

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION
DOCKET NO. 130040-EI

IN RE: TAMPA ELECTRIC COMPANY'S
PETITION FOR AN INCREASE IN BASE RATES
AND MISCELLANEOUS SERVICE CHARGES



LIGHTING INCREMENTAL COST STUDY 2013
SUPPLEMENTAL MFR SCHEDULE E-13D

VOLUME III

COM _____
AFD _____
APA _____
ECO _____
ENG _____
GCL _____
IDM _____
TEL _____
CLK _____

DOCUMENT NUMBER-DATE

01699 APR-5 2013

FPSC-COMMISSION CLERK

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 1 OF 111
FILED: 04/05/2013

TAMPA ELECTRIC COMPANY

LIGHTING INCREMENTAL COST STUDY 2013

APRIL 5, 2013

TABLE OF CONTENTS

	<u>PAGE</u> <u>NO.</u>
MAINTENANCE COST - SUMMARY	
LUMINAIRES	3
MISCELLANEOUS OTHER	10
POLES	12
 INSTALLATION COST - SUMMARY	
LUMINAIRES	18
COBRA, NEMA, AND MONGOOSE	19
SHOEBOX	28
FLOOD	36
POST TOP	41
MISCELLANEOUS OTHER	51
TIMER	52
DOUBLE BRACKET	53
POLES	54
POST TOP	55
CONCRETE	71
ALUMINUM AND STEEL	79
WOOD	83
 MAINTENANCE AND INSTALLATION LABOR	
MAINTENANCE LABOR SUMMARY (INCLUDES VEHICLE COSTS)	88
LABOR/VEHICLE COSTS - GENERAL	89
LUMINAIRE FAILURE	90
LUMINAIRE PARTS FAILURE	90
LAMP REPLACEMENT	90
PHOTO CELL REPLACEMENT	91
RELAY REPLACEMENT	91
TIMER REPLACEMENT	92
DOUBLE BRACKET REPLACEMENT	92
CABLE/UG PARTS FAILURE	93
CABLE/OH PARTS FAILURE	94
CLEAN/PAINT POLE	95
POLE REPLACEMENT	96
INSTALLATION LABOR SUMMARY (INCLUDES VEHICLE COSTS)	97
LABOR/VEHICLE COSTS - GENERAL	98
ENGINEERING	99
TRENCH AND CONDUIT	102
HANDHOLE	103
UNDERGROUND CONDUCTOR	103
OVERHEAD CONDUCTOR	104
FIXTURE ON EXISTING POST TOP POLE	104
UNDERGROUND SERVICE TO EXISTING WOOD POLE	105
NEW STEEL OR ALUMINUM POLE WITH FIXTURE	105
NEW POST TOP POLE AND FIXTURE	106
NEW CONCRETE POLE AND FIXTURE	107
NEW WOOD OR CONCRETE AND FIXTURE (OH FEED)	108
DOUBLE BRACKET	109
RELAY/TIMER	109
 MISCELLANEOUS SUPPORT	
LABOR / MATERIAL ADJUSTMENT FACTORS	110
17-YEAR FIXED CHARGE RATE	111

**Maintenance
Costs**

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 3 OF 111
FILED: 04/05/2013

MAINTENANCE COST SUMMARY

LUMINAIRES

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 4 OF 111
FILED: 04/05/2013

Luminaire Maintenance Cost Summary

Line No.	Rate	Luminaire	Luminaire Failure	Lamp Failure	Luminaire Parts Failure	Photo Cell Failure	Relay Failure	Average Annual Cost	Total Monthly Charge
1	468	250W HPS Flood	\$4.60	\$18.41	\$4.54	\$5.46	\$0.03	\$33.01	\$2.75
2	478	400W HPS Flood	\$4.03	\$20.33	\$5.98	\$5.58	\$0.04	\$35.92	\$2.99
3	509	50W HPS PT - Night Torch	N/A	\$16.18	\$2.45	\$7.64	\$0.00	\$26.27	\$2.19
4	520	400W MH Cobra	\$3.85	\$22.17	\$5.97	\$5.95	\$0.04	\$37.94	\$3.16
5	550	100W HPS Shoebox	\$3.75	\$15.01	\$2.21	\$5.59	\$0.03	\$26.55	\$2.21
6	552	400W HPS Shoebox	\$5.22	\$18.19	\$5.66	\$5.33	\$0.04	\$34.40	\$2.87
7	554	400W MH Shoebox	\$4.74	\$21.94	\$5.93	\$5.92	\$0.04	\$38.53	\$3.21
8	556	400W MH Flood	\$4.76	\$22.21	\$5.97	\$5.96	\$0.04	\$38.90	\$3.24
9	558	1000W MH Flood	\$2.56	\$34.41	\$42.73	\$9.05	\$0.07	\$88.75	\$7.40
10	564	175W MH Shoebox	\$6.00	\$11.76	\$3.97	\$2.08	\$0.01	\$23.81	\$1.98
11	566	250W HPS Shoebox	\$5.19	\$17.22	\$4.24	\$5.10	\$0.03	\$31.76	\$2.65
12	570	100W HPS Classic PT	\$6.29	\$14.39	\$2.16	\$5.40	\$0.03	\$28.24	\$2.35
13	571	100W HPS Contemporary PT	N/A	\$12.25	\$2.10	\$5.92	\$0.03	\$20.28	\$1.69
14	572	100W HPS Colonial PT	\$6.89	\$14.11	\$2.12	\$5.31	\$0.03	\$28.43	\$2.37
15	573	100W HPS Salem PT	\$5.19	\$14.58	\$2.18	\$5.46	\$0.03	\$27.43	\$2.29
16	574	175W MH General PT	\$2.42	\$13.45	\$4.40	\$2.53	\$0.01	\$22.80	\$1.90
17	575	175W MH Salem PT	\$0.89	\$11.99	\$4.09	\$2.35	\$0.01	\$19.33	\$1.61
18	576	1000W MH Shoebox	\$3.53	\$38.78	\$42.99	\$9.03	\$0.07	\$94.34	\$7.86
19	700	150W MH Salem PT	\$0.98	\$13.00	\$4.09	\$2.35	\$0.01	\$20.43	\$1.70
20	701	150W MH General PT	\$2.67	\$14.53	\$4.40	\$2.53	\$0.01	\$24.12	\$2.01
21	702	150W MH Shoebox	\$6.09	\$12.75	\$3.97	\$2.08	\$0.01	\$24.89	\$2.07
22	703	350W MH Shoebox	\$4.89	\$24.93	\$5.93	\$5.92	\$0.04	\$41.67	\$3.47
23	704	350W MH Cobra	\$4.15	\$25.19	\$5.97	\$5.95	\$0.04	\$41.27	\$3.44
24	705	350W MH Flood	\$4.76	\$25.24	\$5.97	\$5.96	\$0.04	\$41.93	\$3.49
25	800	50W HPS Cobra	\$2.35	\$19.11	\$2.93	\$9.63	\$0.00	\$34.02	\$2.84
26	802	70W HPS Cobra/Nema	\$0.52	\$12.30	\$0.41	\$6.72	\$0.00	\$19.95	\$1.66
27	803	100W HPS Cobra/Nema	\$2.03	\$15.33	\$2.25	\$5.62	\$0.03	\$25.23	\$2.10
28	804	150W HPS Cobra/Nema	\$7.36	\$12.71	\$1.88	\$4.61	\$0.03	\$26.57	\$2.21
29	805	250W HPS Cobra/Nema	\$2.94	\$16.44	\$4.05	\$4.77	\$0.03	\$28.20	\$2.35
30	806	400W HPS Cobra	\$3.34	\$19.32	\$5.83	\$5.42	\$0.04	\$33.90	\$2.83
31	809	400W HPS Mongoose	\$9.39	\$18.06	\$5.61	\$5.27	\$0.04	\$38.33	\$3.19
32	810	70W HPS Coach PT	\$10.94	\$13.10	\$7.04	\$7.25	\$0.00	\$38.32	\$3.19

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 5 OF 111
FILED: 04/05/2013

Luminaire Failure

Line No.	Rate	Luminaire	Avg Material Cost	Material Handling	Labor & Vehicle	Total Activity Cost	Frequency	Annual Cost
1	468	250W HPS Flood	\$165.60	\$34.21	\$ 132.59	\$332.40	1.4%	\$4.60
2	478	400W HPS Flood	\$198.40	\$40.99	\$ 132.59	\$371.98	1.1%	\$4.03
3	509	50W HPS PT - Night Torch	LUMINAIRE NO LONGER AVAILABLE FROM MANUFACTURER.					
4	520	400W MH Cobra	\$131.71	\$27.21	\$ 132.59	\$291.51	1.3%	\$3.85
5	550	100W HPS Shoebox	\$237.14	\$48.99	\$ 132.59	\$418.72	0.9%	\$3.75
6	552	400W HPS Shoebox	\$240.97	\$49.79	\$ 132.59	\$423.35	1.2%	\$5.22
7	554	400W MH Shoebox	\$263.01	\$54.34	\$ 132.59	\$449.94	1.1%	\$4.74
8	556	400W MH Flood	\$221.94	\$45.85	\$ 132.59	\$400.39	1.2%	\$4.76
9	558	1000W MH Flood	\$287.41	\$59.38	\$ 132.59	\$479.38	0.5%	\$2.56
10	564	175W MH Shoebox	\$215.08	\$44.44	\$ 132.59	\$392.11	1.5%	\$6.00
11	566	250W HPS Shoebox	\$234.28	\$48.40	\$ 132.59	\$415.28	1.3%	\$5.19
12	570	100W HPS Classic PT	\$507.82	\$104.92	\$ 132.59	\$745.32	0.8%	\$6.29
13	571	100W HPS Contemporary PT	LUMINAIRE NO LONGER AVAILABLE FROM MANUFACTURER.					
14	572	100W HPS Colonial PT	\$535.06	\$110.54	\$ 132.59	\$778.19	0.9%	\$6.89
15	573	100W HPS Salem PT	\$399.83	\$82.61	\$ 132.59	\$615.03	0.8%	\$5.19
16	574	175W MH General PT	\$446.70	\$92.29	\$ 132.59	\$671.58	0.4%	\$2.42
17	575	175W MH Salem PT	\$357.89	\$73.94	\$ 132.59	\$564.42	0.2%	\$0.89
18	576	1000W MH Shoebox	\$506.99	\$104.74	\$ 132.59	\$744.33	0.5%	\$3.53
19	700	150W MH Salem PT	\$406.49	\$83.98	\$ 132.59	\$623.06	0.2%	\$0.98
20	701	150W MH General PT	\$503.08	\$103.94	\$ 132.59	\$739.61	0.4%	\$2.67
21	702	150W MH Shoebox	\$219.62	\$45.37	\$ 132.59	\$397.58	1.5%	\$6.09
22	703	350W MH Shoebox	\$274.71	\$56.75	\$ 132.59	\$464.05	1.1%	\$4.89
23	704	350W MH Cobra	\$151.05	\$31.21	\$ 132.59	\$314.85	1.3%	\$4.15
24	705	350W MH Flood	\$222.23	\$45.91	\$ 132.59	\$400.73	1.2%	\$4.76
25	800	50W HPS Cobra	\$76.08	\$15.72	\$ 132.59	\$224.39	1.0%	\$2.35
26	802	70W HPS Cobra/Nema	\$77.87	\$16.09	\$ 132.59	\$226.55	0.2%	\$0.52
27	803	100W HPS Cobra/Nema	\$96.56	\$19.95	\$ 132.59	\$249.10	0.8%	\$2.03
28	804	150W HPS Cobra/Nema	\$112.36	\$23.21	\$ 132.59	\$268.17	2.7%	\$7.36
29	805	250W HPS Cobra/Nema	\$100.43	\$20.75	\$ 132.59	\$253.77	1.2%	\$2.94
30	806	400W HPS Cobra	\$151.33	\$31.27	\$ 132.59	\$315.19	1.1%	\$3.34
31	809	400W HPS Mongoose	\$437.02	\$90.29	\$ 132.59	\$659.90	1.4%	\$9.39
32	810	70W HPS Coach PT	\$150.19	\$31.03	\$ 132.59	\$313.81	3.5%	\$10.94

Lamp Failure

Line No.	Rate	Luminaire	Avg Material Cost	Material Handling	Labor & Vehicle	Total Activity Cost	Frequency	Annual Cost
1	468	250W HPS Flood	\$11.00	\$2.27	\$ 73.86	\$87.13	21.1%	\$18.41
2	478	400W HPS Flood	\$11.07	\$2.29	\$ 73.86	\$87.22	23.3%	\$20.33
3	509	50W HPS PT - Night Torch	\$11.60	\$2.40	\$ 73.86	\$87.86	18.4%	\$16.18
4	520	400W MH Cobra	\$15.51	\$3.20	\$ 73.86	\$92.57	23.9%	\$22.17
5	550	100W HPS Shoebox	\$10.54	\$2.18	\$ 73.86	\$86.58	17.3%	\$15.01
6	552	400W HPS Shoebox	\$11.07	\$2.29	\$ 73.86	\$87.22	20.9%	\$18.19
7	554	400W MH Shoebox	\$15.51	\$3.20	\$ 73.86	\$92.57	23.7%	\$21.94
8	556	400W MH Flood	\$15.51	\$3.20	\$ 73.86	\$92.57	24.0%	\$22.21
9	558	1000W MH Flood	\$10.71	\$2.21	\$ 73.86	\$86.78	39.7%	\$34.41
10	564	175W MH Shoebox	\$10.80	\$2.23	\$ 73.86	\$86.89	13.5%	\$11.76
11	566	250W HPS Shoebox	\$11.00	\$2.27	\$ 73.86	\$87.13	19.8%	\$17.22
12	570	100W HPS Classic PT	\$10.54	\$2.18	\$ 73.86	\$86.58	16.6%	\$14.39
13	571	100W HPS Contemporary PT	\$10.71	\$2.21	\$ 73.86	\$86.78	14.1%	\$12.25
14	572	100W HPS Colonial PT	\$10.54	\$2.18	\$ 73.86	\$86.58	16.3%	\$14.11
15	573	100W HPS Salem PT	\$10.54	\$2.18	\$ 73.86	\$86.58	16.8%	\$14.58
16	574	175W MH General PT	\$11.07	\$2.29	\$ 73.86	\$87.22	15.4%	\$13.45
17	575	175W MH Salem PT	\$10.80	\$2.23	\$ 73.86	\$86.89	13.8%	\$11.99
18	576	1000W MH Shoebox	\$19.71	\$4.07	\$ 73.86	\$97.64	39.7%	\$38.78
19	700	150W MH Salem PT	\$16.86	\$3.48	\$ 73.86	\$94.20	13.8%	\$13.00
20	701	150W MH General PT	\$16.86	\$3.48	\$ 73.86	\$94.20	15.4%	\$14.53
21	702	150W MH Shoebox	\$16.86	\$3.48	\$ 73.86	\$94.20	13.5%	\$12.75
22	703	350W MH Shoebox	\$25.97	\$5.37	\$ 73.86	\$105.20	23.7%	\$24.93
23	704	350W MH Cobra	\$25.97	\$5.37	\$ 73.86	\$105.20	23.9%	\$25.19
24	705	350W MH Flood	\$25.97	\$5.37	\$ 73.86	\$105.20	24.0%	\$25.24
25	800	50W HPS Cobra	\$11.60	\$2.40	\$ 73.86	\$87.86	21.8%	\$19.11
26	802	70W HPS Cobra/Nema	\$10.58	\$2.19	\$ 73.86	\$86.63	14.2%	\$12.30
27	803	100W HPS Cobra/Nema	\$10.54	\$2.18	\$ 73.86	\$86.58	17.7%	\$15.33
28	804	150W HPS Cobra/Nema	\$10.71	\$2.21	\$ 73.86	\$86.78	14.6%	\$12.71
29	805	250W HPS Cobra/Nema	\$11.00	\$2.27	\$ 73.86	\$87.13	18.9%	\$16.44
30	806	400W HPS Cobra	\$11.07	\$2.29	\$ 73.86	\$87.22	22.1%	\$19.32
31	809	400W HPS Mongoose	\$11.07	\$2.29	\$ 73.86	\$87.22	20.7%	\$18.06
32	810	70W HPS Coach PT	\$10.58	\$2.19	\$ 73.86	\$86.63	15.1%	\$13.10

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 7 OF 111
FILED: 04/05/2013

Luminaire Parts Failure
Starting Aide, Capacitor, Ballast, Glass

Line No.	Rate	Luminaire	Weighted Avg Material Cost	Material Handling	Labor & Vehicle	Total Activity Cost	Weighted Group Frequency	Annual Cost
1	468	250W HPS Flood	\$31.62	\$6.53	\$ 85.62	\$123.77	3.7%	\$4.54
2	478	400W HPS Flood	\$36.87	\$7.62	\$ 85.62	\$130.10	4.6%	\$5.98
3	509	50W HPS PT - Night Torch	\$14.27	\$2.95	\$ 85.62	\$102.84	2.4%	\$2.45
4	520	400W MH Cobra	\$36.59	\$7.56	\$ 85.62	\$129.77	4.6%	\$5.97
5	550	100W HPS Shoebox	\$33.74	\$6.97	\$ 85.62	\$126.34	1.7%	\$2.21
6	552	400W HPS Shoebox	\$36.88	\$7.62	\$ 85.62	\$130.12	4.4%	\$5.66
7	554	400W MH Shoebox	\$36.59	\$7.56	\$ 85.62	\$129.77	4.6%	\$5.93
8	556	400W MH Flood	\$36.59	\$7.56	\$ 85.62	\$129.77	4.6%	\$5.97
9	558	1000W MH Flood	\$50.27	\$10.38	\$ 85.62	\$146.27	29.2%	\$42.73
10	564	175W MH Shoebox	\$29.80	\$6.12	\$ 85.62	\$121.34	3.3%	\$3.97
11	566	250W HPS Shoebox	\$31.63	\$6.53	\$ 85.62	\$123.78	3.4%	\$4.24
12	570	100W HPS Classic PT	\$35.21	\$7.27	\$ 85.62	\$128.10	1.7%	\$2.16
13	571	100W HPS Contemporary PT	\$35.21	\$7.27	\$ 85.62	\$128.10	1.6%	\$2.10
14	572	100W HPS Colonial PT	\$35.21	\$7.27	\$ 85.62	\$128.10	1.7%	\$2.12
15	573	100W HPS Salem PT	\$35.21	\$7.27	\$ 85.62	\$128.10	1.7%	\$2.18
16	574	175W MH General PT	\$31.06	\$6.42	\$ 85.62	\$123.10	3.6%	\$4.40
17	575	175W MH Salem PT	\$31.06	\$6.42	\$ 85.62	\$123.10	3.3%	\$4.09
18	576	1000W MH Shoebox	\$50.27	\$10.38	\$ 85.82	\$146.27	29.4%	\$42.99
19	700	150W MH Salem PT	\$31.06	\$6.42	\$ 85.62	\$123.10	3.3%	\$4.09
20	701	150W MH General PT	\$31.06	\$6.42	\$ 85.62	\$123.10	3.6%	\$4.40
21	702	150W MH Shoebox	\$29.60	\$6.12	\$ 85.62	\$121.34	3.3%	\$3.97
22	703	350W MH Shoebox	\$36.59	\$7.56	\$ 85.62	\$129.77	4.6%	\$5.93
23	704	350W MH Cobra	\$36.59	\$7.56	\$ 85.62	\$129.77	4.6%	\$5.97
24	705	350W MH Flood	\$36.59	\$7.56	\$ 85.62	\$129.77	4.6%	\$5.97
25	800	50W HPS Cobra	\$14.27	\$2.95	\$ 85.62	\$102.84	2.9%	\$2.93
26	802	70W HPS Cobra/Nema	\$14.27	\$2.95	\$ 85.62	\$102.83	0.4%	\$0.41
27	803	100W HPS Cobra/Nema	\$33.72	\$6.97	\$ 85.62	\$126.30	1.8%	\$2.25
28	804	150W HPS Cobra/Nema	\$33.65	\$6.95	\$ 85.62	\$126.22	1.5%	\$1.88
29	805	250W HPS Cobra/Nema	\$31.62	\$6.53	\$ 85.62	\$123.77	3.3%	\$4.05
30	806	400W HPS Cobra	\$36.87	\$7.62	\$ 85.62	\$130.10	4.5%	\$5.83
31	809	400W HPS Mongoose	\$36.87	\$7.62	\$ 85.62	\$130.10	4.3%	\$5.61
32	810	70W HPS Coach PT	\$14.27	\$2.95	\$ 85.62	\$102.83	6.8%	\$7.04

Photo Cell Failure

Line No.	Rate	Luminaire	Avg Material Cost	Material Handling	Labor & Vehicle	Total Activity Cost	Frequency	Annual Cost
1	468	250W HPS Flood	\$4.06	\$0.84	\$ 72.69	\$77.59	7.0%	\$5.46
2	478	400W HPS Flood	\$4.06	\$0.84	\$ 72.69	\$77.59	7.2%	\$5.58
3	509	50W HPS PT - Night Torch	\$4.06	\$0.84	\$ 72.69	\$77.59	9.9%	\$7.64
4	520	400W MH Cobra	\$4.06	\$0.84	\$ 72.69	\$77.59	7.7%	\$5.95
5	550	100W HPS Shoebox	\$4.06	\$0.84	\$ 72.69	\$77.59	7.2%	\$5.59
6	552	400W HPS Shoebox	\$4.06	\$0.84	\$ 72.69	\$77.59	6.9%	\$5.33
7	554	400W MH Shoebox	\$4.06	\$0.84	\$ 72.69	\$77.59	7.6%	\$5.92
8	556	400W MH Flood	\$4.06	\$0.84	\$ 72.69	\$77.59	7.7%	\$5.96
9	558	1000W MH Flood	\$4.06	\$0.84	\$ 72.69	\$77.59	11.7%	\$9.05
10	564	175W MH Shoebox	\$4.06	\$0.84	\$ 72.69	\$77.59	2.7%	\$2.08
11	566	250W HPS Shoebox	\$4.06	\$0.84	\$ 72.69	\$77.59	6.6%	\$5.10
12	570	100W HPS Classic PT	\$4.06	\$0.84	\$ 72.69	\$77.59	7.0%	\$5.40
13	571	100W HPS Contemporary PT	\$4.06	\$0.84	\$ 72.69	\$77.59	7.6%	\$5.92
14	572	100W HPS Colonial PT	\$4.06	\$0.84	\$ 72.69	\$77.59	6.8%	\$5.31
15	573	100W HPS Salem PT	\$4.06	\$0.84	\$ 72.69	\$77.59	7.0%	\$5.46
16	574	175W MH General PT	\$4.06	\$0.84	\$ 72.69	\$77.59	3.3%	\$2.53
17	575	175W MH Salem PT	\$4.06	\$0.84	\$ 72.69	\$77.59	3.0%	\$2.35
18	576	1000W MH Shoebox	\$4.06	\$0.84	\$ 72.69	\$77.59	11.6%	\$9.03
19	700	150W MH Salem PT	\$4.06	\$0.84	\$ 72.69	\$77.59	3.0%	\$2.35
20	701	150W MH General PT	\$4.06	\$0.84	\$ 72.69	\$77.59	3.3%	\$2.53
21	702	150W MH Shoebox	\$4.06	\$0.84	\$ 72.69	\$77.59	2.7%	\$2.08
22	703	350W MH Shoebox	\$4.06	\$0.84	\$ 72.69	\$77.59	7.6%	\$5.92
23	704	350W MH Cobra	\$4.06	\$0.84	\$ 72.69	\$77.59	7.7%	\$5.95
24	705	350W MH Flood	\$4.06	\$0.84	\$ 72.69	\$77.59	7.7%	\$5.96
25	800	50W HPS Cobra	\$4.06	\$0.84	\$ 72.69	\$77.59	12.4%	\$9.63
26	802	70W HPS Cobra/Nema	\$4.06	\$0.84	\$ 72.69	\$77.59	8.7%	\$6.72
27	803	100W HPS Cobra/Nema	\$4.06	\$0.84	\$ 72.69	\$77.59	7.2%	\$5.62
28	804	150W HPS Cobra/Nema	\$4.06	\$0.84	\$ 72.69	\$77.59	5.9%	\$4.61
29	805	250W HPS Cobra/Nema	\$4.06	\$0.84	\$ 72.69	\$77.59	6.2%	\$4.77
30	806	400W HPS Cobra	\$4.06	\$0.84	\$ 72.69	\$77.59	7.0%	\$5.42
31	809	400W HPS Mongoose	\$4.06	\$0.84	\$ 72.69	\$77.59	6.8%	\$5.27
32	810	70W HPS Coach PT	\$4.06	\$0.84	\$ 72.69	\$77.59	9.3%	\$7.25

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 9 OF 111
FILED: 04/05/2013

Relay Failure

Line No.	Rate	Luminaire	Avg Material Cost	Material Handling	Labor & Vehicle	Total Activity Cost	Frequency	Annual Cost
1	468	250W HPS Flood	\$36.50	\$7.54	\$ 149.69	\$193.73	0.016%	\$0.03
2	478	400W HPS Flood	\$57.56	\$11.89	\$ 149.69	\$219.14	0.018%	\$0.04
3	509	50W HPS PT - Night Torch	\$12.64	\$2.61	\$ 149.69	\$164.94	0.000%	\$0.00
4	520	400W MH Cobra	\$57.56	\$11.89	\$ 149.69	\$219.14	0.018%	\$0.04
5	550	100W HPS Shoebox	\$28.08	\$5.80	\$ 149.69	\$183.57	0.018%	\$0.03
6	552	400W HPS Shoebox	\$57.56	\$11.89	\$ 149.69	\$219.14	0.019%	\$0.04
7	554	400W MH Shoebox	\$57.56	\$11.89	\$ 149.69	\$219.14	0.018%	\$0.04
8	556	400W MH Flood	\$57.56	\$11.89	\$ 149.69	\$219.14	0.018%	\$0.04
9	558	1000W MH Flood	\$138.99	\$28.72	\$ 149.69	\$317.40	0.022%	\$0.07
10	564	175W MH Shoebox	\$25.27	\$5.22	\$ 149.69	\$180.18	0.006%	\$0.01
11	566	250W HPS Shoebox	\$36.50	\$7.54	\$ 149.69	\$193.73	0.014%	\$0.03
12	570	100W HPS Classic PT	\$16.85	\$3.48	\$ 149.69	\$170.02	0.017%	\$0.03
13	571	100W HPS Contemporary PT	\$16.85	\$3.48	\$ 149.69	\$170.02	0.017%	\$0.03
14	572	100W HPS Colonial PT	\$16.85	\$3.48	\$ 149.69	\$170.02	0.017%	\$0.03
15	573	100W HPS Salem PT	\$16.85	\$3.48	\$ 149.69	\$170.02	0.017%	\$0.03
16	574	175W MH General PT	\$25.27	\$5.22	\$ 149.69	\$180.18	0.005%	\$0.01
17	575	175W MH Salem PT	\$25.27	\$5.22	\$ 149.69	\$180.18	0.006%	\$0.01
18	576	1000W MH Shoebox	\$138.99	\$28.72	\$ 149.69	\$317.40	0.022%	\$0.07
19	700	150W MH Salem PT	\$21.06	\$4.35	\$ 149.69	\$175.10	0.006%	\$0.01
20	701	150W MH General PT	\$21.06	\$4.35	\$ 149.69	\$175.10	0.005%	\$0.01
21	702	150W MH Shoebox	\$21.06	\$4.35	\$ 149.69	\$175.10	0.006%	\$0.01
22	703	350W MH Shoebox	\$47.73	\$9.86	\$ 149.69	\$207.29	0.018%	\$0.04
23	704	350W MH Cobra	\$47.73	\$9.86	\$ 149.69	\$207.29	0.018%	\$0.04
24	705	350W MH Flood	\$47.73	\$9.86	\$ 149.69	\$207.29	0.018%	\$0.04
25	800	50W HPS Cobra	\$12.64	\$2.61	\$ 149.69	\$164.94	0.000%	\$0.00
26	802	70W HPS Cobra/Nema	\$21.95	\$4.54	\$ 149.69	\$176.18	0.000%	\$0.00
27	803	100W HPS Cobra/Nema	\$18.90	\$3.90	\$ 149.69	\$172.49	0.019%	\$0.03
28	804	150W HPS Cobra/Nema	\$22.46	\$4.64	\$ 149.69	\$176.79	0.015%	\$0.03
29	805	250W HPS Cobra/Nema	\$36.50	\$7.54	\$ 149.69	\$193.73	0.014%	\$0.03
30	806	400W HPS Cobra	\$57.56	\$11.89	\$ 149.69	\$219.14	0.019%	\$0.04
31	809	400W HPS Mongoose	\$57.56	\$11.89	\$ 149.69	\$219.14	0.020%	\$0.04
32	810	70W HPS Coach PT	\$12.64	\$2.61	\$ 149.69	\$164.94	0.000%	\$0.00

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 10 OF 111
FILED: 04/05/2013

MAINTENANCE COST SUMMARY

MISCELLANEOUS OTHER

Miscellaneous Other Equipment Failure

Line No.	Rate	Equipment	Avg Material Cost	Material Handling	Labor & Vehicle	Total Activity Cost	Frequency	Annual Cost
1	563	Timer	\$ 339.76	\$70.19	\$ 174.94	\$584.89	0.00%	\$0.01
2	569	Double Bracket	\$ 310.44	\$84.14	\$ 97.33	\$471.91	0.0%	\$0.02

MAINTENANCE COST SUMMARY

POLES

Pole & Wire Maintenance Cost Summary

Line No.	Rate	Pole	Pole Replacement	OH Cable Failures/Parts	UG Cable Failures/Parts	Paint Poles	Average Annual Cost	Total Monthly Charge
1	422	Aluminum, 10 ft, DB	\$ 0.96	-	\$ 3.04	\$ 28.91	\$ 32.92	\$ 2.74
2	425	Wood (Inaccessible), 30 ft	\$ 0.89	\$ 1.60	-	-	\$ 2.49	\$ 0.21
3	523	Round, 23 ft, DB Concrete	\$ 2.94	-	\$ 3.18	-	\$ 6.12	\$ 0.51
4	525	Franklin Composite, PT, DB Composite	\$ 2.33	-	-	\$ 20.49	\$ 22.83	\$ 1.90
5	580	Heritage, PT, DB Aluminum	\$ 1.39	-	\$ 3.18	\$ 28.91	\$ 33.48	\$ 2.79
6	581	Capitol, PT, DB Aluminum	\$ 2.33	-	\$ 3.18	\$ 28.91	\$ 34.43	\$ 2.87
7	582	Winston, PT, DB Fiber	\$ 1.11	-	\$ 3.18	\$ 28.91	\$ 33.20	\$ 2.77
8	583	Waterford, PT, DB Concrete	\$ 1.78	-	\$ 1.35	-	\$ 3.13	\$ 0.26
9	584	Aluminum, PT, DB	\$ 1.12	-	\$ 3.18	\$ 28.91	\$ 33.22	\$ 2.77
10	585	Charleston Banner, PT, DB Aluminum	\$ 2.58	-	\$ 3.18	\$ 28.91	\$ 34.67	\$ 2.89
11	586	Charleston, PT, DB Aluminum	\$ 1.60	-	\$ 3.18	\$ 28.91	\$ 33.70	\$ 2.81
12	587	Riviera, PT, DB Aluminum	\$ 1.56	-	\$ 3.18	\$ 28.91	\$ 33.65	\$ 2.80
13	588	Standard, 35 ft, DB Concrete	\$ 0.89	-	\$ 3.18	-	\$ 4.07	\$ 0.34
14	589	Steel, 30 ft, AB	\$ 2.64	-	\$ 3.18	\$ 50.42	\$ 56.25	\$ 4.69
15	590	Charleston HD, PT, DB Aluminum	\$ 2.05	-	\$ 3.18	\$ 35.46	\$ 40.69	\$ 3.39
16	591	Tall Waterford, 35 ft, DB Concrete	\$ 3.61	-	\$ 3.18	-	\$ 6.79	\$ 0.57
17	592	Victorian, PT, DB Concrete	\$ 2.59	-	\$ 3.04	-	\$ 5.64	\$ 0.47
18	594	Standard, 40/45 ft, Concrete	\$ 2.07	\$ 1.60	-	-	\$ 3.67	\$ 0.31
19	595	Standard, 25/30 ft, DB Concrete	\$ 1.31	-	\$ 3.18	-	\$ 4.49	\$ 0.37
20	596	Standard, 45 ft, DB Concrete	\$ 2.05	-	\$ 3.04	-	\$ 5.10	\$ 0.42
21	597	Wood, 40/45 ft	\$ 1.26	\$ 1.60	-	-	\$ 2.86	\$ 0.24
22	599	Standard, 16 ft, DB Concrete	\$ 1.19	-	\$ 3.18	-	\$ 4.37	\$ 0.36
23	607	Std, >100ftspan, 35 ft, DB Conc	\$ 1.45	-	\$ 3.18	-	\$ 4.63	\$ 0.39
24	612	Std, 100-150ftspan, 35 ft, DB Conc	\$ 1.45	-	\$ 3.18	-	\$ 4.63	\$ 0.39
25	614	Std, >150ftspan, 35 ft, DB Conc	\$ 1.45	-	\$ 3.18	-	\$ 4.63	\$ 0.39
26	615	Aluminum, 28 ft, DB	\$ 2.12	-	\$ 3.18	\$ 50.42	\$ 55.72	\$ 4.64
27	616	Aluminum, 27 ft, DB	\$ 3.17	-	\$ 3.18	\$ 50.42	\$ 56.77	\$ 4.73
28	622	Aluminum, 37 ft, DB	\$ 3.32	-	\$ 3.18	\$ 50.42	\$ 56.92	\$ 4.74
29	624	Fiber, PT, DB	\$ 1.11	-	\$ 3.04	\$ 28.91	\$ 33.07	\$ 2.76
30	626	Wood, 30 ft	\$ 0.94	\$ 1.60	-	-	\$ 2.55	\$ 0.21
31	627	Wood, 35 ft	\$ 1.02	\$ 1.60	-	-	\$ 2.62	\$ 0.22
32	637	Standard, 35 ft, Concrete	\$ 1.45	\$ 1.60	-	-	\$ 3.06	\$ 0.25
33	641	Wood, Existing Pole	\$ 1.07	-	\$ 3.04	-	\$ 4.12	\$ 0.34

Pole Replacement

Line No.	Rate	Pole	Avg Material Cost	Material Handling	Labor & Vehicle	Total Activity Cost	Frequency	Annual Cost
1	422	Aluminum, 10 ft, DB	\$ 70.03	\$ 14.47	\$ 459.63	\$ 544.13	0.18%	\$ 0.96
2	425	Wood (Inaccessible), 30 ft	\$ 79.78	\$ 16.48	\$ 407.77	\$ 504.04	0.18%	\$ 0.89
3	523	Round, 23 ft, DB Concrete	\$ 1,042.97	\$ 215.48	\$ 407.77	\$ 1,666.22	0.18%	\$ 2.94
4	525	Franklin Composite, PT, DB Composite	\$ 715.12	\$ 147.74	\$ 459.63	\$ 1,322.49	0.18%	\$ 2.33
5	580	Heritage, PT, DB Aluminum	\$ 271.83	\$ 56.16	\$ 459.63	\$ 787.62	0.18%	\$ 1.39
6	581	Capitol, PT, DB Aluminum	\$ 715.12	\$ 147.74	\$ 459.63	\$ 1,322.49	0.18%	\$ 2.33
7	582	Winston, PT, DB Fiber	\$ 140.46	\$ 29.02	\$ 459.63	\$ 629.11	0.18%	\$ 1.11
8	583	Waterford, PT, DB Concrete	\$ 455.22	\$ 94.05	\$ 459.63	\$ 1,008.89	0.18%	\$ 1.78
9	584	Aluminum, PT, DB	\$ 146.55	\$ 30.28	\$ 459.63	\$ 636.45	0.18%	\$ 1.12
10	585	Charleston Banner, PT, DB Aluminum	\$ 829.83	\$ 171.44	\$ 459.63	\$ 1,460.90	0.18%	\$ 2.58
11	586	Charleston, PT, DB Aluminum	\$ 373.14	\$ 77.09	\$ 459.63	\$ 909.86	0.18%	\$ 1.60
12	587	Riviera, PT, DB Aluminum	\$ 351.46	\$ 72.61	\$ 459.63	\$ 883.71	0.18%	\$ 1.56
13	588	Standard, 35 ft, DB Concrete	\$ 79.78	\$ 16.48	\$ 407.77	\$ 504.04	0.18%	\$ 0.89
14	589	Steel, 30 ft, AB	\$ 904.20	\$ 186.81	\$ 407.77	\$ 1,498.78	0.18%	\$ 2.64
15	590	Charleston HD, PT, DB Aluminum	\$ 583.58	\$ 120.57	\$ 459.63	\$ 1,163.78	0.18%	\$ 2.05
16	591	Tall Waterford, 35 ft, DB Concrete	\$ 1,357.49	\$ 280.46	\$ 407.77	\$ 2,045.72	0.18%	\$ 3.61
17	592	Victorian, PT, DB Concrete	\$ 836.58	\$ 172.84	\$ 459.63	\$ 1,469.05	0.18%	\$ 2.59
18	594	Standard, 40/45 ft, Concrete	\$ 635.21	\$ 131.23	\$ 407.77	\$ 1,174.22	0.18%	\$ 2.07
19	595	Standard, 25/30 ft, DB Concrete	\$ 275.88	\$ 57.00	\$ 407.77	\$ 740.65	0.18%	\$ 1.31
20	596	Standard, 45 ft, DB Concrete	\$ 627.07	\$ 129.55	\$ 407.77	\$ 1,164.40	0.18%	\$ 2.05
21	597	Wood, 40/45 ft	\$ 253.74	\$ 52.42	\$ 407.77	\$ 713.94	0.18%	\$ 1.26
22	599	Standard, 16 ft, DB Concrete	\$ 221.85	\$ 45.83	\$ 407.77	\$ 675.46	0.18%	\$ 1.19
23	607	Std, >100ftspan, 35 ft, DB Conc	\$ 342.19	\$ 70.70	\$ 407.77	\$ 820.67	0.18%	\$ 1.45
24	612	Std, 100-150ftspan, 35 ft, DB Conc	\$ 342.19	\$ 70.70	\$ 407.77	\$ 820.67	0.18%	\$ 1.45
25	614	Std, >150ftspan, 35 ft, DB Conc	\$ 342.19	\$ 70.70	\$ 407.77	\$ 820.67	0.18%	\$ 1.45
26	615	Aluminum, 28 ft, DB	\$ 658.02	\$ 135.95	\$ 407.77	\$ 1,201.74	0.18%	\$ 2.12
27	616	Aluminum, 27 ft, DB	\$ 1,152.15	\$ 238.03	\$ 407.77	\$ 1,797.96	0.18%	\$ 3.17
28	622	Aluminum, 37 ft, DB	\$ 1,221.15	\$ 252.29	\$ 407.77	\$ 1,881.21	0.18%	\$ 3.32
29	624	Fiber, PT, DB	\$ 140.34	\$ 28.99	\$ 459.63	\$ 628.96	0.18%	\$ 1.11
30	626	Wood, 30 ft	\$ 106.14	\$ 21.93	\$ 407.77	\$ 535.84	0.18%	\$ 0.94
31	627	Wood, 35 ft	\$ 140.71	\$ 29.07	\$ 407.77	\$ 577.55	0.18%	\$ 1.02
32	637	Standard, 35 ft, Concrete	\$ 345.01	\$ 71.28	\$ 407.77	\$ 824.06	0.18%	\$ 1.45
33	641	Wood, Existing Pole	\$ 166.86	\$ 34.47	\$ 407.77	\$ 609.11	0.18%	\$ 1.07

