IV. ENVIRONMENTAL IMPACT ANALYSIS
J. PUBLIC SERVICES
1. FIRE PROTECTION

ENVIRONMENTAL SETTING

Fire prevention, fire suppression, and life safety services are provided throughout the City by the Los Angeles Fire Department (LAFD), as governed by the Fire Protection and Prevention Plan (Plan), an element of the City's General Plan, as well as the Fire Code in the LAMC. The Plan and Fire Code serve as guides to City Departments, government offices, developers and the public for the construction, maintenance and operation of fire protection facilities located within the City. The LAFD has 3,244 uniformed personnel and 333 civilian support staff. Their services include fire prevention, firefighting, emergency medical care, technical rescue, hazardous materials mitigation, disaster response, public education and community service. A professionally trained staff of 993 firefighters (including 172 paramedic-trained personnel) is on duty at all times at 103 neighborhood fire stations located across the LAFD's 470 square-mile jurisdiction.[1]

Fire Stations

As shown on Figure IV.J-1, the project site is located in an area that receives fire protection and paramedic services from three fire stations: Station Nos. 74, 24 and 77. Backup support is provided through mutual aid agreements between the LAFD and the Los Angeles County Fire Department. Currently, there are no plans to increase LAFD staffing or resources in the project area.[2]

Fire Station No. 74 is located approximately 2.8 miles north of the project site at 7777 Foothill Boulevard in Tujunga and would have primary response duties.[3] This Task Force Station is comprised of a truck and engine company,[4] with a paramedic ambulance and an Emergency Medical Treatment (EMT) rescue ambulance.[5] Fire Station No. 74 has 12 LAFD staff.

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1 *Los Angeles Fire Department, www.lafd.org/about.htm, February 7, 2003.*

2 *Los Angeles Fire Department, written correspondence from William R. Bamattre, Fire Chief, September 19, 2002.*

3 *Distances from the Fire Station to the project site were measured to La Tuna Canyon Road and Interstate 210 by the LAFD.*

4 *Typically, a Task Force consists of a truck company and an engine company, with a total of 10 personnel. A truck company includes two vehicles: a truck (i.e., a vehicle with a 100-foot aerial ladder apparatus) and an engine (i.e., a vehicle with a pump). An engine company consists of one vehicle: an engine.*

5 *EMTs provide basic first aid and medical services. Most LAFD personnel are EMT qualified.*

Figure IV.J-1, Fire Station Locations

Other stations that would serve the project site include Fire Station No. 24, which is located approximately 3.4 miles northwest of the project site at 9411 Wentworth Street in Sunland. This is a single engine company with a staff of four. Fire Station No. 77, located approximately 4.25 miles southwest of the site at 8943 Glenoaks Boulevard in Sun Valley, would also serve the project site as a paramedic engine company. Station No. 77 also has a staff of four.

In addition to fire stations, equipment, and personnel, water flow (also called "fire flow"), response distance from available fire protection service facilities, and fire hazards, are considered to be important factors in the following analysis.

Fire Flows

In general, the required water flow is closely related to land use as the quantity of water necessary for fire protection varies with the type of development, life hazard, type and level of occupancy, and degree of fire hazard (based on such factors as building age or type of construction). General LAFD requirements for residential projects are 2,000 gallons per minute (gpm) in low-density residential areas with a minimum residual water pressure of 20 pounds per square inch (psi) to remain in the water system while the required gpm is flowing.[6] LAFD has indicated that up to 2,000 gpm fire flow with a minimum residual water pressure of 20 psi would be required for the proposed project.[7] Currently, there is no water flow for fire protection on the project site because there are no water lines on the project site.

Water for fire flows for the area surrounding the project site is provided by the City Department of Water and Power (DWP). According to the DWP, all water mains and lines that are designed and sized according to DWP standards take into account fire flow and pressure requirements.[8] Please refer to Section IV.L (Water) for a discussion of water service infrastructure.

