

## 4.1 AESTHETICS

This section includes an assessment of the potential impacts of the proposed project on aesthetics. Sources consulted include the LBNL 2006 LRDP EIR and LBNL 2006 LRDP, with additional visual simulations and field investigation by DC&E staff.

### A. *Regulatory Setting*

#### 1. **Local Plans and Policies**

The Seismic Phase 2 project involves DOE facilities at LBNL operated by the University of California. The applicable land use plan for the project is the LBNL 2006 LRDP. Relevant strategies from the LBNL 2006 LRDP are summarized below, along with 2006 Design Guidelines that accompany the 2006 LRDP.

The University of California, under Article IX, Section 9 of the California Constitution, is exempt from local land use regulation, including General Plans and zoning. UC nevertheless seeks to cooperate with local jurisdictions to reduce any physical consequences of potential land use conflicts to the extent feasible. Because the western part of the LBNL site is within the Berkeley City limit, and the new construction and demolition work associated with the proposed project would take place in the western portion of the Lab site within the Berkeley city limit,<sup>1</sup> policies contained in the Berkeley General Plan relevant to aesthetics are also summarized below.

#### a. LBNL 2006 Long Range Development Plan

##### i. *Principles and Strategies*

Development strategies in the LBNL 2006 LRDP that are applicable to aesthetics include the following:

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<sup>1</sup> Building 85/85A seismic strengthening would take place in the eastern portion of the LBNL site which is located within Oakland City limit. However all improvements would be internal to the structure and there would be no change in the exterior appearance of the building. Therefore, City of Oakland General Plan policies related to visual resources and quality are not summarized in this section.

- ◆ Protect and enhance the site's natural and visual resources.
- ◆ Increase development densities within areas corresponding to existing clusters of development to preserve open space, enhance operational efficiencies, and access.
- ◆ To the extent possible, site new projects to replace existing outdated facilities and ensure the best use of limited land resources.

*ii. LBNL 2006 LRDP Height Zones*

The 2006 LRDP included a Height Zoning Map which serves to guide the placement and height of buildings on the main hill campus. The Building Heights Map controls the visual quality of LBNL as it is viewed from important off-site locations. The GPL component of the proposed project would be built in an area designated as a Special Viewshed Zone, where maximum building height must not extend into the viewplane of the Advanced Light Source Building (ALS) dome when viewed from the intersection of University Avenue and Milvia Street.

b. Design Guidelines

The LBNL Design Guidelines were developed in parallel with the LBNL 2006 LRDP and provide specific guidelines for site planning, landscape, and building design as a means to implement the LRDP's development principles as each new project is developed. As part of the design review and approval process, new projects are evaluated for adherence to the design guidelines. Specific design guidelines are organized by a set of design objectives that essentially correspond to the strategies provided in the LRDP.

Design objectives that are contained within the design guidelines and applicable to the aesthetics analysis include the following:

- ◆ Provide screening landscape elements to visually screen large buildings;
- ◆ Create landform elements consistent with design on the Hill;
- ◆ Mass and site buildings to minimize their visibility;
- ◆ Screen roofscapes;

- ◆ Respect view corridors;
- ◆ Integrate buildings into the overall landscape using appropriate materials;
- ◆ Create a cohesive identity across the Lab as a whole by following established precedents for new landscape elements;
- ◆ Provide appropriate site lighting for safety and security;
- ◆ Allow sunlight to reach the commons spaces;
- ◆ Create as high a density and critical mass around commons spaces as possible;
- ◆ Create consistency between buildings in individual clusters;
- ◆ Construct new walkway structures such as stairs, bridges, slope retention for walkways, and guardrails of materials compatible with the surrounding landscape;
- ◆ Minimize visual and environmental impacts of new parking lots;
- ◆ Site and design parking structures to integrate with the natural surroundings; and
- ◆ Organize service functions to minimize conflicts and visual impacts.

c. LBNL 2006 LRDP EIR Mitigation Measures

A series of mitigation measures is included within the LBNL 2006 LRDP EIR. Although this analysis does not tier from that EIR, several of the mitigation measures adopted as part of the 2006 LRDP apply to the proposed project and are included in the Seismic Phase 2 project description. The following aesthetics mitigation measures apply to and are a part of the proposed project.