OH Cable Failure/Parts

Line No.	Rate	Pole	Avg Material Cost	Material Handling	Labor & Vehicle	Total Activity Cost	Frequency	Annual Cost
1	422	Aluminum, 10 ft, DB	-	-	-	-	-	-
2	425	Wood (Inaccessible), 30 ft	\$ 68.69	\$ 14.19	\$ 167.53	\$ 250.41	0.64%	\$ 1.60
3	523	Round, 23 ft, DB Concrete	-	-	-	-	-	-
4	525	Franklin Composite, PT, DB Composite	-	-	-	-	-	-
5	580	Heritage, PT, DB Aluminum	-	-	-	-	-	-
6	581	Capitol, PT, DB Aluminum	-	-	-	-	-	-
7	582	Winston, PT, DB Fiber	-	-	-	-	-	-
8	583	Waterford, PT, DB Concrete	-	-	-	-	-	-
9	584	Aluminum, PT, DB	-	-	-	-	-	-
10	585	Charleston Banner, PT, DB Aluminum	-	-	-	-	-	-
11	586	Charleston, PT, DB Aluminum	-	-	-	-	-	-
12	587	Riviera, PT, DB Aluminum	-	-	-	-	-	-
13	588	Standard, 35 ft, DB Concrete	-	-	-	-	-	-
14	589	Steel, 30 ft, AB	-	-	-	-	-	-
15	590	Charleston HD, PT, DB Aluminum	-	-	-	-	-	-
16	591	Tall Waterford, 35 ft, DB Concrete	-	-	-	-	-	-
17	592	Victorian, PT, DB Concrete	-	-	-	-	-	-
18	594	Standard, 40/45 ft, Concrete	\$ 68.69	\$ 14.19	\$ 167.53	\$ 250.41	0.64%	\$ 1.60
19	595	Standard, 25/30 ft, DB Concrete	-	-	-	-	-	-
20	596	Standard, 45 ft, DB Concrete	-	-	-	-	-	-
21	597	Wood, 40/45 ft	\$ 68.69	\$ 14.19	\$ 167.53	\$ 250.41	0.64%	\$ 1.60
22	599	Standard, 16 ft, DB Concrete	-	-	-	-	-	-
23	607	Std, >100ftspan, 35 ft, DB Conc	-	-	-	-	-	-
24	612	Std, 100-150ftspan, 35 ft, DB Conc	-	-	-	-	-	-
25	614	Std, >150ftspan, 35 ft, DB Conc	-	-	-	-	-	-
26	615	Aluminum, 28 ft, DB	-	-	-	-	-	-
27	616	Aluminum, 27 ft, DB	-	-	-	-	-	-
28	622	Aluminum, 37 ft, DB	-	-	-	-	-	-
29	624	Fiber, PT, DB	-	-	-	-	-	-
30	626	Wood, 30 ft	\$ 68.69	\$ 14.19	\$ 167.53	\$ 250.41	0.64%	\$ 1.60
31	627	Wood, 35 ft	\$ 68.69	\$ 14.19	\$ 167.53	\$ 250.41	0.64%	\$ 1.60
32	637	Standard, 35 ft, Concrete	\$ 68.69	\$ 14.19	\$ 167.53	\$ 250.41	0.64%	\$ 1.60
33	641	Wood, Existing Pole	-	-	-	-	-	-

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 16 OF 111
FILED: 04/05/2013

UG Cable Failure/Parts

Line No.	Rate	Pole	Weighted Avg Material Cost	Material Handling	Labor & Vehicle	Total Activity Cost	Weighted Group Frequency	Annual Cost
1	422	Aluminum, 10 ft, DB	\$ 132.00	\$ 27.27	\$ 127.15	\$ 286.43	1.06%	\$ 3.04
2	425	Wood (Inaccessible), 30 ft	-	-	-	-	-	\$ -
3	523	Round, 23 ft, DB Concrete	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
4	525	Franklin Composite, PT, DB Composite	-	-	-	-	1.06%	\$ -
5	580	Heritage, PT, DB Aluminum	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
6	581	Capitol, PT, DB Aluminum	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
7	582	Winston, PT, DB Fiber	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
8	583	Waterford, PT, DB Concrete	-	-	\$ 127.15	\$ 127.15	1.06%	\$ 1.35
9	584	Aluminum, PT, DB	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
10	585	Charleston Banner, PT, DB Aluminum	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
11	586	Charleston, PT, DB Aluminum	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
12	587	Riviera, PT, DB Aluminum	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
13	588	Standard, 35 ft, DB Concrete	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
14	589	Steel, 30 ft, AB	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
15	590	Charleston HD, PT, DB Aluminum	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
16	591	Tall Waterford, 35 ft, DB Concrete	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
17	592	Victorian, PT, DB Concrete	\$ 132.00	\$ 27.27	\$ 127.15	\$ 286.43	1.06%	\$ 3.04
18	594	Standard, 40/45 ft, Concrete	-	-	-	-	-	\$ -
19	595	Standard, 25/30 ft, DB Concrete	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
20	596	Standard, 45 ft, DB Concrete	\$ 132.00	\$ 27.27	\$ 127.15	\$ 286.43	1.06%	\$ 3.04
21	597	Wood, 40/45 ft	-	-	-	-	-	\$ -
22	599	Standard, 16 ft, DB Concrete	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
23	607	Std, >100ftspan, 35 ft, DB Conc	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
24	612	Std, 100-150ftspan, 35 ft, DB Conc	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
25	614	Std, >150ftspan, 35 ft, DB Conc	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
26	615	Aluminum, 28 ft, DB	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
27	616	Aluminum, 27 ft, DB	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
28	622	Aluminum, 37 ft, DB	\$ 142.55	\$ 29.45	\$ 127.15	\$ 299.16	1.06%	\$ 3.18
29	624	Fiber, PT, DB	\$ 132.00	\$ 27.27	\$ 127.15	\$ 286.43	1.06%	\$ 3.04
30	626	Wood, 30 ft	-	-	-	-	-	\$ -
31	627	Wood, 35 ft	-	-	-	-	-	\$ -
32	637	Standard, 35 ft, Concrete	-	-	-	-	-	\$ -
33	641	Wood, Existing Pole	\$ 132.00	\$ 27.27	\$ 127.15	\$ 286.43	1.06%	\$ 3.04

Paint Pole

Line No.	Rate	Pole	Avg Material Cost	Material Handling	Labor & Vehicle	Total Activity Cost	Frequency	Annual Cost
1	422	Aluminum, 10 ft, DB	\$ 82.69	\$ 17.08	\$ 92.99	\$ 192.76	15.00%	\$ 28.91
2	425	Wood (Inaccessible), 30 ft	-	-	-	-	-	-
3	523	Round, 23 ft, DB Concrete	\$ 82.69	\$ 17.08	\$ 136.62	\$ 236.40	0.00%	\$ -
4	525	Franklin Composite, PT, DB Composite	-	-	\$ 136.62	\$ 136.62	15.00%	\$ 20.49
5	580	Heritage, PT, DB Aluminum	\$ 82.69	\$ 17.08	\$ 92.99	\$ 192.76	15.00%	\$ 28.91
6	581	Capitol, PT, DB Aluminum	\$ 82.69	\$ 17.08	\$ 92.99	\$ 192.76	15.00%	\$ 28.91
7	582	Winston, PT, DB Fiber	\$ 82.69	\$ 17.08	\$ 92.99	\$ 192.76	15.00%	\$ 28.91
8	583	Waterford, PT, DB Concrete	-	-	-	-	-	-
9	584	Aluminum, PT, DB	\$ 82.69	\$ 17.08	\$ 92.99	\$ 192.76	15.00%	\$ 28.91
10	585	Charleston Banner, PT, DB Aluminum	\$ 82.69	\$ 17.08	\$ 92.99	\$ 192.76	15.00%	\$ 28.91
11	586	Charleston, PT, DB Aluminum	\$ 82.69	\$ 17.08	\$ 92.99	\$ 192.76	15.00%	\$ 28.91
12	587	Riviera, PT, DB Aluminum	\$ 82.69	\$ 17.08	\$ 92.99	\$ 192.76	15.00%	\$ 28.91
13	588	Standard, 35 ft, DB Concrete	-	-	-	-	-	-
14	589	Steel, 30 ft, AB	\$ 165.37	\$ 34.17	\$ 136.62	\$ 336.16	15.00%	\$ 50.42
15	590	Charleston HD, PT, DB Aluminum	\$ 82.69	\$ 17.08	\$ 136.62	\$ 236.40	15.00%	\$ 35.46
16	591	Tall Waterford, 35 ft, DB Concrete	-	-	-	-	-	-
17	592	Victorian, PT, DB Concrete	-	-	-	-	-	-
18	594	Standard, 40/45 ft, Concrete	-	-	-	-	-	-
19	595	Standard, 25/30 ft, DB Concrete	-	-	-	-	-	-
20	596	Standard, 45 ft, DB Concrete	-	-	-	-	-	-
21	597	Wood, 40/45 ft	-	-	-	-	-	-
22	599	Standard, 16 ft, DB Concrete	-	-	-	-	-	-
23	607	Std, >100ftspan, 35 ft, DB Conc	-	-	-	-	-	-
24	612	Std, 100-150ftspan, 35 ft, DB Conc	-	-	-	-	-	-
25	614	Std, >150ftspan, 35 ft, DB Conc	-	-	-	-	-	-
26	615	Aluminum, 28 ft, DB	\$ 165.37	\$ 34.17	\$ 136.62	\$ 336.16	15.00%	\$ 50.42
27	616	Aluminum, 27 ft, DB	\$ 165.37	\$ 34.17	\$ 136.62	\$ 336.16	15.00%	\$ 50.42
28	622	Aluminum, 37 ft, DB	\$ 165.37	\$ 34.17	\$ 136.62	\$ 336.16	15.00%	\$ 50.42
29	624	Fiber, PT, DB	\$ 82.69	\$ 17.08	\$ 92.99	\$ 192.76	15.00%	\$ 28.91
30	626	Wood, 30 ft	-	-	\$ 136.62	\$ 136.62	0.00%	\$ -
31	627	Wood, 35 ft	-	-	\$ 136.62	\$ 136.62	0.00%	\$ -
32	637	Standard, 35 ft, Concrete	-	-	\$ 136.62	\$ 136.62	0.00%	\$ -
33	641	Wood, Existing Pole	-	-	\$ 136.62	\$ 136.62	0.00%	\$ -

**Installation
Costs**

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 18 OF 111
FILED: 04/05/2013

INSTALLATION COST SUMMARY

LUMINAIRES

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 19 OF 111
FILED: 04/05/2013

BMY 3478 Colors						
Rate Code		800				
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost		
LUMINAIRE	5586230	\$ 76.08	100.0%	76.08		
			0.0%	-		
			0.0%	-		
			0.0%	-		
			0.0%	-		
Weighted Average Luminaire Cost				\$ 76.08		
LAMP	5585370	\$ 11.60	1	\$ 11.60		
BRACKET & ACCESSORY - Weighted Avg Cost						
bracket, 20 IN	5580710	\$ 15.44	37.4%	5.77		
bracket, 4 FT	5580740	\$ 20.71	44.6%	9.23		
bracket, 6 FT	5580750	\$ 31.18	18.0%	5.62		
				-		
				-		
				-		
Weighted Average Bracket Cost				\$ 20.63		
Accessories for 12 ft bracket						
anchor				-		
compound				-		
conduit				-		
screw				-		
strap				-		
Weighted Average Bracket Accessories Cost				\$ -		
12-foot bracket percentage			0.0%	\$ 0.00		
Bracket and Accessory Weighted Average Cost				\$ 20.63		
PHOTOCONTROL						
1000W, 277V	5588100	\$ 5.09	21.2%	1.08		
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98		
Weighted Average Photocontrol Cost				\$ 4.06		
RELAY EQUIPMENT						
Shorting Cap	5581500	\$ 2.92	1 LOT	\$ 2.92		
Oil Switch	5589120	\$ 10.67	10.5%	\$ 1.12		
OH Installation	Varies	\$ 10.29	61.5%	\$ 6.33		
UG Installation	Varies	\$ 18.49	28.0%	\$ 5.18		
Weighted Average Relay Equipment				\$ -		
Control Equipment Average Cost				\$ 4.06		
BRACKET CABLE (Cu, Triplex, 600V 2/C, 10AWG)						
20 IN	5322230	\$ 0.66	3	0.74		
4 FT	5322230	\$ 0.66	6	1.77		
6 FT	5322230	\$ 0.66	8	0.95		
8 FT				-		
10 FT				-		
12 FT				-		
12 FT 5 JU				-		
12 FT 10 JU				-		
Bracket Cable Weighted Average Cost				\$ 3.45		
FIXTURE HARDWARE						
Pole Hardware wood/concrete						
Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2	0.42		
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2	3.16		
Decal		\$ 0.86	1	0.86		
				\$ 4.44		
Overhead Service Hardware						
Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2	2.24		
Cover, Snap-On Service Entrance Sleeve 5/8 dia 2in	5261930	\$ 0.38	2	0.76		
Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2	0.54		
				\$ 3.54		
Underground Service Hardware						
Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2	1.92		
				\$ 0.00		
Fixture Hardware Weighted Average Cost				\$ 7.98		
MATERIAL HANDLING @ 20.86 % of material cost				\$ 25.58		
TOTAL MATERIAL COST				\$ 149.38		
LABOR/VEHICLE						
	Crew Type	Unit Cost	# of Units	Cost		
INSTALL LIGHT FIXTURE						
Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18		
Engineering Office	E/O	\$ 64.12	0.23	\$ 14.69		
Engineering Field	E/F	\$ 69.82	0.29	\$ 20.14		
				\$ 209.01		
INSTALL RELAY CONTROL EQUIPMENT						
Oil Switch Installation	178 LN1	\$ 186.22	2.78	\$ 0.30		
OH Installation	67 SL1	\$ 73.92	1.77	\$ 1.21		
UG Installation	71 SL1	\$ 73.92	2.20	\$ 0.64		
Conduit Installation	71 CC2	\$ 146.93	3.85	\$ 2.24		
Conductor Installation	71 CC1	\$ 160.06	0.67	\$ 0.42		
Engineering Office	84 E/O	\$ 64.12	0.25	\$ 0.19		
Engineering Field incl in Fixture Eng if needed	84 E/F	\$ 69.82		\$ -		
Weighted Average Relay Equipment				\$ -		
				\$ -		
TOTAL LABOR/VEHICLE				\$ 209.01		
TOTAL COST				\$ 358.39		

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 20 OF 111
FILED: 04/05/2013

2013 1995 Classification						
	Rate Code	002				
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost		
LUMINAIRE	5585210	\$ 77.87	100.0%	77.87		
			0.0%	-		
			0.0%	-		
			0.0%	-		
			0.0%	-		
			0.0%	-		
					\$	77.87
LAMP	5585560	\$ 10.58	1	10.58		
BRACKET & ACCESSORY - Weighted Avg Cost						
bracket, 20 IN	5580710	\$ 15.44	37.4%	5.77		
bracket, 4 FT	5580740	\$ 20.71	44.6%	9.23		
bracket, 6 FT	5580750	\$ 31.18	18.0%	5.62		
Weighted Average Bracket Cost					\$	20.63
Accessories for 12 ft bracket						
anchor						
compound						
conduit						
screw						
strap						
Weighted Average Bracket Accessories Cost					\$	-
12-foot bracket percentage			0.0%		\$	-
Bracket and Accessory Weighted Average Cost					\$	20.63
PHOTOCONTROL						
1000W, 277V	5588100	\$ 5.09	21.2%	1.08		
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98		
Weighted Average Photocontrol Cost			100%		\$	4.06
RELAY EQUIPMENT						
Shorting Cap	5581500	\$ 2.92	1	2.92		
Oil Switch	5589120	\$ 18.53	10.5%	1.94		
OH Installation	Varies	\$ 17.87	61.5%	10.99		
UG Installation	Varies	\$ 32.12	28.0%	9.00		
Weighted Average Relay Equipment			0%		\$	-
Control Equipment Average Cost					\$	4.06
BRACKET CABLE (Cu, Triplex, 500V 2/C, 10AWG)						
20 IN	5322230	\$ 0.66	3	0.74		
4 FT	5322230	\$ 0.66	6	1.77		
6 FT	5322230	\$ 0.66	8	0.96		
8 FT						
10 FT						
12 FT						
12 FT 5 JU						
12 FT 10 JU						
Bracket Cable Weighted Average Cost					\$	3.46
FIXTURE HARDWARE						
Pole Hardware wood/boac						
Waasher, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2	0.42		
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2	3.16		
Decal		\$ 0.86	1	0.86		
					\$	4.44
Overhead Service Hardware						
Bot, Machine GALV 5/8x12	9233550	\$ 1.12	2	2.24		
Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2	0.76		
Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2	0.54		
			100%		\$	3.54
Underground Service Hardware						
Bot, Machine GALV 5/8x8	9233450	\$ 0.96	2	1.92		
			0%		\$	0.00
Fixture Hardware Weighted Average Cost					\$	7.98
MATERIAL HANDLING @ 20.66 % of material cost					\$	25.74
TOTAL MATERIAL COST					\$	180.31
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost		
INSTALL LIGHT FIXTURE						
Fixture Installation	LN2	\$ 153.81	1.13	174.18		
Engineering Office	E/O	\$ 64.12	0.23	14.69		
Engineering Field	E/F	\$ 69.82	0.29	20.14		
					\$	209.01
INSTALL RELAY CONTROL EQUIPMENT	<i>avg fixtures/relay</i>					
Oil Switch Installation	102 LN1	\$ 186.22	2.78	0.53		
OH Installation	38 SL1	\$ 73.92	1.77	2.10		
UG Installation	41 SL1	\$ 73.92	2.20	1.12		
Conduit Installation	41 CC2	\$ 146.93	3.85	3.88		
Conductor Installation	41 CC1	\$ 160.06	0.67	0.74		
Engineering Office	84 E/O	\$ 64.12	0.25	0.19		
Engineering Field <i>incl in Fixture Eng if needed</i>	84 E/F	\$ 69.82		-		
Weighted Average Relay Equipment	% Relay		0%		\$	-
TOTAL LABOR/VEHICLE					\$	209.01
TOTAL COST					\$	389.31

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 21 OF 111
FILED: 04/05/2013

100W HPS Cobolux/Arma					
Rate Code		803			
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
LUMINAIRE	5586220	\$ 94.56	84.2%	79.60	
	5586230	\$ 107.21	15.8%	16.96	
			0.0%	-	
			0.0%	-	
			0.0%	-	
			0.0%	-	
				<u>\$ 96.56</u>	
LAMP	5585580	\$ 10.54	1	\$ 10.54	
BRACKET & ACCESSORY - Weighted Avg Cost					
bracket, 20 IN	5580710	\$ 15.44	37.4%	5.77	
bracket, 4 FT	5580740	\$ 20.71	44.6%	9.23	
bracket, 6 FT	5580750	\$ 31.18	18.0%	5.62	
				-	
				-	
				-	
				-	
Weighted Average Bracket Cost				\$ 20.53	
Accessories for 12 ft bracket					
anchor				-	
compound				-	
conduit				-	
screw				-	
strap				-	
Weighted Average Bracket Accessories Cost				\$ -	
12-foot bracket percentage			0.0%	\$ -	
Bracket and Accessory Weighted Average Cost				\$ 20.53	
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%	1.08	
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98	
Weighted Average Photocontrol Cost			69%	\$ 2.80	
				% PC	
RELAY EQUIPMENT					
Shorting Cap	5581500	\$ 2.92	1	\$ 2.92	
Oil Switch	5589120	\$ 15.95	10.5%	\$ 1.67	
OH Installation	Varies	\$ 15.38	61.5%	\$ 9.46	
UG Installation	Varies	\$ 27.65	28.0%	\$ 7.75	
Weighted Average Relay Equipment			31%	\$ 6.75	
				% Relay	
Control Equipment Average Cost				\$ 9.56	
BRACKET CABLE (Cu, Triplex 600V 2/C, 10AWG)					
20 IN	5322230	\$ 0.66	3	0.74	
4 FT	5322230	\$ 0.66	6	1.77	
6 FT	5322230	\$ 0.66	8	0.95	
8 FT				-	
10 FT				-	
12 FT				-	
12 FT 5 JU				-	
12 FT 10 JU				-	
Bracket Cable Weighted Average Cost				\$ 3.46	
FIXTURE HARDWARE					
Pole Hardware wood/conc					
Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2	0.42	
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2	3.16	
Decal		\$ 0.86	1	0.86	
				\$ 4.44	
Overhead Service Hardware					
Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2	2.24	
Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2	0.76	
Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2	0.54	
			100%	\$ 3.54	
				% OH	
Underground Service Hardware					
Bolt, Machine GALV 5/8x6	9233450	\$ 0.96	2	\$ 1.92	
			0%	\$ 0.00	
				% UG	
Fixture Hardware Weighted Average Cost				\$ 7.98	
MATERIAL HANDLING @ 20.66 % of material cost				\$ 30.72	
TOTAL MATERIAL COST				\$ 178.44	
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18	
Engineering Office	E/O	\$ 64.12	0.23	\$ 14.69	
Engineering Field	E/F	\$ 68.82	0.29	\$ 20.14	
				\$ 209.01	
INSTALL RELAY CONTROL EQUIPMENT	<i>avg fixtures/relay</i>				
Oil Switch Installation	119 LN1	\$ 186.22	2.78	\$ 0.46	
OH Installation	44 SL1	\$ 73.52	1.77	\$ 1.81	
UG Installation	47 SL1	\$ 73.52	2.20	\$ 0.96	
Conduit Installation	47 CC2	\$ 146.93	3.85	\$ 3.34	
Conductor Installation	47 CC1	\$ 160.06	0.67	\$ 0.63	
Engineering Office	84 E/O	\$ 64.12	0.25	\$ 0.19	
Engineering Field <i>used in Fixture Eng if needed</i>	84 E/F	\$ 69.82		\$ -	
Weighted Average Relay Equipment			31%	\$ 2.29	
				% Relay	
TOTAL LABOR/VEHICLE				\$ 211.29	
TOTAL COST				\$ 389.73	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 23 OF 111
FILED: 04/05/2013

2013 MFR Schedule					
Rate Code 805					
MATERIAL	Stock #	Unit Cost	# of Units	and/or %	Cost
LUMINAIRE					
	5586010	\$ 129.54	1.7%		2.14
	5586140	\$ 125.82	0.3%		0.39
	5586190	\$ 106.05	26.5%		28.13
	5586200	\$ 96.50	65.6%		63.26
	5586250	\$ 108.75	5.8%		6.26
	5586700	\$ 123.58	0.2%		0.25
					<u>\$ 100.43</u>
LAMP	5585530	\$ 11.00	1		<u>11.00</u>
BRACKET & ACCESSORY - Weighted Avg Cost					
bracket, 20 IN	5580710	\$ 15.44	33.3%		5.14
bracket, 4 FT	5580740	\$ 20.71	39.7%		8.22
bracket, 6 FT	5580750	\$ 31.18	16.0%		5.00
bracket, 8 FT	5580780	\$ 64.85	1.6%		1.03
bracket, 10 FT	5580800	\$ 94.57	4.3%		4.07
bracket, 12 FT	5580820	\$ 78.95	2.1%		1.68
bracket, 12 FT 5 JU	5580850	\$ 204.02	1.8%		3.76
bracket, 12 FT 10 JU	5580830	\$ 138.37	1.1%		1.59
Weighted Average Bracket Cost					<u>\$ 30.48</u>
Accessories for 12 ft bracket					
anchor	1901543	\$ 0.10	8		0.80
compound	5851980	\$ 2.70	1		2.70
conduit	5521030	\$ 0.89	8		7.12
screw	5290800	\$ 0.13	8		1.04
strap	5511210	\$ 0.54	4		2.16
Weighted Average Bracket Accessories Cost					<u>\$ 13.82</u>
12-foot bracket percentage			5.1%		<u>\$ 0.71</u>
Bracket and Accessory Weighted Average Cost					<u>\$ 31.19</u>
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%		1.08
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%		2.98
Weighted Average Photocontrol Cost				69%	<u>\$ 2.79</u>
RELAY EQUIPMENT					
Shorting Cap	5581500	\$ 2.92	per fixture	1 LOT	\$ 2.92
Oil Switch	5589120	\$ 30.81	10.5%		\$ 3.22
OH Installation	Varies	\$ 29.71	61.5%		\$ 18.28
UG Installation	Varies	\$ 53.41	28.0%		\$ 14.97
Weighted Average Relay Equipment				31%	<u>\$ 12.32</u>
Control Equipment Average Cost					<u>\$ 15.11</u>
BRACKET CABLE (Cu, Triplex, 600V 2/C, 10AWG)					
20 IN	5322230	\$ 0.66	3		0.66
4 FT	5322230	\$ 0.66	6		1.57
6 FT	5322230	\$ 0.66	8		0.85
8 FT	5322230	\$ 0.66	10		0.11
10 FT	5322230	\$ 0.66	12		0.34
12 FT	5322230	\$ 0.66	14		0.20
12 FT 5 JU	5322230	\$ 0.66	21		0.26
12 FT 10 JU	5322230	\$ 0.66	24		0.18
Bracket Cable Weighted Average Cost					<u>\$ 4.16</u>
FIXTURE HARDWARE					
Pole Hardware wood/conc					
Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2		0.42
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2		3.16
Decal		\$ 0.86	1		0.86
					<u>\$ 4.44</u>
Overhead Service Hardware					
Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2		2.24
Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2		0.76
Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2		0.54
			98%		<u>\$ 3.45</u>
Underground Service Hardware					
Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2		\$ 1.92
				2%	<u>\$ 0.05</u>
Fixture Hardware Weighted Average Cost					<u>\$ 7.94</u>
MATERIAL HANDLING @ 20.66 % of material cost					<u>\$ 25.09</u>
TOTAL MATERIAL COST					<u>\$ 204.92</u>
LABOR/VEHICLE					
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13		\$ 174.18
Engineering Office	E/O	\$ 64.12	0.23		\$ 14.69
Engineering Field	E/F	\$ 69.82	0.29		\$ 20.14
					<u>\$ 209.01</u>
INSTALL RELAY CONTROL EQUIPMENT					
Oil Switch Installation	52 LN1	\$ 186.22	2.78		\$ 0.88
OH Installation	23 SL1	\$ 73.82	1.77		\$ 3.49
UG Installation	25 SL1	\$ 73.92	2.20		\$ 1.86
Conduit Installation	25 CC2	\$ 146.93	3.85		\$ 6.46
Conductor Installation	25 CC1	\$ 180.06	0.67		\$ 1.22
Engineering Office	84 E/O	\$ 64.12	0.25		\$ 0.19
Engineering Field <i>incl in Fixture Eng if needed</i>	84 E/F	\$ 69.82			\$ -
Weighted Average Relay Equipment				31%	<u>\$ 4.41</u>
TOTAL LABOR/VEHICLE					<u>\$ 213.42</u>
TOTAL COST					<u>\$ 418.34</u>

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 24 OF 111
FILED: 04/05/2013

MFR MFR Costs						
Rate Code		608				
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost		
LUMINAIRE	5586130	\$ 150.08	3.0%	4.53		
	5586180	\$ 152.45	14.9%	22.77		
	5586280	\$ 151.11	74.5%	112.81		
	5586320	\$ 151.82	7.5%	11.42		
			0.0%	-		
			0.0%	-		
				<u>\$ 151.33</u>		
LAMP	5585540	\$ 11.07	1	<u>\$ 11.07</u>		
BRACKET & ACCESSORY - Weighted Avg Cost						
bracket, 20 IN	5580710	\$ 15.44	33.3%	5.14		
bracket, 4 FT	5580740	\$ 20.71	39.7%	8.22		
bracket, 6 FT	5580750	\$ 31.18	16.0%	5.00		
bracket, 8 FT	5580780	\$ 64.85	1.6%	1.03		
bracket, 10 FT	5580800	\$ 94.57	4.3%	4.07		
bracket, 12 FT	5580820	\$ 78.95	2.1%	1.58		
bracket, 12 FT 5 JU	5580850	\$ 204.02	1.8%	3.76		
bracket, 12 FT 10 JU	5580830	\$ 138.37	1.1%	1.59		
Weighted Average Bracket Cost				<u>\$ 30.48</u>		
Accessories for 12 ft bracket						
anchor	1901543	\$ 0.10	8	0.80		
compound	5851980	\$ 2.70	1	2.70		
conduit	5521030	\$ 0.89	8	7.12		
screw	5290800	\$ 0.13	8	1.04		
strap	5511210	\$ 0.54	4	2.16		
Weighted Average Bracket Accessories Cost				<u>\$ 13.82</u>		
12-foot bracket percentage			5.1%	<u>\$ 0.71</u>		
Bracket and Accessory Weighted Average Cost				<u>\$ 31.19</u>		
PHOTOCONTROL						
1000W, 277V	5588100	\$ 5.09	21.2%	1.08		
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98		
Weighted Average Photocontrol Cost			69%	<u>\$ 2.82</u>		
RELAY EQUIPMENT						
		per fixture		1 LOT		
Shorting Cap	5581500	\$ 2.92	1	2.92		
Oil Switch	5589120	\$ 48.59	10.5%	5.08		
OH Installation	Varies	\$ 46.86	61.5%	28.82		
UG Installation	Varies	\$ 84.22	28.0%	23.61		
Weighted Average Relay Equipment			31%	<u>\$ 18.44</u>		
Control Equipment Average Cost				<u>\$ 21.26</u>		
BRACKET CABLE (Cu, Triplex, 600V 2/C, 10AWG)						
20 IN	5322230	\$ 0.66	3	0.66		
4 FT	5322230	\$ 0.66	6	1.57		
6 FT	5322230	\$ 0.66	8	0.85		
8 FT	5322230	\$ 0.66	10	1.11		
10 FT	5322230	\$ 0.66	12	0.34		
12 FT	5322230	\$ 0.66	14	0.20		
12 FT 5 JU	5322230	\$ 0.66	21	0.26		
12 FT 10 JU	5322230	\$ 0.66	24	0.18		
Bracket Cable Weighted Average Cost				<u>\$ 4.16</u>		
FIXTURE HARDWARE						
Pole Hardware wood/conc						
Washer, Flat 2-1/4 X 2-1/4 X 3/16" Hole Dia	9296750	\$ 0.21	2	0.42		
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237850	\$ 1.58	2	3.16		
Decal		\$ 0.86	1	0.86		
				<u>\$ 4.44</u>		
Overhead Service Hardware						
Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2	2.24		
Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261830	\$ 0.38	2	0.76		
Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2	0.54		
			100%	<u>\$ 3.53</u>		
Underground Service Hardware						
Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2	1.92		
			0%	<u>\$ 0.01</u>		
Fixture Hardware Weighted Average Cost				<u>\$ 7.97</u>		
MATERIAL HANDLING @ 20.66 % of material cost				<u>\$ 46.90</u>		
TOTAL MATERIAL COST				\$ 273.89		
LABOR/VEHICLE						
		Crew Type	Unit Cost	# of Units	Cost	
INSTALL LIGHT FIXTURE						
Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18		
Engineering Office	E/O	\$ 64.12	0.23	\$ 14.69		
Engineering Field	E/F	\$ 69.82	0.29	\$ 20.14		
				<u>\$ 209.01</u>		
INSTALL RELAY CONTROL EQUIPMENT						
		avg fixture/relay				
OH Switch Installation	39 LN1	\$ 186.22	2.78	\$ 1.39		
OH Installation	15 SL1	\$ 73.92	1.77	\$ 5.50		
UG Installation	16 SL1	\$ 73.92	2.20	\$ 2.93		
Conduit Installation	16 CC2	\$ 146.93	3.85	\$ 10.18		
Conductor Installation	16 CC1	\$ 160.06	0.67	\$ 1.93		
Engineering Office	84 E/O	\$ 64.12	0.25	\$ 0.19		
Engineering Field <i>incl in Fixture Eng if needed</i>	84 E/F	\$ 69.82		\$		
Weighted Average Relay Equipment			31%	<u>\$ 6.75</u>		
TOTAL LABOR/VEHICLE				\$ 218.76		
TOTAL COST				\$ 488.65		

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 25 OF 111
FILED: 04/05/2013

200V MH Cable					
	Rate Code	704			
LUMINAIRE	MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost
		5587001	\$ 151.05	100.0%	151.05
				0.0%	-
				0.0%	-
				0.0%	-
				0.0%	-
				0.0%	-
					<u>\$ 151.05</u>
LAMP		5585641	\$ 25.97	1	\$ 25.97
BRACKET & ACCESSORY - Weighted Avg Cost					
		5580710	\$ 15.44	33.3%	5.14
		5580740	\$ 20.71	39.7%	8.22
		5580750	\$ 31.18	16.0%	5.00
		5580780	\$ 64.65	1.6%	1.03
		5580800	\$ 94.57	4.3%	4.07
		5580820	\$ 78.95	2.1%	1.68
		5580850	\$ 204.02	1.8%	3.76
		5580830	\$ 138.37	1.1%	1.59
					<u>\$ 30.48</u>
Accessories for 12 ft bracket					
		1901543	\$ 0.10	8	0.80
		5851980	\$ 2.70	1	2.70
		5521030	\$ 0.89	8	7.12
		5290800	\$ 0.13	8	1.04
		5511210	\$ 0.54	4	2.16
					<u>\$ 13.82</u>
				5.1%	<u>\$ 0.71</u>
					<u>\$ 31.19</u>
PHOTOCONTROL					
		5588100	\$ 5.09	21.2%	1.08
		5588110	\$ 3.78	78.8%	2.98
				70%	<u>\$ 2.64</u>
					<u>\$ 2.64</u>
RELAY EQUIPMENT					
		5581500	\$ 2.92	1	\$ 2.92
		5589120	\$ 40.29	10.5%	\$ 4.21
		Varies	\$ 36.86	61.5%	\$ 23.90
		Varies	\$ 69.84	28.0%	\$ 19.58
				30%	<u>\$ 15.18</u>
					<u>\$ 18.02</u>
Control Equipment Average Cost					
BRACKET CABLE (Cu. Triplex, 600V 2/C, 10AWG)					
		5322230	\$ 0.66	3	0.66
		5322230	\$ 0.66	6	1.57
		5322230	\$ 0.66	8	0.85
		5322230	\$ 0.66	10	0.11
		5322230	\$ 0.66	12	0.34
		5322230	\$ 0.66	14	0.20
		5322230	\$ 0.66	21	0.26
		5322230	\$ 0.66	24	0.18
					<u>\$ 4.16</u>
FITTURE HARDWARE					
Pole Hardware wood/onec					
		9296750	\$ 0.21	2	0.42
		9237650	\$ 1.58	2	3.16
			\$ 0.86	1	0.86
					<u>\$ 4.44</u>
Overhead Service Hardware					
		9233550	\$ 1.12	2	2.24
		5261930	\$ 0.38	2	0.76
		9261530	\$ 0.27	2	0.54
				82%	<u>\$ 2.92</u>
Underground Service Hardware					
		9233450	\$ 0.96	2	\$ 1.92
				18%	<u>\$ 0.34</u>
					<u>\$ 7.68</u>
MATERIAL HANDLING @ 20.66 % of material cost					
					<u>\$ 48.19</u>
TOTAL MATERIAL COST					
\$ 287.28					
LABOR/VEHICLE					
	Crew Type	Unit Cost	# of Units		Cost
INSTALL LIGHT FIXTURE					
	LN2	\$ 153.81	1.13	\$	174.18
	E/O	\$ 84.12	0.23	\$	14.69
	E/F	\$ 69.82	0.29	\$	20.14
					<u>\$ 208.01</u>
INSTALL RELAY CONTROL EQUIPMENT					
	47 LN1	\$ 186.22	2.78	\$	1.15
	18 SL1	\$ 73.92	1.77	\$	4.56
	19 SL1	\$ 73.92	2.20	\$	2.43
	19 CC2	\$ 146.93	3.85	\$	8.44
	19 CC1	\$ 160.06	0.67	\$	1.80
	84 E/O	\$ 84.12	0.25	\$	0.19
	84 E/F	\$ 69.82		\$	
					<u>\$ 5.51</u>
TOTAL LABOR/VEHICLE					
\$ 214.82					
TOTAL COST					
\$ 501.80					

