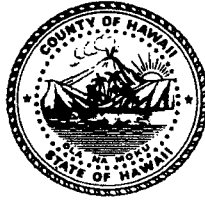


Harry Kim
Mayor

Wil Okabe
Managing Director

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County of Hawai'i
PLANNING DEPARTMENT

Michael Yee
Director

Duane Kanuha
Deputy Director

East Hawai'i Office
101 Pauahi Street, Suite 3
Hilo, Hawai'i 96720
Phone (808) 961-8288
Fax (808) 961-8742

August 19, 2019

Jason Knable
P.O. Box 701
Hilo, HI 96720

Dear Mr. Knable:

SUBJECT: VARIANCE DECISION - VAR-19-000516

Applicant: JASON KNABLE
Owners: CRAIG TAKAMINE & CALEB YAMANAKA
Request: Variance from Article 3, Division 4, Street Design, Section 23-41, Minimum Right-of-Way and Pavement Widths; Article 6, Division 2, Improvements Required, Sections 23-86, Requirements for Dedicable Street, 23-93, Street Lights, & 23-95, Right-of-Way Improvement
Tax Map Key: (3) 2-4-009:045 (SUB-16-001647)

Upon review of your variance application, the Planning Director certifies the **approval** of Variance VAR-19-000516 subject to variance conditions. The variance grants relief for subdivision SUB-16-001647 from constructing minimum County dedicable roadway improvements as required by Hawai'i County Code (HCC), Chapter 23 (Subdivisions).

The variance is from the proposed subdivision's minimum requirements pursuant to HCC, Chapter 23 (Subdivisions), Article 3, Division 4, Street Design, Section 23-41, Minimum Right-of-way (r-o-w) and Pavement Widths, Article 6, Division 2, Improvements Required, Sections 23-86, Standard for Dedicable Street, 23-93, Street Lights, & 23-95, Right-of-way Improvement.

BACKGROUND

1. **Location.** The referenced property, being Lot 8-B, Waiākea Homesteads, First Series, being a Portion of Lot 511-B, also being a Portion of Grant 8941, containing approximately 61,156 sq. ft., is situated in Waiākea, South Hilo, Island of Hawai'i, Hawai'i.
2. **County Zoning.** Residential-15,000 sq. ft. (RS-15).

3. **State Land Use.** Urban (U).
4. **General Plan.** Land Use Pattern Allocation Guide (LUPAG) map designates the property as Low Density Urban (ldu).
5. **Subdivision Code Requirements.** Hawai'i County Code, Chapter 23, Subdivisions requires that subdivisions in the RS-15 zoning district be served by minimum r-o-w and paving widths of 50-feet and 20-feet, respectively, and full right-of-way improvement to include paved shoulders and swales.
6. **Subdivision Request/PPM.** Subdivision application SUB-16-001647 was submitted to subdivide the subject TMK property. Action on the subdivision application has been deferred pursuant to letter of road improvement requirements dated March 8, 2017, in the subdivision file.
7. **Variance Application.** The variance request from roadway improvements was acknowledged by Planning Department letter dated April 22, 2019. This variance application includes background history and circumstances and information regarding the pending subdivision application. Narrative and pictorial evidence of the existing roadway conditions was presented in support of the request.

Existing conditions within Santos Lane (30-foot wide r-o-w), which allows access from West Puainako and West Kahaopea Streets to the subject property is an existing 10-foot wide paved travel way with 2 to 3-foot wide compacted gravel shoulders on both sides within the 30-foot wide r-o-w.

8. **Variance Application (VAR-19-000516) Agency Comments and Requirements.**
 - a. Department of Public Works (DPW): See attached memorandum dated June 21, 2019. **(Exhibit A)**
 - b. County of Hawai'i Fire Department (HFD): See attached memorandum dated June 21, 2019. **(Exhibit B)**
9. **Notice to Surrounding Owners/Posted Sign.** The applicant submitted evidence, dated April 26, 2019, regarding the posting of a public notification sign on the subject property pursuant to Section 23-17(c) of the Hawai'i County Code (HCC). Pictures of the posted sign were also submitted. Evidence submitted on June 6, 2019, also indicates that a notice of the application was sent to the surrounding property owners as required by Section 23-17(a).
10. **Comments from Surrounding Property Owners or Public.** There were no comments received from any neighbors or the public.