LRDP Mitigation Measure VIS-4a: All new buildings on the LBNL hill site constructed pursuant to the LBNL 2006 LRDP shall incorporate design standards that ensure lighting would be designed to confine illumination to its specific site, in order to minimize light spillage to adjacent LBNL buildings and open space areas. Consistent with safety considera-

tions, LBNL project buildings shall shield and orient light sources so that they are not directly visible from outside their immediate surroundings.

LRDP Mitigation Measure VIS-4b: New exterior lighting fixtures shall be compatible with existing lighting fixtures and installations in the vicinity of the new building, and will have an individual photocell. In general, and consistent with safety considerations, exterior lighting at building entrances, along walkways and streets, and at parking lots shall maintain an illumination level of not more than 20 Lux (approximately two foot-candles).

LRDP Mitigation Measure VIS-4c: All new buildings on the LBNL hill site constructed pursuant to the LBNL 2006 LRDP shall incorporate design standards that preclude or limit the use of reflective exterior wall materials or reflective glass, or the use of white surfaces for roofs, roads, and parking lots, except in specific instances when required for energy conservation.

d. Berkeley General Plan

The Urban Design and Preservation Element of the City of Berkeley Draft General Plan contains the following policies related specifically to visual quality.

- ◆ Policy UD-31 Views: Construction should avoid blocking significant views, especially ones toward the Bay, the hills, and significant landmarks such as the Campanile, Golden Gate Bridge, and Alcatraz Island. Whenever possible, new buildings should enhance a vista or punctuate or clarify the urban pattern.
- ◆ Policy UD-32 Shadow: New buildings should be designed to minimize impacts on solar access and minimize detrimental shadows.

## *B. Existing Setting*

### **1. Visual Characteristics of Site**

LBNL is located on a steep hillside with several promontories and valleys; site elevations range from approximately 500 feet to approximately 1,100 feet. The relatively steep topography of the LBNL site influences the perception of building height and reinforces a visual appearance of clustered development from most viewpoints.

The visual quality of built environment at LBNL is eclectic and lacking in consistency. This is the result of a history of “as-needed” and unrelated building construction. Permanent buildings typically display a utilitarian, semi-industrial aesthetic. Most buildings are connected directly to parking and service access areas and lack noticeable signage. Temporary buildings, such as the Building 71 trailers, are often indistinguishable from one another and provide limited visual quality. Many of the site’s pathways and gathering areas encroach on service areas, loading zones, and parking lots, ultimately detracting from overall visual cohesion.

The clusters of on-site structures at LBNL are scattered in a campus format among trees and vegetation. Wooded areas of eucalyptus, sequoias, redwoods, live oaks, and other trees cover 42 acres of the 200-acre site. These vegetated areas create a semi-rural setting and are typically dense enough to visually separate building clusters within the site, as well as to separate the entire site from residential areas to the northwest and open space parkland to the east.

### **2. Visual Characteristics of Project Buildings**

The structures identified for demolition under the proposed project are each part of building clusters spread throughout the LBNL main hill site and organized around roadways and parking lots. Buildings 25/25B – the proposed site of the GPL -- is part of a complex of different box-like grey metal structures built from 1946 into the 1980s. Building 25, and the attached small wooden structure housing a water treatment unit, Building 25B, are connected to the taller, more prominent, glass-fronted Building 25A. Building 25/25A is a complex of structures amongst a cluster of LBNL buildings in the

Old Town area. Adjacent structures include Buildings 4, 5, and 26, all of which exhibit an industrial quality similar to Building 25. West of Building 25/25B is a small grove of giant sequoia and redwood trees ranging in height from 60 to 80 feet.

Building 55 has a concrete façade and exhibits a plain, industrial visual quality. The six temporary trailers of Building 71 slated for demolition are largely utilitarian and lacking in aesthetic appeal. The appearance of Building 85, planned for seismic strengthening, would not be altered by the proposed project.

### 3. Public Vantage Points and Site Visibility

Given the varied and, in places, steep topography of the LBNL site, it cannot be seen in its entirety from any single viewpoint, and many buildings are hidden when viewed from locations parallel to the hillside. In considering publicly accessible viewpoints of the LBNL site, this report distinguishes between:

- ◆ Long-range views – from a distance of more than half a mile, that are mostly limited to views from lower elevations looking up towards the site.
- ◆ Medium-range views – from less than half a mile and more than a quarter of a mile.
- ◆ Short-range views – from within a quarter of a mile.

