



# REPORT TO COUNCIL

## City of Sacramento

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915 I Street, Sacramento, CA 95814-2604  
[www.CityofSacramento.org](http://www.CityofSacramento.org)

**Consent**  
**November 9, 2010**

**Honorable Mayor and  
Members of the City Council**

**Title:** Powerhouse Science Center: Environmental Review and Supporting Grant Application

**Location/Council District:** 400 Jibboom Street/ District 1

**Recommendation:** Adopt a **Resolution** to 1) receive and file the Environmental Assessment and 2) approve the Cultural Resources Treatment and Monitoring Agreement with the Shingle Springs Band of Miwok Indians; and adopt a **Resolution** supporting the Powerhouse Science Center Inc.'s submittal of Proposition 84 Nature Education Facilities Program application for the Earth & Space Sciences Center to the State Department of Parks & Recreation.

**Contact:** Jennifer Witz, 808-2796

**Presenters:** NA

**Department:** Economic Development

**Division:** Redevelopment

**Organization No:** 18001031

### **Description/Analysis**

**Issue:** The City is working with the Powerhouse Science Center to rehabilitate the former PG&E Power Station as a science center devoted to science, space and technology.

Staff recommends Council receive and file the Environmental Assessment ("EA") for the Jibboom Street Infrastructure and Powerhouse Science Center Project ("Project"), which includes the rehabilitation of the former PG&E Power Station on Jibboom Street as the Powerhouse Science Center. The infrastructure component of the Project addresses upgrading the utility infrastructure along Jibboom Street at the former PG&E Power Station so that it conforms to City Standards by undergrounding and relocating the existing utilities lines. For the purposes of environmental review, the infrastructure component and Powerhouse Science Center Project constitute connected actions due to their geographic overlap; therefore they were analyzed as one project. After completion of the EA review period and consideration of the comments, the Sacramento

Housing and Redevelopment Agency (SHRA), as the Responsible Entity (RE) under the National Environmental Policy Act (NEPA), submitted the EA and Finding of No Significant Impact (FONSI), approved on July 21, 2010, to the U.S. Department of Housing and Urban Development (“HUD”) along with a Request for Release of Funds (RROF) for the project. After the mandatory 15-day objection period, HUD approved the RROF on August 23, 2010. After consideration of the EA, the City and SHRA can enter into choice limiting actions with regards to implementation of the Jibboom Street infrastructure work for the Powerhouse Science Center Project with Community Development Block Grant (“CDBG”) program funds and the Project would be eligible for receipt of additional federal funding.

In compliance with Section 106 of the National Historic Preservation Act, the RE consulted with interested Native American tribes. In order to address concerns associated with construction in this culturally sensitive area, a Cultural Resources Treatment and Monitoring Agreement is to be approved between the Shingle Springs Band of Miwok Indians, SHRA and the City to establish the protocol for working in this area and handling Native American human remains and cultural items if uncovered during implementation of the Project.

Additionally, this Council report recommends support for the Powerhouse Science Center’s submittal of a Proposition 84 Nature Education Facilities Program application for the Earth & Space Sciences Center to the State Department of Parks & Recreation. This grant application will give the Powerhouse Science Center the opportunity to receive funds for future construction of the planetarium (Earth & Space Sciences Center). Proposition 84 Nature Education Facilities Program funds projects for development of nature education facilities, buildings, structures and exhibit galleries that present collections to inspire and educate the public and for marine wildlife conservation research equipment and facilities. A total of \$93 million statewide has been appropriated for the grant program.

**Policy Considerations:** The reuse of the former PG&E Power Station property as a science center is consistent with the 2030 General Plan, the Richards Boulevard Area Plan, the River District Redevelopment Plan, and the Sacramento Riverfront Master Plan.

#### **Environmental Considerations:**

##### **California Environmental Quality Act (CEQA):**

The project is subject to review under NEPA and California Environmental Quality Act (“CEQA”). On June 1, 2010, City Council adopted the Mitigated Negative Declaration and Mitigation Monitoring Plan for the Robert T. Matsui Waterfront Park Master Plan Amendment, which included development of the Powerhouse Science Center Project (Resolution 2010-296).

Under NEPA, HUD is the Lead Agency for the project, but it has been delegated to SHRA as the Responsible Entity for conducting the environmental review. SHRA completed preparation of an EA pursuant to 24 CFR 58.36 and approved a FONSI for the project on July 21, 2010. After completion of the 15-day review

period and consideration of the comments, SHRA on behalf of HUD submitted an RROF along with the environmental documentation to HUD. HUD approved the RROF on August 23, 2010. Therefore, environmental review under NEPA is complete.

**Sustainability Considerations:** Not applicable at this time.

**Other:** None.

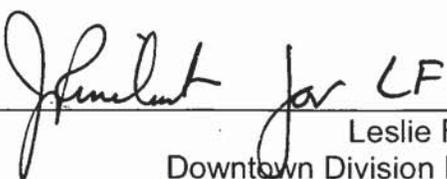
**Commission/Committee Action:** The project was presented to the Preservation Commission for review & comment on April 7, 2010 meeting. Project entitlements for the Powerhouse Science Center Project will be brought back to the Preservation Commission and to the Planning Commission for their recommendations in early 2011.

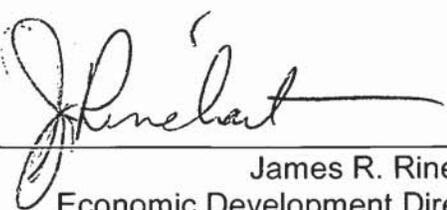
**Rationale for Recommendation:** The reuse of the former PG&E Power Station building into a science center will activate the Sacramento Riverfront and reuse a historic building. In order to redevelop the former PG&E Power Station property into the Powerhouse Science Center Project, utility lines that currently cross the property must be moved into Jibboom Street in conformance with City standards. The Jibboom Street infrastructure work will be partially funded with Community Development Block Grant (“CDBG”) program funds. All new CDBG funded projects are subject to environmental review under the requirements of the NEPA and per HUD regulations prior to any commitment of federal funds for expenditures, unless they are exempt from such review. Therefore, the appropriate level of NEPA review is required and an EA for the Jibboom Street Infrastructure and Powerhouse Science Center Project has been completed.

The Powerhouse Science Center is a catalyst project in the redevelopment of the River District and will assist in its revitalization, as well as bring visitors to the City of Sacramento as a regional destination. Proposition 84 Nature Education Facilities Program grant funding for the Earth & Space Sciences Center will give the Powerhouse Science Center the opportunity to receive funds for the construction of the planetarium and space center.

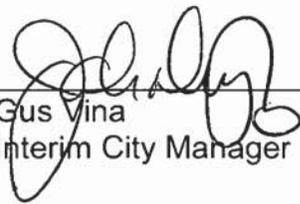
**Financial Considerations:** None.

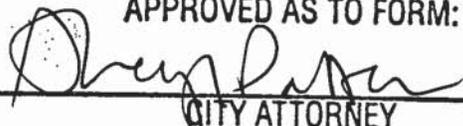
**Emerging Small Business Development (ESBD):** None at this time.

Respectfully Submitted by:   
Leslie Fritzsche  
Downtown Division Manager

Approved by:   
James R. Rinehart  
Economic Development Director

Recommendation Approved:

  
Gus Vina  
Interim City Manager

**APPROVED AS TO FORM:**  
  
CITY ATTORNEY

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## Attachment 1

### Background

The Jibboom Street Power Station site (“Site”) is located on Jibboom Street, approximately one-quarter mile north of the Old Sacramento Historic District. The Site, which is immediately adjacent to the City’s water intake structure on the Sacramento River, includes the historic Pacific, Gas & Electric (“PG&E”) building and the designated parking areas to the north and east of the building. The Site consists of four acres and is located immediately north of the newly completed six and one-half acre Robert T. Matsui Waterfront Park. In 2002, the City took title to the Jibboom Street PG&E Power Station (Power Station) from the State of California. Other than a brief time in the early 1960’s when the site was used as a metal salvage yard, the building has been shuttered since the PG&E Power Station ceased operation in 1954.

In June 2005, the City circulated a Request for Proposals (“RFP”) for the rehabilitation and adaptive reuse of the Jibboom Street PG&E Power Station. In February 2006, the City Council selected a team headed by DR Horton. However, DR Horton withdrew its proposal and terminated its interest in the project prior to the execution of any agreements. Thereafter, the City entered into an Exclusive Right to Negotiate Agreement with the Sacramento Museum of History, Science and Technology for development of the Powerhouse Science Center, which is part of a separate non-profit organization that will undertake development of the science center.

Powerhouse Science Center Inc. proposes developing the “Powerhouse Science Center” on the Site, which will include a science, space and technology museum in the rehabilitated Power Station building, with a restaurant, educational center, and planetarium in a new building, and creating an inviting open space park area with amphitheater.

The Powerhouse Science Center Inc. is a nonprofit corporation that was created in 1994 when the Sacramento Science and Space Center, founded in 1951, and the Sacramento History Museum, founded in 1984, were consolidated. The Science and Space Center has operated in a small City-owned facility on Auburn Avenue for over 50 years. The facility only offers 11,000 square feet of space, yet it successfully operates Sacramento’s only public planetarium and one of the nation’s most successful Challenger Learning Centers. Despite its inconvenient location and small size, the Science and Space Center served more than 95,000 people in the year 2008.

The Science and Space Center will relocate to the Jibboom Street Power Station Site, which will provide room for the museum to expand its exhibits, classroom and laboratory space. Due to the increase in size, expanded exhibits, additional programs and improved location, the new Powerhouse Science Center is projected to attract 350,000 school children and over 200,000 people from the general public each year.

The unique location of the proposed Powerhouse Science Center will take advantage of the nearby new Water Intake Plant on the Sacramento River, which will provide learning

opportunities for students, and the Jibboom Street Park, which will be enhanced with interpretive tours to further environmental study. Additionally, the proximity of the building to the Robert T. Matsui Waterfront Park, Railroad Museum, Old Sacramento, and the future Railroad Technology Museum in the Railyards will place the Powerhouse Science Center centrally amidst other tourist attractions.

The Powerhouse Science Center will include a planetarium and dome theater seating for 150, an outdoor amphitheater, an outdoor café, a gift shop, a bi-level parking structure, and an adjacent restaurant and education center. The café, gift shop, and restaurant would all generate revenue that would support the Center's operation on an ongoing basis.

During the ERN Agreement and first extension term, the Powerhouse Science Center Inc. has completed the following actions:

- Refined site plans including revised design of museum and detailed concepts for the parking and public components of the Project.
- Developed concepts for the open space components of the Project that harmonize with the City's Robert T. Matsui Waterfront Park Master Plan and planned park improvement plans.
- Refined estimated construction costs, including all applicable fees and contingencies.
- Refined development and operating pro-formas.

The Powerhouse Science Center has been more than four years in development. The project funding will come from foundation grants, government grants, private donations and historic tax credits.

The Powerhouse Science Center development plans will use historic preservation methods, green building technology, and the newest exhibit techniques to develop inquiry-based educational programs and a compelling visitor experience that will become a model for 21<sup>st</sup>-century informal science education. The Powerhouse site, once an industrial brownfield, will become a valued visitor and student attraction for Sacramento.

On June 1, 2010, City Council adopted the Mitigated Negative Declaration and Mitigation Monitoring Plan for the Robert T. Matsui Waterfront Park Master Plan Amendment, which included an analysis of the impacts of the Powerhouse Science Center Project (Resolution 2010-296).

On July 24, 2010, the former PG&E Power Station nomination for National Register of Historic Places was approved.



## **RESOLUTION NO.**

Adopted by the Sacramento City Council

### **RECEIVE AND FILE THE ENVIRONMENTAL ASSESSMENT AND APPROVE THE CULTURAL RESOURCES TREATMENT AND MONITORING AGREEMENT FOR THE JIBBOOM STREET INFRASTRUCTURE AND POWERHOUSE SCIENCE CENTER PROJECT**

#### **BACKGROUND**

- A. On March 9, 2010, the City Council approved amendments to the City Community Development Block Grant program (“CDBG”), allocating \$100,000 CDBG funds to be used for design and construction of infrastructure improvements along Jibboom Street for the Powerhouse Science Center project.
- B. The allocation of CDBG funds triggered the National Environmental Policy Act (NEPA), and the Sacramento Housing and Redevelopment Agency (SHRA), as the Responsible Entity (RE) under the National Environmental Policy Act (NEPA), prepared an Environmental Assessment (EA) under NEPA in accordance with 24 CFR 58.36 for the Jibboom Street Infrastructure Project. In accordance with 40 CFR 1508.25(a) regarding connected actions, and 24 CFR 58.32 regarding aggregation requirements, the EA also included review of the Powerhouse Science Center project.
- C. The EA prepared for the project addresses upgrading the infrastructure along Jibboom Street by undergrounding the existing infrastructure utilities in conformance to City's standards. For the purposes of this environmental review, regarding connected actions and aggregation requirements, the infrastructure improvements and the Powerhouse Science Center development were evaluated as a whole, were analyzed as one project. Because the Powerhouse Science Center is the larger of the two actions, the bulk of the EA analysis focuses on the potential impacts of the Powerhouse Science Center development, particularly in regards to the historic PG&E building and the potential for uncovering archaeological and cultural artifacts.
- D. In compliance with Section 106 of the National Historic Preservation Act, the RE consulted with interested Native American tribes. In order to address concerns associated with construction in this culturally sensitive area, a Cultural Resources Treatment and Monitoring Agreement has been drafted. This Agreement is between the Shingle Springs Band of Miwok Indians (Tribe), SHRA, and the City of Sacramento for the Powerhouse Science Center and Jibboom Street

Infrastructure Projects provides protocol for working in this area and handling Native American human remains and cultural items, if uncovered during construction.

- E. After completion of the EA review period and consideration of the comments, SHRA, as the Responsible Entity (RE) under NEPA, submitted the EA and Finding of No Significant Impact (FONSI), approved on July 21, 2010, to the U.S. Department of Housing and Urban Development (HUD) along with a Request for Release of Funds (RROF) for the project. After the mandatory 15-day objection period, HUD approved the RROF on August 23, 2010, which allows the City to enter into choice limiting actions with regards to implementation of the Jibboom Street Infrastructure Project and the Powerhouse Science Center Project.

**BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:**

- Section 1. After consideration, the City of Sacramento finds that the Environmental Assessment (EA) comprehensively analyzed the environmental impacts and the potential adverse effects of the Powerhouse Science Center Project and the City hereby receives and files the EA and will comply with the mitigation measure set out therein in undertaking the Project.
- Section 2. The Cultural Resources Treatment and Monitoring Agreement are hereby approved and the City Manager is authorized to execute the Agreement.

**Table of Contents:**

Exhibit A- Environmental Assessment

Exhibit B- Cultural Resources Treatment and Monitoring Agreement

Exhibit A- Environmental Assessment



**U.S. Department of Housing and Urban  
Development**  
San Francisco Regional Office - Region IX  
600 Harrison Street  
San Francisco, California 94107-1387  
[www.hud.gov](http://www.hud.gov)  
[espanol.hud.gov](http://espanol.hud.gov)

**Environmental Assessment  
for HUD-funded Proposals**

Recommended format per 24 CFR 58.36, revised March 2005

**Project Identification:** Powerhouse Science Center  
400 Jibboom Street  
Sacramento, CA

**Preparer:** Design, Community & Environment  
1625 Shattuck Avenue, Suite 300  
Berkeley, CA 94709

**Responsible Entity:** Sacramento Housing & Redevelopment Agency  
801 12<sup>th</sup> Street  
Sacramento, CA 95814

**Month/Year:** July 2010

## **Powerhouse Final Environmental Assessment**

### **Table of Contents**

1A	Final Environmental Assessment
1Bi	Comment Letters from DTSC and CVFPD on Draft EA
1Bii	Response to Comments
2A	8-Step Process for Wetlands
2Bi	Comment Letter from USACE on 8-Step Process
2Bii	Response to Comments
3A	Final Archaeological Report
3B	Comment Letter from Miwok Indians

**Environmental Assessment  
for HUD-funded Proposals**

**Section 1:  
A. Final EA  
B. Final EA Comment Letters and Responses**

Project Identification:	Powerhouse Science Center 400 Jibboom Street Sacramento, CA
Preparer:	Design, Community & Environment 1625 Shattuck Avenue, Suite 300 Berkeley, CA 94709
Responsible Entity:	Sacramento Housing & Redevelopment Agency 801 12 <sup>th</sup> Street Sacramento, CA 95814
Month/Year:	July 2010

## Environmental Assessment

**Responsible Entity:** Sacramento Housing & Redevelopment Agency  
[24 CFR 58.2(a)(7)]

**Certifying Officer:** LaShelle Dozier  
[24 CFR 58.2(a)(2)]

**Project Name:** Powerhouse Science Center

**Project Location:** The Project Site is approximately 6.35 acres in size, is located northwest of downtown Sacramento, California between the Sacramento River and Interstate 5, and includes 922 feet of frontage along Jibboom Street in the City of Sacramento. It is immediately east of the Sacramento River and immediately north of the Robert T. Matsui Waterfront Park and the Sacramento River Water Intake Structure. The Sacramento River Parkway Trail is located immediately west of the project site. The proposed project site is comprised of 7 parcels (001-0190-005, 001-0190-004, 001-0190-011, 001-0190-016, 001-0190-015, portion of 001-0190-006, portion of 001-0190-009). See Figure 1 – Project Location Map and Figure 2 – Project Boundary Map.

