

Equipment Purchasing						\$108,973.21				
Item	Description	Source	Reference	Quan	Cost Ea	Total	Purchaser	PO #	Date	Rcvd
DE52	Square D - QO816L100DS - 100A, 8sp/16ckt, lugs, 8.9"W x 12.6" H	Lowes	29297	8	\$39.98	\$319.84				
DE53	Fiberglass Enclosure, 16x14x8	FactoryMation	AM1648T	8	\$97.00	\$776.00				
DE54	Subpanel for AM1648T	FactoryMation	P164	8	\$21.00	\$168.00				
DE55	Square D - QO115 breaker, 1 pole, 15A	Lowes			\$4.47					
DE56	Square D - QO120 breaker, 1 pole, 20A	Lowes			\$4.47					
DE57	Knock-out bushings - 1"	Waytek	24108	50	\$0.12					
DE58										
DE59										
DE60										
DE61										
DE62										
DE63										
DE64										
DE65										
DE66										
DE67										
DE68										
DE69										
DE70										
DE71										
DE72										
DE73										
DE74										
DE75										
CP1	CONTROL									
CP2	Enclosure, 60x24x12, Mod according to Project ID #ES03366	FactoryMation	MOD-SCE-60EL24	1	\$629.00	\$629.00				
CP3	Subpanel for enclosure, Mod according to Project ID #ES03367	FactoryMation	MOD-SCE-60P24	1	\$187.00	\$187.00				
CP4	IntelliCompact, Controller	ComAp	IC-NT Mint	2	\$1,298.00	\$2,596.00				
CP5	IntelliCompact, USB Module	ComAp	IL-NT S-USB	2	\$106.00	\$212.00				
CP6	AVRi	ComAp	IG-AVRi	2	\$95.43	\$190.86				
CP7	AVRi Transformer	ComAp	IG-AVRi TRANS-L	2	\$28.63	\$57.26				
CP8	IntelliMains, Controller	ComAp	MainsCompactNT	1	\$1,660.00	\$1,660.00				
CP9	Internet Bridge	ComAp	IG-IB	1	\$570.00	\$570.00				
CP10	Internet Bridge, 3 genset dongle	ComAp	IG-IB3	1	\$92.00	\$92.00				
CP11						\$0.00				
CP12	PLC: Alarm Control	FactoryMation	SG2-12HR-12D	1	\$97.00	\$97.00				
CP13	PLC: TECO RS232 programming cable	FactoryMation	SG2-PL1	1	\$23.00	\$23.00				
CP14	PLC: Memory cartridge	FactoryMation	SG2-PM05	1	\$11.00	\$11.00				
CP15	PLC: Programming Cable, USB - RS232 Adapter (option)	FactoryMation	FM-USB232A	0	\$29.00	\$0.00				
CP16	PLC: Programming Cable, USB version (option)	FactoryMation	SG2-ULINK	0	\$33.00	\$0.00				
CP17	Din Rail: Aluminum, 1M, 5 pack	FactoryMation	DIN35A-5PK	1	\$20.00	\$20.00				
CP18	Terminal Block relays, 12v, SPDT, 6A (6mm wide)	FactoryMation	38.51.7.012.0050	12	\$11.00	\$132.00				
CP19	Extra Relay for above	FactoryMation	34.51.7.012.0010	2	\$5.00	\$10.00				
CP20	Terminal Block relays, 12v, DPDT, 8A (14mm wide)	FactoryMation	38.52.7.012.0050	3	\$15.00	\$45.00				
CP21	Extra Relay for above	FactoryMation	41.52.9.012.0010	2	\$4.00	\$8.00				
CP22	Jumper bar for relays - 20 pole (red)	FactoryMation	093-20-1	2	\$2.00	\$4.00				
CP23	Terminal blocks, pk/100	FactoryMation	ER4BLUE	2	\$38.00	\$76.00				
CP24	Terminal block end bracket, pk/20	FactoryMation	ES1	2	\$5.00	\$10.00				
CP25	Terminal block end plate, pk/25	FactoryMation	EP2.5-10	1	\$5.00	\$5.00				
CP26	Terminal block marking tags, blank, pk/500	FactoryMation	MT5	1	\$13.00	\$13.00				
CP27	Terminal Block Cross connection, strip for 10, 5 pack	FactoryMation	CC4/10	3	\$22.00	\$66.00				

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CP28	Breakers, Control, 5A, 1p DIN Mount	FactoryMation	NB1-B5-1P	4	\$6.00	\$24.00					
CP29	22mm LED indicator, RED, 12v	FactoryMation	FMD16-DS12V-1	4	\$5.00	\$20.00					
CP30	22mm LED indicator, GRN, 12v	FactoryMation	FMD16-DS12V-2	3	\$5.00	\$15.00					
CP31	22mm LED indicator, YLW, 12v	FactoryMation	FMD16-DS12V-3	3	\$5.00	\$15.00					
CP32	22mm LED indicator, BLU, 12v	FactoryMation	FMD16-DS12V-4	1	\$5.00	\$5.00					
CP33	Legend plate, blank	Allied Electronics	767-0212	11	\$1.20	\$13.20					
CP34	Selector switch operator, on/off	Allied Electronics	767-0108	3	\$11.26	\$33.78					
CP35	Emergency Stop mushroom head operator, push - turn release	Allied Electronics	767-0200	1	\$8.09	\$8.09					
CP36	Push button operator, flush yellow (alarm silence)	Allied Electronics	767-0073	1	\$3.59	\$3.59					
CP37	Contact block, Normally Open (NO), silver contacts	Allied Electronics	767-0138	10	\$3.31	\$33.10					
CP38	Contact block, Normally Closed (NC), silver contacts	Allied Electronics	767-0139	2	\$3.41	\$6.82					
CP39	Legend plate, Emergency Stop	Allied Electronics	767-0219	1	\$1.20	\$1.20					
CP40	Legend plate, Emergency Stop	Allied Electronics	767-0220	1	\$1.20	\$1.20					
CP41	Legend plate, ON OFF	Allied Electronics	767-0244	3	\$1.20	\$3.60					
CP42	Legend plate, Reset	Allied Electronics	767-0258	1	\$1.20	\$1.20					
CP43	Handle, Electronic, 6" BC	Allied Electronics	839-7181	1	\$3.86	\$3.86					
CP44	Switch, toggle, DPST, Std 15/32, Manual Override	Allied Electronics	683-0060	2	\$6.09	\$12.18					
CP45	Switch, toggle, SPST MOM, Std 15/32, Manual Start	Waytekwire	44253	2	\$6.34	\$12.68					
CP46	Diode, loose, 1N4004	Allied Electronics	950-0469	10	\$0.06	\$0.56					
CP47	Resistor, 10K, 1W, Loose	Allied Electronics	648-0085	10	\$0.08	\$0.80					
CP48	Fuse Block, Blue Sea Systems PN 5026, 12 circuit	McMaster-Carr	5183T12	1	\$54.04	\$54.04					
CP49	F7, DIN mount blade Fuse holder- Phoenix Contact 3118203	Allied Electronics	70169133	1	\$8.43	\$8.43					
CP50	1000' 16g Black WR16 stranded wire	Waytek Wire	WR16-0	1000	\$0.12	\$117.30					
CP51	1000' 16g Red WR16 stranded wire	Waytek Wire	WR16-2	1000	\$0.12	\$117.30					
CP52	1000' 16g White WR16 stranded wire	Waytek Wire	WR16-9	1000	\$0.12	\$117.30					
CP53	Standoff, Power Junction Block (for switch plate)	Waytek Wire	47211	2	\$3.57	\$7.14					
CP54	Circuit Breaker 5 Amp Tan Low Profile Blade Mount	Waytek Wire	46791	10	\$2.72	\$27.20					
CP55	Circuit Breaker 10 Amp Red Low Profile Blade Mount	Waytek Wire	46794	10	\$2.72	\$27.20					
CP56	Circuit Breaker 20 Amp Red Low Profile Blade Mount	Waytek Wire	46796	5	\$2.72	\$13.60					
CP57	Low Voltage Disconnect, adjustable dropout voltage, 20a 12v	Waytek Wire	80029	1	\$72.62	\$72.62					
CP58	8-32 nuts, SS Box of 100	McMaster-Carr	96278A009	1	\$7.71	\$7.71					
CP59	8-32 x 1/2" Pan, SS, box of 100	McMaster-Carr	91772A194	1	\$7.05	\$7.05					
CP60	8-32 hinged standoff, M-M, 1/4x 1/2L body	McMaster-Carr	98010A530	6	\$2.42	\$14.52					
CP61	8/32 M-F threaded 1/4" standoff, 1/2"L body	McMaster-Carr	92700A715 (8-32)	6	\$1.18	\$7.08					
CP62	3/8" coupling nut (Standoff for Switch Plate)	McMaster-Carr	90264A460	2	\$0.72	\$1.44					
CP63						\$0.00					
CP64											
CP65	Spade terminal, Flanged block, 14-16, #8, Nylon	Waytek Wire	31721	100	\$0.12	\$12.30					
CP66	Spade terminal, Ring, 14-16, 1/4, Nylon	Waytek Wire	31704	25	\$0.10	\$2.55					
CP67	Spade terminal, Ring, 12-10, 5/16, Nylon	Waytek Wire	32704	25	\$0.16	\$4.00					
CP68											
CP69	Fuel Pump connector (DT06-2S) Kit, 3' lead	Martin Machinery		1							
CP70	DC 12V to 24V 10A 240W Step-up DC to DC Converter (FH234, 24v primer p	http://stores.ebay.com	SU12DK240	2	\$53.90	\$107.80					
CP71	20A relay, 240v coil, buffer inrush current on distribution contactors	Allied Electronics	850-0741	3	\$6.71	\$20.13					
CP72	Relay base for above	Allied Electronics	850-0803	3	\$4.83	\$14.49					
CP73	Relay hold down clip	Allied Electronics	850-0763	3	\$0.65	\$1.95					
CP74	320v MOV/ZNR lightning protector - Utility monitor line (for 240vac)	DigiKey	495-1458-ND	6	\$9.18	\$55.08					
CP75	275v MOV/ZNR lightning protector - Utility monitor (for 240vac - option)	DigiKey	P7173-ND	0	\$17.06	\$0.00					
CP76	Screw-terminal barrier strip to mount MOVs	DigiKey	A98520-ND	98520-N	\$5.98	\$23.92					
CP77						\$0.00					
CP78	EXTERNAL					\$0.00					

