

### ***4.1.1 Consistency with Approved Plans and Policies***

This section discusses the possible conflicts between the alternative and the Presidio goals (General Objectives of the GMPA and purposes of the GGNRA Act) and a number of the more specific goals and planning principles of approved land use plans, including the Presidio GMPA and the *San Francisco General Plan*.

#### **4.1.1.1 GENERAL OBJECTIVES OF THE GMPA AND PURPOSES OF GGNRA ACT**

Alternative 1 is consistent with most of the General Objectives of the GMPA, which are identified in Section 1.1.5 of this document. Removal of the LAMC building would be consistent with the General Objective of the GMPA to enhance the scenic resources of the Presidio. Removal of LAMC would also contribute to the General Objective of enhancing the Presidio's cultural resources by assisting in restoring historic settings to permit an understanding of the site's significance to the National Historic Landmark district. It would not, however, contribute to this General Objective of enhancing the Presidio's cultural resources as significantly as would removal of both the LAMC and LAIR buildings because the modern monolithic and non-distinctive architectural style of the existing buildings is inconsistent with the historic setting. Consistent with the General Objective to provide for uses that involve stewardship and sustainability, 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. Furthermore, in keeping with its history as a center for research and health care, the proposed reuse of the site would involve research, training and educational programs to address the interaction of environment and public health issues, which would be consistent with the GMPA's General Objective concerning appropriate uses.

Alternative 1 is not consistent, however, with the GMPA's General Objective to sustain the Presidio indefinitely on an economic basis as a great national park in an urban setting, because there is no current demand for use of the site for laboratory-based research. During the RFQ process, despite having targeted the solicitation of project proposals to many such organizations and users, no interest was expressed from organizations or companies to build and occupy all of the space at the site for laboratory-based medical research. Failure to develop and to ground lease the 23-acre site consistently with the timing and financial parameters of the FMP, which in the absence of a viable tenant would be the result under this alternative, would significantly impair or prevent the achievement of the Trust Act's self-sufficiency mandate. This result then is inconsistent with the General Objective to sustain the Presidio indefinitely on an economic basis.

Because this alternative was drawn largely from the GMPA's preferred alternative, this alternative is consistent with most of the more specific goals and planning principles of the GMPA. It would implement the specific program 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, and would help foster the GMPA's proposed major directions for the future of the Presidio by perpetuating the complex as a building and activity core with a major program center. It would also be consistent with the GMPA's specific planning area concept for the Letterman Complex and the GMPA's proposal to create a national and international center for scientific, research or educational activities.



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Alternative 1 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 1 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.

**4.1.1.2 PRESIDIO GENERAL MANAGEMENT PLAN AMENDMENT**

New construction under this alternative would also be consistent with the specific goals and planning principles of the GMPA. New construction could replace the LAMC as permitted under the GMPA should the LAMC not meet essential program and management needs. This alternative would promote the GMPA concept for infill construction within the complex. It would reinforce the historic hospital complex's courtyard and historic patterns of development. The GMPA's 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. Any replacement construction within the 23-acre site would proceed in accordance with the Planning Guidelines (as 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.

**4.1.1.3 GENERAL PLAN OF THE CITY AND COUNTY OF SAN FRANCISCO**

While the Presidio is not subject to the *General Plan*, Alternative 1 would contribute to the *General Plan's* objective to enhance the city's position as a national and regional center for governmental, health and educational services. Alternative 1 would also 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.

## **4.1.2 Solid Waste**

This section discusses the potential impacts on solid waste resulting from demolition of the LAMC building, should the hospital be removed to enhance open space. The following methods were used to predict impacts:

- Estimates of the volume of demolition debris and the volume of onsite materials recycling resulting from deconstruction and demolition of the LAMC building.
- Interviews with potential landfill sites regarding the ability to accept large volumes of demolition waste.
- Review of available data relating to regional solid waste disposal compiled by the State of California.

The following criteria were considered in assessing the degree of impact:

- Whether appropriate landfill sites are available to accept the estimated quantity of debris from onsite demolition activities.
- Whether identified landfill operators are willing and have the capacity to accept the estimated quantity of demolition debris.
- Whether 50 percent or more of the estimated quantity of debris would be diverted to a landfill site.



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The LAMC is estimated to contain approximately 35,400 tons of concrete, or 63,000 cubic yards of material.

Three potential scenarios for demolition of the LAMC are currently being explored:

1. *Recycle Concrete Onsite* – This would involve placement of a mobile crushing plant onsite, which would process a significant portion of the estimated 63,000 cubic yards of material. After accounting for onsite recycling, it is estimated that approximately 12,600 cubic yards of material would be hauled to solid waste landfill sites and buried.
2. *Recycling of Concrete Offsite* – This would involve hauling all material offsite for recycling and disposal to one or more appropriate landfill sites. After accounting for offsite recycling, it is estimated that approximately 63,000 cubic yards of material would be hauled to solid waste landfill sites, and that approximately 12,600 cubic yards of material would be buried at those landfill sites.
3. *Disposal of Demolition Materials Offsite* – This would involve hauling all material offsite to one or more appropriate landfill sites. It is estimated that approximately 63,000 cubic yards of material would be buried at those landfill sites, assuming that no onsite or offsite recycling takes place.

For the purposes of this impact assessment only, the analysis focuses on the “worst case” scenario (disposal of demolition materials offsite and no onsite or offsite recycling) and assumes that all debris generated by the demolition of the LAMC would be sent to a landfill and disposed of without recycling. It must be noted that the Presidio Trust is committed to diverting at least 50 percent of the project’s demolition waste stream from landfill sites by salvage and reuse in order to promote and demonstrate conservation practices in waste reduction and recycling.

**4.1.2.1 DISPOSAL OF DEMOLITION DEBRIS OFFSITE**

The 35,400 tons of estimated debris generated under this alternative (assuming no recycling at all) represents just over 0.5 percent of the 6.6 million tons total volume of waste disposed of in the nine-county Bay Area in 1997 (California Integrated Waste Management Board and State Board of Equalization 1997). The impact of disposing this building debris was analyzed with respect to the following solid waste sites located in the Bay Area that are likely to receive the material:

- Redwood Sanitary Landfill in north Marin County
- Altamont Sanitary Landfill in east Alameda County
- Zanker Road Landfill in Santa Clara County

The operator of Redwood Sanitary Landfill in north Marin County and Altamont Sanitary Landfill in east Alameda County indicated that the landfill sites have sufficient capacity to handle the debris (personal communication with Paul Yamamoto, Alameda County Division Manager, Waste Management Inc.). The operator regularly seeks out this type of project, and would expect to crush and recycle a significant amount of the concrete for use in the operation of its landfill sites, as well as for roadway and building construction. If the entire amount were disposed of in Redwood or Altamont landfill without recycling (an action that is highly unlikely to occur), the operator indicated that this would not significantly limit the life of either landfill. In the



case of the Altamont Sanitary Landfill, the total volume of the LAMC debris without recycling would represent just over 2 percent of its annual total tonnage (1997 totals). In the case of Redwood Sanitary Landfill, the 35,400 tons of debris would represent approximately 13 percent of its annual tonnage (1997 totals). Both of these estimates assume no recycling of LAMC demolition debris.

Zanker Road Landfill receives an average of 900 tons of solid waste per day, and is permitted to accept up to 1,300 tons per day (personal communication with Paul Lineberry, Landfill Engineer, Zanker Road Landfill). Although Zanker Road accepts 900 tons of waste per day, an average of only 75 tons per day is buried in the landfill because nearly 90 percent of all solid waste received is recycled through various means. The operator indicated that the LAMC demolition debris would not affect the capacity of the landfill. Should Zanker Road Landfill recycle none of the debris, the 35,400 tons would consume about 4 percent of the landfill's total annual permitted capacity.

Based on these estimates, the debris that is estimated to result from demolition activities under this alternative is considerable, but represents a small portion of the solid waste sent to disposal sites within the Bay Area in one year. Given the responses from various operators of regulated landfill sites within the region, the volume of demolition debris from the LAMC would not adversely affect the capacity of solid waste landfill sites in the Bay Area. Furthermore, to the extent that Presidio Trust conservation goals are implemented and waste reduction and recycling of building debris are instituted at the site, and the receiving landfill(s) implement their standard construction debris waste stream diversion practices, the quantity of debris directed to the landfill sites would be reduced by at least 50 percent. Therefore, demolition of the LAMC is expected to result in a less-than-significant impact on regional solid waste disposal facilities.

#### ***4.1.3 Water Supply and Distribution***

This section discusses the impacts to the Presidio water supply and distribution system resulting from implementation of this alternative. Information relating to water supply was obtained primarily from the *Lobos Creek Water Resources Management Issues Brief* (BAE 1998a), interviews with Presidio Trust staff and estimates of water consumption provided by the development teams. The following methods were used to predict impacts:

- Identification of land uses at the site.
- Review of development assumptions and resulting population and employment estimates.
- Review of estimates of domestic and irrigation water consumption.

Based on BAE's recent analysis of Presidio water demand and Lobos Creek resources (1998a), the baseline water consumption for the 23-acre site is estimated to be 89,000 gallons per day (gpd).

The following criteria were considered to assess the degree of impact:



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- Whether water consumption under the alternative would exceed the total water baseline estimated for the 23-acre site.
- Whether water flows available for fighting fire would meet the requirements of the Uniform Fire Code.
- Whether land uses at the site would contribute to cumulative impacts to the water supply and distribution system at the Presidio, or baseline stream flows maintained in Lobos Creek.

**4.1.3.1 IMPACTS OF WATER CONSUMPTION ON BASELINE**

Implementation of Alternative 1 is estimated to generate a demand of approximately 20,000 gpd of water (Tables 12 and 13). This estimate assumes establishment of scientific research and education facilities, replacement or infill construction of 503,000 square feet (as a substitute for demolition of LAMC), and maintaining existing landscaping. The estimated water consumption of this alternative is well below the baseline of approximately 89,000 gpd established for the site. Therefore the demand for water under Alternative 1 is not projected to exceed the baseline water consumption. However, as discussed on page 170 of the GMPA EIS (and mitigated on pages 26 and 27 of the document), if water is required for special uses at the LAIR facility of a purity that is not available from onsite sources (a maximum of 10,000 gallons per day), equal amounts of available water from onsite sources would need to be transferred to the city water system or city and Presidio water would need to be mixed to reduce the effect on the city water supply.

**4.1.3.2 IMPACTS ON FIRE FLOWS**

The GMPA EIS identified deficiencies within the water distribution system resulting in inadequate fire flow throughout most of the Presidio. The analysis of the water system prepared for the NPS that identified such deficiencies led to water system improvement projects carried out by the U.S. Army Corps of Engineers. As a result, the fire flow deficiencies within the Letterman Complex have been corrected and adequate fire flow is available to LAMC/LAIR in their current configuration. Improvements to the water distribution system may be required to ensure adequate fire flow to new development within the Letterman Complex to meet Uniform Fire Code, depending on the characteristics of buildings to be constructed (see mitigation measure WS-1, *Fire Flows*).

#### **4.1.4 Schools**

This section discusses the impacts of Alternative 1 as it relates to enrollment of Presidio resident schoolchildren in San Francisco Unified School District schools. The following methods were used to predict impacts:

- Estimation of enrollment in San Francisco public schools generated by housing units associated with the alternative. Housing units associated with each alternative include two categories: 1) the share of existing Presidio housing occupied by the employees of the project; and 2) new housing units proposed in the alternative.
- Review existing estimates of Presidio public school enrollment, and the methodologies used to make such estimates.
- Consultation with SFUSD officials regarding current and future capacity of school sites.



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The following assumptions were made to estimate the number of schoolchildren living at the Presidio that would be likely to attend SFUSD schools:

- Employees associated with Alternative 1 are assumed to occupy an allocation of 227 existing Presidio housing units in addition to any new housing proposed in the alternative. The allocation of 227 existing Presidio housing units to each alternative is based on the proportion of Letterman Complex employment assumed in the GMPA to total Presidio-wide employment estimated in the GMPA, or 20 percent of total Presidio-wide employment.
- The proportion of schoolchildren in relation to total population in the nine-county San Francisco Bay Area (17.19 percent), based upon the 1990 U.S. Census, was used to estimate the number of schoolchildren (aged 5 to 18) living at the Presidio.
- This 17.19 percent factor was applied to the expected total population occupying housing units (to determine the total population occupying housing units, 3.2 persons per housing unit was assumed, based on the median household size reported for San Francisco in the 1990 U.S. Census).
- The proportion of city of San Francisco public school enrollment to schoolchildren was used to derive the number of resident Letterman Complex schoolchildren that would likely attend SFUSD schools.

The following criterion was considered to assess the degree of impact:

- Whether the alternative would result in the need for the SFUSD to develop additional capacity at existing or new school sites.

**4.1.4.1 IMPACT ON CAPACITY AT EXISTING OR NEW SCHOOL SITES**

At full occupancy, Alternative 1 would generate 92 schoolchildren between the ages of 5 and 18 who would enroll in SFUSD schools (Table 14). The SFUSD Education Placement Center, the office responsible for managing enrollment and placing children within SFUSD schools, indicated that children of Presidio residents have commonly attended a number of schools located in the surrounding neighborhoods. Since the transition of the Presidio from the U.S. Army to the NPS and Presidio Trust, enrollment in schools that traditionally served the Presidio has declined significantly. The SFUSD Education Placement Center stated that there is sufficient capacity in the schools surrounding the Presidio, as well as in the SFUSD school system overall, to accommodate the 92 Presidio schoolchildren estimated to enroll in SFUSD schools as a result of Alternative 1 (personal communication with Margaret Wells, Program Director of the Education Placement Center). Because this level of enrollment is within the existing capacity of SFUSD, Alternative 1 would not result in a significant impact on SFUSD schools.

### **4.1.5 Housing**

This section analyzes the potential impacts resulting from changes in housing demand and supply associated with Alternative 1. The methods used to estimate the net new regional demand for housing resulting from the alternative, and to distribute that demand to the Presidio and to the surrounding Bay Area, were based on the



methodology applied in the GMPA *Presidio Planning Socioeconomic Impact Analysis Report* (Jones & Jones 1994). A full description of methods used to analyze housing impacts is presented in Appendix D.

The following criterion was considered to assess the degree of impact:

- Whether the net new regional housing demand would be a significant increase in demand for housing in the city of San Francisco and the surrounding Bay Area.

#### **4.1.5.1 INCREASE IN HOUSING DEMAND**

At buildout, the additional regional housing demand created by employment associated with Alternative 1 would be 187 housing units (Table 15). The Presidio housing stock available to this alternative would meet 100 percent of this housing demand. Because the housing demand under Alternative 1 generated by new employees from outside the Bay Area can be accommodated at the Presidio, this alternative would not have a significant impact on the housing market within the city of San Francisco and the surrounding Bay Area.

### ***4.1.6 Medical Research***

This section discusses the impact of the alternative on medical and life science research in the Bay Area. The following methods were used to predict impacts:

- Review of medical research space needs in the Bay Area.
- Review of past actions by the NPS and the Presidio Trust to help satisfy those needs.
- Evaluation of existing reports related to the condition and suitability of the LAMC and LAIR for medical research use.

The following criterion was considered to assess the degree of impact:

- Whether conversion of the site from medical research to alternative uses would negatively affect medical research in the Bay Area.

#### **4.1.6.1 IMPACT ON MEDICAL RESEARCH**

Under Alternative 1, the LAMC could be rehabilitated or rebuilt for research space, or removed, to restore open space and the LAIR would be leased to a tenant or tenants for reuse as a research facility. Thus, the alternative would have a positive impact on medical and life science research by providing research space.

