

3 REVISIONS TO THE DRAFT EIR

This chapter presents specific changes to the text, tables, or figures of the Draft EIR that are being made in response to comments made by the public and/or reviewing agencies. In each case, the revised page and location on the page is set forth, followed by the textual, tabular, or graphical revision. These changes clarify and amplify the discussion in the Draft EIR. They do not indicate that any new or substantially more severe impacts would occur or result in any significant new information added to the EIR. Thus, the Draft EIR does not need to be re-circulated.

All changes to Chapter 2 of the Draft EIR, including changes to the Summary of Impacts and Mitigation Measures for the Proposed Project, are included in Chapter 2 of this Final EIR.

The last paragraph on page 1-4, continuing onto page 1-5, of the Draft EIR is hereby revised as follows:

The project proposes to remedy high seismic life-safety risks in general purpose research facilities and lab-wide resource buildings. It will replace ~~two~~ three seismically “very poor” and “poor” (UC Seismic Rating) buildings and six failing trailers that cannot be cost-effectively upgraded (43,000 gsf; \$13.7M in deferred maintenance reduction) with one new approximately 43,000 gsf general purpose laboratory/office building. ~~Construction of the efficient new building will allow LBNL to vacate 36,000 gsf of off-site leased space.~~ This project also proposes to seismically upgrade Building 85/85A, the LBNL Hazardous Waste Handling Facility.

The last sentence on page 2-2, continuing on page 2-3, of the Draft EIR is hereby revised as follows:

It should be noted that since the NOP scoping process, the project was revised and the GPL is now proposed at a location in the largely developed center of the LBNL main hill campus site, and ~~that is not adjacent to~~ near the Botanical Garden ~~or in Strawberry Canyon.~~

The last sentence of the last paragraph on page 3-1, continuing onto page 3-2, is hereby revised as follows:

The project would also allow for the consolidation of related life science programs and personnel from various locations on ~~and off~~ the LBNL main hill site and the adjacent UC Berkeley campus in a new facility to be constructed on the current Building 25/25B location, in the central portion of the LBNL site.

Table 3.1 on page 3-5 is hereby revised as follows:

Activity	Gross Square Footage (gsf)	Footprint Square Footage (sf)	Number of Building Occupants	Proposed Timing of Work
Building 25/25B Demolition	20,663	17,100	0	Mid <u>Late</u> 2010– Early 2011
Building 55 Demolition	19,048	14,327	75	Mid 2013– Early 2014
Building 71 Trailers (71C, D F, J, K, and P) Demolition	3,822	3,822	34	Late 2012– Early 2013
Building 85/85A Seismic Strengthening	NR ^a	NR	NR	Mid 2011– Mid 2012
GPL Construction at Building 25/25B Site	43,000	13,600	130	Mid 2011– Late 2013

The second paragraph on page 3-8 is hereby revised as follows:

Building 25/25B demolition would be the first part of the proposed project and would take place from ~~mid~~ late 2010 to early 2011.

The first full sentence on page 3-15 is hereby revised as follows:

All activities conducted in the GPL would be relocated from other existing facilities on the LBNL main hill site.

The first full paragraph on page 3-15 is hereby revised as follows:

The GPL would house normal ~~life science~~ general purpose laboratory equipment, typical of current laboratories located on site. There would be up to 6 lasers embedded in instruments such as microscopes, mass spectrometers or flow cytometry analyzers/sorters, and probably an x-ray machine. ~~The first floor labs would house several large electron microscopes.~~ Standard laboratory chemicals including organic solvents would be used and stored in the labs. Compressed gases would also be used.

The last full paragraph on page 3-15 is hereby revised as follows:

The GPL would accommodate approximately 130 occupants, including UC LBNL life science researchers, personnel from the Physical Biosciences Division at the LBNL main hill site, and approximately 30 graduate and post-graduate UC Berkeley researchers affiliated with the Solar Energy Research Center (SERC) program, some of whom currently work on or travel regularly to the LBNL main hill site. Relocation of these personnel to the GPL would consolidate related research programs and personnel and foster the collaborative approach to science and the free exchange of ideas which is vital to achieving DOE scientific mission objectives. This co-location of related programs and personnel would be achieved with only a negligible increase in the average daily population (ADP) of the LBNL main hill site.

The following text is hereby added after the first full sentence of the first paragraph on page 3-16:

A new sanitary sewer line would also be added for the GPL, in accordance with the UC LBNL Sanitary Sewer System Management Plan (SSSMP) of September 30, 2009. Preliminary design documents call for a 6-inch diameter pipe with two routing options: either a run of approximately 500 feet west

from the proposed GPL between existing buildings, or a run of approximately 650 feet north and then west from the GPL. Both routing options would pass entirely through previously developed land.

The first sentence of the first paragraph under *C. Project Schedule* on page 3-26 is hereby revised as follows:

Demolition of Building 25/25B and the construction of the GPL is expected to begin in late 2010 and be completed by late 2013.

The first sentence of the second paragraph on page 4.0-2 is hereby revised as follows:

The proposed project would result in ~~relocation of approximately 100 UC LBNL personnel from a site on Potter Street in Berkeley to the LBNL main site as well as some~~ the internal relocation of personnel within the LBNL main hill site, and the transfer of approximately 30 UC Berkeley researchers to the LBNL main hill site, some of who already work at or travel regularly to LBNL.

The following text is hereby added after the first full paragraph on page 4.0-8:

10. Seismic Upgrades, Modernization and Replacement of General Purpose Buildings, Phase 3 (Seismic Phase 3)

LBNL's Seismic Phase 3 project would involve modernization of Building 26, a critical medical emergency facility, and Building 54, which houses conference rooms and a Lab-wide cafeteria and dining facility, in order to upgrade the buildings' seismic ratings from "Poor" to "Good." Buildings 45 and 48, which are connected and comprise the Laboratory Fire Station, would also be upgraded to a seismic rating of "Good." Finally, a General Purpose Laboratory would be constructed at a location as yet undetermined under Seismic Phase 3, to replace 40,000 to 46,000 gsf of seismically unsafe and deficient

space demolished as part of the project. Conceptual design studies are expected in 2012 and construction could start in 2015, continuing through 2020.

The following text is hereby added after the last paragraph on page 4.0-10:

17. Vegetation Management Projects

The University has applied, through the State of California Governor's Office of Emergency Services, to the Federal Emergency Management Agency (FEMA) for funding under the Pre-Disaster Mitigation (PDM) Program to conduct vegetation management activities in Strawberry Canyon, Claremont Canyon, and Frowning Ridge. The vegetation management activities would involve removal of non-native trees, including approximately 10,000 stems of eucalyptus trees from Strawberry Canyon, approximately 12,000 stems of eucalyptus trees from the Claremont Canyon area, and approximately 24,000 stems of eucalyptus and pine trees from the Frowning Ridge location. Environmental review of the projects has not been completed. After approval, each project is expected to take place over a three-year period.

Undetermined Locations

18. Next Generation Light Source

The Next Generation Light Source (NGLS), as envisioned, would be a linear accelerator "light source" capable of producing extraordinarily bright, short, soft x-ray pulses at rates of hundreds of thousands of times per second. Soft x-rays are ideal for studying solar cells, fuel cells, advanced electronics, biological systems, cleaner catalysts, and high-temperature superconductors. If located at the LBNL main hill site, the NGLS could be a national user facility available not only to scientists at Berkeley Lab and UC Berkeley but to researchers around the nation and the world. While the idea of locating the NGLS at the LBNL main hill site is being actively studied by Laboratory management, UC LBNL has not formally proposed this to the DOE, nor has it entered into the required DOE "Critical Decision" process for the NGLS. Consequently, the NGLS is not considered a reasonably foreseeable project at

LBNL at this time. DOE-supported projects at LBNL become reasonably foreseeable and thereby trigger NEPA and CEQA processes when the “Critical Decision – 0” (Statement of Mission Need) milestone is reached. Because the idea to locate the NGLS at LBNL is not a reasonably foreseeable project at this time, the NGLS is not considered further in this CEQA analysis.

The first paragraph on page 4.2-17 is hereby revised as follows:

The BAAQMD released its most recent public review draft of revised CEQA thresholds for evaluation of air quality impacts in May 2010. This new guidance ~~was is in the final review process and has not yet been~~ formally adopted on June 2, 2010. Based on discussions with the BAAQMD in November 2009,¹ it was determined appropriate to use the proposed CEQA thresholds for evaluation of this project’s impacts on air quality. It is BAAQMD policy that BAAQMD thresholds apply only to projects which begin the EIR process after adoption of the BAAQMD thresholds; however, in the absence of other thresholds, the BAAQMD thresholds are used for the purpose of this analysis.

The last paragraph on page 4.2-20 is hereby revised as follows:

The proposed project involves provision of replacement space. However, employees ~~would~~ transfers would be largely from within the LBNL main hill site, with only about 30 UC Berkeley researchers transferring from the adjacent UC Berkeley campus. UC Berkeley researchers would not be issued parking passes and would instead use the shuttle service, walk, or bicycle to and from the LBNL main hill site, and from another site in the City of Berkeley. Janitorial staff would not be expected to increase as a result of the proposed project. Consequently, the addition of this small number of UC Berkeley researchers ~~It is possible that, on average, 100 employees might have to travel slightly greater distances to work at LBNL because they are more~~

¹ Phone conversations between Brian Bateman and Scott Lutz with BAAQMD and Brian Patterson of Golder Associates Inc. on November 23, 2009, page IV.J-13.

