

DESIGN AND SPECIFICATIONS

Project: ADDISON CONVENTION CENTER FOUNTAIN

Water Effects Specification:

Visual element shall consist of a single EAC-200 Cascade Nozzle operating from 4'-0" to 3'-0" above the pool's water level. Underwater lighting shall be provided for night viewing.

Piping & Conduit Requirements:

The following is a list of the primary piping and conduit runs required between the fountain basin and the fountain equipment room.

Piping Required:

- (1) 3" Pump suction pipe.
- (1) 2" Pump discharge pipe.

Conduit Required:

- (1) 3/4" Conduit to U.W. lighting.
- (1) 3/4" Conduit to water level sensor.

Utilities & Services:

Electrical: (Control & Lighting) 120/240 Volt, Single Phase, 19 FLA.

Water Supply: (1) 3/4" water line to fountain equipment, protected by an approved backflow protection device and limited to a maximum pressure of 50PSI.

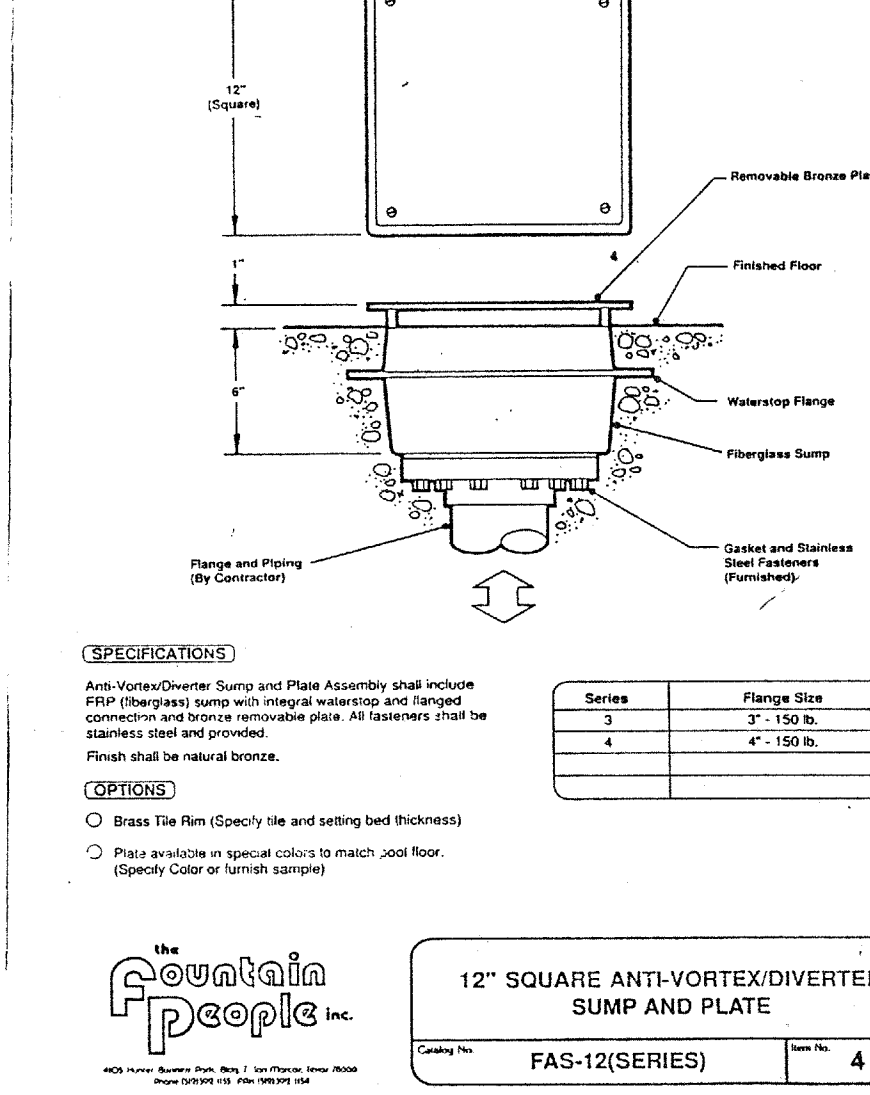
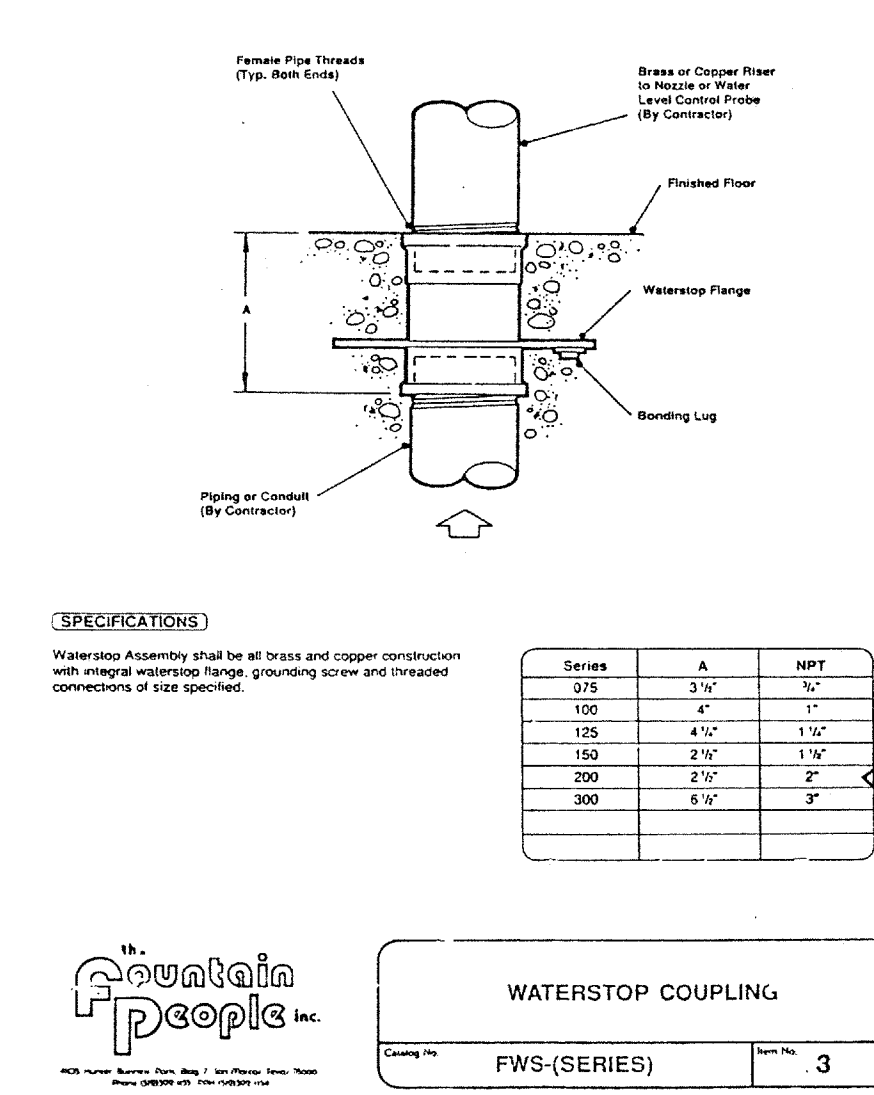
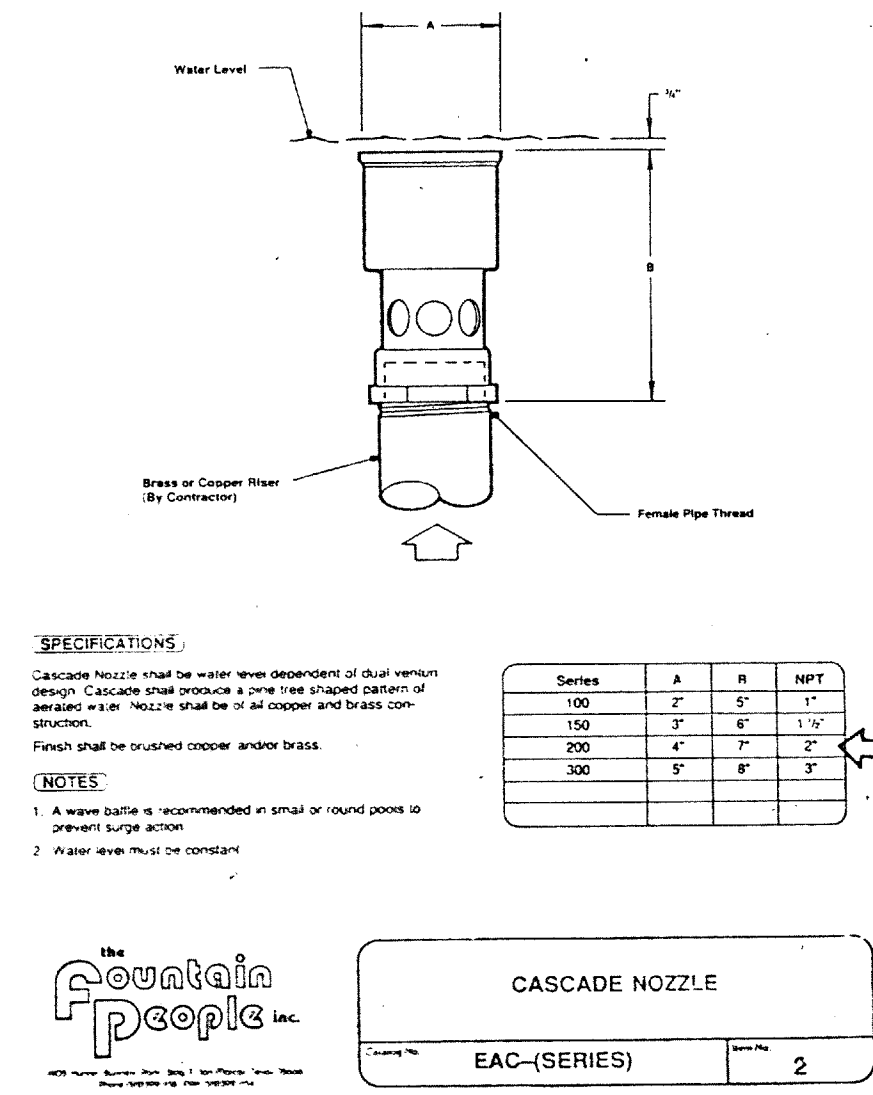
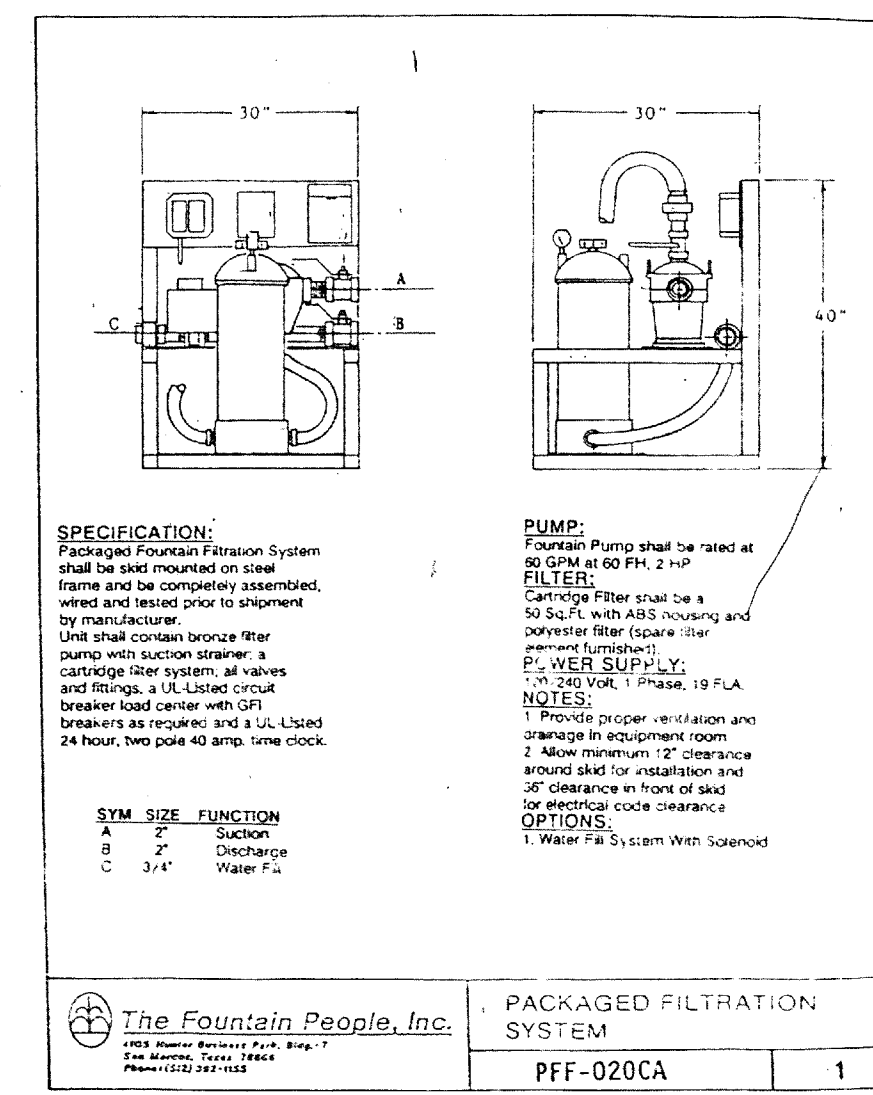
Waste/Drain: (2) 4" gravity drain from fountain basin.

