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NOPA West Neighbors (NOPAWN)
C/O Brian Kingan
627 Masonic Ave,
San Francisco, CA, 94117

Subject: Planned Development
1846 Grove Street, San Francisco, CA
Fire Protection Opinion Letter

This opinion letter has been prepared at the request of NOPAWN to evaluate the fire safety of the proposed means of egress from the planned location of the development.

Opinion Summary

Based upon a review of the 2019 California Building and Fire Codes, with City of San Francisco Amendments, the proposed means of egress from the new proposed construction to the public way does not meet code requirements for egress and presents an unsafe condition to the occupants of those new buildings.

My Background

I graduated from the College of Engineering, Department of Fire Protection Engineering, at the University of Maryland in 1974 with a B.S. in Fire Protection Engineering. In 1991 I graduated from Seattle University with an MBA. From 1970 to 1978 I was a volunteer fire fighter/EMT-A with the Prince George's County Fire Department (suburban Washington DC) operating from College Park Station 12 (f/f, EMT, 1970-1978), and West Lanham Hills Station 48 (EMT, 1975-1978). During the later years with those stations, I was also a certified CPR instructor.

I began my career as a fire protection engineer in 1974. Since that time, I was employed in that position by the US Navy, The Boeing Company, The University of Washington, Raychem Corporation and two different consulting firms. In 2000 I started ESH Consultants, a fire protection engineering consulting firm. Some of my major clients included Genentech Corporation, DSA Oakland Regional Office, DSA Sacramento Office, Safeway Corporation, the City of Mountain View Community Development Department (Building Department) and City of Sunnyvale Department of Public Safety.

With the exception of Genentech, the work for DSA and the cities involved plan review for compliance with the California Building and Fire Codes as well as local regulations and ordinances. In that role I was responsible to verify (and approve) designs met the construction and life safety requirements of the codes. This involved new construction and tenant improvement projects for Assembly, Business, Commercial, Educational, Institutional, Residential and Storage occupancies. Since 2014, for the City of Mountain View, I provided over 1,000 hours of plan review each year, reviewing 45-85 projects per month.

In 1980 I received my PE registration in the State of Oregon, and later in Washington and California. Currently I maintain my PE registration in California and have retired the other registrations as I no longer provided engineering services in those states. I have been a professional member of the International Code Council, the National Fire Protection Association, and have been an officer in two chapters of the Society of Fire Protection Engineers. Since 2001 I have been a member of the NORCAL Fire Prevention Officers, a Division of the California Fire Chiefs.

Project Description

The plans submitted to the San Francisco Planning Department are not clear as to whether the project is four individual buildings or one building with four dwelling units. To be considered as separate buildings, each property needs its own APN designation, and the utilities for each unit shall not be installed in a manner where they pass through another dwelling unit or cross property lines. Thus, all utilities to each unit shall enter the unit directly from the outside of each building. From discussions with members of NOPAWN, the four buildings are located on a single lot. Thus, with adjacent common walls, this should be considered as a four dwelling within a single building, thus, R-2 per the California Building Code.

Based upon the reviewed documentation, it appears the developer is calling these an R-3 Occupancy. Based upon the above information, that designation is incorrect and the correct Occupancy is R-2. These four properties are landlocked with the only access to the public way via a utility easement alley between two existing R-3 residential buildings.

Codes applied to this opinion letter are from the 2019 California Building Code Chapters 5, 6, 7 and 10, as well as the 2019 California Fire Code Chapter 10. San Francisco Fire Department Administrative Bulletins (2020) and San Francisco published modifications to the California Building and Fire Codes were reviewed on line on July 5. This review indicated there were no specific San Francisco modifications to the codes that involved egress from the R-3 structures.

Documents provided by NOPAWN to ESH Consultants were those provided during planning hearings and as submitted by the project architect. Those documents indicate that the existing utility easement (alley) would be the acceptable means of egress for the occupants and an acceptable means of ingress for the fire department and other emergency personnel. The first 50 feet of the easement (in the direction of egress) is six feet wide (+/-) and then reduces to three feet six inches (42 inches) wide for the remaining 50 foot of travel to the street. There are no other means of ingress/egress for the project site.