~~likely to live in the residential areas nearer Potter Street and farther from the LBNL hill campus. However, many of them already make frequent visits to the hill campus, so the change in working location would make very little difference to the overall vehicle miles travelled.~~

The last paragraph on page 4.2-28, continuing on 4.2-29, is hereby revised as follows:

University Avenue is the highest-traffic-volume roadway in Berkeley likely to be affected by the additional vehicle traffic associated with proposed project operations (and therefore the most likely to experience an increase in ambient CO concentrations). However, because the ~~even in the most extreme case with all relocated GPL staff using University Avenue, project is operations would not~~ anticipated to result in an increase in trips associated with personnel relocated to the LBNL main hill site, the project would not generate any measurable increase in traffic volumes on University Avenue. ~~by more than 100 vehicle round trips per day. An additional 100 passenger vehicle round trips per day represents an increase in total traffic volume on University Avenue of only about 0.8 percent, which is not enough to affect potential compliance with the CO ambient air quality standards. Therefore, the proposed project impacts to ambient CO concentrations would be less than significant.~~

The first sentence of the third paragraph on page 4.2-41 is hereby revised as follows:

~~Prior to formal adoption on June 2, 2010, BAAQMD has now proposed and released in several iterations of draft proposed guidelines that are scheduled to be adopted in April, 2010, included~~ a significance threshold of 100-in-a-million.

The following text is hereby added before the last sentence of the first full paragraph on page 4.3-27:

Additionally, a new sanitary sewer line to be added for the GPL would involve the installation of a 6-inch diameter pipe. Routing for the new pipe has

not yet been finalized, however, two options are currently being considered: either a run of approximately 500 feet west from the proposed GPL between existing buildings, or a run of approximately 650 feet north and then west from the GPL. Neither routing option would pass through habitat for the Alameda whipsnake, or other candidate, sensitive, or special status species.

The second paragraph on page 4.4-7 is hereby revised as follows:

The National Park Service defines a cultural landscape as a “geographic area including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values.” Of the various project components, only the seismic strengthening of Building 85/85A would take place in Strawberry Canyon. These seismic strengthening work would be mainly underground or within an existing building and would not affect Strawberry Canyon. While construction of the GPL would take place in the Strawberry Canyon Watershed, it would not take place within the topographic boundaries of Strawberry Canyon. As described in Section 4.1 Aesthetics, the site of the new GPL is not generally visible from locations in Strawberry Canyon with the exception of limited, far-away glimpses from the Jordan Fire Trail.

Figure 4.5-2 on page 4.5-13 of the Draft EIR is hereby replaced with the figure on the following page.

The last full paragraph on page 4.5-18 is hereby revised as follows:

In January 2010 a Additional supplemental geotechnical reports for the Building 25/25B and Building 85/85A area, were in draft form in January 2010, and were in the process of being finalized in April 2010.

The last full paragraph on page 4.5-24 of the Draft EIR is hereby revised as follows:

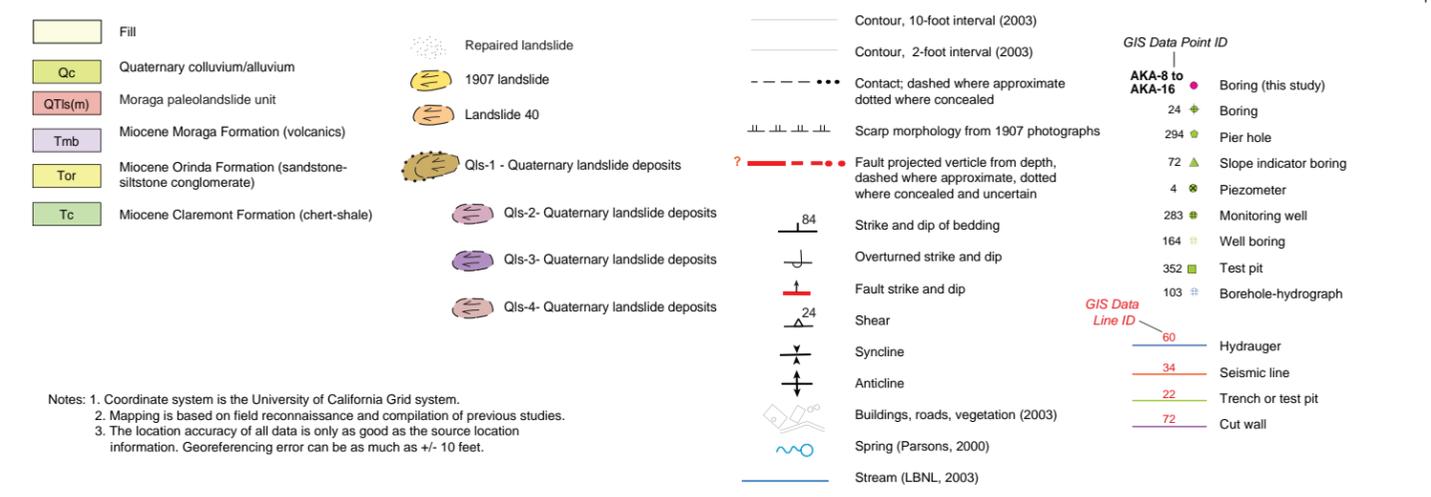
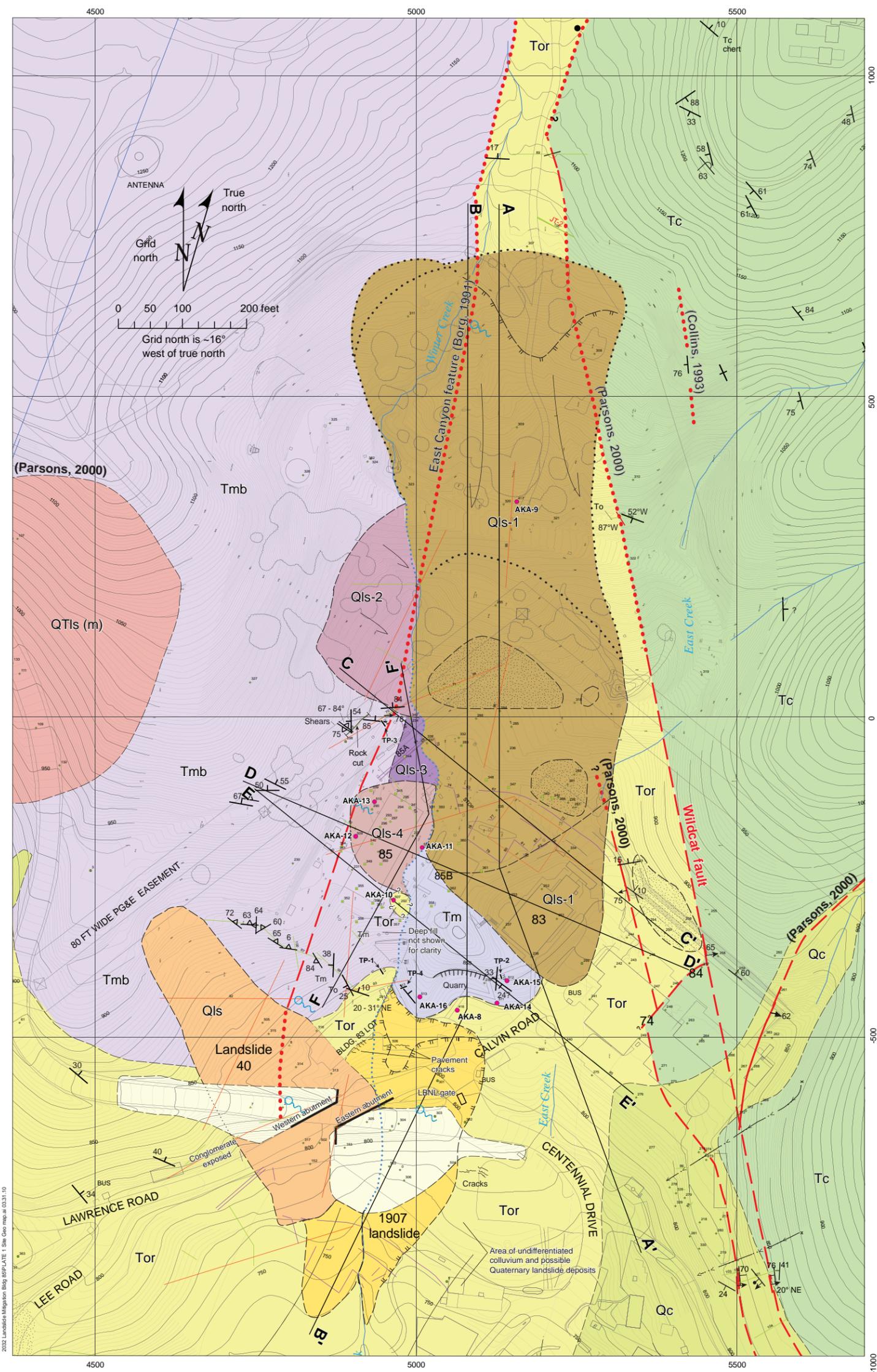


FIGURE 4.5-2
GEOLOGIC MAP OF THE EAST CANYON AREA

~~According to the LBNL 2006 LRDP EIR, soil in all areas but the southern part of the LBNL site does not contain a high enough clay content for it to be expansive. Therefore the GPL would not be constructed in an area of expansive soils. Expansive soils exist in many areas throughout LBNL, but their potentially adverse affects are readily mitigated as part of the engineering design of LBNL projects. The northern portion of the GPL would be founded upon bedrock with a low expansion potential (soils in this area having previously removed prior to constructing Buildings 25 and 25A). Expansive soils may be present at the southern end of the GPL site, but the footings there would be deepened and confirming geotechnical inspections/tests would be performed during construction, to mitigate any post-construction expansive soil effects to a less-than-significant level.~~ Overall, there would be a less-than-significant impact.