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CP79	Wiremarker Book #1-45	Waytek Wire	53600	0	\$9.05	\$0.00					
CP80	Wiremarker Book #46-90	Waytek Wire	53601	0	\$9.05	\$0.00					
CP81	Wiremarker Book #0-9	Waytek Wire	53602	0	\$9.05	\$0.00					
CP82	Wiremarker Book A-Z, 0-15, +, -, /	Waytek Wire	53603	0	\$9.05	\$0.00					
CP83	Self Fusing Tape Black 1" X 20'	Waytek Wire	20965	4	\$7.10	\$28.40					
CP84											
CP85	Self Fusing Tape Black 1" X 20'	Waytek Wire	20965	4	\$7.10						
CP86											
CP87						\$0.00					
CP88	GENERATOR CONTROL WIRE										
CP89	Trailer Cable 6 Contact 16 Ga Vinyl Jacketed Trailer Cable	Waytek Wire	WT16-6	100	\$0.54	\$54.28					
CP90	Trailer Cable 4 Contact 16 Ga Vinyl Jacketed Trailer Cable	Waytek Wire	WT16-4	100	\$0.42	\$41.66					
CP91	3 Conductor Jacketed Gpt Primary Wire 10 Ga Brake Cable	Waytek Wire	WD10-3	100	\$0.83	\$82.74					
CP92											
CP93											
CP94	CONTROL ACCESSORIES										
CP95											
CP96											
CP97	Alarm Bell, 12V -- 6-8" Fire Bell	Allied Electronics	Edwards 439D-6R	1	\$122.00	\$122.00					
CP98	Prestart warning, 12V Siren	Allied Electronics	623-2037	2	\$6.00	\$12.00					
CP99	2" PVC conduit, Teminal adapter	Lowe's	115906	10	\$0.77	\$7.70					
CP100	1/2" PVC conduit, male adapter	Lowe's	115888	3	\$0.33	\$0.99					
CP101	2" Conduit Rigid Nut	Lowe's	75927	10	\$1.42	\$14.20					
CP102	1/2" Conduit Rigid Nut	Lowe's	75443	3	\$0.39	\$1.17					
CP103	High Amp Fuse 100 Amp Amg Mega Bolt Down	Waytek Wire	46270	6	\$2.93	\$17.58					
CP104	Mega Fuse Holder W/Cover	Waytek Wire	46038	4	\$7.47	\$29.88					
CP105	Maxi-Fuse Holder Red Leads 5" 6ga Wire 60 Amp Max Rating	Waytek Wire	46024	2	\$4.28	\$8.56					
CP106	Maxi Automotive Fuse 20 Amps Yellow	Waytek Wire	46240	10	\$0.76	\$7.62					
CP107	Battery top post terminal & lug	Waytek Wire	36225	2	\$3.73	\$7.46					
CP108	12v > 50Ah flooded lead-acid battery for control system -- Optional: AGM batt	local		1	\$100.00	\$0.00					
CP109	Control System Battery Charger: Xantrex TrueCharge2, 12v 20A, 3 bank	Amazon, NewAge M	804-1220-02	1	\$230.00	\$230.00					
CP110	Anderson Power Pole Connectors for battery-- SB50	Waytek Wire	37708	6	\$2.87	\$17.22					
CP111											
CP112											
CP113											
CP114											
CP115											
CP116											
CP117											
CP118											
CP119											
CP120											
MD2											
MD3	Enclosure - 60x36x12", MOD according to Project ID# ES03369	FactoryMation	MOD-SCE-60EL36	1	\$765.00	\$765.00					
MD4	Subpanel for enclosure, MOD according to Project ID# ES03372	FactoryMation	MOD-SCE-60P36	1	\$326.00	\$326.00					
MD5	Contactors: Main, Telemecanique 400, 240V coil	granite city supply	LC1F400U7	3	\$1,165.33	\$3,495.99					
MD6	Contactors: Load Shed, ABB 110 a , 100-240V coil	granite city supply	AF110-30-11-70	8	\$226.85	\$1,814.80					
MD7	Breaker: Load Shed , T2S100TW	granite city supply	T2S100TW	8	\$163.00	\$1,304.00					
MD8	Breaker: Non-Shed Output 50A, 2P, to Power House Load Center	Square D	QOU250	2	\$30.00	\$30.00					
MD9	Breaker: Relay Power, 10A	FactoryMation	NB1-D10-1P	1	\$6.00	\$6.00					
MD10	22mm LED indicator, GRN, 220v	FactoryMation	FMD16-DS220V-2	3	\$5.00	\$15.00					

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MD11	22mm LED indicator, BLU, 220v	FactoryMation	FMD16-DS220V-4	1	\$5.00	\$5.00					
MD12	22mm LED indicator, WHI, 220v	FactoryMation	FMD16-DS220V-0	8	\$5.00	\$40.00					
MD13	Legend plate, blank	Allied Electronics	767-0212	12	\$1.20	\$14.40					
MD14	Analog Gauge, Voltmeter, 3.5"	Allied Electronics	378-0028	1	\$57.66	\$57.66					
MD15	Analog Gauge, Ammeter, 3.5"	Allied Electronics	378-0030	1	\$103.79	\$103.79					
MD16	Handle, Electronic, 6" BC	Allied Electronics	839-7181	2	\$4.80	\$9.60					
MD17	Switch protector guard	Allied Electronics	826-8182	3	\$5.50	\$16.50					
MD18	Switch, toggle, SPDT, Std 15/32	Allied Electronics	683-0053	8	\$6.65	\$53.20					
MD19	Rubber Half Boot, Std TOGGLE	Allied Electronics	760-0225	8	\$4.47	\$35.76					
MD20	Legend plate, ON OFF	Allied Electronics	767-0244	1	\$1.20	\$1.20					
MD21	Selector switch operator, on/off	Allied Electronics	767-0108	1	\$11.26	\$11.26					
MD22	Contact block, Normally Open (NO), silver contacts	Allied Electronics	767-0138	1	\$3.31	\$3.31					
MD23	Current transformer, 200A:5A	Digi-Key	811-1109-ND	2	\$29.75	\$59.50					
MD24	Transient Suppressors, Littelfuse V251BA60	Mouser	576-V321BA60	3	\$108.99	\$326.97					
MD25	Transient Suppressors, Littelfuse V251BA60	Digikey	F4091-ND	0	\$112.12	\$0.00					
MD26	Copper Buss bar, 3/16x1x3' *MADE PY PRICE	McMaster-Carr	98644K222-3'	0	\$26.84	\$0.00					
MD27	Copper Buss bar, 1/8x3/4x3' *MADE BY PRICE	McMaster-Carr	8964K5-3'	0	\$15.32	\$0.00					
MD28	3/8"-16 x 1-1/4" SS bolts for lugs, package of 25	McMaster-Carr	92240A626	2	\$9.21	\$18.42					
MD29	3/8" Belleville spring lock washers, SS, box of 10	McMaster-Carr	90895A031	5	\$12.93	\$64.65					
MD30	3/8"-16 SS nuts, box of 100	McMaster-Carr	91845A031	1	\$8.97	\$8.97					
MD31	5/16"-18 x 1-1/4" SS bolts for lugs, package of 25	McMaster-Carr	92240A585	1	\$8.20	\$8.20					
MD32	5/16" Belleville spring lock washers, SS, box of 10	McMaster-Carr	90895A030	3	\$6.32	\$18.96					
MD33	5/16"-18 SS nuts, box of 100	McMaster-Carr	91845A030	1	\$6.52	\$6.52					
MD34	8-32 x 3" round head screws, SS, box 25	McMaster-Carr	91783A209	1	\$6.62	\$6.62					
MD35	8-32 x 1", Pan, box of 100	McMaster-Carr	91772A199	1	\$9.90	\$9.90					
MD36	#8 Belleville Spring washer, SS, box 50	McMaster-Carr	90895A009	3	\$9.91	\$29.73					
MD37	8/32 x 1/2 green Electrical grounding screw, Box 25	McMaster-Carr	92597A300	2	\$6.56	\$13.12					
MD38	1/4-20 x 1/2", SS, hex washer, box 50	McMaster-Carr	96024A410	1	\$7.95	\$7.95					
MD39	1/4" Belleville Spring washer, SS, box 25	McMaster-Carr	90895A029	2	\$10.27	\$20.54					
MD40	1/4-20 nuts, SS Box of 100	McMaster-Carr	91845A029	1	\$4.49	\$4.49					
MD41						\$0.00					
MD42	Lugs 3/0 GA 3/8" Stud Tinned UL Color Code Orange (best quality)	Waytek Wire	36361	42	\$2.88	\$120.96					
MD43	Lugs 1-2 GA 3/8" Stud Tinned UL Color Code Orange (best quality)	Waytek Wire	36515	40	\$1.38	\$55.20					
MD44	Standoff, Power Junction Block	Waytek Wire	47211	2	\$3.57	\$7.14					
MD45						\$0.00					
MD46	Crimp Tool, heavy wire lugs, adjustable, T&B TBM5-S	Allied Electronics	364-3630	1	\$545.23	\$545.23					
MD47						\$0.00					
MD48	Forged Steel Flange Threaded, 1/2 Pipe Size X 3-1/2" OD, for wire guide	McMaster-Carr	68095K226	1	\$13.06	\$13.06					
MD49	Blk STL Thrd Pipe Fitting 1/2" Pipe Cap, for wire guide	McMaster-Carr	4513K83	1	\$2.01	\$2.01					
MD50	Eyelets: #4 wire, 3/8 Stud	WaytekWire	36463	25	\$0.56	\$13.90					
MD51	Eyelets: #4 wire, 1/4 Stud	WaytekWire	36461	25	\$0.48	\$12.05					
MD52	Eyelets: #4 wire, 5/16 Stud	WaytekWire	36462	25	\$0.48	\$12.05					
MD53	4 gauge wire (Grounds)					\$0.00					
MD54	#6 Butt Splices, uninsulated	WaytekWire	34060	25	\$0.43	\$10.75					
MD55						\$0.00					
MD56	Heavy duty Concrete anchors, 3/8" x 4", box of 4	McMaster-Carr	99795A107	3	\$6.14	\$18.42					
MD57	3/8" concrete bit	McMaster-Carr				\$0.00					
MD58						\$0.00					
MD59	320v MOV/ZNR lightning protector - Utility monitor line (for 240vac)	DigiKey	495-1458-ND	6	\$9.18	\$0.00					
MD60	275v MOV/ZNR lightning protector - Utility monitor (for 240vac - option)	DigiKey	P7173-ND	0	\$17.06	\$17.90					
MD61	Screw-terminal barrier strip to mount MOVs	DigiKey	A98520-ND	98520-N	\$5.98	\$17.90					

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MD62	Utility - isolation transformer lightning arrestor - 750vac to ground (V751BA60)	Allied Electronics	70184622	0	\$173.84	\$0.00					
MD63						\$1,046.88					
MD64						\$0.00					
MD65						\$0.00					
MD66						\$0.00					
MD67						\$0.00					
MD68	20A relay, 240v coil, buffer inrush current on distribution contactors	Allied Electronics	850-0741	3	\$6.71	\$20.13					
MD69	Relay base for above	Allied Electronics	850-0803	3	\$4.83	\$14.49					
MD70	Relay hold down clip	Allied Electronics	850-0763	3	\$0.65	\$1.95					
MD71											
MD72											
MD73											
MD74											
MD75											
MD76											
MD77											
MD78											
MD79											
MD80											
PH1	Structure										
PH2											
PH3	Cement, Bag	Local				\$0.00					
PH4	Concrete Block (8x16 Nom)	Local				\$0.00					
PH5	Air Block (8x16 Nom)	Local				\$0.00					
PH6	Mortar Mix	Local				\$0.00					
PH7	Sand	Local				\$0.00					
PH8						\$30.00					
PH9	1/2" ReRod	Local				\$0.00					
PH10	3/8" ReRod	Local				\$0.00					
PH11	Ground Wire, 3/0 stripped	Local				\$0.00					
PH12						\$0.00					
PH13	Lumber	Local				\$0.00					
PH14						\$0.00					
PH15	2x8	Local				\$0.00					
PH16	2x6	Local				\$0.00					
PH17	2x4	Local				\$0.00					
PH18		Local				\$0.00					
PH19	Corrugated Roofing, Aluminum	Local				\$0.00					
PH20						\$0.00					
PH21	Conduits					\$0.00					
PH22	4" PVC conduit -- feet	Local		100		\$0.00					
PH23	4" PVC conduit 45deg Elbows (Can substitute (4) 90s if not avail.)	Local		8		\$0.00					
PH24	4" PVC Coupling	Local		2		\$0.00					
PH25	4" PVC Pipe Cap			6		\$0.00					
PH26	1.5" PVC Conduit -- feet	Local		4		\$0.00					
PH27	1" PVC Conduit -- feet	Local		4		\$0.00					
PH28	1" PVC 90deg Elbow	Local		1		\$0.00					
PH29						\$0.00					
PH30	Doors/Window/Acc	Local				\$0.00					
PH31	42" Door	Local		3		\$0.00					
PH32	32" Door	Local		1		\$0.00					