Applying The Codes

It is important to understand that the codes currently applied do not apply to any existing construction unless the buildings will be remodeled, renovated, or modified in size as noted in the San Francisco codes. As a result, one cannot infer that if the design was acceptable for the existing buildings, at the time of construction, then it should be acceptable for all new construction. The newer codes have requirements that exceed code requirements at the time of construction of the existing buildings.

The following comment from the developer's fire protection expert, taken from the transcript of the 4/9/2020 Planning Committee Video Conference, does not provide a valid reason for not meeting the current codes. *"For the general public that's listening, and the commissioners, the buildings in san francisco are not unique. We have buildings that are four stories, wood frame construction, no sprinkler system, one way in, one way out. They're throughout the city, and the fire department deals with them on a regular basis."* Using that logic, new high-rise buildings in San Francisco would not need to be built with

sprinklers, smoke control, standpipes etc., as the city has existing high-rise buildings built before the code changes and those are “dealt with” by the fire department. Such rationale does not apply to any situation of new construction. New construction has to meet or exceed the current code minimum requirements even if all the other buildings in the area do not meet current code. Current code is not retroactively applied to existing construction except as noted above.

Nowhere in the California Building and Fire Codes, nor in any of the guide codes presented by the International Code Council or the National Fire Protection Association, does it state that construction is exempt from meeting the codes based upon the approval of the fire department.

The codes do allow for the application of an Alternative Materials and Methods Request (AMMR) Section 104.11 of the California Building Code. This request must show the alternative meets or exceeds the code requirements by the use of research reports, tests and supporting data. This request must be approved by the building official. This code section does not indicate approval by the fire department; however, they may provide input as to whether they believe the alternative does or does not meet the code intent.

Per Section 104.9 of the California Fire Code, the fire official can approve the AMMR. Typically, the fire code official would be involved with changes to required fire protection devices and systems, whereas the building official would be involved with changes to building construction and egress issues. In many jurisdictions, since the construction permit is a building permit, the AMMR approval is by the building official. The documentation provided to the Planning Commission does not include an AMMR, only a letter of Conditions of Approval, by the San Francisco Fire Department Fire Prevention Bureau,

Please note that California Building Code and California Fire Code Chapter 10 are similar and the fire code version is based upon the building code version.

Code Definitions (CBC Chapter 2)

*Egress Court – “A court or yard which provides access **to a public way** for one or more exits”.*

*Exit – “That portion of a means of egress system between the exit access and the exit discharge or **public way**. Exit components include exterior exit doors at the level of exit discharge, interior exit stairways and ramps, exit passageways, exterior exit stairways and ramps and horizontal exits”.*

*Exit Discharge – “That portion of a means of egress system between the termination of an **exit and a public way**”.*

*Public Way – “A street, **alley or other parcel of land open to the outside air leading to a street, that has been deeded, dedicated or otherwise permanently appropriated to the public for public use and which has a clear width and height of not less than 10 feet (3048 mm)**”.*

The Code

As the issue being debated involves egress from the new buildings, this section is based upon Chapter 10 of the California Building Code. Other code sections may be references as needed; however, a full review of the plans versus Chapters 5, 6, 7 and 9 sections that do not apply to the egress situation has not been made. The disparities between the proposed development and Chapter 10 should be sufficient to demonstrate that the buildings are nonconforming and unsafe.

Former SFFD Administrative Bulletin 5.12 (2010) allowed the use of a minimum 36-inch alley access to buildings with no apparatus access to any side of the buildings. As of a few previous code cycles, SFFD AB 5.12 no longer exists and is indicated on the SFFD website as a reserved AB number. As a result, this allowance no longer exists and cannot be applied to this project.

