

Project Status Letter PSL Number: PSL_11
Covering period: 04/15-04/21
Prepared by: Rachel Szteinberg and J. Mahati Hari

Task Summary from Previous Week / Proposed Changes:

Please note that the second column describes what was planned to be completed / demonstrated / able to be fully crossed off the WBS by the time of IPR submission. Any overdue items can be found at the bottom of the first column. This, in conjunction with progress slides will determine if subsystems are behind, ahead, or right on schedule. If there is a change that needs to be made, please notify the project manager. This is referenced with WBS v0.3.

TEAM	PREVIOUS WEEK'S SCHEDULED TASKS	TASKS COMPLETED	FURTHER INVESTIGATION	PROPOSED CHANGES
VSCADA	VSC.2.2 [Demonstrated Drive View] VSC.2.3 [Demonstrated Charging View] VSC.2.4 [Demonstrated Shutdown/Sleep View] VSC.2.5 [Tested Sleep/Shutdown View for Leakage] <u>Overdue:</u> VSC.2.1 [Demonstrated Maintenance View] VSC.3.3 [Config UI delivered]	None	VSC.2.2[Demonstrated Maintenance View] - Discrepancy among IPRs VSC.2.3[Demonstrated Drive View] - Discrepancy among IPRs	Desktop App

Cell App	<p>CELL.3.1 [Implemented Design of Data Structure for Temp. Data] CELL.3.2 [Demonstrated Real Time Updating Views] CELL.3.3 [Populated UI According to Data Ref]</p> <p><u>Overdue:</u> None</p>	No Data	No Data	No Data
DYNO	<p>No tasks scheduled</p> <p><u>Overdue:</u> DYNO.3.4 [Integrated with cooling system] DYNO.3.5[integrated with GLV- full safety loop]</p>	None	None	None
TSV	<p>No tasks scheduled</p> <p><u>Overdue:</u> TSV.3.3 [Testing of Integrated AMS with Load]</p>	<p>TSV.6.3 [User Manual Delivered] TSV.6.8 [ICD Document Delivered]</p>	None	None
TSI	<p>No tasks scheduled</p> <p><u>Overdue:</u> TSI.1.4 [PCB Debugged] TSI.1.5 [PCB Fabricated] TSI.3.2 [API Documented] TSI.3.3 [Drive Button Logic Integrated] TSI.4.4 [Properly Wired] TSI.4.5 [Mounted Current Sensor TSV Bars]</p>	<p>TSI.2.2 [Panel Fabricated] TSI.4.2 [Precharge Relay / HV Cabling Mounted] TSI.4.3 [Circuit Board Mounted]</p>		None

	<p>TSI.5.2 [Integrated Physical Box]</p> <p>TSI.5.3 [Integrated Brake Interface]</p> <p>TSI.5.4 [Integrated Throttle Interface]</p> <p>TSI.5.5 [Integrated VSCADA Interface]</p> <p>TSI.5.6 [Integrated with Cockpit]</p>			
Cooling	<p>COOL.1.1 [Drawing of Mounting Delivered]</p> <p>COOL.4.1 [Firmware Code Interfaced with Safety Loop]</p> <p><u>Overdue:</u> None</p>	<p>COOL.1.1[Drawing of mounting delivered]</p> <p>COOL.3.1[Pump algorithm written- automatic mode]</p> <p>COOL.6.6[box design of LCD delivered]</p>	None	None
Systems Engineering	<p>No tasks scheduled</p> <p><u>Overdue:</u> M.5.4 [Photographic Evidence Annotated]</p> <p>M.5.5 [Subsystem Integration Tests Executed]</p>	None	None	None
GLV	<p>No tasks scheduled</p> <p><u>Overdue:</u> GLV.3.7[HDMI screen delivered]</p> <p>GLV.3.8[VSCADA buttons delivered]</p>	<p>GLV.3.4 [Functional Interior Panel Safety Loop Buttons and Switches Delivered]</p> <p>GLV.3.5 [Functional Interior Panel LEDs Delivered]</p> <p>GLV.3.6 [Functional Exterior Panels Safety Loop Buttons and Switches Delivered]</p>	None	None

Interconnect	<p>No tasks scheduled</p> <p><u>Overdue:</u> IC.3.9[Assembled all W15 cables] IC.3.15[Assembled all W24 cables]</p>	<p>IC.3.9[Assembled all W15 cables] IC.3.12[Assembled all W21 cables] IC.3.15[Assembled all W24 cables] IC.3.17[Assembled all W26 cables]</p>	<p>“Any non-wbs wiring needed”- If it needs to be done, it needs to be on the WBS.</p> <p>All of IC.3?</p>	None
Car Physics Investigation	<p>CC.1.1 [Build/Test Algorithm in Simulink] CC.1.2 [Demonstrated Findings]</p> <p><u>Overdue:</u> PHYS.4.4[Simulated Statics Algorithm] PHYS.4.5[Simulated Dynamics Algorithm]</p>	<p>PHYS.3.1[derivation for current model delivered] PHYS.3.2[derivation for motor speed model delivered] PHYS.3.4[Derivation for load torque model] overdue</p>	None	None
JGB	<p>No tasks scheduled</p> <p><u>Overdue:</u> None</p>	No Data	No Data	No Data
MGMT	<p>No tasks scheduled</p> <p><u>Overdue:</u> M.5.4 [Photographic Evidence Annotated] M.5.5 [Subsystem Integration Tests Executed]</p>	None	None	None

Plan for next week:

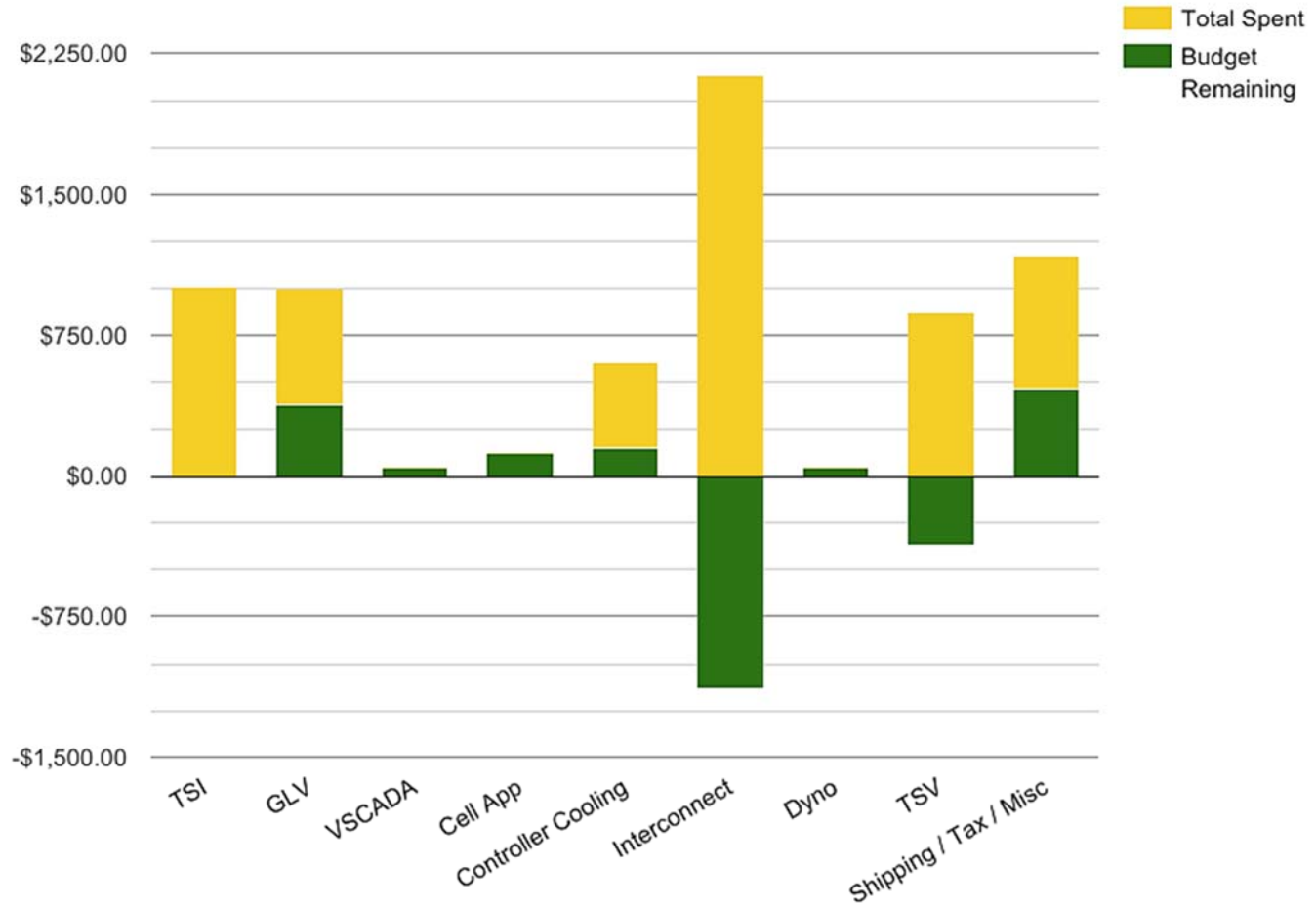
TEAM	NEXT WEEK'S TASKS [AS PER SCHEDULE]	TASKS TO BE COMPLETED [PROPOSED ON IPR]
VSCADA	VSC.2.2 [Demonstrated Drive View] VSC.2.3 [Demonstrated Charging View] VSC.2.4 [Demonstrated Shutdown/Sleep View] VSC.2.5 [Tested Sleep/Shut Down View for Leakage]	VSC.2.1 [Demonstrated Maintenance View] VSC.2.2 [Demonstrated Drive View] VSC.2.3 [Demonstrated Charging View] VSC.5.1 [Demonstrated I2C Protocol for GLV Communication] VSC.5.4 [Demonstrated Soft Throttle with Dyno]
Cell App	CELL.3.5 [ATR delivered] CELL.5.1 [Demonstrated Application in Both Tablet and Mobile Phone Form] CELL.5.2 [Created 'How to Use' Tutorial in App-Help Mode] CELL.6.2 [Demonstrated the Functional UI for Approval]	No Data
DYNO	None	DYNO.5.3 [User Manual Delivered] DYNO.5.4 [Maintenance Manual Delivered]
TSV	TSV.4.3 [ATR Delivered]	TSV.2.8 [Debugged 3rd Pack] TSV.6.4 [Maintenance Manual Delivered]
TSI	TSI.5.8 [ATR Delivered] TSI.7.3 [User Manual Delivered]	TSI.4.4 [Properly Wired] TSI.4.5 [Mounted Current Sensor Bar] TSI.2.2 [Integrated Physical Box] TSI.2.3 [Panel Integrated] TSI.3.1 [Firmware tested] TSI.4.2 [API documented] TSI.4.3 [Circuit boards mounted] TSI.3.3 [Drive Button Logic Integrated] TSI.5.2 [Integrated Physical Box] TSI.5.3 [Integrated Brake Interface] TSI.5.4 [Integrated Throttle Interface]

Cooling	COOL.2.3 [Controller Algorithm Tested with Fan] COOL.3.1 [Pump Algorithm Written - Automatic Mode] COOL.4.2 [Tested / Implemented Interface with Safety Loop] COOL.6.1 [Controller Pump Integrated] COOL.6.2 [Cooling Fan Integrated] COOL.6.3 [Temperature Sensors Integrated] COOL.6.5 [Radiator Integrated] COOL.6.6 [LCD Integrated] COOL.7.3 [User Manual Delivered]	COOL.7.3 [User Manual Delivered]
Systems Engineering	None	M.5.4 [Photograph Evidence Annotated] M.5.5 [Subsystem Integration Tests Executed]
GLV	GLV. 5.3[ATR Delivered]	GLV.3.7 [HDMI Screen Delivered] GLV.3.8 [VSCADA Buttons Delivered]
Interconnect	None	IC.4.2 [ICD Completed]
Car Physics Investigation	CC2.1 [Battery Economy/Efficiency Memo Delivered] CC2.2[Max Car Acceleration Memo Delivered]	CC1.1 [Build/Test Algorithm in Simulink] CC1.2 [Demonstrated Findings] PHYS.4.4[Simulated Statics Algorithm] PHYS.4.5[Simulated Dynamics Algorithm]
JGB	None	No Data
MGMT	None	None