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 26 OF 111
FILED: 04/05/2013

400W MH Cobalt					
Rate Code		520			
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
LUMINAIRE	5587000	\$ 131.71	100.0%		131.71
			0.0%		-
			0.0%		-
			0.0%		-
			0.0%		-
			0.0%		-
					<u>\$ 131.71</u>
LAMP	5585840	\$ 15.51	1		<u>\$ 15.51</u>
BRACKET & ACCESSORY - Weighted Avg Cost					
bracket, 20 IN	5580710	\$ 15.44	33.3%		5.14
bracket, 4 FT	5580740	\$ 20.71	39.7%		8.22
bracket, 6 FT	5580750	\$ 31.18	16.0%		5.00
bracket, 8 FT	5580780	\$ 64.65	1.6%		1.03
bracket, 10 FT	5580800	\$ 94.57	4.3%		4.07
bracket, 12 FT	5580820	\$ 78.95	2.1%		1.68
bracket, 12 FT 5 JU	5580850	\$ 204.02	1.8%		3.76
bracket, 12 FT 10 JU	5580830	\$ 138.37	1.1%		1.59
Weighted Average Bracket Cost					<u>\$ 30.48</u>
Accessories for 12 ft bracket					
anchor	1901543	\$ 0.10	8		0.80
compound	5851980	\$ 2.70	1		2.70
conduit	5521030	\$ 0.89	8		7.12
screw	5290800	\$ 0.13	8		1.04
strap	5511210	\$ 0.54	4		2.16
Weighted Average Bracket Accessories Cost					<u>\$ 13.82</u>
12-foot bracket percentage			5.1%		<u>\$ 0.71</u>
Bracket and Accessory Weighted Average Cost					<u>\$ 31.19</u>
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%		1.08
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%		2.98
Weighted Average Photocontrol Cost			70%		<u>\$ 2.84</u>
RELAY EQUIPMENT					
Shorting Cap	5581500	\$ 2.92	1		2.92
Oil Switch	5589120	\$ 48.59	10.5%		5.08
OH Installation	Varies	\$ 46.86	61.5%		28.82
UG Installation	Varies	\$ 84.22	28.0%		23.61
Weighted Average Relay Equipment			30%		<u>\$ 18.73</u>
Control Equipment Average Cost					<u>\$ 20.97</u>
BRACKET CABLE (Cu, Triplex, 600V 2/C, 10AWG)					
20 IN	5322230	\$ 0.66	3		0.66
4 FT	5322230	\$ 0.66	6		1.57
6 FT	5322230	\$ 0.66	8		0.85
8 FT	5322230	\$ 0.66	10		0.11
10 FT	5322230	\$ 0.66	12		0.34
12 FT	5322230	\$ 0.66	14		0.20
12 FT 5 JU	5322230	\$ 0.66	21		0.26
12 FT 10 JU	5322230	\$ 0.66	24		0.18
Bracket Cable Weighted Average Cost					<u>\$ 4.16</u>
FIXTURE HARDWARE					
Pole Hardware wood/conc					
Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2		0.42
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2		3.16
Decal		\$ 0.86	1		0.86
					<u>\$ 4.44</u>
Overhead Service Hardware					
Bolt, Machine GALV 5/8x12	9233650	\$ 1.12	2		2.24
Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2		0.76
Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2		0.54
Weighted Average Overhead Service Hardware			88%		<u>\$ 3.11</u>
Underground Service Hardware					
Bolt, Machine GALV 5/8x6	9233450	\$ 0.96	2		1.92
Weighted Average Underground Service Hardware			12%		<u>\$ 0.23</u>
Fixture Hardware Weighted Average Cost					<u>\$ 7.78</u>
MATERIAL HANDLING @ 20.66 % of material cost					<u>\$ 43.66</u>
TOTAL MATERIAL COST					\$ 254.88
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13		\$ 174.18
Engineering Office	E/O	\$ 64.12	0.23		\$ 14.69
Engineering Field	E/F	\$ 69.82	0.29		\$ 20.14
					<u>\$ 209.01</u>
INSTALL RELAY CONTROL EQUIPMENT	<i>avg fixtures/relay</i>				
Oil Switch Installation	39 LN1	\$ 186.22	2.78		\$ 1.39
OH Installation	15 SL1	\$ 73.92	1.77		\$ 5.50
UG Installation	16 SL1	\$ 73.92	2.20		\$ 2.93
Conduit Installation	16 CC2	\$ 146.93	3.85		\$ 10.18
Conductor Installation	16 CC1	\$ 160.06	0.67		\$ 1.93
Engineering Office	84 E/O	\$ 64.12	0.25		\$ 0.19
Engineering Field <i>incl in Fixture Eng if needed</i>	84 E/F	\$ 69.82			\$ -
Weighted Average Relay Equipment			30%		<u>\$ 6.54</u>
TOTAL LABOR/VEHICLE					\$ 218.64
TOTAL COST					\$ 476.82

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 29 OF 111
FILED: 04/05/2013

250W HP-1 Shoebox					
Rate Code 558					
LUMINAIRE	MATERIAL	Block #	Unit Cost	# of Units and/or %	Cost
		5580170	\$ 243.85	12.7%	31.05
		5586261	\$ 231.90	84.9%	196.84
		5586262	\$ 268.01	2.4%	6.40
				0.0%	-
				0.0%	-
				0.0%	-
				0.0%	-
				0.0%	-
				0.0%	-
					\$ 234.28
LAMP		5586530	\$ 11.00	1	\$ 11.00
BRACKET & ACCESSORY - Weighted Avg Cost					
	Bracket, Shoebox, Single Mount, Prem Ltg	Various	\$ 71.54	59.0%	42.20
	Bracket, Shoebox, Dual Mount, 90 Degree, Prem Ltg	Various	\$ 128.98	1.7%	2.21
	Bracket, Shoebox, Dual Mount, 180 Degree, Prem Ltg	Various	\$ 128.45	9.3%	11.90
	Bracket, Shoebox, Twin Parallel Mount, Prem Ltg	Various	\$ 336.26	1.0%	3.46
	Bracket, Shoebox, Triple Mount, Prem Ltg	Various	\$ 227.96	0.7%	1.56
	Bracket, Shoebox, Steel, Triple Mount, Prem Ltg	Various	\$ 181.74	2.1%	3.74
	Bracket, Shoebox, Steel, Triple Mount, 90 Degree, Prem Ltg	5580810	\$ 121.33	0.3%	0.42
	Bracket, Shoebox, Quad Mount, Prem Ltg	Various	\$ 537.29	1.0%	5.53
	Bracket, Shoebox, Single Mount, Galv 6" Bracket	5581070	\$ 22.74	24.5%	5.58
	Bracket, Shoebox, Twin Parallel, Wood	5580728	\$ 150.23	0.3%	0.52
	Bracket and Accessory Weighted Average Cost				\$ 77.12
PHOTOCONTROL					
	1000W, 277V	5588100	\$ 5.09	21.2%	1.06
	1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.96
	Weighted Average Photocontrol Cost			70%	\$ 2.84
RELAY EQUIPMENT					
	Shoring Cap	5581500	\$ 2.92	1 LOT	\$ 2.92
	Oil Switch	5589120	\$ 30.81	10.5%	\$ 3.22
	OH Installation	Varies	\$ 29.71	61.5%	\$ 18.28
	UG Installation	Varies	\$ 53.41	28.0%	\$ 14.97
	Weighted Average Relay Equipment			30%	\$ 11.82
Control Equipment Average Cost					
					\$ 14.66
BRACKET CABLE (Cu, Triplex, 600V 2C, 10AWG)					
	Bracket, Shoebox, Single Mount, Prem Ltg	5322230	\$ 0.66	2	0.78
	Bracket, Shoebox, Dual Mount, 90 Degree, Prem Ltg	5322230	\$ 0.66	3	0.03
	Bracket, Shoebox, Dual Mount, 180 Degree, Prem Ltg	5322230	\$ 0.66	3	0.18
	Bracket, Shoebox, Twin Parallel Mount, Prem Ltg	5322230	\$ 0.66	4	0.03
	Bracket, Shoebox, Triple Mount, Prem Ltg	5322230	\$ 0.66	6	0.03
	Bracket, Shoebox, Steel, Triple Mount, Prem Ltg	5322230	\$ 0.66	6	0.08
	Bracket, Shoebox, Steel, Triple Mount, 90 Degree, Prem Ltg	5322230	\$ 0.66	6	0.01
	Bracket, Shoebox, Quad Mount, Prem Ltg	5322230	\$ 0.66	7	0.05
	Bracket, Shoebox, Single Mount, Galv 6" Bracket	5322230	\$ 0.66	3	0.49
	Bracket, Shoebox, Twin Parallel, Wood	5322230	\$ 0.66	3	0.01
	Bracket Cable Weighted Average Cost				\$ 1.89
FIXTURE HARDWARE					
OVERHEAD & UNDERGROUND SERVICE HARDWARE					
	Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2	0.42
	Nut, Eye 1-1/2" GALV for 5/8" bolt	9237660	\$ 1.58	2	3.16
	Decal		\$ 1.12	1	1.12
	Overhead & Underground Service Hardware				\$ 4.70
OVERHEAD SERVICE HARDWARE					
	Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2	0.76
	Overhead wood/concrete				\$ 0.76
	Bolt, Machine GALV 5/8x12	9233650	\$ 1.12	2	2.24
	Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2	0.54
	Overhead wood			73%	2.02
	Connector, Compression H-Block AL #4 str ACSR #4	9261730	\$ 0.33	2	0.66
	concrete			27%	0.18
	Overhead Service Hardware			95%	2.82
UNDERGROUND SERVICE HARDWARE					
	wood				
	Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2	1.92
	Underground Service Hardware			1100%	21.12
				6%	\$ 1.19
	Fixture Hardware Weighted Average Cost				\$ 11.49
MATERIAL HANDLING @ 20.66 % of material cost					
					\$ 72.36
TOTAL MATERIAL COST					
\$ 422.80					
LABOR/VEHICLE					
		Crew Type	Unit Cost	# of Units	Cost
INSTALL LIGHT FIXTURE					
	Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18
	Engineering Office	E/O	\$ 64.12	0.23	\$ 14.69
	Engineering Field	E/F	\$ 69.82	0.29	\$ 20.14
					\$ 209.01
INSTALL RELAY CONTROL EQUIPMENT					
	Oil Switch Installation	62 LN1	\$ 166.22	2.78	\$ 0.88
	OH Installation	23 SL1	\$ 73.92	1.77	\$ 3.49
	UG Installation	25 SL1	\$ 73.92	2.20	\$ 1.86
	Conduit Installation	25 CC2	\$ 146.93	3.65	\$ 6.46
	Conductor Installation	25 CC1	\$ 180.06	0.67	\$ 1.22
	Engineering Office	84 E/O	\$ 64.12	0.25	\$ 0.19
	Engineering Field (incl in Fixture Eng if needed)	84 E/F	\$ 69.82		\$ -
	Weighted Average Relay Equipment			30%	\$ 4.23
TOTAL LABOR/VEHICLE					
\$ 213.24					
TOTAL COST					
\$ 636.83					

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 30 OF 111
FILED: 04/05/2013

ADDN 12/18 Shoobox					
		Rate Code	552		
LUMINAIRE	MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost
		5560150	\$ 242.24	35.0%	84.85
		5560510	\$ 259.14	13.5%	34.86
		5586258	\$ 266.75	6.6%	17.60
		5586259	\$ 230.76	44.9%	103.87
				0.0%	-
				0.0%	-
				0.0%	-
				0.0%	-
				0.0%	-
					\$ 240.97
LAMP		5585540	\$ 11.07	1	\$ 11.07
BRACKET & ACCESSORY - Weighted Avg Cost					
	Bracket, Shoobox, Single Mount, Prem Ltg	Various	\$ 71.54	59.0%	42.20
	Bracket, Shoobox, Dual Mount, 90 Degree, Prem Ltg	Various	\$ 128.98	1.7%	2.21
	Bracket, Shoobox, Dual Mount, 180 Degree, Prem Ltg	Various	\$ 128.45	9.3%	11.90
	Bracket, Shoobox, Twin Parallel Mount, Prem Ltg	Various	\$ 336.26	1.0%	3.46
	Bracket, Shoobox, Triple Mount, Prem Ltg	Various	\$ 227.96	0.7%	1.56
	Bracket, Shoobox, Steel, Triple Mount, Prem Ltg	Various	\$ 181.74	2.1%	3.74
	Bracket, Shoobox, Steel, Triple Mount, 90 Degree, Prem Ltg	5580810	\$ 121.33	0.3%	0.42
	Bracket, Shoobox, Quad Mount, Prem Ltg	Various	\$ 537.29	1.0%	5.53
	Bracket, Shoobox, Single Mount, Galv 6" Bracket	5561070	\$ 22.74	24.5%	5.58
	Bracket, Shoobox, Twin Parallel, Wood	5580728	\$ 150.23	0.3%	0.52
	Bracket and Accessory Weighted Average Cost				\$ 77.12
PHOTOCONTROL					
	1000W, 277V	5588100	\$ 5.09	21.2%	1.08
	1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98
	Weighted Average Photocontrol Cost			70%	\$ 2.84
RELAY EQUIPMENT					
	Shorting Cap	5581500	\$ 2.92	1	\$ 2.92
	Oil Switch	5589120	\$ 48.59	10.5%	\$ 5.08
	OH Installation	Varies	\$ 46.86	61.5%	\$ 28.82
	UG Installation	Varies	\$ 84.22	28.0%	\$ 23.61
	Weighted Average Relay Equipment			30%	\$ 18.13
Control Equipment Average Cost					
					\$ 20.97
BRACKET CABLE (CU, Triple, 600V 2/C, 10AWG)					
	Bracket, Shoobox, Single Mount, Prem Ltg	5322230	\$ 0.66	2	0.78
	Bracket, Shoobox, Dual Mount, 90 Degree, Prem Ltg	5322230	\$ 0.66	3	0.03
	Bracket, Shoobox, Dual Mount, 180 Degree, Prem Ltg	5322230	\$ 0.66	3	0.18
	Bracket, Shoobox, Twin Parallel Mount, Prem Ltg	5322230	\$ 0.66	4	0.03
	Bracket, Shoobox, Triple Mount, Prem Ltg	5322230	\$ 0.66	6	0.03
	Bracket, Shoobox, Steel, Triple Mount, Prem Ltg	5322230	\$ 0.66	6	0.08
	Bracket, Shoobox, Steel, Triple Mount, 90 Degree, Prem Ltg	5322230	\$ 0.66	6	0.01
	Bracket, Shoobox, Quad Mount, Prem Ltg	5322230	\$ 0.66	7	0.05
	Bracket, Shoobox, Single Mount, Galv 6" Bracket	5322230	\$ 0.66	3	0.49
	Bracket, Shoobox, Twin Parallel, Wood	5322230	\$ 0.66	3	0.01
	Bracket Cable Weighted Average Cost				\$ 1.89
FIXTURE HARDWARE					
OVERHEAD & UNDERGROUND SERVICE HARDWARE					
	Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2	0.42
	Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2	3.16
	Decal		\$ 1.12	1	1.12
	Overhead & Underground Service Hardware				\$ 4.70
OVERHEAD SERVICE HARDWARE					
	Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2	0.76
	Overhead wood/concrete				\$ 0.76
	Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2	2.24
	Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2	0.54
	Overhead wood			67%	1.88
	Connector, Compression H-Block AL #4 str ACSR #4	9261730	\$ 0.33	2	0.66
	concrete			32%	0.21
	Overhead Service Hardware			95%	2.71
UNDERGROUND SERVICE HARDWARE					
	wood				
	Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2	1.92
	Underground Service Hardware			1107%	21.25
				13%	2.68
	Fixture Hardware Weighted Average Cost				\$ 12.72
MATERIAL HANDLING @ 20.66 % of material cost					
					\$ 75.31
TOTAL MATERIAL COST					
\$ 438.85					
LABOR/VEHICLE					
		Crew Type	Unit Cost	# of Units	Cost
INSTALL LIGHT FIXTURE					
	Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18
	Engineering Office	E/O	\$ 64.12	0.23	\$ 14.69
	Engineering Field	E/F	\$ 69.82	0.29	\$ 20.14
					\$ 209.01
INSTALL RELAY CONTROL EQUIPMENT					
	Oil Switch Installation	39 LM1	\$ 186.22	2.78	\$ 1.39
	OH Installation	15 SL1	\$ 73.92	1.77	\$ 5.90
	UG Installation	16 SL1	\$ 73.92	2.20	\$ 2.93
	Conduit Installation	16 CC2	\$ 146.93	3.85	\$ 10.18
	Conductor Installation	16 CC1	\$ 180.06	0.67	\$ 1.93
	Engineering Office	84 E/O	\$ 84.12	0.25	\$ 0.19
	Engineering Field incl in Fixture Eng if needed	84 E/F	\$ 69.82		\$ -
	Weighted Average Relay Equipment			30%	\$ 6.64
TOTAL LABOR/VEHICLE					
\$ 215.84					
TOTAL COST					
\$ 654.69					

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 31 OF 111
FILED: 04/05/2013

Rate Code 703					
LUMINAIRE	MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost
		5586455	\$ 284.46	1.8%	5.20
		5586381	\$ 254.62	5.3%	13.46
		5586451	\$ 290.13	14.6%	42.46
		5586456	\$ 272.52	18.7%	50.96
		5586461	\$ 291.02	11.0%	31.94
		5586533	\$ 286.53	1.8%	4.88
		5586535	\$ 254.92	37.4%	99.08
		5586539	\$ 286.87	7.3%	20.99
		5586541	\$ 282.90	2.0%	5.75
					\$ 274.71
LAMP		5586541	\$ 25.97	1.0%	\$ 25.97
BRACKET & ACCESSORY - Weighted Avg Cost					
	Bracket, Shoebox, Single Mount, Prem Ltg	Various	\$ 71.54	59.0%	42.20
	Bracket, Shoebox, Dual Mount, 90 Degree, Prem Ltg	Various	\$ 128.98	1.7%	2.21
	Bracket, Shoebox, Dual Mount, 180 Degree, Prem Ltg	Various	\$ 128.45	9.3%	11.90
	Bracket, Shoebox, Twin Parallel Mount, Prem Ltg	Various	\$ 336.26	1.0%	3.46
	Bracket, Shoebox, Triple Mount, Prem Ltg	Various	\$ 227.96	0.7%	1.56
	Bracket, Shoebox, Steel, Triple Mount, Prem Ltg	Various	\$ 181.74	2.1%	3.74
	Bracket, Shoebox, Steel, Triple Mount, 90 Degree, Prem Ltg	5590910	\$ 121.33	0.3%	0.42
	Bracket, Shoebox, Quad Mount, Prem Ltg	Various	\$ 537.29	1.0%	5.53
	Bracket, Shoebox, Single Mount, Galv 6" Bracket	5581070	\$ 22.74	24.5%	5.58
	Bracket, Shoebox, Twin Parallel, Wood	5580728	\$ 150.23	0.3%	0.52
	Bracket and Accessory Weighted Average Cost				\$ 77.12
PHOTOCONTROL					
	1000W 277V	5588100	\$ 5.09	21.2%	1.08
	1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98
	Weighted Average Photocontrol Cost			70%	\$ 2.84
RELAY EQUIPMENT					
	Shoring Cap	5581500	\$ 2.92	1 LOT	\$ 2.92
	Oil Switch	5589120	\$ 40.29	10.5%	\$ 4.21
	OH Installation	Varies	\$ 38.86	61.6%	\$ 23.90
	UG Installation	Varies	\$ 69.84	28.0%	\$ 19.58
	Weighted Average Relay Equipment			30%	\$ 15.18
	Control Equipment Average Cost				\$ 18.02
BRACKET CABLE (Cu, Triplex, 600V 2/C, 10AWG)					
	Bracket, Shoebox, Single Mount, Prem Ltg	5322230	\$ 0.66	2	0.78
	Bracket, Shoebox, Dual Mount, 90 Degree, Prem Ltg	5322230	\$ 0.66	3	0.03
	Bracket, Shoebox, Dual Mount, 180 Degree, Prem Ltg	5322230	\$ 0.66	3	0.18
	Bracket, Shoebox, Twin Parallel Mount, Prem Ltg	5322230	\$ 0.66	4	0.03
	Bracket, Shoebox, Steel, Triple Mount, Prem Ltg	5322230	\$ 0.66	6	0.03
	Bracket, Shoebox, Steel, Triple Mount, Prem Ltg	5322230	\$ 0.66	6	0.08
	Bracket, Shoebox, Steel, Triple Mount, 90 Degree, Prem Ltg	5322230	\$ 0.66	6	0.01
	Bracket, Shoebox, Quad Mount, Prem Ltg	5322230	\$ 0.66	7	0.05
	Bracket, Shoebox, Single Mount, Galv 6" Bracket	5322230	\$ 0.66	3	0.49
	Bracket, Shoebox, Twin Parallel, Wood	5322230	\$ 0.66	3	0.01
	Bracket Cable Weighted Average Cost				\$ 1.89
FIXTURE HARDWARE					
OVERHEAD & UNDERGROUND SERVICE HARDWARE					
	Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2	0.42
	Nut, Eye 1-1/2" GALV for 5/8" bolt	9237950	\$ 1.58	2	3.16
	Decal		\$ 1.12	1	1.12
	Overhead & Underground Service Hardware				\$ 4.70
OVERHEAD SERVICE HARDWARE					
	Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2	0.76
	Overhead wood/concrete				\$ 0.76
	Bolt, Machine GALV 5/8x12	9233650	\$ 1.12	2	2.24
	Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2	0.54
	Overhead wood			26%	0.71
	Connector, Compression H-Block AL #4 str ACSR #4 concrete	9261730	\$ 0.33	2	0.86
	Overhead Service Hardware			74%	0.49
				95%	1.87
UNDERGROUND SERVICE HARDWARE					
	Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2	1.92
	Underground Service Hardware			2697%	49.86
				56%	28.93
	Fixture Hardware Weighted Average Cost				\$ 36.96
MATERIAL HANDLING @ 20.66 % of material cost					
					\$ 89.76
TOTAL MATERIAL COST					
\$ 524.23					
LABORVEHICLE					
		Crew Type	Unit Cost	# of Units	Cost
INSTALL LIGHT FIXTURE					
	Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18
	Engineering Office	E/O	\$ 64.12	0.23	\$ 14.69
	Engineering Field	E/F	\$ 69.82	0.29	\$ 20.14
					\$ 209.01
INSTALL RELAY CONTROL EQUIPMENT					
	Oil Switch Installation	47 LN1	\$ 186.22	2.78	\$ 1.15
	OH Installation	18 SL1	\$ 73.92	1.77	\$ 4.56
	UG Installation	19 SL1	\$ 73.92	2.20	\$ 2.43
	Conduit Installation	19 CC2	\$ 146.93	3.85	\$ 8.44
	Conductor Installation	19 CC1	\$ 160.06	0.67	\$ 1.90
	Engineering Office	84 E/O	\$ 64.12	0.25	\$ 0.19
	Engineering Field	84 E/F	\$ 69.82		\$
	Weighted Average Relay Equipment			30%	\$ 5.51
TOTAL LABORVEHICLE					
\$ 214.52					
TOTAL COST					
\$ 738.76					

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 32 OF 111
FILED: 04/05/2013

1000W MV Shoebox					
Rate Code 554					
MATERIAL					
	Stock #	Unit Cost	# of Units and/or %	Cost	
LUMINAIRE					
	5568454	\$ 219.01	0.7%		1.63
	5568380	\$ 268.87	4.3%		11.55
	5568450	\$ 256.52	22.5%		57.66
	5568455	\$ 268.12	26.8%		71.79
	5568480	\$ 273.10	26.1%		71.32
	5568531	\$ 287.56	0.8%		2.46
	5568532	\$ 252.89	0.8%		2.09
	5568534	\$ 245.98	17.2%		42.28
	5568540	\$ 287.55	0.7%		2.21
					\$ 263.01
LAMP	5585640	\$ 15.51	1.0%		\$ 15.51
BRACKET & ACCESSORY - Weighted Avg Cost					
	Various	\$ 71.54	59.0%		42.20
	Various	\$ 128.98	1.7%		2.21
	Various	\$ 128.45	9.3%		11.90
	Various	\$ 336.26	1.0%		3.46
	Various	\$ 227.96	0.7%		1.56
	Various	\$ 181.74	2.1%		3.74
	5580810	\$ 121.33	0.3%		0.42
	Various	\$ 537.29	1.0%		5.53
	5581070	\$ 22.74	24.5%		5.58
	5580728	\$ 150.23	0.3%		0.52
					\$ 77.12
PHOTOCONTROL					
	1000W 277V	5568100	\$ 5.08	21.2%	1.08
	1000W GRAY Cover 120V	5568110	\$ 3.78	78.8%	2.98
	Weighted Average Photocontrol Cost			70%	\$ 2.84
RELAY EQUIPMENT					
	Shoring Cap	5581500	\$ 2.92	1 LOT	\$ 2.92
	Oil Switch	5569120	\$ 48.59	10.5%	\$ 5.08
	OH Installation	Varies	\$ 48.86	61.5%	\$ 28.82
	UG Installation	Varies	\$ 84.22	28.0%	\$ 23.61
	Weighted Average Relay Equipment			30%	\$ 18.13
Control Equipment Average Cost					
					\$ 20.97
BRACKET CABLE (C4, Triple, 600V 2IC, 10AWG)					
	5322230	\$ 0.66	2		0.78
	5322230	\$ 0.66	3		0.03
	5322230	\$ 0.66	3		0.18
	5322230	\$ 0.66	4		0.03
	5322230	\$ 0.66	6		0.03
	5322230	\$ 0.66	6		0.08
	5322230	\$ 0.66	6		0.01
	5322230	\$ 0.66	7		0.05
	5322230	\$ 0.66	3		0.49
	5322230	\$ 0.66	3		0.01
					\$ 1.69
BRACKET Cable Weighted Average Cost					
FIXTURE HARDWARE					
OVERHEAD & UNDERGROUND SERVICE HARDWARE					
	Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2	0.42
	Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2	3.16
	Decal		\$ 1.12	1	1.12
	Overhead & Underground Service Hardware				\$ 4.70
OVERHEAD SERVICE HARDWARE					
	Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2	0.76
	Overhead wood/concrete				\$ 0.76
	Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2	2.24
	Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2	0.54
	Overhead wood			55%	1.54
	Connector, Compression H-Block AL #4 str ACSR #4	9261730	\$ 0.33	2	0.66
	concrete			45%	0.29
	Overhead Service Hardware			95%	2.46
UNDERGROUND SERVICE HARDWARE					
	wood				
	Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2	1.92
	Underground Service Hardware			1551%	28.78
				9%	\$ 2.54
Fixture Hardware Weighted Average Cost					
					\$ 12.00
MATERIAL HANDLING @ 20.66 % of material cost					
					\$ 80.63
TOTAL MATERIAL COST					
					\$ 470.83
LABOR/VEHICLE					
		Crew Type	Unit Cost	# of Units	Cost
INSTALL LIGHT FIXTURE					
	Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18
	Engineering Office	EJO	\$ 64.12	0.23	\$ 14.69
	Engineering Field	E/F	\$ 89.82	0.29	\$ 20.14
					\$ 209.01
INSTALL RELAY CONTROL EQUIPMENT					
	avg fixtures/relay				
	Oil Switch Installation	39 LN1	\$ 186.22	2.78	\$ 1.39
	OH Installation	15 SL1	\$ 73.92	1.77	\$ 5.50
	UG Installation	16 SL1	\$ 73.92	2.20	\$ 2.93
	Conduit Installation	16 CC2	\$ 146.93	3.85	\$ 10.18
	Conductor Installation	16 CC1	\$ 150.06	0.67	\$ 1.53
	Engineering Office	84 EJO	\$ 64.12	0.25	\$ 0.19
	Engineering Field incl in Fixture Eng if needed	84 E/F	\$ 89.82		\$ -
	Weighted Average Relay Equipment			30%	\$ 6.64
TOTAL LABOR/VEHICLE					
					\$ 215.64
TOTAL COST					
					\$ 686.57

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 33 OF 111
FILED: 04/05/2013

1000W GRAY Shoebox					
		Rate Code	STA		
MATERIAL	Stock #	Unit Cost	# of Units and/or	%	Cost
LUMINAIRE	5580210	\$ 510.70	53.2%		271.80
	5580215	\$ 457.96	4.3%		22.24
	5580216	\$ 484.17	16.1%		77.76
	5580250	\$ 527.56	13.6%		71.92
	5580501	\$ 492.16	0.6%		4.14
	5580502	\$ 469.78	0.8%		3.95
	5580503	\$ 478.34	1.7%		8.04
	5580504	\$ 463.05	0.8%		3.89
	5586257	\$ 538.83	8.0%		43.27
					\$ 506.96
LAMP	5585650	\$ 19.71	1.0%		\$ 19.71
BRACKET & ACCESSORY - Weighted Avg Cost					
Bracket, Shoebox, Single Mount, Prem Ltg	Various	\$ 71.54	59.0%		42.20
Bracket, Shoebox, Dual Mount, 90 Degree, Prem Ltg	Various	\$ 128.98	1.7%		2.21
Bracket, Shoebox, Dual Mount, 180 Degree, Prem Ltg	Various	\$ 128.45	9.3%		11.90
Bracket, Shoebox, Twin Parallel Mount, Prem Ltg	Various	\$ 336.26	1.0%		3.46
Bracket, Shoebox, Triple Mount, Prem Ltg	Various	\$ 227.96	0.7%		1.56
Bracket, Shoebox, Steel, Triple Mount, Prem Ltg	Various	\$ 181.74	2.1%		3.74
Bracket, Shoebox, Steel, Triple Mount, 90 Degree, Prem Ltg	5580810	\$ 121.33	0.3%		0.42
Bracket, Shoebox, Quad Mount, Prem Ltg	Various	\$ 537.29	1.0%		5.53
Bracket, Shoebox, Single Mount, Galv 6" Bracket	5581070	\$ 22.74	24.5%		5.58
Bracket, Shoebox, Twin Parallel, Wood	5580728	\$ 150.23	0.3%		0.52
Bracket and Accessory Weighted Average Cost					\$ 77.12
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%		1.08
1000W GRAY Cover, 120V	5588110	\$ 3.78	78.8%		2.98
Weighted Average Photocontrol Cost			70%		\$ 2.84
RELAY EQUIPMENT					
		per fixture	1 LOT		
Shorting Cap	5581500	\$ 2.92	1		\$ 2.92
Oil Switch	5569120	\$ 117.32	10.6%		\$ 12.27
OH Installation	Varies	\$ 113.14	61.5%		\$ 69.56
UG Installation	Varies	\$ 203.37	28.0%		\$ 57.01
Weighted Average Relay Equipment			30%		\$ 42.54
Control Equipment Average Cost					
					\$ 46.38
BRACKET CABLE (Cw, Triplex, 800V 2K, 10AWG)					
Bracket, Shoebox, Single Mount, Prem Ltg	5322230	\$ 0.66	2		0.78
Bracket, Shoebox, Dual Mount, 90 Degree, Prem Ltg	5322230	\$ 0.66	3		0.03
Bracket, Shoebox, Dual Mount, 180 Degree, Prem Ltg	5322230	\$ 0.66	3		0.18
Bracket, Shoebox, Twin Parallel Mount, Prem Ltg	5322230	\$ 0.66	4		0.03
Bracket, Shoebox, Triple Mount, Prem Ltg	5322230	\$ 0.66	6		0.03
Bracket, Shoebox, Steel, Triple Mount, Prem Ltg	5322230	\$ 0.66	6		0.08
Bracket, Shoebox, Steel, Triple Mount, 90 Degree, Prem Ltg	5322230	\$ 0.66	6		0.01
Bracket, Shoebox, Quad Mount, Prem Ltg	5322230	\$ 0.66	7		0.05
Bracket, Shoebox, Single Mount, Galv 6" Bracket	5322230	\$ 0.66	3		0.49
Bracket, Shoebox, Twin Parallel, Wood	5322230	\$ 0.66	3		0.01
Bracket Cable Weighted Average Cost					\$ 1.89
FIXTURE HARDWARE					
OVERHEAD & UNDERGROUND SERVICE HARDWARE					
Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2		0.42
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2		3.16
Decal		\$ 1.12	1		1.12
Overhead & Underground Service Hardware					\$ 4.70
OVERHEAD SERVICE HARDWARE					
Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2		0.76
Overhead wood/concrete					\$ 0.76
Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2		2.24
Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2		0.54
Overhead wood				%Wood	73%
Connector, Compression H-Block AL #4 str ACSR #4	9261730	\$ 0.33	2		0.66
Overhead Service Hardware				%Concrete	27%
				% OH	95%
Overhead Service Hardware					\$ 2.82
UNDERGROUND SERVICE HARDWARE					
wood					
Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2		1.92
Underground Service Hardware				%Wood	1971%
				% UG	5%
Underground Service Hardware					\$ 37.84
Fixture Hardware Weighted Average Cost					\$ 1.97
MATERIAL HANDLING @ 20.66 % of material cost					
					\$ 137.01
TOTAL MATERIAL COST					\$ 800.18
LABOR/VEHICLE					
		Crew Type	Unit Cost	# of Units	Cost
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13		\$ 174.18
Engineering Office	E/O	\$ 64.12	0.23		\$ 14.89
Engineering Field	E/F	\$ 69.82	0.29		\$ 20.14
					\$ 209.01
INSTALL RELAY CONTROL EQUIPMENT					
		avg fixtures/relay			
Oil Switch Installation	16 LW1	\$ 186.22	2.78		\$ 3.35
OH Installation	6 SL1	\$ 73.92	1.77		\$ 13.29
UG Installation	6 SL1	\$ 73.92	2.20		\$ 7.07
Conduit Installation	6 CC2	\$ 146.93	3.85		\$ 24.59
Conductor Installation	6 CC1	\$ 160.06	0.67		\$ 4.66
Engineering Office	84 E/O	\$ 84.12	0.25		\$ 0.19
Engineering Field in Fixture Eng if needed	84 E/F	\$ 69.82			\$
Weighted Average Relay Equipment			30%		\$ 15.94
TOTAL LABOR/VEHICLE					\$ 224.95
TOTAL COST					\$ 1,025.13

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 34 OF 111
FILED: 04/05/2013

LUMINAIRE					
	Rate Code	702			
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
LUMINAIRE	5580261	\$ 210.47	50.0%	105.24	
	5580271	\$ 228.77	50.0%	114.39	
			0.0%	-	
			0.0%	-	
			0.0%	-	
			0.0%	-	
			0.0%	-	
			0.0%	-	
			0.0%	-	
				\$ 219.62	
LAMP	5585611	\$ 16.86	1	16.86	
BRACKET & ACCESSORY - Weighted Avg Cost					
Bracket, Shoebox, Single Mount, Prem Ltg	Various	\$ 71.54	63.6%	45.48	
Bracket, Shoebox, Dual Mount, 180 Degree, Prem Ltg	Various	\$ 128.45	10.0%	12.82	
				-	
				-	
Bracket, Shoebox, Single Mount, Galv 6" Bracket	5581070	\$ 22.74	26.4%	6.01	
Bracket and Accessory Weighted Average Cost				\$ 64.31	
PHOTOCONTROL					
100W, 277V	5588100	\$ 5.09	21.2%	1.08	
1000W GRAY Cover 120V	5588110	\$ 3.78	76.8%	2.98	
Weighted Average Photocontrol Cost			70%	\$ 2.84	
RELAY EQUIPMENT					
Shorting Cap	5581500	\$ 2.92	1 LOT	2.92	
Oil Switch	5589120	\$ 17.78	10.5%	1.86	
OH Installation	Varies	\$ 17.14	61.5%	10.54	
UG Installation	Varies	\$ 30.81	28.0%	8.64	
Weighted Average Relay Equipment			30%	\$ 7.19	
Control Equipment Average Cost				\$ 16.03	
BRACKET CABLE (Ck. Triples, 800V 2/C, 10AWG)					
Bracket, Shoebox, Single Mount, Prem Ltg	5322230	\$ 0.66	2	0.84	
Bracket, Shoebox, Dual Mount, 180 Degree, Prem Ltg	5322230	\$ 0.66	3	0.20	
				-	
				-	
Bracket, Shoebox, Single Mount, Galv 6" Bracket	5322230	\$ 0.66	3	-	
Bracket Cable Weighted Average Cost				\$ 1.04	
FIXTURE HARDWARE					
OVERHEAD & UNDERGROUND SERVICE HARDWARE					
Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2	0.42	
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2	3.16	
Decal		\$ 1.12	1	1.12	
Overhead & Underground Service Hardware				\$ 4.70	
OVERHEAD SERVICE HARDWARE					
Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2	0.76	
Overhead wood/concrete				\$ 0.76	
Bolt, Machine GALV 5/8x12	9233560	\$ 1.12	2	2.24	
Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2	0.54	
Overhead wood			%Wood	0%	0.01
Connector, Compression H-Block AL #4 str ACSR #4	9261730	\$ 0.33	2	0.66	
concrete			%Concrete	100%	0.66
Overhead Service Hardware			% OH	95%	1.36
UNDERGROUND SERVICE HARDWARE					
wood					
Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2	1.92	
Underground Service Hardware			%Wood	1688%	32.37
			% UG	100%	\$ 32.37
Fixture Hardware Weighted Average Cost				\$ 39.20	
MATERIAL HANDLING @ 20.66 % of material cost				\$ 72.53	
TOTAL MATERIAL COST				\$ 423.58	
LABOR/VEHICLE					
	Crew Type	Unit Cost	# of Units	Cost	
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18	
Engineering Office	E/O	\$ 64.12	0.23	\$ 14.89	
Engineering Field	E/F	\$ 69.82	0.28	\$ 20.14	
				\$ 209.01	
INSTALL RELAY CONTROL EQUIPMENT					
Oil Switch Installation	avg fixtures/relay				
OH Installation	107 LN1	\$ 186.22	2.78	\$ 51.96	
UG Installation	40 SL1	\$ 73.92	1.77	\$ 2.91	
Conduit Installation	43 SL1	\$ 73.92	2.20	\$ 1.07	
Conductor Installation	43 CC2	\$ 146.93	3.85	\$ 3.73	
Engineering Office	43 CC1	\$ 160.06	0.67	\$ 0.71	
Engineering Field	84 E/O	\$ 64.12	0.25	\$ 0.19	
Engineering Field in Fixture Eng if needed	84 E/F	\$ 69.82	0.28	\$ -	
Weighted Average Relay Equipment			30%	\$ 2.46	
TOTAL LABOR/VEHICLE				\$ 211.47	
TOTAL COST				\$ 635.05	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 35 OF 111
FILED: 04/05/2013