**Estimated Total Project Cost:** \$300,000 for infrastructure improvements; \$45 million for total project

**Grant Recipient:** Sacramento Housing & Redevelopment Agency  
[24 CFR 58.2(a)(5)]

**Recipient Address:** 801 12<sup>th</sup> Street, Sacramento, CA 95814

**Subrecipient:** City of Sacramento

**Subrecipient Address:** 915 I Street, Sacramento, CA 95814

**Project Representative:** Rochelle Amrhein

**Telephone Number:** (916) 440-1312

**Conditions for Approval:** (List all mitigation measures adopted by the responsible entity to eliminate or minimize adverse environmental impacts. These conditions must be included in project contracts and other relevant documents as requirements). [24 CFR 58.40(d), 40 CFR 1505.2(c)]

**Mitigation Measure #1: Cultural Resources**

In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during construction-related earth-moving activities, all work within 50 meters of the resources shall be halted, and the Applicant shall consult with a qualified archeologist to assess the significance of the find. Archeological test excavations shall be conducted by a qualified archeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archeologist, representatives of the Applicant and the qualified archeologist shall coordinate to determine the appropriate course of action. In addition, a report shall be prepared by the qualified archeologist according to current professional standards.

If Native American archeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.

In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.

If a human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. Currently it is presumed that members of the SSR are the Most Likely Descendants; therefore, the SSR shall be contacted in the event that remains are found. The Most Likely Descendant shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.

**Mitigation Measure #2: Cultural Resources**

Prior to the approval of any grading permits or any groundbreaking activity, a Cultural Resources Treatment and Monitoring Agreement (Agreement) shall be prepared in consultation with the Shingle Springs Band of Miwok Indians. This Agreement shall set protocols for procedures to be followed in the event of the discovery of archaeological and human remains during construction. This Agreement shall include a stated policy of avoidance and reburial.

**Mitigation Measure #3: Wetlands**

a) Prior to any groundbreaking activities on the project site, the project Applicant(s) shall obtain all required permits, including CWA Section 404 permit from the USACE for the placement of fill within waters of the United States and Section 401 certification from the Central Valley Regional Water Quality Control Board (RWQCB), as applicable.

b) All conditions that are attached to the USACE permit and/or RWQCB certification shall be implemented as part of the proposed project. The conditions shall be clearly identified in construction plans and specifications and monitored during and after construction to ensure compliance.

c) The Applicant(s) shall compensate for permanent impacts to waters of the United States (including wetlands) and waters of the state to ensure there is no net loss of functions and values. The compensation will be determined as part of State (RWQCB) and federal (USACE) processes and may be a combination of onsite retention of function and value, offsite restoration/creation, and mitigation credits. Compensation ratios will be a minimum of 1:1 (1 acre of mitigation for every 1 acre of impact), as determined by USACE and/or RWQCB. Ratios will be based on site-specific information and determined through coordination with State and federal agencies as part of the permitting process

**Mitigation Measure #4: Valley Elderberry Longhorn Beetle**

The Applicant shall comply with the requirements of the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. The Applicant would be required to consult with the USFWS through the Section 7 consultation or Section 10(a)(B) permit in developing measures to avoid and minimize adverse effects on the Valley elderberry longhorn beetle. A final mitigation plan shall be developed, and approved by USFWS, prior to removal of the shrubs, and shall include the following:

**Compensatory Mitigation:**

**Transplant Directly Affected Elderberry Shrubs**

- a) The shrub that is directly affected by the proposed project will be transplanted to a USFWS-approved conservation area. At the USFWS's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation.
- b) A qualified biological monitor will be on the site for the duration of the transplanting of elderberry shrubs to ensure that no unauthorized take of VELB occurs. If unauthorized take does occur, the monitor will have the authority to stop work until corrective measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the USFWS.
- c) Elderberry shrubs will be transplanted when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success. The Applicant will follow the specific transplanting guidance provided in the USFWS VELB Guidelines.

**Compensate for Direct Impacts on Elderberry Shrubs**

According to the USFWS VELB Guidelines, adversely affected shrubs that are "transplanted or destroyed" should be mitigated for according to the measures outlined in Table 1 of the USFWS VELB Guidelines. The Applicant shall mitigate

for impacts on the shrubs by purchasing mitigation credits at a USFWS approved mitigation bank. If mitigation credits are unavailable, additional mitigation including planting of elderberry seedlings and companion plantings may be required.

**Mitigation Measure #5: Vibration**

Vibratory rollers shall be limited to no closer than 25 feet from the former PG&E Power Station building.

**Mitigation Measure #6: Encroachment Permit**

The Applicant shall be required to coordinate with the Central Valley Flood Protection Board (CVFPB). An encroachment permit may be required by the CVFPB. This encroachment permit application process would include consultation with the U.S. Army Corps of Engineers (USACE) to determine if project features or construction would pose any risk to levee integrity, and whether any additional geotechnical reports would be required.

**Mitigation Measure #7: Groundwater**

All new groundwater discharges to the City of Sacramento's Combined or Separated Sewers must be regulated and monitored by the Department of Utilities (refer City Council Resolution #92-439) Groundwater discharges to the City's sewer system are defined as follows:

1. Construction dewatering discharges
2. Treated or untreated contaminated groundwater cleanup discharges
3. Uncontaminated groundwater discharges

The Developer shall contact the City of Sacramento's Water Quality Section of the Department of Utilities (DOU), (916) 808-1400, 1395 35<sup>th</sup> Avenue, Sacramento, CA 95822 prior to any groundwater withdrawal. Procedures as specified by the City of Sacramento, Standard Specifications, Section 16, Water Quality Control shall be implemented.

**FINDING:** [58.40(g)]

**Finding of No Significant Impact**

(The project will not result in a significant impact on the quality of the human environment)

**Finding of Significant Impact**

(The project may significantly affect the quality of the human environment)

Preparer Signature:



Date: March 16, 2010

Name/Title/Agency: Steve Noack, Principal, Design, Community & Environment

RE Approving Official Signature:



Date: 7/21/10

Name/Title/Agency: LaShelle Dozjek, Executive Director, SHRA

**Statement of Purpose and Need for the Proposal:** [40 CFR 1508.9(b)]

The Sacramento Housing & Redevelopment Agency is requesting Community Development Block Grant (CDBG) funds to assist in upgrading the infrastructure in the low income area of the project to bring the infrastructure into compliance with current City standards. The project site's 2000 census data indicates that the area is low income with an Area Median Income of 80 percent or less. Although these infrastructure improvements are a stand-alone project, they would facilitate development of the Powerhouse Science Center project, which is proposed in the same area and described below.

The purpose of the Powerhouse Science Center project is to provide new:

1. Enlarged facilities for the Sacramento Museum of History, Science and Technology.

The existing 4,000-square foot museum at 3615 Auburn Boulevard only has room for one major exhibit at a time, and is only open to three student groups in the mornings. The museum has outgrown its current facility and proposes to relocate all operations to the project site. The new facilities with greater capacities will increase educational opportunities in the sciences by allowing more visitors to visit an expanded array of educational exhibits, such as the Challenger Learning Center described below. The proposed project, to be named the Powerhouse Science Center, would triple the amount of visitors each year.

2. Museum, conferencing, and educational space that promotes student achievement and attracts innovative thinkers.

The Powerhouse Science Center is expected to draw approximately 250,000 annual visitors, a substantial portion of which would be K – 12<sup>th</sup> grade students. The new, expanded museum would provide hands-on science and math education to boost student interest in those subjects. For example, the Powerhouse Science Center's Challenger Learning Center would use space flight to teach students about math, science, language arts, and technology. The Powerhouse Science Center would also have exhibits on the human body, the world, space, and archaeology. Finally, the new Science Center would house an education center for traveling exhibits and would include a conference center that would act as a gathering place for teachers, scientists, and high-tech leaders.

3. Recreational facilities that would promote the development of Sacramento's waterfront, a long-standing goal of the City. These improvements include:
  - Improved access to the Sacramento River Parkway bike trail
  - Interactive outdoor exhibits on water conservation, ecosystems, conservation, agriculture, and a "healthy planet" that combines education with entertainment

- An outdoor exhibition area, suitable for community and cultural events that require an amphitheater-type seating, complete with a terraced orchard
- Promenade with shade trees and solar trees
- Bicycle parking
- Picnic facilities
- Park benches

For the purposes of this environmental review, in accordance with 40CFR 1508.25 (a) regarding connected actions, and 24CFR 58.32 regarding aggregation requirements, these two projects, the infrastructure improvements and the Powerhouse Science Center, will be analyzed as one project. Because the Powerhouse Science Center is the larger of the two actions, its impact area encompasses the infrastructure improvements project area entirely, and it could potentially cause greater impacts to the environment, the bulk of the analysis focuses on the potential impacts of the Powerhouse Science Center.

**Description of the Proposal:** Include all contemplated actions which logically are either geographically or functionally a composite part of the project, regardless of the source of funding. [24 CFR 58.32, 40 CFR 1508.25]

The project is seeking federal funds for infrastructure improvements to this area of Sacramento to bring it into line with current City standards. The project proposes infrastructure improvements to Jibboom Street for the undergrounding of utilities in conformance to City's standards, beginning 875 feet south of the intersection of Jibboom Street and Richards Boulevard and continuing south for 750 feet. The project also proposes improvements to the street surface, curb, gutters, sidewalks, lighting, and landscaping. Proposed improvements include:

- Two new 12" x 8" tees with standard fire hydrant per City Standard Drawing W-201
- A new curb gutter and sidewalk
- 400 feet of new 8-inch sewer with two manholes including connection to the city's existing sewer system
- A new 937 linear feet (LF) of 12" PVC water main
- Connection of the existing main and drain into the City storm drain; new 90 degree elbow fitting
- Two new 12" gate valves for future connection

While not the primary purpose, the infrastructure improvements would facilitate the development of the Powerhouse Science Center at the proposed site. The Powerhouse Science Center development proposes to rehabilitate a former PG&E Power Station, and construct new facilities to accommodate the Powerhouse Science Center in a site adjacent to the Sacramento River. The project site will include the rehabilitated former PG&E Power Station as the site for the main science center, a new planetarium, an educational center with restaurant, and a parking structure. It will also provide improvements to the Robert T. Matsui Waterfront Park including benches, living

machines and new plantings. The Powerhouse Science Center is projected to create 400 construction jobs and 100 permanent jobs.

The existing 19,250 square foot PG&E Power Station building would be rehabilitated and improved, adding one new partial floor below the first floor (sub-grade) and a new floor addition to the second floor to accommodate interpretive exhibits, education programs and learning labs. A lobby and gift shop would be included. The resulting building would have approximately 36,400 square feet of interior space. A new Planetarium and Challenger Learning Center would be constructed. This 13,218-square foot, two-story (57-foot high) building would accommodate the Challenger Learning Center and a 150-seat Planetarium. The Education Center and Restaurant would be a new 14,500-square foot, two-story building that would accommodate meeting space for conferencing and education, along with a riverfront restaurant. The education center would occupy 3,953 square feet on the entry floor, the restaurant would occupy 6,336 square feet and accommodate 100 patrons, and the Education Center and Restaurant would include offices in 4,211 square feet on the second floor. Finally, the Powerhouse Science Center would include a new parking structure with two levels that would accommodate 298 cars.

The project also calls for two "Living Machine" wastewater reuse facilities. The Living Machine is an engineered ecological system which utilizes plants in porous gravel substrate to create a large surface for biofilms, thin films, or active treatment microorganisms. The Living Machines that will be located on the project site will supplement wastewater services that would normally be provided by the Sacramento Regional County Sanitation District. A goal for the center is to achieve LEED Gold certification or higher. See Figure 3 – Park Improvements.

All proposed site work would occur east of the western edge of the levee bike path along the Sacramento River. There would be no new structures within 10 feet of the levee. (Note that as of March 16, 2010, no detailed plans were available showing areas of disturbance and depths of excavation.)

**Existing Conditions and Trends:** Describe the existing conditions of the project area and its surroundings, and trends likely to continue in the absence of the project. [24 CFR 58.40(a)]

The project site currently contains the vacant, former PG&E Power Station, and two idle PG&E electrical towers. Other than a brief time in the early 1960s when the site was used as a metal salvage yard, the building has been boarded up and closed since the PG&E Power Station ceased operation in 1954. Since the project site has been vacant for decades, the existing infrastructure is antiquated and does not meet current City standards. To the north of the project site, 241 feet from the existing powerhouse, are motels, hotels and restaurants, including the Best Western Sandman, Days Inn Sacramento, Comfort Suites-Downtown, La Quinta Inn, and El Coyote Junction, with surface parking lots. There are no existing science education facilities in the project area. The project area is currently a low income area with an Area Median Income of 80 percent or less.



	<p>Property Survey, which was adopted by the Sacramento City Council in 2001 as part of its adoption of the Richards Boulevard Special Planning District. The City submitted a National Register of Historic Places nomination of the Station on March 8, 2010.</p> <p>A Cultural Resources Report dated June 15, 2010 was prepared for the Applicant by consultants Page &amp; Turnbull. The Report documented the historic architecture, archeology and cultural resources that would be affected by the Proposed Action. The report was sent to the State Historic Preservation Office as part of the consultation initiated by SHRA. SHRA noted that all project work on the Station would comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties/Rehabilitation Standards. SHRA presented the proposed Area of Potential Effect (APE) as including the following potentially eligible historic resources:</p> <ul style="list-style-type: none"><li>• The Sacramento River Station B</li><li>• The former water intake structure for the Sacramento Water Treatment Plant.</li></ul> <p>On July 7, 2010, SHRA received a letter from SHPO that acknowledged that SHRA had made a reasonable and good faith effort to identify historic properties with the undertaking's APE. SHPO concluded that it concurred with SHRA that for the purposes of the HUD Section 106 review, the project appeared to be consistent with the Secretary of Interior's Standards and, therefore, would not adversely affect the historic PG&amp;E Sacramento River Station B.</p> <p>According to the Page &amp; Turnbull Cultural Resources Report, there is little potential for buried archaeological deposits to exist within the archeological APE and past site activities are likely to have destroyed anything that might have existed. However, despite this low likelihood, there is always a possibility of discovering archaeological deposits. The following mitigation measures would apply. This mitigation measure also includes procedures in</p>
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	<p>the event that any Native American or human remains were to be found.</p> <p>Consultation with the appropriate Native American representatives was initiated by SHRA in letters dated March 1, 2010 to the Native American Heritage Commission and local tribes. A comment letter on the Archaeological Resources Report was received on June 14, 2010 from the Shingle Springs Band of Miwok (SSR) Indians and is included with that report as Section 3 of this Final EA. The letter requested consultation with SHRA, which is ongoing and resulted in the development of mitigation to further reduce potential impacts to archeological resources. Mitigation included a pedestrian survey of the APE conducted by members of the SSR, which occurred on June 25, 2010. Additional mitigation developed as a result of consultation with the SSR is described below.</p> <p><b>Mitigation Required:</b></p> <p><b>Mitigation Measure #1: Cultural Resources</b> In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during construction-related earth-moving activities, all work within 50 meters of the resources shall be halted, and the Applicant shall consult with a qualified archaeologist to assess the significance of the find. Archeological test excavations shall be conducted by a qualified archaeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archaeologist, representatives of the Applicant and the qualified archaeologist shall coordinate to determine the appropriate course of action. In addition, a report shall be prepared by the qualified archaeologist according to current professional standards.</p> <p>If Native American archaeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of</p>
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	<p>Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.</p> <p>In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.</p> <p>If a human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. Currently it is presumed that members of the SSR are the Most Likely Descendants; therefore, the SSR shall be contacted in the event that remains are found. The Most Likely Descendant shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.</p> <p><b>Mitigation Measure #2: Cultural Resources</b> Prior to the approval of any grading permits or any groundbreaking activity, a Cultural Resources Treatment and Monitoring Agreement (Agreement) shall be prepared in consultation with the Shingle Springs Band of Miwok Indians. This Agreement shall set protocols for procedures to be followed in the event of the discovery of archaeological and human remains during construction. This Agreement shall include a stated policy of avoidance and reburial.</p> <p><b>Source Documentation:</b></p>
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	<p>Attachment X1: State Office of Historic Preservation, July 7, 2010. Letter to SHRA regarding PG&amp;E Sacramento River Station Infrastructure &amp; Rehabilitation Project. Attachment 1: Page &amp; Turnbull, June 15, 2010. Cultural Resources Report. Final Draft. Powerhouse Science Center, 400 Jibboom Street, Sacramento, CA..</p>
<p><b>Floodplain Management</b> [24 CFR 55, Executive Order 11988]</p>	<p><b>Compliance Determination:</b> The project site is in an area designated "Other Flood Areas, Zone X (shaded), areas of 0.2 percent annual chance flood; areas of 1 percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from a 1 percent annual chance flood." All structures for this proposed project would be kept back from the toe of the levee. The levee toe is located where the levee slope meets the natural ground elevation. Therefore, the project site contains no Special Flood Hazard Areas subject to inundation by the 1 percent annual chance flood designated by the Federal Emergency Management Agency (FEMA).</p> <p><b>Source Documentation:</b> Figure 5, FEMA Issued Flood Map, Community Panel Number 0602660160G, <a href="http://msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay">http://msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay</a>, accessed on January 19, 2010.</p> <p>Attachment 2, Amrhein, Rochelle. Environmental Coordinator, Sacramento Housing &amp; Redevelopment Agency, personal email communication with Alejandro A. Huerta, January 29, 2010.</p>
<p><b>Wetlands Protection</b> [Executive Order 11990]</p>	<p><b>Compliance Determination:</b> The project site is located next to the Sacramento River. No wetlands were identified on the U.S. Fish &amp; Wildlife Service National Inventory Map for the project area. However, a seasonal wetland was identified on the site during a biological site assessment for the Sacramento Access Improvements from Railyards to Richards Boulevard and I-5 Project, a previously approved project in the same area. The identified wetland is</p>

