

PROJECT UNIT COST ANALYSIS

ESTIMATE OF QUANTITIES

PROJECT ID 2060-11-91

South Howell Avenue - Layton Avenue to Howard Avenue

STH 38

MILWAUKEE COUNTY

Item No.	Std. Bid Item No.	Description	Unit	Quantity	Excluded Costs	City Unit	City Total
90005-9	SPV.0060.01	METAL PEDESTAL CABINET (4-INCH x 4-INCH x 36-INCH)	EACH	47	\$ 2,295.48	\$ 97.28	\$ 4,572.16
90005-11	SPV.0060.02	RECTANGULAR POLYMER CONCRETE VAULT (13-INCH x 24-INCH x 18-INCH)	EACH	1	\$ 251.59	\$ 387.17	\$ 387.17
90005-13	SPV.0090.01	CABLE TYPE 3#2/1#8 LTP (UNDERGROUND)	LF	2600	\$ 10,795.55	\$ 6.35	\$ 16,510.00
90005-14	SPV.0090.02	CABLE TYPE 3#4/1#8 LTP (UNDERGROUND)	LF	2200	\$ 6,132.52	\$ 4.98	\$ 10,956.00
90005-15	SPV.0090.03	CABLE TYPE 3#6/1#8 LTP (UNDERGROUND)	LF	2900	\$ 5,519.36	\$ 4.10	\$ 11,890.00
90005-16	SPV.0090.04	CABLE TYPE 3#8/1#8 LTP (UNDERGROUND)	LF	1000	\$ 1,324.63	\$ 3.52	\$ 3,520.00
90005-22	SPV.0090.05	CABLE TYPE 1#8 AWG CONCENTRIC (UNDERGROUND)	LF	250	\$ 475.81	\$ 2.87	\$ 717.50
90005-28	674.0300	REMOVE CABLE	LF	8150	\$ -	\$ 1.03	\$ 8,394.50
90005-29	SPV.0060.03	SPLICE (HAND HOLE OR PEDESTAL)	EACH	60	\$ 1,660.58	\$ 95.15	\$ 5,709.00
90005-30	SPV.0060.04	SECONDARY SPLICE	EACH	1	\$ 12.91	\$ 125.37	\$ 125.37
90005-31	SPV.0060.05	PRIMARY SPLICE (1#8)	EACH	2	\$ 58.53	\$ 119.23	\$ 238.46
90005-39	SPV.0060.06	REMOVAL OF PRIMARY / SECONDARY RISER	EACH	13	\$ -	\$ 103.33	\$ 1,343.29
90005-46	SPV.0060.07	INSTALL POLES (A26 GRAY CONCRETE, DIRECT BURY)	EACH	2	\$ 1,557.08	\$ 1,040.55	\$ 2,081.10
90005-58	SPV.0060.08	INSTALL POLES (31 FT. ALUMINUM, DIRECT BURY)	EACH	1	\$ 630.94	\$ 892.98	\$ 892.98
90005-72	SPV.0060.09	REMOVE POLES (ALUMINUM, CONCRETE, STEEL, AND WOOD)	EACH	23	\$ -	\$ 376.63	\$ 8,662.49
90005-86	SPV.0060.10	INSTALL A21-A26 MOUNTING CLAMP (DOUBLE BRACKET)	EACH	2	\$ 109.69	\$ 79.07	\$ 158.14
90005-88	SPV.0060.11	INSTALL A31-AT31R MOUNTING CLAMP (DOUBLE BRACKET)	EACH	2	\$ 113.43	\$ 80.94	\$ 161.88
90005-94	SPV.0060.12	LUMINAIRE ARM SINGLE MEMBER (6 FT. LONG, 2 INCH DIA. ALUMINUM MITCHELL UPSWEEP BRACKET)	EACH	10	\$ 546.88	\$ 103.13	\$ 1,031.30
90005-110	SPV.0060.13	LUMINAIRES STREET LIGHTING (150W/240V COBRA FIXTURE & 150 WATT HPS LAMP)	EACH	4	\$ 458.34	\$ 187.25	\$ 749.00
90005-111	SPV.0060.14	LUMINAIRES STREET LIGHTING (250W/240V COBRA FIXTURE & 250 WATT HPS LAMP)	EACH	6	\$ 753.68	\$ 198.28	\$ 1,189.68
90005-114	SPV.0060.15	REMOVE LUMINAIRE OR CROSS ARM COMPLETE	EACH	34	\$ -	\$ 25.83	\$ 878.22
90005-132	602.0410	CONCRETE SIDEWALK 5-INCH	SQ.FT.	30	\$ 56.09	\$ 23.22	\$ 696.60

EXCLUDED COST \$ 32,753.09
LFA CONSTRUCTION COST \$ 80,864.84

APPROVED BY:



ROBERT W. BRYSON
CHIEF TRAFFIC AND LIGHTING ENGINEER

TRANSPORTATION SECTION
TRAFFIC AND LIGHTING DESIGN UNIT

DENIS KOZELEK
REVISED: 07-20-15

Please note that the Total Project Cost includes the embedded costs of mobilization, traffic control, electrical installations which are included in the times used for calculating City Unit Costs on the attached worksheets.