From MH Shoobox						
	Rate Code	564				
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost		
LUMINAIRE						
	5580260	\$ 214.40	64.0%	137.22		
	5580270	\$ 216.30	36.0%	77.87		
			0.0%	-		
			0.0%	-		
			0.0%	-		
			0.0%	-		
			0.0%	-		
			0.0%	-		
				\$ 215.08		
LAMP	5585610	\$ 10.80	1	\$ 10.80		
BRACKET & ACCESSORY - Weighted Avg Cost						
Bracket, Shoobox, Single Mount, Prem Lig	Various	\$ 71.54	63.6%	45.48		
Bracket, Shoobox, Dual Mount, 180 Degree, Prem Lig	Various	\$ 128.45	10.0%	12.82		
				-		
				-		
Bracket, Shoobox, Single Mount, Galv 6" Bracket	5581070	\$ 22.74	26.4%	6.01		
Bracket and Accessory Weighted Average Cost				\$ 64.31		
PHOTOCONTROL						
1000W, Z77V	5588100	\$ 5.09	21.2%	1.08		
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98		
Weighted Average Photocontrol Cost			70%	\$ 2.84		
RELAY EQUIPMENT						
Shorting Cap	5581500	\$ 2.92	1 LOT	\$ 2.92		
Oil Switch	5588120	\$ 21.33	10.5%	\$ 2.23		
OH Installation	Varies	\$ 20.57	61.5%	\$ 12.65		
UG Installation	Varies	\$ 36.98	28.0%	\$ 10.37		
Weighted Average Relay Equipment			30%	\$ 8.45		
Control Equipment Average Cost				\$ 11.28		
BRACKET CABLE (Cu, Triplex 600V 2/C, 10AWG)						
Bracket, Shoobox, Single Mount, Prem Lig	5322230	\$ 0.66	2	0.84		
Bracket, Shoobox, Dual Mount, 180 Degree, Prem Lig	5322230	\$ 0.66	3	0.20		
				-		
				-		
Bracket, Shoobox, Single Mount, Galv 6" Bracket	5322230	\$ 0.66	3	-		
Bracket Cable Weighted Average Cost				\$ 1.04		
FIXTURE HARDWARE						
OVERHEAD & UNDERGROUND SERVICE HARDWARE						
Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2	0.42		
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2	3.16		
Decal		\$ 1.12	1	1.12		
Overhead & Underground Service Hardware				\$ 4.70		
OVERHEAD SERVICE HARDWARE						
Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2	0.76		
Overhead wood/concrete				\$ 0.76		
Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2	2.24		
Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2	0.54		
Overhead wood			1%	0.01		
Connector, Compression H-Block AL #4 str ACSR #4	9261730	\$ 0.33	2	0.66		
concrete			98%	0.65		
Overhead Service Hardware			95%	1.35		
UNDERGROUND SERVICE HARDWARE						
wood						
Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2	1.92		
Underground Service Hardware			100%	20.74		
			100%	\$ 20.74		
Fixture Hardware Weighted Average Cost				\$ 27.56		
MATERIAL HANDLING @ 20.66 % of material cost				\$ 68.20		
TOTAL MATERIAL COST				\$ 388.28		
LABORVEHICLE						
	Crew Type	Unit Cost	# of Units	Cost		
INSTALL LIGHT FIXTURE						
Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18		
Engineering Office	E/O	\$ 64.12	0.23	\$ 14.69		
Engineering Field	E/F	\$ 69.82	0.29	\$ 20.14		
				\$ 209.01		
INSTALL RELAY CONTROL EQUIPMENT						
	<i>avg fixtures/relay</i>					
Oil Switch Installation	89 LN1	\$ 185.22	2.78	\$ 0.61		
OH Installation	33 SL1	\$ 73.92	1.77	\$ 2.42		
UG Installation	35 SL1	\$ 73.92	2.20	\$ 1.29		
Conduit Installation	35 CC2	\$ 146.93	3.85	\$ 4.47		
Conductor Installation	35 CC1	\$ 180.06	0.67	\$ 0.85		
Engineering Office	84 E/O	\$ 64.12	0.25	\$ 0.19		
Engineering Field/Incl in Fixture Eng if needed	84 E/F	\$ 69.82		\$ -		
Weighted Average Relay Equipment			30%	\$ 2.95		
TOTAL LABORVEHICLE				\$ 211.96		
TOTAL COST				\$ 610.24		

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 36 OF 111
FILED: 04/05/2013

2013 NPS Flood					
		Rate Code	488		
MATERIAL					
	Stock #	Unit Cost	# of Units and/or	%	Cost
LUMINAIRE	5585810	\$ 165.60	100.0%		165.60
			0.0%		-
			0.0%		-
			0.0%		-
			0.0%		-
			0.0%		-
			0.0%		-
			0.0%		-
Weighted Average Luminaire Cost					\$ 165.60
LAMP	5585530	\$ 11.00	1		\$ 11.00
BRACKET & ACCESSORY - Weighted Avg Cost					
Bracket, Dual Cutout, Arrestor, Pothead	5272070	\$ 41.24	50.0%		20.62
Bracket, Trimount, Arrestor, Pothead	5272090	\$ 53.69	50.0%		28.85
			0.0%		-
			0.0%		-
			0.0%		-
Bracket and Accessory Weighted Average Cost					\$ 47.47
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%		1.08
1000W GRAY Cover, 120V	5588110	\$ 3.78	78.8%		2.88
Weighted Average Photocontrol Cost					\$ 2.84
RELAY EQUIPMENT					
Shorting Cap	5581500	\$ 2.92		1 LOT	\$ 2.92
Oil Switch	5589120	\$ 30.81	10.5%		\$ 3.22
OH Installation	Varies	\$ 29.71	81.5%		\$ 18.28
UG Installation	Varies	\$ 53.41	28.0%		\$ 14.97
Weighted Average Relay Equipment				30%	\$ 11.82
Control Equipment Average Cost					\$ 14.66
BRACKET CABLE (Cu, Triplex, 800V/2K, 10AWG)					
Bracket, Dual Cutout, Arrestor, Pothead	5322230	\$ 0.66	3		0.99
Bracket, Trimount, Arrestor, Pothead	5322230	\$ 0.66	3		0.99
					-
					-
Bracket Cable Weighted Average Cost					\$ 1.98
FIXTURE HARDWARE					
OVERHEAD & UNDERGROUND SERVICE HARDWARE					
Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2		0.42
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2		3.16
Decal		\$ 1.12	1		1.12
Overhead & Underground Service Hardware					\$ 4.70
OVERHEAD SERVICE HARDWARE					
Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2		0.76
Overhead wood/concrete					\$ 0.76
Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2		2.24
Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2		0.54
Overhead wood			80%		2.22
Connector, Compression H-Block AL #4 str ACSR #4	9261730	\$ 0.33	2		0.66
concrete			20%		0.13
Overhead Service Hardware			100%		3.10
UNDERGROUND SERVICE HARDWARE					
wood					
Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2		1.92
wood			1100%		21.12
Underground Service Hardware				0%	\$ 0.05
Fixture Hardware Weighted Average Cost					\$ 10.83
MATERIAL HANDLING @ 20.66 % of material cost					\$ 51.97
TOTAL MATERIAL COST					\$ 303.50
LABOR/VEHICLE					
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13		\$ 174.18
Engineering Office	E/O	\$ 64.12	0.23		\$ 14.69
Engineering Field	E/F	\$ 69.82	0.29		\$ 20.14
					\$ 209.01
INSTALL RELAY CONTROL EQUIPMENT					
Oil Switch Installation	62 LN1	\$ 188.22	2.78		\$ 0.88
OH Installation	23 SL1	\$ 73.92	1.77		\$ 3.49
UG Installation	25 SL1	\$ 73.92	2.20		\$ 1.86
Conduit Installation	25 CC2	\$ 146.93	3.85		\$ 6.46
Conductor Installation	25 CC1	\$ 160.06	0.87		\$ 1.22
Engineering Office	64 E/O	\$ 64.12	0.25		\$ 0.19
Engineering Field, incl in Fixture Eng if needed	64 E/F	\$ 69.82			\$ -
Weighted Average Relay Equipment				30%	\$ 4.23
TOTAL LABOR/VEHICLE					\$ 213.24
TOTAL COST					\$ 516.74

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 37 OF 111
FILED: 04/05/2013

400W HPS Flood					
Rate Code		47b			
MATERIAL					
	Stock #	Unit Cost	# of Units and/or %	Cost	
LUMINAIRE	5585815	\$ 174.01	72.4%	125.95	
	5585860	\$ 238.19	1.1%	2.68	
	5585861	\$ 263.46	28.5%	69.77	
			0.0%	-	
			0.0%	-	
			0.0%	-	
			0.0%	-	
			0.0%	-	
			0.0%	-	
				\$ 198.40	
LAMP	5585540	\$ 11.07	1	\$ 11.07	
BRACKET & ACCESSORY - Weighted Avg Cost					
Bracket, Streetlight, Galvanized, 9"Radius	5581060	\$ 39.64	97.8%	38.76	
Bracket, Dual Cutout, Arrestor, Pothead	5272070	\$ 41.24	1.1%	0.46	
Bracket, Trimount, Arrestor, Pothead	5272090	\$ 53.69	1.1%	0.80	
			0.0%	-	
			0.0%	-	
			0.0%	-	
			0.0%	-	
			0.0%	-	
Bracket and Accessory Weighted Average Cost				\$ 39.81	
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.08	21.2%	1.08	
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98	
Weighted Average Photocontrol Cost			70%	\$ 2.84	
RELAY EQUIPMENT					
			per fixture	1 LOT	
Shorting Cap	5581500	\$ 2.92		1	\$ 2.92
Oil Switch	5589120	\$ 48.59	10.5%		\$ 5.08
OH Installation	Varies	\$ 46.86	61.5%		\$ 26.82
UG Installation	Varies	\$ 84.22	28.0%		\$ 23.91
Weighted Average Relay Equipment			30%		\$ 18.13
Control Equipment Average Cost					\$ 20.97
BRACKET CABLE (Cu, Triplex, 600V 2/C, 10AWG)					
Bracket, Streetlight, Galvanized, 9"Radius	5322230	\$ 0.66	2	1.29	
Bracket, Dual Cutout, Arrestor, Pothead	5322230	\$ 0.66	3	0.02	
Bracket, Trimount, Arrestor, Pothead	5322230	\$ 0.66	3	0.02	
				-	
				-	
				-	
Bracket Cable Weighted Average Cost				\$ 1.33	
FIXTURE HARDWARE					
OVERHEAD & UNDERGROUND SERVICE HARDWARE					
Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2	0.42	
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2	3.16	
Decal		\$ 1.12	1	1.12	
Overhead & Underground Service Hardware				\$ 4.70	
OVERHEAD SERVICE HARDWARE					
Cover, Snap-On Service Entrance Sleeve 5/8 die 2in Overhead wood/concrete	5261930	\$ 0.38	2	0.76	
				\$ 0.76	
Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2	2.24	
Connector, Compression H-Block AL #6 str ACSR #10 Overhead wood	9261530	\$ 0.27	2	0.54	
			77%	2.14	
Connector, Compression H-Block AL #4 str ACSR #4 concrete	9261730	\$ 0.33	2	0.66	
Overhead Service Hardware			23%	0.15	
			100%	3.04	
UNDERGROUND SERVICE HARDWARE					
wood					
Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2	1.92	
wood			1107%	21.25	
Underground Service Hardware			0%	\$ 0.05	
Fixture Hardware Weighted Average Cost				\$ 10.69	
MATERIAL HANDLING @ 20.66 % of material cost				\$ 58.32	
TOTAL MATERIAL COST				\$ 340.80	
LABOR/VEHICLE					
	Crew Type	Unit Cost	# of Units	Cost	
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18	
Engineering Office	E/O	\$ 64.12	0.23	\$ 14.69	
Engineering Field	E/F	\$ 69.62	0.29	\$ 20.14	
				\$ 209.01	
INSTALL RELAY CONTROL EQUIPMENT					
	avg fixtures/relay				
Oil Switch Installation	39 LN1	\$ 186.22	2.78	\$ 1.39	
OH Installation	15 SL1	\$ 73.92	1.77	\$ 5.50	
UG Installation	16 SL1	\$ 73.92	2.20	\$ 2.93	
Conduit Installation	16 CC2	\$ 146.93	3.85	\$ 10.18	
Conductor Installation	16 CC1	\$ 160.06	0.67	\$ 1.93	
Engineering Office	84 E/O	\$ 64.12	0.25	\$ 0.19	
Engineering Field, incl in Fixture Eng if needed	84 E/F	\$ 69.62		\$	
Weighted Average Relay Equipment			30%	\$ 6.84	
TOTAL LABOR/VEHICLE				\$ 215.84	
TOTAL COST				\$ 856.26	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 38 OF 111
FILED: 04/05/2013

3500V MH Flood					
Rate Code 705					
MATERIAL	Stock #	Unit Cost	# of Units and/or	%	Cost
LUMINAIRE	5585881	\$ 224.48	38.3%		85.97
	5585951	\$ 205.46	19.1%		38.34
	5585891	\$ 227.75	42.6%		96.91
			0.0%		-
			0.0%		-
			0.0%		-
			0.0%		-
			0.0%		-
			0.0%		-
					\$ 222.23
LAMP	5585641	\$ 25.97	1		\$ 25.97
BRACKET & ACCESSORY - Weighted Avg Cost					
Bracket, Streetlight, Galvanized, 9"Radius	5581080	\$ 39.64	97.8%		38.76
Bracket, Dual Cutout, Arrestor, Pothead	5272070	\$ 41.24	1.1%		0.46
Bracket, Trimount, Arrestor, Pothead	5272090	\$ 53.69	1.1%		0.60
			0.0%		-
			0.0%		-
			0.0%		-
			0.0%		-
			0.0%		-
Bracket and Accessory Weighted Average Cost					\$ 39.81
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%		1.08
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%		2.98
Weighted Average Photocontrol Cost				70%	\$ 2.84
RELAY EQUIPMENT					
Shorting Cap	5581500	\$ 2.92	1		2.92
Oil Switch	5589120	\$ 40.29	10.5%		4.21
OH Installation	Varies	\$ 38.86	61.5%		23.90
UG Installation	Varies	\$ 69.84	28.0%		19.58
Weighted Average Relay Equipment				30%	\$ 15.18
Control Equipment Weighted Average Cost					\$ 18.02
BRACKET CABLE (Cu, Triplex, 600V 2/C, 10AWG)					
Bracket, Streetlight, Galvanized, 9"Radius	5322230	\$ 0.66	2		1.29
Bracket, Dual Cutout, Arrestor, Pothead	5322230	\$ 0.66	3		0.02
Bracket, Trimount, Arrestor, Pothead	5322230	\$ 0.66	3		0.02
					-
					-
					-
Bracket Cable Weighted Average Cost					\$ 1.33
FIXTURE HARDWARE					
OVERHEAD & UNDERGROUND SERVICE HARDWARE					
Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9286750	\$ 0.21	2		0.42
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2		3.16
Decal		\$ 1.12	1		1.12
Overhead & Underground Service Hardware					\$ 4.70
OVERHEAD SERVICE HARDWARE					
Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5281930	\$ 0.38	2		0.76
Overhead wood/concrete					\$ 0.76
Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2		2.24
Connector, Compression H-Block AL #6 str ACSR #10	9281530	\$ 0.27	2		0.54
Overhead wood			39%		1.08
Connector, Compression H-Block AL #4 str ACSR #4	9281730	\$ 0.33	2		0.66
concrete			61%		0.40
Overhead Service Hardware			100%		2.25
UNDERGROUND SERVICE HARDWARE					
wood					
Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2		1.92
wood			2597%		49.88
Underground Service Hardware			35%		\$ 17.60
Fixture Hardware Weighted Average Cost					\$ 26.40
MATERIAL HANDLING @ 20.66 % of material cost					\$ 68.96
TOTAL MATERIAL COST					\$ 462.73
LABOR/VEHICLE					
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13		\$ 174.18
Engineering Office	E/O	\$ 64.12	0.23		\$ 14.89
Engineering Field	E/F	\$ 69.82	0.29		\$ 20.14
					\$ 209.01
INSTALL RELAY CONTROL EQUIPMENT					
Oil Switch Installation	47 LN1	\$ 186.22	2.78		\$ 1.15
OH Installation	18 SL1	\$ 73.92	1.77		\$ 4.56
UG Installation	19 SL1	\$ 73.92	2.20		\$ 2.43
Conduit Installation	19 CC2	\$ 146.93	3.85		\$ 8.44
Conductor Installation	19 CC1	\$ 160.06	0.87		\$ 1.60
Engineering Office	84 E/O	\$ 64.12	0.25		\$ 0.19
Engineering Field <i>incl in Fixture Eng if needed</i>	84 E/F	\$ 69.82	0.29		\$ 0.2
Weighted Average Relay Equipment			30%		\$ 5.51
TOTAL LABOR/VEHICLE					\$ 214.52
TOTAL COST					\$ 617.25

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 39 OF 111
FILED: 04/05/2013

400W MH Flood						
		Rate Code	558			
LUMINAIRE	MATERIAL	Stock #	Unit Cost	# of Units and/or	%	Cost
		5585880	\$ 203.49	9.6%		19.61
		5585900	\$ 200.88	5.4%		10.88
		5585960	\$ 200.88	5.4%		10.88
		5586590	\$ 227.08	79.5%		180.57
				0.0%		-
				0.0%		-
				0.0%		-
				0.0%		-
				0.0%		-
						\$ 221.94
	LAMP	5585940	\$ 15.51	1		\$ 15.51
	BRACKET & ACCESSORY - Weighted Avg Cost					
	Bracket, Streetlight, Galvanized, 9"Radius	5581060	\$ 39.64	97.8%		38.76
	Bracket, Dual Cutout, Arrestor, Pothead	5272070	\$ 41.24	1.1%		0.46
	Bracket, Trimount, Arrestor, Pothead	5272090	\$ 53.69	1.1%		0.60
				0.0%		-
				0.0%		-
				0.0%		-
				0.0%		-
	Bracket and Accessory Weighted Average Cost					\$ 39.81
	PHOTOCONTROL					
	1000W, 277V	5588100	\$ 5.09	21.2%		1.08
	1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%		2.98
	Weighted Average Photocontrol Cost			70%		\$ 2.84
	RELAY EQUIPMENT					
	Shorting Cap	5581500	\$ 2.92	1	1 LOT	\$ 2.92
	Oil Switch	5589120	\$ 48.59	10.5%		\$ 5.08
	OH Installation	Varies	\$ 46.86	61.5%		\$ 28.82
	UG Installation	Varies	\$ 84.22	28.0%		\$ 23.61
	Weighted Average Relay Equipment			30%		\$ 18.13
	Control Equipment Average Cost					\$ 20.97
	BRACKET CABLE (Cu, Triplex, 600V 2C, 10AWG)					
	Bracket, Streetlight, Galvanized, 9"Radius	5322230	\$ 0.66	2		1.29
	Bracket, Dual Cutout, Arrestor, Pothead	5322230	\$ 0.66	3		0.02
	Bracket, Trimount, Arrestor, Pothead	5322230	\$ 0.66	3		0.02
						-
						-
	Bracket Cable Weighted Average Cost					\$ 1.33
	FIXTURE HARDWARE					
	OVERHEAD & UNDERGROUND SERVICE HARDWARE					
	Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2		0.42
	Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2		3.16
	Decal		\$ 1.12	1		1.12
	Overhead & Underground Service Hardware					\$ 4.70
	OVERHEAD SERVICE HARDWARE					
	Cover, Snap-On Service Entrance Sleeve 5/8 die 2in Overhead wood/concrete	5281930	\$ 0.38	2		0.76
						\$ 0.76
	Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2		2.24
	Connector, Compression H-Block AL #6 str ACSR #10 Overhead wood	9261530	\$ 0.27	2		0.54
				61%		1.69
	Connector, Compression H-Block AL #4 str ACSR #4 concrete	9261730	\$ 0.33	2		0.66
	Overhead Service Hardware			40%		0.26
				100%		2.70
	UNDERGROUND SERVICE HARDWARE					
	wood					
	Bolt, Machine GALV 5/8x8	9233450	\$ 0.96	2		1.92
	wood			1551%		29.78
	Underground Service Hardware			0%		\$ (0.13)
	Fixture Hardware Weighted Average Cost					\$ 9.72
	MATERIAL HANDLING @ 20.66 % of material cost					\$ 63.90
	TOTAL MATERIAL COST					\$ 373.20
	LABOR/VEHICLE					
	INSTALL LIGHT FIXTURE					
	Fixture Installation	LN2	\$ 153.81	1.13		\$ 174.18
	Engineering Office	E/O	\$ 64.12	0.23		\$ 14.89
	Engineering Field	E/F	\$ 68.82	0.28		\$ 20.14
						\$ 209.01
	INSTALL RELAY CONTROL EQUIPMENT					
	Oil Switch Installation	39 LN1	\$ 186.22	2.78		\$ 1.39
	OH Installation	15 SL1	\$ 73.92	1.77		\$ 5.50
	UG Installation	16 SL1	\$ 73.92	2.20		\$ 2.93
	Conduit Installation	16 CC2	\$ 146.93	3.85		\$ 10.18
	Conductor Installation	16 CC1	\$ 160.06	0.67		\$ 1.83
	Engineering Office	84 E/O	\$ 64.12	0.25		\$ 0.19
	Engineering Field incl in Fixture Eng if needed	84 E/F	\$ 69.82			\$ -
	Weighted Average Relay Equipment			30%		\$ 6.64
	TOTAL LABOR/VEHICLE					\$ 215.84
	TOTAL COST					\$ 588.84

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 40 OF 111
FILED: 04/05/2013

1000W MH Flood					
Rate Code 558					
	MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost
LUMINAIRE					
		5585110	\$ 290.55	64.7%	188.00
		5585950	\$ 282.93	6.1%	17.26
		5585951	\$ 281.38	28.2%	82.15
				0.0%	-
				0.0%	-
				0.0%	-
				0.0%	-
				0.0%	-
				0.0%	-
					\$ 287.41
LAMP					
		5585590	\$ 10.71	1	\$ 10.71
BRACKET & ACCESSORY - Weighted Avg Cost					
	Bracket, Streetlight, Galvanized, 9"Radius	5581060	\$ 39.64	28.3%	11.24
	Bracket, Dual Cutout, Arrestor, Pothead	5272070	\$ 41.24	0.3%	0.13
	Bracket, Trimount, Arrestor, Pothead	5272090	\$ 53.89	0.3%	0.17
	Bracket, Shoebox, Single Mount, Prem Ltg	Various	\$ 71.54	55.3%	39.54
	Bracket, Shoebox, Dual Mount, Prem Ltg	Various	\$ 140.19	14.5%	20.27
	Bracket, Floodlight, Triple Mount, Prem Ltg	Various	\$ 222.07	0.8%	1.43
	Bracket, Floodlight, Quad Mount, Prem Ltg	Various	\$ 241.67	0.8%	1.55
	Bracket and Accessory Weighted Average Cost				\$ 74.33
PHOTOCONTROL					
	1000W, 277V	5588100	\$ 5.09	21.2%	1.08
	1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98
	Weighted Average Photocontrol Cost			70%	\$ 2.84
RELAY EQUIPMENT					
	Shorting Cap	5581500	\$ 2.92	1 LOT	\$ 2.92
	Oil Switch	5589120	\$ 117.32	10.5%	\$ 12.27
	OH Installation	Varies	\$ 113.14	61.5%	\$ 69.59
	UG Installation	Varies	\$ 203.37	28.0%	\$ 57.01
	Weighted Average Relay Equipment			30%	\$ 42.54
Control Equipment Average Cost					
					\$ 45.38
BRACKET CABLE (CU Triplex, 500V 2/C, 10AWG)					
	Bracket, Streetlight, Galvanized, 9"Radius	5322230	\$ 0.66	2	0.37
	Bracket, Dual Cutout, Arrestor, Pothead	5322230	\$ 0.66	3	0.01
	Bracket, Trimount, Arrestor, Pothead	5322230	\$ 0.66	3	0.01
	Bracket, Shoebox, Single Mount, Prem Ltg	5322230	\$ 0.66	2	0.73
	Bracket, Shoebox, Dual Mount, Prem Ltg	5322230	\$ 0.66	3	0.29
	Bracket, Floodlight, Triple Mount, Prem Ltg	5322230	\$ 0.66	6	0.03
	Bracket, Floodlight, Quad Mount, Prem Ltg	5322230	\$ 0.66	7	0.03
	Bracket Cable Weighted Average Cost				\$ 1.46
FIXTURE HARDWARE					
OVERHEAD & UNDERGROUND SERVICE HARDWARE					
	Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	2	0.42
	Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	2	3.16
	Decal		\$ 1.12	1	1.12
	Overhead & Underground Service Hardware				\$ 4.70
OVERHEAD SERVICE HARDWARE					
	Cover, Snap-On Service Entrance Sleeve 5/8 die 2in	5261930	\$ 0.38	2	0.76
	Overhead wood/concrete				\$ 0.76
	Bolt, Machine GALV 5/8x12	9233550	\$ 1.12	2	2.24
	Connector, Compression H-Block AL #6 str ACSR #10	9261530	\$ 0.27	2	0.54
	Overhead wood			74%	2.07
	Connector, Compression H-Block AL #4 str ACSR #4	9261730	\$ 0.33	2	0.66
	concrete			25%	0.17
	Overhead Service Hardware			100%	2.99
UNDERGROUND SERVICE HARDWARE					
	wood				
	Bolt, Machine GALV 5/8x8	9233450	\$ 0.98	2	1.92
	wood			1071%	20.56
	Underground Service Hardware			3%	\$ 0.70
	Fixture Hardware Weighted Average Cost				\$ 11.23
	MATERIAL HANDLING @ 20.66 % of material cost				\$ 88.94
	TOTAL MATERIAL COST				\$ 516.45
LABOR/VEHICLE					
		Crew Type	Unit Cost	# of Units	Cost
INSTALL LIGHT FIXTURE					
	Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18
	Engineering Office	E/O	\$ 64.12	0.23	\$ 14.89
	Engineering Field	E/F	\$ 69.82	0.29	\$ 20.14
					\$ 209.01
INSTALL RELAY CONTROL EQUIPMENT					
	Oil Switch Installation	18 LN1	\$ 186.22	2.78	\$ 3.35
	OH Installation	6 SL1	\$ 73.92	1.77	\$ 13.29
	UG Installation	6 SL1	\$ 73.92	2.20	\$ 7.07
	Conduit Installation	6 CC2	\$ 146.93	3.85	\$ 24.59
	Conductor Installation	6 CC1	\$ 160.08	0.67	\$ 4.66
	Engineering Office	84 E/O	\$ 64.12	0.25	\$ 0.19
	Engineering Field incl in Fixture Eng if needed	84 E/F	\$ 69.82		\$
	Weighted Average Relay Equipment			30%	\$ 15.94
	TOTAL LABOR/VEHICLE				\$ 224.95
	TOTAL COST				\$ 744.41

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 41 OF 111
FILED: 04/05/2013

80W HPS Post Top - Night Torch
Rate Code 509

LUMINAIRE NO LONGER AVAILBLE FROM MANUFACTURER.

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 42 OF 111
FILED: 04/05/2013

70W HPS Coach PT					
		Rate Code	810		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
LUMINAIRE	5586170	\$ 150.19	100.0%	150.19	
				-	
				-	
				-	
				-	
Weighted Average Luminaire Cost				\$	150.19
LAMP	5585560	\$ 10.58	1	\$ 10.58	
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%	1.08	
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98	
Weighted Average Photocontrol Cost			100%	\$ 4.06	
RELAY EQUIPMENT					
Shorting Cap	5581500	\$ 2.92	1 LOT	\$ 2.92	
Oil Switch	5589120	\$ 10.67	10.5%	\$ 1.12	
OH Installation	Varies	\$ 10.29	81.5%	\$ 6.33	
UG Installation	Varies	\$ 18.49	28.0%	\$ 5.18	
Weighted Average Relay Equipment			0%	\$ -	
Control Equipment Average Cost				\$	4.06
MATERIAL HANDLING @ 20.86 % of material cost					34.05
TOTAL MATERIAL COST				\$	188.88
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18	
Engineering Office	E/O	\$ 64.12	0.23	\$ 14.89	
Engineering Field	E/F	\$ 69.82	0.29	\$ 20.14	
				\$ 209.01	
INSTALL RELAY CONTROL EQUIPMENT					
Oil Switch Installation	178 LN1	\$ 186.22	2.78	\$ 0.30	
OH Installation	67 SL1	\$ 73.92	1.77	\$ 1.21	
UG Installation	71 SL1	\$ 73.92	2.20	\$ 0.64	
Conduit Installation	71 CC2	\$ 148.93	3.85	\$ 2.24	
Conductor Installation	71 CC1	\$ 160.06	0.67	\$ 0.42	
Engineering Office	84 E/O	\$ 64.12	0.25	\$ 0.19	
Engineering Field <i>incl in Fixture Eng if needed</i>	84 E/F	\$ 69.82		\$ -	
Weighted Average Relay Equipment			0%	\$ -	
TOTAL LABOR/VEHICLE				\$	209.01
TOTAL COST				\$	407.89

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 43 OF 111
FILED: 04/05/2013

100W HPS Classic FT (Classic, Enh Classic, Promenade)					
		Rate Code	570		
<u>MATERIAL</u>	<u>Stock #</u>	<u>Unit Cost</u>	<u># of Units and/or %</u>	<u>Cost</u>	
LUMINAIRE	5582120	\$ 579.16	18.5%	106.93	
	5582140	\$ 573.25	1.7%	9.94	
	5582160	\$ -	1.2%	-	
	5586253	\$ 457.19	0.6%	2.55	
	5586253	\$ 457.19	0.6%	2.55	
	5586268	\$ 498.20	77.4%	385.84	
Weighted Average Luminaire Cost				\$ 507.82	
LAMP	5585580	\$ 10.54	1	\$ 10.54	
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%	1.08	
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98	
Weighted Average Photocontrol Cost			70%	\$ 2.84	
RELAY EQUIPMENT					
Shorting Cap	5581500	\$ 2.92	1 LOT	\$ 2.92	
Oil Switch	5589120	\$ 14.22	10.5%	\$ 1.49	
OH Installation	Varies	\$ 13.71	61.5%	\$ 8.43	
UG Installation	Varies	\$ 24.65	28.0%	\$ 6.91	
Weighted Average Relay Equipment			30%	\$ 5.93	
Control Equipment Average Cost				\$ 8.77	
MATERIAL HANDLING @ 20.66 % of material cost				108.90	
TOTAL MATERIAL COST				\$ 636.03	
<u>LABOR/VEHICLE</u>	<u>Crew Type</u>	<u>Unit Cost</u>	<u># of Units</u>	<u>Cost</u>	
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18	
Engineering Office	E/O	\$ 64.12	0.23	\$ 14.69	
Engineering Field	E/F	\$ 89.82	0.29	\$ 20.14	
				\$ 209.01	
INSTALL RELAY CONTROL EQUIPMENT	<i>avg fixtures/relay</i>				
Oil Switch Installation	133 LN1	\$ 186.22	2.78	\$ 0.41	
OH Installation	50 SL1	\$ 73.92	1.77	\$ 1.61	
UG Installation	53 SL1	\$ 73.92	2.20	\$ 0.86	
Conduit Installation	53 CC2	\$ 146.93	3.85	\$ 2.98	
Conductor Installation	53 CC1	\$ 180.08	0.67	\$ 0.56	
Engineering Office	84 E/O	\$ 64.12	0.25	\$ 0.19	
Engineering Field <i>Incl in Fixture Eng if needed</i>	84 E/F	\$ 69.82		\$ -	
Weighted Average Relay Equipment			30%	\$ 1.98	
TOTAL LABOR/VEHICLE				\$ 210.99	
TOTAL COST				\$ 847.02	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 44 OF 111
FILED: 04/05/2013

100W HPS Contemporary FT

Rate Code 571

LUMINAIRE NO LONGER AVAILBLE FROM MANUFACTURER.