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PH33	28" Door	Local		2		\$0.00					
PH34	Window, 36" x 36" (for 40" x 40" rough opening)	Local		1		\$0.00					
PH35	R30-38 fiberglass insulation, 9" x 24" -- require 350sqft	Lowes		12		\$0.00					
PH36	plastic screen, 4' wide x 60' min. Total	Lowes		60		\$0.00					
PH37	Woven Wire Fencing, 4' high, 2x4, galv. steel 100' roll	Lowes	62294	1	\$74.00	\$74.00					
PH38						\$0.00					
PH39	GENERAL Purpose					\$0.00					
PH40	1/4" x 2 1/4" hex washer head concrete screws, box of 50	McMaster-Carr	90161A551	4	\$13.89	\$55.56					
PH41	3/16" x 1-3/4" concrete screws, box of 50	McMaster-Carr	90161A525	4	\$8.84	\$35.36					
PH42	1/4" flat washers, box of 100	McMaster-Carr	91090A105	1	\$4.60	\$4.60					
PH43	5/16" flat washers, box of 100	McMaster-Carr	91090A110	1	\$3.87	\$3.87					
PH44	3/16" concrete drill bit	McMaster-Carr	91286A318	5	\$2.42	\$12.10					
PH45	5/32" concrete drill bit	McMaster-Carr	2960A55	5	\$2.61	\$13.05					
PH46	#10 x1 1/2" self drilling sheet metal screws, SS, box of 100	McMaster-Carr	90197A651	2	\$9.28	\$18.56					
PH47	4' x 8' x 3/4" Treated Plywood	Lowes		1		\$0.00					
PH48	Staple gun: Powershot	Lowes	29965	2	\$20.98	\$41.96					
PH49	Staples: Arrow T50, 3/8"	Lowes	74102	1	\$11.28	\$11.28					
PH50	Fencing Staples: Galvanized, 500 count	Lowes	69217	1	\$2.98	\$2.98					
PH51	250-350mm sq. Copper wire, stripped for foundation ground usage	Local		42		\$0.00					
PH52	Ground rod, 5/8" x 10', 10mil copper plate, pointed (Eritech 615800)	Grainger	2KXL6	3	\$27.30	\$81.90					
PH53	Ground rod 5/8" threadless coupling (Eritech CC58)	Grainger	2KXN6	3	\$8.87	\$26.61					
PH54	Eritech Hammer Lock ground rod connection (Eritech EHL58C1K)	Grainger	2KXN4	3	\$13.29	\$39.87					
PH55	Eritech ground rod driving sleeve (Eritech B137-31)	Grainger	2CNJ5	1	\$8.62	\$8.62					
PH56						\$0.00					
PH57						\$0.00					
PH58						\$0.00					
PH59											
PH60	LIGHTS, SWITCHES & OUTLETS - CONTROL ROOM, ENGINE ROOM (12\										
PH61	1/2" PVC conduit, bell end, 10'	Lowes	72808	10	\$0.85						
PH62	1/2" PVC conduit, 90 degree sweep, bell end	Lowes	50916		\$0.57						
PH63	1/2" PVC coupling	Lowes	115930		\$0.27						
PH64	FSE PVC box, 1/2"	Lowes	115855		\$4.27						
PH65	1/2" PVC male adapter	Lowes	115888	20	\$0.28						
PH66	1/2" PVC conduit body T	Lowes	115991		\$2.49						
PH67	1/2" conduit locknut, pkg 20	Lowes	141843	20	\$2.56						
PH68	1/2" conduit locknut, pkg 20	Lowes	141843		\$2.56						
PH69	Gray PVC conduit cement, 16oz	Lowes	254888	1	\$6.03						
PH70	1/2" FSE Box Switch cover	Lowes	254884	4	\$1.57						
PH71	HD toggle switch - 20A/277VAC	Lowes	78510	4	\$2.55						
PH72	NEMA 4x PVC junction box, 4x4x2", screw cover (fuel pump conn, outlets)	Lowes	10008	6	\$6.38						
PH73	1/2" PVC box adapter	Lowes	72855	6	\$0.48						
PH74	Liquid Tight Conduit - gray, 1/2" ID, roll of 100'	Lowes	130357	1	\$46.00						
PH75	Liquid Tight fitting, 1/2" straight, gray	Lowes	116022	2	\$2.01						
PH76	1/2" PVC conduit female thread adapter	Lowes	115912	2	\$0.30						
PH77	Cord grip, 1/2", for wire 0.26-0.375"	Lowes	108655	1	\$3.22						
PH78	Square D - QO112L125G - 125A, 12sp/12ckt, lugs, 14.25"W x 18" H	Lowes		1							
PH79	Square D - QOC16US surface cover for QO112L125G	Lowes		1							
PH80	Square D - QO115 breaker, 1 pole, 15A	Lowes		2	\$4.47						
PH81	Square D - QO120 breaker, 1 pole, 20A	Lowes		2	\$4.47						
PH82	Square D - QO130 breaker, 1 pole, 30A	Lowes		2	\$4.47						

Equipment Purchasing						\$108,973.21				
Item	Description	Source	Reference	Quan	Cost Ea	Total	Purchaser	PO #	Date	Rcvd
PH83	4" ENT Ceiling box, Carlon, Octagon	Lowes	130185	10	\$1.76					
PH84	4" ENT Ceiling box, Carlon, Cover	Lowes	71002	6	\$1.09					
PH85	1" PVC conduit, 10' -- (distribution boxes / bldg entrance)	Lowes	72770	1	\$1.93					
PH86	1" PVC conduit, male adapter	Lowes	72856	3	\$0.54					
PH87	1" conduit locknut, pkg 2	Lowes	75464	3	\$1.18					
PH88	Wing Lock Wire Connector Blue 12 To 6 Ga	Waytek Wire	37037	100	\$0.10					
PH89	Wing Lock Wire Connector Gray 14 To 8 Ga	Waytek Wire	37036	100	\$0.09					
PH90	Wing Lock Wire Connector Red 16 To 10 Ga	Waytek Wire	37035	200	\$0.05					
PH91										
PH92	12v fluorescent lights for Control & Engine Room, A-base - 11w	ht AZ Wind Sun	ESL-1112-WW	4	\$19.00					
PH93	light bulb sockets, screw-type	Lowes	71130	6	\$1.37					
PH94										
PH95										
PH96										
PH97										
PH98										
GE1	Air Intake Louver, Fixed, SS, 45" x45"	Machine Shop	Drawing P37	2	\$400.00	\$800.00				
GE2	44"x44" auto alum. exhaust shutters for radiator exhaust (12.9sqft free area)	McMaster-Carr	2047K251	2	\$199.74	\$399.48				
GE3	Air Exhaust Ducts	Martin Machinery	Drawing P33	2		\$0.00				
GE4	Exhaust pipe--kit, 3" Aluminized steel pipe assm.	Exhaust shop	Drawing P34	2	\$100.00	\$200.00				
GE5	3" Stainless Steel U-Clamp	JEGS.com	555-30723	0	\$10.99	\$0.00				
GE6	3" Heavy Duty Steel U-Clamp	JEGS.com	289-35794	6	\$5.99	\$35.94				
GE7	Universal Flex SS Couplers, 3" I.D. x 8" Center x 12" O.A.L.	JEGS.com	555-30777	0	\$49.99	\$0.00				
GE8						\$0.00				
GE9	Fuel Delivery					\$0.00				
GE10	Fuel Tank	Machine Shop	Drawing P40	1		\$0.00				
GE11	Fuel Filter assm (Fleetguard Industrial Pro Duplex w/24V Primer Pump)	Martin Machinery	FH23467	1		\$0.00				
GE12	1/2" black iron pipe, 6'	McMaster-Carr	4457K35	2	\$14.85	\$29.70				
GE13	1/2" black Iron pipe, 4'	McMaster-Carr	4457K33	4	\$11.49	\$45.96				
GE14	1/2" black iron pipe, 18"	McMaster-Carr	4457K114	4	\$4.39	\$17.56				
GE15	1/2" black iron pipe, 12"	McMaster-Carr	44615K544	4	\$3.48	\$13.92				
GE16	1/2" black iron pipe, 9"	McMaster-Carr	44615K314	2	\$2.93	\$5.86				
GE17	1/2" black iron pipe, 6"	McMaster-Carr	44615K484	4	\$1.36	\$5.44				
GE18	1/2" black iron pipe, 3"	McMaster-Carr	44615K454	4	\$0.86	\$3.44				
GE19	1/2" black iron pipe, 1-1/4" to 1" reducer	McMaster-Carr	44605K281	2	\$2.78	\$5.56				
GE20	1/2" black iron pipe, 1" to 1/2" reducer	McMaster-Carr	44605K368	4	\$2.16	\$8.64				
GE21	1/2" black Iron pipe, T fitting	McMaster-Carr	44605K154	4	\$1.67	\$6.68				
GE22	1/2" black iron pipe, 1/2" pipe plug-Magnetic	McMaster-Carr	1072A13	4	\$2.30	\$9.20				
GE23	1/2" black Iron pipe, 45 deg elbow	McMaster-Carr	44605K123	8	\$2.07	\$16.56				
GE24	1/2" black Iron pipe, 90 deg elbow	McMaster-Carr	44605K114	4	\$1.25	\$5.00				
GE25	1/2" Black Steel Coupling	McMaster-Carr	46685K264	8	\$2.09	\$16.72				
GE26	1/2" bronze 1/4 turn ball valve w/ 0.25psi check	McMaster-Carr	47265K31	2	\$36.50	\$73.00				
GE27	1/2" bronze 1/4 turn ball valve	McMaster-Carr	4726K23	1	\$9.35	\$9.35				
GE28	1/2" bronze swinging 0.5psi check valve	McMaster-Carr	9770K43	3	\$31.14	\$93.42				
GE29	Brass NPT Reducer, 1/2"-1/4"	McMaster-Carr	50785K65	2	\$1.87	\$3.74				
GE30	Brass NPT Reducer, 1/2"-3/8"	McMaster-Carr	50785K66	2	\$1.78	\$3.56				
GE31	Brass barbed hose fitting, 3/16" hose-1/4"npt, box of 10	McMaster-Carr	5346K12	0	\$10.49	\$0.00				
GE32	Small SS band clamps, box of 10	McMaster-Carr	5321K14	0	\$6.85	\$0.00				
GE33	3/16" rubber fuel tubing, 10'	auto parts store		0	\$8.00	\$0.00				
GE34	hose for generator fuel delivery if not supplied					\$0.00				
GE35	1/2" hydraulic hose, 1/2" NPT--5' long	Surpluscenter.com	905-1260	2	\$13.00	\$26.00				