### ***4.1.7 Traffic and Transportation Systems***

The following analysis of transportation impacts is based on information included in the 1994 *Presidio Transportation Planning and Analysis Technical Report* (NPS 1994b) as updated for the current EIS. The methodologies used in the traffic impact analysis are summarized below and are more fully described in Appendix D and the *Letterman Complex Transportation Technical Report* (Wilbur Smith Associates 1999).



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*Analytical Approach* – The analytical approach for the traffic impact analysis includes a cumulative impact assessment for 2010 that takes into account the growth expected at the Letterman Complex and growth forecast for the rest of the Presidio and adjacent areas. Future traffic conditions were developed based on the travel demand estimated within the GMPA EIS (Alternative A), subtracting traffic generated by new development within the 23-acre site. Traffic volumes at the analysis locations under the GMPA were then modified to incorporate the vehicle trips generated by the land uses proposed for the Letterman Complex for each alternative currently under consideration, primarily using San Francisco *Guidelines for Environmental Review* (City and County of San Francisco 1991). In addition, adjustments were made to reflect the recent conversion of the O'Reilly housing to office use, a change from the GMPA.

Some of the trips that would be generated by the land uses for each alternative were assumed to begin and end within the Presidio (internal trips), while the remaining trips would be made between the Letterman Complex and areas outside of the Presidio (external trips). The expected mode split for external trips is 70 percent automobile, 15 percent transit and 15 percent pedestrian and bicycle usage. Internal trips would be more likely to be made with non-automobile modes than trips originating or ending outside the Presidio. The mode split for internal trips was estimated to be 50 percent automobile, 20 percent transit, and 30 percent pedestrian or bicycle trips.

The parking demand of each alternative was based on the work/visitor split of automobile trips as described in the San Francisco *Guidelines for Environmental Review* (City and County of San Francisco 1991). Work-related automobile trips were assumed to require a parking space all day, and were developed based on estimates of the number of square feet per employee and mode split. Visitor automobile trips were developed based on the number of daily visitor vehicle trips divided by an average turnover rate for each land use.

Table 16 presents the number of weekday external and internal trips generated by the 23-acre site by mode, as well as the total weekday parking demand for each alternative. Table 17 presents the total 2010 traffic volumes at the gates to the Presidio (including trips generated by the new development within the site as well as the rest of the Presidio, and pass-through traffic).

Under Alternative 1, it was assumed that the existing roadway network within the Letterman Complex would be maintained. Improvements to the intersection(s) of Lyon Street/Richardson Avenue/Gorgas Avenue would allow for left turns into the Letterman Complex from westbound Richardson Avenue. The Gorgas Avenue Gate would be the primary entrance, with the Lombard Street Gate serving as a secondary entrance. Alternative 1 would also include improvements to the pedestrian and bicycle circulation network within the complex, as well as improved connections to adjacent areas. A total of 1,150 surface parking spaces would be available to serve the development.

*Transportation Demand Management Program* – The transportation demand estimates assume the implementation of a Transportation Demand Management (TDM) program that would include improved transit, pedestrian and bicycle conditions, and would reduce the automobile usage to the Letterman Complex. The travel demand management strategies that are assumed to be common for all alternatives include:

- Clean-fuel shuttle bus serving the Letterman Complex and the remainder of the Presidio.



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- Onsite sale of transit passes.
- Transit and ridesharing information disseminated on kiosks within the park, the Presidio Trust’s website, and employee orientation programs.
- Mandatory event-specific TDM programs for all special events.
- Periodic monitoring of traffic volumes and mode choice among Presidio residents and employees.
- Express bus service to regional transit connections (i.e., BART and the Transbay Terminal).
- A transit hub in the Letterman Complex/Main Post area that would facilitate transfers between public transit buses and the Presidio shuttle buses.
- Carpool/vanpool program.
- Secure bicycle parking.
- A parking management program.

*Transportation Network* – Traffic traveling to and from the Letterman Complex would most substantially affect traffic operations at those Presidio gates and intersections nearest the Letterman Complex. Analysis intersections include:

- Lombard Street/Lyon Street.
- Mason Street/Marina Boulevard/Lyon Street.
- Richardson Avenue/Francisco Street/Gorgas Avenue.
- Lombard Street/Presidio Boulevard.
- Presidio Boulevard/Letterman Drive/Lincoln Boulevard.

The combination of traffic traveling to and from other land uses in the Presidio and “pass-through” traffic traveling between the Presidio and the Lombard Street Gate creates heavy traffic volumes at the gate. The large volume of traffic traveling on Lombard Street affects the unsignalized intersection of Lombard and Lyon streets and the internal unsignalized intersection of Lombard Street and Presidio Boulevard.

To reflect the extremely limited capacity of the left-turn movement into the Presidio from Lombard Street at the intersection of Lombard Street and Richardson Avenue, the GMPA proposed a reconfigured version of the intersection of Lyon Street/Richardson Avenue/Gorgas Avenue that would allow left turns into and out of the Presidio at the Gorgas Avenue Gate. The single intersection reconfiguration was analyzed within the GMPA EIS and again as part of the current analysis for Alternative 1. The latter analysis indicated that with the provision of left turns at a single reconfigured intersection, this intersection would operate acceptably during the p.m. peak hour, but would fail during the a.m. peak commute hour when heavy northbound left turns into the Letterman Complex would conflict with heavy southbound traffic on Richardson Avenue and left turns to Richardson Avenue from Gorgas Avenue. Consequently, the current analysis considered a second reconfiguration that would locate left turns to Richardson Avenue from Gorgas Avenue at a separate intersection from left turns from Gorgas Avenue to Richardson Avenue, enabling a two-phase, rather than a three-phase, signal operation. Thus, the two-intersection configuration was incorporated as a part of Alternatives 2, 3, 4 and 5 (Figure 15). Alternative 6, the No Action Alternative, would not include any changes to intersections or roadways in the area.



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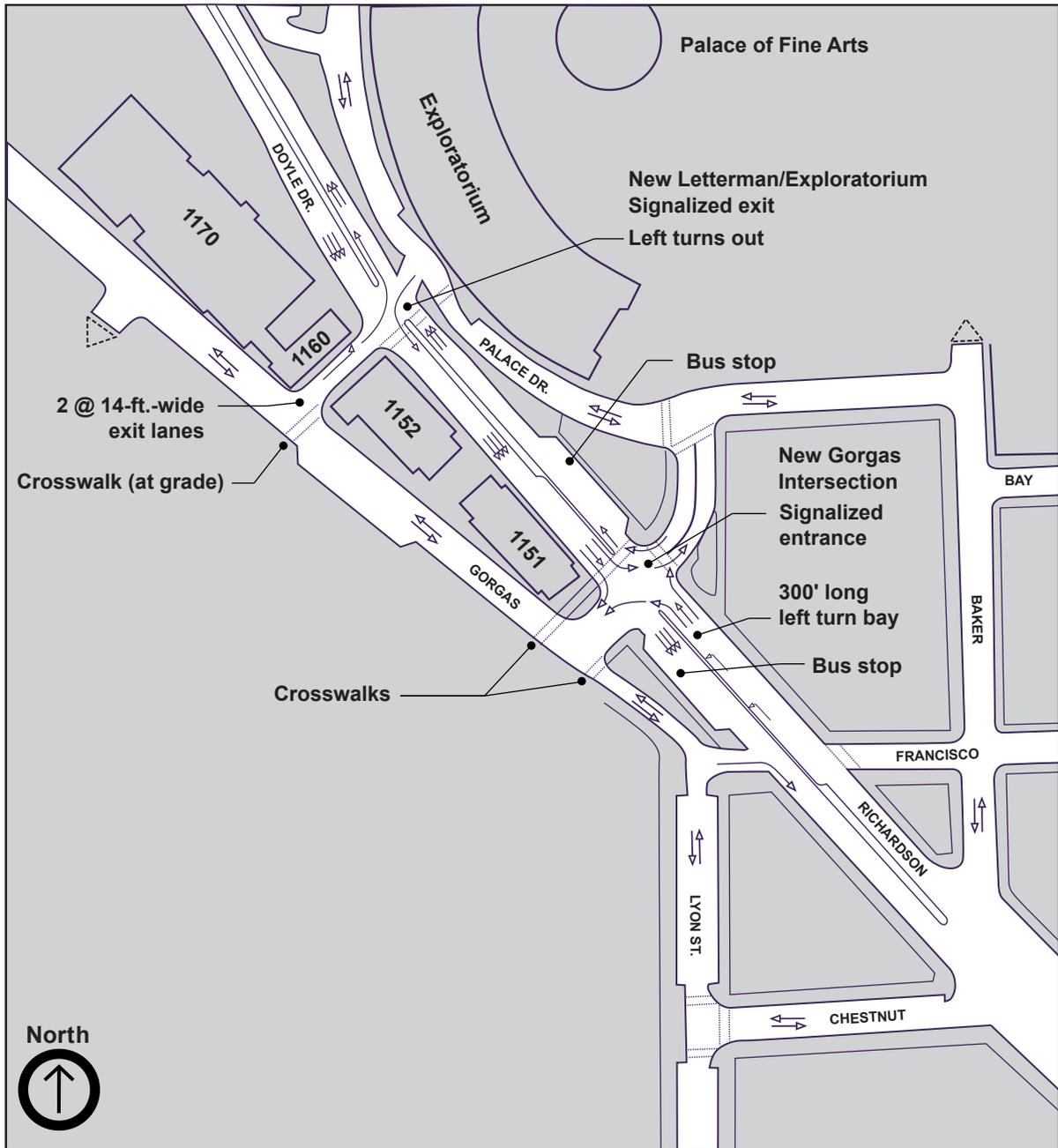


Figure 15.  
Reconfigured Intersection at  
Gorgas Avenue Gate



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Provision of the proposed new Richardson Avenue intersections would enable the Gorgas Avenue Gate to accommodate two-thirds of the traffic traveling to and from the Letterman Complex. However, overall traffic growth resulting from new development within the Letterman Complex and elsewhere in the Presidio would still require intersection improvements at the intersection of Lombard and Lyon streets and the intersection of Lombard Street and Presidio Boulevard. Table 18 summarizes the intersection level of service analysis for the six alternatives.

*Parking Supply* – The number of parking spaces that would be provided for each of the six alternatives would vary. Under Alternative 1, the 23-acre site was estimated to have a share of the 1,570-space parking supply for the 60-acre Letterman Complex that was proportional to the 23-acre site’s share of developed area for the entire complex, or 1,150 spaces. Alternatives 2 through 5 were assumed to have a parking supply consistent with the number of parking spaces proposed by each of the development teams. Under Alternative 6, the existing 770 parking spaces surrounding the 23-acre site would remain, and no additional parking would be provided.

*Implications of Doyle Drive Reconstruction* – A number of studies have been conducted by the City and County of San Francisco and Caltrans on the need for reconstructing Doyle Drive. These efforts include the Doyle Drive Task Force study, prepared in 1991, a Caltrans Project Study Report (Caltrans 1993) and the *Doyle Drive Intermodal Study* (San Francisco Guideway Associates 1996), which identified needs, and developed design alternatives and preliminary cost estimates for the reconstruction of Doyle Drive. Preliminary concepts include the replacement of the current structure with a parkway built to Caltrans standards that would provide direct vehicular access to the Presidio. In addition, multimodal access into and out of the Presidio was proposed through a “transit center” that would be accessed by Golden Gate Transit, MUNI and the Presidio internal shuttle. In December 1999, the San Francisco Transportation Authority began a study involving preparation of an EIS/EIR and preliminary engineering and design documents representing 30 percent design completion. The current schedule calls for completion of the study in the third quarter of 2001.

The reconstruction of Doyle Drive and the provision of new access to the Presidio would affect the transportation conditions within and in the vicinity of the Presidio. A new interchange providing access from Doyle Drive into the Presidio would allow for a more direct connection to the Letterman Complex, and would divert some vehicles from using the Lombard Street and Gorgas Avenue gates. Reconstruction of Doyle Drive may also impact existing connections between Crissy Field and the remainder of the Presidio. Because it is likely that substantial development of the alternatives would occur prior to reconstruction of Doyle Drive, the current analysis does not assume any changes to Doyle Drive.

*Impact Assessment Criteria* – The following criteria were considered in assessing the degree of transportation impacts:

- Whether the alternative would exceed, either individually or cumulatively, LOS D at intersections.
- Whether the alternative would exceed existing transit capacity.
- Whether the alternative would result in hazards or barriers to pedestrians and bicyclists.
- Whether the alternative would result in inadequate parking supply (i.e., demand greater than future available supply).



- Whether the alternative would result in excessive parking supply which would compromise the TDM strategies designed to encourage non-automobile modes, and potentially result in an increase in vehicle trips to the site.

#### 4.1.7.1 ADDITIONAL TRAFFIC VOLUMES

Alternative 1 would generate 4,560 external (i.e., to areas outside the Presidio) weekday daily vehicle-trips, and 490 vehicle-trips during the p.m. peak hour (Table 16). Of the 490 p.m. peak-hour vehicle-trips generated by Alternative 1, the majority would be outbound (380 vehicles) from the Letterman Complex, while 110 vehicles would be inbound.

Overall, the Mason Street Gate would experience an increase of 350 vehicles during the p.m. peak hour from the existing conditions, with Alternative 1 comprising 14 percent of this increase. Alternative 1 would contribute the majority of the increase in traffic volume at the Gorgas Avenue Gate. The existing p.m. peak-hour traffic volume at this gate would increase by 510 vehicles, with the alternative comprising 61 percent of this growth. The existing traffic volume at the Lombard Street Gate would be increased by 400 vehicles during the p.m. peak hour, and 13 percent of this increase would be due to the new development within the complex. The existing p.m. peak-hour traffic at the Presidio Boulevard Gate would increase by 220 vehicles, with Alternative 1 contributing up to 36 percent of the increase (Table 17).

