4.5.1 Consistency with Approved Plans and Policies

4.5.1.1 GENERAL OBJECTIVES OF THE GMPA AND PURPOSES OF GGNRA ACT

Alternative 5 is consistent with the General Objectives of the GMPA, which are identified in Section 1.1.5 of this document. Foremost, it is consistent with the GMPA's General Objective of economically and physically sustaining the Presidio indefinitely through the development team's organizational and financial capabilities to undertake capital investments, operate programs, and make contributions of services or amenities to help preserve the park's unique historic and natural qualities. This alternative is consistent with meeting the Trust Act's financial self-sufficiency mandate and the requirement that the Trust give priority to tenants that enhance the financial viability of the Presidio.

Removal of both the LAMC and LAIR buildings, modern structures that block view corridors and are architecturally non-distinctive but which clash with their surroundings, would be consistent with the GMPA's General Objective to enhance the scenic resources of the Presidio. Removal of both the LAMC and LAIR buildings would also contribute to the General Objective of enhancing the Presidio's cultural resources by assisting in rehabilitating historic settings to permit an understanding of the site's significance to the National Historic Landmark district. In furtherance of this General Objective, design and siting of new construction would promote the enhancement and rehabilitation of scenic vistas, including views to the Palace of Fine Arts. New construction to replace the monolithic and architecturally non-distinctive buildings with those better tailored to the mass, scale, color, and materials of other structures in the Letterman Complex and the Presidio would be in keeping with preservation of the character and integrity of the National Historic Landmark district. Consistent with the General Objective to provide for uses that involve stewardship and sustainability, replacement construction would promote principles of sustainable design and technology. Furthering this General Objective, hand-dismantling and salvaging of materials prior to building demolition and conservation and recycling strategies to be employed within the buildings and by tenants would promote and demonstrate conservation practices, including waste reduction and recycling.

Alternative 5 is consistent with the General Objective to provide for appropriate uses of the Presidio. An Internet-based tenant applying advanced digital arts and technologies to on-line communications offers enhancement of use involving the arts, innovation, and communication. A company developing interactive educational software and a non-profit foundation devoted to promoting innovative efforts to improve education fosters educational and innovation objectives. Furthermore, companies developing cutting-edge technologies in the digital and interactive arts and sciences offer a use oriented toward the arts and research. The mix of offerings in Alternative 5 would assist in making the Presidio a center for research and learning by enlivening the park with a program of national and international distinction serving a national and international audience.

The alternative is consistent with the other GMPA General Objectives. Activities, seminar programs, and educational initiatives would be in keeping with the GMPA's General Objective to provide for uses that involve cross-cultural and international dialogue. The 7-acre Great Lawn or public park would further the GMPA's General Objective to increase open space, and the design of the proposed cisterns and lagoon to reduce

stormwater runoff would be consistent with the GMPA's General Objective of meeting tenant and resident needs while minimizing impacts on neighboring communities.

Alternative 5 is consistent with the purposes of the GGNRA Act, which are identified in Section 1.1.5 of this document. Primarily by focusing more intensive use into an area that has been previously developed, Alternative 5 preserves the recreation area as far as possible in its natural setting. New construction would be subject to sound land use planning, including implementation of the Planning Guidelines and design review, so that it would not degrade scenic views and the natural setting.

4.5.1.2 PRESIDIO GENERAL MANAGEMENT PLAN AMENDMENT

This alternative is also consistent with a number of the more specific goals and planning principles of the GMPA. This alternative would foster the GMPA's proposed major directions for the future of the Presidio by perpetuating the site as a building and activity core, retaining and using the site for research purposes by a single institutional user devoted to innovative research and technology development. It also fosters using the facilities for visiting researchers and other special program participants. New construction would replace the LAMC as permitted under the GMPA since the LAMC would not meet essential program and management needs. Provision of limited retail facilities and services, including the day-care facility, fitness center, general store, cafeteria, and cafes, would reinforce the GMPA's neighborhood concept. The 7-acre Great Lawn or public park would further the GMPA's specific goal to provide for safe and enjoyable recreational use of the Presidio. The design of the proposed cisterns and lagoon to reduce storm-water runoff would further the GMPA's specific goals of managing onsite water resources and making the Presidio an environmental model.

In certain respects, Alternative 5 does not match the GMPA's site-specific plan. This alternative would not promote the GMPA concept for infill construction within the complex but would focus replacement construction within a 23-acre site. Because replacement construction would occur within only a portion of the potential sites that were identified on a preliminary basis as referenced in the GMPA (i.e., outside the historic hospital complex), the alternative would not reinforce the historic hospital complex's courtyard as encouraged by the GMPA. Whereas the GMPA assumed rehabilitation and reuse of LAIR, demolition of the LAIR and other existing buildings that have been demolished or are designated for demolition so as to allow new replacement construction would also increase the total amount of gross square feet of replacement construction within the complex as envisioned in the GMPA from 503,000 to approximately 900,000 square feet. Nevertheless, the GMPA's key restrictions on maximum allowable square footage for the complex (1.3 million square feet) and maximum allowable height of new construction (60 feet) would not be exceeded by this alternative. Furthermore, replacement construction would proceed in accordance with the Planning Guidelines (provided in Appendix B) and design review as recommended within the GMPA to ensure that new construction would be compatible with the adjacent historic buildings and patterns of development.