Based upon the California Building Code **the alley does not meet the definition of an egress court; however, the proposed use is similar and the egress court section could be applied to the alley.** California Building Code Section 1028.4.2 states that when the width of the egress court is less than 10 feet wide, the walls shall have a fire resistance rating of one hour for a distance (height) of ten feet above the floor of the egress court. The two buildings on the sides of the alley appear to be Type V-B construction and are not fire rated. The owner of one of those two buildings indicated they are not willing to change their exposing walls to one-hour fire resistive construction.

If we look at the existing two buildings that form the alley, they do not meet current code nor do they need to meet current code as there is no proposed construction modifications to those buildings. Both buildings are assumed to be Type V-B combustible construction. The building code requires a fire resistance rating based upon the construction type, occupancy group and distance from the property line (or imaginary property line when more than one building occupies the same property).

Table 602 of the California Building Code, footnote "i" does not require an exterior wall fire resistance rating, for Type II-B or Type V-B construction, if the fire separation distance is five or more feet, or three feet or more if the building has a California Fire Code Section 903.3 fire sprinkler system. The proposed construction is Type III-B. Even if the construction were upgraded to Type II-B, it does not appear that either of the two buildings forming the alley have a sprinkler system and the distance between the buildings would need to be a minimum of 10 feet to meet the exception the required fire resistance rated construction requirement (similar to an Egress Court).

The current design was probably acceptable when these two buildings were built but would not be acceptable for new construction today without the exterior walls being a one-hour rating on each building. Additionally, California Building Code Table 705.8, does not allow any unprotected openings, in non-sprinklered buildings with less than a 10-foot separation (5 feet of fire separation distance from each building for a total of 10 feet). There are some unprotected openings on the second floor of one of the buildings. Thus, even if not considered as an egress court, the alley does not meet code.

Section 1022.1 of the California Building Code indicates that an exit shall not be used for any purpose that interferes with its function as a means of egress. As a result, this alley must be kept clear of any obstructions, either mobile or fixed to the buildings.

Section 1028.4 for Egress Courts requires a minimum exit Section 1028.5 of the California Building Code, "**Access to a public way**" states the exit discharge shall provide a direct and unobstructed access to a public way. No means have been shown to prevent occupants of the new buildings from storing items in the alley, such as bicycles, strollers, planters or other obstructive items. The code does allow an exception to an obstructive access if a safe dispersal area of 5 sq ft per person is provided. The safe dispersal area must be at least 50 feet away from the building requiring egress, and marked as to its purpose. It is not apparent from the plans that the use of a safe dispersal area has been proposed or can be used based upon the project land size and building locations.

Opinion and Comments

It is the opinion of ESH Consultants that the proposed method of using an alley as a means of egress to the public way from **the proposed buildings does not meet the requirements nor the intentions of the California Building or Fire Codes.** This will lead to an unsafe situation for both the occupants and responding emergency personnel. SFFD AB 5.12 (2010) which would have allowed the use of a minimum 3-foot-wide access alley has not been in existence since 2013, and has

been deleted from the currently enforced administrative bulletins. **The use of the alley, in this fashion, just because it has been done before, does not make it acceptable or code compliant.**

The Fire Prevention Bureau of the San Francisco Fire Department issued a Conditions of Approval letter to allow the use of the alley based upon a minimum, unobstructed width of 42 inches. This will require the door opening (gate) to be a minimum of 42 inches. It is possible that with a 42-inch-wide alley, when one factors in the two gate frame sides and hinges, the door will not meet the 42-inch minimum opening. The owners of the property on one side of the alley are not willing to allow parts of the gate to be installed on their property. Egress is under the jurisdiction of the Building Department and there is no evidence from the SFFD letter to indicate where the alley meets code requirements or why the code requirements have been waived.

The use of the unprotected alley is a fire/life safety issue. Should there be a fire in either of the buildings adjacent to the ingress/egress alley, it will not be possible for the occupants of the new construction to exit to the public way. The occupants would be trapped. After such a fire, if the alley were not passable, the occupants would not be able to egress from or gain access to their residences. This same condition would exist for emergency responders. These conditions would require individuals to access an unsafe alley if they wanted to leave the area or gain access to the area.

Prepared by: Elliot L. Gittleman, FPE, MBA
CA PE FP1341



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