7/20/2015

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-9 Item: METAL PEDESTAL CABINET (4-INCH x 4-INCH x 36-INCH)						
Quantity: 47 Unit: EACH						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Pickup	0.500	23.500	\$2.20	\$ 51.70	
Total Machinery Charges					\$ 51.70	
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic	0.500	23.500	\$29.55	\$ 694.43	
	Electrical Worker	0.500	23.500	\$22.70	\$ 533.45	
Sub-Total Labor Cost					\$ 1,227.88	
Indirect Cost factor @ 6.33%					\$ 77.72	
Fringe Benefit Rate @ 79.09%					\$ 971.13	
Total Labor Cost					\$ 2,276.73	
Material Costs:	Item	Amount	Price	Total		
	metal pedestal housing (4"x4"x36")	47	\$43.73	\$ 2,055.31		
Sub-Total Material Cost				\$ 2,055.31		
Indirect Cost Factor @ 9.17%				\$ 188.47		
Total Material Cost				\$ 2,243.78		
TOTAL COST					\$ 4,572.21	
Total Cost Per Unit					\$ 97.28	
ROUNDED TOTAL COST					\$ 4,572.16	
Total Excluded Cost					\$ 2,295.48	

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-11 Item: RECTANGULAR POLYMER CONCRETE VAULT (13-INCH x 24-INCH x 18-INCH)						
Quantity: 1 Unit: EACH						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Compressors	1.000	1.000	\$0.93	\$ 0.93	
	Pickup	1.000	1.000	\$2.20	\$ 2.20	
	Van [Heavy]	1.000	1.000	\$3.03	\$ 3.03	
Total Machinery Charges					\$ 6.16	
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic (crew chief)	1.000	1.000	\$31.05	\$ 31.05	
	Electrical Worker	1.000	1.000	\$22.70	\$ 22.70	
	Laborer Electrical Services	1.000	1.000	\$19.37	\$ 19.37	
Sub-Total Labor Cost					\$ 73.12	
Indirect Cost factor @ 6.33%					\$ 4.63	
Fringe Benefit Rate @ 79.09%					\$ 57.83	
Total Labor Cost					\$ 135.58	
Material Costs:	Item	Amount	Price	Total		
	13"x24"x18" rectangular vault & cover	1	\$224.81	\$ 224.81		
Sub-Total Material Cost				\$ 224.81		
Indirect Cost Factor @ 9.17%				\$ 20.62		
Total Material Cost				\$ 245.43		
TOTAL COST					\$ 387.17	
Total Cost Per Unit					\$ 387.17	
ROUNDED TOTAL COST					\$ 387.17	
Total Excluded Cost					\$ 251.59	

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-13 Item: CABLE TYPE 3#2/1#8 LTP (UNDERGROUND)						
Quantity: 2600 Unit: LF						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Dump Truck (Med. & Lrg.)	0.009	23.400	\$4.94	\$ 115.60	
	Trailers (Pole & Cable)	0.009	23.400	\$0.32	\$ 7.49	
Total Machinery Charges					\$ 123.09	
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic (crew chief)	0.009	23.400	\$31.05	\$ 726.57	
	Electrical Worker	0.009	23.400	\$22.70	\$ 531.18	
	Special Laborer Electrical Services	0.009	23.400	\$20.82	\$ 487.19	
	City Laborer Regular	0.009	23.400	\$18.97	\$ 443.90	
	City Laborer Regular	0.009	23.400	\$18.97	\$ 443.90	
	City Laborer Regular	0.009	23.400	\$18.97	\$ 443.90	
Sub-Total Labor Cost					\$ 3,076.64	
Indirect Cost factor @ 6.33%					\$ 194.75	
Fringe Benefit Rate @ 79.09%					\$ 2,433.31	
Total Labor Cost					\$ 5,704.70	
Material Costs:	Item	Amount	Price	Total		
	3#2/1#8 LTP cable - secondary	2600	\$3.76	\$ 9,776.00		
Sub-Total Material Cost				\$ 9,776.00		
Indirect Cost Factor @ 9.17%				\$ 896.46		
Total Material Cost				\$ 10,672.46		
TOTAL COST					\$ 16,500.25	
Total Cost Per Unit					\$ 6.35	
ROUNDED TOTAL COST					\$ 16,510.00	
Total Excluded Cost					\$ 10,795.55	

