Appendix A

Notice of Preparation and Initial Study

NOTICE OF PREPARATION
of a Draft Environmental Impact Report for the City of Santa Barbara Los Patos Underpass Removal Project

Date: October 8, 2024

To: State Clearinghouse, Responsible Agencies, Trustee Agencies, and Interested Parties

Project Title:

City of Santa Barbara (City) Los Patos Underpass Removal Project, Project No. PLN2019-00591

Project Location:

The Los Patos Underpass Removal Project (proposed Project) site is located along Los Patos Way, directly off the southbound Exit 95 from U.S. Highway101 (U.S. 101). It includes the Union Pacific Railroad (UPRR) Underpass and the UPRR rail line from Los Patos Way to just east of Cabrillo Boulevard. The Project's site consists of the right-of-way owned by Caltrans, the UPRR, and the City (see Figure 1).

Notice Of Preparation Comment Period:

Friday, October 11, 2024, to Monday, November 11, 2024

Scoping Meeting:

On **Thursday, October 24, 2024, from 3:00 p.m. to 6:00 p.m.,** the Scoping Meeting will be held at the Palm Park Beach House, at 236 East Cabrillo Blvd, Santa Barbara, CA 93101

Lead Agency Contact:

City of Santa Barbara, Public Works Department/Engineering Division, Beth Anna Cornett, Senior Planner I, BCornett@SantaBarbaraCA.gov

Introduction:

The City is the Lead Agency under the California Environmental Quality Act (CEQA). After preparing an Initial Study, the City has determined that the Project may have a potential significant effect on Aesthetics, Biological Resources, Cultural, and Tribal Cultural Resources, Hazards and Hazardous Materials, and Land Use and Planning. An Environmental Impact Report (EIR) will be prepared to evaluate these potential effects.

This Notice of Preparation (NOP) from the City informs agencies and interested parties that an EIR will be prepared for the proposed Project. This NOP solicits guidance from regulatory agencies about the scope and content of the environmental information included in the EIR as related to the agencies' statutory responsibilities. The agencies will use the EIR when considering their respective permits or other approvals related to the Project. This NOP allows interested parties to inform the City regarding environmental issues that should be addressed in the EIR.

Project Description:

As part of the Caltrans U.S. 101 HOV and Widening Project's 4E North Segment, the Highway 101 southbound off-ramp at Los Patos Way will permanently close. Once the off-ramp is closed, the Los Patos Underpass Project (Project) will remove the underpass (Bridge No. 51-0235) and fill in the underpass with compacted soil and reinstall the UPRR track on top of the fill. Landscaping will replace the former off-ramp. The terminus of Los Patos Way at the former underpass will be turned into a cul-de-sac. There will be gated access at the end of the cul-de-sac for maintenance access.

There will be a temporary shoofly (rail bypass) constructed between the Project and the Cabrillo and Los Patos Roundabout Project to allow continued train travel during construction of both projects. The shoofly will be created once the retaining walls for the new Cabrillo/Highway 101 interchange are constructed as part of the U.S. 101 HOV and Widening Project's 4E North Segment. Funding is still pending for the Cabrillo/UPRR Bridge Replacement Project and U.S. 101 HOV and Widening Project's 4E North Segment. If state funding is awarded, construction is anticipated to begin in 2025 and be completed in 2028.

The draft of the **CEQA Initial Study** for the Project is available for review on the City's website: SantaBarbaraCA.gov/LosPatosUnderpass.

Probable Environmental Effects and Scope of the EIR:

The Los Patos Way Off-Ramp Underpass (Underpass) was evaluated by Rincon Consultants, Inc. in the Historic Structure/Site Report (HSSR) for the Project in February 2020. The findings indicated the Underpass was eligible for listing in the California Register of Historical Resources (CRHR) and as a City of Santa Barbara Structure of Merit. As a structure eligible for listing in the CRHR and local designation, the Underpass qualifies as a historic resource, as defined in Section 15064.5 of the CEQA Guidelines. In April of 2020, the report findings were presented to the City Historic Landmarks Commission (HLC), and the conclusions were approved.

The Underpass would be demolished as part of the proposed Project. The Underpass is considered a historical resource per the findings in the HSSR and subsequent determination by HLC. Per Section 15064.5 of the CEQA Guidelines, its demolition would have a potentially significant impact. When potentially significant impacts are identified during the CEQA review process, Section 15126.6 of the CEQA Guidelines requires the

Project EIR to explore a range of reasonable alternatives that would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of its significant effects.

The EIR is a project-specific document that will analyze the potentially significant environmental impacts of removing the Underpass and the construction of the shoofly. The EIR will evaluate whether feasible mitigation measures exist that may lessen or avoid identified significant impacts and identify and evaluate feasible alternatives to the proposed Project to avoid or lessen the significant impact. Potential mitigation measures and alternatives are discussed in Attachment A of the **CEQA Initial Study**.

In accordance with State CEQA Guidelines Section 15063(a), the City prepared the **CEQA Initial Study**, which found potentially significant impact(s) in five environmental issue areas. The City advises that an EIR would be necessary to evaluate the potentially significant environmental effects on the following environmental topics outlined in Appendix G of the *State CEQA Guidelines*.

- Aesthetics;
- Biological Resources;
- Cultural and Tribal Cultural Resources (removal of Structure of Merit);
- Hazards and Hazardous Materials; and
- Land Use and Planning (removal of Structure of Merit)

NOP Comment Period:

In accordance with the time limits identified in State law (CEQA Guidelines 15082(b)), please respond to this NOP with your comments on the scope and content of the EIR as soon as possible, but **no later than 5:00 p.m. on Monday, November 11, 2024**. November 11, 2024, is 30 days following the date this NOP was first posted and published. The City requests comments on the efficacy and feasibility of the identified alternatives and mitigation. Please include the name of the contact person for your agency and submit written comments to:

Beth Anna Cornett, Senior Planner I
City of Santa Barbara, Public Works Department, Engineering Division
630 Garden Street, Santa Barbara, CA 93102
Email: BCornett@SantaBarbaraCA.gov

Americans With Disabilities Act:

If you need services or staff assistance to attend or participate in this meeting, contact the City Administrator's Office at (805) 564 5305. If possible, notification at least 48 hours before the meeting will usually enable the City to make reasonable arrangements. Specialized services, such as sign language interpretation or documents in Braille, may require additional lead time to arrange.

Figure 1 – Regional Location

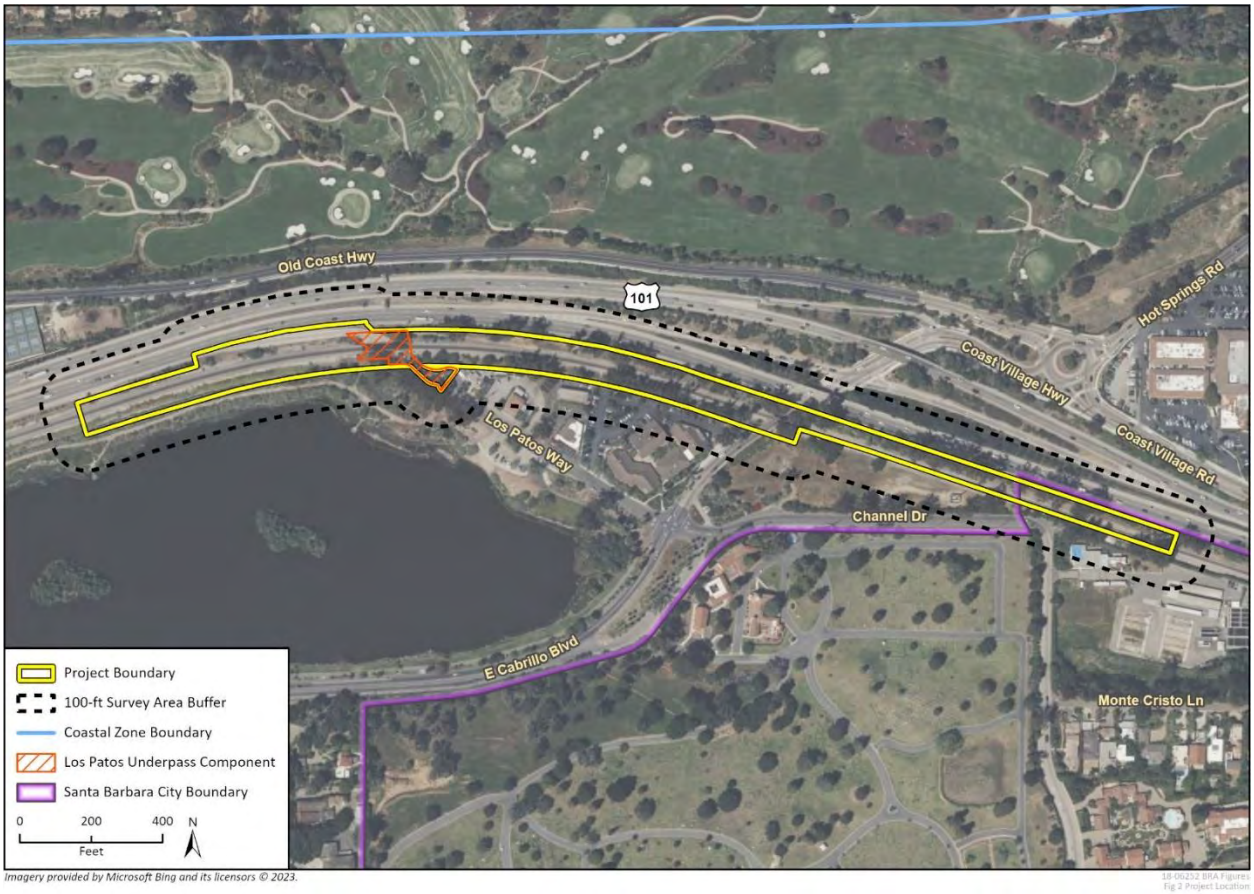
Imagery provided by National Geographic Society, Esri and their licensors © 2023. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

18-06252 ELS
PhFig 1 Vicinity Map

Subject Property

N

Figure 2 – Project Location



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NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

November 1, 2024

Beth Anna Cornett
City of Santa Barbara
P.O. Box 1990
Santa Barbara CA 93102

Re: 2024100348 Los Patos Underpass Removal, Santa Barbara County

Dear Ms. Cornett:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015. If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). Both SB 18 and AB 52 have tribal consultation requirements. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe. (Gov. Code §65352.3 (a)(2)).

2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.

3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).

4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:

- **a.** The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
- **b.** Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (https://ohp.parks.ca.gov/?page_id=30331) for an archaeological records search. The records search will determine:

- **a.** If part or all of the APE has been previously surveyed for cultural resources.
- **b.** If any known cultural resources have already been recorded on or adjacent to the APE.
- **c.** If the probability is low, moderate, or high that cultural resources are located in the APE.
- **d.** If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- **a.** The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
- **b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Mathew.Lin@NAHC.ca.gov.

Sincerely,

Mathew Lin

Mathew Lin
Cultural Resources Analyst

cc: State Clearinghouse

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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

November 6, 2024

Beth Anna Cornett
City of Santa Barbara Public Works Department
630 Garden Street
P.O. Box 19990
Santa Barbara, CA 93102
BCornett@SantaBarbaraCA.gov

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE LOS PATOS UNDERPASS REMOVAL PROJECT, SCH NO. 2024100348, SANTA BARBARA COUNTY, CA

Dear Beth Anna Cornett:

The California Department of Fish and Wildlife (CDFW) reviewed the Initial Study (IS) from City of Santa Barbara Public Works Department (City) for the Los Patos Underpass Removal Project (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines[1].

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, CDFW appreciates the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species (Fish & G. Code, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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CDFW may also act as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381). CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law[2] of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.) or the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

Proponent: City of Santa Barbara Public Works Department

Objective: The objective of the proposed Project is to remove the Los Patos Way offramp underpass. The underpass will permanently close as a result of the Caltrans U.S. 101 High Occupancy Vehicle Lane and Widening Project in the 4E North Segment. The removal is proposed to alleviate required continued maintenance and safety concerns over the existing bridge. After removal, the underpass will be filled with material compatible with the ashlar square-cut sandstone located on either side of the underpass. The Union Pacific Railroad (UPRR), who own and operate the Los Patos Underpass, has determined that structures such as the abutments, center pier, girders, decking, and a small culvert or drainpipe through the fill to convey minor flows are to be removed. Los Patos Way terminus would be reconfigured as a cul-de-sac and the former underpass would be landscaped.

To allow train travel to continue during construction, a temporary rail bypass would be constructed over Cabrillo Boulevard and Los Patos Way. The rail bypass construction will require 8,000 cubic yards of fill, 5,000 cubic yards of roadway excavation, and 72,000 square feet of clearing and grubbing activities. Additionally, a rail bypass bridge will be built to span just the width of existing roadway for the rail bypass track to cross over existing Cabrillo Boulevard. The temporary tracks and associated structures would be removed once the rail operation is back on the main line. Added ballast used for the rail bypass would remain, and grading would occur to reduce any shifting after the track is removed.

Location: The Project is in Santa Barbara County Assessor's parcel number 017-010-079 south of, and adjacent to U.S. Highway 101 (U.S. 101). More specifically, the area is located along Los Patos Way, directly off the southbound exit 95 from U.S. 101 and includes the UPRR Underpass. Southbound of the U.S. 101, the bridge carries railroad

[2] "Take" is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

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track over the Los Patos Underpass. The Project area consists of right-of-way owned by Caltrans, UPRR, and the City.

Biological Setting: The vegetation communities within a 100-foot radius of the Project area are quailbrush scrub, eucalyptus grove, lemonade berry scrub, fountain grass swards, annual grasslands, salt marsh, and bulrush marsh. The eucalyptus groves are of particular interest to CDFW as this habitat type provides suitable overwintering habitat for monarch butterflies. Andree Clark Bird Refuge is located to the southwest of the Project area, consists of coastal salt marsh habitat, and serves as a local wildlife corridor and refugia.

Field reconnaissance surveys were conducted by Rincon Consultants, Inc. in August 2021 and November 2023. Sensitive species that are of potential concern for the Project include southwestern pond turtle (*Actinemys pallisa*; Endangered Species Act (ESA)-proposed threatened; Species of Special Concern (SSC)), California red-legged frog (*Rana draytonii*; ESA-listed threatened; SSC), California legless lizard (*Anniella pulchra;* SSC), coast patch-nosed snake (*Salvadora hexalepis virgultea*; SSC), Crotch's bumble bee (*Bombus crotchii*; (CESA-listed candidate species), monarch – California overwintering population (*Danaus plexippus plexippus*; ESA candidate species), and nesting birds.

Mitigation measures in the IS describe implementation of worker's environmental awareness training (BIO-1), nesting bird surveys (BIO-2), best management practices throughout construction (BIO-3), pre-construction wildlife surveys (BIO-4), and a Tree Protection Plan (BIO-5). As part of the Tree Protection Plan, the Project proposes to replace and plant up to 69 City-protected trees and 13 County-protected trees. No other compensatory mitigation is proposed for the Project.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the City in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

Specific Comments

1) Crotch's Bumble Bee. Crotch's bumble bee is a generalist bee species that can utilize a variety of habitats included in the Project area, such as open grasslands, shrublands, and semi-urban settings for nesting and foraging opportunities. According to the California Natural Diversity Database (CNDDB), Crotch's bumble bee has been observed within one mile of the Project area (CDFW 2024a). Additionally, the Project area falls within the current range for Crotch's bumble bee based on CDFW's Crotch's Bumble Bee Range Dataset (CDFW 2024b). Focused surveys should be conducted to determine Crotch's bumble bee presence/absence within the Project area. Without a focused survey, Project activities could result in

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permanent loss of floral resources and nesting sites, nest abandonment, and/or direct injury or mortality of Crotch's bumble bee.

In preparation of the DEIR, CDFW recommends the County retain a qualified biologist with the appropriate handling permits to conduct focused surveys. Focused surveys should follow CDFW's Survey Considerations for California Endangered Species Act Candidate Bumble Bee Species (CDFW 2023). Focused surveys should also be conducted throughout the entire Project area during the appropriate flying season to ensure no missed detection of Crotch's bumble bee occurs. Findings from the focused survey should be included in the DEIR for complete public disclosure and review.

The DEIR should also provide a discussion of habitat suitability for Crotch's bumble bee. Additionally, the DEIR should provide a discussion of the Project's potential direct and indirect impacts on Crotch's bumble bee. If the Project would impact Crotch's bumble bee, the DEIR should provide measures to minimize, and/or mitigate potential impacts to Crotch's bumble bee as well as habitat supporting the species. Coordination with CDFW is recommended and may include obtaining appropriate take authorization under CESA.

Appropriate authorization from CDFW may include an ITP or a consistency determination in certain circumstances, among other options [Fish & G. Code, §§ 2080.1, 2081, subds. (b) and (c)]. Early consultation is encouraged, as significant modification to a Project and mitigation measures may be required to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that CDFW issue a separate CEQA document for the issuance of an ITP unless the Project CEQA document addresses all Project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements of a CESA ITP.

2) Monarchs. Given the presence of eucalyptus trees on Los Patos Way, tree trimming and vegetation removal of eucalyptus may directly impact monarch butterfly overwintering habitat in the Project area. According to CNDDB, the Project area falls directly within monarch Areas of Conservation Emphasis (ACE), which displays the Project area having potential monarch overwintering habitat (CDFW 2024c). Additionally, noise from construction activities may disturb overwintering roosts. Monarchs are commonly known to utilize eucalyptus trees as overwintering sites such as those found within the Project area. The DEIR should evaluate the Project's potential direct, indirect, and cumulative impacts on monarchs and overwintering habitat during the construction and operational phase of the Project.

CDFW recommends the City retain a qualified biologist to assess the Project area for monarchs and overwintering habitat. The qualified biologist should survey

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eucalyptus and other trees within the Project area that are suitable for overwintering monarchs. The qualified biologist should conduct multiple surveys for overwintering monarchs where potential overwintering habitat has been identified. Monitoring should be done as frequently as possible during the overwintering season (typically September 15 through March 11) to capture changing distributions throughout the season and in response to storm events. Findings should be incorporated in the DEIR for public review.

Given the Project would possibly have impacts to monarchs, the DEIR should include measures to first avoid and minimize impacts on monarchs and overwintering habitat. If the Project would result in loss of overwintering habitat, CDFW recommends the City provide compensatory mitigation so that there is no net loss of overwintering habitat. Mitigation for monarchs should be developed in consultation with U.S. Fish and Wildlife Service (USFWS). CDFW recommends the City also consult the following resources to develop appropriate measures to mitigate the Project's potential impacts on monarchs.

- Western Monarch Butterfly Conservation Plan (WAFWA 2019);
- Overwintering Site Management and Protection (Western Monarch Count 2022);
- Protecting California's Butterfly Groves (Xerces Society 2017);
- Managing Monarch Habitat in the West (Xerces Society 2024a);
- Pollinator-Friendly Native Plant Lists (Xerces Society 2024b); and,
- CDFW's Monarch Butterfly webpage (CDFW 2024d).

Given the candidate listing under the ESA, we also recommend the City scope the impacts to this species and possible mitigation options with the USFWS.

3) SSC Species. A review of CNDDB indicates observations of southwestern pond turtle, California red-legged frog, California legless lizard, coast patch-nosed snake within a mile of the Project area. Project activities may result in death or injury of adults, juveniles, eggs, or hatchlings. Moreover, the Project may eliminate foraging, breeding, or nesting habitat and refugia for these species. In preparation of the DEIR, CDFW recommends that City thoroughly discuss the potential for impacts to these SSC and include mitigation measures that provide compensatory mitigation for Project impacts on SSC.

4) Lake and Streambed Alteration Agreement. Sycamore Creek is located approximately 0.6 miles to the west of the Project area, and heavy rain events can result in minimal run-off running onto Los Patos Way underpass. According to the IS, significant impacts could occur due to Project activities, such as the removal and installation of a small culvert or drainpipe, that would result in changing or altering drainage patterns of Sycamore Creek. The DEIR should discuss any impacts associated with removal and installation of stream features, erosion, impacts to channelized drainages, and alterations to existing drainage patterns. The DEIR

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should also discuss the Project's impact on the streams, including a stream delineation and evaluation of impacts.

CDFW requests the City provide a basis of design report and a hydrological study to ensure that all storm drain lines, culverts, and bridges are appropriately designed. The study should provide information on how water and sediment is conveyed throughout the site for pre-disturbed, current, and proposed conditions. The study should assess 2, 5, 10, 20, 50, and 100-year flood events and the potential for erosion and sedimentation upstream, downstream, and at the Project site for these flood events. The basis of the design report should explain the rationale and criteria for the final design of the permanent structures to be placed in areas subject to the regulatory authority of CDFW. 30 days prior to commencement of Project-related activities, the basis of design report and hydrological study should be submitted to CDFW for review and approval. Work should not commence without CDFW written approval.

CDFW exercises its regulatory authority as provided by Fish and Game Code section 1600 et seq. to conserve fish and wildlife resources which include rivers, streams, or lakes and associated natural communities. As a Responsible Agency under CEQA, CDFW has authority over activities in streams and/or lakes that will divert or obstruct the natural flow, or change the bed, channel, or bank (including vegetation associated with the stream or lake) of a river or stream or use material from a streambed. For any such activities, the Project proponent (or "entity") must notify CDFW. Accordingly, because the Project would impact streams, the DEIR should include measures that require the Project proponent to notify CDFW pursuant to Fish and Game Code section 1602 prior to starting activities. Please visit CDFW's Lake and Streambed Alteration (LSA) Program webpage for more information (CDFW 2024e).

5) Tree Protection Plan. CDFW concurs with mitigation measure BIO-5's requirement for a Tree Protection Plan. We request the opportunity to review and provide feedback on the Tree Protection Plan prior to obtaining a tree permit from the City.

General Comments

1) Disclosure. The DEIR should provide an adequate, complete, and detailed disclosure about the effects which a proposed project is likely to have on the environment (Pub. Resources Code, § 20161; CEQA Guidelines, § 15151). Such disclosure is necessary so CDFW may provide comments on the adequacy of proposed avoidance, minimization, or mitigation measures, as well as assess the significance of the specific impact relative to plant and wildlife species impacted (e.g., current range, distribution, population trends, and connectivity).

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2) Project Description and Alternatives. To enable adequate review and comment on the proposed Project from the standpoint of the protection of fish, wildlife, and plants, CDFW recommends the following information be included in the DEIR.

   a. A complete discussion of the purpose and need for, and description of the proposed Project.

   b. A range of feasible alternatives to the Project location to avoid or otherwise minimize direct and indirect impacts on sensitive biological resources and wildlife movement areas. CDFW recommends the City select Project designs and alternatives that would avoid or otherwise minimize direct and indirect impacts on biological resources. CDFW also recommends the City consider establishing appropriate setbacks from sensitive and special status biological resources. Setbacks should not be impacted by ground disturbance or hydrological changes from any future Project-related construction, activities, maintenance, and development. As a general rule, CDFW recommends reducing or clustering a development footprint to retain unobstructed spaces for vegetation and wildlife and provide connections for wildlife between properties and minimize obstacles to open space.

   c. Project alternatives should be thoroughly evaluated, even if an alternative would impede, to some degree, the attainment of the Project objectives or would be more costly (CEQA Guidelines, § 15126.6). The DEIR shall include sufficient information about each alternative to allow meaningful evaluation, public participation, analysis, and comparison with the proposed Project (CEQA Guidelines, § 15126.6).

   d. Where the Project may impact aquatic and riparian resources, CDFW recommends the City select Project designs and alternatives that would fully avoid impacts to such resources. CDFW also recommends an alternative that would not impede, alter, or otherwise modify existing surface flow, watercourse and meander, and water-dependent ecosystems and natural communities. Project designs should consider elevated crossings to avoid channelizing or narrowing of watercourses. Any modifications to a river, creek, or stream may cause or magnify upstream bank erosion, channel incision, and drop in water level, which may cause the watercourse to alter its course of flow.

3) Biological Baseline Assessment. An adequate biological resources assessment should provide a complete assessment and impact analysis of the flora and fauna within and adjacent to the Project area and where the Project may result in ground disturbance. The assessment and analysis should place emphasis on identifying endangered, threatened, rare, and sensitive species; regionally and locally unique species; and sensitive habitats. An impact analysis will aid in determining the Project's potential direct, indirect, and cumulative biological impacts, as well as specific mitigation or avoidance measures necessary to offset those impacts.

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CDFW also considers impacts to Species of Special Concern (SSC) a significant direct and cumulative adverse effect without implementing appropriate avoidance and/or mitigation measures. The DEIR should include the following information.

a. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines, § 15125(c)). The DEIR should include measures to fully avoid and otherwise protect Sensitive Natural Communities. CDFW considers Sensitive Natural Communities as threatened habitats having both regional and local significance. Natural communities, alliances, and associations with a State-wide rarity ranking of S1, S2, and S3 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by visiting the Vegetation Classification and Mapping Program - Natural Communities webpage[3].

b. A thorough, recent, floristic-based assessment of special status plants and natural communities following CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*[4]. Botanical field surveys should be comprehensive over the entire Project site, including areas that will be directly or indirectly impacted by the Project. Adjoining properties should also be surveyed where direct or indirect Project effects could occur, such as those from fuel modification, herbicide application, invasive species, and altered hydrology. Botanical field surveys should be conducted in the field at the times of year when plants will be both evident and identifiable. Usually, this is during flowering or fruiting. Botanical field survey visits should be spaced throughout the growing season to accurately determine what plants exist in the Project site. This usually involves multiple visits to the Project site (e.g., in early, mid, and late season) to capture the floristic diversity at a level necessary to determine if special status plants are present.

c. Floristic alliance- and/or association-based mapping and vegetation impact assessments conducted in the Project site and within adjacent areas. The Manual of California Vegetation[5], second edition, (Sawyer, Keeler-Wolf, & Evens, 2009) should also be used to inform this mapping and assessment. Adjoining habitat areas should be included in this assessment where the Project's construction and activities could lead to direct or indirect impacts offsite.

d. A complete and recent assessment of the biological resources associated with each habitat type in the Project site and within adjacent areas. A full literature review includes but is not limited to CDFW's California Natural Diversity

[3] https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities
[4] https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline
[5] https://vegetation.cnps.org/

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Database[6] (CNDDB). The CNDDB should be accessed to obtain current information on any previously reported sensitive species and habitat. An assessment should include a minimum nine-quadrangle search of the CNDDB to determine a list of species potentially present in the Project site. A nine-quadrangle search should be provided in the Project's CEQA document for adequate disclosure of the Project's potential impact on biological resources.

e. A complete, recent, assessment of endangered, rare, or threatened species and other sensitive species within the Project site and adjacent areas, including SSC and California Fully Protected Species (Fish & G. Code, §§ 3511, 4700, 5050, and 5515). Species to be addressed should include all those which meet the CEQA definition of endangered, rare, or threatened species (CEQA Guidelines, § 15380). Seasonal variations in use of the Project site should also be addressed such as wintering, roosting, nesting, and foraging habitat. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, may be required if suitable habitat is present. See CDFW's Survey and Monitoring Protocols and Guidelines[7] for established survey protocol. Acceptable species-specific survey procedures may be developed in consultation with CDFW and U.S. Fish and Wildlife Service.

f. A recent wildlife and rare plant survey. A lack of records in the CNDDB does not mean that rare, threatened, or endangered plants and wildlife do not occur. Field verification for the presence or absence of sensitive species is necessary to provide a complete biological assessment for adequate CEQA review (CEQA Guidelines, § 15003(i)). CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of the proposed Project may warrant periodic updated surveys for certain sensitive taxa, particularly if Project implementation build out could occur over a protracted time frame or in phases.

4) Direct and Indirect Impacts on Biological Resources. The DEIR should provide a thorough discussion of direct and indirect impacts expected to affect biological resources with specific measures to offset such impacts. The DEIR should address the following.

a. A discussion of potential impacts from lighting, noise, temporary and permanent human activity, and exotic species, and identification of any mitigation measures. A discussion regarding Project-related indirect impacts on biological resources. These include resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or

[6] https://wildlife.ca.gov/Data/CNDDB
[7] https://wildlife.ca.gov/conservation/survey-protocols

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proposed or existing reserve lands (e.g., preserve lands associated with a Natural Community Conservation Plan (Fish & G. Code, § 2800 et. seq.)).

b. A discussion of both the short-term and long-term effects of the Project on species population distribution and concentration, as well as alterations of the ecosystem supporting those species impacted (CEQA Guidelines, § 15126.2(a)).

c. Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in areas adjacent to the Project, should be fully analyzed and discussed in the DEIR.

d. A discussion of post-Project fate of drainage patterns, surface flows, and soil erosion and/or sedimentation in streams and water bodies. The discussion should also address the potential water extraction activities and the potential resulting impacts on habitat supported by the groundwater. Measures to mitigate such impacts should be included.

e. An analysis of impacts from proposed changes to land use designations and zoning, and existing land use designation and zoning located nearby or adjacent to natural areas that may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the DEIR.

5) Cumulative Impact. Cumulative impacts on biological resources can result from collectively significant projects which are individually insignificant. The Project, when considered collectively with prior, concurrent, and probable future projects, may have a significant cumulative effect on biological resources. The Project may have the potential to substantially reduce the number or restrict the range of endangered, rare, or threatened species. Species that may be impacted by the Project include, but are not limited to, the biological resources described in this letter.

Accordingly, CDFW recommends the DEIR evaluate the Project's potential cumulative impacts on biological resources. The Project may have a "significant effect on the environment" if the possible effects of the Project are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (Pub. Resources Code, § 21083(b)). The City's conclusions regarding the significance of the Project's cumulative impact should be justified and supported by evidence to make those conclusions. Specifically, if the City concludes that the Project would not result in cumulative impacts on biological resources, the City, "shall identify facts and analysis

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supporting the Lead Agency's conclusion that the cumulative impact is less than significant" (CEQA Guidelines section § 15130(a)(2)).

6) Nesting Birds. To avoid impacts to nesting birds, CDFW recommends that clearing of vegetation occur outside of the peak avian breeding season, which general runs from February 1 through September 15 (as early as January 1 for some raptors). If Project construction is necessary during the bird breeding season, a qualified biologist with experience in conducting breeding bird surveys should conduct a nesting bird survey within three days prior to work in the area. If an active nest is identified, a buffer should be established between the construction activities and the nest so that nesting activities are not interrupted. CDFW generally recommends a 100-foot buffer from common avian species, and buffers ranging up to 2 miles for listed or highly sensitive species. The buffer should be delineated by temporary fencing and remain in effect as long as construction is occurring. No Project construction should occur within the fenced nest zone until the young have fledged, are no longer being fed by the parents, have left the nest, and will no longer be impacted by the Project. Reductions or expansions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.

7) Mitigation Measures. Public agencies have a duty under CEQA to prevent significant, avoidable damage to the environment by requiring changes in a project through the use of feasible alternatives or mitigation measures (CEQA Guidelines, §§ 15002(a)(3), 15021). Pursuant to CEQA Guidelines section 15126.4, an environmental document shall describe feasible measures which could mitigate impacts below a significant level under CEQA. Mitigation measures must be feasible, effective, implementable, and fully enforceable/imposed by the lead agency through permit conditions, agreements, or other legally binding instruments (Pub. Resources Code, § 21081.6(b); CEQA Guidelines, § 15126.4).

   a. The DEIR should provide mitigation measures that are specific and detailed (i.e., responsible party, timing, specific actions, location) in order for a mitigation measure to be fully enforceable and implemented successfully via a mitigation monitoring and/or reporting program (Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15097).

   b. If a proposed mitigation measure would cause one or more significant effects, in addition to impacts caused by the proposed Project, the DEIR should include a discussion of the effects of proposed mitigation measures (CEQA Guidelines, § 15126.4(a)(1)). In that regard, the DEIR should provide an adequate, complete, and detailed disclosure about the Project's proposed mitigation measure(s). Adequate disclosure is necessary so CDFW may assess the potential impacts of proposed mitigation measures.

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8) Compensatory Mitigation. The DEIR should include compensatory mitigation measures for the Project's significant impacts (direct and/or through habitat modification) to sensitive and special status plants, animals, and habitats. Mitigation measures should emphasize avoidance and minimization of Project-related impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore inadequate to mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed. Areas proposed as mitigation lands should be protected in perpetuity with a conservation easement and financial assurance and dedicated to a qualified entity for long-term management and monitoring.

9) Long-term Management of Mitigation Lands. For proposed mitigation lands, the DEIR should include measures to protect the targeted habitat values in perpetuity. The mitigation should offset Project-induced qualitative and quantitative losses of biological resources. Issues that should be addressed include (but are not limited to) restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, and increased human intrusion. An appropriate endowment should be set aside to provide for long-term management of mitigation lands.

10) CESA. CDFW considers adverse impacts to a species protected by CESA to be significant. Take of any endangered, threatened, candidate species, or NPPA-listed plant species that results from the Project is prohibited, except as authorized by state law (Fish & G. Code §§ 2080, 2085; Cal. Code Regs., tit. 14, §786.9). Consequently, if the Project or any Project-related activity will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, CDFW recommends that the Project proponent seek appropriate take authorization under CESA prior to implementing the Project. Appropriate authorization from CDFW may include an Incidental Take Permit (ITP) or a consistency determination in certain circumstances, among other options (Fish & G. Code, §§ 2080.1, 2081, subds. (b) and (c)). Early consultation is encouraged, as significant modification to a Project and mitigation measures may be required to obtain a CESA Permit.

    To ensure CDFW will be able to use the City's CEQA document for the issuance of an ITP, the DEIR should address all Project impacts to CESA-listed species and specify a mitigation, monitoring, and reporting program that will meet the requirements of an ITP.

11) Translocation/Salvage of Plants and Animal Species. Translocation and transplantation is the process of removing plants and wildlife from one location and permanently moving it to a new location. CDFW generally does not support the use of translocation or transplantation as the primary mitigation strategy for unavoidable

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impacts to endangered, rare, or threatened plants and animals. These efforts are experimental, and the outcome is unreliable. CDFW has found that permanent preservation and management of habitat capable of supporting these species is often a more effective long-term strategy for conserving plants and animals and their habitats.

12) Scientific Collecting Permit. A Scientific Collecting Permit would be necessary if there is a plan to capture and relocate wildlife. Pursuant to the California Code of Regulations, title 14, section 650, qualified biologist(s) must obtain appropriate handling permits to capture, temporarily possess, and relocated wildlife to avoid harm or mortality in connection with Project-related activities. CDFW has the authority to issue permits for the take or possession of wildlife, including mammals; birds, nests, and eggs; reptiles, amphibians, fish, plants; and invertebrates (Fish & G. Code, §§ 1002, 1002.5, 1003). A Scientific Collecting Permit is required to monitor project impacts on wildlife resources, as required by environmental documents, permits, or other legal authorizations; and, to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with otherwise lawful activities (Cal. Code Regs., tit. 14, § 650). For more information, please see CDFW's Scientific Collecting Permit webpage[8].

13) Wetland Resources. CDFW, as described in Fish and Game Code section 703(a), is guided by the Fish and Game Commission's (Commission) policies[9]. Through its Wetlands Resources policy, the Commission "…seek[s] to provide for the protection, preservation, restoration, enhancement, and expansion of wetland habitat in California" (California Fish and Game Commission, 2005). It is the policy of the Commission to strongly discourage development in or conversion of wetlands. It opposes, consistent with its legal authority, any development or conversion that would result in a reduction of wetland acreage or wetland habitat values. To that end, the Commission opposes wetland development proposals unless, at a minimum, project mitigation assures there will be 'no net loss' of either wetland habitat values or acreage. The Commission strongly prefers mitigation which would achieve expansion of wetland acreage and enhancement of wetland habitat values."

    a. The Wetlands Resources policy provides a framework for maintaining wetland resources and establishes mitigation guidance. CDFW encourages avoidance of wetland resources as a primary mitigation measure and discourages the development or type conversion of wetlands to uplands. CDFW encourages activities that would avoid the reduction of wetland acreage, function, or habitat values. Once avoidance and minimization measures have been exhausted, a project should include mitigation measures to assure a "no net loss" of either wetland habitat values, or acreage, for unavoidable impacts to wetland

[8] https://wildlife.ca.gov/Licensing/Scientific-Collecting
[9] https://fgc.ca.gov/About/Policies/Miscellaneous

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resources. Conversions include, but are not limited to, conversion to subsurface drains, placement of fill or building of structures within the wetland, and channelization or removal of materials from the streambed. All wetlands and watercourses, whether ephemeral, intermittent, or perennial, should be retained and provided with substantial setbacks, which preserve the riparian and aquatic values and functions benefiting local and transient wildlife populations. CDFW recommends mitigation measures to compensate for unavoidable impacts be included in the DEIR and these measures should compensate for the loss of function and value.

b. The Fish and Game Commission's Water policy guides CDFW on the quantity and quality of the waters of this State that should be apportioned and maintained respectively so as to produce and sustain maximum numbers of fish and wildlife; to provide maximum protection and enhancement of fish and wildlife and their habitat; encourage and support programs to maintain or restore a high quality of the waters of this State; prevent the degradation thereof caused by pollution and contamination; and, endeavor to keep as much water as possible open and accessible to the public for the use and enjoyment of fish and wildlife. CDFW recommends avoidance of water practices and structures that use excessive amounts of water, and minimization of impacts that negatively affect water quality, to the extent feasible (Fish & G. Code, § 5650).

14) Use of Native Plants and Trees. CDFW recommends the City require the Project Applicant to provide a native plant palette for the Project. The Project's landscaping plan should be disclosed and evaluated in the DEIR for potential impacts on biological resources such as natural communities adjacent to the Project site (e.g., introducing non-native, invasive species). CDFW supports the use of native plants for the Project especially considering the Project's location adjacent to protected open space and natural areas. CDFW strongly recommends avoiding non-native, invasive species for landscaping and restoration, particularly any species listed as 'Moderate' or 'High' by the California Invasive Plant Council[10] CDFW supports the use of native species found in naturally occurring plant communities within or adjacent to the Project site. In addition, CDFW supports planting species of trees, such as oaks (Quercus genus), and understory vegetation (e.g., ground cover, subshrubs, and shrubs) that create habitat and provide a food source for birds. CDFW recommends retaining any standing, dead, or dying tree (snags) where possible because snags provide perching and nesting habitat for birds and raptors. Finally, CDFW supports planting species of vegetation with high insect and pollinator value.

[10] https://www.cal-ipc.org/plants/inventory/

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ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNDDB website[11] provides direction regarding the types of information that should be reported and allows on-line submittal of field survey forms.

In addition, information on special status native plant populations and sensitive natural communities, should be submitted to CDFW's Vegetation Classification and Mapping Program using the Combined Rapid Assessment and Relevé Form[12].

The City should ensure data collected for the preparation of the DEIR is properly submitted.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP to assist the City in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Joleena De La Fe[13], Environmental Scientist.

Sincerely,

DocuSigned by:
5991E19EF8094C3...
Victoria Tang
Environmental Program Manager
South Coast Region

[11] https://wildlife.ca.gov/Data/CNDDB
[12] https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Submit
[13] Phone: (858) 354-3527; Email: Joleena.delafe@wildlife.ca.gov

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EC: California Department of Fish and Wildlife
Victoria Tang (CDFW EPM)
Jennifer Turner (CEQA Supervisor)
Frederic Rieman (LSA Supervisor)
Joleena De La Fe (CEQA Staff)
Sarah Rains (LSA Staff)

Office of Planning and Research
State.Clearinghouse@opr.ca.gov

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CITY OF SANTA BARBARA

COMMUNITY DEVELOPMENT DEPARTMENT, PLANNING DIVISION

INITIAL STUDY/ ENVIRONMENTAL CHECKLIST

PROJECT TITLE: Los Patos Underpass Removal

APPLICATION NUMBER: PLN2019-00591

DATE: SEPTEMBER 2024

This Initial Study has been prepared in accordance with CEQA (Public Resources Code §21000 et seq.) and the State CEQA Guidelines (Title 14, California Code of Regulations, §15000 et seq.). This Initial Study has been completed for the project described below because the project is subject to review under the California Environmental Quality Act (CEQA) and was determined not to be exempt from the requirement for the preparation of an environmental document. The information, analysis, and conclusions contained in this Initial Study determine whether the project could have significant environmental impacts and if preparation of a Negative Declaration (ND), Mitigated Negative Declaration (MND), or Environmental Impact Report (EIR) is required to further analyze project impacts and significance levels. Additionally, if preparation of an EIR is required, the Initial Study is used to focus the scope of the EIR on the effects determined to be potentially significant.

LEAD AGENCY

Public Works Department, City of Santa Barbara
P.O. Box 1990
Santa Barbara, CA 93102

Contact Person and Phone Number: Beth Anna Cornett, Supervising Planner bcornett@SantaBarbaraCA.gov (805) 564-5537 or Kaitlin Mamulski, Project Planner, kmamulski@SantaBarbaraCA.gov (805) 897-2685

REPORT PREPARER

Eric VonBerg, Supervising Environmental Planner, Rincon Consultants, Inc.

209 East Victoria Street, Santa Barbara, CA 93101

APPLICANT/ PROPERTY OWNER

Applicant: City of Santa Barbara Public Works Department

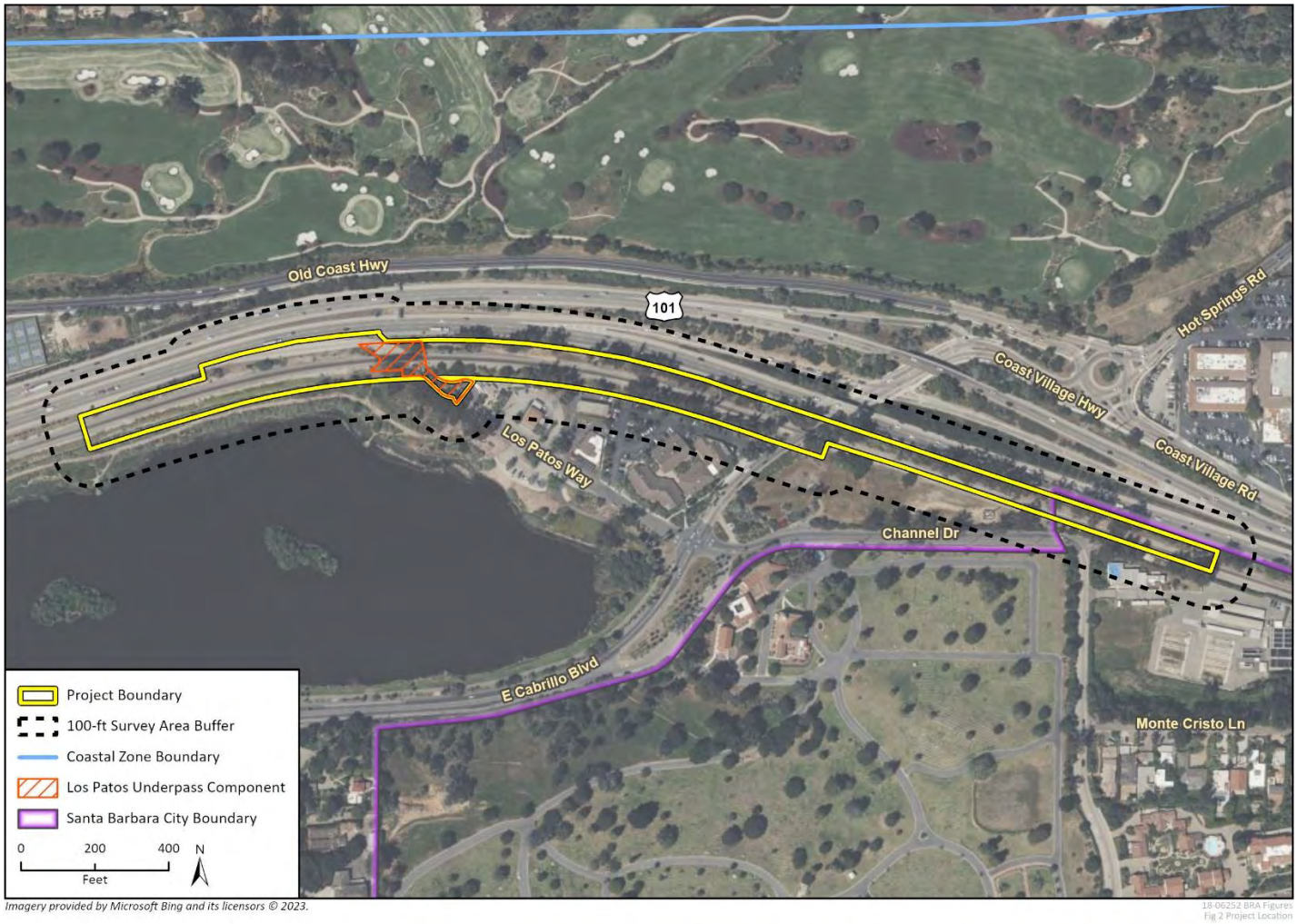
Applicant Representative(s): Eric Goodall, Supervising Engineer, EGoodall@SantaBarbaraCA.gov

Owner(s): Union Pacific Railroad, Caltrans, City of Santa Barbara

PROJECT ADDRESS/LOCATION

The project site is located along Los Patos Way, directly off the southbound exit 95 from U.S. Highway101 (U.S. 101) and includes the Union Pacific Railroad's (UPRR) Underpass. The Los Patos Underpass is located on Santa Barbara County Assessor's parcel number 017-010-079 south of, and adjacent to U.S. 101. Located at UPRR mile-post 372.5 and Caltrans mile-post 11.65, the bridge carries railroad track over the Los Patos Underpass (Exit 95) of southbound U.S. 101. The project site consists of right-of-way owned by Caltrans, UPRR, and the City of Santa Barbara. The vicinity map is shown in Figure 1.

Figure 1 Vicinity Map



PROJECT DESCRIPTION

The proposed project involves the removal of the Los Patos Way Off-Ramp Underpass (Los Patos Underpass), Bridge No. 51-0235 and construction of a shoofly (rail bypass) to allow continued train travel during construction of a new rail bridge over Cabrillo Boulevard. A replacement offramp will be constructed as part of the U.S. 101 HOV project (redesign of the U.S. 101\Cabrillo interchange) and to be in operation prior to closing Los Patos Way as an offramp. The Los Patos Underpass is currently owned and operated by UPRR. UPRR determined that portions of the subject structure will need to be removed, including the abutments, center pier, girders, and decking, and replaced with solid fill, consisting of about 2,750 cubic yards of imported fill at Los Patos, and a small culvert or drainpipe through the fill to convey minor flows. The abutment and center pier will be removed down to a few feet above grade. There will be no ground disturbance in the removal of the structure. The limits of ground disturbance for the Los Patos bridge removal consist of removing the existing paving under the crossing. Approximately 2,750 cubic yards of fill will be placed to support the tracks in place of the existing girders and abutment system. Grading and earthwork for the project is anticipated to last three weeks and the reconstruction of the rail components would be completed in two days (over one weekend). A new maintenance path and driveway will be constructed at the curb line of the cul-de-sac. A rolling maintenance gate and fencing will be installed at the property line of the City parcel containing the Los Patos Way off-ramp. The area adjacent to the maintenance path will be mulched. A number of trees will be planted in the remaining open space to replace up to 69 City-protected trees and 13 County-protected trees (BRA Addendum 2024). The Caltrans 101 HOV project construction impacts the same area where many of these trees are located, so a final count of impacted trees will occur following construction of the 101 HOV project that will occur prior to start of this project. According to UPRR, no landscaping would be allowed on the new fill. The railroad track would remain in the same location and would be placed on the new fill. The Historic Structures Evaluation

(Rincon, 2020) found the Los Patos Underpass to be eligible for listing on the California Register of Historical Resources (CRHR) and for designation as a City Structure of Merit. The character defining features were determined to be the sandstone bridge abutments and center pier, and the riveted steel girders. This listing as a historic resource triggered the preparation of an Environmental Impact Report for this project as the Los Patos Underpass is proposed to be removed and replaced with fill.

The U.S. 101 off-ramp at Los Patos Way will be vacated upon completion of U.S. 101 High Occupancy Vehicle Lane (U.S. 101 HOV) Project. Once completed, the Los Patos off-ramp will be removed by Caltrans up to the UPRR right of way, rendering the underpass unusable. UPRR has indicated the removal of this underpass is necessary to complete the Cabrillo Blvd Pedestrian and Bicycle Improvements, Los Patos/Cabrillo Roundabout and UPRR Bridge Replacement Project (Cabrillo/UPRR Bridge Project). The Cabrillo/UPRR Bridge Project is a mitigation measure for the U.S. 101 HOV Project and must be completed before the U.S. 101 HOV Project can be completed. UPRR indicated the necessity of the removal of the underpass and closing of the Los Patos Way off-ramp as a safety measure. The existing underpass is a low-clearance structure (non-standard vertical clearance) and has caused numerous shutdowns to railroad operations as several trucks have hit the structure. Also, leaving the underpass in place would have created an attractive nuisance, providing an increased security risk for UPRR. **See Attachment A – Conceptual Project Plans**.

The project will include, as stated before, a shoofly track. A shoofly track is a temporary track that will facilitate continued service for the UPRR and passenger commuter trains running on this track during a construction project. This shoofly track will cross over Los Patos Way and Cabrillo Boulevard. It will be constructed on the north side of the existing mainline track and will be built entirely on UPRR right-of-way. The alignment of the shoofly track will be located as close as possible to the Caltrans right-of-way, to the north, without encroaching onto the Caltrans right-of-way.

The shoofly track will be supported by approximately 8,000 cubic yards of fill material not including the fill needed to replace the Los Patos underpass. There will be approximately 5,000 cubic yards of roadway excavation and approximately 72,000 square feet of clearing and grubbing activities. Implementation of the shoofly track will require approximately between 50-100 of the 146 identified trees to be removed (which will not include planting replacement trees as the UPRR will not allow trees to be planted on their right-of-way), approximately 300 track-feet of track removal, approximately 1,200 track-feet of shifted track, approximately 2,000 track-feet of new track on wood ties, approximately 650 cubic yards sub ballast materials, and approximately 2,400 square feet of retaining walls.

Also, in order for the shoofly track to cross over existing Cabrillo Boulevard a shoofly bridge will be built, and will be built to span just the width of existing roadway or as needed to assist with construction of the bridge.

The fill materials will remain in-place after the shoofly is abandoned with only the track materials being removed from the project site.

Project Components

The purpose of the project is to remove from service the Los Patos Underpass and construct a shoofly to allow continued train travel during construction of a new rail bridge over Cabrillo Boulevard. Removal of the Los Patos Underpass would eliminate the currently required continued maintenance and liability associated with potential structure failure, as this bridge is more than 100 years old, and has a non-standard vertical clearance. Once the Underpass is removed, the Project would replace the existing structure with solid fill material that is similar to the materials located on either side of the underpass. The shoofly will allow for continuous use of the UPRR rail line during construction of a new and expanded rail bridge over Cabrillo Boulevard.

Project Operations

The closure of the off-ramp will occur ahead of this Project as part of the U.S. 101 HOV Project; therefore, traffic would no longer exit U.S. 101 at this location. The UPRR will continue to operate as usual. Los Patos Way will terminate at the new cul-de-sac. The UPRR rail line would continue operations using the shoofly until the new Cabrillo rail bridge is completed.

Demolition/Construction

The Project would remove the existing Los Patos Underpass structure located northwest of the intersection at Cabrillo Boulevard and Los Patos Way and replace it with solid fill material that is similar to the materials located on either side of the underpass. Los Patos Way would be reconfigured as a cul-de-sac. The cul-de-sac would be formed by continuing the existing curb line and centerline radius across the existing off-ramp roadway thereby eliminating access to that stretch of roadway. The roadway from the new curb line to the Caltrans right of way beyond the underpass would be removed. A new narrow maintenance access path would be provided from the newly formed cul-de-sac to the south side of the existing underpass. A portion of the new curb in the cul-de-sac would be a rolled curb to accommodate City maintenance vehicles.

The shoofly track will be built utilizing two separate shooflies and four phases. Phase 1A of the first shoofly will be to construct the shoofly bridge and then construct the first shoofly track to the 13 feet clear point from the mainline track. Phase 1B of the first shoofly will consist of shifting the existing track and connecting the mainline to the shoofly track.

Phase 2A of the first shoofly will remove the existing bridge and the existing mainline track. Phase 2B will construct the new bridge over Cabrillo Boulevard and the mainline track across the new bridge. Finally, the mainline track will be shifted to connect the mainline track to the shoofly track, on both sides of the new bridge.

Phase 3A of the second shoofly will be to remove the first shoofly track and widen Cabrillo Boulevard beneath the new bridge. Finally, Phase 3A will construct the second shoofly track to the 13 feet clear point of the existing mainline (after Los Patos Way is closed to traffic).

Phase 3B of the second shoofly will shift the existing track and connecting to the mainline track to the shoofly track.

Phase 3C of the second shoofly track will remove the Los Patos Way Underpass and the existing mainline track across the bridge.

Phase 3D of the second shoofly track will construct the mainline track and then shift track and connect to the mainline track.

Phase 4 (Final) Phase will remove the existing second shoofly track.

Once rail operation moves back to the main line, the shoofly tracks and structures will be removed. The added ballast for the shoofly tracks would remain in place. Some minor grading of the ballast may occur to better blend in the ballast with the main track to reduce any shifting of the ballast after the track is removed.

Required Discretionary Actions

1. A Coastal Development Permit (CDP2020-00025) to allow the proposed development in the Non-appealable Jurisdiction of the City's Coastal Zone (SBMC §28.44.060), and
2. Project Design and Final Approvals by the Historic Landmarks Commission (SBMC Chapter 22.22).

Other Public Agency Approvals Required

Caltrans encroachment permit.

PROPERTY CHARACTERISTICS

Assessor's Parcel Number:	Portion of 017-010-019 (UPRR parcel); City Right of Way; Caltrans Right of Way	**Local Coastal Plan Designation:**	Parks/Open Space
Zoning:	UPPR: P-R/SD-3 (Park and Recreation/ Coastal Overlay) Non-appealable Jurisdiction of Coastal Zone	**Parcel Size:**	Project site is approximately 6.60 acres
Existing Uses:	UPRR ROW and Los Patos Way Off-Ramp Underpass	**Proposed Uses:**	UPRR ROW and public right of way
Slope:	Flat below underpass and within City Right of Way		
Surrounding Zoning:			
North:	N/A, Caltrans Right of Way		
South:	P-R/SD-3 (Park and Recreation/Coastal Overlay)		
East:	HRC-2/SD-3 (Hotel and Related Commerce II/Coastal Overlay)		
West:	P-R/SD-3 (Park and Recreation/Coastal Overlay)		

ENVIRONMENTAL SETTING

Existing Site Characteristics

Topography:

The area is generally flat with a raised berm that is part of the UPRR line.

Seismic/Geologic Conditions:

The City's Master Environmental Assessment indicates that the project site is located in an area of moderate erosion potential; high expansive soils; high liquefaction potential; low landslide potential; and potentially shallow groundwater. The two fault systems closest to the project site are the Mission Ridge Fault approximately 0.3 miles to the north and the San Andreas Fault approximately 40 miles to the northeast.

Flooding/Fire Hazard:

The City's Master Environmental Assessment indicates that the project site is located within the Tsunami Hazard Zone and it is not located in a High Fire Hazard Zone. According to FEMA flood maps, the project site west of Los Patos Way is located in Flood Zone AE (100-year) and 0.2% Annual Chance Flood Hazard zone at Los Patos Way, with the tracks east of the 0.2% zone not in a Special Flood Hazard Area zone (FEMA.gov 2024). However, the Thomas Fire burned areas of Santa Barbara north of the project site in late 2017. This was followed by heavy rains in early 2018 causing flooding and a debris flow in the Montecito area east of the project site, including portions of U.S. 101 adjacent to the project site. The potential for flooding and fire hazard is high based on past events.

Creeks/Drainage:

Sycamore Creek is located approximately 0.6 mile to the west of the project site and in heavy rain events minimal run-off

makes its way onto Los Patos Way Underpass.

Biological Resources:

The project is located adjacent to the Andree Clark Bird Refuge (Refuge). There are 16 trees within the project area including 14 sugar gum eucalyptus (Eucalyptus cladocalyx), one pine tree, (pinus sp.) and one coast live oak (Quercus agrifolia) within the Los Patos bridge and roadway work plus there are between 50-100 of the 146 identified trees within the UPRR right of way that may be removed for construction of the shoofly. The actual trees impacted by the shoofly will be identified when the shoofly design is completed. The tree types within the shoofly area included mostly Blue gum eucalyptus (Eucalyptus globulus) and sugar gum eucalyptus (Eucalyptus cladocalyx) in addition to stone pine (Pinus pinea), coast live oak (Quercus agrifolia), black acacia (Acacia melanoxylon), red willow (Salix laevigata), silver wattle (Acacia dealbata), pittosporum (Pittosporum undulatum), broad-leaved paperbark (Melaleuca quinquenervia), and Crimson bottlebrush (Callistemon citrinus). The study area contains six vegetation communities (quailbush scrub, eucalyptus groves, lemonade berry scrub, fountain grass swards, annual grassland, and salt marsh bulrush marsh) and three land cover types (ornamental landscaping, developed, and unvegetated beach).

Archaeological Resources:

The City's Master Environmental Assessment indicates that the project site is located within the Prehistoric Sensitivity Area as shown on the City's Archaeological Resource Sensitivity Map and is in close proximity to Prehistoric Drainage Courses zone. A Phase 1 Archaeological Resources Report was prepared by Rincon Consultants (Rincon, 2021). No archaeological resources are known to occur on the site.

Hazards and Hazardous Materials

There is the potential for contamination due to the project site's proximity to Highway 101 and the UPRR railroad. Aerially deposited lead is common along the freeway. Additionally, the railroad right-of-way may contain elevated lead from train brake dust, arsenic from weed abatement, and Total Petroleum Hydrocarbon (TPH) and Semi-Volatile Organic Compounds including Polycyclic Aromatic Hydrocarbons (PAHs) from creosote-based wood preservatives used in the railroad ties. Because of the potential for these contaminants at the project site to create a hazard to the public or the environment, this potentially significant impact will be further evaluated in the EIR.

Historic Resources:

The Project-specific Historic Structure/Site Report (Rincon, 2020) indicates that the existing Los Patos Underpass was built in 1901. The Los Patos Underpass has been found eligible for listing in the California Register of Historical Resources and as a City of Santa Barbara Landmark or Structure of Merit (Rincon, 2020). The project area is adjacent to two historic resources located at 40 and 50 Los Patos Way to the east of the underpass. The project area is not within a historic district but is located adjacent to the East Cabrillo Blvd. Parkway Historic District and the El Pueblo Viejo Landmark District.

A Draft Preservation Alternatives and Mitigation Measures Analysis memorandum (see **Attachment C**) completed for the project identified potential draft alternatives to the complete removal of the underpass, and potential draft mitigation measures to mitigate impacts resulting from its removal including reuse of the sandstone on the Cabrillo Railroad Underpass as an architectural feature.

Tribal Cultural Resources

No Native American cultural resources are known to be located in the vicinity of the project site.

Noise:

The City's Master Environmental Assessment indicates that the existing noise level at the site is >70 DBA LDN. Noise is generated from the vehicles traveling on U.S. 101 and existing traffic noise due to the nearby commercial uses. Periodic noise is also generated by the operation of the UPRR. The nearest sensitive receptors are located on Los Patos Way between the Los Patos Underpass and Cabrillo Boulevard.

Visual and Aesthetic Resources

The primary scenic resources surrounding the project site include the Andree Clark Bird Refuge, which is adjacent to the project site to the south, and the Pacific Ocean further to the south. The removal of a large number of trees required by the shoofly may result in a significant visual impact. The potential for this impact will be addressed in the EIR.. The project would result in no impacts to lighting and glare.

Existing Land Use

Existing Facilities and Uses:

The UPRR line is in use as part of their rail system. The underpass allows vehicle access off of southbound U.S. 101 onto Los Patos Way (Exit 95).

Access and Parking:

Regional access is via the U.S. 101 (Exit 95) onto Los Patos Way. Los Patos Way at the undercrossing is one-way traffic exiting U.S. 101 toward Cabrillo Boulevard. There is no parking along the Underpass and on Los Patos Way, although there is a parking lot adjacent to the project site for the Andree Clark Bird Refuge.

Neighboring Land Uses and Characteristics

The US Highway 101 is adjacent to and north of the site, which is off Exit 95 along Los Patos Way. The bridge is part of the UPRR line which continues east-west of the project site. There is undeveloped land with existing vegetation south of the project and a mix of commercial properties to the southeast. The Andree Clark Bird Refuge is located south and adjacent to the project site.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project.

☒ Aesthetics and Visual Resources	☐ Agriculture and Forestry Resources	☐ Air Quality and Greenhouse Gas Emissions
☒ Biological Resources	☒ Cultural and Tribal Cultural Resources	☐ Energy
☐ Geology and Soils	☒ Hazards and Hazardous Materials	☒ Land Use and Planning
☐ Mineral Resources	☐ Noise	☐ Population and Housing
☐ Public Services and Utilities	☐ Recreation	☐ Transportation and Circulation
☐ Water Quality and Hydrology	☐ Wildfire	☒ Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☒ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Prepared by:

_____ 9/11/2024

Signature Date

Approved by:

_____ _____

Signature Date

ENVIRONMENTAL CHECKLIST

The following checklist contains questions concerning potential changes to the environment that may result if this project is implemented. The potential level of significance should be indicated as follows:

Significant: Known substantial environmental impacts. Further review is needed to determine whether there are feasible mitigation measures and/or alternatives to reduce the impact.

Potentially Significant: Unknown, potentially significant impacts that need further review to determine significance level and whether any impacts identified as potentially significant can be mitigated.

Less than Significant with Mitigation: Potentially significant impacts that are avoided or reduced to less than significant levels with identified feasible mitigation measures.

Less than Significant: Impacts that are not substantial or significant.

Beneficial Impact: Impacts would improve environmental conditions.

No Impact: Project would not cause this type of impact.

1. AESTHETICS AND VISUAL RESOURCES Except as provided in Public Resources Code Section 21099* (CEQA provisions for Transit-Oriented In-Fill Projects), would the project:	**Level of Significance**
a) Have a substantial adverse effect on a public scenic vista or a private scenic vista visible to a large portion of the community?	Potentially Significant Impact
b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	Potentially Significant Impact
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Potentially Significant Impact
d) Create a new source of substantial light or glare which would adversely affect surrounding areas or important public day or nighttime views in the area?	No Impact

** CEQA California A Public Resources Code §21099(d)(1): "Aesthetic and parking impacts of a residential, mixed-use, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. (2)(A) This subdivision does not affect, change, or modify the authority of a lead agency to consider aesthetic impacts pursuant to local design review ordinances or other discretionary powers provided by other laws or policies. (B) For the purposes of this subdivision, aesthetic impacts do not include impacts on historical or cultural resources."*

Aesthetics and Visual Resources – Discussion

Issues: Issues associated with visual resources and aesthetics include the potential blockage or substantial alteration of important public scenic views, project on-site aesthetic character and compatibility with the surrounding area, substantial changes in exterior lighting and shade/shadow, and introduction of substantial new sources of glare.

Impact Evaluation Guidelines: Aesthetic quality, whether a project is visually pleasing or unpleasing, may be perceived and valued differently from one person to the next, and depends in part on the context of the environment in which a project is proposed. The significance of visual changes is assessed qualitatively based on consideration of the proposed physical change and project design within the context of the surrounding visual setting. First, the existing visual setting is reviewed to determine whether important existing visual aesthetics are involved, based on consideration of existing public views, existing visual aesthetics on and around the site, and existing lighting conditions. Under CEQA, the evaluation of a project's potential impacts to scenic views is focused on views from public (as opposed to private) viewpoints and larger community wide views (those things visible by a larger community, as opposed to select individuals). The importance of existing public views is assessed qualitatively based on whether important visual resources such as mountains, skyline trees, or the coastline, can be seen, the extent and scenic quality of the views, whether the views are experienced from public viewpoints, and how many people can see the views. The visual changes associated with the project are then assessed qualitatively to determine whether the project would result in substantial effects associated with important public scenic views, on-site visual aesthetics, or lighting.

Significant visual resources impacts may potentially result from:

1. Substantial obstruction of important public or communitywide scenic views. This includes, but is not limited to, the following scenic resources: Pacific Ocean, Stearn's Wharf, the Harbor, Douglas Family

Preserve, Montecito Country Club, Andree Clark Bird Refuge, Bellosguardo, Santa Barbara Zoo, coastal bluffs and shoreline, creeks, estuaries, lagoons, riparian areas, parks and open space, historic structures, sites, and trees important for their visual quality, Channel Islands, Foothills, Riviera, and Santa Ynez Mountains.

2. Substantial damage to scenic resources within a state scenic highway (Highway 154). Impacts to local scenic roads should also be considered. These include Highway 101; Cabrillo Boulevard between U.S Highway 101 and Castillo Street; Sycamore Canyon Road (144)/Stanwood Drive (Highway 192)/Mission Ridge Road (Highway 192)/Mountain Drive to the Old Mission on Los Olivos Street, or Shoreline Drive from Castillo Street to the end of Shoreline Park.
3. Substantial negative aesthetic effect or incompatibility with surrounding land uses or structures due to project size, massing, scale, density, architecture, signage, or other design features.
4. Substantial degradation of important public or communitywide scenic views or the visual quality of the site through extensive grading and changes in topography, removal of substantial amounts of vegetation and trees visible from public areas without adequate landscaping; or substantial loss of important public open space.
5. Substantial light and/or glare that substantially affects offsite properties, safe travel, or sensitive wildlife, or substantially affects important public views.

Aesthetics and Visual Resources – Existing Conditions and Project Impacts

1.a) Scenic Views

The primary scenic resources surrounding the project site include the Andree Clark Bird Refuge, which is adjacent to the project site to the south, and the Pacific Ocean further to the south. Santa Barbara's natural beauty is central to the City's character and is a major part of the City's appeal as an international tourist destination. Public views of Santa Ynez Mountains ridgelines and foothills, the Pacific Ocean and Channel Islands, beaches, the harbor, and natural and landscaped open areas are available throughout the City. Much of the City's architectural design has been oriented around maintaining views of these natural amenities from within the City and from outlying areas. The underpass is mostly hidden from view by large trees and other vegetation if standing in or looking upon the bird refuge and is not part of the refuge. Removal of the underpass would not impact scenic views and would not create a significant impact on scenic views. There is a potential visual impact from removing a large number of trees required by the shoofly. that we will address in the EIR, therefore just the impact from the tree removal on scenic views will be studied further in the EIR.

1.b) Scenic Highways and Scenic View Corridors

The US Highway 101 is located to the north of the project site. It is eligible to be a designated scenic highway by the California Department of Transportation (Caltrans 2020).

The underpass is at the end of the Los Patos Way southbound off-ramp is only visible to southbound drivers. Their line of sight while driving by the underpass is away from it and the site is only momentarily visible going by at highway speeds. The view of the site from the highway is not a contributing factor to the highway's designation as a scenic route. There is only a partial view of the bridge approximately 950 feet from the intersection of Los Patos Way and Cabrillo Boulevard with the bridge blending with the background. The damaged sandstone features of the bridge are not identifiable until standing near the bridge. The closest public viewpoint is at the turnaround for Los Patos Way, more than 150 feet from the bridge. The bridge is mostly hidden from public viewpoints and does not have scenic attributes that would visually connect it to the Andree Clark Bird Refuge.

The Los Patos Way off ramp is identified in the Highway 101 Santa Barbara Coastal Parkway Design Guidelines (Guidelines) (Santa Barbara, April 1996). The purpose of the Guidelines is to preserve the historic nature and visual quality of the portion of U.S. 101 in the coastal zone. The Los Patos Way railroad bridge with its sandstone revetments and support

column is identified as a rare surviving example of stonework common to the City. The Guidelines encourage preservation of existing highway structures but also acknowledges that there are situations where state and federal policies conflict with City design guidelines. The Guidelines encourage coordination between Caltrans, SBCAG, and the City to resolve potential areas of disagreement. In this case, impacts to the railroad bridge will require further analysis in the Environmental Impact Report, as described in the Cultural Resources section.

The removal of the railroad bridge would be a *potentially significant impact* to the scenic highway or scenic view corridor and will be evaluated in the EIR.

1.c) Visual Character and Quality including Changes to Grading and Topography

The project is located adjacent to scenic views of local importance and a highway eligible for state designation as a scenic highway. The project would not change the topography of the area, as it would fill in the currently open area under the existing rail line. The elevation of the rail line would not change. There would be limited grading as the project's topography is generally level.

The existing visual character of the area would change with the removal of the railroad bridge. Therefore, the removal would have a *potentially significant impact* to the visual character and quality in the area. There would be *no impact* on topography. The change in visual character from the removal of the railroad bridge will be further evaluated in the EIR.

1.d) Lighting and Glare

The project would not result in new outdoor lighting or exterior lighting that would be subject to compliance with the requirements of Santa Barbara Municipal Code Chapter 22.75, the City's Outdoor Lighting and Design Ordinance. The project would consist of removing an existing bridge structure. Therefore, there would be *no impacts* related to lighting and glare.

Aesthetics and Visual Resources – Mitigation

The project would result in a *less than significant impact* to scenic views and no impacts to lighting and glare. However, the project's impacts to the scenic highway or scenic view corridor and to the visual character and quality in the area are *potentially significant* and will be evaluated in the EIR.

Aesthetics and Visual Resources – Residual Impacts

The project would result in a *less than significant impact* to scenic views and *no impacts* to lighting and glare. However, the project's impacts to the scenic highway or scenic view corridor and to the visual character and quality in the area are *potentially significant* and will be evaluated in the EIR.

2. AGRICULTURE AND FORESTRY RESOURCES Would the project:	Level of Significance
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest land?	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest land?	No Impact

Agricultural and Forestry Resources – Discussion

Issues: There are no agricultural designated lands or lands under Williamson Act contracts within the City; however, agricultural lands exist adjacent to the City boundary. Agriculture and forestry resource issues include land use compatibility with nearby agricultural operations and forested lands, and potential indirect impacts that could result in a loss of agriculture and forestry resources (for example, annexation of lands with agricultural resources). Increased density and intensity of land uses have the potential affect the productivity of nearby agricultural lands.

Impact Evaluation Guidelines: A significant impact could occur from projects that result in the conversion of lands suitable for agriculture to non-agricultural uses or result in a disruption to surrounding agricultural operations.

Agriculture and Forestry Resources – Existing Conditions and Project Impacts

2.a-e) Agriculture and Forestry Resources

There are no existing agricultural uses or lands zoned for agricultural use within, or in the vicinity of the project site, and the project site is not under a Williamson Act contract. The proposed project would include the demolition and filling in of an underpass and would not involve any conversion of agricultural or forest land to non-agricultural or non-forest land. Additionally, the project site and adjacent land is not currently zoned for agricultural use, nor would the project require rezoning of the project site or its surroundings. As a result, the project would have *no impact* to agricultural or forestry resources.

Agriculture and Forestry Resources – Mitigation

No mitigation is required.

Agriculture and Forestry Resources – Residual Impacts

No impact.

3. AIR QUALITY AND GREENHOUSE GAS EMISSIONS Would the project:	Level of Significance
a) Conflict with or obstruct implementation of the applicable air quality plan?	Less than Significant Impact
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is designated in non-attainment under an applicable federal or state ambient air quality standard?	Less than Significant Impact
c) Expose sensitive receptors to substantial pollutants?	Less than Significant Impact
d) Result in other emissions such as those leading to odors adversely affecting a substantial number of people?	Less than Significant Impact
e) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less than Significant Impact
f) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases?	Less than Significant Impact

Air Quality and Greenhouse Gas Emissions – Discussion

Issues:

Air Quality: Air quality issues involve pollutant emissions from vehicle exhaust, stationary sources (e.g., gas stations, boilers, diesel generators, dry cleaners, oil and gas processing facilities, etc.), and minor stationary sources called "area sources" (e.g., residential heating and cooling, fireplaces, etc.) that contribute to smog, particulates, nuisance dust associated with grading and construction processes, and nuisance odors. Emissions of harmful air pollutants are of particular concern to sensitive receptors. Sensitive receptors are populations who are more susceptible to the effects of air pollution than the population at large and include children, persons over 65 years of age, athletes, and persons with cardiovascular or chronic respiratory diseases. Land uses typically associated with sensitive receptors include residences, schools, parks, playgrounds, recreation facilities, childcare centers, retirement homes, convalescent homes, hospitals, and health care facilities and clinics.

Smog, or ozone, is formed in the atmosphere through a series of photochemical reactions involving interaction of oxides of nitrogen (NO_x) and reactive organic compounds (ROC) (referred to as ozone precursors) with sunlight over a period of several hours. Primary sources of ozone precursors in the South Coast area are vehicle emissions. Sources of particulate matter (PM_{10} and $PM_{2.5}$) include demolition, grading, road dust, agricultural tilling, mineral quarries, and vehicle diesel exhaust.

The City of Santa Barbara is part of the South Coast Air Basin (Santa Barbara County area). The City is subject to the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS). The CAAQS apply to seven pollutants: photochemical ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), course particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead (Pb). There are also established state standards for other criteria pollutants including sulfates, hydrogen sulfide (H_2S), and visibility reducing particulates. The Santa Barbara County Air Pollution Control District (APCD) provides oversight on compliance with air quality standards and preparation of the County Clean Air Plan (2013) and the Ozone Plan (2019).

Santa Barbara County is currently in attainment of most federal and state standards. The County does not presently meet the state PM10 standard. See Table 1 below.

Table 1. County Attainment Status of Federal and State Ambient Air Quality Standards (2023)

Criteria Pollutant	Federal Attainment Status	State Attainment Status
O_3 8-hour	Attainment	Nonattainment-Transitional
O_3 1-hour	No standard	Attainment
PM_{10}	Attainment	Nonattainment
PM_5	Unclassified	Unclassified
CO	Attainment	Attainment
Pb	Attainment	Attainment
SO_2	Unclassified	Attainment
NO_2	Unclassified	Attainment
S_x	No Standard	Attainment
H_2S	No Standard	Attainment
Vinyl Chloride	No Standard	Unclassified
Visibility Reducing Particulates	No Standard	Attainment

The APCD has analysis and permitting requirements regarding toxic air contaminants (TACs) generated from activities such as gasoline dispensing, dry cleaning, freeways, manufacturing, etc., and may require projects with high TAC emissions to mitigate or redesign features of the project to avoid excessive health risks. The APCD requires submittal of an asbestos notification form for each regulated structure that is proposed to be demolished or renovated. CARB and APCD also recommend 500-foot buffers between Highway 101 and new residential developments or other sensitive receptors in order to reduce potential health risks associated with traffic-related air pollutant emissions, particularly diesel particulates. Based on analysis in the certified Final Program EIR for the Plan Santa Barbara General Plan Update (2011; herein referred to as the General Plan EIR), the City established an interim policy (SBMC 22.65) limiting the introduction of new residential sensitive receptor structures or uses within 250 feet of Highway 101 (excluding minor additions or remodels of existing homes or the construction of one new residential unit on vacant property), until CARB implements further statewide phased diesel reduction measures and/or the City otherwise determines that project design measures satisfactorily address highway exhaust effects. Certain projects also have the potential to create objectionable odors that could create a substantial nuisance to neighboring residential areas or sensitive receptors and should be evaluated in CEQA documents.

Greenhouse Gases: Global climate change refers to accelerated changes occurring in average worldwide weather patterns, measurable by factors such as air and ocean temperatures, wind patterns, storms, and precipitation. Climate change is forecasted to result in increasingly serious effects to human health and safety and the natural environment in coming decades, such as more extreme weather, drought, wildfire, sea level rise effects on flooding and coastal erosion, and impacts on air quality, water quality and supply, habitats and wildlife, and agriculture.

Substantial evidence identifies accelerated climate change due to emissions of carbon dioxide and other heat trapping greenhouse gases[1] (GHGs) from human activities. Natural processes emit GHGs to regulate the earth's temperature; however, substantial increases in emissions, particularly from fossil fuel combustion for electricity production and vehicle use, have substantially elevated the concentration of these gases in the atmosphere well beyond naturally occurring concentrations.

[1] GHGs include carbon dioxide, methane, and nitrous oxide, as well as smaller contributions from hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Greenhouse gas emissions are typically measured in metric tons (MT) of carbon dioxide equivalents (CO_2e) based on global warming potential, which allows for totaling the emissions.

Carbon dioxide accounts for 81 percent of greenhouse gas emissions within the United States. California is a substantial contributor of GHGs, with transportation and industrial uses representing the largest sources (41 and 24 percent, respectively). In Santa Barbara, direct sources of GHG emissions are on-road vehicles, natural gas consumption, and off-road vehicles and equipment. Indirect sources (emissions removed in location or time) are electricity consumption (power generation), landfill decomposition (methane releases), and State Water Project transport (electricity use).

California Assembly Bill 32 (2006 Global Warming Solutions Act) sets a target to reduce statewide GHG emissions to 1990 levels by the year 2020. Senate Bill 375 (2008 Sustainable Communities and Climate Protection Act) requires regional coordination of transportation and land use planning throughout the State to reduce vehicle GHG emissions. CARB established targets for Santa Barbara County to not exceed 2005 per capita vehicle emissions in the years 2020 and 2035. State Senate Bill 97 (enacted in 2007 and amended in 2010) requires that project environmental reviews include analysis of GHG impacts and mitigation, and establishes that public agencies may provide for a communitywide GHG emissions mitigation program through an adopted climate action plan.

The City of Santa Barbara Climate Action Plan was first adopted in September 2012 and recently updated in July of 2024 (CAP Update). The CAP Update builds off and incorporates the climate protection programs that the City has in place and will continue to reduce GHG emissions. The CAP Update addresses municipal and communitywide GHG emissions and includes a goal of reducing communitywide GHG emissions output by 378,507 metric tons of carbon dioxide equivalent (MT CO2e) by 2030 (consistent with California Senate Bill 32 target for 2030). Additionally, the City of Santa Barbara has aspirational goals to achieve carbon neutrality by 2035, which is substantially more aggressive than the state's emissions reduction target of 40% below 1990 levels by 2030 (SB 32) and 85% below 1990 levels or net zero by 2045 (AB 1279).

Impact Evaluation Guidelines: A project may create a significant air quality impact associated with criteria air pollutants from the following:

1. Exceeding an APCD pollutant threshold; inconsistency with District regulations; or exceeding population forecasts in the adopted County Clean Air Plan (2013) or Ozone Plan 2019.
2. Exposing sensitive receptors, such as children, persons over 65 years of age, or persons with cardiovascular or respiratory conditions, to substantial pollutant concentrations.
3. Placement of sensitive land uses within 250 feet of Highway 101.
4. Substantial unmitigated nuisance dust during earthwork or construction operations.
5. Creation of nuisance odors inconsistent with APCD regulations.

Long-Term (Operational) Air Quality Impact Guidelines: The City of Santa Barbara uses the APCD thresholds of significance for evaluating air quality impacts. In accordance with the APCD Environmental Review Guidelines (2015), the APCD does not consider a proposed project to a significant air quality impact on the environment if operation of the project would:

1. Emit (from all project sources, both stationary and mobile) less than 240 pounds per day for ROC and NO_x, and 80 pounds per day for PM_{10};
2. Emit less than 25 pounds per day of ROC or NO_x from motor vehicle trips only;
3. Not cause or contribute to a violation of any CAAQS or NAAQS;
4. Not exceed the APCD health risks public notification thresholds adopted by the APCD Board; and
5. Be consistent with the adopted federal and state air quality plans applicable to the Santa Barbara Air Basin.

Substantial long-term project emissions could potentially stem from stationary sources which may require permits from the APCD and from motor vehicles associated with the project and from mobile sources. Examples of stationary emission sources that require permits from APCD include gas stations, automobile repair body shops, diesel generators, boilers and large water heaters, dry cleaners, oil and gas production and processing facilities, and wastewater treatment facilities.

Short-Term (Construction) Impacts Guidelines: Projects involving grading, paving, construction, and landscaping activities may cause localized nuisance dust impacts and increased particulate matter (PM_{10}). Dust-related impacts can be mitigated and less than significant with the application of standard dust control mitigation measures pursuant to APCD rules and regulations (e.g., Rule 345, Control of Fugitive Dust from Construction and Demolition Activities) and City ordinance provisions (SBMC 22.04.020), such as dampening graded areas and soil stockpiles. Exhaust from construction equipment also contributes to air pollution.

Quantitative thresholds of significance are not currently in place for short-term or construction emissions for non-stationary sources because cumulative basin-wide effects are not identified as significant. However, APCD uses a criterion for stationary sources, which is also considered a guideline for evaluating impacts of construction emissions for non-stationary source projects. The criterion states that a project's combined emissions from all construction equipment not exceed 25 tons of any pollutant except carbon monoxide within a 12-month period. Standard equipment exhaust mitigation measures are recommended by APCD to be applied to projects.

Cumulative Impacts and Consistency with Clean Air Plan (2013) and Ozone Plan (2019): Consistency with the Clean Air Plan and Ozone Plan means that emissions associated with the project are accounted for within each Plan's emissions growth assumptions, land use and population projections, and that the project is consistent with policies adopted within each Plan. If the project-specific impact exceeds the ozone precursor significance threshold, it is also considered to have a considerable contribution to cumulative impacts. If a project would exceed the Clean Air Plan growth projections, then the project's impact may also be considered for whether it represents a considerable contribution to cumulative air quality impacts. The Santa Barbara County Association of Governments and CARB on-road emissions forecasts are used as a basis for vehicle emission forecasting. If a project provides for increased population growth beyond that forecasted in the most recently adopted Clean Air Plan and Ozone Plan, or if the project does not incorporate appropriate air quality mitigation and control measures, or is inconsistent with APCD rules and regulations, then the project may be found inconsistent with the Clean Air Plan and may constitute a significant impact on air quality.

Greenhouse Gas Emission Impact Guidelines: In accordance with Appendix G of the CEQA Guidelines, a project may have a significant impact related to GHG emissions if it would generate substantial GHG emissions either directly or indirectly, or would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases. Analysis should include a quantification of GHG emissions from all project sources, including direct and indirect, as applicable. This includes energy usage, water conveyance, waste disposal, and vehicle trips.

