I. MATERIALS

THE ALUMINUM LIGHT POLE SHALL BE AS FOLLOWS:

THE SHAFT SHALL BE A ONE–PIECE, SEAMLESS, ROUND TAPERED TUBE OF ALLOY 6063 AND SHALL BE FULL–LENGTH HEAT TREATED AFTER WELDING ON THE BASE FLANGE TO PRODUCE A T6 TEMPER. THE SHAFT SHALL BE 8" O.D. AT THE BASE, HAVE A WALL THICKNESS OF .188" AND BE 33'–3" IN LENGTH INCLUDING A STRAIGHT (UN–TAPERED) TOP SECTION 5'–6" LONG WITH AN O.D. OF 4 1/16".

THE SECTION FROM 5'–6" TO 1'–6", FROM THE TOP OF THE SHAFT, SHALL BE SCRIBED OR STAMPED WITH MARKS AT 6" INTERVALS. THE NUMBERS 39', 40', 41', 42' AND 43' SHALL BE PLACED AT THE MARKS AT 12" INTERVALS TO IDENTIFY MOUNTING HEIGHT FROM THE TOP OF FOUNDATION TO THE LUMINAIRE ATTACHMENT POINT. THE BASE FLANGE FOR THE ATTACHMENT OF THE SHAFT TO THE TRANSFORMER BASE SHALL BE A ONE–PIECE CAST SOCKET OF ALUMINUM ALLOY 356. THE FLANGE SHALL BE JOINED TO THE SHAFT BY MEANS OF COMPLETE CIRCUMFERENTIAL WELDS, EXTERNALLY AT THE TOP OF THE FLANGE AND INTERNALLY AT THE BOTTOM OF THE SHAFT TUBE. FOUR ANCHOR BOLT COVERS OF ALUMINUM ALLOY 43 AND STAINLESS STEEL SCREWS FOR THEIR ATTACHMENT SHALL BE PROVIDED.

THE LUMINAIRE MOUNTING BRACKET SHALL BE MADE OF 4 ½" O.D. .188 WALL 6'–½" LONG TUBE OF ALLOY 6063T6 ALUMINUM WITH A 2" SCHEDULE 80 PIPE OF 6061T6 ALUMINUM TO PROVIDE A HORIZONTAL MOUNT FOR THE LUMINAIRE DIRECTLY ABOVE THE POLE. THE MOUNTING BRACKET SHALL HAVE A CABLE HOOK WELDED TO THE INSIDE OF THE TUBE. A REMOVABLE CAP OF CAST ALUMINUM ALLOY WITH STAINLESS STEEL LOCKING SCREWS SHALL BE PROVIDED FOR THE TOP OF THE 4 ½" TUBE. THE BRACKET SHALL HAVE TWO (2) ½" STAINLESS STEEL SET SCREWS WITH JAM NUTS AND A ½" STAINLESS STEEL THRU BOLT FOR ATTACHING THE BRACKET TO THE POLE SHAFT.

THE BRACKET SHALL OVERLAP THE POLE SHAFT A MINIMUM LENGTH OF 1'–6" AND A MAXIMUM LENGTH OF 5'–6" THE PROVIDE AN ADJUSTABLE MOUNTING HEIGHT FROM THE TOP OF FOUNDATION OF 39' TO 43'. DRILLING AND ASSEMBLY OF THE POLE AND LUMINAIRE MOUNTING BRACKET SHALL BE AS INSTRUCTED BY THE MANUFACTURER.

THE TRANSFORMER BASE SHALL BE CAST ALUMINUM ALLOY 356 AND 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 TAPER 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 MEANS OF 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. THE COMPLETE UNIT SHALL BE DESIGNED FOR A WIND LOADING OF 90 MPH 3 SECOND GUST PER AASHTO 2013.

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).

ALL MATERIALS SHALL BE FURNISHED IN A NATURAL ALUMINUM COLOR. POLE SHAFTS SHALL BE FURNISHED WITH POLISHED SURFACE.

SHAFT AND BRACKET ARM ASSEMBLY SHALL BE TIE–WRAPPED WITH A HEAVY WATER RESISTANT PAPER FOR PROTECTION DURING SHIPMENT AND INSTALLATION.

THE COMPLETE POLE ASSEMBLY SHALL BE MANUFACTURED PER HAPCO DRAWING # B17916 OR APPROVED EQUAL.

II. INSTALLATION

THE POLES AND BASES SHALL BE SET ON THE FOUNDATION SECURELY ANCHORED TO THE ANCHOR RODS SO THAT THE T BASE DOOR IS FACING AWAY FROM THE CURB. POLE BASES SHALL BE PROPERLY PLUMBED BY MEANS OF SHIMS.

LUMINAIRE MOUNTING HEIGHT SHALL BE ADJUSTABLE BETWEEN 39' AND 43'. SPECIFIC MOUNTING HEIGHT SHALL BE CLEARLY NOTED IN THE PROJECT PLANS AND SPECIFICATIONS BY THE DESIGNER.

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–306	EACH	POLE, ALUMINUM, LOW MAST, ADJUSTABLE MOUNTING HEIGHT, 39' TO 43'

39' TO 43'

CITY OF COLUMBUS, OHIO

ADJUSTABLE MOUNTING HEIGHT

MIS-306

DEPARTMENT OF PUBLIC UTILITIES - DIVISION OF POWER

POLE, ALUMINUM, LOW MAST,

DRAWN BY: SAW	DATE: 8/24/24	
SCALE: NONE	SHEET: 1 OF 1	306