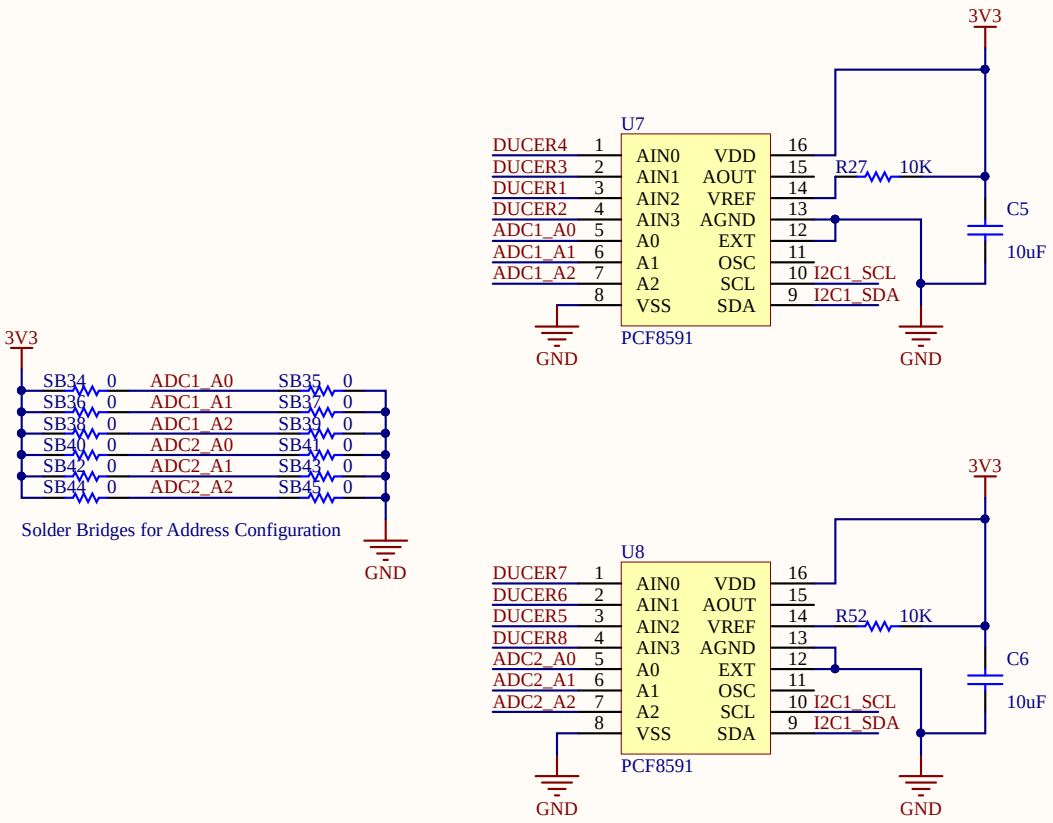
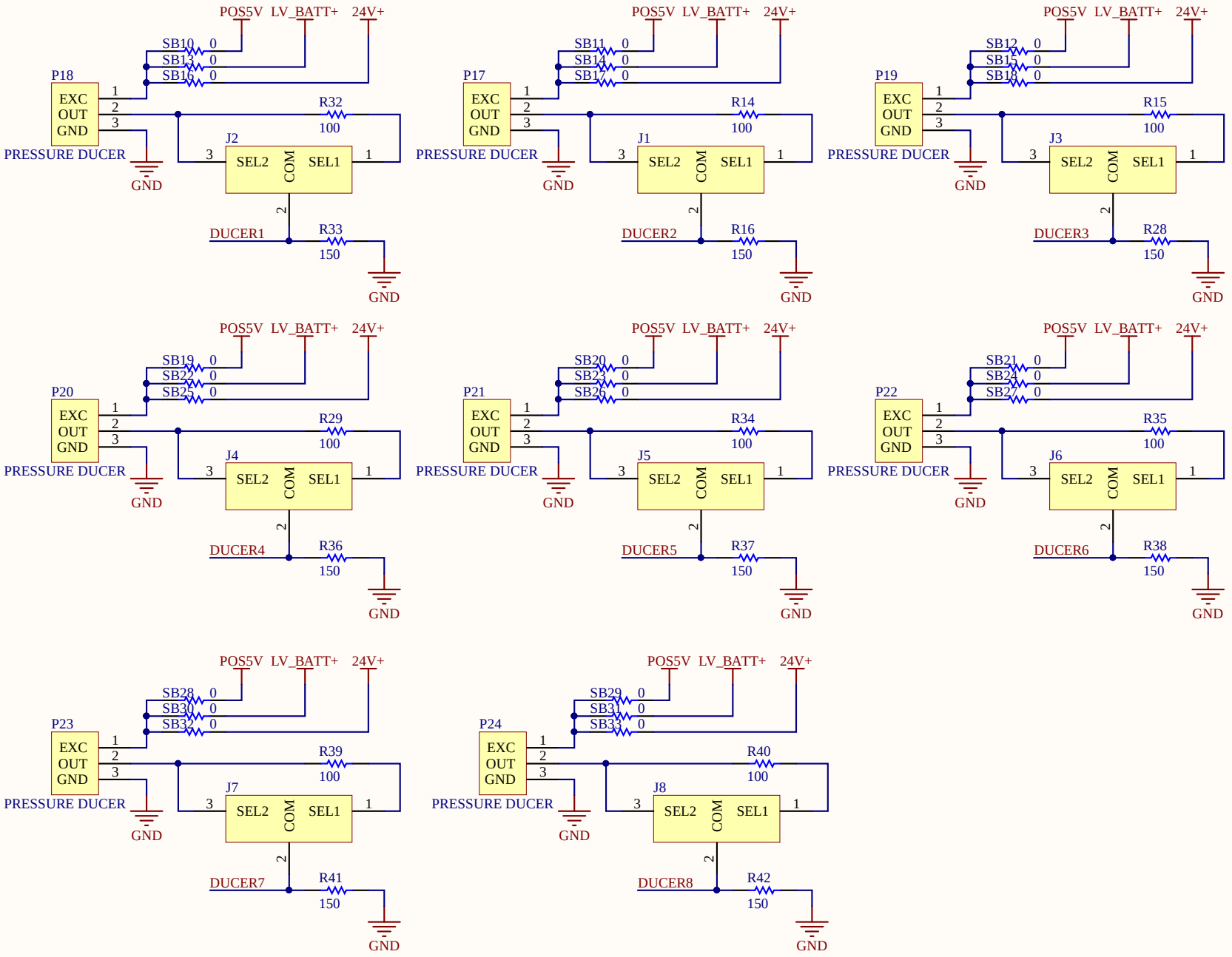
