

**APPENDIX 1**

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**Standard Project Features**

## Introduction to Standard Project Features

Standard Project Features (SPFs) were originally identified in the UC LBNL 2006 LRDP EIR as environmentally proactive measures that would be incorporated into all LBNL projects. These measures have been adopted as part of the LBNL 2006 LRDP EIR by the Regents of the University of California. Because the proposed CRT facility is an element of the LBNL site growth projected by the University, the following SPFs are included in and a part of the Proposed Action and alternatives (described in **Section 3.0, Proposed Action and Alternatives**), except the Former DHS Site Alternative to which similar SPFs adopted by the UC Berkeley campus would apply.

For clarity, this Appendix lists SPFs as they were characterized in the 2006 LRDP EIR in Chapter 5, entitled *Mitigation Monitoring and Reporting Program*. These SPFs are pertinent to such environmental resource areas as aesthetics; air quality; biological resources; cultural resources; geology and soils; hazards and hazardous materials; hydrology and water quality; noise; traffic and transportation; and utilities and service systems. The analysis presented in the Environmental Assessment evaluates environmental impacts that would result from project implementation following the application of these SPFs.

**SPF GEO-3a:** Construction under the LRDP shall be required to use construction best management practices and standards to control and reduce erosion. These measures could include, but are not limited to, restricting grading to the dry season, protecting all finished graded slopes from erosion using such techniques as erosion control matting (manufactured with coconut fibers or similar products) and hydroseeding or other suitable measures.

**SPF GEO-3b:** Revegetation of areas disturbed by construction activities, including slope stabilization sites, using native shrubs, trees, and grasses, shall be included as part of all new projects.

**SPF BIO-3:** Direct disturbance, including tree and shrub removal or nest destruction by any other means, or indirect disturbance (e.g., noise, increased human activity in area) of active nests of raptors and other special-status bird species (as listed in **Table 4.3-1**) within or in the vicinity of the proposed footprint of a future development project shall be avoided in accordance with the following procedures for Pre-Construction Special-Status Avian Surveys and Subsequent Actions. No more than two weeks in advance of any tree or shrub removal or demolition or construction activity involving particularly noisy or intrusive activities (such as concrete breaking) that will commence during the breeding season (February 1 through July 31), a qualified wildlife biologist shall conduct pre-construction surveys of all potential special-status bird nesting habitat in the vicinity

of the planned activity and, depending on the survey findings, the following actions shall be taken to avoid potential adverse effects on special-status nesting birds:

1. Pre-construction surveys are not required for demolition or construction activities scheduled to occur during the non-breeding season (August 1 through January 31).
2. If pre-construction surveys indicate that no nests of special-status birds are present or that nests are inactive or potential habitat is unoccupied, no further mitigation is required.
3. If active nests of special-status birds are found during the surveys, a no-disturbance buffer zone will be created around active nests during the breeding season or until a qualified biologist determines that all young have fledged. The size of the buffer zones and types of construction activities restricted within them will be determined through consultation with the CDFG, taking into account factors such as the following:
  - a. noise and human disturbance levels at the project site and the nesting site at the time of the survey and the noise and disturbance expected during the construction activity;
  - b. distance and amount of vegetation or other screening between the project site and the nest; and
  - c. sensitivity of individual nesting species and behaviors of the nesting birds.
4. Noisy demolition or construction activities as described above (or activities producing similar substantial increases in noise and activity levels in the vicinity) commencing during the non-breeding season and continuing into the breeding season do not require surveys (as it is assumed that any breeding birds taking up nests would be acclimated to project-related activities already under way). However, if trees and shrubs are to be removed during the breeding season, the trees and shrubs will be surveyed for nests prior to their removal, according to the survey and protective action guidelines 3a through 3c, above.
5. Nests initiated during demolition or construction activities would be presumed to be unaffected by the activity, and a buffer zone around such nests would not be necessary.
6. Destruction of active nests of special-status birds and overt interference with nesting activities of special-status birds shall be prohibited.
7. The noise control procedures for maximum noise, equipment, and operations identified in Section IV.I, Noise, of this EIR<sup>1</sup> shall be implemented.

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<sup>1</sup> Refers to 2006 LRDP EIR.

**SPF BIO-5a:** With the approval of the USFWS on a case-by-case basis, relocate any snake encountered during construction that is at risk of harassment; cease construction activity until the snake is moved to suitable refugium. Alternatively, submit a general protocol for relocation to the USFWS for approval prior to project implementation.

**SPF BIO-5b:** Conduct focused pre-construction surveys for the Alameda whipsnake at all project sites within or directly adjacent to areas mapped as having high potential for whipsnake occurrence. Project sites within high potential areas shall be fenced to exclude snakes prior to project implementation. This would not include ongoing and non-site-specific activities such as fuel management.

