DESCRIPTION
The work shall consist of furnishing and installing bottle filling stations in accordance with the contract documents and as directed by the Engineer.

MATERIALS
The following sections of the standard specifications shall apply:

Sidewalks, Driveways and Bicycle Paths 608-2
Water Supply Utilities 663-2

The following ASTM references shall apply:

Standard Specification for Gray Iron Castings A48
Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless A53
Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware A153
Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications A240
Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipe A312
Standard Practice for Cleaning, Descaling and Passivation of Stainless Steel Parts, Equipment and Systems A380
Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes A500
Standard Specification for Welded Stainless Steel Mechanical Tubing A554
Standard Specification for Chemical Passivation Treatments for Stainless Steel Parts A967
Standard Specification for Seamless Copper Water Tube B88
Standard Practice for Operating Salt Spray (Fog) Apparatus B117
Standard Specification for Portland Cement C150
Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings D522
Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings D822
Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments D1654
Standard Practice for Determining the Effect of Overbaking on Organic Coatings D2454
Standard Test Methods for Measuring Adhesion by Tape Test D3359
Standard Test Method for Film Hardness by Pencil Test D3363
Standard Practice for Testing Water Resistance of Coatings using Controlled Condensation D4585
The drinking fountain equipment and installation must comply with all Americans with Disability Act (ADA) Standards (§602 and associated sections). The manufacturer must certify that their product meets current ADA Standards for drinking fountains.

**ADA Certification:** Fountain design shall be certified as being compliant with §602 of the Americans with Disabilities Act (ADA) Standards, including the following requirements:

- The fountain shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist (ADA, §309.4).
- The force required to activate the fountain shall be no more than five pounds (5 lbs.) of force applied to the bubbler control valve push button (ADA, §309.4) without the use of a pressure regulating valve to reduce the maximum inlet pressure of 65 psi.
- The spout shall provide a flow of water four inches (4”) high minimum and shall be located five inches (5”) maximum from the front of the unit. The angle of water stream shall be measured horizontally relative to the front face of the unit. Where spouts are located less than three inches (3”) from the front of the unit, the angle of the water stream shall be thirty degrees maximum. Where spouts are located between three inches and five inches maximum from the front of the unit, the angle of the water stream shall be fifteen degrees maximum (ADA, §602.6).

**BOTTLE FILLING STATION**

**General:**
Sensor operated bottle filling station and freeze resistant valves are not required under this specification.

**Tubular Body:** Shall be either steel pipe per ASTM A53, steel tubing per ASTM A500, 304 stainless steel pipe per ASTM A312, or 304 stainless steel tubing ASTM A554, 12 gauge or better.

**Corrosion Resistant Treatment:** All fabrication and welding shall be completed prior to application of the corrosion resistant coating, metal pieces shall be cleaned of all weld spatter, mill scale, varnish, rust, grease, and the like and the surface mechanically and chemically...
prepared to receive the coating. This corrosion resistant coating shall a thermal spray zinc coating or electrostatic or immersion applied primer with a minimum thickness of 3 mils. All metal pieces, including welds, shall receive the coating inside and out.

Polyester Powder Coating: A surface coat shall be applied to the thermal zinc coated metal pieces in such a manner that the coating will not peel off. The manufacturer shall perform all processes required to achieve a smooth material bond. An epoxy or acrylic polymer primer shall be applied prior to application of powdercoating. The surface coat shall be an electrostatically sprayed, lead-free, superdurable TGIC (triglycidyl isocyanurate) polyester powder coating applied to a minimum of three (3) mils thickness which shall be oven cured. The TGIC polyester powder coating shall be UV resistant and comply with the ASTM standards below:

<table>
<thead>
<tr>
<th>Physical Properties</th>
<th>Test Methods</th>
<th>Acceptance Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesion cross hatching</td>
<td>D3359B</td>
<td>5B (0% area removed)</td>
</tr>
<tr>
<td>Flexibility conical mandrel</td>
<td>D522</td>
<td>Pass 3/8” mandrel</td>
</tr>
<tr>
<td>Pencil hardness</td>
<td>D3363</td>
<td>Pencil hardness 2H minimum</td>
</tr>
<tr>
<td>Impact resistance</td>
<td>D2794</td>
<td>80 inch pounds minimum</td>
</tr>
<tr>
<td>Overbake resistance- Adhesion</td>
<td>D2454</td>
<td>5B</td>
</tr>
<tr>
<td>Overbake resistance-Hardness</td>
<td>D2454</td>
<td>Pencil hardness 2H minimum</td>
</tr>
<tr>
<td>Overbake resistance- Direct Impact</td>
<td>D2454</td>
<td>80 inch pounds minimum</td>
</tr>
<tr>
<td>Humidity resistance-250 hours</td>
<td>D4585</td>
<td>No visible change to surface</td>
</tr>
<tr>
<td>Weatherability</td>
<td>D822</td>
<td>No visible change to surface</td>
</tr>
<tr>
<td>Salt Spray Resistance</td>
<td>B117</td>
<td>1000 hours</td>
</tr>
<tr>
<td>Corrosion Resistance</td>
<td>D1654</td>
<td>Rating 6 or greater</td>
</tr>
<tr>
<td>UV Exposure</td>
<td>G154</td>
<td>340 bulb, 2,000 hours, rating delta E of 2, 90% gloss retention</td>
</tr>
</tbody>
</table>

Color: Shall be as indicated in the contract documents.

Access panel and covers: Manufacturer’s identification—shall be displayed discreetly on the unit’s access panel to facilitate ordering replacement parts. Access covers shall be located for easy access to facilitate maintenance and replacement of parts and shall be fastened with vandal resistant stainless steel screws.

Surface mount (aka Surface Carrier): Shall be either 304 stainless steel mount or optional 304 stainless steel surface carrier in accordance with ASTM A240.

Anchor Bolts: Shall be 304 stainless steel bolts in accordance with ASTM F593, or as recommended by the manufacturer. Anchor bolts shall be of the sizes recommended by the manufacturer.

Hardware: All hardware including, but not limited to, bolts, threaded rods, nuts, washers, and all other fastenings shall be either 304 stainless steel per ASTM F593, or galvanized steel per ASTM A153.
Fountain Plumbing & Hardware: Fountain plumbing hardware, including bubblers, stainless steel bowls, strainers, push-buttons and all internal plumbing, shall be preassembled by the manufacturer. The manufacturer shall have all factory installed plumbing components pre-tested prior to delivery. All factory connections shall be made by a licensed plumber.

Water Supply: Type “K” copper tubing meeting the Standard Specification requirements of §722-06 “Water Service Pipe, Service Valves and Fittings” shall be used throughout the unit for water supply.

Bubbler Head: Bubblers shall be rounded one piece design, vandal-resistant type, certified to be lead-free. Bubblers may be either 18-8 stainless steel type 304 or chrome plated cast brass.

Push Button: Shall be stainless steel valve body with a 1 ½" diameter feather touch vandal resistant push button. Push button for bottle filling station and accessible “lo” basin shall be activated by a maximum five (5) pounds of pressure, in compliance with ADA Standards §602.

Stainless Steel Bowls: Shall be 18 gauge or better stainless steel, type 304, satin finish to comply with ASTM A380 and ASTM A967 standards, install with tamper proof stainless steel screws.

Waste Strainer: Shall be satin chrome plated brass or stainless steel waste strainer with a 1-1/4" O.D. tailpiece. Plastic waste drain/strainers are not acceptable.

Bottle filling station:
The bottle filling station shall be from one of the following manufacturers:

10135 SM as manufactured by Most Dependable Fountains, Inc. 5705 Commander Drive Arlington, TN 38002 800.552.6331 www.mostdependable.com

GYM74 Series as manufactured by Murdock Manufacturing 15125 Procter Avenue City of Industry, CA 91746 800.453.7465 www.murdockmfg.com

LK4420BF1U as manufactured by Elkay 2222 Camden Court Oak Brook, IL 60523 630.572.3192 www.elkay.com

or equal as approved by the Engineer

Bottle filling station with pet fountain:
The bottle filling station shall be from one of the following manufacturers:

10155 SM GYM74Series-PF
ITEM 663.4800NN06 - WATER BOTTLE FILLING STATION

as manufactured by
Most Dependable Fountains, Inc.
5705 Commander Drive
Arlington, TN 38002
800.552.6331
www.mostdependable.com

as manufactured by
Murdock Manufacturing
15125 Procter Avenue
City of Industry, CA 91746
800.453.7465
www.murdockmfg.com

LK4420BF1UDB
as manufactured by
Elkay
2222 Camden Court
Oak Brook, IL 60523
630.572.3192
www.elkay.com

or equal as approved by the Engineer

EXTERNAL PLUMBING:
Materials shall meet the requirements as specified by the respective utility company as shown in the contract documents.

