



**UNITED STATES  
DEPARTMENT OF VETERANS AFFAIRS**

**ENVIRONMENTAL ASSESSMENT**

**PROPOSED HELIPAD AT THE SAN FRANCISCO  
VETERANS AFFAIRS MEDICAL CENTER,  
SAN FRANCISCO, CALIFORNIA**

**AUGUST 14, 2008**

**ENVIRONMENTAL ASSESSMENT**

**PROPOSED HELIPAD AT THE SAN FRANCISCO  
VETERANS AFFAIRS MEDICAL CENTER,  
SAN FRANCISCO, CALIFORNIA**

**Prepared for**

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**AUGUST 14, 2008**

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PROJECT TITLE: PROPOSED HELIPAD AT THE SFVAMC

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PROJECT NO: 66-07-027

## **INTRODUCTION**

The San Francisco Veterans Affairs Medical Center (SFVAMC) is an integrated health care facility serving approximately 300,000 veterans in eight Northern California counties. The Medical Center provides a wide range of services, including serving as a backup in national and local emergencies, fulfilling its role as a Federal Coordination Center (FCC) for the San Francisco bay area.

This Environmental Assessment (EA) for construction and operation of a helipad at the SFVAMC was prepared in accordance with the regulations set forth by the Council on Environmental Quality implementing the provisions of the National Environmental Policy Act (NEPA) (CEQ Regulations, Title 40 CFR 1500-1508); Executive Order 11514 as amended by Executive Order 11991; and VA Regulations - Environmental Effects of VA Actions (Title 38 CFR Part 26). The purpose of the EA is to report the environmental analysis of the proposed action in sufficient detail to allow the Department of Veterans Affairs (VA) to determine whether it is necessary to prepare an Environmental Impact Statement (EIS), or to prepare a finding of no significant impact (FONSI) for the proposed action. The EA format follows the recommendations contained in Part II of the *Department of Veterans Affairs Environmental Compliance Manual*.

## **PURPOSE AND NEED**

The purpose and need for the SFVAMC helipad is to provide emergency helicopter landing capabilities at the SFVAMC. The helipad would be used by the VA to complete its role as an FCC with the Federal Emergency Management Agency (FEMA) and the Department of Homeland Security. The SFVAMC was elected to be an FCC for the San Francisco bay area under the National Disaster Medical System<sup>1</sup> (NDMS) over 10 years ago and was directed by the Secretary of Veterans Affairs 3 years ago to construct a helipad due to the SFVAMC's strategic geographic location in the bay area. The landing for helicopters would be used to transport coordination officials, supplies, and casualties to support the City of San Francisco and local community during natural and manmade disasters.

## **PROJECT DESCRIPTION**

The proposed action is to construct and operate a permanent helipad at SFVAMC. The helipad (helicopter take off and landing pad) would be constructed on the northwestern edge of the SFVAMC property. Two helicopter flight paths 105 degrees apart would be designated, one to the northwest and one to the northeast of the helipad, over the Golden Gate National Recreation Area and ocean.

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<sup>1</sup> The National Disaster Medical System (NDMS) is a federally coordinated system that augments the Nation's medical response capability. The overall purpose of the NDMS is to supplement an integrated National medical response capability for assisting State and local authorities in dealing with the medical impacts of major peacetime disasters and to provide support to the military and the Department of Veterans Affairs medical systems in caring for casualties evacuated back to the U.S. from overseas armed conventional conflicts.

## **Location**

The SFVAMC is situated near the western edge of the City and County of San Francisco near the Pacific Ocean. The location of the SFVAMC is shown in Figure 1. Below the site to the north lies the Golden Gate National Recreation Area. To the east are the California Palace of the Legion of Honor museum and the Lincoln Park Golf Course, and to the east of the golf course are residences. To the south is the SFVAMC main campus, with residences located further to the south. The location of the helipad site in relation to surrounding land uses is shown in Figure 2. The helipad site is located on the northwestern edge of the SFVAMC property on a small promontory measuring approximately 75 ft by 75 ft. Adjacent to the helipad site on the south is a SFVAMC parking lot. The nearest occupied building is SFVAMC Building 18, which lies south of the parking lot approximately 70 feet from the helipad site. Building 18 contains clinical offices. The location of the helipad site and the site plan for proposed improvements are shown in Figure 3. This figure shows the helipad site prior to tree and vegetation removal.

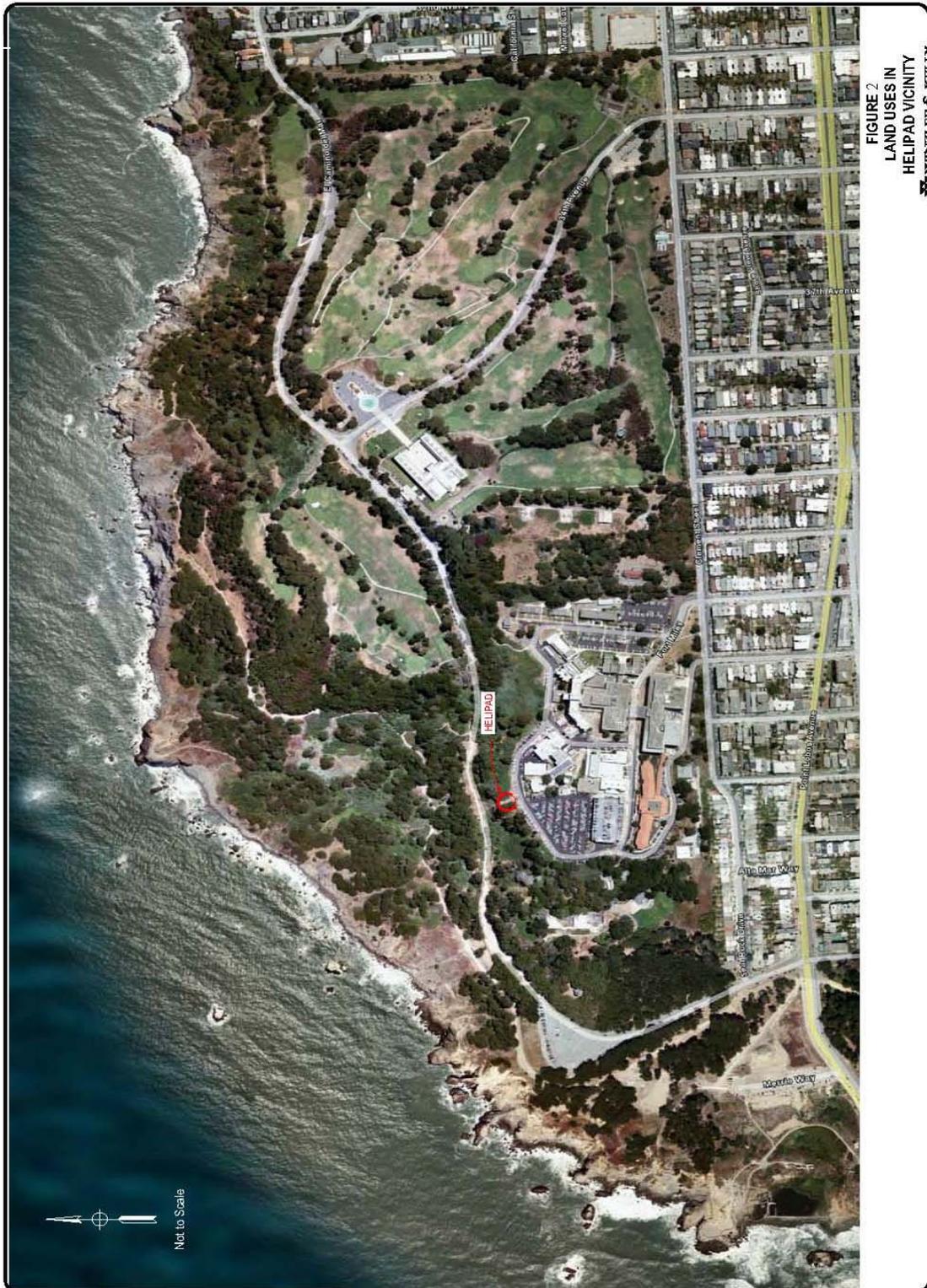
## **Construction**

The helipad site is currently vacant. The helipad would consist of a 54-foot-diameter concrete landing pad (approximately 3,000 square feet) that would be designed to accommodate helicopters with a gross weight of up to 22,000 lbs. Other improvements would include construction of a concrete retaining wall around the landing pad ranging from 0 to 7 ft in height; a pedestrian fall protection safety net attached to the top of the retaining wall; installation of a new sliding chain link fence along the adjacent parking lot; removal of existing fencing; removal of a sprinkler head; relocation of a picnic table to another area of the medical center; extension of below-ground electrical service from an existing outdoor light standard to the helipad site, a distance of about 20 ft; installation of a lighted wind cone; and installation of green perimeter lights at the edge of the landing pad. Fourteen parking spaces currently designated for patient parking would be reserved for medical center vehicles. To compensate for the loss of patient parking spaces, fourteen nearby medical center vehicle parking spaces would be redesignated for patient parking.

The helipad would be sloped to provide for rapid removal of surface water runoff from the site to prevent ponding of water or seepage toward the helipad foundation. All surface water would collect in a drainage channel located around the interior circumference of the landing pad which would direct runoff over the adjacent parking lot to enter the SFVAMC storm drain system. Site preparation would include regrading of a portion of the site and placement of approximately 3 ft of clean fill.

An unobstructed Safety Area measuring 133.5 ft in diameter around the helipad center would be established as required by the Federal Aviation Administration (FAA). This would require that three cypress trees would be trimmed (topped) to provide the required unobstructed clearance to the site, and that additional trees within the 133.5 ft diameter area be maintained at an appropriate height throughout the life of the facility.







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Construction is expected to temporarily affect portions of a 75-ft diameter area, which includes the helipad and an approximately 20-ft construction zone surrounding the helipad site. The construction staging area for supplies and equipment would extend the construction zone about 15 additional feet westward. Existing trees within the construction zone would not be damaged. Nine existing parking spaces in the adjacent parking lot would be temporarily reserved for construction contractor vehicles.

Construction is expected to occur in the Fall of 2008, and take approximately two months. Construction work would be limited to the hours of 7:30 a.m. to 5:00 p.m., 7 days a week. Estimated construction cost is \$185,000.

## **Operation**

Two helicopter flight paths 105 degrees apart would be designated, one to the northwest and one to the northeast of the helipad (see Figure 4). Two flight paths are needed to accommodate varying wind conditions. Both flight paths would be over the Golden Gate National Recreation Area and the ocean. Neither would be located over residences. The flight paths described in this Environmental Assessment are the typical landing and take-off paths pilots would be directed to follow by the FAA. However, the exact flight route is ultimately left to the discretion of each pilot. Factors such as wind direction are considered by pilots, and individual routing may be adjusted accordingly.

When a national or local emergency occurs, the helipad could be used several times a day. Landings and take offs would only occur during daylight hours until dusk, and would occur only under VFR (visual flight rules) weather conditions (i.e., proper visibility and distance from cloud cover) in accordance with the FAA's safety determination for the helipad (FAA 2007). The number or frequency of helicopter landings and take offs cannot be reasonably estimated, because the number and duration of future natural or manmade emergencies cannot be reasonably estimated. The helipad would not be used for transport of patients to other San Francisco hospitals, would not be available for private use, and would have no ongoing or scheduled helicopter landings or take offs. A helicopter would not reside on the proposed helipad, and the helipad would not be designated as a heliport.

During landings, medical center vehicles would be removed from the helipad area, the fence restricting access to the helipad would be rolled back, and the helipad lights would be activated. Three individuals, either police or landing crew, would stop the flow of vehicle traffic in the area. Upon landing, emergency coordination officials would be escorted and supplies would be off-loaded to awaiting vehicles. Any individuals needing emergency medical care would be wheeled from the landing pad, across the hospital driveway, and into one of the buildings leading to the appropriate treatment area. Individuals needing to be evacuated by helicopter would take the reverse route.

J:\11645 - BeXar - Advanced Solutions Group\11645-08-001 SF VA Helipad Project\32-100 Prepare Draft EA and Proposed FDN\Figures\C4FlightPaths.dwg Aug 06, 2008 - 3:54pm



FIGURE 4  
PROPOSED ACTION HELIPAD  
FLIGHT PATHS  
WINZLER & KELLY

Source: Aerial Mapping Provided by Google Earth™

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## **ALTERNATIVES CONSIDERED**

Ground level and rooftop locations throughout the SFVAMC property were considered as potential sites for a helipad. Suitability of the various sites was considered in terms of the following six factors: aeronautics, environmental noise impact, ground access, permanence vs. obsolescence, and construction cost. Except for the preferred alternative (the Proposed Action), no alternative ground-level site was found to be feasible. Several rooftops sites were identified as potential locations for a helipad, but only the rooftop of Building 210 was considered as a feasible site because it would not require the substantial expense and disruption of having to extend an elevator to the rooftop for ground access. The roof of this four-story office building provides a location adjoining a taller building, Building 2, where a door could be cut into the wall. Individuals and supplies would be directed into the elevator in Building 2, then taken down to the ground floor. Access for casualties from the rooftop helipad to the hospital would be limited due to the size of the elevator.