Floor drain in pump room is required in equipment room.

Ventilation: Equipment room shall require a minimum 50 CFM of forced air ventilation.

- 01 PFF-020CA (QTY-1) 30"X 30"X 40" High Skid Mounted Filtration System with a 2 horsepower bronze pump with integral suction strainer; a 50 sq. ft. cartridge filter with heavy-duty ABS top access housing, polyester single element filter, air vent, pressure gauge, and replacement filter element; all valves as required; schedule 80 PVC piping and fittings as required; and a NEMA-3R control panel including disconnect switch, GFCI breakers and time clock. All equipment shall be factory assembled, wired and tested and furnished on a painted steel skid with adjustable stainless steel leveling legs. Skid designed for 120/240 volt, single phase power supply. Unit shall be furnished with water fill station including 3/4" solenoid valve and isolation valve.
- 02 EAC-200 (QTY-1) Cascade Jet of all brass and copper construction with brushed finish and 2" FIP connection.
- 03 FWS-200 (QTY-1) Waterstop Coupling of cast bronze construction with bonding lug and 2" FIP connections.
- 04 FAS-123 (QTY-1) 12" Square Anti-Vortex Plate and Sump with cast bronze anti-vortex plate and heavy-duty FIP Sump with integral waterstop flange, 3" flanged outlet connection, neoprene flange gasket, and stainless steel fasteners.
- 05 FSD-400-MOD (QTY-1) Standpipe Overflow Drain fitting with cast bronze waterstop coupling, bonding lug, copper standpipe, brushed finish, and 4" FIP outlet connection.
- 06 CWL-101C (QTY-1) Water Level Control Switch in brass and copper mounted housing with 3/4" FIP connection and brushed finish. Unit furnished with replaceable probe designed for minimum 2" vertical adjustment and with integral 30' cord.
- 07 FWS-075 (QTY-1) Waterstop Coupling of brass and copper construction with bonding lug and 3/4" FIP connections.
- 08 LUN-1C (QTY-1) Water Level Control Junction Box of bronze and brass construction with (3) 3/4" FIP conduit connections, stainless steel fasteners and natural brass finish. Box shall be U.L. Listed.

- 09 LLP-250PHBA (QTY-3) 250 Watt, 120 Volt Underwater Fountain Light of all cast bronze construction with 80 degree adjustable aiming, rock guards, clear tempered glass lens, silicone lens gasket, integral thermal cut-off device, and 10' ft. submersible cord. Underwater fixture shall be U.L. Listed. Light fixture shall be furnished with a heavy-duty bronze tri-pod mounting stand. Light fixture shall be furnished with 250 watt, 120 volt, type PAR38 medium screw based lamp.
- 10 LUP-13 (QTY-1) Conduit Mounted Underwater Junction Box of all bronze construction with neoprene gasket, stainless steel fasteners, (1) 3/4" schedule 40 red brass riser with integral waterstop flange, bonding lug and 5/4" MIP power conduit connection, and (3) 1/2" FIP connections with brass strain relief seals for connection to light cords. Box to be U.L. Listed for submersible or non-submersible installation.
- 11 RPC-4441 (QTY-3) Reenterable Encapsulating Compound for use in the potting of underwater junction boxes. Package is Size-C (12.3oz).
- 12 CPC-1800 (QTY-1) Photoelectric Switch with adjustable light sensor and 1800 watt, 120 volt switching capability.
- 13 MANUALS (3-SETS) Comprehensive Maintenance and Operating Manuals including procedures for all fountain functions and equipment, a trouble shooting guide, manufacturer's replacement parts lists, and system piping, lighting and electrical panel drawings. Manual shall be bound in a three ring water resistant binder. (END OF EQUIPMENT LIST)