Cost Summary:

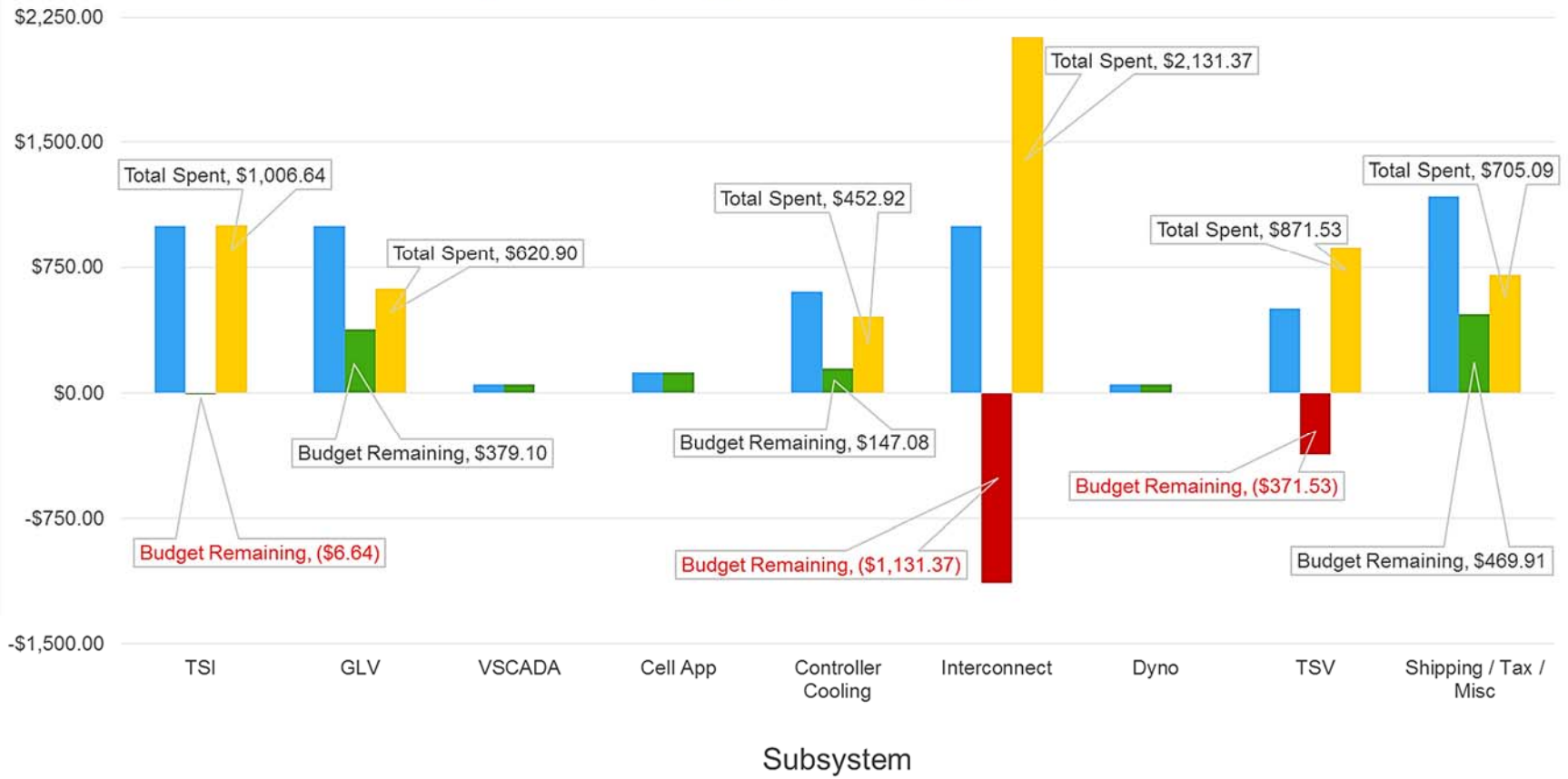
Subsystem	Spent this period	Spent to date	Budget Allocated	Budget Remaining	Percentage Spent
TSI	\$42.80	\$1,006.64	\$1,000	-\$6.64	100.66%
GLV	\$49.51	\$620.90	\$1,000	\$379.10	62.09%
VSCADA	\$0.00	\$0.00	\$50	\$50.00	0.00%
Cell App	\$0.00	\$0.00	\$125	\$125.00	0.00%
Controller Cooling System	\$0.00	\$452.92	\$600	\$147.08	75.49%
Interconnect / Cabling / ICD	\$169.28	\$2,131.37	\$1,000	-\$1,131.37	213.14%
Dyno	\$0.00	\$0.00	\$50	\$50.00	0.00%
TSV	\$58.50	\$871.53	\$500	-\$371.53	174.31%
Physics & Cruise Control	\$0.00	\$0	\$0	-	-
JGB	\$0.00	\$0	\$0	-	-
Shipping / Tax / Miscellaneous	\$24.76	\$705.09	\$1,175	\$494.67	60.01%
Total	\$344.95	\$5,788.45	\$5,500	-\$288.45	105.24%