#### 4.1.7.2 IMPACTS ON INTERSECTION OPERATING CONDITIONS

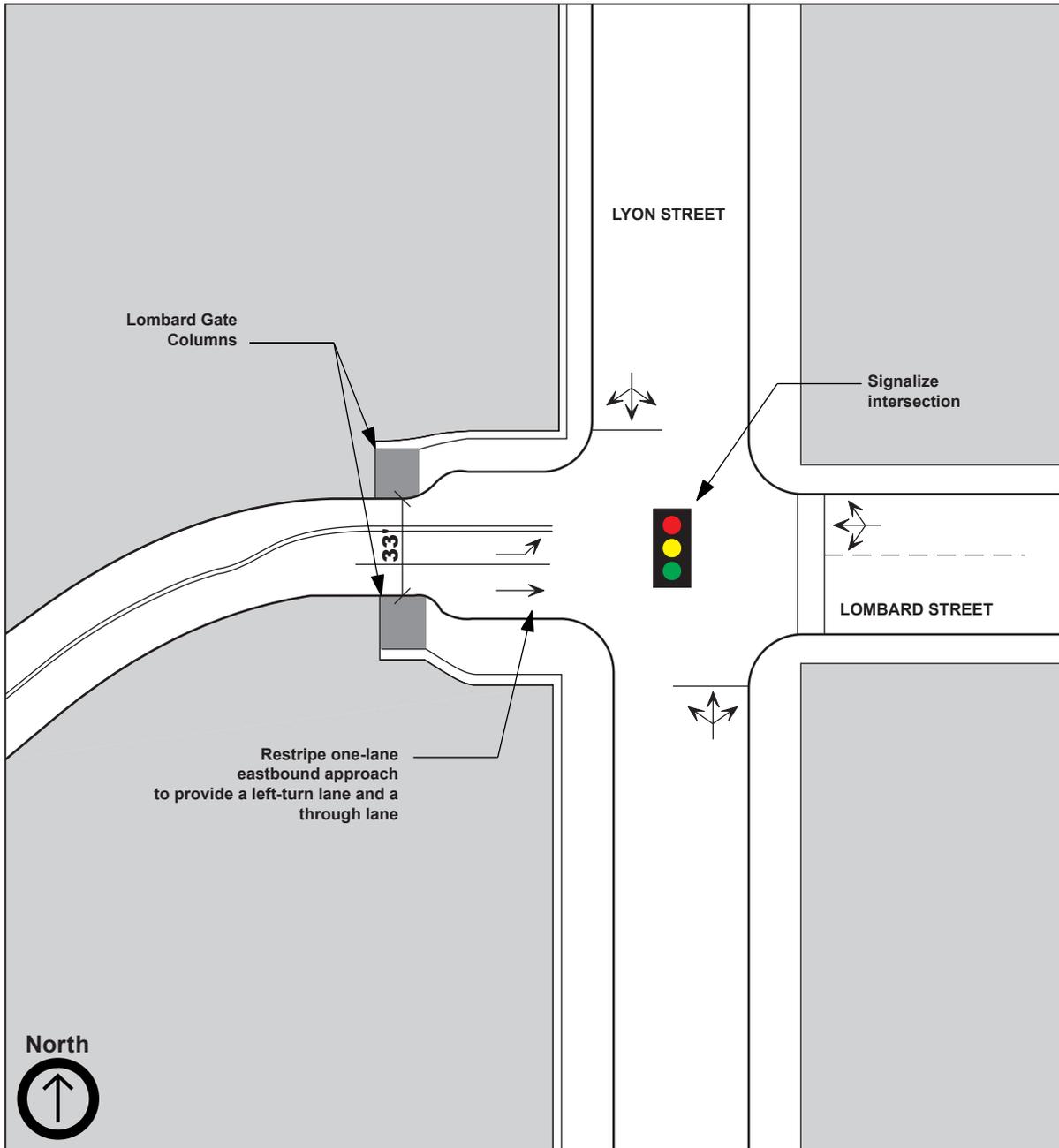
Currently, during the p.m. peak hour, two of the study intersections operate at LOS C, four intersections operate at LOS B, and one intersection operates at LOS A (Table 4). Under Alternative 1, three of the study intersections (Presidio Boulevard/Letterman Drive/Lincoln Boulevard, Mason Street/Marina Boulevard/Lyon Street and Doyle Drive/Marina Boulevard/Lyon Street) would operate acceptably at LOS C during the p.m. peak hour (Table 18). Three of the five studied intersections (Lyon Street/Richardson Avenue/Gorgas Avenue, Lombard Street/Lyon Street and Presidio Boulevard/Lombard Street) on the boundary or within several blocks of the Presidio would fail (have LOS D or worse) under Alternative 1 during the p.m. peak hour (Table 18). The poor operating conditions at these intersections reflect the increase in traffic volumes traveling to and from the Letterman Complex and other land uses at the Presidio via Lombard Street and Richardson Avenue.

The following intersection improvements as described in mitigation measures TR-1, *Lyon Street/Richardson Avenue/Gorgas Avenue Intersection Improvements*, TR-2, *Lombard Street/Lyon Street Intersection Improvements*, and TR-3, *Lombard Street/Presidio Boulevard Intersection Improvements*, and illustrated in Figures 15 through 17 would improve the operating conditions at the intersections to acceptable levels of service:

- *Lyon Street/Richardson Avenue/Gorgas Avenue Intersection Improvements* – Prior to reuse of the site, the intersection would be reconfigured to provide left turns from Richardson Avenue to Gorgas Avenue and left turns from Gorgas Avenue to Richardson Avenue at two separate intersections (Figure 15). These improvements would mitigate the a.m. peak-hour operation of the intersection of Lyon Street and Richardson Avenue from LOS F to LOS D under 2010 conditions.
- *Lombard Street/Lyon Street Intersection Improvements* – Prior to reuse of the site, the intersection would be signalized and the one-lane eastbound approach would be restriped to provide one left-turn lane and one



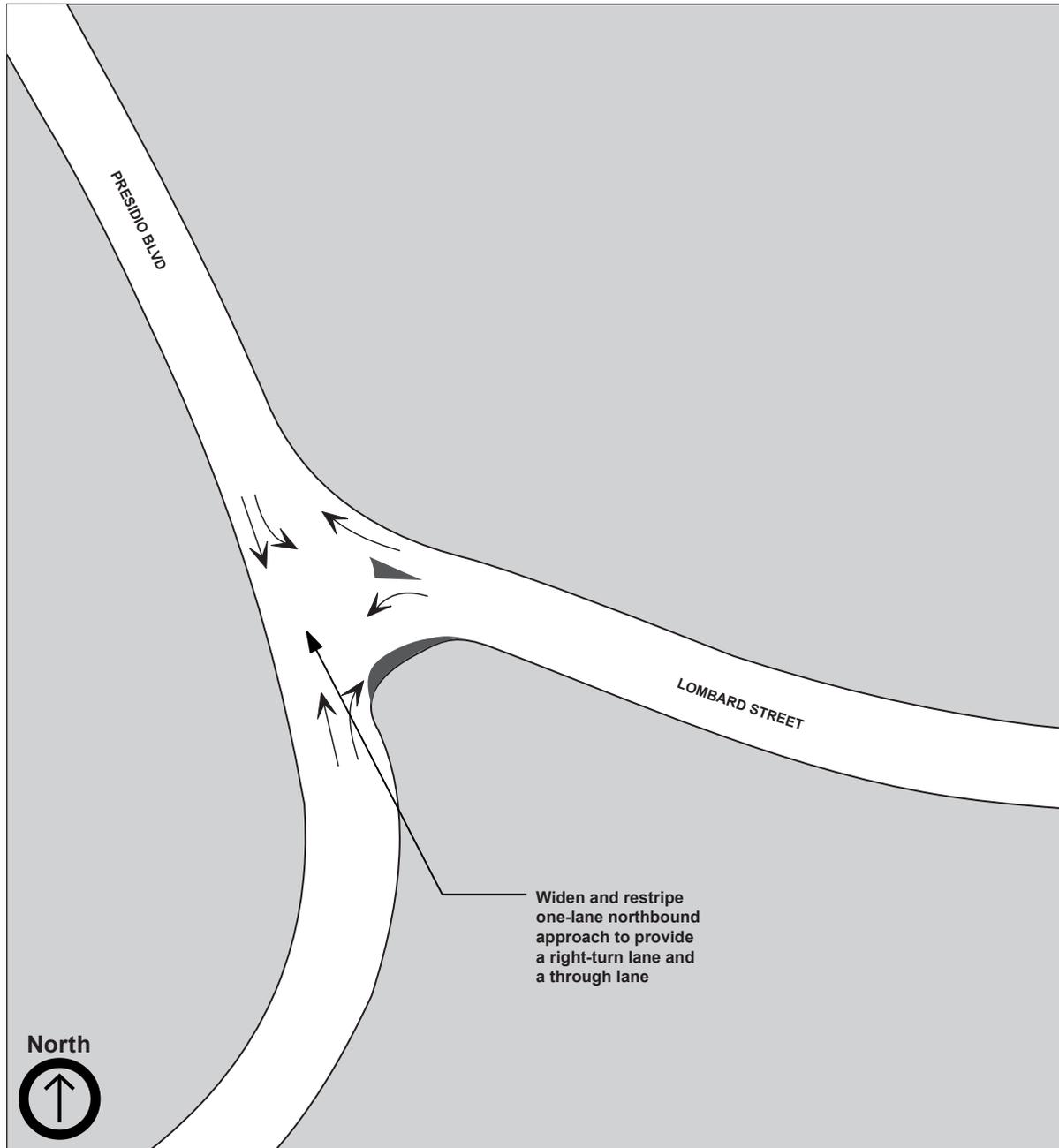
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**Figure 16.**  
**Proposed Mitigation Measure**  
**for Lombard/Lyon Intersection**



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**Figure 17.**  
**Proposed Mitigation Measure for**  
**Lombard/Presidio Intersection**



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**4 . 1   E N V I R O N M E N T A L   C O N S E Q U E N C E S :   A L T E R N A T I V E   1  
( S C I E N C E   A N D   E D U C A T I O N   C E N T E R )**

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- shared right-through lane (Figure 16). These improvements would mitigate the p.m. peak-hour operation of the intersection of Lombard and Lyon streets from LOS F to LOS B under 2010 conditions.
- *Lombard Street/Presidio Boulevard Intersection Improvements* – When LOS E conditions are reached, the one-lane northbound approach would be widened and restriped to provide one right-turn lane and one through lane (Figure 17). These improvements would improve the operation of the intersection from LOS E to LOS D during the p.m. peak hour.

**4.1.7.3 INCREASED PARKING DEMAND**

The parking demand of 1,320 parking spaces for Alternative 1 would exceed the proposed supply of 1,150 spaces, resulting in a shortfall of 170 spaces. In order to ensure that the shortfall does not result in employees or visitors seeking parking outside of the Letterman Complex, major tenants would need to develop additional TDM strategies to demonstrate that parking demand would be reduced by at least 170 spaces, or the parking supply would need to be increased to 1,320 spaces. In addition, parking management strategies would be developed to ensure that the parking supply and demand is balanced within a broader area that includes the Letterman Complex and adjacent areas within the Presidio. Mitigation measures TR-4, *Monitoring of Parking* and TR-8, *Transportation Demand Management Program* would ensure that planned parking management and the development or expansion of TDM strategies would reduce parking demand both within and outside the 23-acre site. These mitigation measures would ensure no significant impacts to parking in Area A and adjacent neighborhoods. As shown on Table D-11 in Appendix D, weekend parking demand would be only 27 percent of weekday demand, therefore substantial parking would be available for recreational uses on weekends.

**4.1.7.4 IMPACTS ON PEDESTRIAN AND BICYCLE FACILITIES**

With new development occurring within the Letterman Complex, the number of pedestrian and bicycle trips would substantially increase in the vicinity of the complex. Based on the assumed 30 percent and 15 percent bicycle and pedestrian mode share for internal and external trips, respectively, there would be an increase of about 200 new pedestrian and bicycle trips during the p.m. peak hour. These new pedestrian trips would be accommodated within the existing pedestrian paths between the Letterman Complex and key gates of the Presidio as well as on sidewalks that would be constructed as part of the development. The provision of additional pedestrian paths would connect the Letterman Complex with other parts of the Presidio. The existing bicycle network would also accommodate the expected increase in bicycle trips. Furthermore, planned improvements at the complex as called for in the GMPA would enhance the pedestrian and bicycle environment.

The reconfiguration of the Lyon Street/Richardson Avenue/Gorgas Avenue intersection (mitigation measure TR-1) would remove the traffic signal at the intersection of Richardson Avenue and Francisco Street, and would result in a disconnect in the citywide bicycle route network. Relocating a portion of the city's bike route 4 from Francisco Street to Chestnut Street as required by mitigation measure TR-6 and shown in Figure 18 would reestablish this connection with no significant adverse impact on bicyclists.

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



4. ENVIRONMENTAL CONSEQUENCES

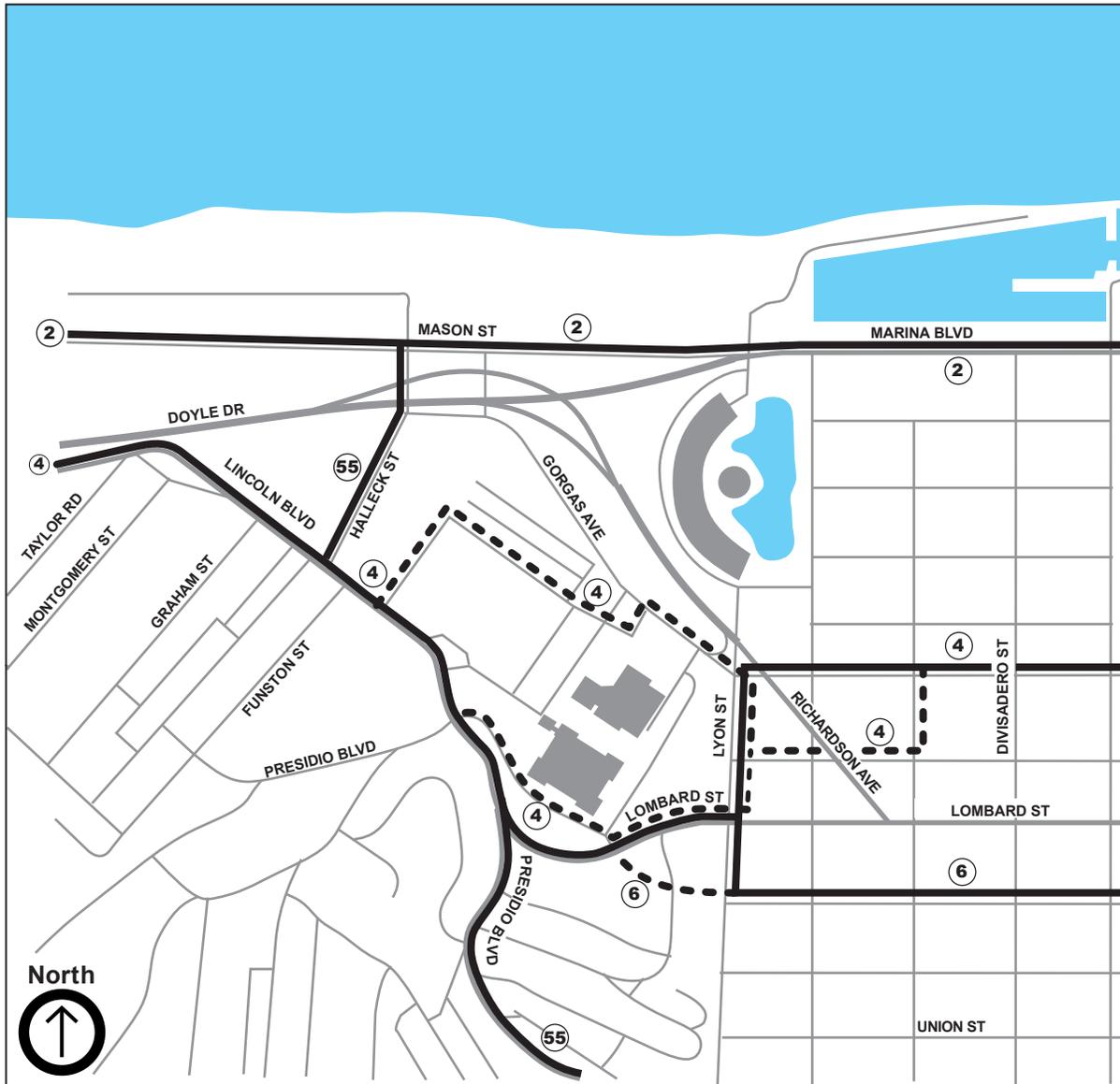


Figure 18.  
Bicycle Routes

- Existing
- - - Proposed (subject to additional study)



(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).

**4.1.7.5 INCREASED DEMAND FOR PUBLIC TRANSPORTATION**

The 140 transit trips generated by Alternative 1 during the p.m. peak hour would be accommodated among the six bus lines serving the Presidio according to the expected geographic distribution of trips to and from the Letterman Complex. The 29-Sunset and 82X-Levi Plaza Express buses are expected to carry the greatest portion of the transit trips, with the 29-Sunset carrying 40 trips (or 26 percent of the total transit trips), and the 82X-Levi Plaza Express carrying 30 trips (or 24 percent of the total transit trips) generated by Alternative 1. The 41-Union, the 45-Union-Stockton, and the 28-19th Avenue would carry the remaining 70 transit trips. The maximum load points on MUNI lines serving the Presidio are far away and opposite to the Presidio commute direction. This results in existing capacity available to accommodate transit passengers associated with Alternative 1 on all of the MUNI lines listed above.

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 1 would generate 20 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.