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 45 OF 111
FILED: 04/05/2013

100W HPS Colonial PT					
	Rate Code	572			
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
LUMINAIRE	5586150	\$ 535.28	99.4%	532.16	
	5586660	\$ 496.94	0.6%	2.89	
				-	
				-	
				-	
Weighted Average Luminaire Cost				\$ 535.06	
LAMP	5585580	\$ 10.54	1	\$ 10.54	
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%	1.08	
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98	
Weighted Average Photocontrol Cost			70%	\$ 2.84	% PC
RELAY EQUIPMENT		per fixture	1 LOT		
Shorting Cap	5581500	\$ 2.92	1	\$ 2.92	
Oil Switch	5589120	\$ 14.22	10.5%	\$ 1.49	
OH Installation	Varies	\$ 13.71	61.5%	\$ 8.43	
UG Installation	Varies	\$ 24.65	28.0%	\$ 6.91	
Weighted Average Relay Equipment			30%	\$ 5.93	% Relay
Control Equipment Average Cost				\$ 8.77	
MATERIAL HANDLING @ 20.66 % of material cost				114.53	
TOTAL MATERIAL COST				\$ 668.89	
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18	
Engineering Office	E/O	\$ 64.12	0.23	\$ 14.69	
Engineering Field	E/F	\$ 69.82	0.29	\$ 20.14	
				\$ 209.01	
INSTALL RELAY CONTROL EQUIPMENT	avg fixtures/relay				
Oil Switch Installation	133 LN1	\$ 186.22	2.78	\$ 0.41	
OH Installation	50 SL1	\$ 73.92	1.77	\$ 1.61	
UG Installation	53 SL1	\$ 73.92	2.20	\$ 0.86	
Conduit Installation	53 CC2	\$ 146.93	3.85	\$ 2.98	
Conductor Installation	53 CC1	\$ 180.06	0.67	\$ 0.56	
Engineering Office	84 E/O	\$ 64.12	0.25	\$ 0.19	
Engineering Field <i>incl in Fixture Eng if needed</i>	84 E/F	\$ 69.82		\$ -	
Weighted Average Relay Equipment			30%	\$ 1.98	% Relay
TOTAL LABOR/VEHICLE				\$ 210.99	
TOTAL COST				\$ 879.88	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 46 OF 111
FILED: 04/05/2013

100W HPS Salem PT					
		Rate Code	573		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
LUMINAIRE					
	5588661	\$ 399.87	99.8%		398.96
	5588662	\$ 383.58	0.2%		0.87
					-
					-
					-
Weighted Average Luminaire Cost					\$ 399.83
LAMP	5585580	\$ 10.54	1		\$ 10.54
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%		1.08
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%		2.98
Weighted Average Photocontrol Cost			70%		\$ 2.84
RELAY EQUIPMENT		per fixture	1 LOT		
Shorting Cap	5581500	\$ 2.92	1		\$ 2.92
Oil Switch	5589120	\$ 14.22	10.5%		\$ 1.49
OH Installation	Varies	\$ 13.71	61.5%		\$ 8.43
UG Installation	Varies	\$ 24.65	28.0%		\$ 6.91
Weighted Average Relay Equipment			30%		\$ 5.93
Control Equipment Average Cost					\$ 8.77
MATERIAL HANDLING @ 20.66 % of material cost					86.59
TOTAL MATERIAL COST					\$ 505.73
LABOR/VEHICLE		Crew Type	Unit Cost	# of Units	Cost
INSTALL LIGHT FIXTURE					
Fixture Installation		LN2	\$ 153.81	1.13	\$ 174.18
Engineering Office		E/O	\$ 64.12	0.23	\$ 14.69
Engineering Field		E/F	\$ 69.82	0.29	\$ 20.14
					\$ 209.01
INSTALL RELAY CONTROL EQUIPMENT					
		avg fixtures/relay			
Oil Switch Installation	133	LN1	\$ 186.22	2.78	\$ 0.41
OH Installation	50	SL1	\$ 73.92	1.77	\$ 1.61
UG Installation	53	SL1	\$ 73.92	2.20	\$ 0.86
Conduit Installation	53	CC2	\$ 146.93	3.85	\$ 2.98
Conductor Installation	53	CC1	\$ 160.06	0.67	\$ 0.56
Engineering Office	84	E/O	\$ 64.12	0.25	\$ 0.19
Engineering Field incl in Fixture Eng if needed	84	E/F	\$ 69.82		\$ -
Weighted Average Relay Equipment				30%	\$ 1.98
TOTAL LABOR/VEHICLE					\$ 210.99
TOTAL COST					\$ 716.72

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 47 OF 111
FILED: 04/05/2013

150W MH Salem PT					
Rate Code		700			
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
LUMINAIRE	5582041	\$ 406.44	7.8%	31.81	
	5582051	\$ 406.49	92.2%	374.68	
Weighted Average Luminaire Cost				\$ 406.49	
LAMP	5585611	\$ 16.86	1	\$ 16.86	
PHOTOCONTROL	5588100	\$ 5.09	21.2%	1.08	
1000W, 277V	5588110	\$ 3.78	78.8%	2.98	
1000W GRAY Cover 120V	Weighted Average Photocontrol Cost % PC				\$ 2.84
			70%		
RELAY EQUIPMENT	per fixture		1 LOT		
Shorting Cap	5581500	\$ 2.92	1	\$ 2.92	
Oil Switch	5589120	\$ 17.78	10.5%	\$ 1.86	
OH Installation	Varies	\$ 17.14	61.5%	\$ 10.54	
UG Installation	Varies	\$ 30.81	28.0%	\$ 8.64	
Weighted Average Relay Equipment % Relay				\$ 7.19	
Control Equipment Average Cost				\$ 10.03	
MATERIAL HANDLING @ 20.66 % of material cost				\$ 89.54	
TOTAL MATERIAL COST				\$ 522.91	
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13	\$ 174.18	
Engineering Office	E/O	\$ 64.12	0.23	\$ 14.69	
Engineering Field	E/F	\$ 69.82	0.29	\$ 20.14	
				\$ 209.01	
INSTALL RELAY CONTROL EQUIPMENT	avg fixtures/relay				
Oil Switch Installation	107 LN1	\$ 186.22	2.78	\$ 0.51	
OH Installation	40 SL1	\$ 73.92	1.77	\$ 2.01	
UG Installation	43 SL1	\$ 73.92	2.20	\$ 1.07	
Conduit Installation	43 CC2	\$ 146.93	3.85	\$ 3.73	
Conductor Installation	43 CC1	\$ 160.06	0.67	\$ 0.71	
Engineering Office	84 E/O	\$ 84.12	0.25	\$ 0.19	
Engineering Field incl in Fixture Eng if needed	84 E/F	\$ 69.82		\$ -	
Weighted Average Relay Equipment % Relay				\$ 2.46	
30%					
TOTAL LABOR/VEHICLE				\$ 211.47	
TOTAL COST				\$ 734.38	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 48 OF 111
FILED: 04/05/2013

150W MH General FT (Classic, Enh. Classic, Colonial, Promenade)					
	Rate Code	701			
<u>MATERIAL</u>	<u>Stock #</u>	<u>Unit Cost</u>	<u># of Units and/or %</u>	<u>Cost</u>	
LUMINAIRE	5582151	\$ 598.40	11.4%	88.17	
	5583341	\$ 450.41	11.4%	51.31	
	5583351	\$ 489.68	43.0%	202.14	
	5584221	\$ 513.95	11.4%	58.55	
	5584331	\$ 515.82	11.4%	58.76	
	5587761	\$ 563.01	11.4%	64.14	
Weighted Average Luminaire Cost				\$	503.08
LAMP	5585611	\$ 16.86	1	\$	16.86
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%	1.08	
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%	2.98	
Weighted Average Photocontrol Cost			70%	\$	2.84
RELAY EQUIPMENT		<i>per fixture</i>	1 LOT		
Shorting Cap	5581500	\$ 2.92	1	\$	2.92
Oil Switch	5589120	\$ 17.78	10.5%	\$	1.86
OH Installation	Varies	\$ 17.14	61.5%	\$	10.54
UG Installation	Varies	\$ 30.81	28.0%	\$	8.64
Weighted Average Relay Equipment			30%	\$	7.19
Control Equipment Average Cost				\$	10.03
MATERIAL HANDLING @ 20.66 % of material cost					109.49
TOTAL MATERIAL COST				\$	639.46
<u>LABOR/VEHICLE</u>	<u>Crew Type</u>	<u>Unit Cost</u>	<u># of Units</u>	<u>Cost</u>	
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13	\$	174.18
Engineering Office	E/O	\$ 64.12	0.23	\$	14.89
Engineering Field	E/F	\$ 69.82	0.29	\$	20.14
				\$	209.01
INSTALL RELAY CONTROL EQUIPMENT	<i>avg fixtures/relay</i>				
Oil Switch Installation	107 LN1	\$ 186.22	2.78	\$	0.51
OH Installation	40 SL1	\$ 73.92	1.77	\$	2.01
UG Installation	43 SL1	\$ 73.92	2.20	\$	1.07
Conduit Installation	43 CC2	\$ 146.93	3.85	\$	3.73
Conductor Installation	43 CC1	\$ 160.08	0.67	\$	0.71
Engineering Office	84 E/O	\$ 64.12	0.25	\$	0.19
Engineering Field <i>incl in Fixture Eng if needed</i>	84 E/F	\$ 69.82		\$	-
Weighted Average Relay Equipment			30%	\$	2.46
TOTAL LABOR/VEHICLE				\$	211.47
TOTAL COST				\$	850.93

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 49 OF 111
FILED: 04/05/2013

175W MH General PT (Classic, Eco Classic, Colonial, Promenade)					
Rate Code 574					
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
LUMINAIRE					
	5582150	\$ 518.68	2.3%		12.16
	5583340	\$ 360.72	2.3%		8.45
	5583350	\$ 446.71	78.6%		351.32
	5584220	\$ 448.61	12.0%		53.74
	5584330	\$ 397.44	2.3%		9.32
	5587760	\$ 499.81	2.3%		11.71
Weighted Average Luminaire Cost					\$ 446.70
LAMP	5585540	\$ 11.07	1		\$ 11.07
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%		1.08
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%		2.98
Weighted Average Photocontrol Cost			70%		\$ 2.84
RELAY EQUIPMENT					
		<i>per fixture</i>		1 LOT	
Shorting Cap	5581500	\$ 2.92		1	\$ 2.92
Oil Switch	5589120	\$ 21.33	10.5%		2.23
OH Installation	Varies	\$ 20.57	61.5%		\$ 12.65
UG Installation	Varies	\$ 36.98	28.0%		\$ 10.37
Weighted Average Relay Equipment			30%		\$ 8.45
Control Equipment Average Cost					\$ 11.29
MATERIAL HANDLING @ 20.66 % of material cost					96.91
TOTAL MATERIAL COST					\$ 565.97
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13		\$ 174.18
Engineering Office	E/O	\$ 64.12	0.23		\$ 14.69
Engineering Field	E/F	\$ 69.82	0.29		\$ 20.14
					\$ 209.01
INSTALL RELAY CONTROL EQUIPMENT	<i>avg fixtures/relay</i>				
Oil Switch Installation	89 LN1	\$ 186.22	2.78		\$ 0.61
OH Installation	33 SL1	\$ 73.92	1.77		\$ 2.42
UG Installation	35 SL1	\$ 73.92	2.20		\$ 1.29
Conduit Installation	35 CC2	\$ 146.93	3.85		\$ 4.47
Conductor Installation	35 CC1	\$ 160.06	0.67		\$ 0.85
Engineering Office	84 E/O	\$ 64.12	0.25		\$ 0.19
Engineering Field <i>incl in Fixture Eng if needed</i>	84 E/F	\$ 69.82			\$ -
Weighted Average Relay Equipment			30%		\$ 2.95
TOTAL LABOR/VEHICLE					\$ 211.95
TOTAL COST					\$ 777.92

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 50 OF 111
FILED: 04/05/2013

175W MH Salom PT					
		Rate Code	575		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
LUMINAIRE					
	5582040	\$ 314.08	4.0%		12.45
	5582050	\$ 359.70	96.0%		345.44
					-
					-
					-
Weighted Average Luminaire Cost					\$ 357.89
LAMP	5585610	\$ 10.80	1		\$ 10.80
PHOTOCONTROL					
1000W, 277V	5588100	\$ 5.09	21.2%		1.08
1000W GRAY Cover 120V	5588110	\$ 3.78	78.8%		2.98
Weighted Average Photocontrol Cost % PC					\$ 2.84
RELAY EQUIPMENT				per fixture	1 LOT
Shorting Cap	5581500	\$ 2.92	1		\$ 2.92
Oil Switch	5589120	\$ 21.33	10.5%		\$ 2.23
OH Installation	Varies	\$ 20.57	61.5%		\$ 12.85
UG Installation	Varies	\$ 36.98	28.0%		\$ 10.37
Weighted Average Relay Equipment % Relay					\$ 8.45
Control Equipment Average Cost					\$ 11.29
MATERIAL HANDLING @ 20.66 % of material cost					78.50
TOTAL MATERIAL COST					\$ 458.49
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL LIGHT FIXTURE					
Fixture Installation	LN2	\$ 153.81	1.13		\$ 174.18
Engineering Office	E/O	\$ 64.12	0.23		\$ 14.69
Engineering Field	E/F	\$ 69.82	0.29		\$ 20.14
					\$ 209.01
INSTALL RELAY CONTROL EQUIPMENT	avg fixtures/relay				
Oil Switch Installation	89 LN1	\$ 166.22	2.78		\$ 0.81
OH Installation	33 SL1	\$ 73.92	1.77		\$ 2.42
UG Installation	35 SL1	\$ 73.92	2.20		\$ 1.29
Conduit Installation	35 CC2	\$ 148.93	3.85		\$ 4.47
Conductor Installation	35 CC1	\$ 160.06	0.87		\$ 0.85
Engineering Office	84 E/O	\$ 64.12	0.25		\$ 0.19
Engineering Field incl in Fixture Eng if needed	84 E/F	\$ 69.82			\$ -
Weighted Average Relay Equipment % Relay					\$ 2.95
TOTAL LABOR/VEHICLE					\$ 211.95
TOTAL COST					\$ 670.44

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 51 OF 111
FILED: 04/05/2013

INSTALLATION COST SUMMARY

MISCELLANEOUS OTHER

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 52 OF 111
FILED: 04/05/2013

TIMER					
		Rate Code	563		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
TIMER	5588160	\$ 418.79	20.0%	83.76	
	5588760	\$ 320.00	80.0%	256.00	
				\$ 339.76	
CABLE, POLE & BRACKET					
UG Copper, Triplex, 600V 2/C 10AWG	5322230	\$ 0.66	10	\$ 6.60	
FIXTURE HARDWARE					
Pole Hardware wood/concrete					
Washer, Flat 2-1/4 X 2-1/4 X 3/16 w/ 13/16" Hole Dia	9296750	\$ 0.21	1	0.21	
Nut, Eye 1-1/2" GALV for 5/8" bolt	9237650	\$ 1.58	1	1.58	
Bolt, Machine Galv Rolled Threads 5/8 X 12	9235250	\$ 2.35	1	2.35	
				\$ 4.14	
Overhead Service Hardware					
Cover, Snap-On Squeezon Connector D die	5261900	\$ 0.44	2	0.88	
Connector, Vice CU #2 str	9280550	\$ 2.62	2	5.24	
Connector, Compression H-Block AL #8 str ACSR #2-2/0	9261540	\$ 0.24	4	0.96	
% OH			100%	\$ 7.08	
Fixture Hardware Weighted Average Cost				\$ 11.22	
MATERIAL HANDLING @ 20.66 % of material cost				71.56	
TOTAL MATERIAL COST				\$ 429.14	
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL TIMER					
Timer Installation	SL1	\$ 73.92	1.27	\$ 93.63	
Engineering Office	E/O	\$ 64.12	0.20	\$ 12.82	
Engineering Field	E/F	\$ 69.82	0.00	\$ -	
				\$ 106.46	
TOTAL LABOR/VEHICLE				\$ 106.46	
TOTAL COST				\$ 535.59	

DOUBLE BRACKET					
		Rate Code	569		
	<u>MATERIAL</u>	<u>Stock #</u>	<u>Unit Cost</u>	<u># of Units and/or %</u>	<u>Cost</u>
BRACKET		5580950	\$ 310.44	1	\$ 310.44

MATERIAL HANDLING @ 20.66 % of material cost 64.14

TOTAL MATERIAL COST **\$ 374.58**

<u>LABOR/VEHICLE</u>	<u>Crew Type</u>	<u>Unit Cost</u>	<u># of Units</u>	<u>Cost</u>
INSTALL DOUBLE BRACKET				
Double Bracket Installation	LN1	\$ 186.22	0.30	\$ 55.87
Engineering Office	E/O	\$ 64.12	0.20	\$ 12.82
Engineering Field	E/F	\$ 69.82	0.00	\$ -
				\$ 68.69
TOTAL LABOR/VEHICLE				\$ 68.69
TOTAL COST				\$ 443.27

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 54 OF 111
FILED: 04/05/2013

INSTALLATION COST SUMMARY

POLES

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 55 OF 111
FILED: 04/05/2013

Aluminum, 19 FL, DB							
		Rate Code	422				
MATERIAL	Stock #	Unit Cost	# of Units and/or	%	Cost		
POLE	5586420	\$ 70.03	100.0%		70.03		
Weighted Average Pole Cost						\$ 70.03	
CABLE <i>based on OH/UG</i>							
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0		\$0.00		
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	75.0		\$49.50		
						\$ 49.50	
CABLE HARDWARE w/ P&B Cable (UG only)							
Underground Cable Hardware							
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	33		\$21.45		
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2		\$4.84		
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2		\$16.26		
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55		
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$16.26		
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1		\$13.40		
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08		
% UG					100%	\$ 78.84	
Cable Hardware Weighted Average Cost						\$ 78.84	
GROUNDING (1 every 1/4 mile) - UG Circuits <i>Spans per 1/4 mi =</i>							
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293280	\$ 11.84	2	0.05	\$23.28		
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.48	1		\$4.48		
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1		\$1.80		
Grounding Average Cost					% UG	100%	\$1.45
CONDUIT							
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	73		\$35.77		
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmted seq. flg	5853530	\$ 0.03	81		\$2.43		
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78		
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	4		\$2.34		
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.2		\$0.57		
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$28.92		
						\$72.81	
Wood							
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35		\$17.15		
Strap, Galv, 2in Hole	5512420	\$ 0.21	2		\$0.42		
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4		\$0.40		
					% Wood	0%	\$ -
Conduit Average Cost					% UG	100%	\$72.81
MATERIAL HANDLING @ 20.66 % of material cost						\$ 56.33	
TOTAL MATERIAL COST						\$ 328.96	
LABOR/VEHICLE							
INSTALL POLE							
Haul Set Pole	LN1	\$ 186.22	0.97		\$ 180.12		
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00		\$ -		
Trench & Install Conduit	CC2	\$ 146.93	2.41		\$ 354.59		
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.46		\$ 72.99		
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27		
Engineering Field	E/F	\$ 69.82	0.27		\$ 18.61		
						\$ 652.58	
TOTAL LABOR/VEHICLE						\$ 652.58	
TOTAL COST						\$ 981.55	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 56 OF 111
FILED: 04/05/2013

Round 23 R, DBI Contents					
		Rate Code	523		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE	5210520	\$ 1,042.97	100.0%	1,042.97	
Weighted Average Pole Cost				\$ 1,042.97	
CABLE based on OH/UG					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	104.0	\$68.64	
				\$ 68.64	
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47	\$31.02	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26	
Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08	
% UG			100%	\$ 88.41	
Cable Hardware Weighted Average Cost				\$ 88.41	
GROUNDING (1 every 1/4 mile) - UG Circuits Spans per 1/4 mi =					
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.84	2	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80	
Grounding Average Cost			% UG	100%	\$21.00
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102	\$49.98	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmtid seq. ftg	5853530	\$ 0.03	110	\$3.30	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6	\$3.13	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.3	\$0.82	
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92	
				\$88.93	
Wood					
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40	
Conduit Average Cost			% Wood	0%	\$ -
			% UG	100%	\$88.93
MATERIAL HANDLING @ 20.66 % of material cost				\$ 266.73	
TOTAL MATERIAL COST				\$ 1,557.78	
LABOR/VEHICLE					
INSTALL POLE	Crew Type	Unit Cost	# of Units	Cost	
Haul Set Pole	LN1	\$ 188.22	0.97	\$ 180.12	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 188.22	0.00	\$ -	
Trench & Install Conduit	CC2	\$ 148.93	3.43	\$ 503.80	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.63	\$ 101.20	
Engineering Office	E/O	\$ 84.12	0.41	\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61	
				\$ 829.81	
TOTAL LABOR/VEHICLE				\$ 829.81	
TOTAL COST				\$ 2,387.59	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 57 OF 111
FILED: 04/05/2013

Franklin Composite, PT, DB Composite						
Rate Code 525						
MATERIAL	Stock #	Unit Cost	# of Units and/or	%	Cost	
POLE	5586690	\$ 715.12	100.0%		715.12	
Weighted Average Pole Cost						\$ 715.12
CABLE	based on OH/UG					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0		\$0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	104.0		\$68.64	\$ 68.64
CABLE HARDWARE w/ P&B Cable (UG only)						
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47		\$31.02	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2		\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2		\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$16.26	
Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4"x1/8"	5851120	\$ 13.40	1		\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08	
	% UG		100%		\$ 88.41	\$ 88.41
Cable Hardware Weighted Average Cost						\$ 88.41
GROUNDING (1 every 1/4 mile) - UG Circuits	Spans per 1/4 mi = 14 0.07					
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.84	2		\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1		\$4.46	
Clamp, Ground Copper 1/2"	9272950	\$ 1.80	1		\$1.80	
Grounding Average Cost	% UG		100%		\$2.10	\$2.10
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102		\$49.98	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmtid seq. ftg	5853530	\$ 0.03	110		\$3.30	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6		\$3.13	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.3		\$0.82	
Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$28.92	\$28.92
Wood						\$88.93
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35		\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2		\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4		\$0.40	
	% Wood		0%		\$ -	
	% UG		100%		\$88.93	\$88.93
Conduit Average Cost						\$88.93
MATERIAL HANDLING @ 20.66 % of material cost						\$ 199.00
TOTAL MATERIAL COST						\$ 1,162.20
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units		Cost	
INSTALL POLE						
Haul Set Pole	LN1	\$ 186.22	0.97		\$ 180.12	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00		\$ -	
Trench & Install Conduit	CC2	\$ 148.93	3.43		\$ 503.80	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 180.06	0.63		\$ 101.20	
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27		\$ 18.61	
					\$ 829.61	\$ 829.61
TOTAL LABOR/VEHICLE						\$ 829.61
TOTAL COST						\$ 1,992.01

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 58 OF 111
FILED: 04/05/2013

Meritage, PT, DB Aluminum					
		Rate Code	580		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE					
	5586659	\$ 266.82	33.3%		88.94
	5586660	\$ 285.21	33.3%		95.07
	5586600	\$ 263.46	33.3%		87.82
Weighted Average Pole Cost					<u>\$ 271.83</u>
CABLE	<i>based on OH/UG</i>				
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0		\$0.00
UG Cable, UG, Copper, Triplex, 800V 2/C, 10AWG	5322230	\$ 0.66	104.0		<u>\$68.64</u>
					<u>\$ 68.64</u>
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47		\$31.02
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2		\$4.84
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2		\$16.26
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$16.26
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4" x 1/8"	5851120	\$ 13.40	1		\$13.40
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08
	<i>% UG</i>		<i>100%</i>		<u>\$ 88.41</u>
Cable Hardware Weighted Average Cost					<u>\$ 88.41</u>
GROUNDING (1 every 1/4 mile) - UG Circuits	<i>Spans per 1/4 mi =</i>				
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293280	\$ 11.64	2		\$23.28
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1		\$4.46
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.60	1		\$1.80
Grounding Average Cost	<i>% UG</i>		<i>100%</i>		<u>\$2.10</u>
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102		\$49.98
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmted seq. flg	5853530	\$ 0.03	110		\$3.30
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6		\$3.14
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.3		\$0.82
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		<u>\$28.92</u>
					<u>\$88.94</u>
Wood					
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35		\$17.15
Strap, Galv, 2in Hole	5512420	\$ 0.21	2		\$0.42
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4		0.40
	<i>% Wood</i>		<i>0%</i>		<u>\$ -</u>
Conduit Average Cost	<i>% UG</i>		<i>100%</i>		<u>\$88.94</u>
MATERIAL HANDLING @ 20.66 % of material cost					<u>\$ 107.42</u>
TOTAL MATERIAL COST					<u>\$ 627.36</u>
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL POLE					
Haul Set Pole	LN1	\$ 186.22	0.97		\$ 180.12
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00		\$ -
Trench & Install Conduit	CC2	\$ 146.93	3.43		\$ 503.65
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 180.06	0.83		\$ 101.21
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27
Engineering Field	E/F	\$ 89.82	0.27		\$ 18.61
					<u>\$ 829.87</u>
TOTAL LABOR/VEHICLE					<u>\$ 829.87</u>
TOTAL COST					<u>\$ 1,457.21</u>

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 59 OF 111
FILED: 04/05/2013

Capitol, PT, DB Aluminum						
Rate Code		581				
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost		
POLE	5586690	\$ 715.12	100.0%	715.12		
Weighted Average Pole Cost				<u>\$ 715.12</u>		
CABLE	based on OH/UG					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00		
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	104.0	<u>\$68.64</u>		
				<u>\$ 68.64</u>		
CABLE HARDWARE w/ P&B Cable (UG only)						
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47	\$31.02		
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84		
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.28		
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55		
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26		
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40		
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08		
			% UG	100%	<u>\$ 88.41</u>	
Cable Hardware Weighted Average Cost				<u>\$ 88.41</u>		
GROUNDING (1 every 1/4 mile) - UG Circuits	Spans per 1/4 mi = 14 0.07					
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28		
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46		
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80		
Grounding Average Cost				% UG	100%	<u>\$21.00</u>
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102	\$49.98		
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmtid seq. flg	5853530	\$ 0.03	110	\$3.30		
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78		
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6	\$3.14		
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.3	\$0.82		
Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	<u>\$28.92</u>		
				<u>\$88.94</u>		
Wood						
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15		
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42		
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40		
			% Wood	0%	\$ -	
			% UG	100%	<u>\$88.94</u>	
Conduit Average Cost				<u>\$88.94</u>		
MATERIAL HANDLING @ 20.68 % of material cost				<u>\$ 199.00</u>		
TOTAL MATERIAL COST				\$ 1,162.22		
LABOR/VEHICLE						
LABOR/VEHICLE		Crew Type	Unit Cost	# of Units	Cost	
INSTALL POLE						
Haul Set Pole	LN1	\$ 186.22	0.97	\$ 180.12		
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00	\$ -		
Trench & Install Conduit	CC2	\$ 146.93	3.43	\$ 503.85		
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.63	\$ 101.21		
Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27		
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61		
				<u>\$ 829.87</u>		
TOTAL LABOR/VEHICLE				\$ 829.87		
TOTAL COST				\$ 1,992.08		

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 60 OF 111
FILED: 04/05/2013

MINNESOTA, PT, DR FIBER					
		Rate Code	582		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE					
	5586600	\$ 140.34	99.5%	139.69	
	5586605	\$ 165.62	0.5%	0.77	
				-	
Weighted Average Pole Cost				\$ 140.46	
CABLE	<i>based on OH/UG</i>				
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	104.0	\$68.64	
				\$ 68.64	
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47	\$31.02	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08	
	% UG		100%	\$ 88.41	
Cable Hardware Weighted Average Cost				\$ 88.41	
GROUNDING (1 every 1/4 mile) - UG Circuits	<i>Spans per 1/4 mi =</i>				
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293280	\$ 11.64	2	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80	
Grounding Average Cost	% UG		100%	\$2.10	
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102	\$49.98	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmid seq. flg	5853530	\$ 0.03	110	\$3.30	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6	\$3.13	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.3	\$0.82	
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92	
				\$88.93	
Wood					
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40	
	% Wood		0%	\$ -	
Conduit Average Cost	% UG		100%	\$88.93	
MATERIAL HANDLING @ 20.66 % of material cost				\$ 80.27	
TOTAL MATERIAL COST				\$ 468.81	
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL POLE					
Haul Set Pole	LN1	\$ 186.22	0.97	\$ 180.12	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00	\$ -	
Trench & Install Conduit	CC2	\$ 146.93	3.43	\$ 503.80	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 180.06	0.63	\$ 101.20	
Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27	\$ 16.61	
				\$ 629.81	
TOTAL LABOR/VEHICLE				\$ 629.81	
TOTAL COST				\$ 1,298.62	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 61 OF 111
FILED: 04/05/2013

Waterford, PT. DB Concrete					
		Rate Code	583		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE					
	5210260	\$ 329.56	50.0%	164.78	
	5210270	\$ 580.87	50.0%	290.44	
				-	
Weighted Average Pole Cost				\$ 455.22	
CABLE	<i>based on OH/UG</i>				
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00	
UG Cable, UG, Copper, Triplex, 800V 2/C, 10AWG	5322230	\$ 0.66	104.0	\$68.64	
				\$ 68.64	
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47	\$31.02	
Fuse, Cartridge Non-Renew 3DA 800V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08	
	% UG		100%	\$ 88.41	
Cable Hardware Weighted Average Cost				\$ 88.41	
GROUNDING (1 every 1/4 mile) - UG Circuits	<i>Spans per 1/4 mi =</i>				
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293280	\$ 11.84	2	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80	
Grounding Average Cost	% UG		100%	\$2.10	
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102	\$49.98	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmid seq. fig	5853530	\$ 0.03	110	\$3.30	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6	\$3.13	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.3	\$0.82	
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92	
				\$88.93	
Wood					
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40	
	% Wood		0%	\$ -	
Conduit Average Cost	% UG		100%	\$88.93	
MATERIAL HANDLING @ 20.66 % of material cost				\$ 145.30	
TOTAL MATERIAL COST				\$ 848.60	
LABOR/VEHICLE					
INSTALL POLE	Crew Type	Unit Cost	# of Units	Cost	
Haul Set Pole	LN1	\$ 188.22	0.97	\$ 180.12	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 188.22	0.00	\$ -	
Trench & Install Conduit	CC2	\$ 146.93	3.43	\$ 503.80	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.63	\$ 101.20	
Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61	
				\$ 829.81	
TOTAL LABOR/VEHICLE				\$ 829.81	
TOTAL COST				\$ 1,678.41	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 62 OF 111
FILED: 04/05/2013

Aluminum, PT, DB					
		Rate Code	584		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE	5586640	\$ 146.55	100.0%	146.55	
Weighted Average Pole Cost				\$ 146.55	
CABLE <i>based on OH/UG</i>					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	104.0	\$68.64	
				\$ 68.64	
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47	\$31.02	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26	
Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5856200	\$ 1.08	1	\$1.08	
			% UG	100%	\$ 88.41
Cable Hardware Weighted Average Cost				\$ 88.41	
GROUNDING (1 every 1/4 mile) - UG Circuits <i>Spans per 1/4 mi =</i>					
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80	
Grounding Average Cost			% UG	100%	\$2.10
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102	\$49.98	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmtid seq. fig	5853530	\$ 0.03	110	\$3.30	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6	\$3.14	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.3	\$0.82	
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92	
				\$88.94	
Wood					
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40	
			% Wood	0%	\$ -
Conduit Average Cost			% UG	100%	\$88.94
MATERIAL HANDLING @ 20.66 % of material cost				\$ 81.53	
TOTAL MATERIAL COST				\$ 476.18	
LABOR/VEHICLE					
	Crew Type	Unit Cost	# of Units	Cost	
INSTALL POLE					
Haul Set Pole	LN1	\$ 186.22	0.97	\$ 180.12	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00	\$ -	
Trench & install Conduit	CC2	\$ 146.93	3.43	\$ 503.85	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.63	\$ 101.21	
Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61	
				\$ 829.87	
TOTAL LABOR/VEHICLE				\$ 829.87	
TOTAL COST				\$ 1,306.04	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 63 OF 111
FILED: 04/05/2013

Charleston Banner FT, DE Aluminum						
		Rate Code	585			
MATERIAL	Stock #	Unit Cost	# of Units and/or	%	Cost	
POLE	5586629	\$ 829.83	100.0%		829.83	
Weighted Average Pole Cost						\$ 829.83
CABLE <i>based on OH/UG</i>						
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0		\$0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	104.0		\$68.64	
						\$ 68.64
CABLE HARDWARE w/ P&B Cable (UG only)						
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47		\$31.02	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2		\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2		\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$16.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1		\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08	
% UG					100%	\$ 88.41
Cable Hardware Weighted Average Cost						\$ 88.41
GROUNDING (1 every 1/4 mile) - UG Circuits <i>Spans per 1/4 mi =</i>						
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	0.07	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1		\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.60	1		\$1.60	
Grounding Average Cost					% UG	100%
						\$ 21.00
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102		\$49.98	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmted seq. fig	5853530	\$ 0.03	110		\$3.30	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6		\$3.13	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.3		\$0.82	
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$28.92	
						\$88.93
Wood						
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35		\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2		\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4		\$0.40	
					% Wood	0%
					% UG	100%
Conduit Average Cost						\$ 88.93
MATERIAL HANDLING @ 20.66 % of material cost						\$ 222.70
TOTAL MATERIAL COST						\$ 1,300.61
LABOR/VEHICLE						
INSTALL POLE						
Haul Set Pole	LN1	\$ 186.22	0.97		\$ 180.12	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00		\$ -	
Trench & Install Conduit	CC2	\$ 146.93	3.43		\$ 503.80	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.63		\$ 101.20	
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27	
Engineering Field	E/F	\$ 69.62	0.27		\$ 18.61	
						\$ 629.81
TOTAL LABOR/VEHICLE						\$ 629.81
TOTAL COST						\$ 2,130.42

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 64 OF 111
FILED: 04/05/2013

Charleston, PT, DB Aluminum						
Rate Code 586						
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost		
POLE	5586630	\$ 373.14	100.0%	373.14		
Weighted Average Pole Cost				\$ 373.14		
CABLE	based on OH/UG					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00		
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	104.0	\$68.64		
				\$ 68.64		
CABLE HARDWARE w/ P&B Cable (UG only)						
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47	\$31.02		
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84		
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26		
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55		
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26		
Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40		
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08		
% UG				100%	\$ 88.41	
Cable Hardware Weighted Average Cost				\$ 88.41		
GROUNDING (1 every 1/4 mile) - UG Circuits	Spans per 1/4 mi = 14					
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.84	2	\$23.28		
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.48	1	\$4.48		
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80		
Grounding Average Cost				% UG	100%	\$21.00
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102	\$49.98		
Pulwire, Tape, Pulling, Polyester, Rated 1250#, w/prntd seq. ftg	5853530	\$ 0.03	110	\$3.30		
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78		
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6	\$3.13		
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.3	\$0.82		
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92		
				\$68.93		
Wood						
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15		
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42		
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40		
Conduit Average Cost				% Wood	0%	\$ -
				% UG	100%	\$68.93
MATERIAL HANDLING @ 20.66 % of material cost				\$ 128.34		
TOTAL MATERIAL COST				\$ 749.57		
LABOR/VEHICLE						
INSTALL POLE						
Haul Set Pole	LN1	\$ 188.22	0.97	\$ 180.12		
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00	\$ -		
Trench & install Conduit	CC2	\$ 146.93	3.43	\$ 503.60		
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 180.06	0.63	\$ 101.20		
Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27		
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61		
				\$ 629.81		
TOTAL LABOR/VEHICLE				\$ 629.81		
TOTAL COST				\$ 1,379.38		

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 65 OF 111
FILED: 04/05/2013

Riviera, PT, DB Ashburn					
		Rate Code	587		
	MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost
POLE		5586650	\$ 351.46	100.0%	351.46
Weighted Average Pole Cost					\$ 351.46
CABLE	<i>based on OH/UG</i>				
	OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00
	UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	104.0	\$68.64
					\$ 68.64
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
	UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47	\$31.02
	Fuse, Cartridge Non-Renew 30A 800V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84
	Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26
	Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55
	Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26
	Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40
	Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08
% UG					100%
Cable Hardware Weighted Average Cost					\$ 88.41
GROUNDING (1 every 1/4 mile) - UG Circuits	<i>Spans per 1/4 mi =</i>				
	Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28
	Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46
	Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80
Grounding Average Cost					\$ 2.10
CONDUIT					
	Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102	\$49.98
	Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmt d seq. fig	5853530	\$ 0.03	110	\$3.30
	Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78
	Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6	\$3.14
	Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.3	\$0.82
	Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92
					\$88.94
Wood					
	Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15
	Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42
	Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40
% Wood					0%
% UG					100%
Conduit Average Cost					\$88.94
MATERIAL HANDLING @ 20.88 % of material cost					\$ 123.87
TOTAL MATERIAL COST					\$ 723.43
LABOR/VEHICLE					
		Crew Type	Unit Cost	# of Units	Cost
INSTALL POLE					
	Haul Set Pole	LN1	\$ 186.22	0.97	\$ 180.12
	Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00	\$ -
	Trench & Install Conduit	CC2	\$ 146.93	3.43	\$ 503.65
	Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.63	\$ 101.21
	Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27
	Engineering Field	E/F	\$ 89.82	0.27	\$ 18.61
					\$ 829.87
TOTAL LABOR/VEHICLE					\$ 829.87
TOTAL COST					\$ 1,553.29

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 66 OF 111
FILED: 04/05/2013

Charleston MD, FT, DB Aluminum					
		Rate Code	590		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE	5586628	\$ 583.58	100.0%	583.58	
Weighted Average Pole Cost				\$ 583.58	
CABLE	based on OH/UG				
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	104.0	\$66.64	
				\$ 66.64	
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47	\$31.02	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08	
			% UG	100%	\$ 88.41
Cable Hardware Weighted Average Cost				\$ 88.41	
GROUNDING (1 every 1/4 mile) - UG Circuits	Spans per 1/4 mi = 14 0.07				
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80	
Grounding Average Cost			% UG	100%	\$21.00
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102	\$49.98	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmtd seq. ftg	5853530	\$ 0.03	110	\$3.30	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6	\$3.13	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.82	0.3	\$0.82	
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92	
				\$88.93	
Wood					
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40	
Conduit Average Cost			% Wood	0%	\$ -
			% UG	100%	\$88.93
MATERIAL HANDLING @ 20.66 % of material cost				\$ 171.82	
TOTAL MATERIAL COST				\$ 1,003.48	
LABOR/VEHICLE					
LABOR/VEHICLE		Crew Type	Unit Cost	# of Units	Cost
INSTALL POLE					
Haul Set Pole	LN1	\$ 186.22	0.97	\$ 180.12	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00	\$ -	
Trench & Install Conduit	CC2	\$ 146.93	3.43	\$ 503.60	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.83	\$ 101.20	
Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61	
				\$ 829.81	
TOTAL LABOR/VEHICLE				\$ 829.81	
TOTAL COST				\$ 1,833.29	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 67 OF 111
FILED: 04/05/2013

Tall Waterford, 36 ft. BS Concrete						
		Rate Code	591			
	MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE		5210370	\$ 1,304.96	37.5%	489.36	
		5212220	\$ 1,389.00	62.5%	866.13	
					-	
	Weighted Average Pole Cost					\$ 1,357.49
CABLE		based on OH/UG				
	OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00	
	UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	145.0	\$95.71	
						\$ 95.71
CABLE HARDWARE w/ P&B Cable (UG only)						
Underground Cable Hardware						
	UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	88	\$44.55	
	Fuse, Cartridge Non-Renew 30A 800V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84	
	Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$18.26	
	Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55	
	Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26	
	Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4' x 1/8"	5851120	\$ 13.40	1	\$13.40	
	Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08	
	% UG			100%	\$ 101.94	
	Cable Hardware Weighted Average Cost					\$ 101.94
GROUNDING (1 every 1/4 mile) - UG Circuits		Spans per 1/4 mi =		10	0.10	
	Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28	
	Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46	
	Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80	
	Grounding Average Cost			% UG	100%	\$3.02
CONDUIT						
	Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	143	\$70.08	
	Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmid seq. ftg	5853530	\$ 0.03	151	\$4.53	
	Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
	Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	8	\$4.26	
	Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.5	\$1.31	
	Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92	
						\$111.75
Wood						
	Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15	
	Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42	
	Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40	
	% Wood			0%	\$ -	
	% UG			100%	\$111.75	
	Conduit Average Cost					\$ 111.75
MATERIAL HANDLING @ 20.66 % of material cost						\$ 345.00
TOTAL MATERIAL COST						\$ 2,014.91
LABOR/VEHICLE						
		Crew Type	Unit Cost	# of Units	Cost	
INSTALL POLE						
	Haul Set Pole	LN1	\$ 186.22	0.97	\$ 180.12	
	Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00	\$ -	
	Trench & Install Conduit	CC2	\$ 146.93	4.86	\$ 714.40	
	Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 180.06	0.88	\$ 141.12	
	Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27	
	Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61	
						\$ 1,080.53
TOTAL LABOR/VEHICLE						\$ 1,080.53
TOTAL COST						\$ 3,095.44

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 68 OF 111
FILED: 04/05/2013

Victorian, PT, DB Concrete					
		Rate Code	592		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE					
	5211130	\$ 1,044.00	50.0%		522.00
	5211132	\$ 629.16	50.0%		314.58
					-
					-
Weighted Average Pole Cost					<u>\$ 836.58</u>
CABLE	<i>based on OH/UG</i>				
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0		\$0.00
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	104.0		<u>\$88.64</u>
					<u>\$ 88.64</u>
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	47		\$31.02
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2		\$4.84
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2		\$16.26
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$16.26
Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4"x1/8"	5851120	\$ 13.40	1		\$13.40
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08
	% UG		100%		<u>\$ 88.41</u>
Cable Hardware Weighted Average Cost					<u>\$ 88.41</u>
GROUNDING (1 every 1/4 mile) - UG Circuits	<i>Spans per 1/4 mi =</i>				
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	14	\$23.28
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	0.07	\$4.46
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1		\$1.80
Grounding Average Cost	% UG		100%		<u>\$21.00</u>
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102		\$49.98
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmted seq. flg	5853530	\$ 0.03	110		\$3.30
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6		\$3.13
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.3		\$0.82
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$28.92
					<u>\$88.93</u>
Wood					
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35		\$17.15
Strap, Galv, 2in Hole	5512420	\$ 0.21	2		\$0.42
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4		\$0.40
	% Wood		0%		\$ -
	% UG		100%		<u>\$88.93</u>
Conduit Average Cost					<u>\$88.93</u>
MATERIAL HANDLING @ 20.66 % of material cost					<u>\$ 224.09</u>
TOTAL MATERIAL COST					\$ 1,308.75
LABOR/VEHICLE					
INSTALL POLE					
Haul Set Pole	LN1	\$ 188.22	0.97		\$ 180.12
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00		\$ -
Trench & Install Conduit	CC2	\$ 146.93	3.43		\$ 503.60
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.63		\$ 101.20
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27
Engineering Field	E/F	\$ 69.82	0.27		\$ 18.61
					<u>\$ 829.81</u>
TOTAL LABOR/VEHICLE					\$ 829.81
TOTAL COST					\$ 2,138.56