Although this alternative would not implement the specific proposal in the GMPA for the Letterman Complex to serve as a science and education center devoted to issues of health, life and earth sciences, to date no suitable tenant has been identified for the site that would adhere to the GMPA's specific proposal. This potential land use conflict, therefore, cannot be resolved. However, mitigation measures identified in Section 4.7 would be implemented to lessen any adverse environmental impacts of this alternative.

4.5.1.3 SAN FRANCISCO GENERAL PLAN

While the Presidio is not subject to the General Plan, this alternative would be consistent with General Plan policies regarding the location of institutional facilities in areas occupied by or reserved for large groups of buildings of a public or a semi-public nature. However, it may not be consistent with the policy to restrict business activities of city-wide importance to districts devoted to and designated for business services.

4.5.2 Solid Waste

4.5.2.1 DISPOSAL OF DEMOLITION DEBRIS OFF SITE

Due to the demolition of both the LAMC and LAIR buildings as proposed under this alternative, Alternative 5 would generate 80,000 tons of construction debris. This represents 44,600 (55 percent) more tons of debris than Alternative 1. The impacts of this alternative on solid waste sites located in the Bay Area are described under Alternative 2.

4.5.3 Water Supply and Distribution

4.5.3.1 IMPACTS OF WATER CONSUMPTION ON BASELINE

Alternative 5 would demand approximately 85,000 gpd of water (Tables 12 and 13). This figure assumes the use of 8,197 gpd of storm water captured onsite for a portion of the landscape irrigation and the proposed lagoon. Since the estimated water consumption of this alternative is below the 89,000 gpd threshold established for the site, Alternative 5 is not expected to have a negative effect on the Presidio water supply. Nevertheless, the development team should adopt water conservation measures implemented by the Presidio Trust and described in mitigation measure WS-2, *Water Supply- and Demand-Side Solutions to Reduce Cumulative Impacts* to further reduce water consumption.

4.5.3.2 IMPACTS ON FIRE FLOWS

Improvements to the water distribution system may be required to ensure adequate fire flow to new development with the Letterman Complex to meet the Uniform Fire Code, depending on the characteristics of buildings to be constructed (see mitigation measure WS-1, *Fire Flows*).

4.5.4 Schools

4.5.4.1 IMPACT ON CAPACITY AT EXISTING OR NEW SCHOOL SITES

The impact of this alternative on SFUSD schools would be the same as Alternative 1 (Table 14). At full occupancy, Alternative 5 would generate 92 schoolchildren between the ages of 5 and 18 who would enroll in SFUSD schools. This level of enrollment is within the existing capacity of SFUSD. Therefore, Alternative 5 would not result in an adverse impact on SFUSD schools.

4.5.5 Housing

4.5.5.1 INCREASE IN HOUSING DEMAND

At buildout, the additional regional housing demand created by employment associated with Alternative 5 from outside of the Bay Area would be 481 housing units (Table 15). The Presidio housing stock would accommodate about 55 percent of this housing demand. Thus, the new demand on regional housing due to implementation of the alternative would be 216 units. This represents less than 0.5 percent of the estimated new housing construction between 2000 and 2010 (ABAG 1998), and less than 1 percent of the currently vacant units in the Bay Area (California Department of Finance 1998). Distributed by sub-region in the Bay Area, this new demand would be 119 units in San Francisco, 43 units in the East Bay, 37 units in the North Bay and 17 units on the Peninsula. The potential new housing demand created by employment associated with this alternative would not have a significant effect on the regional housing market since it represents an insignificant percentage (less than 1 percent) of the total number of vacant housing units.

This alternative would incrementally contribute to the Presidio housing demand, which represents a small portion of the employment-related housing demand increases in San Francisco and the Bay Area. However, given the short supply of affordable housing in the city, there would be an adverse impact from any unmet affordable housing demand. To limit the demand for affordable units in San Francisco, the Presidio Trust offers reduced rental rates to Presidio employee and tenant households with gross household incomes of less than $45,000. As Presidio buildings are reoccupied and park programs and activities are established, the need for additional onsite housing, including affordable housing, would be analyzed based on actual employment patterns and related housing demands associated with building uses.

4.5.6 Medical Research

4.5.6.1 IMPACT ON MEDICAL RESEARCH

Implementation of this alternative would preclude the use of the site from medical and life science research. The impact of not providing medical research space at the site is discussed in Alternative 3.

4.5.7 Traffic and Transportation Systems

Under Alternative 5, there would be no vehicular roadway network within the 23-acre site, but merely access to underground parking facilities. Improvements to the intersection(s) of Lyon Street/Richardson Avenue/Gorgas Avenue would allow for left turns into the site from westbound Richardson Avenue. The Gorgas Avenue Gate would be the primary entrance, with the Lombard Street Gate serving as a secondary entrance. Alternative 5 would also include improvements to the pedestrian network within the site, as well as improved connections to adjacent areas. Alternative 5 assumes a total of 1,530 parking spaces within the site, of which 1,500 spaces would be below-grade, while 30 spaces would be provided on surface lots.