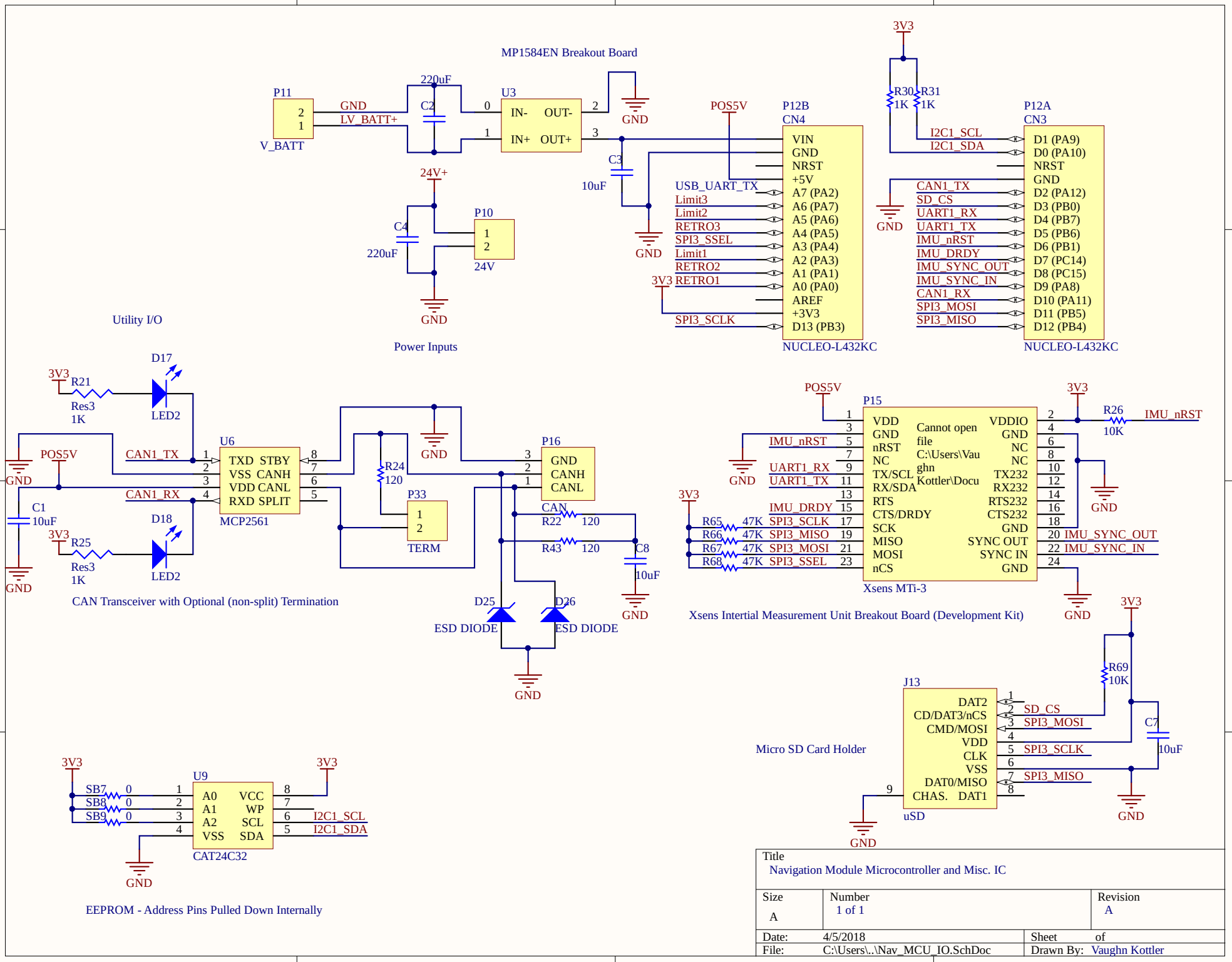


