

OVERHEAD CIRCUIT #2 ALUMINUM (4 WIRE)

I. Quantity

The base bid shall include the specified number of feet of overhead circuit #2 Alum (4 Wire) furnished and supplied as hereinafter specified.

II. Material

- a. Wire - The single conductor aluminum wire shall consist of one ACSR #2, 7 strand 6/1, conductor. The wire shall have .047 inches of cross linked polyethylene insulation rated at 600V. The single conductor wire shall be code worded "PIGNUT".
- b. Secondary Racks with Spool Insulators - The secondary racks shall be heavy duty, hot dipped galvanized steel, with four 3" Spool Insulators, approved equal to Porcelain Products Catalogue #3948.
- c. Secondary Rack Extension brackets - The secondary rack 9" or 21" extension bracket shall be heavy duty, hot dipped galvanized steel, approved equal to Cooper Catalogue #DR2E1 or DR2E2.
- d. Splices - The splices shall be compression type, aluminum, equal to Burndy product.
- e. Tie Wire - The tie wires shall be #6 aluminum.
- f. Through Bolts - The through bolts, nuts, and washers shall be hot dipped galvanized, 5/8" diameter.
- g. Insulating Pads - The insulating pads shall be approximately 3 1/4" x 4 1/2" x .125" Scotch #2200 or approved equal.

III. Installation

- a. The overhead circuit shall be installed in the locations shown on the drawings and as indicated in the field by the engineer.
- b. Secondary rack extension brackets shall be used in locations shown on the drawings and indicated in the field by the engineer.

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- c. The wire shall be strung and sagged in accordance with DOE DWG. 01S0117

and as instructed in the field by the engineer.

- d. The overhead circuit shall consist of four wires strung on the secondary racks in the areas indicated.
- e. All clearances indicated in the National Electrical Safety Code shall be maintained throughout and any relocation of existing facilities required or indicated for such clearance shall be obtained by the contractor and included in the unit price bid under this item.
- f. All racks at dead-ends or at angle points shall be installed by bolting through the pole.
- g. Preformed coated dead-ends of the appropriate size shall be used at circuit terminations and directed by the engineer.
- h. All lines side splices and taps shall be insulated with an insulating pad.

IV. Quotation

The overhead circuit #2 Alum (4 Wire) as hereinbefore specified, shall be quoted on as a unit price per foot in the appropriate places in this document.

SAG AND TENSION DATA FOR
STREET LIGHTING PIGNUT

SPAN = 100 Ft.			SPAN = 110 Ft.			SPAN = 120 Ft.			SPAN = 130 Ft.			SPAN = 140 Ft.		
TEMP.	SAG	TENSION												
F	Ft.	Lb.												
0	.13	1202	0	.15	1202	0	.18	1202	0	.22	1201	0	.25	1201
10.	.13	1160	10.	.16	1160	10.	.19	1159	10.	.22	1159	10.	.26	1159
20.	.14	1116	20.	.17	1116	20.	.20	1116	20.	.23	1116	20.	.27	1115
30.	.14	1072	30.	.17	1071	30.	.21	1071	30.	.24	1071	30.	.28	1071
40.	.15	1025	40.	.18	1025	40.	.22	1025	40.	.25	1025	40.	.29	1025
50.	.16	977	50.	.19	977	50.	.23	977	50.	.27	977	50.	.31	977
60.	.17	928	60.	.20	928	60.	.24	928	60.	.28	928	60.	.32	928
70.	.18	877	70.	.21	877	70.	.25	877	70.	.30	877	70.	.34	877
80.	.19	824	80.	.23	824	80.	.27	825	80.	.32	825	80.	.37	825
90.	.20	770	90.	.24	770	90.	.29	771	90.	.34	771	90.	.39	772
100.	.22	714	100.	.26	715	100.	.31	715	100.	.36	716	100.	.42	717

SPAN = 150 Ft.			SPAN = 160 Ft.			SPAN = 170 Ft.			SPAN = 180 Ft.			SPAN = 190 Ft.		
TEMP.	SAG	TENSION												
F	Ft.	Lb.												
0	.29	1200	0	.33	1200	0	.37	1200	0	.42	1199	0	.46	1199
10.	.30	1158	10.	.34	1158	10.	.38	1158	10.	.43	1157	10.	.48	1157
20.	.31	1115	20.	.35	1115	20.	.40	1115	20.	.45	1114	20.	.50	1114
30.	.32	1070	30.	.37	1070	30.	.42	1070	30.	.47	1070	30.	.52	1069
40.	.34	1024	40.	.38	1024	40.	.43	1024	40.	.49	1024	40.	.54	1024
50.	.35	977	50.	.40	977	50.	.45	977	50.	.51	976	50.	.57	976
60.	.37	928	60.	.42	928	60.	.48	928	60.	.54	928	60.	.60	928
70.	.39	877	70.	.45	878	70.	.51	878	70.	.57	878	70.	.63	878
80.	.42	825	80.	.48	826	80.	.54	826	80.	.60	826	80.	.67	827
90.	.45	772	90.	.51	773	90.	.57	773	90.	.64	774	90.	.72	774
100.	.48	717	100.	.55	718	100.	.62	719	100.	.69	720	100.	.77	721

SPAN = 200 Ft.			SPAN = 210 Ft.			SPAN = 220 Ft.		
TEMP.	SAG	TENSION	TEMP.	SAG	TENSION	TEMP.	SAG	TENSION
F	Ft.	Lb.	F	Ft.	Lb.	F	Ft.	Lb.
0	.51	1198	0	.57	1198	0	.63	1180
10.	.53	1156	10.	.59	1156	10.	.65	1138
20.	.55	1113	20.	.61	1113	20.	.68	1094
30.	.58	1069	30.	.63	1069	30.	.71	1050
40.	.60	1023	40.	.66	1023	40.	.74	1004
50.	.63	976	50.	.69	976	50.	.78	957
60.	.66	928	60.	.73	928	60.	.82	908
70.	.70	878	70.	.77	878	70.	.87	858
80.	.74	827	80.	.82	828	80.	.92	808
90.	.79	775	90.	.87	776	90.	.98	756
100.	.85	722	100.	.94	723	100.	1.06	703

MELP

MUNICIPAL ELECTRIC LIGHT & POWER SYSTEM
CITY OF COLUMBUS, OHIO
DEPT. OF UTILITIES - DIVISION OF ELECTRICITY

SAG AND TENSION DATA FOR
STREET LIGHTING PIGNUT

REVISIONS

SCALE NONE

DRAWN LS 11/93

DRAWING NO. 01S0117

C. D. NUMBER

APPROVED

SHEET 1 OF 1