PLAN CHECK CORRECTION SHEET
FOR FIRE PUMP SYSTEMS
2020 LAPC

This is intended to provide uniform application of the codes by the plan check staff and to help the public apply the codes correctly.

Section: Mechanical Plan Check

Plan Check/PCIS Application No.: _____ **Date:** _____

Job Address: _____

Applicant Name: _____

Address: _____ **Phone:** _____

City/State/Zip: _____ **E-mail:** _____

Plan Check Engineer: _____

Telephone: _____ **E-mail:** _____
firstname.lastname@lacity.org

Your feedback is important; please visit our website to complete a Customer Survey at www.ladbs.org/LADBSWeb/customer-survey.jsf.

If you have any questions or need clarification on any plan check matters, please contact a plan check supervisor or call our Customer Hotline at (213) 482-0056.

Your plans have been examined and the issuance of a permit is withheld for the reasons set forth. The approval of plans and specifications does not permit the violation of any section of the Code, or other local ordinance or state law.

INSTRUCTIONS:

- Corrections with circled item numbers apply to this plan check.
- Additional corrections are at the end of the list.
- Incomplete or non-legible drawings or calculations will not be accepted.
- Incorporate all comments as marked on the checked set of plans and calculations and this correction sheet.
- For each correction indicate the sheet number and detail or note number on the plans where the corrections are made.
- **WHEN YOU HAVE COMPLIED WITH ALL CORRECTIONS, CALL OR EMAIL THE PLAN CHECK ENGINEER TO MAKE AN APPOINTMENT FOR VERIFICATION**
- **PLEASE BRING THE MARKED UP PLANS AND THE CORRECTIONS SHEET TO THE VERIFICATION APPOINTMENT**

SEE MARKED UP PLANS FOR CLARIFICATIONS OF CORRECTIONS.

NOTES ON PLANS

1. Plans shall bear, in every sheet, the license number and signature of the licensed engineer registered in the appropriate classification by the State of California or of the licensed contractor that will do the installation. (LAPC 101.5.2)
2. Sign every sheet of the plans (LAPC 101.5.2)
3. State on the plans make and model of the pump (NFPA 20, 4.2.3.1)
4. Show on the plans gpm flow and pressure rating of the pump. (LAPC 101.5.1, 103.2.1, 103.3.2.2)
5. Add to the plans the pump performance curve. (NFPA 20, 4.2.3.1(6) LAPC 103.2.1)

DOCUMENTATION

1. Provide product literature showing that the pump is listed by a City of Los Angeles recognized listing agency. (NFPA 20, 4.7.1)
2. Provide product literature showing the pump performance curve. (NFPA 20, 4.2.3.1(6) LAPC 103.2.1)
3. Provide product literature for the jockey pump. (NFPA 20, 4.2.3.1(19); LAPC 101.5.1, 103.3.2.2.1)
4. Provide product literature for the pump driver. (NFPA 20, 4.2.3.1(12); LAPC 103.2.1)
5. Provide an S.A.R. (Service Advisory Report) from the Department of Water and Power. (LAPC 103.2.1; NFPA 20, 4.2.3.1 (10))