Viewpoints of Building 25/25B from medium- and short-range viewpoints are shown on Figure 4.1-1.

#### a. Long-Range Views of Proposed Project

LBNL is generally visible from downslope locations to the west in downtown Berkeley. There are also public vantage points of parts of LBNL at nearby elevated off-site locations on residential streets to the north and northwest. Generally, only buildings that are on the crest of the hillside and between the incised valleys are distinguishable at this distance. Building 25/25B, the



FIGURE 4.1-1  
VIEW POINTS OF BUILDING 25

proposed site of the GPL, is embedded in the general fabric of the buildings in the center of the site and is relatively difficult to distinguish from the others. The site is seated slightly northeast of the hillside crest and is generally obscured from off-site views by the hill topography and a grove of eucalyptus trees. Building 25 can be partially viewed from parks along the ridgeline to the northeast, including Tilden Park, although it blends in with the surrounding buildings and is difficult to distinguish.

Of the buildings that would be demolished, Building 55 is in the western portion of the LBNL site and may be partially visible from some Berkeley streets. Building 71 trailers are relatively small compared with the surrounding buildings and would not be distinguishable from nearby city streets to the north. Overall, none of affected buildings is visible from a long-range view.

b. Medium-Range Views of Proposed Project

At a distance of one-half to one-quarter of a mile, most views of the various project sites are within the LBNL campus itself, and there are not many publicly accessible vantage points. There are public views of the overall proposed project site from the Lawrence Hall of Science, a public facility owned by the University.

Building 25/25B, the proposed GPL site, can be seen from the residences to the north of LBNL and from the hiking trail that runs parallel to Campus Drive (Figure 4.1-2), but it is not visible from the Lawrence Hall of Science or its surrounding parking lots. Building 25 can be seen across Strawberry Canyon, east of UC's Memorial Stadium, from the Lower Jordan Fire Trail (Figure 4.1-3). Both of these viewpoints provide partial views of Building 25, which is nestled under tree cover. Building 55 is visible from the Lawrence Hall of Science, as are the Building 71 trailers.

c. Short-Range Views of Proposed Project

Building 25 and the proposed GPL site are clearly visible from Centennial Drive, a public road owned by the University of California that cuts through LBNL (Figure 4.1-4).



Source: DC&E, 2009

FIGURE 4.1-2

VIEW OF BUILDING 25 FROM CAMPUS DRIVE HIKING TRAIL LOOKING SOUTH



Source: DC&E, 2009

FIGURE 4.1-3

VIEW OF BUILDING 25 FROM LOWER JORDAN FIRE TRAIL LOOKING NORTH



Source: DC&E, 2009

FIGURE 4.1-4

VIEW OF BUILDING 25 FROM CENTENNIAL DRIVE LOOKING SOUTHWEST

#### 4. Views from Proposed Project

Long-range and sometimes panoramic views to off-site locations from LBNL vantage points are available from north-south axis streets, such as Cyclotron Road, and from higher elevation locations along East Road. These points provide westward views to historic landmarks at lower elevations such as the Golden Gate Bridge and Alcatraz Island, as well as other notable landmarks including the UC Berkeley campus and Downtown Berkeley. None of the buildings that form part of the proposed project obstructs (or would be projected to obstruct) any of these vistas.

Building 25, which is immediately northeast of the crest of a small hill in the middle of the site, looks out to the northeast over a transformer station towards the vistas of the ridgeline parks, such as Tilden Park (Figure 4.1-5). To the northwest, there are views of trees, residences, and hillsides, including a hiking trail (Figure 4.1-6).

#### C. CEQA Significance Criteria

The impact of the proposed project on aesthetics would be considered significant if it would exceed the following standards of significance, in accordance with Appendix G of the *CEQA Guidelines* and the UC CEQA Handbook:

1. Have a substantial adverse effect on a scenic vista.
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.
3. Substantially degrade the existing visual character or quality of the site and its surroundings.
4. Create new source of substantial light or glare which would adversely affect day or nighttime views in the area.



Source: DC&E, 2009

FIGURE 4.1-5

VIEW OF CENTENNIAL DRIVE FROM BUILDING 25



Source: DC&E, 2009

FIGURE 4.1-6

VIEW OF RESIDENCES AND CAMPUS DRIVE HIKING TRAIL FROM BUILDING 25

#### *D. Potential Project Impacts*

This section discusses impacts to aesthetics and visual resources resulting from demolition, construction, and seismic strengthening related to the proposed project.

