SECTION 21 12 00

FIRE-SUPPRESSION STANDPIPES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Standpipe system.

B. Fire department connection.

C. Fire extinguishers located in hose cabinets.

1.02 RELATED REQUIREMENTS

A. Section 10 44 00 - Fire Protection Specialties.

B. Section 21 05 00 - Common Work Results for Fire Suppression: Fire protection piping.

C. Section 21 05 53 - Identification for Fire Suppression Piping and Equipment.

D. Section 21 30 00 - Fire Pumps.

E. Section 21 13 00 - Fire-Suppression Sprinkler Systems.

F. Section 22 05 53 - Identification for Plumbing Piping and Equipment.

G. Section 26 27 17 - Equipment Wiring: Electrical characteristics and wiring connections.

1.03 REFERENCE STANDARDS

A. FM P7825 - Approval Guide; Factory Mutual Research Corporation.

B. ITS (DIR) - Directory of Listed Products; Intertek Testing Services NA, Inc..

C. NFPA 10 - Standard for Portable Fire Extinguishers; National Fire Protection Association.

D. NFPA 14 - Standard for the Installation of Standpipe and Hose Systems; National Fire Protection Association.

E. UL (FPED) - Fire Protection Equipment Directory; Underwriters Laboratories Inc..

1.04 SUBMITTALS

A. Product Data: Provide manufacturer's catalog sheet for equipment indicating rough-in size, finish, and accessories.

B. Shop Drawings: Indicate supports, components, accessories, and sizes.
   1. Submit shop drawings and product data to Red Clay Consolidated School District's insurance underwriter for approval.
   2. Submit proof of approval to Architect.

C. Project Record Documents: Record actual locations of components.

D. Operation Data: Include manufacturer's data.

E. Maintenance Data: Include servicing requirements and test schedule.

F. Certificates: Provide certificate of compliance from authority having jurisdiction indicating approval of field acceptance tests.

1.05 QUALITY ASSURANCE

A. Perform Work in accordance with NFPA 14. Maintain one copy on site.

B. Installer Qualifications: Company specializing in performing the work of this section with minimum three years experience approved by manufacturer.

1.06 PRE-INSTALLATION MEETING

A. Convene one week before starting work of this section.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products in shipping packaging until installation.

1.08 EXTRA MATERIALS

A. Provide two extra hose nozzles and hoses.

PART 2 PRODUCTS

2.01 FIRE HOSE CABINETS

A. Hose Cabinets:
   1. Style: Recessed mounted.
   2. Tub: 16 gage thick steel, prepared for pipe and accessory rough-in.
   3. Door: 12 gage thick steel, flush,; hinged, positive latch device.
   4. Finish: Prime Coated.

B. Hose Rack: Steel with polished chrome finish; swivel type with pins and water stop.

C. Hose: 1 inch diameter, 50 feet long, of linen hose; mildew and rot-resistant.

D. Nozzle: Chrome plated brass; combination fog, straight stream, and adjustable shut-off.

2.02 VALVES

A. Hose Station Valve: Angle type, brass finish, 1-1/2 inch nominal size with automatic ball drip; refer to Section 21 05 00.

B. Hose Connection Valve: Angle type; brass finish; 2-1/2 inch size, thread to match fire department hardware, 300 psi working pressure, with threaded cap and chain of same material and finish; refer to Section 21 05 00.

C. Pressure Reducing Valve: Angle type; brass finish with inner hydraulic controls; 1-1/2 inch size, thread to match fire department hardware, 400 psi inlet pressure, with threaded cap and chain of same material and finish; refer to Section 21 05 00.

D. Hose Connection Valve Cabinets:
   1. Style: Recessed mounted.
   2. Tub: 16 gage thick steel, prepared for pipe and accessory rough-in.
   3. Door: 12 gage thick steel, flush,; hinged, positive latch device.
   4. Finish: Prime Coated.

2.03 FIRE DEPARTMENT CONNECTION

A. Type: Flush mounted wall type with brass finish.

B. Outlets: Two way with thread size to suit fire department hardware; threaded dust cap and chain of matching material and finish.

C. Drain: 3/4 inch automatic drip, outside.

D. Label: "Standpipe - Fire Department Connection".

2.04 FIRE EXTINGUISHERS

A. General: Comply with NFPA 10; UL listed.

B. Water Type: Copper container with positive displacement pump and discharge hose.
   1. 2-1/2 gallon capacity with 2A rating.
   2. 5 gallon capacity with 4A rating.

C. Carbon Dioxide Type: Insulated handle, hose and horn discharge assembly, self-closing lever or squeeze grip operated, insulated handle.
   1. 5 pound capacity with 5BC rating.
   2. 10 pound capacity with 10BC rating.
   3. 15 pound capacity with 10BC rating.
   4. 20 pound capacity with 10BC rating.

D. Multi-Purpose Dry Chemical Type: Cartridge operated with hose and shut-off nozzle or integral shut-off nozzle.
   1. 2-1/2 pound capacity with 1A:10BC rating.
   2. 5 pound capacity with 2A:10BC rating.
   3. 6 pound capacity with 3A:40BC rating.
   4. 10 pound capacity with 4A:60BC rating.
   5. 20 pound capacity with 20A:120BC rating.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install in accordance with NFPA 14.

C. Locate and secure cabinets plumb and level. Establish top of cabinet (inside horizontal) surface 66 inches above finished floor.

D. Locate hose station valve in cabinet at 60 inches above finished floor.

E. Connect standpipe system to water source ahead of domestic water connection.

F. Where static pressure exceeds 100 psi but is less than 100 psi at any hose station, provide pressure orifice disc in discharge of hose station valve to prevent pressure on hose exceeding 90 psi.

G. Where static pressure exceeds 100 psi at any hose station, provide pressure reducing valve to prevent pressure on hose exceeding 90 psi.

H. Provide two way fire department outlet connection on roof.

I. Flush entire system of foreign matter.

3.02 FIELD QUALITY CONTROL

A. Perform field inspection and testing in accordance with Section 01 40 00.

B. Test entire system in accordance with NFPA 14.

C. Test shall be witnessed by authority having jurisdiction.

END OF SECTION