



City of Sanford
Fire Department
Mailing: 972 Main St. Sanford, Maine 04073



Sprinkler Revision City of Sanford Fire Code

128-12 Revision

Fire protection water supply for subdivisions

Any Subdivision, as dictated by the rules of City of Sanford Code Chapter 275, with more than three lots shall install a reliable water supply for firefighting. If a public hydrant is not available within 1000 feet of each lot, the subdivision shall be responsible for an adequate fire protection water supply in accordance with NFPA 1231. Acceptable methods include, but are not limited to, underground storage reservoirs with an approved dry hydrant or approved residential sprinkler system in each principal building in accordance with NFPA 13D. Individual property owners and or homeowner associations shall be responsible for maintenance of the protection system after the first 5 years.

- A. If fire hydrants are not provided and the Planning Board determines that fire protection water supply is needed, a minimum storage capacity of 10,000 gallons plus 2,000 gallons per lot of principal building or such other amount required by the Fire Chief shall be provided. Tanks will be installed in accordance with the install drawings provided in this code.(See Appendix A) The town Engineer and the Fire Chief shall approve the design of all storage facilities. All storage facilities will be warranted for a period of 5 years to ensure that it functions in the manner it was designed for. The Sanford Fire Marshal shall check the facilities once a quarter for 20 quarters. A warranty fee will be paid to the City of Sanford to guarantee the facilities will hold water. Fees will be as follows: \$25,000 for developments 3 to 8 lots. Developments over 8 lots up to 20 lots will occur a fee of \$25,000 plus \$2,500 per a lot. Any developments with more that 20 lots will have to install a 2nd fire protection supply. A \$250 per lot management fee will be assessed to the Water Holding Tank Fee. Fees will be released to the developer minus the management fee after 5 years of proven fire protection (tank holding water and functioning properly) and will be released only after the Sanford Fire Marshal does a final inspection.
- B. NPFA 13D Sprinkler Systems subject to review and approval of the Sanford Fire Marshal may be utilized for fire protection.