Equipment Purchasing							\$108,973.21			
Item	Description	Source	Reference	Quan	Cost Ea	Total	Purchaser	PO #	Date	Rcvd
GE87										
SP1										
SP2	4' x 8' x 3/4" Treated Plywood for solar power wall	Lowes		2	\$40.00	\$80.00				
SP3	Heavy duty Concrete anchors, 3/8" x 4", box of 4	McMaster-Carr	99795A107	1	\$6.14	\$6.14				
SP4						\$0.00				
SP5	Xantrex TrueCharge2 24v, 60A - for charging with SNE	Amazon, NewAge N	804-2430	2	\$300.00	\$600.00				
SP6	Xantrex TrucCharge2 Remote panel for paralleling	Amazon, NewAge N	808-8040-01	1	\$180.00	\$180.00				
SP7						\$0.00				
SP8						\$0.00				
SP9	Outback Power FlexPower2, 6kw 230v/50Hz, 24vdc		FP2-24	1	\$8,000.00	\$8,000.00				
SP10	Outback Power FlexMax80 Solar Charge Controller		FlexMax80	4		\$0.00				
SP11	Outback Power FlexMax60 Solar Charge Controller					\$0.00				
SP12						\$0.00				
SP13						\$0.00				
SP14	Outback Power VFX3524 120v/60Hz inverter for O2 Filling Station	AZ Sun Wind	VFX3524	1		\$0.00				
SP15	120-240v transformer for filling station, 2kva	FactoryMation	G002K1PG1A07	0	\$386.00	\$0.00				
SP16	Contacto to turn on transformer/filling station when generator power is on	FactoryMation	MC-22B-11-AC230	1	\$26.00	\$26.00				
SP17	DIN-rail enclosure, 8-slot	FactoryMation	ICB-0865	1	\$28.00	\$28.00				
SP18	Circuit breakers for SNE AC to SP5 chargers	FactoryMation	NB1-D16-3P	2	\$17.90	\$35.80				
SP19	RED LED 230v - tripped breaker	FactoryMation	FMD16-DS220V-1	1	\$5.00	\$5.00				
SP20	GRN LED 230v - SNE power on	FactoryMation	FMD16-DS220V-2	1	\$5.00	\$5.00				
SP21	Voltage Sensing Relay, 240V	Allied	831VS-240A	2	\$80.00	\$160.00				
SP22						\$0.00				
SP23						\$0.00				
SP24						\$0.00				
SP25						\$0.00				
SP26						\$0.00				
SP27						\$0.00				
SP28						\$0.00				
SP29						\$0.00				
SP30						\$0.00				
WP 1	Pump, submersible, 11 SQF-2	Grundfos	95027416	1	\$2,000.00	\$2,000.00				
WP 2	Solar Panels, GF 80	Grundfos	96616391	5	\$200.00	\$200.00				
WP 3	Level Switch	Grundfos	00010748	1	\$15.00	\$0.00				
WP 4	Control Unit CU200	Grundfos	96625360	1	\$450.00	\$450.00				
WP 5	AC Integration Unit, IO 101	Grundfos	96475074	1	\$300.00	\$300.00				
WP 6						\$0.00				
WP 7	NEMA 4x PVC junction box, 4x4x2", screw cover (water tower float junction)	Lowes	10008	2		\$0.00				
WP 8	Liquid Tight Conduit - gray, 1/2" ID, roll of 100' (use roll from PH)	Lowes	130357	1		\$0.00				
WP 9	Liquid Tight fitting, 1/2" straight, gray	Lowes	116022			\$0.00				
WP 10	1/2" PVC conduit female thread adapter	Lowes	115912			\$0.00				
WP 11	Cord grip, 1/2", for wire 0.26-0.375"	Lowes	108655			\$0.00				
WP 12	Water tight 3/4" cord grip for 10/2 UF cable	Lowes	108490			\$0.00				
WP 13	1/2" PVC conduit clamp, 2-hole, pk 25	Lowes	75748			\$0.00				
WP 14	1/2" PVC conduit, bell end, 10'	Lowes	72808			\$0.00				
WP 15	1/2" PVC conduit sweep	Lowes	50916			\$0.00				
WP 16	1/2" PVC coupling, 15pk	Lowes	254896			\$0.00				
WP 17	1/2" PVC box adapter	Lowes	72855			\$0.00				
WP 20	NEMA 4x junction box, 12x10x6", hinged latch cover (pump control)	FactoryMation	AM1206RTW	1	\$119.00	\$119.00				
WP 21										
WP 22	Watts RO-TFM-4SV Premier 4-Stage Reverse Osmosis System	Amazon	RO-TFM-4SV	1	\$193.99	\$193.99				

Main Load Centers						\$8,377.52
Item	Description	Source	Reference	Quan	Cost Ea	Total
DE1	Breaker Panels for Distribution Centers A-F		QO112L125G	8		\$0.00
DE2	Square D - surface cover for QO112L125G		QOC16US	8	\$25.00	\$200.00
DE3	Fiberglass outdoor enclosure, 24x16x9 - junction/breaker boxes	FactoryMation	UCP640	8	\$271.00	\$2,168.00
DE4	Steel sub-panel	FactoryMation	UMPZ640	8	\$25.00	\$200.00
DE5	Wallmount SS brackets for UCP enclosures	FactoryMation	UWMB01	8	\$36.00	\$288.00
DE6	1/4" x 2 1/4" hex washer head concrete screws, box of 50	McMaster-Carr	90161A551	2	\$13.89	\$27.78
DE7						\$0.00
DE8	Knock-out bushings - 1"	Waytek	24108	50	\$0.12	\$5.76
DE9	Knock-out bushings - 1.5"	Waytek	24111	50	\$0.16	\$8.15
DE10	Square D - QO115 breaker, 1 pole, 15A	Lowe's			\$4.47	\$0.00
DE11	Square D - QO120 breaker, 1 pole, 20A	Lowe's			\$4.47	\$0.00
DE12	Square D - QO130 breaker, 1 pole, 30A	Lowe's			\$4.47	\$0.00
DE13	Square D - QO150 breaker, 1 pole, 50A	Lowe's			\$30.00	\$0.00
DE14	Square D - QO160 breaker, 1 pole, 60A	Lowe's			\$30.00	\$0.00
DE15	Square D - QO170 breaker, 1 pole, 70A	Lowe's			\$30.00	\$0.00
DE16	CU split bolt - 2-3/0	Lowe's	47186		\$6.99	\$0.00
DE17	CU split bolt - 2-2/0	Lowe's	47130		\$4.85	\$0.00
DE18	CU split bolt - 4-1/0	Lowe's	47072		\$5.48	\$0.00
DE19	CU split bolt - 8-4, 2pk	Lowe's	46991		\$6.98	\$0.00
DE20	CU split bolt - 10-8, 2pk	Lowe's	46948		\$4.88	\$0.00
DE21	6pk color marking tape, 1/2" x 20' ea	Lowe's	291607	2	\$5.17	\$10.34
DE22	3M # 35 electrical/marketing tape - colors, 3/4" x 66' (WHI, GRN, RED) (2 ea	Lowe's		6	\$3.13	\$18.78
DE23	Scotch electrical tape	Lowe's	39340	10	\$1.64	\$16.40
DE24	Greenlee # 727 wire cutter - max # 2/0 CU, frequent use # 1 CU (9" JAP)	Lowe's	47435	1	\$23.97	\$23.97
DE25	Greenlee # 718 wire cutter - max 350kcmil CU, frequent # 4/0 CU (18" US,	Lowe's	30350	1	\$65.00	\$65.00
DE26						
DE27						
DE28	1" PVC conduit, 10' -- (distribution boxes / bldg entrance)	Lowe's	72770		\$1.93	\$0.00
DE29	1" PVC conduit 90-degree sweep	Lowe's	51076		\$1.07	\$0.00
DE30	1" PVC conduit, coupling	Lowe's	72824		\$0.46	\$0.00
DE31	1" PVC conduit, male adapter	Lowe's	72856		\$0.54	\$0.00
DE32	1" conduit locknut, pkg 2	Lowe's	75464		\$1.18	\$0.00
DE33	1" conduit strap, pkg 5	Lowe's	50364		\$1.54	\$0.00
DE34	1.5" PVC conduit, 10' -- (distribution boxes / bldg entrance)	Lowe's	72811		\$2.91	\$0.00
DE35	1.5" PVC conduit 90-degree sweep	Lowe's	51365		\$2.08	\$0.00
DE36	1.5" PVC conduit, male adapter	Lowe's	18188		\$0.75	\$0.00
DE37	1.5" conduit locknut, pkg 2	Lowe's	75913		\$1.38	\$0.00
DE38	1.5" conduit clamp, 2-hole, 5pk	Lowe's	115982		\$1.93	
DE39	Weather Heads, 1" PVC					

Main Load Centers						\$8,377.52
Item	Description	Source	Reference	Quan	Cost Ea	Total
DE40	Weather Heads, 1.5" PVC					
DE41						
DE42	Ground rod, 5/8" x 10', 10mil copper plate, pointed (Eritech 615800)	Grainger	2KXL6	20	\$27.30	\$546.00
DE43	Ground rod 5/8" threadless coupling (Eritech CC58)	Grainger	2KXN6	0	\$8.87	\$0.00
DE44	Eritech Hammer Lock ground rod connection (Eritech EHL58C1K)	Grainger	2KXN4	20	\$13.29	\$265.80
DE45						
DE46	Transient Supressors, Littelfuse V321BA60	Mouser	576-V321BA60	30	\$108.99	\$3,269.70
DE47	Transient Supressors, Littelfuse V251BA60	Digikey	F4091-ND	0	\$112.12	\$0.00
DE48						
DE49						
DE50	INVERTER DISTRIBUTION					
DE51						
DE52	Square D - QO816L100DS - 100A, 8sp/16ckt, lugs, 8.9"W x 12.6" H	Lowe's	29297	8	\$39.98	\$319.84
DE53	Fiberglass Enclosure, 16x14x8	FactoryMation	AM1648T	8	\$97.00	\$776.00
DE54	Subpanel for AM1648T	FactoryMation	P164	8	\$21.00	\$168.00
DE55	Square D - QO115 breaker, 1 pole, 15A	Lowe's			\$4.47	
DE56	Square D - QO120 breaker, 1 pole, 20A	Lowe's			\$4.47	
DE57	Knock-out bushings - 1"	Waytek	24108	50	\$0.12	
DE58						
DE59						
DE60						
DE61						
DE62						
DE63						
DE64						
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DE69						
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DE73						
DE74						
DE75						
DE76						
DE77						
DE78						

Main Load Centers						\$8,377.52
Item	Description	Source	Reference	Quan	Cost Ea	Total
DE79						
DE80						
DE81						
DE82						
DE83						
DE84						
DE85						
DE86						
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DE88						
DE89						
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DE96						
DE97						
DE98						