Two flight paths situated 100 degrees apart would be available without having to remove any trees or other objects. Helipad construction on the Building 210 rooftop would entail extending the building columns up through the roof and erecting a 54 ft diameter concrete helipad and embankment surrounded by a pedestrian fall protection safety net. Foam fire protection utilizing the building's sprinkler riser and fire pumps would be required and helipad lighting would be necessary. No changes in vehicle parking spaces would be needed. Estimated construction cost is \$490,000, almost three times the cost of the proposed ground level helipad.

The no action alternative would be to not construct or operate an emergency helipad at the SFVAMC. This alternative would not satisfy the purpose and need for the action, which is to provide emergency helicopter landing capabilities at the SFVAMC to allow the VA to complete its role as an FCC.

## **ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION**

The checklist on the pages that follow provides an analysis of environmental impacts that could result from construction and operation of a helipad at the SFVAMC. The analysis considers direct, indirect, and cumulative impacts. Environmental impacts of the rooftop alternative and no action alternative are evaluated starting on page 33.

### AESTHETICS

#### IMPACTS

#### ATTRIBUTES

S   M   MI   N  
        

VEGETATION REMOVAL  
 LANDSCAPE ALTERATION  
 OPEN SPACE ALTERED

BUILDING RESTORATION  
 UTILITY OR SERVICE AREA DEVELOPMENT

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- |  |   |
|--|---|
| <input checked="" type="checkbox"/> NEW STRUCTURE CONSTRUCTION | <input type="checkbox"/> GROUND IMPROVEMENT AMENITIES |
| <input checked="" type="checkbox"/> ADVERSE                    | <input checked="" type="checkbox"/> LONG TERM         |
| <input type="checkbox"/> BENEFICIAL                            | <input checked="" type="checkbox"/> SHORT TERM        |
|  | <input type="checkbox"/> CUMULATIVE                   |

COMMENTS

The SFVAMC is situated near the western edge of the City and County of San Francisco near the Pacific Ocean. Below the site to the north lies the Golden Gate National Recreation Area, and beyond that lies the Pacific Ocean. The Golden Gate Bridge is visible in the distance. To the east is a museum, the California Palace of the Legion of Honor, and the Lincoln Park Golf Course. To the south is the SFVAMC main campus, with residences located further to the south. The helipad site is located on the northwestern edge of the SFVAMC property on a small promontory measuring approximately 75 ft by 75 ft. Figure 2 shows the location of the helipad site in relation to surrounding land uses.

The helipad would have a minimal impact on the aesthetics of the SFVAMC and surrounding area. From off-site locations, views of the helipad site from the east and west are blocked by Monterey cypress and eucalyptus trees and scrub vegetation, so the helipad would not be visible from residences. From off-site locations to the south, view of the site would be blocked by intervening SFVAMC buildings. Being set back approximately 20 feet from the edge of the ridge, views of the helipad from the Golden Gate National Recreation Area situated approximately 30 feet below the site would be minimal, being only visible from a small section of the trail below.

The Golden Gate Bridge and Marin Headlands, which are located about 2.5 miles away, are visible in the distance. However, because the helipad structures would be low-profile, and because the bridge and headlands are located a substantial distance from the site, the helipad would not be noticeable to travelers on the bridge and would not be noticeable from the headlands.

From within the SFVAMC, the helipad would be seen from the adjacent parking lot, from the two nearest multi-storied buildings (Buildings 14 and 18), and from a parking garage. Building 18 has been determined to be a contributing element of a potential National Register Historic District and would be constructed adjacent to a historic landscape area. The impact of the helipad on the historic integrity of these resources is addressed in the cultural resources section of this EA.

The helipad would not be out of character with the SFVAMC site as a whole, which is intensively developed with multi-story buildings, parking lots, and paved streets. The new 6-ft high chain link fence in front of the helipad site would replace an existing 6-ft high chain link fence. The green perimeter lights that would be installed on the edge of the concrete retaining wall would only be activated immediately prior to a helicopter landing or take-off and would provide a low level of light. The helipad would not introduce a substantial new source of light in the area. Maintenance (potential topping) of trees within the safety area would not substantially change the character of the skyline.

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Aesthetic impacts associated with construction, for example, the presence of construction vehicles and equipment, would be visible to Buildings 14 and 18 occupants, and to users of the adjacent parking lot. This impact would be short-term and is considered minimal.

The helipad would result in helicopter flyovers. Residents, recreationists, and workers in the surrounding areas and within the SFVAMC would see the helicopters flying overhead. Such impacts on views would be transitory in nature, would occur infrequently, and would affect only a small portion of available views at any time. The visual presence of helicopters in the air may be annoying to some individuals but because of the infrequency of helipad use, impacts are considered minimal.

**AIR QUALITY**

**IMPACTS**

**ATTRIBUTES**

S M MI N

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> CARBON MONOXIDE                       | <input type="checkbox"/> PRESENCE OF ODORS                |
| <input type="checkbox"/> PHOTOCHEMICAL OXIDANTS                           | <input checked="" type="checkbox"/> PARTICULATE EMISSIONS |
| <input checked="" type="checkbox"/> NITROGEN OXIDES                       | <input checked="" type="checkbox"/> HYDROCARBONS          |
| <input type="checkbox"/> OCCURS IN AN AIR QUALITY MAINTENANCE AREA (AQMA) | <input checked="" type="checkbox"/> SULFUR OXIDES         |
| <input checked="" type="checkbox"/> ADVERSE                               | <input checked="" type="checkbox"/> TEMPORARY             |
| <input type="checkbox"/> BENEFICIAL                                       | <input type="checkbox"/> LONG TERM                        |
|   | <input checked="" type="checkbox"/> SHORT TERM            |
|   | <input type="checkbox"/> CUMULATIVE                       |

**COMMENTS**

This section evaluates potential impacts of the project relative to criteria air pollutants (pollutants for which federal and/or state standards exist), toxic air contaminants, and greenhouse gases.

The Bay Area Air Quality Management District (BAAQMD) is responsible for implementing federal and state air quality regulations and standards. The Bay Area is classified as in attainment for criteria air pollutants, except for ozone and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>). The BAAQMD has adopted the Bay Area Clean Air Plan and the Ozone Attainment Plan; no plan is required for exceeding particulate matter standards.

Toxic air contaminants (TACs), such as diesel exhaust, are regulated under both state and federal laws. The BAAQMD regulates emissions of TACs if health or cancer risks exceed thresholds.

The temperature on earth is regulated by the “greenhouse effect,” where naturally occurring gases, such as carbon dioxide, absorb infrared radiation emitted by the Earth’s surface and radiate it back to the surface,

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thus trapping heat within the atmosphere. Recent increases in greenhouse gases have led to an increase in global temperatures referred to as climate change. In the Fall of 2006, the Governor signed Assembly Bill 32 (AB32), the “Global Warming Solutions Act of 2006,” committing the State of California to reducing greenhouse gas emissions to 1990 levels by 2020. On July 11, 2008, the U.S. EPA issued a finding that the Clean Air Act should not be used to regulate greenhouse gases; therefore, at the time of publishing this Environmental Assessment, no federal regulations on greenhouse gases are applicable to the project.

Potential sources of project air pollutants are construction equipment exhaust and dust, vehicular trips, and helicopter emissions during operations.

Construction of the helipad is expected to require approximately two months and disturb less than one acre of land. Construction traffic is expected to consist primarily of supply trucks and worker trips and would be minor. The BAAQMD CEQA Guidelines do not recommend quantification of construction-period emissions for either criteria pollutants or TACs for small projects, such as the proposed action. With implementation of BAAQMD’s standard construction dust control measures, construction emissions would be minimal. These actions include, at a minimum: (1) limiting the area subject to excavation, grading and other construction activity at any one time; (2) watering active construction areas at least twice daily; (3) covering trucks hauling soil or require trucks to maintain at least two feet of freeboard; and (4) enclosing, covering, watering twice daily or applying (non-toxic) soil binders to exposed stockpiles.

Operation of the helipad would not generate additional vehicular trips and would not have any direct emissions as there would be no working equipment on site. Therefore no air quality impacts would occur. No additional population or employees would be generated by the project, so the project would be consistent with the Bay Area clean Air Plan and the Ozone Attainment Plan.

Helicopter trips would have emissions of both criteria pollutants and TACs, however, it is not possible to estimate the amount of emissions, because the frequency of helicopter landings and takeoffs is not known. Neither is it possible to estimate the length of the helicopter trips. As identified in the Project Description, the helipad is proposed solely for use during manmade or natural disasters. For example, if bay area bridges or major roads were impassable during an earthquake, helicopters could be used to bring disaster officials and supplies to the SFVAMC. The BAAQMD estimates that all air traffic in the Bay Area emits approximately 2 percent of the air pollutants in the Air Basin. Infrequent trips by helicopters to the SFVAMC would not substantially increase this percentage.

Greenhouse gas emissions would occur from combustion during construction and during helicopter flights. Construction emissions would be brief (two months) and are considered negligible. Lights at the helipad would be turned on only when incoming flights are expected, so energy use would be minimal. Combustion of fuel during helicopter flights would contribute to cumulative greenhouse gas emissions, but actual emissions cannot be calculated and are expected to be negligible. Operation of the helipad would not conflict with any of the policies for reduction of greenhouse gases adopted or contemplated by the City of San Francisco or the State.

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Air quality impacts are considered minimal.

**COMMUNITY SERVICES**

**IMPACTS**

**ATTRIBUTES**

S M MI N

- ALTERATION OF PUBLIC FACILITIES
- ADVERSE
- BENEFICIAL

- ALTERATION OF PUBLIC SERVICES
- ALTERATION OF PUBLIC UTILITIES
- LONG TERM
- SHORT TERM
- CUMULATIVE

**COMMENTS**

The proposed helipad would benefit community services by providing a landing spot for helicopters transporting coordination officials, supplies, and casualties to support the City of San Francisco and local community during natural and manmade disasters.

Solid waste in the form of construction debris and soil would be generated during construction that would require disposal at a landfill. The amount of material needing disposal would be typical of small construction projects. Also there would be a slight increase in storm drainage use to accommodate precipitation run-off from the 54 ft diameter concrete landing pad. The amount of landfill space and storm drainage facility capacity needed to serve the project would be minimal.

There would be no effect on other community services including police and fire services, or the need for recreation facilities.

**CULTURAL RESOURCES**

**IMPACTS**

**ATTRIBUTES**

S M MI N

- NATIONAL REGISTER PROPERTY
- ELIGIBLE PROPERTY
- ARCHITECTURALLY SIGNIFICANT PROPERTY
- ADVERSE
- BENEFICIAL

- CRITERIA OF ADVERSE EFFECT
- CRITERIA OF EFFECT
- ACTION REQUIRES HISTORIC PRESERVATION OFFICER COORDINATION
- LONG TERM
- SHORT TERM
- CUMULATIVE

COMMENTS

***Historic Architectural Resources***

The 29-acre SFVAMC campus was formerly part of U.S. Army Fort Miley. Construction of SFVAMC began in 1932 with the Army's demolition of the Fort Miley barracks, the officers' club, and support structures. Only Building 18 was left standing. By late 1934 SFVAMC construction was completed and began accepting patients. The floor plans of the new buildings at the SFVAMC were based on standardized plans, but the "Mayan Deco" style chosen for the exterior was unique to this VA campus. This architectural style was popular in southern California during the early 1930s.

Beginning in the early 1960s, a three-phase facility modernization program was begun at the SFVAMC. As a result of this modernization program, much of the original landscaping and open space at the SFVAMC was replaced with structures and parking lots. Many of the new buildings were inappropriately sited and designed in relation to the historic structures, and some historic buildings were substantially altered.

As the report titled *Historical and Architectural Assessment, Department of Veterans Affairs Medical Center, San Francisco, California* (Turnbull & Page 2002) describes, the setting outside the campus has not changed appreciably since its construction in 1934. However, on the campus itself the setting surrounding the historic 1934 buildings has changed considerably. The construction of a least a dozen buildings on formerly open ground and landscaping has dramatically changed the feel of the campus, converting it from a picturesque and pastoral setting to an urban one. Slumping of the bluff north of the campus has destroyed a paved road that ran along the northern property line of the campus. In addition, the growth of the thick Monterey Cypress stands and lush undergrowth on three sides of the campus have helped to obscure some views from the campus toward both the Golden Gate and the Pacific. However, two areas of the campus retain their historic "feeling" because they convey the "expression of the aesthetic or historic sense of a particular period of time better than others." These include the main north-south axis along Veterans Drive in the eastern part of the campus, and a section of Veterans Drive along the northern edge of the campus from Buildings 3 to 18. These sections are free from major alteration or modern additions. These areas effectively convey an accurate impression of what the VA Medical center looked like in 1934.