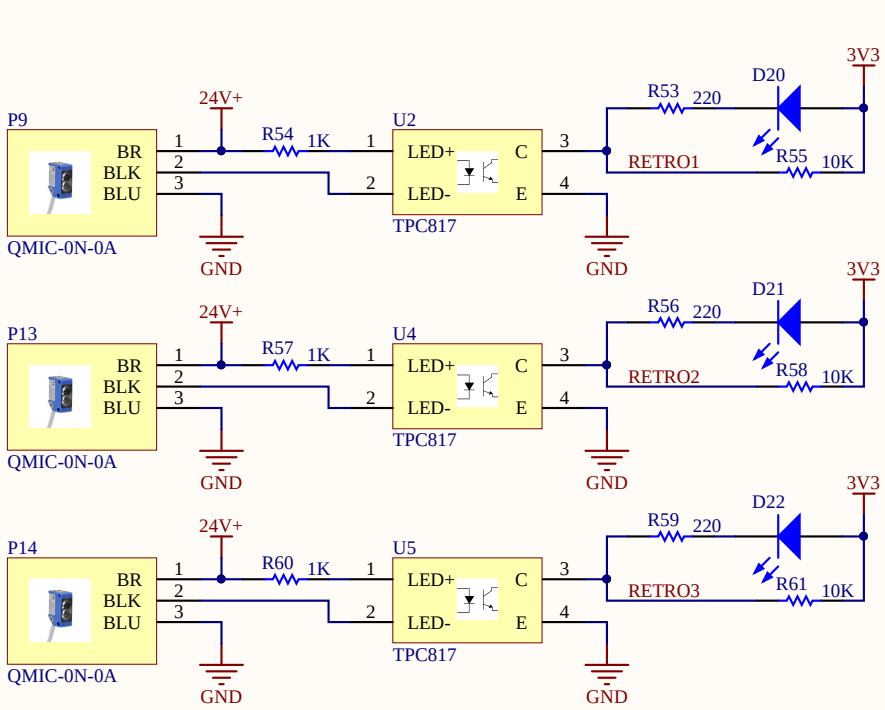
Dual I2C ADC Modules to handle Pressure Transducer Output Voltages