	<p>to the east of the clay cap and utility berm on the eastern edge of the project site. This seasonal wetland is located in a trench directly to the east of the utility berm. This seasonal wetland is identified as SW-3 in Attachment 7. The U.S. Army Corps of Engineers (USACE) verified the delineation of this feature on December 7, 2009 (SPK-2009-00977). During a site visit, SHRA staff identified another potential wetland feature directly to the west of the utility berm, parallel to SW-3. A qualified biologist conducted a wetland delineation on February 25, 2010 and determined that the feature is a wetland. Because the project would involve new construction within or adjacent to a USACE verified seasonal wetland and another delineated wetland feature, applicable permits and certificates under Sections 401 and 404 of the Clean Water Act (CWA) would be required.</p> <p><b>Mitigation Required:</b> Mitigation Measure #3: Wetlands</p> <p>a) Prior to any groundbreaking activities on the project site, the project Applicant(s) shall obtain all required permits, including CWA Section 404 permit from the USACE for the placement of fill within waters of the United States and Section 401 certification from the Central Valley Regional Water Quality Control Board (RWQCB), as applicable.</p> <p>b) All conditions that are attached to the USACE permit and/or RWQCB certification shall be implemented as part of the proposed project. The conditions shall be clearly identified in construction plans and specifications and monitored during and after construction to ensure compliance.</p> <p>c) The Applicant(s) shall compensate for permanent impacts to waters of the United States (including wetlands) and waters of the state to ensure there is no net loss of functions and values. The compensation will be determined as part of State (RWQCB) and federal (USACE) processes and may be a combination of onsite retention of function and value, offsite restoration/creation, and mitigation credits. Compensation ratios will be a minimum of 1:1 (1 acre of mitigation for every 1 acre</p>
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	<p>of impact), as determined by USACE and/or RWQCB. Ratios will be based on site-specific information and determined through coordination with State and federal agencies as part of the permitting process</p> <p><b>Source Documentation:</b> Attachment 3, U.S. Fish &amp; Wildlife Service, National Wetlands Inventory, <a href="http://www.fws.gov/wetlands/Data/Mapper.html">http://www.fws.gov/wetlands/Data/Mapper.html</a>, accessed on January 19, 2010.</p> <p>Attachment 4, Exhibit A, Wetlands And Other Waters in the Sacramento Access Improvements from Railyards to Richards Boulevard and I-5 Project Delineation Area.</p> <p>Attachment 4a, ICF International, March 2010, Powerhouse Science Center Project Preliminary Delineation of Waters of the United States, including Wetlands, Exhibit 1 and Wetland Determination Forms.</p>
<p><b>Coastal Zone Management Act</b> [Sections 307(c),(d)]</p>	<p><b>Compliance Determination:</b> The project is not located in a Coastal Zone.</p> <p><b>Source Documentation:</b> Attachment 5, Map "LCP Status North Central Coast Area, as of July 1, 2009," <a href="http://www.coastal.ca.gov/lcp/lcpstatus-mapncc.pdf">http://www.coastal.ca.gov/lcp/lcpstatus-mapncc.pdf</a>, accessed on September 28, 2009.</p>
<p><b>Sole Source Aquifers</b> [40 CFR 149]</p>	<p><b>Compliance Determination:</b> The project is not located on or near a sole source aquifer designated by the U.S. EPA. There are no sole source aquifers located in the City of Sacramento. The nearest sole source aquifer is the Santa Margarita, Scotts Valley Sole Source Aquifer, which is located 110 miles southwest of the project site.</p> <p><b>Source Documentation:</b> Attachment 6, Santa Margarita, Scotts Valley Sole Source Aquifer Designated Area, <a href="http://www.epa.gov/region09/water/groundwater/ssa.html">http://www.epa.gov/region09/water/groundwater/ssa.html</a>, accessed on September 24, 2009.</p>
<p><b>Endangered Species Act</b> [50 CFR 402]</p>	<p><b>Compliance Determination:</b> The project is not located within a critical habitat for</p>

	<p>any federally-listed species. However, the site contains the federally threatened valley elderberry longhorn beetle (VELB), which occurs on the site's elderberry shrubs. The proposed project site contains one cluster of blue elderberry plants on the northeastern portion of the site with documented VELB exit holes. Project construction would require the removal of these plants. This action will adversely affect the VELB. Any beetle larvae occupying these plants are likely to be killed when the plants are removed.</p> <p><b>Mitigation Required:</b> Mitigation Measure #4: Valley Elderberry Longhorn Beetle The Applicant shall comply with the requirements of the <i>Conservation Guidelines for the Valley Elderberry Longhorn Beetle</i>. The Applicant would be required to consult with the USFWS through the Section 7 consultation or Section 10(a)(B) permit in developing measures to avoid and minimize adverse effects on the Valley elderberry longhorn beetle. A final mitigation plan shall be developed, and approved by USFWS, prior to removal of the shrubs, and shall include the following:</p> <p><b>Compensatory Mitigation:</b> <b>Transplant Directly Affected Elderberry Shrubs</b></p> <ol style="list-style-type: none"><li>a) The shrub that is directly affected by the proposed project will be transplanted to a USFWS-approved conservation area. At the USFWS's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation.</li><li>b) A qualified biological monitor will be on the site for the duration of the transplanting of elderberry shrubs to ensure that no unauthorized take of VELB occurs. If unauthorized take does occur, the monitor will have the authority to stop work until corrective</li></ol>
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	<p>measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the USFWS.</p> <p>c) Elderberry shrubs will be transplanted when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success. The Applicant will follow the specific transplanting guidance provided in the USFWS VELB Guidelines.</p> <p><b>Compensate for Direct Impacts on Elderberry Shrubs</b> According to the USFWS VELB Guidelines, adversely affected shrubs that are "transplanted or destroyed" should be mitigated for according to the measures outlined in Table 1 of the USFWS VELB Guidelines. The Applicant shall mitigate for impacts on the shrubs by purchasing mitigation credits at a USFWS approved mitigation bank. If mitigation credits are unavailable, additional mitigation including planting of elderberry seedlings and companion plantings may be required.</p> <p><b>Source Documentation:</b> Attachment 7, U.S. Fish and Wildlife Service, 1999, Conservation Guidelines for the Valley Elderberry Longhorn Beetle, pages 4, 15.</p> <p>Attachment 8, U.S. Fish and Wildlife Service Sacramento Fish &amp; Wildlife Office, December 1 2009, Federal Endangered and Threatened Species that Occur in or May be Affected by Projects in the Counties and/or U.S.G.S. 7 ½ Minute Quads You Requested.</p> <p>Attachment 9, Affonso, Jana. Chief, Sacramento Valley Branch, Sacramento Fish and Wildlife Office, U.S. Fish &amp; Wildlife Service. Personal email communication with Alejandro A. Huerta, February 17, 2010.</p>
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<p><b>Wild and Scenic Rivers Act</b> [Sections 7 (b), (c)]</p>	<p><b>Compliance Determination:</b> There is a designated Wild and Scenic River within one mile of the project site, the American (Lower) River. The American (Lower) River is 0.22 mile to the north of the existing Powerhouse building. There would be no impact to the American (Lower) River from the proposed project according to the National Park Service.</p> <p><b>Source Documentation:</b> Attachment 10, National Wild and Scenic Rivers System September 2009, <a href="http://www.rivers.gov/wildriverslist.html">http://www.rivers.gov/wildriverslist.html</a>, accessed on September 24 2009.</p> <p>Attachment 11, Bowes, Stephen. CA Wild and Scenic Rivers Coordinator, National Park Service. Letter to Alejandro A. Huerta, DC&amp;E, March 1, 2010.</p>
<p><b>Air Quality</b> [Clean Air Act, Sections 176 (c) and (d), and 40 CFR 6, 51, 93]</p>	<p><b>Compliance Determination:</b> The Sacramento Metropolitan Area is designated as severe-15 non-attainment for the 1997 8-hour ozone ambient air quality standard by EPA as of June 4, 2010.</p> <p>The Sacramento Metropolitan Air Quality Management District confirmed that the project would be located within a "non-attainment" area, conforms with the EPA-approved State Implementation Plan (SIP), and that the project requires no individual National Emissions Standards for Hazardous Air Pollutants (NESHAP) permit or notification.</p> <p><b>Source Documentation:</b> Attachment 12, Nonattainment Areas Map-Criteria Air Pollutants, <a href="http://www.epa.gov/air/data/nonat.html?us~USA~United%20States">http://www.epa.gov/air/data/nonat.html?us~USA~United%20States</a>, accessed on January 20, 2010.</p> <p>Attachment 13, Hurley, Joseph J. Air Quality Planner/Analyst, Sacramento Metropolitan Air Quality Management District, personal email communication with Rochelle Amrhein, Sacramento Housing &amp; Redevelopment Agency, March 8, 2010.</p>
<p><b>Farmland Protection</b></p>	<p><b>Compliance Determination:</b></p>

<p><b>Policy Act</b> [7 CFR 658]</p>	<p>The project site contains no Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance. According to the American Farmland Trust, the project site is located in an urban area. In addition, the Sacramento 2030 General Plan Land Use &amp; Urban Form Diagram illustrates that no areas within the project area are designated as farmland or agricultural area. Finally, the site does not support any agricultural activities, and no commercial agricultural activities occur in the general vicinity. Therefore the project would not impact farmland areas.</p> <p><b>Source Documentation:</b> Attachment 14, "Farming on the Edge: Sprawling Development Threatens America's Best Farmland, California" Farmland Information Center, <a href="http://www.farmlandinfo.org/california/">http://www.farmlandinfo.org/california/</a>, accessed on September 29, 2009.</p> <p>Attachment 15, Sacramento 2030 General Plan Land Use &amp; Urban Form Diagram.</p>
<p><b>Environmental Justice</b> [Executive Order 12898]</p>	<p><b>Compliance Determination:</b> The proposed site is located in a low income neighborhood. The infrastructure improvements would benefit the area by providing up-to-date utilities infrastructure compliant with the City of Sacramento Department of Public Works Design and Procedures Manual and Improvement Standards. New water and sewer lines would be constructed, as well as new curbs, gutters, sidewalks and street lighting, which would make the area safer for pedestrians. The infrastructure improvements would facilitate the development of the Powerhouse Science Center. In turn, the Science Center, when completed, would be a museum and educational facility that would have a positive impact on City residents. The visitors to the Powerhouse Science Center would represent the diverse socioeconomic population of the City of Sacramento and region.</p>

**HUD Environmental Standards Determination and Compliance Documentation**  
**Noise Abatement and Compliance Determination:**

<p><b>Control</b> [24 CFR 51 B]</p>	<p>HUD requires consideration of all noise sources, which may adversely impact noise-sensitive areas such as housing. In this regard, the three principal sources of noise that may be considered are civil airports within 5 miles and military airfields within 15 miles, railroads within 3,000 feet, and major roadways within 1,000 feet of the project site. For this project, the following are found:</p> <ul style="list-style-type: none"> <li>- Interstate 5 (I-5) is located about 228 feet east from the project site.</li> <li>- The Amtrak railroad lines are located 2,555 feet to the south of the project site.</li> <li>- There are no airports within 5 miles of the project site.</li> </ul> <p>Noise in the project area is dominated by noise from traffic on I-5. A short-term measurement for the motel closest to the proposed project was a 73 dBA Worst Hour Leq, which, according to HUD Site Acceptability Standards, is normally unacceptable for housing since it is above 65 dB but not exceeding 75 dB. The proposed project does not contain any housing. Therefore, the Site Acceptability Standards do not apply.</p> <p><b>Source Documentation:</b> Attachment 16, ICF Jones &amp; Stokes, 2008, Draft Noise Study Report, Access Improvements from Railyards to Richards Boulevard and Interstate 5, page 20.</p>
<p><b>Toxic/Hazardous/Radioactive Materials, Contamination, Chemicals or Gases</b> [24 CFR 58.5(1)(2)]</p>	<p><b>Compliance Determination:</b> In 1986 a portion of the site was placed on the National Priorities List as a Superfund site due to lead contamination from past uses as a PG&amp;E manufactured gas plant and as a scrap metal recycling facility. Clean-up was certified in 1988 and the site was delisted in 1991. The remedial actions for the site included installation of clay caps over lead-contaminated soil; a deed restriction limiting the site to non-residential uses; groundwater monitoring; and an Operations and Maintenance Plan. The Department of Toxic Substances Control (DTSC) signed the Remedial Action Certification Form on August 19, 1998. The proposed project site, therefore, is not listed on an EPA Superfund</p>

National Priorities or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) List, or equivalent State list.

In addition, the California Department of Water Resources (DWR) oversaw a site investigation and remedial action for the removal of two fuel oil tanks from the southern side of the Powerhouse Building. A total of 6,200 tons of soil was excavated and three monitoring wells were installed at that time. An earthen cap was built over the top of the contaminated area and vegetative cover installed. DWR considered that because the contaminated soils were restricted to 15 feet below grade, there would not be a threat to site workers. The cap was intended to direct runoff away from the hydrocarbon area. DWR issued a letter confirming the completion of the investigation on April 13, 1999.

Two Leaking Underground Storage Tank (LUST) cleanup sites were located on adjacent sites. The Holiday Inn LUST case at 200 Jibboom Street was closed as of May 28, 1996, and the Texaco SS (Former) LUST case at 226 Jibboom Street was closed as of July 10, 1997.

There are no toxic or solid waste landfills within 3,000 feet of the project site.

**Source Documentation:**

Attachment 17, State Water Resources Control Board Geotracker Map, <https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=95811>, accessed on February 11, 2010.

Attachment 18, Department of Toxic Substances Control EnviroStor Record for Jibboom Building (34490056).

Attachment 19, Department of Water Resources, September 10, 1999, Former PG&E Power Plant Site, Sacramento County, California, Remediation Documentation, pages 1 to 3.

Attachment 20, Covenant to Restrict Use of

	<p>Property, Environmental Restriction Former PG&amp;E Power Plant Site, Jibboom Street, "Jibboom Building Site," Sacramento, Sacramento County, California, 1998, pages 1, 2, 4 and 8.</p> <p>Attachment 21, Agreement, Operation and Maintenance RE: Former Pacific, Gas, and Electric Power Plant Site, Jibboom Street, Sacramento, Sacramento County, California, 1998, pages 1 to 2.</p>
<p><b>Siting of HUD-Assisted Projects near Hazardous Operations</b> [24 CFR 51 C]</p>	<p><b>Compliance Determination:</b> As shown on the project aerial in Figure 4, no explosive or flammable operations were identified on or adjacent to the project site. In addition, no storage tanks nor drums or other chemical containers were observed on the site.</p> <p><b>Source Documentation:</b> Figure 4, Aerial Photograph.</p>
<p><b>Airport Clear Zones and Accident Potential Zones</b> [24 CFR 51 D]</p>	<p><b>Compliance Determination:</b> The property is not located within 2,500 feet of the end of a civil airport runway or within 8,000 feet of the end of a military airfield runway.</p> <p>This site is not within an FAA-designated Runway Clear Zone or Runway Protection Zone or within a Military Aircraft Clear Zone or Accident Protection Zone.</p> <p><b>Source Documentation:</b> Attachment 22, Powerhouse Science Center Airport Clear Zones Map.</p>

**Environmental Assessment Checklist**

[Environmental Review Guide HUD CPD 782, 24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27]

Evaluate the significance of the effects of the proposal on the character, features and resources of the project area. Enter relevant base data and verifiable source documentation to support the finding. Then enter the appropriate impact code from the following list to make a determination of impact. **Impact Codes:** (1) - No impact anticipated; (2) - Potentially beneficial; (3) - Potentially adverse; (4) - Requires mitigation; (5) - Requires project modification. Note names, dates of contact, telephone numbers and page references. Attach additional material as appropriate. Note conditions or mitigation measures required.