Subsystem Budget Spending

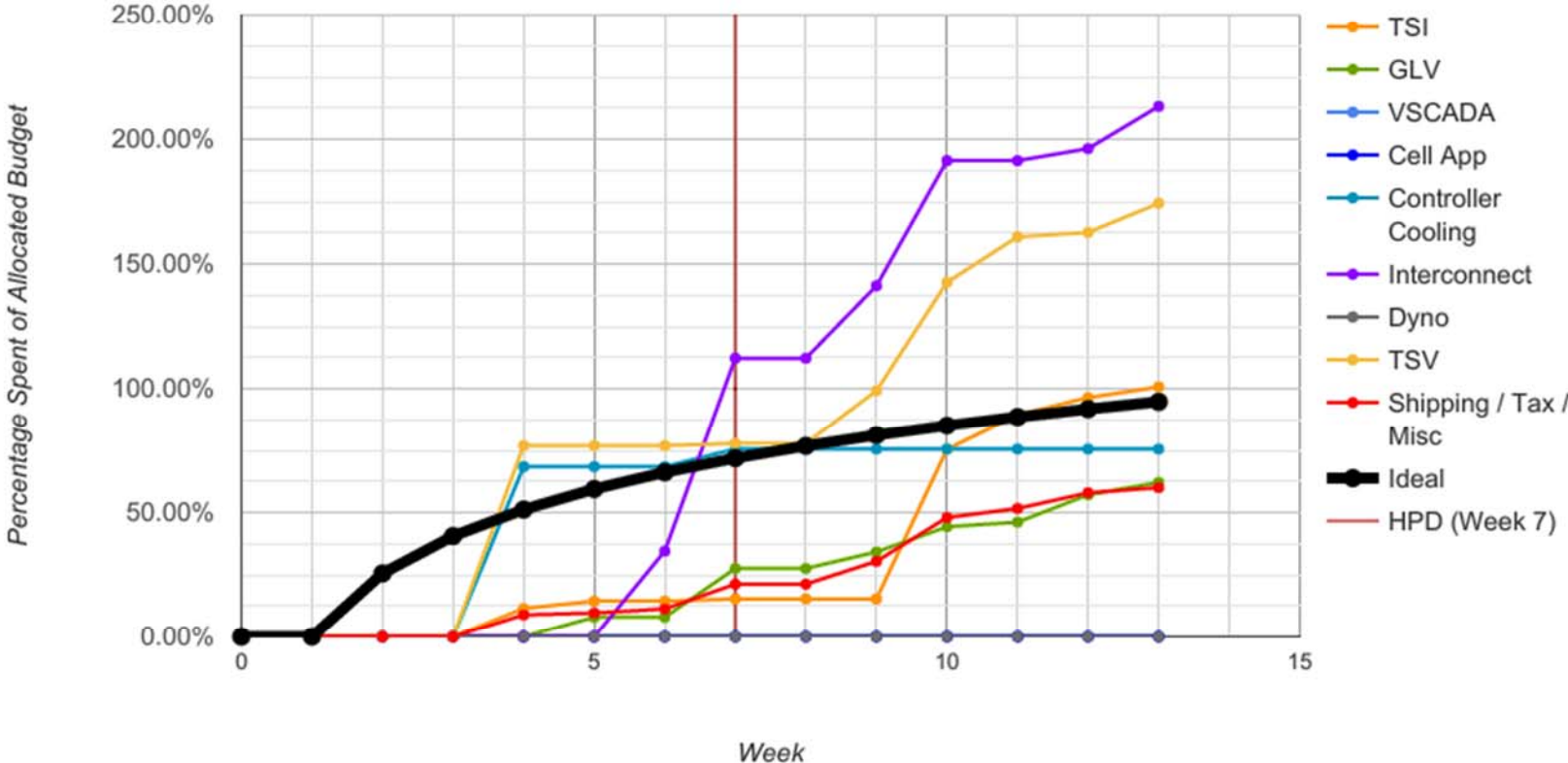


Budget Spending

■ Allocated Budget ■ Budget Remaining ■ Total Spent



Percentage Spent of Subsystem Budget Allocations

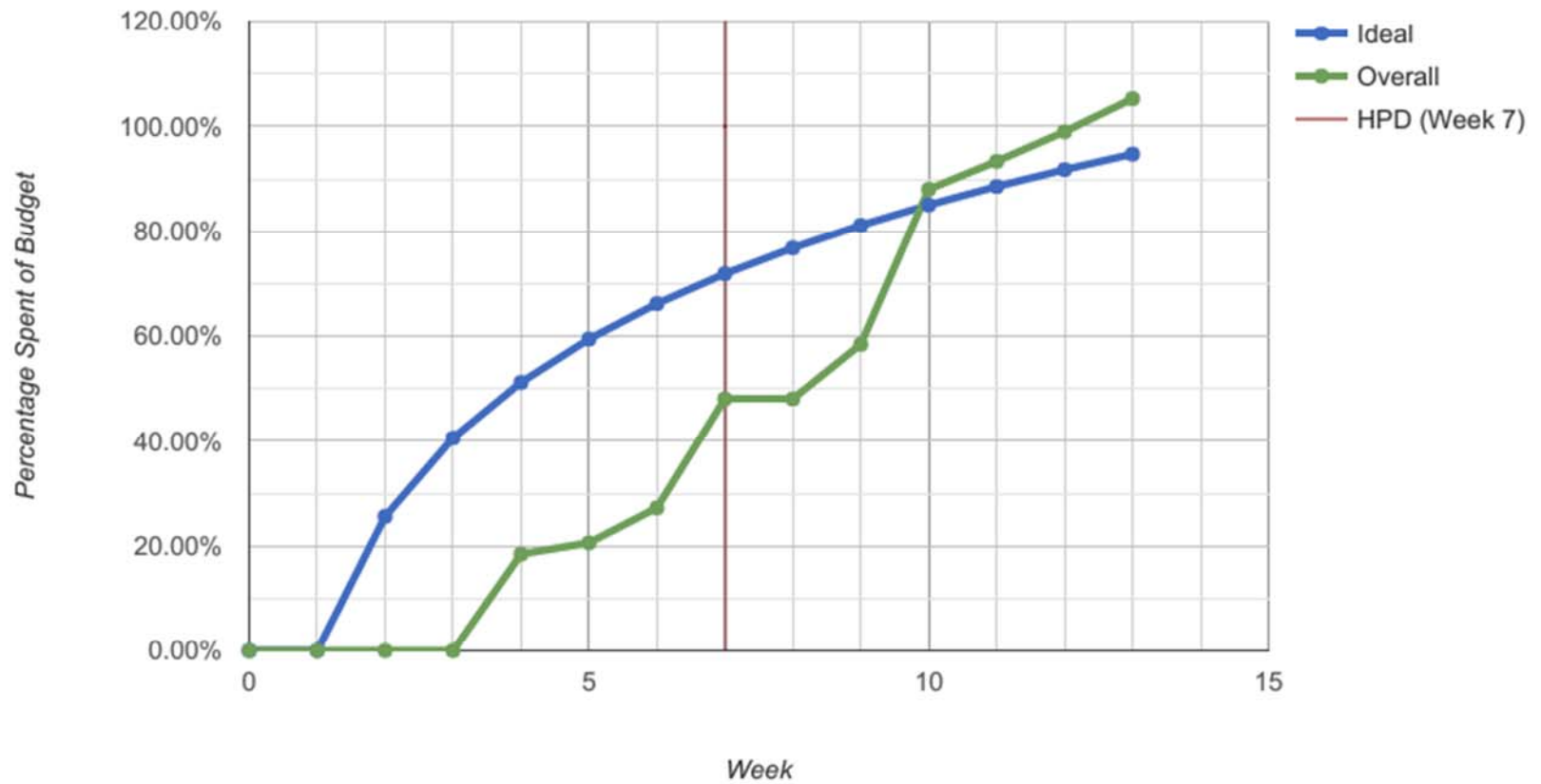


Ideally Spent per Subsystem (by Week 13): 94.72%

Total Spent



Percentage Spent of Total Budget



Ideally Spent Overall (by Week 13): 94.72%

Receiving Report:

The following items were all received during this period:

Purchase Order #42 – TSI – Super Bright LEDs – 4" and 6" Red LEDs (Appendix I)

Purchase Order #44 – TSI/TSV – Digikey – Resistors, Fuse Holders, Connectors, Crystal (Appendix II)

Purchase Order #45 – GLV – Adafruit – 7" Raspberry Pi Display (Appendix III)

Purchase Order #47** – TSI/IC/TSV – McMaster – Rubber Trim, Sealant, Pack Labels, Spiral Wrap (Appendix V)

Purchase Order #48 – TSI – Home Depot – Clamp Connectors, Screws, Nuts, Bolts (Appendix VI)

*IC stands for Interconnect/Cabling/ICD

**Only 4 out of 5 items of Purchase Order #47 were received during this period

Req #	Team	Vendor	Vendor PN	Qty	Item Description	Ordered Date	Received Date
42	TSI	Super Bright LEDs	PT-STRB-R56	1	Oval LED Strobe Truck and Trailer Lights - 6" LED Lights w/ Built-In Controller - 3-Pin Connector - Red	12-Apr-17	18-Apr-17
42	TSI	Super Bright LEDs	M9-R4	2	Oval LED Truck and Trailer Lights - 4" LED Side Clearance Lights w/ 4 High Flux LEDs - Pigtail Connector - Red	12-Apr-17	18-Apr-17
44	TSI	Digikey	P4.70KCCT-ND	10	RES SMD 4.7K OHM 1% 1/8W 0805	12-Apr-17	18-Apr-17
44	TSI	Digikey	P4.87KCCT-ND	10	RES SMD 4.87K OHM 1% 1/8W 0805	12-Apr-17	18-Apr-17
44	TSI	Digikey	P4.99KCCT-ND	10	RES SMD 4.99K OHM 1% 1/8W 0805	12-Apr-17	18-Apr-17
44	TSI	Digikey	AKC14H-ND	2	CONN IDC SKT 14POS W/POL 15 GOLD	12-Apr-17	18-Apr-17
44	TSI	Digikey	WM2902-ND	2	CONN HOUSING 4POS .100 W/LATCH	12-Apr-17	18-Apr-17
44	TSI	Digikey	WM2906-ND	2	CONN HOUSING 8POS .100 W/LATCH	12-Apr-17	18-Apr-17
44	TSI	Digikey	556879-2-ND	2	CONN HSG PLUG 2POS 11.18MM BLACK	12-Apr-17	18-Apr-17
44	TSI	Digikey	F4564-ND	2	FUSE HLDR CART 500V 15A IN LINE	12-Apr-17	18-Apr-17
44	TSI	Digikey	F3212-ND	10	FUSE CERAMIC 500MA 250VAC 125VDC	12-Apr-17	18-Apr-17
44	TSV	Digikey	887-1741-1-ND	15	CRYSTAL 10.0000MHZ 12PF SMD	12-Apr-17	18-Apr-17
45	GLV	Adafruit	2718	1	7" Touchscreen Display for Raspberry Pi	12-Apr-17	18-Apr-17
47	TSV	McMaster	8507K65	1	Rubber Edge Trim Standard Style 4, 100 FT	18-Apr-17	20-Apr-17

47	TSI	McMaster	74945A69	1	Clear Silicone Sealant, Loctite® 59530, 2.7 oz. Tube	18-Apr-17	20-Apr-17
47	IC	McMaster	7432K162	1	Spiral Bundling Wrap, UV-Resistant Polyethylene, 3/16" ID, 1/4" OD (25ft)	18-Apr-17	20-Apr-17
47	IC	McMaster	7432K63	1	Spiral Bundling Wrap, UV-Resistant Polyethylene, 1/4" ID, 3/8" OD (25ft)	18-Apr-17	20-Apr-17
48	TSI	Home Depot	279782	2	3/4 in. Non-Metallic (NM) Twin-Screw Clamp Connectors (5-Pack)	19-Apr-17	19-Apr-17
48	TSI	Home Depot	292514	1	1 in. Non-Metallic (NM) Twin-Screw Clamp Connector (Wrong size but opened package thus cannot return)	19-Apr-17	19-Apr-17
48	TSI	Home Depot	492405	2	Everbilt #8-32 x 3/4 in. Phillips Flat-Head Machine Screws (5-Pack)	19-Apr-17	19-Apr-17
48	TSI	Home Depot	661872	6	3/8 in. Hex Bolt	19-Apr-17	19-Apr-17
48	TSI	Home Depot	655449	6	3/8 in. Hex Nut	19-Apr-17	19-Apr-17

Purchase Requests:

The following items were ordered during this period:

Purchase Order #46 – TSI/GLV – Mouser – Corrected Slide Pots, 10K Through-hole resistors, Panel LEDs (Appendix IV)

Purchase Order #47** – TSI/IC*/TSV – McMaster – Rubber Trim, Sealant, Pack Labels, Spiral Wrap (Appendix V)

Purchase Order #48 – TSI – Home Depot – Clamp Connectors, Screws, Nuts, Bolts (Appendix VI)

Purchase Order #49 – TSI – Super Bright LEDs – Brake Light Bezel and Plug (Appendix VII)

Purchase Order #50 – IC* – Wire Care – 16-20 AWG Pins (Appendix VIII)

Purchase Order #51 – IC*/TSI – Mouser – Connectors (Appendix IX)

Purchase Order #52 – GLV – McMaster – Cable Holders for Strain Relief (Appendix X)