Based on the analysis within the City Climate Action Plan Update (2024) and the General Plan Program EIR Addendum (2012), projects within the growth assumptions of the Plan Santa Barbara General Plan (2011) and that meet applicable City regulations for GHG emission reductions:

1. Would be consistent with the City Climate Action Plan and associated policies and regulations for reducing greenhouse gas emissions;
2. Would be within the citywide GHG impact assessment in the Climate Action Plan and associated General Plan Program EIR Addendum (2012), which found that total citywide GHG emissions and per capita vehicle emissions would meet State and City reduction targets and would not constitute a significant environmental impact; and

3. Would be within the City Climate Action Plan adoption finding that less than significant GHG impacts would result from General Plan build out of the City.
4. Would the project emit more than the screening significance level of 10,000 metric tons per year (MT CO_2e).

Air Quality and Greenhouse Gas Emissions – Existing Conditions and Project Impacts

3.a) Clean Air Plan

Direct and indirect emissions associated with the project are accounted for in the 2012 Clean Air Plan and 2019 Ozone emissions growth assumptions for the Air Basin since the project is an existing structure. Appropriate air quality conditions of approval, including construction dust suppression, would be applied to the project, consistent with Clean Air Plan, Ozone Plan, and APCD rules, and City policies and ordinance provisions, and are identified in **Attachment B Standard Conditions of Approval**. The project would be consistent with the 2012 Clean Air Plan and 2019 Ozone Plan as the project would not change land uses accounted for in these plans; therefore, project impacts would be *less than significant*.

3.b) Air Pollutant Emissions and Cumulative Impacts

Short-Term (Construction) Emissions:

Proposed removal of the underpass could result in emissions of pollutants due to grading, fumes, and vehicle exhaust during construction. Sensitive receptors are located at an apartment complex on Los Patos Way, approximately 0.1 mile to the east, and houses located approximately 0.2-mile northwest across U.S. 101. However, due to the barrier of U.S. 101 the receptors across the highway would not be substantially affected by dust and particulates from grading and exhaust emissions during project construction. Grading and earthwork for the project is anticipated to last three weeks and the reconstruction of the rail components would be completed in two days (over one weekend). Diesel and gasoline powered construction equipment also emit particulate matter and ozone precursors NO_X, and ROC. In order for emissions from construction equipment to be considered a potentially significant environmental impact, combined emissions from all construction equipment would need to exceed 25 tons of any pollutant (except carbon monoxide) within a 12-month period. Dust-related impacts would be addressed with the application of standard dust control mitigation measures pursuant to APCD rules and regulations (e.g., Rule 345, Control of Fugitive Dust from Construction and Demolition Activities) and City ordinance provisions (SBMC 22.04.020). Exhaust from construction equipment also contributes to air pollution. Due to the short duration to complete the removal and/or demolition of the underpass and fill in the section (less than one month) and limited size of the project, the project would not exceed any established thresholds for short-term construction emissions. Also, the project would be required to apply the City's standard conditions of approval (AQ-1 Air Quality and Dust Control) to minimize dust during demolition/construction and require all construction equipment to meet California Air Resource Board (CARB) Regulation for In-use Off-road Diesel Vehicles and limiting engine idling time, which would further reduce criteria pollutant emissions during construction. Therefore, short-term construction emissions impacts would be *less than significant*.

Long-Term (Operational) Emissions:

Once the underpass has been removed, Los Patos Way would be converted to a cul-de-sac that would carry substantially fewer vehicle trips as compared to existing conditions since the only vehicular access would be from Cabrillo Blvd onto Los Patos Way. The project would not result in any change to vehicle travel lanes/roads/highways in a manner that would modify traffic patterns or otherwise increase VMT. A replacement offramp will be constructed as part of the U.S. 101 HOV project (redesign of the U.S. 101\Cabrillo interchange) and will be in operation prior to closing Los Patos Way as an offramp. Therefore, long-term operational emissions impacts would be *less than significant*.

3.c) Sensitive Receptors

Sensitive receptors can be found in areas that contain residences, health care facilities, elder-care facilities, rehabilitation centers, schools, daycare centers, and parks. Air emissions, including TACs have adverse implications for public health,

particularly for sensitive receptors. Apartments located within 0.1 mile east of the project site on Los Patos Way are the closest sensitive receptors to the project site. Other nearby sensitive receptors include the Andree Clark Bird Refuge. The short duration of the project and requirements for dust control through the City standard conditional of approval described in AQ-1 that would minimize exposure to the nearby sensitive receptors on Los Patos Way. Therefore, impacts to sensitive receptors would be *less than significant*.

3.d) Odors

The project is limited to its existing use as a UPRR underpass and once removed would not cause or involve any new odors or smoke. The project would not contain features with the potential to emit substantial odors, from sources such as commercial cooking equipment, combustion or evaporation of fuels, sewer systems, or solvents and surface coatings.

Project construction equipment may emit minor short-term odors such as diesel exhaust. Nevertheless, due to the nature of the proposed land use and limited size of the project, project impacts related to odors would be *less than significant*.

3.e-f) Greenhouse Gases

The project would be consistent with applicable plans, policies, and regulations for reducing GHG emissions. There would be negligible project GHG emissions associated with the operation of the project and minor GHG emissions from construction equipment during the short-term and temporary construction period. The project would be consistent with applicable plans, policies, and regulations for reducing GHG emissions. Therefore, greenhouse gas impacts would be *less than significant*.

Air Quality and Greenhouse Gas Emissions – No Mitigation Required

No mitigation is required. Also see AQ-1 (Air Quality and Dust Control) in Attachment B, Standard Conditions of Approval Applicable to Project.

Air Quality and Greenhouse Gas Emissions - Residual Impacts

Less than significant.

4. BIOLOGICAL RESOURCES Would the project:	**Level of Significance**
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S Fish and Wildlife Service?	Less than Significant Impact with Mitigation
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Less than Significant Impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Less than Significant Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less than Significant Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Potentially Significant Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact

Biological Resources – Discussion

Issues: Biological resources issues involve the potential for a project to substantially affect biologically-important natural vegetation and wildlife, particularly species that are protected as rare, threatened, or endangered by federal or state wildlife agencies, and their habitats.

Impact Evaluation Guidelines: Existing native wildlife and vegetation on a project site are assessed to identify whether they constitute important biological resources, based on the types, amounts, and quality of the resources within the context of the larger ecological community. If important or sensitive biological resources exist, project effects on the resources are qualitatively evaluated to determine whether the project would substantially affect these important biological resources. Significant biological resource impacts may potentially result from substantial disturbance to important wildlife and vegetation in the following ways:

1. Elimination, substantial reduction or disruption of important natural vegetative communities, wildlife habitat, migration corridors, or habitats supporting sensitive species such as oak woodland, coastal strand, riparian, and wetlands.
2. Substantial effect on a protected plant or animal species listed or otherwise identified or protected as endangered, threatened, or rare.
3. Substantial loss or damage to biologically important native trees such as oak or sycamore trees (note that, if applicable, historic or landmark trees are discussed in Section 5, Cultural Resources, and other trees are discussed in Section 1, Aesthetics and Visual Resources).

Biological Resources – Existing Conditions and Project Impacts

4.a) Endangered, Threatened, or Rare Species

There are 26 special-status plant species and 33 special-status wildlife species documented by the California Natural Diversity Database (CNDDB) within a five mile and 6-quad search of the project site with only 14 species having a potential to occur on the project site, at least transiently. A Project-specific Biological Resource Assessment (BRA) was conducted in September 2021 and updated in an Addendum in 2024 to assess the shoofly and Los Patos Way improvements (Rincon BRA 2021, BRA Addendum 2024). No federal- or State-listed rare, threatened, or endangered plant species were observed within the project area or a 100-foot buffer (study area) during preparation of the BRA and Addendum.

The shoofly component extends about 900 feet west Los Patos Way to approximately 380 feet southeast of the corner of Channel Drive, totaling approximately 0.60-mile along the UPRR. Vegetation communities and land cover types for the entire project are shown in Figure 2. The Project is located northwest of the southern coastal salt marsh habitat of the Andree Clark Bird Refuge with the improvements within the Los Patos Way right of way. The shoofly components are further from the refuge occurring on the north side of the UPRR tracks. Project activities would not result in direct impacts to the salt marsh, as jurisdictional waters, including wetlands are located outside of the project site, and the Project does not propose any encroachments into, or alterations to, the salt marsh or riparian habitat associated with the salt marsh. No equipment would enter, or be used within, the adjacent salt marsh or its riparian habitat, as the project footprint is a minimum of 70 feet from the marsh in all locations.

The project would not result in significant indirect impacts to the salt marsh, as the project design would be required to incorporate features necessary to meet the City's Tier 3 Storm Water Runoff Requirements and the Post-Construction Storm Water Management Program, including implementing a combination of site design, best management practices, and stormwater runoff best management practices (City 2013). In addition to these design features and best management practices, the project site is subject to the requirements of the City's CLUP (City 2019), the City's Municipal Code, and the Environmental Resources Element of the City's General Plan (City 2011). The CLUP, Municipal Code, and General Plan contain policies identifying the protection, preservation, and enhancement of biological and natural resources, in particular, Environmentally Sensitive Habitat Areas (ESHA) and trees. These specific policies are described in the BRA Addendum prepared for the project (BRA Addendum, 2024) Compliance with these policies could include replacement of trees removed, construction controls during nesting birds breeding season, and implementing a combination of site design, best management practices, and stormwater runoff best management practices to reduce potential runoff impacts to the ESHA. These requirements would reduce indirect impacts to listed species to a less than significant level.

No special status plant species were determined to have a potential to occur within the project site; however, quailbush scrub and lemonade berry scrub habitat located outside of the project site has the potential to support special status plant species. The project is entirely contained within developed land and is separated from natural vegetation communities by the eucalyptus grove; therefore, the project would not directly, or indirectly, impact special status plant species potentially occurring off site.

Figure 2 Vegetation Communities and Land Cover Types

No special-status animal species were detected during the field reconnaissance surveys in August 2021 and November 2023. Nine special status avian species have a low to moderate potential to occur transiently on the project site. The adjacent Andee Clark Bird Refuge (Refuge) supports as many as 192 bird species, including migratory waterfowl and wading birds, and the federally and state endangered California least tern (Sternula antillarum) and bank swallow (Riparia riparia) have been found nearby. Those special-status wildlife species that may occur in the Refuge are generally not anticipated to occur on the project site due to the highly disturbed/developed nature of the site and lack of foraging/nesting habitat. The existing developed areas and associated disturbances to wildlife, such as the active UPRR and U.S. 101, limit the quantity and quality of suitable habitat for these special status wildlife and reduce the ability for self-sustaining wildlife populations to occur within the project area. Due to the Project's proximity to the Refuge and a variety of habitats, including the vegetated lagoon edge (quailbush scrub) and shrubs and large trees of various ornamental and native species, avian species have a potential to forage adjacent to the project site. One special-status species, Cooper's hawk, has a low potential to breed and forage adjacent to the site. Monarch butterflies have a low potential to occur transiently on site in the eucalyptus groves. California legless lizard and coast patch-nosed snake have a low potential to occur transiently on site.

The ornamental shrubs and eucalyptus groves near the project site at Los Patos Way serve as a visual buffer between the project site and the quailbush scrub and the Refuge, however increased noise/dust/lighting from construction has a potential to indirectly impact avian species associated with the Refuge that may forage within the study area. Cooper's hawk has the potential to be directly and indirectly impacted by construction Within the study area, 133 City-protected trees and 13 County-protected trees have the potential to be removed or impacted by the project. These trees have the potential to support nesting bird species (including raptors) protected under the California Fish and Game Code and the migratory Bird Treaty

Act. Protected trees within the City included native and non-native species and were located within Caltrans, UPRR, and City street ROW. Protected trees were defined based on the City's Coastal Land Use Plan (CLUP; City 2019) and Municipal Code Chapters 15.20 (Street Tree Ordinance) and 15.24 (Tree Preservation Ordinance), the County's Article II § 35-140, and the MCP Policy BIO-M-1.15 through BIO-M-1.17. No native trees are proposed to be impacted within ESHA or ESHA buffers. Per Policies 4.1-13 and 4.1-20 of the CLUP (City 2019), mature native trees within ESHAs, wetlands, creeks, and required habitat buffers that are substantially impacted or removed should be replaced. The City's Municipal Code tree ordinances require permits for pruning or removing protected trees. These regulations would reduce impacts to nesting bird species to a less than significant with mitigation.

The project has the potential to directly impact transient reptiles on site during ground disturbance and/or vegetation removal. The project has the potential to indirectly impact special status-avian species foraging or breeding adjacent to the project site and the potential to directly impact other nesting bird species that may forage or breed on site. Construction activity could result in direct mortality if nests were to be destroyed, or individual birds injured or killed through impacts with construction equipment. Construction activity, noise and vibrations could result in nest abandonment, and displaced birds could suffer stress from displacement into adjacent territories belonging to other individuals. Implementation of mitigation measures BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5 would reduce impacts to less than significant. Therefore, the Project would have a *less than significant impact with mitigation* on endangered, threatened, or rare species.

4.b-c) Natural Communities; Wetland and Riparian Habitats

Santa Barbara is largely built out and urban in character; however, the City contains substantial areas of relatively undisturbed native habitats. The Project is located in an urban environment and comprises developed and ornamental land cover and non-native eucalyptus groves. The project site is located approximately 30 feet northeast of a vegetated hillslope associated with the Andree Clark Bird Refuge. The vegetated hillslope comprises quailbush scrub natural vegetation community, which constitutes riparian vegetation and coastal wetlands. In addition, lemonade berry scrub, a CDFW sensitive natural community, is present outside the project site adjacent to the quailbush scrub. The vegetated hillslope at the lagoon edge lacked an ordinary high-water mark (OHWM); as such, no non-wetland waters of the U.S. were present. Although no wetland indicators were observed within the vegetated hillslope and it does not constitute a landform that could support three -parameter wetlands, a wetland determination sample point was evaluated to confirm if USACE wetland waters of the U.S. were present within the study area. Some hydrophytic vegetation was present but the predominant vegetation was non-hydrophytic, the upland landform was not suitable for formation of wetlands, and no hydric soil indicators or wetland hydrology indicators were present. As such, it was determined that USACE wetland waters of the U.S. were not present. The project is also located approximately 150 feet northeast of the salt marsh habitat of the Andree Clark Bird Refuge. The project will not directly impact these areas as they are located outside of the project site. The project will not indirectly impact these areas as the eucalyptus groves provide a natural buffer from the site, and these areas are located on a hillslope slightly elevated from the project site (which aids in preventing runoff from the project site). The project design will incorporate features necessary to meet the City's Tier 3 Storm Water Management Program requirements including installation of a bio retention basin within the project area. The Project would have *less than significant impact with mitigation* to natural communities, or wetland and riparian habitats as wetlands and riparian habitats are not within the project limits and the adherence to City standards, application of City Standard Conditions of Approval, and application of mitigation measures BIO - through BIO-5 would reduce impacts to natural communities to less than significant.

4.d) Wildlife Dispersal and Migration Corridors

The project site is a freeway off-ramp and provides minimal potential to support wildlife movement. Migratory waterfowl and wading birds regularly use the salt marsh and open water habitat of the Andree Clark Bird Refuge as a wildlife corridor. The project site contains habitat that can support nesting birds, including raptors protected under the CFGC and the MBTA. Furthermore, CDFW protects raptor nests regardless of nesting status (active vs. inactive). The project could adversely affect raptors and other nesting birds if construction occurs while they are present on or adjacent to the site, through direct mortality or abandonment of nests. The loss of a nest due to construction activities would be a violation of the MBTA and CFGC 3503 et. seq. Wildlife movement within the Refuge lagoon would not be directly or indirectly affected by construction

activities due to the 150-foot buffer from the site and the eucalyptus grove buffer, and application of mitigation measures BIO 1-4, City standards, and application of City Standard Conditions of Approval to protect nesting birds and implement best management practices to protect and reduce impacts to wildlife. Therefore, the Project would have a *less than significant impact with mitigation* on migration corridors or the dispersal of wildlife.

4.e) Local Ordinances

The project site is subject to the requirements of the City's Coastal Land Use Plan (CLUP). The project is located approximately 30 feet northeast of the quailbush scrub wetland ESHA and the lemonade berry scrub sensitive natural community ESHA. The project would not directly impact ESHA as both ESHA areas are located outside the project site. The project is located within the minimum habitat buffers for the ESHAs (100-feet for estuaries, lagoons, and associated wetlands, and typically 25-feet for sensitive vegetation communities). The project would be exempt from minimum habitat buffer requirements per CLUP Policy 4.1-15 as it involves only improvements to existing roads and road rights-of-way, does not involve an increase in development footprint, and is separated from the ESHA by eucalyptus trees that serve as a visual and noise buffer. In addition, the project design will incorporate runoff management as discussed in 4.a and 4.b-c.

The trees in the project site are afforded certain protections pursuant to the CLUP, City of Santa Barbara Municipal Code, and the Environmental Resources Element of the City of Santa Barbara's General Plan. There are approximately 16 trees within the Los Patos Bridge and roadway project area; 14 sugar gum eucalyptus (Eucalyptus cladocalyx), one pine tree, (pinus sp.), and one coast live oak (Quercus agrifolia) within the Los Patos bridge and roadway work. Up to 69 City-protected trees and 13 County-protected trees (BRA Addendum 2024) may be impacted by the Project. The Caltrans 101 HOV project construction impacts the same area where many of these trees are located, so a final count of impacted trees will occur following construction of the 101 HOV project that will occur prior to start of this project. . The exact number of trees impacted will be determined once the shoofly design is completed. Any pruning of trees would be subject to the requirements of SBMC Chapter 15.20 Tree Planting and Maintenance. These trees would be replaced per City tree policies and ordinances described in 4.a. Suitable locations within City and/or County rights of way or property would need to be identified as UPRR will not allow planting of new trees within their right of way. In addition to the listed mitigation below, the City will impose on the project their standard conditions for nesting birds and tree removal and replacement. These standard conditions are listed below after the required mitigation. Adherence to these requirements and mitigation, the project could have a *less than significant impact* on biological resources protected by local ordinances. Because it is not known at this time the number of trees that will need to be replaced and required replacement ratio and the inability to replace trees within the UP right-of-way, it cannot be determined at this time if adequate replacement locations for tree mitigation can be identified and so is considered a *potentially significant impact*. Therefore, this issue will be further studied in the EIR.

Biological Resources –Mitigation Required.

BIO-1 *Worker's Environmental Awareness Training.* Prior to initiation of construction activities (including staging and mobilization), a qualified biologist will conduct a Worker's Environmental Awareness Program (WEAP) training for all construction personnel. The training will aid workers in recognizing special-status species, native birds, protected trees, ESHA, or other biological resources that may occur in the construction area. The specifics of this program should include identification and habitats of special-status species with potential to occur in the study area, description of the regulatory status and general ecological characteristics of sensitive resources, review of the limits of construction, and an explanation of measures required to protect biological resources. A fact sheet conveying this information shall be prepared for distribution to all contractors, their employers, and other personnel involved with construction. All employees will sign a form provided by the trainer indicating they have attended the WEAP training and understand the information presented to them. The crew foreman will be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to biological resources. If new construction personnel are added to the project, the crew foreman will ensure the new personnel receive the WEAP training before starting work.

BIO-2 **Nesting Bird Surveys.** To avoid disturbance of nesting and special-status birds, including raptor species protected by the MBTA and CFGC, construction activities shall occur outside of the bird breeding season (February 1 through August 30), if feasible. If construction must begin during the breeding season, then a nesting bird survey shall be conducted no more than 14 days prior to initiation of ground disturbance and/or vegetation removal activities. The nesting bird survey shall be conducted on foot inside the project boundary, including a 300-foot buffer (500-foot for raptors), and in inaccessible areas (e.g., private lands) from afar using binoculars to the extent practical. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in southern California coastal communities. If active nests are found, an avoidance buffer (dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site) shall be established by the biologist. If a raptor nest is observed in a tree proposed for removal, the Applicant must consult with CDFW and obtain authorization prior to removal of the nest. The buffer area(s) should be closed to all construction personnel and equipment until a qualified biologist has confirmed that breeding/ nesting is completed and the young have fledged the nest. If the buffer zones are determined to be infeasible, a full-time qualified biological monitor must be on site to monitor construction within the buffer zones to help ensure that active nests and nesting birds are not impacted.

BIO-3 **Best Management Practices.** The following measures shall be adhered to throughout construction.

a. The contractor shall clearly delineate construction limits and prohibit any construction-related traffic outside these boundaries.

b. Projected related vehicles and construction equipment shall restrict off-road travel outside of the designated construction area.

c. All open trenches shall be fenced or sloped to prevent entrapment of wildlife species.

d. No pets or firearms shall be allowed at the project area during construction activities.

e. During project activities, all trash shall be properly contained, and removed from the work/disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

f. Pallets or secondary containment areas for chemicals, drums, or bagged materials shall be provided. If material spills occur, materials and/or contaminants shall be cleaned immediately.

g. All vehicles and equipment shall be properly maintained and free of leaks of oil, fuel, or residues.

h. Construction shall be restricted to daylight hours (7:00 AM to 5:00 PM) to avoid impacts to nocturnal and crepuscular (dawn and dusk activity period) species. If night-time construction is unavoidable, all lighting will be shielded and directed downward to minimize potential for glare or spillover to reduce impacts on wildlife.

BIO-4 **Pre-Construction Wildlife Surveys.** Within one week prior to the initiation of ground disturbance and vegetation removal, a qualified wildlife biologist shall conduct pre-construction surveys in the southern portion of the project site south of Los Patos Way near the quailbush scrub habitat, including a 50-foot buffer around the project site (inaccessible areas will be surveyed with binoculars as practicable). The biologist will document existing conditions and search for special-status species (i.e. coast patch-nosed snake and California legless lizard). If either species is found, individual animals shall be relocated to similar habitat from construction activities, at least 200 feet from any area of project construction.

BIO-5 *Tree Protection Plan*. Prior to the start of construction activities (such as but not limited to pruning, trimming, compaction, or grading) that have the potential to impact protected trees (as determined by a certified arborist) and prior to obtaining a tree permit from the City, a Tree Protection Plan (TPP) shall be prepared by a certified arborist in accordance with the City's Street Tree Ordinance and Tree Preservation Ordinance. The TPP should include data on each protected tree such as, but not limited to: species, diameter at breast height (DBH), height, dripline, and overall health. The TPP shall at a minimum graphically depict the locations of all protected trees with at least a portion of their driplines within the project boundary, project boundary and tree protection zone, and measures to protect trees during construction including but not limited to: protective fencing, monitoring during construction, activities allowed/prohibited within TPZs, proper root and canopy pruning techniques, and replacement standards if impacts exceed 20% of a tree's dripline.

Standard Conditions of Approval Applicable to Project for Biology

1. **Nesting Birds.** Birds and their eggs nesting on or near the project site are protected under the Migratory Bird Treaty Act and pursuing, hunting, taking, capturing, killing, or attempt to do any of the above is a violation of federal and state regulations. No trimming or removing brush or trees shall occur if nesting birds are found in the vegetation. All care should be taken not to disturb the nest(s). Removal or trimming may only occur after the young have fledged from the nets(s).

2. **Tree Removal and Replacement.** All trees removed, except fruit trees and street trees approved for removal without replacement by the Parks Department, shall be replaced on-site on a one-for-one basis with minimum 15 gallon size tree(s) of an appropriate species or like species, in order to maintain the site's visual appearance and reduce impacts resulting from the loss of trees.

3. **Tree Protection Measures.** The landscape plan and grading plan shall include the following tree protection measures:

   a. **Tree Protection.** All trees not indicated for removal on the approved landscape plan shall be preserved, protected, and maintained, in accordance with the Tree Protection Plan, if required, and/or any related Conditions of Approval.

   b. **Landscaping Under Trees.** Landscaping under the tree(s) shall be compatible with the preservation of the tree(s), as determined by the ABR.

   c. **Oak Trees.** The following additional provisions shall apply to existing oak trees on site:

      i. No irrigation system shall be installed within three feet of the dripline of any oak tree.

      ii. Oak trees greater than four inches (4") in diameter at four feet (4') above grade removed as a result of the project shall be replaced at a ten to one (10:1) ratio, at a minimum five (5) gallon size, from South Coastal Santa Barbara County Stock.

      iii. The use of herbicides or fertilizer shall be prohibited within the drip line of any oak tree.

      iv. No storage of heavy equipment or materials, or parking shall take place within five (5) feet of the dripline of any oak tree.

      d. During Construction.

      i. All trees within 25 feet of proposed construction activity shall be fenced three feet outside the dripline for protection.

      ii. A qualified Arborist shall be present during any excavation beneath the dripline(s) of the tree(s) which are required to be protected. All excavation within the dripline(s) of the tree(s) shall be minimized and shall be done with hand tools.

      iii. Any roots encountered shall be cleanly cut and sealed with a tree-seal compound.

      iv. Any root pruning and trimming shall be done under the direction of a qualified Arborist.

      v. No heavy equipment, storage of materials or parking shall take place under the dripline of any tree(s), or within five (5) feet of the dripline of any oak tree.

      vi. Oak seedlings and saplings less than four inches (4") at four feet (4') above the ground that are removed during construction shall be transplanted where feasible. If transplantation is not feasible, replacement trees shall be planted at a minimum one to one (1:1) ratio. Replacement trees shall be a minimum of one (1) gallon size derived from South Coastal Santa Barbara County stock.

Biological Resources – Residual Impacts.

Less than Significant.

5. CULTURAL AND TRIBAL CULTURAL RESOURCES Would the project:	**Level of Significance**
a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA §15064.5?	Significant Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA §15064.5?	Less than Significant Impact
c) Disturb any human remains, including those interred outside of formal cemeteries?	Less than Significant Impact
d) Cause a substantial effect on an important tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with important cultural value to a California Native American tribe, and that is: i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code §5020.1.1(k), or ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence and within consideration of the views of California Native American tribes, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code §5024.1?	Less than Significant Impact

Cultural and Tribal Cultural Resources – Discussion

Issues:

Archaeological Resources are subsurface deposits dating from prehistoric or historical time periods. Native American culture appeared along the channel coast over 10,000 years ago, and numerous villages of the Barbareno Chumash flourished in coastal plains now encompassed by the City. Spanish exploration and eventual settlements in Santa Barbara occurred in the 1500's through 1700's. In the mid-1800's, the City began its transition from Mexican village to American city, and in the late 1800's through early 1900's experienced intensive urbanization.

Historic Resources are above-ground structures and sites from historical time periods with historic, architectural, or other cultural importance. The City's built environment has a rich cultural heritage with a variety of architectural styles, including the Spanish Colonial Revival style emphasized in the rebuilding of Santa Barbara's downtown following a destructive 1925 earthquake.

Tribal Cultural Resources are defined in Public Resources Code (PRC) Section 21074.1 as sites, features, places, cultural landscapes, sacred places, and objects that have cultural value to Native American tribes. A tribal cultural resource can be included on or eligible for a national, state, or local register of historical resources. In addition, the City can determine that a tribal cultural resource is significant even if it has not been evaluated as eligible for a national, state, or local register.

Impact Evaluation Guidelines: Archaeological, historical, and tribal cultural impacts are evaluated based on review of available cultural resource documentation, data gathered from records searches, and consultation with tribal representatives. Existing conditions on a site are assessed to identify whether important or unique resources exist, based on criteria specified in the State CEQA Guidelines §15064.5 and City Master Environmental Assessment Guidelines for Archaeological Resources and Historical Structures and Sites, summarized as follows:

1. Contains information needed to answer important scientific research questions and there exists a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with an important prehistoric or historic event or person.
4. Is depicted on the City's Archeological Resources Reports Location Map.
5. Is designated, or meets criteria for inclusion on a national, state, or local landmark or historic resource register. This includes, but is not limited to, the National Register of Historic Places, National Historic Landmarks, California Register of Historical Resources, California Registered Historical Landmarks, City of Santa Barbara Landmarks, and City of Santa Barbara Structures of Merit.
6. Is associated with a traditional way of life important to an ethnic, national, racial, or social group, or to the community at large; or illustrates the broad patterns of cultural, social, political, economic, or industrial history.
7. Is determined by the City to be significant, based on substantial evidence.
8. Constitutes a tribal cultural resource based on statutory criteria and/or consultation with Native American tribal representatives.

If important resources exist on the site, project changes are evaluated to determine whether they would substantially affect important resources. A project could have a significant impact if it may cause a substantial adverse change in the characteristics of a resource that convey its significance or justify its eligibility for inclusion in a national, state, or local register. Impacts may include physically damaging, destroying, or altering all or part of a resource, altering the characteristics of the surrounding environment that contribute to the resource's significance, neglecting the resource to the extent that it deteriorates or is destroyed, or the incidental discovery of a resource without proper notification and protocols.

Cultural and Tribal Cultural Resources – Existing Conditions and Project Impacts

5.a) Historical Resources

Santa Barbara's diverse cultural heritage is reflected in the broad range of heritage resources within the City. Heritage resources include archaeological sites, and historical buildings, structures, sites, objects, and districts. Individual historical resources include structures used for habitation, work, recreation, education, and religious worship. The City Municipal Code (Chapter 30.57) also defines an historic district as a delineated geographic area of the City (or a noncontiguous grouping of real properties within the City) where most of the properties within the district are thematically architecturally related and possess historical significance, special character, or aesthetic value, including, but not limited to, a distinct section of the City possessing a significant concentration of cultural resources which are united historically or aesthetically either by plan or by physical development.

The existing underpass is not located within a designated or potential historic district nor is it listed on the City's list of Designated Landmarks, Designated Structures of Merit, or Potential Historic Resources (Santa Barbara 2019, 2020a, 2020b and 2020c).

On December 11, 2019, a Phase 1 Historic Structures/Sites Report (Rincon Consultants, November 2019) was reviewed by

the Historic Landmarks Commission (HLC). The report concluded that the Los Patos Way Off-Ramp Underpass is eligible for listing in the California Register of Historical Resources and as a City of Santa Barbara Landmark or Structure of Merit as an example of a structure that was constructed out of local sandstone. The structure therefore meets the definition of a historical resource under California Environmental Quality Act and the City Master Environmental Assessment Guidelines. HLC accepted the report as submitted and directed staff to prepare a Resolution of Intention to consider the structure for Structure of Merit status and the comment to adjust Criterion 3.I to represent a familiar feature of the neighborhood as a contributing element.

On April 15, 2020, a Revised Phase 1 Historic Structures/Sites Report (Rincon Consultants, February 2020) was reviewed by the HLC. Consistent with the findings of the original 2019 Phase 1 Historic Structures/Sites Report, the Revised Phase 1 Historic Structures/Sites Report concluded that the Los Patos Way Off-Ramp Underpass is eligible for listing in the California Register of Historic Resources and as a City of Santa Barbara Landmark or Structure of Merit. The structure's significance stems from it being an example of local sandstone construction; thus, its character defining features are its sandstone pier and abutments. Non-character-defining features which are utilitarian and ubiquitous include the wooden ties, rails, ballast, girders, wooden posts and cable railing. The sandstone pier and abutments meets the definition of a historical resource under CEQA and the City MEA Guidelines. The revised report concluded that only the sandstone abutments were historically significant. HLC did not accept the report because a majority of the Commission found the steel girders to contribute to the significance of the structure.

Therefore, because the bridge has been determined to be eligible for listing as a locally historic resource, the demolition would be considered a *potentially significant impact* on a historic resource and will require further analysis in the EIR.

A Draft Preservation Alternatives and Mitigation Measures Analysis memorandum was prepared to identify potential alternatives to the complete removal of the underpass, and potential mitigation measures to mitigate impacts resulting from its removal, including reuse of the sandstone on the Cabrillo Railroad Underpass as an architectural feature. This will require further analysis in the EIR.

5.b) Archaeological Resources

A Phase 1 Archaeological Resources Report was prepared by Rincon Consultants (Rincon, 2021) in compliance with the requirements of the CEQA and the City of Santa Barbara's MEA Guidelines for Archaeological Resources and Historic Structures and Sites (City of Santa Barbara 2002). This report was accepted by the HLC on April 14, 2021. This study included the results of a cultural resources records search of the California Historical Resources Information System (CHRIS), a review of historical documents, maps and aerial imagery, a site history, an archaeological pedestrian survey of the project site, and preparation of this report. On September 12, 2016, Rincon conducted a CHRIS records search (as part of the Cabrillo Boulevard Pedestrian and Bicycle Improvements and Replacement of the Union Pacific Railroad Bridge Project) at the Central Coast Information Center (CCIC) located at the University of California, Santa Barbara. Rincon requested copies of additional reports and resource records from the CCIC on January 3 and January 17, 2017. Rincon Archaeologist Lucas Nichols conducted an archaeological pedestrian survey of the project site on January 8, 2021. This report was completed in February 2021. The cultural resources records search results identified three previously recorded archaeological resources within a radius of 0.5-mile to 1.0-mile surrounding the project site; none of which are within the project site. The pedestrian survey completed for this study did not identify any cultural resources within the project site. On August 28, 2023, another CHRIS records search was conducted by CCIC staff at the Santa Barbara Museum of Natural History. Archaeologist Pedro Garcia, BA, conducted an archaeological field survey on November 7, 2023.

Even though the project site is within the City's "Prehistoric Sites and Watercourses" sensitivity zone, no known archaeological resources are located within the project site and no archaeological materials were identified during the Phase 1 survey of the project site. The project site has been subject to substantial previous disturbances, and proposed ground disturbances associated with the removal of the existing Los Patos Underpass, placement of fill soil, and removal of the existing off-ramp are limited. There is always a potential to encounter unanticipated archaeological resources that is addressed through standard condition of approval CUL-1 in the project specs. Therefore, this impact is less than significant impact with adherence to the City's MEA Guidelines for Archaeological Resources and Historic Structures and Sites as

described in standard conditions of approval CUL-1. With the implementation of the standard condition of approval, impacts to archaeological resources would be *less than significant*.

5.c) Human Remains

There is no evidence that the site contains any human remains. Standard conditions of approval for the Project include procedures pursuant to State regulations for the unanticipated discovery of human remains. To minimize or avoid potential impacts, if any human remains are discovered, all construction activities would cease, and the Santa Barbara County Coroner would be contacted in accordance with 14 California Code of Regulations (CCR) Section 15064.5(e). If the coroner determines that the human remains are of Native American origin, the Native American Heritage Commission (NAHC) would be notified to determine the Most Likely Descendent (MLD) for the area. The MLD would make recommendations for the arrangements for the human remains per Public Resources Code (PRC) Section 5097.98. Therefore, this impact is less than significant impact with adherence to the City's MEA Guidelines for Archaeological Resources and Historic Structures and Sites as described in mandatory conditions of approval Cul-2. With the implementation of the standard condition of approval, impacts to archaeological resources would be *less than significant*.

5.d) Tribal Cultural Resources

The City provided an opportunity for Native American tribal consultation regarding the potential effects of the Project on tribal cultural resources to tribes that had requested notification by the City on CEQA projects, in compliance with Assembly Bill 52. This notification took place in November of 2020. In response to the letters the City held a meeting with SYB of Chumash in January 2021, at which time Chumash requested to be on the distribution list for the NOP. AB 52 consultation occurred in early 2021 and no tribal resources were identified. In addition to the initiation of Native American tribal consultation, the City submitted a request for review by the Native American Heritage Commission's (NAHC's) Sacred Lands Inventory File (SLF) on August 28, 2023. The SLF identified no Native American cultural resources are known to be located in the vicinity of the project site. Impacts to tribal cultural resources are *less than significant*.

Cultural Resources – Mitigation

Draft project alternatives and mitigation strategies were prepared to avoid and reduce historic impacts, and the likely feasibility and performance of said alternatives and mitigation strategies. See **Attachment C - Potential Preservation Alternatives and Mitigation Options for the Los Patos Underpass Removal Project**, City and County of Santa Barbara, California. This will be evaluated in the EIR.

See **Attachment B for Standard Conditions of Approval** related to archaeological resources.

Cultural Resources – Residual Impacts

Because the bridge has been determined to be eligible for listing as a locally historic resource, the demolition would be considered a *potentially significant impact* on a historic resource and will require further analysis in the EIR and assess if any residual impacts would occur to a historic resource.

6. ENERGY Would the project:	Level of Significance
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation; or conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less than Significant Impact
b) Conflict with a state or local plan for renewable energy or energy efficiency?	Less than Significant Impact

Energy – Discussion

Issues: Issues include the potential for the project to result in impacts on energy conservation and/or consumption. A project may have the potential to cause such impacts if it would result in the inefficient, wasteful, or unnecessary consumption of energy from sources including construction and operational equipment, electricity, natural gas, and transportation fuel supplies and/or resources.

Impact Evaluation Guidelines: A project has the potential to result in a significant impact if it would:

1. Use large amounts of fuel or energy in an unnecessary, wasteful, or inefficient manner;
2. Constrain local or regional energy supplies, affect peak and base periods of electrical or natural gas demand, require or result in the construction of new electrical generation and/or transmission facilities, or necessitate the expansion of existing facilities, the construction of which could cause significant environmental effects; or
3. Conflict with existing energy standards, including standards for energy conservation.

Energy – Existing Conditions and Project Impacts

6.a-b) Energy Conservation and Consumption

The project site would be provided temporary electricity by Southern California Edison (SCE). In 2018, SCE provided approximately 43.8 percent of the total electricity used in California. The Project includes removal of an existing structure and would not result in any continued use of energy once constructed. The Project would only expend energy during its short and temporary construction period and not expend substantial energy or wasteful, inefficient, or unnecessary energy, nor conflict with energy plans or policies. Therefore, Project's energy use impact would be *less than significant*.

Energy – Mitigation

No mitigation is required.

Energy – Residual Impacts

Less than significant.

7. GEOLOGY AND SOILS Would the project:	**Level of Significance**
a) Earthquake Hazards: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic conditions: i. Rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake C Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42) ii. Strong seismic ground shaking? iii. Seismic-related ground failure, including liquefaction? iv. Tsunami/Seiche	Less than Significant Impact
b) Geologic or Soil Instability: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, collapse, or sea cliff failure? Be located on expansive soils, as defined the Uniform Building Code, creating substantial direct or indirect risk to life or property?	Less than Significant Impact
c) Erosion: Result in substantial soil erosion or the loss of topsoil?	Less than Significant Impact
d) Septic System: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?	No Impact
e) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less than Significant Impact

Geology and Soils – Discussion

Issues: Geophysical impacts involve geologic and soil conditions, and their potential to create physical hazards affecting persons or property; or substantial changes to the physical condition of the site. Included are earthquake-related conditions such as fault rupture, ground shaking, liquefaction (a condition in which saturated soil loses shear strength during earthquake shaking), or seismic waves; unstable soil or slope conditions, such as landslides, sea cliff retreat, subsidence (the downward shifting of the Earth's surface; can result in sinkholes), expansive or compressible/collapsible soils, or erosion; and extensive grading or topographic changes.

Erosion is the movement of rocks and soil from the Earth's surface by wind, rain, or running water. Several factors influence erosion, such as topography, the size of soil particles (larger particles are more prone to erosion), and vegetation cover, which prevents erosion. Projects in areas with high erosion potential could reduce natural ground cover, create exposed cut or fill slopes and increase loss of surface soils and downstream sedimentation. Removal of vegetation and increased earthwork would potentially expose soils to erosion.

Unique geologic features are features that are unique to the field of geology and typically embody distinct characteristics of a geological principle, provide important information to the field of geology, and/or are the best example of its kind locally or regionally. Paleontological resources include fossils, which are the preserved remains

or traces of animals, plants, and other organisms from prehistoric time (i.e., the period before written records). Fossils and traces of fossils are preserved in sedimentary rock units (formed by the deposition of material at the Earth's surface) and are more likely to be preserved subsurface, where they have not been damaged or destroyed by previous ground disturbance or natural causes, such as erosion by wind or water.

Impact Evaluation Guidelines: Potentially significant geophysical impacts may result from:

1. Exposure of people or structures to risk of loss, injury, or death involving unstable earth conditions due to: seismic conditions (such as earthquake faulting, ground shaking, liquefaction, or seismic waves); landslides; sea cliff retreat; or expansive soils.
2. Exposure to or creation of unstable earth conditions due to geologic or soil conditions, such as landslides, settlement, or expansive, collapsible/compressible, or expansive soils.
3. Substantial erosion of soils.
4. Placement of a septic system in an area with soils not capable of adequately supporting disposal of waste water or where waste water could potentially cause unstable conditions or water quality problems.
5. Loss or damage to a unique geological feature or paleontological resource.

Geology and Soils – Existing Conditions and Project Impacts

7.a-b) Seismic and Geologic Hazards

Santa Barbara is located along the San Andreas Fault and is within the Mission Ridge Fault System. The City is characterized by the prominent structural features within the Santa Barbara Fold Belt. Most of the City is underlain by marine sedimentary rocks. The Rincon Shale and the Monterey Formation crop out along the northern and southwestern borders of the City in the Northridge Road area, Mission Canyon, the Riviera, and in the Las Positas Valley. These formations weather into expansive clay soils that expand when wet and contract when dry, which, when combined with steep slopes, increases the risk of soil creep and slumps in these areas. With adverse bedding orientation in these clayey bedrock formations, these steep slope areas are also prone to landslides.

The level portions of the City in the downtown and surrounding areas are underlain by alluvium with pockets of abundant boulders. The West Beach area and the southern parts of downtown are underlain by Estuarine Deposits associated with an estuary that was filled in the 1900s. These deposits exhibit low strength and stability and some areas have potential for liquefaction1 during seismic events. Santa Barbara's sea cliffs bordering the Pacific Ocean are marine terrace deposits that extend from the harbor to the western City boundary, and south of the Andree Clark Bird Refuge in the southeastern portion of Santa Barbara.

Fault Rupture:

As with most of Southern California, the project site is within a seismically active area where active faults could produce ground substantial shaking. The San Andreas Fault Zone, located approximately 40 miles northeast of the city, is the dominant active fault in California. There have been numerous historic earthquakes along the San Andreas Fault, which is likely capable of producing a maximum earthquake of magnitude 8.25 on the Richter scale (Santa Barbara 2010). Faults in the Project vicinity may have some potential for ground surface rupture during earthquakes of significant magnitude. The nearest fault is the Mission Ridge Fault System located approximately 0.3 mile north from the project site (USGS 2020). The Project would not directly or indirectly risk exacerbating potential substantial adverse effects from a fault rupture on people or structures and therefore would result in *no impact*.

Ground Shaking and Liquefaction:

The project site is located in an area with low to moderate liquefaction potential based on the Project-specific Geotechnical Report for the nearby Cabrillo Boulevard Underpass Project by Diaz, Yourman and Associates on August 14, 2018; Revised

on March 29, 2019 (Diaz 2019). The subsurface soils in the area primarily consisted of fills that overlaid alluvial soils in addition to the depth to historically highest groundwater level which indicated that the liquefaction in the area to be low. However, soils can settle during seismic shaking. Once the structure is removed, no impacts would occur. This project does not include any habitable structures and therefore would not increase the risk of geologic hazards on any individuals.

According to Figure 8.1 and Table 8.1 of the Santa Barbara General Plan EIR several other local faults are located near the Project in addition to the Mission Ridge Fault mentioned above. These faults are also of concern for ground shaking (Santa Barbara 2010). Standard construction measures will be implemented in order to provide suitable compaction of soils. A geotechnical soils report will be required prior to construction and all required recommendations would be incorporated into the project. The Project would not directly or indirectly risk exacerbating potential substantial adverse effects from ground shaking or liquefaction on people or structures and therefore would result in a *less than significant impact*.

Tsunami/Seiche:

The project site is located in the Tsunami Hazard Zone. Tsunamis are large ocean waves that are generated by a subsea earthquake or landslide. These waves travel across the ocean at high speeds (several hundreds of miles per hour). As the waves reach shore they can rise up and cause widespread flooding in areas near the ocean and along low-lying river channels. The low-lying southeastern portion of the City, especially areas south of Carrillo Street below 50 feet in elevation, are potentially vulnerable to tsunamis, as are areas near Arroyo Burro Beach Park and oceanfront areas below City College. The project site is located approximately 0.4 mile north of the Pacific Ocean. This project would not increase exposure to a tsunami hazard as the project will not result in attracting people or provide housing to the Tsunami Hazard Zone. This route is not an evacuation route nor could it be used for evacuation in the event of a tsunami. Removal of the undercrossing would only benefit those evacuating from a tsunami as it would work to limit water reaching Highway 101, which is a potential risk if the undercrossing remains in place.

A seiche is a wave or series of waves produced within enclosed water bodies such as a lake or bay, most often caused by landslides falling into the body of water, or by an earthquake. Most water bodies in and around the City such as the Harbor, Andree Clark Bird Refuge, and Sheffield Reservoir, are not surrounded by unstable slopes with landslide potential. The Andree Clark Bird Refuge is located adjacent to the project site to the southwest. The Project would not directly or indirectly risk exacerbating potential substantial adverse effects from a tsunami or seiche on people or structures and therefore would result in *a less than significant impact*.

Geologic/Soil Instability:

The project site is located in an area with low-level landslide potential (Diaz, 2019). Landslides occur on unstable slopes and are often triggered during periods of rainfall or by earthquakes. Landslide-prone areas include steep slopes with weak or highly fractured rock, loose, weak soil, and areas near ancient landslides. Mudslides are typically generated by heavy rainfall and entail shallow slope failures of the upper soil layer not commonly involving bedrock. The project site has little slope except for the rail line base that is made of compacted soil. The Project would not risk exacerbating landslide hazards and there would be *no impact* from landslides.

Subsidence and Expansive Soils:

The project site is located in an area with moderate erosion potential, low to moderate seismic settlement, and high expansive soils. Expansive soils contain clay that can shrink and swell with changes in moisture content, which can damage buildings and foundations by repeated swelling of the supporting soil. In the event unsuitable expansive soils are encountered during excavation and compaction those soils will be removed and replaced with suitable fill. Standard construction practices for testing soil for settlement potential and obtaining fill for the Project that does not contain expansive soils will result in *less than significant impact* related to subsidence or expansive soils.

7.c) Soil Erosion

The project site is located within a low-level-landslide-potential zone. Based on the level topography of the site, the landslide potential and erosion at the site is low. The embankment fill slopes are inclined at approximately 1.5H:1V (horizontal to vertical) or flatter with vegetation. These slopes are judged to be stable. Impacts from soil erosion are *less than significant*.

7.d) Septic Systems

The proposed Project would not include the use of any septic tanks or alternative wastewater disposal systems. *No impact* would occur regarding the adequacy of soils to support a septic and alternative wastewater systems.

7.e) Unique Geological Features and Paleontological Resources

The City of Santa Barbara Coastal Land Use Plan, Cultural Resources Element, Figure 4.4-1 shows that there are no unique geological features are located on or near the site. Paleontological resources and sites have been found throughout Santa Barbara. Implementation of the Project would involve ground disturbing activities and require earthwork, but with minimal and with shallow excavation of up to one foot, and grading in a highly disturbed area due to past construction. Due to the limited potential to disturb paleontological resources within the Project area as the Project area is located off of Los Patos Way, this impact would *be less than significant*.

Geology and Soils – Mitigation

No mitigation is required.

Geology and Soils – Residual Impacts

Less than significant.

8. HAZARDS AND HAZARDOUS MATERIALS Would the project:	Level of Significance
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less than Significant Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Potentially Significant Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Less than Significant Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Potentially Significant Impact
e) For a project located within the SBCAG Airport Land Use Plan, Airport Influence Area, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	Less than Significant Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less than Significant Impact

Hazards and Hazardous Materials – Discussion

Issues: Hazardous materials issues involve the potential for public health or safety impacts from exposure of persons or the environment to hazardous materials or risk of accidents involving combustible or toxic substances. Hazards issues include the exposure of people or structures to airport hazards or other types of hazards.

Impact Evaluation Guidelines: Significant impacts may result from the following:

1. Siting of incompatible projects in close proximity to existing sources of safety risk, such as pipelines, industrial processes, railroads, airports, etc.
2. Exposure of project occupants or construction workers to unremediated soil or groundwater contamination.
3. Exposure of persons or the environment to hazardous substances due to the improper use, storage, transportation, or disposal of hazardous materials.
4. Physical interference with an emergency evacuation or response plan.

Emergency access is discussed in the Section 15, Transportation and Circulation. Toxic air contaminants are discussed in Section 2, Air Quality and Greenhouse Gas Emissions. Wildland fire hazards are discussed in Section 17, Wildfire.

Hazards and Hazardous Materials – Existing Conditions and Project Impacts

8.a-e) Public Health and Safety

The transport, use, and disposal of hazardous materials used or removed during proposed Project activities would be conducted in compliance with applicable federal, state, and local laws pertaining to the safe handling, transport, and disposal

of hazardous materials, including the Federal Resource Conservation and Recovery Act (RCRA), which includes requirements for hazardous solid waste management; the California Department of Toxic Substances Control (DTSC) Environmental Health Standards for the Management of Hazardous Waste (CCR Title 22, Division 4.5), which includes standards for generators and transporters of hazardous waste. Impacts from the routine transport, use, or disposal of hazardous materials would be *less than significant*.

Hazardous Materials Exposure:

The undercrossing is currently in use by UPRR for the existing railroad line. During the construction phase, removal of the undercrossing along with associated debris and addition of the replacement fill would result in need for waste disposal of potentially hazardous lead and/or asbestos containing materials. Hazardous materials and hazardous wastes are regulated by many state and federal laws. Hazardous waste in California is regulated mainly under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during Project construction. The 101 HOV Lane Project evaluated several undercrossing along the Project area that had asbestos-containing materials. The 101 HOV Lane Project recommended that a licensed registered contractor with the California Occupational Safety and Health Administration for asbestos-related work perform the removal of such materials. The contractor would have to comply with the rules and regulations of the Santa Barbara County Air Pollution Control District and file a notification as required by the National Elimination System for Hazardous Air Pollutants before demolishing any of these structures. There is the potential for contamination due to its proximity to Highway 101 and the UPRR railroad. Aerially deposited lead is common along the freeway. Additionally, the railroad right-of-way may contain elevated lead from train brake dust, arsenic from weed abatement, and Total Petroleum Hydrocarbon (TPH) and Semi-Volatile Organic Compounds including Polycyclic Aromatic Hydrocarbons (PAHs) from creosote-based wood preservatives used in the railroad ties. Because of the potential for these contaminants at the project site, this potentially significant impact will be further evaluated in the EIR.

Public Safety:

The project site is not located near or within pipelines or other potential safety or aircraft hazards. It is located approximately 0.01 mile south of the USHighway101 and there are no schools within a 0.25-mile radius. Use of hazardous materials would occur during the construction phase which would be typical for use of construction equipment such as fuel. Therefore, impacts to public safety would be *less than significant*.

8.f) Emergency Evacuation and Response

The Project would not interfere with existing emergency evacuation and response protocols according to the Santa Barbara Emergency Management Plan. The undercrossing would be removed only after the replacement off-ramp at Cabrillo Boulevard is in operation, which would maintain emergency access to and from the Project vicinity. Impacts would be *less than significant*.

Hazards and Hazardous Materials -Mitigation

A phase II site assessment is being prepared to identify and evaluate potential soil contamination within the project area. These results will be evaluated in the EIR.

Hazards and Hazardous Materials – Residual Impacts

A phase II site assessment is being prepared to identify and evaluate potential soil contamination within the project area. These results will be evaluated in the EIR.

9. LAND USE AND PLANNING Would the project:	Level of Significance
a) Physically divide an established community?	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating and environmental impact?	Potentially Significant Impact

Land Use and Planning – Discussion

Issues: Certain land uses have the potential to result in incompatibility with existing surrounding land uses or activities. Typically, development applications for General Plan Amendments, Rezones, Conditional Use Permits, Performance Standard Permits, and certain modifications have the greatest potential to result in land use compatibility issues. Incompatibility can result from a proposed project's generation of noise, odor, safety hazards, traffic, visual effects, or other environmental impacts.

Impact Evaluation Guidelines: Significant impacts may result from a project that would create a physical barrier that would substantially impact circulation within an established neighborhood. Significant impacts may result from a project where an inconsistency with the General Plan, Municipal Code, or Coastal Land Use Plan (if applicable) would result if an adverse environmental effect. Analysis should focus on regulations, standards, and policies that relate to avoiding or mitigating environmental impacts, and an assessment of whether any inconsistency with these standards creates a significant physical impact on the environment.

Certain land uses have the potential to result in conflicts with existing surrounding land uses or activities. Typically, development applications for General Plan Amendments, Rezones, Conditional Use Permits, Performance Standard Permits, and certain Modifications have the greatest potential to result in land use compatibility issues. Conflicts can result from generation of noise, odor, safety hazards, traffic, visual effects, or other environmental impacts.

Land Use and Planning – Existing Conditions and Project Impacts

9.a) Physically Divide a Community

The Coastal Land Use Plan designates the project site as Parks/Open Space. The project site is located in an urban built-out area of Santa Barbara and the Project would not physically divide an established community as the project would only remove an existing structure no longer required. There would be *no impact*.

9.b) Conflict with a Plan or Policy that would Avoid or Mitigate an Environmental Impact

Applicable Coastal Land Use Plan policies include:

> **Policy 4.4-1** Preserve, Protect, and Enhance Cultural Resources. Protect the heritage of the City by preserving, protecting, and enhancing the City's pre-historic and historic past, which includes, but it is not limited to, important or unique pre-historic and historic archaeological artifacts, objects, and/or sites, and important paleontological resources and sites.

Applicable General Plan Historic Resource Element policies include:

> **HR1** Protect Historic and Archeological Resources. Protect the heritage of the City by preserving, protecting and enhancing historic resources and archeological resources. Apply available governmental resources, devices and approaches, such as the measures enumerated in the Land Use Element to facilitate preservation and protection.

HR3 Discourage Demolition. Develop effective measures to discourage and curtail the demolition of historic resources and HR3.3 to require development proposal that request demolition of historic resources to present preservation alternatives.

HR4 Pursue Adaptive Reuse. Encourage the adaption of historic buildings or structures for uses other than the original intended use when the original use is no longer viable.

The Los Patos Way Off-Ramp Underpass is a historic resource under CEQA and its removal would result in a significant impact that will be further analyzed in the EIR under Cultural Resources. The EIR will include project preservation alternatives and mitigation, including adaptive reuse, and will include further analysis of consistency with historical resource policies in exploring ways to mitigate the removal of a historic resource to the extent feasible. A draft Preservation Alternatives and Mitigation Measures Analysis memorandum has been prepared. Therefore, the Project would have *a potentially significant impact* to land use and planning.

Land Use and Planning – Mitigation

The project's consistency with City historic resource protection and preservation policies will be evaluated in the EIR.

Land Use and Planning – Residual Impacts

The project's consistency with City historic resource protection and preservation policies will be evaluated in the EIR.

10. MINERAL RESOURCES Would the project:	Level of Significance
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	No Impact
b) Result in the loss of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	No Impact

Mineral Resources – Discussion

Issues: A mineral is a naturally occurring chemical element or compound formed from inorganic processes (not biological in origin). Minerals include metals, rock, sand, petroleum products, and geothermal resources. The City has no active aggregate operations within its jurisdiction, and no quarry or mine operations are pending reactivation or initiation.

Impact Evaluation Guidelines: A significant impact could occur from projects that result in the loss of known mineral resources, or loss of mineral resource recovery sites including quarries and petroleum extraction sites.

Mineral Resources – Existing Conditions and Project Impacts

10.a-b) Loss of Known Mineral Resource or Mineral Resource Recovery Site

Santa Barbara is largely urbanized with limited mineral resources (Santa Barbara 2010). There are no known mineral resources within the project site. The project site is located within a highly urbanized area of the City and the potential for mineral resources to occur onsite is low. Therefore, the Project would not result in the loss of availability of a mineral resource, or a mineral resource recovery site and *no impact* would occur.

Mineral Resources – Mitigation

No mitigation is required.

Mineral Resources – Residual Impacts

No impact.

11. NOISE Would the project result in:	**Level of Significance**
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less than Significant Impact
b) Generation of excessive ground borne vibration or ground borne noise levels?	No Impact
c) Siting of a land use in an area with noise levels exceeding City General Plan noise policies and land use compatibility guidelines?	No Impact
d) For a project located within the vicinity of a private airstrip or the SBCAG Airport Land Use Plan/Airport Influence Area, would the project expose people residing or working in the project area to excessive noise levels?	No Impact

Noise – Discussion

Issues: Noise issues are associated with siting of a new noise-sensitive land use in an area subject to high ambient background noise levels, siting of a noise-generating land use next to existing noise-sensitive land uses, and/or short-term construction-related noise. Similarly, construction techniques such as pile driving and blasting, and land uses such as the railroad can present issues of groundborne vibration. If groundborne vibration is excessive, it can impact the integrity of structures and can affect sensitive land uses.

The primary source of ambient noise in the City is vehicle traffic noise. The City Master Environmental Assessment (MEA) Noise Contour Map identifies average ambient noise levels within the City.

Ambient noise levels are determined as averaged 24-hour weighted levels, using the Day-Night Noise Level (L_{dn}) or Community Noise Equivalence Level (CNEL) measurement scales. The L_{dn} averages the varying sound levels occurring over the 24-hour day and gives a 10-decibel penalty to noises occurring between the hours of 10:00 p.m. and 7:00 a.m. to take into account the greater annoyance of intrusive noise levels during nighttime hours. Since L_{dn} is a 24-hour average noise level, an area could have sporadic loud noise levels above 60 dBA which average out over the 24-hour period. CNEL is similar to L_{dn} but includes a separate 5 dB(A) penalty for noise occurring between the hours of 7:00 p.m. and 10:00 p.m. CNEL and L_{dn} values usually agree with one another within 1 dB(A). The Equivalent Noise Level (L_{eq}) is a single noise level, which, if held constant during the measurement time period, would represent the same total energy as a fluctuating noise level. L_{eq} values are commonly expressed for periods of one hour, but longer or shorter time periods may be specified. In general, a change in noise level of less than three decibels is not audible. A doubling of the distance from a noise source will generally equate to a change in decibel level of six decibels.

Guidance for appropriate long-term background noise levels for various land uses are established in the City General Plan Noise Element Land Use Compatibility Guidelines. Building codes also establish maximum average ambient noise levels for the interiors of structures.

High construction noise levels occur with the use of heavy equipment such as pile drivers, scrapers, rollers, graders, trenchers and large trucks for demolition, grading, and construction. Equipment noise levels can vary substantially through a construction period, and depend on the type of equipment, number of pieces operating, and equipment maintenance. Construction equipment may generate noise levels of more than 80 or 90 dBA at a distance of 50 feet, and the shorter impulsive noises from other construction equipment (such as pile drivers and drills) can be even

higher, up to and exceeding 100 dBA at a distance of 50 feet. Noise during construction is generally intermittent and sporadic, and after completion of the initial demolition, grading and site preparation activities, tends to be quieter.

The Noise Ordinance (Chapter 9.16 of the SBMC) governs short-term or periodic noise, such as construction noise, operation of motorized equipment or amplified sound, or other sources of nuisance noise. The ordinance establishes limitations on hours of construction and motorized equipment operations, and provides criteria for defining nuisance noise in general.

Aircraft traffic also creates intermittent higher noise levels and is a major source for noise in the communities surrounding the Santa Barbara Airport. The Airport is located outside of the continuous boundary of the City, and areas affected by aircraft noise include several neighborhoods within the City of Goleta, UCSB, and unincorporated areas of the County. The Santa Barbara Airport's Noise Compatibility Program and the Airport Land Use Plan provide noise abatement procedures and policies for the airport to minimize noise; guidelines for placement of noise sensitive land uses near the airport, and mitigation measures to prevent impacts to residential areas from airport noise.

Impact Evaluation Guidelines: A significant noise impact may result from:

Project Noise Generation: Substantial noise and/or vibration from project operations (such as stationary mechanical equipment) or grading and construction activities (such as the use of pile drivers) in close proximity to noise-sensitive receptors for an extensive duration. Exposure to noise levels of 100 dBA for longer than 15 minutes, or 85 dBA for more than 8 hours, has the potential to result in harmful health effects. A vibration study is required for projects that will use pile drivers.

Ambient Noise Levels: Siting of a project such that persons would be subject to long-term ambient noise levels in excess of the Noise Element land use compatibility guidelines as follows. The guidelines include maximum interior and exterior noise levels.

1. Interior noise levels are of primary importance for residences due to the health concerns associated with continued exposure to high interior noises. Projects not meeting interior noise levels would have significant noise impacts.
2. For exterior noise levels, there are two levels of noise:

    a. "Clearly unacceptable" exterior levels are those levels above which it would be prohibitive, even with mitigation, to achieve the maximum interior noise levels, and the outdoor environment would be intolerable for the assigned use. Projects exceeding the maximum "clearly unacceptable" noise levels would have significant noise impacts.

    b. "Normally unacceptable" noise levels are those levels which it is clear that with standard construction techniques maximum interior noise levels will be met and there will be little interference with the land use. Projects below the maximum "normally unacceptable" noise levels would have less than significant noise impacts.

    c. Projects with exterior noise levels exceeding the "normally acceptable" level and below the maximum "clearly unacceptable" level are evaluated on a case by case basis to identify mitigation to achieve the "normally acceptable" exterior levels to the extent feasible and to determine the level of significance of the noise exposure.

    The following are the maximum interior and exterior noise levels for common land uses in the City:

    - Commercial (retail, restaurant, etc.) and Office (personal, business, professional): Normally acceptable maximum exterior ambient noise level of 75 dBA L_{dn}; clearly unacceptable

maximum exterior noise level of 80 dBA L_{dn}; maximum interior noise level of 50 dBA L_{dn}.

- Residential: Normally acceptable maximum exterior ambient noise level of 60 dBA Ldn in single family zones and 65 dBA L_{dn} in non-residential or multi-family residential zones); clearly unacceptable maximum exterior noise level of 75 dBA L_{dn}; maximum interior noise level of 45 dBA L_{dn}.

Aircraft Noise: project site location near the Airport that would result in excessive noise exposure for project residents or employees.

Noise – Existing Conditions and Project Impacts

The project site is adjacent to U.S. 101 and the Project is a UPRR underpass located on an active railroad used by UP. The nearest residential areas are located approximately 0.1 mile east of the project site on Los Patos Way. The Andree Clark Bird Refuge located south of and adjacent to the site is also a sensitive noise receptor. The project site currently is located within an area that generates noise due to the proximity to the U.S. 101 Freeway and the railroad use. Vehicle noise affects relatively large areas of the City along transportation corridors, particularly neighborhoods in close proximity to the 8-mile long corridor of U.S. 101. Noise from U.S. 101 affects City neighborhoods such as the lower Eastside, Westside, parts of Samarkand, and Hitchcock Road. Noise levels exceeding 65 dBA Ldn extend outward between 100 and 680 feet from various segments of the freeway, depending on topography, intervening barriers, and traffic levels. At the project site, the noise level is 70-75 dBA Ldn at 150 feet, 65-69 dBA Ldn at 260 feet and 60-64 dBA Ldn at 470 feet (Santa Barbara 2010).

11.a-b) Increased Noise Level from Project

Temporary Construction Noise and/or Vibration:

The 23-day demolition/construction schedule includes using the following equipment: Welding apparatus, crane, flatbed truck, dump trucks, excavation/backhoe, and a roller compacter. These are not considered high noise generating equipment such as pile driving equipment but do produce noise in excess of normal conditions while operating. The Santa Barbara Noise Ordinance (Chapter 9.16 of the SBMC) governs short-term or periodic noise, such as construction noise, operation of motorized equipment or amplified sound, or other sources of nuisance noise. The ordinance establishes limitations on hours of construction and motorized equipment operations. Noise during construction would generally be intermittent and sporadic. Adherence to the requirements in the noise ordinance would reduce short term construction noise and vibration impacts to *less than significant.*

Long-Term Operational Noise:

There will be no new or increased long-term operational noise from the replacement of the underpass. The rail line would continue to operate as it currently operates after replacement. There would be a reduction in traffic noise along Los Patos Way once the off-ramp is closed as it would no longer function as such and only have local traffic accessing the adjacent uses. There would be *no impact* related to long-term operational noise.

11.c) Exposure to High Noise Levels

The Project would not expose neighboring uses to high noise levels during construction beyond levels allowed in the Santa Barbara Noise Ordinance *No impact* would result.

11.d) Aircraft Noise

The Project is not located within the vicinity of the Santa Barbara Airport nor any private airstrip. *No impact* would occur.

Noise – No Mitigation Required

City standard conditions of approval, N-1 to N-3 would apply to reduce noise impacts to a less than significant level. These are listed in Attachment B . These standard conditions include proper neighborhood notification, construction hours, and controlling equipment noise as appropriate. No additional mitigation is required.

Noise – Residual Impact

Less than significant.

12. POPULATION AND HOUSING Would the project:	Level of Significance
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact

Population and Housing – Discussion

Issues: Population and housing issues include induced population growth that would strain environmental resources within the City or require new infrastructure or development, the construction of which could result in environmental impacts. The loss of housing units would displace populations and increase demand for housing within the City.

Impact Evaluation Guidelines: A potentially significant population and housing impact may occur if:

1. Growth inducement, such as provision of substantial population or employment growth or creation of substantial housing demand; development in an undeveloped area, or extension/ expansion of major infrastructure that could support additional future growth.
2. Loss of a substantial number of people or housing units, especially loss of lower cost housing.

Population and Housing – Existing Conditions and Project Impacts

12.a) Growth-Inducing Impacts

The Project would not involve a substantial increase in major public facilities such as extension of water or sewer lines or roads that would facilitate other growth in the area. The Project would not involve substantial employment growth that would increase population or housing demand as no housing is proposed for the Project. No growth-inducing impacts would occur because the Project is the removal of an underpass. *No impact* would result from the Project.

12.b) Housing Displacement

The Project would not involve any displacement of people or housing. *No impact* would result from the Project.

Population and Housing – Mitigation

No mitigation is required.

Population and Housing – Residual Impact

No impact.

13. PUBLIC SERVICES AND UTILITIES Would the project:	Level of Significance
a) Require or result in the relocation or construction of new or expanded storm water drainage facilities or expansion of water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects?	Less than Significant Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	No Impact
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No Impact
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	Less than Significant Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact
f) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: i. Fire Protection? ii. Police Protection? iii. Schools? iv. Parks? v. Other Public Facilities?	No Impact

Public Services and Utilities – Discussion

Issues: This section evaluates project effects on fire and police protection services, schools, public facility maintenance and other governmental services, utilities, including electric and natural gas, water and sewer service, and solid waste disposal.

Water: The City of Santa Barbara's water supply comes primarily from the following sources, with the actual share of each determined by availability and level of customer demand: Lake Cachuma and Tecolote Tunnel; Gibraltar Reservoir, Devils Canyon and Mission Tunnel; groundwater; State Water Project Table A allotment; desalination; and recycled water. Conservation and efficiency improvements are projected to contribute to the supply by offsetting demand that would otherwise have to be supplied by additional sources. The Long Term Water Supply Program (LTWSP) for the planning period 2011-2030 outlines a strategy to use the above sources to meet the City's estimated system demand (potable plus recycled water) of 14,000 acre-feet per year (AFY), plus a 10 percent safety margin equal to

1,400 AFY, for a total water supply target of 15,400 AFY. The LTWSP concludes that the City's water supply is adequate to serve the anticipated demand plus safety margin during the planning period.

Sewer: The maximum capacity of the El Estero Water Resource Center is 11 million gallons per day (MGD), with current average daily flows in 2020 of 6 MGD. In 2010, the City certified a citywide Program FEIR for the Plan Santa Barbara General Plan Update. This FEIR concluded that the increased wastewater flows to El Estero Wastewater Water Resource Center are enough to accommodate the growth planned through 2030 for the City. The FEIR also concluded that the increased wastewater flows into the City's collection systems would not substantially contribute to current problems of offsite inflow and infiltration of wastewater flows from the City's system.

Solid Waste: Most of the waste generated in the City is transported on a daily basis to seven landfills located around the County. The County of Santa Barbara, which operates the landfills, has developed impact significance thresholds related to the impacts of development on remaining landfill capacity. These thresholds are utilized by the City to analyze solid waste impacts. The County thresholds are based on the projected average solid waste generation for Santa Barbara County from 1990-2005. The County assumes a 1.2 percent annual increase (approximately 4,000 tons per year) in solid waste generation over the 15-year period. The County's threshold for project specific impacts to the solid waste system is 196 tons per year (this figure represents 5% of the expected average annual increase in solid waste generation [4000 tons per year]) for project operations. Source reduction, recycling, and composting can reduce a project's waste stream by as much as 50 percent. If a proposed project generates 196 or more tons per year after reduction and recycling efforts, impacts would be considered significant and unavoidable. Proposed projects with a project specific impact as identified above (196 tons per year or more) would also be considered cumulatively significant, as the project specific threshold of significance is based on a cumulative growth scenario. However, as landfill space is already extremely limited, any increase in solid waste of 1% or more of the expected average annual increase in solid waste generation (4,000 tons per year), which equates to 40 tons per year, is considered adverse significant cumulative impact.

The County of Santa Barbara adopted revised solid waste generation thresholds and guidelines in October 2008. According to the County's thresholds of significance, any construction, demolition or remodeling project of a commercial, industrial or residential development that is projected to create more than 350 tons of construction and demolition debris is considered to have a significant impact on solid waste generation. The County's 350 ton threshold has not been formally adopted by the City; however, it provides a useful method for calculating and analyzing construction waste generated by a project.

Facilities and Services: In 2010, the City certified a citywide General Plan EIR. The EIR concluded that under existing conditions as well as the projected planned development and all studied alternatives, all public services (police, fire, library, public facilities, governmental facilities, electrical power, natural gas and communications) could accommodate the potential additional growth until 2030. The FEIR also determined that growth in the City under the General Plan would not result in a considerable contribution to cumulative impacts on public services on the South Coast.

Schools: None of the school districts in the South Coast have been designated "overcrowded" as defined by California State law. Per California Government Code Section 66000, the City collects development impact fees from new development to offset the cost of providing school services/additional infrastructure to accommodate new students generated by the development.

Impact Evaluation Guidelines: The following may be identified as significant public services and facilities impacts:

1. Inadequate water, sewage disposal, or utility facilities or capacity to serve the project.
2. Substantial increase in solid waste disposal to area sanitary landfills that would result in a disproportional use of remaining landfill capacity.
3. Creation of a substantial need for increased police department, fire department, public facility maintenance, or government services staff or equipment.

4. Generation of substantial numbers of students exceeding public school capacity where schools have been designated as overcrowded.

Public Services and Utilities – Existing Conditions and Project Impacts

13.a-c) Water, Stormwater, and Sewer

Water:

The Project would not result in operational demand for water, except minor water use for dust control during demolition and construction. This temporary water use would have no adverse effects on water supply. In addition, the newly graded slope would be within the UPRR right-of-way with no anticipated planting or vegetation. New landscaping would potentially occur along Los Patos Way and would follow City of Santa Barbara guidelines and regulations for drought tolerant plants, vegetation and irrigation. Therefore, impacts would be *less than significant.*

Stormwater

The Project would not result in the need to expand stormwater facilities. The Project would address any minor drainage requirements from filling in the underpass to maintain existing storm flows through the installation of a drain pipe through the fill section, sized to convey the design storm in its current configuration. Therefore, *no impact* would occur.

Sewer:

The Project would not require sewer service during construction or operation. Therefore, *no impact* would occur.

13.d-f) Solid Waste Generation/ Disposal

Removal of the underpass would result in temporary short term need for solid waste disposal, but not in excess of any State or local standards (Tajiguas capacity of 1,500 tons of trash per day). The largest elements of the bridge, the multi-beam girders, are anticipated to be diverted to a recycling center or preserved as an architectural feature. The sandstone is also anticipated to be preserved for mitigation purposes, leaving minimal solid waste to be disposed of. This waste would be taken to the Tajiguas Landfill owned and operated by the County of Santa Barbara. It can process up to 1,500 tons of trash per day. The Project is not estimated to create more than 350 tons of construction and demolition debris, therefore the impact on solid waste generation and disposal would be *less than significant*.

Long-Term (Operational). The Project would not result in additional solid waste generation or disposal in the long-term. There would be *no impact* to long-term solid waste.

13.g) Police, Fire, Schools, and Public Facilities

The project site is located in an urban area where all public services are available. The project is would not create any new or substantial demand on fire or police protection services, library services, or need for new City buildings and facilities. The Project would not need to be served by existing public services for gas, electricity, cable, and/or telephone services.

Typical land uses that are associated with increased use of police, fire, school and public facility services are housing, commercial and industrial developments. None of those land uses are proposed for this Project, therefore *no impact* would occur to schools or other public facilities or services.

Public Services and Utilities – Mitigation

No mitigation is required.

Public Services and Utilities – Residual Impacts

Less than Significant.

14. RECREATION Would the project:	Level of Significance
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No Impact
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No Impact
c) Result in substantial loss or interference with existing park space or other public recreational facilities (such as hiking, cycling or horse trails)?	No Impact

Recreation – Discussion

Issues: Recreational issues are associated with increased demand for recreational facilities, or, loss of or impacts to existing recreational facilities or parks.

Impact Evaluation Guidelines: Recreation impacts may be significant if the project would result in:

1. Substantial increase in demand for park and recreation facilities in an area under-served by existing public park and recreation facilities.
2. Substantial loss or interference with existing park space or other public recreational facilities such as hiking, cycling, or horse trails.

Recreation – Existing Conditions and Project Impacts

Environmental Setting: The City of Santa Barbara's Parks and Recreation Department manages the public urban forest, including public street trees, and the City creek restoration, water quality, and storm water management programs. The Project area is directly adjacent to the Andree Clark Bird Refuge.

14.a-b) Recreational Demand

The City of Santa Barbara's Parks and Recreation Department maintains the parks and recreation areas within the City. Responsibilities of this department are to provide clean and safe parks, beaches, and recreation facilities; promote stewardship of City resources; and provide quality recreation, cultural, and community services to residents and visitors of the City (Santa Barbara 2010). This Project would not increase demand for recreational facilities. The Project would not result in blocking access to the Andree Clark Bird Refuge. The closure of the Los Patos Way offramp is part of the Highway 101 HOV Project to be replaced with an offramp at Cabrillo Boulevard providing similar access to the refuge for highway travelers. Therefore, there would be *no impact.*

14.c) Existing Recreational Facilities

No housing is proposed for this Project and no impacts would occur to the existing recreational area or recreational facilities. Staging for the Project would occur on the portion of Los Patos Way no longer being used as an off-ramp after closure of the off-ramp providing direct access to US 101 from the site. Access to the Andree Clark Bird Refuge will be maintained with the new interchange at Cabrillo as part of the U.S. 101 HOV Project. Visitors to the bird refuge would be able to access the site via the new off-ramp at Cabrillo. Therefore, there would be *no impact*.

Recreation – Mitigation

No mitigation is required.

Recreation – Residual Impacts

No impact.

15. TRANSPORTATION AND CIRCULATION Would the project:	**Level of Significance**
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	No Impact
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3 (Determining the Significance of Transportation Impacts)?	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Less than Significant Impact
d) Result in inadequate emergency access?	No Impact

Transportation and Circulation – Discussion

Issues: Transportation issues include traffic, access, circulation and safety. Vehicle, bicycle and pedestrian, and mass transit modes of transportation are all considered, as well as emergency vehicle access.

The City General Plan Circulation Element contains policies addressing circulation, vehicle traffic, and alternative mode travel in the City. Vehicle traffic and alternative mode policies are also contained in other adopted City planning documents, including the Nonresidential Growth Management Ordinance, Pedestrian Master Plan, Bicycle Master Plan, Upper State Street Plan, etc., as well as regional transportation plans.

Impact Evaluation Guidelines: State legislation Senate Bill (SB) 743 revises the approach for analyzing transportation impacts of projects under CEQA. The legislation identifies the use of vehicle miles traveled (VMT) or similar approaches as the most appropriate measure for determining transportation impacts as alternative metrics for assessing the environmental impact of vehicle transportation (as an air quality and GHG impact) transportation impacts in CEQA reviews. The change to VMT is meant to focus development in urban centers and to encourage land use and transportation planning decisions that reduce and minimize VMT, which is GHG emissions generator.

The State provides screening criteria to quickly identify projects not expected to result in transportation impacts under the VMT methodology. Consistent with State CEQA Guidelines §15064.3, projects in areas that are already well served by a major transit stop are presumed to have less than significant transportation impacts. A major transit stop is defined in the State CEQA Guidelines as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with frequencies of service intervals of 15 minutes or less during the morning and afternoon peak commute periods. Projects located within a high quality transit corridor as identified by SBCAG are presumed to have less than significant VMT impacts. Projects that would generate less than 110 vehicle trips per day are presumed to be less than significant, as well as infill development projects with 100 percent affordable units. Transit and active transportation projects are also presumed to have a less than significant impact on VMT.

In accordance with the Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA (2019), a proposed project may have a significant impact on transportation if it would:

Vehicle Miles Traveled:

1. For Residential and Office Uses: Exceeds a level of 15 percent below existing regional or Citywide VMT per capita. A 15 percent reduction is consistent with SB 743's direction to achieve State goals for GHG reduction.

2. For Retail Uses: Result in a net increase in VMT.
3. For Transportation Roadway Projects: Increases roadway capacity in congested areas and/or increases vehicle lane miles.

Circulation and Traffic Safety:

1. Create potential hazards due to addition of traffic to a roadway that has design features (e.g., narrow width, roadside ditches, sharp curves, poor sight distance, inadequate pavement structure) or that supports uses that would be incompatible with substantial increases in traffic.
2. Diminish or reduce effectiveness, adequacy, or safety of pedestrian, bicycle, or public transit circulation.
3. Result in inadequate emergency access on-site or to nearby uses.
4. Conflict with regional and local plans, policies, or ordinances regarding the circulation system, including pedestrian, bicycle, and public transportation.

Transportation and Circulation – Existing Conditions and Project Impacts

Environmental Setting: Santa Barbara's transportation system consists of roads, public transportation, bike and pedestrian facilities, parking, and City and regional programs that support and guide the use and development of these facilities, including programs to manage transportation demand. Regional access to the project site is via the U.S. 101 via Exit 95 onto Los Patos Way or via Cabrillo Boulevard.

15.a) Bicycle/Pedestrian/Public Transit

The Project would not affect transit, bike, or pedestrian facilities or plans, or create a need for such because the project would not increase population needing these additional services or facilities and the project would not impact or alter any transit, bike, or pedestrian facilities or plans, therefore, there would be *no impact*.

15.b) Vehicle Miles Traveled

The Project would remove an undercrossing which is currently in use by UPRR to grade separate their tracks from the U.S. 101 Los Patos offramp. A replacement offramp will be constructed as part of the U.S. 101 HOV project (redesign of the U.S. 101\Cabrillo interchange) and it is to be in operation prior to closing Los Patos Way as an offramp. This offramp would be closed regardless of this project with the new offramp taking its place exiting onto Cabrillo Boulevard just north of the current Los Patos/Cabrillo intersection. The Project therefore would not increase roadway capacity or result in an increase in vehicle lane miles as there would be no change in the existing traffic pattern or capacity; therefore, impacts would be *less than significant.*

15.c-d) Access/ Circulation

Short-Term Construction Access and Circulation:

Removal of the Los Patos Underpass would address and improve the existing safety hazard concerns from UPRR. Currently, the height clearance of the underpass is classified as a low-clearance structure and is often hit by larger trucks which then shuts down on-going railroad operations. Removal of the structure would generate temporary construction-related traffic that would occur over a maximum of a one-month construction period and would vary depending on the stage of construction. Standard conditions of approval would be applied, including restrictions on the hours permitted for construction trips outside of peak traffic hours, approval of routes for construction traffic, and designation of specific construction staging and parking areas. In addition, the Caltrans (101 High Occupancy Vehicle (HOV) Lane Project) would remove the Los Patos Way off-ramp which closes off access to the project site from US 101. This closure was planned and not part of the proposed Project. This impact is less than significant as there will be no reduction in access.

Operational Access and Circulation:

Removal of the underpass would not affect circulation during the operational phase, as the Los Patos Way off-ramp will be abandoned by Caltrans upon completion and start of operation of the 101 HOV Lane Project, replaced with a full interchange at Cabrillo Boulevard. The Underpass would not be replaced with another structure. Los Patos Way would be reconfigured as a cul-de-sac similar to its current operating condition in providing an area to turn around in. The cul-de-sac would be formed by continuing the existing curb line and centerline radius across the existing off-ramp roadway thereby eliminating access to that stretch of roadway. The Project would not create additional parking as the cul-de-sac would have red curb and be used for a turnaround area only, consistent with the current use of Los Patos Way near the off-ramp. The roadway from the new curb line to the Caltrans right of way beyond the underpass would be removed. A new narrow maintenance access path would be provided from the newly formed cul-de-sac to the south side of the existing underpass. This path would provide access for UPRR to remove nuisance activities associated with the rail line. A portion of the new curb in the cul-de-sac would be a rolled curb to accommodate City maintenance vehicles. There would be *no impact.*

Transportation and Circulation – Mitigation

No mitigation is required.

Transportation and Circulation – Residual Impact

Less than significant.

16. WATER QUALITY AND HYDROLOGY Would the project:	**Level of Significance**
a) Groundwater: i. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? ii. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater quality?	Less than Significant Impact
b) Surface Water: i. Substantially alter the existing drainage pattern of the site or area or substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion, siltation, or flooding on- or offsite? ii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? iii. Substantially affect water quality within a creek? iv. Conflict with or obstruct implementation of a water quality control plan?	Less than Significant Impact
c) Flood Risk: In flood hazard zones: i. Substantially exacerbate existing hazard conditions to persons or property? ii. Risk release of pollutants due to project inundation? iii. Conflict with floodway or floodplain regulations?	Less than Significant Impact

Water Quality and Hydrology – Discussion

Issues: Water resources issues include changes in surface drainage, creeks, surface water quality, groundwater quantity and quality, flooding, and inundation.