#### **SP2 Impact AES-1: The proposed project would not have a substantial adverse effect on a scenic vista. (*Less than Significant*)**

The proposed project may result in a potentially significant impact on a scenic vista if it were to cause a notable degradation in the quality of a scenic view or the unique attributes contributing to that view.

##### **a. Building 25/25B Demolition and GPL Construction**

The demolition of Building 25/25B and construction of the GPL would not significantly increase the amount of physical development that is visible within the context of long-range scenic vistas. The GPL would replace Building 25/25B and a majority of the new GPL building would be under cover of adjacent trees, mostly eucalyptus with some pine. Vegetated hillsides and undeveloped ridgelines would remain intact.

To investigate the effect of the GPL on publicly accessible viewpoints from medium and short-ranges, a site study was conducted and several visual simulations were prepared. The existing Building 25/25B can only be seen from a few public vantage points in the surrounding area and these locations, presented in Figure 4.1-1, were selected for visual simulations.

The replacement of Building 25/25B with the new GPL would yield a taller, more visible structure with two exhaust air stacks extending from the roof. Views of the GPL from publicly accessible locations would generally be attainable only from the short-range vista on Centennial Drive. The view from Centennial Drive is shown in Figure 4.1-7. Although the GPL building would be clearly visible downslope from Centennial Drive, it would be situated amidst LBNL buildings of industrial visual quality and therefore would not adversely affect the existing medium-range scenic vista. Moreover, most



Source: DC&E, 2009

FIGURE 4.1-7

VIEW OF GPL FROM CENTENNIAL DRIVE LOOKING SOUTHWEST

of the GPL building would be shielded from off-site views by existing eucalyptus and various pine trees.

As shown in Figure 4.1-8, the exhaust air stacks would only be partially visible from Viewpoint 1 on the Campus Drive hiking trail, looking southeast. This limited view of the exhaust stacks would be compatible with the existing structures visible on the hillside and would not adversely affect medium-range scenic vistas. As demonstrated in Figure 4.1-9, from Viewpoint 3 on the Lower Jordan Fire Trail looking northwest, the GPL would be almost entirely hidden behind eucalyptus trees and, would be largely invisible. It is possible that the air stacks could be seen from some vantage points in the Panoramic Hills neighborhood, but the rest of the building would scarcely be visible due to existing vegetation and topography.

During the construction period, it is conceivable that some of the taller equipment could be partially seen from various off-site viewpoints, but it would be temporary and not clearly or distinctly visible. No scenic vistas would be obstructed. Overall, the demolition of Building 25/25B and construction of the GPL at that location, would have a *less-than-significant* impact on scenic vistas.

b. Building 55 and Building 71 Trailers Demolition

Demolition of Building 55 and Building 71 trailers would serve to marginally enhance views to and from the site by removing sources of development that are visible from locations on-site and reducing the amount of physical development from viewpoints off-site. Therefore, building removal would not adversely affect scenic vistas, and the impact would be *less than significant*.