FOUNTAIN SPECIFICATION NOTES

- Prime contractor shall be responsible for purchasing all components of the fountain, as well as providing all labor and materials required to effect the installation of the operational fountain as shown on the plans.
- Prime contractor shall furnish electrical components to the electrical contractor for installation and connection.
- All electrical and mechanical fountain components shall be supplied by one fountain manufacturer in order to ensure the integrity of the fountain design.
- Fountain equipment shall be as manufactured and supplied by The Fountain People, Inc. or approved equal.
- Contractors offering bids on submittals for fountain systems must also submit a bid on the "as specified" system.
- Substitution of fountain materials shall require prior written approval by the specifying consultant. Contractors desiring to substitute the specified items shall submit three (3) copies of the following data at least ten (10) working days prior to the bid date for review:
  - A complete fountain system isometric schematic.
  - A complete bill of materials along with specification cuts of all proposed items.
  - A written description of the fountain's operational cycle.
  - A written performance guarantee certifying that the alternate system will produce the specified water effects. Within ten (10) working days of award of contract, contractor shall submit (5) copies of all manufacturer's detailed data sheets and submittal drawings of all fountain components for approval prior to installation.
- Upon completion of the project, contractor shall provide three (3) owner's operation and maintenance manuals. Manuals shall be provided in three-ring binders and shall include all operating and maintenance procedures along with manufacturer's data sheets and system drawings.
- For further information on the fountain system contact the specifying consultant at The Fountain People, Inc. at 4105 Hunter Business Park, Bldg. 47, San Marcos, TX 78666, (512) 392-1155, FAX (512) 392-1154.

GENERAL NOTES

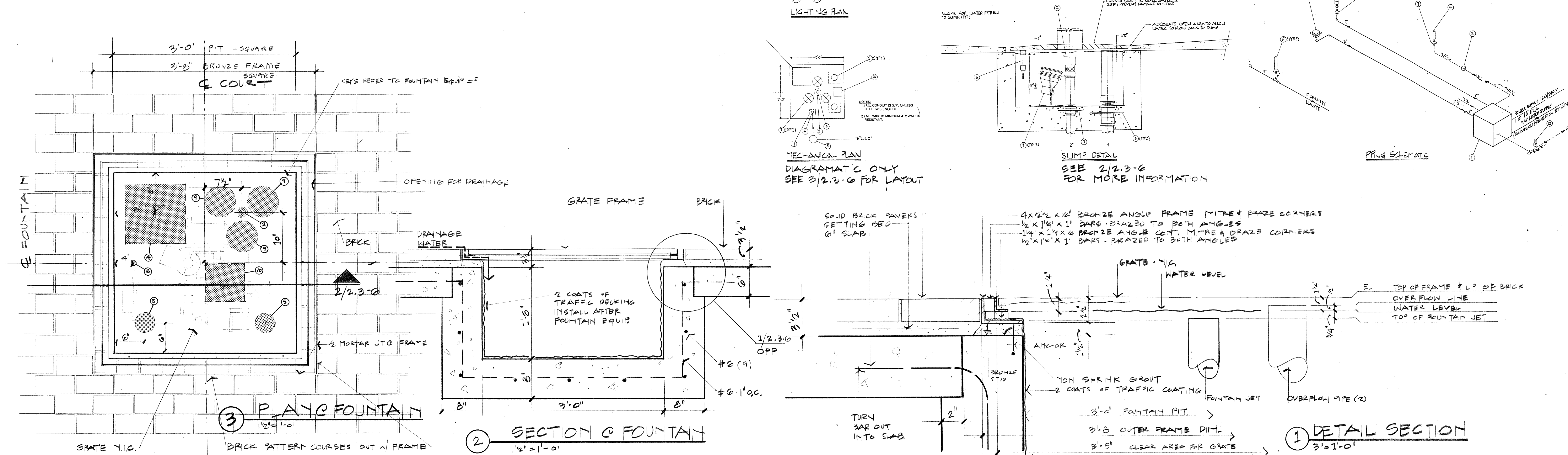
- The fountain's mechanical/electrical drawings are essentially complete. Items noted in this section are for information only and are not to be construed as a change to the drawings. Questions pertaining to work that does not appear to be sufficiently detailed or explained, or pertaining to the true meaning of any part of the drawings or specifications, or discrepancies found existing in or between the specifications and/or drawings, shall be referred to the specifying consultant for clarification or correction.
- All numbered items correspond to the fountain bill of materials and shall be furnished by the fountain manufacturer. All other materials, labor, tools, equipment, apparatus, service, and other items which are required to complete the installation of the fountain's mechanical and electrical systems shall be furnished by the contractor.