Title: Navigation Module Braking I/O		
Size: A	Number: 3 of 3	Revision: A
Date: 4/5/2018		Sheet of
File: C:\Users\..\Nav_Ducer_ADC.SchDoc		Drawn By: Vaughn Kottler

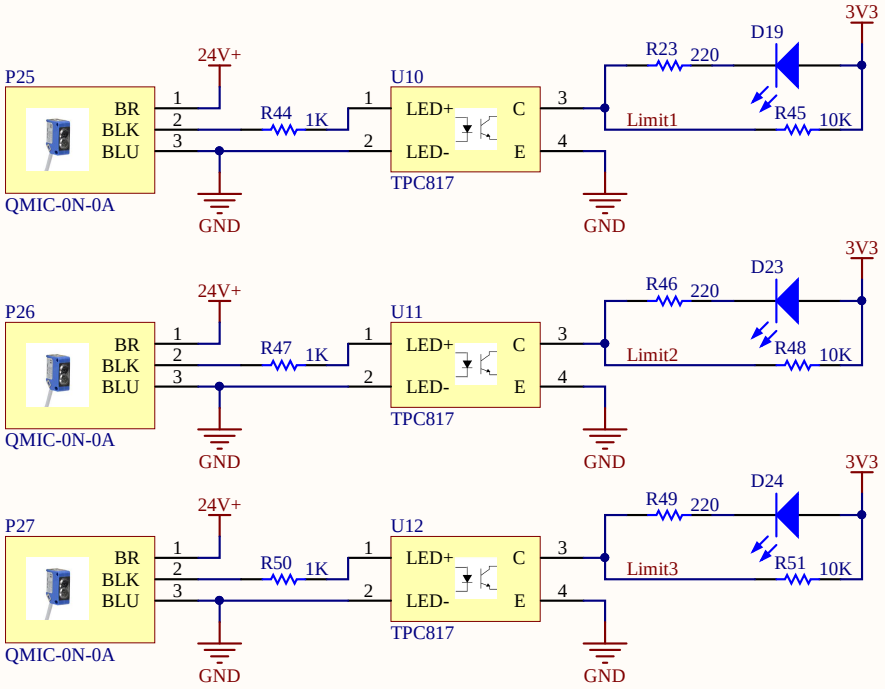


Title: Navigation Module Braking I/O		
Size: A	Number: 2 of 3	Revision: A
Date: 4/5/2018		Sheet of
File: C:\Users\..\Nav_Ducer_IO.SchDoc		Drawn By: Vaughn Kottler


MP1584EN Breakout Board
P11
V_BATT
GND
LV_BATT+
C2
220uF
U3
IN-
OUT-
IN+
OUT+
C3
10uF
C4
220uF
24V+
P10
24V
POS5V
P12B
CN4
VIN
GND
NRST
+5V
A7 (PA2)
A6 (PA7)
A5 (PA6)
A4 (PA5)
A3 (PA4)
A2 (PA3)
A1 (PA1)
A0 (PA0)
AREF
+3V3
D13 (PB3)
NUCLEO-L432KC
USB_UART_TX
Limit3
Limit2
RETRO3
SPI3_SSEL
Limit1
RETRO2
RETRO1
SPI3_SCLK
3V3
R30
R31
1K
P12A
CN3
D1 (PA9)
D0 (PA10)
NRST
GND
D2 (PA12)
D3 (PB0)
D4 (PB7)
D5 (PB6)
D6 (PB1)
D7 (PC14)
D8 (PC15)
D9 (PA8)
D10 (PA11)
D11 (PB5)
D12 (PB4)
NUCLEO-L432KC
I2C1_SCL
I2C1_SDA
CAN1_TX
SD_CS
UART1_RX
UART1_TX
IMU_nRST
IMU_DRDY
IMU_SYNC_OUT
IMU_SYNC_IN
CAN1_RX
SPI3_MOSI
SPI3_MISO
Utility I/O
Power Inputs
D17
LED2
R21
Res3
1K
D18
R25
C1
10uF
U6
TXD STBY
VSS CANH
VDD CANL
RXD SPLIT
MCP2561
CAN1_TX
CAN1_RX
R24
120
P33
TERM
P16
GND
CANH
CANL
CAN
R22
R43
120
C8
10uF
D25
D26
ESD DIODE
CAN Transceiver with Optional (non-split) Termination
P15
VDD
GND
nRST
NC
TX/SCL
RX/SDA
RTS
CTS/DRDY
SCK
MISO
MOSI
nCS
VDDIO
NC
TX232
RX232
RTS232
CTS232
SYNC OUT
SYNC IN
Cannot open file C:\Users\Vaughn Kottler\Docu
R65 47K SPI3_SCLK
R66 47K SPI3_MISO
R67 47K SPI3_MOSI
R68 47K SPI3_SSEL
R26
10K
Xsens MTi-3
Xsens Intertial Measurement Unit Breakout Board (Development Kit)
U9
A0
A1
A2
VSS
VCC
WP
SCL
SDA
CAT24C32
SB7
SB8
SB9
EEPROM - Address Pins Pulled Down Internally
J13
DAT2
CD/DAT3/nCS
CMD/MOSI
VDD
CLK
VSS
DAT0/MISO
CHAS.
DAT1
uSD
Micro SD Card Holder
R69
10K
C7
10uF
Title
Navigation Module Microcontroller and Misc. IC
Size
A
Number
1 of 1
Revision
A
Date:
4/5/2018
Sheet
of
File:
C:\Users\..\Nav_MCU_IO.SchDoc
Drawn By:
Vaughn Kottler

