

POLICY: FIRE FLOW FOR BUILDINGS

Discipline: Fire and Life Safety

Division of the State Architect (DSA) documents referenced within this publication are available on the [DSA Forms](#) or [DSA Publications](#) webpages.

PURPOSE: To provide clarification and the procedure for documenting acceptance of water supply data for firefighting and building exposure protection (fire flow, fire hydrant locations, and distribution) by the local fire authority (LFA). For the purposes of this document, the terms “water supply” and “fire flow” have the same meaning.

BACKGROUND: DSA is the authority having jurisdiction for construction projects of public schools (K–12) and community colleges, and recognizes that the LFA is inherently more familiar than DSA with the water supply infrastructure within its jurisdiction and operational procedures used in response to a fire emergency.

Some jurisdictions may have public water supply distribution systems capable of providing the minimum required flow in gpm and pressure to a school site, while other jurisdictions may not. Where jurisdictions do not have a traditional water distribution network or the supply is deemed insufficient, some LFAs may routinely utilize water tenders or other water supply resources. In consideration of this, DSA will accept the LFA water supply means for firefighting and building exposure protection.

Water supplies must comply with the minimum requirements of California Fire Code (CFC) Appendix BB. When the water supply is insufficient to meet required minimums, an alternate design means of water supply for firefighting and building exposure protection may be proposed (see Section 2.2.1). The design professional shall coordinate any proposed alternate design means with the LFA.

To facilitate plan approval, a completed and signed form *DSA 810: Fire Life Safety Site Conditions Submittal* imaged on the fire access plan sheet is required as part of the plan submittal package.

1. POLICY:

- 1.1** A completed and signed form DSA 810 is required for proposed alternate design means associated with construction of any new buildings and additions to existing buildings.
- 1.2** Fire hydrants, when required, shall be designed to supply the minimum required flow as determined by CFC Appendix BB, Table BB105.1, but not less than 1,500 gpm at 20 psi residual pressure.
- 1.3** In rural areas, and urban areas where the minimum required flow cannot be provided by the water supply infrastructure, it shall be the policy of DSA to accept the LFA approval of proposed or existing water supplies and the number and placement of hydrants. The acceptance by the LFA is documented by the completed form DSA 810 imaged onto the fire access site plan. The LFA acceptance indicates to DSA that the water supply meets the minimum requirements of the CFC or that a proposed alternate design means is acceptable.

The LFA may decline to review fire flow by placing a check mark in the NR column for the item on form DSA 810 and providing a statement in the “comments” section. In such instances, DSA will review the project for compliance with CFC requirements.

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1.4 DSA shall review the submitted plans for adequate water supply and pressure for proposed automatic fire sprinkler systems (AFSS) to ensure that the infrastructure (including size of required tanks and/or fire pumps), piping, water flow and pressures are sufficient to operate the AFSS. (See DSA policy *PL 10-01: Plan Submittal Requirements: Automatic Fire Sprinkler Systems (AFSS)*).

2. PROCEDURE:

2.1 Preparation: Prior to submitting a fire access site plan to DSA as part of a project submittal, the design professional (DP) shall first determine if the available water supply meets the minimum requirements of CFC Appendix BB.

Where fire flow minimum requirements cannot be met in accordance with the CFC, the design professional shall notify the school district of the need for an alternate design means for firefighting and building exposure protection. The school district official shall sign form DSA 810 acknowledging that the district understands and accepts the alternate design means.

2.2 Site Plan: The design professional shall provide a fire access-related site plan reflecting all required information as noted on form DSA-810 for LFA approval.

2.2.1 Alternate design means and methods allowed by CCR Title 24, Part 1, Section 4-404 (CAC) and CFC Appendices BB and CC for firefighting, shall be submitted to the LFA for consideration and acceptance.

Alternate design means and methods proposed for water supplies shall reflect equivalency with, but need not be more restrictive than, the minimum CFC requirements.

Alternate design means and methods shall be requested in writing to the LFA.

If the LFA chooses not to review a requested alternate design, it shall be submitted to DSA as part of the initial project design package at time of initial project submittal.

Where proposed alternate design means include on-site water storage tanks and/or fire pumps, the initial project submittal package must include manufacturer's product and installation documentation and tank sizing calculations. For above-ground water tanks, submittals must include structural calculations for foundation and tank designs.

2.2.2 Per C.C.R. Title 19, Public Safety, Section 1.07 (see *Hall v. City of Taft*), local ordinances do not apply to public school project sites. Minimum code and standards requirements will be enforced, as adopted and reflected in the California Building Code, Chapter 35. However, the connection or tie in to city or county utilities on the public side of the project shall comply with local specifications and ordinances. It is the school district's responsibility to identify and comply with all such applicable statutes and regulations.

2.3 Items Reviewed but not approved by the LFA: Where the LFA does not accept the design professional's proposed alternate design; the LFA must provide comments on form DSA 810. DSA's regional office Fire & Life Safety staff will review and evaluate the proposal giving consideration to LFA comments on the issues and, as the authority having final jurisdiction, will make a determination based on minimum requirements found in the CFC.

2.4 Submittal to DSA: The design professional shall ensure that the LFA-approved site plan is submitted to DSA as part of the initial project submittal. Fire access site plans with the LFA review must coincide with the final project site plan submitted to DSA. Any

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changes that affect a previous approval must be re-submitted to the LFA (and the school district, if an alternative means is proposed) for review and approval prior to back check.

All information, as required on the form DSA-810, shall be permanently included on the site plan when submitted to DSA. This information will be part of the archived record set.

REFERENCES:

- Title 24, Part 1, California Administrative Code (CAC)
- Title 24, Part 2, California Building Code (CBC) – Section 903
- Title 24, Part 9, California Fire Code (CFC) –
Section 507 & Appendices BB, CC

DSA 810: Local Fire Authority Review

A Division of the State Architect (DSA) Policy is a formally established set of governing statements based on law and code objectives, addressing any aspect of DSA's review and approval of plans and specifications and construction oversight programs that is not clearly addressed by code. A Policy also may specify administrative or technical requirements that are not yet addressed within Title 24, but are deemed important and necessary to fulfill code objectives in advance of adoption into the code.