Land Development	Code	Source or Documentation
<p>Conformance with Comprehensive Plans and Zoning</p>	<p>1</p>	<p><b>Compliance Determination:</b> The project site is located within the Richards Boulevard Special Planning District, Section C-Highway Commercial Zone (HC zone); the River District Redevelopment Project area; the Sacramento Riverfront Master Plan area; and the proposed River District Specific Plan area. The Powerhouse Science Center would be classified in the City Code as an amusement center and would be an allowed use in the HC zone with the approval of a</p>

	<p>Plan Review. The infrastructure improvements would be consistent with the purpose and intent of the Richards Boulevard Special Planning District, which states that one of the goals is to "provide for improved circulation, infrastructure and community facilities that will serve existing and future needs within the area." Therefore, the infrastructure improvements would not conflict with the Richards Boulevard Special Planning District.</p> <p><b>Source Documentation:</b> Attachment 23, Sacramento City Code, Chapter 17.120 Richards Boulevard Special Planning District.</p> <p>Attachment 24, River District Redevelopment Area, <a href="http://www.riverdistrict.net/about-us/river-district-redevelopment.shtml">http://www.riverdistrict.net/about-us/river-district-redevelopment.shtml</a>, accessed on February 12, 2010.</p> <p>Attachment 25, Aerial Photo View of Richards Boulevard Redevelopment Area.</p> <p>Attachment 26, Sacramento Riverfront Master Plan, 2003, Riverfront Concept Map.</p> <p>Attachment 27, River District Specific Plan Vision Map.</p>
<p>Compatibility and Urban Impact</p>	<p>1</p> <p><b>Compliance Determination:</b> The project is immediately surrounded by a park to the south and a motel to the north. Jibboom Street runs to the east and to the east of Jibboom Street is the elevated portion of Interstate 5. A recreational trail runs to the west of the project on top of the levee, on the outside of which is the Sacramento River. The surrounding area to the north has several low-rise businesses surrounded by paved parking, and south of the park the area is dominated by the elevated portion of I-5 which runs along the Sacramento River. To the northeast of the freeway are large, low-rise commercial developments, some occupying entire blocks, and to east of I-5 is a water treatment plant.</p> <p>The project would be infrastructure improvements that would facilitate development of an educational center attracting 250,000 annual visitors, including large numbers of school children, to several indoor, and some outdoor, attractions. Due to the close proximity (218 feet) to I-5, the area is particularly noisy, which could detract from enjoyment of the outdoor amenities.</p> <p>The 19,250 square foot (sf) existing structure of the Powerhouse would be rehabilitated and two new structures would be built on the site: a 13,218 sf two-story, 57-foot-high Planetarium and Challenger Learning Center, and a 14,500 sf Education Center and Restaurant. In addition, there would be parking for 298 cars. The existing riverine trees would be maintained and several new trees would be planted as part of the project's landscape plan. The new development would not be out of character with the surrounding low-density commercial and industrial development with wide stretches of asphalt, and none of the new structures would exceed the height of the existing building. The riverside zone would maintain its vegetated character. Finally, the proposed project would not displace or divide an existing community since the site is currently an undeveloped lot with the exception of the shuttered former PG&amp;E building. Therefore, the proposed project would be compatible with surrounding land uses.</p> <p><b>Source Documentation:</b> Attachment 4, Aerial Photograph.</p>

Slope	1	<p><b>Compliance Determination:</b> The site is generally flat. It is bordered to the west by the ridge of the Sacramento Levee. The Sacramento River was 10 to 15 feet below the top of the levee in January, 2010, and there are substantial seasonal fluctuations. To the east there is a slight break in slope from the edge of the artificial clay cap, down towards Jibboom Street. However, there is no evidence of slope erosion or unstable slope conditions on or near the site.</p> <p><b>Source Documentation:</b> Attachment 28, Site Photograph.</p>
Erosion	1	<p><b>Compliance Determination:</b> Soils on the site consist generally of a surface layer of fill underlain by a mixture of silts, silty-sands and some sandy gravels to a depth of around 25 feet below site grade. This is underlain by sand. Two areas, totaling 0.75 acres of the site, have a clay cap that has raised the site level in those places to the elevation of the existing levee. Given the lack of slope, or developed vegetated nature of the site, and the relatively coarse nature of the deposits, erosion would not be a substantial problem. Compliance with the City's Grading, Erosion, and Sediment Control Ordinance (City Code Chapter 15.88) would reduce the proposed project's potential to result in erosion, topographic changes, or unstable soil conditions.</p> <p><b>Source Documentation:</b> Attachment 29, Dreyfuss &amp; Blackford Architects, 2000, Jibboom Street PG&amp;E Power Plant Site Study Final Report, pages 1.2, 6.1 to 6.2.</p>
Soil Suitability	4	<p><b>Compliance Determination:</b> Soils on the site consist generally of a surface layer of fill underlain by a mixture of silts, silty-sands and some sandy gravels. Depth to groundwater is closely related to the flow in the Sacramento River that was observed at 10 to 15 feet below the top of the levee in January, 2010. Groundwater flow direction is generally towards the Sacramento River. In general, groundwater is 15 to 30 feet below ground surface but can rise to within 5 feet of the surface at certain times of year. Because of the shallow water table, the structural components necessary for construction of the proposed improvements could require depths that encounter groundwater during construction and could require dewatering. Often, groundwater provides partial support for the near-surface soil materials and, when withdrawn, allows the soils to slough into the excavation. If the dewatering system draws down the water table in the area of the excavation, there is the possibility of undermining structures either on or near the site, causing cracking or collapse.</p> <p>An undetermined amount of contaminated soil would be excavated in the basement of the existing Station in order to create space that may be occupied. The level and extent of excavation would be determined upon further exploration of the condition of the contaminated soil, and existing and abandoned foundation structures below grade. There would be no construction within 10 feet of the required levee.</p> <p>As part of the construction permitting process, the City requires completed reports of soil conditions at the specific construction sites to identify potentially unsuitable soil conditions including liquefaction, settlement, subsidence, lateral spreading, and collapse. The City requires that these evaluations be conducted by registered soil professionals, and measures to eliminate</p>

	<p>inappropriate soil conditions must be applied, depending on the soil conditions. The design of foundation and excavation-wall support must conform to the analysis and implementation criteria described in the California Building Code (CBC), Chapters 16, 18, 33, and the appendix to Chapter 33. Adherence to the CBC and City policies contained in the 2030 General Plan would ensure the maximum practicable protection available for users of buildings and infrastructure and their associated trenches, slopes, and foundations. Specifically, implementation of Sacramento 2030 General Plan Environmental Constraints Policies EC 1.1.1 and EC 1.1.2 would ensure that the City review and enforce all applicable building codes and require site-specific geotechnical reports for all development projects.</p> <p><b>Source Documentation:</b> Attachment 30, Blackburn Consulting, 2008, Initial Site Assessment, Richards to Railyards Access Improvement, Sacramento, California, pages 2 to 3.</p> <p>Attachment 31, Blackburn Consulting, 2009, Draft Aerially Deposited Lead/Phase II Assessment, Railyards to Richards Boulevard Access Improvement Project, Sacramento, California, pages 10 and 11.</p>
<p>Hazards and Nuisances including Site Safety</p>	<p>1 <b>Compliance Determination:</b> The project would bring an increased number of children in close proximity to the Sacramento River along the unfenced recreational trail that is already in public use. Management of the trail is the responsibility of the City of Sacramento Department of Parks and Recreation.</p> <p>The adjacent Jibboom Street, which is the access road to the facility, does not experience traffic in general, or much through-traffic. The project would be adequately lit to aid visitors. The project is relatively isolated from surrounding land uses by roads, fences and the natural topography of the Sacramento River. However, there are several outdoor areas which would be frequented by children and which are within 200 feet of I-5. Although there is no pedestrian access to I-5, there are air quality and noise issues resulting from its proximity. These issues are discussed below with respect to the background conditions and potential for the project to contribute to these. Noise affects the enjoyment of visitors to the facility and would presumably deter them from spending excessive time in the outdoor areas.</p> <p>Park users and customers of the Science Center would be exposed to existing noise levels which currently exceed the 2030 General Plan Exterior Noise Compatibility Standards. The City would be required to take the noise environment into consideration when considering whether to approve the development proposal.</p> <p>The U.S. Department of Housing and Urban Development (HUD) Regulations for acceptable noise for new housing construction projects location are 65 Ldn for exterior noise and 45 Ldn for interior noise. Exterior noise of 73 dBA would therefore be normally unacceptable. The HUD standard applies to housing and there would be no housing in this project; therefore, this standard does not apply.</p> <p>As the development is recreational, visitors would presumably not be outside for long periods of time. Employees at the Powerhouse Science Center would also presumably not be</p>

		<p>working outside for long periods of time. In addition, the Powerhouse Science Center would include a sound and shade structure to the southwest of the former PG&amp;E building that would help reduce the noise from I-5.</p> <p>Inside the Powerhouse building the transmission of exterior noise would be minimized by the solid concrete walls which are sufficient to meet interior noise standards. The new Planetarium would include an exterior shell of insulated panels, laminated glass and layers of gypsum board to reduce the sound from the exterior environment. These features would provide adequate protection inside the building from exterior noise and enable visitors to enjoy the museum experience.</p> <p><b>Source Documentation:</b> Attachment 16, ICF Jones &amp; Stokes, 2008, Draft Noise Study Report for Access Improvements from Railyards to Richards Boulevard and Interstate 5, page 20.</p>
Energy Consumption	1	<p><b>Compliance Determination:</b> Further development of the project's program and exhibit concept is needed to determine requirements and energy consumption. However, the project's goal is to attain LEED-Gold certification or higher. One of the components of the project is to use "green power." The goal is to provide at least 35 percent of the building's electricity from renewable sources, such as solar, wind, geothermal, biomass or low-impact hydro sources. In addition, the infrastructure improvements would not significantly increase energy consumption in the area.</p>

Noise - Contribution to Community Noise Levels	1	<p><b>Compliance Determination:</b> Noise in the project area is dominated by traffic on I-5. Noise was measured at the motel to the immediate north of the project site in 2008 at 73 dBA for the worst hour Leq. This is already in excess of the standard of 65 dBA for the transient lodging (motels, hotels) land use category in the City's General Plan and of 70 dBA for playgrounds and neighborhood parks, which is the land use immediately south of the project site.</p> <p><u>Construction Noise</u> Construction activities associated with the project would also result in short-term increases in noise. Table 1 below summarizes typical noise levels from construction activity).</p> <p><b>Table 1 - Construction Equipment Noise</b></p> <table border="1"> <thead> <tr> <th>Type of Equipment</th> <th>Typical Level (dBA at 50 feet)</th> </tr> </thead> <tbody> <tr><td>Air compressor</td><td>81</td></tr> <tr><td>Backhoe</td><td>80</td></tr> <tr><td>Bulldozer</td><td>85</td></tr> <tr><td>Compactor</td><td>82</td></tr> <tr><td>Concrete pump</td><td>82</td></tr> <tr><td>Grader</td><td>85</td></tr> <tr><td>Impact wrench</td><td>85</td></tr> <tr><td>Jackhammer</td><td>88</td></tr> <tr><td>Loader</td><td>85</td></tr> <tr><td>Pneumatic tool</td><td>85</td></tr> <tr><td>Saw</td><td>76</td></tr> <tr><td>Scraper</td><td>89</td></tr> <tr><td>Truck</td><td>88</td></tr> </tbody> </table> <p>Source: Federal Transit Administration 2006.</p>	Type of Equipment	Typical Level (dBA at 50 feet)	Air compressor	81	Backhoe	80	Bulldozer	85	Compactor	82	Concrete pump	82	Grader	85	Impact wrench	85	Jackhammer	88	Loader	85	Pneumatic tool	85	Saw	76	Scraper	89	Truck	88
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	<p>Construction noise typically attenuates at a rate of 6 dB per doubling of distance. A reasonable worst-case assumption is that the three loudest pieces of equipment (jackhammer, scraper, and truck) would operate concurrently in the same location. The combined noise level of these three pieces of equipment would be 93 dBA at 50 feet.</p> <p>The City's noise ordinance establishes these exterior noise standards for residential properties: From 7 a.m. to 10 p.m., the exterior noise standard is 55 dBA. From 10 p.m. to 7 a.m., the exterior noise standard is 50 dBA.</p> <p>The standards are adjusted depending on the duration of noise generation within any given hour. For the purposes of this analysis, construction noise is assumed to operate continuously for at least 1 hour. The noise ordinance exempts construction noise between the hours of 7 a.m. and 6 p.m. on Monday to Saturday, and between 9 a.m. and 6 p.m. on Sunday, provided that the operation of an internal combustion engine will not be exempt if such engine is not equipped with suitable exhaust and intake silencers in good working order.</p> <p>Assuming a source level of 93 dBA at 50 feet and attenuation at a rate of 6 dB per doubling of distance, the 55 dBA daytime standard could be exceeded within about 4,000 feet of construction, and the nighttime standard could be exceeded within about 7,000 feet. The high ambient noise level in the project area from traffic on I-5 will likely reduce these distances substantially. This analysis indicates that construction activity during non-exempt hours could exceed the noise ordinance standards at the adjacent motel (which is classified as a sensitive noise receptor) in the project area.</p> <p>Sacramento 2030 General Plan Policy EC 3.1.10 requires all development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible. Because this policy requires mitigation of construction noise from future development and because construction noise would be restricted in intensity and hours of operation by the City's noise ordinance, this effect would be reduced to the minimum possible. In addition, the construction noise would be limited in duration.</p> <p><u>Construction-Generated Vibration</u></p> <p>Operation of heavy equipment may generate groundborne vibration that could be perceptible at sensitive land uses close to construction activity. Table 2 summarizes vibration levels at various distances based on source levels developed by the Federal Transit Administration as of 2006.</p> <p>Peak particle velocity (PPV) is the maximum velocity of a particle in a vibrating medium such as soil. PPV is usually expressed in inches/second.</p> <p>Table 2- Peak particle velocity (PPV) Vibration from Construction Equipment (measured in feet)</p> <table border="1"> <thead> <tr> <th>Equipment</th> <th>PPV@ 25</th> <th>PPV@50</th> <th>PPV@ 100</th> <th>PPV@150</th> <th>PPV@250</th> </tr> </thead> <tbody> <tr> <td>Vibratory Roller</td> <td>0.210</td> <td>0.074</td> <td>0.026</td> <td>0.014</td> <td>0.007</td> </tr> <tr> <td>Hoe Ram or Large Bulldozer</td> <td>0.089</td> <td>0.031</td> <td>0.011</td> <td>0.006</td> <td>0.003</td> </tr> </tbody> </table>	Equipment	PPV@ 25	PPV@50	PPV@ 100	PPV@150	PPV@250	Vibratory Roller	0.210	0.074	0.026	0.014	0.007	Hoe Ram or Large Bulldozer	0.089	0.031	0.011	0.006	0.003
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Air Quality	1	Compliance Determination:												

<p>Effects of Ambient Air Quality on Project and Contribution to Community Pollution Levels</p>	<p>The project area is located in the Sacramento Valley Air Basin (SVAB), which is bounded by the Sierra Nevada on the east and the Coast Range on the west. Prevailing winds in the project area originate primarily from the southwest. These winds are the result of marine breezes coming through the Carquinez Straits. These marine breezes diminish during the winter months, and winds from the north occur more frequently at this time. Air quality within the project area and surrounding region is largely influenced by urban emission sources.</p> <p>The SVAB is subject to federal, State, and local air quality regulations under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). As there are minimal industrial emissions, urban emission sources originate primarily from automobiles. Home fireplaces also contribute a significant portion of the air pollutants, particularly during the winter months. Air quality hazards are caused primarily by carbon monoxide (CO), particulate matter equal to or less than 10 microns in diameter (PM<sub>10</sub>), and ozone, primarily as a result of motor vehicles. The national 24-hour PM<sub>10</sub> standard has not been exceeded since 1987 in the SVAB. In June, 2010, the Sacramento Metropolitan Area was designated as severe-15 for non-attainment of the 1997 8-hour ozone national ambient air quality standard by EPA. All development/construction projects subject to environmental review under CEQA or NEPA were then subject to a 25 tons/year (137 lbs/day) standard for NO<sub>x</sub> and ROG emissions, rather than the previously adopted 50 tons/year (274 lbs/day).</p> <p>The SMAQMD adopted the following thresholds of significance in 2002:</p> <p>Ozone and Particulate Matter. An increase of nitrogen oxides (NO<sub>x</sub>) above 85 pounds per day for short-term effects (construction) would exceed the SMAQMD threshold adopted for this EA. An increase of either ozone precursor, nitrogen oxides (NO<sub>x</sub>) or reactive organic gases (ROG), above 65 pounds per day for long-term effects (operation), would also exceed the SMAQMD threshold. As both the SMAQMD construction and operation standards are more stringent than the June 2010 EPA standards, they are used here in this EA. The threshold of significance for PM<sub>10</sub> is a concentration-based threshold equivalent to the California Ambient Air Quality Standard (CAAQS). For PM<sub>10</sub>, a project would exceed the threshold if it would emit pollutants at a level equal to or greater than 5 percent of the CAAQS (50 micrograms/cubic meter for 24 hours) if there were an existing or projected violation; however, if a project is below the ROG and NO<sub>x</sub> thresholds, it can be assumed that the project is below the PM<sub>10</sub> threshold as well.</p> <p>Carbon Monoxide. The pollutant of concern for sensitive receptors is carbon monoxide (CO). Motor vehicle emissions are the dominant source of CO in Sacramento County. For purposes of environmental analysis, sensitive receptor locations generally include parks, sidewalks, transit stops, hospitals, rest homes, schools, playgrounds, and residences. Commercial buildings are generally not considered sensitive receptors. Carbon monoxide concentrations would exceed the SMAQMD threshold if they exceed the 1-hour state ambient air quality standard of 20.0 parts per million (ppm) or the 8-hour state ambient standard of 9.0 ppm (state ambient air quality standards are more stringent than their federal counterparts).</p> <p>Toxic Air Contaminants (TACs). The project would exceed the SVAB thresholds if it would expose sensitive receptors to substantial pollutant concentrations.</p> <p><u>Operational Impacts</u> The URBEMIS 2007 9.2.4 model was used to calculate estimated</p>
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emissions for the operation of the proposed project. Estimated highest ROG and NO<sub>x</sub> summer and winter emissions for using the URBEMIS 2007 9.2.4 model were calculated to be approximately 7.37 pounds per day (lbs/day) and 11.38 lbs/day, respectively, which is below the 65 lbs/day threshold.

Project-Related Construction Impacts

The URBEMIS 2007 9.2.4 model was used to calculate estimated emissions for the construction of the proposed project. Based on the estimated emissions from running the URBEMIS model, the proposed project is not likely to exceed the short-term emissions threshold of 85 lbs/day for NO<sub>x</sub>. Estimated NO<sub>x</sub> summer emissions using the URBEMIS 2007 9.2.4 model were calculated to be approximately 58.27 lbs/day, which is below the 85 lbs/day threshold.

The SMAQMD 2004 Guide to Air Quality Assessment states that if the project's NO<sub>x</sub> mass emissions from heavy-duty, mobile sources do not exceed the SMAQMD threshold using the recommended methodologies for estimating emissions (Manual Calculation, URBEMIS, and Roadway Construction Model), the Lead Agency may assume that exhaust emissions of other pollutants from operation of construction equipment and worker commute vehicles also do not exceed the threshold. The URBEMIS 2007 model indicated that the project would not exceed the NO<sub>x</sub> threshold and, based on the guidance of the air district, the analysis of other criteria pollutant emissions is not included in this discussion.

Construction activities would be subject to SMAQMD's Rule 403 on Fugitive Dust, which provides that contractors shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from any construction, handling or storage activity, or any excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions include, but are not limited to: the use of water or chemicals for control of dust, where possible, during construction operations (including roadways), or during the clearing of land; the application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts; and other means approved by the Air Pollution Control Officer.

Land uses such as schools, hospitals, residences and convalescent homes are considered to be relatively sensitive to poor air quality. However, since proposed project emissions of NO<sub>x</sub>, ROG, PM<sub>10</sub> and CO are not anticipated to exceed SMAQMD thresholds and the surrounding land uses are not considered sensitive, it is not expected that concentrations will exceed any standards for sensitive receptors.

The project would not therefore exceed the SMAQMD thresholds that are used in this EA to determine if the project would contribute substantially towards Community Pollution Levels.