Response Distance and Access

Response distance relates directly to the linear travel distance (i.e., miles between a station and a site) and the LAFD's ability to successfully navigate the given accessways and adjunct circulation system. Roadway congestion and intersection level of service along the response route can affect the response distance when viewed in terms of travel time. The City Fire Code specifies the maximum response distances recommended between specific sites and engine and truck companies, based upon land use

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6 *City of Los Angeles Fire Code, Los Angeles Municipal Code, Section 57.09.06.*

7 *Los Angeles Fire Department, written correspondence from William R. Bamattre, Fire Chief, September 19, 2002.*

8 *Correspondence with the Los Angeles Department of Water and Power, Charles C. Holloway, Supervisor Environmental Assessment, March 19, 2003.*

and fire flow requirements. The maximum response distance for residential land uses are 1.5 miles for an engine company and 2.0 miles for a truck company.[9] When response distances exceed these recommendations, all structures must be equipped with automatic fire sprinkler systems and any other fire protection devices deemed necessary by the Fire Chief (e.g., fire signaling systems, fire extinguishers, smoke removal systems, etc.). The project site is located approximately 2.8 miles from the closest fire station (Station No. 74), which is outside the Fire Code's specified response distance.

Fire Hazards

The project site is located in a "Very High Fire Hazard Severity Zone" (VHFHSZ).[10] VHFHSZs are areas identified by the LAFD that are prone to wind-driven fires. The Fire Code states that no building within a designated VHFHSZ (formerly called "Mountain Fire District") shall be located more than 1,000 feet from a fire hydrant with the distance being measured along a route providing reasonable access. In addition, the Chief Engineer of the LAFD needs to report that adequate fire protection exists or is in the process of being provided in VHFHSZs.

The climate of Southern California is classified as a Mediterranean type in which hot summer droughts are followed by winter season rainfall. The hot, dry summers subject vegetation to prolonged periods of moisture stress at times when wildfire is most likely. Seasonal weather changes introduce periods with distinctly different "fire weather" conditions. At the end of the summer, Santa Ana winds can exacerbate fire hazard levels in the project vicinity. It appears that the most recent fire on the project site occurred on August 5, 1999, but the LAFD's records are not conclusive regarding the precise location of the fire.[11]

As described in Section IV.D (Biological Resources), a wide variety of natural vegetation covers the project site. Drought, a relatively frequent occurrence in Southern California, causes accumulation of dead plant material annually during their dormant stages, which contributes to a build-up, or fuel-loading, of volatile plant material. This build-up produces conditions that may exacerbate the intensity of wildfires and, thereby, increases the degree of the fire hazard over time.

Slope steepness and the ruggedness of terrain throughout the project site could influence the speed of a fire spreading, the accessibility of fire-fighting equipment, and response times. Up-slope fires move substantially faster than down-slope fires because of an up-slope "wind effect" which accelerates the

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[9] *City of Los Angeles Fire Code, Los Angeles Municipal Code, Section 57.09.07.*

[10] *Los Angeles Fire Department, "Your Los Angeles Fire Department Brush Clearance Program," www.lafd.org/brush, February 7, 2003.*

[11] *Telephone correspondence with Los Angeles Fire Department, Arson Investigation Section, August 22, 2003.*

spread of fire. As slope steepness increases, the ability to use fire trucks and bulldozers to directly fight fires is inhibited.

The LAFD provides an enhanced level of response to the areas that are at risk on "high hazard" days. The enhancements provided to homes in the VHFHSZ include: pre-deployment of additional fire companies, brush patrol apparatus, command officers, and community fire patrols in hillside areas; pre-deployment of helicopters with water dropping capability; local fire company patrol of critical areas for brush fires; pretreatments of hillside homes with Class A and/or barricade foams to protect them from wildfires; and the development of pre-attack plans for areas where fires have historically occurred.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G to the CEQA Guidelines, impacts on fire protection services would be significant if the project results in a substantial adverse physical impact associated with the provision or need of new or expanded fire protection facilities (e.g., fire stations, fire flow equipment), in order to maintain acceptable service ratios, response times, or other performance objectives of the LAFD.

Short-Term Construction Impacts

Construction of the proposed project would increase the potential for accidental wildfires from such sources as the operation of mechanical equipment in close proximity to fire-prone vegetation, use of flammable construction materials, and from carelessly discarded cigarettes. In most cases, the implementation of "good housekeeping" procedures by the construction contractors and the work crews would minimize these hazards. Good housekeeping procedures that would be implemented during construction of the proposed project include: the maintenance of mechanical equipment in good operating condition; careful storage of flammable materials in appropriate containers; and the immediate and complete cleanup of spills of flammable materials when they occur. Additionally, such procedures as watering newly graded areas to keep dust down and the cessation of grading during high winds would also help to reduce fire hazards during dry summer months.