**4.1.7.6 IMPACTS OF TRANSPORTATION DEMAND MANAGEMENT MEASURES**

At a minimum, the TDM strategies listed at the beginning of this section would be incorporated into Alternative 1 to encourage non-automobile modes and reduce parking demand. A TDM program, as discussed in mitigation measure TR-8, would be developed that would establish specific performance targets and a monitoring and reporting process.

**4.1.7.7 CONSTRUCTION IMPACTS**

Construction vehicles would generally access the Letterman Complex via Lombard Street and Doyle Drive/Richardson Avenue. From points east of the Presidio, construction traffic would use Lombard Street through the Lombard Street Gate to the Letterman Complex. Construction traffic would access the Letterman Complex from Doyle Drive via the Gorgas Avenue Gate. Construction traffic leaving the complex would use Halleck and Old Mason streets to access Doyle Drive at the intersection of Old Mason Street/Marina Boulevard and Doyle Drive; this traffic would not travel east on Marina Boulevard due to city restrictions. Figure 19 shows proposed construction routes.



4. ENVIRONMENTAL CONSEQUENCES

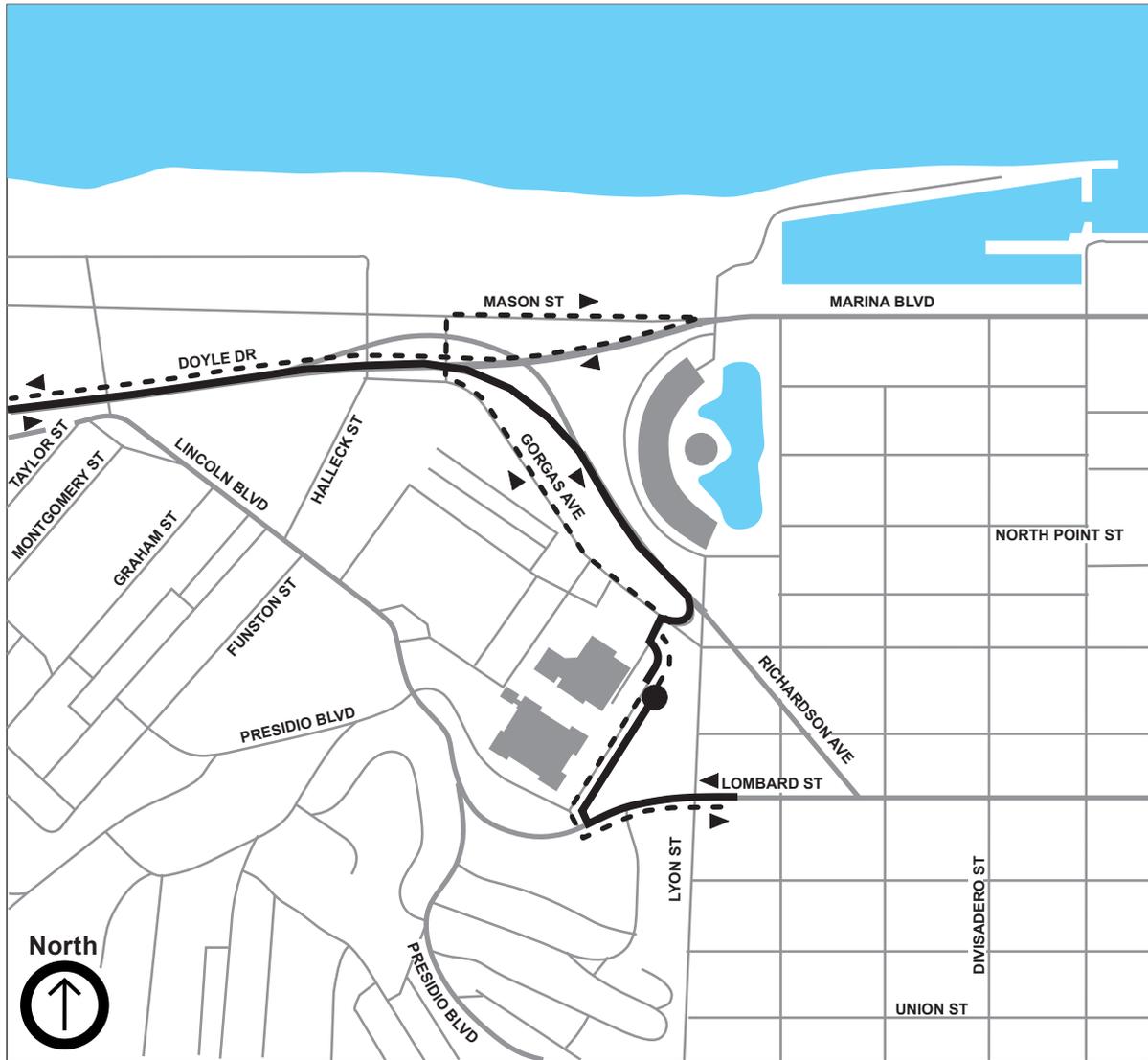


Figure 19.  
Construction Truck Routes

- Inbound Routes
- - - Outbound Routes



The additional construction-related traffic could result in some conflicts with local and regional traffic, especially from the larger construction vehicles. However, because the vehicle trips traveling to and from the complex would be dispersed through the Bay Area, the vehicle trips generated by this alternative on other regional roadways would not be substantial and would fall within the normal fluctuations of traffic. 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.

#### ***4.1.8 Cultural Resources***

This section discusses the effect of the proposed undertaking on the National Historic Landmark district.

Section 106 of the National Historic Preservation Act (NHPA) requires that every federal agency “take into account” how each of its undertakings could affect historic properties. An agency must also afford the Advisory Council on Historic Preservation (ACHP), an independent reviewing agency, a reasonable opportunity to comment on the agency’s proposal. The ACHP provides the methodology for assessing impacts on historic resources in the 36 CFR Section 800.8.

A federal agency first determines that its proposed action constitutes an “undertaking.” An undertaking is defined to include “a project, activity or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; those requiring a Federal permit, license or approval; and those subject to state or local regulation administered pursuant to a delegation or approval by a Federal agency.” The Presidio Trust has determined that new development and uses within the 23-acre site would constitute an undertaking for purposes of Section 106 of the NHPA. Upon establishing that there is an undertaking, the federal agency is required to identify historic properties within a prescribed area of potential effects and to assess and take into account the adverse effects of the undertaking on those properties. The Section 106 process also requires the federal agency to afford the ACHP a reasonable opportunity to comment with regard to the undertaking.

Section 110 (f) of the NHPA charges federal agencies to afford some special protection to National Historic Landmarks. Specifically, it requires that the agency “to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm” to any National Historic Landmark that may be directly and adversely affected by an undertaking.

The APE is the geographic area or areas within which an undertaking may cause changes in the character or use of historic properties if such properties exist. The APE for the undertaking has been determined to be the 60-acre Letterman Complex and the Palace of Fine Arts property, although the specific site under consideration for new construction is the 23-acre site within the Letterman Complex.

The following criteria were considered in assessing the degree of impact:

- An undertaking has an adverse effect on a historic property when the undertaking may alter directly or indirectly any of the characteristics of the property that qualify the property for inclusion in the National



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4 . 1   E N V I R O N M E N T A L   C O N S E Q U E N C E S :   A L T E R N A T I V E   1  
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Register of Historic Places in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association. Adverse effects on historic properties include, but are not limited to:

1. Physical destruction, damage, or alteration of all or part of the property.
  2. Removal of the property from its historic location.
  3. Introduction of visual, audible, or atmospheric elements that diminish the integrity of the property's significant historic features.
  4. Neglect of a property resulting in its deterioration.
  5. Transfer, lease or sale of the property out of federal ownership or control without adequate and legally enforceable restrictions or conditions.
- Effects of an undertaking that would otherwise be found to be adverse may be considered as being not adverse:
1. When the historic property is of value only for its potential contribution to archeological, historical, or architectural research, and when such value can be substantially preserved through the conduct of appropriate research, and such research is conducted in accordance with applicable professional standards and guidelines;
  2. When the undertaking is limited to the rehabilitation of buildings and structures and is conducted in a manner that preserves the historical and architectural value of affected historic property through conformance with the Secretary of *The Interior's Standards for Rehabilitation & Illustrated Guidelines for Rehabilitating Historic Buildings* (NPS 1992b); or
  3. When the undertaking is limited to the transfer, lease or sale of a historic property, and adequate restrictions or conditions are included to ensure preservation of the property's significant historic features.

The scenic resources of the Letterman Complex are the result of natural features (such as topography) and man-made features over time. Views of the site are available from surrounding city neighborhoods; from surrounding Presidio planning areas such as East Housing and the Main Post; along adjacent travel routes in the Presidio; and from within the complex itself. The following factors were considered in analyzing potential visual impacts:

- Visibility of the proposed building and landscape changes from major viewpoints, both within and from outside the Presidio.
- Compatibility of the proposed building and landscape changes with the existing cultural landscape and historic scenic views (defined as those views and view corridors which existed at the Letterman Complex during its period of significance).

Under 36 CFR Section 800.14, the Presidio Trust has initiated the Section 106 consultation process through a Programmatic Agreement that envisions the sustained involvement of the State Historic Preservation Officer, Advisory Council on Historic Preservation, and NPS throughout the process of developing Design Guidelines



for new construction, conceptual design documents, and schematic design documents and into the construction phase.

**4.1.8.1 EFFECTS OF RETAINING LAIR, REMOVING LAMC, AND ADDING NEW CONSTRUCTION**

This alternative would provide for the continued use of the LAIR, and could include 503,000 square feet of replacement construction should the LAMC facility be demolished. Retention of the LAIR would only allow for the partial restoration of the historic setting of the earlier hospital complex and significant streetscapes. Therefore, the building would continue to have an adverse effect on the adjacent historic buildings.

New construction that would replace LAMC could be located on the present building site or distributed as infill construction throughout the 60-acre Letterman Complex. New construction would be sited and designed to reinforce historic patterns of development. Development on the 23-acre site would be directed by the Planning Guidelines (included in Appendix B) and Design Guidelines for new construction and would be more compatible in scale and massing than the existing LAMC. For infill construction elsewhere in the 60-acre Letterman Complex, additional design guidelines would be developed as required by mitigation measure CR-2, *Planning and Design Guidelines for Infill Construction*. New buildings would be compatible with adjacent historic buildings in height, size, and form and would use a palette of materials found elsewhere in the complex and Presidio, to ensure compatible new design. In conjunction with the rehabilitation of historic buildings and landscape throughout the Letterman Complex, demolition of LAMC with compatible new construction would have a beneficial effect on the historic setting.

**4.1.8.2 BENEFICIAL EFFECTS ON EXTANT CULTURAL LANDSCAPE FEATURES**

The historic landscape of the Letterman Complex has been compromised over time by the realignment of Lombard Drive in the 1950s, the construction of the LAMC and LAIR, and the removal of numerous historic structures, along with new construction that is not in keeping with the historic setting (such as buildings 1027, 1028, 1029, and 1030). Under this alternative, significant historic landscape features and spaces within the 60-acre complex would be rehabilitated and preserved during the process of making changes to accommodate new uses. Site improvements, listed below, done in conformance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes* (NPS 1996c), would enhance the historic setting and compatible new landscape elements would reinforce the significant characteristics of the Letterman Complex:

- The historic Lyon Street windrow and other remnant historic tree plantings would be maintained and rehabilitated.
- The Presidio boundary wall and Lombard Street Gate would be preserved and rehabilitated.
- Historic circulation networks would be retained and streetscapes rehabilitated.
- New construction, including infill construction within the historic hospital complex, would be sited to reinforce the historic patterns of development.
- Historic drainage patterns and features would be preserved and reused whenever possible.
- The Gorgas Avenue streetscape would be preserved, in conjunction with the removal of nonhistoric buildings and landscape elements along this streetscape, to protect the last remaining industrial/maintenance center in the historic district.



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**4 . 1   E N V I R O N M E N T A L   C O N S E Q U E N C E S :   A L T E R N A T I V E   1  
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- Excess pavement throughout the historic hospital complex would be removed.
- Infill construction within the historic hospital complex would enhance the campus-like setting of the historic landscape and unify the disjointed remnant of the historic building cluster.
- Infill construction would reestablish the western edge of the former hospital courtyard.
- Infill construction would reestablish sections of the historic street layout and landscape, resulting in a beneficial impact on the cultural landscape.

**4.1.8.3 EFFECT DUE TO INTERSECTION AND ROADWAY IMPROVEMENTS**

Under this alternative, several changes would be made to the east end of the Gorgas Avenue corridor to address traffic and safety concerns. These actions include the reconfiguration of the Gorgas Avenue Gate/Lyon Street entrance and a connector from Gorgas Avenue to Richardson Drive

Reconfiguration of the Gorgas Avenue Gate/Lyon Street entrance to address traffic safety concerns would include a reduction of non-historic pavement to the maximum extent possible, restoration of the immediate historic landscape, and a more defined sense of entry into the Presidio, as historically existed.

A new, 28-foot wide road lane would be constructed between buildings 1160 and 1152 to facilitate movement of traffic from the Letterman Complex to Richardson Avenue. The siting of a new connector for exiting traffic from Gorgas Avenue to Richardson Avenue would result in an increase of vehicular traffic on the eastern edge of Gorgas Avenue. However, this new connector would not require the removal of 1160, a contributing building to the National Historic Landmark district. Building 1152, constructed in 1945 as a two-story wood, concrete and steel frame gymnasium with red composition roof, is currently in use as a gym and would be retained. The alteration of the setting at the east end of Gorgas Avenue, through increased vehicular traffic and the potential segregation of buildings 1151 and 1152 from pedestrian traffic in this area, would not constitute an adverse effect on these properties. The balance of the streetscape's industrial character would be preserved and design refinements of these intersection improvements would strive to maintain the overall streetscape and its character-defining features. Safe pedestrian access to buildings 1151 and 1152 would also be factored in the design process.

The minor roadbed improvements at the Lombard Street/Presidio Boulevard intersection alter the immediate landscape by widening the northbound lane of Presidio Boulevard to provide one right-turn lane in addition to the through lane. Construction would be kept to a minimum to preserve and protect as much as possible of the remnant historic landscape features to retain the historic character of the road corridor.

Improvements to the Lombard Street Gate entrance which would include signalization and re-striping to accommodate one turning lane and one through lane within the Presidio, would not have an adverse effect on elements of the historic gate entrance. In conjunction with the intersection improvements, the historic gate and wall would be preserved through conservation work. Overall, these intersection improvements would comply with *The Secretary's Standards for the Treatment of Historic Properties* and would not have an adverse effect on the National Historic Landmark.

**4.1.8.4 VISUAL IMPACTS**

This alternative includes the removal of LAMC and its replacement with lower-scaled construction which would have a beneficial effect on the visual quality of both the 23-acre site and the 60-acre Letterman Complex.



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**4 . 1   E N V I R O N M E N T A L   C O N S E Q U E N C E S :   A L T E R N A T I V E   1  
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Should this alternative include the removal of the 10-story LAMC building, and replacement with new construction limited to 60 feet in height, the visual integrity of the complex would be enhanced and views from many vantage points within the Presidio would be greatly improved. Conversely, because the LAMC is so visually conspicuous, its retention and use under this alternative would continue to diminish the visual integrity of the complex. If infill construction within the Letterman Complex occurs, scenic viewing may be adversely affected (Figure 20). However, additional design guidelines for infill construction in the complex and building height restrictions would help to minimize these impacts.