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-14 Item: CABLE TYPE 3#4/1#8 LTP (UNDERGROUND)						
Quantity: 2200 Unit: LF						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Dump Truck (Med. & Lrg.)	0.009	19.800	\$4.94	\$ 97.81	
	Trailers (Pole & Cable)	0.009	19.800	\$0.32	\$ 6.34	
Total Machinery Charges					\$ 104.15	
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic (crew chief)	0.009	19.800	\$31.05	\$ 614.79	
	Electrical Worker	0.009	19.800	\$22.70	\$ 449.46	
	Special Laborer Electrical Services	0.009	19.800	\$20.82	\$ 412.24	
	City Laborer Regular	0.009	19.800	\$18.97	\$ 375.61	
	City Laborer Regular	0.009	19.800	\$18.97	\$ 375.61	
	City Laborer Regular	0.009	19.800	\$18.97	\$ 375.61	
Sub-Total Labor Cost					\$ 2,603.32	
Indirect Cost factor @ 6.33%					\$ 164.79	
Fringe Benefit Rate @ 79.09%					\$ 2,058.97	
Total Labor Cost					\$ 4,827.08	
Material Costs:	Item	Amount	Price	Total		
	3#4/1#8 LTP cable - secondary	2200	\$2.51	\$ 5,522.00		
Sub-Total Material Cost				\$ 5,522.00		
Indirect Cost Factor @ 9.17%				\$ 506.37		
Total Material Cost				\$ 6,028.37		
TOTAL COST					\$ 10,959.60	
Total Cost Per Unit					\$ 4.98	
ROUNDED TOTAL COST					\$ 10,956.00	
Total Excluded Cost					\$ 6,132.52	

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-15 Item: CABLE TYPE 3#6/1#8 LTP (UNDERGROUND)						
Quantity: 2900 Unit: LF						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Dump Truck (Med. & Lrg.)	0.009	26.100	\$4.94	\$ 128.93	
	Trailers (Pole & Cable)	0.009	26.100	\$0.32	\$ 8.35	
Total Machinery Charges					\$ 137.28	
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic (crew chief)	0.009	26.100	\$31.05	\$ 810.41	
	Electrical Worker	0.009	26.100	\$22.70	\$ 592.47	
	Special Laborer Electrical Services	0.009	26.100	\$20.82	\$ 543.40	
	City Laborer Regular	0.009	26.100	\$18.97	\$ 495.12	
	City Laborer Regular	0.009	26.100	\$18.97	\$ 495.12	
	City Laborer Regular	0.009	26.100	\$18.97	\$ 495.12	
Sub-Total Labor Cost					\$ 3,431.64	
Indirect Cost factor @ 6.33%					\$ 217.22	
Fringe Benefit Rate @ 79.09%					\$ 2,714.08	
Total Labor Cost					\$ 6,362.94	
Material Costs:	Item	Amount	Price	Total		
	3#6/1#8 LTP cable - secondary	2900	\$1.70	\$ 4,930.00		
Sub-Total Material Cost				\$ 4,930.00		
Indirect Cost Factor @ 9.17%				\$ 452.08		
Total Material Cost				\$ 5,382.08		
TOTAL COST					\$ 11,882.30	
Total Cost Per Unit					\$ 4.10	
ROUNDED TOTAL COST					\$ 11,890.00	
Total Excluded Cost					\$ 5,519.36	