POWER HOUSE CONTROL SYSTEM							\$8,418.02
Item	Description	Source	Reference	Quan	Cost Ea	Total	
CP1	CONTROL						
CP2	Enclosure, 60x24x12, Mod according to Project ID #ES03366	FactoryMation	MOD-SCE-60EL2412LP	1	\$629.00	\$629.00	
CP3	Subpanel for enclosure, Mod according to Project ID #ES03367	FactoryMation	MOD-SCE-60P24	1	\$187.00	\$187.00	
CP4	IntelliCompact, Controller	ComAp	IC-NT Mint	2	\$1,298.00	\$2,596.00	
CP5	IntelliCompact, USB Module	ComAp	IL-NT S-USB	2	\$106.00	\$212.00	
CP6	AVRi	ComAp	IG-AVRi	2	\$95.43	\$190.86	
CP7	AVRi Transformer	ComAp	IG-AVRi TRANS-LV	2	\$28.63	\$57.26	
CP8	IntelliMains, Controller	ComAp	MainsCompactNT	1	\$1,660.00	\$1,660.00	
CP9	Internet Bridge	ComAp	IG-IB	1	\$570.00	\$570.00	
CP10	Internet Bridge, 3 genset dongle	ComAp	IG-IB3	1	\$92.00	\$92.00	
CP11						\$0.00	
CP12	PLC: Alarm Control	FactoryMation	SG2-12HR-12D	1	\$97.00	\$97.00	
CP13	PLC: TECO RS232 programming cable	FactoryMation	SG2-PL1	1	\$23.00	\$23.00	
CP14	PLC: Memory cartridge	FactoryMation	SG2-PM05	1	\$11.00	\$11.00	
CP15	PLC: Programming Cable, USB - RS232 Adapter (option)	FactoryMation	FM-USB232A	0	\$29.00	\$0.00	
CP16	PLC: Programming Cable, USB version (option)	FactoryMation	SG2-ULINK	0	\$33.00	\$0.00	
CP17	Din Rail: Aluminum, 1M, 5 pack	FactoryMation	DIN35A-5PK	1	\$20.00	\$20.00	
CP18	Terminal Block relays, 12v, SPDT, 6A (6mm wide)	FactoryMation	38.51.7.012.0050	12	\$11.00	\$132.00	
CP19	Extra Relay for above	FactoryMation	34.51.7.012.0010	2	\$5.00	\$10.00	
CP20	Terminal Block relays, 12v, DPDT, 8A (14mm wide)	FactoryMation	38.52.7.012.0050	3	\$15.00	\$45.00	
CP21	Extra Relay for above	FactoryMation	41.52.9.012.0010	2	\$4.00	\$8.00	
CP22	Jumper bar for relays - 20 pole (red)	FactoryMation	093-20-1	2	\$2.00	\$4.00	
CP23	Terminal blocks, pk/100	FactoryMation	ER4BLUE	2	\$38.00	\$76.00	
CP24	Terminal block end bracket, pk/20	FactoryMation	ES1	2	\$5.00	\$10.00	
CP25	Terminal block end plate, pk/25	FactoryMation	EP2.5-10	1	\$5.00	\$5.00	
CP26	Terminal block marking tags, blank, pk/500	FactoryMation	MT5	1	\$13.00	\$13.00	
CP27	Terminal Block Cross connection, strip for 10, 5 pack	FactoryMation	CC4/10	3	\$22.00	\$66.00	
CP28	Breakers, Control, 5A, 1p DIN Mount	FactoryMation	NB1-B5-1P	4	\$6.00	\$24.00	
CP29	22mm LED indicator, RED, 12v	FactoryMation	FMD16-DS12V-1	4	\$5.00	\$20.00	
CP30	22mm LED indicator, GRN, 12v	FactoryMation	FMD16-DS12V-2	3	\$5.00	\$15.00	
CP31	22mm LED indicator, YLW, 12v	FactoryMation	FMD16-DS12V-3	3	\$5.00	\$15.00	
CP32	22mm LED indicator, BLU, 12v	FactoryMation	FMD16-DS12V-4	1	\$5.00	\$5.00	
CP33	Legend plate, blank	Allied Electronics	767-0212	11	\$1.20	\$13.20	
CP34	Selector switch operator, on/off	Allied Electronics	767-0108	3	\$11.26	\$33.78	
CP35	Emergency Stop mushroom head operator, push - turn release	Allied Electronics	767-0200	1	\$8.09	\$8.09	
CP36	Push button operator, flush yellow (alarm silence)	Allied Electronics	767-0073	1	\$3.59	\$3.59	
CP37	Contact block, Normally Open (NO), silver contacts	Allied Electronics	767-0138	10	\$3.31	\$33.10	
CP38	Contact block, Normally Closed (NC), silver contacts	Allied Electronics	767-0139	2	\$3.41	\$6.82	
CP39	Legend plate, Emergency Stop	Allied Electronics	767-0219	1	\$1.20	\$1.20	
CP40	Legend plate, Emergency Stop	Allied Electronics	767-0220	1	\$1.20	\$1.20	
CP41	Legend plate, ON OFF	Allied Electronics	767-0244	3	\$1.20	\$3.60	

POWER HOUSE CONTROL SYSTEM						\$8,418.02
Item	Description	Source	Reference	Quan	Cost Ea	Total
CP42	Legend plate, Reset	Allied Electronics	767-0258	1	\$1.20	\$1.20
CP43	Handle, Electronic, 6" BC	Allied Electronics	839-7181	1	\$3.86	\$3.86
CP44	Switch, toggle, DPST, Std 15/32, Manual Override	Allied Electronics	683-0060	2	\$6.09	\$12.18
CP45	Switch, toggle, SPST MOM, Std 15/32, Manual Start	Waytekwire	44253	2	\$6.34	\$12.68
CP46	Diode, loose, 1N4004	Allied Electronics	950-0469	10	\$0.06	\$0.56
CP47	Resistor, 10K, 1W, Loose	Allied Electronics	648-0085	10	\$0.08	\$0.80
CP48	Fuse Block, Blue Sea Systems PN 5026, 12 circuit	McMaster-Carr	5183T12	1	\$54.04	\$54.04
CP49	F7, DIN mount blade Fuse holder- Phoenix Contact 3118203	Alid Electronics	70169133	1	\$8.43	\$8.43
CP50	1000' 16g Black WR16 stranded wire	Waytek Wire	WR16-0	1000	\$0.12	\$117.30
CP51	1000' 16g Red WR16 stranded wire	Waytek Wire	WR16-2	1000	\$0.12	\$117.30
CP52	1000' 16g White WR16 stranded wire	Waytek Wire	WR16-9	1000	\$0.12	\$117.30
CP53	Standoff, Power Junction Block (for switch plate)	Waytek Wire	47211	2	\$3.57	\$7.14
CP54	Circuit Breaker 5 Amp Tan Low Profile Blade Mount	Waytek Wire	46791	10	\$2.72	\$27.20
CP55	Circuit Breaker 10 Amp Red Low Profile Blade Mount	Waytek Wire	46794	10	\$2.72	\$27.20
CP56	Circuit Breaker 20 Amp Red Low Profile Blade Mount	Waytek Wire	46796	5	\$2.72	\$13.60
CP57	Low Voltage Disconnect, adjustable dropout voltage, 20a 12v	Waytek Wire	80029	1	\$72.62	\$72.62
CP58	8-32 nuts, SS Box of 100	McMaster-Carr	96278A009	1	\$7.71	\$7.71
CP59	8-32 x 1/2" Pan, SS, box of 100	McMaster-Carr	91772A194	1	\$7.05	\$7.05
CP60	8-32 hinged standoff, M-M, 1/4x 1/2L body	McMaster-Carr	98010A530	6	\$2.42	\$14.52
CP61	8/32 M-F threaded 1/4" standoff, 1/2"L body	McMaster-Carr	92700A715 (8-32)	6	\$1.18	\$7.08
CP62	3/8" coupling nut (Standoff for Switch Plate)	McMaster-Carr	90264A460	2	\$0.72	\$1.44
CP63						\$0.00
CP64						
CP65	Spade terminal, Flanged block, 14-16, #8, Nylon	Waytek Wire	31721	100	\$0.12	\$12.30
CP66	Spade terminal, Ring, 14-16, 1/4, Nylon	Waytek Wire	31704	25	\$0.10	\$2.55
CP67	Spade terminal, Ring, 12-10, 5/16, Nylon	Waytek Wire	32704	25	\$0.16	\$4.00
CP68						
CP69	Fuel Pump connector (DT06-2S) Kit, 3' lead	Martin Machinery		1		
CP70	DC 12V to 24V 10A 240W Step-up DC to DC Converter (FH234, 24v primer pump)	http://stores.ebay.com/N/	SU12DK240	2	\$53.90	\$107.80
CP71						
CP72						
CP73						
CP74	320v MOV/ZNR lightning protector - Utility monitor line (for 240vac)	DigiKey	495-1458-ND	6	\$9.18	\$55.08
CP75	275v MOV/ZNR lightning protector - Utility monitor (for 240vac - option)	DigiKey	P7173-ND	0	\$17.06	\$0.00
CP76	Screw-terminal barrier strip to mount MOVs	DigiKey	A98520-ND	4	\$5.98	\$23.92
CP77						\$0.00
CP78						\$0.00
CP79						\$0.00
CP80	EXTERNAL					\$0.00
CP81	Wiremarker Book #1-45	Waytek Wire	53600	0	\$9.05	\$0.00

POWER HOUSE CONTROL SYSTEM						\$8,418.02
Item	Description	Source	Reference	Quan	Cost Ea	Total
CP82	Wiremarker Book #46-90	Waytek Wire	53601	0	\$9.05	\$0.00
CP83	Wiremarker Book #0-9	Waytek Wire	53602	0	\$9.05	\$28.40
CP84	Wiremarker Book A-Z, 0-15, +, -, /	Waytek Wire	53603	0	\$9.05	
CP85	Self Fusing Tape Black 1" X 20'	Waytek Wire	20965	4	\$7.10	
CP86						
CP87						\$0.00
CP88	GENERATOR CONTROL WIRE					
CP89	Trailer Cable 6 Contact 16 Ga Vinyl Jacketed Trailer Cable	Waytek Wire	WT16-6	100	\$0.54	\$54.28
CP90	Trailer Cable 4 Contact 16 Ga Vinyl Jacketed Trailer Cable	Waytek Wire	WT16-4	100	\$0.42	\$41.66
CP91	3 Conductor Jacketed Gpt Primary Wire 10 Ga Brake Cable	Waytek Wire	WD10-3	100	\$0.83	\$82.74
CP92						
CP93						
CP94	CONTROL ACCESSORIES					
CP95						
CP96						
CP97	Alarm Bell, 12V -- 6-8" Fire Bell	Allied Electronics	Edwards 439D-6RAU	1	\$122.00	\$122.00
CP98	Prestart warning, 12V Siren	Allied Electronics	623-2037	2	\$6.00	\$12.00
CP99	2" PVC conduit, Terminal adapter	Lowe's	115906	10	\$0.77	\$7.70
CP100	1/2" PVC conduit, male adapter	Lowe's	115888	3	\$0.33	\$0.99
CP101	2" Conduit Rigid Nut	Lowe's	75927	10	1.42	\$14.20
CP102	1/2" Conduit Rigid Nut	Lowe's	75443	3	0.39	\$1.17
CP103	High Amp Fuse 100 Amp Amg Mega Bolt Down	Waytek Wire	46270	6	\$2.93	\$17.58
CP104	Mega Fuse Holder W/Cover	Waytek Wire	46038	4	\$7.47	\$29.88
CP105	Maxi-Fuse Holder Red Leads 5" 6ga Wire 60 Amp Max Rating	Waytek Wire	46024	2	\$4.28	\$8.56
CP106	Maxi Automotive Fuse 20 Amps Yellow	Waytek Wire	46240	10	\$0.76	\$7.62
CP107	Battery top post terminal & lug	Waytek Wire	36225	2	\$3.73	\$7.46
CP108	12v > 50Ah flooded lead-acid battery for control system -- Optional: AGM battery -- Solar Power supplier, other battery supplier	local		1	\$100.00	\$0
CP109	Control System Battery Charger: Xantrex TrueCharge2, 12v 20A, 3 bank	Amazon, NewAge Marine	804-1220-02	1	\$230.00	\$230.00
CP110	Anderson Power Pole Connectors for battery-- SB50	Waytek Wire	37708	6	\$2.87	\$17.22
CP111						
CP112						
CP113						
CP114						
CP115						
CP116						
CP117						
CP118						
CP119						
CP120						
CP121						