**4.1.8.5 EFFECT ON VISITOR EXPERIENCE**

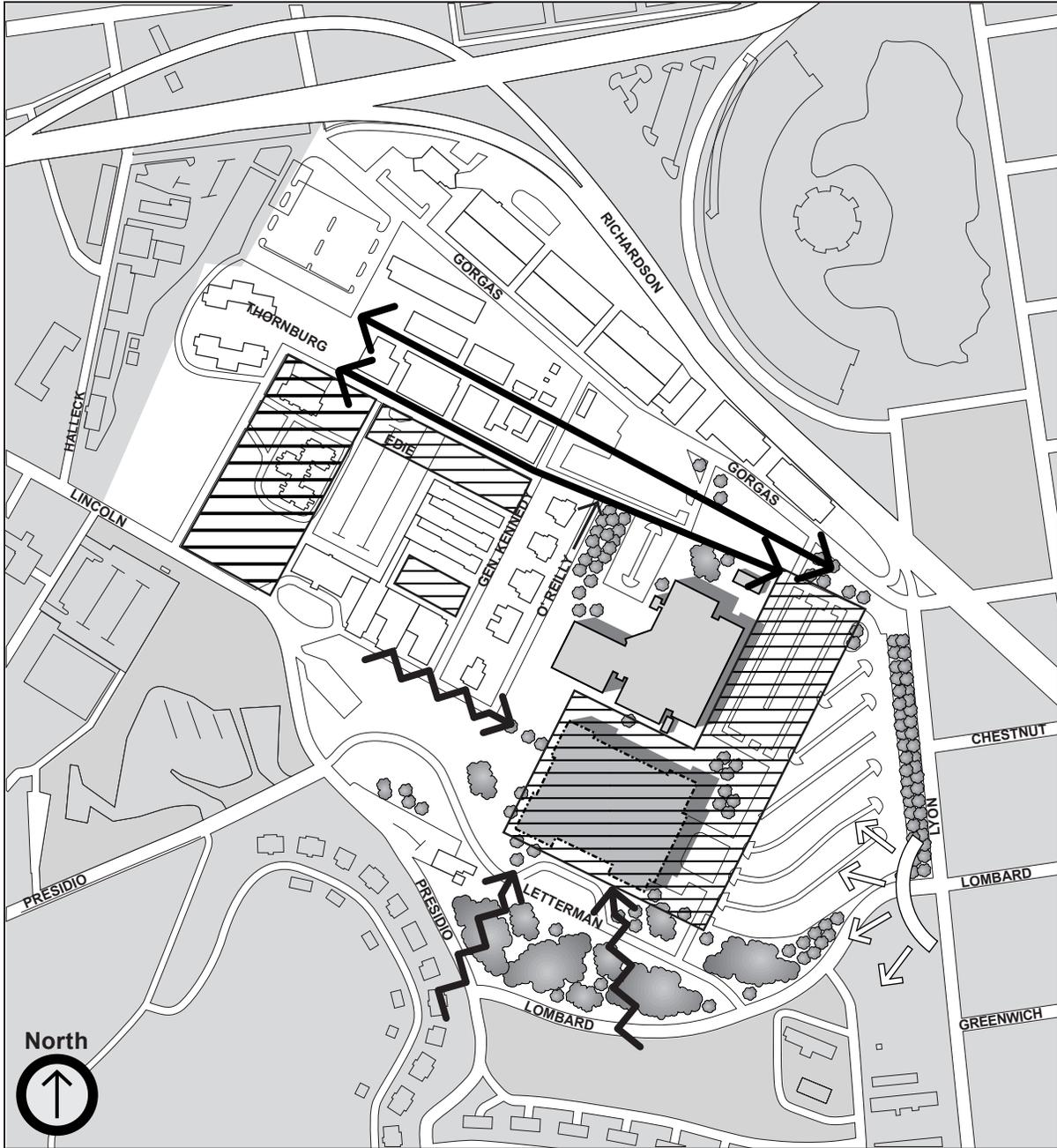
Under this alternative, the 23-acre site would be used as a research and education facility that would provide new opportunities for residents and visitors to attend educational programs and learn about advances in health and science. Actions such as the introduction of information/orientation kiosks, the rehabilitation of historic buildings to include public lobby spaces with interpretive information about the complex, the reuse of the Letterman auditorium for public programs, and interpretive displays incorporated into the landscape at key spots would have a beneficial impact on the visitor experience. In addition, infill construction throughout the complex could afford an opportunity for public gathering places and locations for programs open to the public. These improvements would increase public access and visitor opportunities considerably over what exists today for visitors.

**4.1.8.6 EFFECT ON ARCHEOLOGICAL PROPERTIES**

The initial Archeological Management Assessment (AMA) conducted for the 60-acre Letterman Complex indicates that ground-disturbing activities associated with the alternative would have the likelihood of encountering archeological resources. Appendix F contains a program describing future AMAs and Monitoring Programs to be employed for all undertakings at the Letterman Complex. The AMAs and Monitoring Programs would ensure that all planned undertakings would be reviewed by a qualified archeologist prior to their implementation. Construction projects and ground-disturbing activities would be closely observed in the vicinity of sensitive archeological areas to discover, document, protect, and manage the archeological record of the Presidio. An inventory study of known archeological sites in the area of each undertaking, including test excavations, as appropriate, would be conducted to determine whether significant sites or historic features are extant and whether construction might adversely affect archeological resources. Reports of any investigations would be submitted to the SHPO and the ACHP. A phased inventory, evaluation, monitoring, and treatment program for archeological resources regarding ongoing maintenance and construction in the complex would be conducted. The discovery of any human remains or associated mortuary items covered under the Native American Graves Protection and Repatriation Act would be treated in accordance with 43 CFR 10.4 (Inadvertent discoveries). Consultation and work would be conducted in accordance with the Programmatic Agreement (Appendix F to the EIS).



4.1 ENVIRONMENTAL CONSEQUENCES: ALTERNATIVE 1  
 (SCIENCE AND EDUCATION CENTER)



-  Historic View Corridors
-  Obstructed Views
-  Views from Entry Point

**Figure 20.**  
**Visual Impacts of**  
**Alternative 1**



#### ***4.1.9 Air Quality***

This section summarizes both the short-term and long-term impacts of the alternative on air quality. Based on BAAQMD recommendations for compliance with CEQA and the methodology applied within the 1994 GMPA EIS, the following methods are used to predict impacts:

- Qualitative discussion of construction emissions based on the methods outlined in the BAAQMD *CEQA Guidelines* (1996).
- Quantitative discussion of regional operational emissions based on use of CARB's EMFAC7G and URBEMIS7G emissions estimating models and the BAAQMD *CEQA Guidelines*.
- Quantitative discussion of local operational concentrations of CO based on use of the California Department of Transportation's CALINE4 dispersion model and the BAAQMD *CEQA Guidelines*.
- Documentation of state implementation plan conformity based on the methodology provided in 40 CFR 51 Subpart W and the BAAQMD *CEQA Guidelines*.

The following criteria are considered to assess the degree of impact (BAAQMD 1996):

##### *Project Demolition/Construction Impacts*

- Whether appropriate mitigation is employed to minimize particulate emissions during construction/demolition.
- Whether construction/demolition-related emissions of asbestos are in compliance with BAAQMD Regulation 11, Rule 2.

##### *Project Operations Impacts*

- Whether operation-related emissions equal or exceed 80 pounds per day of ROG, NO<sub>x</sub>, and inhalable particulates (PM<sub>10</sub>).
- Whether CO concentrations are above the federal or state ambient air quality standards.
- Whether there is the potential to expose the public to toxic air contaminants in excess of the following thresholds (these criteria refer to incremental risk of the proposed project):
  - Probability of contracting cancer exceeds 10 in 1 million for the maximally exposed individual.
  - Ground-level concentrations of noncarcinogenic toxic air contaminants would result in a hazard index greater than 1 for the maximally exposed individual.

##### *Cumulative Impacts*

- Whether proposed development conforms to applicable implementation plans approved under Section 176(c) of the federal Clean Air Act.



**4.1.9.1 SHORT-TERM DEMOLITION/CONSTRUCTION IMPACTS**

*Particulate Emissions* – Since this alternative involves building demolition and potential construction replacement, air quality could potentially be affected for a short period. Heavy equipment activity could create fugitive dust and emit NO<sub>x</sub>, CO, SO<sub>2</sub>, hydrocarbons (HC) and particulate matter as a result of diesel fuel combustion. The primary pollutant of concern in fugitive dust would be PM<sub>10</sub>. Construction emissions would be short term and temporary, but could still cause adverse effects on local air quality.

The Bay Area Air Quality Management District (BAAQMD 1996) has developed an analytical approach that obviates the need to quantitatively estimate these emissions. Instead, BAAQMD has identified a set of feasible PM<sub>10</sub> control measures for construction activities (Table 23). Should the LAMC be removed to restore open space, both basic and enhanced control measures would be applicable. 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.

*Asbestos* – The demolition, renovation or removal of asbestos-containing building materials is subject to BAAQMD Regulation 11, Rule 2. Any demolition activity subject to, but not complying with the BAAQMD requirements, would be considered to have a significant impact. Because the alternative would comply with the applicable requirements for asbestos control, demolition and construction activities would cause a less-than-significant impact.

**4.1.9.2 LONG-TERM REGIONAL OPERATION IMPACTS**

Regional emissions caused by project-related traffic are estimated for each alternative using the URBEMIS7G computer program (SJVUAPCD 1998). URBEMIS was developed by the California Air Resources Board as a planning tool to assess the region-wide impacts of proposed land use developments. To estimate vehicular emissions, the URBEMIS7G model uses emission factors from the California Air Resources Board EMFAC7G emissions model. Vehicle operating characteristics are determined by each land use type in the alternative and the setting of the site. The emission rates are calculated using the vehicle-dependent factors from the EMFAC7G model. URBEMIS provides the resulting emission rates.

The following input is used with the URBEMIS7G model. The daily vehicular trip generation rate and the worker trip percentage for each proposed land use category are based on the transportation analysis for this document (Wilbur Smith Associates 1999). Default values recommended by the BAAQMD (1996) are used for the vehicle fleet, the average trip length, and meteorological conditions within the San Francisco portion of the air basin. All pollutants except CO are analyzed under summer conditions using a temperature of 75 degrees Fahrenheit; CO is analyzed under winter conditions at 40 degrees Fahrenheit.<sup>1</sup> The analysis year for each alternative is 2010.

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<sup>1</sup> Average summer and winter temperatures based on NOAA-CIRES data and Appendix H of URBEMIS7G User's Guide (SJVUAPCD 1998).



*Table 23*  
*Feasible Control Measures for Construction Emissions of PM<sub>10</sub>*

<b>FUGITIVE DUST CONTROL</b>	<b>CONTROLS TO BE IMPLEMENTED AT ALL CONSTRUCTION SITES</b>
Basic Control Measures (all construction sites)	<p>Cover all trucks hauling soil, sand, and other loose materials, <i>or</i> require all trucks to maintain at least 2 feet of freeboard.</p> <p>Water all active construction areas at least twice daily.</p> <p>Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas.</p> <p>Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.</p> <p>Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.</p>
Enhanced Control Measures (sites greater than 4 acres)	<p>All “basic” control measures listed above.</p> <p>Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more).</p> <p>Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)</p> <p>Limit traffic speeds on unpaved roads to 15 mph.</p> <p>Install sandbags or other erosion control measures to prevent silt runoff to public roadways.</p> <p>Replant vegetation in disturbed areas as quickly as possible.</p>
Optional Control Measures (sites near sensitive receptors)	<p>Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site.</p> <p>Install windbreaks, or plant trees/vegetative windbreaks at windward side(s) of construction areas.</p> <p>Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.</p> <p>Limit the area subject to excavation, grading and other construction activity at any one time.</p>

Source: BAAQMD 1996



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**4.1 ENVIRONMENTAL CONSEQUENCES: ALTERNATIVE 1  
(SCIENCE AND EDUCATION CENTER)**

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Alternative 1 assumes demolition of LAMC and replacement construction up to 503,000 square feet for research and education space. Alternative 1 would result in an increase of up to approximately 5,430 internal and external vehicle trips per day. Based on URBEMIS7G modeling results, increased vehicle trips associated with the alternative would generate approximately 52 lb/day of ROG, 88 lb/day of NO<sub>x</sub>, 39 lb/day of PM<sub>10</sub>, and 634 lb/day of CO. These emission rates are summarized in Table 22. Alternative 1 would result in regional operational emissions exceeding the BAAQMD's significance thresholds for NO<sub>x</sub>. Implementation of TDM measures would encourage alternatives to automobile use, and thus contribute to improvements in air quality and lower NO<sub>x</sub> emissions.

Alternative 1 would also result in nominal emissions from the use of electricity and natural gas at the site. Emissions would be produced directly at the site with the burning of natural gas by water heaters, space heaters, and gas appliances. Emissions are produced indirectly through increased electricity usage for space heating, lighting, and operation of electrical appliances. However, these emissions would not be significant when compared to the emissions caused by project-related traffic. Indirect emissions associated with electricity generation may occur at plants that are outside of the San Francisco Bay Area air basin. Alternative 1 would not have the potential to expose nearby receptors to toxic air contaminants.

**4.1.9.3 LONG-TERM LOCAL OPERATIONS IMPACTS**

Table 22 shows that regional emissions of CO for Alternative 1 would exceed the BAAQMD screening threshold of 550 pounds per day. Therefore, the following analysis of localized CO impacts is necessary. For analysis of localized CO concentrations under Alternative 1, the BAAQMD's manual calculation method is used to evaluate worst-case air quality conditions at the most heavily impacted intersection. The most congested intersection of the transportation analysis is the Lombard Street/Lyon Street intersection (other intersections in the vicinity would operate at better levels of service than Lombard Street/Lyon Street). Emission factors and reference CO concentrations based on worst-case meteorology are recommended by the BAAQMD (1996). To evaluate worst-case conditions, the projected 2010 p.m. peak hour traffic volumes and intersection geometry are used with the reference concentrations to estimate the worst-case future CO concentrations in the vicinity of the intersection. Concentrations fall off rapidly as distance from the intersection increases. Because the worst-case traffic volumes and meteorological conditions are considered, the analysis provides a conservatively high estimate of concentrations.

Alternative 1 would result in 2010 volumes of less than 1,680 vehicles per hour during the p.m. peak hour through the Lombard Street Gate. The value of 1,680 vehicles per hour is selected as a hypothetical worst-case vehicle count for Lombard Street Gate. Based on the modeling results using the BAAQMD manual calculation with these worst-case traffic volumes, Alternative 1 would generate roadside concentrations of less than 7.9 parts per million (ppm) of CO on a 1-hour basis and 5.4 ppm of CO on an 8-hour basis. The state ambient air quality standards for CO are 20 ppm on a one-hour basis and 9 ppm on an 8-hour basis. Therefore, Alternative 1 would not result in local operational air quality impacts exceeding the state ambient air quality standards for CO.



#### ***4.1.10 Noise***

This section summarizes both the short-term and long-term impacts of Alternative 1 on the noise environment. Based on the methodology within the GMPA EIS, the following methods were used to predict impacts:

- Review of the existing land uses and noise environment.
- Analysis of construction noise impacts based on compliance with provisions equivalent to the standards in the applicable local noise ordinance.
- Analysis of traffic noise increases caused by traffic volume increases.
- Analysis of stationary source noise impacts based on review of proposed uses and nearby sensitive receptors.

The following criteria were considered to assess the degree of impact.

##### *Project Demolition/Construction Impacts*

- Whether noise impacts during periods of demolition or construction would exceed the limitations of the San Francisco Noise Ordinance.

##### *Project Operations Impacts*

- Whether traffic noise exposure for noise-sensitive receptors would be in excess of thresholds contained in 23 CFR 772, or, in those areas where traffic noise already exceeds applicable standards, would result in a noticeable traffic noise increase (i.e., greater than 3 dBA).
- Whether stationary noise source exposure at noise-sensitive receptors would be in excess of applicable safety standards.