ANALYSIS OF GROUNDS FOR VARIANCE

No variance will be granted unless it is found that:

- (a) *There are special or unusual circumstances applying to the subject real property which exist either to a degree which deprives the owner or applicant of substantial property rights that would otherwise be available or to a degree which obviously interferes with the best use or manner of development of that property.*

The Variance application meets criterion (a) for the following reasons(s):

There is no practical way to further improve the Santos Lane roadway to County standards. Installing a roadway to dedicable County standards would require acquiring much additional r-o-w's, relocation of waterlines, meters and service laterals and fire hydrants, relocation of utility poles, and removal of rock walls and other items and would be an extremely cost prohibitive undertaking for this low density residential area. In addition, many existing dwellings would become nonconforming to setbacks, etc.

The existing Santos Lane, with 10-foot wide paved travel way and 2 to 3-foot compacted gravel shoulders within the 30-foot wide r-o-w should be adequate for this low density subdivision. Considering that the road was only gravel until the recent upgrade by the DWS, it has satisfactorily served this neighborhood for many years.

Considering that the subdivision is in keeping with the density of the existing RS-15 zoning, without subdividing, this lot could be improved with an equivalent number of dwelling units. With a condition that restricts the proposed lots from building 'Ohana or second dwelling units on the lots, that density is preserved, but will allow the subdivider to offer the house lots for sale to others.

The above special and unusual circumstances would deprive the applicant from developing this property and interferes with the best use of this property.

- (b) *There are no other reasonable alternatives that would resolve the difficulty.*

The Variance application meets criterion (b) for the following reasons(s):

There is no practical way to improve the roadway to County dedicable standards. The 10-foot wide paved travel way and 2 to 3-foot wide compacted gravel shoulders allow for 2-way travel on the low-use road and actually allow for less permeable surface to minimize rainwater run-off and should be adequate for the purposes of this low density subdivision.

The existing improvements of Santos Road, in this low density neighborhood, is a 10-foot wide pavement with 2 to 3-foot wide compacted graveled shoulders on each side

of the road. Notwithstanding the cost to comply with the code requirement, the graded rather than paved shoulders within the right-of-way, because of their permeability, could also act as natural storm drains and/or retard the velocity of any potential storm water run-off. Furthermore, allowing a 10-foot instead of a 20-foot wide pavement would result in less land disturbance. From a cost perspective, it would be extremely prohibitive to require the acquisition of additional r-o-w's and full right-of-way improvements with attendant utility reconstructions/relocations.

Then, too, the reduced pavement should not compromise traffic safety. Given the projected low volume, low speed of traffic within this low density neighborhood, there should be minimal 2-way traffic. As such, the existing 10-foot wide paved road and compacted graveled shoulders should be sufficient.

- (c) The variance will be consistent with the general purpose of the district, the intent and purpose of this chapter, and the County general plan and will not be materially detrimental to the public welfare or cause substantial, adverse impact to an area's character or to adjoining properties.*

The Variance application meets criterion (c) for the following reasons(s):

The roadway variance authorizing use of a privately owned road, will not be detrimental to public welfare or burden County resources. The subdividers' plans are consistent with the existing land uses and will not have any adverse impact on the area's character or on neighboring properties. By prohibiting 'Ohana dwellings, this variance preserves the intent of the RS-15 density.

The proposed lots meet the minimum lot size for the RS-15 zoning. The project is consistent with the intent and purpose of the Zoning and Subdivision Codes. The project is designed with lots for additional residential use in keeping with the residential zoning. The Owners' plans are consistent with these designations.

