NMSU FIRE DEPARTMENT
FIRE PUMPS
PLAN REVIEW CHECKLIST

Date Documents Submitted:_____

Log No.:_____

File No.:_____

Property Information

Building Name:_____

Building Address:_____

Owner's Name:_____

Owner's Address:_____

Owner's Phone:_____

Fax:_____ E-mail:_____

System Designer/Contractor

Company Name:_____

Company Address:_____

Contact Person (Designer):_____

Designer Qualifications:_____

Phone:_____

Fax:_____ E-mail:_____

General

Building type:_____

_____New _____Existing _____Renovation

Pump make:_____

Drive: _____Electric _____Diesel

Model No.:_____

Pump rating:_____gpm @ _____psi

Rated speed:_____rpm

Area/building protected? _____Yes _____No

What is fire pump feeding?

_____Automatic sprinkler system _____Fire hydrants _____Standpipe system

Other:_____

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Building Use and Occupancy Classification

Applicable building code: _____

Edition: _____

_____ NFPA 20, *Standard for the Illustration of Stationary Pumps for Fire Protection*

Edition: _____

Other: _____

Fire pump system required by building or fire code? _____ Yes _____ No

Fire pump system required by local ordinances? _____ Yes _____ No

Fire pump system required for equivalency, alternative level of protection, etc.

_____ Yes _____ No

Fire pump system not required, property owner voluntary safety improvements

_____ Yes _____ No

Other: _____

Fire Pump Plan Review

Yes	No	Installation Features
		Water supply to the fire pump adequate to meet fire pump requirements
		Water supply to the fire pump added to the fire pump rating meets or exceeds the demands placed on it
		Centrifugal fire pump listed for, and used exclusively for fire protection service
		Horizontal pump/driver on common base plate and connected by a listed flexible coupling
		Indoor fire pump units separated from all other areas of the building by 2-hour fire-rated construction; 1-hour fire-rated construction if fire pump buildings is protected with an automatic sprinkler system
		Fire pump units located outdoors and fire pump installations in buildings other than that building being protected by the fire pump located at least 50 feet away from the protected building
		Pump room/house can be inundated by water
		Suction piping the proper size: (5 inch for 500 gpm) (6 inch for 750 gpm) (8 inch for 1000 or 1500 gpm) (10 inch for 2000 or 2500 gpm)
		Suction pipe galvanized or painted on the inside
		An OS&Y valve provided in the suction piping (Butterfly valves not permitted in suction piping)
		Backflow prevention or other device in the suction piping
		Elbows perpendicular to impeller of horizontal pump within 10 pipe diameters of the intake flange
		Reducer at pump intake, if provided, eccentric and installed with flat side up

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Yes	No	Installation Features (continued)
		If the suction supply is of sufficient pressure to be of material value without the pump, a bypass at least the required size of the discharge pipe provided
		A listed indicating-type valve on each side of the check valve in the bypass and they are normally open
		A 3½ inch compound gauge, having a rating of at least 100 psi and a range of at least twice the maximum suction pressure, provided on the suction piping
		A 3½ inch pressure gauge, with a rating of at least 200 psi and a range of at least twice the working pressure of the pump, provided near the discharge casting
		A ¾ inch circulating relief valve (1 inch if pump is rated over 2500 gpm) provided and piped to a drain (Not needed for engine driven pump., cooled by water from pump discharge)
		Listed, float-operated, automatic, air release valve (no less than ½ inch in size) provided
		Discharge piping the proper size: (5 inch for 500 gpm) (6 inch for 750 or 1000 gpm) (8 inch for 1250 or 1500 gpm) (10 inch for 2000 or 2500 gpm)
		A listed indicating valve installed on the fire protection system side of the pump
		A check valve provided between discharge valve and the pump
		Pump driver, regardless of diesel or electric, listed for fire pump service
		Pump controller, regard less of diesel or electric, listed
		If pump is electric motor driven, wiring, wiring elements, and components arranged in approved manner sized relief valve provided (5 inch for 500 gpm) (6 inch for 750 gpm) (8 inch for 1000 and 1500 gpm) (10 inch for 2000 gpm)
		Relief valve piping installed with no valves
		For a diesel engine driver, storage battery units provided with battery chargers specifically listed for fire pump service, arranged to automatically charge at the maximum rate whenever required by the state of charge of the battery, and arranged to indicate loss of current
		For a diesel engine driver cooled by a heat exchanger, the cooling water supply from the discharge of the pump taken is prior to the discharge check valve
		The heat exchanger piping for a diesel engine driver is equipped with an indicating manual shutoff valve, an approved flushing-type strainer, a pressure regulator, an automatic valve listed for fire protection service, and a second indicating manual shutoff valve
		The heat exchanger piping for a diesel engine driver is equipped with a pressure gauge installed in the cooling water supply system on the engine side of the last manual valve
		The heat exchanger piping for a diesel engine driver is provided with a bypass line
		An outlet is provided for the wastewater line from the heat exchanger with a discharge line not less than one size larger than the inlet line, discharging into a visible open waste cone, and having no valves
		A diesel fuel supply tank provided with a capacity of 1 gallon per engine horsepower plus 10%
		A diesel fuel supply tank located above ground
		A test header or flow-meter tapped between the discharge check valve and the discharge valve is provided for annual fire pump now testing (If a flow-meters is used, it is to be arranged so as to test both pump performance and suction supply)

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Yes	No	Installation Features (continued)
		Proper number of listed 2½ inch hose valves provided on test header (2 for 500 gpm) (3 for 750 gpm) (4 for 1000 gpm) (6 for up to 2500 gpm)
		Test header piping is the proper size (4 inch for 500 gpm) (6 inch for 750 & 1000 gpm) (8 inch up to 2500 gpm) (10 inch for 2500 gpm)
		For test header piping over 15 feet in length, next larger piping size is used
		Drain valve located at a low point of the test header pipe between the normally closed test header valve and the test header
		If a flow-meter provided, is the meter system piping is the proper size (5 inch for 500 and 750 GPM) (6 inch for 1000 and 1250 GPM) (8 inch for up to 2500 GPM) (If the meter system piping exceeds 100 feet equivalent of pipe is next larger size pipe used)
		Jockey pump takes suction upstream of the main pump suction control valve and discharges downstream of the installation, typically the main pump discharge valve
		Jockey pump provided with sensing line totally independent from that of main pump sensing line
		Sensing lines both tap the discharge pipes between the check valve and the discharge control valve of the pumps they respectively serve
		Both sensing lines ½ inch nominal and brass, copper, or series 300 stainless steel piping, tube, and fittings
		Two check valves are installed in each pressure sensing line at least 5 feet apart with $_{3/32}$ inch holes drilled in the clappers
		There are no shutoff valves in the sensing lines
		Valves supervised open (Test header and flow –meter valves should be supervised shut)

Location of test header:_____

Approval:_____

Reviewer:_____ Date:_____

Approved: _____Yes _____No

If no, reason(s):_____

_____

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Notes:_____

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Form Completion Date:_____ Supplemental Pages Attached: _____