SUBMITTALS:
Submittals for this item shall include the following:

Catalog Cuts:
The Contractor shall submit a catalog cut and a complete dimensional shop drawing of the bottle filling station showing all components including color, internal plumbing, access panels, gauges of metal and thickness of wall construction at least four (4) weeks prior to proposed installation.

Certifications:
2. A foundry certificate verifying the authenticity of the ductile iron supplied on this item shall be submitted. The certificate shall be on foundry letterhead, dated and signed by an officer of the company with the contract name and number, Contractor name and class of ductile iron provided.

Warrantee: The Manufacturer warrants that the bottle filling station and accessory to be free from defects in material and workmanship under normal use for (1) year from date of installation or eighteen (18) months from date of shipment from the factory, whichever occurs first. Manufacturer’s standard one year warrantee shall be submitted.

Operation and Maintenance Manual: The Contractor shall furnish an Operation and Maintenance (O & M) Manual prepared in conjunction with the manufacturers of equipment in this specification. The O & M manual shall contain the following:
ITEM 663.4800NN06 – WATER BOTTLE FILLING STATION

1) Description of system operation.
2) Troubleshooting and Repair Guide.
3) List of parts with their model numbers.

CONSTRUCTION DETAILS
The Contractor shall meet the following requirements of the standard specifications:

Sidewalks, Driveways and Bicycle Paths §608-3.01
Water Supply Utilities §663-3

Fountain installation shall comply with §602 of the Americans with Disabilities Act (A.D.A.) Standards.

STORAGE PRIOR TO INSTALLATION:
Refer to manufacturer’s directions for storage.

BOTTLE FILLING STATION INSTALLATION:
The unit is to be handled at lifting locations designated by the manufacturer.

Bottle filling station and bottle filling station with dog bowl shall be surface mounted on a concrete pad as per manufacturers recommendations. The concrete pad shall be a smooth, flat, broom finished surface installed flush with adjacent pavement grade and in accordance with the contract documents. Adjacent pavement shall be pitched away from bottle filling station. Refer to the contract documents for the dimensions of the concrete pad.

Entire assemblies shall be installed in accurate locations, square and plumb on the concrete pad and in required locations to surrounding finished grade, as shown in the contract documents. Anchor bolts shall be accurately set, plumb and true, on concrete pad, quantity as recommended by the manufacturer.

EXTERNAL PLUMBING:
The factory installed portion of the cold water supply and waste water lines shall be extended from the bottle filling station. The supply water line shall be extended beyond the foundation and connected to the meter pit, as shown in the contract documents. The drain pipe shall be extended beyond the foundation and connected to the sanitary drain line as shown in the contract documents. The requirements specified in §663-3 and §664-3 shall apply. All field connections shall be made by a licensed plumber.

Water and drain lines shall be pitched away from the bottle filling station. Pockets in rigid piping that cannot be drained by gravity will be rejected. The plumber shall be required to reinstall piping until gravity drain is achieved. The bottle filling station, dog bowl and drinking fountain basins shall be designed to allow internal water to drain by gravity.

Connection to the water supply system shall be made as per specified by the respective utility company.
ITEM 663.4800NN06 - WATER BOTTLE FILLING STATION

METHOD OF MEASUREMENT
The work will be measured as the number of each bottle filling stations furnished and installed.

BASIS OF PAYMENT
The unit price bid for each bottle filling station shall include the cost of all labor, materials, and equipment necessary to satisfactorily complete the work.

Payment will be made using the following payment items:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>663.48000106</td>
<td>Water Bottle Filling Station</td>
<td>EA</td>
</tr>
<tr>
<td>663.48000206</td>
<td>Water Bottle Filling Station with Pet Fountain</td>
<td>EA</td>
</tr>
</tbody>
</table>