#### **4.1.10.1 SHORT-TERM DEMOLITION/CONSTRUCTION NOISE IMPACTS**

Construction noise is assessed qualitatively in terms of the distance between sensitive receptors and construction activities. Reference noise values for standard construction activities are found in Table 24.

Construction noise would create an intermittent impact on the noise environment. Reference construction noise data illustrates that operation of typical construction equipment would result in noise levels between approximately 75 dBA and 100 dBA measured 50 feet from the source, depending primarily on the type of equipment.

The schedule for demolition and construction is provided in Section 2.3.7. Construction activities would include demolition, grading, excavation, foundation work and truck traffic, and would most likely be noisiest during the first three to six months of the project. Building demolition would take place in three phases: 1) hazardous material abatement; 2) building salvage/material reclamation; and 3) structure demolition. Hazardous material abatement work, covering a period of 45 to 60 days, would largely be contained within the



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*Table 24*  
*Construction Equipment Noise Levels Before and After Mitigation (dBA)*

EQUIPMENT TYPE	NOISE LEVEL AT 50 FEET (dBA)	
	WITHOUT NOISE CONTROL	WITH FEASIBLE NOISE CONTROL <sup>a</sup>
<b>Earthmoving</b>		
Front Loaders	79	75
Backhoes	85	75
Dozers	80	75
Tractors	80	75
Scrapers	88	80
Graders	85	75
Trucks	91	75
Pavers	89	80
<b>Materials Handling</b>		
Concrete Mixers	85	75
Concrete Pumps	82	75
Cranes	83	75
Derricks	88	75
<b>Stationary</b>		
Pumps	76	75
Generators	78	75
Compressors	81	75
<b>Impact</b>		
Pile Drivers	101	95
Jack Hammers	88	75
Rock Drills	98	80
Pneumatic Tools	86	80
<b>Other</b>		
Saws	78	75
Vibrators	76	75

Source: Bolt, Beranek and Newman 1971

Note:

<sup>a</sup> With feasible noise controls, these levels are obtainable by selecting quieter procedures or machines, requiring no major redesign or extreme cost.



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buildings and would have little effect on adjoining uses. The second phase, building salvage/reclamation, would require 30 to 60 days and would also be mostly contained within the structures. The final structure demolition activity would take 30 to 60 days.

Earthmoving activities and most demolition activities are capable of causing noise levels between approximately 85 and 90 dBA at distances of 50 feet from the source without noise control. With noise control, as shown in Table 24, the same sources would be between 75 and 80 dBA. This would include most stationary noise sources, such as pumps, generators, and mixers, and most mobile sources, including dozers, trucks and scrapers. Noise levels for a single piece of equipment tend to drop off at a rate of 6 decibels per doubling of distance. This means that beyond 100 feet of the noise source, routine construction noise levels would be between approximately 79 to 84 dBA without noise control, or 69 to 74 dBA with noise control.

Demolition activities could include mechanical wrecking and use of an onsite temporary concrete crushing operation. Construction could also require use of impact tools such as pile drivers. During the short periods of potential impact tool use, considerable noise would be generated. Stationary source noise due to the crushing operation could also be considerable. If conducted at the Letterman Complex, these activities would be intermittent and of a short-term nature.

*Impacts on Residential Neighborhoods* – The analysis of construction noise in the GMPA EIS was based on the demolition and removal of about 275 buildings, including the LAMC (NPS 1994a). The GMPA EIS determined that buildings to be removed would need to be at least 250 feet from nearby residences and facilities in order for noise impacts on property owners to be less than 80 dBA  $L_{eq}$ . Should the LAMC building be removed under this alternative to restore open space, demolition would take place about 450 feet from the nearest residential neighborhoods. Thus, demolition activities would not exceed the noise thresholds in the San Francisco Noise Ordinance.

Impact tools would be required by mitigation measure NO-1, *Reduction of Construction Noise* to be equipped with intake and exhaust mufflers. While noise would be expected to be noticeable to residents within the adjacent San Francisco neighborhoods, these residences are at least 250 feet from the construction area and are currently exposed to noise from other nearby urban activities. Because the impacts would be short term and they would also be attenuated over the distance and partially masked by unrelated urban noise, the residences would not experience disruptive noise levels.

*Impacts on Recreational Users Outside the Letterman Complex* – Recreational users outside the Letterman Complex would experience construction noise throughout its duration, but because of the size and location of the Letterman Complex, most would be protected from construction noise by distance. Because the Letterman Complex is within a developed area and within close proximity to the Lombard Street and Gorgas Avenue gates, routine construction noise is not expected to adversely impact the natural quiet of areas experiencing less activity within the Presidio. Since the activities would be more than 250 feet away from most recreational users within the Presidio and the impacts would be reduced by mitigation measure NO-1, *Reduction of Construction Noise*, the noise levels would be below thresholds in the San Francisco Noise Ordinance and would not be expected to disturb recreational users, tenants, or other people outside the Letterman Complex.



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*Impacts on Recreation Users and Others Within the Letterman Complex* – Short-term impact tool use and demolition activities could be disruptive to passive recreation users and other people within the Letterman Complex. As determined in the GMPA EIS and required by mitigation measure NO-1, *Reduction of Construction Noise*, erecting barriers around construction equipment and restricting access to construction sites would reduce noise impacts but not to a level of insignificance to those closest to (i.e., within 250 feet from) construction equipment. Since these users could experience potentially disruptive impacts, replacement construction under this alternative would have an unmitigable, potentially significant short-term impact on the occupants and recreational users internal to the Letterman Complex.

**4.1.10.2 LONG-TERM TRAFFIC NOISE INCREASES**

The analysis in the GMPA EIS for impacts due to traffic noise is based on a comparison of the existing noise environment with compatibility standards for land use development established by the Federal Highway Administration (FHWA) and the American National Standards Institute (ANSI). The analysis shows that traffic noise would increase under the GMPA as traffic to and from the Presidio increased, and that the increases would not substantially exceed existing noise levels or the FHWA Noise Abatement Criteria or ANSI standards (NPS 1994a). Because traffic volumes for Alternative 1 would be within the volumes shown in the GMPA EIS, noise impacts due to traffic would be within the impacts illustrated in the GMPA EIS.

This analysis re-evaluates the traffic noise environment for compatibility with the noise abatement criteria and evaluates traffic volume increases associated with new development to determine whether noise level increases would be noticeable. Generally, traffic volumes must double to produce a noticeable (3-dBA) increase in noise levels. For outdoor recreation areas, the applicable noise abatement criteria is 67 dBA  $L_{eq}$  (23 CFR 772).

Existing noise levels along the roadways surrounding the Letterman Complex are described in Section 3.12.2. The transportation analysis for this document provides p.m. peak hour traffic volumes for nine intersections and numerous roadways in the site vicinity. Traffic volume increases between existing p.m. peak volumes and 2010 p.m. peak volumes with Alternative 1 are examined for Lyon Street between Lombard and Francisco streets, Presidio Boulevard north of Lombard Street, and Gorgas Avenue west of Sternberg Road. The roadways which are external to the Letterman Complex, including Presidio Boulevard in the vicinity of the Officers' Family Housing (at Lombard Street), would experience less than a two-fold increase in peak traffic volumes over existing conditions. Because peak traffic volume increases on these streets would be less than two-fold, associated noise level increases would be less than 3 dBA. This means that residents within the adjacent San Francisco neighborhoods and users of the Officers' Family Housing would not experience noticeable noise level increases, and no significant impacts are expected.

To characterize noise levels within the Letterman Complex and near intersections and roadways that could be newly created by the proposed development, the noise environment along Gorgas Avenue was analyzed. Gorgas Avenue and the Gorgas Avenue Gate would experience considerable increases in traffic volumes. As shown in Section 3.12.2, the existing noise environment does not exceed the noise abatement criteria of 72 dB  $L_{eq}$  for developed settings. Increases between existing p.m. peak traffic volumes and 2010 peak volumes with Alternative 1 would be more than two-fold for this roadway, and increases in noise levels associated with peak traffic volumes after implementation of the alternative would be perceptible. The resulting traffic noise levels



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along Gorgas Avenue would be approximately 70 dBA within 25 feet of the centerline and less than 67 dBA beyond 50 feet. No recreational uses or housing uses are proposed under Alternative 1. Employees of the proposed research and education uses would be expected to use the open spaces proposed as part of the development. These open spaces are typical of those in other urban commercial developments and are not typical of large recreation areas such as Crissy Field or Golden Gate Park. Therefore, users of the new open space in the Letterman Complex would not be considered to be sensitive receptors. Because the traffic noise levels along Gorgas Avenue would be compatible with the uses proposed with Alternative 1, the noise levels within the Letterman Complex would cause no significant impacts.

Because no existing sensitive receptors would experience noticeable increases in peak traffic noise levels and the new uses within the Letterman Complex would be consistent with the noise abatement criteria, the traffic noise associated with Alternative 1 would not cause a significant impact.

**4.1.10.3 LONG-TERM STATIONARY SOURCE NOISE IMPACTS**

No major stationary sources of noise would be associated with Alternative 1. The alternative would result in a minor increase in stationary source noise from leasing of the LAIR and any development that would replace the LAMC. For example, heating and ventilation systems would generate a steady level of low-level noise, and the additional visitors to the uses within the Letterman Complex would generate more noise from human activity. However, noise levels at the sensitive receptors in nearby San Francisco neighborhoods are not expected to change perceptibly from existing levels. Traffic would remain the dominant noise source on and in the vicinity of the Letterman Complex. Accordingly, no significant long-term stationary source noise impacts are expected.

***4.1.11 Cumulative Impacts***

This section discusses the cumulative impacts that would result when the effects of Alternative 1 are added to or interact with effects of other proposed actions in the Presidio and surrounding area. The assessment of cumulative impacts is not substantially different from the assessment of direct or indirect impacts discussed above. The major difference is that the cumulative impact assessment entails a more extensive and broader review of possible effects.<sup>2</sup> The following analysis focuses on resources and areas that may be significantly affected by the project, including solid waste, water supply and distribution, schools, housing, traffic and transportation systems, cultural resources (including visitor experience and visual resources), air quality, and noise. As documented in Appendix A, the following resources would not be significantly affected by cumulative impacts: water quality, wetlands and stream drainages, native plant communities, wildlife, and special status species.<sup>3</sup>

The level of analysis and scope of cumulative impact assessment within each of the resource areas under consideration is commensurate with the potential impacts, i.e., a greater degree of detail is provided for potentially more serious impacts. The qualitative and quantitative criteria identified at the beginning of each

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<sup>2</sup> While no “cookbook” approach to cumulative impacts analysis exists, the approach taken in this section is described in a CEQ handbook (1997).

<sup>3</sup> Documented in Sections D, Water Quality; O, Wetlands and Stream Drainages; P, Native Plant Communities; Q, Wildlife; and R, Special Status Species in Appendix A.



discussion of impacts within Sections 4.1.2 through 4.1.10 were used to determine whether cumulative impacts would be significant and whether the resources of concern would be degraded to unacceptable levels. Where applicable, cumulative effects are also compared to appropriate national, state, regional, or community goals to determine whether the total effect would be significant.

#### **4.1.11.1 SOLID WASTE**

Demolition, construction and renovation activities at the Letterman Complex would include the disposal of approximately 35,400 tons of debris and would contribute to a cumulative reduction in regional solid waste capacity. These activities, along with the other projects listed in Table 9, would result in the disposal of a total of approximately 63,145 tons of debris.<sup>4</sup> This tonnage would result primarily from the potential demolition of the 451,000-square-foot LAMC and the 356,000-square-foot LAIR facilities at the Letterman Complex and the 122,000-square-foot addition to building 1801 at the Public Health Service Hospital Complex. The 63,145 tons of debris generated from the Letterman Complex and the other projects represents approximately 1.0 percent of the 6.6 million tons total volume of waste disposed of in the nine-county Bay Area in 1997. Wood and masonry (composed primarily of brick and concrete) would be the largest portion of the waste stream, followed by gypsum, paper, glass, plastics, asphalt, various roofing materials, and mixed waste. Wastes would also include major appliances, heating and air conditioning equipment and ducting, furniture, carpet and flooring, wiring, plumbing, and other fixtures (though many of these items would be sold or salvaged prior to demolition). The California Integrated Waste Management Act of 1989 requires cities and counties to divert 50 percent of their waste streams from landfills. The Presidio Trust would implement cost-effective, environmentally protective alternatives to disposal of demolition debris to help meet the mandates of the state's 1989 waste diversion law, such as the following:

- Choosing contractors who understand the processes involved and are able to maximize reuse and recycling of construction and demolition materials.
- Clearing salvageable items prior to demolition activities, including such items as piping, flooring, doors, windows, bathroom fixtures and kitchen fixtures, hospital equipment, heaters, and lumber.
- Removing and encapsulating contamination before demolition to minimize commingling of the wastes and to maximize reuse of the uncontaminated materials.
- Bringing down buildings piece by piece, as in hand demolition, to recover the maximum amount of reusable materials.
- Size reducing (especially concrete) and presorting and segregating materials after demolition to increase salvage value of the recovered materials and to decrease tipping fees for different materials in the debris.
- Recycling materials onsite to lower both hauling and disposal costs.
- Storing recovered materials within the Presidio to avoid flooding a market with too much material at one time (which drives local prices down and reduces potential income from the sale of the material).

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<sup>4</sup> The Crissy Field project included removal of 86,000 tons of soil containing hazardous substances which were taken to federally approved dump sites. The contribution to the regional solid waste stream associated with this soil removal was not considered in the cumulative impacts on the solid waste stream as the disposal is related to hazardous waste, rather than the general waste streams analyzed in this assessment.



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Implementation of these strategies to dispose of demolition debris would reduce the impacts on regional landfills to a less than significant level.

**4.1.11.2 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 1.62 mgd with this alternative and the other projects listed in Table 9 that are within the Presidio (BAE 1998a). Alternative 1 and the other identified projects within the Presidio would contribute to a net cumulative peak shortfall of approximately 221,000 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, WS-3, and WT-1 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.

**4.1.11.3 SCHOOLS**

As discussed in the GMPA EIS, this alternative would not contribute to cumulative impacts to SFUSD because existing Presidio housing units have been historically contained within the jurisdiction of the SFUSD and new school enrollment represents partial restoration of prior enrollment levels. SFUSD would be reimbursed through Impact Aid Program payments for pupils living at the Presidio. The increased intensity of residential use of the 1880 Lombard Street residential building would not be of a magnitude that would result in a significant increase in school enrollment.

**4.1.11.4 HOUSING**

This alternative and the projects listed in Table 9 would add 2,231 employees to the local economy. The new development within the Letterman Complex accounts for 970 jobs, or 43 percent of this total. This growth in employment is estimated to require 430 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.

**4.1.11.5 TRAFFIC AND TRANSPORTATION SYSTEMS**

The traffic generated by the land uses under Alternative 1 would contribute to the expected increases in traffic volumes on adjacent local and regional roadways. In addition to the land uses proposed in Alternative 1, cumulative increases in traffic volumes would be attributable to reasonably foreseeable projects within the Presidio and in the surrounding neighborhoods as shown in Table 19. Alternative 1 would contribute 27 percent



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of the total p.m. peak-hour traffic resulting from these cumulative projects (Table 19). This proportion varies throughout the project impact zone depending on location. For example, Alternative 1 would contribute 20 percent of the cumulative growth in traffic at the intersection of Lyon and Lombard streets and 87 percent of cumulative growth in traffic at the reconfigured intersection of Richardson Avenue/Lyon Street, which is the primary vehicular entrance to the 23-acre site.