4.5.7.1 ADDITIONAL TRAFFIC VOLUMES

Alternative 5 would generate 4,360 external (i.e., to areas outside the Presidio) weekday daily vehicle-trips and 400 vehicle-trips during the p.m. peak hour into and out of the Presidio (Table 16). Because the trips generated by the office uses would be primarily comprised of employee trips, only 90 of the 400 p.m. peak-hour vehicle-trips generated by Alternative 5 would be inbound and 310 would be leaving the site (Table D-9 in Appendix D).

Between existing and 2010 conditions, the Mason Street Gate would experience an increase of 350 vehicles during the p.m. peak hour, with project-related traffic comprising 12 percent of this increase. Alternative 5 would contribute the majority of the traffic volume increase at Gorgas Avenue Gate. Traffic volumes at this gate would increase by 470 vehicles during the p.m. peak hour, with project-generated traffic comprising 55 percent of this growth. The existing p.m. peak-hour traffic volumes at the Lombard Street Gate would be increased by 390 vehicles; 10 percent of this increase would be due to the project. The existing p.m. peak-hour traffic volumes at the Presidio Boulevard Gate would increase by 210 vehicles; 29 percent of this increase would be due to the project (Table 17).

4.5.7.2 IMPACTS ON INTERSECTION OPERATING CONDITIONS

Currently, during the p.m. peak hour, two of the study intersections operate at LOS C, four intersections operate at LOS B, and one intersection operates at LOS A (Table 4). Under Alternative 5, three of the study intersections (Presidio Boulevard/Letterman Drive/Lincoln Boulevard, Mason Street/Marina Boulevard/Lyon Street, and Doyle Drive/Marina Boulevard/Lyon Street) would operate acceptably at LOS C during the p.m. peak hour (Table 18). The intersections of Lombard Street/Lyon Street and Presidio Boulevard/Lombard Street would fail under Alternative 5 (Table 18). The intersections of Lombard Street/Lyon Street and Presidio Boulevard/Lombard Street would fail, operating at LOS F and LOS E, respectively. Recommended improvements described in mitigation measures TR-2, *Lombard Street/Lyon Street Intersection Improvements*, and TR-3, *Lombard Street/Presidio Boulevard Intersection Improvements*, in Section 4.6.6, and illustrated in Figures 16 and 17, would improve the operating conditions at the intersection of Lombard Street/Lyon Street from LOS F to LOS B and at the intersection of Presidio Boulevard/Lombard Street from LOS E to LOS C.

4.5.7.3 INCREASED PARKING DEMAND AS A RESULT OF PROJECT-RELATED TRIPS

Alternative 5 assumes a parking supply of 1,530 parking spaces. The parking demand of 1,440 spaces would primarily consist of long-term employee parking (1,260 parking spaces) and some short-term visitor spaces (180 parking spaces). The parking demand of 1,440 spaces would be accommodated within the proposed supply of 1,530 spaces. Therefore, there would be no significant impact on parking in Area A and adjacent neighborhoods. As shown on Table D-11 in Appendix D, weekend parking demand would be only 50 percent of weekday demand; therefore, substantial parking would be available for recreational uses on weekends.

4.5.7.4 IMPACTS ON PEDESTRIAN AND BICYCLE FACILITIES

Development of the land uses proposed in Alternative 5 would increase pedestrian and bicycle activity within and in the vicinity of the Letterman Complex. During the p.m. peak hour, the project would result in an increase of about 160 new pedestrian and bicycle trips. These new trips would be accommodated within the

existing pedestrian and bicycle network. In addition, planned improvements would enhance the pedestrian and bicycle environment, and facilitate the safe and direct travel of pedestrians and bicyclists to and from the site.

The impacts associated with improvements at the Lyon Street/Richardson Avenue/Gorgas Avenue intersection (mitigation measure TR-1) on the citywide bicycle network are described under Alternative 1. Relocating a portion of the city's bicycle route 4 as discussed in mitigation measure TR-6 would reestablish this connection.

Implementation of recommended vehicular capacity improvements at the Lombard Street Gate may require adjustment of routes and physical improvements to facilitate access for bicycles currently entering the Presidio via the city's bike route 4 (relocated to Chestnut Street, see mitigation measure TR-6) and bike route 6 (Greenwich Street). The current Presidio Trails and Bikeways Study will consider alternatives to the current access on Lombard Street to include widening the current pedestrian walkway at the Lombard Street Gate, re-establishing the historic opening of the Presidio perimeter wall at Greenwich Street (subject to additional environmental review, including Section 106 compliance), relocating bike route 4 to Gorgas Avenue or creating an expanded bicycle and pedestrian path from the Lombard Street Gate (see Figure 18).

4.5.7.5 INCREASED DEMAND FOR PUBLIC TRANSPORTATION

The 120 p.m. peak-hour transit trips generated by Alternative 5 would be accommodated on the six existing MUNI bus lines that currently serve the Presidio. Planned improvements to transit service to the Presidio, including a peak period express bus service and more frequent service on MUNI's 29-Sunset line, would also serve to accommodate the increase in transit demand.