Construction activities also have the potential to affect fire protection services, such as emergency vehicle response times, by adding construction traffic to the street network and by partial lane closures during street improvements and utility installations. These impacts, while potentially adverse, are considered to be less than significant for the following reasons:

(1) Construction impacts are temporary in nature and do not cause lasting effects;

(2) The majority of construction-related vehicle traffic is expected to be freeway-oriented (given the proximity of Interstate 210). Thus, opportunities for conflicts between construction traffic and emergency vehicles on nearby surface streets would be minimal; and

(3) Partial lane closures would not greatly affect emergency vehicles, the drivers of which normally have a variety of options for dealing with traffic, such as using their sirens to clear a path of travel or driving in the lanes of opposing traffic. Additionally, if there are partial closures to streets surrounding the project site, flagmen would be used to facilitate the traffic flow until construction is complete.

While the proposed project's construction-related activities would increase the potential for starting a wildfire, construction is not considered to be a high-risk activity and the LAFD is equipped and prepared to deal with such fires should they occur. Project construction would not be expected to tax fire fighting and emergency services to the extent that there would be a need for new or expanded fire facilities, in order to maintain acceptable service ratios, response times, or other performance objectives of the LAFD. Therefore, construction-related impacts to fire protection and medical emergency services would be less than significant.

Long-Term Operational Impacts

The proposed project would introduce an estimated 831 residents[12] into previously uninhabited hillside areas considered to be subject to very high fire hazards by the LAFD. This new resident population would increase the potential for wildlife fire starts in the area and, concomitantly, the need for fire protection and emergency services in the area. The following discussion analyzes the major criteria for determining the proposed project's impacts to fire protection services, including response distance, emergency access/evacuation, and fire flows.

Fire Flows

As determined by the LAFD, the overall fire flow requirement for the proposed project would be up to 2,000 gpm with a 20 psi minimum residual pressure from two fire hydrants flowing simultaneously. In order to provide the required fire flow (and water for domestic purposes), two water tanks, each with a capacity of 1.5 million gallons, would be installed. In addition, improvements to water lines to meet fire flow requirements (and water for domestic purposes) would include a 5,000-foot extension of the 16-inch water main located under La Tuna Canyon Road and smaller lines throughout the Development Areas. All of these water lines would be designed according to DWP standards, which take into

[12] *Source: Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon Community Plan, Plan Population and Dwelling Unit Capacity, Persons Per Dwelling Unit (2010), Low Residential Land Use Category = 2.97 persons per unit x 280 units = 831 persons.*

account LAFD fire flow and pressure requirements. For a complete discussion of the proposed project's provision of water service for fire flows and domestic purposes, refer to Section IV.L.1 (Water).

As discussed in Section IV.L.1 (Water), short-term traffic and access impacts could occur during the construction of the water lines within public right-of-ways. Such impacts could consist of temporary partial or complete land closures as trenches are excavated, the pipes installed, and the trenches subsequently refilled and covered over. The 5,000-foot extension of the water line in the La Tuna Canyon Road public right-of-way (see Section IV.L.1 (Water)) is expected to take approximately one week to complete. However, the construction would not require complete roadway closures and no detours are anticipated. Nevertheless, flagpersons would be used to facilitate traffic flow if the construction required temporary land closures. Therefore, no significant construction-related impacts are expected.

The Water Operations Division of the DWP would perform a fire flow study at the time of permit review in order to ascertain whether further water system or site-specific improvements would be necessary. Hydrants, water lines and water tanks would be installed per Fire Code requirements and would be based upon the specific land uses of the proposed project.

Response Distance and Access

Since the response distance between the project site and the primary response fire station is not within Fire Code specifications pertaining to engine and truck companies (1.5 miles and 2.0 miles, respectively, for residential development), impacts with respect to distance criteria are considered to be potentially significant.[13] However, LAMC Section 57.09.07 provides that, where a response distance exceeds the maximum response distance set forth in the Fire Code, all project structures shall be constructed with automatic fire sprinkler systems in order to compensate for the additional response distance. That requirement has been included as Mitigation Measure J.1-7 below.