The operating conditions at the project impact zone intersections shown in Table 20 reflect the impact of Alternative 1 land uses and the other cumulative projects and actions occurring within and near the Presidio. The combined cumulative projects, including Alternative 1, would generate increased traffic volumes throughout the Presidio. The cumulative projects would contribute 330 additional vehicles on Lincoln Boulevard during the p.m. peak hour, and Alternative 1 would make up about 14 percent of the additional traffic. Delays would increase at critical intersections, but would generally remain at acceptable levels. Exceptions would occur at the intersections of Presidio Boulevard/Lombard Street and Lombard Street/Lyon Street, where drivers would experience substantial delays. However, mitigation measures TR-2, *Lombard Street/Lyon Street Intersection Improvements* and TR-3, *Lombard Street/Presidio Boulevard Intersection Improvements* would improve operating conditions at these intersections to acceptable conditions (LOS D or better), as shown in Table 20.

The parking demand generated by the cumulative projects, including Alternative 1, is estimated to be 4,432 spaces. All of the parking demand related to cumulative projects within the Presidio would occur outside Area A, except the additional demand generated by actions at Crissy Field. The East Beach at Crissy Field would create a demand for 100 additional parking spaces (Table 21). The increased parking demand would be accommodated by the 560-space proposed supply. The land uses of Alternative 1 would comprise 35 percent of the total cumulative parking demand within the Presidio and 30 percent of the total cumulative parking demand within the project impact zone (Table 21). About 1,020 spaces of the parking demand would be that of residential units throughout the Presidio. The planned parking supply of 8,390 spaces throughout the Presidio (as described in the 1994 GMPA) would be adequate to accommodate expected cumulative parking demand within the Presidio.

Examining specific planning areas within the Presidio, parking supply in the 23-acre site within the Letterman Complex in Alternative 1 would not be adequate to support the predicted demand of 1,320 spaces, as discussed in Section 4.1.7.3. Mitigation measure TR-4, *Monitoring of Parking* would ensure that the shortfall does not result in employees or visitors to the 23-acre site seeking parking outside the Letterman Complex. In the Main Post, cumulative land uses would generate 1,030 parking spaces which, when added to the current demand, yields a demand for 1,550 parking spaces, or 230 spaces fewer than the 1,780-space supply described for Year 2010 in the GMPA.

The city has indicated that the impact of the two Lombard Street projects on parking availability would not be substantial, although neighbors have reported that very few parking spaces are available at evening hours. The projects are expected to fall just short of estimated parking demand by about four to six spaces. This unmet parking demand would mean drivers would need to compete for on-street parking in the vicinity or outside of the immediate area (including the Presidio), which, though inconvenient, would not substantially alter the



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existing nature of area-wide parking conditions. The increase in attendance due to the renovation of the Exploratorium would increase the parking demand to a maximum on weekends of 520 spaces. The Exploratorium has requested use of parking (about 210 spaces) in the Presidio for peak periods utilizing shuttle buses if appropriate. The Exploratorium parking may need to be expanded to reduce the demand deficit as the Exploratorium's activities increases. Event coordination between staff of the Presidio Trust and the Exploratorium would be required to reduce concurrent demand for available parking spaces.

This alternative's contribution of cumulative traffic and parking conditions would not be considerable, and would have a minor cumulative effect on local and regional traffic growth and related congestion.

**4.1.11.6 CULTURAL RESOURCES**

The area of potential effect for this cumulative impact analysis consists of the Presidio and adjacent San Francisco neighborhoods. The entire Presidio is listed on the National Register of Historic Places as a National Historic Landmark district. Of the projects listed in Table 9 and shown in Figure 14, all those within the Presidio would have some effect on the historic resources which contribute to its landmark status. The undertakings would involve the rehabilitation of currently vacant buildings, replacement of non-historic buildings with compatible new construction, rehabilitation of cultural landscapes and natural landscapes, water conservation, improvements to traffic safety and efficiency, and enhancements to the visitor facilities and programs. For those buildings to be rehabilitated, a use would be selected that would require minimal alteration of the building's defining characteristics — either a compatible new use or the use for which the building was originally designed. Some historic buildings would have to be altered to accommodate new uses. The standards for rehabilitation contained in *The Secretary of the Interior's Standards for the Treatment of Historic Properties* (NPS 1992a) would set the minimum standards for proposed changes. Under Section 110 of the NHPA, all federal agencies must carry out their programs in accordance with national historic preservation policy and make efforts to minimize harm to National Historic Landmarks. Furthermore, Section 110(f) of the NHPA charges federal agencies to afford some special protection to National Historic Landmarks. Specifically, it requires that the agency "to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm" to a National Historic Landmark that may be directly and adversely affected by an undertaking. Section 106 of the NHPA requires federal agencies to take into account the effects of their actions on historic properties and seek comments from an independent reviewing agency, the Advisory Council on Historic Preservation. Adherence to the Section 106 process would avoid unnecessary harm to historic properties. For new construction, planning and design guidelines would be developed to ensure compatibility with the historic setting. All of these undertakings would involve appropriate treatments for cultural landscapes and respect for the scenic and cultural resources of the Presidio.

*Letterman Complex* – This alternative would contribute to cumulative beneficial effects on the National Historic Landmark district. New construction would employ a contextual approach to architecture and site planning to create a development more compatible with the existing Letterman Complex than the existing LAMC, which could be demolished under this alternative. Buildings within the 23 acres and possibly in other sites within the complex would be compatibly designed and sited to unify the historic hospital complex. Removal of the ten-story Letterman tower and restricting new construction to 60 feet in height would improve regional views of the complex from adjacent Presidio areas and surrounding neighborhoods. Restoring visual order to the complex



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and reducing surface parking would also improve scenic viewing. If the existing concrete structure is removed and replaced by buildings that use materials based on character-defining elements of historic buildings found elsewhere within the complex and throughout the Presidio, the new buildings would be more compatible with the historic and visual setting than the current LAMC. However, retention of the LAIR would continue to have an adverse effect on the adjacent historic structures.

*Fifteen Historic Buildings at the Main Post* – This action involves the rehabilitation of 15 historic buildings for new compatible uses. It would preserve historically significant buildings through rehabilitation. The impact on the historic buildings would be beneficial. For each building to be rehabilitated, a use would be selected that would require minimal alterations of the building’s defining characteristics. Some historic buildings would have to be altered to accommodate new uses (for example, historic barracks would be converted to offices) which could have an effect on the historic building fabric or materials. Modifications to historic buildings proposed by tenants that create adverse effects would be prohibited. The undertaking would be subject to the review and approval process, known as the 5x process, established between the NPS and the SHPO in accordance with the 1994 Project Agreement developed for the Presidio, in which the Presidio Trust is an active participant.<sup>5</sup> The review process would ensure that standards for rehabilitation contained in *The Secretary of the Interior’s Standards for the Treatment of Historic Properties* (NPS 1992a) would be the minimum standard for proposed changes. In addition, actions that involve ground disturbance would be reviewed in advance, and mitigation measures to protect and record archeological resources would be implemented.

The occupancy and rehabilitation of these currently vacant buildings would improve visitor experience. An interpretive program, under development by the NPS and Presidio Trust, would provide interpretive materials throughout the Main Post and in each building lobby. Visual impacts of this undertaking would have an overall beneficial effect on the National Historic Landmark by rehabilitating the existing structures and maintaining them in good condition. The cultural landscape would be rehabilitated concurrently with building repair, and this would also be subject to the review and approval process mentioned above, resulting in improved scenic viewing and visual order at the Main Post.

*Rehabilitation and Expansion of Building 99* – The Presidio Theater, constructed in 1939, is located at the corner of Montgomery Street and Moraga Avenue at the south end of the Main Post. This action would rehabilitate and potentially expand the theater for such uses. The building is listed on the Presidio National Historic Landmark as a contributing structure, therefore the undertaking would be subject to the review and approval process, known as the 5x process, established between the NPS and the SHPO in accordance with the 1994 Project Agreement developed for the Presidio, in which the Presidio Trust is an active participant (see footnote below). The review process would ensure that standards for rehabilitation contained in *The Secretary of the Interior’s Standards for the Treatment of Historic Properties* (NPS 1992a) would be the minimum standard for proposed changes. In addition, actions that involve ground disturbance would be reviewed in advance, and mitigation measures would be implemented to protect and record archeological resources.

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<sup>5</sup> Until changed or superseded, the 1994 Project Agreement developed for the Presidio between NPS and the SHPO rather than the Letterman Complex Programmatic Agreement (provided in Appendix F) applies to planning areas outside the Letterman Complex.



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Any addition to the building would be subject to detailed design guidelines developed by the Trust to ensure that the addition's scale, massing, and architectural character would be compatible with the historic building to which it is being added and to the historic setting of the Main Post. Design guidelines as well as the proposed design of any additions would be subject to SHPO review and approval at appropriate stages.

Reactivation of the currently unused movie theater and any addition would provide an amenity which would enhance the visitor experience. Not only would a new theater provide entertainment for visitors, but theater space would be made available to park visitors for viewing interpretive and educational programs during the daylight hours when regular commercial programming is least active. Use of the movie theater for auditorium and meeting spaces by other Presidio tenants is also expected. Other functions included within the project scope, such as a café and an art gallery, would also provide amenities to enhance the visitor experience. Visual impacts resulting from an addition, including impacts on viewsheds and view corridors, would be minimized through careful siting and massing.

*Underground Parking Structure at the Main Post* – This undertaking would construct an underground parking structure at one of two possible sites within the Main Post. The Parade Ground site would be located under a portion of the main Parade Ground. The French Court site would be located under the existing parking lot between buildings 220 and 211. Either structure would be largely invisible to visitors to the Main Post, except for entrance and exit driveways. Any necessary stair or elevator towers or air intake structures would be kept to a minimum.

The undertaking would reduce or completely remove the existing 7-acre parking lot that occupies the Parade Ground, as well as reducing or eliminating smaller parking lots located throughout the Main Post. Relocation of these parking spaces to an underground structure would allow restoration of the historic Parade Ground, which would result in a beneficial effect on the National Historic Landmark district. At present, parked cars dominate the landscape and obscure visitors' understanding of the Parade Ground's historic use. Returning the Parade Ground to its historic appearance would be central to a cultural landscape rehabilitation of the Main Post. Removing smaller surface lots would allow greater options for landscape rehabilitation in various locations around the Main Post.

The undertaking would result in improved scenic viewing and enhancement of the visitor experience by locating cars out of view. Visitors would experience a setting that more closely resembled the historic appearance of the Main Post and views to the historic buildings. Primary scenic views, such as those to the bay, would also be improved. With the restoration of the Parade Ground, recreational and interpretive opportunities would increase with the creation of a car-free open space that would provide for a multitude of uses by visitors and by NPS interpretive staff.

At either site, ground disturbance associated with their construction could encounter archeological remains. The Main Post is considered an area of archeological sensitivity, with several predicted historic archeological features listed as contributing features to the National Historic Landmark district. An Archeological Management Assessment and Monitoring Program would be developed to protect, evaluate, and record historic features that were uncovered during the project. Appropriate consultation with Native American groups in



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accordance with the NHPA and the Native American Graves Protection and Repatriation Act would be carried out. The design and siting of the underground parking structure would be subject to the requirements of Section 106 of the NHPA. The design of entrance and exit driveways and ramps, and all attendant visible structures would be carefully evaluated during the Presidio Trust’s design review and compliance process to avoid adverse impacts on the historic setting.

*Public Health Service Hospital (PHSH) Complex* – As part of this undertaking, the non-historic front addition to the PSHH may be removed, and the historic front façade rehabilitated and possibly restored. Building 1801 (the hospital) is listed as contributing to the significance of the district, but with marginal integrity because of its non-historic addition. Removal of the addition and rehabilitation of the façade would have a beneficial effect on the integrity of the original hospital building. If the large parking lot north of building 1801 and other pavement and non-historic structures throughout the site are removed, it would allow for the restoration of the historic setting. These actions would have a beneficial effect on the district.

If a suitable tenant for the hospital complex is not found, the hospital building might be demolished. The Presidio Trust would first consider an array of alternatives to demolition of historic buildings. Modifications proposed by prospective tenants that create an “adverse effect” would be discouraged. If a proposal can demonstrate that it supports the achievement of other park purposes and that these purposes outweigh the requirements of historic resource protection, then modifications that cause an adverse effect may be proposed and addressed through the Section 106 process. The Section 106 compliance for the PSHH Complex would occur through a Memorandum of Agreement following identification of the preferred alternative. New building construction, including additions to buildings, would adhere to site-specific planning and design guidelines to be made available for public review and comment. Measures identified in the guidelines would ensure that building removal and new construction would not have an adverse effect on the district. The guidelines would direct all replacement construction and set forth in further detail review processes for replacement construction of buildings (e.g., massing, scale, heights, roof forms, colors, materials). A copy of these guidelines would be sent to the State Historic Preservation Officer for review. Additional measures may be imposed during preparation of the NEPA environmental analysis and Section 106 consultation under the NHPA.

Little is known about the extent, nature or location of artifact caches and the integrity of prehistoric and historic archaeological deposits at the site. The removal of structures and pavement, replacement construction, upgrading of utilities, and hazardous material remediation might adversely affect remains. One known identified resource (Marine Cemetery) and the following areas of archeological sensitivity were identified within the PSHH Complex during re-documentation of the National Historic Landmark district by the NPS prior to preparation of the GMPA EIS. The areas were identified based on trenching by the Army (Marine Cemetery only) and predictive modeling and were devised to be more intensively scrutinized or monitored if ground disturbance would occur within the site. While historic archeological sites would already be a part of the National Historic Landmark district and would not require separate nomination to the National Register of Historic Places, prehistoric sites would require separate nomination or eligibility assessment because they are distinct from the military-based definition of the landmark district:



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- *PHAF-34 (Marine Hospital and Cemetery)* – An area of sensitivity, including historic features associated with squatters or farmers (?-1869), the earlier construction of the Marine Hospital, outbuildings, historic refuse deposits (1875-1932) and the Marine Cemetery (1885-). Of these, the Marine Cemetery has been relocated. A documented 585 burials were interred at this site between 1885 and 1912 composed of merchant marines from a myriad of international ports. The site is located to the north of the PSHH beneath approximately 13 to 15 feet of construction rubble.
- *PHAF-10 (Lobos Creek Water Control)* – Remains are expected in this area of the Hotalling Tunnel, and parts of early water supply systems connecting Mountain Lake to the Spring Valley Water Works on Lobos Creek (1857-?).
- *PPAF-3 (Mountain Lake)* – This water source and the surrounding area have high potential for prehistoric archaeological sites but no documented incidence of discovery.

Since preparation of the GMPA EIS, NPS and Presidio Trust archeologists have also indicated that there is the potential for re-locating the temporary encampment used in the spring of 1776 by a Spanish expedition lead by Juan Bautista de Anza in the area adjacent to Mountain Lake prior to establishment of El Presidio de San Francisco in the Main Post area that summer.

An Archeological Management Assessment and Monitoring Program would be conducted for all undertakings at the PSHH Complex. The AMA and Monitoring Programs would ensure that all planned undertakings would be reviewed by a qualified archeologist prior to their implementation. Construction projects and ground-disturbing activities would be closely observed in the vicinity of sensitive archeological areas to discover, document, protect, and manage the archeological record of the Presidio. An inventory study of known archeological sites in the area of each undertaking including test excavations, as appropriate, would be conducted to determine whether significant sites or historic features are extant and whether construction might adversely affect archeological resources. Reports of any investigations would be submitted to the SHPO and the ACHP. A phased inventory, evaluation, monitoring, and treatment program for archeological resources regarding ongoing maintenance and construction in the complex would be conducted. The discovery of any human remains or associated mortuary items covered under the Native American Graves Protection and Repatriation Act would be treated in accordance with 43 CFR 10.4 (Inadvertent Discoveries). Consultation and work would be conducted in accordance with the Programmatic Agreement (Appendix F to the EIS).