DETERMINATION-VARIANCE CONDITIONS

The variance to permit the proposed 3-lot subdivision of the subject TMK property without providing a County dedicable roadway, and in lieu, utilizing a privately owned non-dedicable road is hereby **approved** subject to the following variance conditions:

1. The applicant, owners, their assigns, or successors shall be responsible for complying with all stated conditions of approval.
2. Should the Council adopt a Unified Impact Fees Ordinance setting forth criteria for the imposition of exactions or the assessment of impact fees, conditions included herein shall be credited towards the requirements of the Unified Impact Fees Ordinance.

3. The owners, their assigns, or successors shall file a written agreement document with the Planning Department within one (1) year from the issuance of this variance approval. This written agreement shall contain deed language, being covenants, conditions, and restrictions affecting the lots created by the proposed subdivision which are not serviced by a County dedicable roadway and instead utilizing the privately owned alternative roadway. The agreement shall specify that if a Homeowners' or Maintenance Association is created for purposes of upkeep of, and required repairs to the roadway improvements, that the owners of the subdivided lots shall participate in said association.

The agreement shall be duly recorded with the State of Hawai'i Bureau of Conveyances by and at the cost and expense of the owners. A copy of the recorded document shall be supplied to the Planning Department for our files.

In the event that there are any amendments or changes to the subdivision after the agreement is recorded, the applicant shall be responsible for informing the County Planning Department of such amendments or changes so that the agreement can be amended concomitantly. Further, the recorded agreement shall be binding upon the owner(s), their successors or assigns and shall be incorporated as an exhibit and made part of each agreement of sale, deed, lease, or similar documents affecting the title of the approved subdivided buildable lots.

4. The subdivider and all grantees, successors, and assigns acknowledge that the parcels were created by a variance from the normal subdivision requirements of Hawai'i County, and that there are no longer any special or unusual circumstances applying to the property, and hence, no grounds exist or will exist for another variance from the Subdivision Code to permit further subdivision of the subdivided properties.

It is also understood that they will use and maintain the privately owned roadway on their own without any expectation of governmental assistance to maintain the improvements. They shall also indemnify and defend the State of Hawai'i or County of Hawai'i from any and all liability arising out of vehicular access to and from the subject properties utilizing the private r-o-w.

5. Upon written demand of the County of Hawai'i, the applicant and/or owners, their assigns, or successors shall agree to participate and pay their fair share percentage of any improvement district adopted for the purpose of roadway improvements serving the proposed lots. Should the improvement district require acquisition of any privately owned right-of-ways fronting the lots, such right-of-ways shall be dedicated to the County without cost and the value of the dedication credited to the fair share contribution of the respective lot owner(s).
6. No condominium property regime will be allowed, nor will an 'Ohana Dwelling Unit be permitted or allowed. This restriction shall be recorded with each deed recorded at the Bureau of Conveyance and a copy of the deed provided to the Planning Department for our files.

7. The pending subdivision application's (SUB-16-001647) final plat map shall meet all the requirements of the Hawai'i County Zoning Code and the Subdivision Code that are not covered by this variance. This will include 10-foot wide future road widening setbacks on all lots fronting the Santos Lane r-o-w.
8. The subdivider, owner(s), their assigns or successors shall pay any outstanding real property taxes and comply with all other applicable State statutes and County ordinances pertaining to building improvements and land use.

Should any of the foregoing conditions not be complied with, the Planning Director may proceed to declare this Variance Permit null and void.

Sincerely,



MICHAEL YEE
Planning Director

JRH: NK:jaa

P:\public\Admin Permits Division\Variance\2019\VAR-19-000516 Knable Road\APVL NK edits.docx

Encls.: Agency Comments, Exhibits A-B

xc: DPW
HFD
A. Surprenant, CDP PPM (via e-mail)
SUB-16-001647

Wayne A. Subica, Jr., LPLS
Imata and Associates, Inc.
171 Kapi'olani Street
Hilo, HI 96720

xc w/encls.: Craig Takamine & Caleb Yamanaka
1266 Kamehameha Avenue, Suite C
Hilo, HI 96720