The average passenger load on Golden Gate Transit transbay buses during the a.m. and p.m. peak hours is about 30 passengers per bus, and there are about 120 buses per hour during the a.m. peak hour and about 110 buses per hour during the p.m. peak hour for about 23 different transbay routes (Golden Gate Bridge, Highway and Transportation District 1997). Alternative 5 would generate 17 transit trips to the North Bay in the p.m. peak hour. If these project-generated passengers were distributed across the 23 Golden Gate Transit routes proportionally to the existing distribution of passengers across routes, the project would add a maximum of two passengers to each route. Even if all of the passengers added to a single route were on the same bus, the estimated passenger load would not exceed the bus capacity for any one line.

4.5.7.6 IMPACTS OF TRANSPORTATION DEMAND MANAGEMENT MEASURES

In addition to the TDM plan elements described under Alternative 1, the following TDM measures were developed as part of Alternative 5 to encourage non-automobile modes and minimize parking demand:

- Onsite transportation coordinator
- Guaranteed-ride-home program
- Webpage devoted to transportation alternatives
- Flex-time policies
- Telecommuting policies
- Onsite support services
- Preferential carpool/vanpool parking

Alternative 5 TDM elements include strategies that the proponent has successfully utilized in TDM programs at their current worksites to exceed trip reduction requirements. The project proponent's overall TDM concept relies on providing a comprehensive set of positive rewards (incentives). These TDM measures would encourage transit, rideshare, pedestrian and bicycle travel by employees through the provision of onsite facilities, staff support and the guaranteed-ride-home program. Flextime and guaranteed-ride-home programs would allow employees to adjust their work schedules as necessary. Preferential parking would encourage the use of carpools and vanpools, which would reduce the number of vehicle trips to the site, as well as reduce parking demand. Telecommuting and onsite amenities such as restaurants, retail and day-care facilities would reduce the number of trips that would leave the site.

Based on current experience, the proponent of the preferred alternative has estimated that the Letterman Complex automobile mode share would be between 80 and 85 percent and the vehicle occupancy rate would be 1.2 persons per vehicle without a successful TDM program in place (Letterman Digital Arts Ltd. 2000). These figures translate to between 6,850 and 7,280 weekday daily vehicle trips. With implementation of all TDM measures outlined for Alternative 5 in Table D-12 in Appendix D (including the proponent's employees occupying 300 units of Presidio housing), it is estimated that the mode split would achieve the required automobile mode share of 70 percent for external trips, 50 percent for internal trips and 1.4 persons per vehicle occupancy rate. These figures translate to 4,910 weekday daily vehicle trips with the successful TDM program in place. The TDM program removes between 28 and 33 percent of the weekday daily vehicle trips that could be generated by Alternative 5.

A TDM program, as discussed in mitigation measure TR-8, would establish specific performance criteria and a monitoring and reporting process. Following annual monitoring, TDM strategies that are found to be ineffective or underutilized would be improved or replaced with other strategies.

4.5.7.7 CONSTRUCTION IMPACTS

The impacts associated with additional construction-related traffic on the local and regional traffic network are described under Alternative 1. A construction traffic management plan, as discussed in mitigation measure TR-5, would be developed to provide specific routes and other mitigation measures to minimize traffic impacts.

4.5.8 Cultural Resources

4.5.8.1 EFFECT OF REMOVING LAMC/LAIR AND ADDING NEW CONSTRUCTION

Under this alternative, LAMC and LAIR would be removed and replacement construction of 900,000 square feet would be built. In contrast to the current centralized building layout of LAMC and LAIR, replacement buildings would be lower in height, distributed across the 23 acres, and would complement historic patterns of development found elsewhere around the complex. The Planning Guidelines, finalized under this EIS, and Design Guidelines for new construction would be applied to new construction to achieve a contextual and compatible approach to architecture and site planning within the historic setting. However, replacement construction on the 23-acre site would foreclose the opportunity for the construction of new infill buildings within the adjacent historic hospital complex as recommended in the GMPA. Therefore, this alternative would

preclude enhancing the campus-like setting of the historic landscape and unifying the disjointed remnant historic building cluster. This would constitute an adverse effect on the adjacent historic hospital complex.

Building Massing and Scale – The buildings' 60-foot and 45-foot height restrictions and their massing would be compatible with the historic setting and in accordance with the Planning Guidelines. New construction would consist of narrow rectilinear bar buildings, arranged in parallel rows connected by lower-height linking pieces in keeping with the configuration of the adjacent historic hospital ward buildings linked by glass-enclosed breezeways. The new buildings would be three- and four-stories high with gabled roofs and glazed circulation elements that would be based on character-defining elements of historic buildings found elsewhere within the complex and throughout the Presidio. However, the length and mass of the interconnected buildings would be incompatible in scale with and would isolate the 23-acre site from the adjacent historic hospital complex. Changes to the western edge of the 23-acre site would be considered during design review to modulate and make this edge more permeable, and thereby break up the solidity of the building massing.

O'Reilly Greensward – The siting of new buildings close to O'Reilly Avenue would not follow the Planning Guidelines' recommendation for a greensward along O'Reilly Avenue. These actions would create an adverse effect on the adjacent historic structures. Attention would be given to refining this edge of the site during design review to avoid this adverse effect and make the site design more consistent with the Planning Guidelines' objectives.

Gorgas – The public café and public park would be consistent with active and public activities for the Gorgas edge recommended in the Planning Guidelines.