POWER HOUSE CONTROL SYSTEM						
Item	Description	Source	Reference	Quan	Cost Ea	Total
						\$8,418.02
CP122						
CP123						
CP124						
CP125						
CP126						

POWER HOUSE MASTER DISTRIBUTION SYSTEM							\$11,273.83
Item	Description	Source	Reference	Quan	Cost Ea	Total	
MD1	Distribution						
MD2							
MD3	Enclosure - 60x36x12", MOD according to Project ID# ES03369	FactoryMation	MOD-SCE-60EL3612LP	1	\$765.00	\$765.00	
MD4	Subpanel for enclosure, MOD according to Project ID# ES03372	FactoryMation	MOD-SCE-60P36	1	\$326.00	\$326.00	
MD5	Contactors: Main, Telemecanique 400, 240V coil	granite city supply	LC1F400U7	3	\$1,165.33	\$3,495.99	
MD5a	Aux Contact block for above	granite city supply	LADN11	3	\$14.00	\$42.00	
MD6	Contact: Load Shed, ABB 110 a , 100-240V coil	granite city supply	AF110-30-11-70	8	\$226.85	\$1,814.80	
MD6a	Contact extension bars for above.	granite city supply	LW110	16	\$36.80	\$588.80	
MD7	Breaker: Load Shed , T2S100TW	granite city supply	T2S100TW	8	\$163.00	\$1,304.00	
MD8	Breaker: Non-Shed Output 50A, 2P, to Power House Load Center	Square D	QOU250	2	\$30.00	\$30.00	
MD9	Breaker: Relay Power, 10A	FactoryMation	NB1-D10-1P	1	\$6.00	\$6.00	
MD10	22mm LED indicator, GRN, 220v	FactoryMation	FMD16-DS220V-2	3	\$5.00	\$15.00	
MD11	22mm LED indicator, BLU, 220v	FactoryMation	FMD16-DS220V-4	1	\$5.00	\$5.00	
MD12	22mm LED indicator, WHI, 220v	FactoryMation	FMD16-DS220V-0	8	\$5.00	\$40.00	
MD13	Legend plate, blank	Allied Electronics	767-0212	12	\$1.20	\$14.40	
MD14	Analog Gauge, Voltmeter, 3.5"	Allied Electronics	378-0028	1	\$57.66	\$57.66	
MD15	Analog Gauge, Ammeter, 3.5"	Allied Electronics	378-0030	1	\$103.79	\$103.79	
MD16	Handle, Electronic, 6" BC	Allied Electronics	839-7181	2	\$4.80	\$9.60	
MD17	Switch protector guard	Allied Electronics	826-8182	3	\$5.50	\$16.50	
MD18	Switch, toggle, SPDT, Std 15/32	Allied Electronics	683-0053	8	\$6.65	\$53.20	
MD19	Rubber Half Boot, Std TOGGLE	Allied Electronics	760-0225	8	\$4.47	\$35.76	
MD20	Legend plate, ON OFF	Allied Electronics	767-0244	1	\$1.20	\$1.20	
MD21	Selector switch operator, on/off	Allied Electronics	767-0108	1	\$11.26	\$11.26	
MD22	Contact block, Normally Open (NO), silver contacts	Allied Electronics	767-0138	1	\$3.31	\$3.31	
MD23	Current transformer, 200A:5A	Digi-Key	811-1109-ND	2	\$29.75	\$59.50	
MD24	Transient Supressors, Littelfuse V251BA60	Mouser	576-V321BA60	3	108.99	\$326.97	
MD25	Transient Supressors, Littelfuse V251BA60	Digikey	F4091-ND	0	112.12	\$0.00	
MD26	Copper Buss bar, 3/16x1x3' *MADE PY PRICE	McMaster-Carr	98644K222-3'	0	\$26.84	\$0.00	
MD27	Copper Buss bar, 1/8x3/4x3' *MADE BY PRICE	McMaster-Carr	8964K5-3'	0	\$15.32	\$0.00	
MD28	3/8"-16 x 1-1/4" SS bolts for lugs, package of 25	McMaster-Carr	92240A626	2	\$9.21	\$18.42	
MD29	3/8" Belleville spring lock washers, SS, box of 10	McMaster-Carr	90895A031	5	\$12.93	\$64.65	
MD30	3/8"-16 SS nuts, box of 100	McMaster-Carr	91845A031	1	\$8.97	\$8.97	
MD31	5/16"-18 x 1-1/4" SS bolts for lugs, package of 25	McMaster-Carr	92240A585	1	\$8.20	\$8.20	
MD32	5/16" Belleville spring lock washers, SS, box of 10	McMaster-Carr	90895A030	3	\$6.32	\$18.96	
MD33	5/16"-18 SS nuts, box of 100	McMaster-Carr	91845A030	1	\$6.52	\$6.52	
MD34	8-32 x 3" round head screws, SS, box 25	McMaster-Carr	91783A209	1	\$6.62	\$6.62	
MD35	8-32 x 1", Pan, box of 100	McMaster-Carr	91772A199	1	\$9.90	\$9.90	
MD36	#8 Belleville Spring washer, SS, box 50	McMaster-Carr	90895A009	3	\$9.91	\$29.73	
MD37	8/32 x 1/2 green Electrical grounding screw, Box 25	McMaster-Carr	92597A300	2	\$6.56	\$13.12	
MD38	1/4-20 x 1/2", SS , hex washer, box 50	McMaster-Carr	96024A410	1	\$7.95	\$7.95	
MD39	1/4" Belleville Spring washer, SS, box 25	McMaster-Carr	90895A029	2	\$10.27	\$20.54	

POWER HOUSE MASTER DISTRIBUTION SYSTEM						\$11,273.83
Item	Description	Source	Reference	Quan	Cost Ea	Total
MD40	1/4-20 nuts, SS Box of 100	McMaster-Carr	91845A029	1	\$4.49	\$4.49
MD41						\$0.00
MD42	Lugs 3/0 GA 3/8" Stud Tinned UL Color Code Orange (best quality)	Waytek Wire	36361	42	\$2.88	\$120.96
MD43	Lugs 1-2 GA 3/8" Stud Tinned UL Color Code Orange (best quality)	Waytek Wire	36515	40	\$1.38	\$55.20
MD44	Standoff, Power Junction Block	Waytek Wire	47211	2	\$3.57	\$7.14
MD45						\$0.00
MD46	Crimp Tool, heavy wire lugs, adjustable, T&B TBM5-S	Allied Electronics	364-3630	1	\$545.23	\$545.23
MD47						\$0.00
MD48	Forged Steel Flange Threaded, 1/2 Pipe Size X 3-1/2" OD, for wire guide	McMaster-Carr	68095K226	1	\$13.06	\$13.06
MD49	Bik STL Thrd Pipe Fitting 1/2" Pipe Cap, for wire guide	McMaster-Carr	4513K83	1	\$2.01	\$2.01
MD50	Eyelets: #4 wire, 3/8 Stud	WaytekWire	36463	25	\$0.56	\$13.90
MD51	Eyelets: #4 wire, 1/4 Stud	WaytekWire	36461	25	\$0.48	\$12.05
MD52	Eyelets: #4 wire, 5/16 Stud	WaytekWire	36462	25	\$0.48	\$12.05
MD53	4 gauge wire (Grounds)					\$0.00
MD54	#6 Butt Splices, uninsulated	WaytekWire	34060	25	\$0.43	\$10.75
MD55						\$0.00
MD56	Heavy duty Concrete anchors, 3/8" x 4", box of 4	McMaster-Carr	99795A107	3	\$6.14	\$18.42
MD57	3/8" concrete bit	McMaster-Carr				\$0.00
MD58						\$0.00
MD59	Utility - 15kva isolation transformer (need 3 for delta-wye three-phase bank)	FactoryMation	G010K1KF7A03	0	\$701.00	\$0.00
MD60	Utility - transformer breaker - primary	FactoryMation	NB1-D20-3P	1	17.9	\$17.90
MD61	Utility - transformer breaker - secondary	FactoryMation	NB1-D32-3P	1	17.9	\$17.90
MD62	Utility - isolation transformer lightning arrestor - 750vac to ground (V751BA60)	Allied Electronics	70184622	0	\$173.84	\$0.00
MD63	Utility isolation transformer lightning arrestor - 750vac to ground (V751BA60)	Digi-Key	F4099-ND	6	174.48	\$1,046.88
MD64						\$0.00
MD65						\$0.00
MD66						\$0.00
MD67						\$0.00
MD68	20A relay, 240v coil, buffer inrush current on distribution contactors	Allied Electronics	850-0741	3	6.71	\$20.13
MD69	Relay base for above	Allied Electronics	850-0803	3	4.83	\$14.49
MD70	Relay hold down clip	Allied Electronics	850-0763	3	0.65	\$1.95
MD71						
MD72						
MD73						
MD74						
MD75						
MD76						
MD77						
MD78						
MD79						
MD80						

POWER HOUSE MASTER DISTRIBUTION SYSTEM						\$11,273.83
Item	Description	Source	Reference	Quan	Cost Ea	Total
MD81						
MD82						
MD83						
MD84						
MD85						
MD86						
MD87						
MD88						
MD89						
MD90						
MD91						
MD92						
MD93						
MD94						
MD95						
MD96						
MD97						
MD98						
MD99						
MD100						

POWER HOUSE STRUCTURE						\$460.32
Item	Description	Source	Reference	Quan	Cost Ea	Total
PH1	Structure					
PH2						
PH3	Cement, Bag	Local				\$0.00
PH4	Concrete Block (8x16 Nom)	Local				\$0.00
PH5	Air Block (8x16 Nom)	Local				\$0.00
PH6	Mortar Mix	Local				\$0.00
PH7	Sand	Local				\$0.00
PH8						\$30.00
PH9	1/2" ReRod	Local				\$0.00
PH10	3/8" ReRod	Local				\$0.00
PH11	Ground Wire, 3/0 stripped	Local				\$0.00
PH12						\$0.00
PH13	Lumber	Local				\$0.00
PH14						\$0.00
PH15	2x8	Local				\$0.00
PH16	2x6	Local				\$0.00
PH17	2x4	Local				\$0.00
PH18		Local				\$0.00
PH19	Corrugated Roofing, Aluminum	Local				\$0.00
PH20						\$0.00
PH21	Conduits					\$0.00
PH22	4" PVC conduit -- feet	Local		100		\$0.00
PH23	4" PVC conduit 45deg Elbows (Can substitute (4) 90s if not avail.)	Local		8		\$0.00
PH24	4" PVC Coupling	Local		2		\$0.00
PH25	4" PVC Pipe Cap			6		\$0.00
PH26	1.5" PVC Conduit -- feet	Local		4		\$0.00
PH27	1" PVC Conduit -- feet	Local		4		\$0.00
PH28	1" PVC 90deg Elbow	Local		1		\$0.00
PH29						\$0.00
PH30	Doors/Window/Acc	Local				\$0.00
PH31	42" Door	Local		3		\$0.00
PH32	32" Door	Local		1		\$0.00
PH33	28" Door	Local		2		\$0.00
PH34	Window, 36" x 36" (for 40" x 40" rough opening)	Local		1		\$0.00
PH35	R30-38 fiberglass insulation, 9" x 24" -- require 350sqft	Lowes		12		\$0.00
PH36	plastic screen, 4' wide x 60' min. Total	Lowes		60		\$0.00
PH37	Woven Wire Fencing, 4' high, 2x4, galv. steel 100' roll	Lowes	62294	1	\$74.00	\$74.00
PH38						\$0.00
PH39	GENERAL Purpose					\$0.00
PH40	1/4" x 2 1/4" hex washer head concrete screws, box of 50	McMaster-Carr	90161A551	4	\$13.89	\$55.56