G. Bailado, GIS Section (via email)

DEPARTMENT OF PUBLIC WORKS
COUNTY OF HAWAII
HILO, HAWAII

DATE: June 21, 2019

Memorandum

TO: PLANNING DEPARTMENT

FROM: DEPARTMENT OF PUBLIC WORKS *MD*

SUBJECT : VARIANCE APPLICATION (VAR 19-516)
Applicant: JASON KNABLE
Owners: CRAIG TAKAMINE & CALEB YAMANAKA
TMK: 2-4-009:045
Reference: SUB 16-1647; Fldr. No.: 24703-B

PLANNING DEPARTMENT
COUNTY OF HAWAII
2019 JUN 24
AM 11 00

We have reviewed the subject application received on April 22, 2019 and offer the following comment:

We believe the minimum road improvement requirements codified within Chapter 23 of the Hawaii County Code provide public welfare and safety.

However, should the Planning Director determine that Section 23-15 is applicable, we defer to the director's authority.

Should there be any questions concerning this matter, please contact Melanie DeMello in our Engineering Division at Ext. 8927.

MD

EXHIBIT
A

126153

Harry Kim
Mayor



Darren J. Rosario
Fire Chief

Lance S. Uchida
Deputy Fire Chief

County of Hawai'i
HAWAII FIRE DEPARTMENT
25 Aupuni Street • Suite 2501 • Hilo, Hawai'i 96720
(808) 932-2900 • Fax (808) 932-2928

PLANNING DEPARTMENT
COUNTY OF HAWAII

2019 JUN 21 AM 8 55

June 21, 2019

TO: MICHAEL YEE, PLANNING DIRECTOR

FROM: DARREN J. ROSARIO, FIRE CHIEF

SUBJECT: Application: Variance – VAR-19-000516
Applicant: Jason Knable
Owners: Craig Takamine & Caleb Yamanaka
Request: Variance from Article 3, Division 4, Street Design, Section 23-41
Minimum right-of-way and pavement widths; Article 6, Division 2
Improvements required, sections 23-86, requirements for dedicable
Street, 23-93, Street Lights & 23-95, right-of-way improvements
Tax Map Key: (3) 2-4-009:045 (SUB 16-001647)

In regards to the above-mentioned Variance application, the following shall be in accordance:

NFPA 1, UNIFORM FIRE CODE, 2006 EDITION

Note: Hawai'i State Fire Code, National Fire Protection Association 2006 version, with County of Hawai'i amendments. County amendments are identified with a preceding "C~" of the reference code.

Chapter 18 Fire Department Access and Water Supply

18.1 General. Fire department access and water supplies shall comply with this chapter.

For occupancies of an especially hazardous nature, or where special hazards exist in addition to the normal hazard of the occupancy, or where access for fire apparatus is unduly difficult, or areas where there is an inadequate fire flow, or inadequate fire hydrant spacing, and the AHJ may require additional safeguards including, but not limited to, additional fire appliance units, more than one type of appliance, or special systems suitable for the protection of the hazard involved.

18.1.1 Plans.

18.1.1.1 Fire Apparatus Access. Plans for fire apparatus access roads shall be submitted to the fire department for review and approval prior to construction.

EXHIBIT
B

Hawai'i County is an Equal Opportunity Provider and Employer.

126158



18.1.1.2 Fire Hydrant Systems. Plans and specifications for fire hydrant systems shall be submitted to the fire department for review and approval prior to construction.

C~ 18.1.1.2.1 Fire Hydrant use and Restrictions. No unauthorized person shall use or operate any Fire hydrant unless such person first secures permission or a permit from the owner or representative of the department, or company that owns or governs that water supply or system. Exception: Fire Department personnel conducting firefighting operations, hydrant testing, and/or maintenance, and the flushing and acceptance of hydrants witnessed by Fire Prevention Bureau personnel.

18.2 Fire Department Access.

18.2.1 Fire department access and fire department access roads shall be provided and maintained in accordance with Section 18.2.

18.2.2* Access to Structures or Areas.

18.2.2.1 Access Box(es). The AHJ shall have the authority to require an access box(es) to be installed in an accessible location where access to or within a structure or area is difficult because of security.