Impact Evaluation Guidelines: A significant impact would result from:

Water Resources and Drainage:

1. Substantially changing the amount of surface water in any water body or the quantity of groundwater recharge.
2. Substantially changing the drainage pattern or creating a substantially increased amount or rate of surface water runoff that would exceed the capacity of existing or planned drainage and storm water systems.
3. Altering drainage patterns or affecting creeks in a way that would cause substantial erosion, siltation, on- or off-site flooding, or impacts to sensitive biological resources. See also Section 4, Biological Resources.

Water Quality:

1. Substantial discharge of sediment or pollutants into surface water or groundwater, or otherwise degrading water quality, including temperature, dissolved oxygen, or turbidity.

The City of Santa Barbara updated the Storm Water Management Program (SWMP) in 2020, and the Plan is implemented through City ordinance provisions. The purpose of the SWMP is to implement and enforce a program designed to reduce the discharge of pollutants to the "maximum extent practicable" to protect water quality. The SWMP addresses discharge of pollutants both during construction and after construction. The water quality treatment requirement is to retain and treat the 1-inch, 24-hour storm event. The peak runoff discharge rate requirement is that the peak runoff discharge rate shall not exceed the pre-development rate up to the 25 year storm. The volume reduction requirement is to retain on site the volume difference between pre- and post-conditions for the 25-year, 24-hour storm or the 1-inch storm (whichever is larger).

Flooding and Inundation Hazards:

1. Locating development within floodway or 100-year flood hazard area; substantially altering the course or flow of flood waters or otherwise exacerbating flood hazard to persons or property.
2. Exposing people or structures to substantial unmitigated risk involving inundation.

Water Quality and Hydrology – Existing Conditions and Project Impacts

16.a) Groundwater Quantity and Quality

During construction, the Project would not require use of groundwater as the underpass removal would use trucked in water for dust mitigation and other construction uses on site. However, due to the proximity to the Andree Clark Bird Refuge, as mentioned in Section 8 Hazards and Hazardous Materials, the Project would ensure no construction materials contaminate the groundwater through standard best management practices and preparing and following a SWPPP. Therefore, impacts during construction would be *less than significant*. In addition, *no impacts* would occur after completion of the Project.

16.b-c) Drainage, Stormwater Runoff, Water Quality, Creeks and Flooding

The Project is located adjacent to the Andree Clark Bird Refuge and is approximately 0.6 mile east of Sycamore Creek. A Sycamore Creek Evaluation study for the Project was conducted by Stantec on August 8, 2016 to determine the hydraulic impacts to flooding along U.S. 101 due to the removal of the underpass and closure of the Los Patos Way offramp. The evaluation found that overflow during flood conditions would be directed entirely into the Andree Clark Bird Refuge with little to no flow returning to the Sycamore Creek Channel. As such, discharge directed to the Los Patos off ramp is very minor (less than one cubic foot per second) and would not significantly contribute to a rise in the Base Flood Elevation once the off ramp is closed.

The City and State require onsite capture, retention, and treatment of storm water to be incorporated into the design of the Project. Pursuant to the City's SWMP and the NPDES General Permit for Storm Water Discharges, the City requires that any increase in stormwater runoff (based on a 25-year storm event) be retained onsite and that Projects be designed to capture and treat the calculated amount of runoff from the project site for a one-inch storm event, over a 24-hour period. The Sycamore Creek Evaluation study indicates that the peak runoff flow rate has been accounted for in the design of the Project. The proposed storm water management plan complies with the City's SWMP requirements. Additionally, the Project is subject to standard conditions of approval, building codes, and federal and state regulatory programs that have been established to minimize impacts to water quality resulting from construction operations. Compliance with City and State stormwater capture, retention, and treatment requirements would ensure that impacts associated with drainage, stormwater, and surface water quality would be *less than significant*.

The project site west of Los Patos Way is located in Flood Zone AE and 0.2% Annual Chance Flood Hazard zone at Los Patos Way. The tracks east of the 2% zone is not in a Special Flood Hazard Area zone (FEMA.gov 2024). However, the

Sycamore Creek Evaluation found that the flood mapping identified in the Flood Insurance Map are just in the vicinity of the U.S. 101 and downstream of it. The vast majority of discharge from the combined Sycamore Creek overflow and Andree Clark Bird Refuge watershed would be released to the bird refuge crossing over the UPRR just east of the Santa Barbara Zoological Gardens. The flooding potential would not affect construction. There currently exist minor flows of surface water on Los Patos Way. There is no drainage from the project site to the bird refuge so the project would not affect water quality in the bird refuge. The fill design will include installation of drainage through the fill area in line with current drainage patterns to carry the 100-year storm in order to accommodate the flow of surface water and not impact the 100-year flood zone. Therefore, impacts related to flooding would be *less than significant*.

Water Quality and Hydrology – Mitigation

No mitigation required.

Water Quality and Hydrology – Residual Impact

Less than significant.

17. WILDFIRE If the project is located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Level of Significance
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No Impact
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, or thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel break, emergency water sources, power lines, or other utilities) that may exacerbate fire risks or that may result in temporary or ongoing impacts to the environment?	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding, landslides, or mud flows, as a result of runoff, post-fire slope instability, or drainage changes?	Less than Significant Impact

Wildfire – Discussion

Issues: Wildfire issues include exposure of persons and structures to wildfire, air pollutants, and post-wildfire slope instability. Structural losses or damage from wildfires often result from inappropriate siting of development within or adjacent high fire hazard areas, the use of inappropriate construction materials or landscaping, and presence of biofuel mass. Recent wildfire events in California indicate that wildfire behavior is changing, and the duration and frequency of wildfire events are increasing. The 2017 Thomas Fire in Santa Barbara and Ventura Counties was the largest wildfire in California history and burned over 250,000 acres. This ultimately led to the subsequent debris flow event in January 2018, which gravely impacted the Montecito community.

The California Department of Forestry and Fire Protection (CALFIRE) defines fire hazard severity zones based on the presence of biofuel mass, climate, topography, assets at risk (high population centers), and an agency's ability to provide fire protection services to an area. The City contains state responsibility lands within the Very High Fire Hazard Severity Zone (VHFHSZ) within the Santa Barbara foothills. In addition, the City has also designated areas within the City as high fire hazard severity zones within the Community Wildfire Protection Plan (CWPP).

Impact Evaluation Guidelines: A significant impact would result from:

1. Siting of development in a very high fire hazard severity zone or beyond adequate emergency response time, with inadequate access, infrastructure, or water pressure, or otherwise in a manner that creates a fire hazard.
2. Impairment or conflict with the Community Wildfire Protection Plan or other emergency response plan.
3. Exposing people or structures to post-fire slope instability, mud or debris flows.

Wildfire – Existing Conditions and Project Impacts

17.a-c) Wildfire Risk and Consistency with Existing Emergency and Wildfire Plans and Regulations

The Project is not located within a Very High Fire Hazard Severity Zone (VHFHSZ) according to CALFIRE. However, the majority of the northern areas of Santa Barbara are within a VHFHSZ, located approximately 2 miles from the project site. The 2020 Santa Barbara Community Wildfire Protection Plan indicates that the Project is not within the extreme foothill, foothill, coastal or coastal interior zone where topography and response times would be higher than average response times

in the event of a fire. The response time for the Project area would be within the 4-minute range and would not be affected by the Project. In addition, the Project would not increase potential wildfires as no structures are proposed to replace the underpass and would not conflict with existing emergency services or evacuation plans. Therefore, the Project would result in *no impact* due to wildfire.

17.d) Post-wildfire Flooding or Mud Slides

The Project would eliminate an underpass on an off-ramp scheduled to be abandoned. This would not result in exposing people or structures to significant risks, including downslope or downstream flooding, landslides, or mud flows, as a result of runoff, post-fire slope instability, or drainage changes. However, as mentioned in Water Quality and Hydrology, the Project is located within flood zone AE (100-year) and 0.2% Annual Chance flood Hazard zone with the area prone to regular flooding. There currently exist minor flows of surface water on Los Patos Way. The fill design will include installation of drainage through the fill area in line with current drainage patterns to carry the 100 year storm in order to accommodate the flow of surface water and not impact the 100-year flood zone. Therefore, impacts would be *less than significant.*

Wildfire – Mitigation

No mitigation required.

Wildfire – Residual Impacts

Less than significant.

18. MANDATORY FINDINGS OF SIGNIFICANCE.	YES	NO
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	X	
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)		X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X

18.a) Biological and Cultural Resources

As discussed in Section 4, Biological Resources, the Project would not reduce the habitat of a fish or wildlife species, cause a fish or wildfire population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal. The Project would require implementation of mitigation measures BIO-1(Nesting Bird Surveys), BIO-2 (Best Management Practices), and BIO-3 (Pre-construction Wildlife Surveys), which would reduce potential impacts to nesting birds and raptors, the adjacent Andree Clark Bird Refuge, and wildlife due to temporary construction activities to a less than significant level.

In regard to Cultural Resources, as discussed in Section 5, the Project would have a potentially significant impact on the Los Patos Off-Ramp Underpass, a historic resource. This potentially significant impact to the historic will be further evaluated in the EIR.

18.b) Cumulative Impacts

Sections 1 through 17 of this Initial Study consider potential cumulative impacts to environmental resources. As discussed in these sections, the Project would have potentially significant impacts related to aesthetics and visual resources, cultural resources, hazardous materials, and land use planning. Only these impacts have been identified as possibly contributing to cumulative impacts, and result in significant, cumulative impacts on the environment. For all other issue areas, the proposed Project would have either direct or indirect impacts that have been determined to be less than significant, with mitigation measures or standard conditions of approval. The assessment of these impacts did not identify residual impacts or identified a contribution to a cumulative impact.

The Project consists of the removal of the undercrossing and replacing it with fill within the footprint of Los Patos Way and the UPRR right-of-way. Thus, impacts of the Project are generally restricted to that area and would not adversely affect biological or other physical resources outside of the footprint. Other impacts in regard to noise and dust from construction are short-term just during the one-month demolition and reconstruction window. Thus, the effects of the Project would not combine with impacts from other projects and would not result in new or substantially more severe impacts beyond those identified in this Project. Therefore, the potential for cumulative impacts related to aesthetics and visual resources, cultural resources, hazardous materials, and land use planning would be further analyzed in the EIR.

18.c) Other Environmental Effects

The project has the potential to result in environmental effects related to hazardous materials; as a result, this topic will be further evaluated in the EIR. No other environmental effects have been identified that would cause substantial adverse effects on human beings, either directly or indirectly.

MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

An MMRP will be prepared for the EIR.

ATTACHMENTS:

A. Conceptual Project Plans

B. Standard Conditions of Approval Applicable to Project

C. Draft Potential Preservation Alternatives and Mitigation Options for the Los Patos Underpass Removal Project, City and County of Santa Barbara, California, Letter Report dated July 9, 2020; Rincon Consultants

REFERENCES

The following sources used in the preparation of this Initial Study are located at the Community Development Department, Planning Division, 630 Garden Street, Santa Barbara and are available for review upon request.

Project-Specific Sources

Rincon 2021. *Los Patos Underpass Removal Project: Phase 1 Archaeological Resources Report*. Rincon Consultants, Inc., Project No. 18-06252. Report on file at the Central Coast Information Center, University of California, Santa Barbara. (confidential)

General Sources

California Building Code as adopted by City

California Emissions Estimator Model (CalEEMod)

California Environmental Quality Act (CEQA) Statute & Guidelines

City of Santa Barbara Climate Action Plan and Initial Study-Negative Declaration (2024)

City of Santa Barbara Coastal Land Use Plan, Cultural Resources Element (2019)

City of Santa Barbara Designated Landmarks List (October 8, 2019)

City of Santa Barbara Designated Structures of Merit List (March 4, 2020)

City of Santa Barbara Highway 101 Coastal Parkway Design Guidelines (April 10, 1996)

City of Santa Barbara Historic Resources Element (2012)

City of Santa Barbara Historic WebMap (January 2020)

City of Santa Barbara Potential Historic Resources List (March 4, 2020)

EnviroStor web site, State Department of Toxic Substances Control

Erosion/Sediment Control Program, City of Santa Barbara (2012)

Farmland of Statewide Importance Map, California Resources Agency

General Plan, City of Santa Barbara, and General Plan Map

General Plan Certified Final Environmental Impact Report (2011) and Addenda

Geology Assessment for the City of Santa Barbara

Geotracker website, State Water Resources Control Board

Institute of Traffic Engineers Trip Generation Manual

Long Term Water Supply Plan (2011)

Local Coastal Plan *(Main or Airport)*

Master Environmental Assessment, MEA Guidelines, and MEA Maps

Regional Growth Impacts Study (1980)

Santa Barbara County APCD Scope and Content of Air Quality Sections in Environmental Documents (2017)

Santa Barbara Municipal Code & City Charter

Special District Map

Water Demand Factors Update Report (2009)

Zoning Ordinance & Zoning Map

Attachment A – Conceptual Project Plans

CITY OF SANTA BARBARA

LOS PATOS UNDERPASS REMOVAL PROJECT

LOS PATOS WAY OFF RAMP

Project Site Address: Public Right of Way and Union Pacific Right of Way on Loa Patos Way

APNs: 017-010-079, ROW-001-628

Zoning: P-R/S-D-3

Applicant: City of Santa Barbara, Public Works Department
Designer: Eric Goodall. 805-897-2664
Owner: Union Pacific Railroad and City of Santa Barbara, Public Works Department

All construction shall comply with ACI 318-19, ASCE 7-16, and all City of Santa Barbara Amendments included in Ordinance No.5780.

The Project will remove the Los Patos Way Off Ramp Underpass (Los Patos Underpass) adjacent to the U.S. Highway 101 Freeway (U.S. 101). The U.S. 101 off-ramp at Los PAtos Way will be vacated upon completion of the U.S. 101 HOV Project (HOV Project). The Los Patos off-ramp will be removed by Caltrans up to the Union Pacific Railroad (UPRR) right of way, rendering the underpass unusable. It is anticipated that the underpass may become an attractive nuisance if left in place, once the off-ramp is removed, thereby providing an increased security risk for the UPRR.

The Los Patos Underpass will be removed down to the abutments, which will be partially removed, including removal of girders and decking, and replaced with solid fill and a small culvert or drainpipe through the fill to convey minor flows. The off-ramp roadway will be removed to the point it becomes Los Patos Way, forming a cul-de-sac by continuing the existing curb line and centerline radius across the existing off-ramp roadway. A narrow maintenance access path would be provided from the cul-de-sac to the underpass. The fill under the railroad tracks is estimated to be 3,100 cubic yards of imported material.

While this Project has independent utility without the HOV Project, UPRR has indicated the necessity of the removal of the underpass and closure of the Los Patos Way off ramp as a safety measure and a contingency in order to reconstruct the UPRR bridge over Cabrillo Boulevard as is necessary to complete construction of the East Cabrillo Boulevard Pedestrian and Bicycle Improvements and Replacement of the Union Pacific Railroad Bridge Project.

The Project primarily contains three main features:

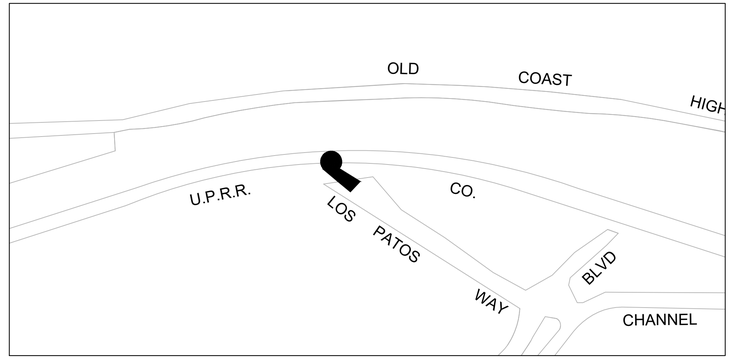
- Removal of the existing Los Patos Underpass including girders and partial abutment removal;
- Fill the Underpass with compacted soil and reinstall the UPRR track on top of the fill; and
- Demolish the roadway and landscape the area

The Project will meet the goals of the City's Local Coastal Plan and aid in completion of Projects that will meet the goals of the Bicycle Master Plan and Pedestrian Master Plan for ensuring safety for all road users.

The Project requires the following discretionary approvals:

- A Coastal Development Permit (DCP2020-00025) to allow the proposed development in the nonappealable Jurisdiction of the City's Coastal Zone (SBMC 28.44.060)
- Project Design and Final Approvals by the Historic Landmarks Commission (SBMC 22.22)

VICINITY MAP
N.T.S.



PROJECT LOCATION MAP
N.T.S.

LEGEND:
- STRUCTURE REMOVAL
- ROADWAY REPLACEMENT

BASIS OF BEARINGS:
R/S BOOK 147,
PAGES 70–74
DATUM: NAVD 88

811 Know what's below. Call before you dig.

SYMBOL LEGEND

W	EXISTING WATER MAIN	CTV	EXISTING CABLE TV	WM	EXISTING WATER METER
G	EXISTING GAS MAIN		EXISTING EDGE OF PAVEMENT	TMH	EXISTING TELEPHONE MANHOLE
S	EXISTING SEWER MAIN		EXISTING FLOWLINE	E	EXISTING ELECTRIC PULL BOX
E	EXISTING SCE MAIN	FH	EXISTING FIRE HYDRANT		EXISTING POWER POLE
T	EXISTING TELEPHONE MAIN	WV	EXISTING WATER VALVE		EXISTING STREET SIGN
SD	EXISTING STORM DRAIN MAIN	GV	EXISTING GAS VALVE		EXISTING STREET LIGHT
O	EXISTING FENCE	GM	EXISTING GAS METER		EXISTING CITY MONUMENT
R/W	RIGHT OF WAY LINE				EXISTING IP SURVEY MARKER

ABBREVIATION LEGEND

BM	BENCHMARK	MH	MANHOLE
BOW	BACK OF WALK	NTS	NOT TO SCALE
CTV	CABLE TELEVISION	R/W	RIGHT OF WAY
E	ELECTRICAL	S	SEWER
ECONC	EDGE OF CONCRETE	SD	STORM DRAIN
FH	FIRE HYDRANT	T	TELEPHONE
FL	FLOW LINE	TC	TOP OF CURB
FOW	FRONT OF WALK	TMH	TELEPHONE MANHOLE
G	GAS	P	PAVEMENT
		W	WATER

PROJECT ENGINEER _____ DATE _____

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
APPROVED: _____ DATE _____
CITY ENGINEER _____
ORIGINAL SIGNED DATE _____

DESIGN EG
DRAWN EG
CHECKED

NO.	REVISIONS	DATE	APPROVED

WEST CARRILLO LIGHTING AND SIGNAL IMPROVEMENT PROJECT

TITLE SHEET

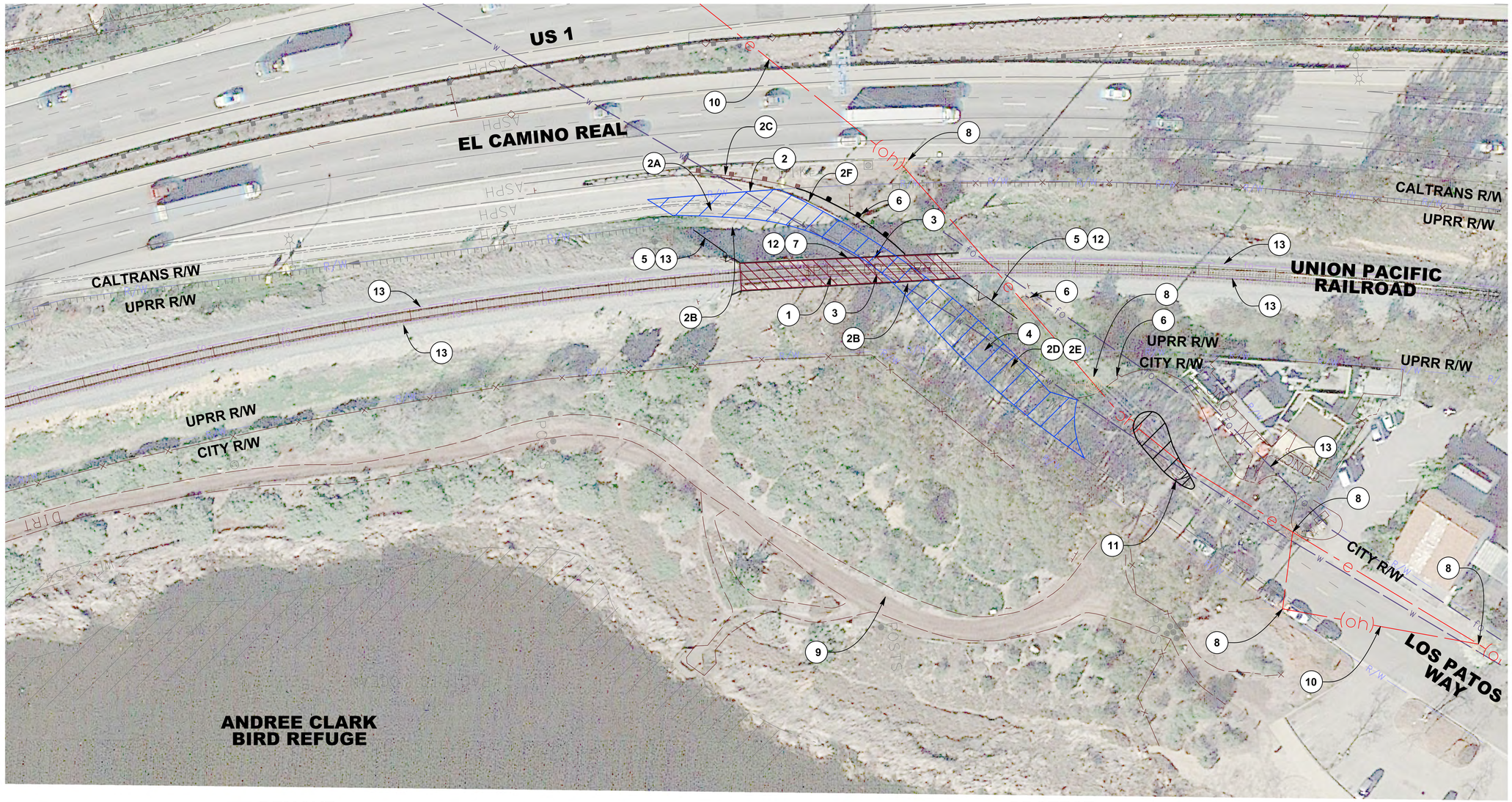
XX
PBW. NO.

xx BID NO. | G1 SHT. DES.

xx
DWG. NO.

SHT. 1 OF 4

\\cip@SSL\DavWWRoot\Active\STREETS\CabrilloUPRR\Boards_Commissions\Planning_Commission\Los Patos Undercrossing\G1.dwg, 3/17/2021 1:36 PM, Eric Goodall



LEGEND:

- EXISTING R/W
- POWER POLE
- (#) PROJECT FEATURE
- MEDIAN
- DEMOLISH UPRR BRIDGE

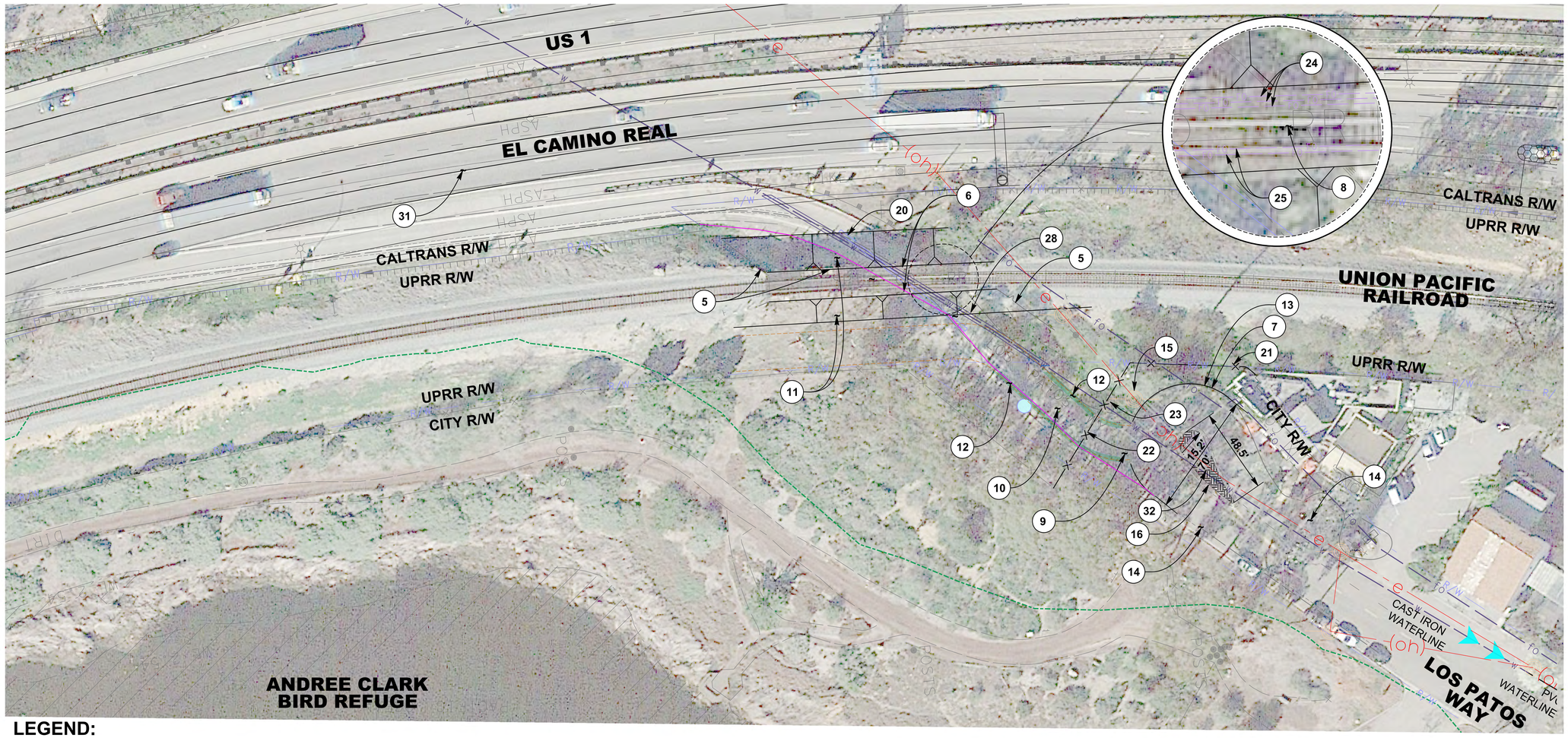
REMOVE:

1. EXISTING UPRR RAILROAD BRIDGE AND WINGWALLS
2. SB US 101 LOS PATOS WAY OFF-RAMP
2A. REMOVE ASPHALT CONCRETE WITHIN UPRR R/W (67 CY).
2B. REMOVE CONCRETE DIKE WITHIN UPRR R/W (310 LF).
2C. REMOVE GUARDRAIL (215 LF).
2D. REMOVE ASPHALT CONCRETE WITHIN PUBLIC R/W (34 CY).
2E. REMOVE AGGREGATE BASE MATERIAL WITHIN PUBLIC R/W (50 CY).
3. EXISTING CONDUITS ON BRIDGE
4. DEMOLISH ROADWAY
5. DEMOLISH WING WALLS
6. RAILING
7. EXISTING SANDSTONE BENT

PROTECT:

8. EXISTING POWER POLE
9. EXISTING PATH TO ANDREE CLARK BIRD REFUGE
10. EXISTING OVERHEAD POWER LINES
11. EXISTING MEDIAN
12. SALVAGE SANDSTONE BLOCKS FROM WINGWALS, ABUTMENT, AND COLUMN
13. EXISTING FIBER OPTIC CONDUITS

0 15 30
SCALE: 1"=30



LEGEND:

- EXISTING R/W
- ANDREE CLARK BIRD REFUGE BUFFER
- PROPOSED CHAINLINK FENCE
- EXISTING OVERHEAD ELECTRIC
- EXISTING CAST IRON WATERLINE
- PROPOSED FIBEROPTIC RELOCATION
- POWER POLE
- (#) PROJECT FEATURE
- MAINTENANCE ROAD
- PROPOSED CURB AND GUTTER
- PROPOSED LANDSCAPING

(5) SALVAGE SANDSTONE BLOCKS

(6) RELOCATE/UNDERGROUND FIBEROPTIC CONDUITS

(8) UNION PACIFIC RAILROAD TRACK

(9) CONSTRUCT MAINTENENCE ROAD DRIVEWAY ACCESS

(10) CONSTRUCT GRAVEL MAINTENENCE ROAD (RIVER ROCK OR EQUIVALENT) (APPROX 73 LF)

(11) CONSTRUCT EMBANKMENT

(12) LANDSCAPING: 3' BAND OF MULCH ADJACENT TO ACCESS ROAD

(13) CONSTRUCT CONCRETE CURB & GUTTER (114 LF)

(14) PROTECT DRIVEWAY ACCESS

(15) PROTECT POWER POLE

(16) PROTECT EXISTING RAISED MEDIAN ISLAND

(20) CONSTRUCT REINFORCED CONCRETE PIPE (58 LF)

(21) INSTALL 6' CHAINLINK FENCE

(22) INSTALL 6' HIGH SLIDING GATE

(23) ASPHALT PAD FOR SLIDING GATE

(24) EXISTING FIBER OPTIC CONDUIT RELOCATION (TO BE BURIED WITHIN FILL MATERIAL AFTER BRIDGE REMOVAL): AT&T; CENTURY LINK; & UNION PACIFIC

(25) EXISTING FIBER OPTIC CONDUIT RELOCATION (TO BE BURIED WITHIN FILL MATERIAL AFTER BRIDGE REMOVAL): SPRINT; VERIZON

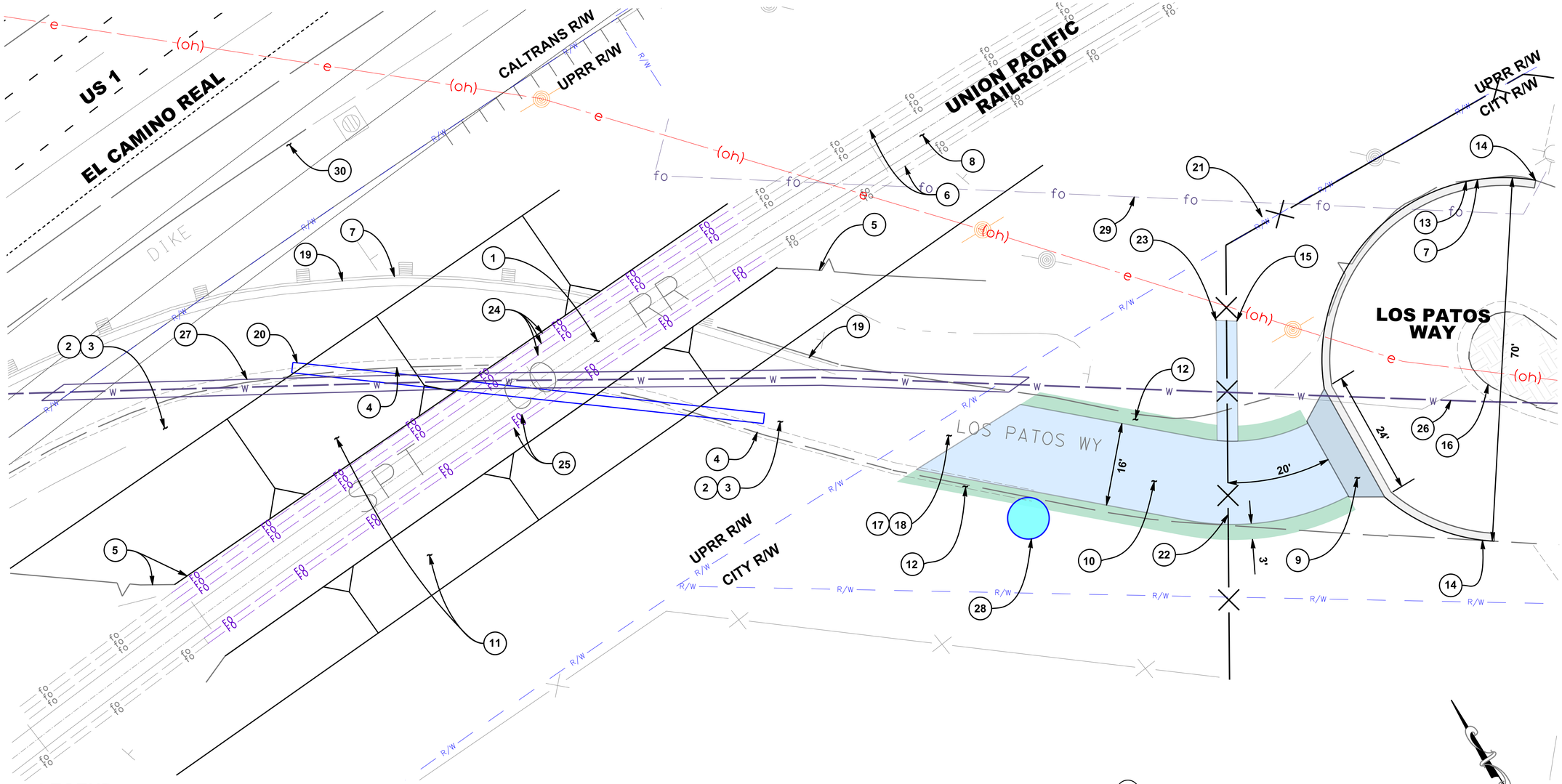
(28) ENCASE EXISTING WATER LINE THROUGH UNION PACIFIC RAILROAD RIGHT OF WAY

(31) PROPOSED ROADWAY/STRIPING IMPROVEMENTS ON US 1 (BY OTHERS)

(32) PROPOSED PERVIOUS PLANTING

0 15 30

SCALE: 1"=30'



LEGEND:

- EXISTING R/W
- PROPOSED CHAINLINK FENCE
- EXISTING OVERHEAD ELECTRIC
- EXISTING CAST IRON WATERLINE
- EXISTING FIBER OPTIC LINE
- PROPOSED FIBEROPTIC RELOCATION
- POWER POLE
- (#) PROJECT FEATURE
- MAINTENANCE ROAD
- PROPOSED CURB AND GUTTER
- PROPOSED LANDSCAPING

1. REMOVE UPRR RAILROAD BRIDGE
2. REMOVE ASPHALT CONCRETE WITHIN UPRR R/W (67 CY)
3. REMOVE AGGREGATE BASE WITHIN UPRR R/W (100 CY)
4. REMOVE CONCRETE DIKE WITHIN UPRR R/W (310 LF)
5. SALVAGE SANDSTONE BLOCKS
6. UNDERGROUND FIBEROPTIC CONDUITS
7. REMOVE GUARDRAIL (APPROX 215 LF)
8. UNION PACIFIC RAILROAD TRACK
9. CONSTRUCT MAINTENENCE ROAD DRIVEWAY ACCESS
10. CONSTRUCT GRAVEL MAINTENENCE ROAD (RIVER ROCK OR EQUIVALENT) (APPROX 73 LF)
11. CONSTRUCT EMBANKMENT
12. LANDSCAPING: 3' BAND OF MULCH ADJACENT TO ACCESS ROAD
13. CONSTRUCT CONCRETE CURB & GUTTER (114 LF)
14. MATCH EXISTING CURB
15. PROTECT POWER POLE
16. PROTECT EXISTING RAISED MEDIAN ISLAND
17. REMOVE ASPHALT CONCRETE WITHIN PUBLIC R/W (34 CY)
18. REMOVE AGGREGATE BASE WITHIN PUBLIC R/W (50 CY)
19. REMOVE CURB AND GUTTER (110 LF)
20. CONSTRUCT REINFORCED CONCRETE PIPE (58 LF)
21. INSTALL 6' CHAINLINK FENCE
22. INSTALL 6' HIGH SLIDING GATE
23. ASPHALT PAD FOR SLIDING GATE
24. EXISTING FIBER OPTIC CONDUIT RELOCATION (TO BE BURIED WITHIN FILL MATERIAL AFTER BRIDGE REMOVAL): AT&T; CENTURY LINK; & UNION PACIFIC
25. EXISTING FIBER OPTIC CONDUIT RELOCATION (TO BE BURIED WITHIN FILL MATERIAL AFTER BRIDGE REMOVAL): SPRINT; VERIZON
26. EXISTING CAST IRON WATER LINE
27. ENCASE EXISTING WATER LINE THROUGH UNION PACIFIC RAILROAD RIGHT OF WAY
28. EXISTING DRAINAGE INLET DI-L08-05
29. EXISTING UNDERGROUND FIBER OPTIC LINE (FRONTIER)
30. PROPOSED ROADWAY/STRIPING IMPROVEMENTS ON US 1 (BY OTHERS)

0 5 10 15
SCALE: 1"=10'

2021-02-18

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
APPROVED: CITY ENGINEER DATE
ORIGINAL SIGNED DATE
DESIGN
DRAWN
CHECKED
APPROVED
DATE
REVISIONS
NO.

LOS PATOS UNDERCROSSING REMOVAL
PROPOSED LAYOUT DETAIL SHEET

PBW. NO.
BID NO. SHT. DES.
DWG. NO.
SHT. 4 OF 4

ONE WAY
DO NOT ENTER
WRONG WAY
DO NOT ENTER
WRONG WAY
STOP
Google Earth
© 2021 Google

LEFT EXIT 94B
Hot Springs Rd
Cabrillo Blvd
UNION PACIFIC
2701
2701
Google Earth
© 2021 Google

UNION PACIFIC
2701
UNION P

Attachment B – Standard Conditions of Approval

Standard Conditions of Approval Applicable to Project

Air Quality-Related

AQ-1 Air Quality and Dust Control. The following measures shall be shown on grading and building plans and shall be adhered to throughout grading, hauling, and construction activities:

a. During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 mph. Reclaimed water should be used whenever possible. However, reclaimed water should not be used in or around crops for human consumption.

b. Minimize amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less.

c. If importation, exportation and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin.

d. Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads.

e. After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur.

f. The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District prior to land use clearance for map recordation and land use clearance for finish grading of the structure.

g. All portable diesel-powered construction equipment shall be registered with the state's portable equipment registration program OR shall obtain an APCD permit.

h. Fleet owners of mobile construction equipment are subject to the California Air Resource Board (CARB) Regulation for In-use Off-road Diesel Vehicles (Title 13 California Code of Regulations, Chapter 9, § 2449), the purpose of which is to reduce diesel particulate matter (PM) and criteria pollutant emissions from in-use (existing) off-road diesel-fueled vehicles. For more information, please refer to the CARB website at www.arb.ca.gov/msprog/ordiesel/ordiesel.htm.

i. All commercial diesel vehicles are subject to Title 13, § 2485 of the California Code of Regulations, limiting engine idling time. Idling of heavy-duty diesel construction equipment and trucks during loading and unloading shall be limited to five minutes; electric auxiliary power units should be used whenever possible.

j. Diesel construction equipment meeting the California Air Resources Board (CARB) Tier 1 emission standards for off-road heavy-duty diesel engines shall be used. Equipment meeting CARB Tier 2 or higher emission standards should be used to the maximum extent feasible.

k. Diesel powered equipment should be replaced by electric equipment whenever feasible.

l. If feasible, diesel construction equipment shall be equipped with selective catalytic reduction systems, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by EPA or California.

m. Catalytic converters shall be installed on gasoline-powered equipment, if feasible.

n. All construction equipment shall be maintained in tune per the manufacturer's specifications.

o. The engine size of construction equipment shall be the minimum practical size.

p. The number of construction equipment operating simultaneously shall be minimized through efficient management practices to ensure that the smallest practical number is operating at any one time. Construction worker trips should be minimized by requiring carpooling and by providing for lunch onsite.

AQ-2 Asbestos & Lead-Containing Materials. Pursuant to APCD Rule 1001, the applicant is required to complete and submit an Asbestos Demolition / Renovation Notification form for each regulated structure to be demolished or renovated. The completed notification shall be provided to the Santa Barbara County APCD with a minimum of 10 working days advance notice prior to disturbing asbestos in a renovation or starting work on a demolition. Any abatement or removal of asbestos and lead-containing materials must be performed in accordance with applicable federal, State, and local regulations. Permits shall be obtained from the Air Pollution Control District prior to commencement of demolition of the structures containing asbestos and/or lead. Disposal of material containing asbestos and/or lead shall be in sent to appropriate landfills that are certified to accept this material.

Biological Resource-Related

a. **Tree Protection.** All trees not indicated for removal on the approved landscape plan shall be preserved, protected, and maintained, in accordance with the Tree Protection Plan, if required, and/or any related Conditions of Approval.

b. **Landscaping Under Trees.** Landscaping under the tree(s) shall be compatible with the preservation of the tree(s), as determined by the ABR.

c. **Oak Trees.** The following additional provisions shall apply to existing oak trees on site:

   i. No irrigation system shall be installed within three feet of the dripline of any oak tree.

   ii. Oak trees greater than four inches (4") in diameter at four feet (4') above grade removed as a result of the project shall be replaced at a ten to one (10:1) ratio, at a minimum five (5) gallon size, from South Coastal Santa Barbara County Stock.

   iii. The use of herbicides or fertilizer shall be prohibited within the drip line of any oak tree.

   iv. No storage of heavy equipment or materials, or parking shall take place within five (5) feet of the dripline of any oak tree.

d. **During Construction.**

   i. All trees within 25 feet of proposed construction activity shall be fenced three feet outside the dripline for protection.

   ii. A qualified Arborist shall be present during any excavation beneath the dripline(s) of the tree(s) which are required to be protected. All excavation within the dripline(s) of the tree(s) shall be minimized and shall be done with hand tools.

   iii. Any roots encountered shall be cleanly cut and sealed with a tree-seal compound.

   iv. Any root pruning and trimming shall be done under the direction of a qualified Arborist.

   v. No heavy equipment, storage of materials or parking shall take place under the dripline of any tree(s), or within five (5) feet of the dripline of any oak tree.

   vi. Oak seedlings and saplings less than four inches (4") at four feet (4') above the ground that are removed during construction shall be transplanted where feasible. If transplantation is not feasible,

replacement trees shall be planted at a minimum one to one (1:1) ratio. Replacement trees shall be a minimum of one (1) gallon size derived from South Coastal Santa Barbara County stock.

Cultural Resource-Related

Unanticipated Archaeological Resources Contractor Notification. Standard discovery measures shall be implemented per the City master Environmental Assessment throughout grading and construction: Prior to the start of any vegetation or paving removal, demolition, trenching or grading, contractors and construction personnel shall be alerted to the possibility of uncovering unanticipated subsurface archaeological features or artifacts. If such archaeological resources are encountered or suspected, work shall be halted immediately, the City Environmental Analyst shall be notified and the Owner shall retain an archaeologist from the most current City Qualified Archaeologists List. The latter shall be employed to assess the nature, extent and significance of any discoveries and to develop appropriate management recommendations for archaeological resource treatment, which may potentially include, but are not limited to, redirection of grading and/or excavation activities, consultation and/or monitoring with a Barbareño Chumash representative from the most current City qualified Barbareño Chumash Site Monitors List, testing, documentation, collection, and curation of resources, etc. Measures will be implemented to ensure no significant impact involving important resources will result.

If the discovery consists of possible human remains, the Santa Barbara County Coroner shall be contacted immediately. If the Coroner determines that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission. A Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization.

If the discovery consists of possible prehistoric or Native American artifacts or materials, a Barbareño Chumash representative from the most current City Qualified Barbareño Chumash Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization.

A final report on the results of the archaeological monitoring shall be submitted by the City-approved archaeologist to the Environmental Analyst within 180 days of completion of the monitoring and prior to any certificate of occupancy for the project.

Construction Traffic-Related

CON-1 Haul Routes Require Separate Permit. Apply for a Public Works Permit to establish the haul route(s) for all construction-related trucks with a gross vehicle weight rating of three tons or more, entering or exiting the site. The Haul Routes shall be approved by the Transportation Engineer.

CON-2 Construction-Related Truck Trips. Construction-related truck trips for trucks with a gross vehicle weight rating of three tons or more shall not be scheduled during peak hours (7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.) in order to help reduce truck traffic on adjacent streets and roadways.

CON-3 Construction Parking. During construction, free parking spaces for construction workers shall be provided on-site or off-site in a location subject to the approval of the Transportation Manager.

CON-4 Construction Storage/Staging. Construction vehicle/ equipment/ materials storage and staging shall be done on-site. No parking or storage shall be permitted within the public right-of-way, unless specifically permitted by the Transportation Manager with a Public Works permit.

Noise-Related

N-1 **Neighborhood Notification Prior to Construction.** At least twenty (20) days prior to commencement of construction, the contractor shall provide written notice to all property owners, businesses, and residents within 300 feet of the project area. The notice shall contain a description of the project, the construction schedule, including days and hours of construction, the name and phone number of the (Project Environmental Coordinator and) Contractor(s), site rules and Conditions of Approval pertaining to construction activities, and any additional information that will assist the Building Inspectors, Police Officers and the public in addressing problems that may arise during construction.

N-2 **Construction Hours.** Construction (including preparation for construction work) shall only be permitted Monday through Friday between the hours of 7:00 a.m. and 5:00 p.m., and Saturdays between the hours of 9:00 a.m. and 4:00 p.m., excluding the following holidays: New Year's Day (January 1st); Martin Luther King Jr Day (3rd Monday in January); President's Day (3rd Monday in February); Memorial Day (Last Monday in May); Independence Day (July 4th); Labor Day (1st Monday in September); Thanksgiving Day (4th Thursday in November); Day Following Thanksgiving Day (Friday following Thanksgiving); Christmas Day (December 25th). *When a holiday falls on a Saturday or Sunday, the preceding Friday or following Monday respectively shall be observed as a legal holiday.

When, based on required construction type or other appropriate reasons, it is necessary to do work outside the allowed construction hours, contractor shall contact the City to request a waiver from the above construction hours, using the procedure outlined in Santa Barbara Municipal Code §9.16.015 Construction Work at Night. Contractor shall notify all residents within 300 feet of the parcel of intent to carry out said construction a minimum of 48 hours prior to said construction. Said notification shall include what the work includes, the reason for the work, the duration of the proposed work and a contact number.

N-3 **Construction Equipment Sound Control.** All construction equipment, including trucks, shall be professionally maintained and fitted with standard manufacturers' muffler and silencing devices.

Attachment C – Potential Preservation Alternatives and Mitigation Options for the Los Patos Underpass Removal Project

Rincon Consultants, Inc.

209 East Victoria Street
Santa Barbara, California 93101

805 319 4092 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

July 23, 2020

Project No. 18-06252

James Faber
Project Manager
Ty Lin International
707 Wilshire Boulevard, Suite 4900
Los Angeles, CA 90017
Via email: james.faber@tylin.com

Subject: **Potential Preservation Alternatives and Mitigation Options for the Los Patos Underpass Removal Project, City and County of Santa Barbara, California**

Dear Mr. Faber:

Rincon Consultants, Inc. (Rincon) was retained to address potential preservation alternatives and mitigation options for the Los Patos Underpass Removal Project. The proposed project would remove the Los Patos Underpass (Bridge No. 51-0235; subject structure), located above the US 101 Southbound Los Patos in the City and County of Santa Barbara, California. Constructed in 1901, the Los Patos Underpass is a utilitarian railroad underpass that features support abutments and a pier constructed of local sandstone. The City of Santa Barbara (City) is seeking to remove the Los Patos Underpass, which is owned and operated by the Union Pacific Railroad (UPRR). UPRR has determined that the underpass will need to be retired because the U.S. Route 101 off-ramp at Los Patos Way is being vacated and will no longer be needed.

The Los Patos Underpass was previously evaluated by Rincon and found eligible for listing in the California Register of Historical Resources (CRHR) and as a City of Santa Barbara Landmark or Structure of Merit.[1] As a structure eligible for listing in the CRHR and for local designation, the underpass qualifies as a historical resource as defined in Section 15064.5 of the California Environmental Quality Act (CEQA) Guidelines. In December 2019, the report findings were presented to the City Historic Landmarks Commission (HLC) where the conclusions were approved by the majority of the commissioners.

In April 2020, the historical resources assessment was updated and presented to HLC for a revised review/approval. The purpose of the assessment revision was to address minor recommendations made by the HLC members and to clarify that the underpass retained one character-defining feature: the sandstone abutments and pier. The report also was modified to state that the non-character-defining features of the underpass include the wooden ties, rails, ballast, girders, wooden posts and cable railing. The HLC motioned to continue a vote on approving the report, due to the majority belief that the steel

[1] Carmack, Shannon and Susan Zamudio-Gurrola. 2019. *Historic Structure/Site Report for Los Patos Way Off-Ramp Underpass, City and County of Santa Barbara, California*. Prepared for T.Y. Lin International by Rincon Consultants, Inc.

girders should be included as a character-defining feature of the underpass. As a result of the HLC's findings that the steel girders should be included as a character-defining feature of the underpass, it is anticipated that the project will result in the demolition of the underpass and that an Environmental Impact Report (EIR) is required to avoid and address significant adverse impacts to the historical resource.

This memorandum was prepared at the request of the City Public Works Department to assess potential preservation alternatives and mitigation measure options as part of the project's ongoing environmental review process. The effort was overseen by Shannon Carmack, Rincon Principal and Architectural History Program Manager, with assistance from Architectural Historians Steven Treffers, M.H.P. and Susan Zamudio-Gurrola, MHP. Ms. Carmack, Mr. Treffers and Ms. Zamudio-Gurrola exceed the Secretary of the Interior's *Professional Qualification Standards* (PQS) for architectural history and history.

Preservation Alternatives

The Los Patos Underpass would be demolished as part of the proposed project. As a property which has been found eligible for local and state designation, the underpass is considered a historical resource and its demolition would result in a significant impact as defined by Section 15064.5 of the CEQA Guidelines. When significant impacts are identified during the CEQA review process, Section 15126.6 of the CEQA Guidelines requires the project EIR explore a range of reasonable alternatives which would feasibly attain most of the basic project objectives, but would avoid or substantially lessen any of its significant effects. Every conceivable alternative to a project need not be considered, rather a reasonable range of potentially feasible alternatives should be assessed to inform decision making and assist in public participation. The City as the lead agency is responsible for selecting a range of project alternatives and is required to publicly disclose its reasoning for selecting those alternatives. The following discussion presents four potential alternatives to provide the City with preliminary information regarding the development of alternatives to support the EIR and compliance with Section 15126.6 of the CEQA Guidelines.

Alternative 1. Preservation in Place

This alternative would entail the retention and preservation of the Los Patos Underpass in-situ. The structure would be retained in its current location and would continue to carry rail but would no longer operate as an active underpass due to the closure of the Los Patos offramp from U.S.-101. The structure would be kept in its current location and with the retention and preservation of the sandstone abutments and pier, and steel girders. Although the structural feasibility of this approach is currently unknown, this alternative assumes these physical features would able to be preserved in a manner consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (SOI Standards).

Impacts: Because the subject structure would be preserved in place in compliance with the SOI Standards, it would retain the physical characteristics which convey its significance. It would therefore avoid impacts to a historical resource per Section 15064.5(b) of the CEQA Guidelines.

Ability to Meet Project Objectives: The UPRR has determined the existing underpass will need to be removed due to increased maintenance and structural concerns; therefore this alternative would not meet the objectives of the project.

Alternative 1a. Partial Preservation

This alternative would entail the partial preservation of the Los Patos Underpass. The steel girders would be removed and replaced with a modern superstructure and the sandstone abutments and pier would

be retained and preserved to the greatest extent feasible. It is assumed that some degree of alteration to the sandstone abutments and pier would be necessary to accommodate the removal and replacement of the rail superstructure.

Impacts: The steel girders have been found to be a character-defining feature of the Los Patos Underpass. They, in conjunction with the sandstone abutments and pier, convey the historical significance of the underpass. Therefore, the removal of the steel girders and replacement with a modern superstructure, would negatively alter the physical characteristics that justify the state and local eligibility of the structure. As a result, this alternative would result in a significant and unavoidable impact under CEQA.

Ability to Meet Project Objectives: Although this alternative would potentially reduce the impact to the historic structure by retaining a portion of it, this alternative would still result in a significant and unavoidable impact to a historical resource. Further, this alternative would not meet the project objective of removing the underpass.

Alternative 2. Full Relocation

Under this alternative, the Los Patos Underpass, including the steel girders and sandstone abutments and pier, would be relocated to a yet-to-be determined receiver site. It is presumed the underpass could not be relocated to another crossing within the existing rail line as it may not be permitted by UPRR due to logistical and safety concerns. A site would therefore need to be selected which could include a pedestrian crossing or distinct location within a park. It is presumed a technical study would be prepared which would confirm relocation was feasible and the underpass and its components would be transported whole or dissembled and assembled on site. Once relocated, the underpass would be rehabilitated, and interpretive signage would be installed to present historic information about the underpass.

Impacts: In accordance with CEQA, relocation of an historical resource may avoid an adverse impact to a resource provided that the new location is compatible with the original character and use of the historical resource and the resource retains its eligibility for listing on the California Register (14 CCR Section 4852(d)(1)). The underpass serves a very specific function as a railroad underpass, so there are no feasible options for “adaptive reuse” and identifying a compatible site with similar conditions is not likely. If the underpass was to be reused as a pedestrian crossing, it would lack the association of rail line from which it derives much of its significance; a consideration that would be further amplified by its placement within an incompatible location such as a park. Its integrity of setting, location, feeling and association would be diminished as a result of the relocation, leaving it without sufficient historic integrity to convey its significance as a historical resource. The underpass would therefore be materially impaired, and the project would still result in a significant and unavoidable impact under CEQA.

Ability to Meet Project Objectives: Although this alternative has the potential to meet the project objectives, it would still result in a significant and unavoidable impact to a historical resource.

Alternative 2a. Partial Relocation

Under this alternative, the sandstone abutments and pier would be relocated to a receiver site. Given that the underpass would not move without its superstructure, it is presumed the new location would be a park or similar site. It is further presumed a technical study would be prepared which would confirm relocation was feasible and the stone abutments and pier components would be transported whole or dissembled and assembled on site. Once relocated, the underpass components would be rehabilitated, and interpretive signage would be installed to present historic information about the underpass.

Impacts: As discussed above, relocation of an historical resource may avoid an adverse impact to a resource provided that the new location is compatible with the original character and use of the historical resource and the resource retains its eligibility for listing on the California Register (14 CCR Section 4852(d)(1)). The partial relocation of the underpass to a park would change its use and setting. This alternative would not result in any real use of the underpass; rather it would be presented as a relic, which would work to tell the history of its design and associations with the history of Santa Barbara. Nonetheless, it would no longer retain integrity or the physical characteristics that justify its eligibility for state and local designation. This alternative therefore would result in a significant and unavoidable impact under CEQA.

Ability to Meet Project Objectives: Although this alternative has the potential to meet the project objectives, it would still result in a significant and unavoidable impact to a historical resource.

Mitigation Measure Options

The following options were explored as potential measures to mitigate impacts resulting from the demolition of the Los Patos Underpass. Although none of these mitigation measures would be capable of mitigating impacts to a level of less than significant, they would mitigate impacts to the greatest extent feasible.

Historic American Engineering Record (HAER) Documentation

Impacts resulting from the demolition of the subject structure could be minimized through archival documentation of the structure in as-built and as-found condition. The City would ensure that documentation of the structure would be completed prior to its demolition in the form of Historic American Engineering Record (HAER) documentation. This would include a historical report consistent with the requirements outlined in the *Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation: HAER Guidelines for Historical Reports*. The written narrative would include: a historical context covering the history of sandstone construction and the development of the railroad in Santa Barbara; a physical description of the underpass; and available information on the underpass' design and history. The documentation would include large-format, black-and-white photographs including elevations and significant details such as the sandstone block post and abutments and steel-riveted girders. Information in the existing historic structure/site report may be utilized and supplemented by additional historic research utilizing primary and secondary source information, as needed. UPRR should be consulted for any available information, drawings or images. The documentation should be completed by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards (PQS) for History and/or Architectural History.[2] The documentation package should be submitted to the Library of Congress (LOC) in accordance with National Park Service and LOC guidelines. An archival-quality copy of the documentation should be submitted to the City of Santa Barbara Planning Department/Urban Historian, the Santa Barbara Historical Museum Gledhill Library, and the Santa Barbara Public Library main branch, where it would be available to local researchers. Completion of this mitigation measure would be monitored and enforced by the City of Santa Barbara.

[2] National Park Service, *Archaeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines: Professional Qualifications Standards*, electronic document available at http://www.cr.nps.gov/local-law/arch_stnds_9.htm (accessed April 4, 2017).

Reconstruction/Replication

Reconstruction/replication of the underpass as near as possible to its original location could be considered as a potential mitigation option. Reconstruction is defined as "the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure or object for the purpose of replicating its appearance at a specific period of time and in its historic location."[3] *The Secretary of the Interior's Standards for the Treatment of Historic Properties* states when a contemporary depiction is required to understand and interpret a property's historic value; when no other property with the same associative value has survived; and when sufficient historical documentation exists to ensure an accurate reproduction, reconstruction may be considered as a treatment. However, because of the potential for historical error in the absence of sound physical evidence, this treatment can be justified only rarely and thus, is the least frequently undertaken of the four treatments of historical properties.[4] Thus, if undertaken, reconstruction of the Los Patos Underpass should rely on detailed physical and documentary evidence such as HAER documentation to ensure the reconstruction is as accurate as possible. Work should follow the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The cost and availability of materials to authentically replicate the structure may create an obstacle. Because of the large-scale nature of an overpass structure, a reconstruction effort may be constrained by modern code and safety requirements.

Development of Interpretive Plan

An interpretive plan could be developed focusing on the significant historic themes associated with the Los Patos Underpass, particularly its design and construction, and the history of the railroad and sandstone construction in the City of Santa Barbara. The plan should include an interpretive display or other suitable interpretive approaches developed by a PQS-qualified historic preservation professional in coordination with a graphic designer and approved by the City of Santa Barbara. The interpretive display should be installed at an appropriate site such as the City-owned Andree Clark Bird Refuge, the open space park adjacent to the UPRR alignment. The interpretive plan should be completed and approved by the City prior to demolition of the underpass, and the display should be installed on-site within one year of the completion of the proposed project. The interpretive display should remain in public view for a minimum of ten years, and if removed, appropriately archived.

Interpretive Video

An interpretive video could be created by a qualified videographer providing a visual overview of the Los Patos Underpass with a focus on its design, construction, materials, setting and history. The video shall include an overview of the history of the railroad and sandstone construction in the City of Santa Barbara. A copy of the video should be distributed to the City of Santa Barbara Planning Department/Urban Historian, the Santa Barbara Historical Museum Gledhill Library, and the Santa Barbara Public Library main branch.

Interpretive Website

A dedicated website could be created to provide public access to the documentary material produced such as the HAER documentation report and archival photographs, the interpretive video, and/or

[3] Grimmer, Anne E. 2017. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings.* National Park Service 2017. Washington, D.C.
[4] Ibid.

information from the interpretive display. The website should remain active for a minimum of 5 years and be hosted by the City of Santa Barbara.

Salvaging of Materials for Reuse

The Los Patos Underpass's ashlar square-cut sandstone, a significant material and character-defining-feature of the structure, could be salvaged for re-use, such as: in the interpretive display; relocation to the new bridge at Cabrillo Boulevard as an aesthetic feature; as facing on abutments or center pier for a different undercrossing in a more prominent location; or another appropriate use such as a work of public art. The removal work should be completed by a professional with experience removing historic stone to ensure that the sandstone can be reused.

Conclusion

As discussed above, the Los Patos Underpass was previously recommended eligible for listing in the CRHR and as a City of Santa Barbara Landmark or Structure of Merit and is considered a historical resource as defined by CEQA. Demolition of the structure would constitute a significant adverse impact to cultural resources because it would materially impair the significance of an historical resource. One of the preliminary alternatives would have the potential to avoid significant impacts but would not meet the project objectives as currently defined. Proposed measures would help to mitigate impacts to the greatest extent feasible however impacts would remain significant and unavoidable.

Should you have any questions or comments regarding this report, please do not hesitate to contact me at 501-239-5860 ext. 102, or scarmack@rinconconsultants.com

Sincerely,

Rincon Consultants, Inc.

Steven Treffers, MHP
Senior Architectural Historian

Shannon Carmack
Principal, Architectural History Program Manager

Appendix B

Biological Resources Assessment and Addendum

Rincon Consultants, Inc.

209 East Victoria Street
Santa Barbara, California 93101

805 319 4092 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

April 25, 2024
Project No: 18-06252/16-02446

James Faber
Project Manager
T.Y. Lin International
707 Wilshire Boulevard, Suite 4900
Los Angeles, California 90017
Via email: james.faber@tylin.com

Subject: **Los Patos Bridge Replacement Project Biological Resource Assessment Report**

Dear Mr. Faber:

Rincon Consultants, Inc. (Rincon) has prepared this Biological Resources Assessment (BRA) report for the Los Patos Bridge Replacement Project (Project) located in the City of Santa Barbara, California. The purpose of this BRA is to document the existing conditions of the project site and to evaluate the potential for impacts to special-status biological resources for compliance with the City's California Environmental Quality Act (CEQA) review process.

Project Location and Description

The Project is in the City of Santa Barbara in southern Santa Barbara County, as well as in the Coastal Zone (Attachment A, Figure 1). The proposed Project is along Los Patos Way, directly off the southbound exit 95 from the U.S. 101 Highway A Union Pacific Railroad (UPRR) underpass crosses Los Patos Way in the northern portion of the site as shown in (Attachment A, Figure 2). The Project site consists of right-of-way owned by Caltrans, UPRR, and the City of Santa Barbara. The Project site is bordered to the north by U.S. 101 Highway, to the east by commercial properties and Cabrillo Boulevard, and to the south and west by the Andree Clark Bird Refuge (Refuge). The Project site is within Section 13, Township 4 North, and Range 27 West, San Bernardino meridian, and is depicted on the U.S. Geographic Survey (USGS) *Santa Barbara, California* 7.5-minute topographic quadrangle.

The proposed Project involves the removal of the Los Patos Way Off-Ramp Underpass (Los Patos Underpass), Bridge No. 51-0235. The Los Patos Underpass is located on Santa Barbara County Assessor's Parcel Number (APN) 017-010-079 south of, and adjacent to, U.S. 101 Highway. Located at UPRR milepost 372.5 and Caltrans milepost 11.65, the bridge carries railroad track over the Los Patos Underpass of southbound U.S. 101 Highway. The Los Patos Underpass is currently owned and operated by UPRR. UPRR determined that portions of the subject structure, including the abutments, center pier, girders, and decking, will need to be removed and replaced with imported solid fill and a small culvert or drainpipe through the fill to convey minor flows. The railroad track would remain in the same location and would be placed on the new fill.

UPRR has indicated the removal of this underpass is necessary to complete the Cabrillo Roundabout Project. The Cabrillo Roundabout Project is a mitigation measure for the U.S. Highway 101 High Occupancy Vehicle Lane (U.S. 101 HOV) Project and must be completed before the U.S. 101 HOV project

can be completed. UPRR indicated the necessity of the removal of the underpass and closing of the Los Patos Way off-ramp as a safety measure. The existing underpass is a low-clearance structure (non-standard vertical clearance) and has caused numerous shutdowns to railroad operations as several trucks have hit the structure.

The Project will also involve improvements within the existing Los Patos Way right-of-way, including a new cul-de-sac, a 16-foot-wide gravel maintenance road, driveway access, and a 6-foot-high sliding gate (including an asphalt pad northeast of the proposed maintenance road) as shown in Attachment F. Page 1 of Attachment F includes a preliminary tree mitigation plan and an overview of the proposed cul-de-sac and gravel maintenance road. Page 2 of Attachment F includes a proposed layout detail sheet that depicts the location of the proposed maintenance road and adjacent landscaping, sliding gate, driveway access, and cul-de-sac; as well as the existing road and landscape buffer footprint of Los Patos Way and the existing cul-de-sac and associated curb. The proposed maintenance road, landscaping, and driveway access are located entirely within the existing road and landscape buffer footprint of Los Patos Way. The proposed cul-de-sac is also located entirely within the footprint of the existing cul-de-sac on Los Patos Way, and the proposed curb will match the existing curb. The proposed 6-foot-high sliding gate and asphalt pad are the only improvements located outside of the existing road and landscape buffer footprint of Los Patos Way but are within existing ornamental landscaping. As such, the proposed improvements are almost entirely within the existing development footprint.

Methodology

The biological resources assessment consisted of a review of relevant literature followed by a field reconnaissance survey and preparation of this report. The analysis of potential presence of special-status species was based on the literature review and field survey designed to assess habitat suitability and presence or absence of special-status species.

Literature Review

Prior to conducting a biological field survey, Rincon reviewed the project plans, aerial photographs, and previous historical land use of the study area. Queries of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2023) and the CNPS Online Inventory of Rare and Endangered Plants (CNPS 2023) were conducted to obtain comprehensive information regarding state and federally listed species as well as other special-status species that have been previously recorded within a 5-mile radius of the Project site. For CNPS query purposes, a 6 USGS quadrangle search area centered on the Project site was used.

In addition, regionally occurring sensitive biological resources and geological information related to the Project site were researched from the following sources:

- United States Fish and Wildlife Service (USFWS) Critical Habitat Portal (USFWS 2023)
- Biogeographic Information and Observation System (BIOS) (CDFW 2023a)
- CDFW Special Animals List and Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2023b)
- Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2023)
- Monarch Butterfly Overwintering Sites in Santa Barbara County, California (D. Meade, Ph.D. August 1999).

Field Reconnaissance Survey

Rincon biologists Kendra Bonsall and Yuling Huo conducted a reconnaissance-level field survey on August 18, 2021, to document the existing site conditions and to evaluate the potential for presence of sensitive biological resources including sensitive plant and animal species, sensitive plant communities, potentially jurisdictional waters of the U.S. and wetlands, and habitat for federally and state protected species. The study area included the proposed Project site plus a 100-foot buffer (Attachment A, Figure 3). Weather conditions during the survey included temperatures of 66-67 degrees Fahrenheit, with winds up to five miles per hour, and overcast skies with good visibility. The survey was conducted on foot and by remote observation with 10x30 binoculars. Biological resources encountered within the study area were recorded.

During the survey, an inventory of plant and animal species observed was compiled. Plant species nomenclature and taxonomy follows *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012). All species encountered were noted and identified to the lowest practical taxonomic level. Vegetation and land cover within the study area was characterized and mapped. The vegetation classification used for this analysis is based on *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009) (MCV) but modified as needed to accurately describe the existing vegetation communities on-site.

The habitat requirements for each regionally occurring special-status species identified from the database query were assessed and compared to the type and quality of the habitats observed within the Project site during the site visit. The field reconnaissance survey was conducted to make an initial determination regarding the presence or absence of terrestrial biological resources including plants, birds and wildlife.

Jurisdictional Delineation

As part of the field surveys, Rincon biologist Julie Love and Yuling Huo conducted a jurisdictional delineation in the study area on September 2, 2021. The entire study area was surveyed for potential wetland and non-wetland jurisdictional areas, including streambeds and riparian resources. Access was limited to the Project site and publicly accessible roads. The Project site was observed via a pedestrian survey. Current methods, guidelines, and policies were used to identify and delineate potential federal, state, and locally-defined aquatic- features that may be under the jurisdiction of the United States Army Corps of Engineers (USACE), CDFW, Central Coast Regional Water Quality Control Board (CCRWQCB), or the City and California Coastal Commission (CCC). The study area was surveyed for any streams and other hydrologic features that might constitute Waters of the U.S. or Waters of the State, including those having a defined channel, bed, and banks and any associated riparian habitat that could be subject to CDFW jurisdiction, as well as one-parameter coastal wetlands. A detailed description of the regulatory background is provided in Attachment D.

Extents of potential jurisdictional features, centerlines, and photo locations in the study area were mapped using a Global Positioning System (GPS) with sub-meter accuracy. Note that final jurisdictional determinations of the boundaries of waters and riparian habitats are made by each agency, typically at the time that authorizations to impact such features are requested.

Vegetation community mapping and documentation of on-site plant species were further refined using the same methodology as used during the field reconnaissance survey.

Existing Conditions

The Project site is located along a developed road (Los Patos Way). A bridge that carries a railroad runs across the Project site at the northern portion directly south of U.S. Highway 101. The Project site is mostly developed and surrounded by numerous non-native plant species, including ornamental and eucalyptus trees. The site is located approximately 1500 feet northeast of the salt marsh habitat of the Refuge lagoon and is considered an Environmentally Sensitive Habitat Area (ESHA) per the City's Coastal Land Use Plan (CLUP, City 2019). Commercial structures are present east of the Project site.

Topography and Soils

Topography at the site is generally flat with elevations generally ranging from approximately 3.7 to 4.6 meters (approximately 12-15 feet) above mean sea level. The study area is situated on soils mapped as the Milpitas-Positas fine sandy loams, 2 to 9 percent slopes (NRCS 2023). This series is generally found on terraces and consists of very deep, moderately well drained clay loam formed in mixed alluvium and is not listed as hydric.

Hydrology

The study area is located within the Mission Creek-Frontal Santa Barbara Channel (HUC-12 No. 180600130203) sub watershed (USGS 2023b). The National Hydrography Dataset (NHD) and National Wetlands Inventory (NWI) do not identify any wetlands or waters within the study area. The NHD and NWI identifies palustrine and lacustrine wetlands approximately 30 feet south of the study area associated with the Refuge lagoon. However, on-site surveys indicate estuarine wetlands are present outside of the study area along the edge of the Refuge lagoon as further described in the *Jurisdictional Waters and Wetlands* section.

Vegetation Communities and Land Covers

The study area contains three vegetation communities (quailbush scrub, lemonade berry scrub, and eucalyptus groves) and two land cover types (ornamental landscaping and developed land). Vegetation communities and land covers within the Study Area are illustrated in Attachment 1, Figure 3. A complete list of plant species by vegetation community observed in the Study Area, as well as their wetland indicator status, are included in **Error! Reference source not found.**.

Table 1. Plant Species Observed Within the Study Area

				Vegetation Communities			
Scientific Name	**Common Name**	**Native vs Non-native[1]**	**Wetland Indicator Status[2]**	**Quailbush Scrub**	**Lemonade Berry Scrub**	**Eucalyptus Groves**	**Ornamental**
Acacia longifolia	golden wattle	Non-native	UPL				x
Artemisia californica	California sagebrush	Native	UPL		x		
Atriplex lentiformis	quailbush	Native	FACU	x			
Baccharis pilularis	coyote brush	Native	UPL	x			
Cortaderia jubata	Pampas grass	Non-native	UPL				x
Delosperma litorale	ice plant	Non-native	UPL				x

Scientific Name	Common Name	Native vs Non-native[1]	Wetland Indicator Status[2]	Vegetation Communities			
				Quailbush Scrub	Lemonade Berry Scrub	Eucalyptus Groves	Ornamental
Elymus condensatus	giant wildrye	Native	FACU		x		
Encelia californica[3]	California sunflower	Native	UPL	x	x		
Eucalyptus cladocalyx	sugar gum	Non-native	UPL			x	
Frankenia salina	alkali heath	Native	FACW	x	x		
Lactuca serriola	prickly lettuce	Non-native	FACU				
Malosma laurina	laurel sumac	Native	UPL				
Melaleuca spp.	bottlebrush	Non-native	UPL		x		
Pinus spp.	ornamental pine	Non-native	UPL				x
Platanus racemosa	Western sycamore	Native	FAC	x			
Prunus ilicifolia ssp. *lyonii*	Island cherry	Native	UPL	x			
Quercus agrifolia	coast live oak	Native	UPL	x			
Rhus integrifolia	lemonade berry	Native	UPL	X	x		
Ricinus communis	castor bean	Non-native	FACU				
Salix exigua	narrowleaf willow	Native	FACW	x			
Sambucus nigra	blue elderberry	Native	FACU	x			

[1] Jepson 2023
[2] USACE 2018
[3] Most individual plants were dead
OBL = Obligate Wetland, FACW = Facultative Wetland, FAC = Facultative, FACU = Facultative Upland, UPL = Obligate Upland

Quailbush Scrub

Quailbush scrub (*Atriplex lentiformis* Shrubland Alliance) is a native vegetation community. In general, the shrub canopy is dominant or co-dominant with quailbush and California sagebrush (*Artemisia californica*), coyote brush (*Baccharis pilularis*), California sunflower (*Encelia californica*), or lemonade berry (*Rhus Integrifolia*). Emergent trees (native and non-native) may be present at low cover (Sawyer et al. 2009). Quailbush is a National Wetland Plant List facultative upland (FACU) species, meaning it is equally likely to occur in non-wetlands but may frequently occur in standing water or saturated soils (USACE 2020).

Quailbush scrub is present outside of the Project site in the southern portion of the study area. Although California sunflower was the dominant species, the majority of the individuals were observed to be dead. As such, quailbush is now dominant in the shrub canopy, which is interspersed with coyote brush, lemonade berry, California sagebrush, and narrowleaf willow (*Salix exigua*). Emergent trees include coast live oak, California sycamore (*Platanus racemosa*), and Island cherry (*Prunus ilicifolia* ssp. *lyonii*). Alkali heath (*Frankenia salina*) is present in small quantities in the herbaceous layer.

Lemonade Berry Scrub

Lemonade berry scrub (*Rhus integrifolia* Shrubland Alliance) is a CDFW sensitive natural community. In general, the shrub canopy is dominant or codominant with lemonade berry, California sagebrush, and bush sunflower. Emergent trees may be present at low cover, including coast live oak (Sawyer et al. 2009).

Lemonade berry scrub is present outside of the Project area in the southeastern edge of the study area. Lemonade berry is dominant in the shrub canopy and interspersed with California sagebrush and dead California sunflower. Emergent non-native ornamental bottlebrush trees (*Melaleuca* sp.) are present, and alkali heath is present in small quantities in the herbaceous layer.

Eucalyptus Groves

Eucalyptus groves (*Eucalyptus* spp. Semi-Natural Alliance) is a semi-natural vegetation community. The tree canopy is dominant with eucalyptus, specifically sugar gum (*Eucalyptus cladocalyx*) is dominant on-site. The shrub and herbaceous layer is sparse to intermittent (Sawyer et al. 2009).

Eucalyptus groves are present directly south of the Project site along Los Patos Way. Some of the eucalyptus tree canopies overhang the Project site. The understory is sparse and mostly comprised of eucalyptus leaves. Quailbush is present in small quantities in the eastern portion of the grove, northeast of the lemonade berry scrub.

Ornamental Landscaping

Ornamental landscaping is characterized by lands that support planted, ornamental trees and shrubs with sparse herbaceous understory. Within the study area, ornamental landscaping is present throughout the study area and concentrated north of Los Patos Way and surrounding the railroad. Species include herbaceous plants such as ice plant (*Carpobrotus edulis*), pampas grass (Cortaderia selloana) and various non-native, ornamental trees. Some native species are scattered throughout the ornamental landscape along the slopes at the base of the railroad and outside of the Project boundary, including coast live oak and laurel sumac (*Malosma laurina*). A single coast live oak is located within the Project boundary on the north side of the railroad tracks. This landcover type is not described in *A Manual of California Vegetation* (Sawyer et al. 2009), as it is not a naturally occurring vegetation community.

Developed

This land cover type is typically devoid of vegetation and comprises hardscapes/buildings/roads. Developed land (Highway 101, paved roads, a railroad, and commercial buildings) are present throughout and adjacent to the Project site. Recreational dirt pathways are present in the study area south of the Project site near the Refuge.

Jurisdictional Waters

Based on the jurisdictional delineation, no potentially jurisdictional waters are present within the Study Area. The vegetation within the lagoon margin is predominantly quailbush, which is non-hydrophytic (FACU) species, meaning it is equally likely to occur in non-wetlands but may frequently occur in standing water or saturated soils (USACE 2020). Some hydrophytic plant species that were present included emergent trees such as California sycamore (Facultative [FAC]), narrowleaf willow (Facultative Wetland [FACW]) in the shrub layer, and alkali heath (FACW) in the herbaceous layer. FAC species occur in a variety of habitats, including wetland and mesic to xeric non-wetland habitats but commonly occur in standing water or saturated soils. FACW species nearly always occur in areas of prolonged flooding or require standing water or saturated soils but may occur in non-wetlands (USACE 2020). Upland species were scattered throughout the area, including coyote brush and California sunflower (most of which was dead); and emergent trees such as coast live oak and Island cherry were also present. This particular area where hydrophytic vegetation has established along the margin of the lagoon is a small hillslope

that rises approximately 5 feet above the lower edges of the lagoon. No water was observed in the vegetated margin and would not be expected due to the convex landform of the hillslope. Soils were comprised of sandy loam. The vegetated hillslope constitutes a landform that is not suitable for the formation of three-parameter wetlands. The area exhibits a predominance of non-hydrophytic upland vegetation and is therefore not considered a wetland as defined by the Coastal Act. No potentially jurisdictional waters are present within the study area, as shown on Attachment A, Figure 4. Representative photographs of the study area observed are included in Attachment B.

The vegetated hillslope at the lagoon edge lacked an ordinary high-water mark (OHWM); as such, non-wetland waters of the U.S. were not present. Although no wetland indicators were observed within the vegetated hillslope and it does not constitute a landform that could support three -parameter wetlands, a wetland determination sample point (SP) was evaluated to confirm if USACE wetland waters of the U.S. were present within the study area (location indicated on Figure 4). Potential wetland features were evaluated for the presence of wetland indicators: hydrophytic vegetation, hydric soils, and wetland hydrology in accordance with the *Wetlands Delineation Manual* (USACE 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a). The USACE Arid West 2020 Regional Wetland Plant List was used to determine the indicator status of the examined vegetation by the following indicator status categories: Upland (UPL), Facultative Upland (FACU), FAC, FACW, and Obligate Wetland (OBL) (USACE 2020). Sample Point 1 (SP-1) was situated north of a dirt trail on the small hillslope. Although some hydrophytic vegetation was present, the predominant vegetation was FACU, the upland landform was not suitable for formation of wetlands, and no hydric soil indicators or wetland hydrology indicators were present. As such, it was determined that USACE wetland waters of the U.S. were not present. The USACE Wetland Determination Data Form is provided in Attachment E; note that this form lists quailbush as a FAC species, however the species has been updated to FACU based on the USACE Arid West 2020 Regional Wetland Plant List.

The vegetated hillslope does not constitute CDFW jurisdiction because it is associated with a brackish lagoon, and not the type of water body for a lake or streambed.

The vegetated hillslope does not constitute CCRWQCB wetland waters of the state based on the reasons described above for wetland waters of the U.S. In addition, the vegetated hillslope does not constitute CCRWQCB non-wetland waters of the state because the vegetation is not considered riparian (due to the fact that it is associated with a lagoon).

General Wildlife

The study area provides suitable habitat for wildlife species that commonly occur in urban areas. The wildlife species detected onsite are common, widely distributed, and adapted to living in proximity to human development. Common avian species in the study area include Anna's hummingbird (*Calypte anna*), house finch (*Haemorhous mexicanus*), and American crow (*Corvus brachyrhyncos*). The wildlife species observed within the study area are included in Table 2.

Table 2. Wildlife Species Observed Within Study Area

Scientific Name	Common Name	Native vs Non-native
Wildlife		
Haemorhous mexicanus	house finch	Native
Calypte anna	Anna's hummingbird	Native

Scientific Name	Common Name	Native vs Non-native
Corvus brachyrhynchos	American crow	Native
Sayornis nigricans	black phoebe	Native
Pipilo maculatus	spotted towhee	Native
Aphelocoma californica	California scrubjay	Native
Sceloporus occidentalis	Western fence lizard	Native
Sylvilagus audubonii	Desert cottontail	Native

Impact Analysis and Mitigation Measures

This section discusses the possible adverse impacts to biological resources that may occur from implementation of the proposed Project and suggests appropriate mitigation measures that would reduce those impacts to less than significant levels. Criteria used to evaluate potential project-related impacts to biological resources are presented in the Section Guidelines for Determining CEQA Significance.

Guidelines for Determining CEQA Significance

The following threshold criteria, as defined within the *CEQA Guidelines*, Appendix G – Initial Study Checklist, are used as the basis to evaluate potential environmental effects. Based on these criteria, a proposed Project would have a significant effect on biological resources if it would:

a) *Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.*

b) *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service.*

c) *Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.*

d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.*

e) *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.*

f) *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.*

Special-Status Species

Local, state, and federal agencies that regulate special-status species may require an assessment of their presence or potential presence to be conducted on site prior to the approval of proposed development

on a property. Assessments for the potential occurrence of special-status species are based upon known ranges, habitat preferences for the species, species occurrence records from CNDDB, species occurrence records from other sites in the vicinity of the study area, and previous reports for the site. The potential for each special-status species to occur in the study area was evaluated according to the following criteria:

- **Not Expected.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last 5 years).

For the purpose of this report, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the ESA; those listed or candidates for listing as Rare, Threatened, Endangered under CESA or the Native Plant Protection Act; those identified as Fully Protected under Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code (CFGC); Species of Special Concern and Watch List species identified by the CDFW; and plants occurring on Ranks 1 and 2 of the CNPS California Rare Plant Rank (CRPR) system per the following definitions:

- **List 1A** = Plants presumed extinct in California
- **List 1B.1** = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- **List 1B.2** = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened)
- **List 1B.3** = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known)
- **List 2** = Rare, threatened or endangered in California, but more common elsewhere

Species with Rare Plant Ranks 3 and 4 were not evaluated. These rankings reflect insufficient information to make a ranking determination (Rank 3) or a limited distribution in California (Rank 4). Because the documented rarity of these species does not merit inclusion in Ranks 1 or 2, these species are not likely to meet the criteria for listing as Rare, Threatened, or Endangered under CESA and therefore do not require consideration as special-status species under CEQA.