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-16 Item: CABLE TYPE 3#8/1#8 LTP (UNDERGROUND)						
Quantity: 1000 Unit: LF						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Dump Truck (Med. & Lrg.)	0.009	9.000	\$4.94	\$ 44.46	
	Trailers (Pole & Cable)	0.009	9.000	\$0.32	\$ 2.88	
Total Machinery Charges					\$ 47.34	
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic (crew chief)	0.009	9.000	\$31.05	\$ 279.45	
	Electrical Worker	0.009	9.000	\$22.70	\$ 204.30	
	Special Laborer Electrical Services	0.009	9.000	\$20.82	\$ 187.38	
	City Laborer Regular	0.009	9.000	\$18.97	\$ 170.73	
	City Laborer Regular	0.009	9.000	\$18.97	\$ 170.73	
	City Laborer Regular	0.009	9.000	\$18.97	\$ 170.73	
Sub-Total Labor Cost					\$ 1,183.32	
Indirect Cost factor @ 6.33%					\$ 74.90	
Fringe Benefit Rate @ 79.09%					\$ 935.89	
Total Labor Cost					\$ 2,194.11	
Material Costs:	Item	Amount	Price	Total		
	3#8/1#8 LTP cablr - secondary	1000	\$1.17	\$ 1,170.00		
Sub-Total Material Cost				\$ 1,170.00		
Indirect Cost Factor @ 9.17%				\$ 107.29		
Total Material Cost				\$ 1,277.29		
TOTAL COST					\$ 3,518.74	
Total Cost Per Unit					\$ 3.52	
ROUNDED TOTAL COST					\$ 3,520.00	
Total Excluded Cost					\$ 1,324.63	

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-22 Item: CABLE TYPE 1#8 AWG CONCENTRIC (UNDERGROUND)						
Quantity: 250 Unit: LF						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Dump Truck (Med. & Lrg.)	0.009	2.250	\$4.94	\$	11.12
	Trailers (Pole & Cable)	0.009	2.250	\$0.32	\$	0.72
Total Machinery Charges					\$	11.84
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic	0.010	2.500	\$29.55	\$	73.88
	Electrical Worker	0.010	2.500	\$22.70	\$	56.75
Sub-Total Labor Cost					\$	130.63
Indirect Cost factor @ 6.33%					\$	8.27
Fringe Benefit Rate @ 79.09%					\$	103.32
Total Labor Cost					\$	242.22
Material Costs:	Item	Amount	Price	Total		
	1#8 concentric cable - primary	250	\$1.70	\$	425.00	
Sub-Total Material Cost					\$	425.00
Indirect Cost Factor @ 9.17%					\$	38.97
Total Material Cost					\$	463.97
TOTAL COST					\$	718.03
Total Cost Per Unit					\$	2.87
ROUNDED TOTAL COST					\$	717.50
Total Excluded Cost					\$	475.81

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-28 Item: REMOVE CABLE						
Quantity: 8150 Unit: LF.						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Aerial/Boom Trucks	0.010	81.500	\$6.45	\$	525.68
Total Machinery Charges					\$	525.68
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic	0.010	81.500	\$29.55	\$	2,408.33
	Electrical Worker	0.010	81.500	\$22.70	\$	1,850.05
Sub-Total Labor Cost					\$	4,258.38
Indirect Cost factor @ 6.33%					\$	269.56
Fringe Benefit Rate @ 79.09%					\$	3,367.95
Total Labor Cost					\$	7,895.89
Material Costs:	Item	Amount	Price	Total		
Sub-Total Material Cost					\$	-
Indirect Cost Factor @ 9.17%					\$	-
Total Material Cost					\$	-
TOTAL COST					\$	8,421.57
Total Cost Per Unit					\$	1.03
ROUNDED TOTAL COST					\$	8,394.50
Total Excluded Cost					\$	-

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-46 Item: INSTALL POLES (A26 GRAY CONCRETE, DIRECT BURY)						
Quantity: 2 Unit: EACH						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Constr. Equipment - Large	1.500	3.000	\$6.74	\$	20.22
	Dump Truck (Small)	1.500	3.000	\$3.97	\$	11.91
	Trailers (Pole & Cable)	1.500	3.000	\$0.32	\$	0.96
Total Machinery Charges					\$	33.09
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic (crew chief)	1.500	3.000	\$31.05	\$	93.15
	Electrical Worker	1.666	3.332	\$22.70	\$	75.64
	City Laborer Regular	1.500	3.000	\$18.97	\$	56.91
	City Laborer Regular	1.500	3.000	\$18.97	\$	56.91
Sub-Total Labor Cost					\$	282.61
Indirect Cost factor @ 6.33%					\$	17.89
Fringe Benefit Rate @ 79.09%					\$	223.52
Total Labor Cost					\$	524.02
Material Costs:	Item	Amount	Price	Total		
	A26 concrete pole direct burial	2	\$678.74	\$	1,357.48	
35 ft Riser	3#12 UF cable - secondary	2	\$19.25	\$	38.50	
Sub-Total Material Cost				\$	1,395.98	
Indirect Cost Factor @ 9.17%				\$	128.01	
Total Material Cost				\$	1,523.99	
TOTAL COST					\$	2,081.10
Total Cost Per Unit					\$	1,040.55
ROUNDED TOTAL COST					\$	2,081.10
Total Excluded Cost					\$	1,557.08