18.2.2.2 Access to Gated Subdivisions or Developments. The AHJ shall have the authority to require fire department access be provided to gated subdivisions or developments through the use of an approved device or system.

18.2.2.3 Access Maintenance. The owner or occupant of a structure or area, with required fire department access as specified in 18.2.2.1 or 18.2.2.2, shall notify the AHJ when the access is modified in a manner that could prevent fire department access.

18.2.3 Fire Department Access Roads. (*may be referred as FDAR)

18.2.3.1 Required Access.

18.2.3.1.1 Approved fire department access roads shall be provided for every facility, building, or portion of a building hereafter constructed or relocated.

18.2.3.1.2 Fire Department access roads shall consist of roadways, fire lanes, parking lots lanes, or a combination thereof.

18.2.3.1.3* When not more than two one- and two-family dwellings or private garages, carports, sheds, agricultural buildings, and detached buildings or structures 400ft² (37 m²) or less are present, the requirements of 18.2.3.1 through 18.2.3.2.1 shall be permitted to be modified by the AHJ.

18.2.3.1.4 When fire department access roads cannot be installed due to location on property, topography, waterways, nonnegotiable grades, or other similar conditions, the AHJ shall be authorized to require additional fire protection features.

18.2.3.2 Access to Building.

18.2.3.2.1 A fire department access road shall extend to within in 50 ft (15 m) of at least one exterior door that can be opened from the outside that provides access to the interior of the building. Exception: 1 and 2 single-family dwellings.

18.2.3.2.1.1 When buildings are protected throughout with an approved automatic sprinkler system that is installed in accordance with NFPA 13, NFPA 13D, or NFPA 13R, the distance in 18.2.3.2.1 shall be permitted to be increased to 300 feet.

18.2.3.2.2 Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 ft (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility.

18.2.3.2.2.1 When buildings are protected throughout with an approved automatic sprinkler system that is installed in accordance with NFPA 13, NFPA 13D, or NFPA 13R, the distance in 18.2.3.2.2 shall be permitted to be increased to 450 ft (137 m).

18.2.3.3 Multiple Access Roads. More than one fire department access road shall be provided when it is determined by the AHJ that access by a single road could be impaired by vehicle congestion, condition of terrain, climatic conditions, or other factors that could limit access.

18.2.3.4 Specifications.

18.2.3.4.1 Dimensions.

C~ **18.2.3.4.1.1** FDAR shall have an unobstructed width of not less than 20ft with an approved turn around area if the FDAR exceeds 150 feet. **Exception:** FDAR for one and two family dwellings shall have an unobstructed width of not less than 15 feet, with an area of not less than 20 feet wide within 150 feet of the structure being protected. An approved turn around area shall be provided if the FDAR exceeds 250 feet.

C~ **18.2.3.4.1.2** FDAR shall have an unobstructed vertical clearance of not less then 13ft 6 in.

C~ **18.2.3.4.1.2.1** Vertical clearances may be increased or reduced by the AHJ, provided such increase or reduction does not impair access by the fire apparatus, and approved signs are installed and maintained indicating such approved changes.

18.2.3.4.1.2.2 Vertical clearances shall be increased when vertical clearances or widths are not adequate to accommodate fire apparatus.

C~ 18.2.3.4.2 Surface. Fire department access roads and bridges shall be designed and maintained to support the imposed loads (25 Tons) of the fire apparatus. Such FDAR and shall be comprised of an all-weather driving surface.

18.2.3.4.3 Turning Radius.

C~ 18.2.3.4.3.1 Fire department access roads shall have a minimum inside turning radius of 30 feet, and a minimum outside turning radius of 60 feet.

18.2.3.4.3.2 Turns in fire department access road shall maintain the minimum road width.

18.2.3.4.4 Dead Ends. Dead-end fire department access roads in excess of 150 ft (46 m) in length shall be provided with approved provisions for the fire apparatus to turn around.

18.2.3.4.5 Bridges.

18.2.3.4.5.1 When a bridge is required to be used as part of a fire department access road, it shall be constructed and maintained in accordance with county requirements.

