

# **Guide Specification**

## **Section 131200 Fountains (Interior and Exterior)**

### **Stonewear Nexgen Fountains**

#### **1.0 GENERAL**

##### **1.1 WORK INCLUDED**

A. Provision of turnkey lightweight concrete fountain elements, plumbing and lighting.

##### **1.2 RELATED WORK**

- A. Section 03300 Cast-in-Place concrete
- B. Section 22000 Plumbing
- C. Section 26000 Electrical

##### **1.3 SUBMITTALS**

- A. Product Data: Manufacturer's standard data package, including fountain drawings and maintenance and installation instructions.
- B. Samples: As required for color selection only.
- C. Shop Drawings: For custom applications, showing critical sizes and dimensions for installation and integration with other work.

##### **1.4 QUALITY ASSURANCE**

- A. Source: All fountain components to be provided by single qualified manufacturer to ensure proper integration of interrelated components.
- B. Pump motor(s) shall be industry standard submersible motors designed to operate underwater.
- C. Controllers shall comply with National Electrical Code (NEC) and Underwriters Laboratory (UL) standard and shall be labeled where required by code.

##### **1.5 DELIVERY, STORAGE AND HANDLING**

- A. Contractor is to unload fountain elements and store near location of installation.
- B. Inspect elements (basin, center features, etc.) immediately upon delivery for signs of damage during transit. Notify driver and sign bill of lading with damage notice, provide immediate notification to manufacturer.
- C. Protect fountain and site components from damage during storage, handling and neighboring work.
- D. Store materials out of harm's way, in their original packaging.
- E. Sequence deliveries to avoid delays, minimize on-site storage.

##### **1.6 WARRANTY**

- A. Manufacturer shall provide a three-year limited warranty for all fountain parts, workmanship and design functionality. Fountain pump covered by one-year warranty.
- B. Warranty shall be void where damage results from: operation with no flow, continued operation with only partial flow or with obstructions that result in pump cavitation, improper electrical connections or voltage, alterations, lightning, misuse, abuse, freezing, or failure to follow maintenance instructions.

## 1.6 PROJECT CONDITIONS

- A. Contractor to provide adequate precast slab with utility keyhole area per manufacturer's drawings and specifications prior to fountain assembly.
- B. Contractor to ensure plumbing and electrical are routed to keyhole area, per manufacturer's drawings prior to fountain assembly
- C. Protect units from damage by adjacent work. Clean units with water spray to remove workplace dust.

## 2.0 PRODUCTS

### 2.1 ACCEPTABLE PRODUCTS/MANUFACTURERS

- A. Nexgen Stonewear Fountain, manufactured by Tournesol Siteworks, 2930 Faber St., Union City, CA 94587, tournesol.com Tel: (800) 542-2282 FAX (510) 471-6243

### 2.2 GFRC FOUNTAIN ELEMENTS

#### A. Materials

- 1. Portland Cement: ASTM C150, Type I, II, or III.
- 2. Glass Fibers: Alkali resistant, with a minimum zirconia content of 16 percent, 1 to 2 inches long, specifically produced for use in GFRC.
- 3. Sand: clean silica, complying with composition requirements of ASTM C144; passing No. 30 sieve with a maximum of 2 percent passing No. 100 sieve.
- 4. Coloring Admixture: ASTM C979, synthetic mineral-oxide pigments or colored water-reducing admixtures, temperature stable, nonfading, and alkali resistant.
- 5. Water: Potable; free from deleterious material that may affect color stability, setting, or strength of GFRC ..
- 6. Polymer Curing Admixture: Acrylic thermoplastic copolymer dispersion complying with PCI MNL 130.

#### B. Construction

Architectural parts shall be fabricated by spray laminate method using suitable molds to attain the desired surface finish. The finished face mix shall be not less than 1/8" thick and thicker in those areas requiring additional structural strength. Where ribs or stiffeners are to be fastened to liner sections by spray laminating over premolded forms, the stiffeners or ribs shall be located and spray laminated into position before the section to which they are to be attached has passed the state of curing, and the finished joint shall be strong and durable.

- 1. Backing Mix: Proportion backing mix of portland cement, glass fibers, sand, and admixtures to comply with design requirements. Provide nominal glass-fiber content of not less than 5 percent by weight of total mix.
- 2. Face Mix: Proportion face mix of portland cement, sand and admixtures to comply with design requirements.
- 3. Polymer Curing Admixture: 6 to 7 percent by weight of polymer curing admixture solids to dry portland cement.
- 4. Coloring Admixture: Not to exceed 10 percent of cement weight.

C. Finish: specified finish; factory finished.

D. Sealing: Fountain elements are to be sealed by manufacturer

E. Sizes: Single-piece basins - 8' dia., Multi-piece basins - 10', 12' or 16' dia. .  
Optional center feature elements include spray ring, column jets, single or tiered bowl sets. Consult drawings for exact details.