The last paragraph on page 4.6-21, continuing on page 4.6-22, is hereby revised as follows:

Overall, the proposed project would, through demolition and new construction, replace a series of older buildings with a single modern, scientific laboratory with associated office space, of equivalent square footage. In addition, the proposed GPL would be energy efficient and designed with the goal of achieving a Gold LEED rating and, consequently, more energy conserving than the facilities it would replace. Traffic generation under the proposed project would be very similar to existing conditions, slightly higher, since the future occupants of the GPL would be drawn largely from existing buildings on the LBNL main hill site, with only about 30 UC Berkeley researchers transferring from the adjacent UC Berkeley campus. UC Berkeley researchers would not be issued parking passes and would instead use the shuttle service, walk, or bicycle to and from the LBNL main hill campus. involve relocation of 100 personnel from the Potter Street site in west Berkeley that is closer to residential neighborhoods. However, many of these employees already travel to the LBNL hill site to collaborate with other researchers located there.

Table 4.6-4 on page 4.6-23 is hereby revised as follows:

TABLE 4.6-4 **SUMMARY OF PROJECT AND BASELINE ESTIMATED GREENHOUSE GAS EMISSIONS (METRIC TONS OF CO₂)**

Source	2004	2008	Proposed Project	Net Increase over 2008
Construction/Demolition	N/A	N/A	214	214
Operation (non-stationary)	1,386 691 ^b	1,195 500 ^b	2,096 ^a	904 1,596
Operation (stationary)	N/A	57 ^c	46	-11

^a Includes off-site CO₂ emissions from electricity usage of 4,700 MW-hrs/year by the GPL.

^b Estimated CO₂ emissions resulting from operation of Buildings 25/25B; 55; and 71C, D, F, J, K, and P (to be demolished) based on natural gas and electricity usage. Energy usage includes operation of Buildings 26 and 71 trailer G because these were not metered separately. Also includes historical electricity usage (2008 usage for 2004 and 2008 estimates) from Potter Street location operations at this site would be transferring to the main LBNL Hill site.

^c Estimated based on fiscal year 2009 data.

Source: Golder Associates, January 2010.

Table 4.6-5 on page 4.6-24 is hereby revised as follows:

TABLE 4.6-5 **SUMMARY OF ESTIMATED NET CARBON DIOXIDE EMISSIONS INCREASES**

Scenario	Maximum Annual Emissions Increase in Metric Tons of CO ₂	Proposed BAAQMD CEQA Significance Threshold
Non-Stationary Sources (2004 baseline year)	740 1,405 ^a	1,100 MT of CO _{2e} /yr ^b
Non-Stationary Sources (2008 baseline year)	904 1,596 ^a	1,100 MT of CO _{2e} /yr ^b

^a Equal to the CO₂ emissions from the non-stationary component of project operations minus the CO₂ emissions from the non-stationary component of either the 2004 or 2008 baseline operations.

^b Or compliance with a Qualified Climate Action Plan, or 4.6 metric tons CO₂/service population/yr (mixed use). A Qualified Climate Action Plan is one that is consistent with all of the AB 32 Scoping Plan measures and goals.

The following text is hereby added after the second full paragraph on page 4.6-22:

UC has applied to the Federal Emergency Management Agency (FEMA) for funding to conduct vegetation management activities on land under its jurisdiction in the East Bay hills. These activities could involve the removal of approximately 46,000 trees activities in Strawberry Canyon, Claremont Canyon, and Frowning Ridge. While the removal of these trees could have GHG related impacts due to the loss of carbon sequestration potential, the proposed project would not contribute to that potential impact because it would involve the removal of only 3 trees, all of which would be replaced in conformance with UC LBNL policy.

The last full paragraph on page 4.9-13 is hereby revised as follows:

The relocation of approximately ~~100 LBNL personnel~~ 30 UC Berkeley researchers to the main hill ~~campus site~~ would increase population density in a manner consistent with the 2006 LRDP. The ADP of the main hill site would increase by approximately ~~2.5~~ 0.8 percent upon completion of the proposed project. Annualized over the 20 year planning horizon of the LRDP, this equates to 0.1504 percent, ~~which is well within~~. As such, the project would not exceed the annual growth rate of 1.25 percent projected for the main hill campus in the LRDP.

The last full paragraph on page 4.10-18 is hereby revised as follows:

Operation of the GPL would not result in an increase in vehicular traffic as the future occupants of the GPL would be drawn largely from existing buildings on the LBNL main hill site, and the 30 or so UC Berkeley researchers transferring from the adjacent UC Berkeley campus would not be issued parking passes for the LBNL main hill site from operation of the GPL will be minor as the anticipated increase in LBNL hill site population would only be around 100. In addition, as described in Section 4.12, Transportation and Traffic, the LBNL Transportation Demand Management program contains

strategies that have made, and continue to make, significant reductions to the number of vehicle trips to and from LBNL. With this program in place and continued development of quieter passenger vehicles such as electric and hybrid vehicles, the noise impact from the additional vehicles is considered *less than significant*.

The second paragraph on page 4.11-9 is hereby revised as follows:

~~The proposed project would result in an increase of 100 staff working on the main hill site and~~ Additional workers would be present on the LBNL main hill -site during demolition and construction phase of the proposed project, and once in operation, the proposed project would result in a negligible increase in the ADP of the LBNL main hill site. However, these additions are not substantial in relation to the existing LBNL population, which was approximately 4,000 in 2003. Furthermore, the improved and new facility on the site is not expected to trigger a substantial increase in the demand for police protection or response from UCPD or the on-site security staff. As a result, a *less-than-significant* impact would occur during the proposed project's construction and operational phases.

The full last paragraph on page 4.11-9 is hereby revised as follows:

New or expanded school facilities could be required if the proposed project introduced school-aged children into existing schools that are at or above classroom capacity. ~~About 100 LBNL staff would~~ However, because the project would only result in the transfer of approximately 30 UC Berkeley researchers to the LBNL main hill site from the adjacent UC Berkeley campus and no other transfer of personnel from off-site locations, transfer from the Potter Street facility in Berkeley to the main hill site, however, as this is only 5 miles away, few, if any, no families are likely to relocate as a consequence. The proposed project would therefore not result in an overall population increase in the City of Berkeley and adjacent municipalities, which could otherwise impact school capacity and require new or expanded facilities. As such, *no impact* would occur.

The second paragraph on page 4.11-10 is hereby revised as follows:

The proposed project would not result in an increased population in local municipalities. As explained under SP2 Impact PUB-3 above, the proposed project would involve only the transfer of about 30 UC Berkeley researchers to the LBNL main hill site from the adjacent UC Berkeley campus and no other transfer of personnel from off-site locations. As such, the proposed project involves the transfer of LBNL staff from the Potter Street facility to the main hill site, but this would not result in people relocating to Berkeley, Oakland, or other cities from outside the region. ~~Thus, the proposed project would not result in or cause~~ an increased demand for new or expanded parks. As a result, *no impact* would occur during the construction or operation of the proposed project.