Emergency Access/Evacuation

The LAFD has preliminarily reviewed the project site plan and determined that vehicular access by emergency vehicles must be provided at a minimum of two locations in each Development Area. Multiple points of access for emergency vehicles and evacuation would be provided. With respect to Development Area A, emergency vehicle and public access would be provided from the La Tuna Canyon Road and Interstate 210 interchange. In addition, Development Area A would have a second emergency access point at either Verdugo Crestline Drive or Inspiration Way (see Section IV.I (Traffic

[13] *Los Angeles Fire Department, written correspondence from William R. Bamattre, Fire Chief, September 19, 2002.*

and Access) for a detailed discussion of emergency access routes). This emergency access point would be gated and locked, and not accessible by the public. However, the gate would be designed with key access for emergency vehicles.

In the event of the need for emergency evacuation of Development Area A, residential traffic would normally be expected to leave the site via La Tuna Canyon Road and Interstate 210. Residents evacuating from Development Area A would have the option to enter Interstate 210 immediately upon exiting or they could choose to head easterly on La Tuna Canyon toward Tujunga Canyon Boulevard or westerly toward Sunland Boulevard. However, the potential funneling of evacuating traffic from Development Area A to a single access point could result in congestion and possible conflicts with entering emergency vehicles. The second emergency access route through either Verdugo Crestline Drive or Inspiration Way would relieve that potential congestion and provide alternative ingress and egress to the extent that access to La Tuna Canyon Road in not possible.

Development Area B would provide emergency access from two points along La Tuna Canyon Road via an internal loop road. The loop road would be private, gated at the entrances, and constructed to LAFD specifications. Residents evacuating from Development Area B would have the option to proceed westerly on La Tuna Canyon toward Sunland Boulevard or easterly toward Interstate 210 and/or Tujunga Canyon Boulevard. No significant evacuation concerns have been identified for Development Area B.

Nevertheless, emergency access mitigation measures are recommended below to ensure that emergency access to the project site would be sufficient and, thus, would not require the construction or expansion of fire stations or other fire protection facilities.

Fire Hazards

As discussed above, the project site is within a VHFHSZ. In compliance with the Fire Code, onsite fire hydrants would be sited within 1,000 feet of all buildings as measured along any route that would be potentially used for emergency access. Furthermore, the LAFD's standard conditions with respect to emergency access are included as recommended mitigation measures below to ensure that there would be sufficient emergency access to the project site. Also, the LAFD has reviewed preliminary plans for the proposed project and would again review the plans prior to approval of the vesting tract map. This would ensure that adequate fire protection facilities would be provided, particularly in light of the project site's location within a VHFHSZ, and that new or expanded fire protection facilities would not be necessary.

LAFD Review

As previously noted, the LAFD has preliminarily reviewed the proposed project and has requested a number of conditions of approval. These are presented below as recommended mitigation measures. Additional LAFD review would occur during the vesting tract map stage. The incorporation of the LAFD's requirements would ensure that the proposed project would not result in a need for new or expanded fire facilities in order to maintain acceptable service ratios, response times, or other performance objectives of the LAFD. Therefore, the proposed project's operational-related impacts to fire protection and emergency services would be less than significant.

MITIGATION MEASURES

J.1-1 Sprinkler systems shall be provided in each structure in accordance with Section 57.09.07 of the LAMC.

With the implementation of Mitigation Measure J.1-1, the proposed project would not have a significant impact on fire protection services. However, the following additional mitigation measures are recommended to reduce further the proposed project's potential fire protection impacts:

J.1-2 At least two different ingress/egress roads shall be provided for each Development Area that will accommodate major fire apparatus and provide for major evacuation during emergency situations.

J.1-3 Private streets and entry gates shall be built to City standards to the satisfaction of the City Engineer and the LAFD.

J.1-4 Construction of public or private roadways in the proposed development shall not exceed 15 percent in grade.

J.1-5 Private development shall conform to the standard street dimensions shown on City Department of Public Works Standard Plan D-22549 regarding travel-way width (i.e., curb-to-curb).

J.1-6 Standard cut-corners shall be used on all turns.

J.1-7 The width of private roadways for general access use and fire lanes shall not be less than 20 feet clear to the sky.

J.1-8 Fire lanes, where provided, and dead ending streets shall terminate in a cul-de-sac or other approved turning area. No dead ending street or fire lane shall be greater than 700 feet in length or secondary access shall be provided.

J.1-9 All access roads, including fire lanes, shall be maintained in an unobstructed manner, removal of obstructions shall be at the owner's expense. The entrance to all fire lanes or private driveways shall be posted with a sign no less than three square feet in area in accordance with Section 57.09.05 of the LAMC.

