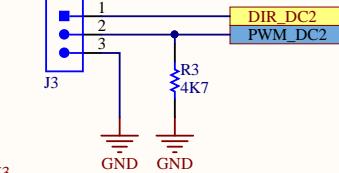
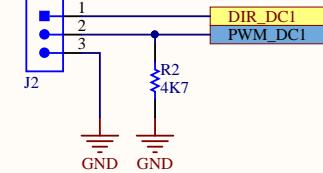
Moisture Sensor



Temp Sensor

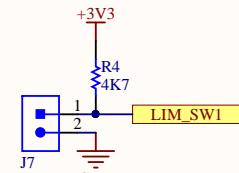
DC Motors

A

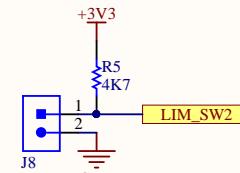


Limit Switches

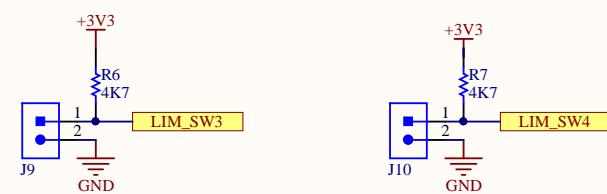
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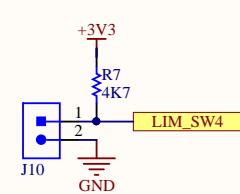
LIM_SW1



LIM_SW2



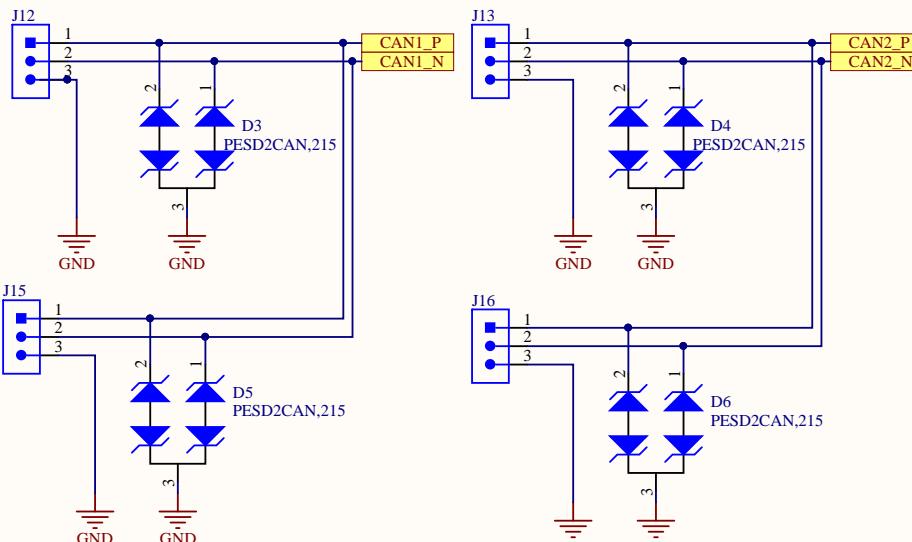
LIM_SW3



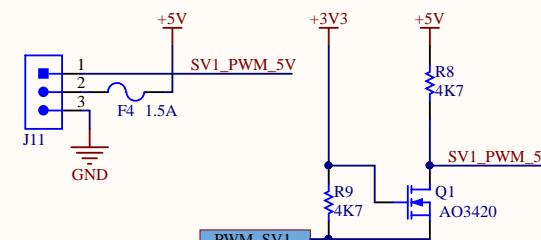
LIM_SW4

CAN Connectors

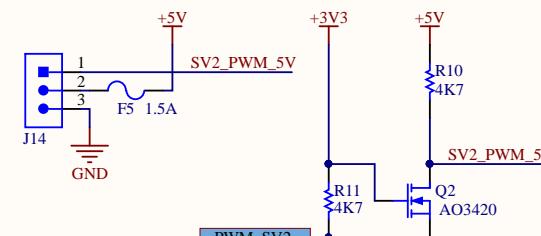
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Servos