The PSHH Complex, on the Presidio's southern boundary, is physically and visually distinct from other areas in the Presidio. Although not high in visual quality, the complex, particularly the south-facing façade of the modern addition, is visible from some regional viewpoints. Removal of the hospital addition would enhance the visual continuity of the 1930s structure and result in a visual scale more appropriate to the surrounding neighborhoods. Should the 1952 addition to building 1801 not be removed, the building would not be returned to a smaller scale, and views from vantagepoints in adjacent neighborhoods would remain the same as at present. Removal of other non-historic buildings (including building 1803) and the large parking lot north of building 1801 would increase the integrity of the historic setting.



Removal of non-historic forest for native plant restoration would help reestablish scenic vistas and open up views of the complex's scenic qualities to the north. The removal of any additional buildings also has the potential to enhance scenic viewing. However, replacement construction might adversely affect scenic views. Therefore, careful design and siting, building height restrictions, compliance with site-specific planning guidelines and additional analysis would be required to minimize impacts on the integrity of the historic setting and scenic views.

*Two Playing Fields* – Rehabilitation of two playing fields in the West Cantonment area of the Presidio, Morton Street field and Paul Goode field, has improved the appearance and functionality of both playing fields, including such features as parking areas, fencing, and pedestrian paths. Neither playing field is listed as a contributing feature to the National Historic Landmark, but both are adjacent to and visible from both historic and non-historic housing areas. These improvements have enhanced the visual setting of the Presidio.

*Presidio-Wide Housing* – The gradual leasing of both historic and non-historic housing units throughout the Presidio has served to protect the resource itself, as well as revitalized the residential areas. This has improved safety and maintenance and has brought activity back to formerly vacant areas. There are 12 clusters of historic housing, containing 301 housing units, approximately 27 percent of the total housing inventory. The largest concentration of historic residences is located on Liggett and Portola streets. Many of the historic residences have amenities typically found in older housing prototypes, including decorative fireplaces, expansive views, ample open space and front porches or stoops along small neighborhood streets. The landscape and many site features not only contribute to the National Historic Landmark, but also establish the character of the individual housing clusters. The Presidio Trust participates in the process established by the 1994 Project Agreement between the NPS and the SHPO (known as the 5x process) to review and approve all projects on historic buildings to ensure rehabilitation in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. The majority of the historic housing units which have been reviewed to date are classified as "make-ready" projects, meaning only minor painting, patching and mechanical system upgrades are executed. Substantial rehabilitation on historic housing units, which would include major work such as seismic upgrading, would involve submission of full plans and specifications for review to the SHPO and NPS. In each case, character-defining features would be protected and retained, aggressive physical treatments which could damage historic features would be avoided, and mitigation measures would be developed to protect archeological resources. Residential rules have been enacted that would protect the buildings and their landscapes from inappropriate occupant modifications and treatments, resulting in beneficial effects on the National Historic Landmark. Scenic qualities and visitor experience would also be improved by the rehabilitation, occupancy and maintenance of residential units.

*Water Reclamation Plant* – The water reclamation plant may be located inside an existing vacant warehouse or similar open-plan building type to minimize the need for building alternations. The two different treatment systems being considered are compact and would occupy only about 1,600 square feet. Selection of an appropriate building to house the plant, and the rehabilitation treatments proposed would be subject to the review process described above regarding housing. Rehabilitation of a historic building for this new use would be done in accordance with *The Secretary of the Interior's Standards for the Treatment of Historic Structures*. The rerouting of underground utility lines to the new processing area would involve ground disturbance that



could impact archeological resources. The layout of underground systems would be designed to minimize impact on these resources.

*Crissy Field* – Crissy Field is one of the many discrete areas of the Presidio that contribute to the National Historic Landmark. This undertaking includes several different actions: restoration of Crissy Field airfield, re-establishing of a tidal marsh with beach and dunes, restoration of old Mason Street, rehabilitation of historic building 603 as the Community and Educational Center, planting of trees along Mason Street, construction activities in the vicinity of old railroad track, and potential disturbances of archeological resources. The Project Agreement reached between NPS and SHPO in 1994 addresses the effects of this project on the historic features within Crissy Field.

The existing airfield site includes multiple layers of construction representing continual expansion through time. The airfield restoration period would return it to its 1920–1930 appearance and create opportunities to enhance the historic qualities of the airfield and to provide educational and interpretive benefits. It would enhance the historic setting for structures and landscape features outside the Crissy Field area because the restoration would provide a better context for appreciation of the air base as a whole. Restoring the airfield is considered a beneficial impact.

For each of these actions, those that involve ground disturbance are likely to encounter archeological remains. The general location of many of these remains is known and was incorporated into the design to avoid affecting specific areas known to contain archeological resources. Documentary research and test borings have been and would continue to be required prior to beginning any work. As an example of how this has operated, the original design of the tidal marsh was modified during construction in order to avoid archeological remains found on the site. An archeological monitoring program has been in place during construction to evaluate and record historic features that were uncovered during the project. Appropriate consultation with Native American groups in accordance with the NHPA and the Native American Graves Protection and Repatriation Act was carried out.

Originally built in 1920, Mason Street was realigned between 1946 and 1963. This undertaking would result in the street’s restoration by returning it to its historical alignment, providing better continuity and context for the Crissy Field historic setting, thereby enhancing the restoration of the airfield. Planting of trees at Mason Street near the gate would fill a spatial void left by the 1992 demolition of the former commissary building. The former linear quality of the entrance would be restored with this grove of trees in a manner more appropriate to a major entrance to the former military base and national park. Construction activities in the vicinity of the historic railroad tracks along Mason Street would be conducted to avoid harming these remnant tracks. They would be covered with asphalt or soil to protect them from future disturbance. No adverse effects are expected, and no additional mitigation is necessary.

The undertaking would result in increased opportunities for recreation and scenic viewing. The rehabilitation of the Torpedo Wharf, a new rest area at Crissy Field beach, and the Community and Environmental Center would provide concessions, public restrooms and other interpretive and visitor services. In addition, the Community



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and Environmental Center would involve rehabilitation of a historic structure which has long been vacant. This would improve the historic setting by redeveloping the building for public use.

The Crissy Field shoreline promenade, restored dunes and beaches, and the family picnic area would create significant improvements to recreational and scenic viewing opportunities for the Presidio. When this action is complete, the San Francisco Bay shoreline from Fort Point to the Embarcadero would be an almost continuous promenade, open and accessible to the public.

*William Penn Mott, Jr. Visitor Center* – Building 102, on the Main Post, has been designated to serve as the Presidio’s visitor center. Not only would this undertaking result in a rehabilitation of the historic structure, it would also create a revitalized visitor center and museum to better meet the needs of Presidio visitors. Building rehabilitation would be reviewed and approved to ensure compliance with the *Secretary’s Standards for the Treatment of Historic Properties*, and would have a beneficial effect on the historic setting, and the interior program improvements would improve the visitor experience.

*Exploratorium* – The Exploratorium is located within the Palace of Fine Arts, which adjoins the Presidio and is the last remaining structure of the 1915 Panama Pacific International Exposition. The temporary structure survived until 1962, when the Beaux Arts rotunda and colonnade were re-created in concrete from castings of the original ornamentation. The building and grounds are owned by the city, and managed by its Department of Parks and Recreation. The Palace of Fine Arts is designated as a city landmark (Landmark #88). As a publicly owned landmark, the Exploratorium’s improvement program would be required to conform to the provisions of Article 10 of the City Planning Code that encourage and achieve historic preservation. This would include the filing of a Certificate of Appropriateness for the work proposed (including proposed changes in major interior architectural features) accompanied by plans and specifications for proper consideration for review by the city’s Planning Department and Landmarks Advisory Board. Ground disturbance during construction has the potential to disturb archeological resources; therefore, the services of an archeologist would most likely be required. Review and issuance of the Certificate of Appropriateness by the Planning Department, with the advice of the Landmarks Advisory Board, and mitigation to protect archeological resources would ensure that the Exploratorium’s improvement program would not have a significant impact on or be potentially detrimental to the landmark site.

*2361 Lombard Street* – The location of this proposed action along the Lombard Street corridor within the Marina district, neither of which has been designated by the city as a historic district. The action would entail the demolition of several existing buildings: the Lanai Motel, the Bakers Square Restaurant, Wong’s Auto Repair, and the flower stand. None of these structures is considered by the city as a landmark site or otherwise deemed as having any special character or special historical, architectural or aesthetic interest or value worthy of preservation. The action would not conflict with the historic preservation of buildings subject to the provisions of Article 10 of the City Planning Code. However, the action would have the potential to unearth archeological resources during excavation because the action is located next to the historic bay margin and slough known to potentially contain aboriginal artifacts and skeletal remains. In addition, there is potential for the existence of buried material associated with the historic use of the property as dwellings and a store at the turn of the twentieth century. To assure some protection of the material and data in the event resources are



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discovered during excavation, mitigation requiring the monitoring of excavation activities by an archeologist would be performed. Thus, onsite investigations by an archeologist, and/or documentation, preservation, and recovery of cultural material would avoid potential significant effects of the action on cultural resources.

The action would not obstruct currently available scenic views from public areas.

*1880 Lombard Street* – This action is also located along the busy, commercial Lombard Street corridor, and would involve the demolition of the current Jack-in-the-Box restaurant which has not been found worthy of preservation. The action would not conflict with the historic preservation of buildings subject to the provisions of Article 10 of the City Planning Code. However, it is located in close proximity to what was San Francisco’s historic northern shoreline which was likely occupied by Native Americans (or Ohlone people) prior to the appearance of Europeans. Therefore, the city has determined that there is a possibility of finding cultural resources during excavation, and mitigation requiring that a qualified archeologist monitor the site during excavation is necessary. Retaining the services of an archeologist would ensure that no significant impact to any cultural artifacts would occur.

Although there would be a change on the project site from one single-story, 2,300-square-foot building to the proposed 60,600-square-foot building, the city has determined that this would not result in a substantial, demonstrable negative aesthetic effect. The height, bulk, and design of the proposed building would be within the range of designs for other buildings in the vicinity of the site. The action would not degrade or obstruct any scenic view or vista now observed from a public area. Finally, neighbors have commented that the current use of the site (a restaurant with a drive-through) contributes to sanitation and rodent problems to the area, as well as a high level of motorist and pedestrian activity, and related nuisances. Therefore, discontinuation of the current use may enhance the visitor experience within the neighborhood.

*Electronic Toll Collection, Golden Gate Bridge* – The toll booth plaza and the bridge itself are administered by the Golden Gate Bridge, Highway and Transportation District. The Golden Gate Bridge and the Roundhouse, used as a gift shop, date from 1937 and are determined to be eligible for the National Register. The toll booth plaza is from a more recent time period and is not considered eligible. The electronic toll collection system requires visible hardware to scan electronic passes and record vehicles passing through the toll lanes, as well as signage mounted on the toll plaza canopy. This equipment would have a negligible effect on the historic bridge and the Roundhouse.

*Doyle Drive* – This action would impact sensitive areas such as archeological sites and historic building and military batteries. In addition, Doyle Drive itself is eligible to be listed on the National Register, and appears as a contributing feature to the Presidio National Historic Landmark.

The proposed action traverses several areas of highly sensitive archeological resources. In accordance with Caltrans and FHWA Section 106 guidance, archeological resources in the vicinity of the project would be inventoried, evaluated and consolidated into an Archeological Survey Report as part of Section 106 consultation with FHWA and SHPO. Historic structures, including sections of Doyle Drive itself, may be displaced by replacement alternatives or construction staging areas. An Historic Architectural Survey (HASR) and an



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Historic Resources Evaluation Report would be prepared in accordance with Caltrans and FHWA standards. Effects to the historic resources would be determined consistent with federal and state requirements.

The existing structure blocks views to the bay and the Palace of Fine Arts and forms a barrier dividing Crissy Field and the upland portions of the Presidio. Its effects on scenic viewing would be evaluated following FHWA Visual Impact Assessment guidance. Design options for alternatives would incorporate the aesthetic qualities of a parkway as envisioned by a Doyle Drive Task Force. The action is intended to improve the aesthetic qualities of the existing structure and the visual setting surrounding it. Alternatives to the action would result in changes to the visual environment. Visual analyses would document the potential for alternatives to have negative or positive effects on the visual environment. The action is also intended to enhance access to Presidio recreational areas, such as the Crissy Field restoration, and areas of new leasing and development activity, such as the Main Post, Letterman Complex, and housing areas. By improving the aesthetic, scenic and design qualities of the existing structure, and by improving access for Presidio users, the action has the potential for considerable beneficial effects to the area.

*Conclusion* – The cumulative impact of Alternative 1 combined with the other known undertakings may produce individual adverse effects on features of the affected area, but would have an overall beneficial effect. Rehabilitation of historic structures and cultural landscapes, and new compatible construction would enhance the historic setting. Compliance with the NHPA, *The Secretary of the Interior's Standards for the Treatment of Historic Properties*, Article 10 and 11 of the City Planning Code, and other standards for preservation of cultural resources, would ensure that appropriate rehabilitation of historic buildings and landscapes is achieved. Visitors' experience would be enhanced by new visitor facilities and interpretive materials that bring the Presidio's cultural resources to life, while the Crissy Field wetland and the environmental education center would showcase its natural resources. Opportunities for recreation would increase. Both historic and non-historic military housing would once again be occupied and maintained. Doyle Drive would be redesigned or improved for faster, safer vehicular traffic, providing better access to the Presidio for recreational users, park visitors, and those who live and work at the Presidio. Visual and scenic qualities would improve because of the cumulative effects of these undertakings, which would increase open space, rehabilitate buildings and landscapes, and create compatible new construction in the area.

**4 . 1 . 1 1 . 7   A I R   Q U A L I T Y**

As discussed in Section 4.1.9, a significant cumulative impact would be caused if the proposed development would not conform to the applicable regional air quality management plans. Conformity with the State Implementation Plan and the Clean Air Plan is discussed in Section 5.4.2. The BAAQMD's region-wide planning efforts aim to manage emissions and allow for growth in the region while avoiding further violations of the ambient air quality standards. An evaluation of a project for conformity with the applicable implementation plans is an assessment of whether the project is accounted for in the forecasts of regional air emissions used in preparing the plans. If a project is found to be in conformity with the implementation plans, its contribution to regional cumulative air quality has been accounted for.

Proposed development under Alternative 1 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. Expected cumulative increases in vehicle trips would also result in increases to region-wide emissions of ozone precursors (including NO<sub>x</sub> and ROG<sub>s</sub>) and CO. With the exception of NO<sub>x</sub>, 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 1 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.

#### **4.1.11.8 NOISE**

Demolition and construction activities that could occur under Alternative 1, 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). These impacts were discussed in the GMPA Final EIS. The long-term cumulative effect of Alternative 1 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 1 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.

#### ***4.1.12 Unavoidable Adverse Effects***

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

*Cultural Resources* – Retention of the LAMC would only allow for the partial restoration of the historic setting of the earlier hospital complex and significant streetscapes. Therefore, the building would continue to have an adverse effect on the adjacent historic hospital. In addition, the visual integrity of the Letterman Complex would continue to be diminished and regional views would remain significantly affected.



*Air Quality* – The air quality modeling indicated that the level of NO<sub>x</sub> emissions would be significant based on the BAAQMD’s significance thresholds for NO<sub>x</sub> of 80 pounds/day.

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

#### ***4.1.13 Relationship of Short-Term Uses of the Environment and Maintenance and Enhancement of Long-Term Productivity***

Use of the site for research and education would preclude other long-term management possibilities for the Letterman Complex. This use 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 science and education 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, 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.

#### ***4.1.14 Irreversible or Irrecoverable Commitments of Resources***

The science and education center 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 new development 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 was not possible, disturbance would be mitigated through recovery of cultural information and significant artifacts.

