

I. MATERIALS

THE ALUMINUM POLE SHALL BE AS FOLLOWS:

THE SHAFT SHALL BE A ONE PIECE, ROUND, TAPERED ALUMINUM TUBE, SATIN GROUND, HAVING A BASE WELDED TO THE LOWER END AND COMPLETE WITH ANCHOR BOLTS, ALUMINUM TRANSFORMER BASE, AND 2" DIAMETER BY 14" LONG HORIZONTAL TENON NEAR THE TOP OF THE SHAFT FOR SIDE MOUNTING A RECTANGULAR LIGHTING FIXTURE. THE COMPLETE UNIT SHALL BE DESIGNED FOR WIND LOADING OF 90 MPH, 3 SECOND GUST PER AASHTO 2013. THE SHAFT SHALL HAVE NO LONGITUDINAL OR CIRCUMFERENTIAL WELDS EXCEPT AT THE LOWER END JOINING THE SHAFT TO THE BASE. THE SHAFT SHALL BE 8" X 4.5" X APPROXIMATELY 38'-3" WITH MINIMUM WALL THICKNESS OF 0.188 INCH. THE SHAFT SHALL HAVE A TRUE CONTINUOUS TAPER EXCEPT FOR THE BOTTOM SECTIONS WHICH MAY BE STRAIGHT. NO MORE THAN 40 PER CENT OF THE TOTAL SHAFT SHALL BE STRAIGHT. THE TOP OF THE SHAFT SHALL BE EQUIPPED WITH A CAST ALUMINUM REMOVABLE POLE TOP HELD SECURELY IN PLACE BY MEANS OF SET SCREWS. THE POLE SHALL BE FURNISHED WITH A TWO PIECE BASE COVER. VIBRATION DAMPER SHALL BE INCLUDED.

THE ALUMINUM TRANSFORMER BASE SHALL BE 17" HIGH, 15.38" SQUARE AT THE BASE AND 13.12" SQUARE AT THE TOP. THE DOOR SHALL BE ATTACHED TO THE BASE WITH A STAINLESS STEEL PIANO HINGE. THE HINGE SHALL BE PLACED AT THE TOP OF THE DOOR AND ATTACHED TO THE BASE AND THE DOOR WITH STAINLESS STEEL RIVETS. THE DOOR SHALL BE HELD IN PLACE WITH A TAMPER RESISTANT FASTENER AT THE BOTTOM. EACH BASE SHALL BE PROVIDED WITH FOUR (4) LOOSE BEARING PLATES AND NUTS TO FASTEN THE BASE DOWN TO THE ANCHOR BOLTS. THE TRANSFORMER BASE SHALL FASTEN TO THE SHAFT ANCHOR BASE BY FOUR (4) LOOSE BEARING PLATES AND FOUR (4) HOT DIPPED GALVANIZED HEX HEAD STEEL MACHINE BOLTS AND NUTS. ALL BEARING PLATES SHALL BE HOT DIPPED GALVANIZED. A 1/2"-13 UNC TAPPED HOLE SHALL BE PROVIDED FOR A GROUNDING LUG.

FOUR (4) 1"x48"+4" HIGH STRENGTH, HOT DIPPED GALVANIZED, HOOKED STEEL ANCHOR BOLTS, FITTED WITH A HEX NUT, SHALL BE FURNISHED WITH THE POLES. EACH ANCHOR BOLT BE THREADED AT THE TOP END. THREADED ENDS AND ALL NUTS SHALL BE GALVANIZED. ANCHOR BOLTS SHALL BE CAPABLE OF RESISTING AT YIELD STRENGTH STRESS THE BENDING MOVEMENT OF THE SHAFT AT ITS YIELD STRENGTH STRESS.

ALL HARDWARE (BOLTS, NUTS, AND WASHERS—BUT NOT INCLUDING ANCHOR BOLTS) NOT OTHERWISE SPECIFICALLY DESIGNATED IN THIS SPECIFICATION SHALL BE ALUMINUM OR STAINLESS STEEL (AT THE OPTION OF THE SUPPLIER). POLE SHAFTS AND TENONS SHALL BE TIE-WRAPPED WITH A HEAVY WATER RESISTANT PAPER FOR PROTECTION DURING SHIPMENT AND INSTALLATION.

THE COMPLETE POLE SHALL BE PER HAPCO DRAWING #B67777-002 OR APPROVED EQUAL IN DESIGN, QUALITY AND PERFORMANCE.

ALL ALUMINUM SURFACES ON THE POLE AND BASE COVER SHALL BE ROTARY SANDED TO A SATIN GROUND FINISH AND BRACKETS SHALL BE ETCHED TO A MATTE FINISH. THE SHAFT, BRACKET, AND TRANSFORMER BASE SHALL BE FINISHED DARK BRONZE. THE FINISH SHALL BE AN ELECTRO-STATICALLY APPLIED POLYESTER OR URETHANE POWDER COAT, OVEN CURED AND BONDED AT APPROXIMATELY 400 DEGREES F, TO A DRY FILM THICKNESS OF 2-4 MILS.

II. INSTALLATION

THE POLES AND BASES SHALL BE SET ON THE FOUNDATIONS AND SECURELY ANCHORED TO THE ANCHOR BOLTS. THE POLE BASE SHALL BE PROPERLY PLUMBED BY MEANS OF METAL SHIMS. AFTER ERECTION, EACH LIGHT POLE SHALL BE ADEQUATELY GROUNDED, AND HAVE TRANSFORMER BASE DOORS FASTENED IN PLACE.

THIS POLE IS REQUIRED TO USE MIS-202; STREET LIGHT FOUNDATION, 8' (PAID SEPARATELY) FOR NEW POLE INSTALLATIONS.

III. BASIS OF PAYMENT

ITEM	UNIT	DESCRIPTION
MIS-309	EACH	POLE, ALUMINUM, 14" TENON, T-BASE, 40' MOUNTING HEIGHT

MIS-309	CITY OF COLUMBUS, OHIO DEPT. OF PUBLIC UTILITIES - DIVISION OF POWER		
	POLE, ALUMINUM, 14" TENON, T-BASE, 40' MOUNTING HEIGHT		
	DRAWN BY: SAW	DATE: 12/13/23	
	SCALE: NONE	SHEET: 1 OF 1	309