Based on a query of the CNDDB and CNPS, there are 26 special-status plant species and 33 special-status wildlife species documented within a 5-mile CNDDB radius and 6-quad CNPS search of the Project site. All 57 species were evaluated for potential to occur within the study area and results of this evaluation can be found in Appendix C. No special-status plant or animal species were detected during the field reconnaissance survey conducted on August 18, 2021 or the jurisdictional delineation survey on September 2, 2021. A review of the City of Santa Barbara CLUP (City 2019) did not identify any habitats on site for threatened or rare species, although the Refuge is identified as suitable habitat for special-status species. Additionally, no federally regulated plant species are expected to occur on the Project site given the disturbed nature of the site, the high degree of urbanization within the vicinity of the Project site, and the specific soil types and/or plant communities each species requires. No native vegetation communities are present in the Project site. The quailbush scrub and lemonade berry scrub native vegetation communities are present in the southern portion of the study area outside of the Project site and have the potential to support special status plant species. The Project is not anticipated to indirectly impact special status plants potentially occurring outside of the Project site, as the Project is anticipated to be entirely contained within developed land, and the eucalyptus trees provide a natural buffer between the site and the quailbush scrub community. Based on the above species assessment, no impacts to special-status plant species are expected.

Of the 33 wildlife species identified as candidate, sensitive or special-status species in local or regional plans, policies or regulations, or by CDFW or USFWS; 11 species have a low potential to occur on the Project site as transients. Special-status wildlife species typically have specific habitat requirements that include vegetation communities, elevations, topography, and availability of primary constituent elements (i.e., space for individual and population growth, breeding, foraging, and shelter). Developed areas and roads occur within the Project site and the U.S. Highway 101 is directly adjacent to the Project site. The existing developed areas and associated disturbances to wildlife limit the quantity and quality of suitable habitat for special-status wildlife and reduce the ability for self-sustaining special-status wildlife species populations to occur.

Multiple special-status animals have been observed in the salt marsh habitat at the Refuge, approximately 150 feet southwest of the Project site. The Refuge supports as many as 192 bird species, including migratory waterfowl and wading birds, and the federally and state endangered California least tern (*Sternula antillarum*) and bank swallow (*Riparia riparia*) have been found near here. However, special-status wildlife species that may occur in the Refuge are generally not anticipated to occur on the Project site due to the highly disturbed/developed nature of the site and lack of foraging/nesting habitat. No special-status wildlife species were determined to have a high or moderate potential to occur on the site due to lack of suitable habitat. Six special-status avian species, including the state threatened California black rail (*Laterallus jamaicensis coturniculus*) and state endangered Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), have a low potential to occur transiently on site. Somewhat suitable foraging habitat is present for these species in the quailbush scrub and lemonade berry scrub habitat within the study area, and suitable breeding and foraging habitat is present in the saltmarsh/open water habitat of the Refuge lagoon; however, no suitable foraging or breeding habitat is present on site. One special-status avian species, Cooper's hawk (*Accipter cooperii*) has a low potential to breed and forage on and adjacent to the site in the oak trees in landscaped areas. The Project is not anticipated to directly impact transient special status avian species associated with the Refuge as they are highly mobile and likely adapted to avoidance of vehicular and pedestrian traffic on Los Patos Way. The eucalyptus row serves as a visual buffer between the Project site and the quailbush scrub and the Refuge, however increased noise/dust/lighting from construction has a potential to indirectly impact

avian species associated with the Refuge that may forage within the study area. Cooper's hawk has the potential to be directly and indirectly impacted by construction. The impacts to special status avian species are anticipated to be less than significant with the implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3 below.

Monarch butterfly overwintering roosts are considered ESHA by the CLUP. Monarch roosts observed in the Southern California region are generally made up of a stand of eucalyptus trees that contain an open understory surrounding a riparian zone. The Project site does not contain the preferred monarch roosting habitat and is not identified in the document "Monarch Butterfly Overwintering Sites in Santa Barbara County, California" (Meade 1999) or in the CLUP (City 2019). Therefore, monarch butterflies are not expected to roost onsite but may have a low potential to occur transiently on site.

Northern California and California legless lizards and coast patch-nosed snake are CDFW species of special concern and have a low potential to occur transiently on site. Suitable habitat is present in the quailbush scrub and lemonade berry scrub south of the Project site, but the Project site is mostly developed and does not provide suitable soils or brush cover. Direct and indirect impacts such as injury or morality or disturbance from noise/dust/lighting could occur if these species are present on site as transients during ground disturbance and/or vegetation removal. The impacts to special status reptiles are anticipated to be less than significant with the implementation of Mitigation Measure BIO-4.

The Project is not expected to have a substantial adverse effect on any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the CDFW or the USFWS with the implementation of Mitigation Measures BIO-1, BIO 2,BIO 3, and BIO-4.

The Project site contains habitat that can support nesting birds, including raptors protected under the CFGC and the MBTA. Furthermore, CDFW protects raptor nests regardless of nesting status (active vs. inactive). The Project could adversely affect raptors and other nesting birds if construction occurs while they are present on or adjacent to the site, through direct mortality or abandonment of nests. The loss of a nest due to construction activities would be a violation of the MBTA and CFGC 3503 et. seq. Implementation of Mitigation Measure BIO-1, BIO-2, BIO-3, and BIO-4 would help ensure compliance with the MBTA and CFGC.

Mitigation Measures

BIO-1 *Worker's Environmental Awareness Training.* Prior to initiation of construction activities (including staging and mobilization), a qualified biologist will conduct a Worker's Environmental Awareness Program (WEAP) training for all construction personnel. The training will aid workers in recognizing special-status species, native birds, protected trees, ESHA, or other biological resources that may occur in the construction area. The specifics of this program should include identification and habitats of special-status species with potential to occur in the study area, description of the regulatory status and general ecological characteristics of sensitive resources, review of the limits of construction, and an explanation of measures required to protect biological resources. A fact sheet conveying this information shall be prepared for distribution to all contractors, their employers, and other personnel involved with construction. All employees will sign a form provided by the trainer indicating they have attended the WEAP training and understand the information presented to them. The crew foreman will be responsible for ensuring crew members adhere to the guidelines and restrictions designed to avoid impacts to biological resources. If new

construction personnel are added to the Project, the crew foreman will ensure the new personnel receive the WEAP training before starting work.

BIO-2 *Nesting Bird Surveys.* To avoid disturbance of nesting and special-status birds, including raptor species protected by the MBTA and CFGC, construction activities shall occur outside of the bird breeding season (February 1 through August 30), if feasible. If construction must begin during the breeding season, then a nesting bird survey shall be conducted no more than 14 days prior to initiation of ground disturbance and/or vegetation removal activities. The nesting bird survey shall be conducted on foot inside the Project boundary, including a 300-foot buffer (500-foot for raptors) where suitable nesting habitat is present, and in inaccessible areas (e.g., private lands) from afar using binoculars to the extent practical. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in southern California coastal communities. If active nests are found, an avoidance buffer (dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site) shall be established by the biologist. If a raptor nest is observed in a tree proposed for removal, the Applicant must consult with CDFW and obtain authorization prior to removal of the nest. The buffer area(s) should be closed to all construction personnel and equipment until a qualified biologist has confirmed that breeding/ nesting is completed and the young have fledged the nest. If the buffer zones are determined to be infeasible, a full-time qualified biological monitor must be on site to monitor construction within the buffer zones to help ensure that active nests and nesting birds are not impacted.

BIO-3 *Best Management Practices*

- The contractor shall clearly delineate construction limits and prohibit any construction-related traffic outside these boundaries.
- Projected related vehicles and construction equipment shall restrict off-road travel outside of the designated construction area.
- All open trenches shall be fenced or sloped to prevent entrapment of wildlife species.
- No pets or firearms shall be allowed at the Project site during construction activities.
- During Project activities, all trash shall be properly contained, and removed from the work/disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
- Pallets or secondary containment areas for chemicals, drums, or bagged materials shall be provided. If material spills occur, materials and/or contaminants shall be cleaned immediately.
- All vehicles and equipment shall be properly maintained and free of leaks of oil, fuel, or residues.
- Construction shall be restricted to daylight hours (7:00 AM to 7:00 PM) to avoid impacts to nocturnal and crepuscular (dawn and dusk activity period) species. If night-time construction is unavoidable, all lighting will be shielded and directed downward to minimize potential for glare or spillover to reduce impacts on wildlife.

BIO-4 *Pre-construction Wildlife Surveys*. Within one week prior to the initiation of ground disturbance and vegetation removal, a qualified wildlife biologist shall conduct pre-construction surveys in the southern portion of the Project site south of Los Patos Way near the quailbush scrub habitat, including a 50-foot buffer around the Project site (inaccessible areas will be surveyed with binoculars as practicable). The biologist will document existing conditions and search for special-status species (e.g., coast patch-nosed snake and California legless lizard). If either species is found, individual animals shall be relocated to similar habitat from construction activities, at least 200 feet from any area of Project construction.

Sensitive Plant Communities

The current CDFW Sensitive Natural Communities List (CDFW 2019) was referenced to determine the sensitivity status of natural or semi-natural vegetation communities present within the study area. The CLUP considers coastal sage scrub or chaparral to be potential ESHA if they are global or state ranked G1-G3 or S1-S3 by CNDDB and NatureServe. Figure 4.1-1 of the CLUP – Biological Resources section maps riparian scrub, other riparian woodland or forest, and ruderal vegetation communities in the areas where Rincon identified two coastal sage scrub communities: quailbush scrub and lemonade berry scrub. The CLUP figure, however, is noted to depict representational delineations of vegetation communities and may be corrected or confirmed based on field review.

Rincon identified one CDFW sensitive vegetation community, lemonade berry scrub (G3S3), within the study area, which is considered ESHA. The quailbush scrub (G4S4) is not a CDFW sensitive natural community and is not considered coastal sage scrub ESHA because it is not ranked G1-G3 or S1-S3. Lemonade berry scrub is entirely located outside of the Project site. No ESHA acres are located within the Project boundary, as summarized in Table 3.

Table 3. Summary of ESHA Within the Study Area

ESHA Type	ESHA within Project Boundary (Acres)	ESHA within Study Area (Acres)
Lemonade Berry Scrub	0	0.006

Per Policy 4.1-17 of the CLUP (City 2019), new development and substantial redevelopment such as improvements to existing roads, road rights of way, public infrastructure and facilities, and public parking lots may be allowed in ESHA buffers if there is no development footprint increase within the buffer and the activity does not significantly disrupt the habitat value of ESHA(s). The Project is located approximately 30 feet northeast of the lemonade berry scrub ESHA, and outside of the 25-foot minimum habitat buffer for coastal sage scrub (lemonade berry) ESHA, as shown in Attachment A, Figure 5. The Project is also located outside of the 100-foot minimum habitat buffer for the salt marsh coastal wetland ESHA associated with the Refuge lagoon, as shown in Attachment A, Figure 5. Project construction activities are not anticipated to directly impact ESHA or CDFW-designated sensitive natural communities (coastal sage [lemonade berry] scrub) and salt marsh coastal wetland, as the Project site is located outside of the communities and ESHA buffers (Attachment A, Figure 5). The Project improvements to the existing Los Patos Way features (existing roads and road rights of way) are almost entirely within the existing development footprint (as shown in Attachment F and described in the *Project Location and Description* section), and is separated from the ESHA by eucalyptus trees that serve as a visual and noise buffer. The proposed 6-foot-high sliding gate and asphalt pad are located outside of the existing road and landscape buffer footprint but within existing ornamental landscaping.

Construction of project improvements, including the 6-foot high sliding gate and asphalt pad, outside the existing development footprint are not anticipated to have indirect impacts to ESHA because the project design will incorporate the features necessary to meet the City's Tier 3 Storm Water Runoff Requirements and Post-Construction Storm Water Management Program (including implementing a combination of site design, best management practices as described in BIO-3 above, and stormwater runoff best management practices). The proposed Project does not have the potential to result in direct or indirect adverse effects to sensitive habitat types or vegetation communities as identified by CDFW and the CLUP. Due to the absence of potential impacts to sensitive plant communities, no additional measures are recommended.

Jurisdictional Waters and Wetlands

The Project is not anticipated to directly impact jurisdictional waters as they are located outside of the study area. The Project is located outside the 100-foot minimum habitat buffer from the salt marsh wetlands associated with the Refuge lagoon (Attachment A, Figure 5). As previously mentioned in the *Sensitive Plant Communities* section, the Project improvements to the existing Los Patos Way features are located almost entirely within the existing development footprint (as described in the *Project Location and Description* section). The Project improvements located outside of the existing development footprint (the proposed 6-foot-high sliding gate and asphalt pad) are within existing ornamental landscaping.

The potentially jurisdictional waters of the Refuge lagoon are located outside of the study area and are separated from the Project site by the eucalyptus groves and the vegetated hillslope, which provide a natural aiding in preventing potential runoff from the Project site into nearby jurisdictional waters). Construction of the Project improvements located outside of the existing development footprint are not anticipated to have indirect impacts to jurisdictional waters because the Project design will incorporate the features necessary to meet the City's Tier 3 Storm Water Runoff Requirements and the Post-Construction Storm Water Management Program (including implementing a combination of site design, best management practices as described in BIO-3 above, and stormwater runoff best management practices). As such the Project is not anticipated to directly or indirectly impact jurisdictional waters, including wetlands, and no mitigation measures are recommended.

Wildlife Movement

Wildlife corridors are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as between foraging and denning areas, or they may be regional in nature, allowing movement across the landscape. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Examples of barriers or impediments to movement include housing and other urban development, roads, fencing, unsuitable habitat, or open areas with little vegetative cover. Regional and local wildlife movements are expected to be concentrated near topographic features that allow convenient passage, including roads, drainages, and ridgelines.

Much of the land within the City has been converted from open space to commercial, agricultural, residential, and recreational uses, resulting in habitat fragmentation. Regional wildlife movement is restricted due to the urbanized nature of the City in which the Project site is located, including U.S.-101 Highway, located north of the Project site, and Cabrillo Boulevard, located south of the Project. The

Project site is highly disturbed (i.e., mostly developed with ornamental landscaping) and has minimal potential to support wildlife movement.

Migratory waterfowl and wading birds may use the salt marsh and open water habitat of the Refuge lagoon as a migratory wildlife corridor or native wildlife nursery site (City 2019). The Project site is approximately 150 feet from the salt marsh edge of the Refuge lagoon. Wildlife movement within the Refuge lagoon is not anticipated to be directly or indirectly affected by construction activities (e.g., noise) due to the 200-foot buffer between the site and the refuge, as well as the eucalyptus trees west of the Project site that also serve as a buffer. As such, no mitigation measures are recommended.

Local Policies and Ordinances

The Project site is subject to the requirements of the City's CLUP (City 2019), the City's Municipal Code, and the Environmental Resources Element of the City's General Plan (City 2011).

The Project may directly or indirectly impact nesting birds if construction occurs during the breeding season, as described in the *Special-Status Species* section. Per Policy 4.1-36 of the CLUP (City 2019), activities that could impact nesting or breeding birds within or adjoining wetlands, special wildlife areas, or known nesting or breeding areas shall be prohibited during nesting season for birds (February 1-August 30) where feasible. The Project is not anticipated to directly or indirectly impact wetland avian species that are associated with the Refuge as the project will be located in developed areas outside of wetland habitat and adjacent uplands. Special status wetland avian species associated with the Refuge are only anticipated to occur as transients on the project site or forage in the quailbush scrub adjacent to the Project site. With the implementation of BIO-1 and BIO-2, impacts to nesting or breeding birds would be less than significant.

The proposed Project is located approximately 75feet northeast of the coastal sage (lemonade berry scrub) ESHA as shown in Attachment A, Figure 5. The Project is not anticipated to directly impact ESHA as it is located outside of the Project site. As discussed in the *Sensitive Plant Communities* and *Jurisdictional Waters and Wetlands* sections, the Project improvements to the existing Los Patos Way features are almost entirely within the existing development footprint (as shown in Attachment F and described in the *Project Location and Description* section), and is separated from the ESHA by eucalyptus trees that serve as a visual and noise buffer. The Project improvements located outside of the existing development footprint (proposed 6-foot high sliding gate and asphalt pad) are within existing ornamental landscaping. These Project improvements are not anticipated to have indirect impacts to the ESHA because the Project will incorporate features necessary to meet the City's Tier 3 Storm Water Runoff Requirements, which include implementing a combination of site design, basic best management practices (BMPs), and storm water runoff BMPs to meet the storm water runoff requirements of the City's Post-Construction Storm Water Management Program (City 2013). No additional mitigation is recommended.

The Project is not anticipated to remove trees, but may result in impacts to native and/or non-native trees within or directly adjacent to the site. Per Policies 4.1-13 and 4.1-20 of the CLUP (City 2019), mature native trees (with one trunk at least 4 inches or greater in diameter at 4 feet 6 inches above grade, herein referred to as diameter at breast height [DBH]) within ESHAs, wetlands, creeks, and required habitat buffers that are substantially impacted or removed should be replaced. No mature native trees are anticipated to be impacted or removed within ESHAs, wetlands, creeks, and required habitat buffers as the trees in these areas are located outside of the Project site (in the southern portion

of the study area). Several trees, including the coast live oak at the northwestern portion of the site and trees along Los Patos Way (e.g. eucalyptus grove) are subject to the City's Street Tree Ordinance (Municipal Code Chapter 15.20) and Tree Preservation Ordinance (Municipal Code Chapter 15.24). These tree ordinances require permits for pruning or removing trees planted in a parkway strip, tree well, public area, or street right-of-way as well as setback trees, parking lot trees, trees on approved plans, and historic/specimen trees 4 inches or greater in diameter of the main trunk. Protected trees in and adjacent to the Project site may require clearance pruning or may be impacted by Project activities (e.g., ground disturbance resulting in root impacts) to the point where the tree is significantly altered. A Tree Removal and Impact Plan (Rincon 2017) and a Tree Retention Plan (Rincon 2018) have been prepared for the Cabrillo Roundabout Project but have not been updated to include discussion of impacts from the Los Patos Project. The Tree Removal and Impact Plan for the Cabrillo Roundabout Project indicated that the City requested a replacement plan for the removal of and encroachment of any "healthy" existing trees of 4 inches or greater DBH that will have 20 percent or more of their dripline or roots impacted by the Project. As such, this standard will be applied to this Project to maintain consistency with City requirements. Although no trees are proposed for removal, a Tree Protection Plan should be prepared to assess impacts to protected trees and determine if any trees will require replacement per City standards. Implementation of Mitigation Measure BIO-5 would reduce potentially adverse effects to locally protected trees to a less than significant level.

Mitigation Measure

BIO-5 *Tree Protection Plan*. Prior to the start of construction activities (such as but not limited to pruning, trimming, compaction, or grading) that have the potential to impact protected trees (as determined by a certified arborist) and prior to obtaining a tree permit from the City, a Tree Protection Plan (TPP) shall be prepared by a certified arborist in accordance with the City's Street Tree Ordinance and Tree Preservation Ordinance. The TPP should include data on each protected tree such as, but not limited to: species, diameter at breast height (DBH), height, dripline, and overall health. The TPP shall at a minimum graphically depict the locations of all protected trees with at least a portion of their driplines within the Project boundary, Project boundary and tree protection zone, and measures to protect trees during construction including but not limited to: protective fencing, monitoring during construction, activities allowed/prohibited within TPZs, proper root and canopy pruning techniques, and replacement standards if impacts exceed 20% of a tree's dripline.

Habitat Conservation Plans

The Project site is not within any Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan areas. The proposed Project would not conflict with the provisions of any such plans and no impact would occur.

Conclusions

Potential impacts to nesting birds and protected trees would be less than significant with implementation of the mitigation measures recommended herein. No impacts are proposed to any ESHA, riparian habitat, or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS. No direct or indirect impacts are proposed to any

jurisdictional waters, including wetlands. The Project would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Additionally, the proposed Project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

Limitations

This limited biological analysis was prepared for use solely and exclusively by Rincon for T.Y. Lin International and the City of Santa Barbara. No other use or disclosure is intended or authorized by Rincon, nor shall this analysis be relied upon or transferred to any other party without the express written consent of Rincon Consultants. T.Y. Lin International agrees to hold Rincon harmless for any inverse condemnation or devaluation of said property that may result if Rincon's report or information generated is used for other purposes. The findings and opinions conveyed in this analysis are based on the material reviewed and the limited field reconnaissance. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources reviewed. Thank you for selecting Rincon Consultants to provide you with this biological technical study. Please call if you have questions, or if we can be of further assistance.

Sincerely,

Rincon Consultants, Inc.

Yuling Huo
Associate Biologist

Christopher Julian
Principal / Senior Regulatory Specialist

Attachments:

Attachment A	Figures
Attachment B	Representative Site Photographs
Attachment C	Special-Status Species Potential to Occur
Attachment D	Regulatory Background
Attachment E	Wetland Determination Data Form
Attachment F	Preliminary Site Plans

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Attachment A

Figures

Figure 1 Regional Location

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Project Location

N

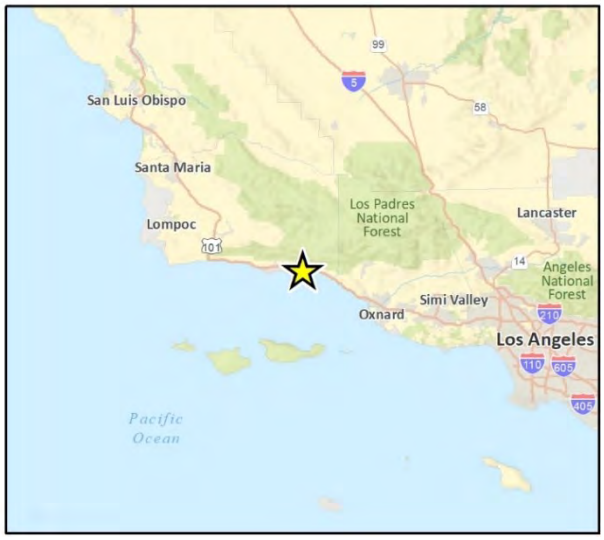

Figure 2 Project Location

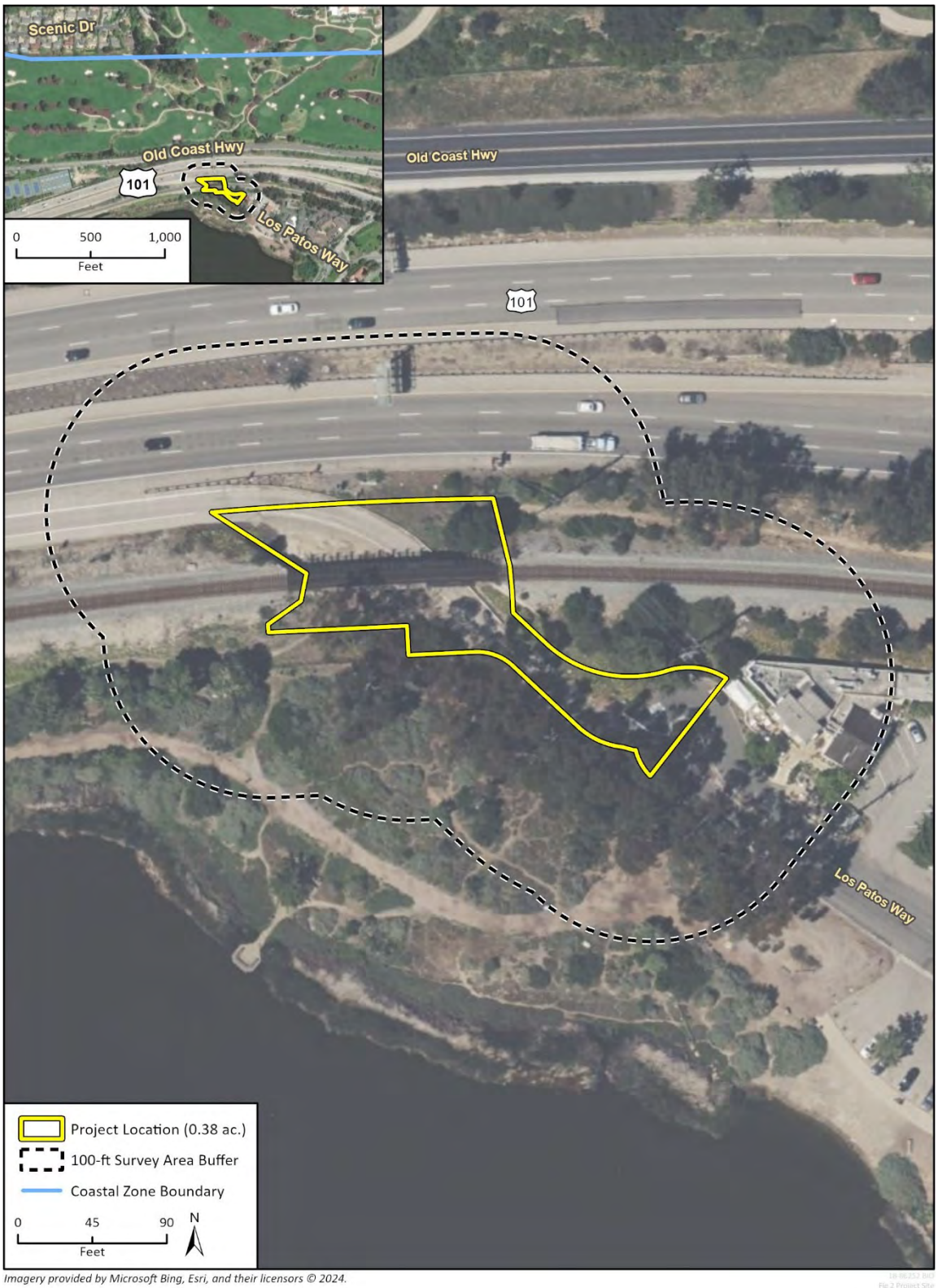

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Figure 3 Vegetation Communities and Land Cover Types

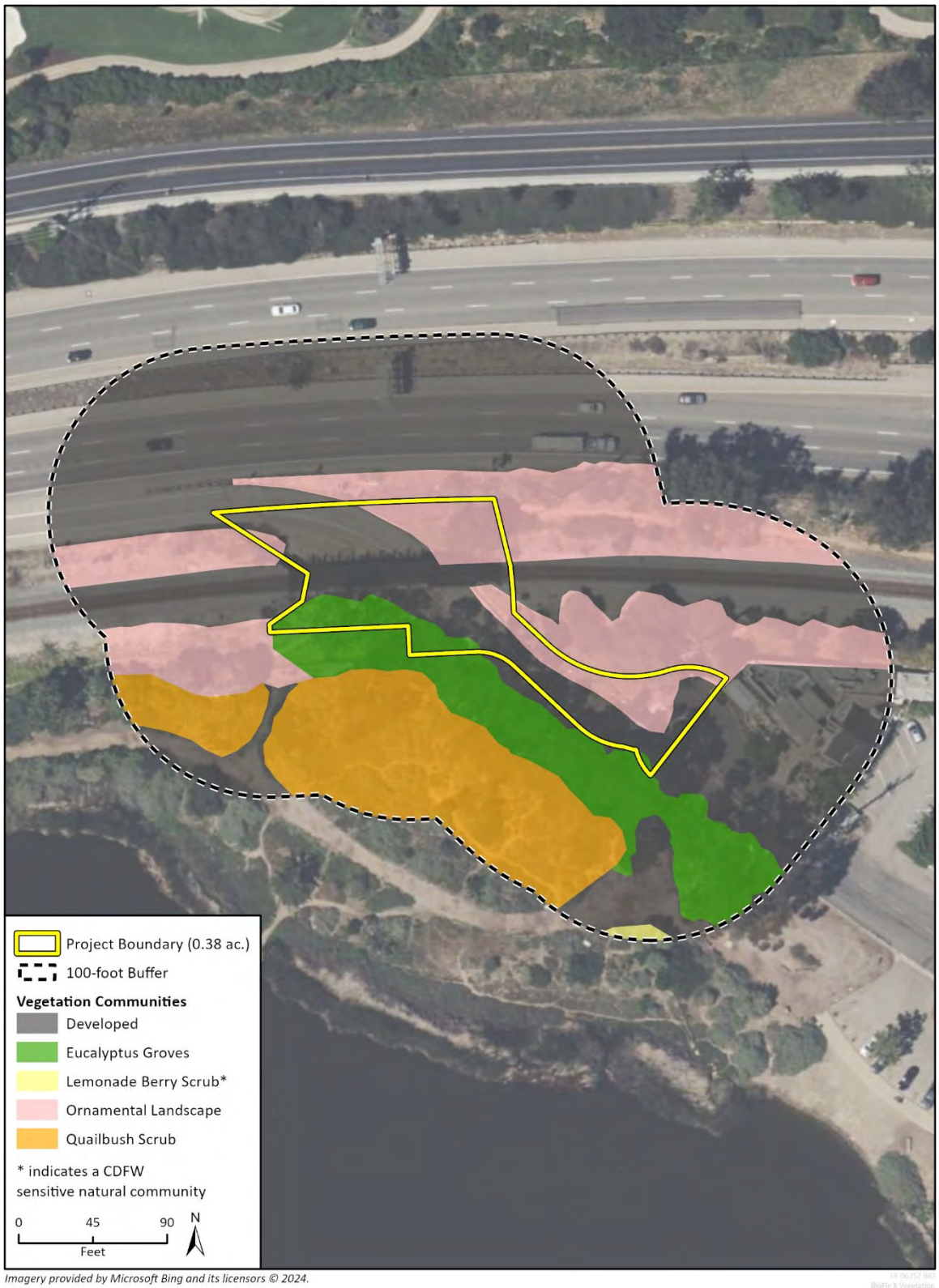

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Figure 4 Jurisdictional Delineation within the Study Area

Figure 5 ESHA and ESHA Buffers within the Study Area

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Attachment B

Representative Site Photographs

Photograph 1. View of Los Patos Way, facing northwest.

Photograph 2. View of eucalyptus trees along Los Patos Way on the western border of the project boundary, facing west.

Photograph 3. View of ornamental landscape along Los Patos Way, within the project boundary, facing northwest.

Photograph 4. View of developed buildings along Los Patos Way, facing northeast.

Photograph 5. View of native trees within ornamental landscape on eastern slope along railroad track, outside of project boundary, facing northwest.

Photograph 6. View of eucalyptus trees adjacent to railroad track at western portion of study area, facing southwest.

Photograph 7. View of ornamental landscape near U.S. Highway 101, facing west.

Photograph 8. View of single coast live oak (*Quercus agrifolia*) at northeast portion of project boundary, facing southwest.

Photograph 9. View of eucalyptus grove along Los Patos Way, facing southeast.

Photograph 10. View of quailbush scrub at southern portion of study area, facing southeast.

Photograph 11. View of sampling point 1 at southwestern portion of study area, facing north.

Photograph 12. View of soil pit at southwestern portion of study area, facing north.

Photograph 13. View of quailbush scrub and trail on hillslope, facing northeast.

Photograph 14. View of trail and quailbush scrub on hillslope, facing northwest.

Photograph 15. View of lemonade berry scrub with ornamental bottlebrush trees, facing southeast.

Photograph 16. View of saltmarsh, wetland, trails, and lagoon outside of study area, facing southwest.

Attachment C

Special-Status Species Potential to Occur

Special-Status Species Potentially Occurring on the Project Site

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Plants and Lichens				
Arctostaphylos refugioensis Refugio manzanita	None/None G3/S3 1B.2 SBBG	Chaparral. On sandstone. 274-820m. Blooms (May)Dec-Mar.	None	Suitable elevations not present on site.
Astragalus didymocarpus var. milesianus **Miles' milk-vetch**	None/None G5T2/S2 1B.2	Occurs in clay substrates within coastal scrub. This species blooms between March and June, and typically occurs at elevations ranging from 20-90 meters.	None	Suitable elevations not present on site.
Atriplex coulteri Coulter's saltbush	None/None G3/S1S2 1B.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 3-460m. Blooms Mar-Oct.	None	Suitable coastal bluff scrub, coastal dunes, or valley and foothill grassland habitat not present on site.
Atriplex serenana var. *davidsonii* Davidson's saltscale	None/None G5T1/S1 1B.2	Annual herb. Blooms April to October. Coastal bluff scrub, coastal scrub. Alkaline soil. 3-250m (10-820ft).	None	Suitable coastal bluff scrub or coastal scrub habitat not present on site.
Calochortus fimbriatus late-flowered mariposa-lily	None/None G3/S3 1B.3 SBBG	Chaparral, Cismontane woodland, Riparian woodland. Dry, open coastal woodland, chaparral; on serpentine. 275-1905m.	None	Suitable elevations not present on site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		Blooms Jun-Aug.		
Calochortus palmeri var. *palmeri* Palmer's mariposa-lily	None/None G3T2/S2 1B.2 SBBG	Chaparral, Lower montane coniferous forest, Meadows and seeps. Vernally moist places in yellow-pine forest, chaparral. 710-2390m. Blooms Apr-Jul.	None	Suitable elevations not present on site.
Calystegia sepium ssp. *binghamiae* Santa Barbara morning-glory	None/None G5TXQ/SX 1A	Marshes and swamps. 5m. Blooms Aug.	None	Suitable marshes or swamps not present on site.
Centromadia parryi ssp. *australis* southern tarplant	None/None G3T2/S2 1B.1 SBBG	Marshes and swamps, Valley and foothill grassland, Vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. 0-480m. Blooms May-Nov.	None	Suitable marsh, swamp, valley and foothill grassland, or vernal pool habitat not present on site.
Chloropyron maritimum ssp. *maritimum* salt marsh bird's-beak	FE/SE G4?T1/S1 1B.2 SBBG	Occurs in coastal dunes and coastal salt marshes and swamps. This species blooms between May and October, and typically occurs at elevations ranging from 0-30 meters.	None	Suitable coastal dunes, coastal salt marsh, or swamp habitat not present on site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Delphinium umbraculorum umbrella larkspur	None/None G3/S3 1B.3	Chaparral, Cismontane woodland. Mesic sites. 400-1600m. Blooms Apr-Jun.	None	Suitable elevations not present on site.
Fritillaria ojaiensis Ojai fritillary	None/None G3/S3 1B.2 SBBG	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest. Rocky sites. Sometimes on serpentine; sometimes along roadsides. 225-998m. Blooms Feb-May.	None	Suitable elevations not present on site.
Horkelia cuneata var. *puberula* mesa horkelia	None/None G4T1/S1 1B.1	Perennial herb. Blooms February to September. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 70-810m (230-2655ft).	None	Suitable elevations not present on site.
Juncus luciensis Santa Lucia dwarf rush	None/None G3/S3 1B.2	Chaparral, Great Basin scrub, Lower montane coniferous forest, Meadows and seeps, Vernal pools. Vernal pools, ephemeral drainages, wet meadow habitats and streamsides.	None	Suitable elevations not present on site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		300-2040m. Blooms Apr-Jul.		
Lasthenia conjugens Contra Costa goldfields	FE/None G1/S1 1B.1	Cismontane woodland, Playas, Valley and foothill grassland, Vernal pools. Vernal pools, swales, low depressions, in open grassy areas. 0-470m. Blooms Mar-Jun.	None	Suitable cismontane woodland, playas, valley and foothill grassland, or vernal pool habitat not present on site.
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	None/None G4T2/S2 1B.1 SBBG	Annual herb. Blooms February to June. Coastal salt marshes, playas, valley and foothill grassland, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-1400m (3-4595ft).	None	Suitable coastal salt marshes, playas, valley and foothill grassland, or vernal pool habitat not present on site.
Layia heterotricha pale-yellow layia	None/None G2/S2 1B.1 SBBG	Cismontane woodland, Coastal scrub, Pinyon and juniper woodland, Valley and foothill grassland. Alkaline or clay soils; open areas. 300-1705m. Blooms Mar-Jun.	None	Suitable elevations not present on site.
Lonicera subspicata var. *subspicata* Santa Barbara honeysuckle	None/None G5T2?/S2? 1B.2	Chaparral, Cismontane woodland, Coastal scrub. 10-1000m. Blooms	None	Suitable chaparral, cismontane woodland, or coastal scrub not present on site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		(Feb)May-Aug (Dec).		
Malacothrix saxatilis var. *arachnoidea* Carmel Valley malacothrix	None/None G5T2/S2 1B.2	Chaparral, Coastal scrub. Rock outcrops or steep rocky roadcuts. 25-1036m. Blooms (Mar) Jun-Dec.	None	Suitable elevations not present on site.
Monardella hypoleuca ssp. *hypoleuca* white-veined monardella	None/None G4T3/S3 1B.3	Perennial herb. Blooms April to December. Chaparral, cismontane woodland. Dry slopes. 50-1525m (165-5005ft).	None	Suitable elevations not present on site.
Nasturtium gambelii Gambel's water cress	FE/ST G1/S1 1B.1 SBBG	Marshes and swamps. Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 5-330m. Blooms Apr-Oct.	None	Suitable marsh and swamp habitat not present on site.
Pelazoneuron puberulum var. *sonorense* Sonoran maiden fern	None/None G5T3/S2 2B.2	Meadows and seeps. Along streams, seepage areas. 50-610m. Blooms Jan-Sep.	None	There are five CNDDB occurrences within 5 miles of the study area, four of which are in the Santa Ynez Mountains. The other occurrence is historical (1932) and in an unknown location in Smith Canyon, Goleta, approximately 4.1 miles west of the study area. The most recent occurrence was in 2011, approximately 4.3 miles northeast of the study area. There are no meadows or seeps present within the study area.
Pleuridium mexicanum Mexican earthmoss	None/None G5/S1 2B.1	Chaparral. Sandstone. 440 m. 440-440m.	None	Suitable elevations not present on site.
Quercus dumosa Nuttall's scrub oak	None/None G3/S3 1B.1	Chaparral, Closed-cone coniferous forest, Coastal scrub. Generally, on sandy soils near the coast;	None	Suitable elevations not present on site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		sometimes on clay loam. 15-400m. Blooms Feb-Apr (May-Aug).		
Scrophularia atrata black-flowered figwort	None/None G2?/S2? 1B.2	Chaparral, Closed-cone coniferous forest, Coastal dunes, Coastal scrub, Riparian scrub. Sand, diatomaceous shales, and soils derived from other parent material; around swales and in sand dunes. 10-500m. Blooms Mar-Jul.	None	Suitable chaparral, closed-cone coniferous forest, coastal dune, costal scrub, or riparian scrub habitat not present on site.
Suaeda esteroa estuary seablite	None/None G3/S2 1B.2	Marshes and swamps. Coastal salt marshes in clay, silt, and sand substrates. 0-5m. Blooms (Jan-May)Jul-Oct.	None	Suitable elevations not present on site.
Thelypteris puberula var. *sonorensis* Sonoran maiden fern	None/None G5T3/S2 2B.2	Meadows and seeps. Along streams, seepage areas. 50-610m. Blooms Jan-Sep.	None	Suitable elevations not present on site.
Thermopsis macrophylla Santa Ynez false lupine	None/SR G1/S1 1B.3 SBBG	Chaparral. In open areas such as fuel breaks, after burns; on sandstone. 425-1400m. Blooms Apr-Jun.	None	Suitable elevations not present on site.
Invertebrates				
Bombus crotchii Crotch bumble bee	None/SCE G3G4/S1S2	Coastal California east to the Sierra-Cascade crest	None	Suitable food plants not present on site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.		
Cicindela hirticollis gravida sandy beach tiger beetle	None/None G5T2/S2	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	None	Suitable non-brackish water habitat not present on site.
Coelus globosus **globose dune beetle**	None/None G1G2/S1S2	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.	None	Suitable coastal sand dune habitat does not occur on site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Danaus plexippus pop. 1 monarch butterfly-California overwintering population	FC/None G4T2T3/S2S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Low	14 CNDDB occurrences recorded within 5 miles and eucalyptus trees are present adjacent to the site, however no suitable roost sites (dense, wind-protected tree groves) are present.
Eugnosta busckana Busck's gallmoth	None/None G1G3/S2S3	Coastal southern California. Tiny micro-moth (1 cm) with larva forming galls on host plant California brittlebush (*Encelia californica*). Adult flight period is during winter, generally from November to February, and have been reported at UV lights and porch lights.	Low	There is one historical CNDDB occurrence (1999) within 5 miles of the study area, approximately 4.5 miles northwest of the study area. There is suitable host plan, California brittlebrush (*Encelia californica*), present within the study area but outside of the project site. Species may occur as a transient within the project site.
Panoquina errans wandering (=saltmarsh) skipper	None/None G4G5/S2	Southern California coastal salt marshes. Requires moist saltgrass for larval development.	None	Suitable coastal salt marsh habitat not present on site.
Fishes				
Eucyclogobius newberryi tidewater goby	FE/None G3/S3	Brackish water habitats along the California coast from Agua Hedionda	None	Suitable brackish water habitat not present on site.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.		
Oncorhynchus mykiss irideus pop. 10 steelhead - southern California DPS	FE/None G5T1Q/S1	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	None	No aquatic features are present in the study area.
Amphibians				
Anaxyrus californicus arroyo toad	FE/None G2G3/S2S3 SSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of	None	Suitable washes, streams, or rivers not present in the study area.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		streams in drier parts of range.		
Rana boylii foothill yellow-legged frog	None/SE G3/S3 SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	None	Suitable shallow stream habitat not present in the study area.
Rana draytonii California red-legged frog	FT/None G2G3/S2S3 SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	None	Suitable deep water with dense, shrubby, or emergent riparian habitat not present in the study area.
Taricha torosa Coast Range newt	None/None G4/S4 SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats & will migrate over 1 km to breed in ponds, reservoirs & slow-moving streams.	None	Four CNDDB occurrences within 5 miles. However, suitable slow-moving streams, ponds, or reservoir habitat not present in the study area
Reptiles				

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Anniella pulchra Northern California legless lizard	None/None G3/S3 SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Low	Suitable high moisture soil habitat not present in the project site, which is highly disturbed. Species may occur transiently.
***Anniella* spp. California legless lizard**	None/None G3G4/S3S4 SSC	Contra Costa County south to San Diego, within a variety of open habitats. This element represents California records of Anniella not yet assigned to new species within the Anniella pulchra complex. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Low	Suitable high moisture soil habitat not present in the project site, which is highly disturbed. Species may occur transiently.
Emys marmorata western pond turtle	None/None G3G4/S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km	None	One CNDDB occurrence is documented within 0.15 miles of the project site, however, suitable aquatic habitat and basking sites (sandy banks or grassy fields) not present in the study area.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		from water for egg-laying.		
Phrynosoma blainvillii coast horned lizard	None/None G3G4/S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	None	Suitable sandy wash or scattered low bush habitat not present in the study area.
Salvadora hexalepis virgultea coast patch-nosed snake	None/None G5T4/S2S3 SSC	Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites.	Low	Somewhat suitable shrubby vegetation and small mammal burrows for habitat are present outside of the project area in the saltbush scrub. Site is highly disturbed and not suitable for refuge.
Thamnophis hammondii two-striped gartersnake	None/None G4/S3S4 SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	None	Suitable freshwater habitat not present in the study area.
Birds				

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
Accipiter cooperii Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	Low	Somewhat suitable habitat (oak trees within landscaped areas) present in the study area.
Charadrius nivosus nivosus western snowy plover	FT/None G3T3/S2 SSC	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	None	Suitable nesting habitat (beaches, ponds) not present in the study area.
Coturnicops noveboracensis yellow rail	None/None G4/S1S2 SSC	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	None	Suitable nesting habitat (freshwater marshlands) not present in the study area.
Egretta thula snowy egret	None/None G5/S4	Colonial nester, with nest sites situated in protected beds of dense tules. Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	Low	One CNDDB occurrence within 5 miles of site. Suitable nesting and foraging habitat not present in the study area. Potential to occur as transient.
Elanus leucurus white-tailed kite	None/None G5/S3S4 FP	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to	Low	Suitable nesting and foraging habitat (oak woodlands, open grasslands) not present in the study area. Marshes present southwest of site; species may occur as transient.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.		
Laterallus jamaicensis coturniculus California black rail	None/ST G3G4T1/S1 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Low	Suitable nesting and foraging habitat (freshwater marshes, salt water marsh edges) not present in the study area but present southeast of study area. Species may occur as transient.
Nycticorax nycticorax black-crowned night heron	None/None G5/S4	Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.	Low	Suitable nesting and foraging habitat (tule patches, marshes, lake margins) not present in the study area but located southeast of study area. Species may occur as transient.
Passerculus sandwichensis beldingi Belding's savannah sparrow	None/SE G5T3/S3	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in Salicornia on and about	Low	Suitable nesting and foraging habitat (salt marshes, tidal flats) not present in the study area but located southeast of study area. Species may occur as transient

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		margins of tidal flats.		
Pelecanus occidentalis californicus **California brown pelican**	FD/SD G4T3T4/S3 FP	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	Low	One CNDDB occurrence within 5 miles of site. Suitable nesting and foraging habitat (coastal inlands adjacent to surfline) not present in the study area, but suitable salt marsh located southeast of study area. Species may occur as transient
Rallus obsoletus levipes light-footed Ridgway's rail	FE/SE G3T1T2/S1 FP	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on molluscs and crustaceans.	None	Suitable foraging and nesting habitat (salt marshes) not present in study area but located southeast of study area. Species may occur as transient.
Riparia riparia bank swallow	None/ST G5/S2	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers,	None	Suitable nesting and foraging habitat (vertical banks/cliffs, sandy soils near aquatic resources) not present in the study area.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		lakes, ocean to dig nesting hole.		
Sternula antillarum browni California least tern	FE/SE G4T2T3Q/S2 FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	None	Suitable nesting and foraging habitat (sand beaches, alkali flats along coast) not present in the study area. Site is highly disturbed.
Vireo bellii pusillus least Bell's vireo	FE/SE G5T2/S2	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	None	Suitable nesting and foraging habitat (riparian areas) not present in the study area.
Mammals				
Corynorhinus townsendii Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls &	None	Suitable habitat (bridges, caves, tunnels) with minimal human disturbance not present in the study aera. Site is highly disturbed.

Scientific Name Common Name	Status Fed/State ESA CRPR/CDFW	Habitat Requirements	Potential to Occur	Rationale
		ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.		
Nyctinomops macrotis big free-tailed bat	None/None G5/S3 SSC	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	None	Suitable cliffs and rocky outcrops for roosting not present in the study area.

Regional Vicinity refers to within a 5-mile search radius of site.

Status (Federal/State)
FE = Federal Endangered
FT = Federal Threatened
FPE = Federal Proposed Endangered
FPT = Federal Proposed Threatened
FD = Federal Delisted
FC = Federal Candidate
SE = State Endangered
ST = State Threatened
SCE = State Candidate Endangered
SCT = State Candidate Threatened
SR = State Rare
SD = State Delisted
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List

CRPR (CNPS California Rare Plant Rank)
1A = Presumed extirpated in California, and rare or extinct elsewhere
1B = Rare, Threatened, or Endangered in California and elsewhere
2A = Presumed extirpated in California, but common elsewhere
2B= Rare, Threatened, or Endangered in California, but more common elsewhere

CRPR Threat Code Extension
.1 = Seriously endangered in California (>80% of occurrences threatened/ high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% of occurrences threatened/ moderate degree and immediacy of threat)
.3 = Not very endangered in California (<20% of occurrences threatened/ low degree and immediacy of threat)

Other Statuses
G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant
GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery
SBBG Santa Barbara Botanic Garden – Rare Plants of Santa Barbara County

Additional notations may be provided as follows
T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
? – Inexact numeric rank

Attachment D

Regulatory Setting

Special-status habitats are vegetation types, associations, or sub-associations that support concentrations of special-status plant or animal species, are of relatively limited distribution, or are of particular value to wildlife.

Listed species are those taxa that are formally listed as endangered or threatened by the federal government (e.g. U.S. Fish and Wildlife Service [USFWS]), pursuant to the Federal Endangered Species Act (FESA) or as endangered, threatened, or rare (for plants only) by the State of California (i.e. California Fish and Game Commission), pursuant to the California Endangered Species Act or the California Native Plant Protection Act. Some species are considered rare (but not formally listed) by resource agencies, organizations with biological interests/expertise (e.g. Audubon Society, CNPS, The Wildlife Society), and the scientific community.

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project area include:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States);
- Regional Water Quality Control Board (waters of the State);
- U.S. Fish and Wildlife Service (federally listed species and migratory birds);
- California Department Fish and Wildlife (riparian areas and other waters of the State, state-listed species, Species of Special Concern);
- City of Santa Barbara

U.S. Army Corps of Engineers

Under Section 404 of the Clean Water Act, the USACE has authority to regulate activities that could discharge fill of material or otherwise adversely modify wetlands or other "waters of the United States." Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetland value or acres. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any fill or adverse modification of wetlands that are hydrologically connected to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetland acres or values is met through compensatory mitigation involving creation or enhancement of similar habitats.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and the local RWQCB have jurisdiction over "waters of the State," pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The Central Coast RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the Clean Water Act for waters subject to federal jurisdiction.

Coastal Wetlands

The California Coastal Act (CCA) defines coastal wetlands as generally extending seaward to the state's outer limit of jurisdiction (i.e. three nautical miles from the mean high tide line [MHTL]) and inland generally 1,000 yards from the MHTL. The CCA also allows transfer of permitting authority to local governments, such as the City of Santa Barbara, with Local Coastal Programs (LCPs) that have been approved by the California Coastal Commission (CCC).

The City is the responsible agency that issues Coastal Development Permits under the City's CLUP (City 2019). The CCA contains specific policies aimed at preserving biological resources such as wetlands. Potential coastal wetland features must meet one of the three USACE wetland indicators (California Code of Regulations [CCR] Title 14). The one-parameter definition is as follows:

> Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salt or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats (14 CCR Section 13577).

United States Fish and Wildlife Service

The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 et seq.). Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in "take" of any federally threatened or endangered species are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened, endangered or fully protected species. Take under CESA is restricted to direct mortality of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW also prohibits take for species designated as Fully Protected under the Code.

California Fish and Game Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Fully protected birds (Section 3511) may not be taken or

possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species in special consideration when decisions are made concerning the development of natural lands. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of plant.

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 *et seq*. of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

City of Santa Barbara

The project is subject to the City's Coastal Land Use Plan (CLUP) and General Plan – Environmental Resources Element (ERE).

The CLUP – Biological Resources section contains policies related to biological resources in the City, including protection of Environmentally Sensitive Habitat Areas (ESHAs). The ERE contains policies to protect native habitat and special status species and maintain/improve urban biotic communities such as the Andree Clark Bird Refuge.

Attachment E

Wetland Determination Data Form

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Los Patos Bridge City/County: Santa Barbara/ Santa Barbara Sampling Date: 9/2/2021

Applicant/Owner: T.Y. Lin International State: CA Sampling Point:

Investigator(s): Julie Love and Yuling Huo Section, Township, Range: S13/T4N/R27 West, San Bernardino meridian

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 15-20

Subregion (LRR): C-Mediterreanean Lat: 34.42 Long: -119.66 Datum: WGS84

Soil Map Unit Name: MeC- Merrimac sandy loam NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✔
Hydric Soil Present?	Yes ____	No ✔	
Wetland Hydrology Present?	Yes ____	No ✔	

Remarks:

Sampling point located North of trail on small hillslope. Hydrophytic vegetation present, but no wetland hydrology or hydric soils. Upland landforms not suitable for the formation of wetlands.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Prunus sp. (ornamental)	5	Y	UPL
2.			
3.			
4.			
	5 = Total Cover		
Sapling/Shrub Stratum (Plot size: 20 ft radius)			
1. Salix exigua	50	Y	FACW
2. Baccharis pilularis	15	N	UPL
3. Atriplex lentiformis	25	Y	FAC
4. Encelia californica	5	N	UPL
5.			
	95 = Total Cover		
Herb Stratum (Plot size: 10 ft radius)			
1. Frankenia salina	2	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	2 = Total Cover		
Woody Vine Stratum (Plot size: 0)			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 98% % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species	52	x 2 =	104
FAC species	25	x 3 =	75
FACU species		x 4 =	
UPL species	25	x 5 =	125
Column Totals:	102 (A)		304 (B)

Prevalence Index = B/A = 2.98

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

✔ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No ____

Remarks:

Qualibush (ATLE) scrub; only portion with SAEX, remaining ATLE scrub does not have SAEX.

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/3	100		0			SaLo	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** ✔

Remarks:

Shovel refusal at 4"; 3 spots tried. No hydric soil indicators. Tried another pit to the East, outside of the sampling area, got shovel refusal there as well.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ___ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): _____

Wetland Hydrology Present? **Yes** ___ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

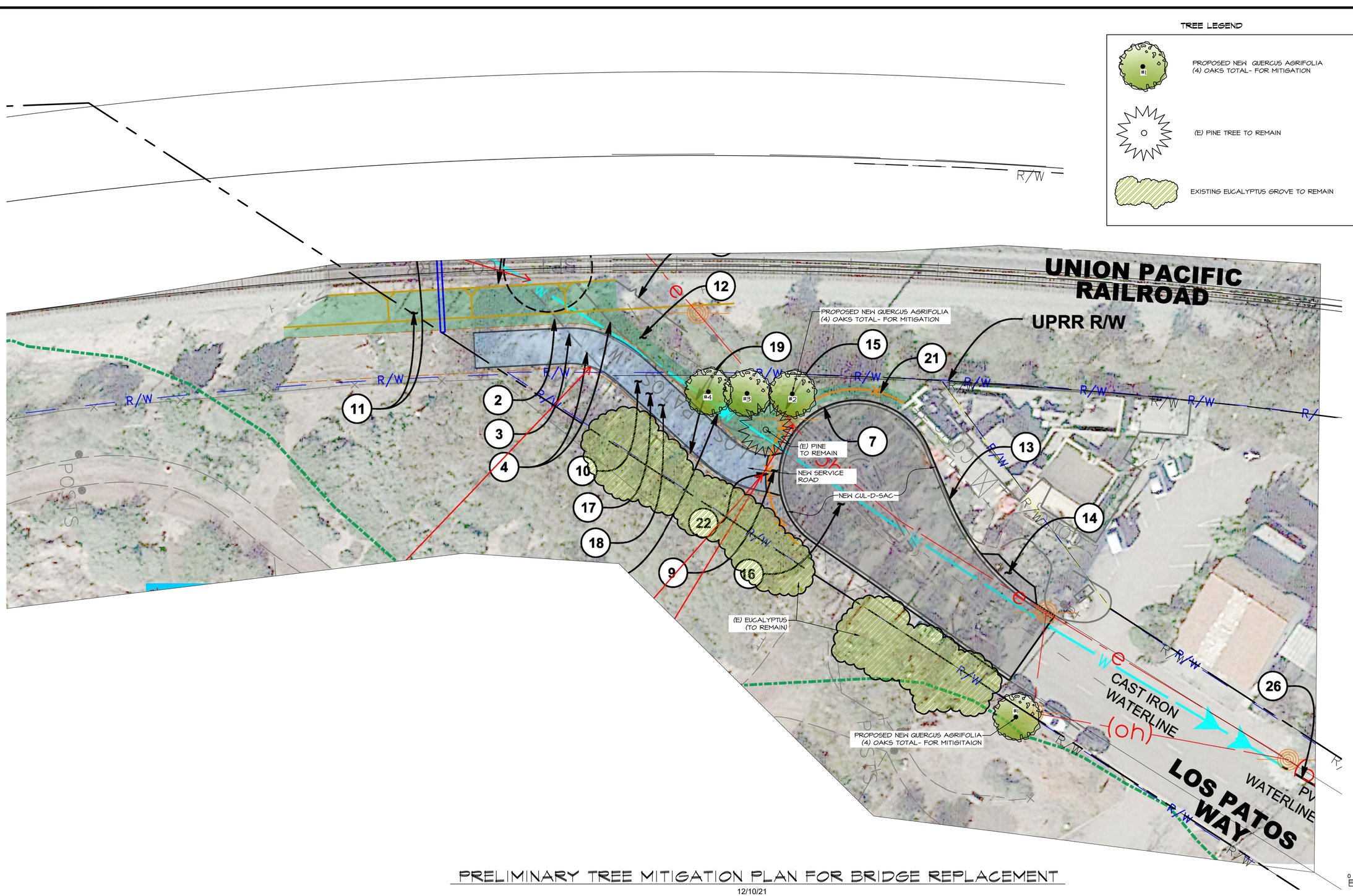
N/A

Remarks:

FAC-Neutral test = 2:1 = negative. No wetland hydrology indicators.

Attachment F

Preliminary Site Plans



PRELIMINARY TREE MITIGATION PLAN FOR BRIDGE REPLACEMENT

12/10/21

0 10 20 30

SCALE: 1"=20'

EARTHFORM DESIGN
LANDSCAPE ARCHITECTURE • LAND PLANNING • URBAN DESIGN
1227 DE LA VINA ST. SANTA BARBARA, CALIFORNIA. 93101
TEL:(805) 963-2006 ● ▲ ■ FAX:(805) 963-8335

REGISTERED LANDSCAPE ARCHITECT
SAM W. MAPHIS IV
No. 3703
Signature
12/10/21
Date
STATE OF CALIFORNIA

SAM MAPHIS IV DATE 12/10/21
PROJECT L.A.

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

APPROVED: CITY ENGINEER DATE
ORIGINAL SIGNED DATE

DESIGN SWM
DRAWN A. NUNO
CHECKED LMB

100%
DRAFT

NO.	REVISIONS	DATE	APPROVED

CABRILLO BLVD/ UPRR UNDERPASS REPLACEMENT PROJECT

PROPOSED RETIREMENT OF LOS PATOS UNDERCROSSING

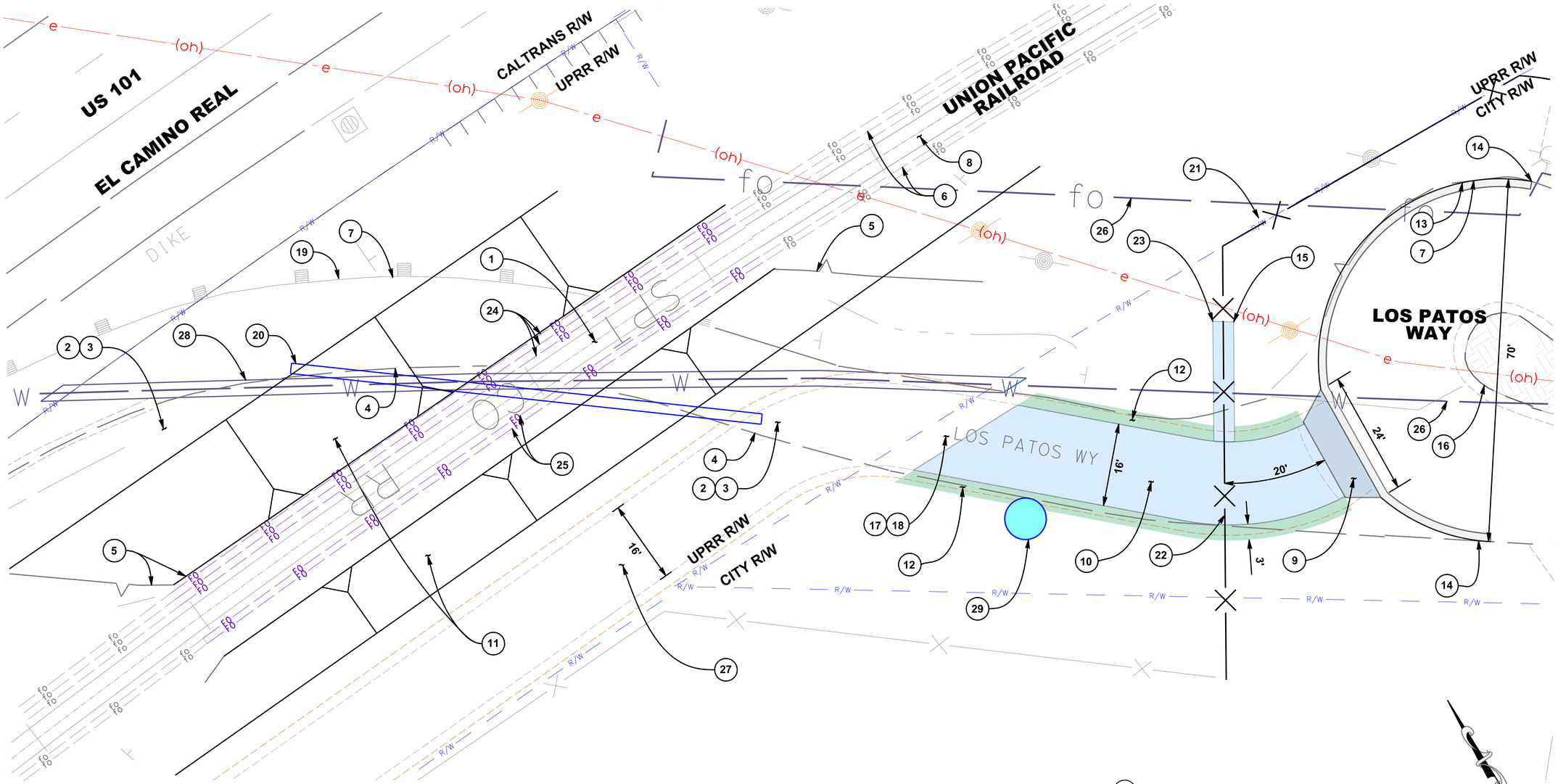
PBW. NO.

BID NO. L-1 SHT. DES.

DWG. NO.

SHT. 1 OF 1

N:\EFD1\Projects\Los Patos Bridge\Autocad\Base Mitigation.dwg, 12/10/2021 11:55:42 AM



LEGEND:

- EXISTING R/W
- PROPOSED CHAINLINK FENCE
- EXISTING OVERHEAD ELECTRIC
- EXISTING CAST IRON WATERLINE
- EXISTING FIBER OPTIC LINE
- PROPOSED FIBEROPTIC RELOCATION
- POWER POLE
- (#) PROJECT FEATURE
- MAINTENANCE ROAD
- PROPOSED CURB AND GUTTER
- PROPOSED LANDSCAPING

1. REMOVE UPRR RAILROAD BRIDGE
2. REMOVE ASPHALT CONCRETE WITHIN UPRR R/W (67 CY)
3. REMOVE AGGREGATE BASE WITHIN UPRR R/W (100 CY)
4. REMOVE CONCRETE DIKE WITHIN UPRR R/W (310 LF)
5. SALVAGE SANDSTONE BLOCKS
6. UNDERGROUND FIBEROPTIC CONDUITS
7. REMOVE GUARDRAIL (APPROX 215 LF)
8. UNION PACIFIC RAILROAD TRACK
9. CONSTRUCT MAINTENENCE ROAD DRIVEWAY ACCESS
10. CONSTRUCT GRAVEL MAINTENENCE ROAD (RIVER ROCK OR EQUIVALENT) (APPROX 73 LF)
11. CONSTRUCT EMBANKMENT
12. LANDSCAPING: 3' BAND OF MULCH ADJACENT ACCESS ROAD
13. CONSTRUCT CONCRETE CURB & GUTTER (114 LF)
14. MATCH EXISTING CURB
15. PROTECT POWER POLE
16. PROTECT EXISTING RAISED MEDIAN ISLAND
17. REMOVE ASPHALT CONCRETE WITHIN PUBLIC R/W (34 CY)
18. REMOVE AGGREGATE BASE WITHIN PUBLIC R/W (50 CY)
19. REMOVE CURB AND GUTTER (110 LF)
20. CONSTRUCT REINFORCED CONCRETE PIPE (58 LF)
21. INSTALL 6' CHAINLINK FENCE
22. INSTALL 6' HIGH SLIDING GATE
23. ASPHALT PAD FOR SLIDING GATE
24. EXISTING FIBER OPTIC CONDUIT RELOCATION (TO BE BURIED WITHIN FILL MATERIAL AFTER BRIDGE REMOVAL): AT&T; CENTURY LINK; & UNION PACIFIC
25. EXISTING FIBER OPTIC CONDUIT RELOCATION (TO BE BURIED WITHIN FILL MATERIAL AFTER BRIDGE REMOVAL): SPRINT; VERIZON
26. EXISTING CAST IRON WATER LINE
27. EXISTING MAINTENENCE PATH
28. ENCASE EXISTING WATER LINE THROUGH UNION PACIFIC RAILROAD RIGHT OF WAY
29. EXISTING DRAINAGE INLET DI-L08-05
30. EXISTING UNDERGROUND FIBER OPTIC LINE (FRONTIER)

0 5 10 15
SCALE: 1"=10'

2021-02-05

PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
APPROVED: CITY ENGINEER DATE
ORIGINAL SIGNED DATE
DESIGN
DRAWN
CHECKED
APPROVED DATE
NO. REVISIONS

LOS PATOS UNDERCROSSING REMOVAL
PROPOSED LAYOUT DETAIL SHEET

PBW. NO.
BID NO. SHT. DES.
DWG. NO.
SHT. OF

Rincon Consultants, Inc.
319 East Carrillo Street, Suite 105
Santa Barbara, California 93101
805-319-4092

August 23, 2024
Project No: 18-06252

James Faber
Project Manager
T.Y. Lin International
707 Wilshire Boulevard, Suite 4900
Los Angeles, California 90017
Via email: james.faber@tylin.com

Subject: Los Patos Bridge Replacement Project Biological Resource Assessment to Include the Shoofly Tracks in City of Santa Barbara, California

Dear Mr. Faber:

Rincon Consultants, Inc. (Rincon) prepared this addendum to the Biological Resources Assessment (BRA) dated August 9, 2024 (Rincon 2024) for the Los Patos Bridge Replacement Project (project). The project involves two components: removal of the Los Patos Way Off-Ramp Underpass (Los Patos Underpass) in the City of Santa Barbara (City), California and construction of the Cabrillo Rail Bridge Shoofly rail bypass (shoofly) component in the City and County of Santa Barbara (County). The Los Patos Underpass removal component was added to the Cabrillo Rail Bridge Project to satisfy requirements of the Union Pacific Railroad (UPRR). Replacement of the Cabrillo Rail Bridge and construction of the Los Patos-Cabrillo Roundabout, of which this project is a component, have already been assessed under separate documents with the roundabout currently under construction. The UPRR approved Cabrillo Rail Bridge design now requires the shoofly component over Cabrillo Boulevard as well. The BRA addresses the Los Patos Underpass component to support the Initial Study (IS) being prepared by Rincon for the project to determine the scope of analysis in the forthcoming Environmental Impact Report (EIR). This BRA addendum (report) addresses the shoofly component which was added to include the temporary shoofly tracks required by the revised design of the Cabrillo Rail Bridge, based on the City's review of the Administrative Draft IS. This report was prepared in accordance with the City's California Environmental Quality Act (CEQA) review process and the City's Master Environmental Assessment (MEA) Guidelines (City 2023).

An overall boundary of the shoofly component was provided by T.Y. Lin; however, a detailed design and description sufficient to assess significance of biological impacts (particularly within the coastal zone and Environmentally Sensitive Habitat Areas and their associated buffers) remain in progress. Therefore, this BRA addendum summarizes the existing conditions and evaluates the potential for sensitive resources to occur within the project boundary but does not evaluate potential impacts or provide mitigation measures for the proposed shoofly component. Biological impact details such as number of trees needing to be removed are to be addressed in the EIR that will be prepared for the project at the time that the shoofly component is further along in its design. This addendum will be updated at that time and will include impact analysis of the shoofly component and additions to or revisions of the mitigation measures provided in the BRA as needed to address those impacts. The BRA and BRA Addendum combined will address the whole of the project's potential biological impacts and will be incorporated into the EIR.

Shoofly component Location and Description

The shoofly component is located in the coastal zone in the City and the Montecito Community Plan (MCP) area of unincorporated County (Attachment 1, Figure 1). The shoofly component is located along the UPRR on County Assessor's parcel number 017-010-079 and 017-010-020. The shoofly component is bordered to the north by U.S. Highway 101; to the east and west by the UPRR; and to the south by the Andree Clark Bird Refuge (Refuge), commercial properties, and the Santa Barbara Cemetery. The shoofly component extends about 900 feet west Los Patos Way to approximately 380 feet southeast of the corner of Channel Drive, totaling approximately 0.60-mile along the UPRR. The eastern portion of the shoofly component is located within the MCP area of the County. The shoofly component is located within the right-of-way owned by California Department of Transportation (Caltrans), UPRR, and the City of Santa Barbara but will be owned and operated by UPRR.

The proposed shoofly component involves construction of a rail bypass to allow continued train travel during construction of a new rail bridge over Cabrillo Boulevard. The shoofly tracks are anticipated to be installed only on the north side of the existing UPRR tracks. As previously stated, a final design for the shoofly component is still being developed. The shoofly component includes associated staging and laydown areas.

The project boundary in this report includes both the overall boundary of the shoofly component and the Los Patos Underpass component. Note that the shoofly component may overlap the Los Patos Underpass component depending on final design. The boundary of the Los Patos Underpass component is included for reference but will not be analyzed further. For the purposes of this report, the study area includes the project boundary plus a 100-foot buffer (Attachment 1, Figure 2). The replacement of the Cabrillo Rail Bridge and construction of the Los Patos-Cabrillo Roundabout, of which this project is a component, have already been assessed under separate CEQA documents with the roundabout currently under construction.

Methodology

Literature Review

Rincon conducted a literature review to characterize the nature and extent of biological resources in the study area. The literature review included an evaluation of current and historical aerial photographs of the site (Google Earth), regional and site-specific topographic maps, and other readily available literature regarding biological resources present on and near the project site.

Queries of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation system (IPaC; UFWS 2023a), CDFW California Natural Diversity Database (CNDDB; CDFW 2023a), and California Native Plant Society (CNPS) online Inventory of Rare and Endangered Plants of California (CNPS 2023) were conducted to obtain comprehensive information regarding State and federally listed species, and other special status species, considered to have potential to occur within the *Santa Barbara, California* USGS 7.5-minute topographic quadrangle and the surrounding five quadrangles, *Goleta*, *San Marcos Pass*, *Little Pine Mtn*., *Hildreth Peak*, *Carpinteria* (three remaining quadrangles of a standard nine-quad search consist solely of the Pacific Ocean). The results of database-queries and lists of special status species were reviewed by Rincon's regional biological experts for accuracy and completeness. The final list of special status biological resources (species and sensitive natural communities) was evaluated for potential to occur in the study area based on documented occurrences within the six-quadrangle search area and biologists' expert opinions on species known to occur in the region. The evaluation results and justification were compiled into a table (Attachment 4).

The following resources were also reviewed for additional information on existing conditions relating to biological resources within the study area:

- USFWS Critical Habitat Portal (2023b)
- CDFW Special Animals List (2023b)
- CDFW Biogeographic Information and Observation System (CDFW 2023c)
- CDFW Special Vascular Plants, Bryophytes, and Lichens List (2023d)
- Monarch Butterfly Overwintering Sites in Santa Barbara County, California (Meade 1999)

The vegetation community characterizations for this analysis were based on the classification systems presented in *A Manual of California Vegetation, Second Edition* (MCV2; Sawyer et al. 2009).

The potential for wildlife movement corridors was evaluated based on the California Essential Habitat Connectivity Project (Spencer et al. 2010) commissioned by the California Department of Transportation and CDFW .

Field Reconnaissance Survey

Rincon biologists Kendra Bonsall and Yuling Huo conducted a reconnaissance-level field survey on November 7 and 8, 2023, to document the existing site conditions and to evaluate the potential for presence of sensitive biological resources including sensitive plant and animal species, sensitive plant communities, potentially jurisdictional waters of the U.S. and wetlands, and habitat for federally and state protected species. Table 1 provides details on the weather conditions for each survey day.

Kendra Bonsall is a fisheries and marine biologist with over four years of professional experience in the environmental consulting field based in Santa Barbara County. She has extensive experience conducting special status species surveys, construction monitoring, and reporting for environmental compliance. She has prepared technical biological reports throughout Ventura and Santa Barbara Counties and is experienced with surveys and reporting for avian and a variety of special status species, including the monarch butterfly – California overwintering population (*Danaus plexippus plexippus* pop.1).

Yuling Huo is a biologist and arborist with seven years of professional experience in the environmental consulting field based in Santa Barbara County. Ms. Huo has extensive project management experience and expertise in compliance monitoring and reporting for complex large-scale projects, arborist surveys and reports, nesting bird and wildlife surveys, nesting bird management and species protection plans, native tree restoration, technical report preparation, and tree surveys and risk assessments. Ms. Huo is well versed in biological resource assessments to meet local, state, and federal requirements and address CEQA, NEPA, and the Endangered Species Act; as well as supporting the acquisition of Federal and State waters permits (including Clean Water Act Section 404, 401, and California Department of Fish and Wildlife Section 1602 agreements) and coastal development permits.

Kaitlyn Weaver is a biologist and arborist with three years of professional experience in the environmental consulting field based in Santa Barbara County. She has experience working with California native plants, animals, and trees. She has assisted in pre-construction surveys, compliance monitoring, and has written technical reports for numerous projects throughout southern California.

Table 1 Survey Weather Conditions

Date	Surveyors	Weather
November 7, 2023	Kendra Bonsall, Yuling Huo	57-71F, clear to partly cloudy skies, 1 to 5 mile per hour winds
November 8, 2023	Kendra Bonsall, Yuling Huo, Kaitlyn Weaver	62-69F, clear skies, 1 to 5 mile per hour winds

Methodologies were consistent with the BRA. A jurisdictional delineation was completed for the Los Patos Underpass component in the BRA. The project is not anticipated to directly impact jurisdictional waters, including wetlands, as they are located outside of the project site. Therefore, an additional jurisdictional delineation was not conducted for this report. The extent of potential jurisdictional features was however mapped throughout the remainder of the study area based on aerial imagery as reference for establishing the City's Environmentally Sensitive Habitat Area (ESHA) buffers.

Protected Tree Survey

In addition, a tree survey was conducted by International Society of Arboriculture (ISA) Certified Arborists Yuling Huo (#WE-11975A) and Kaitlyn Weaver (#WE-14623A) on November 7 and 8, 2023, to document protected trees with the potential to be impacted by the project. As such, the survey included any protected trees located on the north side of the UPRR tracks (proposed shoofly track location) and within or directly adjacent to the Los Patos Underpass component boundary. Note that trees located on the south side of the UPRR tracks and outside of the Los Patos Bridge Replacement boundary were not included because they are not anticipated to be impacted. Protected trees were defined based on the City's Coastal Land Use Plan (CLUP; City 2019) and Municipal Code Chapters 15.20 (Street Tree Ordinance) and 15.24 (Tree Preservation Ordinance), the County's Article II § 35-140, and the MCP Policy BIO-M-1.15 through BIO-M-1.17 as follows:

- Mature native trees (with one trunk at least 4 inches or greater in diameter at 4 feet 6 inches above grade) within ESHAs, wetlands, creeks, and required habitat buffers, per City's CLUP Policies 4.1-13 and 4.1-20
- Trees planted in a parkway strip, tree well, public area, or street right-of-way as well as setback trees, parking lot trees, trees on approved plans, and historic/specimen trees 4 inches or greater in diameter of the main trunk, per City Municipal Code Chapters 15.20 and 15.24
- Any tree which is 6 inches or more in diameter measured at four feet above ground and six feet or more in height which is 1) located in a County street right-of-way; 2) located within 50 feet of any major or minor stream; 3) oak trees; or 4) used as habitat my the monarch butterflies, per County Article II § 35-140
- Oak trees and native specimen trees, per MCP Policy BIO-M-1.15 through BIO-M-1.17. Since size threshold is not defined in the MCP, the County Article II § 35-140 size of 6 inches more in diameter was utilized to determine protection size

Tree locations were recorded using a Geode global positioning system (GPS) device capable of submeter accuracy as close to the base of the trunk as possible. All surveyed trees were assigned a unique identification number and tagged with a corresponding metal tag (except where infeasible due to access restrictions such as fencing, encampments, or steep terrain). Relationships among the trees (e.g., multiple trunks arising from the same root, mature clones of a no longer present parent tree) were not determined, as only above ground portions of the trees were examined. For each tree, the diameter at breast height (DBH) was measured at 4.5 feet above natural grade using a tree caliper, or slightly higher or lower where a limb or swelling interfered; if the trunk split at or below 4.5 feet, the tree was considered a multi-trunk tree. Data collected included the following information for each tree: Scientific and common name, DBH and visually estimated height, crown spread in eight compass directions representing the dripline, health assessment and structural condition ratings by visual tree assessment.

Existing Conditions

This section summarizes the general environmental setting, vegetation communities present, and plants and animals observed in the study area. Representative photographs of the study area are provided in Attachment 3. A complete list of all plant and animal species observed onsite during the field surveys is presented in Table 2 and Table 3.

Physical Characteristics

The project site is mostly developed and surrounded by numerous non-native plant species, including ornamental plantings and eucalyptus trees. The western portion is approximately 50 feet north of and the shoofly component is over 100 feet north of the salt marsh coastal wetland habitat of the Refuge lagoon. The central portion is located north of commercial buildings. The eastern portion is located north of open space with primarily annual grassland vegetation. The U.S. Highway 101 borders the north side of the project site.

Topography and Soils

Topography in the study area is generally flat with elevations ranging from approximately 3 to 23 meters (approximately 10-75 feet) above mean sea level. The study area is situated on soils mapped as the Milpitas-Positas fine sandy loams, 2 to 9 percent slopes and Milpitas-Positas fine sandy loam, 9 to 15 percent slopes, eroded (USDA 2022). Both soil profiles are generally found on terraces and consist of very deep, moderately well drained clay loam formed in mixed alluvium and are not listed as hydric. A small portion of the study area in the southwest, near the Refuge, is classified as water.

Hydrology

The National Hydrography Dataset (NHD) maps two potential jurisdictional features in the study area, a flow line connector and estuary (USGS 2023). The flow line connector begins on the north side of the U.S. Highway 101, near the Montecito Club, and crosses the UPRR, near Cabrillo Boulevard, and enters the Refuge. The estuary identified is associated with the edge of the Refuge lagoon, outside of the project site. The NWI identifies a riverine, a freshwater emergent wetland, and a lake within the study area. The riverine crosses the railroad tracks at the western portion of the project site and is classified as a temporarily flooded, intermittent streambed that is excavated. The freshwater emergent wetland and lake is associated with the edge of the Refuge lagoon, located along the southwestern boundary of the study area, outside of the project site. The portion of the study area associated with the Refuge lagoon is further described below.

Vegetation Communities and Land Covers

The study area contains six vegetation communities (quailbush scrub, eucalyptus groves, lemonade berry scrub, fountain grass swards, annual grassland, and salt marsh bulrush marsh) and three land cover types (ornamental landscaping, developed, and unvegetated beach) (Attachment 1, Figure 3). General descriptions of quailbush scrub, lemonade berry scrub, eucalyptus groves, ornamental landscaping, and developed land are discussed in the BRA. A complete list of plant species by vegetation community observed in the study area, as well as their wetland indicator status, are included in Table 2. The unvegetated beach land cover is not included in the table since no vegetation is present in that land cover type.

Table 2 Plant Species Observed Within the Study Area

Scientific Name	Common Name	Native vs Non-native[1]	Wetland Indicator Status[2]	Quailbush Scrub	Lemonade Berry Scrub	Eucalyptus Groves	Fountain Grass Swards	Annual Grassland	Salt Marsh Bulrush Marsh	Ornamental Landscape	Developed
Acacia dealbata	silver wattle	Non-native	UPL			x	x				
Acacia longifolia	golden wattle	Non-native	UPL			x	x				
Acacia mearnsii	black wattle	Non-native	UPL			x	x				
Artemisia californica	California sagebrush	Native	UPL	x	x	x					
Atriplex lentiformis	quailbush	Native	FACU	x	x	x			x		
Avena barbata	slender oat	Non-native	UPL				x	x			
Avena fatua	wild oat	Non-native	UPL				x	x			
Baccharis pilularis	coyote brush	Native	UPL	x		x	x	x			
Bulboschoenus maritimus	saltmarsh bulrush	Native	OBL						x		
Bromus diandrus	ripgut brome	Non-native	UPL			x	x	x		x	
Bromus rubens	red brome	Non-native	UPL			x	x	x		x	
Callistemon citrinus	crimson bottlebrush	Non-native	UPL							x	
Cenchrus spinifex	coastal sandbur	Native	UPL					x			
Cortaderia jubata	pampas grass	Non-native	FACU							x	
Cynodon dactylon	Bermuda grass	Non-native	UPL				x	x			
Cynosurus echinatus	annual dogstail	Non-native	UPL	x				x			
Delosperma litorale	ice plant	Non-native	FACU							x	
Echium candicans	pride of madeira	Non-native	UPL							x	
Elymus condensatus	giant wildrye	Native	FACU		x		x	x			
Encelia californica[3]	California sunflower	Native	UPL	x	x						
Ehrharta calycina	veldt grass	Non-native	UPL				x	x			
Erigeron canadensis	Horseweed	Native	FACU	x			x	x	x		
Eucalyptus cladocalyx	sugar gum	Non-native	UPL			x					
Eucalyptus globulus	blue gum eucalyptus	Non-native	UPL			x	x	x		x	
Eucalyptus sideroxylon	ironbark eucalyptus	Non-native	UPL			x					
Frankenia salina	alkali heath	Native	FACW	x	x				x		
Hirschfeldia incana	short podded mustard	Non-native	UPL				x	x			
Jaumea carnosa	marsh jaumea	Native	OBL						x		
Lactuca serriola	prickly lettuce	Non-native	FACU			x		x			
Ligustrum lucidum	glossy privet	Non-native	UPL			x					
Malephora crocea	red ice plant	Non-native	FACU			x				x	
Malosma laurina	laurel sumac	Native	UPL							x	
Marva paviflora	cheeseweed	Non-native	UPL					x			
Melaleuca quinquenervia	broad-leaved paperbark	Non-native	UPL		x						
Melaleuca sp.	bottlebrush	Non-native	UPL		x						
Myoporum sp.	Myoporum	Non-native	FACU			x					x
Nicotiana glauca	tree tobacco	Non-native	FAC				x	x			
Paspalum dilatatum	dali grass	Non-native	FAC				x	x			
Pennisetum ciliare	Buffelgrass	Non-native	UPL				x				

Scientific Name	Common Name	Native vs Non-native[1]	Wetland Indicator Status[2]	Quailbush Scrub	Lemonade Berry Scrub	Eucalyptus Groves	Fountain Grass Swards	Annual Grassland	Salt Marsh Bulrush Marsh	Ornamental Landscape	Developed
Pinus sp.	ornamental pine	Non-native	UPL							x	x
Pittosporum undulatum	pittosporum	Non-native	UPL			x					
Platanus racemosa	western sycamore	Native	FAC	x							
Prunus ilicifolia	hollyleaf cherry	Native	UPL			x					
Prunus ilicifolia ssp. *lyonii*	island cherry	Native	UPL	x		x					
Quercus agrifolia	coast live oak	Native	UPL	x		x	x	x		x	
Rhus integrifolia	lemonade berry	Native	UPL	x	x	x				x	
*Ribes californicum***	gooseberry currant	Native	UPL			x					
Ricinus communis	castor bean	Non-native	FACU				x	x			
Romus diandrus	great brome	Non-native	UPL					x			
Salicornia pacifica	Pickleweed	Native	OBL	x					x		
Salix exigua	narrowleaf willow	Native	FACW	x			x				
Salix laevigata	red willow	Native	FACW				x				
Sambucus nigra	blue elderberry	Native	FACU	x							
*Salvia spathacea***	California hummingbird sage	Native	UPL			x					
Schinus terebinthifolia	Brazilian pepper tree	Non-native	FAC			x					
Schoenoplectus californicus	Bulrush	Native	OBL						x		
*Sisyrinchium bellum***	blue-eyed grass	Native	FACW			x					
Sonchus oleraceus	Sowthistle	Non-native	UPL							x	

[1] Jepson 2023
[2] USACE 2020
[3] Most individual plants were dead
**Planted in restoration area
OBL = Obligate Wetland, FACW = Facultative Wetland, FAC = Facultative, FACW = Facultative Wetland, FACU = Facultative Upland, UPL = Obligate Upland

Quailbush Scrub

Quailbush is qualified as a facultative uplands (FACU) species, or plant that typically occurs in non-wetland habitats but may frequently occur in standing water or saturated soils (USFWS 2020).