Appendix A

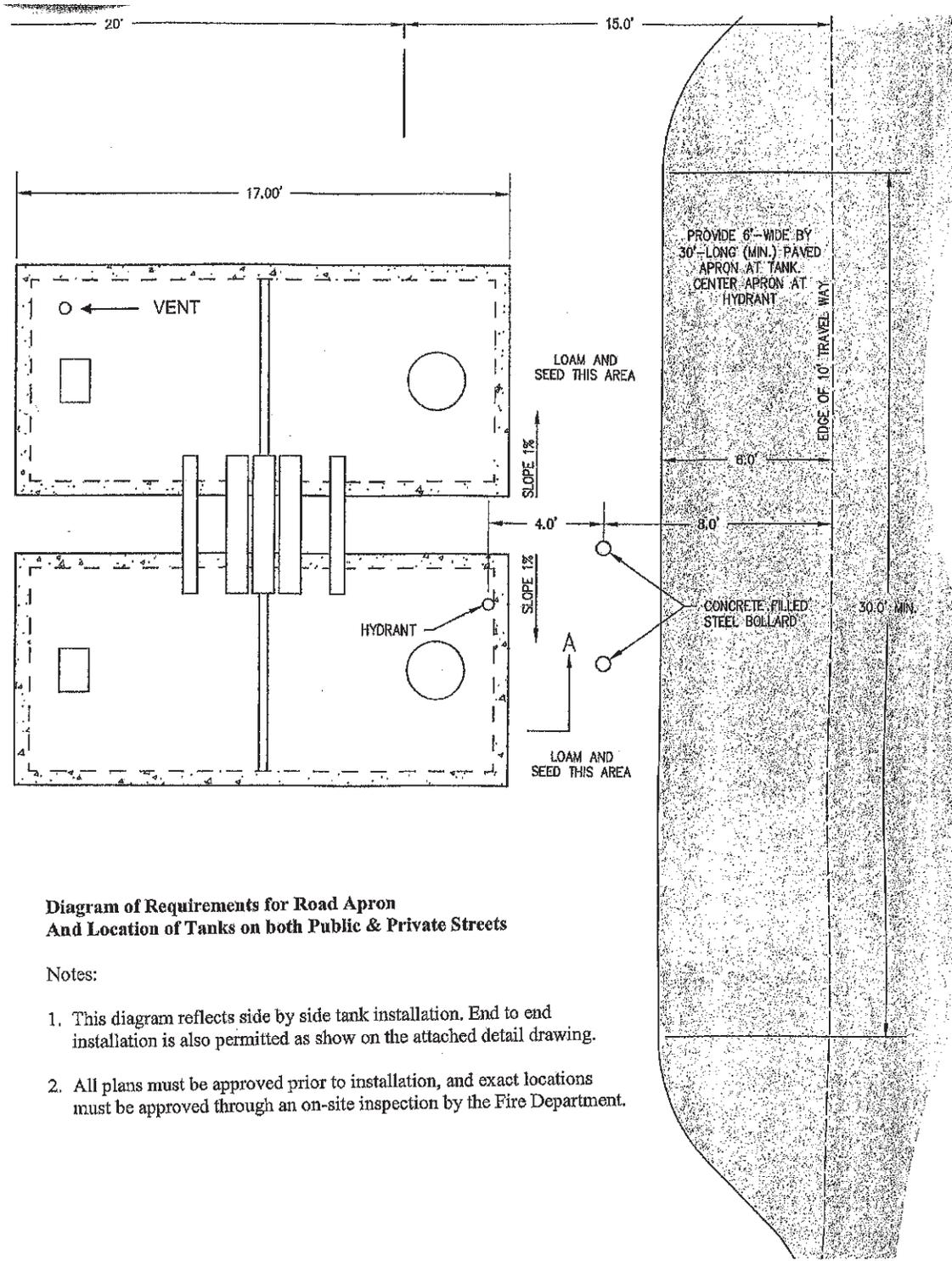
Fire Suppression

Underground Fire Storage Tank Requirements

All developers/installers must meet with the Sanford Fire Department prior to beginning any installation of dry hydrants and/or holding tanks to cover the required criteria. Additionally, the Fire Department must be notified 7 days prior to any such installation to allow scheduling of an on-site inspection.

1. The minimum size accepted will be \$10,000 gallons.
2. **Construction:** Construction must be designed to safely withstand the service to which they are subjected. This includes pressure of the earth or pavement above the tank.
3. **Materials:** Suitable materials include concrete, stainless steel, fiberglass, or lined concrete.
4. **Installation:** Tanks should be set on firm foundations and surrounded with soft sand, well compacted into place. Tanks must be anchored or weighted to prevent floating in locations where the water table is high or may rise. Underground tanks must be protected against damaging loads.
5. **Hardware:** Each tank will be provided with a 4.5" National standard male thread Fire Department connection with 2.5" NST cap and chain. This connection will be located within 6 feet from hot top or hard surface suitable for support of fire apparatus. The center-to-cap elevation shall be 30" from final grade. An appropriate vent must be provided for normal operation (1000 GPM) of any tank to permit filling and emptying and for the maximum expansion or contraction of the tank contents with changes in temperature. A screen shall be provided to prevent clogged vents, which may result in the rupturing of tanks from the internal pressure or collapse due to internal vacuum. Inadequately sized vents may have the same result. The vent shall be a minimum of 6" in circumference (schedule 80 PVC pipe) and terminate a minimum 6 feet above grade. Pipe materials that are resistant to corrosion and have adequate strength to withstand the maximum service pressure shall be used.
6. **Tank Fill:** A tank fill assembly shall be included in the vent pipe, 18" above final grade. It shall consist of a 6" schedule 80 PVC wye socket, 45 degree street elbow spigot & socket, and 6"x 4" Storz hydrant adaptor with cap and chain as illustrated in technical drawings.:
7. The installer, owner, and/or responsible party for the project shall insure in writing to the Planning Board and the Sanford Fire Department, that the water in the tank and vertical lift of the hydrant will be protected from freezing. To the water in the tank will rise in the hydrant connection exactly to the water level in the tank, and the water in the vertical lift in all cases must not be subject to freezing.
8. The owner or contractor shall be responsible for all maintenance for a five-year period.

9. An inspection cover shall be provided that will allow any required maintenance to be done from the inside.
10. Two tanks may be connected, or the connection of several tanks to hold the required gallons is allowed if approved by the Town Engineers. There shall be 3 (8") cross connections at the bottom of the tanks of (8") schedule 80 PVC pipe. There shall be 2 top cross connection vents of (6") schedule 80 PVC pipe.
11. The piping for the Fire Department connection MUST be constructed so that it comes through the interior of the tank, not through the end or underside.
12. There must be 6' of level ground around the Fire Department connection.
13. Protective bollards shall be installed and approved by the Fire Department.
14. The suction pipe inside the tank must be 6" Schedule 80 PVC to the top of the water level, then minimum Schedule 40 6" ID iron pipe from the top of the tank to the fire department connection.
15. Threaded or welded connections are acceptable.
16. Tanks are required to be re-inspected internally 30 days after installation.
17. The developer will be responsible for pumping any existing water, to totally remove any foreign material of any kind, i.e. gasket material, dirt, leaves, concrete dust, etc., prior to on-site inspection by the Fire Department.
18. The developer will be responsible for filling the tank under Fire Department supervision.
19. A 24" concrete collar around the Fire Department connection shall be poured into place.
Note: Please see the attached drawings regarding placement requirements off a public or private way and design specifics.
20. All Fees must be paid prior to issuing of the first building permit being issued.