Although the project itself is not expected to contribute substantially toward community pollution levels, it should be noted that the existing former PG&E building is located 228 feet from I-5, which is a major highway with more than 6 lanes of traffic. This is a major source of CO and particulate matter.

Background air quality monitoring would need to be carried out at the project site to determine current levels of these pollutants. Projected estimates would need to be added to these pollutant levels to determine the effects of ambient air quality on the project. Although users of the project are expected to include a high proportion of children, who are considered sensitive receptors, they would be unlikely to spend much

		<p>time outside due to the noise. Indoor air quality is not likely to be much affected by the particulate pollution because this would be filtered out by the building's ventilation system.</p> <p><u>Greenhouse Gases</u> Greenhouse gases (GHGs) are an area of recent concern and analysis in HUD documents. As the project would be designed with the goal of attaining LEED-Gold certification or higher, it will be relatively energy-efficient. Operational GHG emissions would be largely derived from passenger vehicles making trips to and from the site. The URBEMIS 2007 model runs calculated CO<sub>2</sub> emissions (the main GHG) for the project. Over the lifetime of the project, the total metric tons of CO<sub>2</sub> per year would be less than 2,000 tons per year (tons/yr). This is considerably less than the threshold of 25,000 tons/yr that is being considered for adoption by the Council of Environmental Quality for projects undergoing NEPA review.</p> <p><b>Source Documentation:</b> Attachment 32, ARB Almanac 1999 – Chapter 4: Historical Basinwide Emissions and Air Quality, pages 145 and 153.</p> <p>Attachment 33, SMAQMD, adopted March 2002, Thresholds of Significance Table.</p> <p>Attachment 34, SMAQMD, 2004, Guide to Air Quality Assessment, page 3-2.</p> <p>Attachment 35, SMAQMD, 2005, Rule 403 on Fugitive Dust, pages 403-5 and 403-6.</p> <p>Attachment 36, Federal Agencies Should Consider Climate Change When Reviewing Environmental Effects Of Projects, Says Council on Environmental Quality, February 23, 2010.</p>
<p><b>Environmental Design</b> Visual Quality - Coherence, Diversity, Compatible Use and Scale</p>	<p>1</p>	<p><b>Compliance Determination:</b> The project is immediately surrounded by a park to the south and a motel to the north. Jibboom Street runs to the east and farther to the east is the elevated portion of the I-5 freeway. A recreational trail runs to the west of the project, on top of the levee, on the outside of which is the Sacramento River. The surrounding area to the north has several low-rise businesses surrounded by paved parking, and the area farther south is dominated by the elevated portion of I-5 which runs along the Sacramento River. East of the freeway are large, low-rise commercial and industrial developments some occupying entire blocks and to the southeast is a water treatment plant.</p> <p>The 19,250 sf existing structure of the PG&amp;E building would be rehabilitated and two new structures would be built: a 13,218 sf two-story, 57-foot-high Planetarium and Challenger Learning Center; and a 14,500 sf Education Center and Restaurant. There would also be parking for 298 cars. The existing riverine trees would be maintained and several new trees planted around the project site. The new development would not be out of character with the nearby low-density industrial and commercial development with wide stretches of asphalt, and none of the new structures would exceed the height of the existing building. The riverside zone would maintain its vegetated character. Finally, the proposed project would not displace or divide an existing community since the site is currently a vacant lot with the shuttered former PG&amp;E building. Therefore, the proposed project would be compatible with surrounding land uses.</p> <p>The project reuses and rehabilitates the 1912 Powerhouse building, maintaining its character-defining features, with changes to its current</p>

	<p>setting to include the two aforementioned new structures. The site will be diverse and the newer buildings are designed to contrast with the older Powerhouse, while respecting its character-defining features, scale, massing and primary facades. As the neighborhood is already architecturally diverse, and unremarkable, this project would stand out as a well designed civic attraction.</p> <p><b>Source Documentation:</b> Attachment 4, Aerial Photograph Attachment 37, Project Rendering</p>
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Socioeconomic	Code	Source or Documentation
Demographic Character Changes	2	The proposed project would not displace any demographic group because the proposed project would be located on a site with no occupants. The proposed project would introduce a demographic group – K-12 students and other visitors – that does not currently exist in the project area. Overall, the proposed project would benefit the City of Sacramento by providing new educational and museum facilities for students and other visitors.
Displacement	1	<b>Compliance Determination:</b> The proposed project would be located on a site with no occupants and therefore would not displace any existing residents or employees.
Employment and Income Patterns	1	<b>Compliance Determination:</b> The proposed project is an educational, museum and restaurant project and would introduce a commercial use that would unlikely alter employment and income patterns. The Powerhouse Science Center is projected to create 400 construction jobs and 100 permanent jobs. The project vicinity already contains lodgings and restaurants to the north. In addition, the project is of a density and demographic character that would not trigger substantial changes to income patterns throughout the project vicinity.

Community Facilities and Services	Code	Source or Documentation
Educational Facilities	1	<b>Compliance Determination:</b> The proposed project involves the development of civic buildings to house exhibits for educational purposes, a restaurant and café, a gift shop, and improvements to the existing park. The proposed project does not include a residential component. As a result, it would not generate any additional needs for schools or necessitate the construction of new school facilities.
Commercial Facilities	2	<b>Compliance Determination:</b> The proposed project would result in new public facilities. These facilities would be potentially beneficial to the project area and City by increasing jobs and adding a new restaurant facility near the Sacramento waterfront.
Health Care	1	<b>Compliance Determination:</b> The proposed project does not include a residential component. Therefore, there would not be a demand for additional health care services beyond those required for emergency services. Consequently, the proposed project would not adversely impact medical services.
Social Services	1	<b>Compliance Determination:</b> The proposed project would not adversely impact the social services provided by Sacramento County and the City of Sacramento because it is a visitor-serving, educational facility.
Solid Waste	1	<b>Compliance Determination:</b> Solid waste in Sacramento is collected by City and permitted private haulers. The City offers both commercial and residential solid waste collection services. Construction and demolition waste is collected by the City and private companies. Commercial solid waste collected by the City is transported to one of two transfer stations for processing: the Sacramento Recycling and Transfer

	<p>Station owned by BLT Enterprises, which is permitted for a maximum daily disposal of 2,500 tons; and the North Area Transfer Station, owned by the County of Sacramento Public Works Department, which accepts a maximum of 2,400 tons per day of construction/demolition, industrial, and green materials, tires, wood waste, and mixed municipal waste.</p> <p>The Integrated Waste Management Act of 1989 (AB 939) requires each city and county in California to reduce landfilled waste by 50 percent. As of 2004, the most recent data available that has been approved by the California Integrated Waste Management Board (CIWMB) shows that the City of Sacramento maintained a 49 percent diversion rate. The City has six recycling programs, six programs specializing in source reduction and four public education programs designed to encourage and promote recycling in the communities.</p> <p>Implementation of Policies U 5.1.1 through U 5.1.3 from the Sacramento 2030 General Plan Master EIR ensures that solid waste and recycling facilities such as transfer stations are adequately provided throughout the city to help reduce the amount of waste sent to landfills. Policies U 5.1.1 through U 5.1.3 are:</p> <p>U 5.1.1           <b>Zero Waste.</b> The City shall achieve zero waste to landfills by 2040 through reusing, reducing, and recycling solid waste; and using conversion technology if appropriate.</p> <p>U 5.1.2           <b>Landfill Capacity.</b> The City shall continue to coordinate with Sacramento County in providing long-term landfill disposal capacity.</p> <p>U 5.1.3           <b>Transfer Stations.</b> The City shall provide for adequate transfer station facilities to meet the city's demand.</p> <p>Many programs are already in place to promote waste diversion, which will help reduce waste flow to landfills. The proposed project will be sufficiently served by the City and will comply with federal, State, and local statutes and regulations related to solid waste.</p> <p><b>Source Documentation:</b> Attachment 38, CalRecycle, Transfer Station Profile for Sacramento Recycling &amp; Transfer Station (34-AA-0195), <a href="http://www.calrecycle.ca.gov/Profiles/Facility/Transfer/TransProfile1.asp?COID=34&amp;FACID=34-AA-0195">http://www.calrecycle.ca.gov/Profiles/Facility/Transfer/TransProfile1.asp?COID=34&amp;FACID=34-AA-0195</a>, accessed on February 19, 2010.</p> <p>Attachment 39, CalRecycle, Transfer Station Profile for North Area Transfer Station (34-AA-0002), <a href="http://www.calrecycle.ca.gov/Profiles/Facility/Transfer/TransProfile1.asp?COID=34&amp;FACID=34-AA-0002">http://www.calrecycle.ca.gov/Profiles/Facility/Transfer/TransProfile1.asp?COID=34&amp;FACID=34-AA-0002</a>, accessed on February 19, 2010.</p> <p>Attachment 40, CalRecycle, Jurisdictional Profile for City of Sacramento, <a href="http://www.calrecycle.ca.gov/Profiles/Juris/JurProfile2.asp?RG=C&amp;JURID=418&amp;JUR=Sacramento">http://www.calrecycle.ca.gov/Profiles/Juris/JurProfile2.asp?RG=C&amp;JURID=418&amp;JUR=Sacramento</a>, accessed on February 19, 2010.</p>
Wastewater	<p><b>1 Compliance Determination:</b> Wastewater collection in the project area is provided by the City. The City provides wastewater collection to about two-thirds of the area within the project area via a combined sewer system (CSS). Currently all flows into the CSS are conveyed westerly to two pumping stations (Sump 2/2A and 1/1A) located on the Sacramento River. For secondary treatment and disinfection of the flow, the City has entered into an agreement with the Sacramento Regional Wastewater Treatment Plant (SRWTP) to convey up to 60 million gallons per day (mgd). This treatment capacity is currently sufficient for dry weather flows. During heavy storms where the flows exceed this amount, the Combined Wastewater Treatment Plant (CWTP) at South Land Park Drive and 35th Avenue is used to provide primary treatment of an additional 130 mgd. Excess flows beyond 190 mgd are diverted to the Pioneer Reservoir storage and treatment facility that has a capacity of 350 mgd. When all three treatment facilities (SRWTP, CWTP, and Pioneer) have reached capacity, excess flows are directly discharged into the Sacramento River from Sump 2 without treatment. These are called combined sewer overflows (CSOs). In the central City, when the pipeline system capacities are surpassed, the excess flows flood local streets through maintenance holes and catchbasins.</p> <p>The City of Sacramento adopted a sewer ordinance for the CSS in 2005, which requires payment of a development fee for projects that add sewer flows within the CSS service boundary. Key aspects of the CSS development fee include: a fee per equivalent single-family dwelling unit that</p>

		<p>will be subject to periodic adjustments; CSS development fees may be fully or partially offset by constructing or cost sharing in the construction of a mitigation project approved by the City Department of Utilities; the fee approximates the cost to construct local storage to mitigate downstream impacts; and fees will be collected and deposited in a fund for the City to construct larger projects to mitigate multiple developments.</p> <p>Based on the uses planned for the site, the proposed project is anticipated to generate approximately 7,468 gallons per day of wastewater. The proposed project is consistent with the 2030 General Plan. Development under the 2030 General Plan would increase the demand for conveyance capacity in the local City-maintained sewer lines that connect to major trunk lines and interceptors in the separate sewer system. The City's CSS is limited in capacity, and flows must currently be mitigated in accordance with the Combined System Development Fee.</p> <p>The proposed project is constructing "Living Machine" systems, which adapt the ecological process of natural tidal wetlands to produce clean water from wastewater. The Living Machine is an engineered ecological system which utilizes plants in porous gravel substrate to create a large surface for biofilms, thin films or active treatment microorganisms. Biofilms efficiently treat wastewater from municipal, agricultural and other sources. After the wastewater is treated the water can be stored and used for watering the surrounding landscape onsite. The "Living Machines" that will be located on the project site will not replace but will supplement wastewater services that would normally be provided by the Sacramento Regional County Sanitation District. With the Living Machines in operation, impacts to the CSS would not be potentially adverse, and the requirement to pay the CSS impact fee may be reduced but still required.</p> <p>In addition, an 8-inch sanitary sewer line would be installed under Jibboom Street as part of the proposed project. This line would connect to currently active lines on Jibboom Street north of the project site. The new sanitary sewer line would serve the proposed project as needed. With the Living Machines on-site, and a back-up sewer line, as well as policies to ensure there is adequate wastewater service, no impact is anticipated.</p> <p><b>Source Documentation:</b> Attachment 41, Bertrand, Tony. Sacramento Department of Utilities. Personal email communication with Dana Allen, City of Sacramento Community Development Department, January 28, 2010.</p>
Stormwater	1	<p><b>Compliance Determination:</b> The City's separate storm drainage system includes conveyance of storm water and dry weather urban runoff to the adjacent creeks and rivers. The separate drainage system consists of street drains, conveyance systems, and usually a pump station to discharge into either the Sacramento or American River. These discharges are regulated for water quality by the Regional Water Quality Control Board National Pollutant Discharge Elimination System (NPDES) permit R5-2002-0206.</p> <p>The City of Sacramento design standards for project drainage include capturing the 10-year design storm without street flooding and preventing water from the 100-year storm from reaching within one foot of any building pad. The flows are generally conveyed in pipes or pipes and channels to pump stations. The channels are designed to hold the 100-year design storm. Projects that may cause the conveyance system to exceed their 100-year design capacity are required to detain their flows on-site or otherwise mitigate the potential flow exceedance.</p> <p>The 2030 General Plan also includes policies to address stormwater drainage facilities, such as Policy U 4.1.1 to ensure that there are adequate drainage facilities. Policy U 4.1.5 requires that new development adhere to the City stormwater design requirements, and Policy ER 1.1.4 directs the City to require new development to protect the quality of water bodies and natural drainage systems through site design, storm water treatment, and best management practices. These policies are:</p> <p>U 4.1.1 Adequate Drainage Facilities. The City shall ensure that all new drainage facilities are adequately sized and constructed to accommodate stormwater runoff in urbanized areas.</p> <p>U 4.1.5 New Development. The City shall require proponents of new development to</p>

	<p>submit drainage studies that adhere to City stormwater design requirements and incorporate measures to prevent on- or off-site flooding.</p> <p>ER 1.1.4 <b>New Development.</b> The City shall require new development to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, best management practices (BMPs) and Low Impact Development (LID), and hydromodification strategies consistent with the City's NPDES Permit.</p> <p>The size of the project area is approximately 6.35 acres. This project is greater than 1 acre in size; therefore, the project is required to comply with the State "NPDES General Permit for Stormwater Discharges Associated with Construction Activity" (State Permit). To comply with the State Permit, the Applicant will need to file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) and prepare a Stormwater Pollution Prevention Plan (SWPPP) prior to construction. A copy of the State Permit and NOI may be obtained from <a href="http://www.swrcb.ca.gov/stormstr/construction.html">www.swrcb.ca.gov/stormstr/construction.html</a>. The SWPPP will be reviewed by the Department of Utilities prior to issuing a grading permit. The following items shall be included in the SWPPP: (1) vicinity map, (2) site map, (3) list of potential pollutant sources, (4) type and location of erosion and sediment BMPs, (5) name and phone number of person responsible for SWPPP and (6) certification by property owner or authorized representative. Additionally, development of the site would be required to comply with regulations involving the control of pollution in stormwater discharges under the City's Stormwater Management and Discharge Control Code (Title 13, Chapter 13.16). This code requires all development to prevent pollutants from entering the stormwater conveyance system. Under this code, the project would be required to develop and comply with Best Management Practices (BMPs) (e.g. use of erosion control barriers, proper disposal of chemicals, hydroseeding, good housekeeping, etc.) to manage short-term, construction related, erosion and stormwater issues which would be regulated by the City's Stormwater Prevention Pollution Plan Inspectors. Long term stormwater issues are addressed through source control and good housekeeping practices.</p> <p>The Applicant would ensure adherence to these established plans and requirements, best management practices and policies to ensure runoff is collected in appropriately sized catchbasins in order to gain project approval from the City. As such there would not be substantial environmental effects from the project in regards to stormwater management.</p> <p><b>Source Documentation:</b> Attachment 42, California Regional Water Quality Control Board Central Valley Region, Waste Discharge Requirements Cities of Citrus Heights, Elk Grove, Folsom, Galt, Rancho Cordova, Sacramento, and County of Sacramento Storm Water Discharges from Municipal Separate Storm Sewer Systems Sacramento County, <a href="http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/sacramento/rs-2008-0142.pdf">http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/sacramento/rs-2008-0142.pdf</a>, accessed on February 19, 2010.</p>
Water Supply	<p>1 <b>Compliance Determination:</b> Municipal water services within the project area are provided by the City of Sacramento and other water purveyors. The City's water supply comes from the American and Sacramento Rivers and groundwater pumped from the North and South American Subbasins. On average, groundwater use has consisted of 15 to 20 percent of the City's supply between 1999 and 2006.</p> <p>As part of the Sacramento River Water Intake Structure project, approximately 700 lineal feet of 12 inch diameter water pipe were placed to provide water to the new intake structure, the Robert T. Matsui Waterfront Park and the proposed project site. The water pipe extends from the northeast corner of the old PG&amp;E power station building lot to the intake structure and connects to the water distributions system on the east side of I-5 via two 4 inch pipes, thereby creating a "loop" system. Currently, as part of the infrastructure improvements, a new 12-inch water line would also be placed under Jibboom Street to meet City standards. It will replace the existing water line located on the former PG&amp;E property placed underground during the Sacramento River Water Intake Structure project. This line would connect to currently active lines on Jibboom Street and would accommodate the development of the proposed project. In addition, due to the project's proximity to the water treatment facility there is water pressure of roughly 60 pounds per square inch (psi) that is more than sufficient for fire suppression purposes. Therefore, there are sufficient water supplies available to serve the project.</p> <p><b>Source Documentation:</b></p>