Quailbush scrub is present along the dirt trails in the southwestern portion of the study area. A small portion of the vegetation community encroaches into the southwestern boundary of the project site. However, a chainlink fence separates the quailbush scrub and adjacent annual grassland. Although California sunflower was the dominant species, the majority of the individuals were observed to be dead. As such, quailbush is now the dominant in the shrub canopy, which is interspersed with coyote brush, lemonade berry, California sagebrush, and narrowleaf willow (*Salix exigua*). Emergent trees include coast live oak, western sycamore (*Platanus racemosa*), and island cherry (*Prunus ilicifolia* ssp. *lyonii*). Alkali heath (*Frankenia salina*) is present in small quantities in the herbaceous layer. A small portion of quailbush scrub encroaches into the project site (i.e., overhangs the chainlink fence that separates the quailbush and fountain grass swards adjacent to the UPRR). However, the chainlink fence clearly separates the two vegetation communities.

Lemonde Berry Scrub

Lemonade berry scrub is present in a small area at the southern edge of the study area, outside of the project site, along the dirt trails. Lemonade berry is dominant in the shrub canopy and interspersed with California sagebrush and dead California sunflower. Emergent non-native ornamental bottlebrush trees (*Melaleuca* sp.) are present, and alkali heath is present in small quantities in the herbaceous layer. Lemonade berry scrub constitutes ESHA in the study area.

Salt Marsh Bulrush Marsh

Salt marsh bulrush marsh (*Bulboschoenus maritimus* Herbaceous Alliance) typically is dominated or co-dominated by saltmarsh bulrush (*Bolboschoenus maritimus)* in the herbaceous layer (>50% relative cover) with other native marsh species, such as spear-leaved orache (*Atriplex prostrate*), pickleweed (*Salicornia pacifica*), cattail (*Typha latifolia*). The vegetation community is generally found in seasonally flooded mudflats and tidal brackish marshes (Sawyer et al. 2009). Salt marsh bulrush marsh is ranked as S3/G4 and therefore is a sensitive community (CDFW 2023e).

Salt marsh bulrush marsh is located at the southwestern portion of the study area, adjacent to the Refuge outside the project site. The vegetation community is dominated by saltmarsh bulrush and bulrush (*Schoenoplectus californicus;* obligate wetland species [OBL]) with pickleweed (OBL), alkali heath (facultative wetland [FACW]), and marsh jaumea (*Jaumea carnosa;* OBL) present on the ground. Emergent quailbush scrub is also present in the shrub layer. Salt marsh bulrush marsh is considered ESHA within the study area.

Eucalyptus Groves

Eucalyptus grove is the dominant vegetation community within the study area. Blue gum eucalyptus (*Eucalyptus globulus*) groves are present directly north and south of the railroad tracks, beginning at the central portion of the study area to the eastern extent of the study area. The eucalyptus grove runs parallel to U.S. Highway 101 on the northern extent of the study area. Some of the eucalyptus tree canopies overhang into the project site. The understory is sparse and mostly comprised of eucalyptus debris and leaves. Non-native plants, including coppery mesembryanthemum (*Malephora crocea*), is present on the ground at the northwestern portion of the vegetation community, where ornamental landscaping meets the eucalyptus grove. Emergent coast live oak (*Quercus agrifolia*), island cherry, and lemonade berry is also present in the eucalyptus groves. A eucalyptus grove dominated by sugar

gum (*Eucalyptus cladocalyx*) is present along the southern extent of Los Patos Way, as seen in the original project boundary (Rincon 2021). Quailbush is present in small quantities in the eastern portion of this grove, northeast of the lemonade berry scrub (described below).

Fountain Grass Swards

Fountain grass swards (*Pennisetum setaceum - Pennisetum ciliare* Herbaceous Semi-Natural Alliance) is a non-native community with *Pennisetum* species dominating or co-dominating (>50% relative cover) with other non-native species in the herbaceous layer. Emergent trees and shrubs may be present at low cover. This vegetation community is commonly found in steep coastal bluffs, road-cuts, coastal dunes, coastal scrub, and desert scrub types in areas with mild, frost-free winters (Sawyer et al. 2009). This vegetation alliance is primarily not considered sensitive (CDFW 2023e).

Fountain grass swards are present at the western portion of the study area, adjacent to the UPRR. The dominant species is bufflegrass (*Pennisetum ciliare)* with other invasive, non-native species present, such as castor bean (*Ricinus communis*), and tree tobacco (*Nicotiana glauca*). This vegetation community is highly disturbed, as it is adjacent to the UPRR. Homeless encampments are within the area, and some trails are apparent (i.e., stomped vegetation) adjacent to the UPRR that contain trash. The southern portion of the vegetation community (south of the UPRR) has a higher population of California brittlebrush and some emergent coyote brush shrubs compared to the northern portion of the vegetation community (north of the UPRR). However, buffelgrass and non-native species are the dominant species overall within the vegetation community. Some emergent coast live oaks, acacia trees (*Acacia* sp.), and narrow-leafed willow (*Salix exigua)* is also present on the northern portion of the vegetation community.

Annual Grassland

Annual grassland (*Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance) is dominated by non-native annual grasses and weedy annual and perennial forbs, primarily of Mediterranean origin, usually as a result of human disturbance. Scattered native grass and wildflower species, representing remnants of the original vegetation may also be common. This vegetation community is generally found in open areas in valleys and foothills throughout coastal and interior California. It typically occurs on soils consisting of fine-textured loams or clays that are somewhat poorly drained (Sawyer et al. 2009). This vegetation alliance is ranked GNASNA due to the predominance of non-native species and is not considered sensitive (CNPS 2023).

Annual grassland is present at the southeastern portion of the study area, south of the UPRR. The dominant species includes *Bromus* sp., such as ripgut brome (Bromus diandrus) and red brome (*Bromus rubens*). Other non-native species present include veldt grass (*Ehrharta calycina*), cheeseweed (*Marva paviflora*), and sowthistle (*Sonchus oleraceus*). Emergent pine (*Pinus* sp.), coast live oak, and blue gum eucalyptus are present in this vegetation community. No shrub cover is present in this community but some chopped eucalyptus wood is present at the western portion that could provide minimal coverage. This community is highly disturbed, with truck tracks present throughout the vegetation community. A gate is located off of Channel Drive and trucks likely access the UPRR through this area.

Ornamental Landscaping

Ornamental landscaping is present throughout the study area and concentrated north of Los Patos Way and surrounding the railroad. Species include herbaceous plants such as ice plant (*Carpobrotus edulis*), pampas grass (*Cortaderia selloana*) and various non-native, ornamental trees, such as bottlebrush (*Melaleuca* spp.). Some native species are scattered throughout the ornamental

landscape along the slopes at the base of the railroad and outside of the project site, including coast live oak and laurel sumac (*Malosma laurina*). A single coast live oak is located within the project site on the north side of the railroad tracks. Additional ornamental landscaping is present within the U.S. Highway 101 easement, along the northeastern boundary of the study area.

Developed

Developed portions of the study area comprises hardscapes/buildings/roads. Developed land (U.S. Highway 101, UPRR, paved roads, and commercial buildings) are present throughout and adjacent to the project site. The track ballast of the UPRR, which includes small, crushed stones (approximately 1 to 3 inch) supporting the railroad track, also comprises the developed landcover type. Recreational dirt pathways are also present in the study area south of the project site near the Refuge. Some ornamental plantings, such as myoporum (*Myoporum* sp.) and emergent pine trees (*Pinus* sp.) are present in this landcover type, specifically adjacent to the commercial buildings and along roads. However, this landcover type is mostly devoid of vegetation within the study area.

Unvegetated Beach

Unvegetated beach is not described in the MCV2 vegetation classification system (Sawyer et al. 2009). The area consists of a sand and silt beach that is exposed along the shoreline of the Refuge.

Unvegetated beach is present in a small portion of the southwestern portion of the study area, between the salt marsh bulrush marshes and the Refuge, outside of the project site. No vegetation occurs within the land cover type. Many shorebirds use the unvegetated beach for resting, such as snowy egret (*Egretta thula*) and sanderling (*Calidris alba*). Because the unvegetated beach is part of the Refuge, the landcover type is considered ESHA under the CLUP (City 2019).

General Wildlife

The study area provides suitable habitat for wildlife species that commonly occur in urban areas. The wildlife species detected onsite are common, widely distributed, and adapted to living in proximity to human development. During the survey, common avian species observed included Anna's hummingbird (*Calypte anna*), house finch (*Haemorhous mexicanus*), and American crow (*Corvus brachyrhyncos*). The study area also had a variety of waterfowl species associated with the Refuge lagoon, such as western gull (*Larus occidentalis*), American coot (*Fulica americana*), mallard (*Anas platyrhynchos*), snowy egret (*Egretta thula*), and California brown pelican (*Pelecanus occidentalis californicus*; FP). An individual monarch butterfly (*Danaus plexippus*) mortality was observed on the ground at the eucalyptus grove located in the central portion of the study area, near Los Patos Way. The wildlife species observed within the study area are included in Table 3.

Table 3 Wildlife Species Observed Within the Study Area on November 7-8, 2023

Scientific Name	Common Name	Status	Native or Introduced
Invertebrates			
*Danaus plexippus**	monarch butterfly (individual, not overwintering)	FC	Native
Reptiles			
Sceloporus occidentalis	western fence lizard	–	Native
Birds			
Calidris alba	sanderling	–	Native
Corvus brachyrhynchos	American crow	–	Native

Scientific Name	Common Name	Status	Native or Introduced
Egretta thula	snowy egret	–	Native
Fulica americana	American coot	–	Native
Haemorhous mexicanus	house finch	–	Native
Lonchura punctulata	scaly-breasted munia	–	Introduced
Junco hyemalis	dark-eyed junco	–	Native
Larus occidentalis	western gull	–	Native
Melozone crissalis	California towhee	–	Native
Mimus polyglottos	northern mockingbird	–	Native
Pelecanus occidentalis californicus	California brown pelican	FP	Native
Sayornis nigricans	black phoebe	–	Native
Selasphorus rufus	Rufous hummingbird	–	Native
Mammals			
Sylvilagus bachmani	brush rabbit	–	Native

*mortality

FP = State Fully Protected, FC = Federal Candidate

Sensitive Biological Resources

Special Status Species

Methodology and criteria for evaluating the potential for each special status species to occur in the study area and definitions for special-status species are described in the BRA.

- **No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime), and species would have been identifiable on the site if present (e.g., oak trees).
- **Low Potential.** Few of the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential.** Some of the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All the habitat components (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime) meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (i.e., within the last 5 years).

For the purpose of this report, and as stated above, special status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the ESA; those listed or candidates for listing as Rare, Threatened, Endangered under CESA or the Native Plant Protection Act; those identified as Fully Protected under Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code (CFGC); SSC and WL species identified by the CDFW; and plants occurring on Ranks 1 and 2 of the CNPS California Rare Plant Rank (CRPR) system per the following definitions:

- List 1A = Plants presumed extinct in California
- List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
- List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80% occurrences threatened)
- List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20% of occurrences threatened or no current threats known)
- List 2 = Rare, threatened or endangered in California, but more common elsewhere

Species with Rare Plant Ranks 3 and 4 were not evaluated. These rankings reflect insufficient information to make a ranking determination (Rank 3) or a limited distribution in California (Rank 4). Because the documented rarity of these species does not merit inclusion in Ranks 1 or 2, these species are not likely to meet the criteria for listing as Rare, Threatened, or Endangered under CESA and therefore do not require consideration as special status species under CEQA.

Based on the database and literature review, 26 special status plant species are known or have the potential to occur in the vicinity of the study area, as reported in the CNDDB (five-mile), CNPS (six-quad), USFWS IPaC (five-mile), and Rare Plant of Santa Barbara County (SBBG 2012) lists. No special status plant species have a potential to occur within the project site, based on the criteria presented above and lack of suitable habitat (Attachment 4). No special status plant species were detected during the field reconnaissance survey conducted on November 7 and 8, 2023. A review of the City's CLUP (City 2019) did not identify any habitats within the project site for threatened or rare species. A small portion of quailbush scrub encroaches into the project site (i.e., overhangs the chainlink fence that separates the quailbush and fountain grass swards adjacent to the UPRR). However, the chainlink fence clearly separates the two vegetation communities. No federally regulated plant species are expected to occur on the project given the disturbed nature of the project site, the high degree of urbanization within the vicinity of the project site, and the specific soil types and/or plant communities requirements for each species. The native vegetation communities present in the southwestern portion of the study area, outside of the project site, have the potential to support special status plant species, including the quailbush scrub, lemonade berry scrub, and salt marsh bulrush marsh adjacent to the Refuge. The UPRR provides a buffer between the proposed shoofly (north of UPRR) and the native vegetation communities (south of UPRR).

A total of 33 special status wildlife species were documented from the database and literature review as having a potential to occur in the vicinity, as reported in the CNDDB (five-mile) and USFWS IPaC (five-mile) (Attachment 4). No special-status animal species were detected during the field reconnaissance surveys. The existing developed areas and associated disturbances to wildlife, such as the active UPRR and U.S. Highway 101, limit the quantity and quality of suitable habitat for special status wildlife and reduce the ability for self-sustaining wildlife populations to occur. Of the 33 special status wildlife species, 14 species have a potential to occur on the project site, at least transiently. Nine special-status avian species have a low to moderate potential to occur transiently on site, including Cooper's hawk (*Accipiter cooperii*) which is a State-listed Watch List (WL) species which also

has a potential to breed and forage on site. Three special-status reptile species have a low potential to occur transiently, including northern California legless lizard (*Anniella pulchra*), California legless lizard (*Anniella* spp.), and coast patch-nosed snake (*Salvadora hexalepis virgultea*). Two insect species have a low potential to occur, including monarch butterfly – California overwintering population (*Danaus plexippus plexippus* pop.1) which is a federally-listed Candidate (FC) species.

Monarch butterfly overwintering roosts are generally found in a dense stand of eucalyptus trees that contain high canopy and shrub coverage for wind protection, typically within a drainage (Meade 1999, 2017). Monarch roosts are considered City ESHA by the City's CLUP and County ESH per County Article II §35-97.12 and are also protected by MCP Policy BIO-M-1.4. The nearest Xerces Society (Xerces) overwintering site is a eucalyptus grove north of the Music Academy of the West campus, approximately 320 feet east of the study area (Xerces 2023). This grove has been documented as no longer having suitable roosting habitat due to tree removal and construction (Meade 2017). The Butterfly Lane overwintering site is located south of the Music Academy of the West building and has been identified as still providing suitable overwintering habitat (Meade 2017). No monarchs have been observed at either site in recent years (Xerces 2023). No known or historic overwintering roosts are documented within the study area. An individual monarch butterfly mortality was observed on the ground at the eucalyptus grove at the central portion of the study area, near Los Patos Way. The eucalyptus groves within the study area are generally narrow windrows that are not expected to provide suitable roosting microhabitat. The groves are not dense enough and lack edge barriers to provide wind protection and insulation, lack an open interior for sunning, and lack understory plants for nectar source and a good water source. Due to the presence of known/historic monarch in the vicinity and observations of transient monarchs, monarch butterflies have a low potential to utilize the on-site eucalyptus groves as temporary roosting habitat (earlier in the season as they search for suitable aggregation sites).

Northern California legless lizard, California legless lizard, and coast patch-nosed snake are SSC that have a low potential to occur on the project site. The species require a habitat composed of sandy or loose laomy soils under sparse vegetation. Soils with high moisture content are essential (Nafis 2020). In a study conducted in coastal Central California, legless lizard density was high near shrubs and where soil moisture was greater, but lower in disturbed soils and in iceplant (Kuhnz et al. 2005). Suitable habitat is present in the quailbush scrub and lemonade berry scrub, southwest of the project site. Although the study area has elements of the species' habitat (e.g., coastal scrub habitat), these areas are outside of the project site.

The project site contains habitat that can support nesting birds, including raptors protected under the CFGC and the MBTA. Take of these species is prohibited by federal and state law and must be avoided. The loss of a nest due to construction activities would be a violation of the MBTA and CFGC 3503 et. seq. Potential nesting sites for raptors within the study area are located within the eucalyptus groves and other emergent trees, such as coast live oaks. Other species of birds are likely to utilize the coastal shrub and marsh habitat (i.e., quailbush shrub, lemonade berry, and salt marsh bulrush marsh) within the study area, outside of the project site. The Refuge supports as many as 192 bird species, including migratory waterfowl and wading birds. Special status bird species that may occur in the Refuge are generally not anticipated to occur on the project site due to the lack of foraging and nesting habitat. There is a moderate potential for Cooper's hawk breed and/or forage in the coast live oaks trees within the study area. Avian species are highly mobile and likely adapted to avoidance of vehicular and pedestrian traffic within the project site. Furthermore, the eucalyptus row serves as a visual buffer between the project site and the vegetation communities associated with the Refuge (i.e., lemonade berry, quailbush scrub, and salt marsh bulrush marsh).

Sensitive Plant Communities

Criteria for determining sensitive plant communities is provided in the BRA. Two CDFW sensitive vegetation communities are located within the study area, but outside of the project site; salt marsh bulrush marsh (G4S3) and lemonade berry scrub (G3S3). These vegetation communities also constitute ESHA.

The County Article II and MCP maps were reviewed for presence of mapped ESH within the study area. No mapped ESH is present within the study area and no sensitive natural communities were identified within the County. ESH and ESHA are further discussed in the "Resources Protected by Local Policies and Ordinances" section below.

Critical Habitat

No critical habitat has been designated in the study area. The nearest critical habitat is western snowy plover (*Charadrius nivosus nivosus*) critical habitat located along East Beach, approximately 0.3 miles south of the study area. The project will not affect any critical habitat areas.

Jurisdictional Waters and Wetlands

The salt marsh bulrush marsh associated with the Refuge lagoon is potentially subject to City/California Coastal Commission (CCC), USACE, CDFW, and CCRWQCB jurisdiction. The CLUP states that identification of wetlands is based on a site-specific wetland delineation, which was not conducted for the shoofly component because the project boundary is located approximately 50 feet north of and the shoofly component is located over 100 feet north of potentially jurisdictional waters and wetlands. The approximate boundary of the coastal wetland associated with the Refuge was estimated based on the salt marsh bulrush marsh vegetation community boundary which surrounds the unvegetated beach because it comprises hydrophytic vegetation, which is a wetland indicator. The approximate coastal wetland boundary is shown in Attachment 1, Figure 4 as ESHA, which is further explained in the "Resources Protected by Local Policies and Ordinances" section below.

A riverine feature classified by NWI as a temporarily flooded, intermittent streambed that is excavated, crosses U.S. Highway 101 and the railroad tracks at the western portion of the project site. The area is developed with roads and the UPRR, and no drainage or ponded water was observed during the reconnaissance survey. It is possible the NWI-classified riverine runs under the developed areas but no drainage output was observed. Additionally, a flow line connector classified by NHD begins on the north side of the U.S. Highway 101, near the Montecito Club, crosses the UPRR near Cabrillo Boulevard, and enters the Refuge. A metal pipe outlet, approximately 12 inches in diameter, was observed at the location of the NHD-classified flow line connector, on the north side of the UPRR between the railroad tracks and U.S. Highway 101. NHD maps an ephemeral stream that connects to the upstream portion of the flow line. The flow line drains into the Refuge, which is connected to the Pacific Ocean. The outlet was covered in eucalyptus leaf debris and had no presence of water during the reconnaissance survey. The outlet ran under the U.S. Highway 101 on the eastern portion of the project site (Attachment 1, Figure 4). The outlet is likely jurisdictional under USACE or RWQCB due to the ephemeral connection and output to the Pacific Ocean. The outlet is likely not jurisdictional under CDFW since the outlet is not natural (e.g., metal corrugated culvert).

The project design will incorporate features necessary to meet the City's Tier 3 Storm Water Runoff Requirements and the Post-Construction Storm Water Management Program, including implementing a combination of site design, best management practices, and stormwater runoff best management practices (City 2013).

Wildlife Movement

Wildlife corridors are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as between foraging and denning areas, or they may be regional in nature, allowing movement across the landscape. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Examples of barriers or impediments to movement include housing and other urban development, roads, fencing, unsuitable habitat, or open areas with little vegetative cover. Regional and local wildlife movements are expected to be concentrated near topographic features that allow convenient passage, including roads, drainages, and ridgelines.

No mapped wildlife movement corridors are present within the study area. However, migratory waterfowl and wading birds may use the salt marsh and open water habitat of the Refuge lagoon, outside the project site, as a migratory wildlife corridor or native wildlife nursery site (City 2019). The existing UPRR and U.S. Highway 101 within and surrounding the project site present barriers to the movement of resident or migratory wildlife species. The shoofly component is proposed along the north side of the existing UPRR tracks, which separate it from the Refuge habitat and open space habitat.

The eucalyptus groves within the study area may also provide temporary roosting habitat for overwintering monarchs as they migrate through the area to more suitable roost sites.

Resources Protected by Local Policies and Ordinances

The project site is subject to the requirements of the City's CLUP (City 2019), the City's Municipal Code, and the Environmental Resources Element of the City's General Plan (City 2011). The CLUP, Municipal Code, and General Plan contain policies identifying the protection, preservation, and enhancement of biological and natural resources, in particular, ESHA and trees.

The project is also subject to the requirements of the MCP and County Article II, which contain policies identifying protection of ESH. The County Article II § 35-200 – Montecito Community Plan Overlay District implements portions of the MCP section of the County's Local Coastal Plan. Where provisions of the MCP conflict with other provisions of Article II, provisions of the MCP shall take precedence.

The California Coastal Act defines ESHA as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments." Unique plant habitats, rare and endangered plant and animal habitats, wetlands, coastal streams, rocky points, and sea cliffs are typically considered ESHA.

City ESHA

Under Section 4.1 Biological Resources in the City's CLUP (City 2019), ESHA areas include, but are not limited to:

- Estuaries and lagoons
- Southern coastal bluff scrub
- Coastal sage scrub or Chaparral that:
  - Support sensitive species;
  - Is within or adjacent to creeks, riparian, or wetland ESHAs and is an important component in the functioning of these habitats; or

  - Is a vegetation association or alliance with a global or state ranking of 1, 2, or 3 on the CNDDB or NatureServe.

- Monarch Butterfly Autumnal and Winter Roost Sites.

Figure 4.1-1 of the CLUP – Biological Resources section maps riparian scrub, other riparian woodland or forest, and ruderal vegetation communities in the area where Rincon identified quailbush scrub, lemonade berry scrub, and salt marsh bulrush marsh. The figure, however, is noted to depict representational delineations of vegetation communities and may be corrected or confirmed based on field review (City 2019).

Per Policy 4.1-15 of the CLUP, new development or redevelopment should have a 100-foot buffer from the upland edge of estuaries, lagoons, and associated adjacent wetlands (e.g., the Refuge) and 25 feet from outer edge of riparian vegetation or canopy considered an ESHA. However, according to Policy 4.1-17, improvements to existing roads, road rights-of-way, public infrastructure and facilities, and public parking lots may encroach within the ESHA buffer if there is no development footprint increase within the buffer and does not significantly disrupt the habitat values of ESHAs (City 2019).

A portion of the project boundary is approximately 50 feet north of the salt marsh bulrush marsh ESHA associated with the Refuge, however the shoofly component is proposed north of the UPRR tracks and outside of ESHA and associated ESHA buffers (Attachment 1, Figure 5). The shoofly component would be separated from the ESHA by the UPRR tracks and will also incorporate features necessary to meet the City's Tier 3 Storm Water Runoff Requirements and Post-Construction Storm Water Management Program (including implementing a combination of site design, best management practices, and stormwater runoff best management practices).

The project may directly or indirectly impact nesting birds if construction occurs during the breeding season, as described in the *Special Status Species* section. Per Policy 4.1-36 of the CLUP (City 2019), activities that could impact nesting or breeding birds within or adjoining wetlands, special wildlife areas, or known nesting or breeding areas shall be prohibited during nesting season for birds (February 1-August 30) where feasible. The shoofly component is located over 100 feet away from the Refuge habitat. Furthermore, the UPRR tracks serve as a visual buffer between the shoofly component and the vegetation communities associated with the Refuge that includes lemonade berry, quailbush scrub, and salt marsh bulrush marsh. Special status avian species associated with the Refuge are only anticipated to occur as transients on the project site or forage in the trees adjacent to the project site.

County ESH

Per Article II §35-97 and the MCP BIO-M-1.1, the ESH Overlay District within the County contains unique natural resources and/or endangered species of animal or plant life that must be protected and preserved from human activities and developments. ESH within the MCP area include but are not limited to riparian woodland corridors, monarch butterfly roosts, sensitive native flora, and coastal sage scrub. Per MCP BIO-M-1.4, any construction, grading or development within 200 feet of known or historic butterfly roosts shall be prohibited between the months of November 1 and April 1. Prior to issuance of a Coastal Development Permit (CDP) or Land Use Permit (LUP) for development within 200 feet of known or historic butterfly roosts, the resource management department (RMD) shall determine if the proposed project would have the potential to adversely impact monarch butterfly habitat.

No County-mapped ESH is located within the study area (County 2023). Eucalyptus groves are present within the study area but do not provide suitable habitat for monarch roosting and do not constitute known or historic monarch roost sites. The project is greater than 200 feet (west) from the historic butterfly roost located north of the Music Academy of the West campus (Xerces 2023).

Protected Trees

Protected trees were identified within the study area, as defined based on the City's CLUP and Municipal Code Chapters 15.20 (Street Tree Ordinance) and 15.24 (Tree Preservation Ordinance), the County's Article II § 35-140, and the MCP Policy BIO-M-1.15 through BIO-M-1.17.

Within the study area, 133 City-protected trees and 13 County-protected trees have the potential to be impacted by the project. Protected trees within the City included native and non-native species and were located within Caltrans, UPRR, and City street ROW (which were all assumed to be considered protected under Municipal Code Chapter 15.20 based on previously accepted methodology from the Cabrillo Rail Bridge Project). No native trees are proposed to be impacted within ESHA or ESHA buffers. Protected trees within the County included only non-native species and were located within Caltrans and UPRR ROWs (which were assumed to also be considered County street ROW for the purposes of protection under Article II § 35-140). At least 64 of the City-protected trees may be impacted by the Caltrans 101 HOV project. Therefore, a final count of impacted trees will need to occur following construction of the 101 HOV project that will occur prior to start of construction for this project.

Per Policies 4.1-13 and 4.1-20 of the CLUP (City 2019), mature native trees within ESHAs, wetlands, creeks, and required habitat buffers that are substantially impacted or removed should be replaced. The City's Municipal Code tree ordinances require permits for pruning or removing protected trees. The County Article II § 35-140 requires a CDP for removal of protected trees and findings where the 1) trees are dead, 2) The trees prevent the construction of a project for which a CDP has been issued and project redesign is not feasible, 3) The trees are diseased and pose a danger to healthy trees in the immediate vicinity, providing a certificate attesting to such fact is filed with the Planning and Development Department by a licensed tree surgeon, or; 4) The trees are so weakened by age, disease, storm, fire, excavation, removal of adjacent trees, or any injury so as to cause imminent danger to persons or property. Tree protection and replacement should be consistent with City and County policies.

Habitat Conservation Plans

The project site is not within any Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan areas.

Limitations

This limited biological analysis was prepared for use solely and exclusively by Rincon for T.Y. Lin International and the City of Santa Barbara. No other use or disclosure is intended or authorized by Rincon, nor shall this analysis be relied upon or transferred to any other party without the express written consent of Rincon Consultants. T.Y. Lin International agrees to hold Rincon harmless for any inverse condemnation or devaluation of said property that may result if Rincon's report or information generated is used for other purposes. The findings and opinions conveyed in this analysis are based on the material reviewed and the limited field reconnaissance. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources reviewed.

Thank you for selecting Rincon Consultants to provide you with this biological technical study. Please call if you have questions, or if we can be of further assistance.

Sincerely,
Rincon Consultants, Inc.

Kendra Bonsall, M.S.
Biologist

Christopher Julian
Principal/Senior Regulatory Specialist

Attachments

Attachment 1 Figures
Attachment 2 Regulatory Framework
Attachment 3 Representative Site Photos
Attachment 4 Special Status Species Potential to Occur

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Attachment 1

Figures

Figure 1 Regional Location

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18-08252 BRA Figures
Fig 1 Regional Location

Project Location

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Figure 2 Project Location

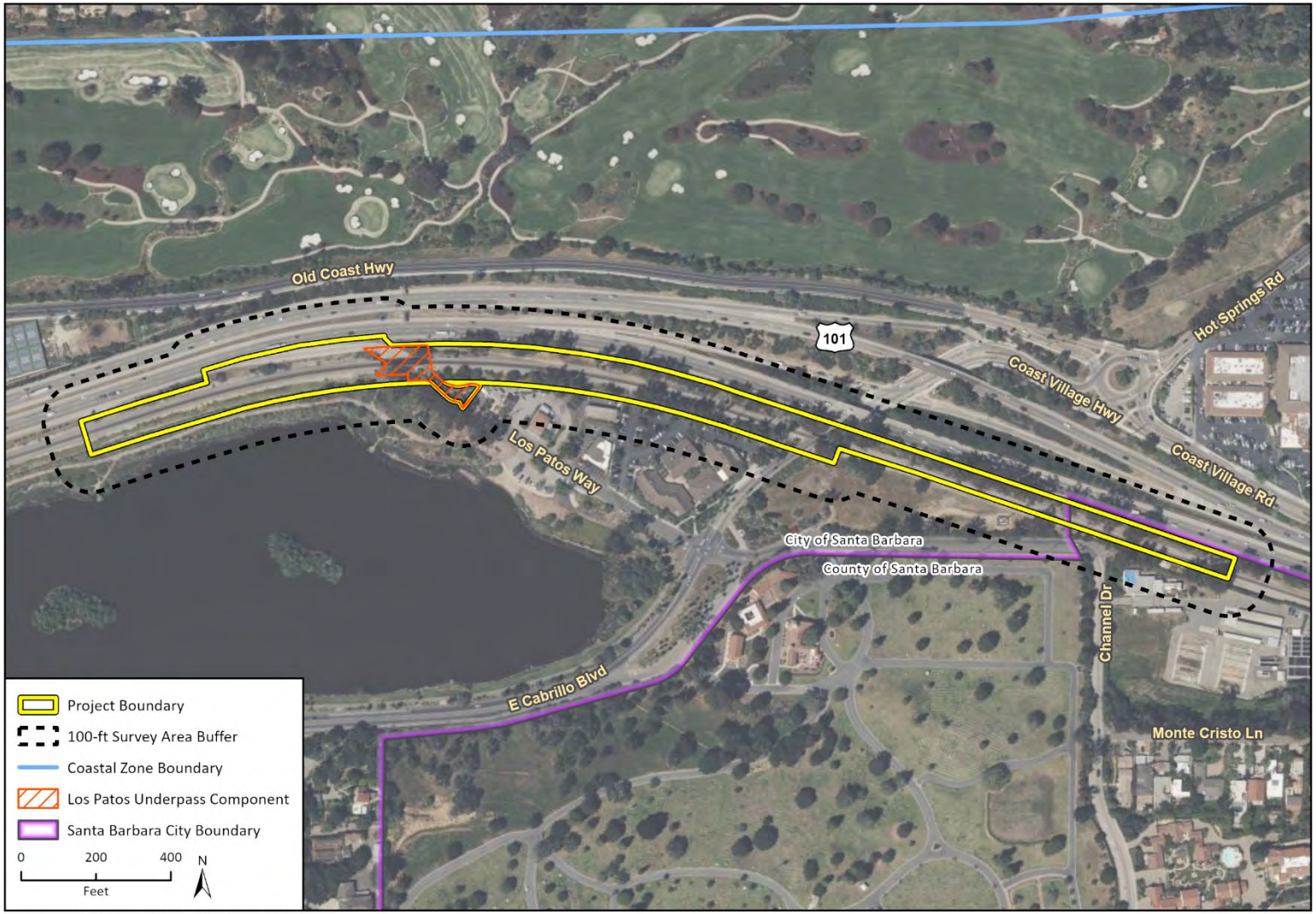

Figure 3 Vegetation Communities and Land Cover Types

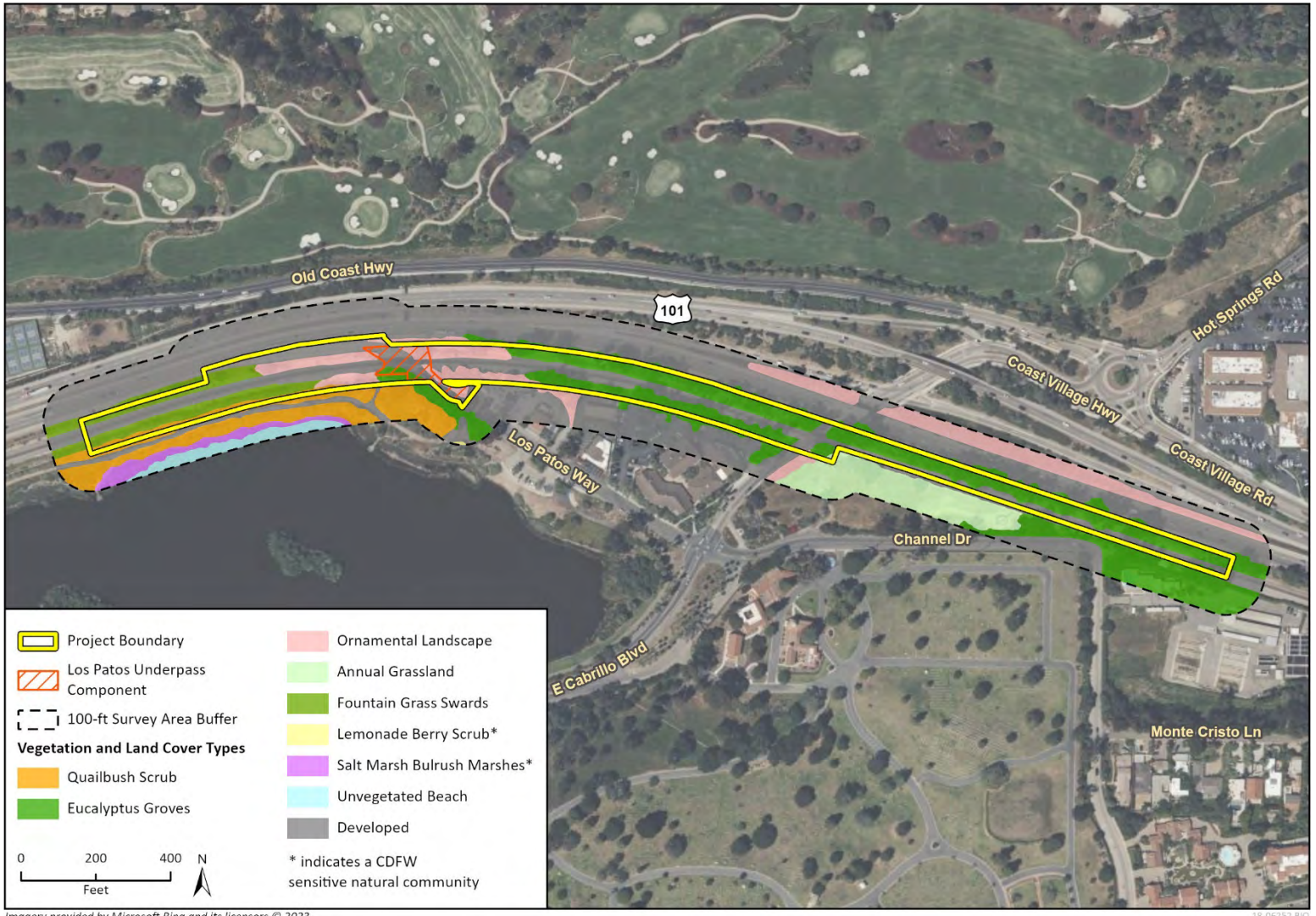

Figure 4 ESHA within the Study Area

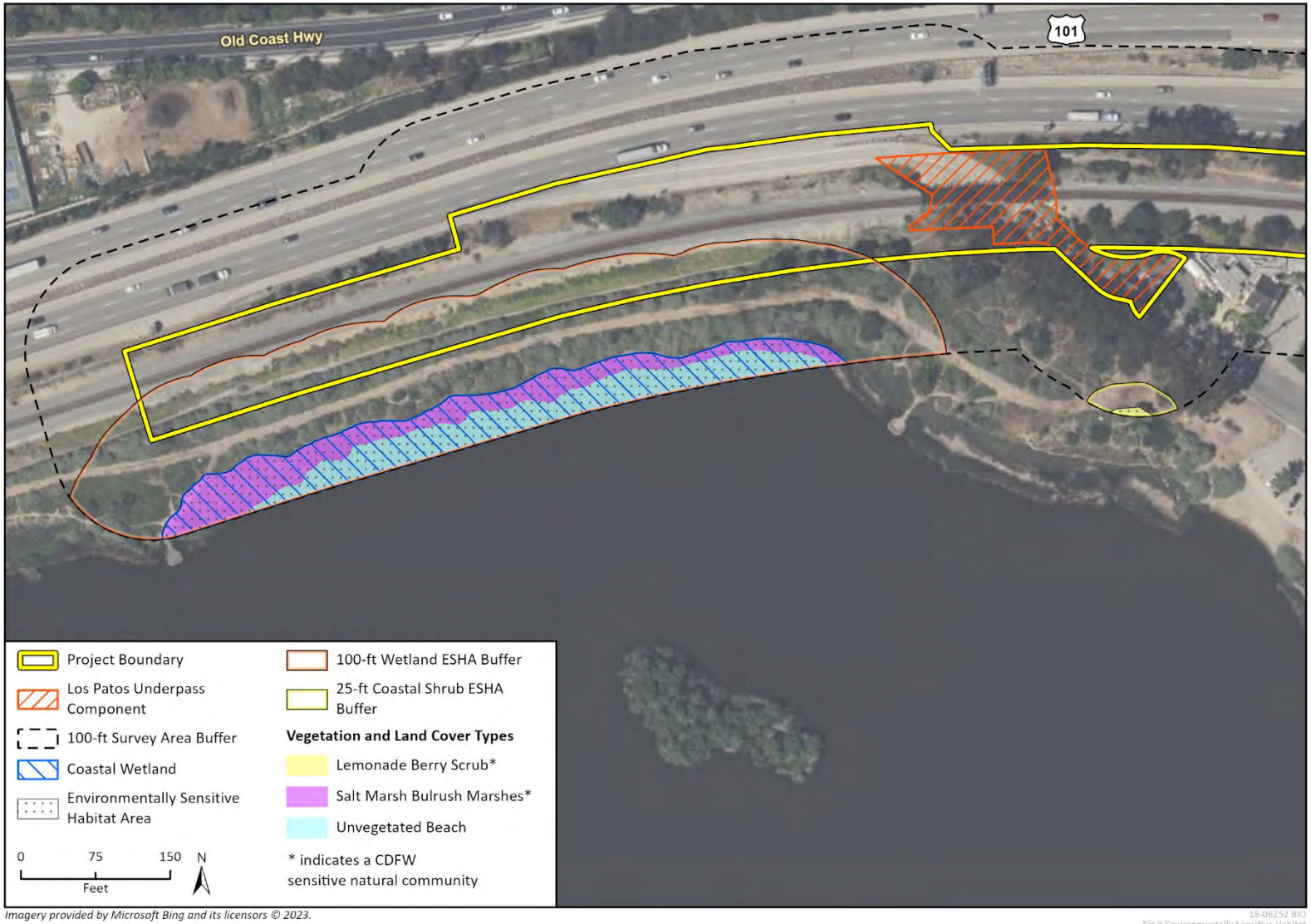

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Fig X Environmentally Sensitive Habitat

Attachment 2

Regulatory Framework

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local levels. A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Agencies with the responsibility for protection of biological resources within the project site include the following:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States)
- U.S. Fish and Wildlife Service (federally listed species and migratory birds)
- National Marine Fisheries Service (marine wildlife and anadromous fishes)
- Central Coast Regional Water Quality Control Board (waters of the State)
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes; state-listed species; nesting birds, marine resources)
- California Coastal Commission
- City of Santa Barbara
- County of Santa Barbara

United States Army Corps of Engineers

The United States Army Corps of Engineers (USACE) is responsible for administering several federal programs related to ensuring the quality and navigability of the nation's waters.

Clean Water Act Section 404

Congress enacted the Clean Water Act (CWA) "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Section 404 of the CWA authorizes the Secretary of the Army, acting through the USACE, to issue permits regulating the discharge of dredged or fill materials into the "navigable waters at specified disposal sites."

Section 502 of the CWA further defines "navigable waters" as "waters of the United States, including the territorial seas." "Waters of the United States" are broadly defined at 33 CFR Part 328.3 to include navigable, tidal, and interstate waters and certain impoundments, tributaries, and wetlands. The agencies' most recent regulatory definition of the term was promulgated in January 2023, following failed attempts in prior years that had been frustrated by legal challenges. However, in May 2023 the U.S. Supreme Court issued its ruling in Sackett v. Environmental Protection Agency, which invalidated portions of the updated regulations. To address this ruling, in September 2023 the agencies issued a "conforming rule" (88 FR 61964-61969) modifying their definition of "waters of the United States" to comport with the Court's ruling. This definition is described in detail below.

Waters of the U.S.

Current USACE and USEPA regulations, reflecting of the January 2023 definition as modified by the September 2023 Conforming Rule, define "waters of the United States" as follows (33 CFR 328.3; see also 88 FR 61964-61969):

(1) Waters which are:

(i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(ii) The territorial seas; or

(iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:

(i) Waters identified in paragraph (a)(1) of this section; or

(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds, not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

The definition specifies that the following features are not “waters of the United States” even where they otherwise meet the terms of provisions (2) through (5) above:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

The lateral limits of USACE jurisdiction in non-tidal waters is defined by the "ordinary high-water mark" (OHWM) unless adjacent wetlands are present. The OHWM is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or the presence of debris (33 CFR 328.3(c)(1)). As such, waters are recognized in the field

by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within, or adjacent to, waters of the United States, the lateral limits of USACE jurisdiction extend beyond the OHWM to the outer edge of the wetlands (33 CFR 328.4 (c)). The upstream limit of jurisdiction in the absence of adjacent wetlands is the point beyond which the OHWM is no longer perceptible (33 CFR 328.4; see also 51 FR 41217).

Wetlands

The USACE defines wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3(c)(1)). The USACE's delineation procedures identify wetlands in the field based on indicators of three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology. The following is a discussion of each of these parameters.

Hydrophytic Vegetation

Hydrophytic vegetation dominates areas where frequency and duration of inundation or soil saturation exerts a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurring in wetlands. More than fifty percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USACE published the National Wetland Plant List (USACE 2018), which separates vascular plants into the following four basic categories based on plant species frequency of occurrence in wetlands:

- Obligate Wetland (OBL). Almost always occur in wetlands
- Facultative Wetland (FACW). Usually occur in wetlands, but occasionally found in non-wetlands
- Facultative (FAC). Occur in wetlands or non-wetlands
- Facultative Upland (FACU). Usually occur in non-wetlands, but may occur in wetlands
- Obligate Upland (UPL). Almost never occur in wetlands

The USACE considers OBL, FACW and FAC species to be indicators of wetlands. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not appearing on the United States Fish and Wildlife Service's list is assumed to be an upland species, almost never occurring in wetlands. In addition, an area needs to contain at least 5% vegetative cover to be considered as a vegetated wetland.

Hydric Soils

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation. Field indicators of wetland soils include observations of ponding, inundation, saturation, dark (low chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), gleying (indicates reducing conditions by a blue-grey color), or accumulation of organic material. Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soils survey, both of which must be verified in the field.

Wetland Hydrology

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by field indicators, such as water marks, drift lines, sediment deposits, or drainage patterns in wetlands.

Limitations on Jurisdiction based on Sackett v. USEPA Supreme Court Decision

On May 25, 2023, the Supreme Court issued its decision on the petition from the Sacketts, a family in Idaho that was subject to a compliance order from the USEPA for backfilling their lot near Priest Lake, which the USEPA claimed contained federally regulated wetlands. The wetlands in question were adjacent to a ditch that fed a creek that ultimately drained into Priest Lake, a navigable water body. The USEPA asserted that the Sacketts had violated the law by filling the wetlands on their property without a permit. The Court's decision addressed controversy over whether, and under what conditions, the CWA reaches navigable waters' tributaries or adjacent wetlands. The Supreme Court's decision in Sackett provides definitive guidance to the agencies in determining the limits of their Clean Water Act authority. Major tenets of the decision have been incorporated into the agencies' current regulations through the September 2023 Conforming Rule.

The Court decided:

- "Adjacent wetlands" are WOTUS only if there is a continuous surface connection between the wetland and a navigable or relatively permanent water body, such that it is difficult to determine the boundary between the wetland and the water body. The opinion notes that "temporary interruptions to surface connection may sometimes occur because of phenomena like low tides or dry spells." The agencies addressed this element by defining the term "adjacent" to mean "having a continuous surface connection" in the Conforming Rule.
- The Significant Nexus Standard, introduced by the Court in prior decisions, is not mentioned in the Clean Water Act and should not be used. The Court determined that the standard applies ecological factors whose use in determining jurisdiction is not supported by the statute. The Conforming Rule removed significant nexus considerations from the definition.
- Although jurisdiction over tributaries was not addressed by the Court, the decision stated that "…the [Clean Water Act's] use of "waters" encompasses only those relatively permanent, standing or continuously flowing bodies of water forming geographical features that are described in ordinary parlance as streams, oceans, rivers, and lakes." The Conforming Rule makes clear that only relatively permanent tributaries qualify as "waters of the United States."

Rivers and Harbors Act Section 10

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable water of the United States. Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, re-channelization, or any other modification of a navigable water of the United States, and applies to all structures and work. It further includes, without limitation, any wharf, dolphin, weir, boom breakwater, jetty, groin, bank protection (e.g., riprap, revetment, bulkhead), mooring structures such as pilings, aerial or subaqueous power transmission lines, intake or outfall pipes, permanently moored floating vessel, tunnel, artificial canal,

boat ramp, aids to navigation, and any other permanent, or semi-permanent obstacle or obstruction. It is important to note that Section 10 applies only to navigable waters, and thus does not apply to work in non-navigable wetlands or tributaries. In some cases, Section 10 authorization is issued by the USACE concurrently with CWA Section 404 authorization, such as when certain Nationwide Permits are used.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) have jurisdiction over "waters of the State," which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state (California Water Code sec. 13050(e)). These agencies also have responsibilities for administering portions of the CWA.

Clean Water Act Section 401

Section 401 of the CWA requires an applicant requesting a federal license or permit for an activity that may result in any discharge into navigable waters (such as a Section 404 Permit) to provide state certification that the proposed activity will not violate state and federal water quality standards. In California, CWA Section 401 Water Quality Certification (Section 401 Certification) is issued by the RWQCBs and by the SWRCB for multi-region projects. The process begins when an applicant submits an application to the RWQCB and informs the USACE (or the applicable agency from which a license or permit was requested) that an application has been submitted. The USACE will then determine a "reasonable period of time" for the RWQCB to act on the application; this is typically 60 days for routine projects and longer for complex projects but may not exceed one year. When the period has elapsed, if the RWQCB has not either issued or denied the application for Section 401 Certification, the USACE may determine that Certification has been waived and issue the requested permit. If a Section 401 Certification is issued it may include binding conditions, imposed either through the Certification itself or through the requested federal license or permit.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 et seq.), the policy of the State is as follows:

- The quality of all the waters of the State shall be protected
- All activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason
- The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation

The Porter-Cologne Act established nine RWQCBs (based on watershed boundaries) and the SWRCB, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The SWRCB provides program guidance and oversight, allocates funds, and reviews RWQCB decisions. In addition, the SWRCB allocates rights to the use of surface water. The RWQCBs have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The SWRCB and RWQCBs have numerous nonpoint

source related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

Section 13260 of the Porter-Cologne Act requires any person discharging or proposing to discharge waste that could affect the quality of waters of the State to file a Report of Waste Discharge with the appropriate RWQCB. The RWQCB may then authorize the discharge, subject to conditions, by issuing Waste Discharge Requirements (WDRs). While this requirement was historically applied primarily to outfalls and similar point source discharges, the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, effective May 2020, make it clear that the agency will apply the Porter-Cologne Act's requirements to discharges of dredge and fill material as well. The *Procedures* state that they are to be used in issuing CWA Section 401 Certifications and WDRs, and largely mirror the existing review requirements for CWA Section 404 Permits and Section 401 Certifications, incorporating most elements of the USEPA's *Section 404(b)(1) Guidelines*. Following issuance of the *Procedures*, the SWRCB produced a consolidated application form for dredge/fill discharges that can be used to obtain a CWA Section 401 Water Quality Certification, WDRs, or both.

Non-Wetland Waters of the State

The SWRCB and RWQCBs have not established regulations for field determinations of waters of the state except for wetlands currently. In many cases the RWQCBs interpret the limits of waters of the State to be bounded by the OHWM unless isolated conditions or ephemeral waters are present. However, in the absence of statewide guidance each RWQCB may interpret jurisdictional boundaries within their region and the SWRCB has encouraged applicants to confirm jurisdictional limits with their RWQCB before submitting applications. As determined by the RWQCB, waters of the State may include riparian areas or other locations outside the OHWM, leading to a larger jurisdictional area over a given water body compared to the USACE.

Wetland Waters of the State

Procedures for defining wetland waters of the State pursuant to the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* went into effect May 28, 2020. The SWRCB defines an area as wetland if, under normal circumstances:

(i) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;

(ii) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and

(iii) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The SWRCB's Implementation Guidance for the Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State (2020), states that waters of the U.S. and waters of the State should be delineated using the standard USACE delineation procedures, taking into consideration that the methods shall be modified only to allow for the fact that a lack of vegetation does not preclude an area from meeting the definition of a wetland.

United States Fish and Wildlife Service

The United States Fish and Wildlife Service (USFWS) implements several laws protecting the Nation's fish and wildlife resources, including the Endangered Species Act (ESA; 16 United States Code [USC]

Sections 153 et seq.), the Migratory Bird Treaty Act (MBTA; 16 USC Sections 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668).

Endangered Species Act

The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA. Generally, the USFWS implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in "take" of any threatened or endangered wildlife species, or a threatened or endangered plant species if occurring on federal land, are required to obtain permits from the USFWS or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of the ESA, depending on the involvement by the federal government in funding, authorizing, or carrying out the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. "Take" under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of the ESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

Migratory Bird Treaty Act

The MBTA of 1918 implements four international conservation treaties that the U.S. entered into with Canada in 1916, Mexico in 1936, Japan in 1972, and Russia in 1976. It is intended to ensure the sustainability of populations of all protected migratory bird species. The law has been amended with the signing of each treaty, as well as when any of the treaties were amended, such as with Mexico in 1976 and Canada in 1995. The MBTA prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the USFWS.

The list of migratory bird species protected by the law, in regulations at 50 CFR Part 10.13, is primarily based on bird families and species included in the four international treaties. A migratory bird species is included on the list if it meets one or more of the following criteria:

1. It occurs in the United States or U.S. territories as the result of natural biological or ecological processes and is currently, or was previously listed as, a species or part of a family protected by one of the four international treaties or their amendments.
2. Revised taxonomy results in it being newly split from a species that was previously on the list, and the new species occurs in the United States or U.S. territories as the result of natural biological or ecological processes.
3. New evidence exists for its natural occurrence in the United States or U.S. territories resulting from natural distributional changes and the species occurs in a protected family.

In 2004, the Migratory Bird Treaty Reform Act limited the scope of the MBTA by stating the MBTA applies only to migratory bird species that are native to the United States or U.S. territories, and that a native migratory bird species is one that is present as a result of natural biological or ecological processes. The MBTRA requires the USFWS to publish a list of all nonnative, human-introduced bird species to which the MBTA does not apply, and an updated list was published in 2020. The 2020 update identifies species belonging to biological families referred to in treaties the MBTA implements but are not protected because their presence in the United States or U.S. territories is solely the result of intentional or unintentional human-assisted introductions.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act prohibits anyone, without a permit issued by the USFWS, from "taking" bald or golden eagles, including their parts (including feathers), nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle … [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

"Disturb" means “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

In addition to immediate impacts, this definition also covers impacts that result from human-induced alterations initiated around a previously used nest site during a time when eagles are not present, if, upon the eagle's return, such alterations agitate or bother an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California and administers several State laws protecting fish and wildlife resources and the habitats upon which they depend.

California Endangered Species Act

The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 et. seq.) prohibits take of state listed threatened or endangered. Take under CESA is defined as “Hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” (Fish and Game Code sec. 86). This definition does not prohibit indirect harm by way of habitat modification, except where such harm is the proximate cause of death of a listed species. Where incidental take would occur during construction or other lawful activities, CESA allows the CDFW to issue an Incidental Take Permit upon finding, among other requirements, that impacts to the species have been minimized and fully mitigated. Unlike the federal ESA, CESA’s protections extend to candidate species during the period (typically one year) while the California Fish and Game Commission decides whether the species warrants CESA listing.

Native Plant Protection Act

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare, and prohibits the take of listed plant species. Effective in 2015, CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA’s permitting procedures would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

Fully Protected Species Laws

The CDFW enforces Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code, which prohibits take of species designated as Fully Protected. Under Senate Bill 147, effective July 1, 2023, the CDFW is allowed to issue an Incidental Take Permit for Fully Protected species under CESA through December 31, 2033, or take can be authorized by a Natural Community Conservation Plan (NCCP) which is in place that authorizes take of the Fully Protected species.

Avian Protection Laws

California Fish and Game Code sections 3503, 3503.5, and 3513 describe unlawful take, possession, or destruction of native birds, nests, and eggs. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Section 3513 makes it a state-level offense to take any bird in violation of the federal Migratory Bird Treaty Act.

Protection of Lakes and Streambeds

California Fish and Game Code section 1602 states that it is unlawful for any person to "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake" without first notifying the California Department of Fish and Wildlife (CDFW) of that activity. Thereafter, if CDFW determines and informs the entity that the activity will not substantially adversely affect any existing fish or wildlife resources, the entity may commence the activity. If, however, CDFG determines that the activity may substantially adversely affect an existing fish or wildlife resource, the entity may be required to obtain from CDFW a Streambed Alteration Agreement (SAA), which will include reasonable measures necessary to protect the affected resource(s), before the entity may conduct the activity described in the notification. Upon receiving a complete Notification of Lake/Streambed Alteration, CDFW has 60 days to present the entity with a Draft SAA. Upon review of the Draft SAA by the applicant, any problematic terms are negotiated with CDFW and a final SAA is executed.

The CDFW has not defined the term “stream” for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. However, four relevant sources of information offer insight as to the appropriate limits of CDFW jurisdiction as discussed below.

- **The plain language of Section 1602 of CFGC** establishes the following general concepts:
  - References “river,” “stream,” and “lake”
  - References “natural flow”
  - References “bed,” “bank,” and “channel”
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987), which interpreted Section 1602’s use of “stream” to be as defined in common law. The Court indicated that a “stream” is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel
  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars

  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM

- **CDFW regulations** defining "stream" for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life
  - Can be dry for a period of time
  - Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation

- **Guidance documents**, *including A Field Guide to Lake and Streambed Alteration Agreements* (CDFG 1994) and *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (Brady and Vyverberg 2013), which suggest the following:
  - A stream may flow perennially or episodically
  - A stream is defined by the course in which water currently flows, or has flowed during the historic hydrologic course regime (approximately the last 200 years)
  - Width of a stream course can reasonably be identified by physical or biological indicators
  - A stream may have one or more channels (single thread vs. compound form)
  - Features such as braided channels, low-flow channels, active channels, banks associated with secondary channels, floodplains, islands, and stream-associated vegetation, are interconnected parts of the watercourse
  - Canals, aqueducts, irrigation ditches, and other means of water conveyance can be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife
  - Biologic components of a stream may include aquatic and riparian vegetation, all aquatic wildlife including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system
  - The lateral extent of a stream can be measured in different ways depending on the particular situation and the type of fish or wildlife resource at risk

The tenets listed above, among others, are applied to establish the boundaries of streambeds in various environments. Importance of each factor may be weighted based on site-specific considerations and the applicability of the indicators to the streambed at hand.

Local Jurisdiction

City of Santa Barbara, California

The project is subject to the City of Santa Barbara's (City's) Municipal Code, Coastal Land Use Plan (CLUP) and General Plan – Environmental Resources Element (ERE).

Chapter 15.24 Preservation of Trees

Except as provided in Sections 15.24.030 and 15.24.035, it is unlawful for any person to remove or significantly alter or to authorize or allow the removal or significant alteration of any of the following trees without a permit:

A. A setback tree;

B. A parking lot tree;

C. A tree on an approved plan; or

D. A tree designated as an historic or specimen tree by the City Council. (Ord. 5505, 2009; Ord. 5459, 2008; Ord. 5312, 2004; Ord. 4154, 1982; Ord. 3863, 1976; Ord. 3360, 1969)

Notwithstanding the prohibition specified in Section 15.24.020, a tree that is subject to the prohibition specified in Section 15.24.020 may be lawfully removed without a permit if the tree satisfies any one of the following definitions:

A. The main trunk of the tree is less than four inches in diameter at a point four feet six inches above the highest natural grade adjacent to the trunk.

Chapter 15.20 Street Trees

A. PERMIT REQUIRED. Except for persons acting at the direction of the Director, a written permit shall be required for any person to plant, prune, trim, perform maintenance on, or remove any tree planted in a parkway strip, tree well, public area or street right-of-way.

B. REMOVAL. When an application is submitted for the removal of a tree planted in a parkway strip, tree well, public area or street right-of-way, the application shall be processed in accordance with the procedures in the City of Santa Barbara Municipal Code Chapter 15.20.110.

The City's Coastal Land Use Plan (CLUP) – Biological Resources section contains policies related to biological resources in the City, including protection of Environmentally Sensitive Habitat Areas (ESHAs). The CLUP contains policies and goals to protect native habitat and special status species and maintain/improve urban biotic communities such as the Andree Clark Bird Refuge and are further explained in Section 4.1 Biological Resources. The CLUP achieves these goals through: 1) providing methods for identification of ESHAs and wetlands; 2) establishing development buffers to protect biological resources; 3) restricting allowed uses within and adjacent to protected biological resources; and 4) providing development standards and management techniques to avoid impacts to biological resources. In addition, Chapter 4.2 Water Quality provides policies to protect water quality and prevent polluted runoff from entering coastal waters, streams, wetlands, estuaries, and lakes.

As of 2018, habitat types that could potentially occur in the City of Santa Barbara's Coastal Zone that usually meet the definition of an ESHA include, but are not limited to, the list below. However, for any particular area, site-specific evidence may show that the area does not meet the definition of an ESHA. Conversely, there are areas not contained in the following list that could be determined by site-specific evidence to meet the definition of an ESHA. The status of some species and habitat could also change over time. Additional ESHAs in some intertidal and marine areas exist in the City that remain under the Coastal Development Permit jurisdiction of the California Coastal Commission and are not included in the list below:

- Estuaries and Lagoons.
- Wetlands.

- Creeks.
- Riparian Areas.
- Southern Coastal Bluff Scrub
- Coastal Sage Scrub or Chaparral that:
  - Support sensitive species;
  - Is within or adjacent to creeks, riparian, or wetland ESHAs and is an important component in the functioning of these habitats; or
  - Is a vegetation association or alliance with a global or state ranking of 1, 2, or 3 on the California Department of Fish and Wildlife's Natural Diversity Database or NatureServe
- Perennial Grasslands (Coastal Prairie)
- Oak Woodlands
- Southern Foredune
- Western Snowy Plover Nesting Habitat
- White-tailed Kite Nesting and Communal Roosting Habitat
- Monarch Butterfly Autunmal and Winter Roost Sites

The City's General Plan contains goals, policies, and implementation actions to address most of the City's natural resources, including biology. These are further explained in the General Plan's Environmental Resource Element (ERE) Section.

County of Santa Barbara

The County's Comprehensive Plan, including the Conservation Element, Open Space Element, Environmental Resource Management Element, Land Use Element and specifically the Coastal Land Use Plan (CLUP) contain policies identifying the protection, preservation and enhancement of biological and natural resources, in particular ESH areas. ESH includes areas such as wetlands, intertidal areas, monarch butterfly habitat, streams, riparian corridors, native grasslands and other native plant communities. The intent of these plans and policies is to promote protection of important biological and natural resources and ensure that new development is compatible with these resources and the surrounding environment.

- The Conservation Element describes the diversity of ecological systems present within Santa Barbara County and includes a range of policies designed to preserve the County's biological diversity.
- The Open Space Element identifies areas within Santa Barbara County where natural resources such as wetlands and rare and endangered plant and animal species are preserved.
- The Environmental Resource Management Element summarizes the various environmental factors analyzed in the Conservation and Open Space Elements, and identifies policies that define whether development is appropriate given the severity of constraints.
- The Land Use Element lays out the general patterns of development throughout the County, including the distribution of property improvements, agricultural lands and open space.
- In addition to Comprehensive Plan policy guidance, natural resources in the Coastal Zone receive further protection in the County's Coastal Land Use Plan (CLUP). Similar to the Land Use Element, the CLUP lays out the general patterns of development and provides resource protection policies that address cultural, biological and natural resources, which include ESH

areas and prime agricultural lands, recreational resources, and the aquatic environment (i.e., streams, wetlands, and coastal waters). The GCP is a component of the CLUP.

Coastal Plan Policies are implemented by the County's Municipal Code Article II - Coastal Zoning Ordinance. Relevant sections of the ordinance for this project include Section 35-97 ESH - Environmentally Sensitive Habitat Area Overlay District, Section 35-97.19 Development Standards for Stream Habitats, Section 35-140 Tree Removal, and Division 16 – Montecito Community Plan Overlay District.

Article II Division 16 implements portions of the Montecito Community Plan (MCP) section of the County's Local Coastal Plan. The MCP was adopted in September 15, 1992 and sets out specific goals relating to community development, public facilities and services, and resources and constraints. It states the objectives of the goals, name specific policies and actions to carry out those policies. The MCP also designated the type of land use (e.g., residential, commercial) allowed for each parcel within the Montecito Planning Area and the maximum density allowed for residential parcels (e.g., one unit allowed per acre, 4.6 units allowed per acre). These designations determine the amount of growth that can be expected through potential subdivision of land. Zoning for every parcel is then mapped to march the land use and density specific in the MCP. Area plans focus on general planning issues pertaining to an identified geographical area or community (Public Resources Code § 21083.3(e)). Area plans are adopted in the same manner as a general plan amendment and are similarly implemented by local ordinances (e.g., zoning). They are commonly used in counties or large cities that contain a variety of distinct regions. An area plan must be internally consistent with the Comprehensive Plan of which it is a part.

Attachment 3

Representative Site Photos

Photograph 1. View of fountain grass swards adjacent to the developed landcover type (i.e., Highway 101 and UPRR) at the western portion of the study area, facing east. November 7, 2023.

Photograph 2. View of developed landcover type (i.e., UPRR) at the western portion of the study area, facing east. November 7, 2023.

Photograph 3. View of eucalyptus groves adjacent to the developed landcover type (i.e., UPRR) within the central portion of the study area, facing east. November 7, 2023.

Photograph 4. View of ornamental landscaping landcover type in the central portion of the study area, facing north. November 7, 2023

Photograph 5. View of eucalyptus grove, developed landcover type (i.e., Los Patos Way and commercial buildings), and ornamental landscaping in the central portion of the study area, facing southeast. November 7, 2023.

Photograph 6. View of metal outlet on the north side of the UPRR, facing north. The outlet was identified as a flow line connected on NHD. The outlet runs under Highway 101. November 7, 2023.

Photograph 7. View of quailbush scrub adjacent to a trail at the southwestern portion of the study area, outside of the project site, facing northeast. November 8, 2023.

Photograph 8. View of quailbush scrub adjacent to a trail at the southwestern portion of the study area, outside of the project site, facing northeast. A chain link fence separates the vegetation community and UPRR (right side of photo). November 8, 2023.

Photograph 9. View of salt marsh bulrush marsh adjacent to the quailbush scrub at the southwestern portion of the study area, outside the project site, facing northeast. November 8, 2023.

Photograph 10. View of the disturbed annual grassland adjacent to the developed landcover type (i.e., UPRR) at the southeastern portion of the study area, facing northeast. November 8, 2023.

Photograph 11. View of lemonade berry scrub with ornamental bottlebrush trees at the southern boundary of the study area, outside the project site, facing south. November 8, 2023.

Photograph 12. View of individual monarch butterfly mortality observed at the eucalyptus grove along Los Patos Way. November 7, 2023.

Attachment 4

Special Status Species Potential to Occur

Special Status Plant Species Potentially Occurring on the Project Site

Scientific Name Common Name	Status Fed/State ESA Rank CRPR Other	Habitat Requirements	Potential to Occur	Rationale
Arctostaphylos refugioensis Refugio manzanita	None/None G3/S3 1B.2 SBBG	Perennial evergreen shrub. Chaparral. On sandstone. Elevations: 900-2690ft. (274-820m.) Blooms (May)Dec-Mar.	None	Suitable elevations are not present within the study area.
Astragalus didymocarpus var. *milesianus* Miles' milk-vetch	None/None G5T2/S2 1B.2	Annual herb. Coastal scrub. Clay soils. Elevations: 65-295ft. (20-90m.) Blooms Mar-Jun.	None	There are no CNDDB occurrences within 5 miles of the study area. Some coastal scrub habitat is present within the southwestern portion of the study area, outside of the project site. No suitable habitat is present within the project site.
Atriplex coulteri Coulter's saltbush	None/None G3/S1S2 1B.2	Perennial herb. Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Alkaline (sometimes), clay (sometimes). Elevations: 10-1510ft. (3-460m.) Blooms Mar-Oct.	None	There is one historical CNDDB occurrence (1956) at the Union Pacific Railroad near Oak Park, approximately 3.5 miles west of the study area. Some coastal scrub habitat is present within the southwestern portion of the study area, outside of the project site. No suitable habitat is present within the project site.
Atriplex serenana var. *davidsonii* Davidson's saltscale	None/None G5T1/S1 1B.2	Annual herb. Coastal bluff scrub, coastal scrub. Alkaline. Elevations: 35-655ft. (10-200m.) Blooms Apr-Oct.	None	There is one historical CNDDB occurrence (1947) near Cliff Drive and the parking lot at Arroyo Burro/Hendry's beach, approximately 4.5 miles southwest of the study area. Some coastal scrub habitat is present within the southwestern portion of study area, outside of the project site. No suitable habitat is present within the project site.
Calochortus fimbriatus late-flowered mariposa-lily	None/None G3/S3 1B.3 SBBG	Perennial bulbiferous herb. Chaparral, cismontane woodland, riparian woodland. Serpentinite (sometimes). Elevations: 900-6250ft. (275-1905m.) Blooms Jun-Aug.	None	Suitable elevations are not present within the study area.

Scientific Name Common Name	Status Fed/State ESA Rank CRPR Other	Habitat Requirements	Potential to Occur	Rationale
Calochortus palmeri var. *palmeri* Palmer's mariposa-lily	None/None G3T2/S2 1B.2 SBBG	Perennial bulbiferous herb. Chaparral, lower montane coniferous forest, meadows and seeps. Mesic. Elevations: 2330-7840ft. (710-2390m.) Blooms Apr-Jul.	None	Suitable elevations are not present within the study area.
Calystegia sepium ssp. *binghamiae* Santa Barbara morning-glory	None/None G5TXQ/SX 1A	Perennial rhizomatous herb. Marshes and swamps. Elevations: 15-15ft. (5-5m.) Blooms Aug.	None	There is one historical CNDDB occurrence (1886) near the foot of De La Vina Drive, approximately 1.7 miles west of the study area. Some marsh habitat is present within the southwestern portion of study area, outside of the project site. No suitable habitat is present within the project site.
Centromadia parryi ssp. *australis* southern tarplant	None/None G3T2/S2 1B.1 SBBG	Annual herb. Marshes and swamps, valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. Elevations: 0-1575ft. (0-480m.) Blooms May-Nov.	None	There are no CNDDB occurrences within 5 miles of the study area. Some marsh habitat is present within the southwestern portion of study area, outside of the project site. No suitable habitat is present within the project site.
Chloropyron maritimum ssp. *maritimum* salt marsh bird's-beak	FE/SE G4T1/S1 1B.2 SBBG	Annual herb (hemiparasitic). Coastal dunes, marshes and swamps. Limited to the higher zones of salt marsh habitat. Elevations: 0-100ft. (0-30m.) Blooms May-Oct(Nov).	None	There are no CNDDB occurrences within 5 miles of the study area. Some marsh habitat is present within the southwestern portion of study area, outside of the project site. No suitable habitat is present within the project site.
Delphinium umbraculorum umbrella larkspur	None/None G3/S3 1B.3	Perennial herb. Chaparral, cismontane woodland. Mesic sites. Elevations: 1310-5250ft. (400-1600m.) Blooms Apr-Jun.	None	Suitable elevations are not present within the study area.

Scientific Name Common Name	Status Fed/State ESA Rank CRPR Other	Habitat Requirements	Potential to Occur	Rationale
Fritillaria ojaiensis Ojai fritillary	None/None G3/S3 1B.2 SBBG	Perennial bulbiferous herb. Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest. Rocky sites. Sometimes on serpentine; sometimes along roadsides. Elevations: 740-3275ft. (225-998m.) Blooms Feb-May.	None	Suitable elevations are not present within the study area.
Horkelia cuneata var. *puberula* mesa horkelia	None/None G4T1/S1 1B.1	Perennial herb. Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. Elevations: 230-2660ft. (70-810m.) Blooms Feb-Jul(Sep).	None	Suitable elevations are not present within the study area.
Juncus luciensis Santa Lucia dwarf rush	None/None G3/S3 1B.2	Annual herb. Chaparral, great basin scrub, lower montane coniferous forest, meadows and seeps, vernal pools. Vernal pools, ephemeral drainages, wet meadow habitats and streamsides. Elevations: 985-6695ft. (300-2040m.) Blooms Apr-Jul.	None	Suitable elevations are not present within the study area.
Lasthenia conjugens Contra Costa goldfields	FE/None G1/S1 1B.1	Annual herb. Cismontane woodland, playas, valley and foothill grassland, vernal pools. Vernal pools, swales, low depressions, in open grassy areas. Elevations: 0-1540ft. (0-470m.) Blooms Mar-Jun.	None	There are no CNDDB occurrences within 5 miles of the study area. There are no vernal pools present within the study area.

Scientific Name Common Name	Status Fed/State ESA Rank CRPR Other	Habitat Requirements	Potential to Occur	Rationale
Lasthenia glabrata ssp. *coulteri* Coulter's goldfields	None/None G4T2/S2 1B.1 SBBG	Annual herb. Marshes and swamps, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 1-. Elevations: 5-4005ft. (1-1220m.) Blooms Feb-Jun.	None	There are no CNDDB occurrences within 5 miles of the study area. Some marsh habitat is present within the southwestern portion of study area, outside of the project site. No suitable habitat is present within the project site.
Layia heterotricha pale-yellow layia	None/None G2/S2 1B.1 SBBG	Annual herb. Cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Alkaline or clay soils; open areas. Elevations: 985-5595ft. (300-1705m.) Blooms Mar-Jun.	None	Suitable elevations are not present within the study area.
Lonicera subspicata var. *subspicata* Santa Barbara honeysuckle	None/None G5T2/S2 1B.2 SBBG	Perennial evergreen shrub. Chaparral, cismontane woodland, coastal scrub. Elevations: 35-3280ft. (10-1000m.) Blooms (Feb)May-Aug(Dec).	None	There are three CNDDB occurrences within 5 miles of the study area, all of which are in the Santa Ynez Mountains. Two of these occurrences are historical (1926 and 1944). The most recent occurrence was in 2010, approximately 4.7 miles northeast of the study area. Some coastal scrub habitat is present within the southwestern portion of study area, outside of the project site. No suitable habitat is present within the project site.
Malacothrix saxatilis var. *arachnoidea* Carmel Valley malacothrix	None/None G5T2/S2 1B.2	Perennial rhizomatous herb. Chaparral, coastal scrub. Rock outcrops or steep rocky roadcuts. Elevations: 80-3400ft. (25-1036m.) Blooms (Mar)Jun-Dec.	None	There are no CNDDB occurrences within 5 miles of the study area. Some coastal scrub habitat is present within the southwestern portion of study area, outside of the project site. No suitable habitat is present within the project site.
Monardella hypoleuca ssp. *hypoleuca* white-veined monardella	None/None G4T3/S3 1B.3 SBBG	Perennial herb. Chaparral, cismontane woodland. Dry slopes. Elevations: 165-5005ft. (50-1525m.) Blooms (Apr)May-Aug(Sep-Dec).	None	Suitable elevations are not present within the study area.

Scientific Name Common Name	Status Fed/State ESA Rank CRPR Other	Habitat Requirements	Potential to Occur	Rationale
Nasturtium gambelii Gambel's water cress	FE/ST G1/S1 1B.1 SBBG	Perennial rhizomatous herb. Marshes and swamps. Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. Elevations: 15-1085ft. (5-330m.) Blooms Apr-Oct.	None	There is one historical CNDDB occurrence (1886) at an unknown location in the City of Santa Barbara, approximately 1.7 miles west of the study area. Some marsh habitat is present within the southwestern portion of study area, outside of the project site. No suitable habitat is present within the project site.
Pelazoneuron puberulum var. *sonorense* Sonoran maiden fern	None/None G5T3/S2 2B.2	Meadows and seeps. Along streams, seepage areas. 50-610m. Blooms Jan-Sep.	None	There are five CNDDB occurrences within 5 miles of the study area, four of which are in the Santa Ynez Mountains. The other occurrence is historical (1932) and in an unknown location in Smith Canyon, Goleta, approximately 4.1 miles west of the study area. The most recent occurrence was in 2011, approximately 4.3 miles northeast of the study area. There are no meadows or seeps present within the study area.
Pleuridium mexicanum Mexican earthmoss	None/None G5/S1 2B.1	Moss. Chaparral. Sandstone. Elevations: 1445-1445ft. (440-440m.)	None	Suitable elevations are not present within the study area.
Quercus dumosa Nuttall's scrub oak	None/None G3/S3 1B.1	Perennial evergreen shrub. Chaparral, closed-cone coniferous forest, coastal scrub. Generally on sandy soils near the coast; sometimes on clay loam. Elevations: 50-1310ft. (15-400m.) Blooms Feb-Apr(May-Aug).	None	There are ten CNDDB occurrences within 5 miles of the study area, all of which are north of the U.S. Route 192. The most recent occurrence was in 2015 along Rattlesnake Canyon trail, approximately 3 miles north of the study area. Some coastal scrub habitat is present within the southwestern portion of study area, outside of the project site. No suitable habitat is present within the project site.

Scientific Name Common Name	Status Fed/State ESA Rank CRPR Other	Habitat Requirements	Potential to Occur	Rationale
Scrophularia atrata black-flowered figwort	None/None G2?/S2? 1B.2	Perennial herb. Chaparral, closed-cone coniferous forest, coastal dunes, coastal scrub, riparian scrub. Sand, diatomaceous shales, and soils derived from other parent material; around swales and in sand dunes. Elevations: 35-1640ft. (10-500m.) Blooms Mar-Jul.	None	There are two historical CNDDB occurrences (1924 and 1971) within 5 miles of the study area, both which are north of the U.S. Route 192. Some coastal scrub habitat is present within the southwestern portion of study area, outside of the project site. No suitable habitat is present within the project site.
Suaeda esteroa estuary seablite	None/None G3/S2 1B.2	Perennial herb. Marshes and swamps. Coastal salt marshes in clay, silt, and sand substrates. Elevations: 0-15ft. (0-5m.) Blooms (Jan-May) Jul-Oct.	None	There are no CNDDB occurrences within 5 miles of the study area. Some marsh habitat is present within the southwestern portion of study area, outside of the project site. No suitable habitat is present within the project site.
Thermopsis macrophylla Santa Ynez false lupine	None/SR G1/S1 1B.3 SBBG	Perennial rhizomatous herb. Chaparral. In open areas such as fuel breaks, after burns; on sandstone. Elevations: 1395-4595ft. (425-1400m.) Blooms Apr-Jun.	None	Suitable elevations are not present within the study area.

* Regional Vicinity refers to within a 6-quad search (three quadrangles in the Pacific Ocean) radius of site.

Status (Federal/State)
FE = Federal Endangered
SE = State Endangered
ST = State Threatened
SR = State Rare

CRPR (CNPS California Rare Plant Rank)
1A = Presumed extirpated in California, and rare or extinct elsewhere
1B = Rare, Threatened, or Endangered in California and elsewhere
2B= Rare, Threatened, or Endangered in California, but more common elsewhere
3 = Need more information (Review List)
4 = Limited Distribution (Watch List)

CRPR Threat Code Extension
.1 = Seriously endangered in California (>80% of occurrences threatened/high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% of occurrences threatened/moderate degree and immediacy of threat)
.3 = Not very endangered in California (<20% of occurrences threatened/low degree and immediacy of threat)

Scientific Name Common Name	Status Fed/State ESA Rank CRPR Other	Habitat Requirements	Potential to Occur	Rationale

Other Statuses (Rank)

G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
SBBG – Santa Barbara Botanical Garden

Special Status Wildlife Species in the Regional Vicinity* of the Project Site

Scientific Name Common Name	Status Fed/State ESA Other	Habitat Requirements	Potential to Occur	Rationale
Invertebrates				
Bombus crotchii Crotch bumble bee	None/SCE G2/S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	None	There are no CNDDB occurrences within 5 miles of the study area. There are no suitable food plants present within the project site.
Cicindela hirticollis gravida sandy beach tiger beetle	None/None G5T2/S2	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	None	There are no CNDDB occurrences within 5 miles of the study area. There is no suitable non-brackish water habitat within the study area.
Coelus globosus globose dune beetle	None/None G1G2/S1S2	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.	None	There is one historical CNDDB occurrence (1971) within 5 miles of the study area, approximately 1.3 miles west of the study area along west beach. However, there is no suitable coastal sand dune habitat within the study area.
Danaus plexippus plexippus pop. 1 monarch butterfly - California overwintering population	FC/None G4T1T2Q/S2	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Low	An individual monarch butterfly mortality was observed at the eucalyptus groves near Los Patos Way during the reconnaissance survey on November 7, 2023. There are 16 CNDDB occurrences within 5 miles of the study area, including one occurrence in 2017 that overlaps the eastern portion of the project site. The nearest Xerces overwintering site is approximately 320 feet east of the study area (Xerces 2023). There are eucalyptus trees present within the study area. However, no suitable roost sites (dense, wind-protected tree groves) are present. The species is known to transit through the study area and may utilize the eucalyptus trees as temporary roost sites.

Scientific Name Common Name	Status Fed/State ESA Other	Habitat Requirements	Potential to Occur	Rationale
Eugnosta busckana Busck's gallmoth	None/None G1G3/S2S3	Coastal southern California. Tiny micro-moth (1 cm) with larva forming galls on host plant California brittlebush (*Encelia californica*). Adult flight period is during winter, generally from November to February, and have been reported at UV lights and porch lights.	Low	There is one historical CNDDB occurrence (1999) within 5 miles of the study area, approximately 4.5 miles northwest of the study area. There is suitable host plan, California brittlebrush (*Encelia californica*), present within the study area but outside of the project site. Species may occur as a transient within the project site.
Panoquina errans wandering (=saltmarsh) skipper	None/None G4G5/S2	Southern California coastal salt marshes. Requires moist saltgrass for larval development.	None	There are no CNDDB occurrences within 5 miles of the study area. There is no suitable marsh or saltgrass habitat within the study area.
Fish				
Eucyclogobius newberryi tidewater goby	FE/None G3/S3	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	None	There are four CNDDB occurrences within 5 miles of the study area. However, there are no suitable lagoon or lower stream habitat present within the study area.
Oncorhynchus mykiss irideus pop. 10 steelhead - southern California DPS	FE/SCE G5T1Q/S1	Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.	None	There are two CNDDB occurrences within 5 miles of the study area. However, there is no suitable stream habitat present within the study area.