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 69 OF 111
FILED: 04/05/2013

Standard, 14 ft. DB Concrete					
		Rate Code	599		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE	5212330	\$ 221.85	100.0%	221.85	
				-	
				-	
Weighted Average Pole Cost				\$ 221.85	
CABLE <i>based on OH/UG</i>					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	104.0	\$68.64	
				\$ 68.64	
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.88	47	\$31.02	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 18.26	1	\$18.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08	
			% UG	100%	\$ 88.41
Cable Hardware Weighted Average Cost				\$ 88.41	
GROUNDING (1 every 1/4 mile) - UG Circuits <i>Spans per 1/4 mi =</i>					
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80	
			% UG	100%	\$21.00
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	102	\$49.98	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmtid seq. ftg	5853530	\$ 0.03	110	\$3.30	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	6	\$3.13	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.82	0.3	\$0.82	
Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92	
				\$68.93	
Wood					
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40	
			% Wood	0%	\$ -
			% UG	100%	\$68.93
Conduit Average Cost				\$68.93	
MATERIAL HANDLING @ 20.88 % of material cost				\$ 97.09	
TOTAL MATERIAL COST				\$ 567.02	
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL POLE					
Haul Set Pole	LN1	\$ 188.22	0.97	\$ 180.12	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 188.22	0.00	\$ -	
Trench & Install Conduit	CC2	\$ 148.93	3.43	\$ 503.60	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.63	\$ 101.20	
Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.81	
				\$ 829.81	
TOTAL LABOR/VEHICLE				\$ 829.81	
TOTAL COST				\$ 1,396.83	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 70 OF 111
FILED: 04/05/2013

Pole, PT, DB					
		Rate Code	624		
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE	5586600	\$ 140.34	100.0%	140.34	
Weighted Average Pole Cost				\$ 140.34	
CABLE	based on OH/UG				
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	75.0	\$49.50	
				\$ 49.50	
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	33	\$21.45	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08	
% UG			100%	\$ 78.84	
Cable Hardware Weighted Average Cost				\$ 78.84	
GROUNDING (1 every 1/4 mile) - UG Circuits	Spans per 1/4 mi = 20 0.05				
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80	
Grounding Average Cost	% UG		100%	\$1.45	
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	73	\$35.77	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmted seq. flg	5853530	\$ 0.03	81	\$2.43	
Eibow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522160	\$ 0.55	4	\$2.34	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.2	\$0.57	
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92	
				\$72.81	
Wood					
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40	
% Wood			0%	\$ -	
Conduit Average Cost	% UG		100%	\$72.81	
MATERIAL HANDLING @ 20.66 % of material cost				\$ 70.85	
TOTAL MATERIAL COST				\$ 413.79	
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL POLE					
Haul Set Pole	LN1	\$ 186.22	0.97	\$ 180.12	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00	\$ -	
Trench & Install Conduit	CC2	\$ 146.93	2.41	\$ 354.59	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.46	\$ 72.99	
Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61	
				\$ 652.58	
TOTAL LABOR/VEHICLE				\$ 652.58	
TOTAL COST				\$ 1,066.38	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 71 OF 111
FILED: 04/05/2013

Standard, 36 ft. DB Concrete						
	Rate Code	588				
MATERIAL			Stock #	Unit Cost	# of Units and/or %	Cost
POLE			5210300	\$ 79.78	100.0%	79.78
						-
						-
Weighted Average Pole Cost						<u>\$ 79.78</u>
CABLE		<i>based on OH/UG</i>				
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG			5430340	\$ 0.41	0.0	\$0.00
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG			5322230	\$ 0.66	153.3	\$101.18
						<u>\$ 101.18</u>
CABLE HARDWARE w/ P&B Cable (UG only)						
Cable Hardware concrete						
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type I			5210120	\$ 102.89	1	102.89
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type II			5210130	\$ 101.29	-	-
	% Concrete				100%	<u>\$ 102.89</u>
Overhead Cable Hardware concrete						
Holder, Wire Service Galv Full Thd Wood Screw #22x3			5297000	\$ 3.32	1.0	3.32
Cover, Snap-On Service Entrance Sleeve 5/8 Die 2"			5261930	\$ 0.38	1.0	0.38
Connector, Compression H-Block ACSR #4 str AL #4 str 6			9261730	\$ 0.33	1.0	0.33
Clamp, Service AL #4 - #2 STR			5261200	\$ 1.19	1	1.19
	% Concrete				100%	<u>\$ 5.22</u>
	% OH				0%	\$ -
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG			5322230	\$ 0.66	40	\$26.40
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3			5251300	\$ 2.42	2	\$4.84
Fuse Holder, Waterproof Fuse Connector			5581800	\$ 8.13	2	\$16.26
Compound, Silicone Grease Dielectric 5.3oz Tube			5852800	\$ 5.55	1	\$5.55
Handhole, Round 9X10X13 w/Penta HD Bolt			5531950	\$ 16.26	1	\$16.26
Water Seal, Compound, Waterproofing 3-3/4 x 3-3/4 x 1/8"			5851120	\$ 13.40	1	\$13.40
Tape, 3/4" Vinyl Plastic Tape			5858200	\$ 1.08	1	\$1.08
	% UG				100%	<u>\$ 83.79</u>
Cable Hardware Weighted Average Cost						<u>\$ 186.68</u>
GROUNDING (1 every 1/4 mile) - UG Circuits		<i>Spans per 1/4 mi = 9</i>			0.11	
Rod, Ground, Sectional, Copper Bonded Threadless Length 10ft			9293260	\$ 11.64	2	\$23.28
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"			9281300	\$ 4.46	1	\$4.46
Clamp, Ground Rod Copper 1/2"			9272950	\$ 1.80	1	\$1.80
Grounding Average Cost		% UG			100%	<u>\$3.21</u>
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01			5522010	\$ 0.49	147	\$72.18
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/prntd seq. ftg			5853530	\$ 0.03	151	\$4.54
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius			5522220	\$ 1.39	2	\$2.78
Coupling, PVC 2in Sch 40, TEMS 13.01			5522180	\$ 0.55	8	\$4.49
Cement, PVC Clear, Fast Drying, 1 pint container standard			5850580	\$ 2.62	0.5	\$1.25
Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs			5558230	\$ 14.46	2	\$28.92
						<u>\$114.16</u>
Wood						
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01			5522010	\$ 0.49	35	\$17.15
Strap, Galv, 2in Hole			5512420	\$ 0.21	2	\$0.42
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in			1901543	\$ 0.10	4	\$0.40
	% Wood				0%	\$ -
	% UG				100%	<u>\$114.16</u>
Conduit Average Cost						<u>\$114.16</u>
MATERIAL HANDLING @ 20.66 % of material cost						<u>\$ 100.20</u>
TOTAL MATERIAL COST						<u>\$ 585.20</u>
LABOR/VEHICLE						
INSTALL POLE						
Haul Set Pole			LN1	\$ 186.22	0.92	\$ 170.97
Run OH Conductor (includes terminate @ secondary)			LN1	\$ 186.22	0.00	\$ -
Trench & Install Conduit			CC2	\$ 146.93	5.15	\$ 756.97
Pull UG Conductor (includes install HH & terminate @ secondary)			CC1	\$ 180.06	0.93	\$ 149.18
Engineering Office			E/O	\$ 64.12	0.41	\$ 26.27
Engineering Field			E/F	\$ 69.82	0.27	\$ 18.61
						<u>\$ 1,122.01</u>
TOTAL LABOR/VEHICLE						<u>\$ 1,122.01</u>
TOTAL COST						<u>\$ 1,707.21</u>

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 72 OF 111
FILED: 04/05/2013

Standard, 40/48 ft. Concrete						
		Rate Code	594			
MATERIAL	Stock #	Unit Cost	# of Units and/or %		Cost	
POLE	5210770	\$ 635.21	100.0%		635.21	
Weighted Average Pole Cost					\$ 635.21	
CABLE	<i>based on OH/UG</i>					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	151.3		\$62.03	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	0.0		\$0.00	
					\$ 62.03	
CABLE HARDWARE w/ P&B Cable (UG only)						
Cable Hardware concrete						
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type I	5210120	\$ 102.89	1		102.89	
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type II	5210130	\$ 101.29			101.29	
			% Concrete	100%	\$ 102.89	
Overhead Cable Hardware concrete						
Holder, Wire Service Galv Full Thd Wood Screw #22x3	5297000	\$ 3.32	1.0		3.32	
Cover, Snap-On Service Entrance Sleeve 5/8 Die 2"	5261930	\$ 0.38	1.0		0.38	
Connector, Compression H-Block ACSR #4 str AL #4 str 6	9261730	\$ 0.33	1.0		0.33	
Clamp, Service AL #4 - #2 STR	5261200	\$ 1.19	1		1.19	
			% Concrete	100%	\$ 5.22	
			% OH	100%	\$ 5.22	
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40		\$26.40	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2" X 13/3	5251300	\$ 2.42	2		\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2		\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$16.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1		\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08	
			% UG	0%	\$ -	
Cable Hardware Weighted Average Cost					\$ 108.11	
GROUNDING (1 every 1/4 mile) - UG Circuits	<i>Spans per 1/4 mi = 9</i>					
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	0.11	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1		\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1		\$1.80	
Grounding Average Cost					\$0.00	
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	4		\$1.96	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/printd seq. ftg	5853530	\$ 0.03	8		\$0.24	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	1		\$0.55	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.0		\$0.00	
Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$28.92	
					\$34.45	
Wood						
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35		\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2		\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4		\$0.40	
			% Wood	0%	\$ -	
			% UG	0%	\$0.00	
Conduit Average Cost					\$0.00	
MATERIAL HANDLING @ 20.66 % of material cost						
					\$ 166.39	
TOTAL MATERIAL COST					\$ 971.74	
LABOR/VEHICLE						
	Crew Type	Unit Cost	# of Units		Cost	
INSTALL POLE						
Haul Set Pole	LN1	\$ 186.22	0.92		\$ 170.97	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00		\$ -	
Trench & Install Conduit	CC2	\$ 146.93	0.00		\$ -	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.00		\$ -	
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27		\$ 18.61	
					\$ 215.85	
TOTAL LABOR/VEHICLE					\$ 215.85	
TOTAL COST					\$ 1,187.59	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 73 OF 111
FILED: 04/05/2013

Standard, 2520 ft, DB Concrete						
		Rate Code	595			
MATERIAL	Stock #	Unit Cost	# of Units and/or %		Cost	
POLE	5210140	\$ 274.27	22.0%		60.21	
	5210250	\$ 320.75	34.1%		109.52	
	5210310	\$ 215.00	22.0%		47.20	
	5210330	\$ 268.57	22.0%		58.95	
Weighted Average Pole Cost						\$ 275.88
CABLE						
		<i>based on OH/UG</i>				
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0		\$0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	145.0		\$95.71	
						\$ 95.71
CABLE HARDWARE w/ P&B Cable (UG only)						
Cable Hardware concrete						
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type I	5210120	\$ 102.89	1		102.89	
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type II	5210130	\$ 101.29			-	
	% Concrete		100%			\$ 102.89
Overhead Cable Hardware concrete						
Holder, Wire Service Galv Full Thd Wood Screw #22x3	5297000	\$ 3.32	1.0		3.32	
Cover, Snap-On Service Entrance Sleeve 5/8 Die 2'	5261930	\$ 0.38	1.0		0.38	
Connector, Compression H-Block ACSR #4 str AL #4 str 6	9261730	\$ 0.33	1.0		0.33	
Clamp, Service AL #4 - #2 STR	5261200	\$ 1.19	1		1.19	
	% Concrete		100%			\$ 5.22
	% OH		0%			\$ -
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40		\$26.40	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2		\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2		\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$16.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1		\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08	
	% UG		100%			\$ 83.79
Cable Hardware Weighted Average Cost						\$ 186.68
GROUNDING (1 every 1/4 mile) - UG Circuits						
		<i>Spans per 1/4 mi = 10</i>				
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	0.10	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1		\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1		\$1.80	
Grounding Average Cost			100%			\$3.02
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	139		\$68.12	
Pulwire, Tape, Pulling, Polyester, Rated 1250#, w/prntd seq. flg	5853530	\$ 0.03	143		\$4.29	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	8		\$4.26	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.5		\$1.18	
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$28.92	
						\$109.55
Wood						
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35		\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2		\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4		\$0.40	
	% Wood		0%			\$ -
	% UG		100%			\$109.55
Conduit Average Cost						\$109.55
MATERIAL HANDLING @ 20.66 % of material cost						
						\$ 138.60
TOTAL MATERIAL COST						\$ 809.43
LABOR/VEHICLE						
		Crew Type	Unit Cost	# of Units	Cost	
INSTALL POLE						
Haul Set Pole	LN1	\$ 186.22	0.92		\$ 170.97	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00		\$ -	
Trench & Install Conduit	CC2	\$ 146.93	4.86		\$ 714.39	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.88		\$ 141.12	
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27		\$ 18.61	
						\$ 1,071.36
TOTAL LABOR/VEHICLE						\$ 1,071.36
TOTAL COST						\$ 1,880.80

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 74 OF 111
FILED: 04/05/2013

Standard, 48 ft. DB Concrete						
Rate Code 596						
<u>MATERIAL</u>	<u>Stock #</u>	<u>Unit Cost</u>	<u># of Units and/or</u>		<u>Cost</u>	
POLE						
	5210770	\$ 635.21	63.3%		402.30	
	5210769	\$ 612.79	32.8%		200.86	
	5210775	\$ 614.97	3.9%		23.92	
						-
Weighted Average Pole Cost						\$ 627.07
CABLE						
	<i>based on OH/UG</i>					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0		\$0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	153.3		\$101.18	
						\$ 101.18
CABLE HARDWARE w/ P&B Cable (UG only)						
Cable Hardware concrete						
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type I	5210120	\$ 102.89	1		102.89	
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type II	5210130	\$ 101.29				
	% Concrete		100%			\$ 102.89
Overhead Cable Hardware concrete						
Holder, Wire Service Galv Full Thd Wood Screw #22x3	5297000	\$ 3.32	1.0		3.32	
Cover, Snap-On Service Entrance Sleeve 5/8 Die 2"	5261930	\$ 0.38	1.0		0.38	
Connector, Compression H-Block ACSR #4 str AL #4 str 6	9261730	\$ 0.33	1.0		0.33	
Clamp, Service AL #4 - #2 STR	5261200	\$ 1.19	1		1.19	
	% Concrete		100%			\$ 5.22
	% OH		0%			-
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40		\$26.40	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2		\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2		\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$16.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1		\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08	
	% UG		100%			\$ 83.79
Cable Hardware Weighted Average Cost						\$ 186.68
GROUNDING (1 every 1/4 mile) - UG Circuits						
	<i>Spans per 1/4 mi = 9</i>					
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	0.11	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1		\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1		\$1.80	
Grounding Average Cost	% UG		100%			\$3.21
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	147		\$72.18	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/prntd seq. ftg	5853530	\$ 0.03	151		\$4.54	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	8		\$4.49	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.5		\$1.25	
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$28.92	
						\$114.16
Wood						
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35		\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2		\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4		\$0.40	
	% Wood		0%			-
	% UG		100%			\$114.16
Conduit Average Cost						\$ 114.16
MATERIAL HANDLING @ 20.66 % of material cost						\$ 213.27
TOTAL MATERIAL COST						\$ 1,245.57
LABOR/VEHICLE						
	<u>Crew Type</u>	<u>Unit Cost</u>	<u># of Units</u>		<u>Cost</u>	
INSTALL POLE						
Haul Set Pole	LN1	\$ 186.22	0.92		\$ 170.97	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00		\$ -	
Trench & Install Conduit	CC2	\$ 146.93	5.15		\$ 756.97	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.93		\$ 149.18	
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27		\$ 18.61	
						\$ 1,122.01
TOTAL LABOR/VEHICLE						\$ 1,122.01
TOTAL COST						\$ 2,367.58

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 75 OF 111
FILED: 04/05/2013

Rate Code 607						
MATERIAL	Stock #	Unit Cost	# of Units and/or %	%	Cost	
POLE						
	5210390	\$ 508.39	0.3%		1.68	
	5210340	\$ 334.17	31.0%		103.48	
	5210380	\$ 345.01	68.7%		237.03	
Weighted Average Pole Cost					\$ 342.19	
CABLE						
	<i>based on OH/UG</i>					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0		\$ 0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.86	127.0		\$ 83.82	
					\$ 83.82	
CABLE HARDWARE w/ P&B Cable (UG only)						
Cable Hardware concrete						
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type I	5210120	\$ 102.89	1		102.89	
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type II	5210130	\$ 101.29	1		101.29	
	% Concrete		100%		\$ 102.89	
Overhead Cable Hardware concrete						
Holder, Wire Service Galv Full Thd Wood Screw #22x3	5297000	\$ 3.32	1.0		3.32	
Cover, Snap-On Service Entrance Sleeves 5/8 Die 2"	5261930	\$ 0.38	1.0		0.38	
Connector, Compression H-Block ACSR #4 str AL #4 str 6	9261730	\$ 0.33	1.0		0.33	
Clamp, Service AL #4 - #2 STR	5261200	\$ 1.19	1		1.19	
	% Concrete		100%		\$ 5.22	
	% OH		0%		\$ -	
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40		\$ 26.40	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2		\$ 4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2		\$ 16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$ 5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$ 16.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1		\$ 13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$ 1.08	
	% UG		100%		\$ 83.79	
Cable Hardware Weighted Average Cost					\$ 185.68	
GROUNDING (1 every 1/4 mile) - UG Circuits						
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	11	\$ 23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9261300	\$ 4.46	1		\$ 4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1		\$ 1.80	
Grounding Average Cost				% UG	100%	\$ 26.62
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	121		\$ 59.29	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/prntd seq. ftg	5853530	\$ 0.03	125		\$ 3.75	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$ 2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	7		\$ 3.77	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	4		\$ 11.02	
Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$ 28.92	
					\$ 99.53	
Wood						
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35		\$ 17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2		\$ 0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4		\$ 0.40	
	% Wood		0%		\$ -	
	% UG		100%		\$ 99.53	
Conduit Average Cost					\$ 99.53	
MATERIAL HANDLING @ 20.66 % of material cost					\$ 147.69	
TOTAL MATERIAL COST					\$ 862.53	
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units		Cost	
INSTALL POLE						
Haul Set Pole	LN1	\$ 186.22	1.13		\$ 210.02	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00		\$ -	
Trench & Install Conduit	CC2	\$ 146.93	4.23		\$ 621.85	
Pull UG Conductor (includes intell HH & terminate @ secondary)	CC1	\$ 160.06	0.77		\$ 123.59	
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27		\$ 18.61	
					\$ 1,000.34	
TOTAL LABOR/VEHICLE					\$ 1,000.34	
TOTAL COST					\$ 1,862.88	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 76 OF 111
FILED: 04/05/2013

Std. 100-1000v, 100V, 35 R, DB Cont						
Rate Code 612						
MATERIAL	Stock #	Unit Cost	# of Units and/or		%	Cost
POLE						
	5210390	\$ 508.39		0.3%		1.68
	5210340	\$ 334.17		31.0%		103.48
	5210380	\$ 345.01		68.7%		237.03
Weighted Average Pole Cost						\$ 342.19
CABLE	<i>based on OH/UG</i>					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41		0.0		\$0.00
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66		146.8		\$96.92
						\$ 96.92
CABLE HARDWARE w/ P&B Cable (UG only)						
Cable Hardware concrete						
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type I	5210120	\$ 102.89		1		102.89
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type II	5210130	\$ 101.29				-
			% Concrete	100%		\$ 102.89
Overhead Cable Hardware concrete						
Holder, Wire Service Galv Full Thd Wood Screw #22x3	5297000	\$ 3.32		1.0		3.32
Cover, Snap-On Service Entrance Sleeve 5/8 Die 2"	5261930	\$ 0.38		1.0		0.38
Connector, Compression H-Block ACSR #4 str AL #4 str 6	9261730	\$ 0.33		1.0		0.33
Clamp, Service AL #4 - #2 STR	5261200	\$ 1.19		1		1.19
			% Concrete	100%		\$ 5.22
			% OH	0%		\$ -
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66		40		\$26.40
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42		2		\$4.84
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13		2		\$16.26
Compound, Silicone Grease Dielectric 5.5oz Tube	5852800	\$ 5.55		1		\$5.55
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26		1		\$16.26
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40		1		\$13.40
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08		1		\$1.08
			% UG	100%		\$ 83.79
Cable Hardware Weighted Average Cost						\$ 186.68
GROUNDING (1 every 1/4 mile) - UG Circuits	<i>Spans per 1/4 mi = 10 0.10</i>					
Rod, Ground, Sectional, Copper Bonded Threadless Length 10ft	9293260	\$ 11.64		2		\$23.28
Coupler, Ground Rod Sectional, Copper Threadless 1/2"	9281300	\$ 4.46		1		\$4.46
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80		1		\$1.80
Grounding Average Cost			% UG	100%		\$3.06
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49		141		\$69.01
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/printd seq. ftg	5853530	\$ 0.03		145		\$4.35
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39		2		\$2.78
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55		8		\$4.31
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62		0.5		\$1.20
Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46		2		\$28.92
						\$110.57
Wood						
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49		35		\$17.15
Strap, Galv, 2in Hole	5512420	\$ 0.21		2		\$0.42
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10		4		0.40
			% Wood	0%		\$ -
			% UG	100%		\$110.57
Conduit Average Cost						\$110.57
MATERIAL HANDLING @ 20.66 % of material cost						\$ 152.76
TOTAL MATERIAL COST						\$ 892.19
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost		
INSTALL POLE						
Haul Set Pole	LN1	\$ 186.22	1.13	\$		210.02
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00	\$		-
Trench & Install Conduit	CC2	\$ 146.93	4.93	\$		723.81
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.89	\$		142.90
Engineering Office	E/O	\$ 64.12	0.41	\$		26.27
Engineering Field	E/F	\$ 69.82	0.27	\$		18.61
						\$ 1,121.62
TOTAL LABOR/VEHICLE						\$ 1,121.62
TOTAL COST						\$ 2,013.80

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 77 OF 111
FILED: 04/05/2013

Std. 150Tspan, 300/600V, 36 ft. DB Conc						
Rate Code 614						
MATERIAL	Stock #	Unit Cost	# of Units and/or	%	Cost	
POLE						
	5210390	\$ 508.39	0.3%		1.68	
	5210340	\$ 334.17	31.0%		103.48	
	5210380	\$ 345.01	68.7%		237.03	
Weighted Average Pole Cost						\$ 342.19
CABLE						
<i>based on OH/UG</i>						
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0		\$0.00	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	187.4		\$123.69	
					\$ 123.69	
CABLE HARDWARE w/ P&B Cable (UG only)						
Cable Hardware concrete						
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type I	5210120	\$ 102.89	1		102.89	
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type II	5210130	\$ 101.29	1		101.29	
				% Concrete	100%	\$ 102.89
Overhead Cable Hardware concrete						
Holder, Wire Service Galv Full Thd Wood Screw #22x3	5297000	\$ 3.32	1.0		3.32	
Cover, Snap-On Service Entrance Sleeve 5/8 Die 2"	5261930	\$ 0.38	1.0		0.38	
Connector, Compression H-Block ACSR #4 str AL #4 str 6	9261730	\$ 0.33	1.0		0.33	
Clamp, Service AL #4 - #2 STR	5261200	\$ 1.19	1		1.19	
				% Concrete	100%	\$ 5.22
				% OH	0%	\$ -
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40		\$26.40	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2" X 13/32"	5251900	\$ 2.42	2		\$4.84	
Fuse Holder, Waterproof Fuse Connector	5681800	\$ 8.13	2		\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5631950	\$ 16.26	1		\$16.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4" x 1/8"	5851120	\$ 13.40	1		\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08	
				% UG	100%	\$ 83.79
Cable Hardware Weighted Average Cost					\$ 186.68	
GROUNDING (1 every 1/4 mile) - UG Circuits						
<i>Spans per 1/4 mi = 7</i>						
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2		\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281900	\$ 4.46	1		\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1		\$1.80	
Grounding Average Cost					\$3.97	
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	181		\$88.89	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/prntd seq. ftg	5853530	\$ 0.03	185		\$5.56	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	10		\$5.43	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.6		\$1.55	
Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$28.92	
					\$133.13	
Wood						
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35		\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2		\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4		\$0.40	
				% Wood	0%	\$ -
				% UG	100%	\$133.13
Conduit Average Cost					\$133.13	
MATERIAL HANDLING @ 20.66 % of material cost					\$ 163.14	
TOTAL MATERIAL COST					\$ 952.80	
LABOR/VEHICLE						
<i>INSTALL POLE</i>						
Haul Set Pole	LN1	\$ 186.22	1.13		\$ 210.02	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00		\$ -	
Trench & Install Conduit	CC2	\$ 146.93	6.34		\$ 932.25	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	1.14		\$ 182.37	
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27		\$ 18.61	
					\$ 1,369.53	
TOTAL LABOR/VEHICLE					\$ 1,369.53	
TOTAL COST					\$ 2,322.33	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 78 OF 111
FILED: 04/05/2013

Standard, 36 ft. Concrete						
		Rate Code	637			
MATERIAL	Stock #	Unit Cost	# of Units and/or	%	Cost	
POLE	5210380	\$ 345.01	100.0%		345.01	
Weighted Average Pole Cost						\$ 345.01
CABLE						
<i>based on OH/UG</i>						
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	146.2		\$59.94	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	0.0		\$0.00	
					\$	59.94
CABLE HARDWARE w/ P&B Cable (UG only)						
Cable Hardware concrete						
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type I	5210120	\$ 102.89	1		102.89	
Pole Cap, w/ 2-3/8" O.D. Tenon Hot Dipped GALV Type II	5210130	\$ 101.29				
% Concrete					100%	\$ 102.89
Overhead Cable Hardware concrete						
Holder, Wire Service Galv Full Thd Wood Screw #22x3	5297000	\$ 3.32	1.0		3.32	
Cover, Snap-On Service Entrance Sleeve 5/8 Die 2"	5261930	\$ 0.38	1.0		0.38	
Connector, Compression H-Block ACSR #4 str AL #4 str 6	9261730	\$ 0.33	1.0		0.33	
Clamp, Service AL #4 - #2 STR	5261200	\$ 1.19	1		1.19	
% Concrete					100%	\$ 5.22
% OH					100%	\$ 5.22
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40		\$26.40	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2" X 13/3	5251300	\$ 2.42	2		\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2		\$16.26	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$16.26	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1		\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08	
% UG					0%	\$ -
Cable Hardware Weighted Average Cost						\$ 108.11
GROUNDING (1 every 1/4 mile) - UG Circuits						
<i>Spans per 1/4 mi = 10</i>						
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2		\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1		\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1		\$1.80	
Grounding Average Cost					% UG	0%
						\$0.00
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	4		\$1.96	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmtld seq. ftg	5853530	\$ 0.03	8		\$0.24	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	1		\$0.55	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0		\$0.00	
Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$28.92	
					\$	34.45
Wood						
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35		\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2		\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4		0.40	
% Wood					0%	\$ -
% UG					0%	\$0.00
Conduit Average Cost						\$ -
MATERIAL HANDLING @ 20.66 % of material cost						\$ 106.00
TOTAL MATERIAL COST						\$ 819.05
LABOR/VEHICLE						
<i>INSTALL POLE</i>						
Haul Set Pole	LN1	\$ 186.22	0.74		\$ 138.64	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00		\$ -	
Trench & Install Conduit	CC2	\$ 146.93	0.00		\$ -	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.00		\$ -	
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27		\$ 18.91	
					\$	183.52
TOTAL LABOR/VEHICLE						\$ 183.52
TOTAL COST						\$ 802.57

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 79 OF 111
FILED: 04/05/2013

Street Light, AS						
		Rate Code	589			
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost		
POLE						
Weighted Average Pole Cost	55586831	\$ 904.20	100.0%	904.20		
				\$ 904.20		
FOUNDATION, ANCHOR						
Foundation, Anchor Screw 15in	5580620	\$ 384.37	80.9%	310.77		
Foundation, Anchor Screw 15in, Galv	5270240	\$ 154.76	9.8%	14.62		
Covers, Street Light Pole Base	5581350	\$ 60.00	9.8%	5.74		
<i>% Foundation</i>				100%	\$ 331.33	
BASE						
Base, 27ft	5580630	\$ 347.06	50.0%	173.53		
Base, 37ft	5580640	\$ 309.07	50.0%	154.54		
<i>% Base</i>				0%	\$ -	
Foundation and Base Average Cost				\$ 331.33		
CABLE						
<i>based on OH/UG</i>						
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00		
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.86	145.1	\$95.79		
				\$ 95.79		
CABLE HARDWARE w/ P&B Cable (UG only)						
Underground Cable Hardware						
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.86	40	\$26.40		
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84		
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26		
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55		
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 18.28	1	\$18.28		
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4" x 1/8"	5851120	\$ 13.40	1	\$13.40		
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08		
Cable Hardware Weighted Average Cost				100%	\$ 83.79	
GROUNDING (1 every 1/4 mile) - UG Circuits						
<i>Spans per 1/4 mi = 10</i>						
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293280	\$ 11.64	2	\$23.28		
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46		
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80		
Grounding Average Cost				100%	\$3.02	
CONDUIT						
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	139	\$68.18		
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmtd seq. ftg	5853530	\$ 0.03	143	\$4.29		
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78		
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	8	\$4.27		
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.82	0.5	\$1.18		
Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92		
Conduit Average Cost				100%	\$109.62	
MATERIAL HANDLING @ 20.86 % of material cost				\$ 315.83		
TOTAL MATERIAL COST				\$ 1,843.39		
LABOR/VEHICLE						
INSTALL POLE						
Haul Set Pole	LN1	\$ 186.22	1.08	\$ 200.71		
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00	\$ -		
Trench & Install Conduit	CC2	\$ 146.93	4.87	\$ 715.04		
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 180.06	0.88	\$ 141.24		
Engineering Office	E/O	\$ 84.12	0.41	\$ 26.27		
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61		
				\$ 1,101.87		
TOTAL LABOR/VEHICLE				\$ 1,101.87		
TOTAL COST				\$ 2,945.25		

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 80 OF 111
FILED: 04/05/2013

Aluminum, 28 ft. DS					
		Rate Code			
		615			
MATERIAL	Stock #	Unit Cost	# of Units and/or	%	Cost
POLE					
Weighted Average Pole Cost	5586780	\$ 658.02	100.0%		658.02
					\$ 658.02
FOUNDATION, ANCHOR					
Foundation, Anchor Screw 15in	5580620	\$ 384.37	80.9%		310.77
Foundation, Anchor Screw 15in, Galv	5270240	\$ 154.76	9.6%		14.82
Covers, Street Light Pole Base	5581350	\$ 60.00	9.6%		5.74
% Foundation					0%
					\$ -
BASE					
Base, 27ft	5580630	\$ 347.06	50.0%		173.53
Base, 37ft	5580640	\$ 309.07	50.0%		154.54
% Base					0%
					\$ -
Foundation and Base Average Cost					\$ -
CABLE					
<i>based on OH/UG</i>					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0		\$0.00
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	127.0		83.82
					\$ 83.82
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40		\$26.40
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2		\$4.84
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 6.13	2		\$16.26
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$16.26
Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4"x1/8"	5851120	\$ 13.40	1		\$13.40
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08
Cable Hardware Weighted Average Cost					\$ 83.79
GROUNDING (1 every 1/4 mile) - UG Circuits					
<i>Spans per 1/4 mi = 11</i>					
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	0.09	\$23.28
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1		\$4.46
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1		\$1.80
Grounding Average Cost					\$ 26.62
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	121		\$59.29
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmtd seq. fig	5853530	\$ 0.03	125		\$3.75
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	7		\$3.77
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.4		\$1.02
Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$28.92
Conduit Average Cost					\$ 99.53
MATERIAL HANDLING @ 20.66 % of material cost					\$ 191.68
TOTAL MATERIAL COST					\$ 1,119.46
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL POLE					
Haul Set Pole	LN1	\$ 188.22	1.08		\$ 200.71
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 188.22	0.00		\$ -
Trench & Install Conduit	CC2	\$ 148.93	4.23		\$ 621.85
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.77		\$ 123.59
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27
Engineering Field	E/F	\$ 69.82	0.27		\$ 18.61
					\$ 991.03
TOTAL LABOR/VEHICLE					\$ 991.03
TOTAL COST					\$ 2,110.49

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 81 OF 111
FILED: 04/05/2013

Aluminum, 27 ft, DB					
		Rate Code	616		
POLE	MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost
	Weighted Average Pole Cost	5586720	\$ 1,152.15	100.0%	1,152.15
					\$ 1,152.15
	FOUNDATION, ANCHOR				
	Foundation, Anchor Screw 15in	5580620	\$ 384.37	80.9%	310.77
	Foundation, Anchor Screw 15in, Galv	5270240	\$ 154.76	9.6%	14.82
	Covers, Street Light Pole Base	5581350	\$ 80.00	9.6%	5.74
	% Foundation			100%	\$ 331.33
	BASE				
	Base, 27ft	5580630	\$ 347.08	50.0%	173.53
	Base, 37ft	5580640	\$ 309.07	50.0%	154.54
	% Base			100%	\$ 328.07
	Foundation and Base Average Cost				\$ 659.39
	CABLE				
		<i>based on OH/UG</i>			
	OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00
	UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.86	177.6	\$117.20
					\$ 117.20
	CABLE HARDWARE w/ P&B Cable (UG only)				
	Underground Cable Hardware				
	UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.86	40	\$26.40
	Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84
	Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26
	Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55
	Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.28	1	\$16.28
	Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40
	Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08
	Cable Hardware Weighted Average Cost			100%	\$ 83.79
	GROUNDING (1 every 1/4 mile) - UG Circuits				
		<i>Spans per 1/4 mi = 8</i>			
	Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9283280	\$ 11.64	2	\$23.28
	Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46
	Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80
	Grounding Average Cost			100%	\$3.75
	CONDUIT				
	Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	172	\$84.07
	Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmted seq. fig	5853530	\$ 0.03	178	\$5.27
	Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78
	Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	9	\$5.16
	Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.6	\$1.46
	Gel Pack, Gel Cap Splice 800V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92
	Conduit Average Cost			100%	\$127.66
	MATERIAL HANDLING @ 20.66 % of material cost				\$ 442.94
	TOTAL MATERIAL COST				\$ 2,586.88
	LABOR/VEHICLE				
	INSTALL POLE				
	Haul Set Pole	LN1	\$ 186.22	1.08	\$ 200.71
	Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.00	\$ -
	Trench & Install Conduit	CC2	\$ 148.93	6.00	\$ 881.72
	Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.08	1.08	\$ 172.81
	Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27
	Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61
					\$ 1,300.12
	TOTAL LABOR/VEHICLE				\$ 1,300.12
	TOTAL COST				\$ 3,887.00

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 82 OF 111
FILED: 04/05/2013

Aluminum, 37 ft, DS					
Rate Code 622					
MATERIAL	Stock #	Unit Cost	# of Units and/or	%	Cost
POLE					
Weighted Average Pole Cost	5586770	\$ 1,221.15	100.0%		1,221.15
					\$ 1,221.15
FOUNDATION, ANCHOR					
Foundation, Anchor Screw 15in	5580620	\$ 384.37	80.9%		310.77
Foundation, Anchor Screw 15in, Galv	5270240	\$ 154.76	9.8%		14.82
Covers, Street Light Pole Base	5581350	\$ 60.00	9.8%		5.74
	% Foundation		100%		\$ 331.33
BASE					
Base, 27ft	5580630	\$ 347.06	50.0%		173.53
Base, 37ft	5580640	\$ 309.07	50.0%		154.54
	% Base		100%		\$ 328.07
Foundation and Base Average Cost					
					\$ 659.39
CABLE					
	<i>based on OH/UG</i>				
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0		\$0.00
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	177.6		\$117.20
					\$ 117.20
CABLE HARDWARE w/ P&B Cable (UG only)					
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40		\$26.40
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2		\$4.84
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2		\$16.26
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1		\$5.55
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1		\$16.26
Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4"x1/8"	5851120	\$ 13.40	1		\$13.40
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1		\$1.08
Cable Hardware Weighted Average Cost	% UG		100%		\$ 83.79
GROUNDING (1 every 1/4 mile) - UG Circuits					
	<i>Spans per 1/4 mi = 8</i>				
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	0.13	\$23.28
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1		\$4.46
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1		\$1.80
Grounding Average Cost	% UG		100%		\$3.75
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	172		\$84.07
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmted seq. fig	5853530	\$ 0.03	176		\$5.27
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2		\$2.78
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	9		\$5.16
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.6		\$1.46
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2		\$28.92
Conduit Average Cost	% UG		100%		\$127.68
MATERIAL HANDLING @ 20.86 % of material cost					
					\$ 457.19
TOTAL MATERIAL COST					\$ 2,670.14
LABOR/VEHICLE					
INSTALL POLE					
Haul Set Pole	LN1	\$ 188.22	1.08		\$ 200.71
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 188.22	0.00		\$ -
Trench & Install Conduit	CC2	\$ 148.93	6.00		\$ 881.72
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	1.08		\$ 172.81
Engineering Office	E/O	\$ 64.12	0.41		\$ 26.27
Engineering Field	E/F	\$ 69.82	0.27		\$ 18.61
					\$ 1,300.12
TOTAL LABOR/VEHICLE					\$ 1,300.12
TOTAL COST					\$ 3,970.26