### 2.3 FOUNTAIN COMPONENTS

- A. Submersible Pumps – 115v 4-5k GPH direct-drive submersible pumps to power water features, 30' max lift. Quantity of pumps varies depending upon size and center feature of fountain.
- B. Low-Voltage Lighting – 14V 6W LED submersible sealed spotlights, quantity determined by size and center feature of fountain. RGB lights controlled individually through digital controller. Lights are to be removable for changing of bulbs.
- C. Chlorinator – adjustable release chlorinator, location dependent upon size of basin.
- D. Plumbing Components – Fountain to include auto-water level adjustment, manual fill valve, overflow drain and main (valved) drain hidden behind access panel in interior fountain walls. All water flows to features to be adjustable, and on timer. Turnkey fountain to include all internal plumbing connections, piping for assembly. Fountain jets to be column, spray ring nozzles, blossom (multi-tier) or aerating jets, depending upon (optional) center feature. Consult plans for details.
- E. Electrical Components – 125A all-weather Type 3R load center with 115V programmable controller to be located away from main fountain. Turnkey fountain to include all sealed electrical connections, wiring for pumps and lighting for assembly.
- F. Sealants and GFRC concrete Adhesives – Turnkey fountain to include potting compound, SikaFlex adhesives and all additional materials required for complete fountain assembly.

### 2.3 FOUNTAIN CENTER FEATURES (OPTIONAL)

- A. Spray Ring – 24 individual jets emerging from the center foundation, creating a clear, well defined water stream that is fairly stable in windy conditions. Minimal overspray. Spray jets may also be located on perimeter of fountain, oriented towards the center foundation.
- B. Column Jets – Multiple (depending on fountain size) 2" thick columns of water created by a cluster of 25 orifice jets. Jets typically are located in center foundation, may also be located in base of fountain floor. When installed above water creates a slender cascade, below the surface creates a frothy, reflective column about 2-3X wider.
- C. Single Bowls – Single bowls either mounted on a taller pedestal (Plaza) or set upon the center foundation of the fountain. Available with fluted or non-fluted crystal bowl (with laminar water flow). Single bowls are typically specified with a blossom jet, which produces a flower-like multi-tier water pattern that varies with the flow rate.
- D. Tiered Bowls – Double or triple tiers of bowls cascade water into the basin. Available as fluted or non-fluted crystal bowl (with laminar water flow). Fluted bowl sets are typically topped with an aerating jet which produces a 7/8" column of aerated (frothy) water which is highly reflective. Crystal bowls are topped by an appropriately sized finial.

## 3.0 EXECUTION

### 3.1 PREPARATION

- A. Prior to fabrication, the contractor shall have cast a concrete slab as per the plans and specs. Concrete slab is to have minimum thickness of 4" and 3000psi compressive strength. Unless otherwise specified, slab is to have keyhole configuration at the edge with utility stub-outs for fountain connection.
- B. Place fountain pallets close to installation site, as possible.

### 3.2 INSTALLATION

- A. Prior to assembly, installer shall inspect substrate, supports, and conditions and notify contractor, in writing, of conditions detrimental to the proper completion of the work. Do not proceed with work until unsatisfactory conditions are corrected.
- B. All fountain installation instructions to be included in comprehensive installation instruction manual, provided at time of submittal submission. Assembly directions, especially cure times for adhesives and caulking, are to be strictly observed during assembly.
- B. Assemble multi-part basin as per instructions, thoroughly test for leaks before proceeding to next sections.
- C. Electrical utility connections (including installation of control box away from fountain) are to be done by local, licensed personnel once basin has been installed and sealed. Plumbing connections (drain out, water in) should be connected from fountain basin to stub-outs in keyhole vault.
- D. Once utility connections are complete, foundation and center feature is to be adhered in place. Refer to instructions for order of assembly.
- E. Pumps, jets and plumbing to center feature to be installed once center feature complete. Electrical connections to center feature to be done using potting compound provided.
- F. Floor plates, inner walls and seat caps to be installed. All elements to be leveled using existing leveling screws. Floor plates to cover wiring and plumbing. Avoid stepping on floor plates once installed. All joints and seams to be sealed using backing materials and caulking provided.

### 3.3 FOUNTAIN STARTUP

- A. Fountain is to be filled, equipment and systems prepared in accordance with manufacturer's recommendations.
- B. Adjust water feature and lighting timers, water flow to features prior to turnover.
- C. Clean exposed surfaces using manufacturer recommended materials and methods.
- D. Test all equipment to show that it complies with specified requirements, and that fountain is in proper working order.

### 3.4 DEMONSTRATION

- A. Train contractor and/or owner's personnel on operation of system, supplemented with maintenance and installation manual.
- B. Provide and review maintenance manual, demonstrate equipment, and instruct in routine maintenance procedures.