*IC stands for Interconnect/Cabling/ICD

**Only 4 out of 5 items of Purchase Order #47 were received during this period

Req #	Team	Vendor	Vendor PN	Qty	Item Description	Ordered Date
46	TSI	Mouser	652-PTA45532015DPB50	5	Slide Potentiometers 15MM SHAFT NO DET 45MM STRK SNG LIN	18-Apr-17
46	TSI	Mouser	859-LTV-357T	10	Transistor Output Optocouplers Optocoupler Phototrans	18-Apr-17
46	TSI	Mouser	594-AC05W10K00J	6	Wirewound Resistors - Through Hole 5watts 10Kohms 5%	18-Apr-17
46	TSI	Mouser	571-5568802	6	Power to the Board CONTACT AMPINNERGY WTB 10-12	18-Apr-17
46	GLV	Mouser	645-6123132120F	2	LED Panel Mount Indicators Red 60mcd 6VDC 15mA	18-Apr-17
46	GLV	Mouser	645-6123132130F	1	LED Panel Mount Indicators Red 60mcd 12VDC 15mA	18-Apr-17
46	GLV	Mouser	645-6123232140F	2	LED Panel Mount Indicators GREEN 110MCD 24VCD 15MA	18-Apr-17
47	TSV	McMaster	8507K65	1	Rubber Edge Trim Standard Style 4, 100 FT	18-Apr-17
47	TSV	McMaster	8216T66	1	Made-to-Order Peel-and-Stick Message, 1-5 Characters, 1-1/2" High, "1234"	18-Apr-17
47	TSI	McMaster	74945A69	1	Clear Silicone Sealant, Loctite® 59530, 2.7 oz. Tube	18-Apr-17
47	IC	McMaster	7432K162	1	Spiral Bundling Wrap, UV-Resistant Polyethylene, 3/16" ID, 1/4" OD (25ft)	18-Apr-17

47	IC	McMaster	7432K63	1	Spiral Bundling Wrap, UV-Resistant Polyethylene, 1/4" ID, 3/8" OD (25ft)	18-Apr-17
48	TSI	Home Depot	279782	2	3/4 in. Non-Metallic (NM) Twin-Screw Clamp Connectors (5-Pack)	19-Apr-17
48	TSI	Home Depot	292514	1	1 in. Non-Metallic (NM) Twin-Screw Clamp Connector (Wrong size but opened package thus cannot return)	19-Apr-17
48	TSI	Home Depot	492405	2	Everbilt #8-32 x 3/4 in. Phillips Flat-Head Machine Screws (5-Pack)	19-Apr-17
48	TSI	Home Depot	661872	6	3/8 in. Hex Bolt	19-Apr-17
48	TSI	Home Depot	655449	6	3/8 in. Hex Nut	19-Apr-17
49	TSI	Super Bright LEDs	PL-3S	1	Straight 3-Pin Plug for Trailer Lights and Truck Lights	20-Apr-17
49	TSI	Super Bright LEDs	KC-65	1	PT Series Chrome Bezel with Hood	20-Apr-17
50	IC	Wire Care	0462-201-16141	100	Female, Crimp 16 - 20 AWG	20-Apr-17
50	IC	Wire Care	0460-202-16141	100	Male pin 16 - 20 AWG	20-Apr-17
51	IC	Mouser	571-DT06-2S	10	Automotive Connectors 6WAY RECEPTACLE	21-Apr-17
51	IC	Mouser	571-W2-S	10	Pin & Socket Connectors 2 POS MICRO MNL, TOP LATCH, BL	21-Apr-17
51	IC	Mouser	571-W6-S	10	Automotive Connectors 6WAY RECEPTACLE	21-Apr-17
51	IC	Mouser	571-DT04-6P	5	Pin & Socket Connectors 2 POS MICRO MNL, TOP LATCH, BL	21-Apr-17
51	TSI	Mouser	571-2008571-2	10	Automotive Connectors 6WAY RECEPTACLE	21-Apr-17
52	GLV	McMaster	7565K47	2	Cable Holders, Adhesive-Back, for 9/16" Maximum Bundle Diameter (Pack of 25)	21-Apr-17

Outstanding Orders:

The following items have been ordered but have not yet been received:

Purchase Order #46 – TSI/GLV – Mouser – Corrected Slide Pots, 10K Through-hole resistors, Panel LEDs (Appendix IV)

Purchase Order #47** – TSI/IC*/TSV – McMaster – Rubber Trim, Sealant, Pack Labels, Spiral Wrap (Appendix V)

Purchase Order #49 – TSI – Super Bright LEDs – Brake Light Bezel and Plug (Appendix VII)

Purchase Order #50 – IC* – Wire Care – 16-20 AWG Pins (Appendix VIII)

Purchase Order #51 – IC*/TSI – Mouser – Connectors (Appendix IX)

Purchase Order #52 – GLV – McMaster – Cable Holders for Strain Relief (Appendix X)

*IC stands for Interconnect/Cabling/ICD

**Only 1 out of 5 items of Purchase Order #47 has yet to be received

Req #	Team	Vendor	Vendor PN	Qty	Item Description	Ordered Date
46	TSI	Mouser	652-PTA45532015DPB50	5	Slide Potentiometers 15MM SHAFT NO DET 45MM STRK SNG LIN	18-Apr-17
46	TSI	Mouser	859-LTV-357T	10	Transistor Output Optocouplers Optocoupler Phototrans	18-Apr-17
46	TSI	Mouser	594-AC05W10K00J	6	Wirewound Resistors - Through Hole 5watts 10Kohms 5%	18-Apr-17
46	TSI	Mouser	571-5568802	6	Power to the Board CONTACT AMPINNERGY WTB 10-12	18-Apr-17
46	GLV	Mouser	645-6123132120F	2	LED Panel Mount Indicators Red 60mcd 6VDC 15mA	18-Apr-17
46	GLV	Mouser	645-6123132130F	1	LED Panel Mount Indicators Red 60mcd 12VDC 15mA	18-Apr-17
46	GLV	Mouser	645-6123232140F	2	LED Panel Mount Indicators GREEN 110MCD 24VCD 15MA	18-Apr-17
47	TSV	McMaster	8216T66	1	Made-to-Order Peel-and-Stick Message, 1-5 Characters, 1-1/2" High, "1234"	18-Apr-17
49	TSI	Super Bright LEDs	PL-3S	1	Straight 3-Pin Plug for Trailer Lights and Truck Lights	20-Apr-17
49	TSI	Super Bright LEDs	KC-65	1	PT Series Chrome Bezel with Hood	20-Apr-17
50	IC	Wire Care	0462-201-16141	100	Female, Crimp 16 - 20 AWG	20-Apr-17
50	IC	Wire Care	0460-202-16141	100	Male pin 16 - 20 AWG	20-Apr-17