The text starting with the last paragraph on page 4.12-26 and continuing through to the fourth full paragraph on page 4.12-31 is hereby revised as follows:

The future occupants of the GPL would be drawn largely from existing buildings on the LBNL main hill site, with only about 30 UC Berkeley researchers transferring from the adjacent UC Berkeley campus. UC Berkeley researchers would not be issued parking passes and would instead use the shuttle service, walk, or bicycle to and from the LBNL main hill site. As a result, there would be no increase in the number of vehicle commute trips made as a result of the proposed project. Additionally, continued implementation of the TDM program would encourage further use of alternatives to single-occupancy vehicle trips to and from the LBNL main hill site. Therefore, operational traffic from the proposed project would not add substantially to the existing volume of traffic on local roads or adversely affect level of service conditions at stressed intersections in the vicinity of LBNL. ~~Following completion of the GPL, the proposed project would result in an increase in the number of vehicle trips made to and from LBNL due to the relocation of approximately 100 personnel from the Potter Street facility in Berkeley. As stated in Section B, Existing Conditions, of this chapter, approximately 40~~

~~percent of LBNL staff use alternative modes of transportation to the single occupancy vehicle to make trips to and from the main hill site. Among this percentage, the LBNL shuttle, bicycling, BART, and carpooling are the most commonly used modes of travel. During the operation phase of the proposed project, it is expected that a similar percentage (40 percent) of the total possible new trips would be made to and from LBNL by similar modes.~~

~~Based on calculations from the LBNL 2006 LRDP EIR, 100 new personnel associated with the proposed project would be expected to generate 142 new one-way trips per day, with 15 trips in AM peak hours, and 17 trips in PM peak hours.~~

~~The proposed project would be constructed and operational by 2014. Therefore the effects of the project's operational traffic were evaluated at the four study intersections under 2014 conditions with and without the project. Major projects currently under construction or expected to be completed in the next few years would add to the traffic in the study area. The near term projects included in this analysis are described below:~~

- ~~◆ *Underhill Parking Structure*, recently completed by UC Berkeley, would provide 690 net new parking spaces in the Southside area.~~
- ~~◆ *Lower Hearst Parking Structure*, recently completed by UC Berkeley, would provide 100 net new parking spaces in the Northside area.~~
- ~~◆ *Southeast Campus Integrated Projects (SCIP)* would consolidate existing parking spaces and provide 300 additional parking spaces in the southeast area of the UC Berkeley campus. About 900 parking spaces would be provided at the Maxwell Family Field Parking Structure located at Stadium Rim Way, just east of Gayley Road.~~
- ~~◆ *Computational Research and Theory (CRT) Facility Project* and the *SERC* would increase the LBNL population by no more than 300 persons.~~

~~Other planned LBNL projects such as the BELLA, Seismic Phase 1, User Support Building, and Old Town demolition would not result in an increase in the daily population at LBNL. Thus, they are not expected to add addi~~

~~tional traffic to the roadway network. New trips generated by other UC Berkeley projects such as the NEQSS, Law School Infill, Naval Architecture Restoration and Blum Center, and Warren Hall replacement are included in the trips associated with the two parking structure projects.~~

~~Estimated traffic generated by the near-term projects was added to the existing conditions volumes to estimate intersection volumes under near-term No Project conditions. Table 4.12-4 summarizes the near-term No Project conditions weekday peak-hour intersection level-of-service analysis results. As shown in the table, two of the study intersections that currently operate at LOS D or better, would continue to operate at LOS D or better during both AM and PM peak hours under near-term No Project conditions. The all-way stop-controlled Stadium Rim Way/Gayley Road would degrade from LOS D under Existing conditions to LOS F under near-term No Project conditions during both AM and PM peak hours.~~

~~The all-way stop-controlled Bancroft Way/Piedmont Avenue would continue to operate at LOS F during both AM and PM peak hours under the near-term No Project conditions primarily due to the high pedestrian volume.~~

~~Table 4.12-4 also summarizes the near-term With Project weekday peak-hour intersection level-of-service analysis results. As shown in the table, all four of the existing study intersections would continue to operate at the same level of service as under near-term No Project conditions.~~

~~The Stadium Rim Way/Gayley Road and Bancroft Way/Piedmont Avenue intersections would continue to operate at LOS F during both AM and PM peak hours. However, the proposed project would not increase the intersection v/c ratio by more than 0.01 at these intersections. Thus, the project would not cause a significant impact at these two intersections.~~

TABLE 4.12-4 LEVEL OF SERVICE CONDITIONS IN 2014 WITH AND WITHOUT PROJECT OPERATIONAL TRAFFIC

Intersection	Intersection Control	Peak Hour	Near-Term No Project Conditions		Near-Term With Project Conditions	
			Delay (Seconds) ^a	LOS ^a	Delay (Seconds) ^a	LOS ^a
Hearst Avenue/ Gayley Road/ La Loma Avenue	Signalized	AM	28.6	E	29.4	E
		PM	37.5	D	37.6	D
Stadium Rim Way/Gayley Road	All-Way Stop- Controlled	AM	>60 (v/c = 1.108)	F	>60 (v/c = 1.108)	F
		PM	>60 (v/c = 1.196)	F	>60 (v/c = 1.200)	F
Bancroft Way/ Piedmont Avenue ^b	All-Way Stop- Controlled	AM	>60 (v/c = 1.127)	F	>60 (v/c = 1.136)	F
		PM	>60 (v/c = 0.910)	F	>60 (v/c = 0.911)	F
Durant Avenue/ Piedmont Avenue	All-Way Stop- Controlled	AM	26.1	D	26.7	D
		PM	20.7	E	20.9	E

^aSignalized and all-way stop-controlled intersection delay and level of service based on average control delay per vehicle for the intersection, and side street stop-controlled intersection delay and level of service based on average control delay per vehicle for the worst approach, according to the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2000. For intersections operating at LOS F, the v/c is also reported.

^bBased on the 2000 HCM methodology, the intersection would operate at LOS F during the AM peak hour and LOS D during the PM peak hour under near-term No Project and near-term With Project conditions. Based on field observations and measurements, the intersection currently operates at LOS F during both AM and PM peak hours due to the high number of pedestrian crossings, which the 2000 HCM methodology does not account for. Thus, the intersection would continue to operate at LOS F during both AM and PM peak hours under near-term No Project and near-term With Project conditions.

Source: Fehr & Peers Transportation Consultants, 2010.

Based on the foregoing analysis, the new trip volumes associated with operation of the proposed project would not be substantial in relation to existing traffic volumes or the capacity of the local street system, and would not result in an exceedance of a level of service standard. The project's operational impact would be *less than significant*.

The text starting with the first paragraph on page 4.12-34 and continuing through to the last paragraph on page 4.12-41 is hereby revised as follows:

SP2 Cumulative Impact TRANS-1: The proposed project, in combination with other foreseeable development at LBNL and in the surrounding community, would not generate traffic that would cause the level of service standards to be exceeded at the Durant Avenue/Piedmont Avenue, Hearst Avenue/Gayley Road/La Loma Avenue, Gayley Road/Stadium Rim Way, ~~and~~ or Bancroft Way/Piedmont Avenue intersections. (*No Impact Significant and Unavoidable*)

As discussed above in Impact SP2 TRANS-1, construction traffic at LBNL would be controlled so as not to exceed City of Berkeley thresholds for significant impacts. Also as discussed above in Impact SP2 TRANS-1, the future occupants of the GPL would be drawn largely from exiting buildings on the LBNL main hill site, with approximately 30 UC Berkeley researchers transferring from the adjacent UC campus, all of whom would walk, bicycle, or use the shuttle service to commute. Accordingly, there would be no increase in the number of vehicle commute trips associated with the proposed project, and conditions on stressed intersections in the vicinity of the main hill site would not be exacerbated. Consequently, the project would not contribute to a cumulative impact on the LOS of local roadways ~~the project would not generate traffic volumes that would significantly impact the levels of service of key intersections in the surrounding communities in the near term. However, in combination with other projects at LBNL and foreseeable development in the surrounding community as projected through 2025, in the long term, the proposed project would result in significant impacts to intersection~~

~~operations at the Durant Avenue/Piedmont Avenue, Hearst Avenue/Gayley Road/La Loma Avenue, Gayley Road/Stadium Rim Way, and Bancroft Way/Piedmont Avenue intersections in the City of Berkeley.~~

~~The cumulative traffic analysis completed for the LBNL 2006 LRDP (hereinafter 2006 LRDP Traffic Study) included an intersection operations analysis under year 2025 conditions, which analyzed the impacts of the buildout of the LBNL 2006 LRDP combined with the buildout of the UC Berkeley 2020 LRDP and general plans of Berkeley and surrounding communities. To evaluate the proposed project's contribution to the previously evaluated long term cumulative traffic impacts, an independent 2025 cumulative impact analysis was conducted for this EIR. Four study intersections were reanalyzed with the more refined information regarding LBNL and UC Berkeley projects than was available when the 2006 LRDP Traffic Study was conducted. Table 4.12.5 presents the results of this updated analysis. It compares intersection level of service under Year 2025 with LRDP buildout conditions as presented in the 2006 LRDP Traffic Study with the results of the updated analysis.~~

~~As shown in Table 4.12.5, study intersections would continue to operate at the same level of service under the Updated Year 2025 with LRDP conditions as under the Year 2025 with LRDP conditions presented in the 2006 LRDP Traffic Study. The Hearst Avenue/Gayley Road/La Loma Avenue intersection would operate at LOS E during the AM peak hour and LOS F during the PM peak hour. The Durant Avenue/Piedmont Avenue intersection would operate at LOS E during the AM peak hour and LOS F during the PM peak hour. Both Stadium Rim Way/Gayley Road and Bancroft Way/Piedmont Avenue intersections would operate at LOS F during both AM and PM peak hours.~~

