MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**ORNAMENTAL ALUMINUM PRIVACY FENCE**

RSD:NMA 1 of 3 APPR:REL:DMG:06-16-23

**a. Description.** This work consists of furnishing, manufacturing, and installing an ornamental aluminum fixed louver modular fencing, fabricated with extruded aluminum louver panels, extruded aluminum framing, extruded aluminum fence posts and aluminum louver gate at the locations shown on the plans. Furnish a complete commercial quality aluminum system that includes all framework, posts, gate, hardware, and material as required. Complete all work in accordance with subsection 808.03 of the Standard Specifications for Construction, except as modified herein.

Furnish ornamental aluminum privacy fence from one of the following manufacturers or approved equal:

|  |  |  |
| --- | --- | --- |
| Ultra Aluminum Mfg Inc | Alumi-Guard, Inc. | Ameristar Perimeter Security |
| 2124 Grand Commerce Drive | 2401 Corporate Blvd | 1555 North Mingo Road |
| Howell, MI 48855 | Brooksville, FL 34604 | Tulsa, OK 74116 |
| (800) 656-4420 | (877) 258-6448 | (800) 321-8724 |

The furnished fence and all components must be from one manufacturer.

**b. Materials.** Ensure all aluminum louver fencing components are manufactured and assembled in the United States with 6005-T5 35,000 psi aluminum alloy material.

Ensure aluminum material for fence framework (i.e., tubular pickets, louver panels, rails and posts) are in accordance with *ASTM B221*.

Furnish tubular framework 1 inch by 3 inches with routed “V” groove receivers to accept the extruded louver with welded corners.

Fit the correct number of louvers to match height and width of panels. Run louvers horizontal.

Furnish posts 3 inch by 3 inch by 0.125 inch extruded aluminum alloy.

Furnish post to panel connection hardware.

Furnish flange plates factory welded to posts with four pilot holes for fasteners and flange cover.

Furnish stainless steel corrosion resistant anchor bolts and screws, paint to match the fence color. Use #10 screw caps. Ensure nuts are self-locking nylon insert type in accordance with *ASTM A320/A320M, Grade 8F*.

Furnish aluminum alloy die castings for post caps and miscellaneous hardware. Ensure die castings are manufactured from alloy designation 360.0 in accordance with *ASTM B85/B85M* for superior corrosion resistance. Alloy designation A380.0 is not acceptable.

Furnish aluminum louver panel, double swing 6-foot gate. Fabricate gate frame with 3 inch by 3 inch by 0.125 inch aluminum extrusion and fully welded at all connections and joints with routed slots to accept factory installed louvers.

Include padlock and heavy-duty accepting cane bolt drop rod with stainless steel hardware black in color.

Furnish triglycidyl isocyanurate (TGIC) polyester powder coating, applied by electrostatic spraying in textured bronze color. Cure at 400 °F for 10 minutes. Furnish proof of successfully passing the following standards and tests:

● Salt spray resistance test *ASTM D1654*-300 hours.

● Humidity resistant test *ASTM D714*-3000 hours.

● Meets or exceeds American Architectural Manufacturers Association *(AAMA) 2604-5* voluntary specification, performance requirements and test procedures for pigmented organic coatings on aluminum extrusions and panels.

Furnish concrete Grade 3000 for fence post foundations in accordance with section 1004 of the Standard Specifications for Construction.

**c. Construction.** Construct the ornamental aluminum fence and gate in accordance with subsection 808.03 of the Standard Specifications for Construction, as specified herein and as shown on the plans. Assemble and install fence components in accordance with the manufacturer’s recommendations, keep perimeter lines straight, plumb and level. Do not cut off or field modify louver panels, accurate post spacing is mandatory.

All material to be inspected by the Engineer upon receipt and prior to installation to check for damage during shipment. Store and handle in a safe and dry environment.

Install sections 2 inches above finish grade to achieve fence height as shown on plans.

Set posts in formed 8 inch diameter concrete footings, mounted using welded flange plates or in high performance non-shrink grout using core drilled or preset sleeves.

Shop weld aluminum in accordance with *AWS D1.2* and as specified in the contract. Field welding is prohibited.

Ensure flange plate installation uses fasteners of proper size and embedment into substrate to meet design loads and shim as required. Ensure separation of dissimilar metals is maintained.

Field drill pilot holes for thread cutting screw connections from panels to post.

Use non-marking blocking and clamps to avoid damage to the powder coated finish during erection of panels.

Hang gates using specified hinges, latches and hardware where required. Ensure gate posts are plumb, true, and level. Mount hinges in accordance with manufacturer’s instructions and adjust for smooth operation.

Repair any painted surface that has been damaged during shipping or assembly in accordance with the manufacturer’s recommendations.

Clean site of debris and excess materials, if necessary, clean aluminum louver fencing with mild detergent and clean water. Remove excess grout or concrete from posts and other fencing material before it hardens. Ensure damaged and defective work is removed and replaced with material meeting specified requirements at no cost to the contract.

Submit shop drawings to show plan layout, spacing of components, aluminum louver fence elevation and section, post foundation dimensions, gate hardware and attachment to other work.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay item:

**Pay Item Pay Unit**

Fence, Ornamental Alum, Privacy, 96 inch Foot

**Fence, Ornamental Alum, Privacy 96 inch** will be measured along the centerline of the fence. The price includes all appurtenances for furnishing, fabricating, and installing the **Fence, Ornamental Alum, Privacy 96 inch** complete in place including aluminum flange plates, bolts, nuts, washers, and all hardware required for erection. This work also includes furnishing and installing gate as shown on the plans.