ATTACHMENT J-C17

DESCRIPTION OF FIRE PROTECTION SYSTEMS

The following fire protection systems and equipment shall be maintained and repaired by the Contractor as specified herein. Current tests, PMs, and inventories are found in the CMMS. The following descriptions supplement the data available on As-builts and in the existing CMMS.

FIRE ALARM SYSTEMS

DFRC and DAOF use Central Fire Alarm reporting systems for the majority of facilities. A few facilities have local (building level) alarming only. The system is primarily built on a Simplex® network, with some Notifier® panels. Detection and initiation devices (heat detectors, smoke detectors, combustible gas, and pull stations) are from various manufacturers.

The primary alarm reporting station are located in DFRC Security Post 1 (Building 4825) and at the Dryden Aircraft Operations Facility (DAOF) and are Simplex 4100U BMUX Models. The 4100U is further connected to the Edwards Air Force Base Fire reporting system, the B703 Facility reports to Simplex Alarm Monitoring Station. DFRC owns a small amount of interface equipment including a monitor and printer located at the Air Force ECC.

There are approximately 102 fire panels of varying complexity throughout DFRC and DAOF, locations are identified in the maintenance requirements asset list.

Item	Approximate Number of Each
Fire Alarm Control Panels (with batteries and communication interfaces/transponders)	55
Hydrazine Alarm Systems (4840, 703)	6
B703 UV/IR Optical Detectors	8
Decommissioned UV/IR Optical Detectors	There are approximately 80 UV/IR devices abandoned in place, out of service. No maintenance required.
Central Reporting Stations	3
Automatic Fire Door Closures/Releases	60
Pull Stations	511
Smoke Detectors	463
Heat Detectors	927
Duct Detectors	179
Pressure Switches	48
Pre-Action Systems	5

Foam Pumps	10
Jockey Pumps	6
Fire Pumps	7
Deluge Control Panels (DCP)	18
Inergen Control Panels (ICP)	11
Halon Control Panel (HCP)	3
Flow Switches	104
Tamper Switches	256
Bells	559
Strobes	1712
Horns	403
Post Indicator Valves	79
Wet Pipe Sprinkler Systems	83
Deluge Systems	78
Sprinkler Heads	14,000

FIRE SPRINKLER, DELUGE AND STANDPIPE SYSTEMS

Each occupied and large unoccupied facility has an automatic sprinkler system. Systems are primarily of closed-head design of various date and manufacturer. All aircraft hangars have fire suppression systems.

Item	Approximate Number of Each
Wet Pipe Sprinkler / Standpipe	
Dry Pipe Sprinkler	1
Preaction Systems	6
Foam Deluge Systems	75
Deluge Systems	2
3% AFFF Buildings	4801, 4802, 4820, 4826 and 4840
3% AFFF Foam Capacity	TBD
1% AFFF Buildings	703
1% AFFF Foam Capacity	TBD
Sprinkler Heads, All types	14,000

FIRE PUMPS

Supplemental fire water pressure and volume is provided by seven diesel fire pumps on DFRC.

Item	Approximate Number of Each
4853 Fire Pumps, Caterpillar	4
4840 Fire Pumps, Caterpillar	3

FOAM SYSTEMS

Item	Approximate Number of Each
Foam Pumps	10
Foam Tanks	10
Foam Bladder Tanks	2

INERT GAS EXTINGUISHING SYSTEMS

DFRC has eleven gaseous fire suppression systems located in buildings 4800, 4838, 4982, and 4840. The systems are used in the raised floor computer rooms. Currently both Halon and Inergen® are used. Exact locations are available on As-builts or through the Contracting Officer.

DRY AND WET CHEMICAL EXTINGUISHERS

DFRC and DAOF has a mix of portable and mobile dry and wet chemical fire extinguishers located throughout the facility. The total estimated number is 750, locations are available in the CMMS. There are also approximately 32 flight-line and hangar portable Halon extinguishers.

DRY / WET CHEMICAL EXTINGUISHING SYTEMS

DFRC has approximately 12 Dry / CO2 chemical locker suppression systems and 1 kitchen Type K suppression system.

FIRE WATER SUPPLY AND DELIVERY SYSTEMS AND INFRASTUCTURE

Dryden's existing fire protection water system contains a primary and a secondary fire water supply system. The primary fire water supply system consists of two surface fire water storage tanks, one 400,000 gallon and one 500,000 gallon, located on a hill about one mile west of the Dryden main complex. The two primary fire water supply tanks feed into a 20- inch cast iron fire water distribution main and provides fire protection water needed for the Dryden main complex. The secondary fire water supply system consists of four diesel driven fire water pumps in Building 4853 and a 600,000 gallon fire water storage tank adjacent to Building 4853. The four fire water pumps draw water from the tank and discharge into an 18-inch fire water main. Three fire water pumps in 4840 provide additional pressure capacity to building 4840. Water is supplied into Dryden's fire water storage tanks from Edwards Air Force Base water mains.

The primary fire water supply system is a gravity system. The base elevation of the two primary fire water storage tanks at 2479 feet above Mean Sea Level (MSL) is the highest point of the system. Fire hydrant elevations of the main Dryden complex range from 2275 to 2340 feet MSL. Available fire water supply from this gravity system is 7,542 gpm @ 74 psi. The secondary fire water supply is provided by the four fire water pumps for the DFRC site. Each of the four fire water pumps has a 3,500 gpm @ 145 psi capacity.

System Component	Quantity	Year Installed
Fire Water Sectionalizing Valves (8” – 20”)	35	1953 - Present
Post Indicator Valves	TBD	1953 - Present
400,000 gallon steel fire water storage tank	one	1953
500,000 gallon steel fire water storage tank	one	1953
20" cast iron fire water mains	8,160 feet	1953
20" ductile iron fire water mains	400 feet	1964

6" cast iron fire water mains	350 feet	1966
3" Tar wrapped steel water pipe	750 feet	1966
20" cast iron fire water mains	1,250 feet	1968
6" cast iron fire water mains	200 feet	1969
8" cast iron fire water mains	700 feet	1973
6" cast iron fire water mains	150 feet	1973
6" PVC fire water mains	200 feet	1973
600,000 gallon steel fire water storage tank	one	1975
18" cast iron fire water mains	1450 feet	1975
16" cast iron fire water mains	600 feet	1975
12" cast iron fire water mains	450 feet	1975
10" cast iron fire water mains	450 feet	1975
8" cast iron fire water mains	900 feet	1975
3" cast iron fire water mains	500 feet	1975
8" cast iron fire water mains	1,400 feet	1981
6" ductile iron fire water mains	550 feet	1984
16" ductile iron fire water mains	1820 feet	1985
8" ductile iron fire water mains	1520 feet	1989
6" ductile iron fire water mains	350 feet	1989
12"ductile iron fire water mains	500 feet	1990
16" PVC fire water mains	1270 feet	1991
20" PVC fire water mains	770 feet	1993
16" PVC fire water mains	1,000 feet	1993
3500 gpm fire water pumps	seven	1994
12" ductile iron fire water mains	250 feet	1993
Fire Hydrants	65	Various