Methods for pre-construction surveys burrow excavation, and site fencing shall be developed prior to implementation of any project located within or adjacent to areas mapped as having high potential for whipsnake occurrence. Such methods would be developed in consultation or with approval of USFWS for any development taking place in USFWS officially designated Alameda whipsnake critical habitat. Pre-construction surveys of such project sites shall be carried out by a permitted biologist familiar with whipsnake identification and ecology (Swaim 2002). These are not intended to be protocol-level surveys but designed to clear an area so that individual whipsnakes are not present within a given area prior to initiation of construction. At sites where the project footprint would not be contained entirely within an existing developed area footprint and natural vegetated areas would be disturbed, any existing animal burrows shall be carefully hand-excavated to ensure that there are no whipsnakes within the project footprint. Any whipsnakes found during these surveys shall be relocated according to the Alameda Whipsnake Relocation Plan. Snakes of any other species found during these surveys shall also be relocated out of the project area. Once the site is cleared, it shall then be fenced in such a way as to exclude snakes for the duration of the project. Fencing shall be maintained intact throughout the duration of the project.

**SPF BIO-5c:** (1) A full-time designated monitor shall be employed at project sites that are within or directly adjacent to areas designated as having high potential for whipsnake occurrence, or (2) Daily site surveys for Alameda whipsnake shall be carried out by a designated monitor at construction sites within or adjacent to areas designated as having moderate potential for whipsnake occurrence.

Each morning, prior to initiating excavation, construction, or vehicle operation at sites identified as having moderate or high potential for whipsnake occurrence, the project

area of applicable construction sites shall be surveyed by a designated monitor trained in Alameda whipsnake identification to ensure that no Alameda whipsnakes are present. This survey is not intended to be a protocol-level survey. All laydown and deposition areas, as well as other areas that might conceal or shelter snakes or other animals, shall be inspected each morning by the designated monitor to ensure that Alameda whipsnakes are not present. All materials will be stored to avoid entrapment of wildlife. At sites in high potential areas, the monitor shall remain on site during construction hours. At sites in moderate potential areas, the monitor shall remain on-call during construction hours in the event that a snake is found on site. The designated monitor shall have the authority to halt construction activities in the event that a whipsnake is found within the construction footprint until such time as threatening activities can be eliminated in the vicinity of the snake and it can be removed from the site by a biologist permitted to handle Alameda whipsnakes or allowed to escape voluntarily without harassment. The USFWS shall be notified within 24 hours of any such event.

**SPF BIO-5d:** Alameda whipsnake awareness and relevant environmental sensitivity training for each worker shall be conducted by the designated monitor prior to commencement of on-site activities. All on-site workers at applicable construction sites shall attend an Alameda whipsnake information session conducted by the designated monitor prior to beginning work. This session shall cover identification of the species and procedures to be followed if an individual is found on site, as well as basic site rules meant to protect biological resources, such as speed limits and daily trash pickup.

**SPF BIO-5e:** Hours of operation and speed limits shall be instituted and posted. All construction activities that take place on the ground (as opposed to within buildings) at applicable construction sites shall be performed during daylight hours or with suitable lighting so that snakes can be seen. Vehicle speed on the construction site shall not exceed 5 miles per hour.

**SPF BIO-5f:** Site vegetation management shall take place prior to tree removal, grading, excavation, or other construction activities. Construction materials, soil, construction debris, or other material shall be deposited only on areas where vegetation has been mowed.

Areas where development is proposed under the 2006 LRDP are subject to annual vegetation management involving the close cropping of all grasses and ground covers; this management activity would be performed prior to initiating project-specific construction. Areas would be re-mowed if grass or other vegetation on the project site

becomes high enough to conceal whipsnakes during the construction period. In areas not subject to annual vegetation management, dense vegetation would be removed prior to the onset of grading or the use of any heavy machinery, using goats, manual brush cutters, or a combination thereof.

**SPF CUL-3:** If an archaeological artifact is discovered on site during construction under the proposed LRDP, all activities within a 50-foot radius shall be halted and a qualified archaeologist shall be summoned within 24 hours to inspect the site. If the find is determined to be significant and to merit formal recording or data collection, adequate time and funding shall be devoted to salvage the material. Any archaeologically important data recovered during monitoring shall be cleaned, catalogued, and analyzed, with the results presented in a report of finding that meets professional standards.

**SPF CUL-4:** In the event that human skeletal remains are uncovered during construction or ground-breaking activities resulting from implementation of the 2006 LRDP at the LBNL site, *CEQA Guidelines* Section 15064.5(e)(1) shall be followed:

- In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:
  - (1) There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:
    - (A) The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and
    - (B) If the coroner determines the remains to be Native American: (1) The coroner shall contact the Native American Heritage Commission within 24 hours; (2) The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. (3) The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or
  - (2) Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance.
    - (A) The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission;

(B) The descendant identified fails to make a recommendation; or

(C) The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.

**SPF VIS-4a:** All new buildings on the LBNL hill site constructed pursuant to the 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 considerations, LBNL project buildings shall shield and orient light sources so that they are not directly visible from outside their immediate surroundings.