c. Building 85/85A Seismic Strengthening

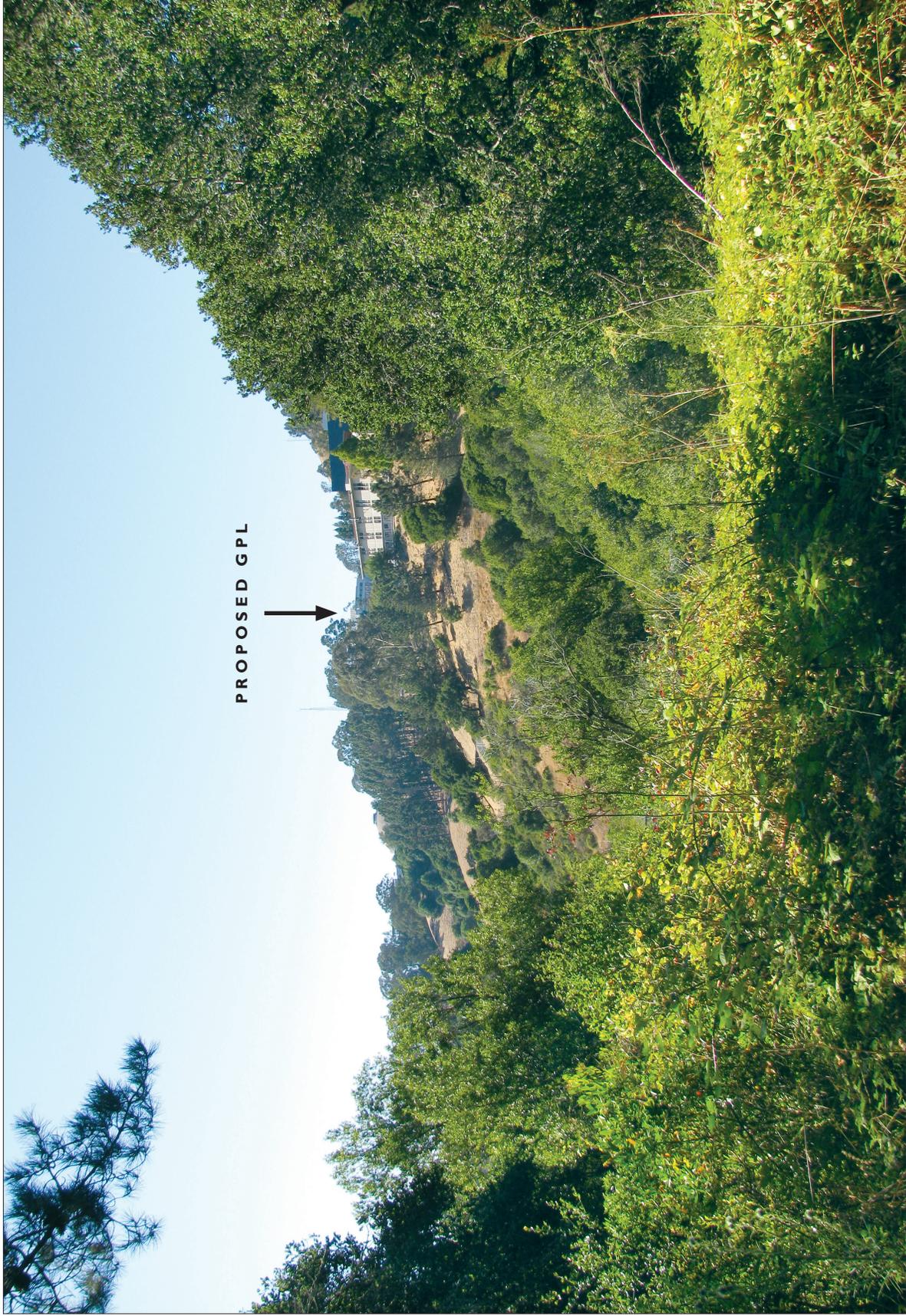
The seismic improvements at Building 85/85A would not affect on-site views beyond the construction period because the improvements would be below grade and inside the building. Although construction equipment would be visible from a distance, it would be temporary, not visually prominent in scale, and viewed against the backdrop of the industrial building. Therefore,



Source: DC&E, 2009

FIGURE 4.1-8

VIEW OF GPL FROM CAMPUS DRIVE HIKING TRAIL LOOKING SOUTH



Source: DC&E, 2009

FIGURE 4.1-9

VIEW OF GPL FROM LOWER JORDAN FIRE TRAIL LOOKING NORTH

there would be a *less-than-significant* impact on scenic vistas associated with seismic strengthening of Building 85/85A.

Overall, the project would not have an adverse impact on scenic vistas, and the impact would be *less than significant*.

**SP2 Impact AES-2: The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway. (No Impact)**

No scenic highways are located in the vicinity of the proposed project.<sup>2</sup> Thus, *no impact* to scenic resources within a State Designated Scenic Highway would occur.

**SP2 Impact AES-3: The proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings. (Less than Significant)**

a. Building 25/25B Demolition and GPL Construction

Demolition of Building 25/25B and construction of the GPL would not introduce a significant change to the existing visual setting of the site and its surroundings. During the construction phase, there would be construction equipment that would likely be more visually prominent than the completed building, although temporary in nature. Construction equipment would include equipment such as front-end loaders, dump trucks, graders, welding machines, scissor lifts, aerial boom trucks, mobile cranes, backhoes, excavators, compactors, and compressors. The presence of taller, larger equipment such as mobile cranes and aerial boom trucks would add new visual elements to the site landscape. This would not result in substantial visual effect due to the scale and density of existing development backdrop as well as the temporary nature of the work.