Site Circulation – The pedestrian promenade beginning at the new Chestnut Street Gate which leads into the center of the 23-acre site would not continue through to O'Reilly Avenue as recommended in the Planning Guidelines. Similarly, potential connections from Torney Avenue or Edie Road would be blocked by the proposed building layout. Modifications to these areas to improve connectivity between the 23-acre site and the adjacent historic hospital complex would be encouraged during design review in accordance with the Planning Guidelines.

4.5.8.2 BENEFICIAL EFFECT ON EXTANT CULTURAL LANDSCAPE FEATURES

Actions associated within this alternative would have a beneficial effect on the cultural landscape and the National Historic Landmark district as described under Alternative 2.

4.5.8.3 ADVERSE EFFECT DUE TO REMOVAL OF TENNIS COURT (STRUCTURE 1147)

The effect of removal and replacement of this structure is discussed under Alternative 2.

4.5.8.4 EFFECT ON THE PRESIDIO WALL

The effect of the proposed re-introduction of a pedestrian entrance through the Presidio wall along Lyon Street at the Chestnut Street intersection is discussed under Alternative 2.

4.5.8.5 EFFECT OF INTERSECTION AND ROADWAY IMPROVEMENTS

The effect of intersection improvements would be similar to that described under Alternative 2. However, under this alternative, Letterman Drive would not be removed and Torney Avenue would not be extended. This alternative would not include a new road network within the 23-acre site, but instead would provide direct vehicular access from Gorgas Avenue and Letterman Drive into an underground parking garage. A short drive, parallel to Letterman Drive, would be established for visitor drop-off, short-term parking, and underground parking. These improvements would not have an adverse effect on the historic circulation network.

4.5.8.6 VISUAL IMPACTS

This alternative, with the removal of LAMC and LAIR, the large paved parking area that occupies the eastern half of the 23-acre site, and the introduction of lower-scaled new construction would enhance the visual integrity of the Letterman Complex. The removal of the 10-story LAMC building, which contrasts sharply with its surroundings, and replacement with new construction limited to 60 feet in height, would substantially improve the views from many vantage points within the Presidio. Replacement construction would be of a visual scale more appropriate to the surrounding areas. Pavement would be removed within the area now dominated by parking and replaced with new landscaping and a public park that would create visual order and provide viewing opportunities of the Palace of Fine Arts (refer to Figure 24). Views into the 23-acre site from Lyon Street would be screened by the existing windrow.

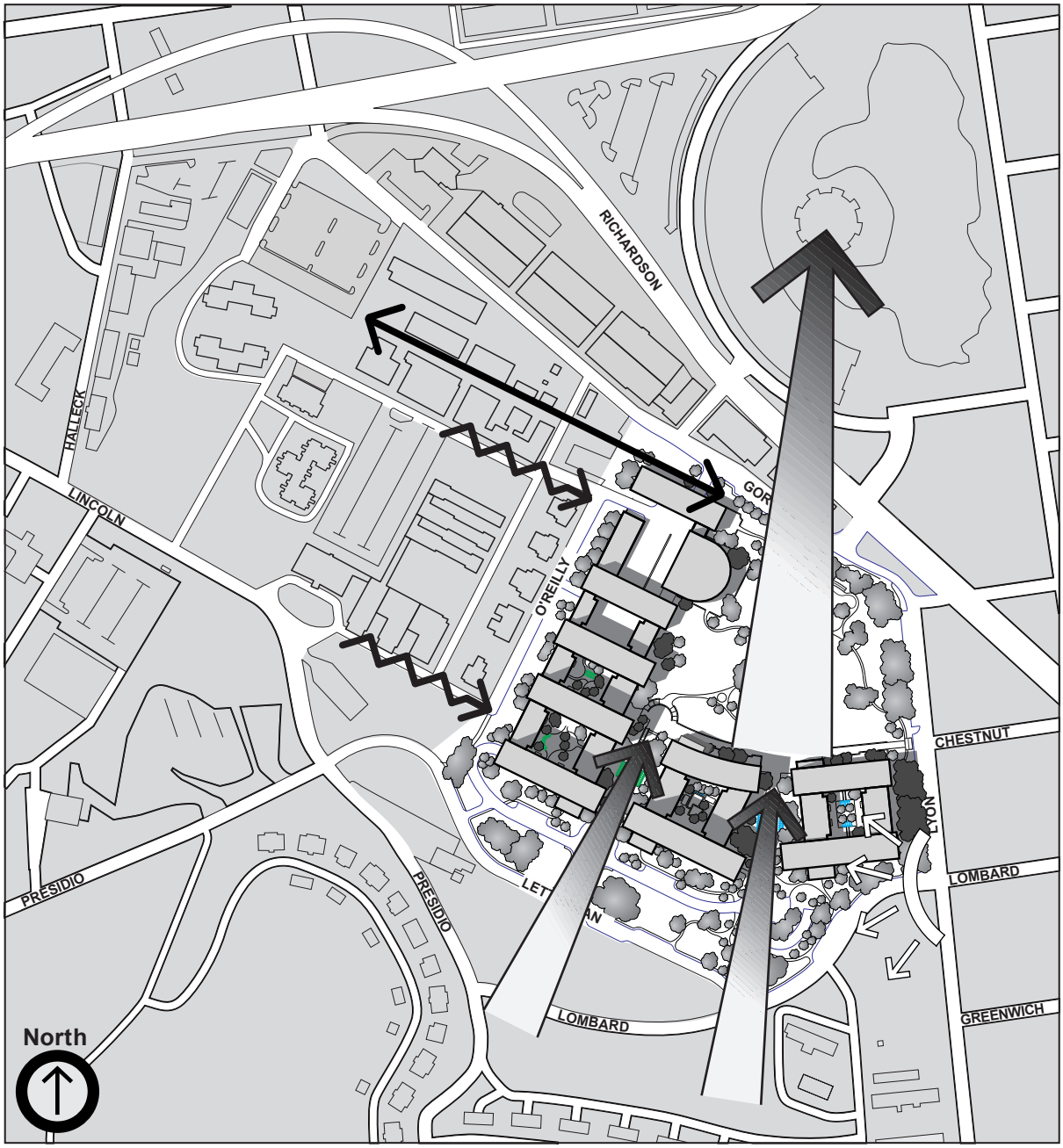
The siting of buildings near Lombard Street Gate would alter the visual setting at this important entry point. New construction would reinforce the historic pattern of development for the Letterman Complex, which included buildings very close to the Lombard Street Gate. Sufficient vegetative screening and building setbacks would be provided to minimize these impacts on entry views. Views from Lombard Street Gate toward the 23-acre site would produce a new sense of arrival into the Presidio similar to the historic pattern of buildings at this edge.