		Attachment 43, Joyce, Neal. City of Sacramento, Department of Utilities. Personal email communication with Alejandro A. Huerta, DC&E, February 23, 2010.
Public Safety-Police	1	<p><b>Compliance Determination:</b> The Sacramento Police Department (SPD) is principally responsible for providing police protection services for areas within the city. The SPD's authorized staffing is 799 sworn police officers for an officer-to-population ratio of 1.66 officers per 1,000 residents. The SPD is in the process of developing a 10-year plan to increase the ratio to 2 to 2.5 officers per 1,000 residents. Central Command, at 300 Richards Boulevard, is the closest police station, about 0.5 mile, from the project site. The project site would be located in the Central Division, District 3, Beat 3A. The Central Command facility houses patrol officers, forensic investigations (CSI), detectives, administrative staff, SWAT, K9, bicycle officers and traffic officers who respond to calls for service mainly in the downtown area, but also citywide.</p> <p>The SPD expects adequate access to the site by car, bike or horse. The SPD believes that it will be able to provide adequate service if the project incorporates design principles that prevent crime such as video cameras.</p> <p><b>Source Documentation:</b> Attachment 44, Taylor, Chris. Sergeant, Sacramento Police Department. Personal email communication with Alejandro A. Huerta, DC&amp;E, February 11, 2010.</p>
Fire	1	<p><b>Compliance Determination:</b> The Sacramento Fire Department (SFD) provides fire protection services to the entire city, which includes approximately 98 square miles within the existing city limits as well as three contract areas that include 47 square miles immediately adjacent to the city boundaries within the unincorporated county. There are currently 530 sworn fire officers. Station 2 at 1229 I Street would be the first station to respond to an incident at this location. Due to the project's proximity to the water treatment facility there is water pressure of roughly 60 psi which is more than adequate for fire suppression. The City's goal is to maintaining appropriate response times to adequately provide fire protection and medical aid services. The City is also committed to maintaining optimum staffing levels for sworn, civilian, and support staff in order to provide fire protection and emergency services to the community. The response goal is to arrive on scene within a 4- to 6-minute response time 90 percent of the time for fire suppression and medic units within 8 minutes 90 percent of the time. According to Fire Department Deputy Chief of Administration, Leo Baustian, the project would be adequately served by the new fire station that will be built for the Sacramento Downtown Railyards project approved on December 11, 2007. A shared developer fee would be used to pay for the new fire station. The project would be required to provide adequate access and enough water supply for fighting fires.</p> <p><b>Source Documentation:</b> Attachment 43, Joyce, Neal. City of Sacramento, Department of Utilities. Personal email communication with Alejandro A. Huerta, DC&amp;E, February 23, 2010.</p> <p>Attachment 45, Tunson, King. Program Analyst, Planning &amp; Land use, Sacramento Fire Department. Personal email communication with Alejandro A. Huerta, DC&amp;E, February 10, 2010.</p> <p>Baustian, Leo. Deputy Chief of Administration, Sacramento Fire Department. Personal phone conversation with Alejandro A. Huerta, DC&amp;E, March 5, 2010.</p>
Emergency-Medical	1	<p><b>Compliance Determination:</b> The Sutter Medical Center, Sacramento is a Sutter Health Affiliate made up of several facilities that serve Sacramento. Sutter General Hospital is the closest facility to the project site at 2801 L Street in Sacramento. As of 2008, there were 950 physicians for the entire Sutter Medical Center, with 181,029 outpatient visits and 70,544 emergency visits. The Sutter Medical Center's services include 24-hour emergency services, surgery, respiratory therapy, intensive care, diagnostic imaging, rehabilitation, cardiopulmonary, occupational health, laboratory, physical therapy, home health and hospice services. The proposed project would not adversely impact the medical services provided by the Sutter General Hospital. In addition, fire personnel from the Sacramento Fire Department would be able to administer emergency medical attention, which would further reduce impacts, per the following General Plan policies:</p> <p>PHS 2.1.2 Response Time Standards. The City shall strive to maintain appropriate emergency response times to provide optimum fire protection and emergency medical services to the community.</p>

		<p>PHS 2.1.3 Staffing Standards. The City shall maintain optimum staffing levels for sworn, civilian, and support staff, in order to provide quality fire protection and emergency medical services to the community.</p> <p><b>Source Documentation:</b> Attachment 46, Facts at a Glance, Sutter Medical Center, Sacramento, <a href="http://www.sutterhealth.org/about/affiliates/hospitals.html">http://www.sutterhealth.org/about/affiliates/hospitals.html</a>, accessed on February 16, 2010.</p>
Open Space and Recreation	2	<p><b>Compliance Determination:</b> Because the proposed project would not involve the construction of new homes, it would not result in an increased demand for neighborhood or regional parks, or other recreational facilities beyond those identified in the General Plan and the Master EIR. The proposed project would not alter demand for park and open space facilities. Because the proposed project is proposing to improve recreation opportunities with improvements to the existing park, the proposed project would be potentially beneficial.</p>
Recreation	2	<p><b>Compliance Determination:</b> The proposed project would not alter the existing recreational opportunities that adjoin it. Because the proposed project is proposing to improve recreation opportunities with improvements to the existing park and improved access to the adjacent bike trail, the proposed project would be potentially beneficial.</p>
Cultural Facilities	1	<p><b>Compliance Determination:</b> The proposed project involves the rehabilitation of an existing vacant industrial building and the development of two new commercial buildings to house exhibits for educational purposes, a restaurant and café, a gift shop, and improvements to the existing park. The proposed project does not include a residential component. As a result, it would not generate any additional needs for schools (no increase in schoolchildren) or necessitate the construction of new school facilities. Nor would there be a need for expanded or new library services. The project is intended to serve students from the area. Therefore, no impacts are anticipated to schools or libraries.</p>
Transportation		<p><b>Compliance Determination:</b></p> <p><u>Access to the Site</u> Vehicular access to the project site would be provided from two driveways on Jibboom Street. Jibboom Street is a two-lane street, which begins at I Street in Downtown Sacramento and extends northwards toward Richards Boulevard, and then crosses the American River, terminating within Discovery Park. The daily traffic volume on Jibboom Street is about 9,400 vehicles.</p> <p><u>Public Transportation</u> Sacramento Regional Transit (RT) provides service along three routes in the study area. The 11 and 15 lines serve Richards Boulevard as a regular bus route, while the 33 line serves Bercut Drive and Richards Boulevard during peak hours. There are currently no light rail stations in the River District although the first segment, MOS1, of the Green Line is under construction. The first station will be at Township 9 located at the northwest corner of Richards Boulevard and North 7<sup>th</sup> Street.</p> <p><u>Bikeways and Pedestrian Access</u> A Class II bike lane is striped on both sides of Jibboom Street. The Sacramento River Parkway bicycle path, a Class I bikeway that runs from Old Sacramento to the American River Parkway, is located west of the proposed project. There is an existing sidewalk at the west side of Jibboom Street just north of the project site but no sidewalk is provided adjacent to the project site.</p> <p><u>Disabled Access and Truck Access to the Project</u> All buildings would be accessible to the disabled from the public right-of-way. All building interiors would be accessible to the disabled through the use of elevators.</p> <p>Trucks would be able to access the site at an off-hours loading area at the northeast corner of the Powerhouse Science Center building.</p> <p><u>Level of Service (LOS) Resulting from the Project</u> The proposed project is anticipated to attract 250,000 visitors when it opens in 2013. The table below summarizes the trip generation estimates of the proposed project. The Museum and Restaurant land uses are calculated separately since the operation hours are different. Assuming 20 percent of visitors are expected to arrive by bus, mostly school field trip groups, with 30 visitors in a bus and assuming 2.7 visitors per vehicle for the remaining 80 percent of visitors arriving in personal vehicles, the museum component of the project would generate 378 daily trips.</p>

Adjustments were made to account for restaurant pass-by trips and for internal trips between the museum and the restaurant. Internal trips are trips that would occur between different land uses on the same site without accessing the external street system. Pass-by trips are vehicle trips already traveling on the adjacent roadway system that are diverted into and out of the driveways serving the project site. No pass-by or internal trip reductions are applied for a.m. peak hour since restaurant business hours are expected to be from 11 a.m. to 8 p.m. weekdays. The proposed project will generate 863 daily trips, 43 trips in the a.m. peak hour and 113 trips in the p.m. peak hour, as listed below.

Land Use	Size (1000 sf)	Daily trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Museum	67.71	378	33	5	38	8	67	75
Restaurant	6.336	570	5	0	5	31	16	47
Internal trip reduction (-3%)		-28	0	0	0	-1	-3	-4
Restaurant Pass-by trips (-10%)		-57	0	0	0	-3	-2	-5
<b>Total Trips</b>		<b>863</b>	<b>38</b>	<b>5</b>	<b>43</b>	<b>35</b>	<b>78</b>	<b>113</b>

Source: Trip generation estimates based on land uses from the California Indian Heritage Center Traffic Study data, Natural History Museum trip generation analysis; museum and land use estimates taken from Institute of Transportation Engineers, Trip Generation, 8<sup>th</sup> Edition, 2008.

The total project peak-hour number of trips would not be considered substantial and would not degrade Level of Service (LOS) on roadways or intersections to unacceptable levels. The Powerhouse Science Center has been assumed as a baseline project in the I-5 and Richards Boulevard interim interchange study, and thus any potential future impacts are accounted for.

The existing streets in the vicinity of the project site would have adequate capacity to accommodate the project generated traffic volumes without any substantial adverse effects to traffic. However, the project is still subject to entitlement review and may be required to provide frontage improvements to the satisfaction of Department of Transportation Traffic Engineering Division.

Road Design Changes and Safety Issues

The recently-approved Access Improvements from Railyards to Richards Boulevard and Interstate 5 Project will improve Jibboom Street with restriping, repaving, and widening approximately 600 feet of the southern portion of the existing roadway. Along the west side of the widened section of Jibboom Street, fronting the PG&E property, curb, gutter with storm drain extensions would be added. Pending coordination with the utility companies, if the existing overhead utilities are relocated underground, Jibboom Street would be shifted toward I-5, and off-street parking would be added to portions of the west side. If these utilities remained on overhead poles, the existing asphalt sidewalk would be maintained with the poles in their existing locations, and off-street parking would not be added to the west side of Jibboom Street. This action is anticipated to commence in July 2010.

The proposed project will be consistent with Section 16.48.110 of the City Code, which states that street and roadway improvements should be designed and constructed to City standards in place at the time that the building permit is issued. All such improvements are required to be designed and constructed to the satisfaction of the Department of Transportation and this would ensure that there would be no hazards to safety from design features or incompatible uses. Therefore, the proposed project is not anticipated to result in increases in hazards due to design features.

Emergency Access

Existing and proposed project infrastructure provides adequate emergency access to the nearby uses. The project is required to be designed to appropriate standards of the City of Sacramento Department of Transportation and the Sacramento Fire Department. During construction, the project proponent would prepare a Transportation Management Plan (TMP) that ensures that construction period traffic impacts are minimized. The TMP would identify the type of construction

	<p>work; lane/road closure; traffic management measures to minimize impacts; and provisions made for emergency vehicles, heavy vehicles, cyclists, and pedestrians. In addition, the TMP would assess public transportation services affected and propose a public notification process. Proper notification and advanced warning to nearby emergency service providers, as directed to be included in the proposed project-level TMP, would ensure adequate egress and ingress for emergency service personnel. Therefore, the project would not result in inadequate access to nearby uses or for emergency vehicles.</p> <p><u><b>Bike and Pedestrian Safety</b></u> Pedestrian and bicycle access to the Sacramento River Parkway bicycle path could be disrupted temporarily during construction. No actual improvements would be made to the bicycle path. This construction zone would be coned off to allow limited access for workers and to ensure the exclusion and safety of the bicycle path users. Advance signage would also be placed in both directions of the pathway and bicyclists would be directed to walk their bicycles through this construction zone. With these precautionary measures, the construction adjacent to the Sacramento River Parkway bicycle path would not result in unsafe conditions for pedestrians or bicyclists.</p> <p><u><b>Parking</b></u> The project site currently has one off-street parking lot, located at the Robert T. Matsui Waterfront Park. The proposed project is proposing additional parking with the construction of a parking structure to accommodate 298 cars, which is considered adequate for the project's needs. Additionally, students accessing the project site are expected to arrive by school bus. School bus parking would be accommodated on-site. Any overflow parking would be accommodated off-site consistent with City Code 17.64.010 General Provisions (A)(1)(c), which states: "Off-Site Parking Under Different Ownership Outside a Specified Radius from Subject Site. Outside the central city, a special permit may be granted to locate required and non-required off-street vehicle parking on a parcel(s) outside of a three hundred (300) foot radius of the subject site if the parcels designated for off-site parking are under different ownership from the subject site. Within the central city, a special permit may be granted to locate required and non-required off-street vehicle parking for retail/commercial uses on a parcel(s) outside of a one thousand (1,000) foot radius of the subject site if the parcels designated for off-site parking are under different ownership from the subject site. A special permit may be granted only if the Applicant provides written evidence that users of the subject site will have unrestricted exclusive right to use the other parcel(s) for required parking for a period of not less than ten (10) years, or otherwise provides an arrangement satisfactory to the planning commission. Under no circumstances shall the amount of parking approved by the planning commission exceed any maximum amount of allowable parking." Undergrounding the water intake pipe, which is part of the infrastructure improvements, will allow for improved circulation related to parking access.</p> <p><u><b>Source Documentation:</b></u> Attachment 47, City of Sacramento Department of Transportation, Engineering Services, Traffic Counts Database, count from 09/12/2007. <a href="http://www.cityofsacramento.org/transportation/traffic/list.cfm">http://www.cityofsacramento.org/transportation/traffic/list.cfm</a>, accessed on February 22, 2010.  Attachment 48, Sacramento Regional Transit District, System Map, <a href="http://www.sacrt.com/systemmap/systemmap.stm">http://www.sacrt.com/systemmap/systemmap.stm</a>, accessed on February 19, 2010.</p>
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<b>Natural Features</b>	<b>Source or Documentation</b>
Water Resources	<p><u><b>Compliance Determination:</b></u> <u><b>Stormwater Runoff Quality Construction</b></u> During construction of the proposed project, stormwater runoff quality would be protected by using standard California Department of Transportation (Caltrans) approved Best Management Practices (BMPs) to reduce or eliminate potential water quality impairments. Caltrans BMPs are described in the 2003 Caltrans Stormwater Management Plan and the City's BMPs are included in the Sacramento Stormwater Quality Improvement Plan (SQIP). Both plans list measures that cover sediment and erosion controls, fueling and hazardous materials storage areas,</p>