However enough of the original SFVAMC remains that in 1981, the SFVAMC was determined to be eligible for listing in the National Register of Historic Places by the VA Historic Preservation Officer as "a significant component of the thematic group of Veterans Affairs set hospitals developed throughout the United States by the Federal Government in the second quarter of the 20<sup>th</sup> century to provide an innovative and comprehensive system of health care for American veterans."

Further studies undertaken in 2001 (Page & Turnbull 2001) identified that only two specific areas of the campus retain enough historic integrity to qualify for listing in the National Register. These areas

meet National Register Criterion C as examples of a “type, period and method of construction.” The historic integrity of the remaining areas had been compromised by more recent developments to an extent that the campus as a whole is ineligible for listing. One of the qualifying areas is a cluster of buildings on the eastern edge of the campus and Buildings 1, 8, 9, 10 and 11. The second area is cluster of buildings located in the northwestern part of the campus and includes Buildings 4, 6 and 18.

The proposed helipad would be constructed on the northwestern boundary of the SFVAMC on a 75 ft by 75 ft promontory that overlooks the Golden Gate National Recreation Area and the ocean to the north. Immediately adjacent to the site on the south lies a SFVAMC parking lot and beyond the parking lot to the southeast lies Building 18, situated about 70 ft from the helipad site. Adjacent to Building 18 on the east is Building 14. Adjacent to Building 18 on the southwest is a parking lot.

Building 14, Building 18, and the historic landscape area that runs along the northern edge of the campus from Buildings 3 to 18 are within the project’s indirect area of potential effect (indirect APE) for historic resources. The helipad would be located immediately adjacent to the historic landscape area and within view of Buildings 14 and 18.

Building 18 was constructed in 1897 as an apartment complex for officers stationed at Fort Miley. In 1935 it was remodeled in the Mayan Deco mode to match the rest of the new SFVAMC campus. It is a two-story wood-frame building that presently contains clinical offices. It has been incrementally remodeled over the years, resulting in the replacement of many of the double hung wood windows with aluminum casements. Nevertheless, the building retains a moderate level of architectural integrity and is considered a contributing resource to a potential historic district.

Building 14 is a two-story modular building that was moved to the site in 2000. It is a non-contributing resource to a potential historic district.

As seen from Building 18 the helipad would consist of a concrete slab and embankment that would rise from approximately 2 to 7 ft above ground level. The helipad would not impact the historic architectural integrity of Building 18, and because of the helipad’s relatively low profile and the presence of an intervening parking lot, the visual impact on Building 18 is considered minimal. The helipad would be located immediately adjacent to one of the two areas on campus that retains its historic feeling. Because the helipad would be located adjacent to, but not within this area, visual impacts to this area are considered moderate.

### ***Archeological Resources***

No cultural resources associated with the Native American period have been recorded on the SFVAMC. The closest recorded archeological sites are situated to the west of the SFVAMC near the Sutro Bath ruins, which are within a mile of the SFVAMC. The coastal area around Point Lobos, which is situated to the west and below the SFVAMC, was used by Native Americans for seasonal

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camps. The archaeological sites, located within Point Lobos Archeological Sites National Register District, consist primarily of shell middens. The helipad project would have no impact on known archaeological resources.

In the unlikely event that unanticipated archeological resources are encountered during construction, the follow actions shall be taken.

Ground-disturbing activities shall be halted and a professional archaeologist would be called in to evaluate the significance of the find. If the find is significant, the evaluating archaeologist would determine whether it would be affected by the project. Non-significant finds would not be given further protection. If the project would adversely affect the resource, a mitigation plan shall be developed and implemented based on the recommendations of the evaluating archaeologist and in consultation with the California State Historic Preservation Officer. Mitigation may include, but is not limited to, data recovery excavation, consultation with descendent communities, and site recording.

If possible human remains are discovered, potentially damaging activities shall be halted. The VA shall immediately notify the County Coroner and a professional archaeologist to determine the nature of the remains. If the coroner determines that the remains are of Native American origin, the coroner must contact the Native American Heritage Commission (NAHC) which will identify the Most Likely Descendent (MLD). The MLD shall have 48 hours to complete a site inspection and make recommendations for treatment of the remains. A range of possible treatments includes nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendents, or other appropriate treatment.

These procedures conform to the requirements of pertinent cultural resource laws and regulations.

**ECONOMIC ACTIVITY**

**IMPACTS**

**ATTRIBUTES**

S M MI N

- |   |  |
|---|--|
| <input type="checkbox"/> REDUCTION IN WAGES TO AREA                 | <input checked="" type="checkbox"/> LOCAL PURCHASE OF GOODS AND SERVICES |
| <input type="checkbox"/> ADDITIONAL WAGES WILL BE AVAILABLE TO AREA | <input type="checkbox"/> INCREASE OR DECREASE DIRECT WORK FORCE          |
| <input type="checkbox"/> ADVERSE                                    | <input type="checkbox"/> LONG TERM                                       |
| <input checked="" type="checkbox"/> BENEFICIAL                      | <input checked="" type="checkbox"/> SHORT TERM                           |
|   | <input type="checkbox"/> CUMULATIVE                                      |

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COMMENTS

The project would make a slight contribution to the local economy by the use of local construction contractor labor and through the possible purchase of local construction materials and supplies. Helipad operation is not anticipated to affect economic activity.

FLOODPLAINS, WETLANDS, WATERSHEDS, RIVERS, LAKES, COASTAL ZONE, ETC.

IMPACTS

ATTRIBUTES

S M MI N

- |  |  |
|--|--|
| <input type="checkbox"/> 100 – YEAR FLOODPLAIN         | <input checked="" type="checkbox"/> COASTAL ZONE MANAGEMENT AREA |
| <input type="checkbox"/> 500 – YEAR FLOODPLAIN         | <input type="checkbox"/> CRITICAL ENVIRONMENTAL AREA OF WETLANDS |
| <input type="checkbox"/> CRITICAL ACTION (E. O. 11988) | <input checked="" type="checkbox"/> LONG TERM                    |
| <input checked="" type="checkbox"/> ADVERSE            | <input checked="" type="checkbox"/> SHORT TERM                   |
| <input type="checkbox"/> BENEFICIAL                    | <input type="checkbox"/> CUMULATIVE                              |

COMMENTS

The helipad site is not situated within a floodplain, and there are no wetlands or other water features on or near the site. The only effect the project would have on water resources is to increase the amount of surface run-off from the SFVAMC as a result of constructing a 54-ft diameter concrete landing pad at the helipad site. This storm water would be directed away from the helipad toward the adjacent parking lot where it would enter the SFVAMC storm water system.

The site is situated within a Coastal Zone Management Area. As described in this environmental impacts section, any impacts to coastal zone resources would be minimal (i.e. aesthetic, air quality, vegetation and wildlife, hydrology and water quality).

GEOLOGY AND SOILS

IMPACTS

ATTRIBUTES

S M MI N

- |   |  |
|---|--|
| <input type="checkbox"/> ROCK EXCAVATION                  | <input checked="" type="checkbox"/> SOIL EROSION         |
| <input checked="" type="checkbox"/> CUT / FILL OPERATIONS | <input checked="" type="checkbox"/> SOIL COMPACTION      |
| <input checked="" type="checkbox"/> GRADING               | <input type="checkbox"/> SOIL HORIZON REMOVAL AND MIXING |
| <input checked="" type="checkbox"/> ADVERSE               | <input type="checkbox"/> LONG TERM                       |
| <input type="checkbox"/> BENEFICIAL                       | <input checked="" type="checkbox"/> SHORT TERM           |
|   | <input type="checkbox"/> CUMULATIVE                      |

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## COMMENTS

Geology and soils characteristics of the site that are of primary consideration in constructing the helipad are rock fall conditions on the steep adjacent slopes, and potential seismic hazards, including earthquake-induced shaking and landsliding.

A preliminary geotechnical exploration of the helipad site (ENGEO, Inc 2007) reports that the site is located in an area of Franciscan Formation bedrock. The bedrock underlying the helipad location appears to be competent and massive with no apparent bedding or jointing. Based upon three exploratory soil borings taken within the helipad site, a soil cover one to four feet thick overlies a 12 to 18 ft thick layer of highly weathered and sheared sandstone and clay. Beneath that lies a harder massive greenstone.

The California Seismic Hazard Zones map for the City and County of San Francisco shows that the site is located adjacent to the Earthquake Induced Landslide Hazard Zone. According to geological maps, two mapped landslide scarps are located to the north of the helipad site. However these mapped landslides appear to be well outside the site and do not pose a risk to the proposed helipad structure. Landslide deposits are visible on the over steepened uphill roadway cuts and on the downhill slope between the roadway and base of the swale. Because of the geometry of the over steepened slopes, which consist of exposed sheared and fractured rock over more competent rock, they are prone to rock fall. Evidence of rock fall can be seen in the sloughing of debris from the east side of the exposed bluff.

To create a uniform subgrade below the helipad, the site would be excavated to accommodate at least 18 in of compacted engineered fill. In accordance with the recommendations of a geotechnical engineer (ENGEO, Inc. 2008) the foundation would consist of shallow footings founded on competent bedrock. The footings would be tied together with stiffened continuous grade beam to prevent long-term creep. Where competent rock resistant to excavation is encountered above the footing elevations, the footings would be excavated to the closest practical depth and doweled into the underlying rock with epoxy set anchors. Footings would have a minimum depth of 24 in and a minimum width of 18 in. The retaining wall and foundation are set back a sufficient distance from the bluff face so that active slope protection is not needed at this time. However, the slope may need to be reevaluated in the future to assess the need for protection in the event that active erosion undermines the top of the bluff. Regular inspections would be scheduled each year to reassess the ongoing condition of the slope.

The project area lies near a region of active faulting and high seismicity associated with the San Andreas Fault system. This fault system has been the source of numerous moderate to large magnitude historical earthquakes that caused strong ground shaking in the area. Future strong ground shaking from nearby large magnitude earthquakes is a virtual certainty. At its closest point related to the project site, the San Andreas Fault lies approximately 5.3 kilometers to the southwest. Several other active or potentially active faults occur within 100 kilometers of the site. No faults appear to cross the helipad site. An earthquake of moderate to high magnitude generated within the San Francisco bay area could cause considerable ground shaking at the site. To reduce the shaking effects, the helipad structures would be designed using sound engineering

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judgment and the latest building code requirements. The seismic design would be completed according to the VA Site Specific Criteria as recommended in the geotechnical exploration report.

Groundwater was not encountered in the soil borings which were drilled to a maximum of 15 ft, but the borings do not preclude the possible presence of groundwater because it is possible that the groundwater level had not fully stabilized at the time of the boring. In addition, fluctuation in groundwater level may occur seasonally and over a period of years because of precipitation, changes in drainage patterns, irrigation, and other factors.

The risk of regional subsidence/uplift or tsunamis or seiches is considered remote. The risk of fault offset at the site from a known active fault is low and the absence of deep alluvial deposits implies that the risk of lurching at the site is low. The potential for earthquake-induced liquefaction is negligible.

**HYDROLOGY AND WATER QUALITY**

**IMPACTS**

**ATTRIBUTES**

S M MI N

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> POTENTIAL FOR EROSION AND/OR SEDIMENTATION (NPDES)               | <input checked="" type="checkbox"/> ALTERATION / QUALITY CHANGE OF SURFACE WATER DRAINAGE |
| <input type="checkbox"/> POTENTIAL FOR CONTAMINATION OF WATER REGIME (FROM HAZARDOUS / TOXIC WASTES) | <input type="checkbox"/> ALTERATION / QUALITY CHANGE OF GROUND WATER REGIME               |
| <input checked="" type="checkbox"/> ADVERSE  | <input checked="" type="checkbox"/> LONG TERM   |
| <input type="checkbox"/> BENEFICIAL  | <input type="checkbox"/> SHORT TERM   |
|  | <input type="checkbox"/> CUMULATIVE   |

**COMMENTS**

Three soil borings taken within the proposed helipad site to a depth of 15 ft did not encounter groundwater. Although it is possible that perched groundwater could be encountered during excavation down to a maximum depth of 5 ft for the helipad footings, it is considered unlikely.

Construction of the helipad would increase the amount of impervious surfaces at the SFVAMC site by approximately 3,000 sq. ft. Impervious surfaces can decrease local groundwater recharge. However, any affect of 3,000 sq. ft. of additional impervious surfaces on groundwater levels is considered minimal. The project would have no effect on groundwater quality.