This alternative would enhance north-facing views into the center of the site and to the Palace of Fine Arts. It would also maintain the historic view corridor at Thornburg Road. However, the historic view corridor at Torney Avenue (which is currently blocked) would not be preserved. In addition, the existing historic view corridor at Edie Road would not be maintained, which would have a negative effect on the visual quality of the site. Modifications would be made during design review to improve viewing opportunities along this corridor.

4.5.8.7 EFFECT ON VISITOR EXPERIENCE

This alternative would have a beneficial effect on the visitor experience. The 7-acre Great Lawn would be a key public amenity in a campus-like setting that would include a water feature, promenade, café, and coffee bar. Replacement construction would provide opportunities for public programs such as a museum for visual arts, a visual effects archive, training in the field of digital arts, and screening/meeting rooms for community use.

The Digital Arts Center would build upon the Presidio interpretive theme of innovative technology by demonstrating advances in technologies related to the arts and entertainment. This center would be one of many areas throughout the Presidio which would “tell the story” of the Presidio in support of the five interpretive themes identified in the GMPA. There would be an overall beneficial effect on the visitor experience through



Key Scenic Views and View Corridors

Historic View Corridors

Obstructed Views

Views from Entry Point

Figure 24. Visual Impacts of Alternative 5

actions such as the rehabilitation of building 558 as a visitor information center, the introduction of three information/orientation kiosks, the incorporation of interpretive information about the complex in public lobby spaces, and interpretive displays incorporated into the landscape at key spots. These improvements would increase public access and visitor opportunities considerably over what exists today for visitors.

4.5.8.8 EFFECT ON ARCHEOLOGICAL PROPERTIES

As discussed in Alternative 2, ground-disturbing activities would have the likelihood of encountering archeological resources. An Archeological Management Assessment and Monitoring Program (described in Appendix F) would be employed to discover, document, protect, and manage the archeological record at the Letterman Complex. As a result of these practices, the adverse effects on archeological properties would be mitigated.

4.5.9 Air Quality

4.5.9.1 SHORT-TERM DEMOLITION/CONSTRUCTION IMPACTS

The impacts during demolition of buildings and replacement construction at the 23-acre site would be similar to those shown under Alternative 2. Compliance with the applicable requirements for asbestos control and incorporation of mitigation measures AQ-1, *BAAQMD Control Measures* and AQ-2, *Demolition of Existing Buildings* into the alternative would reduce the effects of demolition and construction activities to a less-than-significant level.

4.5.9.2 LONG-TERM REGIONAL OPERATION IMPACTS

Alternative 5 would result in an increase of up to approximately 4,910 internal and external vehicle trips per day. Based on URBEMIS7G modeling results, increased vehicle trips associated with the alternative would generate approximately 47 lb/day of ROG, 74 lb/day of NO_x, 32 lb/day of PM_{10} and 556 lb/day of CO. These emission rates are summarized in Table 22. Alternative 5 would not result in regional operational emissions exceeding any of the BAAQMD's significance thresholds for ROG, NO_x, or PM_{10}.

Similar to the impacts under Alternative 1, direct and indirect emissions from the use of electricity and natural gas due to Alternative 5 would not be significant when compared to the emissions caused by project-related traffic, and the alternative would not have the potential to expose nearby receptors to toxic air contaminants.

4.5.9.3 LONG-TERM LOCAL OPERATIONS IMPACTS

Localized CO impacts due to project traffic are described under Alternative 1. Because Alternative 5 2010 traffic would cause fewer than 1,680 vehicles in the p.m. peak hour through the Lombard Street Gate, the localized CO concentrations for Alternative 5 would be less than 7.9 ppm on a 1-hour basis and less than 5.4 ppm on an 8-hour basis. These localized CO concentrations would not exceed the state ambient air quality standards for CO.