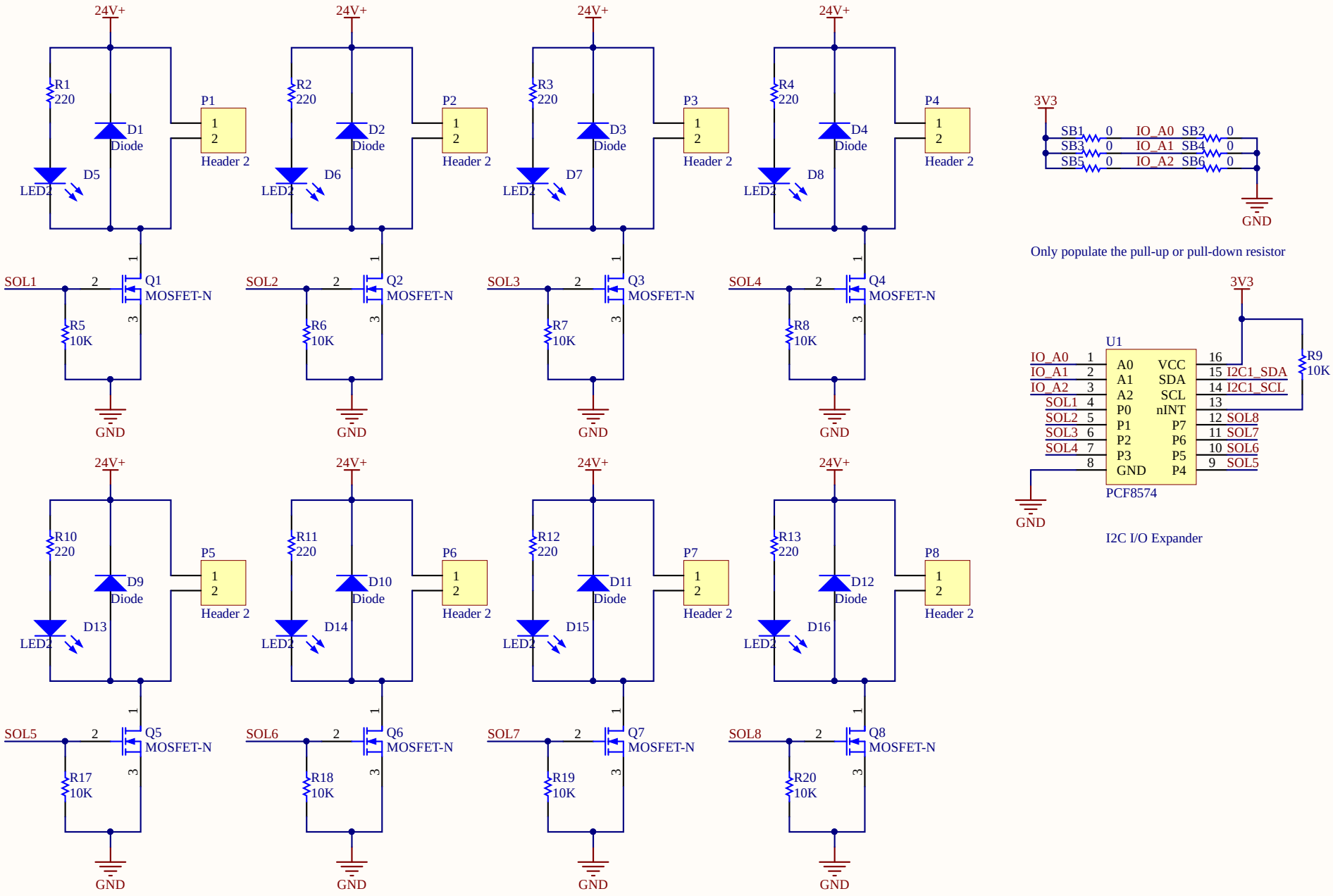


Retros (NPN)