PLAN DETAILS

6. Show location of the fire pump in the floor plans. (LAPC 101.5.1, 103.2.1)
7. Install the fire pump in one hour rated room (for low-rise buildings) or two hour rated room (for high-rise buildings) (NFPA 20, 4.13.1.1.1, 4.13.1.1.2, Table 4.13.1.1.2) (low rise buildings)
8. Locate all the fire pumps in the same room or provide plans approved by the Fire Department. (NFPA 20 4.13.1.1.4, 4.13.2.1)
9. Remove equipment, and penetrations not essential to the operation of the pump and related components. (NFPA 4.13.1.1.5)
10. The fire pump installed outdoors shall be at least 50 feet from any building or other fire exposure. (NFPA 20, 4.14. 1.2.1 and Table 4.13.1.2.1)
11. Increase the suction pipe to _____ inch nominal diameter (NFPA 20, 4.21.3.4(1) and Table 4.27(a))
12. Install a listed OS&Y valve in the suction pipe. (NFPA 20, 4.15.5.1)
13. Provide an anti-vortex plate. (NFPA 20, 4.15.10) (does not apply to vertical turbines)
14. Install a pressure gauge in the suction pipe near the pump. (NFPA 20, 4.11.2.1)
15. Install a pressure gauge near the discharge casting. (NFPA 20, 4.12.11)
16. The size of the pump discharge pipe shall be at least_____inches. (NFPA 20, 4.17.6 and Table 4.28(a)) (NFPA 20,
17. Install a listed check valve in the pump discharge assembly. (NFPA 20, 4.17.7)
18. Install a pressure relief valve between the pump and the pump discharge check valve. (NFPA 20, 4.20.1, 4.20.2 4.27.5.1)
19. Install a listed indicating valve in the pump discharge assembly on the fire protection system side of the pump discharge check valve. (NFPA 20, 4.17.8)
20. Provide a pump bypass. (NFPA 20, 4.16.4.1)
21. The size of the pump bypass shall be at least as large as the pipe size required for discharge pipe. (NFPA 20, 4.16.4.3)
22. The number of hose valves for pump testing shall be_____ (NFPA 20, 4.22.3.1.2 and Table 4.28(a))
23. The size of the hose valves for testing shall be _____inch. (NFPA 20, 4.22.3.1.2 and Table 4.28(a))
24. Since the pipe between the hose valve header and the connection to the pump discharge pipe is over 15 ft, increase the pipe to the next larger pipe size than that required by 4.22.3.1.3. Alternatively, provide hydraulic calculations that match the actual test configuration and that include the required pitot pressure and friction loss for the total length of pipe and fire hose plus equivalent lengths of fittings, control valve, and hose valves, plus elevation loss, from the pump

discharge flange to the discharge outlets. (NFPA 20, 4.22.3.4)

25. Provide a jockey pump. (NFPA 20, 4.27.21)
26. Redundant fire pump systems shall be required for high-rise buildings having an occupied floor more than 200 feet above the lowest level of fire department vehicle access. (LABC 403.3.2.1)

CALCULATIONS

27. Show connection to the water service. (NFPA 20, 4.2.3.1)
28. Show water meter size both on the site plans and the riser diagram. (NFPA 20, 4.2.3.1)
29. In buildings having an occupied floor that are more than 120 feet above the lowest level of fire department vehicle access, required fire pumps shall be supplied by connections to no fewer than two water mains located in different streets. (LABC 403.3.2)
30. The meter shall be sized to supply a flow of 150 percent of rated capacity of the fire pump. (NFPA 20, 4.6.5.1) (Does not apply if the pump draws water from a tank)
31. Install at the meter a listed double check back flow prevention device. (DWP Rule 16D, 7.2 h and/or k)
32. The fire department connection shall not be connected to the suction side of the pump. (LAPC 2030.2)
33. Provide hydraulic calculations to show that the available flow and pressure at the fire pump discharge is adequate to meet the maximum fire protection demand. (NFPA 20, 4.6.2.3.3)
34. Provide calculations showing that the NPSHA (Net Positive Suction Head Available) exceeds the NPSHR (Net Positive Suction Head Required) (LAPC 103.2.1)
35. Provide hydraulic calculations for the sprinklers in the fire pump room. The sprinklers shall be designed and installed as an Extra Hazard group 2 occupancy. (NFPA 20, 4.14.1.3) (Diesel engine driver)
36. Provide hydraulic calculations for the sprinklers in the fire pump room. The sprinklers shall be designed and installed as an Extra Hazard group 1 occupancy. (NFPA 20, 4.14.1.4) (Electric motor driver)

Additional Corrections		Code Section

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