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-58 Item: INSTALL POLES (31 FT. ALUMINUM, DIRECT BURY)						
Quantity: 1 Unit: EACH						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Constr. Equipment - Large	1.500	1.500	\$6.74	\$	10.11
	Dump Truck (Small)	1.500	1.500	\$3.97	\$	5.96
	Trailers (Pole & Cable)	1.500	1.500	\$0.32	\$	0.48
Total Machinery Charges					\$	16.55
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic (crew chief)	1.500	1.500	\$31.05	\$	46.58
	Electrical Worker	1.666	1.666	\$22.70	\$	37.82
	City Laborer Regular	1.500	1.500	\$18.97	\$	28.46
	City Laborer Regular	1.500	1.500	\$18.97	\$	28.46
Sub-Total Labor Cost					\$	141.32
Indirect Cost factor @ 6.33%					\$	8.95
Fringe Benefit Rate @ 79.09%					\$	111.77
Total Labor Cost					\$	262.04
Material Costs:	Item	Amount	Price	Total		
	31' aluminum pole direct burial	1	\$540.78	\$	540.78	
40 ft Riser	3#12 UF cable - secondary	1	\$22.00	\$	22.00	
Sub-Total Material Cost				\$	562.78	
Indirect Cost Factor @ 9.17%				\$	51.61	
Total Material Cost				\$	614.39	
TOTAL COST					\$	892.98
Total Cost Per Unit					\$	892.98
ROUNDED TOTAL COST					\$	892.98
Total Excluded Cost					\$	630.94

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-72 Item: REMOVE POLES (ALUMINUM, CONCRETE, STEEL, AND WOOD)						
EXAMPLE: 22'AL,A21,30'OCT,35'WP						
Quantity: 23 Unit: EACH						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Constr. Equipment - Large	1.000	23.000	\$6.74	\$ 155.02	
	Dump Truck (Small)	1.000	23.000	\$3.97	\$ 91.31	
	Misc. Large Truck	1.500	34.500	\$3.20	\$ 110.40	
	Trailers (Pole & Cable)	1.000	23.000	\$0.32	\$ 7.36	
Total Machinery Charges					\$ 364.09	
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic (crew chief)	1.000	23.000	\$31.05	\$ 714.15	
	Electrical Mechanic	1.500	34.500	\$29.55	\$ 1,019.48	
	Electrical Worker	2.500	57.500	\$22.70	\$ 1,305.25	
	Special Laborer Electrical Services	1.000	23.000	\$20.82	\$ 478.86	
	Special Laborer Electrical Services	1.000	23.000	\$20.82	\$ 478.86	
	Special Laborer Electrical Services	1.000	23.000	\$20.82	\$ 478.86	
Sub-Total Labor Cost					\$ 4,475.46	
Indirect Cost factor @ 6.33%					\$ 283.30	
Fringe Benefit Rate @ 79.09%					\$ 3,539.64	
Total Labor Cost					\$ 8,298.40	
Material Costs:	Item	Amount	Price	Total		
				Sub-Total Material Cost	\$ -	
				Indirect Cost Factor @ 9.17%	\$ -	
				Total Material Cost	\$ -	
TOTAL COST					\$ 8,662.49	
Total Cost Per Unit					\$ 376.63	
ROUNDED TOTAL COST					\$ 8,662.49	
Total Excluded Cost					\$ -	

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-94 Item: LUMINAIRE ARM SINGLE MEMBER (6 FT. LONG, 2 INCH DIA. ALUMINUM MITCHELL UPSWEEP BRACKET)						
Quantity: 10 Unit: EACH						
Machinery	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Aerial/Boom Trucks	0.500	5.000	\$6.45	\$ 32.25	
Total Machinery Charges					\$ 32.25	
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic	0.500	5.000	\$29.55	\$ 147.75	
	Electrical Worker	0.500	5.000	\$22.70	\$ 113.50	
Sub-Total Labor Cost					\$ 261.25	
Indirect Cost factor @ 6.33%					\$ 16.54	
Fringe Benefit Rate @ 79.09%					\$ 206.62	
Total Labor Cost					\$ 484.41	
Material Costs:	Item	Amount	Price	Total		
	Mitchell 6' upsweep bracket	10	\$47.14	\$ 471.40		
				Sub-Total Material Cost	\$ 471.40	
				Indirect Cost Factor @ 9.17%	\$ 43.23	
				Total Material Cost	\$ 514.63	
TOTAL COST					\$ 1,031.29	
Total Cost Per Unit					\$ 103.13	
ROUNDED TOTAL COST					\$ 1,031.30	
Total Excluded Cost					\$ 546.88	