4.5.10 Noise

4.5.10.1 SHORT-TERM DEMOLITION/CONSTRUCTION NOISE IMPACTS

The impacts during demolition and replacement construction within the Letterman Complex would be similar to those described under Alternative 2.

4.5.10.2 LONG-TERM TRAFFIC NOISE INCREASES

The impacts of traffic noise caused by Alternative 5 would be similar to those described under Alternative 1. Traffic volumes for Alternative 5, including peak traffic volumes for Gorgas Avenue, would be less than those shown for Alternative 1, and the associated noise level increases would be subsequently lower. As such, the traffic noise increases associated with Alternative 5 would not cause a significant impact.

4.5.10.3 LONG-TERM STATIONARY SOURCE NOISE IMPACTS

The impacts of stationary sources of noise associated with Alternative 5 would be similar to those shown under Alternative 1. No significant long-term stationary source noise impacts are expected.

4.5.11 Cumulative Impacts

4.5.11.1 SOLID WASTE

Cumulative impacts due to the disposal of demolition debris under this alternative would be the same as Alternative 2.

4.5.11.2 WATER SUPPLY

The Lobos Creek watershed would be insufficient to supply the in-stream flow requirement necessary to maintain natural streambed characteristics and meet peak Presidio daily demands of 1.68 mgd with this alternative and the other projects listed in Table 9 that are within the Presidio (BAE 1998a). Alternative 5 and the other identified projects within the Presidio would contribute to a net cumulative peak shortfall of approximately 286,000 gpd on the Presidio-wide water supply due to excess demand (BAE 2000). However, water supply- and demand-side measures and instream flow monitoring described in mitigation measures WS-2, *Water Supply- and Demand-Side Solutions to Reduce Cumulative Impacts*, WS-3, *Instream Flow Monitoring to Reduce Cumulative Impacts*, and WT-1, *Water Reclamation Plant to Reduce Cumulative Impacts*, would result in a water savings of approximately 320,000 gpd, which would minimize cumulative impacts on the system and baseline stream flow maintained in Lobos Creek.

Projects within the surrounding area would increase water consumption, but according to the city, not in excess of amounts expected and provided for in this area. In general, the projects represent replacement or renovation of existing facilities previously served by the city. New construction would be subject to current city of San Francisco water conservation code requirements. Should the Presidio Trust enter into a water purchase agreement with the city to ensure adequate water supplies during peak demand periods, there would be no significant impact on regional water demand since the pending purchase agreement would essentially replace previous agreements held by both the U.S. Army and NPS with the city.

4.5.11.3 SCHOOLS

The cumulative impacts to SFUSD resulting from this alternative would be similar to Alternative 1.

4.5.11.4 HOUSING

This alternative and the other projects listed in Table 9 would add 3,761 employees to the local economy. The new development within the 23-acre site accounts for 2,500 jobs, or 66 percent of this total. This growth in employment is estimated to require 724 new housing units (BAE 2000). The listed projects include provision of 1,331 new housing units (1,304 renovated units on the Presidio and 27 new units in the Marina District.) The housing demand resulting from the projects would be more than offset by the housing units added to the local supply, largely by reactivation of housing at the Presidio. Therefore, cumulative demand under this alternative would not contribute to employment-related housing demand increases in the surrounding neighborhood or city.

4.5.11.5 TRAFFIC AND TRANSPORTATION SYSTEMS

The traffic generated by the land uses under this alternative would contribute to the expected increases in cumulative traffic volumes on adjacent local and regional roadways. Alternative 5 would contribute 23 percent of the total p.m. peak-hour traffic resulting from these cumulative projects (Table 19). The combined cumulative projects, including Alternative 5, would generate increased traffic volumes throughout the Presidio. The cumulative projects would contribute 320 additional vehicles on Lincoln Boulevard during the p.m. peak hour, and Alternative 5 would make up about 12 percent of the additional traffic. Cumulative conditions with Alternative 5 land uses would result in only the intersection of Lyon Street and Lombard Street experiencing poor operating conditions. The operating conditions at this intersection could be improved to acceptable levels with the implementation of mitigation measure TR-2 (Table 20).

The parking demand generated by the cumulative projects, including Alternative 5, is estimated to be 4,552 spaces, or about 330 spaces more than Alternative 2. Alternative 5 would comprise about 37 percent of the total cumulative parking demand within the Presidio and 32 percent of the total cumulative parking demand within the project impact zone (Table 21). The proposed parking supply within the 23-acre site in Alternative 5 would exceed the projected parking demand, as discussed in Section 4.5.7.3. The 8,390-space parking supply within the Presidio (as described in the 1994 GMPA) would be able to accommodate the expected cumulative parking demand within the Presidio. The parking impacts outside of the Presidio would be comparable to those described in Alternative 2.

The alternative's contribution to cumulative growth would have a minor cumulative effect on local and regional traffic growth and related congestion, and would be similar to Alternative 2.

4.5.11.6 CULTURAL RESOURCES

Under this alternative, LAMC and LAIR would be removed and replacement construction of 900,000 square feet would be built. In contrast to the current centralized building layout of LAMC and LAIR, replacement buildings would be lower in height, distributed across the 23 acres, and would complement historic patterns of development found elsewhere around the complex. The Planning Guidelines, finalized under this EIS, and Design Guidelines for new construction would be applied to new construction to achieve a contextual and compatible approach to architecture and site planning within the historic setting. However, replacement construction on the 23-acre site would not allow for the construction of new infill buildings within the adjacent

historic hospital complex as recommended in the GMPA. Therefore, this alternative would not contribute to cumulative beneficial effects on the National Historic Landmark district.

