## ITEM 625 BRACKET ARM, 30’, as per plan

## ITEM 625 BRACKET ARM, 25’, as per plan

Bracket arm shall be installed per *SCD 4110* on signal poles at locations as shown in the plans to facilitate the installation of VEHICULAR detection, CCTV, and wireless radio equipment in areas clear of obstructions.

Bracket Arm shall be made of aluminum alloy tubing. Contractor shall field verify existing conditions or verify plan details to determine the size and configuration of required clamps prior to ordering - no compensation will be provided for modifications.

All structural steel products shall be galvanized on the interior and the exterior surfaces as per *ASTM A123*. The exterior surface of all structural steel and aluminum products shall be properly prepared for the application of an exterior coating. The coating color on both steel and aluminum products shall match each other. It is the responsibility of the contractor to ensure that both product manufacturers match coating colors so that aconsistent end product is achieved.

All exterior surfaces, all attachment hardware, and all clevis hangers shall have a coating applied to them. Exterior surfaces of all bolt and screw fasteners, washer nuts, and other attachment hardware shall have a coating applied to them. Fastener threads shall not be clogged with coating material.

The exterior coating for all items above shall:

* + - * 1. Meet federal spec #595B, be semi-gloss and conform to colors as shown in the plans; and
        2. Be applied over properly prepared galvanizing material on steel products and over properly prepared aluminum for aluminum products; and
        3. Have a minimum 5-year repair warranty of coating delamination, blistering, or corrosion.

Any alternative processes for finish coating of bracket arm proposed by the Contractor must be submitted to the Engineer for approval prior to starting work.

for aluminum parts, Each coating layer shall be properly cured before the application of the next coat. The application procedure shall be such to warranty a finish without delamination, blistering, or corrosion as per the minimum (5) year repair warranty.

The coating process shall involve such steps as the following:

* + - * 1. Mechanical preparation – bracket arm assembly (bracket arm and all connection components) shall be rotary-sanded to a satin-ground finish. Brackets shall be etched to a matte finish. This treatment will place a rough surface on these items so the base coating layer will have excellent adhesion.
        2. Cleaning - The bracket arm assembly shall be immersed in an alcoholic-phosphoric acid solution that will chemically clean these items. The cleaning solutions shall be kept at a nominal 70 degrees Fahrenheit. The bracket arm assemblyshall be immersed in the solvent solution for 5 minutes and then cold-water rinsed until chemicals are washed off.
        3. Conversion coating - The bracket arm assembly shall then be immersed in an amorphous chromate conversion coating solution for 5 minutes. The solution shall be maintained at 70o F. This treatment will result in the formation of a surface film in which the film chemically bonds itself to the base metal by diffusion and becomes a part of the base metal. The bracket and pedestal assembly shall be cold-water rinsed. This surface will provide optimum adhesion and good stability for the color film so that it does not chip, peel, or flake.
        4. Primer coating - An aluminum primer shall be applied as required to the bracket arm assembly to further improve coating adhesion.
        5. Final coating - Each coat shall be properly dried before additional coats are applied. THE FINISH COAT OF PAINT SHALL MEET FEDERAL STANDARD #595B AND CONFORM TO COLOR *(insert color, choose one: #27038 (Semi-gloss Black), #15048 (Gloss Blue))*. THE FINISH COAT SHALL HAVE A MINIMUM 5-YEAR REPAIR WARRANTY OF COATING DELAMINATION, BLISTERING, OR CORROSION.
        6. Drying - The bracket arm assembly shall be thoroughly dried then protected for shipment as outline before.

All coated items shall be shipped in a manner selected by the manufacturer, which will protect material from damage during delivery. Materials damaged in transit shall be repaired or replaced. All costs associated with correcting damaged material shall be borne by the contractor.

The work as described will be measured as the number bracket arms furnished and installed, complete in place. 10/25/19