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<sup>2</sup> California Department of Transportation website, *Officially Designated State Scenic Highways, Alameda County*, [http://www.dot.ca.gov/hq/LandArch/scenic\\_highways/](http://www.dot.ca.gov/hq/LandArch/scenic_highways/), accessed March 20, 2008.

Building 25/25B is directly behind the ALS dome when seen looking up University Avenue, from the intersection of University and Milvia and is not visible. The GPL, at the highest point of its exhaust stacks, would be approximately 75 to 80 feet and would not be visible behind the ALS dome or extend into its view plane.

As seen in Figure 4.1-2 and Figure 4.1-5, the new GPL would be modern in appearance and thoughtfully designed from an aesthetic point of view. It is expected that most viewers would consider it an improvement to the existing older buildings. The existing visual quality of the site is characterized by surrounding aged and utilitarian structures with little or no aesthetic detail. Overall, the demolition of Building 25/25B and construction of the GPL building would have a *less-than-significant* impact on the existing visual quality of the site and its surroundings.

b. Building 55 and Building 71 Trailers Demolition

As explained under SP2 Impact AES-1, above, demolition of the six Building 71 trailers and Building 55 would serve to increase the amount of undeveloped space on the LBNL site and would not be detrimental to visual quality of the LBNL site overall. Furthermore, none of these structures is a unique, aesthetic resource, the loss of which would result in a substantial degradation of the visual environment. Therefore, while the removal of these buildings would result in a change to the visual environment, overall there would be a *less-than-significant* impact to the overall visual setting.

c. Building 85/85A Seismic Strengthening

The presence of construction equipment at this site would not be detrimental to the visual character of the industrial-looking site. Improvements to Building 85/85A would mainly consist of underground retaining structures, pier foundations, and tiebacks, and some internal work. These generally would not be noticeable from off-site locations after the work was completed. Therefore, there would be a *less-than-significant* impact.

Overall, there would be a *less-than-significant* impact due to the proposed project.

**SP2 Impact AES-4: The proposed project would not create new sources of substantial light or glare which would adversely affect day or nighttime views in the area. (*Less than Significant*)**

LRDP EIR Mitigation Measures VIS-4a, -4b, and -4c are listed above and included as part of the proposed project. These ensure that the proposed project's lighting does not encroach on its surroundings, preventing light spillage, limiting use of reflective exterior material, and producing light that is compatible with existing lighting in the area. During the construction phase, temporary lighting would be used at sites for demolition, construction, and seismic strengthening. However, given the industrial-utilitarian characteristics of the buildings at those sites, any additional temporary lighting would be minor in comparison with existing sources of light. Therefore, impacts associated with sources of light or glare would be *less than significant*.

#### *E. Cumulative Impacts*

**SP2 Cumulative Impact AES-1: The proposed project in conjunction with other past, present, and reasonably foreseeable projects would not cause cumulative impacts associated with aesthetics. (*Less than Significant*)**

The geographic context for this cumulative analysis includes areas from which LBNL is visible to the public from exterior viewpoints. Land use controls in force in the area surrounding LBNL place strict controls on development in the area. Lands northeast of LBNL and farther eastward into the East Bay hills are managed by the East Bay Regional Park District (EBRPD), which has no plans for the construction of large facilities or the large-scale removal of trees. Portions of the cities of Berkeley and Oakland which border the main hill campus are designated for residential uses and zoned single-family or low density. Additionally, UC Berkeley has not proposed substantial new development on its hill site and much of the remaining surrounding

area is park or open space land. As such, little development other than that proposed in the LBNL 2006 LRDP is expected in the general area of LBNL through 2025.

Reasonably foreseeable development at LBNL would generally be spread across the main hill campus as shown in Figure 4.0-1. Old Town demolition, the SERC, and the proposed project are all located in close proximity to each other near the center of the main hill campus and the net effect of these projects would be a decrease in development in that area. Although SERC would potentially add a new building in this area, that building would be behind the GPL. It is very unlikely that it would be visible from viewpoints in the City of Berkeley and Strawberry Canyon. Moreover, implementation of LRDP Mitigation Measures VIS-4a, b and c would minimize potential impacts to aesthetics and visual quality to *less than significant* levels. Therefore the proposed project would not result in significant cumulative aesthetic impacts.

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