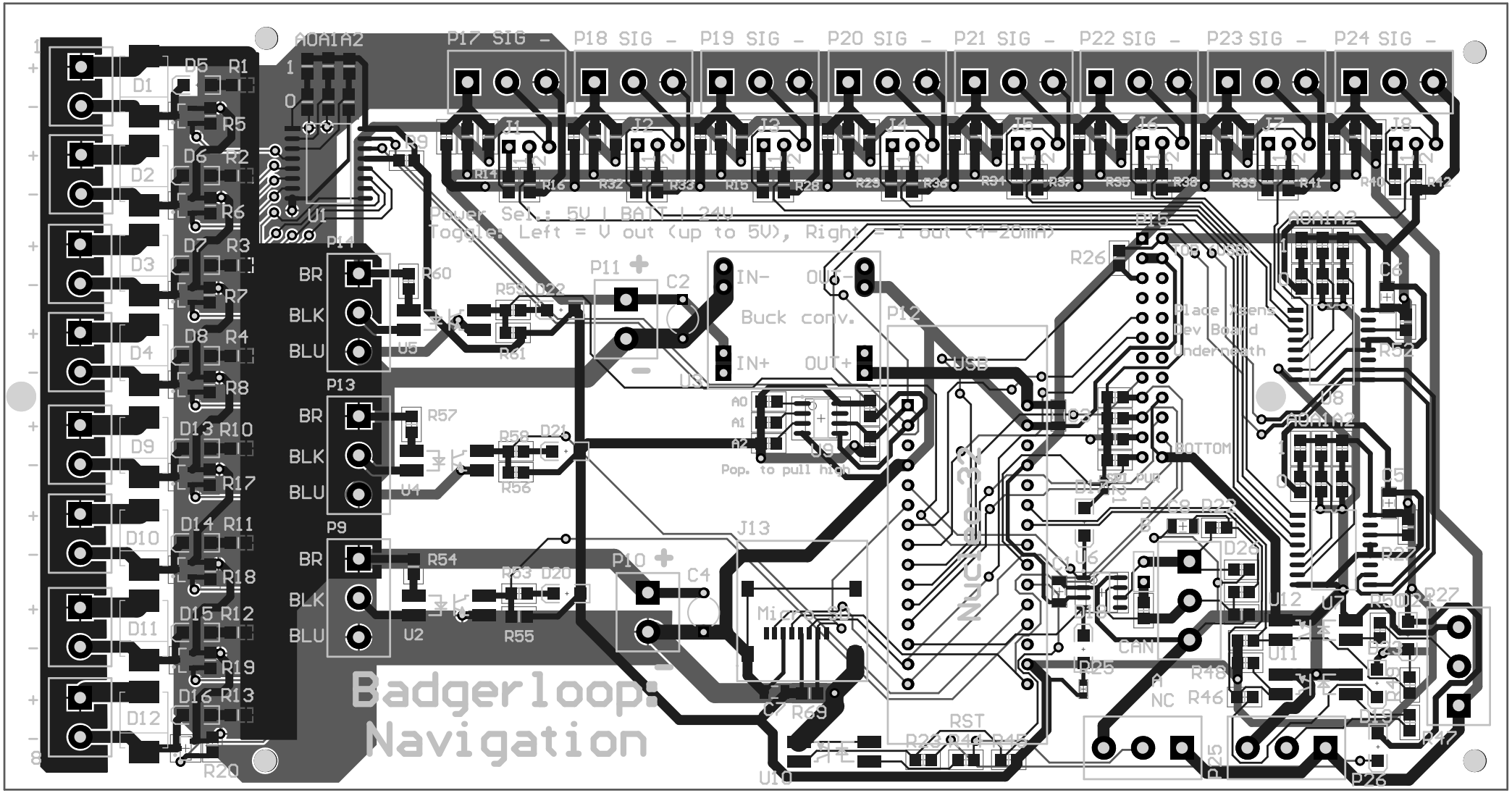
Limit Switches (PNP)

Title: Navigation Module Retroreflective Sensor I/O		
Size: A	Number: 1 of 1	Revision: A
Date: 4/5/2018		Sheet of
File: C:\Users\..\Nav_Retro_IO.SchDoc		Drawn By: Vaughn Kottler



Solenoid Driver Circuits

Title: Navigation Module Braking I/O		
Size: A	Number: 1 of 3	Revision: A
Date: 4/5/2018		Sheet of
File: C:\Users\..\Nav_Solenoid_IO.SchDoc		Drawn By: Vaughn Kottler



Board Dimensions: 7550mil (191.77mm) x 3950mil (100.33mm)

Board S