Additional storm water run-off from the SFVAMC site would be generated as a result of constructing the 54-ft diameter concrete helipad. As described above in the project description, storm water would be directed away from the helipad toward the adjacent parking lot where it would enter the SFVAMC on-site storm

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water system. This system is connected to municipal storm drain systems that discharge into the nearby waste water treatment plant before being discharged into the Pacific Ocean. The SFVAMC is operating under an Industrial User Class I Wastewater Permit issued by the San Francisco Public Utilities Commission (Permit No. 07-0622). This permit includes a Storm Water Pollution Prevention Plan (SWPPP) that describes the Medical Center’s storm water management program and indicates procedures to eliminate or reduce pollution-related to storm water runoff. The procedures outlined in the permit would be adhered to during construction and operation of the helipad. Therefore, the project’s effects on surface water quality are considered minimal. The project would have no effect on surface water hydrology.

LAND USE

IMPACTS

ATTRIBUTES

S M MI N

- |   |  |
|---|--|
| <input type="checkbox"/> ENCROACHMENT ON EXISTING LAND USE  | <input type="checkbox"/> SEWAGE – WASTE TREATMENT FACILITY |
| <input type="checkbox"/> CHANGE IN LAND USE PATTERN         | <input type="checkbox"/> UTILITIES                         |
| <input checked="" type="checkbox"/> SERVICE AND OPERATIONAL | <input type="checkbox"/> ROADS AND PARKING                 |
| <input type="checkbox"/> HOSPITAL-MEDICAL FACILITY          | <input type="checkbox"/> RECREATIONAL                      |
| <input type="checkbox"/> LABORATORIES - CLINICS             | <input type="checkbox"/> GROUND IMPROVEMENTS               |
| <input type="checkbox"/> ADMINISTRATIVE FACILITY            | <input type="checkbox"/> CEMETERY                          |
| <input checked="" type="checkbox"/> ADVERSE                 | <input checked="" type="checkbox"/> LONG TERM              |
| <input type="checkbox"/> BENEFICIAL                         | <input type="checkbox"/> SHORT TERM                        |
|   | <input type="checkbox"/> CUMULATIVE                        |

COMMENTS

The helipad is proposed to be sited at the northern edge of the SFVAMC campus. The medical center’s current use includes a hospital, nursing home, medical clinics, research, administration buildings, child care facilities, and parking facilities. The closest buildings to the helipad site are office buildings. Formerly, the helipad site was used as a lunch area for staff.

The medical center campus is a 29-acre facility that was built on the site of Fort Miley. The medical center is located in the northwestern corner of San Francisco, with adjacent land uses as follows:

- Golden Gate National Recreation Area (GGNRA) land lies to the north, extending to the ocean. This portion of the GGNRA is known as the Cliff House area. A foot path, runs below the helipad site. No major assembly areas exist in this part of the GGNRA.
- The Lincoln Park Golf Course lies to the north and east of the medical center campus.
- The California Palace of the Legion of Honor, a museum, lies northeast of the medical center campus.

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- Single family residential areas known as the Richmond District lie south of the medical center. The center is bounded by Clement Street to the south. The residential areas are zoned Single Family Residential; the closest residences are approximately 900 feet from the helipad site.
- Additional single family residential areas lie to the east of the Lincoln Park Golf Course, about three-quarters of a mile from the helipad.

No nearby helipads exist; the closest facilities are located at the Hall of Justice, downtown, and at the San Francisco Police property at Lake Merced. Emergency medical helipads are currently proposed at San Francisco General Hospital and the University of California San Francisco Mission Bay campus, but not approved.

Although the SFVAMC is not subject to the jurisdiction of San Francisco's Planning Code or zoning regulations, consistency with the San Francisco General Plan and zoning is discussed here for reference. The medical center is listed as an Institutional Facility in the San Francisco General Plan, and is consistent with the following objective and policy:

- Objective 9. Assure that institutional uses are located in a manner that will enhance their efficient and effective use.
- Policy 9.1. Locate institutional uses according to the Institutional Facilities Plan.

Addition of a helipad to the medical center would improve effective use of the site and would be consistent with the General Plan. The medical center site is in a P (Public) Use zoning district, and is consistent with that zoning. Addition of a helipad would also be consistent with the Public zoning.

In addition, the helipad site is located within the Coastal Zone, as defined by the California Coastal Commission. The Local Coastal Plan that covers the helipad site is incorporated into the San Francisco General Plan as an area plan under the title, Western Shoreline Plan. The Western Shoreline Plan focuses on vehicular transportation and transit opportunities, as well as providing the following objective for the Cliff House – Sutro Baths region:

- Objective 8. Maintain the visitor attractiveness of the Cliff House and Sutro bath complex.

The proposed helipad would not be visible from the Cliff House or Sutro bath complex and the approach and departure paths are not over these facilities. Noise from overflights would be audible at the Cliff House and Sutro bath complex, but very infrequent, so that it would not detract from the visitor attractiveness of the area. The project would be consistent with the Western Shoreline Plan and the Local Coastal Plan.

The proposed helipad would be constructed on the edge of the medical center campus and would not interfere with other uses within the medical center. The former lunch area at the helipad site has already been removed. Refer to the Transportation section for a discussion of parking impacts.

The helipad site is located directly adjacent to public open space land owned by the GGNRA, the California Palace of the Legion of Honor, and San Francisco's Lincoln Park Golf Course. Helicopter overflights would

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occur over or near each of these public lands on the approach and departure paths to the ocean. The infrequent and unpredictable nature of the overflights, given that they would only occur in a manmade or natural disaster, would not interfere with the adjacent public recreational and cultural land uses.

The helipad site is located approximately 900 ft from the closest residences to the south and approximately 3,850 ft from the closest residences to the east (on the far side of the golf course). The helicopter overflights would not traverse the residential areas, and would not interfere with the residential land uses.

Refer to the noise section for a discussion of noise impacts.

Impacts on land use are considered minimal.

**NOISE**

**IMPACTS**

**ATTRIBUTES**

S M MI N

- |  |   |
|--|---|
| <input type="checkbox"/> UTILITY SOURCE GENERATION | <input checked="" type="checkbox"/> OPERATIONAL |
| <input type="checkbox"/> TRAFFIC                   | <input type="checkbox"/> VIBRATIONS             |
| <input checked="" type="checkbox"/> CONSTRUCTION   | <input checked="" type="checkbox"/> LONG TERM   |
| <input checked="" type="checkbox"/> ADVERSE        | <input checked="" type="checkbox"/> SHORT TERM  |
| <input type="checkbox"/> BENEFICIAL                | <input type="checkbox"/> CUMULATIVE             |

**COMMENTS**

The San Francisco General Plan identifies the historic (1974) background noise levels in the Richmond District residential areas as 60 dBA, while the SFVAMC area has historically been in the 55 dBA range. The General Plan reports that ambient noise levels have increased over the years primarily due to increased traffic. These ambient noise levels are consistent with the Land Use Compatibility Chart for Community Noise in the San Francisco General Plan Noise Element.

No noise ordinances or noise standards have been identified that would apply to the unpredictable and infrequent nature of the proposed helicopter activity. However, several types of noise standards are provided here as a reference point to judge the severity of noise from the helicopter activity.

The City of San Francisco has a Noise Ordinance which prohibits unnecessary, excessive and offensive noises (San Francisco City Code, Article 29). For example, a piece of construction equipment shall not generate a noise level greater than 85 dBA when measured at a distance of 50 feet. In addition, the City's General Plan Noise Element has policies designed to reduce noise, for example, restricting the use of

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emergency sirens to genuine emergencies. The Noise Element provides a Land Use Compatibility Chart for Community Noise that uses  $L_{dn}$  weighted values (24 hour averages which give more weight to noises at night). For example, outdoor sound levels at residences should be maintained at 60  $L_{dn}$  dBA or less.

Regarding the safety of brief, loud noises, the California Code of Regulations (Title 8, Section 5096) limits occupational noise exposure. For example, an exposure of 105 dBA should not occur for more than 1 hour per day. Occupational exposures below 90 dBA are not regulated.

Increased noise levels would be generated by construction equipment and vehicles during the estimated 2-month construction period. These noise levels would be typical of construction projects and would be minimized by implementing the requirements for noise control outlined in the VA Specification Section 01568 Environmental Protection. These include such requirements as providing sound-deadening devices on equipment, using shields or other physical barriers to restrict noise transmission, providing sound proof housings or enclosures for noise-producing machinery, and taking sound level measurements once every five successive working days while work is being performed above 55 dBA noise level. Because the site is located on a promontory at the edge of SFVAMC property, with a parking lot separating it from the nearest building, the noise would not be heard by a substantial number of VA staff, patients or visitors, and is not expected to affect surrounding properties.

Use of the helipad would generate occasional increased noise levels. As discussed in the project description, when a national or local manmade or natural disaster occurs, the helipad could be used several times a day, during daylight hours only. The number or frequency of helicopter landings and takeoffs cannot be reasonably estimated, because the number and duration of future natural or manmade emergencies cannot be reasonably estimated. When a helicopter lands, the duration of the close-in approach is short; once landed on the helipad, the pilot would reduce the engine and rotor blades to idle for approximately two minutes to allow the turbine engines to cool before shutting down. When starting up, the reverse occurs.

The two helicopter flight paths are not over residential neighborhoods or medical center buildings, but do cross over the Golden Gate National Recreational Area. Refer to Figure 4 to see the two approach and/or departure paths.

Noise data for the Sikorsky S-70 helicopter contained in the FAA Helicopter Noise Model were used to represent credible worst-case conditions.

Residences to the south of the Medical Center would be exposed to a maximum noise level of approximately 85 dBA for approximately 30 seconds. This noise level is less than that of a siren from a ground ambulance, police car, or fire engine. During the engine cool down/warm up period, the sound level at residences to the south would be approximately 60 dBA, not accounting for attenuation (reduction) by existing medical center buildings. With attenuation from intervening buildings, noise levels are expected to be proximately 45 dBA during this period (Davis 2007). Noise levels would not be inconsistent with the existing noise environment, would be restricted to daytime only, would not interfere with sleep, and are not expected to cause substantial disturbance.

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Outdoor noise levels in the Golden Gate National Recreation Area would range from approximately 85 to 105 dBA for brief periods of direct overflight, and then 60 to 75 dBA during the engine cool down/warm up periods. It is unlikely that substantial numbers of people would be recreating during an emergency and be located outdoors directly north of the helipad area during helicopter approaches or landings. However, if persons were located there, they would be exposed to brief loud noise from the overflight. Maximum durations of overflights are estimated at 30 seconds each, with perhaps up to 5 minutes total for several flights in a day. These loud noises would not cause hearing loss or damage based on the California occupational exposure regulations listed above, which allow exposure to 105 dBA for an hour per 8-hour workday.

Increased noise levels would also occur at the SFVAMC. At the closest building, Building 18, an office building, staff would be exposed to interior noise levels of approximately 80 dBA during approach and take off and then 65 dBA during the engine cool down/warm up periods. At the closest medical facility, Building 203, the Nursing Home, staff and patients would be exposed to interior noise levels of approximately 60 dBA during approach and takeoff and less than 45 dBA for the engine cool down/warm up periods. These infrequent and intermittent sound levels during daylight hours are not expected to substantially disturb staff or patients.

Noise impacts are considered moderate.

**POTENTIAL FOR GENERATING SUBSTANTIAL CONTROVERSY**

**IMPACTS**

**ATTRIBUTES**

S M MI N

- INDIRECT OR DIRECT EFFECTS ON COMMUNITY ORGANIZATIONS
- CONSISTENT WITH PROFILE OF COMMUNITY
- ADVERSE
- BENEFICIAL

- INTERPRETATION OF HOW THE ACTION WILL AFFECT COMMUNITY RESPONSE IS IN QUESTION
- LONG TERM
- SHORT TERM
- CUMULATIVE

**COMMENTS**

It is not anticipated the proposed helipad project will generate substantial controversy. Questions raised by the public regarding possible helipad installations at UCSF-Mission Bay and SF General Hospital, identified the following potential concerns: frequency of use, weather conditions for landings, use of the site for other purposes than their primary designation, location of flight paths, types of warning signals used on the helipad, and lighting requirements. The proposed helipad at SFVAMC would be used only to transport

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coordination officials, supplies, and casualties to support the City of San Francisco and local community during natural and manmade disasters. Pilots would be allowed to land only under the acceptable weather conditions as required by the FAA. Designated flight paths would not traverse residential areas. No helipad warning signals or continual lighting would be used. The only lighting would be green perimeter lights and the lighted wind cone at the edge of the landing pad that would be activated just prior to a landing.

Because of the infrequency of helipad use, landings under safe weather conditions under VFR conditions only, absence of visual impacts related to lighting, location of flight paths away from residential areas, substantial controversy is not anticipated.

