

FIRE SPRINKLER SYSTEM / AUTOMATIC FIRE PUMP / UNDERGROUND WATER STORAGE TANK

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Provide, install and test an automatic fire sprinkler system in the Fire Pump Building.
- B. Provide, deliver, install and startup of one (1) diesel engine-driven fire pump system including but not limited to one (1) fire pump with drive and associated controller one (1) electric driven jockey pump each with drive and associated controller with interconnecting piping and wiring.
- C. Provide and install an underground water storage tank to be used as the supply for the sprinkler system.

1.2 QUALITY ASSURANCE

- A. Comply with NFPA 13, 20 and 22 requirements. Meet requirements of AHJ.
- B. Furnish all material that is new and unused and free from defects in workmanship and material.

1.3 SUBMITTALS

- A. Submit product data of each item in this article according to the conditions of the contract and specifications sections.
- B. Submit certified fire pump curves.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Protect all equipment, connection surfaces, piping, wiring, fluid passages and working parts from damage during shipment, handling and storage.
- B. Store material in a clean, dry place and protect from weather and construction traffic.
- C. Repair or replace all items damaged during shipment and delivery.

1.5 WARRANTY

Warrant that all supplied components will function as specified and as a complete functional system in accordance with all applicable codes and free from defects in design, assembly, manufacture and workmanship for a minimum of twelve (12) months after startup.

PART 2- PRODUCTS AND DESIGN

2.1 SPRINKLER SYSTEM

- A. Provide sprinkler system for Ordinary Hazard Group 1.
- B. Piping 2" and smaller to be Schedule 40; Piping larger than 2" to be Schedule 10 or 40.
- C. Provide shut-off valve with tamper switch, flow switch and inspector's test connection.

2.2 FIRE PUMP AND RELATED EQUIPMENT

- A. Vertical turbine fire pump (AC Fire Pump or equal), 250 gpm @ 65 psi.
- B. Diesel Engine driver (shaft and guard, cooling system)
- C. Jockey Pump
- D. Double wall fuel storage tank
- E. Batteries
- F. Exhaust pipe/muffler
- G. Relief Valve (if required)
- H. Air Release Valve
- I. Fire Pump Controller
- J. Jockey Pump Controller
- K. Fuel (testing and final fill)

2.3 UNDERGROUND WATER STORAGE TANK

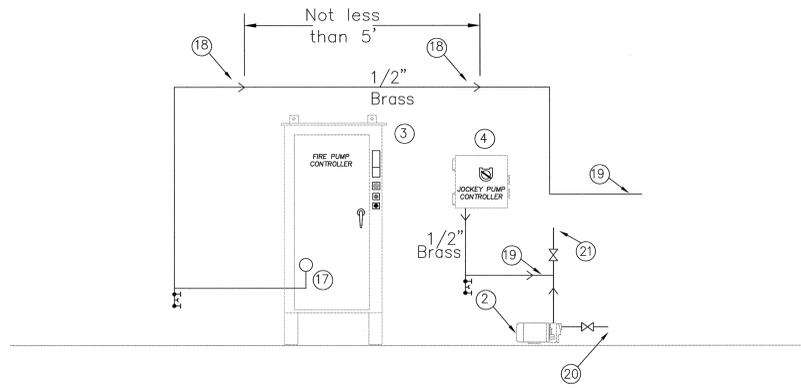
- A. 12,000 Gallon tank by Highland Tank (or equal)
- B. Single wall, steel construction
- C. Outlets on tank to include: Manway, Vertical Turbine Shaft, Dry Hydrant Connection, Tank Fill Connection, Vent Connection and Sensor Connection.
- D. Provide Dry Hydrant per AHJ requirements - Schedule 40 pipe, 6" NST Connection. Verify with AHJ.

2.4 OTHER

- A. Provide all other material and labor required to ensure a complete and functional approved sprinkler system.
- B. Provide means to maintain the temperature in the pump house above 40°F.
- C. Provide artificial light for the pump house.
- D. Provide emergency lighting for the pump house per NFPA 20.
- E. Provide ventilation for pump house. Size exhaust fan per manufacturer's recommendations.
- F. Provide floor drain for pump house.
- G. Provide guards for rotating shafts to prevent injury to personnel.

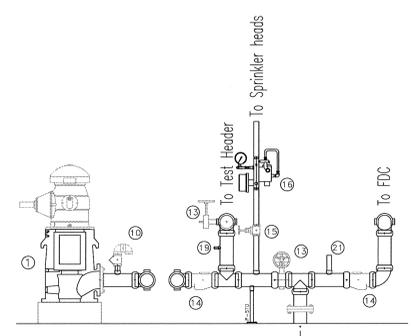
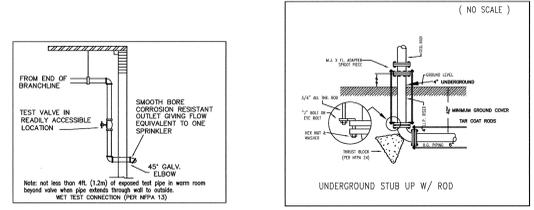
2.5 TESTING

- A. The sprinkler system will be hydrostatically and functionally tested per NFPA 13 requirements.
- B. The fire pump will be tested per the requirements of NFPA, UL and FM.