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-88 Item: INSTALL A31-AT31R MOUNTING CLAMP (DOUBLE BRACKET)						
Quantity: 2 Unit: EACH						
Machinery Charges:	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Aerial/Boom Trucks	0.250	0.500	\$6.45	\$	3.23
Total Machinery Charges						\$ 3.23
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic	0.250	0.500	\$29.55	\$	14.78
	Electrical Worker	0.250	0.500	\$22.70	\$	11.35
Sub-Total Labor Cost						\$ 26.13
Indirect Cost factor @ 6.33%						\$ 1.65
Fringe Benefit Rate @ 79.09%						\$ 20.67
Total Labor Cost						\$ 48.45
Material Costs:	Item	Amount	Price	Total		
	A31 mounting clamp double bracket	2	\$50.47	\$	100.94	
Sub-Total Material Cost						\$ 100.94
Indirect Cost Factor @ 9.17%						\$ 9.26
Total Material Cost						\$ 110.20
TOTAL COST						\$ 161.88
Total Cost Per Unit						\$ 80.94
ROUNDED TOTAL COST						\$ 161.88
Total Excluded Cost						\$ 113.43

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-86 Item: INSTALL A21-A26 MOUNTING CLAMP (DOUBLE BRACKET)						
Quantity: 2 Unit: EACH						
Machinery Charges:	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Aerial/Boom Trucks	0.250	0.500	\$6.45	\$	3.23
Total Machinery Charges						\$ 3.23
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic	0.250	0.500	\$29.55	\$	14.78
	Electrical Worker	0.250	0.500	\$22.70	\$	11.35
Sub-Total Labor Cost						\$ 26.13
Indirect Cost factor @ 6.33%						\$ 1.65
Fringe Benefit Rate @ 79.09%						\$ 20.67
Total Labor Cost						\$ 48.45
Material Costs:	Item	Amount	Price	Total		
	A21/A26 mounting clamp double bracket	2	\$48.76	\$	97.52	
Sub-Total Material Cost						\$ 97.52
Indirect Cost Factor @ 9.17%						\$ 8.94
Total Material Cost						\$ 106.46
TOTAL COST						\$ 158.14
Total Cost Per Unit						\$ 79.07
ROUNDED TOTAL COST						\$ 158.14
Total Excluded Cost						\$ 109.69

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-110 Item: LUMINAIRES STREET LIGHTING (150W/240V COBRA FIXTURE & 150 WATT HPS LAMP)						
Quantity: 4 Unit: EACH						
Machinery Charges:	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Aerial/Boom Trucks	0.750	3.000	\$6.45	\$ 19.35	
Total Machinery Charges					\$ 19.35	
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic	0.750	3.000	\$29.55	\$ 88.65	
	Electrical Worker	0.750	3.000	\$22.70	\$ 68.10	
Sub-Total Labor Cost					\$ 156.75	
Indirect Cost factor @ 6.33%					\$ 9.92	
Fringe Benefit Rate @ 79.09%					\$ 123.97	
Total Labor Cost					\$ 290.64	
Material Costs:	Item	Amount	Price	Total		
	150 watt/240 volt cobra fixture	4	\$89.01	\$ 356.04		
	150 watt H.P.S. lamp	4	\$11.52	\$ 46.08		
Sub-Total Material Cost					\$ 402.12	
Indirect Cost Factor @ 9.17%					\$ 36.87	
Total Material Cost					\$ 438.99	
TOTAL COST					\$ 748.98	
Total Cost Per Unit					\$ 187.25	
ROUNDED TOTAL COST					\$ 749.00	
Total Excluded Cost					\$ 458.34	

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue Highway: STH 38 County: Milwaukee						
Item Number: 90005-111 Item: LUMINAIRES STREET LIGHTING (250W/240V COBRA FIXTURE & 250 WATT HPS LAMP)						
Quantity: 6 Unit: EACH						
Machinery Charges:	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Aerial/Boom Trucks	0.750	4.500	\$6.45	\$ 29.03	
Total Machinery Charges					\$ 29.03	
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic	0.750	4.500	\$29.55	\$ 132.98	
	Electrical Worker	0.750	4.500	\$22.70	\$ 102.15	
Sub-Total Labor Cost					\$ 235.13	
Indirect Cost factor @ 6.33%					\$ 14.88	
Fringe Benefit Rate @ 79.09%					\$ 185.96	
Total Labor Cost					\$ 435.97	
Material Costs:	Item	Amount	Price	Total		
	250 watt/240 volt cobra fixture	6	\$100.70	\$ 604.20		
	250 watt H.P.S. lamp	6	\$9.93	\$ 59.58		
Sub-Total Material Cost					\$ 663.78	
Indirect Cost Factor @ 9.17%					\$ 60.87	
Total Material Cost					\$ 724.65	
TOTAL COST					\$ 1,189.65	
Total Cost Per Unit					\$ 198.28	
ROUNDED TOTAL COST					\$ 1,189.68	
Total Excluded Cost					\$ 753.68	