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**REAL PROPERTY**

**IMPACTS**

**ATTRIBUTES**

S M MI N

- |   |   |
|---|---|
| <input type="checkbox"/> REDUCTION OF LAND ON TAX ROLLS   | <input type="checkbox"/> EXCESS ACTION          |
| <input type="checkbox"/> CHANGES OF LAND VALUES           | <input type="checkbox"/> CHANGES IN OWNERSHIP   |
| <input type="checkbox"/> ENCROACHMENT ON CRITICAL AREAS   | <input type="checkbox"/> BOUNDARIES             |
| <input type="checkbox"/> ACQUISITION (DONATION, PURCHASE) | <input type="checkbox"/> CHANGES OF EASEMENT OR |
| <input type="checkbox"/> ADVERSE                          | RIGHT OF WAY                                    |
| <input type="checkbox"/> BENEFICIAL                       | <input type="checkbox"/> SHORT TERM             |
|   | <input type="checkbox"/> CUMULATIVE             |

**COMMENTS**

No real property issues are associated with the helipad project.

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**RESIDENT POPULATION**

**IMPACTS**

**ATTRIBUTES**

S M MI N

- |  |   |
|--|---|
| <input type="checkbox"/> ADDITION OF STAFF TO FACILITY | <input type="checkbox"/> CHANGE IN NEIGHBORHOOD |
| <input type="checkbox"/> ALTERATION OF DEMOGRAPHIC     | CHARACTERISTICS                                 |
| CHARACTERISTICS  | <input type="checkbox"/> LONG TERM              |
| <input type="checkbox"/> ADVERSE                       | <input type="checkbox"/> SHORT TERM             |
| <input type="checkbox"/> BENEFICIAL                    | <input type="checkbox"/> CUMULATIVE             |

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COMMENTS

The helipad project would not increase or decrease the resident population. Maintenance of the helipad would be performed by existing SFVAMC maintenance staff, and occasional tree topping would be performed by staff or a contractor. Activities associated with helicopter take-offs and landings, for example removing of vehicles from the helipad area, rolling back the fencing, and directing traffic flow in the area, would be performed by existing SFVAMC staff. Construction of the helipad would not displace employees or patients, and would not create a demand for additional staff. Facilities and programs would continue to function during construction.

PUBLIC SAFETY AND SOLID / HAZARDOUS WASTE

IMPACTS

ATTRIBUTES

S M MI N

- |   |   |
|---|---|
| <input type="checkbox"/> STEEL REMOVAL/DEMOLITION                     | <input checked="" type="checkbox"/> CONSTRUCTION SITE |
| <input type="checkbox"/> BULK OPERATIONAL WASTE                       | <input type="checkbox"/> STOCKPILING                  |
| <input checked="" type="checkbox"/> EARTH AND / OR ROCK DEBRIS        | <input type="checkbox"/> CONCRETE DEBRIS              |
| <input type="checkbox"/> ADVERSE                                      | <input type="checkbox"/> HAZARDOUS WASTE              |
| <input type="checkbox"/> BENEFICIAL                                   | <input checked="" type="checkbox"/> LONG TERM         |
|   | <input checked="" type="checkbox"/> SHORT TERM        |
|   | <input type="checkbox"/> CUMULATIVE                   |
| <input checked="" type="checkbox"/> POTENTIAL EFFECT ON PUBLIC SAFETY |   |
| <input type="checkbox"/> ADVERSE                                      |   |
| <input checked="" type="checkbox"/> BENEFICIAL                        |   |
| <input type="checkbox"/> CUMULATIVE                                   |   |

COMMENTS

The helipad could be used by FEMA and Homeland Security in the event of a local or regional multi-casualty incident, catastrophic event, or other large-scale emergency. The helipad would provide a landing spot for FEMA or Homeland Security coordination officials and supplies. This would have a beneficial effect on public health and safety.

Construction of the helipad would generate the types and quantities of solid and hazardous waste that are typical of small construction projects. Solid wastes would consist of construction debris, and soil from site regrading and excavation. Hazardous wastes would include such materials as paints, lubricants, adhesives, and solvents. These materials would be removed from the SFVAMC and disposed of in accordance with federal, state and local regulations. No hazardous materials or wastes would be stored at the helipad.

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To determine the presence or absence of documented soil or groundwater contamination at or near the helipad site, an environmental records review was obtained through a computer data bank search company, Environmental Data Resources, Inc (EDR). The search encompassed the area within a one-mile radius of the SFVAMC (EDR 2008). The search did not identify the presence of soil or groundwater contamination within the searched area that could expose construction site workers or the helipad users to contaminated soil or groundwater. All of the surrounding sites are located at a lower elevation than the SFVAMC and/or are of sufficient distance from the subject property. They would pose no risk, and therefore, no impact would occur.

Helicopter accidents could impact the safety of persons or property on the ground. The national accident rate for all types of helicopters is an average of 8 accidents per 100,000 flying hours. The three major causes of helicopter accidents are operational error, mechanical malfunction, and electrical malfunction. Many provisions are in place to ensure safe operations of the SFVAMC helipad, including safe operation of helicopters, helicopter operations and flight paths approved by the FAA, and maintenance of helicopters in accordance with FAA requirements. In response to the SFVAMC's Notice of Landing Area Proposal submitted to the FAA (Davis 2007), the FAA provided a determination that the helipad would "not adversely affect the safe and efficient use of the navigable airspace by aircraft, provided: 1) all operations are conducted in VFR weather conditions; 2) the landing area is limited to private use; and 3) routes of ingress and egress shall be established and maintained obstruction-free." In making this determination, the FAA considered matters such as the effects the proposal would have on existing or planned traffic patterns of neighboring airports, the effects it would have on existing airspace structures and projected programs of the FAA, the effects it would have on the safety of persons and property on the ground, and the effects that existing or proposed manmade objects (on file with the FAA), and known natural objects within the affected area would have on the proposal (FAA 2007). Potential impacts to public safety are considered minimal.

**TRANSPORTATION AND PARKING**

**IMPACTS**

**ATTRIBUTES**

S   M   MI   N  
        

- ALTERATION OF PUBLIC TRANSPORTATION
- ALTERATION OF FACILITY ACCESS ROADS
- ADVERSE
- BENEFICIAL

- ALTERATION OF EXISTING ON-SITE ROADS OR PARKING
- CONSTRUCTION OF NEW ROADS OR PARKING
- CONSTRUCTION TRAFFIC
- LONG TERM
- SHORT TERM
- CUMULATIVE

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**COMMENTS**

Construction-related vehicles would temporarily increase traffic levels on off-site roads, including Fort Miley Road, Clement Street, 42nd Avenue, Geary Boulevard and/or other roadways that may be used to access the site. The estimated trips during the projected 2-month construction period are summarized in Table 1.

Based on the Helipad Plan for the project, it is estimated that approximately 420 cubic yards of fill could be required, and up to 150 cubic yards of concrete for the footing, slab, and retaining wall. The maximum construction traffic volumes expected on any one day would be associated with site excavation/grading activities and/or delivery of fill. During this time, a maximum of 4 trucks per hour, or 32 trucks per day, is assumed. In addition, an average of 10 vehicles per day is estimated for the construction crew. Such increases in traffic are considered moderate due to their temporary and limited duration.

**TABLE 1  
Proposed Action Construction Traffic**

	<b>Construction Activity</b>	<b>Peak vehicles per day</b>	<b>Average vehicles per day</b>
<b>Trucks</b>	Excavation/grading <sup>1</sup>	32	6
	Slab/Footing/Retaining Wall <sup>2</sup>	5	<1
	Fill <sup>1</sup>	32	6
	Rebar, other materials	6	<1
	Other	8	<1
<b>Other vehicles</b>	Construction Crew	15	10

<sup>1</sup>Assumes excavation activities occur over one day for maximum, over 5 days for average.

<sup>2</sup>Assumes retaining wall construction occurs in phases with five concrete trucks needed for each phase.

During construction, nine adjacent parking spaces would be reserved for construction contractor parking. This would reduce the number of parking spaces available for SFVAMC patients. Although parking space availability at the SFVAMC is limited, it is anticipated that parking would be available elsewhere on site. Therefore, because the loss of parking spaces would only extend over a two-month period and the number of parking spaces lost would be small, this impact is considered minimal.

Although infrastructure maintenance projects are an ongoing activity at the SFVAMC, none are currently scheduled to take place in this area of the SFVAMC at the same time as helipad construction. Any temporary incremental increases in offsite traffic during helipad construction would not result in traffic levels that are cumulatively considerable.

In the long-term, fourteen parking spaces currently designated for patient parking would be reserved for medical center vehicles. To compensate for the loss of patient parking spaces, fourteen nearby medical center vehicle parking spaces would be redesignated for patient parking.

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UTILITIES

IMPACTS

ATTRIBUTES

S M MI N

- |  |   |
|--|---|
| <input type="checkbox"/> WATER SYSTEM, SUPPLY            | <input type="checkbox"/> INCINERATOR                        |
| <input checked="" type="checkbox"/> STORM WATER DRAINAGE | <input type="checkbox"/> AIR CONDITIONING AND REFRIGERATION |
| <input type="checkbox"/> SEWAGE TREATMENT                | <input type="checkbox"/> EXCAVATION                         |
| <input checked="" type="checkbox"/> ELECTRICAL           | <input type="checkbox"/> MAINTENANCE AND REPAIR             |
| <input type="checkbox"/> HEAT GENERATION                 | <input type="checkbox"/> CONSERVATION                       |
| <input checked="" type="checkbox"/> ADVERSE              | <input checked="" type="checkbox"/> LONG TERM               |
| <input type="checkbox"/> BENEFICIAL                      | <input type="checkbox"/> SHORT TERM                         |
|  | <input type="checkbox"/> CUMULATIVE                         |

COMMENTS

The project's use of the SFVAMC stormwater system is discussed above under Hydrology and Water Quality.

The only other utility that would be needed is electricity to power the helipad landing pad and wind cone lights. These lights would only be activated prior to and during helicopter landings and take offs. Landings would only occur if a national or local emergency occurs. The number or frequency of helicopter landings and takeoffs cannot be reasonably estimated; therefore the amount of electricity use cannot be quantified. However, as described above, the duration of approach and landing is approximately 3 minutes. Based upon the anticipated frequency of use of the helipad and limited amount of time the helipad lights would be used, the use of electricity would be minimal.

VEGETATION AND WILDLIFE

IMPACTS

ATTRIBUTES

S M MI N

- |  |  |
|--|--|
| <input type="checkbox"/> PRESENCE OF ENDANGERED OR THREATENED WILDLIFE SPECIES | <input checked="" type="checkbox"/> TREE REMOVAL/TRIMMING  |
| <input checked="" type="checkbox"/> ADVERSE                                    | <input type="checkbox"/> GROUND COVER REMOVAL              |
| <input type="checkbox"/> BENEFICIAL  | <input checked="" type="checkbox"/> SPECIAL STATUS SPECIES |
|  | <input checked="" type="checkbox"/> LONG TERM              |
|  | <input checked="" type="checkbox"/> SHORT TERM             |
|  | <input type="checkbox"/> CUMULATIVE                        |

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## COMMENTS

A survey for vegetation and wildlife was conducted on the 75-ft diameter affected parcel on July 28, 2008. No wetlands or other water features were observed.

Vegetation associated with the urban landscape of the SFVAMC offers habitat for plant and wildlife species adapted to living in close proximity to humans. The soil at the proposed helipad site had been disturbed during vegetation and tree clearing operations, and therefore few herbaceous plants remained on site during the July survey. For this reason, plants adjacent to the cleared area were examined. Plants observed on and adjacent to the project site consist of Monterey Cypress (*Cupressus macrocarpa*), Monterey pine (*Pinus radiata*), Ponderosa pine (*Pinus ponderosa*), Himalayan blackberry (*Rubus discolor*), Italian ryegrass (*Lolium multiflorum*), plantain (*Plantago* sp.), sweet fennel (*Foeniculum vulgare*), rattlesnake grass (*Briza maxima*), agave (*Agave* sp.), poison oak (*Toxicodendron diversilobum*), willows (*Salix* sp.), oats (*Avena* sp.), iceplant (*Carpobrotus edulis*), thick leaved pittosporum (*Pittosporum crassifolium*), and bristly ox-tongue (*Picris echioides*).

The helipad site is situated where urban landscape transitions abruptly to the cypress grove. The grove offers food, shelter and breeding sites for wildlife. Wildlife species observed included brewer's blackbird (*Euphagus cyanocephalus*), red-winged blackbird (*Agelaius phoeniceus*), white-crowned sparrow (*Zonotrichia leucophrys*), house finch (*Carpodacus mexicanus*), western gull (*Larus occidentalis*), and American crow (*Corvus brachyrhynchos*).

Project impacts to plant and animal species would be considered severe if the project:

- Causes disruption to or removal of an endangered or threatened species, its habitat, migration corridors, or breeding areas
- Results in the loss of a substantial number of native plant or animal species that could affect abundance or diversity beyond normal variability.