~~Based on the thresholds of significance that were used when the 2006 LRDP EIR was prepared, that EIR identified significant cumulative impacts at three of the four intersections listed in Table 4.12.5. The EIR included LRDP Mitigation Measure TRANS 8, which incorporated LRDP Mitigation Meas-~~

ures TRANS 1a through 1d, to address these significant impacts. In conjunction with the approval of the 2006 LRDP, UC LBNL committed to work with the City of Berkeley and UC Berkeley to implement the necessary improvements at the three intersections identified in LRDP Mitigation Measures TRANS 1a through 1c to improve operations. LRDP Mitigation Measure TRANS 1c and TRANS 1d required that UC LBNL undertake a detailed study of the Hearst Avenue/Gayley Road/La Loma Avenue intersection as part of its TDM program, and contribute on a fair share basis to implementation of any feasible mitigation measures identified in the study. The study, carried out in November 2009, proposed several measures which would improve conditions at the intersection, including the addition of a left hand turn pocket on northbound Gayley Road to westbound Hearst Avenue, the restriping of the northwest curb crosswalk, the modification of signal phasing, and the reduction of the northeastern curb radius.² The collective effect of these measures would improve level of service from LOS F to LOS E at the intersection under cumulative conditions in 2025. However, even though UC LBNL has completed this study and has committed to pay its fair share of the cost of the required improvements at the intersections, and this remains a binding mitigation commitment, the impacts are considered significant and unavoidable because there is not yet a reasonable plan for improvements at these intersections that has been adopted by the City, and as such, it cannot be determined at this time whether the impacts would be mitigated to a less than significant level. Similarly, although intersection improvements were identified in the 2006 LRDP EIR to address the impacts at Gayley Road/Stadium Rim Way intersection and Durant Avenue/Piedmont Avenue intersection and UC LBNL committed to funding on a fair share basis the necessary improvements, the impact was found to be significant and unavoidable as there was no reasonable plan that had been adopted by the City to improve those intersections. Because that is still the case, therefore the cumulative traffic impacts at all three intersections as evaluated in this EIR would still be *significant and unavoidable*.

² McClain, Ryan. Fehr & Peers Transportation Consultants. Hearst Avenue/Gayley Rd/La Loma Avenue Intersection Evaluation. November 11, 2009.

TABLE 4.12-5 YEAR 2025 CONDITIONS – STUDY INTERSECTION LEVEL OF SERVICE SUMMARY

Intersection	Control	Peak Hour	Year 2025 with LRDP ^a		Updated Year 2025 with LRDP	
			Delay (Seconds) ^b	LOS ^b	Delay (Seconds) ^b	LOS ^b
Hearst Avenue/Gayley Road/La Loma Avenue	Signalized	AM	68.4	E	76.0	E
		PM	84.1 (v/c = 1.173)	F	85.2 (v/c = 1.184)	F
Stadium Rim Way/Gayley Road	All-Way	AM	>60 (v/c = 1.262)	F	>60 (v/c = 1.333)	F
	Stop-Controlled	PM	>60 (v/c = 1.274)	F	>60 (v/c = 1.401)	F
Baneroft Way/Piedmont Avenue ^e	All-Way	AM	>60 (v/c = 1.256)	F	>60 (v/c = 1.356)	F
	Stop-Controlled	PM	>60 (v/c = 0.998)	F	>60 (v/c = 1.009)	F
Durant Avenue/Piedmont Avenue	All-Way	AM	55.9 (v/c = 1.128)	F	>60 (v/c = 1.201)	F
	Stop-Controlled	PM	36.8	E	37.5	E

Notes: **Bold** indicated an intersection operating at unacceptable LOS E or LOS F.

^aBased on Table IV.L 7 (Revised) in the LBNL LRDP Final EIR (July 2007).

^bSignalized and all way stop controlled intersection delay and level of service based on average control delay per vehicle for the intersection, and side street stop controlled intersection delay and level of service based on average control delay per vehicle for the worst approach, according to the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2000. For intersections operating at LOS F, the v/c ratio is also reported.

^cBased on the 2000 HCM methodology, the intersection would operate at LOS F during the AM peak hour and LOS E during the PM peak hour under Cumulative conditions. Based on field observations and measurements, the intersection currently operates at LOS F during both AM and PM peak hours due to the high number of pedestrian crossings, which the 2000 HCM methodology does not account for. Thus, the intersection would continue to operate at LOS F during both AM and PM peak hours under Cumulative conditions.

Source: Fehr & Peers, January 2010.

The LBNL 2006 LRDP EIR did not find a significant traffic-related impact at the Bancroft Way/Piedmont Avenue intersection; however, the updated analysis shows that in addition to the three intersections discussed above, the intersection of Bancroft Way and Piedmont Avenue would operate at LOS F in 2025 and cumulative traffic added by LBNL growth would cause the v/c ratio to increase by 0.181 in the AM peak period and by 0.032 in the PM peak period, with the AM and PM peak hour v/c increase exceeding the threshold of significance established by the City of Berkeley. Therefore, the cumulative traffic would result in a significant impact at this intersection.

As shown in Table 4.12-6, the proposed project would add small amounts of traffic to each of these four intersections compared to the total growth in traffic volumes between 2010 and 2025, and as shown in Table 4.12-7, the project would not substantially increase the delay or the v/c ratio. However, conservatively the proposed project's contribution to these intersections is considered cumulatively considerable.

LBNL 2006 LRDP EIR Mitigation Measures TRANS 8, and TRANS 1a, 1b, 1c, and 1d apply to and are a part of the proposed project and would address the project's contribution to the impacts at Durant Avenue/Piedmont Avenue, Hearst Avenue/Gayley Road/La Loma Avenue, and Gayley Road/Stadium Rim Way intersections but would not reduce the impacts to a less than significant level. With respect to the cumulative impact at the Bancroft Way/Piedmont Avenue intersection from all growth at LBNL under the 2006 LRDP including the proposed project, the following mitigation measure is proposed:³

³ This mitigation measure is the same as Mitigation Measure TRANS 1c in the LBNL 2006 LRDP EIR Supplement, presented after Chapter 7 in this volume of the EIR, that is a supplementation of the LBNL 2006 LRDP EIR traffic analysis. This mitigation measure addresses the cumulative traffic impact of the proposed project and the cumulative impact of LBNL growth under the LBNL 2006 LRDP.

TABLE 4.12-6 YEAR 2025 CONDITIONS – SEISMIC PHASE 2 PROJECT CONTRIBUTION TO CUMULATIVE TRIPS

Intersection	Peak Hour	Total Intersection Volume		Seismic Phase 2 Project Trips	Percent Contribution ^a
		Existing	Cumulative		
Hearst Ave./Gayley Rd./La Loma Ave.	AM	1,440	2,031	45	2.5%
	PM	1,555	2,134	47	2.9%
Stadium Rim Way/Gayley Rd.	AM	1,172	1,872	6	0.9%
	PM	1,293	1,864	3	0.5%
Bancroft Way/Piedmont Ave. ^b	AM	1,151	1,710	6	1.1%
	PM	1,107	1,454	3	0.9%
Durant Ave./Piedmont Ave.	AM	1,078	1,625	6	1.1%
	PM	1,201	1,628	3	0.7%

^aPercent Contribution = Project Trips/(Cumulative Intersection Volume Existing Intersection Volume)

Source: Fehr & Peers, January 2010.

~~Mitigation Measure TRANS 1e: LBNL will work with the City of Berkeley to design and install a signal at the Bancroft Way/Piedmont Avenue intersection and provide an exclusive left turn lane and an exclusive through lane on the northbound approach when a signal warrant analysis shows that the signal is needed. LBNL shall contribute funding, on a fair share basis, to be determined in consultation with UC Berkeley and the City of Berkeley, for a periodic (annual or biennial) signal warrant check to allow the City to determine when a signal is warranted, and for installation of the signal. Should the City determine that alternative mitigation strategies may reduce or avoid the significant impact, LBNL shall work with the City and UC Berkeley to identify and implement such alternative feasible measure(s). See also Mitigation Measure TRANS 1c, development and implementation of a new Transportation Demand Management Program.~~

TABLE 4.12-7 **YEAR 2025 CONDITIONS – STUDY INTERSECTION LEVEL OF SERVICE SUMMARY**

Intersection	Peak Hour	Updated Year 2025 with LRDP Without Seismic Phase 2		Updated Year 2025 with LRDP With Seismic Phase 2		Project Contribution
		Delay (Seconds)	LOS ^a	Delay (Seconds) ^a	LOS ^a	Delay (Seconds) ^a
Hearst Ave./ Gayley Rd./ La Loma Ave.	AM	74.3	E	76.0	E	1.7
	PM	>60 (v/c=1.169)	F	>60 (v/c=1.184)	F	v/c=0.015
Stadium Rim Way/Gayley Rd.	AM	>60 (v/c=1.333)	F	>60 (v/c=1.333)	F	v/c=0
	PM	>60 (v/c=1.398)	F	>60 (v/c=1.401)	F	v/c=0.002
Bancroft Way/ Piedmont Ave. ^b	AM	60 (v/c=1.348)	F	>60 (v/c=1.356)	F	v/c=0.008
	PM	>60 (v/c=1.008)	F	>60 (v/c=1.009)	F	v/c=0.001
Durant Ave./ Piedmont Ave.	AM	>60 (v/c=1.194)	F	>60 (v/c=1.201)	F	v/c=0.007
	PM	37.0	E	37.5	E	0.5

Note: **Bold** indicated an intersection operating at unacceptable LOS E or LOS F.