Scientific Name Common Name	Status Fed/State ESA Other	Habitat Requirements	Potential to Occur	Rationale
Amphibians				
Anaxyrus californicus arroyo toad	FE/None G2G3/S2 SSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.	None	There are no CNDDB occurrences within 5 miles of the study area. There is no suitable washes or intermittent stream habitat within the study area.
Rana boylii pop. 6 foothill yellow-legged frog - south coast DPS	Proposed Endangered/SE G3T1/S1	Southern Coast Ranges from Monterey Bay south through San Gabriel Mountains; west of the Salinas River in Monterey Co, south through Transverse Ranges, and east through San Gabriel Mountains. Historically may have ranged to Baja California. Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.	None	There are no CNDDB occurrences within 5 miles of the study area. There is no suitable stream habitat within the study area.
Rana draytonii California red-legged frog	FT/None G2G3/S2S3 SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	None	There are three CNDDB occurrences within 5 miles of the study area. The most recent occurrence was in 2005 along Montecito Creek, approximately 1 mile north of the study area. There are no sources of permanent water within the study area.
Taricha torosa Coast Range newt	None/None G4/S4 SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats and will migrate over 1 km to breed in ponds, reservoirs and slow moving streams.	None	There are five CNDDB occurrences within 5 miles of the study area. The most recent occurrence was in 2015 in the Santa Ynez Mountains along Rattlesnake Canyon, approximately 3.1 miles north of the study area. There are no coastal drainages present within the study area.

Scientific Name Common Name	Status Fed/State ESA Other	Habitat Requirements	Potential to Occur	Rationale
Reptiles				
Anniella pulchra Northern California legless lizard	None/None G3/S2S3 SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Low	There are eight CNDDB occurrences within 5 miles of the study area, seven of which are historical. The most recent occurrence was in 2008 near the Santa Barbara Museum of Natural History, approximately 3.3 miles northwest of the study area. Loose soils with high moisture content are present within the study area within the quailbush scrub habitat, outside of the project site. Species may occur as a transient.
Anniella spp. California legless lizard	None/None G3G4/S3S4 SSC	Contra Costa County south to San Diego, within a variety of open habitats. This element represents California records of Anniella not yet assigned to new species within the Anniella pulchra complex. Variety of habitats; generally in moist, loose soil. They prefer soils with a high moisture content.	Low	There are no CNDDB occurrences within 5 miles of the study area. Loose soils with high moisture content are present within the study area within the quailbush scrub habitat, outside of the project site. Species may occur as a transient.
Emys marmorata western pond turtle	None/None G3G4/S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	None	There is one CNDDB occurrence from 2017 at the Andrée Clark Bird Refuge. There is no suitable aquatic habitat or basking sites present in the study area.
Phrynosoma blainvillii coast horned lizard	None/None G4/S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	None	There are two historical CNDDB occurrences (1947 and 1981) within 5 miles of the study area. The closest occurrence is documented at an unknown location in Santa Barbara, approximately 1.5 miles west of the study area. There are no lowlands along sandy washes with scattered low bushes present within the study area.

Scientific Name Common Name	Status Fed/State ESA Other	Habitat Requirements	Potential to Occur	Rationale
Salvadora hexalepis virgultea coast patch-nosed snake	None/None G5T4/S3 SSC	Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites.	Low	There are three historical CNDDB occurrences (1939, 1986, 1987) within 5 miles of the study area. The closest occurrence is documented at an unknown location in Santa Barbara, approximately 1.5 miles west of the study area. Small mammal burrows are present at the southeastern portion of the study area. However, the burrows are in an area that is highly disturbed (e.g., tire tracks) with no brushy or shrubby vegetation.
Thamnophis hammondii two-striped gartersnake	None/None G4/S3S4 SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.	None	There are two CNDDB occurrences within 5 miles of the study area, both in the Santa Ynez Mountains. There is no suitable aquatic habitat within the study area.
Birds				
Accipiter cooperii Cooper's hawk	None/None G5/S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Moderate	There are two historical CNDDB occurrences (1966, 1997) within 5 miles of the study area, both approximately 3.5 miles northwest of the study area. There are three iNaturalist observations near the Refuge from 2019 and 2020 (iNaturalist 2023). There is no suitable nesting habitat within the study area, but the species may transit through the study area.
Charadrius nivosus nivosus western snowy plover	FT/None G3T3/S3 SSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	None	There is one CNDDB occurrence (2005), approximately 1.3 miles west of the study area. Critical habitat for the species is approximately 0.3 miles south of the study area, along East Beach. A small portion of the study area contains unvegetated, sandy beach adjacent to the Refuge. However, the shoreline is part of the Refuge and too small of an area for suitable nesting or foraging habitat (< 0.3 acres).
Coturnicops noveboracensis yellow rail	None/None G4/S2 SSC	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	None	There is one historical CNDDB occurrence (1996) at an unknown location in Santa Barbara, approximately 1.3 miles west of the study area. There is marshland habitat present at the Refuge, outside of the project site, however it is saltwater and contains tall vegetation (bulrush) that is not suitable nesting or foraging habitat for the species (Rodewald 2023).

Scientific Name Common Name	Status Fed/State ESA Other	Habitat Requirements	Potential to Occur	Rationale
Egretta thula snowy egret	None/None G5/S4	Colonial nester, with nest sites situated in protected beds of dense tules. Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	Moderate	The species was observed at the Refuge, outside of the project site, during the field survey on November 7, 2023. There is one CNDDB occurrence (2012) within 5 miles of the study area, approximately 2 miles west of the study area. There is suitable nesting (dense tules of bulrush) and foraging habitat present within the study area. The species has a moderate potential to transit through the project site.
Elanus leucurus white-tailed kite	None/None G5/S3S4 FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Low	There are no CNDDB occurrences within 5 miles of the study area. There is no suitable nesting or foraging habitat present within the study area, but the species may occur as a transient.
Laterallus jamaicensis coturniculus California black rail	None/ST G3T1/S2 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Low	There is one historical CNDDB occurrence (1917) within 5 miles of the study area, approximately 1.3 miles west of the study area. There is marshland habitat present at the Refuge, outside of the project site. However, the marshland is small and not part of a larger bay. There is no suitable nesting and foraging habitat present within the study area.
Nycticorax nycticorax black-crowned night heron	None/None G5/S4	Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.	Low	There is one CNDDB occurrence (2012) within 5 miles of the study area, approximately 2 miles southwest of the study area. The species has been observed nesting in eucalyptus near the Santa Barbara Zoo and may occur as a transient through the project site (Kisner 2020).
Passerculus sandwichensis beldingi Belding's savannah sparrow	None/SE G5T3/S3	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in Salicornia on and about margins of tidal flats.	Low	There are no CNDDB occurrences within 5 miles of the study area. There is marshland habitat present at the Refuge, outside of the project site. Species may occur as a transient through the project site.

Scientific Name Common Name	Status Fed/State ESA Other	Habitat Requirements	Potential to Occur	Rationale
Pelecanus occidentalis californicus California brown pelican	FD/SD G4T3T4/S3	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	Moderate	The species was observed transiting through the study area, outside of the project site, during the field survey on November 7, 2023. There is one CNDDB occurrence (2002) within 5 miles of the study area, approximately 2 miles southwest of the study area. There is no suitable nesting and foraging habitat present within the study area, but the species is known to transit through the study area, specifically at the Refuge, outside of the project site.
Rallus obsoletus levipes light-footed Ridgway's rail	FE/SE G3T1T2/S1 FP	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on molluscs and crustaceans.	Low	There are no CNDDB occurrences within 5 miles of the study area. There is some pickleweed present within the marshland, outside of the project site. However, the area is a small area and not dense enough for suitable nesting and foraging habitat. The species has a low potential to transit through the project site.
Riparia riparia bank swallow	None/ST G5/S3	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	None	There are two historical CNDDB occurrences (1913, 1927) within 5 miles of the study area. The closest occurrence is at an unknown location in Santa Barbara, approximately 1.2 miles west of the study area. There is no suitable nesting and foraging habitat present within the study area.
Sternula antillarum browni California least tern	FE/SE G4T2T3Q/S2 FP	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	Low	There is one historical CNDDB occurrence (1932) within 5 miles of the study area, approximately 1.6 miles southwest of the study area. There is no suitable nesting and foraging habitat present within the study area, but the species may occur as a transient through the project site.
Vireo bellii pusillus least Bell's vireo	FE/SE G5T2/S3	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	None	There are no CNDDB occurrences within 5 miles of the study area. There is no suitable nesting and foraging habitat present within the study area.

Scientific Name Common Name	Status Fed/State ESA Other	Habitat Requirements	Potential to Occur	Rationale
Mammals				
Corynorhinus townsendii Townsend's big-eared bat	None/None G4/S2 SSC	Occurs throughout California in a wide variety of habitats. Most common in mesic sites, typically coniferous or deciduous forests. Roosts in the open, hanging from walls & ceilings in caves, lava tubes, bridges, and buildings. This species is extremely sensitive to human disturbance.	None	There is one historic CNDDB occurrence (1985) at Monte Vista Elementary School, approximately 4.5 miles northwest of the study area. Bridges and buildings are present within the study area. However, the bridge is part of an active railroad and there is a high amount of human activity near the buildings.
Nyctinomops macrotis big free-tailed bat	None/None G5/S3 SSC	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	None	There is one historic CNDDB occurrence (1996) at an unknown location in Santa Barbara, approximately 2.8 miles west of the study area. There are no high cliffs or rocky outcrops for roosting present within the study area.

* Regional Vicinity refers to within a 5-mile search radius of site.

Status (Federal/State)

FE = Federal Endangered
FT = Federal Threatened
FC = Federal Candidate
SE = State Endangered
ST = State Threatened
SCE = State Candidate Endangered
SD = State Delisted
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List

Other Statuses

G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority

Appendix C

Historic Structure Site Report

Los Patos Way Off-Ramp Underpass

Historic Structure/Site Report

Santa Barbara County Assessor's Parcel No. 017-010-079

prepared for

T.Y. Lin International
707 Wilshire Boulevard, Suite 4900
Los Angeles, California 90017

prepared by

Rincon Consultants, Inc.
209 East Victoria Street
Santa Barbara, California 93101
Contacts: Shannon Carmack and Susan Zamudio-Gurrola
805-644-4455
scarmack@rinconconsultants.com

February 2020

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

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Executive Summary

T.Y. Lin International retained Rincon Consultants, Inc. (Rincon) to conduct a historical resource assessment of the Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235) in Santa Barbara, California (subject structure). A project is currently under consideration to remove the subject structure, which is owned and operated by the Union Pacific Railroad (UPRR). The purpose of the historical resource assessment is to determine if the subject structure qualifies as a historical resource under the California Environmental Quality Act (CEQA) and if the proposed project would result in an impact to historical resources. Assessment methods included an intensive-level survey of the subject structure, archival research and preparation of this Historic Structure/Site Report. All work was conducted in accordance with the CEQA Guidelines and the City of Santa Barbara's *Master Environmental Assessment Guidelines for Archaeological Resources and Historic Structures and Sites* (City of Santa Barbara 2002).

The Los Patos Way Off-Ramp Underpass was previously evaluated by Caltrans in 1991 (Snyder 1991; Scott 1992) and, following concurrence from the State Historic Preservation Officer (SHPO) in 1993, was determined ineligible for listing in the National Register of Historic Places (NRHP) (Craigo 1993). At the time, the underpass was not evaluated for listing in the California Register of Historical Resources (CRHR) or for local designation.

As part of the current historical resource assessment, Rincon recommends the underpass eligible for listing in the CRHR at the local level of significance under Criterion 1 as it is associated with events that have made a significant contribution to the broad patterns of local history, and Criterion 3 as it embodies the distinctive characteristics of a method of construction. Built in 1901 with local sandstone, the underpass is representative of sandstone architecture and construction, significant to the architectural heritage of the City of Santa Barbara. Therefore, its primary character-defining features are its sandstone pier and abutments; however, as discussed with the City Historic Landmarks Commission (HLC), its steel girders are also considered character-defining features. Non-character-defining features which are utilitarian and ubiquitous include the wooden ties, rails, ballast, wooden posts and cable railing.

The underpass is also recommended eligible for local designation as a City of Santa Barbara Landmark or Structure of Merit as it has character, interest or value as a significant part of the heritage of the city (Criterion 3a), it exemplifies a particular architectural style or way of life important to the city, the state or the nation (Criterion 3d), and its unique location and physical characteristics represent an established and familiar visual feature of the neighborhood (Criterion 3i). Further, the underpass meets the City of Santa Barbara's definition of a significant historic resource, as described in the MEA Guidelines, as a structure that represents a particular architectural style or style that was popular fifty or more years ago (Criterion 2), and as a structure, site or object that conveys an important sense of time and place (Criterion 6). Therefore, the Los Patos Way Off-Ramp Underpass is considered a historical resource for the purposes of CEQA. The proposed project, which would result in the removal and replacement of the subject structure, therefore has the potential to result in a significant adverse impact to a historical resource and will be analyzed pending further consultation with the City.

1 Introduction

T.Y. Lin International retained Rincon Consultants, Inc. (Rincon) to conduct a historical resource assessment for the Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235) in Santa Barbara, California (subject structure). The structure is located on Santa Barbara County Assessor's parcel number 017-010-079 at exit 95 of southbound U.S. Route 101 (Figure 1 and Figure 2).

The purpose of the historical resource assessment is to determine if the subject structure qualifies as a historical resource under the California Environmental Quality Act (CEQA) and if the proposed project would result in an impact to historical resources. Assessment methods included an intensive-level survey of the subject structure, archival research and the preparation of this Historic Structure/Site Report. All work was conducted in accordance with the CEQA Guidelines and the City of Santa Barbara's *Master Environmental Assessment Guidelines for Archaeological Resources and Historic Structures and Sites* (MEA Guidelines) (City of Santa Barbara 2002).

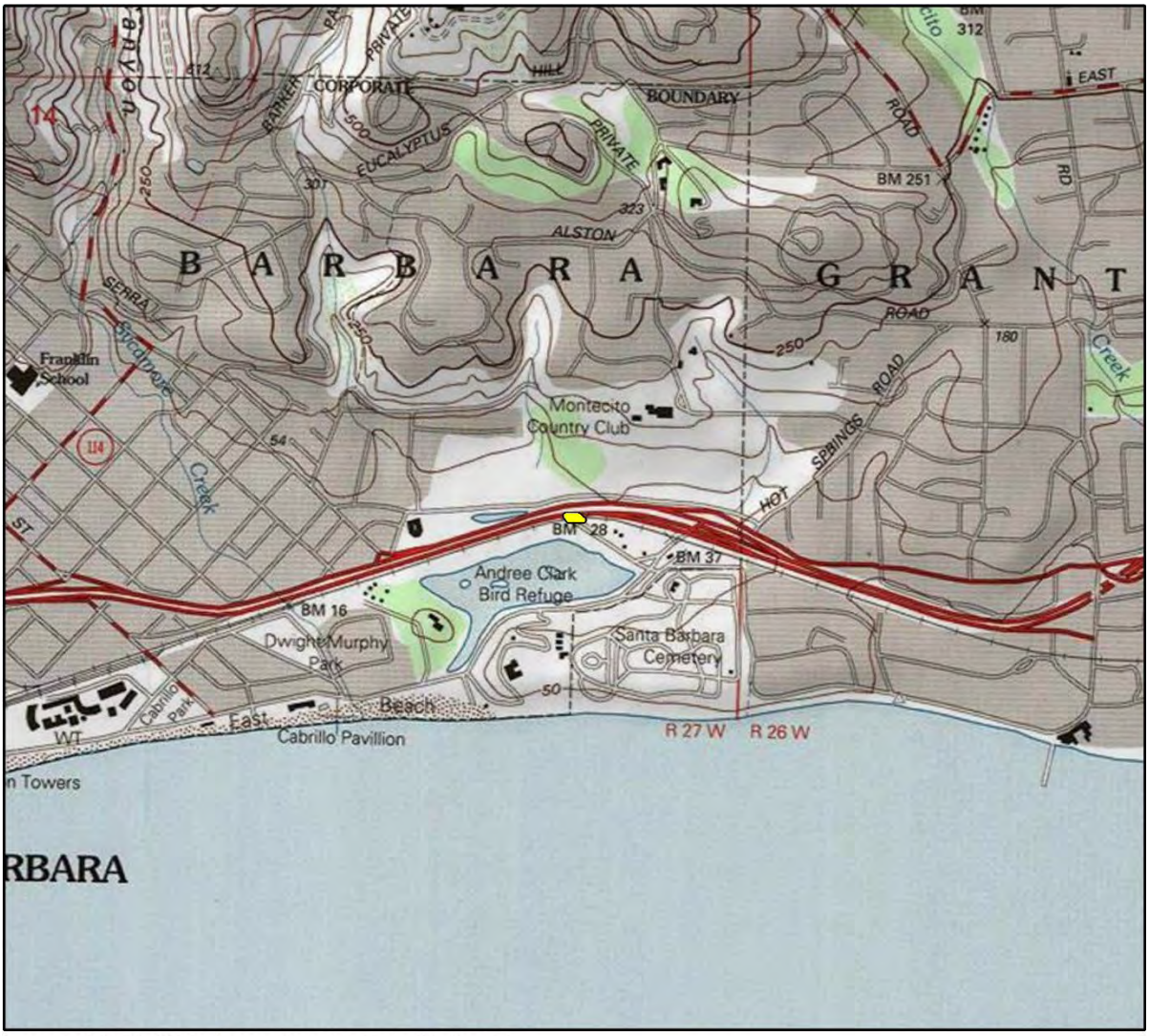
1.1 Project Description

The proposed project involves the removal of the Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235) which is owned and operated by the Union Pacific Railroad (UPRR). UPRR has determined the subject structure will need to be removed and replaced as the U.S. Route 101 off-ramp at Los Patos Way is being vacated and is no longer needed.

1.2 Personnel

Rincon Architectural Historian Susan Zamudio-Gurrola, MHP managed this historical resource assessment with oversight by Senior Architectural Historian Steven Treffers, MHP. Ms. Zamudio-Gurrola and Mr. Treffers meet and exceed the Secretary of the Interior's *Professional Qualifications Standards* for architectural history and history (NPS 1983). GIS Analyst Allysen Valencia prepared the figures in this report. Shannon Carmack, Principal and Architectural History Program Manager, reviewed this report for quality control. See Appendix A for the preparer's qualifications.

Figure 1 Project Vicinity



Imagery provided by National Geographic Society, Esri and its licensors © 2019. Santa Barbara Quadrangle. T04N R27W S13. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may havechanged since the original topographic map was assembled.

Figure 2 Project Location

Imagery provided by Microsoft Bing and its licensors © 2019.

2 Regulatory Framework

This section includes a discussion of the applicable state and local laws, ordinances, regulations, and standards governing cultural resources.

2.1 California Environmental Quality Act

CEQA (Public Resources Code [PRC] Section 21084.1) requires that a lead agency determine whether a project could have a significant effect on historical resources. A *historical resource* is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (PRC Section 21084.1), a resource included in a local register of historical resources or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the PRC (CEQA Guidelines Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (CEQA Guidelines Section 15064.5[a][3]).

PRC Section 5024.1, CEQA Guidelines Section 15064.5, and PRC Sections 21083.2 and 21084.1 were used as the basic guidelines for this historic resource study. PRC Section 5024.1 requires the identification and evaluation of historical resources that may be affected by a project.

2.2 California Register of Historical Resources

The purpose of the CRHR is to maintain listings of the state's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR were developed expressly to be in accordance with previously established criteria developed for listing in the National Register of Historic Places, enumerated below.

According to PRC Section 5024.1(c)(1–4), a resource is considered *historically significant* if it 1) retains substantial integrity and 2) meets at least one of the following CRHR criteria.

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of persons important in our past.
3. It embodies the distinctive characteristics of a type, period, region, or method of installation; or represents the work of an important creative individual; or possesses high artistic values.
4. It has yielded or may be likely to yield information important in prehistory or history.

Impacts to significant cultural resources are considered a significant effect on the environment if they affect the characteristics of any resource that qualify it for the NRHP or adversely alter the significance of a resource listed in or eligible for listing in the CRHR. These impacts could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired (CEQA Guidelines, Section 15064.5 [b][1], 2000). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR (CEQA Guidelines, Section 15064.5[b][2][A]).

2.3 City of Santa Barbara

The City of Santa Barbara defines significant historic resources to include, but not be limited to, the following:

1. Any structure, site or object designated on the most current version of the following lists:
    a. National Historic Landmarks
    b. National Register of Historic Places
    c. California Registered Historical Landmarks
    d. California Register of Historical Resources
    e. City of Santa Barbara Landmarks
    f. City of Santa Barbara Structures of Merit
2. Selected structures that are representative of particular architectural styles including vernacular as well as high styles, architectural styles that were popular fifty or more years ago, or structures that are embodiments of outstanding attention to architectural design, detail, materials, or craftsmanship.
3. Any structure, site or object meeting any or all the criteria established for a City Landmark and a City Structure of Merit (SBMC §22.22.040; Ord. 3900 ¶ I, 1977), as follows:
    a. Its character, interest or value as a significant part of the heritage of the City, the State or the Nation;
    b. Its location as a site of a significant historic event;
    c. Its identification with a person or persons who significantly contributed to the culture and development of the City, the State or the Nation;
    d. Its exemplification of a particular architectural style or way of life important to the City, the State or the Nation;
    e. Its exemplification of the best remaining architectural type in a neighborhood;
    f. Its identification as the creation, design or work of a person or persons whose effort has significantly influenced the heritage of the City, the State or the Nation;
    g. Its embodiment of elements demonstrating outstanding attention to architectural design, detail, materials or craftsmanship;
    h. Its relationship to any other landmark if its preservation is essential to the integrity of that landmark;
    i. Its unique location or singular physical characteristic representing an established and familiar visual feature of a neighborhood;
    j. Its potential of yielding significant information of archaeological interest;
    k. Its integrity as a natural environment that strongly contributes to the well-being of the people of the City, the State of the Nation.
4. Any structure, site, or object meeting any or all the criteria provided for the National Register of Historic Places and the California Historical landmark list.
5. Any structure, site or object associated with a traditional way of life important to an ethnic, national, racial, or social group, or to the community at large; or illustrates the broad patterns of cultural, social, political, economic, or industrial history.

6. Any structure, site, or object that conveys an important sense of time and place, or contributes to the overall visual character of a neighborhood or district.
7. Any structure, site of object able to yield information important to the community or is relevant to historical, historic archaeological, ethnographic, folkloric, or geographical research.
8. Any structure, site, or object determined by the City to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the City's determination is based on substantial evidence in light of the whole record [Ref. State CEQA Guidelines §15064.5(a)(3)].

3 Historic Context

3.1 Santa Barbara

The subject structure is located at the Los Patos Way Off-Ramp (exit no. 95) of southbound U.S. Route 101, at the northeastern edge of the Andree Clark Bird Refuge. The following historic context provides background in which to evaluate the significance of the subject property as it relates to the developmental and growth patterns for the City of Santa Barbara.

Post-Contact history for the state of California is generally divided into three periods: the Spanish Period (1769–1822), Mexican Period (1822–1848), and American Period (1848–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican-American War, signals the beginning of the American Period when California became a territory of the United States.

3.2 Spanish Period (1769–1822)

Spanish explorers made sailing expeditions along the coast of what was then known as Alta (upper) California between the mid-1500s and mid-1700s. In 1542, while in search of the legendary Northwest Passage, Juan Rodríquez Cabríllo recorded a visit to the Santa Barbara area. Sebastian Vizcaíno also conducted exploration of the coast in 1602 and named the Santa Barbara Channel when his ship entered it on the feast day of Saint Barbara (Kyle 2002). The Spanish crown laid claim to Alta California based on the surveys conducted by Cabríllo and Vizcaíno (Bancroft 1885; Gumprecht 1999).

By the 18th century Spain developed a three-pronged approach to secure its hold on the territory and counter against other foreign explorers. The Spanish established military forts known as presidios, as well as missions and towns throughout Alta California. The 1769 overland expedition by Captain Gaspár de Portolá marks the beginning of California's Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. Portolá established the Presidio of San Diego as the first Spanish settlement in Alta California in 1769. Franciscan Fr. Junípero Serra also founded Mission San Diego de Alcalá that same year, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823.

Although the Portolá expedition reached the Santa Barbara area in August of 1769, the Spanish did not create a settlement there until many years later. The Santa Barbara presidio was established in 1782 and the Santa Barbara Mission was founded four years later (Graffey 2010). The mission and presidio relied on Chumash labor; eventually, the majority of the native population lived at the mission complex (Cole 1999).

Spain began making land grants in 1784, typically to retiring soldiers, although the grantees were only permitted to inhabit and work the land. The land titles technically remained property of the Spanish king (Livingston 1914).

3.3 Mexican Period (1822–1848)

A major emphasis during the Spanish Period in California was the construction of missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns, but just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles). Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants (Gutierrez and Orsi 1998).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. The secularization of the missions following Mexico's independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos. Commonly, former soldiers and well-connected Mexican families were the recipients of these land grants, which now included the title to the land. Forty-one ranchos were granted between 1835 and 1846 in what would become Santa Barbara County (Graffey 2010).

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities.

3.4 American Period (1848–Present)

The United States went to war with Mexico in 1846. During the first year of the war, John C. Fremont traveled from Monterey to Los Angeles with reinforcements for Commodore Stockton, and evaded Californian soldiers in Santa Barbara's Gaviota Pass by taking the route over the San Marcos grade instead (Kyle 2002). The war ended in 1848 with the Treaty of Guadalupe Hidalgo, ushering California into its American Period.

California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as U.S. Territories (Waugh 2003). Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the southern California economy through 1850s. The discovery of gold in the northern part of the state led to the Gold Rush beginning in 1848, bringing multitudes of immigrants from across the world, including Europe, Asia and Latin America. Cattle were no longer desired mainly for their hides but also as a source of meat and other goods. During the 1850s cattle boom, rancho vaqueros drove large herds from southern to northern California to feed that region's burgeoning mining and commercial boom.

A severe drought in the 1860s decimated cattle herds and drastically affected rancheros' source of income. In addition, property boundaries that were loosely established during the Mexican era led

to disputes with new incoming settlers, problems with squatters, and lawsuits. Rancheros often were encumbered by debt and the cost of legal fees to defend their property. As a result much of the rancho lands were sold or otherwise acquired by Americans. Most of these ranchos were subdivided into agricultural parcels or towns (Dumke 1944).

Thousands of settlers and immigrants continued to immigrate to California, particularly after the completion of the First Transcontinental Railroad in 1869. Chinese laborers were instrumental in the completion of the Transcontinental Railroad, although they had been utilized in the construction of railroads in California as early as the 1850s (Stanford University 2019). By the 1880s, the railroads had established networks throughout California, resulting in fast and affordable shipment of goods, as well as a means to transport new residents and tourists to different areas (Dumke 1944). As their involvement in railroad construction decreased, Chinese immigrants established settlements in various communities throughout the state, and found employment in other sectors including as cooks, merchants, in laundries, fishing and farm work. The Chinese Exclusion Act of 1882 stifled further Chinese immigration, and by the 1890s, California's primarily male Chinese population was aging and declining in numbers (Library of Congress, n.d.; Smithsonian National Museum of American History, n.d.).

3.5 Santa Barbara

In 1851 Captain Salisbury Haley surveyed and laid out the streets of the City of Santa Barbara. By 1860 its population was over 2,300 people. Two years later the City Council authorized the leveling of State Street to accommodate traffic. Catastrophic drought during 1863-1864 ruined grazing lands and led to many rancheros losing or selling off their land, providing additional property for a growing population. The first wharf in the city was built at the foot of Chapala Street in 1869, followed by Stearns Wharf at the foot of State Street, built in 1872 (City of Santa Barbara 2016). During the 1870s, the blocks plotted at the waterfront were sought-after real estate for commercial and industrial development (Cole 1999).

Charles Nordhoff, a New York journalist, visited Santa Barbara in 1872 and extolled its merits, drawing many people to the city. By the following year Ventura County was created and separated from Santa Barbara County. The Southern Pacific Railroad (SPRR) arrived in Santa Barbara in 1887, passing just north of the "salt pond" or estuary (today's Andree Clark Bird Refuge). This advancement in transportation further increased tourism and relocation to the area. At the time the SPRR route between San Francisco and Los Angeles traveled through the San Joaquin Valley. A connection to Santa Barbara was made from Newhall, an inland community about 40 miles north of Los Angeles. Traveling from the north, the SPRR coast route had only reached as far south as the community of San Miguel and was not developed through Santa Barbara until fourteen years later (Conklin 1987; Graffy 2010).

The California land speculation boom peaked in the city in 1887 and by 1890 its population had grown to over 5,800 people (City of Santa Barbara 2016). A Chinatown developed on Canon Perdido Street approximately between State and Anacapa streets. In 1891 the City created a boulevard along the oceanfront which was known as East Boulevard. It was wider to the west of State Street and narrowed on the east side due to the marshy landscape (Cole 1999).

Completion of the SPRR coast route line between Santa Barbara and San Luis Obispo was completed in 1901 bringing countless travelers between Los Angeles and San Francisco through Santa Barbara. Construction of the lavish Potter Hotel began in 1902 near the shoreline west of State Street. The first hotel in the city to deliberately cater to guests arriving by train, it opened the following year

and became a popular destination for wealthy visitors (Cole 2006; Graffy 2010). Shortly thereafter, SPRR reportedly realigned the train tracks to cater to Potter Hotel guests. Between 1904 and 1905 the SPRR tracks were realigned to run adjacent to the hotel and closer to the shoreline instead of the earlier convoluted route along city streets (a large portion of which had been located on Gutierrez Street) (Cole 2006). A new Mission Revival-style train station was also built in 1905 on lower State Street to replace the earlier Victoria Street station (Conklin 1987).

Development at the west end of Santa Barbara's waterfront differed from the east end. The area west of State Street was relatively dry and easily developed, thus it became the focus for tourism. The area east of State Street was marshy; the salty estero would often flood during the winter rains. Therefore, the East Beach area was dedicated primarily to commercial and industrial use, such as fishing, lumber yards, and citrus shipping. East Beach was not particularly popular with beachgoers, also in part because the city's sewer outfall discharged into the ocean in that area. An early attempt at developing a tourism-related business there was James L. Barker's Shore Acres, a small, modest resort in the area of modern-day Calle Cesar Chavez and Cabrillo Boulevard. Developed starting in 1909, it was comprised of a grouping of cottages with thatched roofs, and palm trees, to help create the ambiance of a tropical beach (Cole 1999; Beresford 2014-2015).

In 1919 the City renamed East and West Boulevard "Cabrillo Boulevard" after the explorer Juan Rodriguez Cabrillo. By the 1920s, the City felt the pressure to improve the East Beach area, and concerned citizens became engaged in the effort (Cole 1999). In 1922 the Santa Barbara Community Arts Association organized a Plans and Planting division, focusing on the beautification of the city. At the time, Santa Barbara was one of the first cities in the country to consider historic preservation during the planning process. Shortly thereafter the city's Planning Commission was established in 1923. Well-known planner Charles H. Cheney was commissioned to work with Olmsted and Olmsted of New York to prepare a seventy-page document titled Major Traffic Street Plan and Boulevard and Park System, also known as the "Olmsted-Cheney Plan", which was presented to the City Council in 1924 (Starr 1990). The plan recommended that the City focus on acquiring as much oceanfront land as possible. That same year, the East Boulevard Improvement Association was formed and purchased beachfront property on Cabrillo Boulevard to keep it from being developed. Similar philanthropic citizens' groups raised funds to acquire the Shore Acres parcels, and the Santa Barbara Lumber Company's property adjacent to Stearns Wharf, and this land was sold to the city in the late 1920s to early 1930s (Beresford 2014-2015).

A major earthquake in 1925 damaged many structures in the city. The city's first Architectural Board of Review was organized to review architectural plans for post-earthquake re-building. Since the 1920s, Spanish and traditional Mediterranean architectural styles have been advocated for building within the city (City of Santa Barbara 2016). A consequence of this was the dismantling of the city's old Chinatown (Santa Barbara Trust for Historic Preservation 2017).

By 1927, the city was successful in raising the funds to buy land and construct a new boulevard further inland from the existing road, spanning from State Street to the Old Coast Highway (Cole 1999). Over the next two years East Cabrillo Boulevard was widened and moved northward, and a beautification program was completed. Attention was then turned to the old salt pond or estuary property (*The Morning Press* 1930; Beresford 2014-2015). During the 1870s and 1880s horse races were held on a track around the pond when conditions permitted. Then in the early 1900s, a group of seventy citizens made donations to purchase the salt pond to save it from oil development. It was sold to the city in 1909, and after it was set aside as a bird refuge, it sat in relative neglect. In 1928 Huguette M. Clark donated $50,000 in memory of her deceased sister Andrée to have the salt pond dredged and to create a shallow lake encircled by walking and bridle paths (Redmon 2016; Conard

et.al. 2016). Improvements on the three islands and the southern, Cabrillo Boulevard side of the Bird Refuge were completed by 1931. Grass lawns and shrubbery were planted around the lake, and trees and shrubs were planted on the islands. Water grass plants were also planted within the Bird Refuge, and eucalypti and pines were planted on its eastern edge near the railroad embankment (*The Morning Press* 1931a and 1931b).

The early route of the Coast Highway which ran adjacent to the east edge of the salt pond utilized present-day Los Patos Way to pass under the SPRR underpass (the subject structure) before entering the east side of Santa Barbara. Because the highway route followed a circuitous network through city streets, by the 1930s, the need for a safer and more efficient route became apparent (Scott 1992). A new highway began being developed through the city in the 1930s, although it was curtailed at the start of World War II and was not completed until the late 1940s (UCSB Map & Imagery Lab 1928 and 1938; Scott 1992). The SPRR merged with UPRR in 1996 creating the largest railroad in the United States (Union Pacific Railroad Company 1994-2018).

Santa Barbara's waterfront area, east of the wharf, has continued to develop throughout the twentieth century into a hub for tourism, and passive and active recreation. To the north of Cabrillo Boulevard, large-scale developments such as hotel and condominium complexes, the city zoo, and a large city park have been built. To the south, an emphasis on the creation of recreation facilities is noted; for example, the volleyball courts at East Beach, bicycle paths along the beachfront, a skateboard park, and public restrooms.

3.6 Stone Masonry Construction in Santa Barbara County

The following information is primarily derived from the book *Stone Architecture in Santa Barbara* by the Santa Barbara Conservancy (2009), except where noted.

Stone architecture and construction has been notable in Santa Barbara since the 19th century, with a surge between 1875 and 1940 as it evolved from a small semi-rural community into a lively city. The use of stone was made possible by several factors: the abundance of local sandstone, a growing number of expert artisans, and the seemingly bottomless pockets of wealthy private patrons. The city's picturesque setting and mild climate made it a popular destination for both vacationers and permanent transplants from across the country. Many of the newcomers were wealthy and bought land on which they created great estates. Stone was used as a locally available and naturally beautiful material in the construction of their homes, outbuildings and garden features. As stated in *Stone Architecture in Santa Barbara*, "with the availability of capital, raw materials, and, especially, a dedicated contingent of architects, builders, and masons devoted to the use of stone, Santa Barbara has been blessed by an abundance of stone houses and gardens…" (Santa Barbara Conservancy 2009). The trend was not just limited to the wealthy, however; others also utilized stone for more modest structures built throughout the city.

Stone construction was utilized in both private and public spaces, including homes, gardens, bridges and walls, which showcased the artistic expression of different stonemasons. The first group of stonemasons to work in Santa Barbara, beginning in the 1870s, were of various nationalities including English, Scottish, German, French, Italian, Mexican and American. The next generation consisted primarily of Italians. A generation of Italian-American stonemasons followed, and afterwards, an influx of Mexican stonemasons also made their mark. These diverse stone masons created and maintained a high standard of workmanship in Santa Barbara stonework, much of

which is still extant. Some of the masons and designers are recognized today, such as Joe Dover, Peter Poole, Owen O'Neill, John Arroqui, Atilio Bazzi, Joe Buzzella, and the Arnoldi brothers.

In addition to the aforementioned stonemasons, general laborers such as Chinese immigrants were hired to construct masonry infrastructure related to railroad development during the mid- to late-1800s. However, after this period of major railroad construction, immigration restrictions put in place in 1882 led to a reduction in the Chinese population in the state. Those who stayed typically settled in more permanent communities and found employment in other sectors. In the report *Survey and Evaluation of Masonry Arch Bridges*, authors Stacie Ham and Andrew Hope state by the early 1900s, the Chinese population that had earlier provided manual labor for masonry structures was replaced by second generation Chinese-Americans, most of whom either moved to cities or moved to their ancestral land (Ham and Hope 2003).

Stone bridges are located throughout the Santa Barbara area where many east-west roads span across canyons and creeks. Bridge construction utilizing the engineering power of the arch "liberated stoneworkers from the construction of post and lintel…translated…to local construction with extraordinary results..." (Santa Barbara Conservancy 2009). In addition to bridges, numerous stone walls were constructed both in private and public places. They were used to delineate boundaries, hold back hillsides, and support roads. Although walls do not require as much in terms of engineering as bridges, stonemasons were able to express more artistry in the selection, carving, and setting of stones for wall design.

Stone architecture and construction in Santa Barbara lessened by the mid-twentieth century. Although local scholars have not elaborated on this, various factors were likely involved. Authors Ham and Hope describe the factors for the decrease in stone masonry construction in Napa Valley as including: newer, cheaper, labor-saving methods of construction; the loss of knowledge of the trade; loss of a large supply of inexpensive manual laborers; and a change in taste and style (Ham and Hope 2003).

4 Background Research

4.1 Records Review and Archival Research

Archival research was completed in September and October 2019. Rincon consulted with a number of archives, local governmental agencies, and individuals to identify relevant information regarding the historical development of the project vicinity. Rincon reviewed the State Historic Property Data File (Historical Resources Inventory list) for Santa Barbara County, the NRHP, CRHR and California Historical Landmarks and Points of Historical Interest lists, the California OHP Archaeological Determinations of Eligibility Research methodology further focused on review of a variety of primary and secondary source materials relating to the history and development of the subject structure. Sources included, but were not limited to, historical maps, aerial photographs, and written histories of the region. Rincon consulted the following archives, publications and sources:

- City of Santa Barbara Designated Landmarks List, Designated Structures of Merit List, Potential Historic Resources List, Potential Historic Features and Landscape Elements List
- City of Santa Barbara Historic Resources Database and Map
- City of Santa Barbara Urban Historian Nicole Hernandez
- Santa Barbara Historical Museum Gledhill Library
- John R. Signor, author and historian of western railroad history
- Ziaojian Zhao, Ph.D., professor of Chinese and Asian-American history at University of California, Santa Barbara
- *Santa Barbara Railroad Centennial, 1887-1987*, edited by Hal Conklin
- Sanborn Fire Insurance Maps
- Historic USGS topo maps
- Historic aerial photographs at University of California, Santa Barbara (UCSB) Map & Imagery Lab
- *The Morning Press* archived at Gledhill Library
- *The Santa Maria Times* at Newspaper.com
- California Railroad Employment Records, 1862-1950, archived at Ancestry.com
- *Closing the Gap: The Coast Line and its Bridges in Ventura and Santa Barbara Counties* by Nan Lawler
- City of Santa Barbara Waterfront Survey Context
- National Register of Historic Places Registration Form for Rattlesnake Canyon Bridge
- Online Archive of California
- United States Census Bureau records
- *Survey and Evaluation of Masonry Arch Bridges* by Stacie Ham and Andrew Hope, California Department of Transportation Division of Environmental Analysis, June 2003
- Other sources as noted in the references list

4.2 Previous Evaluations

Background research revealed the Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235) was previously evaluated by architectural historian John Snyder for Caltrans in 1991. The findings of the evaluation were documented in the *Historical Architectural Survey Report for the Carpinteria-Santa Barbara Median Widening and Interchange Project* (Scott 1992), completed as part of the *Historic Properties Survey Report for the Route 101 Six-Lane Project* (Caltrans District 5 1992). Snyder found the underpass ineligible for listing in the NRHP, a finding which received SHPO concurrence in 1993 (Craigo 1993). The underpass is currently listed on the Caltrans Historic Bridge Inventory as Category 5 ("Bridge not eligible for NRHP"), and is listed on the Santa Barbara County Historic Resources Inventory as resource number P-42-040888 with a California Historical Resource Status Code 6Y meaning, "Determined ineligible for NR by consensus through Section 106 process – Not evaluated for CR or Local Listing."

5 Methods

5.1 Field Survey

Rincon Architectural Historian Susan Zamudio-Gurrola conducted an intensive-level survey of the subject structure on October 2, 2019. The survey consisted of a visual inspection of the subject structure and its associated features to assess overall condition and integrity. Potential character-defining features were identified and documented during the survey process. The structure was recorded on California Department of Parks and Recreation (DPR) 523 series forms, included in Appendix B of this report.

6 Results

6.1 Architectural Description

The Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235) is located on Santa Barbara County Assessor's parcel number 017-010-079 south of and adjacent to U.S. Route 101. Located at UPRR mile-post 372.5 and Caltrans post-mile 11.65, the underpass carries railroad track over the Los Patos Way Off-Ramp (exit 95) of southbound U.S. Route 101 (Figure 3). The underpass is currently owned and operated by the UPRR but was originally constructed by the SPRR in 1901.

Figure 3 Los Patos Way Off-Ramp Underpass, View from Los Patos Way, Looking West

The underpass is composed of two 56-foot-long deck girder spans supported by a center pier and abutments. Essentially, each span between the center pier and one of the abutments is 56 feet long; the overall length of the underpass is 112 feet. The girders are riveted steel (Figure 4), and the pier and abutments are constructed of ashlar, square-cut sandstone laid in regular courses (Figure 5 , Figure 6 and Figure 7).

Figure 4 Closeup of Riveted Steel Girders

Figure 5 Center Sandstone Pier, Looking South

Figure 6 Eastern Sandstone Abutment, Looking East

Figure 7 Western Sandstone Abutment, Looking West

Repairs or alterations have been made to both of the abutments using concrete as depicted in Figure 8 and Figure 9. In addition, various areas of the sandstone have been painted over. Both abutments display steel rungs mounted in the sandstone blocks.

Figure 8 Closeup of Concrete Alteration, Eastern Abutment, Looking East

Figure 9 Closeup of Concrete Alteration, Western Abutment, Looking Northwest

Many of the sandstone blocks and areas of mortar show wear and deterioration as seen in Figure 10 and Figure 11.

Figure 10 Closeup of Deteriorated Sandstone Block and Mortar

Figure 11 Closeup of Deteriorated Sandstone Block

The underpass deck includes the steel rails and wooden ties or sleepers, a steel walkway on both sides of the track as it spans over Los Patos Way, and timber posts supporting cable railings. Where the track reaches the embankment, it rests on rock ballast (Figure 12).

Figure 12 Cable Railing, Wooden Ties, Steel Walkway, and Rock Ballast

The setting surrounding the Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235) includes U.S. Route 101 to the north (Figure 13), and Los Patos Way which is flanked by commercial buildings to the east, the Andree Clark Bird Refuge to the west, and effectively dead-ends just before the Los Patos Way off-ramp and underpass (Figure 14).

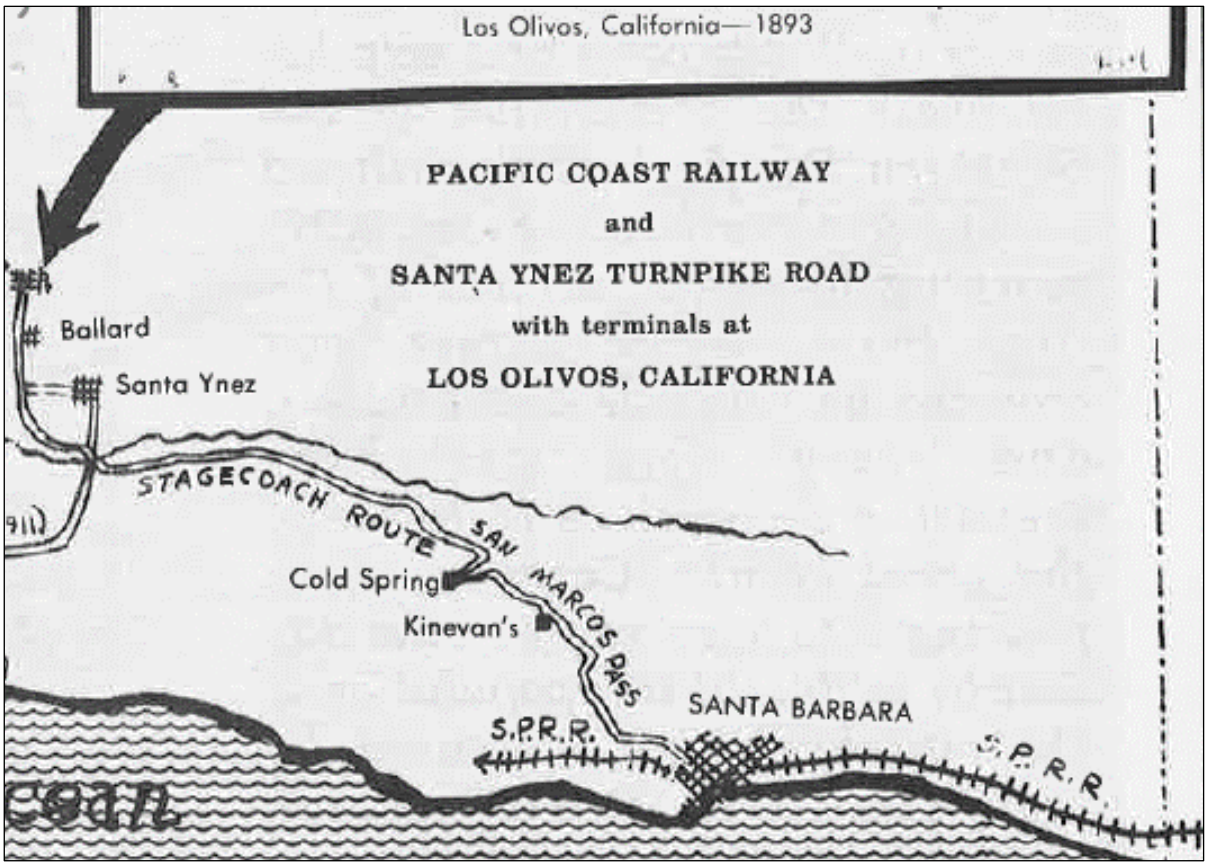
Figure 13 View of U.S. Route 101 Beyond the Los Patos Underpass, Looking Northwest

Figure 14 Los Patos Way, Looking Northwest Towards Underpass

6.2 Developmental History

The subject structure was constructed in 1901 by the Southern Pacific Railroad (SPRR) at the time it was completing the Coast Line as a through route between Los Angeles and San Francisco. SPRR had previously developed its line into Santa Barbara in 1887 which entered from Ventura County to the south and ended in the Ellwood area slightly north of Santa Barbara. This left a sizeable gap in the railroad along the south central coast (Conklin 1987). (Figure 15)

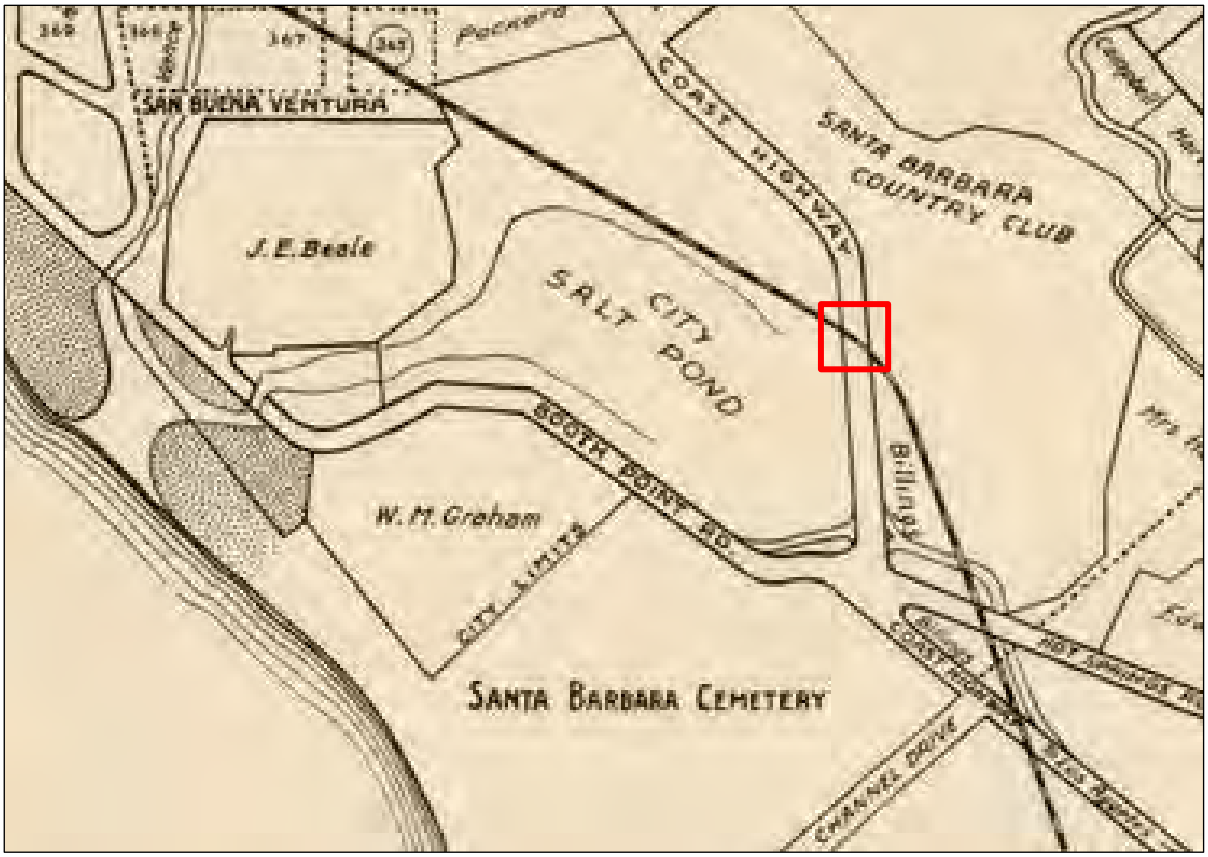
Figure 15 Map Showing SPRR Line Ending in Ellwood, Beginning of "The Gap", 1893



Source: Conklin 1987, *Santa Barbara Railroad Centennial, 1887-1987*

The SPRR tracks crossed over the roadway located along the eastern edge of the "salt pond" (today's Andree Clark Bird Refuge). At the time, the road was part of the state highway known as the Coast Highway that entered the city on its east end (Figure 16). A wooden pile trestle bridge was built adjacent to and northeast of the salt pond to carry the railroad tracks over the highway (J.R. Signor, personal communication, October 2, 2019). In 1901 this earlier trestle bridge was replaced by the current steel girder and sandstone underpass.

Figure 16 SPRR Line Crossing Over Coast Highway and Location of Subject Underpass, 1920



Source: F.W. Cole & Company Real Estate Insurance Map, 1920, Courtesy Raremaps.com

The upgrade of the subject underpass occurred at the time SPRR was working on major construction in Santa Barbara to "close the gap" between the city and the SPRR line's stopping point to the north. In 1887, when SPRR had originally arrived in Santa Barbara, the gap was as far as Paso Robles. Ten years later the tracks had been constructed as far south as the community of Surf. In 1898 the chief contractors for the gap construction were identified as Sam McMurtrie and George Stone of McMurtrie & Stone. Although the firm was based in San Francisco, Stone reportedly lived in Santa Barbara while the work was in progress. When some citizens of Santa Barbara were doubtful of the value of the undertaking, Stone assured them that local workers and local teams would be hired first (Lawler 1990). The extent of McMurtie & Stone's work between Surf and Ellwood was described as including grading, track laying and masonry (*The Railroad Gazette* July 27, 1900).

Various subcontractors worked at the Ellwood/Santa Barbara end of the tracks. Some of those individuals and companies have been identified by researchers such as Nan Lawler in the publication *Closing the Gap: The Coast Line and its Bridges in Ventura and Santa Barbara Counties*. Among these contractors are McCormack and March, Ramish and Marsh, and P.J. McCormick. Local newspapers covered bridge-building activity in Santa Barbara and Ventura counties, with an uptick in activity starting around July 1900. Additional improvements – or corrections as the local newspaper referred to them – completed in the area involved taking curves out of the railroad alignment between Ellwood and Ventura. These improvements were made in order to prepare the original, older line for increased rail traffic (Lawler 1990; *The Morning Press* 1900b). *The Santa Maria Times* reported four wooden bridges in the city of Santa Barbara were to be replaced by stone and steel bridges.

Steel girders of the heaviest grade were stored at the Mason Street depot where the public was welcome to view them. Notably, the newspaper reported "The bridging of the estuary in the lower part of the city will be a heavy piece of work." (*The Santa Maria Times* 1901). This statement appears to be referring to the subject underpass northeast of the salt pond/bird refuge.

Local newspapers also provide some insight as to the laborers working on the gap construction. In 1900 Santa Barbara's *The Morning Press* reported on the murder of a rancher by a railroad laborer working on the gap construction. The murderer, Del Gatho, worked for Ramish and Marsh at one time, and had stayed at different railroad camps (*The Morning Press* 1900a). While not extensive information, the report helps provide understanding as to the nationality of laborers performing the railroad work in the area at the time.

Lawler's study did not specifically mention the Los Patos Underpass, but he identified a dozen steel bridges constructed in Santa Barbara County, calling ten of them "impressive viaducts ranging from 421 to 811 feet". Most of the steel girders used for these bridges were fabricated by the Phoenix Bridge Co., also known as the Phoenix Steel Corporation (Lawler 1990). A previous evaluation completed for the Los Patos Underpass verified its girders were indeed a product of the Phoenix Bridge Co. (Snyder 1991).

Based on available information and consultation with author and western railroad historian John R. Signor, the Los Patos Way Off-Ramp Underpass was most likely built by a SPRR contractor. Signor states it was SPRR's custom at the time to hire eastern European (e.g. Slovenian) stone masons to develop stone infrastructure. Signor also believes it is likely the earlier wooden pile trestle bridge at this location would have been constructed by Chinese laborers (J.R. Signor, personal communication, October 2, 2019).

Although maintenance/inspection records for the subject underpass were not obtained, visible repairs or alterations have been made at an unknown time to the abutments utilizing concrete. The underpass is also known for having been involved in various collisions with traffic attempting to pass underneath (Cooper 2011; Carmel 2013). The cause of these accidents is said to be due to the low vertical clearance of the underpass, a short deceleration distance, and a sharp curve at the underpassing (California Department of Transportation and Federal Highway Administration 1993).

7 Analysis

The City of Santa Barbara defines significant historic resources to include, but not be limited to, the following:

1. Any structure, site or object designated on the most current version of the following lists:
   a. National Historic Landmarks
   b. National Register of Historic Places
   c. California Registered Historical Landmarks
   d. California Register of Historical Resources
   e. City of Santa Barbara Landmarks
   f. City of Santa Barbara Structures of Merit
2. Selected structures that are representative of particular architectural styles including vernacular as well as high styles, architectural styles that were popular fifty or more years ago, or structures that are embodiments of outstanding attention to architectural design, detail, materials, or craftsmanship.
3. Any structure, site or object meeting any or all the criteria established for a City Landmark and a City Structure of Merit (SBMC §22.22.040; Ord. 3900 ¶ I, 1977), as follows:
   a. Its character, interest or value as a significant part of the heritage of the City, the State or the Nation;
   b. Its location as a site of a significant historic event;
   c. Its identification with a person or persons who significantly contributed to the culture and development of the City, the State or the Nation;
   d. Its exemplification of a particular architectural style or way of life important to the City, the State or the Nation;
   e. Its exemplification of the best remaining architectural type in a neighborhood;
   f. Its identification as the creation, design or work of a person or persons whose effort has significantly influenced the heritage of the City, the State or the Nation;
   g. Its embodiment of elements demonstrating outstanding attention to architectural design, detail, materials or craftsmanship;
   h. Its relationship to any other landmark if its preservation is essential to the integrity of that landmark;
   i. Its unique location or singular physical characteristic representing an established and familiar visual feature of a neighborhood;
   j. Its potential of yielding significant information of archaeological interest;
   k. Its integrity as a natural environment that strongly contributes to the well-being of the people of the City, the State of the Nation.

4. Any structure, site, or object meeting any or all the criteria provided for the National Register of Historic Places and the California Historical Landmark list.
5. Any structure, site or object associated with a traditional way of life important to an ethnic, national, racial, or social group, or to the community at large; or illustrates the broad patterns of cultural, social, political, economic, or industrial history.
6. Any structure, site, or object that conveys an important sense of time and place, or contributes to the overall visual character of a neighborhood or district.
7. Any structure, site of object able to yield information important to the community or is relevant to historical, historic archaeological, ethnographic, folkloric, or geographical research.
8. Any structure, site, or object determined by the City to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the City's determination is based on substantial evidence in light of the whole record [Ref. State CEQA Guidelines §15064.5(a)(3)].

7.1 Significance Assessment

Constructed in 1901 by the SPRR, the Los Patos Way Off-Ramp Underpass is composed of riveted-steel girders supported by a center pier and abutments made of ashlar, square-cut sandstone. It was developed at the time SPRR was closing the gap between Santa Barbara and communities to the north, as well as completing improvements to the line spanning to Ventura to the south. The underpass replaced an earlier wooden pile trestle bridge that had been constructed in 1887 at the same location. The Los Patos Way Off-Ramp Underpass is currently under the ownership and operation of the UPRR.

Criterion 1

The Los Patos Way Off-Ramp Underpass is not currently listed on the NRHP or CRHR, nor is it a designated National Historic Landmark, City of Santa Barbara Landmark or Structure of Merit, nor is it on the City of Santa Barbara's lists of Potential Historic Resources or Potential Historic Features and Landscape Elements.

Criterion 2

The Los Patos Way Off-Ramp Underpass meets this City of Santa Barbara criterion as a structure that represents a particular architectural style or style that was popular fifty or more years ago, being sandstone construction.

The Los Patos Way Off-Ramp Underpass meets three of the City criteria for designation as a Landmark or Structure of Merit, as described below.

Criterion 3a: Its character, interest or value as a significant part of the heritage of the City, the State or Nation.

Built in 1901, the subject structure has character, interest and value as a significant part of the heritage of sandstone architecture and construction in the City of Santa Barbara. It is also unique in that it is related to the railroad, unlike other known masonry bridges in the city (which include

Rattlesnake Canyon Bridge, Mission Creek Bridge, and Sycamore Canyon Creek Bridge). The underpass is recommended eligible under Criterion 3a, for its sandstone block construction.

Criterion 3b: Its location as a site of a significant historic event.

Archival research did not indicate any significant historic events have occurred at the site of the Los Patos Way Off-Ramp Underpass. Therefore, the underpass is recommended ineligible for listing under Criterion 3b.

Criterion 3c: Its identification with a person or persons who significantly contributed to the culture and development of the City, the State or the Nation.

Archival research did not indicate the underpass is directly associated with any persons who significantly contributed to the culture and development of the city, state, or nation. Therefore, the underpass is recommended ineligible under Criterion 3c.

Criterion 3d: Its exemplification of a particular architectural style or way of life important to the City, the State or the Nation.

The Los Patos Way Off-Ramp Underpass is eligible under Criterion 3d as it exemplifies a particular architectural style important to the City of Santa Barbara. It is constructed with local sandstone, a significant aspect of the architectural heritage of the city.

Criterion 3e: Its exemplification of the best remaining architectural type in a neighborhood.

While the underpass is a considerably-sized representation of sandstone construction in the East Beach neighborhood of the city, it does not appear to qualify as the best remaining example of this type of construction in that neighborhood. A more elaborate and skillfully executed example of sandstone construction is located 0.20 mile away at the intersection of Los Patos Way, East Cabrillo Boulevard and Channel Drive: the Charles Caldwell Park Watering Trough and Fountain, designed by Francis W. Wilson and built in 1911-1912. The Santa Barbara Cemetery, located at the same intersection, features an ashlar, square-cut sandstone wall with a parapet along hundreds of feet of its property line along East Cabrillo Boulevard and Channel Drive. Large sandstone gate posts with elaborate stone caps mark the cemetery entrance on East Cabrillo Boulevard, and simpler sandstone gate posts mark its entrance and exit on Channel Drive. In addition, examples of sandstone architecture exist within the cemetery such as mausoleums. Consequently, the subject underpass is recommended ineligible for listing under Criterion 3e.

Criterion 3f: Its identification as the creation, design or work of a person or persons whose effort has significantly influenced the heritage of the City, the State or the Nation.

A review of available records and archival research did not reveal an architect, engineer or designer for the subject underpass. As described in Section 6.2, available sources indicate the underpass was constructed by a SPRR contractor, and it was SPRR's custom at the time to hire Eastern European stonemasons to complete sandstone work. As such, the subject underpass is not the creation, design or work of a person or persons whose effort has significantly influenced the heritage of the city, state or nation. The underpass is recommended ineligible for listing under Criterion 3f.

Criterion 3g: Its embodiment of elements demonstrating outstanding attention to architectural design, detail, materials or craftsmanship.

The underpass's construction is simple and utilitarian. It is comprised of riveted steel girders, steel rails, wooden ties, wooden posts with cable railing, and a center pier and abutments constructed primarily of sandstone block but also sections of concrete. The underpass does not embody elements that demonstrate outstanding attention to architectural/engineering design, detail, materials or craftsmanship. In comparison to other sandstone bridges in the city, the Los Patos Way Off-Ramp Underpass does not feature the same engineering qualities or attention to detail as do other, various examples of arched sandstone bridges that have been identified in the city by the Santa Barbara Conservancy in their effort to document stone architecture in Santa Barbara. Additionally, the subject underpass has undergone repairs/alterations with non-original materials such as concrete. Therefore, the underpass is recommended ineligible for listing under Criterion 3g.

Criterion 3h: Its relationship to any other landmark if its preservation is essential to the integrity of that landmark.

Per the City of Santa Barbara's map of historic landmarks, the nearest City-designated Landmark is the Charles Caldwell Park Watering Trough and Fountain, located approximately 0.20 mile to the southeast at the intersection of Los Patos Way, East Cabrillo Boulevard, and Channel Drive. Preservation of the subject underpass is not essential to the integrity of that landmark. Therefore, the underpass is not eligible under Criterion 3h.

Criterion 3i: Its unique location or singular physical characteristic representing an established and familiar visual feature of a neighborhood.

Located adjacent to U.S. Route 101, the underpass is in a location that makes it visible to countless travelers. It can be considered an established and familiar visual feature of the neighborhood. Therefore, the underpass is recommended eligible under Criterion 3i.

Criterion 3j: Its potential of yielding significant information of archaeological interest.

This criterion is not applicable as the underpass is a built environment resource. The project proposes to remove the underpass; no excavation is proposed. Therefore, the likelihood is low that previously unidentified archaeological resources would be disturbed.

Criterion 3k: Its integrity as a natural environment that strongly contributes to the well-being of the people of the City, the State or the Nation.

The underpass is on property that has been developed with railroad right-of-way and a freeway off-ramp; thus, it is not part of a natural environment. This criterion is not applicable.

Criterion 4

Background research revealed the subject structure was previously evaluated and determined ineligible for listing in the NRHP by the SHPO in 1993 (Craigo 1993). The underpass appears largely as it did when it was last evaluated and there is no reason to find the previous determination is no longer valid. As a result, the current analysis does not reconsider the NRHP eligibility of the subject structure but rather focuses on its eligibility for listing in the CRHR and as a City of Santa Barbara Landmark or Structure of Merit.

Rincon recommends the Los Patos Way Off-Ramp Underpass eligible for listing in the CRHR at the local level of significance under Criterion 1 as it is associated with events that have made a significant contribution to the broad patterns of local history, and Criterion 3 as it embodies the distinctive characteristics of a method of construction. Built in 1901 with local sandstone, the subject structure is representative of sandstone architecture and construction, significant to the architectural heritage of the City of Santa Barbara. Therefore, its primary character-defining features are its sandstone pier and abutments; however, as discussed with the City HLC, its steel girders are also considered character-defining features. Non-character-defining features which are utilitarian and ubiquitous include the wooden ties, rails, ballast, wooden posts and cable railing.

The structure is not eligible for listing in the CRHR under criteria 2 or 4, for the same reasons discussed above in City of Santa Barbara Criteria 3c and 3j.

Criterion 5

The Los Patos Way Off-Ramp Underpass is not associated with a traditional way of life important to an ethnic, national, racial, or social group, or to the community at large. It does not illustrate broad patterns of cultural, social, political, economic, or industrial history. Therefore, it does not meet this City criterion.

Criterion 6

Constructed in 1901, the Los Patos Way Off-Ramp Underpass meets this City criterion as its sandstone walls convey a sense of time.

Criterion 7

The Los Patos Way Off-Ramp Underpass is recommended ineligible under this City criterion as it does not appear to have the potential to yield further information important to the community, or important for future historical, historic archaeological, ethnographic, folkloric, or geographical research.

Criterion 8

The Los Patos Way Off-Ramp Underpass does not meet this City criterion as it has not previously been determined by the City to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

8 Conclusions

As a result of the current study, the Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235) was found eligible for listing in the CRHR and as a City of Santa Barbara Landmark or Structure of Merit. The structure's significance stems from it being an example of local sandstone construction. Thus, its primary character-defining features are its sandstone pier and abutments; however, as discussed with the City HLC, its steel girders are also considered character-defining features. Non-character-defining features which are utilitarian and ubiquitous include the wooden ties, rails, ballast, wooden posts and cable railing. The structure meets the definition of a historical resource under CEQA and the City MEA Guidelines. The proposed project has the potential to result in impacts to a historical resource and will be analyzed pending further consultation with the City.

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1931b "Inspection of Project Shows Much Progress", September 19, 1931. On file, Santa Barbara Historical Museum Gledhill Library's file on East Cabrillo Boulevard.

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Appendix A

Preparer's Qualifications

EDUCATION

B.A., History, emphasis in American History, California State University, Long Beach (2007)

SPECIALIZED EDUCATION/ TRAINING

Green Strategies for Historic Buildings, National Preservation Institute (2008)

CEQA Workshop Training, AEP (2007)

Oral History Methods, CSU Long Beach (2005)

Identification and Evaluation of Mid-20th Century Buildings, National Preservation Institute (2004)

Section 4(f) Cultural Resources Compliance for Transportation Projects, National Preservation Institute (2003)

AWARDS

California Preservation Foundation Preservation Design Award (2019), *City of Riverside Latino Historic Context Statement*

Shannon Carmack

PRINCIPAL; ARCHITECTURAL HISTORY PROGRAM MANAGER

Shannon Carmack is an Architectural Historian and Historian for Rincon Consultants. Ms. Carmack has more than 19 years of professional experience providing cultural resources management and historic preservation planning for large-scale and high-profile projects. She has worked throughout California in numerous sectors including local planning, development/construction, public utilities, Department of Defense, transportation, recreation, and education. Ms. Carmack prepares documentation to satisfy CEQA/NEPA, Section 106, and Local Historic Preservation Ordinances. She also provides reports and studies that are in compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties and the California Historic Building Code. She has developed and implemented successful mitigation for countless projects that included Historic American Building Survey (HABS) documentation, oral histories and interpretive programs. Ms. Carmack meets and exceeds requirements in the Secretary of the Interior's Professional Qualification Standards in Architectural History and History.

PROJECT EXPERIENCE

- Ty Lin International - Cabrillo Boulevard Pedestrian and Bicycle Improvements and Replacement of the Union Pacific Railroad Bridge Project Cultural Resources Study, Santa Barbara, California
- Ty Lin International - Olive Mill Road Roundabout Project Cultural Resources Study, City and County of Santa Barbara, California
- Ty Lin International - San Ysidro Road Intersection Project Cultural Resources Study, County of Santa Barbara, California
- City of Ventura – 867 East Main Street Historic Building Assessment, Ventura, California
- City of San Buenaventura Housing Authority– Cultural Resources Assessment Report for the Willett Ranch Project, Ventura, California
- Cultural Resources Technical Study-1240-1280 North Ventura Avenue, City and County of Ventura, California
- County of Ventura Public Works – Kenney Street Widening and Pedestrian Improvements Project Cultural Resources Study, Ventura County, California
- County of Ventura Public Works – Yerba Buena Road Guardrail Project Cultural Resources Study, Ventura County, California
- City of Riverside and the State Office of Historic Preservation, *Latino Historic Context Statement*, Riverside, California
- City of Long Beach, Grant Neighborhood Historic Context Statement and Historic Resources Survey, Long Beach, California
- City of Long Beach, Citywide Historic Context Statement Update, Long Beach, California
- City of Indio Reconnaissance-Level Historic Resources Survey, General Plan Update, Indio, California
- 6634 Sunset Avenue Historic Habitation, Los Angeles, California

PROJECT EXPERIENCE, CONT'D

- Roger Y. Williams Residence, National Register of Historic Places Nomination; City of San Juan Capistrano, Orange County, California
- Hobby City Redevelopment; Cities of Anaheim and Stanton, Orange County, California
- South Coast Shipyard Redevelopment Project; City of Newport Beach, Orange County, California
- Susan Street Exit Ramp Improvement Project; City of Costa Mesa, Orange County, California
- Lambert Ranch General Plan Amendment and Zone Change EIR; City of Irvine, Orange County, California
- Mountain Park Specific Plan Amendment EIR; City of Anaheim, California
- Fort McArthur "Hey Rookie" Pool Historic Habitation, Los Angeles, California
- Woodland Hills Fire Station Historic Assessment and HABS, Los Angeles, California
- Long Beach Courthouse Historic Impacts Assessment, Long Beach, California
- Chapman's Millrace Relocation and Rehabilitation; San Gabriel Mission, Los Angeles County, California
- 7 Oakmont Drive Historic-Cultural Monument (HCM) Application, Los Angeles, California
- Windsor Square Design Review, Los Angeles, California
- Edwards Air Force Base Cold War Historic Context, EAFB, Los Angeles and Kern Counties, California
- Venice Post Office Rehabilitation, Venice Beach, Los Angeles, California
- Terminal Island Historic Survey Evaluation and Historic Context Statement; Los Angeles, California
- University Park Historic District Design Review, Los Angeles, California
- Metro Gold Line Foothill Extension Intermodal Parking Facility Project; Azusa, Los Angeles County, California
- Metro Green Line to LAX Project, Los Angeles, California
- Metro Crenshaw/LAX Transit Corridor EIR Cultural Resources Services; Los Angeles, California
- Olympic Boulevard and Mateo Street Improvements; Los Angeles, California
- Port of Los Angeles Berths 167-169 Rehabilitation Project; Los Angeles, California
- Metro Regional Connector Transit Corridor Project; Los Angeles, California
- Port of Los Angeles Al Larson Boat Shop Historic Assessment; Los Angeles, California
- ACE San Gabriel Trench Project Cultural Resources Services; Los Angeles County, California
- Interstate 5 Improvement Project; Cities of La Mirada, Cerritos, Norwalk, Downey and Santa Fe Springs, Los Angeles County, California

DETAILED PROJECT DESCRIPTIONS

Ty Lin International, Cabrillo Boulevard Pedestrian and Bicycle Improvements and Replacement of the UPRR Bridge Project, Santa Barbara, California

Ms. Carmack is responsible for the preparation and management of the cultural reports and studies conducted for the project. The Cabrillo Rail Bridge Project involves pedestrian and bicycle Improvements on Cabrillo Boulevard, between US-101 and the intersection of Cabrillo Boulevard and Los Patos Way. The project will include the replacement of the UP Railroad Overhead bridge over Cabrillo Boulevard and retirement of the existing UP Overhead Bridge along with construction of a round-a-bout at Cabrillo Boulevard and Los Patos Way. The bicycle improvements will consist of a new Class 1 bike path under the new UP Overhead Bridge, connecting the existing bike path to the Beachway bike path. Rincon is providing environmental (CEQA/NEPA) and Caltrans coordination assistance on this project, including Section 106 compliance. The project is located within a Historic District with contributing elements located within the project's Area of Potential Effects (APE).

EDUCATION

M.H.P., Historic Preservation; University of Southern California, Los Angeles; 2012

Graduate Certificate Program, Architecture & Urbanism; University of Southern California, Los Angeles; 2011

B.A., European History; University of California, Santa Cruz; 2003

TRAININGS

Section 106 Compliance Training; Society for American Archaeology 2014

CEQA Training, California Preservation Foundation; 2015

CERTIFICATIONS/ REGISTRATIONS

Meets and exceeds requirements in the Secretary of the Interior's Professional Qualification Standards in Architectural History and History

Steven Treffers, MHP

SENIOR ARCHITECTURAL HISTORIAN

Mr. Treffers is a senior architectural historian with Rincon's Cultural Resources Group with 10 years of experience. As a former commissioner on the South Pasadena Cultural Heritage Commission, he is extremely familiar with South Pasadena's historic resources and project review process. He has worked closely with design teams on projects involving alterations to historic resources, conducting peer reviews and working to ensure compliance with SOI Standards and applicable design guidelines. As a result, he has extensive experience identifying character-defining features, reviewing architectural drawings, and collaborating with local governments, stakeholders, architects, and engineers to meet project objectives while retaining those elements that convey the reason for a historic resource's significance. Mr. Treffers received his Bachelor of Arts in History at the University of California, Santa Cruz prior to pursuing a Master's in historic preservation from the University of Southern California, School of Architecture. He meets and exceeds the Secretary of the Interior's Professional Qualification Standards for History and Architectural History and has a wide range of experience with projects requiring historic resources compliance with Section 106 of the National Historic Preservation Act, California Environmental Quality Act, and local ordinances.

PROJECT EXPERIENCE

- Cabrillo Boulevard Pedestrian and Bicycle Improvements and Replacement of the Union Pacific Railroad Bridge Project Cultural Resources Study, Santa Barbara, California
- Montecito Union School Secretary of the Interior's Standards Compliance Design Review; Montecito, Santa Barbara County, California
- City of Long Beach, *Citywide Historic Context Statement Update*, Long Beach, California
- Metro Los Angeles - West Santa Ana Branch Transit Corridor Historic Resources Survey and Survey Report, Los Angeles, California
- City of Indio Reconnaissance-Level Historic Resources Survey, General Plan Update, Indio, California
- Westpark Community Center Improvements Project Cultural Resources Technical Report, Ventura, California
- Peer Review of Phase 2 Historic Resources Report for the Pierpont Inn Lobby Rehabilitation Project, Ventura, California
- Kenney Street Widening and Pedestrian Improvements Project Cultural Resources Study, Ventura County, California
- Camarillo Airport Hanger Project; Camarillo, Ventura County, California
- LA Plaza de Cultura y Artes Project; Los Angeles, California
- 3008 Main Street Historic Resources Assessment; Santa Monica, California
- 1965 Market Street Historic Resource Evaluation; San Francisco, California

PROJECT EXPERIENCE, CONT'D

- 1838 Wardlow Road Historic Resources Evaluation; Long Beach, California
- Venice Post Office Rehabilitation Project; Los Angeles, California
- Windsor Village Historic Preservation Overlay Zone Review; Los Angeles, California
- Monterey Regional Airport Historic Resources Survey; City and County of Monterey, California
- Historic District Survey for the Air Force Research Laboratory; Edwards Air Force Base, California
- Cold War Era Buildings Survey and Context Report; Edwards Air Force Base, California
- Chino Airport; Chino, San Bernardino County, California
- Cold War Era Buildings Survey and Context Report; Edwards Air Force Base, California
- California American Water Slant Test Well Project; Marina, Monterey County, California
- Indian Flat Substation Expansion Project; El Portal, Mariposa County, California
- Humboldt Bay-Humboldt #1 60kV Reconductoring Project; Humboldt County, California
- PG&E Compressed Air Energy Storage; San Joaquin, Solano, and Yolo Counties, California
- East Los Angeles College (ELAC) Firestone Building Cultural Resources Services; South Gate, County of Los Angeles, California
- Academy of Art Existing Sites Technical Memorandum; City and County of San Francisco, California
- Compton Community College; Compton Los Angeles County, California
- East Los Angeles College (ELAC) Firestone Building Cultural Resources Services; South Gate, County of Los Angeles, California
- Terminal Island Historic Resources Survey; Port of Los Angeles, Los Angeles, California
- Everport Terminal Cultural Resources Assessment, Port of Los Angeles, Los Angeles, California
- Port of Los Angeles Berths 167-169 Rehabilitation Project; Los Angeles, California
- Immigration Station Historic Assessment; Port of Los Angeles, Los Angeles, California
- Flood County Park; Menlo Park, San Mateo County
- Alma Park Historic Resources Evaluation; Los Angeles, California
- Cypress Park Community Center-Youth Facility, Los Angeles, California
- El Sereno Recreation Center, Los Angeles, California
- Woodland Hills Recreation Center Project, Los Angeles, California
- Alameda Corridor East – San Gabriel Trench Project; San Gabriel, Los Angeles County, California
- Metro Gold Line Foothill Extension Intermodal Parking Facility Project; Azusa, Los Angeles County, California
- Metro Crenshaw/LAX Transit Corridor EIR Cultural Resources Services; Los Angeles, California
- HRER and HPSR for the Cesar Chavez Median Project; Los Angeles, California
- Main Street Lighting Improvement Project; Los Angeles, California

EDUCATION

M.H.P., Historic Preservation, University of Southern California, Los Angeles, 2009

B.A., History of Art and Architecture, University of California, Santa Barbara, 2004

AFFILIATIONS

Member, Board of Directors, Rancho Camulos Museum, Ventura County, California

TRAININGS

CEQA Workshop, Association of Environmental Professionals, 2016

CERTIFICATIONS/ REGISTRATIONS

Meets and exceeds requirements in the Secretary of the Interior's Professional Qualification Standards in Architectural History and History

AWARDS

California Preservation Foundation Preservation Design Award (2019), *City of Riverside Latino Historic Context Statement*

Susan Zamudio-Gurrola, MHP

ARCHITECTURAL HISTORIAN

Susan Zamudio-Gurrola is an Architectural Historian with Rincon Consultants. With over six years' experience, Ms. Zamudio-Gurrola has demonstrated experience conducting archival research and historic resource surveys, assessing the integrity of historic resources, and conducting evaluations for listing in the National Register of Historic Places, California Register of Historical Resources, and local designations. Her professional experience includes the preparation of historic resource assessments in support of NEPA, Section 106, CEQA, and local ordinances. Ms. Zamudio-Gurrola has worked on various historic context statements, has reviewed projects for conformance with the *Secretary's Standards,* and has completed documentation for numerous buildings and structures as part of project mitigation, including submittals to the Library of Congress. Additionally, she has performed extension-of-staff historic preservation consulting services for the Ventura County Planning Department. Ms. Zamudio-Gurrola has documented a variety of built environment resource types, including residential and commercial buildings, agricultural properties, historic designed landscapes, and institutional related properties, including schools. She is highly proficient at preparing DPR forms and applying evaluation findings to federal, state and local regulatory framework. She is well versed with the National Register Bulletin technical series, which covers various aspects of historic preservation. Her well-rounded experience and interests make her well-suited to efficiently and thoroughly assist with historic resource concerns in any environment. Ms. Zamudio-Gurrola holds a Master of Historic Preservation degree from the University of Southern California. She meets and exceeds the Secretary of the Interior's Professional Qualifications Standards for Architectural History and History.

PROJECT EXPERIENCE

- Ty Lin International - Cabrillo Boulevard Pedestrian and Bicycle Improvements and Replacement of the Union Pacific Railroad Bridge Project Cultural Resources Study, Santa Barbara, California
- Ty Lin International – Olive Mill Road Roundabout Project Cultural Resources Study, City and County of Santa Barbara, California
- Ty Lin International – San Ysidro Road Intersection Project Cultural Resources Study, Santa Barbara County, California
- County of Santa Barbara – Hollister Avenue-State Street Improvements Project Historical Resources Evaluation Report, Santa Barbara County, California
- Montecito Union School District – Montecito Union School Master Plan Cultural Resources Study, Santa Barbara County, California
- Lennar Homes - Cavaletto Tree Farm Barn Interpretive Plan, Goleta, Santa Barbara County, California
- County of Ventura Resource Management Agency - Eastern Oxnard Plain Historic Context Statement and Reconnaissance Survey, Ventura County, California
- City of San Buenaventura Housing Authority– Cultural Resources Assessment Report for the Willett Ranch Project, Ventura, California

PROJECT EXPERIENCE, CONT'D

- Historic Building Documentation Report-St. John's Seminary College; Camarillo, Ventura County, California
- County of Ventura Public Works – Kenney Street Widening and Pedestrian Improvements Project Cultural Resources Study, Ventura County, California
- County of Ventura Public Works – Yerba Buena Road Guardrail Project Cultural Resources Study, Ventura County, California
- County of Ventura Public Works – Santa Clara Bike Lanes and Pedestrian Facilities Historic Resources Evaluation Report, Ventura County, California.
- American Jewish University – Brandeis-Bardin Campus Historic Resources Survey, Ventura County, California
- Edmonds Ranch Management – Historic Evaluation of 1723 San Cayetano Street, Ventura County, California
- City of Camarillo – Historic Resources Evaluation of 2474 Ventura Boulevard, Camarillo, Ventura County, California
- City of Camarillo – Historic Resources Evaluation of 2800 Barry Street, Camarillo, Ventura County, California
- City of Los Angeles Department of Recreation and Parks – Harbor View Memorial Park Cemetery Historical Structures Report and Treatment Plan, San Pedro, Los Angeles County, California
- City of West Hollywood – Cultural Resource Assessment for 7965-7985 Santa Monica Boulevard, West Hollywood, Los Angeles County, California
- City of Los Angeles Department of Recreation and Parks – El Sereno Clubhouse Historic Building Documentation Report, Los Angeles County, California
- City of Riverside Latino Historic Context Statement, Riverside, California
- City of Long Beach - Citywide Historic Context Statement Update, Long Beach, California
- City of Indio - Reconnaissance-Level Historic Resources Survey, General Plan Update, Indio, California
- County of Ventura Resource Management Agency - Saticoy Historic Resources Survey and Context, Ventura County, California.
- Metro Los Angeles - West Santa Ana Branch Transit Corridor Historic Resources Survey and Survey Report, Los Angeles, California
- City of Ventura – 867 East Main Street Historic Building Assessment, Ventura County, California

PUBLICATIONS

Zamudio-Gurrola, Susan. 2010. "Preserving Minorities' History: The Camps of Mexican Braceros". In Paul Lopez, ed. *Que Fronteras: Mexican Braceros and a Re-Examination of the Legacy of Migration.* Dubuque, IA: Kendall Hunt Publishing Company.