### **Special Status Species**

Information about special-status species was obtained from the California Natural Diversity Database (CNDDDB 2008), existing literature, and websites maintained by State and federal agencies. Also a search was made of the project area for species listed on the U. S. Fish and Wildlife Services (USFWS) online database for federal threatened, endangered and potential candidate species (USFWS 2008). The California Native Plant Society online website (CNPS 2008) was also consulted for listed plants reported in the region. Utilizing these lists, field surveys were conducted to determine what plant and animal species were on the site and to determine suitability for listed species habitat. Only species with potential to occur in habitats present on the project site are discussed below.

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Monterey cypress and Monterey pine are not naturally occurring in San Francisco County (Barbour et al. 2007). Along with eucalyptus, these trees were often planted as windbreaks along ocean bluffs. Prior to urbanization of this area the vegetation at the site was probably comprised of plant species found in coastal bluff scrub habitats. With the exception of poison oak, there is no remnant scrub species presently on the site. Blue coast gilia (*Gilia capitata* ssp. *chamissonis*), a California Native Plant Society (CNPS) List 1B (meaning rare, threatened or endangered in California) was collected in 1907 at Land's End (CNDDDB occurrence 8) just north of the project site. San Francisco gumplant (*Grindelia hirsutula* var. *maritima*), also a CNPS List 1B plant, was observed in 1987 (CNDDDB occurrence 12) approximately 0.37 miles southwest of the project site on an oceanic bluff at Point Lobos in similar habitat. Both of these plants are found in coastal bluff scrub habitat. If the habitat at the project site was once coastal bluff scrub, seed banks for these plants could persist for an indeterminate time but not germinate because of the closed canopy of the cypress grove. The CNDDDB list for the U. S. Geological Service (USGS) San Francisco North 7.5 minute topographical quadrant for plants that were found at one time in coastal bluff scrub habitat include Franciscan thistle (*Cirsium andrewsii*), San Francisco collinsia (*Collinsia multicolor*), fragrant fritillary (*Fritillaria liliacea*), Kellogg's horkelia (*Horkelia cuneata* ssp. *sericea*), rose leptosiphon, (*Leptosiphon rosaceus*), marsh microseris (*Microseris paludosa*), and Choris' pop-corn flower (*Plagiobothrys chorisianus* var. *chorisianus*) which are all CNPS List 1B plants. There is one San Francisco County record (occurrence 6) for Beach layia (*Layia carnosa*), a federal and state listed endangered species and CNPS List 1B plant, collected in 1904 with no location provided. According to the CNDDDB, San Francisco collinsia, blue coast gilia, Kellogg's horkelia, beach layia and marsh microseris are presumed extirpated from San Francisco County. No special status plant species were observed in the vicinity of the proposed helipad site during the July biological resources survey.

The close proximity to urbanization greatly reduces the potential for the presence of special status wildlife species at the helipad site. There are two state-listed species of special concern with potential to occur. The western red bat (*Lasiurus blossevillii*) and the hoary bat (*Lasiurus cinereus*). The western red bat roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests. This bat roosts in forests and woodlands on edges of urban areas preferring trees that are protected from above and open below with open areas for foraging (CNDDDB 2008). There is only one CNDDDB record for the western red bat in San Francisco County (occurrence #90) for a single bat observed in 2000 roosting in a tree at Strybing Arboretum approximately 2.3 miles southeast of the project site. The hoary bat prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. They roost in dense foliage of medium to large trees and under overhangs of building (CNDDDB 2008).

Monarch butterfly (*Danaus plexippus*) is another native species that could use trees in the vicinity of the project site for winter roosting. CNDDDB records indicate that monarchs have been observed overwintering in Golden Gate Park, the Presidio, and Fort Mason. The monarch has no state or federal listing but could become a candidate.

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The trees on and in the vicinity of the helipad site provide nesting habitat for resident and migratory birds.

The following actions would be taken:

Preconstruction Roosting Bat Surveys – For removal or topping of trees, preconstruction surveys for bats that may be roosting in trees that are scheduled for removal or topping shall be conducted by a qualified biologist within 48 hours of removal activity.

Preconstruction Nesting Bird Surveys – For construction activities, including tree removal, that occur between February 1 and August 1, preconstruction surveys for nesting birds shall be conducted by a qualified biologist within 48 hours of construction. Trees within a 200-ft radius must be included in the surveys as construction related activity could cause nest abandonment. If active nests (nests containing eggs or young) are identified, the biologist would consult with the California Department of Fish and Game biologist for the region regarding protective action.

Due to the relatively small project area, no long-term impacts to vegetation or wildlife are anticipated. The project would require the topping of three cypress trees and occasionally trimming of additional trees that lie within the safety zone. With implementation of the above mitigative actions, no impact to native animal or plant species would occur.

Use of the helipad would not cause disruption to or removal of an endangered or threatened species, its habitat, mitigation corridors, or breeding areas. Also use of the helipad would not result in the loss of a substantial number of native plant or animal species that could affect abundance or diversity beyond normal variability.

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## ENVIRONMENTAL JUSTICE

### IMPACTS

### ATTRIBUTES

S M MI N

- DISPROPORTIONATELY HIGH AND ADVERSE HUMAN HEALTH OR ENVIRONMENTAL EFFECTS ON MINORITY AND LOW-INCOME POPULATIONS.
- LONG TERM
- SHORT TERM

### COMMENTS

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires that federal agencies identify and address, as appropriate,

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disproportionately high and adverse human health or environmental effects of their programs and activities on minority and low-income populations.

The demographic characteristics of the City of San Francisco from the 2000 Census indicate a predominantly White (49.7%) and Asian (30.8%) population. Minority groups in the City of San Francisco include African American, Hispanic/Latino, American Indian/Alaska Native, and Native Hawaiian/Pacific Islanders. Low income populations for this study have been identified based on the median household incomes by ethnicity reported in the City's General Plan Housing Element (City of San Francisco 2004). The median household incomes for African American, American Indian/Alaska Native, and Native Hawaiian/Pacific Islander are in the low range (50-80% of San Francisco Median Household Income), whereas White and Asian median household incomes are not in the low range.

The 2000 Census data for the tracts surrounding the SFVAMC indicate that the proposed action would not result in disproportionate impacts to any minority or low-income portion of the community. The census data indicate that the demographic characteristics for the surrounding tracts are predominantly White and Asian. For example, the SFVAMC is located within Census Tract 602 of San Francisco County. According to the 2000 census data for this tract, White and Asian races comprise 83.5 percent of the population. White and Asian races also comprise over 90 percent of the population in the 3 surrounding Census tracts (428, 478, and 479.02).

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## **ALTERNATIVES**

The following provides an analysis of the potential environmental impact from the rooftop alternative and the no action alternative. Table 3 compares the level of impacts from the proposed action and alternatives.

### **Rooftop Alternative**

#### ***Project Description***

The rooftop alternative consists of constructing and operating a helipad on the roof of Building 210. The location of Building 210 in relation to the surrounding area is shown in Figure 5. The roof of this four-story, 20,182-sq ft office building provides a location adjacent to a taller building, Building 2, where a door could be cut into the wall. Individuals and supplies would be directed to the elevator in adjacent Building 2 and taken to the ground floor. Access for casualties from the rooftop helipad to the hospital would be limited due to the size of the elevator.

Two flight paths situated 100 degrees apart would be available without having to remove any trees or other objects. Both flight paths would be over a number of SFVAMC buildings, a portion of the Golden Gate National Recreation Area, and the ocean (see Figure 6). Helipad construction on the Building 210 rooftop would entail extending the building columns up through the roof and erecting a 54-ft diameter concrete landing pad and embankment, which would rise three to five feet above the existing roof level, and

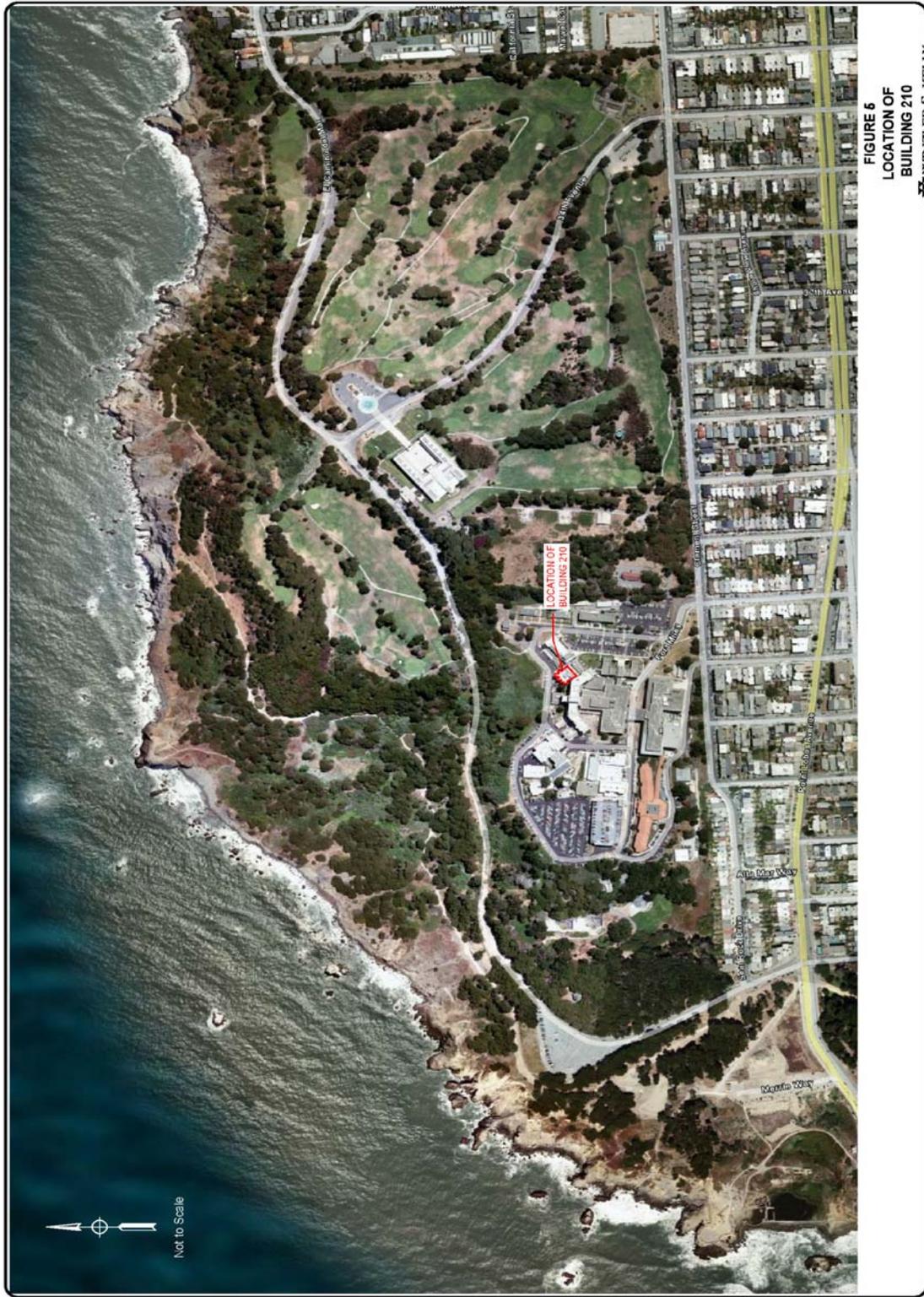


FIGURE 6  
LOCATION OF  
BUILDING 210

WINZLER SKEELLY

Source: Aerial Mapping Provided by Google Earth™

J:\11645 - BeXar Advanced Solutions Group\11645-08-001 SF VA Helipad Project\32-100 Prepare Draft EA and Proposed FONSI\Figures\CAD\Building210HelipadPath.dwg Aug 06, 2008 - 4:00P