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 83 OF 111
FILED: 04/05/2013

Wood (Inaccessible), 30 ft					
Rate Code 425					
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE	5210300	\$ 79.78	100.0%	79.78	
Weighted Average Pole Cost				\$ 79.78	
CABLE <i>based on OH/UG</i>					
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	130.3	\$53.42	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	0.0	\$0.00	
				\$ 53.42	
CABLE HARDWARE w/ P&B Cable (UG only)					
Hook, Drive Pilot Point 4-3/4" Overall Length	5261930	\$ 0.38	1	0.38	
Clamp, Service AL #4 - #2 STR	9261730	\$ 0.33	1	0.33	
				\$ 0.71	
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40	\$26.40	
Connector, Vice CU #4 STR	9280450	\$ 1.99	1	\$1.99	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26	
Conduit, PVC 2 IN 20 FT Bell End	5522000	\$ 0.36	40	\$14.40	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	1	\$0.55	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	2	\$5.24	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55	
Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08	
			% UG	0%	\$ -
Cable Hardware Weighted Average Cost				\$ 0.71	
GROUNDING (1 every 1/4 mile) - UG Circuits <i>Spans per 1/4 mi = 11</i>					
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80	
Grounding Average Cost				\$0.00	
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	4	\$1.96	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmted seq. #g	5853530	\$ 0.03	8	\$0.24	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	1	\$0.55	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.0	\$0.00	
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92	
				\$34.45	
Wood					
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40	
			% Wood	100%	\$ 17.97
			% UG	0%	\$0.00
Conduit Average Cost				\$0.00	
MATERIAL HANDLING @ 20.65 % of material cost					
				\$ 27.67	
TOTAL MATERIAL COST					
				\$ 161.58	
LABOR/VEHICLE					
	Crew Type	Unit Cost	# of Units	Cost	
INSTALL POLE					
Haul Set Pole	LN1	\$ 186.22	0.74	\$ 138.64	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.79	\$ 147.53	
Trench & Install Conduit	CC2	\$ 148.93	0.00	\$ -	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.00	\$ -	
Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61	
				\$ 331.05	
TOTAL LABOR/VEHICLE				\$ 331.05	
TOTAL COST					
				\$ 492.63	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 84 OF 111
FILED: 04/05/2013

Wood, 40/45 ft

Rate Code 597

MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost
POLE	5210230	\$ 321.56	4.7%	15.00
	5210400	\$ 197.47	25.9%	51.16
	5210460	\$ 308.12	5.2%	15.96
	5210471	\$ 267.12	64.2%	171.62
Weighted Average Pole Cost				\$ 253.74

CABLE	Stock #	Unit Cost	# of Units and/or %	Cost
<i>based on OH/UG</i>				
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	151.3	\$62.03
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	0.0	\$0.00
				\$ 62.03

CABLE HARDWARE w/ P&B Cable (UG only)	Stock #	Unit Cost	# of Units and/or %	Cost
Hook, Drive Pilot Point 4-3/4" Overall Length	5261930	\$ 0.38	1	0.38
Clamp, Service AL #4 - #2 STR	9261730	\$ 0.33	1	0.33
				\$ 0.71

Underground Cable Hardware	Stock #	Unit Cost	# of Units and/or %	Cost
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40	\$26.40
Connector, Vice CU #4 STR	9280450	\$ 1.99	1	\$1.99
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26
Handhole, Round 8X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26
Conduit, PVC 2 in 20 FT Bell End	5522000	\$ 0.36	40	\$14.40
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	1	\$0.55
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	2	\$5.24
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08
	% UG		0%	\$ -

Cable Hardware Weighted Average Cost \$ -

GROUNDING (1 every 1/4 mile) - UG Circuits	Stock #	Unit Cost	# of Units and/or %	Cost
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80
Grounding Average Cost	% UG		0%	\$0.00

CONDUIT	Stock #	Unit Cost	# of Units and/or %	Cost
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	4	\$1.96
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/prmtd seq. ftg	5853530	\$ 0.03	8	\$0.24
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	1	\$0.55
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.0	\$0.00
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92
				\$34.45

Wood	Stock #	Unit Cost	# of Units and/or %	Cost
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	0.40
	% Wood		100%	\$ 17.97
Conduit Average Cost	% UG		0%	\$0.00

MATERIAL HANDLING @ 20.66 % of material cost \$ 65.24

TOTAL MATERIAL COST **\$ 381.01**

LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost
INSTALL POLE				
Haul Set Pole	LN1	\$ 186.22	0.74	\$ 138.64
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.92	\$ 171.30
Trench & Install Conduit	CC2	\$ 146.93	0.00	\$ -
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.00	\$ -
Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61
				\$ 354.82

TOTAL LABOR/VEHICLE **\$ 354.82**

TOTAL COST **\$ 735.83**

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 85 OF 111
FILED: 04/05/2013

Wood, 30 ft					
Rate Code 626					
MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
POLE	5210240	\$ 146.80	0.8%	1.14	
	5210300	\$ 79.78	31.0%	24.74	
	5210304	\$ 117.66	88.2%	80.26	
Weighted Average Pole Cost				\$ 106.14	
CABLE	<i>based on OH/UG</i>				
OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	125.0	\$51.25	
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	0.0	\$0.00	
				\$ 51.25	
CABLE HARDWARE w/ P&B Cable (UG only)					
Hook, Drive Pilot Point 4-3/4" Overall Length	5261930	\$ 0.38	1	0.38	
Clamp, Service AL #4 - #2 STR	9261730	\$ 0.33	1	0.33	
				\$ 0.71	
Underground Cable Hardware					
UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40	\$26.40	
Connector, Vice CU #4 STR	9280450	\$ 1.99	1	\$1.99	
Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84	
Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26	
Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26	
Conduit, PVC 2 in 20 FT Bell End	5522000	\$ 0.38	40	\$14.40	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	1	\$0.55	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	2	\$5.24	
Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55	
Water Seal, Compound, Waterproofing 3-3/4" x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40	
Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08	
	% UG		0%	\$ -	
Cable Hardware Weighted Average Cost				\$ -	
GROUNDING (1 every 1/4 mile) - UG Circuits	<i>Spans per 1/4 mi = 11</i>				
Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28	
Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46	
Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80	
Grounding Average Cost	% UG		0%	\$0.00	
CONDUIT					
Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	4	\$1.96	
Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/prmtd seq. ftg	5853530	\$ 0.03	8	\$0.24	
Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	1	\$0.55	
Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.0	\$0.00	
Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92	
				\$34.45	
Wood					
Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15	
Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42	
Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40	
	% Wood		100%	\$ 17.97	
Conduit Average Cost	% UG		0%	\$0.00	
MATERIAL HANDLING @ 20.66 % of material cost				\$ 32.52	
TOTAL MATERIAL COST				\$ 189.91	
LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
INSTALL POLE					
Haul Set Pole	LN1	\$ 186.22	0.74	\$ 138.64	
Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.76	\$ 141.53	
Trench & Install Conduit	CC2	\$ 146.93	0.00	\$ -	
Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 180.06	0.00	\$ -	
Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27	
Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61	
				\$ 325.05	
TOTAL LABOR/VEHICLE				\$ 325.05	
TOTAL COST				\$ 514.95	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 86 OF 111
FILED: 04/05/2013

Wood, 35 ft						
Rate Code 627						
POLE	MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost	
		5210180	\$ 168.18	0.3%	0.43	
		5210200	\$ 230.47	0.3%	0.59	
		5210350	\$ 142.88	94.1%	134.50	
		5210360	\$ 96.88	5.4%	5.18	
	Weighted Average Pole Cost					\$ 140.71
	CABLE	based on OH/UG				
	OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	152.3	\$62.43	
	UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	0.0	\$0.00	
						\$ 62.43
	CABLE HARDWARE w/ P&B Cable (UG only)					
	Hook, Drive Pilot Point 4-3/4" Overall Length	5261930	\$ 0.38	1	0.38	
	Clamp, Service AL #4 - #2 STR	9261730	\$ 0.33	1	0.33	
						\$ 0.71
	Underground Cable Hardware					
	UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40	\$26.40	
	Connector, Vice CU #4 STR	9280450	\$ 1.99	1	\$1.99	
	Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84	
	Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26	
	Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26	
	Conduit, PVC 2 IN 20 FT Bell End	5522000	\$ 0.38	40	\$14.40	
	Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
	Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	1	\$0.55	
	Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	2	\$5.24	
	Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55	
	Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40	
	Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08	
	% UG			0%	\$ -	
	Cable Hardware Weighted Average Cost					\$ -
	GROUNDING (1 every 1/4 mile) - UG Circuits	Spans per 1/4 mi = 9 0.11				
	Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28	
	Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46	
	Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80	
	Grounding Average Cost			% UG		\$0.00
	CONDUIT					
	Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	4	\$1.96	
	Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmted seq. flg	5853530	\$ 0.03	8	\$0.24	
	Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78	
	Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	1	\$0.55	
	Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.0	\$0.00	
	Gel Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92	
						\$34.45
	Wood					
	Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15	
	Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42	
	Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	0.40	
				% Wood		\$ 17.97
	Conduit Average Cost			% UG		\$0.00
	MATERIAL HANDLING @ 20.66 % of material cost					\$ 41.97
	TOTAL MATERIAL COST					\$ 246.11
	LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost	
	INSTALL POLE					
	Haul Set Pole	LN1	\$ 186.22	0.74	\$ 138.64	
	Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.93	\$ 172.40	
	Trench & Install Conduit	CC2	\$ 146.93	0.00	\$ -	
	Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 180.06	0.00	\$ -	
	Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27	
	Engineering Field	E/F	\$ 89.82	0.27	\$ 18.61	
						\$ 355.92
	TOTAL LABOR/VEHICLE					\$ 355.92
	TOTAL COST					\$ 601.03

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 87 OF 111
FILED: 04/05/2013

Wood, Existing Pole						
Rate Code	641	MATERIAL	Stock #	Unit Cost	# of Units and/or %	Cost
		POLE				-
						-
						-
						-
		Weighted Average Pole Cost				\$ -
		CABLE	<i>based on OH/UG</i>			
		OH Cable, OH Svc Drop, AAC-TRIPLEX, 4 AWG	5430340	\$ 0.41	0.0	\$0.00
		UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	142.2	\$93.86
						\$ 93.86
		CABLE HARDWARE w/ P&B Cable (UG only)				
		Hook, Drive Pilot Point 4-3/4" Overall Length	5261930	\$ 0.38	1	0.38
		Clamp, Service AL #4 - #2 STR	9261730	\$ 0.33	1	0.33
						\$ 0.71
		Underground Cable Hardware				
		UG Cable, UG, Copper, Triplex, 600V 2/C, 10AWG	5322230	\$ 0.66	40	\$26.40
		Connector, Vice CU #4 STR	9280450	\$ 1.99	1	\$1.99
		Fuse, Cartridge Non-Renew 30A 600V 1-1/2 X 13/3	5251300	\$ 2.42	2	\$4.84
		Fuse Holder, Waterproof Fuse Connector	5581800	\$ 8.13	2	\$16.26
		Handhole, Round 9X10X13 w/Penta HD Bolt	5531950	\$ 16.26	1	\$16.26
		Conduit, PVC 2 IN 20 FT Bell End	5522000	\$ 0.36	40	\$14.40
		Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78
		Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	8	\$4.19
		Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	2	\$5.24
		Compound, Silicone Grease Dielectric 5.3oz Tube	5852800	\$ 5.55	1	\$5.55
		Water Seal, Compound, Waterproofing 3-3/4' x 3-3/4"x1/8"	5851120	\$ 13.40	1	\$13.40
		Tape, 3/4" Vinyl Plastic Tape	5858200	\$ 1.08	1	\$1.08
		% UG			100%	\$ 112.39
		Cable Hardware Weighted Average Cost				\$ 112.39
		GROUNDING (1 every 1/4 mile) - UG Circuits	<i>Spans per 1/4 mi =</i>		10	0.10
		Rod, Ground, Sectional, Copper Bonded, Threadless Length 10ft	9293260	\$ 11.64	2	\$23.28
		Coupler, Ground Rod Sectional, Copper, Threadless 1/2"	9281300	\$ 4.46	1	\$4.46
		Clamp, Ground Rod Copper 1/2"	9272950	\$ 1.80	1	\$1.80
		Grounding Average Cost	% UG		100%	\$2.96
		CONDUIT				
		Conduit, PVC Sch 40, 2", 10 ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	136	\$66.76
		Pullwire, Tape, Pulling, Polyester, Rated 1250#, w/pmtd seq, ftg	5853530	\$ 0.03	140	\$4.21
		Elbow, Conduit PVC 2in Sch 40, 90 Deg 9-1/2" Radius	5522220	\$ 1.39	2	\$2.78
		Coupling, PVC 2in Sch 40, TEMS 13.01	5522180	\$ 0.55	8	\$4.19
		Cement, PVC Clear, Fast Drying, 1 pint container standard	5850580	\$ 2.62	0.4	\$1.15
		Gell Pack, Gel Cap Splice 600V used w/ #10 CU Lugs	5558230	\$ 14.46	2	\$28.92
						\$108.01
		Wood				
		Conduit, PVC Sch 40, 2in 10ft w/ Coupling TEMS 13.01	5522010	\$ 0.49	35	\$17.15
		Strap, Galv, 2in Hole	5512420	\$ 0.21	2	\$0.42
		Anchor, Masonry, Tapcon Screw, Hex Head, 1/4 X 1 1/4in	1901543	\$ 0.10	4	\$0.40
		% Wood			100%	\$ 17.97
		Conduit Average Cost	% UG		100%	\$125.98
		MATERIAL HANDLING @ 20.68 % of material cost				\$ 69.25
		TOTAL MATERIAL COST				\$ 404.46
		LABOR/VEHICLE	Crew Type	Unit Cost	# of Units	Cost
		INSTALL POLE				
		Haul Set Pole	LN1	\$ 186.22	0.74	\$ 138.64
		Run OH Conductor (includes terminate @ secondary)	LN1	\$ 186.22	0.05	\$ 9.06
		Trench & Install Conduit	CC2	\$ 146.93	4.77	\$ 700.16
		Pull UG Conductor (includes install HH & terminate @ secondary)	CC1	\$ 160.06	0.86	\$ 138.43
		Engineering Office	E/O	\$ 64.12	0.41	\$ 26.27
		Engineering Field	E/F	\$ 69.82	0.27	\$ 18.61
						\$ 1,031.16
		TOTAL LABOR/VEHICLE				\$ 1,031.16
		TOTAL COST				\$ 1,435.62

**Installation and
Maintenance Labor**

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 88 OF 111
FILED: 04/05/2013

MAINTENANCE LABOR SUMMARY

INCLUDES VEHICLE COSTS

Maintenance Labor and Vehicle Costs

Labor Adders Assumptions

Fringe	=	85.0%
Small Tools % for TEC Field Labor	=	8.68%
% Supv & Admin TEC Lighting Field - TEC Engineering	=	11.4%
% Supv & Admin TEC Lighting Field - TEC Crew Labor	=	38.7%

TEC Engineering Labor Multiplier	(1 + Line 1 + Line 3)	TEC Engineering	196.4%
TEC FieldCrew Labor Multiplier	(1 + Line 1 + Line 2 + Line 4)	TEC Crew Labor	232.4%

Crew	Description	Units	Composition	Description	Unit Cost	Total Labor	Combined Cost/Hr
<u>EF</u> E/F - Engineering Field		1	Field Engineering Technician		32.65	64.12	69.82
		1	Light Vehicle		5.70		
<u>EO</u> E/O - Engineering Office		1	Field Engineering Technician		32.65	64.12	64.12
<u>CC1</u> CC1 - Conductor Crew		2	UG Serviceman		27.37	127.20	160.06
		2	Light Vehicle		5.70		
		1	Heavy Vehicle- Class A	Mini Backhoe	8.33		
		1	Heavy Vehicle Class B	Aerial Truck	13.13		
<u>CC2</u> CC2 - Conduit Crew		2	UG Serviceman		27.37	127.20	160.06
		2	Light Vehicle		5.70		
		1	Heavy Vehicle- Class A	Mini Backhoe	8.33		
		1	Heavy Vehicle Class B	Aerial Truck	13.13		
<u>E/F</u> E/F - Engineering Field		1	Field Engineering Technician		32.65	64.12	69.82
		1	Light Vehicle		5.70		
<u>E/O</u> E/O - Engineering Office		1	Field Engineering Technician		32.65	64.12	64.12
<u>LN1</u> LN1 - Line Crew		1	Apprentice Lineman III		25.61	140.68	186.22
		1	Lineman		34.93		
		1	Heavy Vehicle- Class A	Mini Backhoe	8.33		
		1	Heavy Vehicle Class B	Aerial Truck	13.13		
		1	Heavy Vehicle Class D	Digger Derrick	24.06		
<u>LN2</u> LN2 - Line Crew		1	Apprentice Lineman III		25.61	140.68	153.81
		1	Lineman		34.93		
		1	Heavy Vehicle Class B	Aerial Truck	13.13		
<u>PT1</u> PT - Paint Crew		2	Utility Worker		14.43	67.06	72.76
		1	Light Vehicle		5.70		
<u>PT2</u> PT - Paint Crew		2	Utility Worker		14.43	67.06	80.19
		1	Heavy Vehicle Class B	Aerial Truck	13.13		
<u>SL1</u> SL1 - Street Light Crew		1	Lighting Repairman		24.40	56.70	73.92
		1	Heavy Vehicle Class C	Aerial Truck	17.22		
<u>SL2</u> SL2 - Street Light Crew		2	Lighting Repairman		24.40	113.40	147.84
		2	Heavy Vehicle Class C	Aerial Truck	17.22		
<u>SL3</u> SL3 - Street Light Crew		1	Utility Worker		14.43	33.53	39.23
		1	Light Vehicle		5.70		
<u>SL4</u> SL4 - Street Light Crew		1	Lighting Repairman		24.40	98.69	115.91
		1	Special Utility Worker		18.07		
		1	Heavy Vehicle Class C	Aerial Truck	17.22		
<u>SS1</u> SS1 - System Service Crew		1	Troubleman		\$36.17	84.05	97.18
		1	Heavy Vehicle Class B	Aerial Truck	13.13		

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 90 OF 111
FILED: 04/05/2013

HD Luminaire Failure					SL1	Crew Hourly rate	\$ 73.92
Line No.		Bucket Maint	Climb Maint	2nd Man FR Climb	Memo		
1	Luminaire Replacement						
2	Travel Time (Maint)	24	24	24	24		
3	Set up Bucket	6	12	3	6		
4	Call in for 2nd Man/Wait Time	-	-	31			
5	Pull Material Off Truck	4	4				
6	Raise Bucket	1	-				
7	Inspect/Diagnose Problem/ De-energize/ Remove Light	14	18	Join Job	Bucket or Climb		
8	Create Memo on MDT	1	1				
9	Replace Luminaire/Energize	10	15	15			
10	Lower Bucket	1	-				
11	Prepare to Travel	5	11	3	5		
12	subtotal time (min)	66	85	76	35		
13	subtotal time (hr)	1.10	1.42	1.27	0.58		\$ 132.59
14	Bucket/Climb Ratio	86%	14%				
15	FR/Memo Ratio		100%		25%		
17	Maintenance labor cost formula= crew hourly rate x [100%x(86% x (bucket maint)+ 14%x(climb maint+2nd man Fr climb maint))+25% x (86% x (bucket maint)+14% x (climb maint+2nd man FR climb maint)+memo)]						

HD Luminaire Parts Failure					SL1	Crew Hourly rate	\$ 73.92
Line No.		Bucket Maint	Climb Maint	2nd Man FR Climb	Memo		
1	Parts Replacement						
2	Travel Time (Maint)	24	24	24	24		
3	Set up Bucket	6	12	3	6		
4	Call in for 2nd Man/Wait Time	-	-	31			
5	Pull Material Off Truck	4	4				
6	Raise Bucket	1	-	Join Job	Bucket or Climb		
7	Inspect/Diagnose Problem/Remove Part	7	8				
8	Repair Luminaire	5	7	7			
9	Lower Bucket	1	-				
10	Prepare to Travel	5	11	3	5		
11	subtotal time (min)	53	66	68	35		
12	subtotal time (hr)	0.88	1.10	1.13	0.58		\$ 85.62
13	Bucket/Climb Ratio	86%	14%				
14	FR/Memo Ratio		100.0%		5.6%		
17	Part	Inspect/Diagnose	Repair	Ratio of Group	Memo		
18	Starting Aid	6	7	1	1	30%	5%
19	Capacitor	7	8	7	10	58%	5%
20	Ballast	9	10	7	10	9%	10%
21	Glass	1	1	2	3	3%	10%
21	Weighted Average	7	8	5	7		
23	Maintenance labor cost formula= crew hourly rate x [100%x(86% x (bucket maint)+14%x(climb maint+2nd man Fr climb maint))+5.6% x (86% x (bucket maint)+14% x (climb maint+2nd man FR climb maint)+memo)]						

HD Lamp Replacement					SL1	Crew Hourly rate	\$ 73.92
Line No.		Bucket Maint	Climb Maint	2nd Man FR Climb	Memo		
1	Lamp Replacement						
2	Travel Time (Maint)	24	24	24			
3	Set up Bucket	6	12	3			
4	Call in for 2nd Man/Wait Time	-	-	31			
5	Extra Acces Time	0.08	0.08				
6	Pull Material Off Truck	4	4				
7	Raise Bucket	1	-	Join Job			
8	Inspect/Diagnose Problem/ Remove Part	5	8				
9	Repair Luminaire	2	3	3			
10	Lower Bucket	1	-				
11	Prepare to Travel	5	11	11			
12	subtotal time (min)	48	62	72			
13	subtotal time (hr)	0.80	1.03	1.20			\$ 73.86
14	Bucket/Climb Ratio	86%	14%				
15	FR/Memo Ratio		100%		0%		
17	Repair Type	All Maint					
18	Extra Access Time (move surrounding items e.g. cars)	18	0.41%				
20	Maintenance labor cost formula= crew hourly rate x [100% x (86% x (bucket maint)+ 14%x(climb maint+2nd man Fr climb maint))+0% x (86% x (bucket maint)+14% x (climb maint+2nd man FR climb maint)+memo)]						

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 91 OF 111
FILED: 04/05/2013

HB Photo Cell Replacement

		SL1		Crew Hourly rate	\$ 73.92
Line No.		Bucket Maint	Climb Maint	2nd Man FR	Memo
1	Relay/Timer Replacement				
2	Travel Time (Maint)	24	24	24	
3	Set up Bucket	6	12	12	
4	Call in for 2nd Man/Wait Time	-	-	31	
5	Pull Material Off Truck	4	4		
6	Raise Bucket	1	-	Join Job	
7	Inspect/Diagnose Problem/ Remove Part	4	5		
8	Repair Luminaire	1	3		
9	Lower Bucket	1	-		
10	Prepare to Travel	5	11	11	
11	subtotal time (min)	48	59	81	
12	subtotal time (hr)	0.77	0.98	1.35	\$ 72.69
13	Bucket/Climb Ratio	86%	14%		
14	FR/Memo Ratio	100%		0%	
15					
16	Maintenance labor cost formula=	crew hourly rate x [100% x (86% x (bucket maint)+ 14%x(climb maint+2nd man Fr climb maint))+0% x (86%			
17		x (bucket maint)+14% x (climb maint+2nd man FR climb maint)+memo]			

Relay Replacement

		SL1		Crew Hourly rate	\$ 73.92
Line No.		Relay FR	Relay Memo		
1	Relay Replacement				
2	Travel Time (Maint)	24	24		
3	Set up Bucket	6	6		
4	Energize Relay/inspect/ Diagnose Problem/ Remove	36			
5	Lower Bucket	1			
6	Create Memo Ticket for 2nd Trip	-			
7	Program Timer in Office	-	2nd Trip		
8	Pull Material Off Truck	4			
9	Raise Bucket	1			
10	Replace Relay/Reenergize	20			
11	Prepare to Travel	5	5		
12	subtotal time (min)	97	35		
13	subtotal time (hr)	1.62	0.58		\$ 149.69
14	FR/Memo Ratio	100%	70%		
15					
16	Maintenance labor cost formula =	crew hourly rate x (100%x(relay maint)+70%x(relay 2nd trip maint))			
17					
18					

Timer Replacement

Line No.		SL1	Crew Hourly rate	\$ 73.92
1	Timer Replacement			
		<i>Timer FR</i>	<i>Timer Memo</i>	
2	Travel Time (Maint)	24	24	
3	Set up Bucket	6	6	
4	Energize Relay/inspect/ Diagnose Problem/ Remove	40	FR	
5	Lower Bucket	1		
6	Create Memo Ticket for 2nd Trip	1		
7	Program Timer in Office	-	15	
8	Pull Material Off Truck		4	
9	Raise Bucket	2nd Trip	1	
10	Replace Timer/Reenergize		10	
11	Prepare to Travel	5	5	
12	subtotal time (min)	77	65	
13	subtotal time (hr)	1.28	1.06	\$ 174.94
14	FR/Memo Ratio	100%	100%	

Maintenance labor cost formula =crew hourly rate x (100%x(timer maint))+70%x(timer 2nd trip maint))

Post Top Double Bracket Replacement

Line No.		SL1	Crew Hourly rate	\$ 73.92
1	Post top Double Bracket Replacement			
		<i>Bucket</i>		
2	Travel Time (Maint)	24		
3	Set up Bucket	6		
4	Remove Fixtures & Bracket	30		
5	Lower Bucket	1		
6	Make up Double Bracket & Fixtures	6		
7	Install Double Bracket & Fixtures	12		
8	Prepare to Travel	5		
9	subtotal time (min)	79		
10	subtotal time (hr)	1.32		\$ 97.33
11				
12				
13				
14				
15				
16				
17				
18				
19				

Maintenance labor cost formula =crew hourly rate x (replace double bracket maint)

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 93 OF 111
FILED: 04/05/2013

(Cable/UG Parts Failure) FR & Memo

SL1 Crew Hourly rate \$ 73.92
SL2 Crew Hourly rate \$ 147.84

Line No.

	Bucket Maint		FR (pre Memo) All	Memo (UG Parts)	Memo (LT-UG Cable)
	FR	Climb Maint FR			
1 UG Cable Failure/UG Parts					
2 Travel Time (Maint)					
3 Set up Bucket	6	12	6	5	5
4 Inspect/Diagnose Problem	3	5	3		
5 Prepare to Travel NxtPole	4	10	4		
6 Set up Bucket NxtPole	2	8	2		
7 Inspect/Diagnose Problem (determine is UG issue)	3	5	3	Bucket or Climb	Bucket or Climb
8 Lower Bucket	1		1		
9 Locate HH/Feed Source	10	10	10		
10 Inspect/Diagnose Problem	2	2	2		
11 Add'l Inspect/Diagnose Handhole/Connector/Fuse/Fuse Holder (may determine is UG Cable issue)	-	-	-	2	
12 Remove Old Conductor	-	-	-	-	30
13 Pull Material Off Truck	4	4	2nd Trip	4	4
14 Measure Cable	-	-	-	-	15
15 Repair/Replace Conductor	-	-	-	-	30
16 Repair/Replace Handhole/Connector/Fuse/Fuse Holder	3	3		3	-
17 Raise Bucket	1	-		1	1
18 Cover PC/Test Light	1	1		1	1
19 Prepare to Travel	5	11	4	4	4
20 subtotal time (min)	69	95	60	44	114
21 subtotal time (hr)	1.15	1.58	1.00	0.73	1.90
22 Bucket/Climb Ratio	95%	5%			
23 FR/Memo Ratio	84%		15%	0.4%	15.1%

\$ 127.15

Part	Insp/Diagns/ Remv	Replace	Individual Frequency	Ratio	All FR Freq	All Memo Freq
UG Cable Failure FR			0.14%	15%	100%	100%
Hand Hole	10	11	0.03%	3%	85%	15%
UG Connector	5	4	0.04%	4%	100%	0%
UG Fuse	2	2	0.60%	65%	100%	0%
UG Fuse Holder	3	9	0.12%	13%	100%	0%
Average	2	3	0.92%		100%	15.6%
UG Parts Ratio					84.4%	0.4%
LT-UG Cable Ratio					15%	15.1%

Maintenance labor cost formula= crew1 hourly rate x (84%*(95%*(bucket maint)+5%*(climb maint))+crew1 hourly rate x (15%*(1st trip)+ 0.4%*(2nd trip UGParts maint)) + crew2 hourly rate x (15%*(15.1%*(2nd trip UG Cable maint))

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 94 OF 111
FILED: 04/05/2013

(Cable/OH Parts Failure) FR & Memo

SL1	Crew Hourly rate	\$ 73.92
SL2	Crew Hourly rate	\$ 147.84

Line No.		Bucket Maint	2nd Man FR	FR (pre Memo)	Memo	Memo
		FR	Climb Maint FR	Climb	All	(OH Parts)
1	Cable Failure w/ OH Cable Parts					
2	Travel Time (Maint)	24	24	24	24	24
3	Set up Bucket	6	12	3	6	6
4	Inspect/Diagnose Problem	3	5		3	
5	Prepare to Travel NxtPole	4	10		4	
6	Set up Bucket NxtPole	2	8		2	
7	Inspect/Diagnose Problem (determine is OH Cable Issue)	3	5	Join Job	3	Bucket or
8	Add'l Inspect/Diagnose Connector/Fuse	1	1		1	Climb
9	Prepare to Travel MidSpan	4	4		1	Climb
10	Create Memo on MDT	-	-		1	
11	Call in for 2nd Man/Wait Time or log as Memo	-	-	31		
12	Pull Material Off Truck	4	4	Join Job		4
13	Measure Cable	10	10	10		10
14	Set up Bucket MidSpan	2	2	2		2
15	Repair/Replace Conductor - tree trim/make splice	15	25	25	2nd Trip	48
16	Add'l Repair/Replace Connector/Fuse	3	3	3		3
17	Prepare to Travel NxtPole	4	10	10		4.3
18	Set up Bucket NxtPole	2	8	8		2.3
19	Reenergize	2	2	2		2
20	Prepare to Travel	5	11	3	5.3	5.3
21	subtotal time (min)	94	144	121	52	51
22	subtotal time (hr)	1.57	2.40	2.02	0.86	0.85
23	Bucket/Climb Ratio	95%	5%			
24	FR/Memo Ratio	69%		14%	17%	

Repair Type	Clear	in Trees	Memo ratio
Cut old Cable	4	4	\$ 167.53

27	Attach Rope, pull Old Cable Out of Trees, pull new Cable in	20	35
28	Hang & Sag Cable	8	8
29	Make Hot (connect)	3	3
30	Dispose of Materials, add'l	2	2
31	Repair/Replace Cable Sum	37	52
32	Clear/Tree Trim Ratio	30%	70%
33	Repair/Replace Cable Avg	48	

Part	Insp/Diagns/Remv	Replace	Individual Frequency	Ratio	FR All FR Freq	Memo All Memo Freq
OH Cable Failure FR			0.38%	66%	100%	26%
OH Connector	5	4	0.09%	20%	100%	0%
OH Fuse	2	1	0.07%	14%	0%	100%
Average	1	3	0.54%			31%

OH Parts Ratio	86.2%	14%
LT-2/4 SVC Ratio	65.8%	17%

Maintenance labor cost formula= crew1 hourly rate x (69%x(95%x(bucket maint))+5%x(climb maint + 2nd man climb maint))+crew1 hourly rate x (14%x(1st trip)+ 17%(2nd trip OHParts maint)) + crew2 hourly rate x (14%x(1st trip)+17%x(2nd trip UGCable maint))

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 95 OF 111
FILED: 04/05/2013

(Clean/Paint Poles)

PT1 Crew Hourly rate \$ 72.76
PT2 Crew Hourly rate \$ 80.19

Line No.	Description	Paint Maint - PT			Paint Maint - 30'		
		First	Interim	Last	First	Interim	Last
1	Clean/Paint Poles						
2	Travel Time (Group)	24	8	5	24	8	5
3	Set up	10	5	5	10	5	5
4	Pressure Wash Pole	20	20	20	20	20	20
5	Paint Pole & Fixture	20	20	20	45	45	45
6	Prepare to Travel Nxt Pole	8	8	8	8	8	8
7	Re-Grid Pole	5	5	5	5	5	5
8	Restore Site/Stow Materials	2	2	10	2	2	10
9	Prepare to Travel Nxt Pole	2	2	5	2	2	5
10	subtotal time (min)	97	73	84	122	98	109
11	subtotal time (hr)	1.62	1.22	1.4	2.03	1.63	1.82
12							
13	PT/30' Pole Ratio	95%			5%		
14							
15							

	PT	30'	
First	\$117.87	\$162.79	= crew hourly rate x(first pole maint)
Interim	\$88.77	\$130.71	= crew hourly rate x(interim pole maint)
Last	\$101.86	\$145.95	= crew hourly rate x(last pole maint)
poles/day	10	8	
Summary	\$ 92.99	\$ 136.62	

Maintenance labor cost formula (PT)= ((PT first pole maint)+6x(PT interim pole maint) + (PT last pole
(uses crew1 hourly rate) maint))/10
Maintenance labor cost formula (30')= ((30' first pole maint)+6x(30' interim pole maint) + (30' last pole
(uses crew2 hourly rate) maint))/8

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 96 OF 111
FILED: 04/05/2013

Pole Replacement - Maintenance (involving fixture)

Line No.	includes Car Hit Pole	non Post Top	SS1	Crew Hourly rate	\$ 97.18
			LN1	Crew Hourly rate	\$ 186.22
1	Pole (w/ new Fixture) Replacement	All Maint FR			
2	Travel Time (Maint)	24			
3	Inspect/Make Safe/Deenergize Feed	20			
4	Create Memo on MDT	1			
5	Set up Bucket			4.6	
6	Set up Site/Pole Hauler			5	
7	Make up Material			10	
8	Run Cable down thru Pole			4.8	
9	Wire New Fixture/Bracket & Install on Pole	Bucket or		15	
10	Dig Hole/Set Pole	Climb		19.3	
11	Energize Fixture			8.8	
12	Raise Bucket/Set up Ladder			0.8	
13	Test Light			2	
14	Restore Site/Stow Material			6	
15	Prepare to Travel	5		5	
16	subtotal time (min)	50	105		
17	subtotal time (hr)	0.83	1.75		\$ 407.77
18	FR/Memo Ratio	100%	100%		

Ratio of Pole	Run Cable	Raise Bucket/	Energize
Pole Type	down thru	Set up Ladder	
type	Pole		
Al & Steel	12	1	5
UG Conc	15	1	5
Wood & OH Conc	-	1	16
Weighted Avera	4.6	0.8	8.8

Ratio of Pole	Dig Hole - pre dig 3"	Dig Hole -	Set Pole	Dig/Set Sum
type	unrecck Auger, dig	Hand dig		
	Hole			
Al & Steel	15	0	10	25
UG Conc	15	0	10	25
Wood & OH Conc	15	0	10	25
Weighted Avera	11.6	0.0	7.7	19.3

Maintenance labor cost formula= SS crew hourly rate x 0.85 hrs +LN1 crew hourly rate x 1.75 hr

Pole Replacement - Maintenance (involving pole only)

includes Car Hit Pole	Post Top	SS1	Crew Hourly rate	\$ 97.18
		LN1	Crew Hourly rate	\$ 186.22

1	Pole Replacement	All Maint FR			
2	Travel Time (Maint)	24			
3	Inspect/Make Safe/Deenergize Feed	20			
4	Create Memo on MDT	1			
5	Set up Bucket			12	
6	Set up Site/Pole Hauler			5	
7	Make up Material			10	
8	Run Cable down thru Pole			6.0	
9	Wire New Fixture/Bracket & Install on Pole	Bucket or		15	
10	Dig Hole/Set Pole	Climb		25	
11	Energize Fixture			5	
12	Raise Bucket/Set up Ladder			7	
13	Test Light			2	
14	Restore Site/Stow Material			6	
15	Prepare to Travel	5	5		
16	subtotal time (min)	50	122		
17	subtotal time (hr)	0.83	2.03		\$ 459.83
18	FR/Memo Ratio	100%	100%		

Maintenance labor cost formula= SS crew hourly rate x 0.83 hrs +LN1 crew hourly rate x 2.03 hr

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 97 OF 111
FILED: 04/05/2013

INSTALLATION LABOR SUMMARY

INCLUDES VEHICLE COSTS

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 98 OF 111
FILED: 04/05/2013

Labor and Vehicle Costs - Installation & Maintenance

Line No.	Labor Adds Assumptions					
1		Fringe	=	85.0%		
2		Small Tools % for TEC Field Labor	=	8.88%		
3		% Supv & Admin TEC Lighting Field - TEC Engineering	=	11.4%		
4		% Supv & Admin TEC Lighting Field - TEC Crew Labor	=	38.7%		

TEC Engineering Labor Multiplier	(1+ Line 1 + Line 3)	TEC Engineering	196.4%
TEC FieldCrew Labor Multiplier	(1 + Line 1+ Line 2+ Line 4)	TEC Crew Labor	232.4%

Crew	Units	Composition	Description	Unit Cost	Total Labor	Combined Cost/Hr
<u>EF</u> EF - Engineering Field	1	Field Engineering Technician		32.65	64.12	68.82
	1	Light Vehicle		5.70		
<u>EO</u> E/O - Engineering Office	1	Field Engineering Technician		32.65	64.12	84.12