^aSignalized and all way stop controlled intersection delay and level of service based on average control delay per vehicle for the intersection, and side street stop controlled intersection delay and level of service based on average control delay per vehicle for the worst approach, according to the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2000. – or intersections operating at LOS F, the v/c ratio is also reported.

^bBased on the 2000 HCM methodology, the intersection would operate at LOS F during the AM peak hour and LOS E during the PM peak hour under Cumulative with Helios conditions. Based on field observations and measurements, the intersection currently operates at LOS F during both AM and PM peak hours due to the high number of pedestrian crossings, which the 2000 HCM methodology does not account for. Thus, the intersection would continue to operate at LOS F during both AM and PM peak hours under Cumulative with Helios conditions.

Source: Fehr & Peers, January 2010.

~~With the implementation of this mitigation measure, the Bancroft Way/Piedmont Avenue intersection would operate at an acceptable level of service (LOS B) during both the AM and PM peak hours.~~

~~This mitigation measure is proposed to be adopted as part of the LRDP and will be monitored through the LRDP mitigation monitoring and reporting program. It will thus continue to be a binding mitigation commitment of LBNL. Under CEQA case law, however, when the lead agency contributes fair share funding to a mitigation measure that will be carried out by another entity, there must be some evidence of a reasonable plan in place in order for the lead agency to conclude that the adopted mitigation will reduce the impact to a less than significant level (City of Marina v. Board of Trustees of the California State University (2006) 39 Cal.4th 341). The University has discussed this with the City, and based on that consultation, LBNL understands there have been some discussions of improvements at Bancroft Way/Piedmont Avenue intersection. Also, the University has retained a consultant to perform studies related to these improvements, but there is not yet a plan in place for the improvements. As such, it cannot be determined at this time that this impact will be mitigated to a less than significant level. Accordingly, this impact would still be considered significant and unavoidable, but LBNL would contribute to fair share funding which, if a reasonable plan is implemented, would mitigate these impacts to a less than significant level.~~

~~Significance after Mitigation: Implementation of the above measure would improve conditions at the intersection to LOS B in both the AM and PM peak hours.⁴ However, there is not yet a reasonable plan for improvements at this intersection, and as such, it cannot be determined at this time whether the impact will in fact be mitigated to a less than significant level. Therefore, this cumulative impact is considered *significant and unavoidable*.~~

The following text is hereby added after the first paragraph on page 4.13-10:

On September 30, 2009, UC LBNL adopted a Sanitary Sewer System Management Plan (SSSMP) which guides the Facilities Division and the Environmental Health and Safety Division of UC LBNL in identifying, prioritizing, and continuously renewing and replacing sewer system facilities so as to maintain reliable service, and in cost-effectively minimizing infiltration and inflow. As described in the SSSMP, UC LBNL has established procedures for monitoring and evaluating infiltration and inflow (I/I), including guidelines for taking action to limit I/I. Groundwater infiltration and inflow (GWI/I) and rain-dependent infiltration and inflow (RDI/I) are quantified and monitored to ensure that the hydraulic capacity of the sanitary sewer collection system is not exceeded and to determine if I/I reduction projects should be initiated. UC LBNL also maintains design and construction standards, specifications, and details which ensure that new and rehabilitated sanitary sewer collection system infrastructure is designed and installed in compliance with the latest federal and State regulations, and in line with general industry standards.

The second sentence of the second full paragraph on page 4.13-11 is hereby revised as follows:

There are two water lines into LBNL from the outside, including a 12-inch diameter pipeline originating at EBMUD's Shasta Reservoir (2-million gallon capacity) and a 6-inch diameter pipeline originating at EBMUD's Berkeley View Reservoir (~~3~~1-million gallon capacity).

⁴ UC Berkeley. 2020 LRDP Final EIR, http://www.ep.berkeley.edu/LRDP_final/section_9.2.pdf, accessed on January 11, 2010.

The following footnote is added after the third sentence of the second full paragraph on page 4.13-11:

⁴ LBNL, 2006, Long-Range Development Plan Environmental Impact Report, page IV.M-2.

The last full paragraph on page 4.13-14 is hereby revised as follows:

Existing sewer and water utility lines to Building 25/25B would be re-used with some minor additions to provide water and to handle wastewater generated by the proposed GPL.⁵ A new sanitary sewer line would be added for the GPL, in accordance with the UC LBNL Sanitary Sewer System Management Plan (SSSMP) of September 30, 2009. Preliminary design documents call for a 6-inch diameter pipe with two routing options: either a run of approximately 500 feet west from the proposed GPL between existing buildings, or a run of approximately 650 feet north and then west from the GPL. Both routing options would connect to the existing sanitary sewer system and would pass entirely through previously developed land. Environmental impacts from the construction of this sanitary sewer line would be less than significant.

Wastewater from Building 25/25B flows into two City of Berkeley's sanitary sewer sub-basins: sub-basin 17-013 and sub-basin 17-503. Sub-basin 17-013 has no capacity constraints; however sub-basin 17-503 is constrained during peak wet weather conditions. This constraint could potentially be exacerbated by the increased volume of wastewater from the new GPL facility, with its larger full-day occupant population and greater gross square footage.

The last paragraph on page 4.13-16 and continuing through to the end of the first full paragraph on page 4.13-17 is hereby revised as follows:

⁵ Lee, Stuart. LBNL. Personal communication with DC&E staff, August 31, 2009.

SP2 Impact UTIL-5: The proposed project would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's demand in addition to existing commitments. (Less than Significant No impact)

On January 14, 2009, due to Environmental Protection Agency's (EPA) and the State Water Resources Control Board's (SWRCB) re-interpretation of applicable law, the Regional Water Quality Control Board (RWQCB) issued an order prohibiting further discharges from EBMUD's Wet Weather Facilities. EBMUD's Main Wastewater Treatment Plant (MWWTP) and interceptor system are anticipated to have adequate dry weather capacity to treat the proposed wastewater flows from this project, but wet weather flows are a concern. EBMUD is conducting extensive flow monitoring and hydraulic modeling to determine the level of flow reductions that will be needed in order to comply with the new zero-discharge requirement at the Wet Weather Facilities. Currently, there is insufficient information to forecast how allowable wet weather flows in the individual collection system subbasins contributing to the EBMUD wastewater system will be impacted, including the subbasin in which the proposed project is located. A new regional wet weather flow allocation process may occur in the East Bay, although the schedule for implementation has yet to be determined. EBMUD has therefore recommended that the proposed project (1) replace or rehabilitate any existing sanitary sewer collection systems, including sewer lateral lines, to reduce infiltration/inflow and (2) ensure any new wastewater collection systems, including sewer lateral lines, for the project are constructed to prevent infiltration/inflow to the maximum extent feasible.

The 2009 UC LBNL SSSMP, described above, contains a framework for implementing the recommendations made by EBMUD in view of the January 14, 2009 RWQCB order. When EBMUD has determined new flow allocations, requirements, and the schedule for implementation, the SSSMP will allow UC LBNL to react as necessary. Additionally, stormwater control measures described above would further reduce wet weather flows in the individual collection system subbasins contributing to the EBMUD wastewater

system. Therefore impacts related to wastewater treatment capacity would be less than significant.

~~EBMUD provides wastewater treatment services to parts of Alameda and Contra Costa counties along the east shore of the San Francisco Bay, including the project site. As part of the LBNL 2006 LRDP process, EBMUD evaluated the current and future wastewater treatment needs of the main hill site, including the proposed project, and determined that it had adequate capacity to handle the LBNL demand in addition to its existing commitments. Therefore, *no impact* from the proposed project would occur either during construction or operational phases.~~

The first full paragraph on page 4.13-19 is hereby revised as follows:

The proposed project would result in less than significant impacts on utilities and service systems. Nonetheless, in combination with reasonably foreseeable development at LBNL, UC Berkeley, and in nearby communities, the proposed project could potentially have a significant impact on wastewater collection, due to the January 14, 2009 RWQCB order prohibiting further discharges from EBMUD's Wet Weather Facilities. As discussed above, however, the 2009 UC LBNL SSSMP contains a framework for replacing or rehabilitating the existing sanitary sewer collection systems and for limiting infiltration/inflow to the maximum extent feasible. The SSSMP will allow UC LBNL to work to comply with new regional wet weather flow allocations if EBMUD revises current allocations in the East Bay. The associated cumulative impact capacity constraint on City of Berkeley sanitary sewer sub-basin 17-503 during peak wet weather conditions. As discussed above, however, as a part of the project LRDP Mitigation Measure UTILS-2 would be implemented and therefore additional wastewater flows would be diverted to unconstrained sub-basins with adequate capacity; the impact would therefore be less than significant.

The second sentence of the fourth full paragraph on page 5-1 is hereby revised as follows:

The project would also allow for the consolidation of related life science programs and personnel from various locations on ~~and off~~ the LBNL main hill site and the adjacent UC Berkeley campus by replacing approximately 43,000 gross square feet (gsf) of demolished space with a new, approximately 43,000 gsf general purpose laboratory to be constructed on the current Building 25/25B location, in the central portion of the LBNL site.