**SPF 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 2 foot-candles).

**SPF VIS-4c:** All new buildings on the LBNL hill site constructed pursuant to the 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.

**SPF AQ-1a:** During construction of the proposed LRDP buildings, the developer must implement all “basic” control measures to minimize the generation of fugitive dust. In addition, for construction sites greater than 4 acres or projects that would generate large amounts of fugitive dust, “enhanced” and “optional” control measures should be implemented. The recommended control measures are located in Table 2 of the *BAAQMD CEQA Guidelines*.

**SPF AQ-1b:** During construction of the proposed LRDP buildings, the developer must implement the following mitigation measures to minimize heavy-duty construction equipment exhaust.

- Construction equipment shall be properly tuned and maintained in accordance with manufacturer’s specifications.
- Best management construction practices shall be used to avoid unnecessary emissions (e.g., truck and vehicles in loading and unloading queues would turn their engines off when not in use).

- Any stationary motor sources such as generators and compressors located within 100 feet of a sensitive receptor shall be equipped with a supplementary exhaust pollution control system as required by the BAAQMD and CARB.
- Incorporate use of low-NO<sub>x</sub>-emitting, low-particulate-emitting, or alternatively fueled construction equipment into the construction equipment fleet where feasible, especially when operating near sensitive receptors.
- Reduce construction-worker trips with ride sharing or alternative modes of transportation.

**SPF NOISE-1a:** To reduce daytime noise impacts due to construction/ demolition, LBNL shall require construction/demolition to implement noise reduction measures appropriate for the project being undertaken. Measures that might be implemented could include, but not be limited to, the following:

- Construction/demolition activities would be limited to a schedule that minimizes disruption to uses surrounding the project site as much as possible. Such activities would be limited to the hours designated in the Berkeley and/or Oakland noise ordinance(s), as applicable to the location of the project. This would eliminate or substantially reduce noise impacts during the more noise-sensitive nighttime hours and on days when construction noise might be more disturbing.
- To the maximum extent feasible, equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).
- Stationary noise sources shall be located as far from adjacent receptors as possible.
- At locations where noise may affect neighboring residential uses, LBNL will develop a comprehensive construction noise control specification to implement construction/demolition noise controls, such as noise attenuation barriers, siting of construction laydown and vehicle staging areas, and community outreach, as appropriate to specific projects. The specification will include such information as general provisions, definitions, submittal requirements, construction limitations, requirements for noise and vibration monitoring and control plans, noise control materials and methods. This document will be modified as appropriate for a particular construction project and included within the construction specification.

**SPF NOISE-1b:** For each subsequent project pursuant to the LRDP that would involve construction and/or demolition activities, LBNL shall engage a qualified noise consultant to determine whether, based on the location of the site and the activities proposed, construction/demolition noise levels could approach the property line receiving noise standards of the cities of Berkeley or Oakland (as applicable). If the consultant



determines that the standards would not be exceeded, no further mitigation is required. If the standards would be reached or exceeded absent further mitigation, one or more of the following additional measures would be required, as determined necessary by the noise consultant.

- Stationary noise sources shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent feasible.
- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dB(A). External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dB(A). Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.
- Noise from idling trucks shall be kept to a minimum. No trucks shall be permitted to idle for more than 10 minutes if waiting within 100 feet of a residential area.
- If determined necessary by the noise consultant, a set of site-specific noise attenuation measures shall be developed before construction begins; possible measures might include erection of temporary noise barriers around the construction site, use of noise control blankets on structures being erected to reduce noise emission from the site, evaluation of the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings, and monitoring the effectiveness of noise attenuation measures by taking noise measurements.
- If determined necessary by the noise consultant, at least two weeks prior to the start of excavation, LBNL or its contractor shall provide written notification to all neighbors within 500 feet of the construction site. The notification shall indicate the estimated duration and completion date of the construction, construction hours, and necessary contact information for potential complaints about construction noise (i.e., name, telephone number, and address of party responsible for construction). The notice shall indicate that noise complaints resulting from construction can be directed to the contact person identified in the notice. The name and phone number of the contact person also shall be posted outside the LBNL boundaries.

**SPF NOISE-4:** Mechanical equipment shall be selected and building designs prepared for all future development projects pursuant to the 2006 LRDP so that noise levels from future building and other facility operations would not exceed the Noise Ordinance limits of the cities of Berkeley or Oakland for commercial areas or residential zones as measured on any commercial or residential property in the area surrounding the future LRDP project.

Controls that would typically be incorporated to attain adequate noise reduction would include selection of quiet equipment, sound attenuators on fans, sound attenuator packages for cooling towers and emergency generators, acoustical screen walls, and equipment enclosures.

**SPF UTILS-4:** LBNL shall develop a plan for maximizing diversion of construction and demolition materials associated with the construction of the proposed project from landfill disposal.