18.2.3.4.5.2 The bridge shall be designed for a live load sufficient to carry the imposed loads of fire apparatus.

18.2.3.4.5.3 Vehicle load limits shall be posted at both entrances to bridges where required by the AHJ.

18.2.3.4.6 Grade.

C~ 18.2.3.4.6.1 The maximum gradient of a Fire department access road shall not exceed 12 percent for unpaved surfaces and 15 percent for paved surfaces. In areas of the FDAR where a Fire apparatus would connect to a Fire hydrant or Fire Department Connection, the maximum gradient of such area(s) shall not exceed 10 percent.

18.2.3.4.6.2* The angle of approach and departure for any means of fire department access road shall not exceed 1 ft drop in 20 ft (0.3 m drop in 6 m) or the design limitations of the fire apparatus of the fire department, and shall be subject to approval by the AHJ.

18.2.3.4.6.3 Fire department access roads connecting to roadways shall be provided with curb cuts extending at least 2 ft (0.61 m) beyond each edge of the fire lane.

18.2.3.4.7 Traffic Calming Devices. The design and use of traffic calming devices shall be approved the AHJ.

18.2.3.5 Marking of Fire Apparatus Access Road.

18.2.3.5.1 Where required by the AHJ, approved signs or other approved notices shall be provided and maintained to identify fire department access roads or to prohibit the obstruction thereof of both.

18.2.3.5.2 A marked fire apparatus access road shall also be known as a fire lane.

18.2.4* Obstruction and Control of Fire Department Access Road.

18.2.4.1 General.

18.2.4.1.1 The required width of a fire department access road shall not be obstructed in any manner, including by the parking of vehicles.

18.2.4.1.2 Minimum required widths and clearances established under 18.2.3.4 shall be maintained at all times.

18.2.4.1.3* Facilities and structures shall be maintained in a manner that does not impair or impede accessibility for fire department operations.

18.2.4.1.4 Entrances to fire departments access roads that have been closed with gates and barriers in accordance with 18.2.4.2.1 shall not be obstructed by parked vehicles.

18.2.4.2 Closure of Accessways.

18.2.4.2.1 The AHJ shall be authorized to require the installation and maintenance of gates or other approved barricades across roads, trails, or other accessways not including public streets, alleys, or highways.

18.2.4.2.2 Where required, gates and barricades shall be secured in an approved manner.

18.2.4.2.3 Roads, trails, and other access ways that have been closed and obstructed in the manner prescribed by 18.2.4.2.1 shall not be trespassed upon or used unless authorized by the owner and the AHJ.

18.2.4.2.4 Public officers acting within their scope of duty shall be permitted to access restricted property identified in 18.2.4.2.1.

18.2.4.2.5 Locks, gates, doors, barricades, chains, enclosures, signs, tags, or seals that have been installed by the fire department or by its order or under its control shall not be removed, unlocked, destroyed, tampered with, or otherwise vandalized in any manner.

18.3 Water Supplies and Fire Hydrants

18.3.1* A water supply approved by the county, capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ. For on-site fire hydrant requirements see section 18.3.3.

EXCEPTIONS:

1. When facilities or buildings, or portions thereof, are completely protected with an approved automatic fire sprinkler system the provisions of section 18.3.1 may be modified by the AHJ.
2. When water supply requirements cannot be installed due to topography or other conditions, the AHJ may require additional fire protection as specified in section 18.3.2 as amended in the code.
3. When there are not more than two dwellings, or two private garage, carports, sheds and agricultural. Occupancies, the requirements of section 18.3.1 may be modified by AHJ.

18.3.2* Where no adequate or reliable water distribution system exists, approved reservoirs, pressure tanks, elevated tanks, fire department tanker shuttles, or other approved systems capable of providing the required fire flow shall be permitted.

18.3.3* The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be provided on a fire apparatus access road on the site of the premises or both, in accordance with the appropriate county water requirements.

18.3.4 Fire Hydrants and connections to other approved water supplies shall be accessible to the fire department.

18.3.5 Private water supply systems shall be tested and maintained in accordance with NFPA 25 or county requirements as determined by the AHJ.