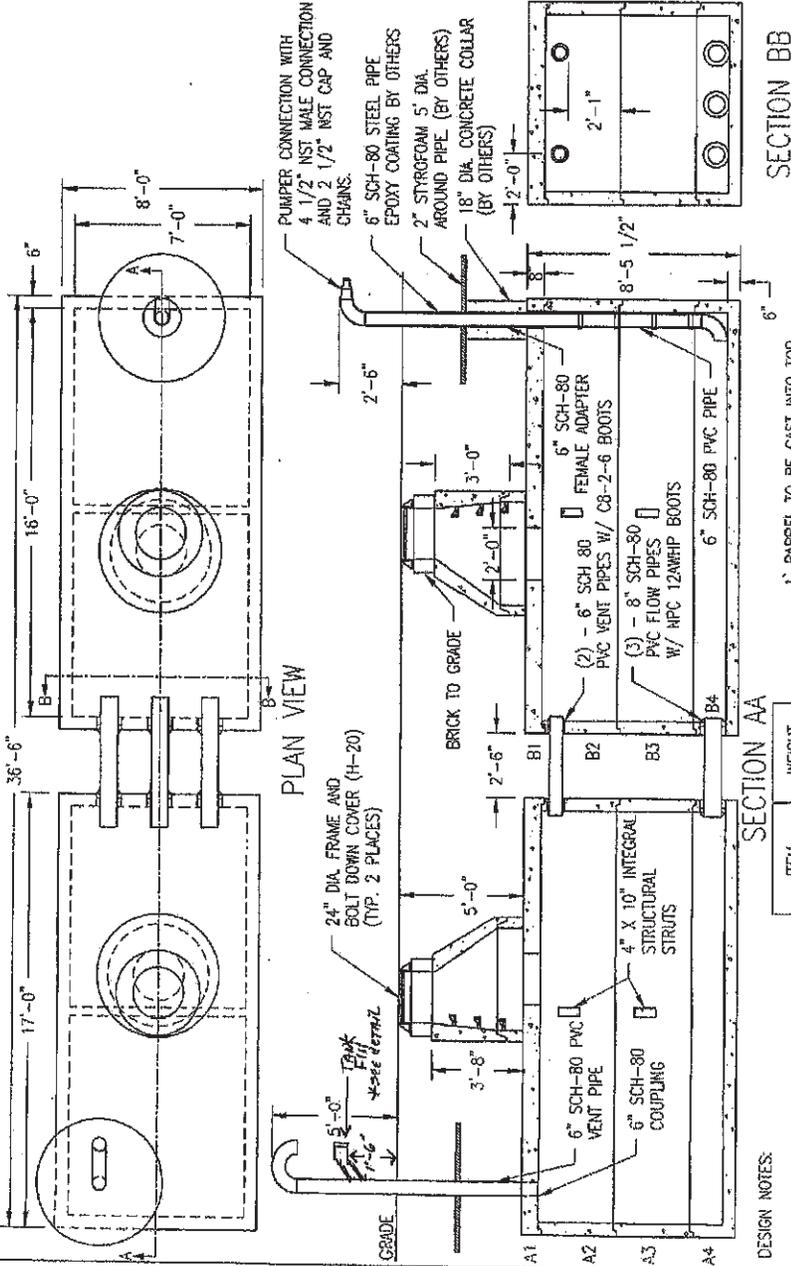
**Diagram of Requirements for Road Apron
And Location of Tanks on both Public & Private Streets**

Notes:

1. This diagram reflects side by side tank installation. End to end installation is also permitted as show on the attached detail drawing.
2. All plans must be approved prior to installation, and exact locations must be approved through an on-site inspection by the Fire Department.

10,000 GALLON FIRE TANK

WEIGHT - 100,400 LBS



PLAN VIEW

SECTION AA

SECTION BB

DESIGN NOTES:

- 1 - CONCRETE 5000 PSI AT 28 DAYS.
- 2 - SHIMLAP JOINTS ARE SEALED WITH A 2 x 1 1/4" STRIP OF ASPHALTIC BUTYL RUBBER.

ITEM	WEIGHT
BASE	13,000 LBS
3'-0" RISER	10,800 LBS
TOP	13,600 LBS

PRECAST CONCRETE PRODUCTS OF MAINE, INC. PHONE (207) 729-1628 FAX (207) 729-8710



City of Sanford

Fire Department
972 Main Street, Sanford, Maine 04073-3592



Emergency Services

CHIEF Steve Benotti

November 24, 2014

Attached is a proposed revision for Sprinklers and water supply for subdivisions. This update would help eliminate the problems in the past of water supplies that were installed and don't work correctly or don't hold water. This would eliminate the making of "Fire Ponds" and only allow properly installed underground storage tanks. This change would require a warranty fee that would be held by the city for 5 years to insure this protection device was installed and maintained to standard and works appropriately. This change also spells out the design criteria that developers would have to use so that we would have standard systems in the city that have been proven to work and if they are not installed correctly give the city the ability to hold the developers warranty fee for a 5 year period to ensure the system will be operational as it should be. If the developer chooses not to put in the water supply they have an alternative, as before, of installing an NFPA 13D sprinkler system in each house that is built.

Respectfully,

Steve Benotti
Fire Chief