4.5.11.7 AIR QUALITY

Proposed development under Alternative 5 and the projects identified in Table 9 would contribute to a cumulative increase in vehicle trips on the region's roadways and would contribute to cumulative increases in regional emissions. The cumulative operational emissions would cause localized impacts at congested intersections in the vicinity of the projects, but the resulting impacts would not be expected to cause local violations of ambient air quality standards. Anticipated cumulative increases in vehicle trips would also result in increases to region-wide emissions of ozone precursors (including NO_x and ROGs) and CO. The proposed development would cause emissions of ozone precursors that fall below the thresholds set forth in federal regulations for conformity determinations (as shown in Table 22). Because emissions of ozone precursors would be less than the applicability thresholds, a conformity determination is not necessary for ozone. Emissions of CO that would be caused by the cumulative scenario under Alternative 5 are accounted for in the current maintenance plan for CO, as discussed in Section 5.4.2. Because the projects are in conformance with regional air quality plans, no further conformity analysis is necessary, and no significant cumulative impacts would occur.

4.5.11.8 NOISE

Demolition and construction activities under Alternative 5, in combination with the project to reconstruct Doyle Drive, would cause short-term cumulative noise impacts if the two projects were to be under construction at the same time. Long-term cumulative impacts around the Letterman Complex would primarily result from increased traffic on Doyle Drive (U.S. Highway 101). The long-term cumulative effect of Alternative 5 and other projects within the Presidio and nearby portions of San Francisco would be increased traffic noise on most of the roads internal and external to the Presidio.

Because the surroundings are dominated by traffic noise in the existing conditions, approximately two-fold increases in traffic would have to result from cumulative development in order to cause increases in traffic noise that would be noticeable to most people. Cumulative development with Alternative 5 would cause peak-hour traffic increases along Lombard Street, inside the Presidio, that could result in noticeable noise increases, but no noise-sensitive receptors are located along this segment. None of the roadway segments near noise-sensitive receptors would experience greater than two-fold peak-hour traffic increases. The conclusion in the GMPA Final EIS that long-term cumulative traffic-induced noise levels would increase due to increases in vehicle volumes remains applicable; however, the increases near sensitive receptors would not be considered significant. No significant cumulative noise impacts are expected.

4.5.12 Unavoidable Adverse Effects

The following impacts are identified as potentially significant and for which there are no mitigating measures or that would not be mitigated to a level of insignificance.

Housing – This alternative would incrementally contribute to the unmet affordable housing demand in the city of San Francisco. Reduced rental rates offered to Presidio employee and tenant households with gross household incomes of less than $45,000 would offset some of this demand.

Cultural Resources – To the extent new construction would not conform to the Planning Guideline recommendations, the following departures would have a potential adverse effect on cultural resources.

- Removal of LAMC and LAIR and replacement construction consistent with Planning and Design Guidelines would not allow for infill construction as recommended in the GMPA, which would have an adverse effect on the adjacent historic hospital complex.
- Siting and length of connected buildings along O'Reilly Avenue would have an adverse effect on the adjacent historic structures.
- Removal of two historic tennis courts would have an adverse effect on these historic structures.
- Buildings along western edge of the 23-acre site would isolate it from the adjacent historic hospital complex, resulting in an adverse effect.
- The historic view corridor at Edie Road would not be preserved by the proposed building layout.

Noise – Short-term use of impact tools and demolition activities would be a source of increased noise to occupants and passive recreational users within the Letterman Complex. Mitigation measures proposed to reduce intrusions would reduce noise impacts but not to a level of insignificance to those users closest to (i.e., within 250 feet from) construction equipment.

4.5.13 Relationship of Short-Term Uses of the Environment and Maintenance and Enhancement of Long-Term Productivity

Use of the site for offices and research would preclude other long-term management possibilities for the Letterman Complex. These uses would occur within an intensively used area within the northern part of the Presidio, which would allow areas in the south and along the coast to remain more natural and experience less activity and development. Reinforcement of this overall use pattern would minimize impacts on the productivity of park resources.

Use of the site for a digital arts center would not affect any park ecosystem. Improvements to existing infrastructure would be considered sustainable actions that are expected to improve the operation of systems. Through implementation of the Planning Guidelines for the project, the Presidio Trust would promote environmental protection and sustainable design and encourage technologies and practices that would reduce environmental impacts or produce environmental benefits in water conservation and reclamation, energy conservation and transportation.

4.5.14 Irreversible or Irretrievable Commitments of Resources

New development would be designed and constructed to minimize consumption of energy and development of non-renewable fuels. Renewable sources of energy and new developments in energy-efficient technology, including recycling of materials and waste, would be fully explored and implemented to the extent possible. Although the site could be restored to previous conditions over time, the use of land, construction materials, energy, and financial resources to implement the alternative would, in a practical sense, be an irretrievable commitment of resources.

Archeological resources would be avoided where possible and historic resources would be protected. Where this is not possible, disturbance would be mitigated through recovery of cultural information and significant artifacts.