J.1-10 Fire lane width shall not be less than 20 feet. When a fire lane must accommodate the operation of LAFD aerial ladder apparatus or where fire hydrants are installed, those portions shall not be less than 28 feet in width.

J.1-11 Private roadways for general access use shall have a minimum width of 20 feet.

J.1-12 Where access for a given development requires accommodation of LAFD apparatus, minimum outside radius of the paved surface shall be 35 feet. An additional six feet of clear space must be maintained beyond the outside radius to a vertical point 13 feet six inches above the paved surface of the roadway.

J.1-13 No building or portion of a building shall be constructed more than 150 feet from the edge of a roadway of an improved street, access road or designated fire lane.

J.1-14 To reduce the potential for confusion, slow response, and other attendant difficulties that may arise during an emergency evacuation situation, which could hamper evacuation activities on La Tuna Canyon Road, the project developer shall prepare and distribute to each homeowner a copy of an evacuation plan prepared specifically for the proposed project. The plan shall be submitted to the Los Angeles Police and Fire Departments for review prior to issuance of certificates of occupancy. Upon establishment, it shall become the responsibility of the homeowner's association to distribute the evacuation plan to new homeowners. The major features of the plan shall address the following issues:

- A program of clear and explicit procedures, responsibilities and courses of action to be followed in the event of an emergency;
- A program for the coordination of evacuation efforts with the Los Angeles Police and Fire Departments; and
- A map showing alternative evacuation routes.

J.1-15 The number and location of adequate offsite public and onsite private fire hydrants shall be provided as determined by the LAFD's review of the vesting tentative tract map.

J.1-16 All landscaping shall use indigenous fire-resistant plants and materials, based on the LAFD's list of such plants.

J.1-17 All homes shall have noncombustible roofs (non-wood).

J.1-18 The brush in the area adjacent to the proposed development shall be cleared or thinned periodically by the homeowners' association(s) under supervision of the LAFD in order to reduce the risk of brush fires spreading to the homes.

J.1-19 The vesting tract map, indicating access roads and turning areas, shall be submitted for LAFD approval.

J.1-20 Adequate fire hydrants shall be provided.

J.1-21 Definitive plans and specifications shall be submitted to the LAFD and requirements for necessary permits satisfied prior to commencement of construction.

CUMULATIVE IMPACTS

Development of the 13 related projects (see Figure II-1 in Section II.C (Related Projects)) in conjunction with the proposed project would increase the demand for fire protection services. In the absence of concomitant expansion of current levels of LAFD personnel, equipment, and facilities, the increased demand would result in a reduction in fire protection services, a lengthening of response times, and possibly inadequate facilities. However, cumulative impacts are not expected to rise to a level of significance for several reasons. First, the largest related project (Related Project No. 9) is located in the unincorporated community of La Crescenta. As the Los Angeles County Fire Department provides fire protection services to La Crescenta, the development of Related Project No. 9 would not contribute to the cumulative demand on LAFD for fire protection services.

In addition, the LAFD would provide fire protection services for the 12 other related projects, which are all relatively small (as indicated in Table II-3 in Section II.C (Related Projects)) and their fire protection impacts would to be addressed through compliance with the Fire Code. Those 12 other related projects are located between 0.3 and 2.8 miles from the closest LAFD fire station. Two of the related projects (i.e., Related Project Nos. 7 and 11) are located at a distance greater than 2.0 miles from the closest LAFD fire station. Similar to the proposed project, these two related projects will be required to install automatic fire sprinkler systems in all structures, as set forth in LAMC Section 57.09.07, in order to compensate for the additional response distance.

Furthermore, the proposed project's impacts on fire protection services are expected to be less than significant because:

- Fire hydrants, water tanks, and associated infrastructure (i.e., water lines) would be provided onsite in accordance with Fire Code requirements and with the approval of the LAFD;

- Multiple points of access for emergency vehicles, via La Tuna Canyon Road and Inspiration Way or Verdugo Crestline Drive, would be provided to the Development Areas;

- Mitigation measures are provided below to ensure that adequate response times and access to the project site are provided; and

- The LAFD would review plans for the proposed project to ensure conformance with LAFD specifications.

Considering the relatively small demand for fire protection services that would result from implementation of the related projects in combination with the less-than-significant impacts of the proposed project, the cumulative demand for fire protection services would not be expected to warrant new or expanded fire protection facilities. Therefore, cumulative impacts are expected to be less than significant.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the mitigation measures above, potentially significant impacts to fire protection services would be less than significant.