Crew	Units	Composition	Description	Unit Cost	Total Labor	Combined Cost/Hr
<u>CC1</u> CC1 - Conductor Crew	2	UG Serviceman		27.37	127.20	160.06
	2	Light Vehicle		5.70		
	1	Heavy Vehicle- Class A	Mini Backhoe	8.33		
	1	Heavy Vehicle- Class B	Aerial Truck	13.13		
<u>CC2</u> CC2 - Conduit Crew	2	UG Serviceman		27.37	127.20	146.83
	2	Light Vehicle		5.70		
	1	Heavy Vehicle- Class A	Mini Backhoe	8.33		
	1	Heavy Vehicle- Class A	Mini Backhoe	13.13		
<u>LN1</u> LN1 - Line Crew	1	Apprentice Lineman III		25.61	140.68	186.22
	1	Lineman		34.93		
	1	Heavy Vehicle- Class A	Mini Backhoe	8.33		
	1	Heavy Vehicle- Class B	Aerial Truck	13.13		
	1	Heavy Vehicle- Class D	Digger Derrick	24.08		
<u>LN2</u> LN2 - Line Crew	1	Apprentice Lineman III		25.61	140.68	153.81
	1	Lineman		34.93		
	1	Heavy Vehicle- Class B	Aerial Truck	13.13		
<u>PT1</u> PT - Paint Crew	2	Utility Worker		14.43	67.06	72.76
	1	Light Vehicle		5.70		
<u>PT2</u> PT - Paint Crew	2	Utility Worker		14.43	67.06	80.19
	1	Heavy Vehicle- Class B	Aerial Truck	13.13		
<u>SL1</u> SL1 - Street Light Crew	1	Lighting Repairman		24.40	56.70	73.82
	1	Heavy Vehicle- Class C	Aerial Truck	17.22		
<u>SL2</u> SL2 - Street Light Crew	2	Lighting Repairman		24.40	113.40	147.84
	2	Heavy Vehicle- Class C	Aerial Truck	17.22		
<u>SL3</u> SL3 - Street Light Crew	1	Utility Worker		14.43	33.53	39.23
	1	Light Vehicle		5.70		
<u>SL4</u> SL4 - Street Light Crew	1	Lighting Repairman		24.40	98.69	115.91
	1	Special Utility Worker		18.07		
	1	Heavy Vehicle- Class C	Aerial Truck	17.22		
<u>SS1</u> SS1 - System Service Crew	1	Troubleshooter		\$36.17	84.05	87.18
	1	Heavy Vehicle- Class B	Aerial Truck	13.13		

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 99 OF 111
FILED: 04/05/2013

Engineering Office - Relay or Timer or Panel Top Double Bracket
E/O Crew Hourly rate \$ 64.12

Line No.		Relay	w/Timer	PT Double Bracket
1	Office Design Work			
2				
3	Lighting Design - Design software	10	10	10
4	Electrical Design	5	2	2
5	CIAC	0	0	0
6	Packaging Work Request	<i>existing job</i>		
7	Prepare to Travel	<i>existing job</i>		
8	subtotal time (min)	15	12	12
9	subtotal time (hr)	0.25	0.20	0.20
10				
11	\$/unit	\$16.03	\$12.82	\$12.82
12	hrs/unit	0.25	0.20	0.20

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 100 OF 111
FILED: 04/05/2013

Engineering, Field - Design Work

E/F Crew Hourly rate \$ 69.82

Time Allocation split between pole and fixture

Line No.	Scenario	Avg Rdwy Span, staggered for 0.5mi				Time Allocation: Pole/Fixture/Shared
		x<5	10>x>25	6>x>many		
	# Fixtures Avg	1	17.5	10	18.2	
1	Field Design Work					
2	Trips to job site	Small 1	Subdivision Install 3	Commercial Install 4	Street/blvd Lights Install 3	
5	FIELD VISIT 1					
6	Travel Time	24	24	24	24	S
7	Secure Vehicle	1	2	2	3	S
8	Customer Contact (Intro Meeting)	5	23	45	-	S
9	Product offering w/ Cust (brochure)	5	-	-	-	S
10	Contract Explanation	5	-	-	-	F
11	Site inspection	5	-	-	30	S
12	Preliminary sketch (wheel, engineering tools)	25	-	-	-	S
13	Prepare to Travel	2	0	0	0	S
14	subtotal time (min)	72	48.5	71	57	
15	subtotal time (hr)	1.20	0.81	1.18	0.95	
17	FIELD VISIT 2					
18	Travel Time		24	24	24	S
19	Secure Vehicle		2	2	3	S
20	Pre Construction Meeting		15	30	-	S
21	Product offering w/ Cust (brochure)		10	10	10	S
22	Contract Explanation		10	10	-	F
23	Preliminary sketch (wheel, engineering tools)		0	0	45	S
24	Review Electronic CAD drawings		40	40	15	S
25	Prepare to Travel		0	0	0	S
26	subtotal time (min)	0	101	116	97	
27	subtotal time (hr)	0.00	1.68	1.93	1.62	
29	FIELD VISIT 3					
30	Travel Time		24	24	24	P
31	Secure Vehicle		2	2	3	P
32	Conduit Issue/Crew Visit		15	20	-	P
33	Staking of Site		0	0	33	P
34	Prepare to Travel		0	0	0	P
35	subtotal time (min)	0	41	46	56.6	
36	subtotal time (hr)	0.00	0.68	0.77	0.98	
38	FIELD VISIT 4					
39	Travel Time			24	-	P
40	Secure Vehicle			2	-	P
41	Crew Visit			15	-	P
42	Prepare to Travel			0	-	P
43	subtotal time (min)	0	0	41	0	
44	subtotal time (hr)	0.00	0.00	0.68	0.00	
45	TOTAL					
48	Combined subtotal time (min)	72	190.5	274	213.6	
47	Combined subtotal time (hr)	1.20	3.18	4.57	3.56	
49	Fixture Subtotal time (min)	38.5	79.8	98.5	77.0	
50	Fixture Subtotal time (hr)	0.64	1.33	1.64	1.28	1.20
51	Pole Subtotal time (min)	33.5	110.8	175.5	136.6	
52	Pole Subtotal time (hr)	0.56	1.85	2.93	2.28	1.85
54	Visits	x>5	10>x>25	6>x>many	18.3/side	
55	Visit 1 Duration		45			
56	Visit 1 (Intro Meeting) % attended		50%			
57	Visit 2 Duration		30			
58	Visit 2 (Pre Construction Meeting) % attended		50%			
59	Staking of Site (min per light)					

Scenario	Ratio	Unit Count	Fixture			Pole			TOTAL
			Cost	Unit Cost	Hrs/Unit	Cost	Unit Cost	Hrs/Unit	Unit Cost
Avg per Unit for Fixture w new Pole*			\$16.76		0.24	\$18.61		0.27	\$35.36
Fixture Only*			\$35.36		0.51				
Small, < 5	26.3%	1	\$44.80	\$44.80		\$38.98	\$38.98		
Subdivision, 10>x>25	24.5%	17.5	\$52.80	\$5.30		\$128.88	\$7.36		
Commercial, 6>x>many	19.4%	10	\$114.62	\$11.46		\$204.22	\$20.42		
Street/Blvd, 18.3 per side	29.8%	18.2	\$69.80	\$4.91		\$158.86	\$9.71		
Average Roadway Span (OH&UG)		145			ft				

* Normalized by Pole/Job Distribution Ratio

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 101 OF 111
FILED: 04/05/2013

Engineering Office - Design Work
E/O Crew Hourly rate \$ 64.12

Line No.	Scenario	Avg Rdwy Span, staggered for				Time Allocation: Pole/ Fixture/ Shared				
		x<5 #Fixtures Avg	10>x>25	6>x>many	0.5mi 18.2					
1	Office Design Work - Preliminary									
2	Trps to job site	Small 1	Subdivision Install 3	Commercial Install 4	Street /Blvd Lights Install 3					
3										
4	FIELD VISIT 1									
5	Lighting Design - Design software	10	87.5	50	81.2	F				
6	Lighting Design - Design Revisions	0	20	20	20	F				
7	CIAC	0	10	10	10	S				
8	Electrical Design	60	120	90	150	P				
9	Permitting				60	P				
10	Packaging Work Request	10	20	15	15	S				
11	subtotal time (min)	80	257.5	185	346.2					
12	subtotal time (hr)	1.33	4.29	3.08	5.77					
13										
14	Fixture Subtotal time (min)	15.0	122.5	82.5	123.7					
15	Fixture Subtotal time (hr)	0.25	2.04	1.38	2.06					
16	Pole Subtotal time (min)	65.0	135.0	102.5	222.5					
17	Pole Subtotal time (hr)	1.08	2.25	1.71	3.71					
18										
19										
20	Scenario	Ratio	Avg Fixtures	Fixture Cost	Unit Cost	Hrs/Unit	Pole Cost	Unit Cost	Hrs/Unit	TOTAL Unit Cost
21	Avg per Unit for Fixture w new Pole*			\$9.92		0.15	\$26.27		0.41	\$36.19
22	Fixture Only*			\$36.19		0.56				
23	Small, < 5	26.3%	1	\$16.03			\$69.46	\$69.46		
24	Subdivision, 10>x>25	24.5%	17.5	\$130.91	\$7.48		\$144.27	\$8.24		
25	Commercial, 6>x>many	19.4%	10	\$88.17	\$8.82		\$109.54	\$10.95		
26	Street/Blvd, 18.3 per side	29.8%	18.2	\$132.22	\$7.25		\$237.78	\$13.03		
27	Average Roadway Span (OH&UG)		145							

* Normalized by Pole/Job Distribution Ratio

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 102 OF 111
FILED: 04/05/2013

part of Install Pole/Install Fixture Task		Trench & Install Conduit		
Time Allocation	100% pole	CC2	Crew Hourly rate	\$ 146.93

Line No.		UG Install 1 Feet: ≤100Ft	UG Install 3 < 500Ft<1000Ft	UG Install 4 >1000Ft	
1	Install conduit				
2	Trips to job site:	1	3	4	
3					
4					
5	FIELD VISIT 1				
6	Load Material	10	20	25	per day
7	Travel Time (Install)	24	24	24	
8	Safety Tail Board (Set cones, safety flashers, etc)	5	5	5	per day
9	Unload Equip (Backhoe, air compressor)	6	6	6	
10	Unload Material (PVC, hand tools)	8	8	8	
11	Spot Utilities	10	10	10	
12	Dig Trench	120	185	185	
13	Install conduit (cutting, gluing, blow rabbit)	10	21	25	
14	Pull Tape	5	6	7	
15	Back fill	90	123	132	
16	Load Equipment	6	6	6	per day
17	Load Material	5	5	5	per day
18	Complete DARs	5	5	5	per day
19	Prepare to Travel	4	4	4	
20					
21	subtotal time (min)	306	425	427	
22	subtotal time (hr)	5.1	7.1	7.1	
23	FIELD VISIT 2				
24	Load Material		20	25	per day
25	Travel Time (Install)		24	24	
26	Safety Tail Board (Set cones, safety flashers, etc)		5	5	per day
27	Unload Equip (Backhoe, air compressor)		6	6	
28	Unload Material (PVC, hand tools)		6	8	
29	Dig Trench		185	185	
30	Install conduit (cutting, gluing, blow rabbit)		21	25	
31	Pull Tape		6	7	
32	Back fill		123	132	
33	Load Equipment		6	6	per day
34	Load Material		5	5	per day
35	Complete DARs		5	5	per day
36	Prepare to Travel		4	4	
37					
38	subtotal time (min)	0	415	417	
39	subtotal time (hr)	0.0	6.9	6.9	
40	FIELD VISIT 3				
41	Load Material		20	25	per day
42	Travel Time (Install)		24	24	
43	Safety Tail Board (Set cones, safety flashers, etc)		5	5	per day
44	Unload Equip (Backhoe, air compressor)		6	6	
45	Unload Material (PVC, hand tools)		3	8	
46	Dig Trench		81	185	
47	Install conduit (cutting, gluing, blow rabbit)		9	25	
48	Pull Tape		3	7	
49	Back fill		54	132	
50	Load Equipment		6	6	per day
51	Load Material		5	5	per day
52	Complete DARs		5	5	per day
53	Prepare to Travel		4	4	
54					
55	subtotal time (min)	0	224	417	
56	subtotal time (hr)	0.0	3.7	6.9	
57	FIELD VISIT 4				
58	Load Material			25	per day
59	Travel Time (Install)			24	
60	Safety Tail Board (Set cones, safety flashers, etc)			5	per day
61	Unload Equip (Backhoe, air compressor)			6	
62	Unload Material (PVC, hand tools)			5	
63	Dig Trench			105	
64	Install conduit (cutting, gluing, blow rabbit)			18	
65	Pull Tape			4	
66	Back fill			84	
67	Load Equipment			6	per day
68	Load Material			5	per day
69	Complete DARs			5	per day
70	Prepare to Travel			4	
71					
72	subtotal time (min)	0	0	294	
73	subtotal time (hr)	0.0	0.0	4.9	
74	TOTAL			6.9	
75	Combined subtotal time (min)	306	1085	1555	
76	Combined subtotal time (hr)	5.10	17.75	25.92	

Scenario	Feet	per Foot Ratio	Cost	Unit Cost	Hrs/Unit
Avg per Unit				\$5.14	0.03
≤100Ft	100	38.4%	\$749.34	\$7.49	0.07
< 500Ft<1000Ft	750	24.9%	\$2,606.01	\$3.48	0.005
>1000Ft	1,000	36.8%	\$3,807.94	\$3.81	0.004

* Normalized by Pole/Job Distribution

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 103 OF 111
FILED: 04/05/2013

Install Hand Hole				
part of Pull Conductor in Conduit Task		CC1	Crew Hourly rate	\$ 160.06
Time Allocation 100% pole				Uses 1/2 of Two Man Crew rate
Line No.		New Install/ Part of Existing Visit/ Only	New Install/ Part of Existing Visit/ First	Next One
1	Install Hand Hole			
2	Load Material	1	1	1
3	Travel Time (Install)	existing trip	existing trip	existing trip
4	Pull Material Off Truck	4	4	3
5	Dig Hole	5	5	5
6	Install Hand Hold	5	5	5
7	Prepare to Travel Nxt Pole	4	4	4
8	Set up Bucket Nxt Pole	0	2	2
9	Prepare to Travel	existing trip	existing trip	existing trip
10	subtotal time (min)	19	21	20
11	subtotal time (hr)	0.32	0.35	0.33
12				
15	Single HH Install Hrs/Single Unit	\$25.34	Uses 1/2 of Two Man Crew	

Pull UG Conductor in Conduit				
part of Install Pole/Install Fixture Task		CC1	Crew Hourly rate	\$ 160.06
part of Install UG Svc to Wood Pole Task				
Time Allocation 100% pole				
Line No.		UG Install	UG Install	UG Install
1	Install Conductor in Conduit			
2		100	500	1000
3	Load Material in Yard	10	10	10
4	Travel Time (Install)	24	24	24
5	Set Up Bucket (Install)	6	6	6
6	Safety Tail Board (Set cones, safety flashers, etc)			
7	Unload Equip (Backhoe, air compressor)	5	5	5
8	Unload Material (wire, hand tools)	5	5	5
9	Pull in Wire	3	15	30
10	Install Handhole(s) (1 every Avg Span, 1.5 first and Terminate conductor (both ends) to URD Hand	10	1.4	1.4
11	Hole	0	0.0	0.0
12	Dig In & Connect to Secondary	Install	Install	Install
13	Load Equipment		6	6
14	Load Material	2	2	2
15	Complete DARE	5	5	5
16	Prepare to Travel (Install)	4	4	4
17	subtotal time (min)	73.5	86	104
18	subtotal time (hr)	1.23	1.49	1.74
19				
20	Terminate Connector for One HH	5		
21				
22				
23	Scenario	per Foot Ratio	Unit Cost	Hrs/Unit
24	Avg per Unit		\$0.97	0.006
25	<1000Ft	38.4%	\$1.96	0.012
26	< 500Ft<1000Ft	24.9%	\$0.48	0.003
27	>1000Ft	36.8%	\$0.26	0.002

* Normalized by Pole/Job Distribution

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 104 OF 111
FILED: 04/05/2013

		Run OH Conductor		
part of Install Pole/Install Fixture Task, need LN1		LN1	Crew Hourly rate	\$ 186.22
Time Allocation 100% pole				
Line No.				
1	Install OH Conductor	Install		
2	Load Material	6		
3	Travel Time (Install)	existing trip		
4	Pull Material Off Truck	5		
5	Measure Cable	10		
6	Raise Bucket	1		
7	Connect to Luminaire	3		
8	Pull OH Conductor - Hang & Sag	15		
9	Prepare to Travel Nxt Pole	4		
10	Set up Bucket Nxt Pole	2		
11	Connect to Secondary Feed	2		
12	Prepare to Travel	existing trip		
13	subtotal time (min)	48		
14	subtotal time (hr)	0.80		
15				
16				
17				
	Scenario Avg OH Span (ft)	Cost	Unit Cost	Hrs/Unit
	Avg per Unit*	134	\$148.66	\$1.12
				0.01
				per foot

* distributed over Average OH Span

		Install New Fixture Only - on Post Top Pole		
assuming conduit and cable is pulled (UG), existing pole		LN2	Crew Hourly rate	\$ 153.61
Line No.	New Fixture	Cobra, Shoebox, Flood	Post Top	
1	Load Material	6	6	
2	Travel Time (Install)	24	24	
3	Set up Bucket	7	8	
4	Make up Material (fixture & bracket)	8	8	
5	Wire New Fixture/Bracket & install on Pole	15	11	
6	Energize (All)	2	2	
7	Raise Bucket	1	-	
8	Test Light	2	2	
9	Prepare to Travel	5	4	
10	subtotal time (min)	70	61	
11	subtotal time (hr)	1.17	1.02	
12				
13				
14	Unit Cost	\$178.45	\$156.37	
15	Hrs/Unit	1.17	1.02	

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 105 OF 111
FILED: 04/05/2013

Install UG Service to existing Wood Pole			
part of Install Fixture Task, need LN1		LN1	Crew Hourly rate
Line No.	Task	Time Allocation	100% pole
1	Install UG Svc to Wood Pole	Install	
2	Load Material	6	
3	Travel Time (Install)	existing trip	
4	Trench and Install Conduit (UG only)	separate task	
5	Run OH Conductor (OH only)	separate task	
6	Install Hand Hole	separate task	
7	Connect to Secondary (UG only)		
8	Pull Material Off Truck	5	
9	Measure & Make up Conduit & Cable for Svc	20	
10	Dig to Install Conduit & Elbow Below Ground	20	
11	Attach Svc Conduit to Pole w/Straps	10	
12	Connect Pole Wire to HH (UG)	8	
13	Energize	Fixture Task	
14	Prepare to Travel	existing trip	
15	subtotal time (min)	68	
16	subtotal time (hr)	1.15	
17	Existing Pole	Unit Cost	Hrs/Unit
		\$214.15	1.15

Install New Pole & New Fixture on Aluminum or Steel Pole								
assuming conduit and cable is pulled (UG)		Al & Steel w Fixture		LN1	Crew Hourly rate	\$ 186.22		
Line No.	New Pole (w/Fixture)	All Install - <3	All Install - First	All Install - Interm	All Install - Last	Time Allocation: Pole/Fixture/Shared		
1	Trench and Install Conduit (UG only)	separate task				P		
2	Pull Wire and Install Conductor (OH only)	separate task				P		
3	Install Hand Hole	separate task - part of Install Conductor				S		
4	Connect to Secondary (UG only)					S		
5	Load Material	6	6	6	6	S		
6	Travel Time (Install)	24	24	2	2	S		
7	Set up Bucket	7	7	2	2	S		
8	Set up Site/Pole Hauler	5	5	3	3	P		
9	Make up Material (fixture & bracket)	8	8	8	8	F		
10	Make up Material (pole)	2	2	2	2	P		
11	Run Cable down thru Pole (UG only)	12	12	12	12	P		
12	Wire New Fixture/Bracket & Install on Pole	15	15	15	15	F		
13	Dig Hole/Set Pole	25	25	25	25	P		
14	Run OH Conductor (OH only)	separate task				P		
15	Connect Pole Wire to HH (UG)	8	8	8	8	F		
16	Energize (All)	2	2	2	2	F		
17	Raise Bucket	1	1	1	1	F		
18	Test Light	2	2	2	2	F		
19	Restore Site/Stow Material	6	2	2	6	P		
20	Prepare to Travel	5	5	5	5	S		
21	subtotal time (min)	128	124	95	99			
22	subtotal time (hr)	2.13	2.07	1.58	1.65			
23	Fixture Subtotal time (min)	49	49	35.5	35.5			
24	Fixture Subtotal time (hr)	0.82	0.82	0.59	0.59			
25	Pole Subtotal time (min)	78	75	59.5	63.5			
26	Pole Subtotal time (hr)	1.32	1.25	0.99	1.06			
27								
28	Fixture Only Total time (min)	70	70	43	43			
29	Fixture Only Total time (hr)	1.17	1.17	0.72	0.72			
30								
31								
32	Scenario	Ratio UG	Cost	Fixture Unit Cost	Hrs/Unit	Pole Cost	Unit Cost	Hrs/Unit
33	Avg per Unit*			\$121.29	0.65	\$200.71		1.08
34	Fixture Only			\$179.45	0.98			
35	<3	10.3%	\$152.08	\$152.08	0.82	\$245.19	\$245.19	1.32
36	3>=4	10.5%	\$427.53	\$122.15	0.66	\$706.86	\$201.96	1.08
37	5<=x<7 & multiple	79.2%	\$702.98	\$117.16	0.63	\$1,168.53	\$184.76	1.05

* Normalized by Pole/Job Distribution Ratio

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 106 OF 111
FILED: 04/05/2013

Install New Pole & New Fixture - Post Top

		Post Top w Fixture		LN1 Crew Hourly rate	\$ 186.22
				LN2 Crew Hourly rate	\$ 153.81
assuming conduit and cable is pulled (UG)					
Time Allocation split between pole and fixture					
Line No.	New Pole (w/Fixture)	All Install - < 3	All Install - First Interim	All Install - Last	Time Allocation: Pole/Fixture/Shared
1	Trench and Install Conduit (UG only)				P
2	Pull Wire and Install Conductor (OH only)				P
3	Install Hand Hole				
	Connect to Secondary (UG only)				S
4	Load Material	6	6	6	S
5	Travel Time (Install)	24	24	2	S
6	Set up Bucket	6	6	2	S
7	Set up Site/Pole Hauler	5	5	3	P
8	Make up Material (fixture & bracket)	6	6	6	F
9	Make up Material (pole)	2	2	2	P
10	Run Cable down thru Pole (UG only)	6	6	6	P
11	Wire New Fixture/Bracket & Install on Pole	11	11	11	F
12	Dig Hole/Set Pole	25	25	25	P
13	Run OH Conductor (OH only)				P
14	Connect Pole Wire to HH (UG)	8	8	8	P
15	Energize (All)	2	2	2	F
16	Raise Bucket	-	-	-	F
17	Test Light	2	2	2	F
18	Restore Site/Stow Material	6	2	2	P
19	Prepare to Travel	4	4	4	S
20	subtotal time (min)	113	109	81	85
21	subtotal time (hr)	1.88	1.82	1.35	1.42
22					
23	Fixture Subtotal time (min)	41	41	28	28
24	Fixture Subtotal time (hr)	0.68	0.68	0.47	0.47
25	Pole Subtotal time (min)	72	68	53	57
26	Pole Subtotal time (hr)	1.20	1.13	0.88	0.95
27					
28	Fixture Only Total time (min)	81	81	35	35
29	Fixture Only Total time (hr)	1.02	1.02	0.58	0.58
30					

Scenario	Ratio UG	Fixture		Pole	
		Cost	Hrs/Unit	Cost	Hrs/Unit
Avg per Unit*		\$97.60	0.52	\$180.12	0.97
Fixture Only		\$156.37	0.84		
< 3 portions	10.3%	\$127.25	0.68	\$223.46	1.20
3>=4 portions	10.5%	\$344.51	0.53	\$634.70	0.97
5<=7 & multiple portions	79.2%	\$561.76	0.50	\$1,045.94	0.94

* Normalized by Pole/Job Distribution Ratio

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 107 OF 111
FILED: 04/05/2013

Install New Pole & New Fixture

UG Conc w Fixture		LN1 Crew Hourly rate				\$ 186.22
Time Allocation split between pole and fixture		LN2 Crew Hourly rate				\$ 153.81
Line No.	New Pole (w/Fixture)	All Install -	All Install - First	All Install -	All Install - Last	Time Allocation:
1	Trench and install Conduit (UG only)	separate task				P
2	Pull Wire and install Conductor (OH only)	separate task				P
3	Install Hand Hole	separate task - part of install Conductor				S
4	Load Material	6	6	6	6	S
5	Travel Time (Install)	24	24	2	2	S
6	Set up Bucket	7	7	2	2	S
7	Set up Site/Pole Hauler	5	5	3	3	P
8	Make up Material (fixture & bracket)	8	8	8	8	F
9	Make up Material (pole)	2	2	2	2	P
10	Run Cable down thru Pole (UG only)	15	15	15	15	P
11	Wire New Fixture/Bracket & install on Pole	15	15	15	15	F
12	Dig Hole/Set Pole	25	25	25	25	P
13	Run OH Conductor (OH only)	separate task				P
14	Connect Pole Wire to HH (UG)	8	8	8	8	P
15	Energize (All)	2	2	2	2	F
16	Raise Bucket	1	1	1	1	F
17	Test Light	2	2	2	2	F
18	Restore Site/Stow Material	6	2	2	6	P
19	Prepare to Travel	5	5	5	5	S
20	subtotal time (min)	131	127	98	102	
21	subtotal time (hr)	2.18	2.12	1.63	1.70	
22						
23	Fixture Subtotal time (min)	49	49	35.5	35.5	
24	Fixture Subtotal time (hr)	0.82	0.82	0.59	0.59	
25	Pole Subtotal time (min)	82	78	62.5	66.5	
26	Pole Subtotal time (hr)	1.37	1.30	1.04	1.11	
27						
28	Fixture Only Total time (min)	70	70	43	43	
29	Fixture Only Total time (hr)	1.17	1.17	0.72	0.72	
30						
31						
32						
33	Scenario	Ratio UG	Cost	Unit Cost	Hrs/Unit	Cost
34	Avg per Unit			\$121.29	0.65	\$210.02
35	Fixture Only			\$179.45	0.96	
36	< 3 portions	10.3%	\$152.08	\$152.08	0.82	\$254.50
37	3 >> 4 portions	10.5%	\$427.53	\$122.15	0.66	\$739.45
	5 << 7 & multiple portions	79.2%	\$702.88	\$117.16	0.63	\$1,224.40

* Normalized by Pole/Job Distribution Rate

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 108 OF 111
FILED: 04/05/2013

Install New Pole & New Fixture

		Wood & OH Conc w Fixture		LN1 Crew Hourly rate	\$ 186.22
		Time Allocation split between pole and fixture		LN2 Crew Hourly rate	\$ 153.81
Line No.	New Pole (w/Fixture)	All Install - < 3	All Install - First Interim	All Install - Last	Time Allocation: Pole/ Fixture/ Shared
1	Trench and Install Conduit (UG only)	separate task			P
2	Pull Wire and Install Conductor (OH only)	separate task			P
3	Install Hand Hole	separate task - part of Install Conductor			S
4	Connect to Secondary (UG only)	separate task			S
5	Load Material	6	6	6	6
5	Travel Time (Install)	24	24	2	2
6	Set up Bucket	7	7	2	2
7	Set up Site/Pole Hauler	5	5	3	3
8	Make up Material (fixture & bracket)	8	8	8	8
9	Make up Material (pole)	2	2	2	2
10	Run Cable down thru Pole (UG only)	-	-	-	-
11	Wire New Fixture/Bracket & Install on Pole	15	15	15	15
12	Dig Hole/Set Pole	25	25	25	25
13	Run OH Conductor (OH only)	separate task			P
14	Connect Pole Wire to HH (UG)	separate task			P
15	Energize (All)	2	2	2	2
16	Raise Bucket	1	1	1	1
17	Test Light	2	2	2	2
18	Restore Site/Stow Material	6	2	2	6
18	Prepare to Travel	5	5	5	5
20	subtotal time (min)	108	104	75	79
21	subtotal time (hr)	1.80	1.73	1.25	1.32
23	Fixture Subtotal time (min)	49	49	35.5	35.5
24	Fixture Subtotal time (hr)	0.82	0.82	0.59	0.59
25	Pole Subtotal time (min)	59	55	39.5	43.5
26	Pole Subtotal time (hr)	0.98	0.92	0.66	0.73
27	Fixture Only Total time (min)	70	70	43	43
28	Fixture Only Total time (hr)	1.17	1.17	0.72	0.72

Scenario	Ratio OH	Cost	Fixture		Pole	
			Unit Cost	Hrs/Unit	Cost	Hrs/Unit
Avg per Unit			\$121.29	0.65	\$138.64	0.74
Fixture Only			\$179.45	1.17		
< 3 portions	45.3%	\$152.08	\$152.08	0.82	\$183.12	0.98
3->4 portions	21.0%	\$427.53	\$122.15	0.66	\$488.60	\$139.89
5->7 & multiple portions	33.7%	\$702.98	\$117.16	0.63	\$796.09	\$132.68

* Normalized by Pole/Job Distribution Ratio

TAMPA ELECTRIC COMPANY
DOCKET NO. 130040-EI
LIGHTING INCREMENTAL COST STUDY - 2013
SUPPLEMENTAL MFR SCHEDULE 13D
WITNESS: ASHBURN
PAGE 109 OF 111
FILED: 04/05/2013

Install Post Top Double Bracket			
part of Install New Pole/New Fixture Task	Post Top	LN1	Crew Hourly rate \$ 186.22
Line No.			
1	Install Post top Double Bracket		
2	Travel Time (Install)	<u>Bucket</u>	
3	Make up Double Bracket & Fixtures	<u>existing trip</u>	
4	Install Double Bracket & Fixtures	6	
5	Prepare to Travel	12	
6	subtotal time (min)	<u>existing trip</u>	
7	subtotal time (hr)	18	
8		0.30	
9			
10		<u>Unit Cost</u>	<u>Hrs/Unit</u>
11	Installation labor cost formula =crew hourly rate x (install double bracket)	\$ 55.67	0.30

Relay/Timer Installation								
		SL1	Crew Hourly rate		\$ 73.82			
		LN1	Crew Hourly rate		\$ 186.22			
Line No.								
1	Relay/Timer Installation	OH	UG	Oil Switch	Timer			
2	Load Material	6	6	12	6			
3	Program Timer in Office	-	-	-	15			
4	Travel Time (Install)	24	24	24	24			
5	Set up Bucket	6	6	6	6			
6	Pull Material Off Truck	4	4	4	4			
7	Trench & Install Conduit (UG)	-	<u>per foot</u>	-	-			
8	Install Conductor (UG)	-	<u>per foot</u>	-	-			
9	Install Pedestal	-	20	-	-			
10	Measure Cable	10	-	10	-			
11	Raise Bucket	1	-	1	-			
12	Pull Wire (OH)	15	-	15	-			
13	Lower Bucket	1	-	1	-			
14	Setup Bucket Next Span	2	-	2	1			
15	Unload & Install Transformer & Oil Switch	-	-	30	-			
16	Install Relay/Timer on Pole/Pedestal	25	60	-	15			
17	Install PC for PC controlled Relay	2	2	2	-			
18	Hang Cutout & Arrestor & Bracket	-	-	25	-			
19	Connect & Energize	5	5	30	-			
20	Prepare to Travel	5	5	5	5			
21	subtotal time (min)	106	132	167	76			
22	subtotal time (hr)	1.77	2.20	2.78	1.27			
23								
24								
25								
26	Install Conduit (# of feet)	OH	UG	Oil Switch	Timer			
27	Install Conductor (# of feet)	0	110	0	0			
28		0	110	0	0			
29								
30								
31								
32								
33								
34								
35	Scenario	Relay/Timer	Hrs/Unit	Conduit	Hrs/Unit	Cable	Hrs/Unit	Unit Cost
36	OH Relay	\$130.59	1.77					\$130.59
37	UG Relay	\$162.62	2.20	\$565.29	3.85	\$107.05	0.67	\$834.67
38	Oil Switch Relay, needs LN1	\$518.31	2.78					\$518.31
39	Timer	\$93.63	1.27					\$93.63

* Normalized by Relay Installation Ratio

Installation labor cost formula =crew hourly rate x (install double bracket)

MATERIAL AND LABOR ADJUSTMENTS

<u>Line No.</u>		
1	A&G, Non-productive, etc.	85.0%
2		
3	Small Tools % for TEC Field Labor	2.6%
4		
5	% Lighting Supv & Admin for TEC Labor	38.7%
6		
7	% Lighting Supv & Admin for Engr Labor - Installation	11.4%
8		
9	ED Material Handling	
10	Stores Clearing	12.08%
11	Inventory Carrying Cost	4.21%
12	Self Help Allocation	<u>4.37%</u>
13	ED Material Handling % Total	<u>20.66%</u>

STREET AND OUTDOOR LIGHTING (POLES AND MID FIXTURES)

	COST RATIO																		
	RATE																		
COMMON EQUITY	0.1125	0.5396	Property Tax Escalation Rate 1.00																
PREFERRED STOCK	0.0000	0.0000																	
DEBT	0.0660	0.4604																	
NET SALVAGE	0.00																		
BOOK DEPR. RATE	0.0588		INITIAL COST 1.00																
DISCOUNT RATE	0.0764		BOOK LIFE 17 Years																
TAX RATE	0.3656		TAX LIFE 7 Years																
ITC RATE	0.0000																		
OTHER TAX RATE	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	0.0185	
DEPRECIATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
TAX BASIS	1.000																		
TAX DEP RATE %	14.290	24.490	17.490	12.490	8.930	8.920	8.930	4.460											
TAX DEP	0.143	0.245	0.175	0.125	0.089	0.089	0.089	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
BOOK DEP	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059		
RATE BASE ADJUSTMENTS																			
DEFERRED TAXES	0.032	0.072	0.045	0.025	0.012	0.012	0.012	-0.005	-0.023	-0.023	-0.023	-0.023	-0.023	-0.023	-0.023	-0.023	-0.023		
ACC DEF TAXES	0.032	0.104	0.149	0.174	0.186	0.198	0.210	0.204	0.182	0.159	0.136	0.113	0.091	0.068	0.045	0.023	0.000		
ACC BOOK DEP	0.059	0.118	0.176	0.235	0.294	0.353	0.412	0.471	0.529	0.588	0.647	0.706	0.765	0.824	0.882	0.941	1.000		
ITC AMORTIZATION	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
ACC DEF ITC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
RATE BASE																			
NET PLANT	0.954	0.843	0.726	0.632	0.555	0.484	0.414	0.352	0.307	0.271	0.235	0.199	0.163	0.126	0.090	0.054	0.018		
AVG DEF TAXES	0.032	0.104	0.149	0.174	0.186	0.198	0.210	0.204	0.182	0.159	0.136	0.113	0.091	0.068	0.045	0.023	0.000		
AVG ITC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
AVG COMMON	0.515	0.455	0.382	0.341	0.299	0.281	0.223	0.190	0.186	0.146	0.127	0.107	0.088	0.068	0.049	0.029	0.010		
AVG PREF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
AVG DEBT	0.439	0.368	0.334	0.291	0.255	0.223	0.191	0.162	0.141	0.125	0.108	0.091	0.075	0.058	0.042	0.025	0.008		
REVENUE REQUIREMENTS																			
O & M EXPENSES	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
PROPERTY TAXES/INS	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019	0.019		
RETURN-DEBT	0.029	0.026	0.022	0.019	0.017	0.015	0.013	0.011	0.009	0.008	0.007	0.006	0.005	0.004	0.003	0.002	0.001		
RETURN-PREF	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
RETURN-COMMON	0.058	0.051	0.044	0.038	0.034	0.029	0.025	0.021	0.019	0.016	0.014	0.012	0.010	0.008	0.005	0.003	0.001		
RETURN-ITC	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
TOTAL RETURN	0.087	0.077	0.066	0.058	0.051	0.044	0.038	0.032	0.028	0.025	0.021	0.018	0.015	0.012	0.008	0.005	0.002		
CURRENT TAXES	0.004	-0.040	-0.017	-0.001	0.009	0.007	0.004	0.019	0.034	0.033	0.032	0.030	0.029	0.028	0.026	0.025	0.023		
TOTAL TAXES	0.036	0.032	0.028	0.024	0.021	0.018	0.016	0.013	0.012	0.010	0.009	0.008	0.006	0.005	0.003	0.002	0.001		
CASH DEP	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059		
TOTAL REVENUE REQ	0.201	0.186	0.171	0.159	0.149	0.140	0.131	0.123	0.117	0.112	0.108	0.103	0.098	0.094	0.089	0.084	0.080		
FIXED CHARGE RATE	0.20064	0.18631	0.17118	0.15904	0.14903	0.13991	0.13079	0.12279	0.11701	0.11234	0.10767	0.10300	0.09833	0.09366	0.08900	0.08433	0.07966		
PRESENT WORTH REVENUE REQUIREMENTS																			
2008 DOLLARS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		
NPV	0.201	0.173	0.147	0.126	0.110	0.098	0.083	0.072	0.064	0.056	0.050	0.044	0.039	0.035	0.031	0.027	0.023		
FIXED CHARGE RATE	0.20064	0.17261	0.14693	0.12647	0.10980	0.09550	0.08271	0.07194	0.06351	0.05649	0.05018	0.04446	0.03932	0.03470	0.03055	0.02682	0.02347		
CUM NPV	0.201	0.373	0.520	0.647	0.756	0.852	0.935	1.007	1.070	1.127	1.177	1.221	1.261	1.295	1.326	1.353	1.376		
K-FACTOR		1.3761																	
LEVELIZED FIXED CHARGE RATE		0.1392																	
DEPRECIATION BOOK LIFE		17																	

111

TAMPA ELECTRIC COMPANY
 DOCKET NO. 130040-EI
 LIGHTING INCREMENTAL COST STUDY - 2013
 SUPPLEMENTAL MFR SCHEDULE 13D
 WITNESS: ASHBURN
 PAGE 111 OF 111
 FILED: 04/05/2013