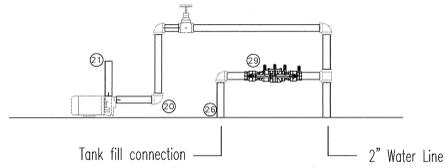


1 FP-2 sensing line details NO SCALE

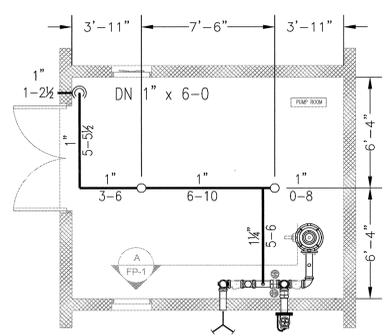
LEGEND	
1	AC FIRE PUMP, VERTICAL TURBINE, ENGINE DRIVEN, 250 GPM, 65 PSI
2	JOCKEY PUMP
3	FIRE PUMP CONTROLLER
4	JOCKEY PUMP CONTROLLER
5	DOUBLE WALL FUEL STORAGE TANK
6	BATTERY RACK
7	DIESEL ENGINE
8	INTAKE LOUVER AND EXHAUST FAN - SIZE PER MANUFACTURER'S RECOMMENDATIONS
9	UNIT HEATER - SIZE TO MAINTAIN TEMPERATURE AT 40° F. MINIMUM
10	AIR RELIEF VALVE
11	TEST HEADER W/ BALL DRIP
12	FDC W/ BALL DRIP
13	4" BUTTERFLY VALVE W/ TAMPER SWITCH
14	4" CHECK VALVE
15	SPRINKLER CONTROL VALVE
16	TEST/DRAIN/FLOW SWITCH ASSEMBLY (or equal)
17	PRESSURE SWITCH
18	BRONZE CHECK VALVE W/ 3/8" ORIFICE
19	SENSING LINE CONNECTION
20	JOCKEY PUMP SUCTION
21	JOCKEY PUMP DISCHARGE
22	12,000 GALLON UNDERGROUND STORAGE TANK
23	FLANGED SUCTION CONNECTION WITH NFPA 22 VORTEX BREAKER (DRY HYDRANT)
24	24" MANWAY
25	FNPT FITTING (VENT CONNECTION)
26	FILL LINE
27	SENSING OUTLET
28	EXHAUST PIPE & MUFFLER
29	2" DOUBLE CHECK (TANK FILL)



1 FP-2 pump piping section NO SCALE

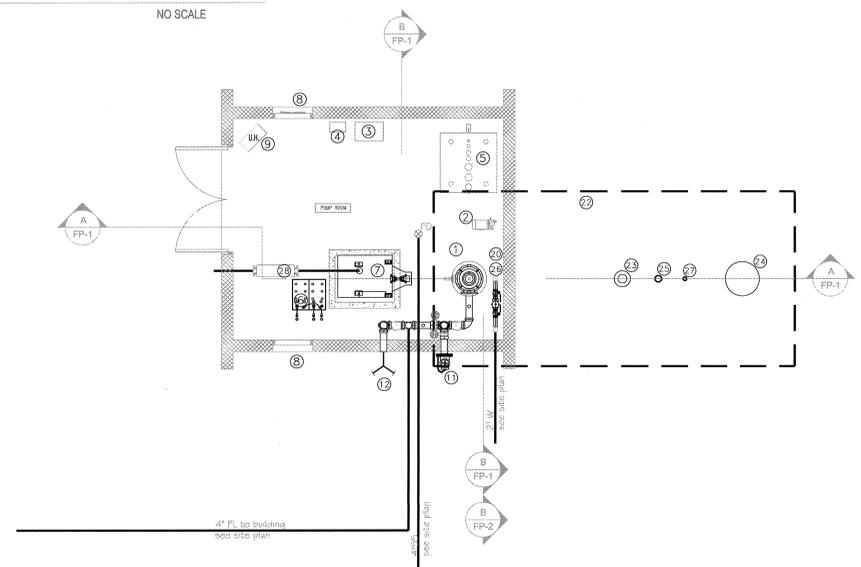


1 FP-2 tank fill line section NO SCALE

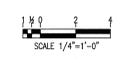


Sprinkler Head Schedule				
Symbol	Count	Thread	K-Factor	Description
○	2	1/2"	5.6	OR UPRIGHT 288" BRASS
2 = Total Number of Heads this floor				

1 FP-2 sprinkler piping plan SCALE: 1/4" = 1'-0"



1 FP-2 pump house floor plan SCALE: 1/4" = 1'-0"



FIRE PUMP AND TANK PROJECT

BAXTER BAILEY & ASSOCIATES
ARCHITECTS
A PROFESSIONAL CORPORATION
11 EAST FRANKLIN STREET, RICHMOND, VIRGINIA 23219
(804) 352-7622 FAX (804) 352-7621



OWNER:
Dinwiddie County Board of Supervisors
William D. Chevin - Chairman
Daniel D. Lee - Vice Chairman
Dr. Mark C. Moore
Brenda K. Elton-Bonner
Kevin Messersmith - County Administrator

MCKENNEY RECREATION CENTER
RAGSDALE COMMUNITY CENTER/phase I & phase II
DINWIDDIE COUNTY, VIRGINIA
COORDINATED BY:
Terrence Collins, Division Chief of Planning and Community Development
J. Rayfield, Vice, the Assistant Recreation Director

DATE: JUN. 1, 2015

JOB NUMBER:
J-239-10

DESIGN BY: JBB
DRAWN BY: MPN
CHECKED BY: JBB

REVISIONS

FP-2