POWER HOUSE STRUCTURE						\$460.32
Item	Description	Source	Reference	Quan	Cost Ea	Total
PH41	3/16" x 1-3/4" concrete screws, box of 50	McMaster-Carr	90161A525	4	\$8.84	\$35.36
PH42	1/4" flat washers, box of 100	McMaster-Carr	91090A105	1	\$4.60	\$4.60
PH43	5/16" flat washers, box of 100	McMaster-Carr	91090A110	1	\$3.87	\$3.87
PH44	3/16" concrete drill bit	McMaster-Carr	91286A318	5	\$2.42	\$12.10
PH45	5/32" concrete drill bit	McMaster-Carr	2960A55	5	\$2.61	\$13.05
PH46	#10 x1 1/2" self drilling sheet metal screws, SS, box of 100	McMaster-Carr	90197A651	2	9.28	\$18.56
PH47	4' x 8' x 3/4" Treated Plywood	Lowes		1		\$0.00
PH48	Staple gun: Powershot	Lowes	29965	2	\$20.98	\$41.96
PH49	Staples: Arrow T50, 3/8"	Lowes	74102	1	11.28	\$11.28
PH50	Fencing Staples: Galvanized, 500 count	Lowes	69217	1	2.98	\$2.98
PH51	250-350mm sq. Copper wire, stripped for foundation ground usage	Local		42		\$0.00
PH52	Ground rod, 5/8" x 10', 10mil copper plate, pointed (Eritech 615800)	Grainger	2KXL6	3	\$27.30	\$81.90
PH53	Ground rod 5/8" threadless coupling (Eritech CC58)	Grainger	2KXN6	3	\$8.87	\$26.61
PH54	Eritech Hammer Lock ground rod connection (Eritech EHL58C1K)	Grainger	2KXN4	3	\$13.29	\$39.87
PH55	Eritech ground rod driving sleeve (Eritech B137-31)	Grainger	2CNJ5	1	\$8.62	\$8.62
PH56						\$0.00
PH57						\$0.00
PH58						\$0.00
PH59						
PH60	LIGHTS, SWITCHES & OUTLETS - CONTROL ROOM, ENGINE ROOM (12V),					
PH61	1/2" PVC conduit, bell end, 10'	Lowes	72808	10	\$0.85	
PH62	1/2" PVC conduit, 90 degree sweep, bell end	Lowes	50916		\$0.57	
PH63	1/2" PVC coupling	Lowes	115930		\$0.27	
PH64	FSE PVC box, 1/2"	Lowes	115855		\$4.27	
PH65	1/2" PVC male adapter	Lowes	115888	20	\$0.28	
PH66	1/2" PVC conduit body T	Lowes	115991		\$2.49	
PH67	1/2" conduit locknut, pkg 20	Lowes	141843	20	\$2.56	
PH68	1/2" conduit locknut, pkg 20	Lowes	141843		\$2.56	
PH69	Gray PVC conduit cement, 16oz	Lowes	254888	1	\$6.03	
PH70	1/2" FSE Box Switch cover	Lowes	254884	4	\$1.57	
PH71	HD toggle switch - 20A/277VAC	Lowes	78510	4	\$2.55	
PH72	NEMA 4x PVC junction box, 4x4x2", screw cover (fuel pump conn, outlets)	Lowes	10008	6	\$6.38	
PH73	1/2" PVC box adapter	Lowes	72855	6	\$0.48	
PH74	Liquid Tight Conduit - gray, 1/2" ID, roll of 100'	Lowes	130357	1	\$46.00	
PH75	Liquid Tight fitting, 1/2" straight, gray	Lowes	116022	2	\$2.01	
PH76	1/2" PVC conduit female thread adapter	Lowes	115912	2	\$0.30	
PH77	Cord grip, 1/2", for wire 0.26-0.375"	Lowes	108655	1	\$3.22	
PH78	Square D - QO112L125G - 125A, 12sp/12ckt, lugs, 14.25"W x 18" H	Lowes		1		
PH79	Square D - QOC16US surface cover for QO112L125G	Lowes		1		
PH80	Square D - QO115 breaker, 1 pole, 15A	Lowes		2	\$4.47	

POWER HOUSE STRUCTURE						\$460.32
Item	Description	Source	Reference	Quan	Cost Ea	Total
PH81	Square D - QO120 breaker, 1 pole, 20A	Lowe's		2	\$4.47	
PH82	Square D - QO130 breaker, 1 pole, 30A	Lowe's		2	\$4.47	
PH83	4" ENT Ceiling box, Carlon, Octagon	Lowe's	130185	10	\$1.76	
PH84	4" ENT Ceiling box, Carlon, Cover	Lowe's	71002	6	\$1.09	
PH85	1" PVC conduit, 10' -- (distribution boxes / bldg entrance)	Lowe's	72770	1	\$1.93	
PH86	1" PVC conduit, male adapter	Lowe's	72856	3	\$0.54	
PH87	1" conduit locknut, pkg 2	Lowe's	75464	3	\$1.18	
PH88	Wing Lock Wire Connector Blue 12 To 6 Ga	Waytek Wire	37037	100	\$0.10	
PH89	Wing Lock Wire Connector Gray 14 To 8 Ga	Waytek Wire	37036	100	\$0.09	
PH90	Wing Lock Wire Connector Red 16 To 10 Ga	Waytek Wire	37035	200	\$0.05	
PH91						
PH92	12v fluorescent lights for Control & Engine Room, A-base - 11w http://www.solar-electric.com/sol12voldcli.html	AZ Wind Sun	ESL-1112-WW	4	\$19.00	
PH93	light bulb sockets, screw-type	Lowe's	71130	6	\$1.37	
PH94						
PH95						
PH96						
PH97						
PH98						

Generators & Accessories						
Item	Description	Source	Reference	Quan	Cost Ea	Total
GE1	Air Intake Louver, Fixed, SS, 45" x45"	Machine Shop	Drawing P37	2	\$400.00	\$800.00
GE2	44"x44" auto alum. exhaust shutters for radiator exhaust (12.9sqft free area)	McMaster Carr	2047K251	2	\$199.74	\$399.48
GE3	Air Exhaust Ducts	Martin Machinery	Drawing P33	2		\$0.00
GE4	Exhaust pipe--kit, 3" Aluminized steel pipe assm.	Exhaust shop	Drawing P34	2	\$100.00	\$200.00
GE5	3" Stainless Steel U-Clamp	JEGS.com	555-30723	0	\$10.99	\$0.00
GE6	3" Heavy Duty Steel U-Clamp	JEGS.com	289-35794	6	\$5.99	\$35.94
GE7	Universal Flex SS Couplers, 3" I.D. x 8" Center x 12" O.A.L.	JEGS.com	555-30777	0	\$49.99	\$0.00
GE8						\$0.00
GE9	Fuel Delivery					\$0.00
GE10	Fuel Tank	Machine Shop	Drawing P40	1		\$0.00
GE11	Fuel Filter assm (Fleetguard Industrial Pro Duplex w/24V Primer Pump)	Martin Machinery	FH23467	1		\$0.00
GE12	1/2" black iron pipe, 6'	McMaster-Carr	4457K35	2	14.85	\$29.70
GE13	1/2" black Iron pipe, 4'	McMaster-Carr	4457K33	4	\$11.49	\$45.96
GE14	1/2" black iron pipe, 18"	McMaster-Carr	4457K114	4	\$4.39	\$17.56
GE15	1/2" black iron pipe, 12"	McMaster-Carr	44615K544	4	\$3.48	\$13.92
GE16	1/2" black iron pipe, 9"	McMaster-Carr	44615K314	2	\$2.93	\$5.86
GE17	1/2" black iron pipe, 6"	McMaster-Carr	44615K484	4	\$1.36	\$5.44
GE18	1/2" black iron pipe, 3"	McMaster-Carr	44615K454	4	\$0.86	\$3.44
GE19	1/2" black iron pipe, 1-1/4" to 1" reducer	McMaster-Carr	44605K281	2	\$2.78	\$5.56
GE20	1/2" black iron pipe, 1" to 1/2" reducer	McMaster-Carr	44605K368	4	\$2.16	\$8.64
GE21	1/2" black Iron pipe, T fitting	McMaster-Carr	44605K154	4	\$1.67	\$6.68
GE22	1/2" black iron pipe, 1/2" pipe plug-Magnetic	McMaster-Carr	1072A13	4	\$2.30	\$9.20
GE23	1/2" black Iron pipe, 45 deg elbow	McMaster-Carr	44605K123	8	\$2.07	\$16.56
GE24	1/2" black Iron pipe, 90 deg elbow	McMaster-Carr	44605K114	4	\$1.25	\$5.00
GE25	1/2" Black Steel Coupling	McMaster-Carr	46685K264	8	\$2.09	\$16.72
GE26	1/2" bronze 1/4 turn ball valve w/ 0.25psi check	McMaster-Carr	47265K31	2	\$36.50	\$73.00
GE27	1/2" bronze 1/4 turn ball valve	McMaster-Carr	4726K23	1	\$9.35	\$9.35
GE28	1/2" bronze swinging 0.5psi check valve	McMaster-Carr	9770K43	3	\$31.14	\$93.42
GE29	Brass NPT Reducer, 1/2"-1/4"	McMaster-Carr	50785K65	2	\$1.87	\$3.74
GE30	Brass NPT Reducer, 1/2"-3/8"	McMaster-Carr	50785K66	2	\$1.78	\$3.56
GE31	Brass barbed hose fitting, 3/16" hose-1/4"npt, box of 10	McMaster-Carr	5346K12	0	\$10.49	\$0.00
GE32	Small SS band clamps, box of 10	McMaster-Carr	5321K14	0	\$6.85	\$0.00
GE33	3/16" rubber fuel tubing, 10'	auto parts store		0	\$8.00	\$0.00
GE34	hose for generator fuel delivery if not supplied					\$0.00
GE35	1/2" hydraulic hose, 1/2" NPT--5' long	Surpluscenter.com	905-1260	2	\$13.00	\$26.00
GE36	1/2" hydraulic hose, 1/2"NPT--30" long	Surpluscenter.com	905-1230	1	\$9.00	\$9.00
GE37	Pipe mounting blocks (modify with (2) mounting holes see Drawing 44)	Surpluscenter.com	9-A3-20-D	5	\$3.45	\$17.25
GE38	Pipe mounting bracket (Drawing P43)	Machine shop	Drawing P43	2		\$0.00
GE39	NPT M/M pipe nipple, close, 1/2"	Surpluscenter.com	9-5404-8-8	10	\$1.65	\$16.50
GE40	NPT M/F Swivel, straight, 1/2"	Surpluscenter.com	9-1404-8-8	8	\$2.10	\$16.80
GE41	NPT M/F Swivel, 90 deg, 1/2"	Surpluscenter.com	9-1501-8-8	4	\$3.40	\$13.60