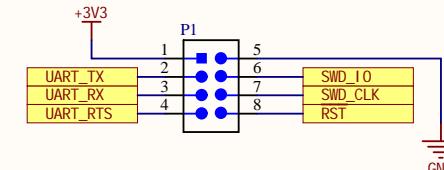
SV1_PWM_5V



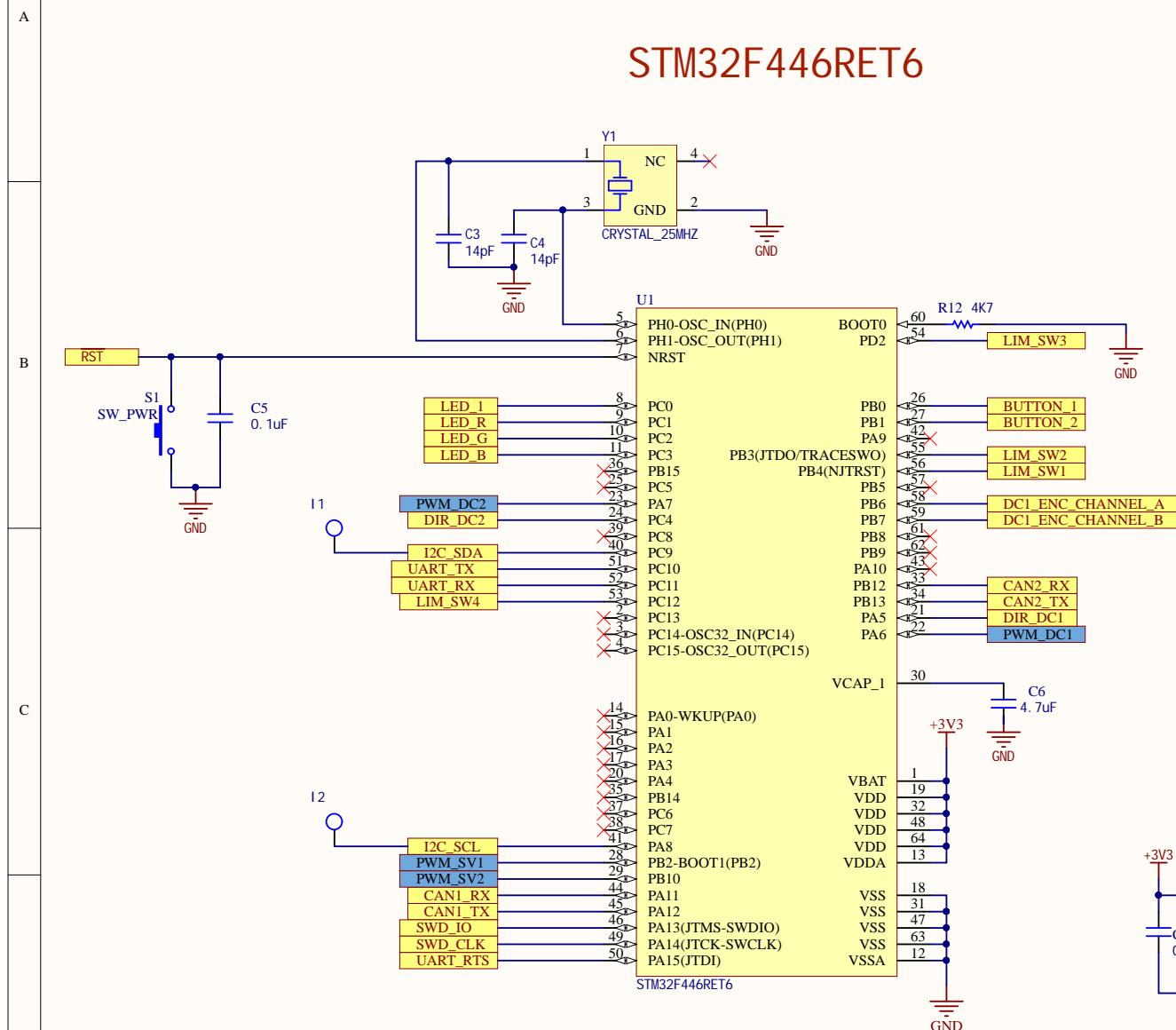
SV2_PWM_5V

Title: Science - Connectors	UW Robotics 200 University Avenue Waterloo Ontario Canada N2L 3G6	UW ROBOTICS TEAM
Size: Letter	Drawn By: Christopher Arjune	
Date: 2020-01-28	Sheet2 of 5	
File: C:\Users\lance\Desktop\MarsRover2020-PCB\Projects\Science\Rev1\sch\Connectors.SchDoc		