The first full paragraph on page 5-3 is hereby revised as follows:

Under this alternative, the Buildings 25/25B, 55 and 71 trailers would still be demolished and Building 85/85A seismically strengthened. A new GPL would still be built, but instead of at a location at LBNL, it would be located at the UC Richmond Field Station (RFS). ~~This facility is a 162-acre teaching and research facility with over 500,000 sf of existing research space located approximately 6 miles (by freeway) northwest of the LBNL site. Under this alternative, the GPL would be built on a 3.2-acre area of the RFS currently used for storage of California Partners for Advanced Transit and Highways research vehicles. Design and operation of the facility would be equivalent to the GPL under the proposed project in all respects. This alternative would involve the relocation of 130 UC LBNL personnel to the RFS site, which is not well served by public transit. It would therefore be necessary to construct parking spaces for additional researchers, visitors, and guests at the RFS~~ Figure 5-4 and 5-5 show an aerial view and the location of the Richmond Field Station. The site was formerly used for industrial purposes and there is ~~remnant contamination that has been the subject of environmental investigation and remediation over a number of years.~~⁶ If the selected site included ~~contamination, a remediation plan would be required prior to construction of a new building on the site. The identification of any contamination would~~

⁶ A description of the Richmond Field Station including past industrial activities and ongoing clean-up can be found online at: <http://rfs.berkeley.edu/about.html#thefacility>.

~~not necessarily preclude building construction as site remediation would most likely allow for construction of light industrial uses, such as the GPL.~~

Figure 5-5 on page 5-8 is hereby replaced with the figure on the following page.

The last sentence of the second full paragraph on page 5-9 is hereby deleted:

~~Overall, there would still be around 100 LBNL personnel in the off site Potter Street facility.~~

The last sentence of the last paragraph on page 5-9 is hereby deleted:

~~UC LBNL personnel would also remain in the off site Potter Street facility.~~

The first paragraph on page 5-10 is hereby revised as follows:

Under this alternative, Buildings 25/25B, 55 and 71 trailers identified for demolition in the proposed project would instead be rehabilitated to upgrade overall function, improve seismic safety ratings and mitigate the safety risk to the occupants. Rehabilitation would occur in lieu of construction of the GPL. Under this alternative, ~~the approximately 100 LBNL employees currently located in 36,000 sqf of leased space at the off site Potter Street facility would remain there.~~ Building 85/85A would still be seismically strengthened.

Table 5-1 is hereby replaced with the table on the following page.

The first sentence of the last paragraph on page 5-15 is hereby revised as follows:

Just as the proposed project would not be associated with significant land use-related impacts, constructing ~~relocating UC LBNL personnel to the GPL at~~



FIGURE 5-5

RICHMOND FIELD STATION SITE BOUNDARIES

LAWRENCE BERKELEY NATIONAL LABORATORY
 SEISMIC PHASE 2 FINAL EIR
 REVISIONS TO THE DRAFT EIR

TABLE 5-1 COMPARISON OF IMPACTS FROM PROJECT ALTERNATIVES

Topic	Project at B25/25B Site	Cumulative Impacts	Building 74 SE Parking Lot Site		Richmond Field Station		Leased Space Off-Site		Reduced Project Alternative		No Project Alternative	
			Project Impacts	Impacts Comparison	Project Impacts	Impacts Comparison	Project Impacts	Impacts Comparison	Project Impacts	Impacts Comparison	Project Impacts	Impacts Comparison
1. Aesthetics	LTS	LTS	SU	>	LTS	=	LTS	<	NI	<	NI	<
2. Air Quality	LTS	LTS	LTS	>	LTS	=	LTS	<	LTS	<	NI	<
3. Biological Resources	LTS	LTS	LTS	>	LTS	=	LTS	<	LTS	<	NI	<
4. Cultural Resources	LTS	LTS	LTS	=	LTS	=	LTS	<	LTS	<	NI	<
5. Geology and Soils	LTS	LTS	LTS	=	LTS	=	LTS	<	LTS	<	LTS	>
6. Greenhouse Gas Emissions ^a	n/a	LTS	LTS	=	LTS	>	LTS	>	LTS	<	LTS	<
7. Hazards and Hazardous Materials	LTS	LTS	LTS	=	LTS	=	LTS	=	LTS	<	NI	<
8. Hydrology and Water Quality	LTS	LTS	LTS	>	LTS	=	LTS	<	LTS	<	NI	<
9. Land Use and Planning	LTS	LTS	LTS	=	LTS	=	LTS	=	NI	<	NI	<
10. Noise	LTS	LTS	SU	>	LTS	=	LTS	<	LTS	<	NI	<
11. Public Services	LTS	LTS	LTS	=	LTS	=	LTS	=	NI	<	NI	<
12. Transportation and Traffic	LTS	SU <u>LTS</u>	LTS	=	LTS	=	LTS	<	LTS	<=	NI	<=
13. Utilities and Service Systems	LTS	LTS	LTS	=	LTS	=	LTS	=	NI	<	NI	<

Notes:

- NI No impact
- LTS Less than significant impact
- SU Significant impact
- < Fewer impacts compared to the proposed project
- = Equivalent to proposed project
- > More impacts compared to the proposed project

^a Comparisons are made at the cumulative level.

the Building 74 SE Parking Lot Site would neither divide an existing community, nor conflict with an existing land use plan, as the construction of a general purpose laboratory at this site would be consistent with the 2006 LRDP.

The first full paragraph on page 5-17 is hereby deleted:

~~This alternative would result in the same significant and unavoidable cumulative impacts at the off site intersections as the proposed project and would be considered equivalent to the proposed project.~~

The second full paragraph on page 5-18 is hereby revised as follows:

This alternative would meet all of the project objectives. It would meet the seismic life-safety objective by replacing the “poor” and “very poor” seismically rated structures and the “failing” trailers with a new GPL, and it would seismically strengthen Building 85/85A. Assuming that the design of the GPL under this alternative would be equivalent to the proposed project, safe, modern, general purpose life science research space would be created. Development of the GPL under this alternative would mean that flexible, LEED Gold-certified research and institutional space would be provided, and the efficiency of research operations would be increased, as the clustering of researchers and programs would occur. Finally, some life science research functions would be located near the Nanosciences/Molecular Foundry Research cluster under this alternative. As such, researchers would benefit from interactive science.

The third full paragraph on page 5-18 is hereby revised as follows:

This alternative differs from the proposed project primarily in the choice of location for construction of the GPL, as demolition of Buildings 55 and 71 trailers and Building 85/85A seismic strengthening would take place under either scenario. The GPL would be built ~~approximately 6 miles (via freeway) northwest of the LBNL main hill site at the Richmond Field Station UC RFS~~ on a 3.2-acre area of the RFS currently used for storage of California Partners

~~for Advanced Transit and Highways research vehicles in the City of Richmond on University-owned property.~~ Figures 5-4 and 5-5 show the location of the RFS and an aerial view, respectively.

The second sentence of the first full paragraph on page 5-18 is hereby revised as follows:

Since the GPL at RFS would be largely screened from public view by intervening buildings and vegetation constructed among the existing light industrial buildings, the impacts under this alternative would be less than significant and equivalent to those from the proposed project.

The last paragraph on page 5-20 is hereby revised as follows:

~~Under the proposed project, construction of the GPL is proposed on an already disturbed area, although this is adjacent to undeveloped areas and to an irrigated grove of redwood and sequoia trees. Up to three trees would probably be removed. Although the precise location of the GPL at RFS has not been determined at this time, the GPL would likely be located outside of the areas where sensitive biological and wetland resources are present, due to regulatory restrictions and the continued importance of those parts of RFS for teaching and research. The habitat on the site proposed for the GPL at the RFS is composed of disturbed non-native and native dominated grassland on fill, ornamental trees, eucalyptus trees, and a drainage ditch. No federally protected wildlife or plant species is known to occur on the alternative site. The drainage along the eastern side of proposed site at the RFS may be subject to U.S. Army Corps of Engineers (USACE) and/or California Department of Fish and Game (CDFG) jurisdiction. If it is determined that the drainage feature qualifies as a jurisdictional feature, it would be avoided. If avoidance is not feasible, compliance with federal and State policies would reduce the environmental effects related to the water feature. The potential for this alternative to affect wetland habitat is greater than if the GPL were constructed on the LBNL main hill site, however the effect would be reduced by the implementation of LBNL 2006 LRDP mitigation measures that would be volun-~~

tarily applied. It is anticipated that most of the trees on the site would remain under this alternative, and only a few trees would be removed. The removal of active nests and nest abandonment due to construction noise would be avoided through implementation of LBNL 2006 LRDP mitigation measures.

In addition, construction of the GPL at the RFS could potentially affect the sensitive natural communities of California Oatgrass Bunchgrass Grassland (*Danthonia californica*) and purple needlegrass (*Nassella pulchra*) that are present on the site. Although these species are not federally protected, implementation of LBNL 2006 LRDP mitigation measures would minimize this effect. The impacts of the RFS alternative would also likely be less than significant and equivalent to the impacts of the proposed project.