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue
 Highway: STH 38
 County: Milwaukee

Item Number: **90005-30**
 Item: **SECONDARY SPLICE**

Quantity: 1
 Unit: EACH

Machinery Charges:	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total
	Van [Heavy]	1.25	1.250	\$3.03	\$ 3.79
Total Machinery Charges					\$ 3.79

Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total
	Electrical Mechanic	1.25	1.250	\$29.55	\$ 36.94
	City Laborer Regular	1.25	1.250	\$18.97	\$ 23.71
Sub-Total Labor Cost					\$ 60.65
Indirect Cost factor @ 6.33%					\$ 3.84
Fringe Benefit Rate @ 79.09%					\$ 47.97
Total Labor Cost					\$ 112.46

Material Costs:	Item	Amount	Price	Total
	Sleeve, splicing, pvc, 2 in. X 12 in. inside bore	1.00	\$ 3.14	\$ 3.14
	Tape, rubber, 3/4 in.	1.00	\$ 2.25	\$ 2.25
	Resin & hardener, expoxy electrical grade	1.00	\$2.96	\$ 2.96
Sub-Total Material Cost				\$ 8.35
Indirect Cost Factor @ 9.17%				\$ 0.77
Total Material Cost				\$ 9.12
TOTAL COST				\$ 125.37
Total Cost Per Unit				\$ 125.37
ROUNDED TOTAL COST				\$ 125.37
Total Excluded Cost				\$ 12.91

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue
 Highway: STH 38
 County: Milwaukee

Item Number: **90005-31**
 Item: **PRIMARY SPLICE (1#8)**

Quantity: 2
 Unit: EACH

Machinery Charges:	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total
	Van [Heavy]	1	2.000	\$3.03	\$ 6.06
Total Machinery Charges					\$ 6.06

Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total
	Electrical Mechanic	1	2.000	\$29.55	\$ 59.10
	City Laborer Regular	1	2.000	\$18.97	\$ 37.94
Sub-Total Labor Cost					\$ 97.04
Indirect Cost factor @ 6.33%					\$ 6.14
Fringe Benefit Rate @ 79.09%					\$ 76.75
Total Labor Cost					\$ 179.93

Material Costs:	Item	Amount	Price	Total
	Sleeve Assembly, transformer, epoxy	3.00	\$3.14	\$ 9.42
	Tape, electrical, 3/4 in. X 15 ft. semi-conducting	3.00	\$9.92	\$ 29.76
	Resin & hardener, expoxy electrical grade	3.00	\$2.96	\$ 8.88
Sub-Total Material Cost				\$ 48.06
Indirect Cost Factor @ 9.17%				\$ 4.41
Total Material Cost				\$ 52.47
TOTAL COST				\$ 238.46
Total Cost Per Unit				\$ 119.23
ROUNDED TOTAL COST				\$ 238.46
Total Excluded Cost				\$ 58.53

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue
 Highway: STH 38
 County: Milwaukee

Item Number: **90005-29**
 Item: **SPLICE (HAND HOLE OR PEDESTAL)**

Quantity: 60
 Unit: EACH

Machinery Charges:	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total
	Van [Heavy]	0.75	45.000	\$3.03	\$ 136.35
Total Machinery Charges					\$ 136.35

Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total
	Electrical Mechanic	0.75	45.000	\$29.55	\$ 1,329.75
	City Laborer Regular	0.75	45.000	\$18.97	\$ 853.65
Sub-Total Labor Cost					\$ 2,183.40
Indirect Cost factor @ 6.33%					\$ 138.21
Fringe Benefit Rate @ 79.09%					\$ 1,726.85
Total Labor Cost					\$ 4,048.46

Material Costs:	Item	Amount	Price	Total
	Contact aid, electrical	60.00	\$8.51	\$ 510.60
	Tape, electrical, 3/4 in. X 15 ft. semi-conducting	60.00	\$9.92	\$ 595.20
	Connector,split bolt, 3 conductor 1/0 to 14, AL. to CU, 600v ins	120.00	\$2.42	\$ 290.40
Sub-Total Material Cost				\$ 1,396.20
Indirect Cost Factor @ 9.17%				\$ 128.03
Total Material Cost				\$ 1,524.23
TOTAL COST				\$ 5,709.04
Total Cost Per Unit				\$ 95.15
ROUNDED TOTAL COST				\$ 5,709.00
Total Excluded Cost				\$ 1,660.58