Appendix B

Department of Parks and Recreation (DPR) Forms

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary # P-42-040888
HRI # 114402
Trinomial
NRHP Status Code 6Y, 3CS, 5S3

Other Listings
Review Code **Reviewer** **Date**

***Resource Name or #:** Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235)

P1. Other Identifier: Los Patos Bridge

***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** Santa Barbara

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Santa Barbara **Date:** 1995 (2000 ed.) **T** 4N ; **R** 27W; **¼ of ¼ of Sec** ; S.B. **B.M.**

c. Address: N/A City: Santa Barbara Zip: 93101

d. UTM: Zone: 11S ; 255642.57 mE / 3812236.55 mN (G.P.S.)

e. Other Locational Data: APN 017-010-079 Elevation:

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235) is located on Santa Barbara County Assessor's parcel number 017-010-079 south of and adjacent to U.S. Route 101. Located at UPRR mile-post 372.5 and Caltrans post-mile 11.65, the bridge carries railroad track over the Los Patos Way Off-Ramp (exit 95) of southbound U.S. Route 101. The bridge is composed of two 56-foot-long deck girder bridges supported by a center pier and abutments. Essentially, each span between the center pier and one of the abutments is 56 feet long; the overall length of the bridge is 112 feet. The girders are riveted steel, and the pier and abutments are constructed of ashlar, square-cut sandstone laid in regular courses. However, repairs or alterations have been made to both of the abutments using concrete. In addition, various areas of the sandstone have been painted over. Both abutments display steel rungs mounted in the sandstone blocks. Many of the sandstone blocks and areas of mortar show deterioration. The bridge deck includes the steel rails and wooden ties or sleepers, a steel walkway on both sides of the track as it spans over Los Patos Way, and timber posts supporting cable railings. Where the track reaches the embankment, it rests on rock ballast. The setting surrounding the bridge includes U.S. Route 101 to the north, and Los Patos Way which is flanked by commercial buildings to the east, the Andree Clark Bird Refuge to the west, and effectively dead-ends just before the Los Patos Way off-ramp and underpass.

***P3b. Resource Attributes:** HP19. Bridge

***P4. Resources Present:** ☐Building ■Structure ☐Object ☐Site ☐District ☐Element of District ☐Other (Isolates, etc.)

P5b. Description of Photo:
View of bridge from Los Patos Way, looking northwest, 10/2/2019.

***P6. Date Constructed/Age and Sources:** ■Historic
☐Prehistoric ☐Both
1901 (Caltrans)

***P7. Owner and Address:** Union Pacific Railroad

***P8. Recorded by:**
S. Zamudio-Gurrola, S. Carmack,
Rincon Consultants, Inc.
209 E. Victoria Street
Santa Barbara, CA 93101

***P9. Date Recorded:** 10/8/2019

***P10. Survey Type:** Intensive

***P11. Report Citation:**
Carmack, Shannon, Susan Zamudio-Gurrola and Steven Treffers. 2019. Historic Structure/Site Report for Los Patos Way Off-Ramp Underpass, City and County of Santa Barbara, California. Rincon Consultants Project No. 18-06252. Report on file at the Central Coast Information Center, University of California, Santa Barbara.

***Attachments:** ☐NONE ■Location Map ☐Sketch Map ■Continuation Sheet ■Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List):

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

***Resource Name or #:** Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235)

***Map Name:** USGS *Santa Barbara* Quadrangle

***Scale:** 1:24,000

***Date of Map:** 1995 (2000 edition)

***Required information**

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code 6Y, 5S3

*Resource Name or # Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235)

B1. Historic Name:
B2. Common Name: Los Patos Bridge
B3. Original Use: SPRR bridge
B4. Present Use: UPRR bridge

*B5. **Architectural Style:** N/A

*B6. **Construction History:** (Construction date, alterations, and date of alterations)
Constructed in 1901 (Snyder 2003). Repairs/alterations to the abutments completed at an unknown time using concrete. Some of the sandstone blocks have been painted over or patched.

*B7. **Moved?** ■No ☐Yes ☐Unknown **Date:** **Original Location:**

*B8. **Related Features:**

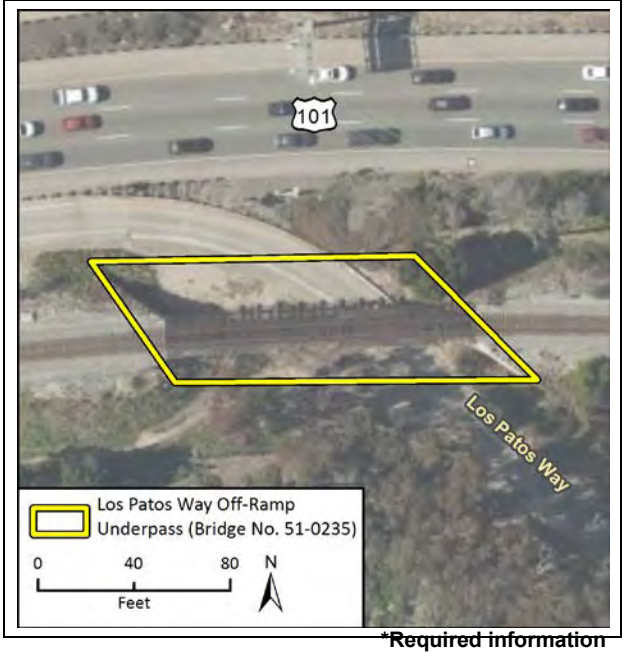
B9a. Architect: N/A
b. Builder: Southern Pacific Railroad

*B10. **Significance: Theme:** **Area:**
Period of Significance: **Property Type:** **Applicable Criteria:**
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Los Patos Way Off-Ramp Underpass was constructed in 1901 by the Southern Pacific Railroad (SPRR) at the time it was completing the Coast Line as a through route between Los Angeles and San Francisco. SPRR had previously developed its line into Santa Barbara in 1887 which entered from Ventura County to the south and ended in the Ellwood area slightly north of Santa Barbara. This left a sizeable gap in the railroad along the south central coast (Conklin 1987). The SPRR tracks crossed over the roadway located along the eastern edge of the "salt pond" (today's Andree Clark Bird Refuge). At the time, the road was part of the state highway known as the Coast Highway that entered the city on its east end. A wooden pile trestle bridge was built adjacent to and northeast of the salt pond to carry the railroad tracks over the highway (J.R. Signor, personal communication, October 2, 2019). In 1901 this earlier trestle bridge was replaced by the current steel girder and sandstone bridge.

The upgrade of the subject bridge occurred at the time SPRR was working on major construction in Santa Barbara to "close the gap" between the city and the SPRR line's stopping point to the north. In 1887, when SPRR had originally arrived in Santa Barbara, the gap was as far as Paso Robles. Ten years later the tracks had been constructed as far south as the community of Surf. In 1898 the chief contractors for the gap construction were identified as Sam McMurtrie and George Stone of McMurtrie & Stone. Although the firm was based in San Francisco, Stone reportedly lived in Santa Barbara while the work was in progress. When some citizens of Santa Barbara were doubtful of the value of the undertaking, Stone assured them that local workers and local teams would be hired first (Lawler 1990). The extent of McMurtie & Stone's work between Surf and Ellwood was described as including grading, track laying and masonry (*The Railroad Gazette* July 27, 1900).

Various subcontractors worked at the Ellwood/Santa Barbara end of the tracks. Some of those individuals and companies have been identified by researchers such as Nan Lawler in the publication *Closing the Gap: The Coast Line and its Bridges in Ventura and Santa Barbara Counties*. Among these contractors are McCormack and March, Ramish and Marsh, and P.J. McCormick. Local newspapers covered bridge-building activity in Santa Barbara and Ventura counties, with an uptick in activity starting around July 1900. Additional improvements – or corrections as the local newspaper referred to them – completed in the area involved taking curves out of the railroad alignment between Ellwood and Ventura. See continuation sheet, p. 4.



B11. Additional Resource Attributes: (List attributes and codes)

*B12. **References:** See continuation sheet, p. 7.

B13. Remarks:

*B14. **Evaluator:** S. Zamudio-Gurrola & S. Carmack

***Date of Evaluation:** October 8, 2019

(This space reserved for official comments.)

B10. Significance, continued:

These improvements were made in order to prepare the original, older line for increased rail traffic (Lawler 1990; *The Morning Press* 1900b). *The Santa Maria Times* reported four wooden bridges in the city of Santa Barbara were to be replaced by stone and steel bridges. Steel girders of the heaviest grade were stored at the Mason Street depot where the public was welcome to view them. Notably, the newspaper reported "The bridging of the estuary in the lower part of the city will be a heavy piece of work." (*The Santa Maria Times* 1901). This statement appears to be referring to the subject bridge northeast of the salt pond/bird refuge.

Local newspapers also provide some insight as to the laborers working on the gap construction. In 1900 *The Morning Press* reported on the murder of a rancher by a railroad laborer working on the gap construction. The murderer, Del Gatho, had worked for Ramish and Marsh, and had stayed at different railroad camps (*The Morning Press* 1900a). While not extensive information, the report helps provide understanding as to the nationality of laborers performing the railroad work in the area at the time.

Lawler's study did not specifically mention the Los Patos bridge, but he identified a dozen steel bridges constructed in Santa Barbara County, calling ten of them "impressive viaducts ranging from 421 to 811 feet". The Los Patos bridge would not be among these as it is only 112 feet long. Most of the steel girders used for these bridges were fabricated by the Phoenix Bridge Co., also known as the Phoenix Steel Corporation (Lawler 1990). A previous evaluation completed for the Los Patos bridge verified its girders were indeed a product of the Phoenix Bridge Co. (Snyder 1991).

Based on available information and consultation with author and western railroad historian John R. Signor, the Los Patos bridge was most likely built by a SPRR contractor. Signor states it was SPRR's custom at the time to hire eastern European (e.g. Slovenian) stone masons to develop stone infrastructure. Signor also believes it is likely the earlier wooden pile trestle bridge at this location would have been constructed by Chinese laborers (J.R. Signor, personal communication, October 2, 2019).

Although maintenance/inspection records for the subject bridge were not obtained, visible repairs or alterations have been made at an unknown time to the abutments utilizing concrete. The bridge is also known for having been involved in various collisions with traffic attempting to pass underneath (Cooper 2011; Carmel 2013). The cause of these accidents is said to be due to the low vertical clearance of the bridge, a short deceleration distance, and a sharp curve at the underpassing (California Department of Transportation and Federal Highway Administration 1993).

Previous Evaluations:

Background research revealed the Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235) was previously evaluated by architectural historian John Snyder for Caltrans in 1992. The findings of the evaluation were documented in the Historical Architectural Survey Report for the Carpinteria-Santa Barbara Median Widening and Interchange Project (Scott 1992), completed as part of the Historic Properties Survey Report for the Route 101 Six-Lane Project (Caltrans District 5 1992). Snyder found the bridge ineligible for listing in the NRHP, a finding which received SHPO concurrence in 1993 (Craigo 1993). The bridge is currently listed on the Caltrans Historic Bridge Inventory as Category 5 ("Bridge not eligible for NRHP"), and is listed on the Santa Barbara County Historic Resources Inventory as resource number P-42-040888 with a California Historical Resource Status Code 6Y meaning, "Determined ineligible for NR by consensus through Section 106 process – Not evaluated for CR or Local Listing."

Significance Assessment:

The City of Santa Barbara defines significant historic resources to include, but not be limited to, the following:

1. Any structure, site or object designated on the most current version of the following lists:

   a. National Historic Landmarks
   b. National Register of Historic Places
   c. California Registered Historical Landmarks
   d. California Register of Historical Resources
   e. City of Santa Barbara Landmarks
   f. City of Santa Barbara Structures of Merit

2. Selected structures that are representative of particular architectural styles including vernacular as well as high styles, architectural styles that were popular fifty or more years ago, or structures that are embodiments of outstanding attention to architectural design, detail, materials, or craftsmanship.

3. Any structure, site or object meeting any or all the criteria established for a City Landmark and a City Structure of Merit (SBMC §22.22.040; Ord. 3900 ¶ I, 1977), as follows:

   a. Its character, interest or value as a significant part of the heritage of the City, the State or the Nation;
   b. Its location as a site of a significant historic event;
   c. Its identification with a person or persons who significantly contributed to the culture and development of the City, the State or the Nation;
   d. Its exemplification of a particular architectural style or way of life important to the City, the State or the Nation;

(See continuation sheet, p. 5).

e. Its exemplification of the best remaining architectural type in a neighborhood;
f. Its identification as the creation, design or work of a person or persons whose effort has significantly influenced the heritage of the City, the State or the Nation;
g. Its embodiment of elements demonstrating outstanding attention to architectural design, detail, materials or craftsmanship;
h. Its relationship to any other landmark if its preservation is essential to the integrity of that landmark;
i. Its unique location or singular physical characteristic representing an established and familiar visual feature of a neighborhood;
j. Its potential of yielding significant information of archaeological interest;
k. Its integrity as a natural environment that strongly contributes to the well-being of the people of the City, the State or the Nation.

4. Any structure, site, or object meeting any or all the criteria provided for the National Register of Historic Places and the California Historical Landmark list.

5. Any structure, site or object associated with a traditional way of life important to an ethnic, national, racial, or social group, or to the community at large; or illustrates the broad patterns of cultural, social, political, economic, or industrial history.

6. Any structure, site, or object that conveys an important sense of time and place, or contributes to the overall visual character of a neighborhood or district.

7. Any structure, site of object able to yield information important to the community or is relevant to historical, historic archaeological, ethnographic, folkloric, or geographical research.

8. Any structure, site, or object determined by the City to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the City's determination is based on substantial evidence in light of the whole record [Ref. State CEQA Guidelines §15064.5(a)(3)].

Constructed in 1901 by the SPRR, the Los Patos Way Off-Ramp Underpass is a riveted-steel girder bridge supported by a center pier and abutments made of ashlar, square-cut sandstone. It was developed at the time SPRR was closing the gap between Santa Barbara and communities to the north, as well as completing improvements to the line spanning to Ventura to the south, The bridge replaced an earlier wooden pile trestle bridge that had been constructed in 1887 at the same location. The Los Patos Way Off-Ramp Underpass is currently under the ownership and operation of the UPRR.

Criterion 1
The Los Patos Way Off-Ramp Underpass is not currently listed on the NRHP or CRHR, nor is it a designated National Historic Landmark, City of Santa Barbara Landmark or Structure of Merit, nor is it on the City of Santa Barbara's lists of Potential Historic Resources or Potential Historic Features and Landscape Elements.

Criterion 2
The Los Patos Way Off-Ramp Underpass appears to meet this City of Santa Barbara criterion as a structure that represents a particular architectural style or style that was popular fifty or more years ago, being sandstone construction.

The Los Patos Way Off-Ramp Underpass meets three of the City criteria for designation as a Landmark or Structure of Merit, as described below.

Criterion 3a: Its character, interest or value as a significant part of the heritage of the City, the State or Nation.
Built in 1901, the subject structure has character, interest and value as a significant part of the heritage of sandstone architecture and construction in the City of Santa Barbara. It is also unique in that it is related to the railroad, unlike other known masonry bridges in the city (which include Rattlesnake Canyon Bridge, Mission Creek Bridge, and Sycamore Canyon Creek Bridge). The bridge is recommended eligible under Criterion a for its sandstone block construction.

Criterion 3b: Its location as a site of a significant historic event.
Archival research did not indicate any significant historic events have occurred at the site of the Los Patos Way Off-Ramp Underpass. Therefore, the bridge is recommended ineligible for listing under Criterion b.

Criterion 3c: Its identification with a person or persons who significantly contributed to the culture and development of the City, the State or the Nation.
Archival research did not indicate the bridge is directly associated with any persons who significantly contributed to the culture and development of the city, state, or nation. Therefore, the bridge is recommended ineligible under Criterion c.

Criterion 3d: Its exemplification of a particular architectural style or way of life important to the City, the State or the Nation.
The Los Patos Way Off-Ramp Underpass is eligible under Criterion d as it exemplifies a particular architectural style important to the City of Santa Barbara. It is constructed with local sandstone, a significant aspect of the architectural heritage of the city.

(See continuation sheet, p. 6).

Criterion 3e: Its exemplification of the best remaining architectural type in a neighborhood.
While the bridge is a considerably-sized representation of sandstone construction in the East Beach neighborhood of the city, it does not appear to qualify as the best remaining example of this type of construction in that neighborhood. A more elaborate and skillfully executed example of sandstone construction is located 0.20 mile away at the intersection of Los Patos Way, East Cabrillo Boulevard and Channel Drive: the Charles Caldwell Park Watering Trough and Fountain, designed by Francis W. Wilson and built in 1911-1912. The Santa Barbara Cemetery, located at the same intersection, features an ashlar, square-cut sandstone wall with a parapet along hundreds of feet of its property line along East Cabrillo Boulevard and Channel Drive. Large sandstone gate posts with elaborate stone caps mark the cemetery entrance on East Cabrillo Boulevard, and simpler sandstone gate posts mark its entrance and exit on Channel Drive. In addition, examples of sandstone architecture exist within the cemetery such as mausoleums. Consequently, the subject bridge is recommended ineligible for listing under Criterion e.

Criterion 3f: Its identification as the creation, design or work of a person or persons whose effort has significantly influenced the heritage of the City, the State or the Nation.
A review of available records and archival research did not reveal an architect, engineer or designer for the subject bridge. As described in Section 6.2, available sources indicate the bridge was constructed by a SPRR contractor, and it was SPRR's custom at the time to hire Eastern European stonemasons to complete sandstone work. As such, the subject bridge is not the creation, design or work of a person or persons whose effort has significantly influenced the heritage of the city, state or nation. The bridge is recommended ineligible for listing under Criterion f.

Criterion 3g: Its embodiment of elements demonstrating outstanding attention to architectural design, detail, materials or craftsmanship.
The bridge's construction is simple and utilitarian. It is comprised of riveted steel girders, steel rails, wooden ties, wooden posts with cable railing, and a center pier and abutments constructed primarily of sandstone block but also sections of concrete. The bridge does not embody elements that demonstrate outstanding attention to architectural/engineering design, detail, materials or craftsmanship. In comparison to other sandstone bridges in the city, the Los Patos Way Off-Ramp Underpass does not feature the same engineering qualities or attention to detail as do other, various examples of arched sandstone bridges that have been identified in the city by the Santa Barbara Conservancy in their effort to document stone architecture in Santa Barbara. Additionally, the subject bridge has undergone repairs/alterations with non-original materials such as concrete. Therefore, the bridge is recommended ineligible for listing under Criterion g.

Criterion 3h: Its relationship to any other landmark if its preservation is essential to the integrity of that landmark.
Per the City of Santa Barbara's map of historic landmarks, the nearest City-designated Landmark is the Charles Caldwell Park Watering Trough and Fountain, located approximately 0.20 mile to the southeast at the intersection of Los Patos Way, East Cabrillo Boulevard, and Channel Drive. Preservation of the subject bridge is not essential to the integrity of that landmark. Therefore, the bridge is not eligible under Criterion h.

Criterion 3i: Its unique location or singular physical characteristic representing an established and familiar visual feature of a neighborhood.
The bridge is located adjacent to U.S. Route 101 and to the north of the Andree Clark Bird Refuge. The bridge is not in a highly visible location from the street or pedestrian view and is largely inaccessible because it is not on public right-of-way. It is not an established and familiar visual feature of the neighborhood. Therefore, the bridge is not recommended eligible under Criterion i.

Criterion 3j: Its potential of yielding significant information of archaeological interest.
This criterion is not applicable as the bridge is a built environment resource. The project proposes to remove the bridge and close the freeway off-ramp; no excavation is proposed. Therefore, the likelihood is low that previously unidentified archaeological resources would be disturbed.

Criterion 3k: Its integrity as a natural environment that strongly contributes to the well-being of the people of the City, the State or the Nation.
The bridge is on property that has been developed with railroad right-of-way and a freeway off-ramp; thus, it is not part of a natural environment. This criterion is not applicable.

Criterion 4
Background research revealed the subject structure was previously evaluated and determined ineligible for listing in the NRHP by the SHPO in 1993 (Craigo 1993). The bridge appears largely as it did when it was last evaluated and there is no reason to find the previous determination is no longer valid. As a result, the current analysis does not reconsider the NRHP eligibility of the subject structure but rather focuses on its eligibility for listing in the CRHR and as a City of Santa Barbara Landmark or Structure of Merit. Rincon recommends the Los Patos Way Off-Ramp Underpass eligible for listing in the CRHR at the local level of significance under Criterion 1 as it is associated with events that have made a significant contribution to the broad patterns of local history. Built in 1901 with local sandstone, the subject structure is representative of sandstone architecture and construction, significant to the architectural heritage of the City of Santa Barbara. The structure is not eligible for listing in the CRHR under criteria 2, 3 or 4, for the same reasons discussed above in City of Santa Barbara Criteria 3c, 3f, 3g, and 3j

(See continuation sheet, p. 7).

Criterion 5
The Los Patos Way Off-Ramp Underpass is not associated with a traditional way of life important to an ethnic, national, racial, or social group, or to the community at large. It does not illustrate broad patterns of cultural, social, political, economic, or industrial history. Therefore, it does not meet this City criterion.

Criterion 6
The Los Patos Way Off-Ramp Underpass appears to meet this City criterion. Constructed in 1901, the bridge's riveted steel girder and prominent sandstone piers convey a sense of time.

Criterion 7
The Los Patos Way Off-Ramp Underpass is recommended ineligible under this City criterion as it does not appear to have the potential to yield further information important to the community, or important for future historical, historic archaeological, ethnographic, folkloric, or geographical research.

Criterion 8
The Los Patos Way Off-Ramp Underpass does not meet this City criterion as it has not previously been determined by the City to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.

As a result of the current study, the Los Patos Way Off-Ramp Underpass (Bridge No. 51-0235) was found eligible for listing in the CRHR and as a City of Santa Barbara Landmark or Structure of Merit as an example of a structure that was constructed out of local sandstone. The structure therefore meets the definition of a historical resource under CEQA and the City's Master Environmental Assessment (MEA) Guidelines for Archaeological Resources and Historic Structures and Sites.

B12. References, continued:

California Department of Transportation and Federal Highway Administration. 1993. Draft Environmental Impact Statement/Report and Section 4(f) Evaluation for Route 101 Six-Lane Project (Post Mile 1.1/12.8); Santa Barbara County, California. Accessed at Google Books.com.

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1900b "Taking Out the Curves. Putting the Old Line in Shape For Heavy Travel", 10 July.

The Railroad Gazette. 1900. "Railroad Construction, New Incorporations, Surveys, Etc.", volume XXXI, no. 18, page 324, 27 July. Accessed at Google Books.

The Santa Maria Times. 1901. " A Double Track. Railroad Company Will Carry Out Old Plans." 30 November. Accessed at Newspapers.com

Close-up from below of riveted steel girders, steel grid walkway surface, and concrete area of abutment.

Close-up of center pier, facing southwest.

View of eastern abutment, facing east.

View of western abutment, facing southwest.

Appendix D

Limited Phase II Environmental Site Assessment

Rincon Consultants, Inc.
319 East Carrillo Street, Suite 105
Santa Barbara, California 93101
805-319-4092

October 15, 2024
Project No.: 18-06252

James Faber, Project Manager
TYLin International
20 Pacifica, Suite 350
Irvine, California 92618
Via email: james.faber@tylin.com

Subject: Limited Phase II Environmental Site Assessment
Los Patos Bridge Replacement/Cabrillo Rail Bridge Shoofly Project, Santa Barbara, California

Dear Mr. Faber:

Rincon Consultants, Inc. (Rincon) is pleased to submit this letter report summarizing the results of a Limited Phase II Environmental Site Assessment (ESA) performed along the shoulder of U.S. Route 101 southbound, west of E. Cabrillo Boulevard, and along the Los Patos Way offramp (site), as part of the Los Patos Bridge Replacement/Cabrillo Rail Bridge Shoofly Project (Project) in Santa Barbara, California (site, Figure 1). The Limited Phase II ESA was completed for TyLin and comprised a soil assessment to evaluate the site for potential impacts from onsite and adjacent uses identified in the Draft Initial Site Assessment (ISA) prepared for the site by Rincon, dated December 15, 2023. This Limited Phase II ESA was prepared in accordance with the scope of work outlined in Rincon's proposal dated April 10, 2024.

Project Background

Rincon's Draft ISA, dated December 15, 2023, identified the following Notable Findings

- Potential presence of aerially deposited lead (ADL) in shallow soil at the site
- Potential presence of lead in soil in the vicinity of the Los Patos Bridge from lead paint
- Potential presence of petroleum hydrocarbons in shallow soil at the site
- Railroad tracks at the site for over 100 years
- Solid waste observed in northern portion of site
- Presence of a natural gas pipeline at the site

Rincon recommended that a soil assessment be conducted to evaluate the Notable Findings.

Rincon originally proposed to collect soil samples within the Union Pacific Railroad right-of-way (UPRR ROW). However, due to complex UPRR permitting requirements, Rincon opted to obtain a Caltrans Encroachment permit and collect soil samples as close to the boundary between Caltrans ROW and UPRR ROW as possible. In addition, due to access issues and safety concerns, Rincon was unable to collect optional soil borings located east of E. Cabrillo Boulevard, as well as one proposed boring location between Los Patos Way and E. Cabrillo Boulevard. In addition, due to access restrictions, the westernmost soil boring (RB-1) was located slightly west of the Project boundary.

Objective

The Limited Phase II ESA scope of work was developed to evaluate the site for potential soil impacts from site and adjacent land uses prior to Project construction activities. To meet this objective, the scope of work included soil sampling and laboratory analysis, as well as comparison of analytical results to applicable environmental and human health screening levels, and California hazardous waste thresholds.

Scope of Work

Pre-Field Activities

Rincon obtained a Caltrans Encroachment permit that allowed access to Caltrans ROW, including the collection of soil samples. The permit was approved on July 10, 2024 (Permit No. 05-24-N-SV-0540).

Prior to soil sampling activities, Rincon notified Underground Service Alert (USA) on August 21, 2024 (Ticket number A242341108-00A) to identify known utility locations in the public right of way. Rincon also completed a site-specific health and safety plan prior to field activities.

Soil Sampling and Analysis

Rincon contracted with Total Barricade Services, Inc. to provide traffic control for Rincon staff during the soil sampling activities.

On August 26, 2024, Rincon advanced nine soil borings using a hand auger to a total depth of 1 foot below ground surface (bgs) (RB-1 through RB-6, RB-8 through RB-10; Figure 2). Soil samples were collected from 0.5 foot bgs and 1.0 foot bgs into laboratory supplied 8-ounce glass jars. A total of 18 soil samples were collected from the nine soil borings and were submitted for analytical laboratory analysis. Eight soil samples were further analyzed for waste characterization purposes.

Soil samples were analyzed for the following:

- Arsenic and lead by United States Environmental Protection Agency (EPA) Method 6020B/7471A;
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270
- Semi-volatile organic compounds (SVOCs) by EPA Method 8270C
- Total petroleum hydrocarbons (TPH) in the gasoline (-g), diesel (-d) and motor oil (-o) ranges by EPA Method 8015M; and
- Eight soil samples (RB3-1.0, RB4-0.5, RB5--0.5, RB8-0.5, RB8-1.0, RB9-0.5, RB10-0.5, and RB10-1.0) were further analyzed for soluble lead using the Waste Extraction Test (WET) Method for comparison to the Soluble Threshold Limit Concentration (STLC) and using the Toxicity Characteristic Leaching Procedure (TCLP) for comparison to the Total Threshold Limit Concentration (TTLC), for waste characterization purposes.

The soil samples were stored in a cooler chilled with ice and were transported under standard chain of custody protocol and analyzed by Eurofins Calscience, LLC (Eurofins), a state certified analytical laboratory in Tustin, California (Eurofins ELAP #3082).

During borehole advancement, an unretained portion of the soil collected from each sample interval was used to field screen the soil for volatile organic compounds (VOCs) using a photoionization detector (PID), and to classify the soils according to the Unified Soil Classification System. PID readings and observations made in the field were recorded on a field log. Soil at the site was generally observed

to be silty sand. The PID readings were generally low and did not indicate that VOCs are present at the site at levels that could result in human health or ecological risk.

Upon completion of soil sampling, each borehole was backfilled with native soil. Reusable sampling equipment underwent a three-stage decontamination procedure between sampling locations, including a phosphate-free detergent followed by tap water and distilled water rinses.

Summary of Soil Analytical Results

Summaries of the soil analytical data for metals, TPH, and SVOCs are presented in Table 1, Table 2, and Table 3, respectively. The soil laboratory analytical reports are provided in Attachment 1. Soil analytical results were compared to San Francisco Bay Regional Water Quality Control Board (SFB RWQCB) Environmental Screening Levels (ESLs) for protection of construction workers (SFB RWQCB 2019)[1]. In addition, concentrations of metals in soil results were also compared to typical California background concentrations[2][3] and to California hazardous waste screening criteria and thresholds[4] .

Metals

Arsenic

Arsenic was detected in 17 of the 18 soil samples at concentrations above Method Detection Limits (MDLs) and in exceedance of the construction worker ESL. Two samples (RB5—1.0 and RB10-0.5) had reported arsenic concentrations that exceed typical California background concentrations.

Lead

Lead was detected in the 18 soil samples above MDLs and in five samples (RB3-1.0, RB5-0.5, RB8-1.0, RB10-0.5, and RB10-1.0) at concentrations exceeding the applicable construction worker ESL. Lead was detected in eight samples (RB3-1.0, RB4-0.5, RB5-0.5, RB8-0.5, RB8-1.0, RB9-0.5, RB10-0.5, RB10-1.0) in exceedance of the STLC screening criteria of 50 milligrams per kilogram (mg/kg) and the TCLP screening criteria of 100 mg/kg. Upon further waste characterization analysis via the WET Method, the reported lead concentrations in five samples (RB3-1.0, RB5-0.5, RB8-1.0, RB10-0.5, and RB10-1.0) were greater than the STLC threshold of 5 milligrams per liter (mg/L). However, the reported TCLP concentrations in these samples were less than the TCLP limit of 5 mg/L.

TPH

TPH-g was not detected above the laboratory method detection limit (MDL) in the soil samples. TPH-d was detected in 18 samples above the MDL; TPH-d concentrations exceeded the construction worker ESL in three samples (RB8-0.5, RB8-1.0, RB9-0.5). TPH-o was detected in 19 samples above the MDL; however, TPH-o concentrations were less than the construction worker ESL.

Fourteen of the soil samples were re-prepared and analyzed outside of holding time due to failures of the Quality Control (QC) results for TPH-d only and three of these soil samples were re-prepared and

[1] SFB RWQCB, 2019. Environmental Screening Levels (ESLs). July 2019.

[2] Kearney Foundation of Soil Science. 1996. Background Concentrations of Trace and Major Elements in California Soils. Division of Agriculture and Natural Resources, University of California. March.

[3] Department of Toxic Substances Control. 2020. Human Health Risk Assessment (HHRA) Note Number 11 – Southern California Ambient Arsenic Screening Level. December 28.

[4] California Code Regulations Title 22, § 66261.24 - Characteristic of Toxicity

analyzed outside of holding time to confirm results. No other QC issues were noted in the laboratory analytical report.

PAHs and SVOCs

PAHs were reported in ten soil samples (RB3-0.5, RB3-1.0, RB4-0.5, RB4-1.0, RB6-0.5, RB6-1.0, RB8-0.5, RB8-1.0, RB10-0.5, and RB10-0.5) at concentrations greater than the MDLs but less than construction worker ESLs.

Conclusions

Concentrations of TPH-d detected in RB8-0.5, RB8-1.0, and RB9-0.5 exceeded the applicable construction worker ESL; therefore, these constituents in soil in the vicinity of these samples may pose an unacceptable risk to human health for construction workers.

Arsenic was reported at concentrations exceeding the construction worker ESL and within typical background concentrations, except for samples RB5—1.0 and RB10-0.5, with reported arsenic concentrations in exceedance of typical background concentration ranges. Arsenic in soil in the vicinity of these samples may pose an unacceptable risk to human health for construction workers.

Soil samples RB3-1.0, RB5-0.5, RB8-1.0, RB10-0.5, and RB10-1.0 contained soluble WET lead at concentrations exceeding the STLC of 5 mg/L; therefore, soil in the vicinity of these samples would be characterized as California hazardous/non-Resource Conservation Recovery Act (RCRA) hazardous if excavated.

Recommendations

Based on the planned excavations associated with the Los Patos Bridge Replacement/Cabrillo Rail Bridge Shoofly Project, Rincon recommends preparation of a Soil Management Plan to guide proper handling of impacted soil, as well as suspected or visibly impacted soil in the event that it is encountered during construction activities. The Soil Management Plan provides recommendations to protect construction worker health, and protocols for the handling, management, and disposal of soil in accordance with applicable regulations.

Limitations

This report has been prepared for and is intended for the exclusive use of TyLin. The contents of this report should not be relied upon by any other party without the written consent of Rincon. Our conclusions regarding the site are based on observations of existing site conditions and the results of the subsurface sampling program described in this report. The results of this evaluation are qualified by the fact that only limited sampling and analytical testing was conducted during this assessment.

This scope was not intended to completely establish the quantities and distribution of contaminants present at the site. The concentrations of contaminants measured at any given location may not be representative of conditions at other locations. Furthermore, conditions may change at any particular location as a function of time in response to natural conditions, chemical reactions, and other events. Conclusions regarding the condition of the site do not represent a warranty that all areas within the site are similar to those sampled.

We appreciate the opportunity to support you on this project. Please contact us with any questions or concerns.

Sincerely,
Rincon Consultants, Inc.

Lauren Vigliotti, PG
Environmental Geologist

Torin Snyder, PG, CHG
Principal

Attachments

Figure 1 Vicinity Map
Figure 2 Site Plan with Boring Locations and Soluble Lead Results

Table 1 Soil Matrix Analytical Results – Metals
Table 2 Soil Matrix Analytical Results – Total Petroleum Hydrocarbons
Table 3 Soil Analytical Results – Semi-volatile Organic Hydrocarbons

Attachment 1 Soil Sample Laboratory Analytical Report

Figures

Figure 1 Vicinity Map

Imagery provided by National Geographic Society, Esri and their licensors © 2024. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may have changed since the original topographic map was assembled.

Site N

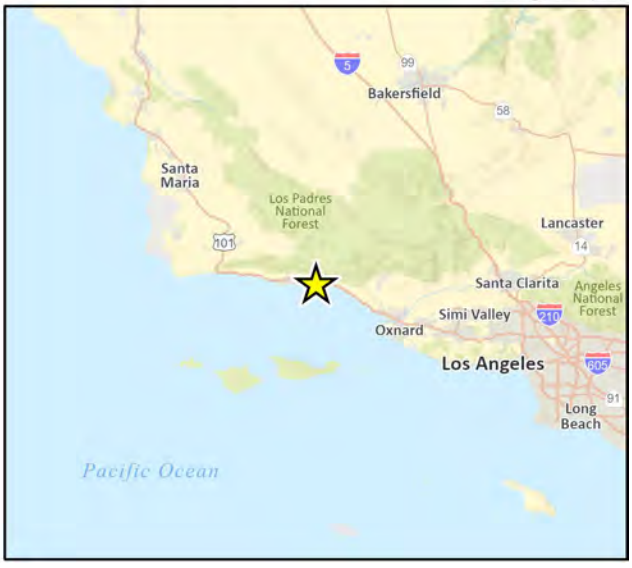

Figure 2 Site Plan with Sampling Locations and Soluble Lead Concentrations

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23-15189 EES
Fig 2 Site Plan_Sampling Locations

Tables

Table 1 Concentrations of Metals in Soil

Boring ID	Sample Date	Sample Depth (ft bgs)	Metals - EPA Method 6010B/7471A (mg/kg)			
			Arsenic[1]	Lead	Soluble	
			Arsenic[1]	Lead	STLC (mg/L)	TCLP (mg/L)
RB1	8/26/2024	0.5	**3.61**	**32.6**	--	--
		1.0	**4.18**	**38.3**	--	--
RB2		0.5	**5.00**	**42.0**	--	--
		1.0	**5.17**	**41.1**	--	--
RB3		0.5	**5.00**	**14.1**	--	--
		1.0	**4.68**	● **214**	**20.4**	**0.297 J**
RB4		0.5	**6.41**	● **112**	**3.04**	<0.0527
		1.0	**4.19**	**40.0**	--	--
RB5		0.5	**5.98**	● **181**	**37.5**	**0.379 J**
		1.0	**18.1**	**42.6**	--	--
RB6		0.5	<2.06	**11.6**	--	--
		1.0	**2.57 J**	**19.0**	--	--
RB8		0.5	**3.96**	● **154**	**2.80**	**0.107 J**
		1.0	**3.21**	● **273**	**6.55**	<0.0527
RB9		0.5	**6.51**	● **109.**	**2.97**	<0.0527
		1.0	**3.02 J**	**13.9**	--	--
RB10		0.5	**18.9**	● **304.**	**8.53**	<0.0527
		1.0	**10.6**	● **210**	**14.3**	**0.0560 J**
	Construction Worker ESLs		*0.98*	*160*	--	--
	STLC/TCLP SC or Threshold		*50/100*	*50/100*	*5.0*	*5.0*
	TTLC Threshold		*500*	*1,000*	--	--
	Background Levels		*0.60 - 11*	*12.4 - 97.1*	--	--

Notes:

[1] Arsenic is compared to Background Concentration of 11 mg/kg

Exceeds Construction Worker ESL - Any Land Use/Any Depth Soil Exposure - Direct Exposure Human Health Risk Levels (Table S-1), Cancer Risk or Non-

Exceeds STLC and/or TCLP Threshold; classifies as non-RCRA (above STLC) or RCRA (above TCLP) hazardous waste

● Exceeds TCLP Screening Criteria

● Exceeds STLC Screening Criteria

Data Flags

J Constituent detected between practical quantitation limit (PQL) and method detection limit (MDL); result is estimated value

Definitions:

bold Constituent detected at or above laboratory reporting limit

-- Not analyzed/Not applicable/Not established (for screening levels)

< Not detected above given concentration

Background Kearney, Background Concentrations of Trace and Major Elements in California Soils, University of California, 1996

Dup Duplicate

EPA Environmental Protection Agency

ESLs Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), July 2019, Revision 2

ft bgs Feet below ground surface

mg/kg Milligrams per kilogram

mg/L Milligrams per liter

RCRA Resource Conservation and Recovery Act

SC Screening Criteria - Value equal to 10x the STLC Threshold or 20x the TCLP Threshold that triggers waste characterization analysis

STLC Soluble Threshold Limit Concentration

TCLP Toxicity Characteristic Leaching Procedure

Title 22 As defined in California Code of Regulations, Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24 (seventeen metals listed in Table II); known as Title 22

TTLC Total Threshold Limit Concentration

Analysis: Title 22 Metals by United States Environmental Protection Agency Method 6020B/7471A

Table 2 Concentrations of Total Petroluem Hydrocarbons in Soil

Boring ID	Sample Date	Sample Depth (ft bgs)	TPH - EPA Method 8015M (mg/kg)		
			TPH - Gasoline	TPH - Diesel	TPH - Motor Oil
RB1	8/26/2024	0.5	<0.0440	**39.0**	**130**
		1.0	<0.0430	**49.0 H**	**170 H**
RB2		0.5	<0.0430	**38.0 H**	**160 H**
		1.0	<0.0440	**36.0 H**	**160 H**
RB3		0.5	<0.0430	**6.70 H**	**17.0 J H**
		1.0	<0.0430	**130 H**	**320 H**
RB4		0.5	<0.0440	**52.0 H**	**190 H**
		1.0	<0.0430	**8.50 H**	**22.0 J H**
RB5		0.5	<0.0430	**660 H**	**1,800 H**
		1.0	<0.0440	**790 H**	**2,300 H**
RB6		0.5	<0.0420	**36.0 H**	**84.0 H**
		1.0	<0.0440	**8.80 H**	**30.0 H**
RB8		0.5	<0.220	**2,500 H**	**2,100 H**
		1.0	<0.220	**6,800 H**	**7,100 H**
RB9		0.5	<0.0430	**2,100 H**	**2,400 H**
		1.0	<0.0430	**88.0 H**	**120 H**
RB10		0.5	<0.0440	**200 H**	**440 H**
		1.0	<0.0430	**35.0 H**	**78.0 H**
Construction Worker ESLs			*1,800*	*1,100*	*54,000*

Notes:

Exceeds Construction Worker ESL - Any Land Use/Any Depth Soil Exposure - Direct Exposure Human Health Risk Levels (Table S-1), Cancer Risk or Non-Cancer Hazard (lower value selected)

Data Flags

J	Constituent detected between practical quantitation limit (PQL) and method detection limit (MDL); result is estimated value
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

Definitions:

--	Not analyzed/Not applicable/Not established (for screening levels)
<	Not detected above given concentration
bold	Constituent detected at or above laboratory reporting limit
Dup	Duplicate
EPA	Environmental Protection Agency
ESLs	Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), July 2019, Revision 2
ft bgs	Feet below ground surface
mg/kg	Milligrams per kilogram
TPH	Total petroluem hydrocarbons

Analysis: TPH-gasoline and -diesel by United States Environmental Protection Agency Method 8015M, TPH-motor oil by US EPA Method 8015B

Table 3 Concentrations of Semi-volatile Organic Compounds in Soil

Boring ID	Sample Date	Sample Depth (ft bgs)	SVOCs - EPA Method 8270C (mg/kg)										
			3-,4-Methylphenol	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Di-n-butylphthalate	Fluoranthene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene	bis(2-Ethylhexyl)phthalate	Other SVOCs
RB1	8/26/2024	0.5	<1.00	<0.840	<0.890	<0.830	<1.10	<0.940	<1.20	<0.720	<1.00	<2.20	<MDL
		1.0	<1.00	<0.850	<0.890	<0.830	<1.10	<0.950	<1.20	<0.720	<1.00	<2.20	<MDL
RB2		0.5	<1.00	<0.850	<0.890	<0.830	<1.10	<0.950	<1.20	<0.720	<1.00	<2.20	<MDL
		1.0	<0.520	<0.420	<0.440	<0.410	<0.550	<0.470	<0.620	<0.360	<0.510	<1.10	<MDL
RB3		0.5	<0.520	**0.700 J**	<0.450	<0.410	<0.550	<0.470	<0.620	<0.360	<0.510	<1.10	<MDL
		1.0	<1.00	**1.30 J**	<0.890	<0.830	<1.10	<0.940	<1.20	<0.720	<1.00	<2.20	<MDL
RB4		0.5	<0.520	**0.680 J**	<0.440	<0.410	<0.550	<0.470	<0.620	<0.360	<0.510	<1.10	<MDL
		1.0	<0.100	**0.120 J**	<0.0890	<0.0830	**0.110 J**	<0.0950	<0.120	<0.0720	<0.100	<0.220	<MDL
RB5		0.5	<1.00	<0.850	<0.890	<0.830	<1.10	<0.950	<1.20	<0.720	<1.00	<2.20	<MDL
		1.0	<1.00	<0.840	<0.890	<0.830	<1.10	<0.940	<1.20	<0.720	<1.00	<2.20	<MDL
RB6		0.5	<0.100	**0.180 J**	**0.110 J**	**0.120 J**	<0.110	**0.140 J**	**0.140 J**	**0.0790 J**	**0.140 J**	<0.220	<MDL
		1.0	<0.100	**0.150 J**	<0.0890	<0.0830	<0.110	**0.100 J**	<0.120	**0.0790 J**	<0.100	<0.220	<MDL
RB8		0.5	**0.160 J**	<0.0840	<0.0890	<0.0830	<0.110	<0.0950	<0.120	<0.0720	<0.100	<0.220	<MDL
		1.0	**1.30 J**	<0.840	<0.890	<0.830	<1.10	<0.950	<1.20	<0.720	<1.00	<2.20	<MDL
RB9		0.5	<0.520	<0.420	<0.450	<0.420	<0.550	<0.470	<0.620	<0.360	<0.510	<1.10	<MDL
		1.0	<0.100	<0.0850	<0.0890	<0.0830	<0.110	<0.0950	<0.120	<0.0720	<0.100	<0.220	<MDL
RB10		0.5	<1.00	<0.850	<0.890	<0.830	<1.10	<0.950	<1.20	<0.720	<1.00	**2.60 J F1**	<MDL
		1.0	<1.10	<0.850	<0.890	<0.830	<1.10	<0.950	<1.20	<0.720	<1.00	**3.60 J**	<MDL
Construction Worker ESLs			*NE*	*110*	*NE*	*9,100*	*NE*	*6,700*	*110*	*NE*	*5,000*	*950*	*various*

Notes:

Exceeds Construction Worker ESL - Any Land Use/Any Depth Soil Exposure - Direct Exposure Human Health Risk Levels (Table S-1), Cancer Risk or Non-Can

Data Flags

J	Constituent detected between practical quantitation limit (PQL) and method detection limit (MDL); result is estimated value
F1	MS and/or MSD recovery exceeds control limits.

Definitions:

bold	Constituent detected at or above laboratory reporting limit
--	Not analyzed/Not applicable/Not established (for screening levels)
<	Not detected above given concentration
Dup	Duplicate
EPA	Environmental Protection Agency
ESLs	Environmental Screening Levels, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB), July 2019, Revision 2
ft bgs	Feet below ground surface
mg/kg	Milligrams per kilogram
SVOC	Semi-Volatile Organic Compounds

Analysis: SVOCs by United States Environmental Protection Agency Method 8270C

Attachment 1

Soil Sample Laboratory Analytical Report

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ANALYTICAL REPORT

PREPARED FOR

Attn: Lauren Vigliotti
Rincon Consultants
4825 J St
Suite 200
Sacramento, California 95819

Generated 9/18/2024 9:41:22 AM

JOB DESCRIPTION

Los Patos Bridge

JOB NUMBER

570-196762-1

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

my EOL

Job Notes

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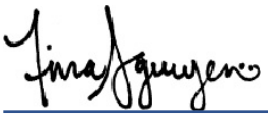

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Authorized for release by
Tina Nguyen, Project Manager
Tina.Nguyen@et.eurofinsus.com
(657)210-6301

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Definitions/Glossary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
570-196762-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 8/27/2024 6:55 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C.

GC/MS Semi VOA
Method 8270C: The following samples were diluted due to the nature of the sample matrix: RB10-0.5 (570-196762-17), (570-196762-C-17-B MS) and (570-196762-C-17-C MSD). Elevated reporting limits (RLs) are provided.

Method 8270C: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 570-475740 and analytical batch 570-476109 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8270C: The continuing calibration verification (CCV) associated with batch 570-476532 recovered above the upper control limit for Benzo[a]pyrene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: RB1-0.5 (570-196762-1), RB1-1.0 (570-196762-2), RB2-0.5 (570-196762-3), RB2-1.0 (570-196762-4), RB5-0.5 (570-196762-5), RB5-1.0 (570-196762-6), RB3-0.5 (570-196762-7), RB3-1.0 (570-196762-8), RB4-0.5 (570-196762-9), RB4-1.0 (570-196762-10), RB6-0.5 (570-196762-11), RB6-1.0 (570-196762-12), RB8-0.5 (570-196762-13), RB8-1.0 (570-196762-14), RB9-0.5 (570-196762-15), RB9-1.0 (570-196762-16), (CCVIS 570-476532/2) and (570-196504-A-49-I).

Method 8270C: The following samples were diluted due to the nature of the sample matrix: RB1-0.5 (570-196762-1), RB1-1.0 (570-196762-2), RB2-0.5 (570-196762-3), RB2-1.0 (570-196762-4), RB5-0.5 (570-196762-5), RB5-1.0 (570-196762-6), RB3-0.5 (570-196762-7), RB3-1.0 (570-196762-8), RB4-0.5 (570-196762-9), RB8-1.0 (570-196762-14) and RB9-0.5 (570-196762-15). Elevated reporting limits (RLs) are provided.

Method 8270C: The initial calibration verification (ICV) result for batch 570-478519 was above the upper control limit. The affected analytes are: Hexachlorocyclopentadiene. Sample results were non-detects, and have been reported as qualified data.

Method 8270C: The following sample was diluted due to the nature of the sample matrix: RB10-1.0 (570-196762-18). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Gasoline Range Organics
Method 8015B_GRO: The following samples were diluted due to very light and dry soil: RB8-0.5 (570-196762-13) and RB8-1.0 (570-196762-14). Elevated reporting limits (RL) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Diesel Range Organics
Method 8015B_DRO: The following samples were re-prepared outside of preparation holding time due to due to QC failures: RB1-1.0 (570-196762-2), RB2-0.5 (570-196762-3), RB2-1.0 (570-196762-4), RB5-0.5 (570-196762-5), RB5-1.0 (570-196762-6), RB3-0.5 (570-196762-7), RB3-1.0 (570-196762-8), RB4-0.5 (570-196762-9), RB4-1.0 (570-196762-10), RB6-0.5 (570-196762-11), RB6-1.0 (570-196762-12), RB9-1.0 (570-196762-16), RB10-0.5 (570-196762-17) and RB10-1.0 (570-196762-18).

Method 8015B_DRO: The following samples were re-prepared outside of preparation holding time to confirm results: RB8-0.5 (570-196762-13), RB8-1.0 (570-196762-14) and RB9-0.5 (570-196762-15).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Client Sample ID: RB1-0.5 — Lab Sample ID: 570-196762-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	39		5.0	4.6	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	130		25	10	mg/Kg	1		8015B	Total/NA
Arsenic	3.61		2.78	1.80	mg/Kg	2		6010B	Total/NA
Lead	32.6		1.85	1.23	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB1-1.0 — Lab Sample ID: 570-196762-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	49	H	5.0	4.5	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	170	H	25	10	mg/Kg	1		8015B	Total/NA
Arsenic	4.18		3.06	1.98	mg/Kg	2		6010B	Total/NA
Lead	38.3		2.04	1.35	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB2-0.5 — Lab Sample ID: 570-196762-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	38	H	5.0	4.5	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	160	H	25	10	mg/Kg	1		8015B	Total/NA
Arsenic	5.00		3.26	2.11	mg/Kg	2		6010B	Total/NA
Lead	42.0		2.17	1.44	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB2-1.0 — Lab Sample ID: 570-196762-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	36	H	5.0	4.6	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	160	H	25	10	mg/Kg	1		8015B	Total/NA
Arsenic	5.17		3.19	2.06	mg/Kg	2		6010B	Total/NA
Lead	41.1		2.13	1.41	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB5-0.5 — Lab Sample ID: 570-196762-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	660	H	50	45	mg/Kg	10		8015B	Total/NA
TPH as Motor Oil (C17-C44)	1800	H	250	100	mg/Kg	10		8015B	Total/NA
Arsenic	5.98		3.13	2.02	mg/Kg	2		6010B	Total/NA
Lead	181		2.08	1.38	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB5-1.0 — Lab Sample ID: 570-196762-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	790	H	50	45	mg/Kg	10		8015B	Total/NA
TPH as Motor Oil (C17-C44)	2300	H	250	100	mg/Kg	10		8015B	Total/NA
Arsenic	18.1		2.88	1.87	mg/Kg	2		6010B	Total/NA
Lead	42.6		1.92	1.27	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB3-0.5 — Lab Sample ID: 570-196762-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.70	J	2.5	0.42	mg/Kg	5		8270C	Total/NA
Diesel Range Organics [C10-C28]	6.7	H	5.0	4.5	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	17	J H	25	10	mg/Kg	1		8015B	Total/NA
Arsenic	5.00		2.78	1.80	mg/Kg	2		6010B	Total/NA
Lead	14.1		1.85	1.23	mg/Kg	2		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Client Sample ID: RB3-1.0 — Lab Sample ID: 570-196762-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	1.3	J	5.0	0.84	mg/Kg	10		8270C	Total/NA
Diesel Range Organics [C10-C28]	130	H	5.0	4.6	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	320	H	25	10	mg/Kg	1		8015B	Total/NA
Arsenic	4.68		2.83	1.83	mg/Kg	2		6010B	Total/NA
Lead	214		1.89	1.25	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB4-0.5 — Lab Sample ID: 570-196762-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.68	J	2.5	0.42	mg/Kg	5		8270C	Total/NA
Diesel Range Organics [C10-C28]	52	H	5.0	4.5	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	190	H	25	10	mg/Kg	1		8015B	Total/NA
Arsenic	6.41		3.26	2.11	mg/Kg	2		6010B	Total/NA
Lead	112		2.17	1.44	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB4-1.0 — Lab Sample ID: 570-196762-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.12	J	0.50	0.085	mg/Kg	1		8270C	Total/NA
Di-n-butyl phthalate	0.11	J	0.50	0.11	mg/Kg	1		8270C	Total/NA
Diesel Range Organics [C10-C28]	8.5	H	5.0	4.5	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	22	J H	25	10	mg/Kg	1		8015B	Total/NA
Arsenic	4.19		2.78	1.80	mg/Kg	2		6010B	Total/NA
Lead	40.0		1.85	1.23	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB6-0.5 — Lab Sample ID: 570-196762-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.18	J	0.50	0.085	mg/Kg	1		8270C	Total/NA
Benzo[g,h,i]perylene	0.11	J	0.50	0.089	mg/Kg	1		8270C	Total/NA
Chrysene	0.12	J	0.50	0.083	mg/Kg	1		8270C	Total/NA
Fluoranthene	0.14	J	0.50	0.095	mg/Kg	1		8270C	Total/NA
Indeno[1,2,3-cd]pyrene	0.14	J	0.50	0.12	mg/Kg	1		8270C	Total/NA
Phenanthrene	0.079	J	0.50	0.072	mg/Kg	1		8270C	Total/NA
Pyrene	0.14	J	0.50	0.10	mg/Kg	1		8270C	Total/NA
Diesel Range Organics [C10-C28]	36	H	5.0	4.6	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	84	H	25	10	mg/Kg	1		8015B	Total/NA
Lead	11.6		2.13	1.41	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB6-1.0 — Lab Sample ID: 570-196762-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.15	J	0.50	0.084	mg/Kg	1		8270C	Total/NA
Fluoranthene	0.10	J	0.50	0.094	mg/Kg	1		8270C	Total/NA
Phenanthrene	0.079	J	0.50	0.072	mg/Kg	1		8270C	Total/NA
Diesel Range Organics [C10-C28]	8.8	H	5.0	4.6	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	30	H	25	10	mg/Kg	1		8015B	Total/NA
Arsenic	2.57	J	3.26	2.11	mg/Kg	2		6010B	Total/NA
Lead	19.0		2.17	1.44	mg/Kg	2		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Client Sample ID: RB8-0.5 — Lab Sample ID: 570-196762-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
3/4-Methylphenol	0.16	J	1.0	0.10	mg/Kg	1		8270C	Total/NA
Diesel Range Organics [C10-C28] - DL	2500	H	50	45	mg/Kg	10		8015B	Total/NA
TPH as Motor Oil (C17-C44) - DL	2100	H	250	100	mg/Kg	10		8015B	Total/NA
Arsenic	3.96		3.13	2.02	mg/Kg	2		6010B	Total/NA
Lead	154		2.08	1.38	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB8-1.0 — Lab Sample ID: 570-196762-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
3/4-Methylphenol	1.3	J	10	1.0	mg/Kg	10		8270C	Total/NA
Diesel Range Organics [C10-C28] - DL	6800	H	98	90	mg/Kg	10		8015B	Total/NA
TPH as Motor Oil (C17-C44) - DL	7100	H	490	200	mg/Kg	10		8015B	Total/NA
Arsenic	3.21		2.88	1.87	mg/Kg	2		6010B	Total/NA
Lead	273		1.92	1.27	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB9-0.5 — Lab Sample ID: 570-196762-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28] - DL	2100	H	50	46	mg/Kg	10		8015B	Total/NA
TPH as Motor Oil (C17-C44) - DL	2400	H	250	100	mg/Kg	10		8015B	Total/NA
Arsenic	6.51		3.19	2.06	mg/Kg	2		6010B	Total/NA
Lead	109		2.13	1.41	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB9-1.0 — Lab Sample ID: 570-196762-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	88	H	5.0	4.6	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	120	H	25	10	mg/Kg	1		8015B	Total/NA
Arsenic	3.02	J	3.06	1.98	mg/Kg	2		6010B	Total/NA
Lead	13.9		2.04	1.35	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB10-0.5 — Lab Sample ID: 570-196762-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	2.6	J F1	5.0	2.2	mg/Kg	10		8270C	Total/NA
Diesel Range Organics [C10-C28]	200	H	5.0	4.6	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	440	H	25	10	mg/Kg	1		8015B	Total/NA
Arsenic	18.9		3.13	2.02	mg/Kg	2		6010B	Total/NA
Lead	304		2.08	1.38	mg/Kg	2		6010B	Total/NA

Client Sample ID: RB10-1.0 — Lab Sample ID: 570-196762-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	3.6	J	5.0	2.2	mg/Kg	10		8270C	Total/NA
Diesel Range Organics [C10-C28]	35	H	5.0	4.5	mg/Kg	1		8015B	Total/NA
TPH as Motor Oil (C17-C44)	78	H	25	10	mg/Kg	1		8015B	Total/NA
Arsenic	10.6		3.13	2.02	mg/Kg	2		6010B	Total/NA
Lead	210		2.08	1.38	mg/Kg	2		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: RB1-0.5
Date Collected: 08/26/24 08:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
1,2-Dichlorobenzene	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
1,3-Dichlorobenzene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
1,4-Dichlorobenzene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
1-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2,4,5-Trichlorophenol	ND		5.0	2.0	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2,4,6-Trichlorophenol	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2,4-Dichlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2,4-Dimethylphenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2,4-Dinitrophenol	ND		20	9.1	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2,4-Dinitrotoluene	ND		5.0	0.81	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2,6-Dichlorophenol	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2,6-Dinitrotoluene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2-Chloronaphthalene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2-Chlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2-Methylphenol	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2-Nitroaniline	ND		5.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
2-Nitrophenol	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
3,3'-Dichlorobenzidine	ND		25	5.3	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
3/4-Methylphenol	ND		10	1.0	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
3-Nitroaniline	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
4,6-Dinitro-2-methylphenol	ND		25	9.4	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
4-Bromophenyl phenyl ether	ND		5.0	0.73	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
4-Chloro-3-methylphenol	ND		5.0	0.92	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
4-Chloroaniline	ND		5.0	0.82	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
4-Chlorophenyl phenyl ether	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
4-Nitroaniline	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
4-Nitrophenol	ND		5.0	3.1	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Acenaphthene	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Acenaphthylene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Aniline	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Anthracene	ND		5.0	0.77	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Azobenzene	ND		5.0	0.78	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Benzidine	ND		50	5.7	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Benzo[a]anthracene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Benzo[a]pyrene	ND		5.0	0.99	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Benzo[b]fluoranthene	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Benzo[g,h,i]perylene	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Benzo[k]fluoranthene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Benzoic acid	ND		25	6.7	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Benzyl alcohol	ND		5.0	1.7	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Bis(2-chloroethoxy)methane	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Bis(2-chloroethyl)ether	ND		25	1.1	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
bis (2-Chloroisopropyl) ether	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Butyl benzyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Chrysene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Dibenz(a,h)anthracene	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 17:59	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB1-0.5
Date Collected: 08/26/24 08:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Diethyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Dimethyl phthalate	ND		5.0	0.98	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Di-n-butyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Di-n-octyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Fluoranthene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Fluorene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Hexachloro-1,3-butadiene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Hexachlorobenzene	ND		5.0	0.80	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Hexachlorocyclopentadiene	ND		15	0.86	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Hexachloroethane	ND		5.0	0.92	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Indeno[1,2,3-cd]pyrene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Isophorone	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Naphthalene	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Nitrobenzene	ND		20	1.4	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
N-Nitrosodimethylamine	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
N-Nitrosodi-n-propylamine	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
n-Nitrosodiphenylamine(as diphenylamine)	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Pentachlorophenol	ND		25	18	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Phenanthrene	ND		5.0	0.72	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Phenol	ND		5.0	0.97	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Pyrene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 17:59	10
Pyridine	ND		5.0	2.4	mg/Kg		08/29/24 09:56	08/31/24 17:59	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*95*		*10 - 134*	*08/29/24 09:56*	*08/31/24 17:59*	*10*
2-Fluorobiphenyl (Surr)	*64*		*14 - 142*	*08/29/24 09:56*	*08/31/24 17:59*	*10*
2-Fluorophenol (Surr)	*73*		*10 - 123*	*08/29/24 09:56*	*08/31/24 17:59*	*10*
Nitrobenzene-d5 (Surr)	*58*		*10 - 129*	*08/29/24 09:56*	*08/31/24 17:59*	*10*
p-Terphenyl-d14 (Surr)	*62*		*31 - 139*	*08/29/24 09:56*	*08/31/24 17:59*	*10*
Phenol-d6 (Surr)	*66*		*10 - 120*	*08/29/24 09:56*	*08/31/24 17:59*	*10*

Client Sample ID: RB1-1.0
Date Collected: 08/26/24 09:15
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
1,2-Dichlorobenzene	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
1,3-Dichlorobenzene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
1,4-Dichlorobenzene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
1-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2,4,5-Trichlorophenol	ND		5.0	2.0	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2,4,6-Trichlorophenol	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2,4-Dichlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2,4-Dimethylphenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2,4-Dinitrophenol	ND		20	9.1	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2,4-Dinitrotoluene	ND		5.0	0.81	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2,6-Dichlorophenol	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2,6-Dinitrotoluene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 18:22	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB1-1.0
Date Collected: 08/26/24 09:15
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2-Chlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2-Methylphenol	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2-Nitroaniline	ND		5.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
2-Nitrophenol	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
3,3'-Dichlorobenzidine	ND		25	5.4	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
3/4-Methylphenol	ND		10	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
3-Nitroaniline	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
4,6-Dinitro-2-methylphenol	ND		25	9.5	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
4-Bromophenyl phenyl ether	ND		5.0	0.73	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
4-Chloro-3-methylphenol	ND		5.0	0.93	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
4-Chloroaniline	ND		5.0	0.82	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
4-Chlorophenyl phenyl ether	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
4-Nitroaniline	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
4-Nitrophenol	ND		5.0	3.1	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Acenaphthene	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Acenaphthylene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Aniline	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Anthracene	ND		5.0	0.77	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Azobenzene	ND		5.0	0.78	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Benzidine	ND		50	5.7	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Benzo[a]anthracene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Benzo[a]pyrene	ND		5.0	0.99	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Benzo[b]fluoranthene	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Benzo[g,h,i]perylene	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Benzo[k]fluoranthene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Benzoic acid	ND		25	6.7	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Benzyl alcohol	ND		5.0	1.7	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Bis(2-chloroethoxy)methane	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Bis(2-chloroethyl)ether	ND		25	1.1	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
bis (2-Chloroisopropyl) ether	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Butyl benzyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Chrysene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Dibenz(a,h)anthracene	ND		5.0	0.80	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Dibenzofuran	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Diethyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Dimethyl phthalate	ND		5.0	0.98	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Di-n-butyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Di-n-octyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Fluoranthene	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Fluorene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Hexachloro-1,3-butadiene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Hexachlorobenzene	ND		5.0	0.80	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Hexachlorocyclopentadiene	ND		15	0.86	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Hexachloroethane	ND		5.0	0.92	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Indeno[1,2,3-cd]pyrene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Isophorone	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 18:22	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB1-1.0
Date Collected: 08/26/24 09:15
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Nitrobenzene	ND		20	1.4	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
N-Nitrosodimethylamine	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
N-Nitrosodi-n-propylamine	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
n-Nitrosodiphenylamine(as diphenylamine)	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Pentachlorophenol	ND		25	18	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Phenanthrene	ND		5.0	0.72	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Phenol	ND		5.0	0.97	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Pyrene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:22	10
Pyridine	ND		5.0	2.4	mg/Kg		08/29/24 09:56	08/31/24 18:22	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*87*		*10 - 134*	*08/29/24 09:56*	*08/31/24 18:22*	*10*
2-Fluorobiphenyl (Surr)	*68*		*14 - 142*	*08/29/24 09:56*	*08/31/24 18:22*	*10*
2-Fluorophenol (Surr)	*69*		*10 - 123*	*08/29/24 09:56*	*08/31/24 18:22*	*10*
Nitrobenzene-d5 (Surr)	*64*		*10 - 129*	*08/29/24 09:56*	*08/31/24 18:22*	*10*
p-Terphenyl-d14 (Surr)	*56*		*31 - 139*	*08/29/24 09:56*	*08/31/24 18:22*	*10*
Phenol-d6 (Surr)	*68*		*10 - 120*	*08/29/24 09:56*	*08/31/24 18:22*	*10*

Client Sample ID: RB2-0.5
Date Collected: 08/26/24 09:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
1,2-Dichlorobenzene	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
1,3-Dichlorobenzene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
1,4-Dichlorobenzene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
1-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2,4,5-Trichlorophenol	ND		5.0	2.0	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2,4,6-Trichlorophenol	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2,4-Dichlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2,4-Dimethylphenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2,4-Dinitrophenol	ND		20	9.1	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2,4-Dinitrotoluene	ND		5.0	0.81	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2,6-Dichlorophenol	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2,6-Dinitrotoluene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2-Chloronaphthalene	ND		5.0	0.87	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2-Chlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2-Methylphenol	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2-Nitroaniline	ND		5.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
2-Nitrophenol	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
3,3'-Dichlorobenzidine	ND		25	5.4	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
3/4-Methylphenol	ND		10	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
3-Nitroaniline	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
4,6-Dinitro-2-methylphenol	ND		25	9.5	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
4-Bromophenyl phenyl ether	ND		5.0	0.73	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
4-Chloro-3-methylphenol	ND		5.0	0.93	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
4-Chloroaniline	ND		5.0	0.82	mg/Kg		08/29/24 09:56	08/31/24 18:45	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB2-0.5
Date Collected: 08/26/24 09:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
4-Nitroaniline	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
4-Nitrophenol	ND		5.0	3.1	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Acenaphthene	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Acenaphthylene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Aniline	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Anthracene	ND		5.0	0.78	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Azobenzene	ND		5.0	0.78	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Benzidine	ND		50	5.7	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Benzo[a]anthracene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Benzo[a]pyrene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Benzo[b]fluoranthene	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Benzo[g,h,i]perylene	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Benzo[k]fluoranthene	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Benzoic acid	ND		25	6.7	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Benzyl alcohol	ND		5.0	1.7	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Bis(2-chloroethoxy)methane	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Bis(2-chloroethyl)ether	ND		25	1.1	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
bis (2-Chloroisopropyl) ether	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Butyl benzyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Chrysene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Dibenz(a,h)anthracene	ND		5.0	0.80	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Dibenzofuran	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Diethyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Dimethyl phthalate	ND		5.0	0.98	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Di-n-butyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Di-n-octyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Fluoranthene	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Fluorene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Hexachloro-1,3-butadiene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Hexachlorobenzene	ND		5.0	0.80	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Hexachlorocyclopentadiene	ND		15	0.86	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Hexachloroethane	ND		5.0	0.92	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Indeno[1,2,3-cd]pyrene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Isophorone	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Naphthalene	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Nitrobenzene	ND		20	1.4	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
N-Nitrosodimethylamine	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
N-Nitrosodi-n-propylamine	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
n-Nitrosodiphenylamine(as diphenylamine)	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Pentachlorophenol	ND		25	18	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Phenanthrene	ND		5.0	0.72	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Phenol	ND		5.0	0.97	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Pyrene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 18:45	10
Pyridine	ND		5.0	2.4	mg/Kg		08/29/24 09:56	08/31/24 18:45	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*97*		*10 - 134*	*08/29/24 09:56*	*08/31/24 18:45*	*10*

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB2-0.5
Date Collected: 08/26/24 09:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-3
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*73*		*14 - 142*	*08/29/24 09:56*	*08/31/24 18:45*	*10*
2-Fluorophenol (Surr)	*77*		*10 - 123*	*08/29/24 09:56*	*08/31/24 18:45*	*10*
Nitrobenzene-d5 (Surr)	*61*		*10 - 129*	*08/29/24 09:56*	*08/31/24 18:45*	*10*
p-Terphenyl-d14 (Surr)	*65*		*31 - 139*	*08/29/24 09:56*	*08/31/24 18:45*	*10*
Phenol-d6 (Surr)	*81*		*10 - 120*	*08/29/24 09:56*	*08/31/24 18:45*	*10*

Client Sample ID: RB2-1.0
Date Collected: 08/26/24 09:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.5	0.60	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
1,2-Dichlorobenzene	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
1,3-Dichlorobenzene	ND		2.5	0.52	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
1,4-Dichlorobenzene	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
1-Methylnaphthalene	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2,4,5-Trichlorophenol	ND		2.5	0.98	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2,4,6-Trichlorophenol	ND		2.5	0.59	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2,4-Dichlorophenol	ND		2.5	0.66	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2,4-Dimethylphenol	ND		2.5	0.64	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2,4-Dinitrophenol	ND		10	4.5	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2,4-Dinitrotoluene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2,6-Dichlorophenol	ND		2.5	0.56	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2,6-Dinitrotoluene	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2-Chloronaphthalene	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2-Chlorophenol	ND		2.5	0.66	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2-Methylnaphthalene	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2-Methylphenol	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2-Nitroaniline	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
2-Nitrophenol	ND		2.5	0.69	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
3,3'-Dichlorobenzidine	ND		12	2.7	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
3/4-Methylphenol	ND		5.0	0.52	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
3-Nitroaniline	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
4,6-Dinitro-2-methylphenol	ND		12	4.7	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
4-Bromophenyl phenyl ether	ND		2.5	0.36	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
4-Chloro-3-methylphenol	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
4-Chloroaniline	ND		2.5	0.41	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
4-Chlorophenyl phenyl ether	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
4-Nitroaniline	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
4-Nitrophenol	ND		2.5	1.6	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Acenaphthene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Acenaphthylene	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Aniline	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Anthracene	ND		2.5	0.39	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Azobenzene	ND		2.5	0.39	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Benzidine	ND		25	2.9	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Benzo[a]anthracene	ND		2.5	0.41	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Benzo[a]pyrene	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Benzo[b]fluoranthene	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Benzo[g,h,i]perylene	ND		2.5	0.44	mg/Kg		08/29/24 09:56	08/31/24 19:09	5

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB2-1.0
Date Collected: 08/26/24 09:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Benzoic acid	ND		12	3.4	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Benzyl alcohol	ND		2.5	0.83	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Bis(2-chloroethoxy)methane	ND		2.5	0.55	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Bis(2-chloroethyl)ether	ND		12	0.53	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
bis (2-Chloroisopropyl) ether	ND		2.5	0.59	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Bis(2-ethylhexyl) phthalate	ND		2.5	1.1	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Butyl benzyl phthalate	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Chrysene	ND		2.5	0.41	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Dibenz(a,h)anthracene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Dibenzofuran	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Diethyl phthalate	ND		2.5	0.57	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Dimethyl phthalate	ND		2.5	0.49	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Di-n-butyl phthalate	ND		2.5	0.55	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Di-n-octyl phthalate	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Fluoranthene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Fluorene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Hexachloro-1,3-butadiene	ND		2.5	0.62	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Hexachlorobenzene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Hexachlorocyclopentadiene	ND		7.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Hexachloroethane	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Indeno[1,2,3-cd]pyrene	ND		2.5	0.62	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Isophorone	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Naphthalene	ND		2.5	0.69	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Nitrobenzene	ND		10	0.68	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
N-Nitrosodimethylamine	ND		2.5	0.44	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
N-Nitrosodi-n-propylamine	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
n-Nitrosodiphenylamine(as diphenylamine)	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Pentachlorophenol	ND		12	9.2	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Phenanthrene	ND		2.5	0.36	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Phenol	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Pyrene	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 19:09	5
Pyridine	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:09	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*83*		*10 - 134*	*08/29/24 09:56*	*08/31/24 19:09*	*5*
2-Fluorobiphenyl (Surr)	*69*		*14 - 142*	*08/29/24 09:56*	*08/31/24 19:09*	*5*
2-Fluorophenol (Surr)	*72*		*10 - 123*	*08/29/24 09:56*	*08/31/24 19:09*	*5*
Nitrobenzene-d5 (Surr)	*61*		*10 - 129*	*08/29/24 09:56*	*08/31/24 19:09*	*5*
p-Terphenyl-d14 (Surr)	*68*		*31 - 139*	*08/29/24 09:56*	*08/31/24 19:09*	*5*
Phenol-d6 (Surr)	*72*		*10 - 120*	*08/29/24 09:56*	*08/31/24 19:09*	*5*

Client Sample ID: RB5-0.5
Date Collected: 08/26/24 09:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
1,2-Dichlorobenzene	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
1,3-Dichlorobenzene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:32	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB5-0.5
Date Collected: 08/26/24 09:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
1-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2,4,5-Trichlorophenol	ND		5.0	2.0	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2,4,6-Trichlorophenol	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2,4-Dichlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2,4-Dimethylphenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2,4-Dinitrophenol	ND		20	9.1	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2,4-Dinitrotoluene	ND		5.0	0.81	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2,6-Dichlorophenol	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2,6-Dinitrotoluene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2-Chloronaphthalene	ND		5.0	0.87	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2-Chlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2-Methylphenol	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2-Nitroaniline	ND		5.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
2-Nitrophenol	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
3,3'-Dichlorobenzidine	ND		25	5.4	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
3/4-Methylphenol	ND		10	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
3-Nitroaniline	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
4,6-Dinitro-2-methylphenol	ND		25	9.5	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
4-Bromophenyl phenyl ether	ND		5.0	0.73	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
4-Chloro-3-methylphenol	ND		5.0	0.93	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
4-Chloroaniline	ND		5.0	0.82	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
4-Chlorophenyl phenyl ether	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
4-Nitroaniline	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
4-Nitrophenol	ND		5.0	3.1	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Acenaphthene	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Acenaphthylene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Aniline	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Anthracene	ND		5.0	0.78	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Azobenzene	ND		5.0	0.78	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Benzidine	ND		50	5.7	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Benzo[a]anthracene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Benzo[a]pyrene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Benzo[b]fluoranthene	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Benzo[g,h,i]perylene	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Benzo[k]fluoranthene	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Benzoic acid	ND		25	6.7	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Benzyl alcohol	ND		5.0	1.7	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Bis(2-chloroethoxy)methane	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Bis(2-chloroethyl)ether	ND		25	1.1	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
bis (2-Chloroisopropyl) ether	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Butyl benzyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Chrysene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Dibenz(a,h)anthracene	ND		5.0	0.80	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Dibenzofuran	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Diethyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Dimethyl phthalate	ND		5.0	0.98	mg/Kg		08/29/24 09:56	08/31/24 19:32	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB5-0.5
Date Collected: 08/26/24 09:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Di-n-octyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Fluoranthene	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Fluorene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Hexachloro-1,3-butadiene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Hexachlorobenzene	ND		5.0	0.80	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Hexachlorocyclopentadiene	ND		15	0.86	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Hexachloroethane	ND		5.0	0.92	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Indeno[1,2,3-cd]pyrene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Isophorone	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Naphthalene	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Nitrobenzene	ND		20	1.4	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
N-Nitrosodimethylamine	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
N-Nitrosodi-n-propylamine	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
n-Nitrosodiphenylamine(as diphenylamine)	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Pentachlorophenol	ND		25	18	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Phenanthrene	ND		5.0	0.72	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Phenol	ND		5.0	0.97	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Pyrene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:32	10
Pyridine	ND		5.0	2.4	mg/Kg		08/29/24 09:56	08/31/24 19:32	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*101*		*10 - 134*	*08/29/24 09:56*	*08/31/24 19:32*	*10*
2-Fluorobiphenyl (Surr)	*69*		*14 - 142*	*08/29/24 09:56*	*08/31/24 19:32*	*10*
2-Fluorophenol (Surr)	*77*		*10 - 123*	*08/29/24 09:56*	*08/31/24 19:32*	*10*
Nitrobenzene-d5 (Surr)	*61*		*10 - 129*	*08/29/24 09:56*	*08/31/24 19:32*	*10*
p-Terphenyl-d14 (Surr)	*75*		*31 - 139*	*08/29/24 09:56*	*08/31/24 19:32*	*10*
Phenol-d6 (Surr)	*78*		*10 - 120*	*08/29/24 09:56*	*08/31/24 19:32*	*10*

Client Sample ID: RB5-1.0
Date Collected: 08/26/24 09:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
1,2-Dichlorobenzene	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
1,3-Dichlorobenzene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
1,4-Dichlorobenzene	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
1-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2,4,5-Trichlorophenol	ND		5.0	2.0	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2,4,6-Trichlorophenol	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2,4-Dichlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2,4-Dimethylphenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2,4-Dinitrophenol	ND		20	9.1	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2,4-Dinitrotoluene	ND		5.0	0.81	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2,6-Dichlorophenol	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2,6-Dinitrotoluene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2-Chloronaphthalene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2-Chlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:55	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB5-1.0
Date Collected: 08/26/24 09:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2-Nitroaniline	ND		5.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
2-Nitrophenol	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
3,3'-Dichlorobenzidine	ND		25	5.3	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
3/4-Methylphenol	ND		10	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
3-Nitroaniline	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
4,6-Dinitro-2-methylphenol	ND		25	9.4	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
4-Bromophenyl phenyl ether	ND		5.0	0.73	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
4-Chloro-3-methylphenol	ND		5.0	0.92	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
4-Chloroaniline	ND		5.0	0.82	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
4-Chlorophenyl phenyl ether	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
4-Nitroaniline	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
4-Nitrophenol	ND		5.0	3.1	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Acenaphthene	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Acenaphthylene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Aniline	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Anthracene	ND		5.0	0.77	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Azobenzene	ND		5.0	0.78	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Benzidine	ND		50	5.7	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Benzo[a]anthracene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Benzo[a]pyrene	ND		5.0	0.99	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Benzo[b]fluoranthene	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Benzo[g,h,i]perylene	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Benzo[k]fluoranthene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Benzoic acid	ND		25	6.7	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Benzyl alcohol	ND		5.0	1.7	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Bis(2-chloroethoxy)methane	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Bis(2-chloroethyl)ether	ND		25	1.1	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
bis (2-Chloroisopropyl) ether	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Butyl benzyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Chrysene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Dibenz(a,h)anthracene	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Dibenzofuran	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Diethyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Dimethyl phthalate	ND		5.0	0.98	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Di-n-butyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Di-n-octyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Fluoranthene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Fluorene	ND		5.0	0.93	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Hexachloro-1,3-butadiene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Hexachlorobenzene	ND		5.0	0.80	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Hexachlorocyclopentadiene	ND		15	0.86	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Hexachloroethane	ND		5.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Indeno[1,2,3-cd]pyrene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Isophorone	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Naphthalene	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Nitrobenzene	ND		20	1.4	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
N-Nitrosodimethylamine	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 19:55	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB5-1.0
Date Collected: 08/26/24 09:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
n-Nitrosodiphenylamine(as diphenylamine)	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Pentachlorophenol	ND		25	18	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Phenanthrene	ND		5.0	0.72	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Phenol	ND		5.0	0.97	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Pyrene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 19:55	10
Pyridine	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 19:55	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*105*		*10 - 134*	*08/29/24 09:56*	*08/31/24 19:55*	*10*
2-Fluorobiphenyl (Surr)	*63*		*14 - 142*	*08/29/24 09:56*	*08/31/24 19:55*	*10*
2-Fluorophenol (Surr)	*69*		*10 - 123*	*08/29/24 09:56*	*08/31/24 19:55*	*10*
Nitrobenzene-d5 (Surr)	*62*		*10 - 129*	*08/29/24 09:56*	*08/31/24 19:55*	*10*
p-Terphenyl-d14 (Surr)	*65*		*31 - 139*	*08/29/24 09:56*	*08/31/24 19:55*	*10*
Phenol-d6 (Surr)	*70*		*10 - 120*	*08/29/24 09:56*	*08/31/24 19:55*	*10*

Client Sample ID: RB3-0.5
Date Collected: 08/26/24 10:05
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-7
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.5	0.60	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
1,2-Dichlorobenzene	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
1,3-Dichlorobenzene	ND		2.5	0.52	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
1,4-Dichlorobenzene	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
1-Methylnaphthalene	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2,4,5-Trichlorophenol	ND		2.5	0.98	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2,4,6-Trichlorophenol	ND		2.5	0.59	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2,4-Dichlorophenol	ND		2.5	0.66	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2,4-Dimethylphenol	ND		2.5	0.64	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2,4-Dinitrophenol	ND		10	4.5	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2,4-Dinitrotoluene	ND		2.5	0.41	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2,6-Dichlorophenol	ND		2.5	0.56	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2,6-Dinitrotoluene	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2-Chloronaphthalene	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2-Chlorophenol	ND		2.5	0.66	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2-Methylnaphthalene	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2-Methylphenol	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2-Nitroaniline	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
2-Nitrophenol	ND		2.5	0.69	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
3,3'-Dichlorobenzidine	ND		12	2.7	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
3/4-Methylphenol	ND		5.0	0.52	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
3-Nitroaniline	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
4,6-Dinitro-2-methylphenol	ND		12	4.7	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
4-Bromophenyl phenyl ether	ND		2.5	0.36	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
4-Chloro-3-methylphenol	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
4-Chloroaniline	ND		2.5	0.41	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
4-Chlorophenyl phenyl ether	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
4-Nitroaniline	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
4-Nitrophenol	ND		2.5	1.6	mg/Kg		08/29/24 09:56	08/31/24 20:18	5