The second full paragraph on page 5-21 is hereby revised as follows:

Excavation of the proposed project site at Building 25/25B could potentially encounter soil and groundwater contaminated with low levels of VOCs. Since the RFS also includes contaminated areas that are undergoing active remediation, construction of the GPL at RFS would require site characterization. If the GPL were to be constructed at the RFS, a Soil Management Plan (SMP) and Groundwater Monitoring and Management Plan (GMMP) would be prepared as required for all excavation at LBNL. These plans would contain descriptions of the sampling and analysis required to evaluate potential risks and to comply with landfill screening criteria. A portion of the site proposed for the GPL at the RFS has been remediated for various metals that exceeded site-specific human and ecological target levels. Additionally, soil management and groundwater monitoring programs are in place to ensure ecological and human safety. It is anticipated that UC Berkeley would remediate the site entirely, in compliance with DTSC requirements, prior to development. Therefore, locating the GPL facility at this site would not expose facility users to contamination. For both the Building 25/25B and RFS locations, LBNL standard practices and other measures that would be implemented as part of the project would protect construction workers from this contamination and also prevent it spreading further. In conclusion, this al-

ternative would also have less than significant impacts to hazards and hazardous materials, which would be equivalent to the proposed project.

The last paragraph on page 5-22, continuing onto page 5-23, is hereby revised as follows:

The GPL facility site at the RFS is currently undeveloped, and therefore the facility would add new impervious surfaces that would generate increased stormwater. Because the precise location for the GPL at the RFS has not been identified, it could be constructed on a redevelopment site or on vacant land. Under either condition, Design of the new facility would be in accordance with applicable LBNL standard procedures and NPDES regulations and policies which would ensure that adequate drainage facilities and storm-water controls were provided. In comparison, the Building 25/25B site at LBNL is already developed and impervious and would not generate new runoff. Consequently, this alternative would also result in less than significant impacts to hydrology and water quality, that would be slightly greater than or equivalent to the impacts of the proposed project. Water quality could be affected by the runoff generated by the parking lot that would be built to serve the GPL facility population at the RFS. However, implementation of LBNL 2006 LRDP Mitigation Measures and compliance with NPDES requirements would minimize water quality effects. Construction-phase water quality impacts would be addressed in a SWPPP that would be developed and implemented in compliance with NPDES requirements. Additionally, the RFS is not located in an area at risk of inundation from sea level rise expected in the next century, as defined by the San Francisco Bay Conservation and Development Commission (BCDC).

The last sentence of the second full paragraph on page 5-23 is hereby revised as follows:

Land uses surrounding the RFS are largely industrial; however, there is a residential neighborhood adjacent to the site 0.28 miles to the southwest.

The third full paragraph on page 5-23 is hereby revised as follows:

Voluntary application of the LBNL 2006 LRDP mitigation measures to the RFS would generally reduce noise levels. Construction noise would also attenuate due to intervening vegetation and buildings between the GPL site and the residential neighborhood. In addition, if necessary, construction activities would be limited to non-holiday weekdays between the hours of 7 am. and 7 p.m. to reduce the noise affecting adjacent single-family residential neighborhoods and prevent exceedence of Richmond Noise Ordinance standards.

The second sentence of the last paragraph on page 5-23 is hereby revised as follows:

~~The precise location of the GPL on the RFS site is not known at this time, however, the building~~ Under this alternative, the GPL would likely be situated at least 0.28 mile from the Marina Bay residences to the southwest, a distance too far for operational noise from the cooling towers or the HVAC system to have a significant impact.

The last paragraph on page 5-24, continuing onto page 5-25, is hereby revised as follows:

As proportionately more employees live closer to Berkeley than Richmond, construction of the GPL at the RFS would likely increase the number of VMT. There would also be decreased opportunities for commuting by public transit as compared to the LBNL main hill site, resulting in a slight increase in VMT. However, the number of personnel in the GPL would not be large (around 130) in comparison with regional transportation patterns and free-way traffic would not be significantly affected.

Vehicles traveling to and from the RFS site via the Regatta interchange travel through one major intersection at Syndicate Street and Meade Street, which currently operates at an acceptable level of service. Based on trip generation rates for Single Tenant Office uses in the Institute of Traffic Engineers (ITE)

Trip Generation guide,⁷ the additional traffic generated by the approximately 130 full-day GPL occupants and associated visitors would not adversely affect the Syndicate and Meade Street intersection. Impacts under this alternative would therefore be *less than significant* and would be equivalent to those of the proposed project.

The second sentence of the second full sentence on page 5-25 is hereby revised as follows:

The design of the GPL would be equivalent to the proposed project, and a safe, modern, LEED Gold-certified ~~life science~~ research space would be created.

The last sentence of the second paragraph on page 5-30 is hereby revised as follows:

~~The operational air quality impacts would be avoided.~~ As no new vehicle trips, cooling towers, lab space or HVAC would be added to the LBNL main hill site, there would be no operational air quality impacts.

The third paragraph on page 5-30 is revised as follows:

~~No construction would avoid the~~ There would be no less-than-significant impacts due to construction of the GPL near undeveloped areas, or the installation of either ~~and~~ the new storm drain or the new sanitary sewer line through the undeveloped but previously disturbed hillside land on the LBNL main hill site. Impacts under this alternative from the seismic strengthening portion of the work would remain less than significant and overall the alternative would result in slightly reduced impacts compared to the proposed project.

⁷ San Francisco Bay Conservation and Development Commission. Climate Change, http://www.bcdc.ca.gov/planning/climate_change/climate_change.shtml. Accessed on April 7, 2010.

The last paragraph on page 5-32 is hereby revised as follows:

This alternative would meet one of the project objectives. It would improve the seismic life-safety of one component of the project, Building 85/85A. However, it would not replace the “poor” and “very poor” seismically rated structures of Buildings 25/25B, 55 and the “failing” 71 trailers with acceptable safe, modern life science research space. ~~The efficiency of research operations would not be optimized as functions would not be located near the Nanosciences/Molecular Foundry Research cluster under this alternative~~ Nor would this alternative co-locate researchers and graduate students within a cluster of research facilities so as to expand opportunities for instrument sharing and interacting among scientists engaged in a range of research projects.

The second paragraph on page 5-33 is hereby revised as follows:

There would be no impacts because this alternative would result in no new construction or demolition, ~~or seismic strengthening.~~

The fifth paragraph on page 5-35 is hereby revised as follows:

With no relocation of functions there would be no impacts to utilities and service systems. This alternative would avoid the less-than-significant impacts of the proposed project on utilities and service systems.

The last paragraph on page 5-35 is hereby revised as follows:

This alternative would not meet any of the project objectives. It would not seismically strengthen Building 85/85B. It would not replace the “poor” and “very poor” seismically rated structures of Buildings 25/25B, 55 and the “failing” 71 trailers with acceptable, modern life science research space. LEED Gold-certified space would not be added to the LBNL main hill site, ~~and the efficiency of research operations would not be optimized as functions would not be located near the Nanosciences/Molecular Foundry Research cluster under this alternative~~ nor would researchers and graduate students be co-

located within a cluster of research facilities so as to expand opportunities for instrument sharing and interacting among scientists engaged in a range of research projects.

The first full paragraph on page 6-2 is hereby revised as follows:

The future occupants of the GPL would be drawn largely from existing buildings on the LBNL main hill site, with only about 30 UC Berkeley researchers transferring from the adjacent UC Berkeley campus. ~~The proposed project would not also result in an increase in the number of employees located at the LBNL site, as it includes the transfer of 100 staff members from the off-site Potter Street facility to the LBNL main hill site. This amount of population growth is within the LBNL long-term planning projections, as set forth in the LRDP, which estimate that the total adjusted daily population (permanent employees and guests) would increase from 3,650 in 2003 to 4,650 in 2025; an increase of 1,000 people.⁸ In addition, these employees are current LBNL staff members, and the Potter Street facility from which they would be transferred is located in the City of Berkeley approximately 5 miles from LBNL. It is likely that transferred employees already reside in the vicinity of LBNL. The project would therefore not foster a substantial increase in population growth in the project vicinity.~~

The last paragraph on page 6-2 is hereby revised as follows:

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be reduced to a less than significant level, even with the implementation of feasible mitigation measures. For the proposed project, all impacts would be reduced to a *less-than-significant* level ~~with the exception of the following one impact that was also identified as significant and unavoidable in the LBNL 2006 LRDP EIR.~~

The first paragraph on page 6-3 is hereby deleted:

⁸ LBNL, 2006, *Long-Range Development Plan Environmental Impact Report*, page II-6.

~~SP2 Cumulative Impact TRANS-1: The proposed project, in combination with other foreseeable development at LBNL and in the surrounding community, would generate traffic that would cause the City of Berkeley level of service standards at the Durant Avenue/Piedmont Avenue, Hearst Avenue/Gayley Road, Gayley Road/Stadium Rim Way, and Bancroft Way/Piedmont Avenue intersections to be exceeded. (*Significant and Unavoidable*)~~

The first sentence of the first full paragraph on page S-2 is hereby revised as follows:

The LBNL 2006 LRDP EIR is hereby ~~amended~~ updated to include in LRDP Impact TRANS-1 and LRDP Impact TRANS-8 the significant impact at the Bancroft Way/Piedmont Avenue intersection consistent with Fehr & Peers' updated 2025 analysis.

LAWRENCE BERKELEY NATIONAL LABORATORY
SEISMIC PHASE 2 FINAL EIR
REVISIONS TO THE DRAFT EIR