	<p>waste handling and cleaning schedules, and known contributors that affect receiving water quality.</p> <p>Construction activities are regulated under the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit), provided that the total amount of ground disturbance during construction exceeds one acre or disturbs less than one acre but are part of a larger common plan of development that in total disturbs one or more acres. The Central Valley Regional Water Quality Control Board (RWQCB) enforces the General Construction Permit. Coverage under a General Construction Permit requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and notice of intent. The SWPPP includes pollution prevention measures (measures to control erosion, sediment, and non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, a detailed construction timeline, and a BMPs monitoring and maintenance schedule. The notice of intent includes site-specific information and the certification of compliance with the terms of the General Construction Permit.</p> <p><u>Operation</u> Site drainage plans will be prepared to reduce operational runoff from the project site. Implementation of the proposed project would change absorption rates, drainage patterns, and the amount of stormwater runoff from the project area. The size of the project area is approximately 6.35 acres. The project site drains to the Caltrans retention basin, adjacent to the southbound I-5 off-ramp to Jibboom Street. The Caltrans retention basin would receive all of the additional stormwater runoff from new impervious surfaces associated with the proposed project. The additional amount of stormwater would be safely conveyed to the Caltrans facilities.</p> <p>Caltrans retention basins act as natural treatment systems for stormwater runoff. Runoff associated with the new impervious surface would be drained to this basin for treatment prior to it being discharged to the American River. The basin provides treatment through percolation, filtration, sedimentation, and other biological processes that reduce or remove pollutants associated with highway and urban stormwater. The additional surface water discharges associated with the proposed project would not deplete or adversely affect water quality in the rivers. Therefore, no improvements to the City's drainage facilities would be needed.</p> <p><u>Groundwater Discharge</u> The project would not use groundwater from the site. However, given the proximity to the Sacramento River and the relatively shallow depth of groundwater (seasonally only 5 feet below ground surface), the excavations will need dewatering. The groundwater beneath the site is known to have been contaminated. It is currently being monitored by the Department of Toxic Substances Control (DTSC). If groundwater needs to be withdrawn during construction during any underground utility construction, the following mitigation measure, Mitigation Measure #7: Groundwater, shall be implemented so that polluted groundwater is not discharged.</p>
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	<p>While small amounts of construction-related dewatering are covered under the General Construction Permit, the RWQCB has also adopted a NPDES Low Threat Discharge and Dewatering Permit. This permit applies to various categories of dewatering activities and would likely apply to aspects of the proposed project if construction requires dewatering in greater quantities than those allowed by the General Construction Permit. The General Dewatering Permit contains waste discharge limitations and prohibitions similar to those in the General Construction Permit. To obtain coverage, the Applicant must submit a notice of intent and a Pollution Prevention and Monitoring Program (PPMP). The PPMP must include a description of the discharge location, discharge characteristics, primary pollutants, the receiving water, treatment systems, spill prevention plans, and other measures necessary to comply with discharge limits. A representative sampling and analysis program must be prepared as part of the PPMP and implemented by the permittee, along with recordkeeping and quarterly reporting requirements during dewatering activities. For dewatering activities that are not covered by the General Dewatering Permit, an individual NPDES permit and waste discharge requirements must be obtained from the RWQCB. The General Dewatering Permit would be applicable to the City contractors where excavation activities may encounter the water table.</p> <p><u>Soil and Groundwater Contamination</u></p> <p>The Powerhouse site has been contaminated with lead from its past activities as either a power plant or a scrap metal recycling yard. Contaminated soil remains in an area to the east of the Powerhouse Building beneath a clay cap that prevents worker exposure to these soils. An Operation and Maintenance agreement and a Deed Restriction cover the area of lead contamination east of the Powerhouse. This states that the Covenantor shall not permit any use or activity at the site which would disturb the integrity of any hazardous waste containment or monitoring system, including but not limited to the cap, without first applying for and receiving a written variance from the DTSC.</p> <p>The site has also been contaminated with petroleum hydrocarbons from two fuel oil tanks that were removed from the eastern side of the Powerhouse Building. Contaminated soil remains inside and outside the south building wall including in the building basement. This soil around the building has been covered with a separate clay cap to protect worker exposure from contaminated soil that is at least 15 feet below the surface, and to direct water away from the area.</p> <p>Groundwater is monitored from wells around both of these contaminated areas. However, the bunker oil is relatively insoluble and tends to remain in the soil and only low concentrations (&lt;10 milligrams per liter or mg/l) have been detected in wells near the south end of the Powerhouse building. Similarly, the lead is relatively insoluble: The most recent groundwater monitoring report from September 2009 found dissolved lead below the detection limit in all samples.</p> <p>The proposed project places parking over most of the area of lead-contaminated soil. This is shown on Figure 3. This would involve only shallow excavation and the clay cap would therefore remain intact. However, there could be some structures associated with the Powerhouse rehabilitation, such as the new Science Center entrance, that would be constructed over the</p>
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	<p>areas of the clay cap. As per the Operation and Maintenance agreement, either the integrity of the clay cap would be maintained by the proposed work, or if it became necessary to remove or modify a portion of it, this work would be agreed by DTSC. A subsequent Operations and Maintenance Agreement has been made between DTSC and the City as required when the City purchased the property. This describes how the remediation system will remain in place until the remediation objectives are achieved, but that monitoring wells may be relocated if a suitable alternative location is provided and written permission is obtained from DTSC.</p> <p>The area of hydrocarbon-contaminated soil would be graded to allow for the installation of the amphitheatre, among other features. The edge of that area also intersects with the proposed plan for the Challenger Center Planetarium. It is expected that some contaminated soil will be removed from the basement level of the Powerhouse. Existing and abandoned foundations could also restrict the area available for the new construction.</p> <p>Soils would be tested during excavation as per standard landfill disposal requirements. Any soil found to be contaminated would be remediated under the oversight of DTSC. Monitoring wells that needed to be relocated would be capped and re-drilled under oversight of DTSC.</p> <p><u>Project Operations Affect on Groundwater Recharge</u> The proposed project includes increasing the amount of impervious surfaces (approximately 64,808 square feet), which could reduce the amount of groundwater recharge in the area. This figure takes into account the current areas of the site that are covered by a clay cap and already impervious.</p> <p><b>Mitigation Required:</b> Mitigation Measure #7: Groundwater All new groundwater discharges to the City of Sacramento's Combined or Separated Sewers must be regulated and monitored by the Department of Utilities (refer City Council Resolution #92-439) Groundwater discharges to the City's sewer system are defined as follows:</p> <ol style="list-style-type: none"> <li>1. Construction dewatering discharges</li> <li>2. Treated or untreated contaminated groundwater cleanup discharges</li> <li>3. Uncontaminated groundwater discharges</li> </ol> <p>The Developer shall contact the City of Sacramento's Water Quality Section of the Department of Utilities (DOU), (916) 808-1400, 1395 35<sup>th</sup> Avenue, Sacramento, CA 95822 prior to any groundwater withdrawal. Procedures as specified by the City of Sacramento, Standard Specifications, Section 16, Water Quality Control shall be implemented.</p> <p><b>Source Documentation:</b> Attachment 30, Blackburn Consulting, 2008, Initial Site Assessment, Richards to Railyards Access Improvement, Sacramento, California, pages 2 to 3.</p> <p>Attachment 31, Blackburn Consulting, 2009, Draft Aerially Deposited Lead/Phase II Assessment, Railyards to Richards Boulevard Access Improvement Project, Sacramento, California, pages 10 and 11.</p>
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		<p>Attachment 49, Email from Jason Silva, Dreyfuss &amp; Blackford Architects, to DC&amp;E, February 17, 2010, Re: construction plans and contamination location.</p> <p>Attachment 50, Letter from Pamela Wee to John Webre, Kleinfelder, Inc. Subject: Preliminary Environmental Evaluation of Jibboom Street Property.</p> <p>Attachment 51, Department of Water Resources, November 7, 1996, Jibboom Street Grading, Clay Caps Plan.</p> <p>Attachment 52, Department of Toxic Substances Control, November 30, 2009, Operations and Maintenance Agreement, Former PG&amp;E Power Plant, 240 Jibboom Street, Sacramento, California.</p>
Surface Water	1	<p><b>Compliance Determination:</b> The project site is immediately adjacent to the Sacramento River. During construction, stormwater runoff would be controlled to prevent sediment or contamination reaching the Sacramento River. During project operation, the site would drain to the north to the Caltrans retention basin adjacent to the southbound I-5 offramp to Jibboom Street. Groundwater may be pumped from the excavation and discharged to the storm sewer where it would be regulated and monitored by the City Department of Utilities. Therefore, the proposed project would not directly affect surface water.</p>
Unique Natural Features and Agricultural Lands	1	<p><b>Compliance Determination:</b> The project site does not contain unique natural features or agricultural lands that would be affected by the proposed project.</p>
Vegetation and Wildlife	4	<p><b>Compliance Determination:</b> The proposed project site contains one cluster of blue elderberry plants on the northeastern portion of the site with documented Valley elderberry longhorn beetle (VELB) exit holes. Project construction would require the removal of these plants. This action will adversely affect the VELB. Any beetle larvae occupying these plants are likely to be killed when the plants are removed. To mitigate this effect, the proposed project would be required to follow the Fish and Wildlife Service's Conservation Guidelines for the Valley Elderberry Longhorn Beetle, listed in Mitigation Measure #4: Valley Elderberry Longhorn Beetle.</p> <p><b>Mitigation Required:</b> Mitigation Measure #4: Valley Elderberry Longhorn Beetle The Applicant shall comply with the requirements of the <i>Conservation Guidelines for the Valley Elderberry Longhorn Beetle</i>. The Applicant would be required to consult with the USFWS through the Section 7 consultation or Section 10(a)(B) permit in developing measures to avoid and minimize adverse effects on the Valley elderberry longhorn beetle. A final mitigation plan shall be developed, and approved by USFWS, prior to removal of the shrubs, and shall include the following:</p> <p><b>Compensatory Mitigation:</b> <b>Transplant Directly Affected Elderberry Shrubs</b></p> <p>a) The shrub that is directly affected by the proposed project will be transplanted to a USFWS-approved conservation area. At the USFWS's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from</p>

		<p>transplantation.</p> <p>b) A qualified biological monitor will be on the site for the duration of the transplanting of elderberry shrubs to ensure that no unauthorized take of VELB occurs. If unauthorized take does occur, the monitor will have the authority to stop work until corrective measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the USFWS.</p> <p>c) Elderberry shrubs will be transplanted when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success. The Applicant will follow the specific transplanting guidance provided in the USFWS VELB Guidelines.</p> <p><b>Compensate for Direct Impacts on Elderberry Shrubs</b> According to the USFWS VELB Guidelines, adversely affected shrubs that are "transplanted or destroyed" should be mitigated for according to the measures outlined in Table 1 of the USFWS VELB Guidelines. The Applicant shall mitigate for impacts on the shrubs by purchasing mitigation credits at a USFWS approved mitigation bank. If mitigation credits are unavailable, additional mitigation including planting of elderberry seedlings and companion plantings may be required.</p> <p><b>Source Documentation:</b> Attachment 53, ICF International, 2009, Biological Assessment, Access Improvements from Railyards to Richards Boulevard and I-5 Project Biological Assessment, pages 4-1 to 4-3.</p>
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**Other Factors**

**Source or Documentation**

Flood Disaster Protection Act [Flood Insurance] [§58.6(a)]	1	<p><b>Compliance Determination:</b> The proposed project area site is not located within a flood hazard zone as delineated by the Federal Emergency Management Agency. Therefore, there is no need for flood insurance.</p> <p><b>Source Documentation:</b> Figure 5, FEMA Issued Flood Map, Community Panel Number 0602660160G, <a href="http://msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay">http://msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay</a>, accessed on January 19, 2010.</p>
Coastal Barrier Resources Act/ Coastal Barrier Improvement Act [§58.6(c)]	1	<p><b>Compliance Determination:</b> The project site is not located in a Coastal Zone.</p> <p><b>Source Documentation:</b> Attachment 5, Map "LCP Status North Central Coast Area, as of July 1, 2009," <a href="http://www.coastal.ca.gov/lcp/lcpstatus-mapncc.pdf">http://www.coastal.ca.gov/lcp/lcpstatus-mapncc.pdf</a>, accessed on September 28, 2009.</p>
Airport Runway Clear Zone or Clear Zone Disclosure [§58.6(d)]	1	<p><b>Compliance Determination:</b> The proposed project is not in an Airport Runway Clear Zone.</p> <p><b>Source Documentation:</b> Attachment 22, Powerhouse Science Center Airport Clear Zones Map.</p>

Other Factors	<p><b>Compliance Determination:</b> In addition to the levees that provide flood protection, dams located upstream of the project area provide a level of flood protection by controlling the release of water from the reservoirs. Dams can fail for a variety of reasons, and the effects are often catastrophic. If Folsom Dam were to fail or be overtopped during a rain event, the project area is within the "dam inundation zone" and would likely experience extensive flooding. However, given the degree and extensive nature of the Sacramento River flood protection system, this is highly unlikely to occur.</p>
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**Summary of Findings and Conclusions**

**ALTERNATIVES TO THE PROPOSED ACTION**

**Alternatives and Project Modifications Considered** [24 CFR 58.40(e), Ref. 40 CFR 1508.9] (Identify other reasonable courses of action that were considered and not selected, such as other sites, design modifications, or other uses of the subject site. Describe the benefits and adverse impacts to the human environment of each alternative and the reasons for rejecting it.)

**1) Powerhouse-Only Alternative**

This alternative would involve only the renovation of the Powerhouse and addition of parking to accommodate the visitors. The new Planetarium and the educational center and restaurant would not be built. There would be no improvements to the Robert T. Matsui Waterfront Park. Infrastructure improvements that are part of the project and would also facilitate the development of the Powerhouse Science Center would still take place.

Discussion of Environmental Effects

Reduced development would minimize some of the environmental effects from exposure of soil, risk of soil erosion and entrainment in storm water, even though these are insubstantial through application of specified construction procedures. No grading or shallow construction would take place in areas of the site that are covered by the clay cap that overlies contaminated soil and this reduces the risk of exposure of contaminated soil, or changes to groundwater flow patterns that could remobilize contamination. There would be no removal of elderberry shrubs that provide habitat for the federally threatened VELB. Reduced construction activity would reduce the short-term noise and air pollution.

If a smaller museum were to occupy the Powerhouse building only, with fewer visitors, there would be less traffic and less congestion; less air pollution and noise; and a lower demand for water, wastewater, fire, police, and other services.

Ability to Meet the Project Objectives

The Powerhouse-Only Alternative would not provide the full museum capacity for the desired 250,000 annual visitors. There would be no space for the Planetarium program and no conference center to act as a gathering place for teachers, scientists and high-tech leaders. The Science Center might not ultimately relocate to the site at all because the location would not meet its capacity requirements. In conclusion, the smaller size of the facility would result in reduced benefits of the project such as the educational value of providing expanded facilities for science education and the employment from increased operations. Similarly, the smaller size of the facility would result in reduced revenues from fewer visitors. If the park were not improved, the project would not achieve the recreational benefits desired by the City such as improved access to the bike trail and the improvements to the outdoor recreation such as provided by the shade structure and other park furniture. Finally, the 2003 Sacramento Riverfront Master Plan identifies the goal – provide pedestrian and bicycle linkages along river and into adjacent areas – which would not be met by this Powerhouse-Only Alternative.

**2) Current Parks Master Plan Alternative**

This alternative includes development of the park, but no improvements to the Powerhouse building, and no new construction of the Planetarium and Educational Center and Restaurant. The Powerhouse would remain in its current condition and would not be occupied by the museum under this alternative. There would be no infrastructure improvements.

Discussion of Environmental Effects

If the new buildings were not built, there would be no deeper excavation necessary for foundations and there would be less exposure of soil, risk of soil erosion and entrainment in stormwater, even though these are insubstantial

through application of specified construction procedures. Reduced construction activity would reduce the short-term noise and air pollution.

There would still be minor grading in areas of the site that are covered by the clay cap that overlies contaminated soil and there would still be a small risk of exposure of contaminated soil, and changes to groundwater flow patterns that could remobilize contamination. There would still be removal of elderberry shrubs that provide habitat for the federally threatened VELB.

If the museum did not move to the Powerhouse site, there would be only a small amount of additional traffic associated with increased numbers of visitors to the park. Compared to the project, there would be much less traffic and congestion; less air pollution and noise; and a lower demand for water, wastewater, fire, police, and other services.

With the park improvements, the project would still achieve some of the recreational benefits desired by the City. However, none of the benefits of the project associated with the expansion of the existing museum and its relocation to the Powerhouse site, such as the educational value and employment, would be achieved. Without renovation of the Powerhouse, it would decay further, its historic value could be compromised, and it could become a danger to park users.

#### Ability to Meet the Project Objectives

The current Parks Master Plan Alternative would not provide the museum capacity for the desired 250,000 annual visitors. It would not provide the additional educational facilities such as the Planetarium and Conference Center, which would prevent visitors from receiving the benefit of expanded science education facilities. There would also not be the economic benefit of new employment or revenues from visits. It would still meet the objective of provision of enhanced recreational facilities. Finally, this alternative would not include the infrastructure improvements, which would mean the existing infrastructure for the area would continue to fail to meet City standards.

#### **No Action Alternative** [24 CFR 58.40(e)]

(Discuss the benefits and adverse impacts to the human environment of not implementing the preferred alternative).

Under the No-Action Alternative the project site would remain as vacant lot.

#### Discussion of Environmental Effects

If the site were to remain in its current condition, the minor environmental effects associated with the project would not occur. There would be no soil erosion from construction, no risk of exposure of contaminated soil or spread of groundwater contamination, and no risk of damage to the levee. There would be no noise or air pollution or traffic congestion associated with the construction or operation of the project. Without the project, there would be no extra demand for services.

None of the beneficial effects of the project such as increased educational value and employment would be achieved. The City would not see any additional recreational amenities. Without renovation of the Powerhouse, it would decay further, causing visual blight; its historic value could be compromised; and it could become a danger to park users.

#### Ability to Meet the Project Objectives

The No-Action Alternative would not provide the museum capacity for the desired 250,000 annual visitors. It would not provide the additional educational facilities such as the Planetarium and Conference Center. In addition, this alternative would not meet the Master Plan objective of providing a large public facility. It would also not meet the objective of providing enhanced recreational facilities. Finally, this alternative would not include the infrastructure improvements, which would mean the existing infrastructure for the area would continue to fail to meet City standards. The 2003 Sacramento Riverfront Master Plan identifies the goal – provide pedestrian and bicycle linkages along river and into adjacent areas – which would not be met by this No Action Alternative.

#### **Mitigation Measures Recommended** [24 CFR 58.40(d), 40 CFR 1508.20]

(Recommend feasible ways in which the proposal or its external factors should be modified in order to minimize adverse environmental impacts and restore or enhance environmental quality.)

#### **Mitigation Measure #1: Cultural Resources**

In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or

mortars are discovered during construction-related earth-moving activities, all work within 50 meters of the resources shall be halted, and the Applicant shall consult with a qualified archeologist to assess the significance of the find. Archeological test excavations shall be conducted by a qualified archeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archeologist, representatives of the Applicant and the qualified archeologist shall coordinate to determine the appropriate course of action. In addition, a report shall be prepared by the qualified archeologist according to current professional standards.

If Native American archeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.

In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.

If a human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. Currently it is presumed that members of the SSR are the Most Likely Descendants; therefore, the SSR shall be contacted in the event that remains are found. The Most Likely Descendant shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.

**Mitigation Measure #2: Cultural Resources**

Prior to the approval of any grading permits or any groundbreaking activity, a Cultural Resources Treatment and Monitoring Agreement (Agreement) shall be prepared in consultation with the Shingle Springs Band of Miwok Indians. This Agreement shall set protocols for procedures to be followed in the event of the discovery of archaeological and human remains during construction. This Agreement shall include a stated policy of avoidance and reburial.

**Mitigation Measure #3: Wetlands**

- a) Prior to any groundbreaking activities on the project site, the project Applicant(s) shall obtain all required permits, including CWA Section 404 permit from the USACE for the placement of fill within waters of the United States and Section 401 certification from the Central Valley Regional Water Quality Control Board (RWQCB), as applicable.
- b) All conditions that are attached to the USACE permit and/or RWQCB certification shall be implemented as part of the proposed project. The conditions shall be clearly identified in construction plans and specifications and monitored during and after construction to ensure compliance.
- c) The Applicant(s) shall compensate for permanent impacts to waters of the United States (including wetlands) and waters of the state to ensure there is no net loss of functions and values. The compensation will be determined as part of State (RWQCB) and federal (USACE) processes and may be a combination of onsite retention of function and value, offsite restoration/creation, and mitigation credits. Compensation ratios will be a minimum of 1:1 (1 acre of mitigation for every 1 acre of impact), as determined by USACE and/or RWQCB. Ratios will be based on site-specific information and determined through coordination with State and federal agencies as part of the permitting process

**Mitigation Measure #4: Valley Elderberry Longhorn Beetle**

The Applicant shall comply with the requirements of the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. The Applicant would be required to consult with the USFWS through the Section 7 consultation or Section 10(a)(B) permit in developing measures to avoid and minimize adverse effects on the Valley elderberry longhorn beetle. A final mitigation plan shall be developed, and approved by USFWS, prior to removal of the shrubs, and shall include the following:

**Compensatory Mitigation:**

**Transplant Directly Affected Elderberry Shrubs**

- a) The shrub that is directly affected by the proposed project will be transplanted to a USFWS-approved conservation area. At the USFWS's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation.
- b) A qualified biological monitor will be on the site for the duration of the transplanting of elderberry shrubs to ensure that no unauthorized take of VELB occurs. If unauthorized take does occur, the monitor will have the authority to stop work until corrective measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the USFWS.
- c) Elderberry shrubs will be transplanted when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success. The Applicant will follow the specific transplanting guidance provided in the USFWS VELB Guidelines.