Generators & Accessories						
Item	Description	Source	Reference	Quan	Cost Ea	Total
GE42	Teflon pipe compound	Lowes				\$0.00
GE43	Teflon Tape	Lowes	23725	1	\$3.11	\$3.11
GE44						\$0.00
	GE45-50 in Fuel tank					
GE45	Fuel tank float switch, Buna-N float, brass stem, 1/8" NPT	Gems Sensors	01801	3	\$47.00	\$141.00
GE46	1/8" NPT Black Steel pipe, 36"	McMaster-Carr	4457K92	1	\$9.37	\$9.37
GE47	1/8" NPT Black Steel pipe, 24"	McMaster-Carr	4457K91	1	\$6.25	\$6.25
GE48	1/8" NPT Black Steel pipe, 1.5"	McMaster-Carr	44615K421	1	\$0.87	\$0.87
GE49	1/8" NPT Black Iron pipe, Coupling	McMaster-Carr	46685K261	3	\$1.18	\$3.54
GE50	Liquid Level Sensor	McMaster-Carr	3711K2-40"	1	\$28.37	\$28.37
GE51						\$0.00
GE52	HARDWARE					\$0.00
GE53						\$0.00
GE54	Drop-in concrete anchors, 1/2" bolt, for genset, box of 10	McMaster-Carr	97083A330	1	\$11.43	\$11.43
GE55	Installation tool for above	McMaster-Carr	97077A130	1	\$5.22	\$5.22
GE56	5/8" concrete drill for above	McMaster-Carr	2960A616	1	\$6.62	\$6.62
GE57	1/2"-13 x 1-1/2" grade 8 bolts,armor coat, for above, box of 10.	McMaster-Carr	91286A318	1	\$7.10	\$7.10
GE58	1/2" flat washer, SS, box of 10	McMaster-Carr	93852A113	1	\$6.74	\$6.74
GE59	1/2" lock washer, SS, box of 10	McMaster-Carr	91007A652	1	\$7.78	\$7.78
GE60	5/16" x 1-1/4" grade 5 flangehead bolts, box of 25 for fuel brackets	McMaster-Carr	92323A539	1	\$7.85	\$7.85
GE61	5/16" flange nut, box of 100 for fuel brackets	McMaster-Carr	95922A120	1	\$9.59	\$9.59
GE62						\$0.00
GE63	1/4" x 2 3/4" C.S. Phillips concrete screws for pipe clamps, box of 25	McMaster-Carr	90161A653	1	\$7.89	\$7.89
GE64	Pipe strap to hang exhaust pipe - 100ft	Lowes	301700	1	\$11.66	\$11.66
GE65	Flex Duct connector, 25' roll, Fiberglass--	McMaster-Carr	1781K88	1	\$69.55	\$69.55
GE66	S-Cleats, 5'	McMaster-Carr	1964K92	4	\$4.84	\$19.36
GE67	GENERATOR SPARES					
GE68	Oil filters, 24	Martin Machinery		24		
GE69	Air filters	Martin Machinery		10		
GE70	Engine-mounted fuel filters	Martin Machinery		4		
GE71	Filters for duplex filter, Fleetguard Industrial Pro	Martin Machinery		4		
GE72	Fan belt	Martin Machinery		1		
GE73	Pencool 2000 cooling system treatment, #20016 (case of 12 pints)	Martin Machinery		2		
GE74						
GE75						
GE76	Generators- MJD-40 JD4045D/Marathon Prime 30kW, 50Hz, 1 Phase	Martin Machinery		2	\$20,000.00	\$40,000.00
GE77						
GE78						
GE79						
GE80						
GE81						

Generators & Accessories						
Item	Description	Source	Reference	Quan	Cost Ea	Total
GE82						
GE83						
GE84						
GE85						
GE86						
GE87						

Solar Power Equipment						
Item	Description	Source	Reference	Quan	Cost Ea	Total
SP1						
SP2	4' x 8' x 3/4" Treated Plywood for solar power wall	Lowes		2	\$40.00	\$80.00
SP3	Heavy duty Concrete anchors, 3/8" x 4", box of 4	McMaster-Carr	99795A107	1	\$6.14	\$6.14
SP4						\$0.00
SP5	Xantrex TrueCharge2 24v, 60A - for charging with SNE	Amazon, NewAge Marine, etc	804-2430	2	\$300.00	\$600.00
SP6	Xantrex TrucCharge2 Remote panel for paralleling	Amazon, NewAge Marine, etc	808-8040-01	1	\$180.00	\$180.00
SP7						\$0.00
SP8						\$0.00
SP9	Outback Power FlexPower2, 6kw 230v/50Hz, 24vdc		FP2-24	1	\$8,000.00	\$8,000.00
SP10	Outback Power FlexMax80 Solar Charge Controller		FlexMax80	4		\$0.00
SP11	Outback Power FlexMax60 Solar Charge Controller					\$0.00
SP12						\$0.00
SP13						\$0.00
SP14	Outback Power VFX3524 120v/60Hz inverter for O2 Filling Station	AZ Sun Wind	VFX3524	1		\$0.00
SP15	120-240v transformer for filling station, 2kva	FactoryMation	G002K1PG1A07	0	\$386.00	\$0.00
SP16	Contactors to turn on transformer/filling station when generator power is on	FactoryMation	MC-22B-11-AC230	1	\$26.00	\$26.00
SP17	DIN-rail enclosure, 8-slot	FactoryMation	ICB-0865	1	\$28.00	\$28.00
SP18	Circuit breakers for SNE AC to SP5 chargers	FactoryMation	NB1-D16-3P	2	\$17.90	\$35.80
SP19	RED LED 230v - tripped breaker	FactoryMation	FMD16-DS220V-1	1	\$5.00	\$5.00
SP20	GRN LED 230v - SNE power on	FactoryMation	FMD16-DS220V-2	1	\$5.00	\$5.00
SP21	Voltage Sensing Relay, 240V	Allied	831VS-240A	2	\$80.00	\$160.00
SP22						\$0.00
SP23						\$0.00
SP24						\$0.00
SP25						\$0.00
SP26						\$0.00
SP27						\$0.00
SP28						\$0.00
SP29						\$0.00
SP30						\$0.00
SP31						\$0.00
SP32						\$0.00
SP33						\$0.00
SP34						\$0.00
SP35						\$0.00
SP36						\$0.00
SP37						\$0.00

Solar Power Equipment						
Item	Description	Source	Reference	Quan	Cost Ea	Total
SP38						\$0.00
SP39						

Water Tower & Pump Control -- Equipment List							\$3,541.99	
Item	Description	Source	Reference	Quan	Cost Ea	Total	Purchaser	
WP 1	Pump, submersible, 11 SQF-2	Grundfos	95027416	1	\$2,000.00	\$2,000.00		
WP 2	Solar Panels, GF 80	Grundfos	96616391	5	\$200.00	\$200.00		
WP 3	Level Switch	Grundfos	00010748	1	\$15.00	\$0.00		
WP 4	Control Unit CU200	Grundfos	96625360	1	\$450.00	\$450.00		
WP 5	AC Integration Unit, IO 101	Grundfos	96475074	1	\$300.00	\$300.00		
WP 6						\$0.00		
WP 7	NEMA 4x PVC junction box, 4x4x2", screw cover (water tower float junction)	Lowe's	10008	2		\$0.00		
WP 8	Liquid Tight Conduit - gray, 1/2" ID, roll of 100' (use roll from PH)	Lowe's	130357	1		\$0.00		
WP 9	Liquid Tight fitting, 1/2" straight, gray	Lowe's	116022			\$0.00		
WP 10	1/2" PVC conduit female thread adapter	Lowe's	115912			\$0.00		
WP 11	Cord grip, 1/2", for wire 0.26-0.375"	Lowe's	108655			\$0.00		
WP 12	Water tight 3/4" cord grip for 10/2 UF cable	Lowe's	108490			\$0.00		
WP 13	1/2" PVC conduit clamp, 2-hole, pk 25	Lowe's	75748			\$0.00		
WP 14	1/2" PVC conduit, bell end, 10'	Lowe's	72808			\$0.00		
WP 15	1/2" PVC conduit sweep	Lowe's	50916			\$0.00		
WP 16	1/2" PVC coupling, 15pk	Lowe's	254896			\$0.00		
WP 17	1/2" PVC box adapter	Lowe's	72855			\$0.00		
WP 20	NEMA 4x junction box, 12x10x6", hinged latch cover (pump control)	FactoryMation	AM1206RTW	1	\$119.00	\$119.00		
WP 21								
WP 22	Watts RO-TFM-4SV Premier 4-Stage Reverse Osmosis System	Amazon	RO-TFM-4SV	1	\$193.99	\$193.99		
WP 23	Watts 5-PK-4SV Premier 1-Year 4-Stage Reverse Osmosis Replacement Kit	Amazon	5-PK-4SV	2	\$23.00	\$46.00		
WP 24	Watts REVERSE OSMOSIS FILTER replacement (Watts 25GPD)	Amazon	B002BJZT5E	1	\$38.00	\$38.00		
WP 25	Watts Premier 501026 Zero Waste Reverse Osmosis Retrofit Kit	Amazon	B000JQ4PWE	1	\$195.00	\$195.00		
WP 26								
WP 27								
WP 28								
WP 29								
WP 30								

Wire for Campus Distribution						\$26,098.65
Item	Description	Type	Longest Run	Total Feet	Cost Ft	Total
ZA1	THHN	# 3/0	899	4,600	3.04	\$13,984.49
ZA2	THHN	# 2/0	295	1,161	2.13	\$2,473.19
ZA3	THHN	# 1	167	335	\$ 1.62?	\$541.99
ZA4	THHN	# 2	164	624	1.05	\$655.03
ZA5	THHN	# 4	899	2,270	0.89	\$2,020.37
ZA6	THHN	# 6	676	5,497	0.52	\$2,858.59
ZA7	THHN	# 8	453	4,259	0.3	\$1,277.62
ZA8	THHN	# 10	315	1,247	0.1995	\$248.72
ZA9	THHN	# 12	236	3,675	0.1365	\$501.66
ZA10	THHN	# 8 GRN		500	\$0.3	\$150.00
ZA11	NM-WG	8/2 w/g		0	\$1.43	\$0.00
ZA12	NM-WG	10/2 w/g		0	\$0.65	\$65.00
ZA13	NM-WG	12/2 w/g		2,000	\$0.25	\$500.00
ZA14	NM-WG	14/2 w/g		3,000	\$0.17	\$510.00
ZA15	bare	# 4 bare		200	\$0.87	\$174.00
ZA16	bare	# 6 bare		200	\$0.69	\$138.00
ZA17						
ZA18						
ZA19						
ZA20						
ZA21						
ZA22						
ZA23						
ZA24						
ZA25						
ZA26						
ZA27						
ZA28						