51	IC	Mouser	571-DT06-2S	10	Automotive Connectors 6WAY RECEPTACLE	21-Apr-17
51	IC	Mouser	571-W2-S	10	Pin & Socket Connectors 2 POS MICRO MNL, TOP LATCH, BL	21-Apr-17
51	IC	Mouser	571-W6-S	10	Automotive Connectors 6WAY RECEPTACLE	21-Apr-17
51	IC	Mouser	571-DT04-6P	5	Pin & Socket Connectors 2 POS MICRO MNL, TOP LATCH, BL	21-Apr-17
51	TSI	Mouser	571-2008571-2	10	Automotive Connectors 6WAY RECEPTACLE	21-Apr-17
52	GLV	McMaster	7565K47	2	Cable Holders, Adhesive-Back, for 9/16" Maximum Bundle Diameter (Pack of 25)	21-Apr-17

APPENDIX I

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 42

Requested By: TSI (Jack / Adam)
Requested Date: 12-Apr-17
Ship By: Ground

Vendor: Super Bright LEDs
Web Site: <http://www.superbrightleds.com/>
Phone: 866-590-3533

#	Vendor PN	UPC	Description	Quantity	Unit Price	Total Price	Rcvd
1	PT-STRB-R56	847781017625	Oval LED Strobe Truck and Trailer Lights - 6" LED Lights w/ Built-In Controller - 3-Pin Connector - Red	1	\$24.95	\$24.95	18-Apr-17
2	M9-R4	847781017977	Oval LED Truck and Trailer Lights - 4" LED Side Clearance Lights w/ 4 High Flux LEDs - Pigtail Connector - Red	2	\$4.95	\$9.90	18-Apr-17

Subtotal:	\$34.85
Shipping Fees	\$7.70
Grand Total:	\$42.55

APPENDIX II

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 44

Requested By: TSI & TSV
Requested Date: 12-Apr-17
Ship By: Ground

Vendor: Digikey
Web Site: <http://www.digikey.com>
Phone: 218-681-6674

#	Team	Vendor PN	Manufacturer PN	Description	Quantity	Unit Price	Total Price	Rcvd
1	TSI	P4.70KCCT-ND	ERJ-6ENF4701V	RES SMD 4.7K OHM 1% 1/8W 0805	10	\$0.037	\$0.37	18-Apr-17
2	TSI	P4.87KCCT-ND	ERJ-6ENF4871V	RES SMD 4.87K OHM 1% 1/8W 0805	10	\$0.037	\$0.37	18-Apr-17
3	TSI	P4.99KCCT-ND	ERJ-6ENF4991V	RES SMD 4.99K OHM 1% 1/8W 0805	10	\$0.037	\$0.37	18-Apr-17
4	TSI	AKC14H-ND	1658621-2	CONN IDC SKT 14POS W/POL 15 GOLD	2	\$1.440	\$2.88	18-Apr-17
5	TSI	WM2902-ND	50579404	CONN HOUSING 4POS .100 W/LATCH	2	\$0.270	\$0.54	18-Apr-17
6	TSI	WM2906-ND	50579408	CONN HOUSING 8POS .100 W/LATCH	2	\$0.480	\$0.96	18-Apr-17
7	TSI	556879-2-ND	556879-2	CONN HSG PLUG 2POS 11.18MM BLACK	2	\$3.890	\$7.78	18-Apr-17
8	TSI	F4564-ND	01500322H	FUSE HLDR CART 500V 15A IN LINE	2	\$6.350	\$12.70	18-Apr-17
9	TSI	F3212-ND	0314.500HXP	FUSE CERAMIC 500MA 250VAC 125VDC	10	\$0.899	\$8.99	18-Apr-17
10	TSV	887-1741-1-ND	7A-10.000MAAE-T	CRYSTAL 10.0000MHZ 12PF SMD	15	\$0.582	\$8.73	18-Apr-17

Subtotal:	\$43.69
Shipping Fees	\$8.99
Grand Total:	\$52.68

APPENDIX III

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 45

Requested By: GLV (Joe)
Requested Date: 12-Apr-17
Ship By: Ground

Vendor: Adafruit
Web Site: <https://www.adafruit.com/>
Phone: (646) 248-7822

#	Vendor PN	Description	Quantity	Unit Price	Total Price	Rcvd
1	2718	7" Touchscreen Display for Raspberry Pi	1	\$79.95	\$79.95	18-Apr-17

Subtotal:	\$79.95
Shipping Fees	\$7.12
Grand Total:	\$87.07

APPENDIX IV

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Requested By: TSI & GLV
Requested Date: 18-Apr-17
Ship By: 3-Day

Req Number: 46

Vendor: Mouser
Web Site: www.mouser.com
Phone: (800) 346-6873

#	Team	Vendor PN	Manufacturer PN	Description	Quantity	Unit Price	Total Price	Rcvd
1	TSI	652-PTA45532015DPB50	PTA4553-2015DPB502	Slide Potentiometers 15MM SHAFT NO DET 45MM STRK SNG LIN	5	\$1.200	\$6.00	
2	TSI	859-LTV-357T	LTV-357T	Transistor Output Optocouplers Optocoupler Phototrans	10	\$0.192	\$1.92	
3	TSI	594-AC05W10K00J	AC05000001002JAC00	Wirewound Resistors - Through Hole 5watts 10Kohms 5%	6	\$0.580	\$3.48	
4	TSI	571-5568802	556880-2	Power to the Board CONTACT AMPINNERGY WTB 10-12	6	\$0.810	\$4.86	
5	GLV	645-6123132120F	612-3132-120F	LED Panel Mount Indicators Red 60mcd 6VDC 15mA	2	\$5.190	\$10.38	
6	GLV	645-6123132130F	612-3132-130F	LED Panel Mount Indicators Red 60mcd 12VDC 15mA	1	\$5.190	\$5.19	
7	GLV	645-6123232140F	612-3232-140F	LED Panel Mount Indicators GREEN 110MCD 24VCD 15MA	2	\$5.190	\$10.38	

