

4 Cost & Schedule

4.1 Cost Analysis

Description	Part	Manufacturer	Quantity	Extended Price	Link
Microcontroller	RP2040	Raspberry Pi	1	\$1.00	Chicago Electronics
I2C Screen	SSD1306	AiTrip	1	\$2.25	Amazon
Instrumentation amplifier/ADC	HX711	AiTrip	1	\$6.63	Amazon
Red LED	HLMP3.301 - Red	Avago Technologies	1	\$0.16	ECE Supply Center
Green LED	HLMP3507 - Green	Avago Technologies	1	\$0.18	ECE Supply Center
Yellow LED	HLMP3401 - Yellow	Avago Technologies	1	\$0.21	ECE Supply Center
Memory	IC FLASH 32MBIT SPI/QUAD 8SOIC	Winbond Electronics	1	\$0.94	Digi-Key
Barrel Jack	Breadboard-friendly 2.1mm DC barrel jack	Adafruit	1	\$0.95	Adafruit
Micro USB Plug	Micro USB Plug Female	Adafruit	1	\$0.95	Adafruit
Voltage Regulator	NCP1117	OnSemi	1	\$0.67	DigiKey
Push Buttons	0661273664773	Cyclewet	3	\$6.29	Amazon
Rotary Potentiometer	CA-WH148-10KB K	TWTADE	2	\$10.99	Amazon
Diode	IN4001	ON Semiconductor	4	\$1.50	Adafruit
Transistor	TIP120	Fairchild	2	\$2.50	Adafruit
100 nF Decoupling	1C20Z5U103M0	Sprague	4	\$0.92	ECE Supply

Capacitor	50B				Center
Solenoid	Plastic Water Solenoid Valve - 12V - 1/2" Nominal	Adafruit	2	\$13.90	Adafruit
12V Power Supply	ALITOVE DC 12V 5A Power Supply Adapter	ALITOVE	1	\$12.99	Amazon
Load Cell	4541	Adafruit	1	\$3.95	Adafruit
27 Ohm Resistor	CMP0805-FX-27 R0ELF	Bourns	2	\$0.44	Mouser
1K Ohm Resistor	810-MMZ1608R1 02ATD25	TDK	6	\$0.24	Mouser
10k Ohm Resistor	603-RT0603DRE 1010KL	YAGEO	2	\$0.24	Mouser
27 pico Farad Capacitor	C0805X270J5GA C7800	Kemet	2	\$0.68	Mouser
1uF Capacitor	810-C1608X5R1 H105K	TDK	2	\$0.14	Mouser
10uF Capacitor	CL32Y106KCVZ NWE	Samsung	2	\$2.24	Mouser
100nF Capacitor	810-C1608X7R1 H104K	TDK	6	\$0.24	Mouser
12MHz Oscillator	ABLS-12.000MH Z-B4-T	Abracon	1	\$0.22	Mouser
Total Cost				\$71.42	

Table 5: Parts List