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue
 Highway: STH 38
 County: Milwaukee

Item Number: **90005-39**
 Item: **REMOVAL OF PRIMARY / SECONDARY RISER**

Quantity: 13
 Unit: EACH

Machinery Charges:	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total
	Aerial/Boom Trucks	1.000	13.000	\$6.45	\$ 83.85
Total Machinery Charges					\$ 83.85

Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total
	Electrical Mechanic	1.000	13.000	\$29.55	\$ 384.15
	Electrical Worker	1.000	13.000	\$22.70	\$ 295.10
Sub-Total Labor Cost					\$ 679.25
Indirect Cost factor @ 6.33%					\$ 43.00
Fringe Benefit Rate @ 79.09%					\$ 537.22
Total Labor Cost					\$ 1,259.47

Material Costs:	Item	Amount	Price	Total
Sub-Total Material Cost				\$ -
Indirect Cost Factor @ 9.17%				\$ -
Total Material Cost				\$ -
TOTAL COST				\$ 1,343.32
Total Cost Per Unit				\$ 103.33
ROUNDED TOTAL COST				\$ 1,343.29
Total Excluded Cost				\$ -

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue						
Highway: STH 38						
County: Milwaukee						
Item Number:	90005-132		(BID #602.0410)			
Item:	CONCRETE SIDEWALK 5-INCH					
Quantity:	30	Unit: SQ.FT.				
Converted	12.500	Unit: CU..FT.				
Converted	0.4630	Unit: CU..YD.				
Machinery Charges:	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Pickup	0.1666	4.9980	\$2.20	\$ 11.00	
	Compressors	0.1666	4.9980	\$0.93	\$ 4.65	
	Total Machinery Charges					\$ 15.65
Labor Costs:	Position	Each Square Foot Unit	Total Hours	Hourly Rate	Total	
	Cement Finisher	0.1666	4.9980	\$27.46	\$ 137.25	
	Special Laborer Electrical Services	0.1666	4.9980	\$20.82	\$ 104.06	
	Special Laborer Electrical Services	0.1666	4.9980	\$20.82	\$ 104.06	
	Sub-Total Labor Cost					\$ 345.37
	Indirect Cost factor @ 6.33%					\$ 21.86
	Fringe Benefit Rate @ 79.09%					\$ 273.15
	Total Labor Cost					\$ 640.38
Material Costs:	Item	Amount (cu.yd.)	Price	Total		
	concrete	(cubic yard)	0.4630	\$80.00	\$ 37.04	
	Sub-Total Material Cost					\$ 37.04
	Indirect Cost Factor @ 9.17%					\$ 3.40
	Total Material Cost					\$ 40.44
	TOTAL COST					\$ 696.47
	Total Cost Per Unit					\$ 23.22
	ROUNDED TOTAL COST					\$ 696.60
	Total Excluded Cost					\$ 56.09

Project ID: South Howell Avenue - Layton Avenue to Howard Avenue						
Highway: STH 38						
County: Milwaukee						
Item Number:	90005-114					
Item:	REMOVE LUMINAIRE OR CROSS ARM COMPLETE					
Quantity:	34	Unit: EACH				
Machinery Charges:	Equipment	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Aerial/Boom Trucks	0.250	8.500	\$6.45	\$ 54.83	
	Total Machinery Charges					\$ 54.83
Labor Costs:	Position	Hours Per Each Unit	Total Hours	Hourly Rate	Total	
	Electrical Mechanic	0.250	8.500	\$29.55	\$ 251.18	
	Electrical Worker	0.250	8.500	\$22.70	\$ 192.95	
	Sub-Total Labor Cost					\$ 444.13
	Indirect Cost factor @ 6.33%					\$ 28.11
	Fringe Benefit Rate @ 79.09%					\$ 351.26
	Total Labor Cost					\$ 823.50
Material Costs:	Item	Amount	Price	Total		
		34		\$ -		
	Sub-Total Material Cost					\$ -
	Indirect Cost Factor @ 9.17%					\$ -
	Total Material Cost					\$ -
	TOTAL COST					\$ 878.33
	Total Cost Per Unit					\$ 25.83
	ROUNDED TOTAL COST					\$ 878.22
	Total Excluded Cost					\$ -