18.3.6 Where required by the AHJ, fire hydrants subject to vehicular damage shall be protected unless located within a public right of way.

18.3.7 The AHJ shall be notified whenever any fire hydrant is placed out of service or returned to service. Owners of private property required to have hydrants shall maintain hydrant records of approval, testing, and maintenance, in accordance with the respective county water requirements. Records shall be made available for review by the AHJ upon request.

C~ 18.3.8 Minimum water supply for buildings that do not meet the minimum County water standards:

Buildings up to 2000 square feet, shall have a minimum of 3,000 gallons of water available for Firefighting.

Buildings 2001- 3000 square feet, shall have a minimum of 6,000 gallons of water available for Firefighting.

Buildings, 3001- 6000 square feet, shall have a minimum of 12,000 gallons of water available for Firefighting.

Buildings, greater than 6000 square feet, shall meet the minimum County water and fire flow requirements.

Multiple story buildings shall multiply the square feet by the amount of stories when determining the minimum water supply.

Commercial buildings requiring a minimum fire flow of 2000gpm per the Department of Water standards shall double the minimum water supply reserved for firefighting.

Fire Department Connections (FDC) to alternative water supplies shall comply with 18.3.8 (1)-(6) of *this code*.

NOTE: In that water catchment systems are being used as a means of water supply for firefighting, such systems shall meet the following requirements:

- 1) In that a single water tank is used for both domestic and firefighting water, the water for domestic use shall not be capable of being drawn from the water reserved for firefighting;
- 2) Minimum pipe diameter sizes from the water supply to the Fire Department Connection (FDC) shall be as follows:
 - a) 4" for C900 PVC pipe;
 - b) 4" for C906 PE pipe;
 - c) 3" for ductile Iron;
 - d) 3' for galvanized steel.

- 3) The Fire Department Connection (FDC) shall:
 - a) be made of galvanized steel;
 - b) have a gated valve with 2-1/2 inch, National Standard Thread male fitting and cap;
 - c) be located between 8 ft and 16 ft from the Fire department access. The location shall be approved by the AHJ;
 - d) not be located less than 24 inches, and no higher than 36 inches from finish grade, as measured from the center of the FDC orifice;
 - e) be secure and capable of withstanding drafting operations. Engineered stamped plans may be required;
 - f) not be located more than 150 feet of the most remote part, but not less than 20 feet, of the structure being protected;
 - g) also comply with section 13.1.3 and 18.2.3.4.6.1 of *this code*.
- 4) Commercial buildings requiring a fire flow of 2000gpm shall be provided with a second FDC. Each FDC shall be independent of each other, with each FDC being capable of flowing 500gpm by engineered design standards. The second FDC shall be located in an area approved by the AHJ with the idea of multiple Fire apparatus' conducting drafting operations at once, in mind.
- 5) Inspection and maintenance shall be in accordance to NFPA 25.
- 6) The owner or lessee of the property shall be responsible for maintaining the water level, quality, and appurtenances of the system.

EXCEPTIONS TO SECTION 18.3.8:

- 1) Agricultural buildings, storage sheds, and shade houses with no combustible or equipment storage.
- 2) Buildings less than 800 square feet in size that meets the minimum Fire Department Access Road requirements.
- 3) For one and two family dwellings, agricultural buildings, storage sheds, and detached garages 800 to 2000 square feet in size, and meets the minimum Fire Department Access Road requirements, the distance to the Fire Department Connection may be increased to 1000 feet.
- 4) For one and two family dwellings, agricultural buildings, and storage sheds greater than 2000square feet, but less than 3000 square feet and meets the minimum Fire Department Access Road requirements, the distance to the Fire Department Connection may be increased to 500 feet.

Michael Yee
June 21, 2019
Page 9

- 5) For buildings with an approved automatic sprinkler system, the minimum water supply required may be modified.

If there are any questions regarding these requirements, please contact the Fire Prevention Bureau at (808) 932-2911.



DARREN J. ROSARIO
Fire Chief

CB:ds