Subtotal:	\$42.21
Shipping Fees:	
Grand Total:	

Instructor Approval: _____

APPENDIX V

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 47

Requested By: TSV & TSI & IC
Requested Date: 18-Apr-17
Ship By: Ground

Vendor: McMaster Carr
Web Site: www.mcmaster.com
Phone: 609-689-3000

#	Team	Vendor PN	Manufacturer PN	Description	Quantity	Unit Price	Total Price	Rcvd
1	TSV	8507K65	N/A	Rubber Edge Trim Standard Style 4, 100 FT	1	\$54.00	\$54.00	20-Apr-17
2	TSV	8216T66	N/A	Made-to-Order Peel-and-Stick Message, 1-5 Characters, 1-1/2" High, "1234"	1	\$4.50	\$4.50	
3	TSI	74945A69	59530	Clear Silicone Sealant, Loctite® 59530, 2.7 oz. Tube	1	\$5.98	\$5.98	20-Apr-17
4	IC	7432K162	N/A	Spiral Bundling Wrap, UV-Resistant Polyethylene, 3/16" ID, 1/4" OD (25ft)	1	\$9.07	\$9.07	20-Apr-17
5	IC	7432K63	N/A	Spiral Bundling Wrap, UV-Resistant Polyethylene, 1/4" ID, 3/8" OD (25ft)	1	\$13.31	\$13.31	20-Apr-17

Grand Total:	\$86.86
Shipping Fees	\$6.36
Grand Total:	\$93.22

APPENDIX VI

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 48

Requested By: TSI (Christer)
Requested Date: 19-Apr-17
Ship By: N/A (Picked Up)

Vendor: Home Depot
Web Site: <http://www.homedepot.com/>
Phone: 1-800-466-3337

#	Vendor SKU	Model #	Description	Quantity	Unit Price	Total Price	Rcvd
1	279782	20512	3/4 in. Non-Metallic (NM) Twin-Screw Clamp Connectors (5-Pack)	2	\$4.210	\$8.42	19-Apr-17
2	292514	90513	1 in. Non-Metallic (NM) Twin-Screw Clamp Connector (Wrong size but opened package thus cannot return)	1	\$1.610	\$1.61	19-Apr-17
3	492405	33461	Everbilt #8-32 x 3/4 in. Phillips Flat-Head Machine Screws (5-Pack)	2	\$1.180	\$2.36	19-Apr-17
4	661872	87196	3/8 in. Hex Bolt	6	\$0.200	\$1.20	19-Apr-17
5	655449	801756	3/8 in. Hex Nut	6	\$0.120	\$0.72	19-Apr-17

Subtotal:	\$14.31
Shipping / Tax:	\$0.00
Grand Total:	\$14.31

APPENDIX VII

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 49

Requested By: TSI (Jack)
Requested Date: 20-Apr-17
Ship By: Ground

Vendor: Super Bright LEDs
Web Site: <http://www.superbrightleds.com/>
Phone: 866-590-3533

#	Vendor PN	UPC	Description	Quantity	Unit Price	Total Price	Rcvd
1	PL-3S	847781017779	Straight 3-Pin Plug for Trailer Lights and Truck Lights	1	\$1.49	\$1.49	
2	KC-65	847781031713	PT Series Chrome Bezel with Hood	1	\$2.95	\$2.95	

Subtotal:	\$4.44
Shipping Fees:	\$3.57
Grand Total:	\$8.01

Instructor Approval: _____

APPENDIX VIII

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 50

Requested By: IC (Larisa)
Requested Date: 20-Apr-17
Ship By: Ground

Vendor: Wire Care
Web Site: www.wirecare.com
Phone: 973-300-9782

#	Vendor PN	Description	Quantity	Unit Price	Total Price	Rcvd
1	0462-201-16141	Female, Crimp 16 - 20 AWG	100	\$0.60	\$60.00	
2	0460-202-16141	Male pin 16 - 20 AWG	100	\$0.593	\$59.30	

Subtotal:	\$119.30
Shipping Fees:	
Grand Total:	

Instructor Approval: _____

APPENDIX IX

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 51

Requested By: IC & TSI
Requested Date: 21-Apr-17
Ship By: 3-Day

Vendor: Mouser
Web Site: www.mouser.com
Phone: (800)346-6873

#	Team	Vendor PN	Manufacturer PN	Description	Quantity	Unit Price	Total Price	Rcvd
1	IC	571-DT06-2S	DT06-2S	Automotive Connectors DT Plug 2 Way	10	\$1.030	\$10.30	
2	IC	571-W2-S	W2-S	WEDGE LOCK FOR 2P PLUG HOUSING	10	\$0.105	\$1.05	
3	IC	571-W6-S	W6-S	WEDGE LOCK FOR 6P PLUG HOUSING	10	\$0.280	\$2.80	
4	IC	571-DT04-6P	DT04-6P	Automotive Connectors 6WAY RECEPTACLE	5	\$2.690	\$13.45	
5	TSI	571-2008571-2	2008571-2	Pin & Socket Connectors 2 POS MICRO MNL, TOP LATCH, BL	10	\$0.181	\$1.81	

Subtotal:	\$29.41
Shipping Fees:	
Grand Total:	

Instructor Approval: _____

Mouser Cart URL: <http://www.mouser.com/ProjectManager/ProjectDetail.aspx?AccessID=0ca6e4c161>

APPENDIX X

ECE Department Material Request

Course: ECE 492
Professor: Nadovich/Schmult

Req Number: 52

Requested By: GLV (Kyle)
Requested Date: 21-Apr-17
Ship By: Ground

Vendor: McMaster Carr
Web Site: <http://www.mcmaster.com>
Phone: 218-681-6674

#	Vendor PN	Description	Quantity	Unit Price	Total Price	Rcvd
1	7565K47	Cable Holders, Adhesive-Back, for 9/16" Maximum Bundle Diameter (Pack of 25)	2	\$11.83	\$23.66	

Subtotal:	\$23.66
Shipping Fees:	
Grand Total:	

Instructor Approval: _____