**Compensate for Direct Impacts on Elderberry Shrubs**

According to the USFWS VELB Guidelines, adversely affected shrubs that are "transplanted or destroyed" should be mitigated for according to the measures outlined in Table 1 of the USFWS VELB Guidelines. The Applicant shall mitigate

for impacts on the shrubs by purchasing mitigation credits at a USFWS approved mitigation bank. If mitigation credits are unavailable, additional mitigation including planting of elderberry seedlings and companion plantings may be required.

**Mitigation Measure #5: Vibration**

Vibratory rollers shall be limited to no closer than 25 feet from the PG&E Power Station building.

**Mitigation Measure #6: Encroachment Permit**

The Applicant shall be required to coordinate with the Central Valley Flood Protection Board (CVFPB). An encroachment permit may be required by the CVFPB. This encroachment permit application process would include consultation with the U.S. Army Corps of Engineers (USACE) to determine if project features or construction would pose any risk to levee integrity, and whether any additional geotechnical reports would be required.

**Mitigation Measure #7: Groundwater**

All new groundwater discharges to the City of Sacramento's Combined or Separated Sewers must be regulated and monitored by the Department of Utilities (refer City Council Resolution #92-439) Groundwater discharges to the City's sewer system are defined as follows:

1. Construction dewatering discharges
2. Treated or untreated contaminated groundwater cleanup discharges
3. Uncontaminated groundwater discharges

The Developer shall contact the City of Sacramento's Water Quality Section of the Department of Utilities (DOU), (916) 808-1400, 1395 35<sup>th</sup> Avenue, Sacramento, CA 95822 prior to any groundwater withdrawal. Procedures as specified by the City of Sacramento, Standard Specifications, Section 16, Water Quality Control shall be implemented.

**Additional Studies Performed**

(Attach studies or summaries)

**List of Sources, Agencies and Persons Consulted** [40 CFR 1508.9(b)]

Aerial Photo View of Richards Boulevard Redevelopment Area.

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Bowes, Stephen. CA Wild and Scenic Rivers Coordinator, National Park Service. Letter to Alejandro A. Huerta, DC&E, March 1, 2010.

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<http://www.cityofsacramento.org/transportation/traffic/list.cfm>, accessed on February 22, 2010.

Covenant to Restrict Use of Property, Environmental Restriction Former PG&E Power Plant Site, Jibboom Street, "Jibboom Building Site," Sacramento, Sacramento County, California, 1998.

Department of Toxic Substances Control EnviroStor Record for Jibboom Building (34490056).

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Department of Water Resources, November 7, 1996, Jibboom Street Grading, Clay Caps Plan.

Department of Water Resources, September 10, 1999, Former PG&E Power Plant Site, Sacramento County, California, Remediation Documentation.

Dreyfuss & Blackford Architects, 2000, Jibboom Street PG&E Power Plant Site Study Final Report.

Exhibit A, Wetlands and Other Waters in the Sacramento Access Improvements from Railyards to Richards Boulevard and I-5 Project Delineation Area.

Facts at a Glance, Sutter Medical Center, Sacramento, <http://www.sutterhealth.org/about/affiliates/hospitals.html>, accessed on February 16, 2010.

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Exhibit B- Cultural Resources Treatment and Monitoring Agreement



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**Cultural Resources Treatment and Monitoring Agreement  
Between the Shingle Springs Band of Miwok Indians  
And the Sacramento Housing and Redevelopment Agency  
And the City of Sacramento  
for the Power House Science Center and Infrastructure Improvement Project  
Protocol for Handling Native American Human Remains and Cultural Items**

The PARTIES to this Agreement are (1) the Shingle Springs Band of Miwok Indians (“Tribe”), a federally recognized Indian tribe and (2) the Sacramento Housing and Redevelopment Agency (“SHRA”) and (3) the City of Sacramento (“City”).

All notices to the PARTIES shall be given at the addresses below:

Tribe

Nicholas Fonseca, Chairperson  
Shingle Springs Band of Miwok Indians  
P.O. Box 1340  
Shingle Springs, CA 95682  
Telephone: (530) 676-8010  
Facsimile: (530) 676-8033

Counsel for the Tribe

AmyAnn Taylor  
Shingle Springs Band of Miwok Indians  
P.O. Box 1340  
Shingle Springs, CA 9582  
Telephone: (530) 683-0123  
Facsimile: (530) 676-8033

Agency

Shelly Amrhein, Environmental Coordinator  
Sacramento Housing and Redevelopment Agency  
801 12<sup>th</sup> Street  
Sacramento, CA 95814-2404  
(916) 440-1312

City

William Crouch, Preservation Director  
City of Sacramento  
Community Development Department  
300 Richards Blvd., 3<sup>rd</sup> Floor  
Sacramento, CA 95811

**I. Subject Matter**

This Agreement concerns the Power House Science Center and Infrastructure Improvement Project (“Project”). The Power House property is owned by the City and the Infrastructure Improvements will be constructed on portions of the property. The design and environmental review of the Project is progressing in conjunction with federal funding for portions of Project-related infrastructure work provided by the Sacramento Housing Redevelopment Agency. The purpose of this Agreement is to formalize procedures for the treatment of Native American human remains, grave goods, ceremonial items, and cultural items, affiliated with the Shingle Springs Band of Miwok Indians, of California that may be found in conjunction with development of the Project, including archaeological studies, excavation, geotechnical investigations, grading, and ground disturbing activity on lands owned by the City, or any other government municipality or entity, which may be affected by the Project. This Agreement also formalizes procedures for Tribal monitoring of the Project during archaeological studies, grading, and ground-disturbing activities that occur in the future.

## **II. Cultural Affiliation**

The Shingle Springs Band of Miwok Indians (“Tribe”) traditionally occupied lands in El Dorado, Placer, and Sacramento Counties. The Tribe has designated its Cultural Resources Department (“Department”) to act on the Tribe’s behalf with respect to the provisions of this Agreement. All Native American human remains and cultural items or artifacts (“cultural resources”) during the Project shall be treated in accordance with Section VIII of this Agreement.

## **III. Inadvertent Discovery of Native American Human Remains**

Whenever Native American human remains are found during the course of the Project, the determination of Most Likely Descendant (“MLD”) under California Public Resources Code Section 5097.98 will be made by the Native American Heritage Commission (“NAHC”) upon notification to the NAHC of the discovery of said remains at the Project site. If the location of the site and the history and prehistory of the area is culturally-affiliated with the Tribe, the NAHC contacts the Tribe, a Tribal member will be designated by the Tribe to consult with the landowner and/or Project proponents.

Should the NAHC determine that a member of an Indian tribe other than the Shingle Springs Band of Miwok Indians is the MLD, the terms of this Protocol relating to the treatment of such Native American human remains shall not be applicable; however, that situation is very unlikely.

## **IV. Coordination with County Medical Examiner’s Office**

State law requires that a project developer shall immediately contact the Medical Examiner and the culturally-affiliated Tribe in the event that any human remains are discovered during the development of a Project. The Medical Examiner shall ensure that notification is provided to the NAHC as required by California Public Resources Code Section 5097.98(a).

## **V. Treatment of Native American Remains**

In the event that Native American human remains are found during development of the Project and the Tribe or a member of the Tribe is determined to be MLD pursuant to Section IV of this Agreement, the following provisions shall apply. The Medical Examiner shall immediately be notified, ground disturbing activities in that location shall cease, and the Tribe shall be allowed, pursuant to California Public Resources Code Section 5097.98(a), to (i) inspect the site of the discovery; and (ii) make determinations as to how the human remains and grave goods should be treated and disposed of with appropriate dignity.

The Tribe shall complete its inspection and make its MLD recommendation within forty-eight (48) hours of getting access to the site. The Tribe shall have the final determination as to the disposition and treatment of human remains and grave goods. Said determination may include avoidance of the human remains, reburial on-site, or reburial on tribal or other lands that will not be disturbed in the future. If the Tribe’s determination would require material alteration of the plans and specifications of the approved Project or necessitate new entitlements, environmental review or permits, the Parties shall work together to achieve a mutually beneficial result. In the

event that the Parties are unable to reach a mutually agreeable resolution, the City and SHRA shall comply with the provisions of Public Resources Code Section 5097.98.

The Tribe may wish to rebury said human remains and grave goods or ceremonial and cultural items on or near the site of their discovery, in an area which will not be subject to future disturbances over a prolonged period of time. Reburial of human remains shall be accomplished in compliance with the California Public Resources Code Sections 5097.98(a) and (b).

The term "human remains" encompasses more than human bones because the Tribe's traditions call for the burial of associated cultural resources with the deceased (funerary objects), and the ceremonial burning of Native American human remains, funerary objects, grave goods, and animals. Ashes and other remnants of these burning ceremonies, as well as funerary objects associated with or buried with the Native American remains are to be treated in the same manner as bones or bone fragments that remain intact.

#### **VI. Non-Disclosure of Location of Reburials**

Unless otherwise required by law, the site of any reburial of Native American human remains shall not be disclosed and will be exempted from public disclosure requirements of the California Public Records Act, Cal. Govt. Code § 6250 *et seq.* The Medical Examiner shall withhold public disclosure of information related to such reburial pursuant to the specific exemption set forth in California Government Code Section 6254(r). The Tribe will require that the location for reburial is recorded with the California Historic Resources Inventory System ("CHRIS") on a form that is acceptable to the CHRIS center. The Tribe may also suggest that the landowner enter into an agreement regarding the confidentiality of site information that will run with title on the property.

#### **VII. Treatment of Cultural Resources**

Treatment of all Native American cultural items, including ceremonial items and archeological items will reflect the religious beliefs, customs, and practices of the Tribe. All Native American cultural items, including ceremonial items and archeological items, which may be found at the Project site should be turned over to the Tribe for appropriate treatment, unless otherwise ordered by a court or agency of competent jurisdiction. The landowner shall waive any and all claims to ownership of Tribal ceremonial and cultural items, including archeological items which may be found on the Project site in favor of the Tribe. If any intermediary, (for example, an archaeologist retained by the Project Proponent) is necessary, said entity or individual shall not possess those items for longer than is reasonably necessary, as determined by the Tribe. The Tribe may require that these items be reburied at an appropriate site location, provided, however, that the Tribe's determination shall not require alteration of the plans and specifications of the approved Project that would necessitate any material changes, new entitlements, environmental review or permits.

#### **VIII. Other Significant Sites Impacted by the Project**

If additional significant Native American human remains and cultural resources sites or sites not identified as significant in the Project environmental review process, but later determined to be significant, are located within the Project impact area, such sites will be subjected to further archeological and cultural significance evaluation by SHRA and/or the City (who may contract

with qualified consultants), and the Tribe to determine if additional mitigation measures are necessary to treat sites in a culturally appropriate manner consistent with CEQA requirements for mitigation of impacts to cultural resources.

**IX. Work Statement for Tribal Monitors**

The description of work for Tribal monitors of the grading and ground disturbing operations at the Project site is attached hereto as Addendum A and incorporated herein by reference.

**X. Authority**

Each Party represents and warrants that (i) it has the legal and valid right to enter into this Agreement; and (ii) the performance by it of its obligations arising hereunder does not and will not violate the terms of any other agreement or understanding to which it is a party.

**SHINGLE SPRINGS BAND OF MIWOK INDIANS**

By:   
Nicholas Fonseca

Date: Chairman

Approved as to Form:

  
General Counsel

**SACRAMENTO HOUSING AND REDEVELOPMENT AGENCY**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Approved as to Form:

\_\_\_\_\_  
Agency Counsel

**THE CITY OF SACRAMENTO**

By: \_\_\_\_\_  
John Dangberg

Title: Assistant City Manager

Date: \_\_\_\_\_

Approved as to Form:

\_\_\_\_\_  
City Attorney

ATTEST:

\_\_\_\_\_  
City Clerk

## ADDENDUM A

### Tribal Monitors

#### Description of Work and Treatment Protocol

##### (I) Preferred Treatment

The preferred protocol upon the discovery of Native American human remains is to secure the area, cover any exposed human remains or other cultural items, and to avoid further disturbance.

##### (II) Excavation Methods

If, after the Shingle Springs Band of Miwok Indian Tribal representative has been granted access to the Project site, Native American human remains have been uncovered, and it is determined by the Parties that avoidance is not feasible, an examination of the human remains will be conducted to confirm they are human and to determine the position, posture, and orientation of the remains. At this point, the following procedures are recommended:

(A) Tools. All excavation in the vicinity of the human remains will be conducted using fine hand tools and fine brushes to sweep loose dirt free from the exposure.

(B) Extent of Exposure. In order to determine the nature and extent of the grave and its contents, controlled excavation should extend to a full buffer zone around the perimeter of the remains.

(C) Perimeter Balk. To initiate the exposure, a perimeter balk (especially, a shallow trench) should be excavated, representing a reasonable buffer a minimum of 10 cm around the maximum extent of the known skeletal remains, with attention to counter-intuitive discoveries or unanticipated finds relating to this or other remains. The dirt from the perimeter balk should be bucketed, distinctly labeled, and screened for cultural materials.

(D) Exposure Methods. Excavation should then proceed inward from the walls of the balk as well as downward from the surface of the exposure. Loose dirt should be scooped out and brushed off into a dustpan or other collective device. Considerable care should be given to ensure that human remains are not further impacted by the process of excavation.

(E) Provenience. Buckets, collection bags, notes, and tags should be fully labeled per provenience, and a distinction should be made between samples collected from: (1) **Perimeter Balk** (described above), (2) **Exposure** (dirt removed in exposing the exterior/burial plan and associations, and (3) **Matrix** (dirt from the interstices between bones or associations). Thus, each burial may have three bags, "Burial 1 Perimeter Balk," "Burial 1 Exposure Balk," "Burial 1 Matrix."

(F) Records. The following records should be compiled in the field: (1) a detailed scale drawing of the burial, including the provenience of and full for all human remains, associated artifacts, and the configuration of all associated phenomena such as burial pits, evidence for preinterment grave pit burning, soil variability, and intrusive disturbance, (2) complete a formal burial record using the consultants proprietary form or other standard form providing information on site #, unit or other proveniences, level depth, depth and location of the burial from a fixed datum, workers, date(s),

artifact list, skeletal inventory, and other pertinent observations, (3) crew chief and worker field notes that may supplement or supercede information contained in the burial recording form, and (4) photographs, including either or standard photography or high-quality (>300 DPI) digital imaging.

Please note the provisions below with respect to handling and conveyance of records and samples.

(G) Association. Association between the remains and other cultural materials should be determined in the field in consultation with a Shingle Springs Band of Miwok Indian Tribal representative, and may be amended per laboratory findings. Records of provenience and sample labels should be adequate to determine association or degree of likelihood of association of human remains and other cultural materials.

(H) Samples. For each burial, all **Perimeter Bulk** soil is to be 1/8"-screened. All **Exposure** soil is to be 1/8"-screened, and a minimum of one 5-gallon bucket of excavated but unscreened Exposure soil is to be collected, placed in a plastic garbage bag in the bucket. All **Matrix** soil is to be carefully excavated, screened as appropriate, and then collected in plastic bags placed in 5-gallon buckets.

(I) Human remains are not to be cleaned in the field.

**(III) Re-internment without Further Disturbance**

No laboratory studies are permitted. The preferred treatment preference for exhumed Native American human remains is reburial in an area not subject to further disturbance.



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## **RESOLUTION NO.**

Adopted by the Sacramento City Council

### **SUPPORTING THE POWERHOUSE SCIENCE CENTER INC.'S SUBMITTAL OF A PROPOSITION 84 NATURE EDUCATION FACILITIES PROGRAM GRANT APPLICATION FOR THE EARTH & SPACE SCIENCES CENTER**

#### **BACKGROUND**

- A. Proposition 84, the Nature Education Facilities Program, will fund projects for development of nature education facilities, buildings, structures and exhibit galleries that present collections to inspire and educate the public and for marine wildlife conservation research equipment and facilities. A total of \$ 93 million statewide has been appropriated for the grant program.
- B. The Powerhouse Science Center will be a premier science and space learning center serving Northern California and provide 21<sup>st</sup>-century experiential education in science, math, technology, engineering, and space.
- C. The planetarium and space center, known as the Earth & Space Sciences Center will be an important component of the Powerhouse Science Center campus and offer specialized education on natural resources in a LEED-certified building.
- D. The Earth & Space Sciences Center is a catalyst project in the redevelopment area of the River District and will assist in its revitalization, as well as bring visitors to the River District.
- E. The Earth & Space Sciences Center will accommodate a significantly increased museum capacity, host four times as many field trips each year, and house the only planetarium in the greater Sacramento region.
- F. The Powerhouse Science Center has submitted an application for the Earth & Space Sciences Center to the Department of Parks & Recreation for their consideration for the Proposition 84 Nature Education Facilities Program.
- G. Funding received by Powerhouse Science Center Inc. from this Proposition 84 grant will benefit the residents of the City of Sacramento and the 11-county greater Sacramento region.

#### **BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES AS FOLLOWS:**

Section 1. The City of Sacramento hereby supports the Proposition 84 Nature

Education Facilities Program grant applications submitted by Powerhouse  
Science Center Inc. for the Earth & Space Sciences Center.