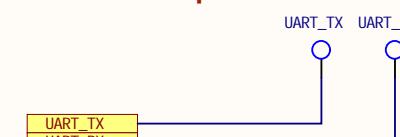
Debug/Programming



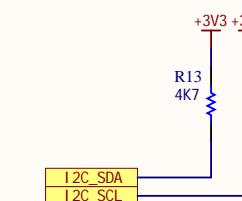
STM32F446RET6



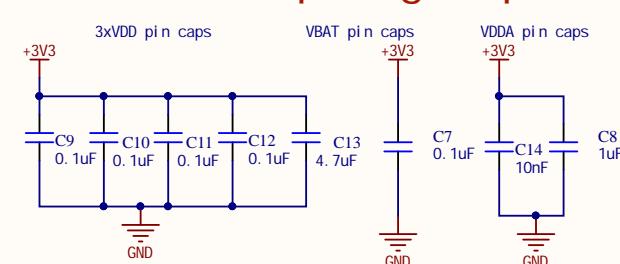
Testpoints



I2C Pull-ups



Decoupling Caps



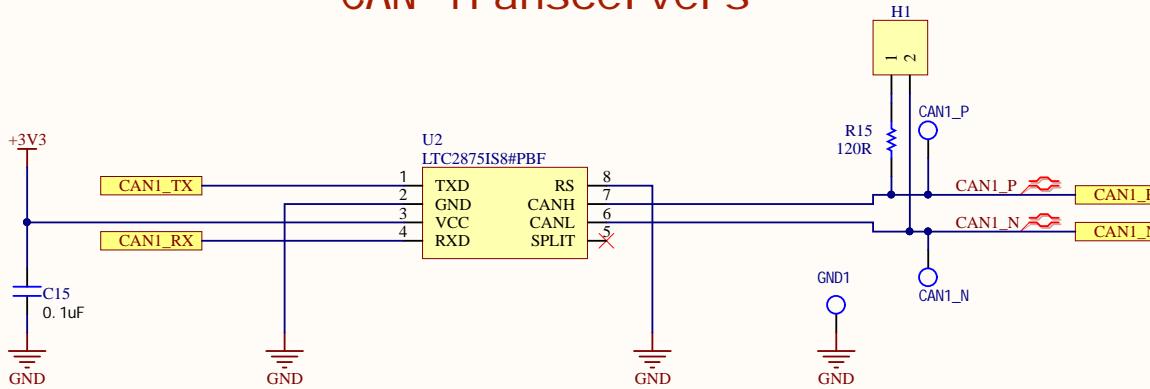
A

A

CAN Transceivers

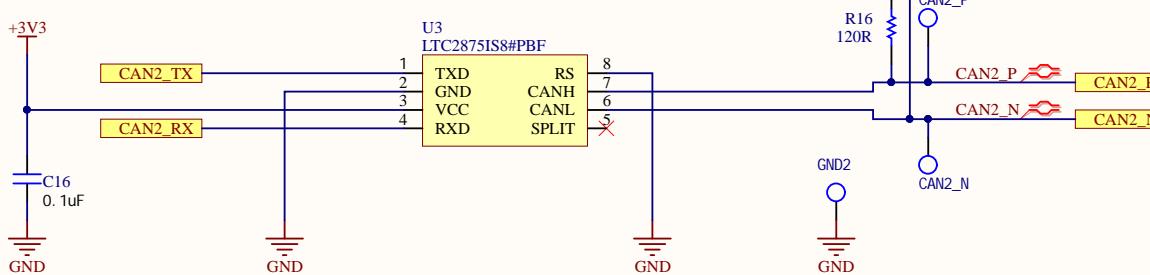
B

B



C

C

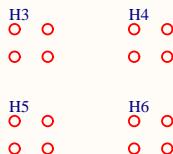


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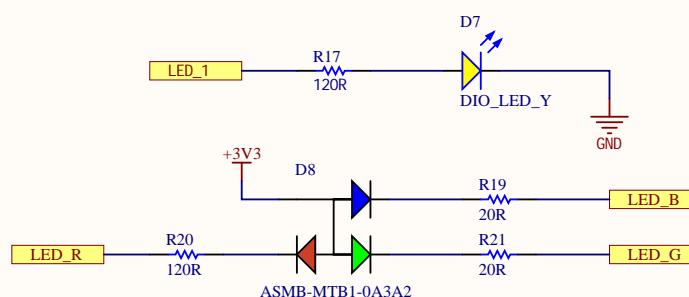
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Title: Science - CAN		UW Robotics
Size: Letter	Drawn By: Christopher Arjune	200 University Avenue Waterloo Ontario Canada N2L 3G6
Date: 2020-01-28	Sheet 4 of 5	
File: C:\Users\lance\Desktop\MarsRover2020-PCB\Projects\Science\Rev1\sch\CAN.SchDoc		UW ROBOTICS TEAM

Mounting Holes



Test LEDs



Current Calculations

Yellow LED voltage drop: 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 Buttons