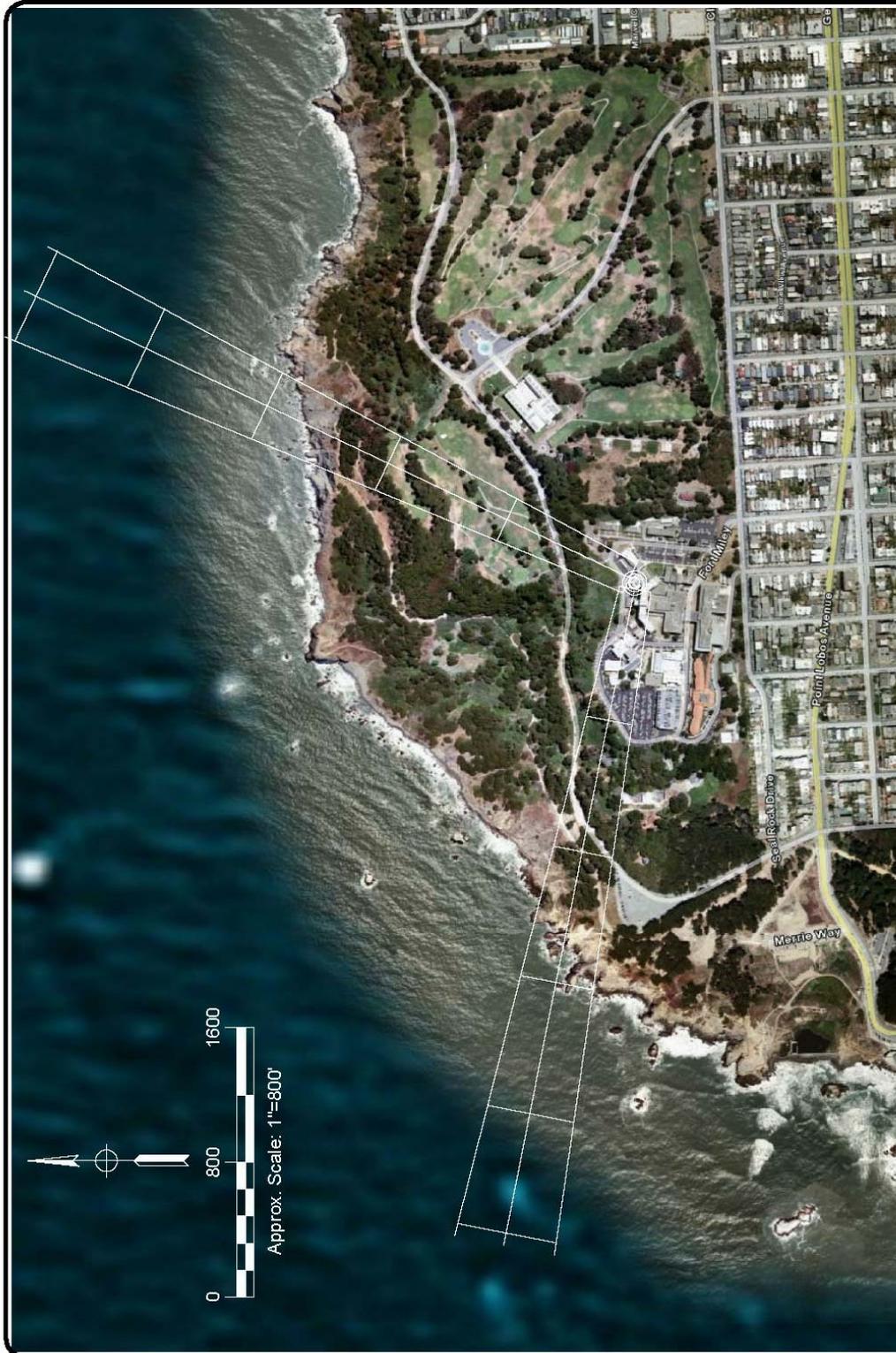


FIGURE 6  
BUILDING 210 ROOFTOP  
HELIPAD FLIGHT PATHS  
WINZLER & KELLY

Source: Aerial Mapping Provided by Google Earth™

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approximately 1.5 ft to 2 ft. above the existing roof parapet. The top of the embankment would be surrounded by a pedestrian fall protection safety net. A door would be cut into the northeast wall of adjacent Building 2. Foam fire protection utilizing the building's sprinkler riser and fire pumps would be required and helipad lighting would be necessary.

During construction, a staging area would be designated at ground level for supplies and the crane which would be needed to construct the helipad on the rooftop. The staging area would result in the temporary loss of approximately 14 parking spaces during the construction period.

Construction is expected to occur in the Fall of 2008, and take approximately six months. Construction work would be limited to the hours of 7:30 a.m. to 5:00 p.m., 7 days a week.

### *Environmental Impacts*

Similar to the proposed action, the rooftop alternative would have no impacts on real property, resident population, or environmental justice. Also similar to the proposed action, the roof-top alternative would have minor impacts on air quality, community services, economic activity, land use, public safety, and solid/hazardous waste, utilities, and potential for generating public controversy. The following describes the impacts that would be greater or lesser than for the proposed action.

#### Aesthetics

Building 210 is a four-story building located on Veterans Drive. It was constructed as an addition to Building 2. It is also linked to Building 7 and abuts the back of Building 5 (see Figure 7). Building 2 is a six-story building, Building 7 is a three-story building, and Building 5 is a single-story building. The north façade of Building 210 faces Veterans Drive. The rooftop of Building 210 is visible from the upper stories of Building 2, but is not visible from Buildings 5 or 7. Because Building 210 is surrounded on three sides by other buildings, the helipad would only be seen by pedestrians on Veterans Drive and the adjacent parking lot. Because the heliport structures would only extend 1.5 to 2 ft above the roof parapet, it would only be seen as a minor visual change.

Building 210 is located in the northern portion of the SFVAMC. It is blocked from view from off-site locations by surrounding campus buildings and can only be seen in the distance from the Golden Gate National Recreation Area. A helipad on the roof of Building 210 would extend from 1.5 to 2 ft above the roof's parapet. It would appear to be part of the rooftop structure and would not substantially stand out from the roof. It likely would not be perceived by users of the Golden Gate Recreation Area.

Aesthetic impacts on views from on and off-site locations are considered to be minor.

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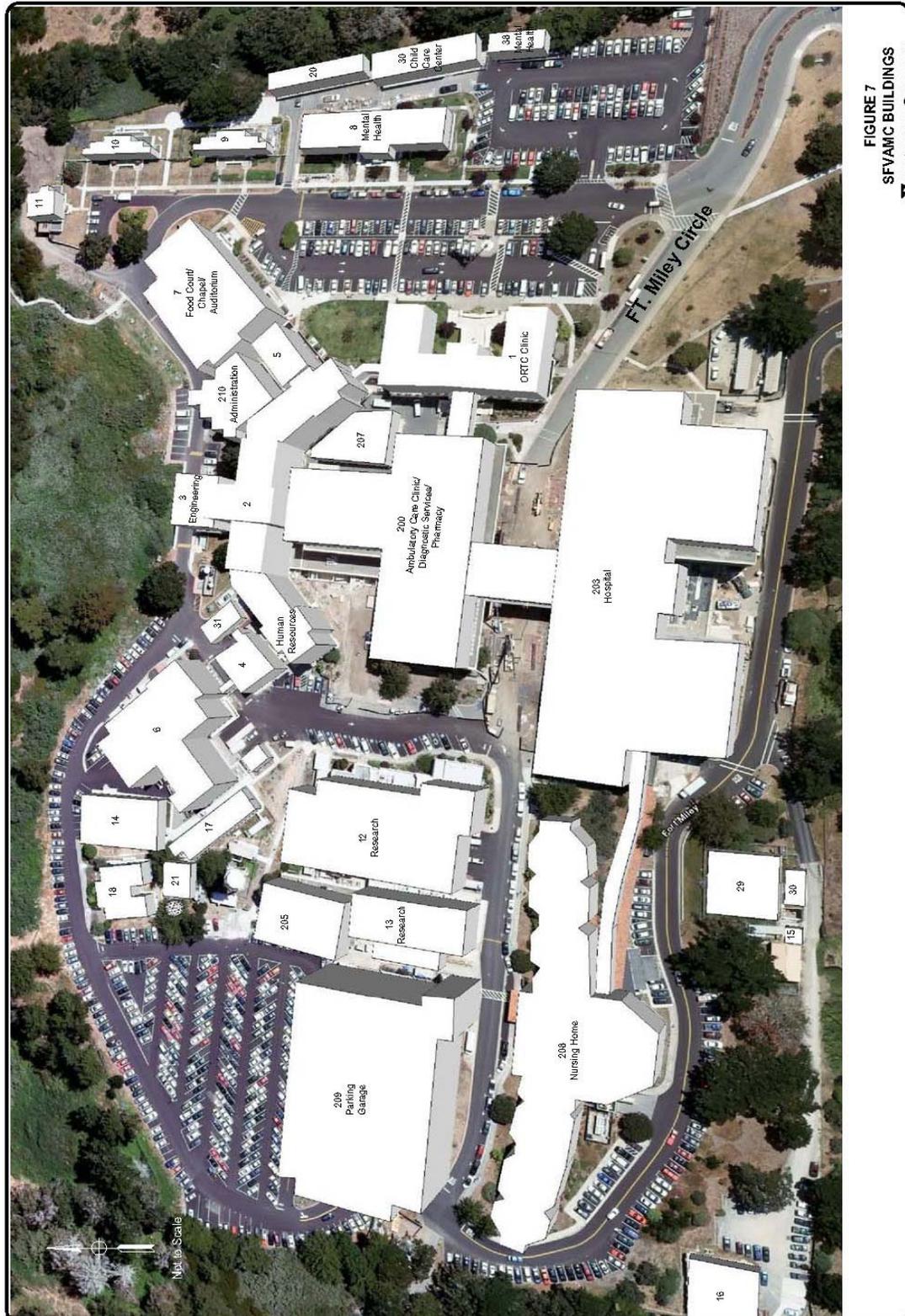


FIGURE 7  
SFVAMC BUILDINGS  
WINZLER & KELLY

Source: Aerial Mapping Provided by Google Earth™

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## Cultural Resources

### *Historic Architectural Resources*

The rooftop helipad would be constructed on Building 210, which was built in 1993 as an addition to Building 2 and enlarged in 1999. It is a four-story, 20,182-sq ft wood-frame building clad in Dry-vit. This building is not a contributing resource to a potential historic district (Page & Turnbull 2002). Therefore the helipad would not result in direct effects to historic architectural resources.

The four buildings that surround Building 210 are situated within the indirect area of potential effects for historic architectural resources. These are Buildings 2, 3, 5 and 7. All four buildings have been determined to be contributing resources to a potential historic district (Page & Turnbull 2002). A helipad on the rooftop of Building 210 has the potential to indirectly affect these buildings by introducing a structural element that may be incompatible with the visual setting of the buildings and their surroundings.

Building 2 is connected to Building 210 on its west side. Building 2 was constructed in 1934 as the main hospital ward, and presently houses administrative, clinical and research departments. At 126,249 sq ft, it was originally the largest structure on the SFVAMC campus. Building 2 and its surroundings have undergone substantial changes through time. The construction of adjoining Building 200 resulted in the removal of a large landscaped lawn and circular drive and Building 2's ornate main entrance. Other significant exterior alterations include the replacement of the original aluminum casement windows with aluminum double-hung windows and filling of several window bays in 1990 as part of a comprehensive seismic upgrade. Aside from the interior stairwells, there do not appear to be any historic interior materials or elements remaining from the period of significance. Building 2 has undergone many changes and its level of integrity has been compromised to such a degree that it can no longer be considered significant. Nevertheless, enough historic fabric survives on the north elevation to warrant its designation as a contributing resource to a possible historic district.

Building 3 is linked to Building 2 and is situated to the northwest of Building 210. Building 3 was constructed in 1934 to house the heating plant, and presently contains the engineering department. Building 3 is a small, one-story, 5,756-sq ft, reinforced-concrete building. Its façade faces north. The most significant exterior alteration on Building 3 occurred when the original steel industrial windows were replaced with fixed aluminum sash in 1964. Its alteration resulted in the filling of the lower portions of each of the bays with concrete and stucco. Despite the changes, Building 3 retains a sufficient level of exterior integrity to be designated a contributing resource to a potential historic district.

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Building 5 is surrounded by Building 210 to the northeast, Building 2 to the southwest, and Building 7 to the northeast. Its southeast façade faces a parking lot. Building 5 is a small two-story building that was constructed in 1934 as the radiology laboratory and now houses clinical and research offices. The exterior to Building 5 is very utilitarian and has undergone few major changes aside from the filling of two window openings and the replacement of the original casements with double-hunt aluminum sash in 1964. As an original and relatively unaltered component of the original VA Medical Center, Building 5 is designated as a contributing resource to a potential historic district.

Building 7 is linked to Building 2. Built in 1934, Building 7 was originally the recreation hall and now contains the canteen, a chapel and various conference rooms. Building 7 is a 36,128-sq ft, three-story, reinforced-concrete building. A pavilion to the west side of the building rises a full floor level above the roof. The exterior of the building has undergone a series of alterations that has resulted in the removal of much of its original ornate detailing. In terms of its integrity, Building 7 has undergone many alterations that compromise its overall level of integrity. However, enough of the building's design and detail survives elsewhere to make it a contributing resource to a potential historic district (Page & Turnbull 2002).

Construction of a helipad on the roof of Building 210 would include cutting a door into the northwest wall of adjacent Building 2 at the fourth floor level to provide access to adjacent buildings. As described above, enough historic fabric survives on the north elevation to warrant its designation as a contributing resource. Cutting a door into the wall of Building 2 would likely constitute an adverse effect on this historic resource. This impact is considered severe.