ELECTRICAL

- Underwater electrical equipment can cause fatal electrical shock if not installed properly. This installation has been designed, and must be installed, in compliance with the National Electrical Code (NEC), Section 680, and local electrical codes.
- A Class "A" ground fault circuit interrupter (GFCI) must be installed in all circuits supplying fountain equipment located within pools and operating above 15 volts. Equipment operating below 15 volts must be protected by a transformer which is U.L. listed and marked for application.
- All underwater light fixtures must be submerged while in operation, must be protected by a lens guard if pointed upward, and must be protected by an integral thermal cut-off device to prevent the possibility of overheating.
- Underwater light fixtures must be installed with sufficient cord to allow removal from the water for cleaning and normal maintenance.
- All underwater junction boxes must be equipped with threaded conduit entries and compression type strain relief seats for cord entry. Strain relief seats serving niche-mounted underwater lights shall make provision for sealing both the fixture cord and an AWG #8 insulated bonding wire, which is required by some local codes.
- All underwater junction boxes or junction boxes mounted outside the pool but below water level must be potted using 3M "Gels" 4441 or "Scotchcast" 214 reenterable encapsulating compound, or approved equal. All conduit entries shall be sealed prior to potting the junction box to prevent potting compound from entering conduit system.
- If an underwater junction box is supported by a conduit, the conduit stub-up must be of red brass pipe and must include a mechanical waterstop. No non-metallic conduit may be used for support.
- All wire pulled between fountain control panel and underwater junction boxes shall be selected and sized for application. All wire shall be of a water-resistant type, and shall be stranded copper.
- All conduit shall be sealed to prevent entry of moisture and to prevent water from draining into the fountain control panel.

MECHANICAL

- All piping located within the pool and all sub-ups through the pool floor shall be of red brass pipe or Type-K copper tubing of full hard temper.
- All piping penetrating pool floor or walls and all fittings cast therein shall have mechanical waterstop protection.
- All interconnecting pipe and fittings between the pool and the pump equipment room shall be copper, Schedule 40 PVC with Schedule 80 fittings, or fiberglass, selected and installed in accordance with manufacturer's recommendations and applicable local codes.
- Any pressurized city water lines supplying the fountain system shall be of Type-K copper and shall be protected by an approved backflow prevention device and a pressure reduction valve set at a maximum 50 psi.
- All piping runs shall be made as direct as possible using a maximum number of fittings. Pipe shall be sloped to the pump and suction piping are completely flooded when fountain basins are filled.
- Pump(s) suction intake and suction piping must be routed at an elevation below lowest pool water level so that both pump and suction piping are completely flooded when fountain basins are filled.
- All piping and/or equipment shall be pressure tested prior to back-filling and shall then be buried and/or supported as required to protect the integrity of mechanical system.
- Contractor shall provide adequate drainage and ventilation in pump room to prevent flooding, condensation or overheating of equipment.
- This installation must comply with all local plumbing codes.



OWNER: Town of Addison

ARCHITECT: Canehingham Architects

THEATRE CONSULTANT: Theatre Projects

INTERIORS: CRSS

LANDSCAPE: The Kollmans Group

STRUCTURAL: Elisor Tanner

HISTORIAN: Alan Mason

ISSUE: ISSUE FOR BID 8-17-90

M.E.P.: MFP Systems

LIGHTING: Pamela Hull Wilson

CIVIL: Kurtz & Associates

GRAPHICS: Notstedt Design

Category: 2

Subcategory: 3

Sheet: 6