Building 210 appears as one of a cluster of five buildings that have lost some of their historic integrity, but retain enough original design elements to be designated as contributing resources to a potential historic district. Construction of Building 210 in 1993 amid these surrounding historic buildings was one factor that contributed to a compromise of the historic integrity of this portion of the SFVAMC campus. The helipad on the rooftop of Building 210 would extend only 1.5 to 2 ft above the existing Building 210 parapet. Because the helipad would appear to be part of the Building 210 rooftop structure and would not substantially stand out from the roof, it would result in only a minor visual change, if any, in the existing setting. Therefore, although the helipad would have an effect on these buildings, it would not be an adverse effect.

#### *Archeological Resources*

The rooftop alternative would not involve ground disturbance and would have no impact on archeological resources. The construction staging area would be located in an existing parking lot.

Floodplains, Wetlands, Watersheds, Rivers, Lakes, Coastal Zone, Etc.

The rooftop alternative would have no impacts on floodplains, wetland, watersheds, rivers or lakes. The amount of surface runoff from the Building 210 roof would not change from its current condition. The SFVAMC is situated within a Coastal Zone Management Area. The only impact to coastal zone resources from the rooftop helipad would be to air quality. This impact would be minimal and identical to that described for the proposed action.

#### Geology and Soils

Construction of a helipad on the rooftop of Building 210 would not affect geology and soils. However, as described for the proposed action, the project area lies near a region of active faulting and high seismicity associated with the San Andrea Fault system. This fault system has been the source of numerous moderate to large magnitude historical earthquakes that caused strong ground shaking in the project area. Future strong ground shaking from nearby large magnitude earthquakes is a virtual certainty. An earthquake of moderate to high magnitude generated within the San Francisco Bay Region could cause considerable ground shaking at the site. Therefore as part of the design phase, a structural engineer would be consulted to verify that the building columns and footings can support the additional load of the helipad and a helicopter, and to recommend any seismic upgrades needed to ensure a safe and stable helipad. Therefore, impacts that could result from seismic activity are considered minimal.

#### Hydrology and Water Quality

A helipad on the rooftop of Building 210 would not affect surface water hydrology or water quality. Stormwater run-off from the roof of Building 210 would not change as a result of construction and use of the helipad.

#### Noise

Construction noise would be centered around Building 210, instead of Building 18, and would occur over about 6 months instead of 2 months.

The rooftop helipad on Building 210 is approximately 225 feet closer to residences to the south and 625 feet closer to residences to the east than the site of the helipad under the Proposed Action. Noise impacts at residences to the south would be greater than under the Proposed Action. Residences to the south of the medical center would be exposed to a maximum noise level of approximately 88 dBA for approximately 30 seconds. This noise level is less than that of a siren from a ground ambulance, police car, or fire engine. During the engine cool down/warm up period, the sound level at residences to the east would be approximately 63 dBA, not accounting for attenuation (reduction) by existing medical center buildings. With attenuation from intervening buildings, noise levels are

expected to be proximately 48 dBA during this period (Davis 2007). Noise impacts are not inconsistent with the existing noise environment, are restricted to daytime only, would not interfere with sleep, and are not expected to cause substantial disturbance.

Outdoor noise levels in the Golden Gate National Recreation Area would be approximately the same as from the proposed action .

Noise impacts at the SFVAMC would affect Buildings 210, 2, 3, 5, and 7. Staff would be exposed to interior noise levels of approximately 90 dBA during approach and take off and then 70 dBA during the engine cool down/warm up periods. At the closest medical facility, Building 203, the Nursing Home, staff and patients would be exposed to interior noise levels of approximately 70 dBA during approach and takeoff and 50 dBA for the engine cool down/warm up periods. These infrequent and intermittent sound levels during daylight hours are not expected to substantially disturb staff or patients.

Noise impacts are considered moderate.

#### Transportation and Parking

Construction-related vehicles would temporarily increase traffic levels on off-site roads, including Fort Miley Road, Clement Street, 42nd Avenue, Geary Boulevard and/or other roadways that may be used to access the site. The estimated trips during the projected 6-month construction period are summarized in Table 2.

Based on the Helipad Plan for the project, it is estimated that approximately 85 cubic yards of concrete would be needed for the footing, slab, and retaining wall. The maximum construction traffic volumes expected on any one day would be associated with delivery of construction materials and equipment to the site. During this time, a maximum of 3 trucks per hour, or 23 trucks per day, is assumed. In addition, an average of 10 vehicles per day is estimated for the construction crew. Such increases in traffic are considered moderate due to their temporary and limited duration.

**TABLE 2  
Rooftop Alternative Construction Traffic**

	<b>Construction Activity</b>	<b>Peak vehicles per day</b>	<b>Average vehicles per day</b>
Trucks	Slab/Retaining Wall <sup>1</sup>	5	<1
	Rebar, other materials	6	<1
	Other	12	<1
Other vehicles	Construction Crew	15	10

<sup>1</sup>Assumes retaining wall construction occurs in phases with five concrete trucks needed for each phase.

During construction, 14 adjacent parking spaces would be reserved for construction contractor parking and construction staging. This would reduce the number of parking spaces available for SFVAMC patients. Although parking space availability at the SFVAMC is limited, it is anticipated that parking would be available elsewhere onsite. Therefore, because the loss of parking spaces would only extend over a six-month period and the number of parking spaces lost would be small, this impact is considered minimal.

**Vegetation and Wildlife**

A helipad on the roof of Building 210 is not anticipated to affect vegetation and wildlife.

**No Action Alternative**

The no action alternative would be to not construct or operate an emergency helipad at the SFVAMC. This alternative would have none of the environmental impacts described above for the proposed action and rooftop alternative, but would not satisfy the purpose and need for the action, which is to provide emergency helicopter landing capabilities at the SFVAMC to allow the VA to complete its role as an FCC. It also would not provide the benefit of providing landing capability for helicopters to transport coordination officials, supplies, and casualties to the area during natural and manmade disasters.

**Comparison of Impacts of the Proposed Action and Alternatives**

**TABLE 3  
Level of Impacts from the Proposed Action and Alternatives**

	<b>PROPOSED ACTION</b>	<b>ROOFTOP ALTERNATIVE</b>	<b>NO ACTION ALTERNATIVE</b>
Aesthetics	MI	MI	N
Air Quality	MI	MI	N
Community Services (beneficial)	MI	MI	N
Cultural Resources	M	S	N
Economic Activity	MI	MI	N
Floodplains, Wetlands, Coastal Zone, etc.	MI	MI	N
Geology and Soils	MI	MI	N
Hydrology and Water Quality	MI	N	N
Land Use	MI	MI	N
Noise	M	M	N
Potential for Generating Substantial Controversy	MI	MI	N

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Real Property	N	N	N
Resident Population	N	N	N
Public Safety and Solid/Hazardous Waste	MI	MI	N
Transportation and Parking	MI	MI	N
Utilities	MI	MI	N
Vegetation and Wildlife	MI	N	N
Environmental Justice	N	N	N

S = Severe  
M = Moderate  
MI = Minimal  
N = None

**MITIGATIVE ACTIONS**

No severe environmental impacts are expected to result from construction and operation of the proposed action. The following mitigation actions that are part of the proposal, or required by regulation, would be undertaken.

1. In the unlikely event that unanticipated archeological resources are encountered during construction, ground-disturbing activities shall be halted and a professional archaeologist called in to evaluate the significance of the find. If the find is significant, the evaluating archaeologist would determine whether it would be affected by the project. Non-significant finds would not be given further protection. If the project would adversely affect the resource, a mitigation plan shall be developed and implemented based on the recommendations of the evaluating archaeologist and in consultation with the California State Historic Preservation Officer. Mitigation may include, but is not limited to, data recovery excavation, consultation with descendent communities, and site recording.
2. In the unlikely event that possible human remains are discovered, potentially damaging activities shall be halted. The VA shall immediately notify the County Coroner and a professional archaeologist to determine the nature of the remains. If the coroner determines that the remains are of Native American origin, the coroner must contact the Native American Heritage Commission (NAHC) which will identify the Most Likely Descendent (MLD). The MLD shall have 48 hours to complete a site inspection and make recommendations for treatment of the remains. A range of possible treatments includes nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendents, or other appropriate treatment.
3. To ensure that active erosion of the adjacent bluff is not occurring, the VA shall schedule regular inspections each year to reassess the ongoing condition of the slope and to determine the need for slope protection. If needed, slope protection measures would be implemented as recommended by a professional geotechnical engineer.
4. During construction the requirements for noise control outlined in the VA Specification Section 01568 Environmental Protection shall be implemented. These include such requirements as providing sound-

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deadening devices on equipment, using shields or other physical barriers to restrict noise transmission, providing sound proof housings or enclosures for noise-producing machinery, and taking sound level measurements once every five successive working days while work is being performed above 55 dBA noise level.

5. Construction and operation of the helipad shall be in accordance with the procedures outlined in the SFVAMD Storm Water Pollution Prevention Plan (SWPPP) to eliminate or reduce pollution-related to storm water runoff.

6. Any solid and hazardous wastes generated during helipad construction shall be removed from the SFVAMC and disposed of in accordance with federal, state and local regulations. No hazardous materials or wastes shall be stored at the helipad.

7. Preconstruction surveys for bats that may be roosting in trees that are scheduled for removal or topping shall be conducted by a qualified biologist within 48 hours of removal activity.

8. Preconstruction surveys for nesting birds shall be conducted for construction activities, including tree removal, that occur between February 1 and August 1. The survey shall be conducted by a qualified biologist within 48 hours of construction. Trees within a 200-foot radius shall be included in the surveys as construction related activity could cause nest abandonment. If active nests (nests containing eggs or young) are identified, the biologist must consult with the California Department of Fish and Game biologist for the region regarding protective action.

9. Construction dust control measures recommended by the Bay Area Air Quality Management District shall be followed. These include at a minimum: (1) limiting the area subject to excavation, grading and other construction activity at any one time; (2) watering active construction areas at least twice daily; (3) covering trucks hauling soil or require trucks to maintain at least two feet of freeboard; (4) and enclosing, covering, watering twice daily or applying (non-toxic) soil binders to exposed stockpiles.

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## **SOURCES CONSULTED**

  X   FEDERAL AVIATION ADMINISTRATION

  X   VAMC ENGINEERING (138)

  X   CITY AND COUNTY OF SAN FRANCISCO, DEPARTMENT OF EMERGENCY MANAGEMENT

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## ***FEDERAL REGULATIONS ESTABLISHING ENVIRONMENTAL STANDARDS***

- FI - REQUIRES FURTHER INVESTIGATION
- MR - MITIGATION REQUIRED, NON-COMPLIANCE ANTICIPATED
- CA - COMPLIANCE ANTICIPATED
- NA - NOT APPLICABLE

<u>NA</u>	EXECUTIVE ORDER 11988, FLOODPLAIN MANAGEMENT (Specify 100-YEAR, CRITICAL ACTION, or 500-YEAR)
<u>NA</u>	EXECUTIVE ORDER 11990, PROTECTION OF WETLANDS
<u>NA</u>	EXECUTIVE ORDER 11987, EXOTIC ORGANISMS
<u>CA</u>	EXECUTIVE ORDER 12088, FEDERAL COMPLIANCE
<u>CA</u>	EXECUTIVE ORDER 12898, FEDERAL ACTIONS TO ADDRESS ENVIRONMENTAL JUSTICE IN MINORITY POPULATIONS AND LOW-INCOME POPULATIONS
<u>CA</u>	FEDERAL WATER POLLUTION CONTROL ACT, SEC. 313, AS AMENDED BY CLEAN WATER ACT OF 1977 (33 USC 1323)
<u>CA</u>	ENDANGERED SPECIES ACT AS AMENDED (PL 93-205)
<u>NA</u>	WILD AND SCENIC RIVERS ACT (16 USC 1274 ET SEQ.)
<u>CA</u>	NOISE CONTROL ACT OF 1972
<u>NA</u>	SAFE DRINKING WATER ACT, SEC., 1447, (PL 93-523)
<u>NA</u>	COASTAL BARRIER RESOURCES ACT (PL 97-348)
<u>CA</u>	COASTAL ZONE MANAGEMENT ACT (16 USC 1451 ET SEQ., AMENDED BY PL 101-508)
<u>NA</u>	EPA REGULATIONS ON DISCHARGE OF DREDGED OR FILL MATERIAL INTO NAVIGABLE WATERS (40 CFR 230)
<u>NA</u>	EPA REGULATIONS ON DETERMINATION OF REPORTABLE QUANTITIES FOR HAZARDOUS SUBSTANCES (40 CFR 117)
<u>CA</u>	EPA REGULATIONS ON THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (40 CFR 122)
<u>NA</u>	EPA REGULATIONS ON POLYCHLORINATED BIPHENYLS MANUFACTURING, PROCESSING DISTRIBUTION IN COMMERCE AND USE PROHIBITIONS (40 CFR 761)
<u>CA</u>	ADVISORY COUNCIL ON HISTORIC PRESERVATION REGULATIONS, PROTECTION OF HISTORIC AND CULTURAL PROPERTIES (36 CFR 800)

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