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB3-0.5
Date Collected: 08/26/24 10:05
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-7
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Acenaphthylene	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Aniline	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Anthracene	ND		2.5	0.39	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Azobenzene	ND		2.5	0.39	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Benzidine	ND		25	2.9	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Benzo[a]anthracene	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Benzo[a]pyrene	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Benzo[b]fluoranthene	**0.70**	**J**	2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Benzo[g,h,i]perylene	ND		2.5	0.45	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Benzo[k]fluoranthene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Benzoic acid	ND		12	3.4	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Benzyl alcohol	ND		2.5	0.83	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Bis(2-chloroethoxy)methane	ND		2.5	0.55	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Bis(2-chloroethyl)ether	ND		12	0.53	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
bis (2-Chloroisopropyl) ether	ND		2.5	0.59	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Bis(2-ethylhexyl) phthalate	ND		2.5	1.1	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Butyl benzyl phthalate	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Chrysene	ND		2.5	0.41	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Dibenz(a,h)anthracene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Dibenzofuran	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Diethyl phthalate	ND		2.5	0.57	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Dimethyl phthalate	ND		2.5	0.49	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Di-n-butyl phthalate	ND		2.5	0.55	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Di-n-octyl phthalate	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Fluoranthene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Fluorene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Hexachloro-1,3-butadiene	ND		2.5	0.62	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Hexachlorobenzene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Hexachlorocyclopentadiene	ND		7.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Hexachloroethane	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Indeno[1,2,3-cd]pyrene	ND		2.5	0.62	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Isophorone	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Naphthalene	ND		2.5	0.69	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Nitrobenzene	ND		10	0.68	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
N-Nitrosodimethylamine	ND		2.5	0.44	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
N-Nitrosodi-n-propylamine	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
n-Nitrosodiphenylamine(as diphenylamine)	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Pentachlorophenol	ND		12	9.2	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Phenanthrene	ND		2.5	0.36	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Phenol	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Pyrene	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 20:18	5
Pyridine	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 20:18	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*93*		*10 - 134*	*08/29/24 09:56*	*08/31/24 20:18*	*5*
2-Fluorobiphenyl (Surr)	*71*		*14 - 142*	*08/29/24 09:56*	*08/31/24 20:18*	*5*
2-Fluorophenol (Surr)	*76*		*10 - 123*	*08/29/24 09:56*	*08/31/24 20:18*	*5*
Nitrobenzene-d5 (Surr)	*68*		*10 - 129*	*08/29/24 09:56*	*08/31/24 20:18*	*5*

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB3-0.5
Date Collected: 08/26/24 10:05
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-7
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl-d14 (Surr)	*71*		*31 - 139*	*08/29/24 09:56*	*08/31/24 20:18*	*5*
Phenol-d6 (Surr)	*81*		*10 - 120*	*08/29/24 09:56*	*08/31/24 20:18*	*5*

Client Sample ID: RB3-1.0
Date Collected: 08/26/24 10:10
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-8
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
1,2-Dichlorobenzene	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
1,3-Dichlorobenzene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
1,4-Dichlorobenzene	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
1-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2,4,5-Trichlorophenol	ND		5.0	2.0	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2,4,6-Trichlorophenol	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2,4-Dichlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2,4-Dimethylphenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2,4-Dinitrophenol	ND		20	9.1	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2,4-Dinitrotoluene	ND		5.0	0.81	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2,6-Dichlorophenol	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2,6-Dinitrotoluene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2-Chloronaphthalene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2-Chlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2-Methylphenol	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2-Nitroaniline	ND		5.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
2-Nitrophenol	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
3,3'-Dichlorobenzidine	ND		25	5.3	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
3/4-Methylphenol	ND		10	1.0	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
3-Nitroaniline	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
4,6-Dinitro-2-methylphenol	ND		25	9.4	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
4-Bromophenyl phenyl ether	ND		5.0	0.73	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
4-Chloro-3-methylphenol	ND		5.0	0.92	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
4-Chloroaniline	ND		5.0	0.82	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
4-Chlorophenyl phenyl ether	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
4-Nitroaniline	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
4-Nitrophenol	ND		5.0	3.1	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Acenaphthene	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Acenaphthylene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Aniline	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Anthracene	ND		5.0	0.77	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Azobenzene	ND		5.0	0.78	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Benzidine	ND		50	5.7	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Benzo[a]anthracene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Benzo[a]pyrene	ND		5.0	0.99	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Benzo[b]fluoranthene	**1.3**	**J**	5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Benzo[g,h,i]perylene	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Benzo[k]fluoranthene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Benzoic acid	ND		25	6.7	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Benzyl alcohol	ND		5.0	1.7	mg/Kg		08/29/24 09:56	08/31/24 20:41	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB3-1.0
Date Collected: 08/26/24 10:10
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-8
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Bis(2-chloroethyl)ether	ND		25	1.1	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
bis (2-Chloroisopropyl) ether	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Butyl benzyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Chrysene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Dibenz(a,h)anthracene	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Dibenzofuran	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Diethyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Dimethyl phthalate	ND		5.0	0.98	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Di-n-butyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Di-n-octyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Fluoranthene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Fluorene	ND		5.0	0.93	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Hexachloro-1,3-butadiene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Hexachlorobenzene	ND		5.0	0.80	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Hexachlorocyclopentadiene	ND		15	0.86	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Hexachloroethane	ND		5.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Indeno[1,2,3-cd]pyrene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Isophorone	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Naphthalene	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Nitrobenzene	ND		20	1.4	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
N-Nitrosodimethylamine	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
N-Nitrosodi-n-propylamine	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
n-Nitrosodiphenylamine(as diphenylamine)	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Pentachlorophenol	ND		25	18	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Phenanthrene	ND		5.0	0.72	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Phenol	ND		5.0	0.97	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Pyrene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 20:41	10
Pyridine	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 20:41	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*88*		*10 - 134*	*08/29/24 09:56*	*08/31/24 20:41*	*10*
2-Fluorobiphenyl (Surr)	*72*		*14 - 142*	*08/29/24 09:56*	*08/31/24 20:41*	*10*
2-Fluorophenol (Surr)	*75*		*10 - 123*	*08/29/24 09:56*	*08/31/24 20:41*	*10*
Nitrobenzene-d5 (Surr)	*63*		*10 - 129*	*08/29/24 09:56*	*08/31/24 20:41*	*10*
p-Terphenyl-d14 (Surr)	*66*		*31 - 139*	*08/29/24 09:56*	*08/31/24 20:41*	*10*
Phenol-d6 (Surr)	*70*		*10 - 120*	*08/29/24 09:56*	*08/31/24 20:41*	*10*

Client Sample ID: RB4-0.5
Date Collected: 08/26/24 10:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.5	0.60	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
1,2-Dichlorobenzene	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
1,3-Dichlorobenzene	ND		2.5	0.52	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
1,4-Dichlorobenzene	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
1-Methylnaphthalene	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2,4,5-Trichlorophenol	ND		2.5	0.98	mg/Kg		08/29/24 09:56	08/31/24 21:05	5

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB4-0.5
Date Collected: 08/26/24 10:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		2.5	0.59	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2,4-Dichlorophenol	ND		2.5	0.66	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2,4-Dimethylphenol	ND		2.5	0.64	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2,4-Dinitrophenol	ND		10	4.5	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2,4-Dinitrotoluene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2,6-Dichlorophenol	ND		2.5	0.56	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2,6-Dinitrotoluene	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2-Chloronaphthalene	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2-Chlorophenol	ND		2.5	0.66	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2-Methylnaphthalene	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2-Methylphenol	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2-Nitroaniline	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
2-Nitrophenol	ND		2.5	0.69	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
3,3'-Dichlorobenzidine	ND		12	2.7	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
3/4-Methylphenol	ND		5.0	0.52	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
3-Nitroaniline	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
4,6-Dinitro-2-methylphenol	ND		12	4.7	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
4-Bromophenyl phenyl ether	ND		2.5	0.36	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
4-Chloro-3-methylphenol	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
4-Chloroaniline	ND		2.5	0.41	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
4-Chlorophenyl phenyl ether	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
4-Nitroaniline	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
4-Nitrophenol	ND		2.5	1.6	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Acenaphthene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Acenaphthylene	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Aniline	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Anthracene	ND		2.5	0.39	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Azobenzene	ND		2.5	0.39	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Benzidine	ND		25	2.9	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Benzo[a]anthracene	ND		2.5	0.41	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Benzo[a]pyrene	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Benzo[b]fluoranthene	**0.68**	**J**	2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Benzo[g,h,i]perylene	ND		2.5	0.44	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Benzo[k]fluoranthene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Benzoic acid	ND		12	3.3	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Benzyl alcohol	ND		2.5	0.83	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Bis(2-chloroethoxy)methane	ND		2.5	0.55	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Bis(2-chloroethyl)ether	ND		12	0.53	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
bis (2-Chloroisopropyl) ether	ND		2.5	0.59	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Bis(2-ethylhexyl) phthalate	ND		2.5	1.1	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Butyl benzyl phthalate	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Chrysene	ND		2.5	0.41	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Dibenz(a,h)anthracene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Dibenzofuran	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Diethyl phthalate	ND		2.5	0.57	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Dimethyl phthalate	ND		2.5	0.49	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Di-n-butyl phthalate	ND		2.5	0.55	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Di-n-octyl phthalate	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Fluoranthene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 21:05	5

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB4-0.5
Date Collected: 08/26/24 10:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Hexachloro-1,3-butadiene	ND		2.5	0.62	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Hexachlorobenzene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Hexachlorocyclopentadiene	ND		7.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Hexachloroethane	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Indeno[1,2,3-cd]pyrene	ND		2.5	0.62	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Isophorone	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Naphthalene	ND		2.5	0.69	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Nitrobenzene	ND		10	0.68	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
N-Nitrosodimethylamine	ND		2.5	0.44	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
N-Nitrosodi-n-propylamine	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
n-Nitrosodiphenylamine(as diphenylamine)	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Pentachlorophenol	ND		12	9.2	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Phenanthrene	ND		2.5	0.36	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Phenol	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Pyrene	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 21:05	5
Pyridine	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 21:05	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*83*		*10 - 134*	*08/29/24 09:56*	*08/31/24 21:05*	*5*
2-Fluorobiphenyl (Surr)	*66*		*14 - 142*	*08/29/24 09:56*	*08/31/24 21:05*	*5*
2-Fluorophenol (Surr)	*72*		*10 - 123*	*08/29/24 09:56*	*08/31/24 21:05*	*5*
Nitrobenzene-d5 (Surr)	*65*		*10 - 129*	*08/29/24 09:56*	*08/31/24 21:05*	*5*
p-Terphenyl-d14 (Surr)	*63*		*31 - 139*	*08/29/24 09:56*	*08/31/24 21:05*	*5*
Phenol-d6 (Surr)	*71*		*10 - 120*	*08/29/24 09:56*	*08/31/24 21:05*	*5*

Client Sample ID: RB4-1.0
Date Collected: 08/26/24 10:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-10
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
1,2-Dichlorobenzene	ND		0.50	0.084	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
1,3-Dichlorobenzene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
1,4-Dichlorobenzene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
1-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2,4,5-Trichlorophenol	ND		0.50	0.20	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2,4,6-Trichlorophenol	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2,4-Dichlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2,4-Dimethylphenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2,4-Dinitrophenol	ND		2.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2,4-Dinitrotoluene	ND		0.50	0.081	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2,6-Dichlorophenol	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2,6-Dinitrotoluene	ND		0.50	0.086	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2-Chloronaphthalene	ND		0.50	0.086	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2-Chlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2-Methylphenol	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2-Nitroaniline	ND		0.50	0.091	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
2-Nitrophenol	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 21:28	1

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB4-1.0
Date Collected: 08/26/24 10:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-10
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	ND		2.5	0.54	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
3/4-Methylphenol	ND		1.0	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
3-Nitroaniline	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
4,6-Dinitro-2-methylphenol	ND		2.5	0.95	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
4-Bromophenyl phenyl ether	ND		0.50	0.073	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
4-Chloro-3-methylphenol	ND		0.50	0.093	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
4-Chloroaniline	ND		0.50	0.082	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
4-Chlorophenyl phenyl ether	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
4-Nitroaniline	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
4-Nitrophenol	ND		0.50	0.31	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Acenaphthene	ND		0.50	0.079	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Acenaphthylene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Aniline	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Anthracene	ND		0.50	0.077	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Azobenzene	ND		0.50	0.078	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Benzidine	ND		5.0	0.57	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Benzo[a]anthracene	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Benzo[a]pyrene	ND		0.50	0.099	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Benzo[b]fluoranthene	**0.12**	**J**	0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Benzo[g,h,i]perylene	ND		0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Benzo[k]fluoranthene	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Benzoic acid	ND		2.5	0.67	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Benzyl alcohol	ND		0.50	0.17	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Bis(2-chloroethoxy)methane	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Bis(2-chloroethyl)ether	ND		2.5	0.11	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
bis (2-Chloroisopropyl) ether	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Bis(2-ethylhexyl) phthalate	ND		0.50	0.22	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Butyl benzyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Chrysene	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Dibenz(a,h)anthracene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Dibenzofuran	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Diethyl phthalate	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Dimethyl phthalate	ND		0.50	0.098	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Di-n-butyl phthalate	**0.11**	**J**	0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Di-n-octyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Fluoranthene	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Fluorene	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Hexachloro-1,3-butadiene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Hexachlorobenzene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Hexachlorocyclopentadiene	ND		1.5	0.086	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Hexachloroethane	ND		0.50	0.092	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Indeno[1,2,3-cd]pyrene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Isophorone	ND		0.50	0.079	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Naphthalene	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Nitrobenzene	ND		2.0	0.14	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
N-Nitrosodimethylamine	ND		0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
N-Nitrosodi-n-propylamine	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Pentachlorophenol	ND		2.5	1.8	mg/Kg		08/29/24 09:56	08/31/24 21:28	1

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB4-1.0
Date Collected: 08/26/24 10:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-10
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	ND		0.50	0.072	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Phenol	ND		0.50	0.097	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Pyrene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:28	1
Pyridine	ND		0.50	0.24	mg/Kg		08/29/24 09:56	08/31/24 21:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*81*		*10 - 134*	*08/29/24 09:56*	*08/31/24 21:28*	*1*
2-Fluorobiphenyl (Surr)	*69*		*14 - 142*	*08/29/24 09:56*	*08/31/24 21:28*	*1*
2-Fluorophenol (Surr)	*83*		*10 - 123*	*08/29/24 09:56*	*08/31/24 21:28*	*1*
Nitrobenzene-d5 (Surr)	*67*		*10 - 129*	*08/29/24 09:56*	*08/31/24 21:28*	*1*
p-Terphenyl-d14 (Surr)	*68*		*31 - 139*	*08/29/24 09:56*	*08/31/24 21:28*	*1*
Phenol-d6 (Surr)	*86*		*10 - 120*	*08/29/24 09:56*	*08/31/24 21:28*	*1*

Client Sample ID: RB6-0.5
Date Collected: 08/26/24 10:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-11
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
1,2-Dichlorobenzene	ND		0.50	0.084	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
1,3-Dichlorobenzene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
1,4-Dichlorobenzene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
1-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2,4,5-Trichlorophenol	ND		0.50	0.20	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2,4,6-Trichlorophenol	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2,4-Dichlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2,4-Dimethylphenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2,4-Dinitrophenol	ND		2.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2,4-Dinitrotoluene	ND		0.50	0.081	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2,6-Dichlorophenol	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2,6-Dinitrotoluene	ND		0.50	0.086	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2-Chloronaphthalene	ND		0.50	0.086	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2-Chlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2-Methylphenol	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2-Nitroaniline	ND		0.50	0.091	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
2-Nitrophenol	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
3,3'-Dichlorobenzidine	ND		2.5	0.54	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
3/4-Methylphenol	ND		1.0	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
3-Nitroaniline	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
4,6-Dinitro-2-methylphenol	ND		2.5	0.95	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
4-Bromophenyl phenyl ether	ND		0.50	0.073	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
4-Chloro-3-methylphenol	ND		0.50	0.093	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
4-Chloroaniline	ND		0.50	0.082	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
4-Chlorophenyl phenyl ether	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
4-Nitroaniline	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
4-Nitrophenol	ND		0.50	0.31	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Acenaphthene	ND		0.50	0.079	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Acenaphthylene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Aniline	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Anthracene	ND		0.50	0.077	mg/Kg		08/29/24 09:56	08/31/24 21:51	1

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB6-0.5
Date Collected: 08/26/24 10:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-11
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Azobenzene	ND		0.50	0.078	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Benzidine	ND		5.0	0.57	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Benzo[a]anthracene	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Benzo[a]pyrene	ND		0.50	0.099	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Benzo[b]fluoranthene	**0.18**	**J**	0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Benzo[g,h,i]perylene	**0.11**	**J**	0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Benzo[k]fluoranthene	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Benzoic acid	ND		2.5	0.67	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Benzyl alcohol	ND		0.50	0.17	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Bis(2-chloroethoxy)methane	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Bis(2-chloroethyl)ether	ND		2.5	0.11	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
bis (2-Chloroisopropyl) ether	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Bis(2-ethylhexyl) phthalate	ND		0.50	0.22	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Butyl benzyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Chrysene	**0.12**	**J**	0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Dibenz(a,h)anthracene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Dibenzofuran	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Diethyl phthalate	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Dimethyl phthalate	ND		0.50	0.098	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Di-n-butyl phthalate	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Di-n-octyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Fluoranthene	**0.14**	**J**	0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Fluorene	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Hexachloro-1,3-butadiene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Hexachlorobenzene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Hexachlorocyclopentadiene	ND		1.5	0.086	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Hexachloroethane	ND		0.50	0.092	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Indeno[1,2,3-cd]pyrene	**0.14**	**J**	0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Isophorone	ND		0.50	0.079	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Naphthalene	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Nitrobenzene	ND		2.0	0.14	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
N-Nitrosodimethylamine	ND		0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
N-Nitrosodi-n-propylamine	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Pentachlorophenol	ND		2.5	1.8	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Phenanthrene	**0.079**	**J**	0.50	0.072	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Phenol	ND		0.50	0.097	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Pyrene	**0.14**	**J**	0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 21:51	1
Pyridine	ND		0.50	0.24	mg/Kg		08/29/24 09:56	08/31/24 21:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*78*		*10 - 134*	*08/29/24 09:56*	*08/31/24 21:51*	*1*
2-Fluorobiphenyl (Surr)	*62*		*14 - 142*	*08/29/24 09:56*	*08/31/24 21:51*	*1*
2-Fluorophenol (Surr)	*77*		*10 - 123*	*08/29/24 09:56*	*08/31/24 21:51*	*1*
Nitrobenzene-d5 (Surr)	*61*		*10 - 129*	*08/29/24 09:56*	*08/31/24 21:51*	*1*
p-Terphenyl-d14 (Surr)	*60*		*31 - 139*	*08/29/24 09:56*	*08/31/24 21:51*	*1*
Phenol-d6 (Surr)	*76*		*10 - 120*	*08/29/24 09:56*	*08/31/24 21:51*	*1*

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: RB6-1.0
Date Collected: 08/26/24 10:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-12
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
1,2-Dichlorobenzene	ND		0.50	0.084	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
1,3-Dichlorobenzene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
1,4-Dichlorobenzene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
1-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2,4,5-Trichlorophenol	ND		0.50	0.20	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2,4,6-Trichlorophenol	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2,4-Dichlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2,4-Dimethylphenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2,4-Dinitrophenol	ND		2.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2,4-Dinitrotoluene	ND		0.50	0.081	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2,6-Dichlorophenol	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2,6-Dinitrotoluene	ND		0.50	0.086	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2-Chloronaphthalene	ND		0.50	0.086	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2-Chlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2-Methylphenol	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2-Nitroaniline	ND		0.50	0.091	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
2-Nitrophenol	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
3,3'-Dichlorobenzidine	ND		2.5	0.54	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
3/4-Methylphenol	ND		1.0	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
3-Nitroaniline	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
4,6-Dinitro-2-methylphenol	ND		2.5	0.94	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
4-Bromophenyl phenyl ether	ND		0.50	0.073	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
4-Chloro-3-methylphenol	ND		0.50	0.092	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
4-Chloroaniline	ND		0.50	0.082	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
4-Chlorophenyl phenyl ether	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
4-Nitroaniline	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
4-Nitrophenol	ND		0.50	0.31	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Acenaphthene	ND		0.50	0.079	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Acenaphthylene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Aniline	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Anthracene	ND		0.50	0.077	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Azobenzene	ND		0.50	0.078	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Benzidine	ND		5.0	0.57	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Benzo[a]anthracene	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Benzo[a]pyrene	ND		0.50	0.099	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Benzo[b]fluoranthene	**0.15**	**J**	0.50	0.084	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Benzo[g,h,i]perylene	ND		0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Benzo[k]fluoranthene	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Benzoic acid	ND		2.5	0.67	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Benzyl alcohol	ND		0.50	0.17	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Bis(2-chloroethoxy)methane	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Bis(2-chloroethyl)ether	ND		2.5	0.11	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
bis (2-Chloroisopropyl) ether	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Bis(2-ethylhexyl) phthalate	ND		0.50	0.22	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Butyl benzyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Chrysene	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Dibenz(a,h)anthracene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 22:14	1

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB6-1.0
Date Collected: 08/26/24 10:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-12
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzofuran	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Diethyl phthalate	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Dimethyl phthalate	ND		0.50	0.098	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Di-n-butyl phthalate	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Di-n-octyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Fluoranthene	**0.10**	**J**	0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Fluorene	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Hexachloro-1,3-butadiene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Hexachlorobenzene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Hexachlorocyclopentadiene	ND		1.5	0.086	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Hexachloroethane	ND		0.50	0.092	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Indeno[1,2,3-cd]pyrene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Isophorone	ND		0.50	0.079	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Naphthalene	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Nitrobenzene	ND		2.0	0.14	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
N-Nitrosodimethylamine	ND		0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
N-Nitrosodi-n-propylamine	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Pentachlorophenol	ND		2.5	1.8	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Phenanthrene	**0.079**	**J**	0.50	0.072	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Phenol	ND		0.50	0.097	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Pyrene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:14	1
Pyridine	ND		0.50	0.24	mg/Kg		08/29/24 09:56	08/31/24 22:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*87*		*10 - 134*	*08/29/24 09:56*	*08/31/24 22:14*	*1*
2-Fluorobiphenyl (Surr)	*73*		*14 - 142*	*08/29/24 09:56*	*08/31/24 22:14*	*1*
2-Fluorophenol (Surr)	*89*		*10 - 123*	*08/29/24 09:56*	*08/31/24 22:14*	*1*
Nitrobenzene-d5 (Surr)	*71*		*10 - 129*	*08/29/24 09:56*	*08/31/24 22:14*	*1*
p-Terphenyl-d14 (Surr)	*68*		*31 - 139*	*08/29/24 09:56*	*08/31/24 22:14*	*1*
Phenol-d6 (Surr)	*92*		*10 - 120*	*08/29/24 09:56*	*08/31/24 22:14*	*1*

Client Sample ID: RB8-0.5
Date Collected: 08/26/24 11:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
1,2-Dichlorobenzene	ND		0.50	0.084	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
1,3-Dichlorobenzene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
1,4-Dichlorobenzene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
1-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2,4,5-Trichlorophenol	ND		0.50	0.20	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2,4,6-Trichlorophenol	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2,4-Dichlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2,4-Dimethylphenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2,4-Dinitrophenol	ND		2.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2,4-Dinitrotoluene	ND		0.50	0.081	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2,6-Dichlorophenol	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2,6-Dinitrotoluene	ND		0.50	0.086	mg/Kg		08/29/24 09:56	08/31/24 22:37	1

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB8-0.5
Date Collected: 08/26/24 11:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloronaphthalene	ND		0.50	0.086	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2-Chlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2-Methylphenol	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2-Nitroaniline	ND		0.50	0.091	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
2-Nitrophenol	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
3,3'-Dichlorobenzidine	ND		2.5	0.54	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
3/4-Methylphenol	**0.16**	**J**	1.0	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
3-Nitroaniline	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
4,6-Dinitro-2-methylphenol	ND		2.5	0.94	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
4-Bromophenyl phenyl ether	ND		0.50	0.073	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
4-Chloro-3-methylphenol	ND		0.50	0.092	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
4-Chloroaniline	ND		0.50	0.082	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
4-Chlorophenyl phenyl ether	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
4-Nitroaniline	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
4-Nitrophenol	ND		0.50	0.31	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Acenaphthene	ND		0.50	0.079	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Acenaphthylene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Aniline	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Anthracene	ND		0.50	0.077	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Azobenzene	ND		0.50	0.078	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Benzidine	ND		5.0	0.57	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Benzo[a]anthracene	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Benzo[a]pyrene	ND		0.50	0.099	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Benzo[b]fluoranthene	ND		0.50	0.084	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Benzo[g,h,i]perylene	ND		0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Benzo[k]fluoranthene	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Benzoic acid	ND		2.5	0.67	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Benzyl alcohol	ND		0.50	0.17	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Bis(2-chloroethoxy)methane	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Bis(2-chloroethyl)ether	ND		2.5	0.11	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
bis (2-Chloroisopropyl) ether	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Bis(2-ethylhexyl) phthalate	ND		0.50	0.22	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Butyl benzyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Chrysene	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Dibenz(a,h)anthracene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Dibenzofuran	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Diethyl phthalate	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Dimethyl phthalate	ND		0.50	0.098	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Di-n-butyl phthalate	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Di-n-octyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Fluoranthene	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Fluorene	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Hexachloro-1,3-butadiene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Hexachlorobenzene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Hexachlorocyclopentadiene	ND		1.5	0.086	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Hexachloroethane	ND		0.50	0.092	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Indeno[1,2,3-cd]pyrene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Isophorone	ND		0.50	0.079	mg/Kg		08/29/24 09:56	08/31/24 22:37	1

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB8-0.5
Date Collected: 08/26/24 11:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Nitrobenzene	ND		2.0	0.14	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
N-Nitrosodimethylamine	ND		0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
N-Nitrosodi-n-propylamine	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Pentachlorophenol	ND		2.5	1.8	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Phenanthrene	ND		0.50	0.072	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Phenol	ND		0.50	0.097	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Pyrene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 22:37	1
Pyridine	ND		0.50	0.24	mg/Kg		08/29/24 09:56	08/31/24 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*88*		*10 - 134*	*08/29/24 09:56*	*08/31/24 22:37*	*1*
2-Fluorobiphenyl (Surr)	*82*		*14 - 142*	*08/29/24 09:56*	*08/31/24 22:37*	*1*
2-Fluorophenol (Surr)	*95*		*10 - 123*	*08/29/24 09:56*	*08/31/24 22:37*	*1*
Nitrobenzene-d5 (Surr)	*71*		*10 - 129*	*08/29/24 09:56*	*08/31/24 22:37*	*1*
p-Terphenyl-d14 (Surr)	*70*		*31 - 139*	*08/29/24 09:56*	*08/31/24 22:37*	*1*
Phenol-d6 (Surr)	*103*		*10 - 120*	*08/29/24 09:56*	*08/31/24 22:37*	*1*

Client Sample ID: RB8-1.0
Date Collected: 08/26/24 11:35
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-14
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
1,2-Dichlorobenzene	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
1,3-Dichlorobenzene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
1,4-Dichlorobenzene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
1-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2,4,5-Trichlorophenol	ND		5.0	2.0	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2,4,6-Trichlorophenol	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2,4-Dichlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2,4-Dimethylphenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2,4-Dinitrophenol	ND		20	9.1	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2,4-Dinitrotoluene	ND		5.0	0.81	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2,6-Dichlorophenol	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2,6-Dinitrotoluene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2-Chloronaphthalene	ND		5.0	0.86	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2-Chlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2-Methylphenol	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2-Nitroaniline	ND		5.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
2-Nitrophenol	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
3,3'-Dichlorobenzidine	ND		25	5.4	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
3/4-Methylphenol	**1.3**	**J**	10	1.0	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
3-Nitroaniline	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
4,6-Dinitro-2-methylphenol	ND		25	9.4	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
4-Bromophenyl phenyl ether	ND		5.0	0.73	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
4-Chloro-3-methylphenol	ND		5.0	0.92	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
4-Chloroaniline	ND		5.0	0.82	mg/Kg		08/29/24 09:56	08/31/24 23:00	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB8-1.0
Date Collected: 08/26/24 11:35
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-14
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorophenyl phenyl ether	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
4-Nitroaniline	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
4-Nitrophenol	ND		5.0	3.1	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Acenaphthene	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Acenaphthylene	ND		5.0	0.96	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Aniline	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Anthracene	ND		5.0	0.77	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Azobenzene	ND		5.0	0.78	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Benzidine	ND		50	5.7	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Benzo[a]anthracene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Benzo[a]pyrene	ND		5.0	0.99	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Benzo[b]fluoranthene	ND		5.0	0.84	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Benzo[g,h,i]perylene	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Benzo[k]fluoranthene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Benzoic acid	ND		25	6.7	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Benzyl alcohol	ND		5.0	1.7	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Bis(2-chloroethoxy)methane	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Bis(2-chloroethyl)ether	ND		25	1.1	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
bis (2-Chloroisopropyl) ether	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Bis(2-ethylhexyl) phthalate	ND		5.0	2.2	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Butyl benzyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Chrysene	ND		5.0	0.83	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Dibenz(a,h)anthracene	ND		5.0	0.80	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Dibenzofuran	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Diethyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Dimethyl phthalate	ND		5.0	0.98	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Di-n-butyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Di-n-octyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Fluoranthene	ND		5.0	0.95	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Fluorene	ND		5.0	0.94	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Hexachloro-1,3-butadiene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Hexachlorobenzene	ND		5.0	0.80	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Hexachlorocyclopentadiene	ND		15	0.86	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Hexachloroethane	ND		5.0	0.92	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Indeno[1,2,3-cd]pyrene	ND		5.0	1.2	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Isophorone	ND		5.0	0.79	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Naphthalene	ND		5.0	1.4	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Nitrobenzene	ND		20	1.4	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
N-Nitrosodimethylamine	ND		5.0	0.89	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
N-Nitrosodi-n-propylamine	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
n-Nitrosodiphenylamine(as diphenylamine)	ND		5.0	0.85	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Pentachlorophenol	ND		25	18	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Phenanthrene	ND		5.0	0.72	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Phenol	ND		5.0	0.97	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Pyrene	ND		5.0	1.0	mg/Kg		08/29/24 09:56	08/31/24 23:00	10
Pyridine	ND		5.0	2.4	mg/Kg		08/29/24 09:56	08/31/24 23:00	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*82*		*10 - 134*	*08/29/24 09:56*	*08/31/24 23:00*	*10*

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB8-1.0
Date Collected: 08/26/24 11:35
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-14
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*55*		*14 - 142*	*08/29/24 09:56*	*08/31/24 23:00*	*10*
2-Fluorophenol (Surr)	*54*		*10 - 123*	*08/29/24 09:56*	*08/31/24 23:00*	*10*
Nitrobenzene-d5 (Surr)	*42*		*10 - 129*	*08/29/24 09:56*	*08/31/24 23:00*	*10*
p-Terphenyl-d14 (Surr)	*48*		*31 - 139*	*08/29/24 09:56*	*08/31/24 23:00*	*10*
Phenol-d6 (Surr)	*61*		*10 - 120*	*08/29/24 09:56*	*08/31/24 23:00*	*10*

Client Sample ID: RB9-0.5
Date Collected: 08/26/24 11:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-15
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		2.5	0.60	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
1,2-Dichlorobenzene	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
1,3-Dichlorobenzene	ND		2.5	0.52	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
1,4-Dichlorobenzene	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
1-Methylnaphthalene	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2,4,5-Trichlorophenol	ND		2.5	0.98	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2,4,6-Trichlorophenol	ND		2.5	0.59	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2,4-Dichlorophenol	ND		2.5	0.66	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2,4-Dimethylphenol	ND		2.5	0.64	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2,4-Dinitrophenol	ND		10	4.6	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2,4-Dinitrotoluene	ND		2.5	0.41	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2,6-Dichlorophenol	ND		2.5	0.56	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2,6-Dinitrotoluene	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2-Chloronaphthalene	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2-Chlorophenol	ND		2.5	0.66	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2-Methylnaphthalene	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2-Methylphenol	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2-Nitroaniline	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
2-Nitrophenol	ND		2.5	0.69	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
3,3'-Dichlorobenzidine	ND		12	2.7	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
3/4-Methylphenol	ND		5.0	0.52	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
3-Nitroaniline	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
4,6-Dinitro-2-methylphenol	ND		12	4.7	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
4-Bromophenyl phenyl ether	ND		2.5	0.37	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
4-Chloro-3-methylphenol	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
4-Chloroaniline	ND		2.5	0.41	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
4-Chlorophenyl phenyl ether	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
4-Nitroaniline	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
4-Nitrophenol	ND		2.5	1.6	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Acenaphthene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Acenaphthylene	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Aniline	ND		2.5	0.48	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Anthracene	ND		2.5	0.39	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Azobenzene	ND		2.5	0.39	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Benzidine	ND		25	2.9	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Benzo[a]anthracene	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Benzo[a]pyrene	ND		2.5	0.50	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Benzo[b]fluoranthene	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Benzo[g,h,i]perylene	ND		2.5	0.45	mg/Kg		08/29/24 09:56	08/31/24 23:24	5

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB9-0.5
Date Collected: 08/26/24 11:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-15
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Benzoic acid	ND		12	3.4	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Benzyl alcohol	ND		2.5	0.83	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Bis(2-chloroethoxy)methane	ND		2.5	0.55	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Bis(2-chloroethyl)ether	ND		12	0.53	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
bis (2-Chloroisopropyl) ether	ND		2.5	0.59	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Bis(2-ethylhexyl) phthalate	ND		2.5	1.1	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Butyl benzyl phthalate	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Chrysene	ND		2.5	0.42	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Dibenz(a,h)anthracene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Dibenzofuran	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Diethyl phthalate	ND		2.5	0.57	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Dimethyl phthalate	ND		2.5	0.49	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Di-n-butyl phthalate	ND		2.5	0.55	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Di-n-octyl phthalate	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Fluoranthene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Fluorene	ND		2.5	0.47	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Hexachloro-1,3-butadiene	ND		2.5	0.62	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Hexachlorobenzene	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Hexachlorocyclopentadiene	ND		7.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Hexachloroethane	ND		2.5	0.46	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Indeno[1,2,3-cd]pyrene	ND		2.5	0.62	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Isophorone	ND		2.5	0.40	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Naphthalene	ND		2.5	0.69	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Nitrobenzene	ND		10	0.68	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
N-Nitrosodimethylamine	ND		2.5	0.44	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
N-Nitrosodi-n-propylamine	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
n-Nitrosodiphenylamine(as diphenylamine)	ND		2.5	0.43	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Pentachlorophenol	ND		12	9.2	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Phenanthrene	ND		2.5	0.36	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Phenol	ND		2.5	0.49	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Pyrene	ND		2.5	0.51	mg/Kg		08/29/24 09:56	08/31/24 23:24	5
Pyridine	ND		2.5	1.2	mg/Kg		08/29/24 09:56	08/31/24 23:24	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*80*		*10 - 134*	*08/29/24 09:56*	*08/31/24 23:24*	*5*
2-Fluorobiphenyl (Surr)	*70*		*14 - 142*	*08/29/24 09:56*	*08/31/24 23:24*	*5*
2-Fluorophenol (Surr)	*70*		*10 - 123*	*08/29/24 09:56*	*08/31/24 23:24*	*5*
Nitrobenzene-d5 (Surr)	*58*		*10 - 129*	*08/29/24 09:56*	*08/31/24 23:24*	*5*
p-Terphenyl-d14 (Surr)	*60*		*31 - 139*	*08/29/24 09:56*	*08/31/24 23:24*	*5*
Phenol-d6 (Surr)	*74*		*10 - 120*	*08/29/24 09:56*	*08/31/24 23:24*	*5*

Client Sample ID: RB9-1.0
Date Collected: 08/26/24 12:00
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-16
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
1,2-Dichlorobenzene	ND		0.50	0.084	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
1,3-Dichlorobenzene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 23:47	1

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB9-1.0
Date Collected: 08/26/24 12:00
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-16
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
1-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2,4,5-Trichlorophenol	ND		0.50	0.20	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2,4,6-Trichlorophenol	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2,4-Dichlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2,4-Dimethylphenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2,4-Dinitrophenol	ND		2.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2,4-Dinitrotoluene	ND		0.50	0.081	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2,6-Dichlorophenol	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2,6-Dinitrotoluene	ND		0.50	0.086	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2-Chloronaphthalene	ND		0.50	0.087	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2-Chlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2-Methylphenol	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2-Nitroaniline	ND		0.50	0.091	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
2-Nitrophenol	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
3,3'-Dichlorobenzidine	ND		2.5	0.54	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
3/4-Methylphenol	ND		1.0	0.10	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
3-Nitroaniline	ND		0.50	0.084	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
4,6-Dinitro-2-methylphenol	ND		2.5	0.95	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
4-Bromophenyl phenyl ether	ND		0.50	0.073	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
4-Chloro-3-methylphenol	ND		0.50	0.093	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
4-Chloroaniline	ND		0.50	0.082	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
4-Chlorophenyl phenyl ether	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
4-Nitroaniline	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
4-Nitrophenol	ND		0.50	0.31	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Acenaphthene	ND		0.50	0.079	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Acenaphthylene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Aniline	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Anthracene	ND		0.50	0.078	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Azobenzene	ND		0.50	0.078	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Benzidine	ND		5.0	0.57	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Benzo[a]anthracene	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Benzo[a]pyrene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Benzo[b]fluoranthene	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Benzo[g,h,i]perylene	ND		0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Benzo[k]fluoranthene	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Benzoic acid	ND		2.5	0.67	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Benzyl alcohol	ND		0.50	0.17	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Bis(2-chloroethoxy)methane	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Bis(2-chloroethyl)ether	ND		2.5	0.11	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
bis (2-Chloroisopropyl) ether	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Bis(2-ethylhexyl) phthalate	ND		0.50	0.22	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Butyl benzyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Chrysene	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Dibenz(a,h)anthracene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Dibenzofuran	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Diethyl phthalate	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Dimethyl phthalate	ND		0.50	0.098	mg/Kg		08/29/24 09:56	08/31/24 23:47	1

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB9-1.0
Date Collected: 08/26/24 12:00
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-16
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Di-n-octyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Fluoranthene	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Fluorene	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Hexachloro-1,3-butadiene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Hexachlorobenzene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Hexachlorocyclopentadiene	ND		1.5	0.086	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Hexachloroethane	ND		0.50	0.092	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Indeno[1,2,3-cd]pyrene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Isophorone	ND		0.50	0.079	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Naphthalene	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Nitrobenzene	ND		2.0	0.14	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
N-Nitrosodimethylamine	ND		0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
N-Nitrosodi-n-propylamine	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Pentachlorophenol	ND		2.5	1.8	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Phenanthrene	ND		0.50	0.072	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Phenol	ND		0.50	0.097	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Pyrene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 23:47	1
Pyridine	ND		0.50	0.24	mg/Kg		08/29/24 09:56	08/31/24 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*86*		*10 - 134*	*08/29/24 09:56*	*08/31/24 23:47*	*1*
2-Fluorobiphenyl (Surr)	*80*		*14 - 142*	*08/29/24 09:56*	*08/31/24 23:47*	*1*
2-Fluorophenol (Surr)	*90*		*10 - 123*	*08/29/24 09:56*	*08/31/24 23:47*	*1*
Nitrobenzene-d5 (Surr)	*67*		*10 - 129*	*08/29/24 09:56*	*08/31/24 23:47*	*1*
p-Terphenyl-d14 (Surr)	*70*		*31 - 139*	*08/29/24 09:56*	*08/31/24 23:47*	*1*
Phenol-d6 (Surr)	*96*		*10 - 120*	*08/29/24 09:56*	*08/31/24 23:47*	*1*

Client Sample ID: RB10-0.5
Date Collected: 08/26/24 12:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.2	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
1,2-Dichlorobenzene	ND		5.0	0.84	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
1,3-Dichlorobenzene	ND		5.0	1.0	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
1,4-Dichlorobenzene	ND		5.0	0.96	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
1-Methylnaphthalene	ND	F1	5.0	1.0	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2,4,5-Trichlorophenol	ND		5.0	2.0	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2,4,6-Trichlorophenol	ND		5.0	1.2	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2,4-Dichlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2,4-Dimethylphenol	ND		5.0	1.3	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2,4-Dinitrophenol	ND		20	9.1	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2,4-Dinitrotoluene	ND	F1	5.0	0.81	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2,6-Dichlorophenol	ND		5.0	1.1	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2,6-Dinitrotoluene	ND		5.0	0.86	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2-Chloronaphthalene	ND		5.0	0.86	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2-Chlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 10:48	08/30/24 14:34	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB10-0.5
Date Collected: 08/26/24 12:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		5.0	0.96	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2-Nitroaniline	ND	F1 F2	5.0	0.91	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
2-Nitrophenol	ND		5.0	1.4	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
3,3'-Dichlorobenzidine	ND		25	5.4	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
3/4-Methylphenol	ND		10	1.0	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
3-Nitroaniline	ND	F1	5.0	0.83	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
4,6-Dinitro-2-methylphenol	ND		25	9.5	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
4-Bromophenyl phenyl ether	ND		5.0	0.73	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
4-Chloro-3-methylphenol	ND		5.0	0.93	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
4-Chloroaniline	ND	F1	5.0	0.82	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
4-Chlorophenyl phenyl ether	ND		5.0	1.0	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
4-Nitroaniline	ND		5.0	1.0	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
4-Nitrophenol	ND	F1	5.0	3.1	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Acenaphthene	ND		5.0	0.79	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Acenaphthylene	ND		5.0	0.96	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Aniline	ND	F1	5.0	0.95	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Anthracene	ND		5.0	0.77	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Azobenzene	ND		5.0	0.78	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Benzidine	ND		50	5.7	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Benzo[a]anthracene	ND		5.0	0.83	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Benzo[a]pyrene	ND		5.0	0.99	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Benzo[b]fluoranthene	ND		5.0	0.85	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Benzo[g,h,i]perylene	ND		5.0	0.89	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Benzo[k]fluoranthene	ND		5.0	0.94	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Benzoic acid	ND	F1	25	6.7	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Benzyl alcohol	ND		5.0	1.7	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Bis(2-chloroethoxy)methane	ND		5.0	1.1	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Bis(2-chloroethyl)ether	ND		25	1.1	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
bis (2-Chloroisopropyl) ether	ND		5.0	1.2	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Bis(2-ethylhexyl) phthalate	**2.6**	**J F1**	5.0	2.2	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Butyl benzyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Chrysene	ND		5.0	0.83	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Dibenz(a,h)anthracene	ND	F1	5.0	0.80	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Dibenzofuran	ND		5.0	0.95	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Diethyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Dimethyl phthalate	ND		5.0	0.98	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Di-n-butyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Di-n-octyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Fluoranthene	ND		5.0	0.95	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Fluorene	ND		5.0	0.94	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Hexachloro-1,3-butadiene	ND		5.0	1.2	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Hexachlorobenzene	ND		5.0	0.80	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Hexachlorocyclopentadiene	ND	F1	15	0.86	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Hexachloroethane	ND		5.0	0.92	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Indeno[1,2,3-cd]pyrene	ND	F1	5.0	1.2	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Isophorone	ND		5.0	0.79	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Naphthalene	ND		5.0	1.4	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Nitrobenzene	ND		20	1.4	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
N-Nitrosodimethylamine	ND		5.0	0.89	mg/Kg		08/29/24 10:48	08/30/24 14:34	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB10-0.5
Date Collected: 08/26/24 12:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-propylamine	ND		5.0	0.85	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
n-Nitrosodiphenylamine(as diphenylamine)	ND		5.0	0.85	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Pentachlorophenol	ND		25	18	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Phenanthrene	ND		5.0	0.72	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Phenol	ND		5.0	0.97	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Pyrene	ND		5.0	1.0	mg/Kg		08/29/24 10:48	08/30/24 14:34	10
Pyridine	ND	F1	5.0	2.4	mg/Kg		08/29/24 10:48	08/30/24 14:34	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*58*		*10 - 134*	*08/29/24 10:48*	*08/30/24 14:34*	*10*
2-Fluorobiphenyl (Surr)	*58*		*14 - 142*	*08/29/24 10:48*	*08/30/24 14:34*	*10*
2-Fluorophenol (Surr)	*62*		*10 - 123*	*08/29/24 10:48*	*08/30/24 14:34*	*10*
Nitrobenzene-d5 (Surr)	*57*		*10 - 129*	*08/29/24 10:48*	*08/30/24 14:34*	*10*
p-Terphenyl-d14 (Surr)	*70*		*31 - 139*	*08/29/24 10:48*	*08/30/24 14:34*	*10*
Phenol-d6 (Surr)	*62*		*10 - 120*	*08/29/24 10:48*	*08/30/24 14:34*	*10*

Client Sample ID: RB10-1.0
Date Collected: 08/26/24 12:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-18
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	1.2	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
1,2-Dichlorobenzene	ND		5.0	0.84	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
1,3-Dichlorobenzene	ND		5.0	1.1	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
1,4-Dichlorobenzene	ND		5.0	0.96	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
1-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2,4,5-Trichlorophenol	ND		5.0	2.0	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2,4,6-Trichlorophenol	ND		5.0	1.2	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2,4-Dichlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2,4-Dimethylphenol	ND		5.0	1.3	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2,4-Dinitrophenol	ND		20	9.1	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2,4-Dinitrotoluene	ND		5.0	0.81	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2,6-Dichlorophenol	ND		5.0	1.1	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2,6-Dinitrotoluene	ND		5.0	0.86	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2-Chloronaphthalene	ND		5.0	0.87	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2-Chlorophenol	ND		5.0	1.3	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2-Methylnaphthalene	ND		5.0	1.0	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2-Methylphenol	ND		5.0	0.97	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2-Nitroaniline	ND		5.0	0.92	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
2-Nitrophenol	ND		5.0	1.4	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
3,3'-Dichlorobenzidine	ND		25	5.4	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
3/4-Methylphenol	ND		10	1.1	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
3-Nitroaniline	ND		5.0	0.84	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
4,6-Dinitro-2-methylphenol	ND		25	9.5	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
4-Bromophenyl phenyl ether	ND		5.0	0.73	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
4-Chloro-3-methylphenol	ND		5.0	0.93	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
4-Chloroaniline	ND		5.0	0.82	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
4-Chlorophenyl phenyl ether	ND		5.0	1.0	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
4-Nitroaniline	ND		5.0	1.0	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
4-Nitrophenol	ND		5.0	3.2	mg/Kg		08/29/24 10:48	09/08/24 00:04	10

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB10-1.0
Date Collected: 08/26/24 12:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-18
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0	0.79	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Acenaphthylene	ND		5.0	0.96	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Aniline	ND		5.0	0.95	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Anthracene	ND		5.0	0.78	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Azobenzene	ND		5.0	0.78	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Benzidine	ND		50	5.8	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Benzo[a]anthracene	ND		5.0	0.83	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Benzo[a]pyrene	ND		5.0	1.0	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Benzo[b]fluoranthene	ND		5.0	0.85	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Benzo[g,h,i]perylene	ND		5.0	0.89	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Benzo[k]fluoranthene	ND		5.0	0.95	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Benzoic acid	ND		25	6.7	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Benzyl alcohol	ND		5.0	1.7	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Bis(2-chloroethoxy)methane	ND		5.0	1.1	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Bis(2-chloroethyl)ether	ND		25	1.1	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
bis (2-Chloroisopropyl) ether	ND		5.0	1.2	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Bis(2-ethylhexyl) phthalate	**3.6**	**J**	5.0	2.2	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Butyl benzyl phthalate	ND		5.0	2.4	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Chrysene	ND		5.0	0.83	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Dibenz(a,h)anthracene	ND		5.0	0.80	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Dibenzofuran	ND		5.0	0.95	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Diethyl phthalate	ND		5.0	1.2	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Dimethyl phthalate	ND		5.0	0.98	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Di-n-butyl phthalate	ND		5.0	1.1	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Di-n-octyl phthalate	ND		5.0	2.3	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Fluoranthene	ND		5.0	0.95	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Fluorene	ND		5.0	0.94	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Hexachloro-1,3-butadiene	ND		5.0	1.3	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Hexachlorobenzene	ND		5.0	0.80	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Hexachlorocyclopentadiene	ND		15	0.87	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Hexachloroethane	ND		5.0	0.92	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Indeno[1,2,3-cd]pyrene	ND		5.0	1.2	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Isophorone	ND		5.0	0.80	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Naphthalene	ND		5.0	1.4	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Nitrobenzene	ND		20	1.4	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
N-Nitrosodimethylamine	ND		5.0	0.89	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
N-Nitrosodi-n-propylamine	ND		5.0	0.86	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
n-Nitrosodiphenylamine(as diphenylamine)	ND		5.0	0.85	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Pentachlorophenol	ND		25	18	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Phenanthrene	ND		5.0	0.72	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Phenol	ND		5.0	0.97	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Pyrene	ND		5.0	1.0	mg/Kg		08/29/24 10:48	09/08/24 00:04	10
Pyridine	ND		5.0	2.4	mg/Kg		08/29/24 10:48	09/08/24 00:04	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*71*		*10 - 134*	*08/29/24 10:48*	*09/08/24 00:04*	*10*
2-Fluorobiphenyl (Surr)	*53*		*14 - 142*	*08/29/24 10:48*	*09/08/24 00:04*	*10*
2-Fluorophenol (Surr)	*58*		*10 - 123*	*08/29/24 10:48*	*09/08/24 00:04*	*10*
Nitrobenzene-d5 (Surr)	*60*		*10 - 129*	*08/29/24 10:48*	*09/08/24 00:04*	*10*

Method: SW846 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: RB10-1.0
Date Collected: 08/26/24 12:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-18
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl-d14 (Surr)	66		31 - 139	08/29/24 10:48	09/08/24 00:04	10
Phenol-d6 (Surr)	63		10 - 120	08/29/24 10:48	09/08/24 00:04	10

Method: SW846 8015B - Gasoline Range Organics - (GC)

Client Sample ID: RB1-0.5
Date Collected: 08/26/24 08:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.10	0.044	mg/Kg		09/05/24 11:40	09/05/24 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*42 - 126*	*09/05/24 11:40*	*09/05/24 19:22*	*1*

Client Sample ID: RB1-1.0
Date Collected: 08/26/24 09:15
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.098	0.043	mg/Kg		09/05/24 11:40	09/05/24 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*42 - 126*	*09/05/24 11:40*	*09/05/24 19:40*	*1*

Client Sample ID: RB2-0.5
Date Collected: 08/26/24 09:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.098	0.043	mg/Kg		09/06/24 15:33	09/06/24 20:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*42 - 126*	*09/06/24 15:33*	*09/06/24 20:33*	*1*

Client Sample ID: RB2-1.0
Date Collected: 08/26/24 09:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.099	0.044	mg/Kg		09/05/24 11:40	09/05/24 20:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*42 - 126*	*09/05/24 11:40*	*09/05/24 20:18*	*1*

Client Sample ID: RB5-0.5
Date Collected: 08/26/24 09:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.098	0.043	mg/Kg		09/05/24 11:40	09/05/24 20:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*42 - 126*	*09/05/24 11:40*	*09/05/24 20:37*	*1*

Client Sample ID: RB5-1.0
Date Collected: 08/26/24 09:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.099	0.044	mg/Kg		09/05/24 11:40	09/05/24 20:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*42 - 126*	*09/05/24 11:40*	*09/05/24 20:56*	*1*

Method: SW846 8015B - Gasoline Range Organics - (GC)

Client Sample ID: RB3-0.5
Date Collected: 08/26/24 10:05
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-7
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.097	0.043	mg/Kg		09/05/24 11:40	09/05/24 21:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*42 - 126*	*09/05/24 11:40*	*09/05/24 21:15*	*1*

Client Sample ID: RB3-1.0
Date Collected: 08/26/24 10:10
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-8
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.097	0.043	mg/Kg		09/05/24 18:34	09/06/24 00:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*42 - 126*	*09/05/24 18:34*	*09/06/24 00:05*	*1*

Client Sample ID: RB4-0.5
Date Collected: 08/26/24 10:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.099	0.044	mg/Kg		09/05/24 18:34	09/06/24 00:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*78*		*42 - 126*	*09/05/24 18:34*	*09/06/24 00:24*	*1*

Client Sample ID: RB4-1.0
Date Collected: 08/26/24 10:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-10
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.098	0.043	mg/Kg		09/06/24 15:33	09/06/24 20:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*42 - 126*	*09/06/24 15:33*	*09/06/24 20:52*	*1*

Client Sample ID: RB6-0.5
Date Collected: 08/26/24 10:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-11
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.096	0.042	mg/Kg		09/05/24 18:34	09/06/24 01:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*42 - 126*	*09/05/24 18:34*	*09/06/24 01:01*	*1*

Client Sample ID: RB6-1.0
Date Collected: 08/26/24 10:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-12
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.10	0.044	mg/Kg		09/05/24 18:34	09/06/24 01:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*42 - 126*	*09/05/24 18:34*	*09/06/24 01:20*	*1*

Method: SW846 8015B - Gasoline Range Organics - (GC)

Client Sample ID: RB8-0.5
Date Collected: 08/26/24 11:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.50	0.22	mg/Kg		09/06/24 15:33	09/06/24 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*77*		*42 - 126*	*09/06/24 15:33*	*09/06/24 21:11*	*1*

Client Sample ID: RB8-1.0
Date Collected: 08/26/24 11:35
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-14
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.49	0.22	mg/Kg		09/06/24 15:33	09/06/24 21:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*59*		*42 - 126*	*09/06/24 15:33*	*09/06/24 21:30*	*1*

Client Sample ID: RB9-0.5
Date Collected: 08/26/24 11:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-15
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.098	0.043	mg/Kg		09/05/24 18:34	09/06/24 01:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*58*		*42 - 126*	*09/05/24 18:34*	*09/06/24 01:38*	*1*

Client Sample ID: RB9-1.0
Date Collected: 08/26/24 12:00
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-16
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.097	0.043	mg/Kg		09/05/24 18:34	09/06/24 01:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*42 - 126*	*09/05/24 18:34*	*09/06/24 01:57*	*1*

Client Sample ID: RB10-0.5
Date Collected: 08/26/24 12:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.10	0.044	mg/Kg		09/05/24 18:34	09/06/24 02:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*52*		*42 - 126*	*09/05/24 18:34*	*09/06/24 02:16*	*1*

Client Sample ID: RB10-1.0
Date Collected: 08/26/24 12:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-18
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.098	0.043	mg/Kg		09/05/24 18:34	09/06/24 02:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*42 - 126*	*09/05/24 18:34*	*09/06/24 02:35*	*1*

Method: SW846 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: RB1-0.5
Date Collected: 08/26/24 08:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	39		5.0	4.6	mg/Kg		08/28/24 11:06	08/31/24 12:22	1
TPH as Motor Oil (C17-C44)	130		25	10	mg/Kg		08/28/24 11:06	08/31/24 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*99*		*60 - 138*	*08/28/24 11:06*	*08/31/24 12:22*	*1*

Client Sample ID: RB1-1.0
Date Collected: 08/26/24 09:15
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	49	H	5.0	4.5	mg/Kg		09/13/24 12:44	09/14/24 00:54	1
TPH as Motor Oil (C17-C44)	170	H	25	10	mg/Kg		09/13/24 12:44	09/14/24 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*116*		*60 - 138*	*09/13/24 12:44*	*09/14/24 00:54*	*1*

Client Sample ID: RB2-0.5
Date Collected: 08/26/24 09:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	38	H	5.0	4.5	mg/Kg		09/13/24 12:44	09/14/24 01:15	1
TPH as Motor Oil (C17-C44)	160	H	25	10	mg/Kg		09/13/24 12:44	09/14/24 01:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*107*		*60 - 138*	*09/13/24 12:44*	*09/14/24 01:15*	*1*

Client Sample ID: RB2-1.0
Date Collected: 08/26/24 09:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	36	H	5.0	4.6	mg/Kg		09/13/24 12:44	09/14/24 01:36	1
TPH as Motor Oil (C17-C44)	160	H	25	10	mg/Kg		09/13/24 12:44	09/14/24 01:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*114*		*60 - 138*	*09/13/24 12:44*	*09/14/24 01:36*	*1*

Client Sample ID: RB5-0.5
Date Collected: 08/26/24 09:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	660	H	50	45	mg/Kg		09/13/24 12:44	09/14/24 01:57	10
TPH as Motor Oil (C17-C44)	1800	H	250	100	mg/Kg		09/13/24 12:44	09/14/24 01:57	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*123*		*60 - 138*	*09/13/24 12:44*	*09/14/24 01:57*	*10*

Client Sample ID: RB5-1.0
Date Collected: 08/26/24 09:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	790	H	50	45	mg/Kg		09/13/24 12:44	09/14/24 02:17	10
TPH as Motor Oil (C17-C44)	2300	H	250	100	mg/Kg		09/13/24 12:44	09/14/24 02:17	10

Method: SW846 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	125		60 - 138	09/13/24 12:44	09/14/24 02:17	10

Client Sample ID: RB3-0.5
Date Collected: 08/26/24 10:05
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-7
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	6.7	H	5.0	4.5	mg/Kg		09/13/24 12:44	09/14/24 02:38	1
TPH as Motor Oil (C17-C44)	17	J H	25	10	mg/Kg		09/13/24 12:44	09/14/24 02:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	115		60 - 138	09/13/24 12:44	09/14/24 02:38	1

Client Sample ID: RB3-1.0
Date Collected: 08/26/24 10:10
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-8
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	130	H	5.0	4.6	mg/Kg		09/13/24 12:44	09/14/24 02:59	1
TPH as Motor Oil (C17-C44)	320	H	25	10	mg/Kg		09/13/24 12:44	09/14/24 02:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	119		60 - 138	09/13/24 12:44	09/14/24 02:59	1

Client Sample ID: RB4-0.5
Date Collected: 08/26/24 10:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	52	H	5.0	4.5	mg/Kg		09/13/24 12:44	09/14/24 03:19	1
TPH as Motor Oil (C17-C44)	190	H	25	10	mg/Kg		09/13/24 12:44	09/14/24 03:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	125		60 - 138	09/13/24 12:44	09/14/24 03:19	1

Client Sample ID: RB4-1.0
Date Collected: 08/26/24 10:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-10
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	8.5	H	5.0	4.5	mg/Kg		09/13/24 12:44	09/14/24 03:40	1
TPH as Motor Oil (C17-C44)	22	J H	25	10	mg/Kg		09/13/24 12:44	09/14/24 03:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	116		60 - 138	09/13/24 12:44	09/14/24 03:40	1

Client Sample ID: RB6-0.5
Date Collected: 08/26/24 10:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-11
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	36	H	5.0	4.6	mg/Kg		09/13/24 12:44	09/14/24 04:01	1
TPH as Motor Oil (C17-C44)	84	H	25	10	mg/Kg		09/13/24 12:44	09/14/24 04:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	122		60 - 138	09/13/24 12:44	09/14/24 04:01	1

Method: SW846 8015B - Diesel Range Organics (DRO) (GC)

Client Sample ID: RB6-1.0
Date Collected: 08/26/24 10:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-12
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	8.8	H	5.0	4.6	mg/Kg		09/13/24 12:44	09/14/24 05:03	1
TPH as Motor Oil (C17-C44)	30	H	25	10	mg/Kg		09/13/24 12:44	09/14/24 05:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*112*		*60 - 138*	*09/13/24 12:44*	*09/14/24 05:03*	*1*

Client Sample ID: RB9-1.0
Date Collected: 08/26/24 12:00
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-16
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	88	H	5.0	4.6	mg/Kg		09/13/24 12:44	09/14/24 06:26	1
TPH as Motor Oil (C17-C44)	120	H	25	10	mg/Kg		09/13/24 12:44	09/14/24 06:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*111*		*60 - 138*	*09/13/24 12:44*	*09/14/24 06:26*	*1*

Client Sample ID: RB10-0.5
Date Collected: 08/26/24 12:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	200	H	5.0	4.6	mg/Kg		09/13/24 12:44	09/14/24 06:47	1
TPH as Motor Oil (C17-C44)	440	H	25	10	mg/Kg		09/13/24 12:44	09/14/24 06:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*104*		*60 - 138*	*09/13/24 12:44*	*09/14/24 06:47*	*1*

Client Sample ID: RB10-1.0
Date Collected: 08/26/24 12:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-18
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	35	H	5.0	4.5	mg/Kg		09/13/24 12:44	09/14/24 07:07	1
TPH as Motor Oil (C17-C44)	78	H	25	10	mg/Kg		09/13/24 12:44	09/14/24 07:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*88*		*60 - 138*	*09/13/24 12:44*	*09/14/24 07:07*	*1*

Method: SW846 8015B - Diesel Range Organics (DRO) (GC) - DL

Client Sample ID: RB8-0.5
Date Collected: 08/26/24 11:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2500	H	50	45	mg/Kg		09/13/24 12:44	09/16/24 15:18	10
TPH as Motor Oil (C17-C44)	2100	H	250	100	mg/Kg		09/13/24 12:44	09/16/24 15:18	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*144*	*S1+*	*60 - 138*	*09/13/24 12:44*	*09/16/24 15:18*	*10*

Client Sample ID: RB8-1.0
Date Collected: 08/26/24 11:35
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-14
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	6800	H	98	90	mg/Kg		09/13/24 12:44	09/16/24 15:38	10
TPH as Motor Oil (C17-C44)	7100	H	490	200	mg/Kg		09/13/24 12:44	09/16/24 15:38	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*311*	*S1+*	*60 - 138*	*09/13/24 12:44*	*09/16/24 15:38*	*10*

Client Sample ID: RB9-0.5
Date Collected: 08/26/24 11:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-15
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	2100	H	50	46	mg/Kg		09/13/24 12:44	09/16/24 15:59	10
TPH as Motor Oil (C17-C44)	2400	H	250	100	mg/Kg		09/13/24 12:44	09/16/24 15:59	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*204*	*S1+*	*60 - 138*	*09/13/24 12:44*	*09/16/24 15:59*	*10*

Method: SW846 6010B - Metals (ICP)

Client Sample ID: RB1-0.5
Date Collected: 08/26/24 08:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-1
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.61		2.78	1.80	mg/Kg		08/28/24 11:55	08/28/24 20:35	2
Lead	32.6		1.85	1.23	mg/Kg		08/28/24 11:55	08/28/24 20:35	2

Client Sample ID: RB1-1.0
Date Collected: 08/26/24 09:15
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-2
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.18		3.06	1.98	mg/Kg		08/28/24 11:55	08/28/24 20:38	2
Lead	38.3		2.04	1.35	mg/Kg		08/28/24 11:55	08/28/24 20:38	2

Client Sample ID: RB2-0.5
Date Collected: 08/26/24 09:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-3
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.00		3.26	2.11	mg/Kg		08/28/24 11:55	08/28/24 20:44	2
Lead	42.0		2.17	1.44	mg/Kg		08/28/24 11:55	08/28/24 20:44	2

Client Sample ID: RB2-1.0
Date Collected: 08/26/24 09:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-4
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.17		3.19	2.06	mg/Kg		08/28/24 11:55	08/28/24 20:47	2
Lead	41.1		2.13	1.41	mg/Kg		08/28/24 11:55	08/28/24 20:47	2

Client Sample ID: RB5-0.5
Date Collected: 08/26/24 09:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.98		3.13	2.02	mg/Kg		08/28/24 11:55	08/28/24 20:49	2
Lead	181		2.08	1.38	mg/Kg		08/28/24 11:55	08/28/24 20:49	2

Client Sample ID: RB5-1.0
Date Collected: 08/26/24 09:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-6
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	18.1		2.88	1.87	mg/Kg		08/28/24 11:55	08/28/24 20:51	2
Lead	42.6		1.92	1.27	mg/Kg		08/28/24 11:55	08/28/24 20:51	2

Client Sample ID: RB3-0.5
Date Collected: 08/26/24 10:05
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-7
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	5.00		2.78	1.80	mg/Kg		08/28/24 11:55	08/28/24 20:54	2
Lead	14.1		1.85	1.23	mg/Kg		08/28/24 11:55	08/28/24 20:54	2

Client Sample ID: RB3-1.0
Date Collected: 08/26/24 10:10
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-8
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.68		2.83	1.83	mg/Kg		08/28/24 11:55	08/28/24 20:56	2
Lead	214		1.89	1.25	mg/Kg		08/28/24 11:55	08/28/24 20:56	2

Method: SW846 6010B - Metals (ICP)

Client Sample ID: RB4-0.5
Date Collected: 08/26/24 10:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.41		3.26	2.11	mg/Kg		08/28/24 11:55	08/28/24 20:58	2
Lead	112		2.17	1.44	mg/Kg		08/28/24 11:55	08/28/24 20:58	2

Client Sample ID: RB4-1.0
Date Collected: 08/26/24 10:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-10
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.19		2.78	1.80	mg/Kg		08/28/24 11:55	08/28/24 21:01	2
Lead	40.0		1.85	1.23	mg/Kg		08/28/24 11:55	08/28/24 21:01	2

Client Sample ID: RB6-0.5
Date Collected: 08/26/24 10:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-11
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		3.19	2.06	mg/Kg		08/28/24 11:55	08/28/24 21:03	2
Lead	11.6		2.13	1.41	mg/Kg		08/28/24 11:55	08/28/24 21:03	2

Client Sample ID: RB6-1.0
Date Collected: 08/26/24 10:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-12
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.57	J	3.26	2.11	mg/Kg		08/28/24 11:55	08/28/24 21:05	2
Lead	19.0		2.17	1.44	mg/Kg		08/28/24 11:55	08/28/24 21:05	2

Client Sample ID: RB8-0.5
Date Collected: 08/26/24 11:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.96		3.13	2.02	mg/Kg		08/28/24 11:55	08/28/24 21:12	2
Lead	154		2.08	1.38	mg/Kg		08/28/24 11:55	08/28/24 21:12	2

Client Sample ID: RB8-1.0
Date Collected: 08/26/24 11:35
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-14
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.21		2.88	1.87	mg/Kg		08/28/24 11:55	08/28/24 21:14	2
Lead	273		1.92	1.27	mg/Kg		08/28/24 11:55	08/28/24 21:14	2

Client Sample ID: RB9-0.5
Date Collected: 08/26/24 11:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-15
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.51		3.19	2.06	mg/Kg		08/28/24 11:55	08/28/24 21:17	2
Lead	109		2.13	1.41	mg/Kg		08/28/24 11:55	08/28/24 21:17	2

Client Sample ID: RB9-1.0
Date Collected: 08/26/24 12:00
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-16
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.02	J	3.06	1.98	mg/Kg		08/28/24 11:55	08/28/24 21:19	2
Lead	13.9		2.04	1.35	mg/Kg		08/28/24 11:55	08/28/24 21:19	2

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Method: SW846 6010B - Metals (ICP)

Client Sample ID: RB10-0.5
Date Collected: 08/26/24 12:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	18.9		3.13	2.02	mg/Kg		08/28/24 11:55	08/28/24 21:21	2
Lead	304		2.08	1.38	mg/Kg		08/28/24 11:55	08/28/24 21:21	2

Client Sample ID: RB10-1.0
Date Collected: 08/26/24 12:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-18
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	10.6		3.13	2.02	mg/Kg		08/28/24 11:55	08/28/24 21:24	2
Lead	210		2.08	1.38	mg/Kg		08/28/24 11:55	08/28/24 21:24	2

Surrogate Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid | **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	TBP (10-134)	FBP (14-142)	2FP (10-123)	NBZ (10-129)	TPHd14 (31-139)	PHL6 (10-120)
570-196762-1	RB1-0.5	95	64	73	58	62	66
570-196762-2	RB1-1.0	87	68	69	64	56	68
570-196762-3	RB2-0.5	97	73	77	61	65	81
570-196762-4	RB2-1.0	83	69	72	61	68	72
570-196762-5	RB5-0.5	101	69	77	61	75	78
570-196762-6	RB5-1.0	105	63	69	62	65	70
570-196762-7	RB3-0.5	93	71	76	68	71	81
570-196762-8	RB3-1.0	88	72	75	63	66	70
570-196762-9	RB4-0.5	83	66	72	65	63	71
570-196762-10	RB4-1.0	81	69	83	67	68	86
570-196762-11	RB6-0.5	78	62	77	61	60	76
570-196762-12	RB6-1.0	87	73	89	71	68	92
570-196762-13	RB8-0.5	88	82	95	71	70	103
570-196762-14	RB8-1.0	82	55	54	42	48	61
570-196762-15	RB9-0.5	80	70	70	58	60	74
570-196762-16	RB9-1.0	86	80	90	67	70	96
570-196762-17	RB10-0.5	58	58	62	57	70	62
570-196762-17 MS	RB10-0.5	52	56	58	52	63	57
570-196762-17 MSD	RB10-0.5	52	55	63	56	63	58
570-196762-18	RB10-1.0	71	53	58	60	66	63
LCS 570-475698/2-A	Lab Control Sample	88	73	105	83	75	108
LCS 570-475740/2-A	Lab Control Sample	86	77	98	77	85	97
LCSD 570-475698/3-A	Lab Control Sample Dup	91	71	100	81	77	99
LCSD 570-475740/3-A	Lab Control Sample Dup	86	78	98	74	84	97
MB 570-475698/1-A	Method Blank	78	83	93	78	75	98
MB 570-475740/1-A	Method Blank	78	79	96	83	85	93

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPHd14 = p-Terphenyl-d14 (Surr)
PHL6 = Phenol-d6 (Surr)

Method: 8015B - Gasoline Range Organics - (GC)

Matrix: Solid | **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB1 (42-126)
570-196762-1	RB1-0.5	103
570-196762-2	RB1-1.0	98
570-196762-3	RB2-0.5	100
570-196762-4	RB2-1.0	95
570-196762-5	RB5-0.5	85
570-196762-6	RB5-1.0	80
570-196762-7	RB3-0.5	91
570-196762-8	RB3-1.0	92
570-196762-9	RB4-0.5	78

Surrogate Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Method: 8015B - Gasoline Range Organics - (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)										
Lab Sample ID	Client Sample ID	BFB1 (42-126)										
570-196762-10	RB4-1.0	98										
570-196762-11	RB6-0.5	82										
570-196762-12	RB6-1.0	97										
570-196762-13	RB8-0.5	77										
570-196762-14	RB8-1.0	59										
570-196762-15	RB9-0.5	58										
570-196762-16	RB9-1.0	104										
570-196762-17	RB10-0.5	52										
570-196762-18	RB10-1.0	100										
LCS 570-477717/1-A	Lab Control Sample	110										
LCS 570-477949/1-A	Lab Control Sample	107										
LCS 570-478267/1-A	Lab Control Sample	102										
LCSD 570-477717/2-A	Lab Control Sample Dup	104										
LCSD 570-477949/2-A	Lab Control Sample Dup	106										
LCSD 570-478267/2-A	Lab Control Sample Dup	110										
MB 570-477717/3-A	Method Blank	103										
MB 570-477717/4-A	Method Blank	96										
MB 570-477949/3-A	Method Blank	101										
MB 570-478267/3-A	Method Blank	102										

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)										
Lab Sample ID	Client Sample ID	OTCSN1 (60-138)										
570-196762-1	RB1-0.5	99										
570-196762-1 MS	RB1-0.5	106										
570-196762-1 MS	RB1-0.5	110										
570-196762-1 MS	RB1-0.5	91										
570-196762-1 MS	RB1-0.5	89										
570-196762-1 MSD	RB1-0.5	99										
570-196762-1 MSD	RB1-0.5	102										
570-196762-1 MSD	RB1-0.5	100										
570-196762-1 MSD	RB1-0.5	110										
570-196762-2	RB1-1.0	116										
570-196762-3	RB2-0.5	107										
570-196762-4	RB2-1.0	114										
570-196762-5	RB5-0.5	123										
570-196762-6	RB5-1.0	125										
570-196762-7	RB3-0.5	115										
570-196762-8	RB3-1.0	119										
570-196762-9	RB4-0.5	125										
570-196762-10	RB4-1.0	116										
570-196762-11	RB6-0.5	122										
570-196762-12	RB6-1.0	112										
570-196762-13 - DL	RB8-0.5	144 S1+										
570-196762-14 - DL	RB8-1.0	311 S1+										

Surrogate Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)						
Lab Sample ID	**Client Sample ID**	**OTCSN1 (60-138)**						
570-196762-15 - DL	RB9-0.5	204 S1+						
570-196762-16	RB9-1.0	111						
570-196762-17	RB10-0.5	104						
570-196762-18	RB10-1.0	88						
LCS 570-475314/2-A	Lab Control Sample	111						
LCS 570-475314/6-A	Lab Control Sample	124						
LCS 570-480608/2-A	Lab Control Sample	105						
LCS 570-480608/6-A	Lab Control Sample	105						
LCSD 570-475314/3-A	Lab Control Sample Dup	107						
LCSD 570-475314/7-A	Lab Control Sample Dup	130						
LCSD 570-480608/3-A	Lab Control Sample Dup	107						
LCSD 570-480608/7-A	Lab Control Sample Dup	106						
MB 570-475314/1-A	Method Blank	110						
MB 570-480608/1-A	Method Blank	120						

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 570-475698/1-A
Matrix: Solid
Analysis Batch: 476532

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
1,2-Dichlorobenzene	ND		0.50	0.084	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
1,3-Dichlorobenzene	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
1,4-Dichlorobenzene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
1-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2,4,5-Trichlorophenol	ND		0.50	0.20	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2,4,6-Trichlorophenol	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2,4-Dichlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2,4-Dimethylphenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2,4-Dinitrophenol	ND		2.0	0.91	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2,4-Dinitrotoluene	ND		0.50	0.081	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2,6-Dichlorophenol	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2,6-Dinitrotoluene	ND		0.50	0.086	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2-Chloronaphthalene	ND		0.50	0.087	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2-Chlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2-Methylphenol	ND		0.50	0.097	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2-Nitroaniline	ND		0.50	0.092	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
2-Nitrophenol	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
3,3'-Dichlorobenzidine	ND		2.5	0.54	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
3/4-Methylphenol	ND		1.0	0.11	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
3-Nitroaniline	ND		0.50	0.084	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
4,6-Dinitro-2-methylphenol	ND		2.5	0.95	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
4-Bromophenyl phenyl ether	ND		0.50	0.073	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
4-Chloro-3-methylphenol	ND		0.50	0.093	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
4-Chloroaniline	ND		0.50	0.082	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
4-Chlorophenyl phenyl ether	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
4-Nitroaniline	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
4-Nitrophenol	ND		0.50	0.32	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Acenaphthene	ND		0.50	0.079	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Acenaphthylene	ND		0.50	0.096	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Aniline	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Anthracene	ND		0.50	0.078	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Azobenzene	ND		0.50	0.078	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Benzidine	ND		5.0	0.58	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Benzo[a]anthracene	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Benzo[a]pyrene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Benzo[b]fluoranthene	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Benzo[g,h,i]perylene	ND		0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Benzo[k]fluoranthene	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Benzoic acid	ND		2.5	0.67	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Benzyl alcohol	ND		0.50	0.17	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Bis(2-chloroethoxy)methane	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Bis(2-chloroethyl)ether	ND		2.5	0.11	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
bis (2-Chloroisopropyl) ether	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Bis(2-ethylhexyl) phthalate	ND		0.50	0.22	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Butyl benzyl phthalate	ND		0.50	0.24	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Chrysene	ND		0.50	0.083	mg/Kg		08/29/24 09:56	08/31/24 14:54	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 570-475698/1-A
Matrix: Solid
Analysis Batch: 476532

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Dibenzofuran	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Diethyl phthalate	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Dimethyl phthalate	ND		0.50	0.098	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Di-n-butyl phthalate	ND		0.50	0.11	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Di-n-octyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Fluoranthene	ND		0.50	0.095	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Fluorene	ND		0.50	0.094	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Hexachloro-1,3-butadiene	ND		0.50	0.13	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Hexachlorobenzene	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Hexachlorocyclopentadiene	ND		1.5	0.087	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Hexachloroethane	ND		0.50	0.092	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Indeno[1,2,3-cd]pyrene	ND		0.50	0.12	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Isophorone	ND		0.50	0.080	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Naphthalene	ND		0.50	0.14	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Nitrobenzene	ND		2.0	0.14	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
N-Nitrosodimethylamine	ND		0.50	0.089	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
N-Nitrosodi-n-propylamine	ND		0.50	0.086	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.50	0.085	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Pentachlorophenol	ND		2.5	1.8	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Phenanthrene	ND		0.50	0.072	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Phenol	ND		0.50	0.097	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Pyrene	ND		0.50	0.10	mg/Kg		08/29/24 09:56	08/31/24 14:54	1
Pyridine	ND		0.50	0.24	mg/Kg		08/29/24 09:56	08/31/24 14:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*78*		*10 - 134*	*08/29/24 09:56*	*08/31/24 14:54*	*1*
2-Fluorobiphenyl (Surr)	*83*		*14 - 142*	*08/29/24 09:56*	*08/31/24 14:54*	*1*
2-Fluorophenol (Surr)	*93*		*10 - 123*	*08/29/24 09:56*	*08/31/24 14:54*	*1*
Nitrobenzene-d5 (Surr)	*78*		*10 - 129*	*08/29/24 09:56*	*08/31/24 14:54*	*1*
p-Terphenyl-d14 (Surr)	*75*		*31 - 139*	*08/29/24 09:56*	*08/31/24 14:54*	*1*
Phenol-d6 (Surr)	*98*		*10 - 120*	*08/29/24 09:56*	*08/31/24 14:54*	*1*

Lab Sample ID: LCS 570-475698/2-A
Matrix: Solid
Analysis Batch: 476532

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475698

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	5.00	4.092		mg/Kg		82	24 - 137
1,2-Dichlorobenzene	5.00	4.365		mg/Kg		87	24 - 148
1,3-Dichlorobenzene	5.00	4.337		mg/Kg		87	22 - 144
1,4-Dichlorobenzene	5.00	3.999		mg/Kg		80	24 - 143
1-Methylnaphthalene	5.00	4.272		mg/Kg		85	26 - 143
2,4,5-Trichlorophenol	7.50	6.694		mg/Kg		89	24 - 139
2,4,6-Trichlorophenol	7.50	7.010		mg/Kg		93	26 - 140
2,4-Dichlorophenol	7.50	6.909		mg/Kg		92	24 - 139
2,4-Dimethylphenol	7.50	8.704		mg/Kg		116	23 - 136
2,4-Dinitrophenol	7.50	7.241		mg/Kg		97	10 - 174

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-475698/2-A
Matrix: Solid
Analysis Batch: 476532

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475698

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrotoluene	5.00	4.621		mg/Kg		92	28 - 166
2,6-Dichlorophenol	7.50	6.914		mg/Kg		92	23 - 134
2,6-Dinitrotoluene	5.00	4.323		mg/Kg		86	30 - 157
2-Chloronaphthalene	5.00	4.554		mg/Kg		91	30 - 144
2-Chlorophenol	7.50	7.266		mg/Kg		97	26 - 157
2-Methylnaphthalene	5.00	4.049		mg/Kg		81	23 - 134
2-Methylphenol	7.50	7.636		mg/Kg		102	30 - 161
2-Nitroaniline	5.00	5.092		mg/Kg		102	16 - 142
2-Nitrophenol	7.50	7.059		mg/Kg		94	23 - 142
3,3'-Dichlorobenzidine	5.00	4.118		mg/Kg		82	28 - 143
3/4-Methylphenol	15.0	14.60		mg/Kg		97	10 - 120
3-Nitroaniline	5.00	4.341		mg/Kg		87	25 - 138
4,6-Dinitro-2-methylphenol	7.50	7.120		mg/Kg		95	10 - 144
4-Bromophenyl phenyl ether	5.00	4.024		mg/Kg		80	33 - 150
4-Chloro-3-methylphenol	7.50	7.701		mg/Kg		103	23 - 142
4-Chloroaniline	5.00	3.966		mg/Kg		79	12 - 120
4-Chlorophenyl phenyl ether	5.00	4.366		mg/Kg		87	29 - 143
4-Nitroaniline	5.00	4.679		mg/Kg		94	26 - 147
4-Nitrophenol	7.50	7.066		mg/Kg		94	10 - 145
Acenaphthene	5.00	4.172		mg/Kg		83	30 - 144
Acenaphthylene	5.00	4.652		mg/Kg		93	28 - 148
Aniline	5.00	4.381		mg/Kg		88	10 - 120
Anthracene	5.00	4.177		mg/Kg		84	30 - 149
Azobenzene	5.00	3.739		mg/Kg		75	14 - 147
Benzidine	5.00	1.959	J	mg/Kg		39	10 - 120
Benzo[a]anthracene	5.00	4.441		mg/Kg		89	27 - 156
Benzo[a]pyrene	5.00	4.884		mg/Kg		98	36 - 157
Benzo[b]fluoranthene	5.00	4.831		mg/Kg		97	35 - 159
Benzo[g,h,i]perylene	5.00	4.839		mg/Kg		97	30 - 156
Benzo[k]fluoranthene	5.00	4.717		mg/Kg		94	35 - 159
Benzoic acid	7.50	5.063		mg/Kg		68	10 - 136
Benzyl alcohol	5.00	5.060		mg/Kg		101	18 - 154
Bis(2-chloroethoxy)methane	5.00	4.203		mg/Kg		84	21 - 140
Bis(2-chloroethyl)ether	5.00	4.247		mg/Kg		85	22 - 151
bis (2-Chloroisopropyl) ether	5.00	4.456		mg/Kg		89	10 - 179
Bis(2-ethylhexyl) phthalate	5.00	4.286		mg/Kg		86	23 - 166
Butyl benzyl phthalate	5.00	4.345		mg/Kg		87	18 - 170
Chrysene	5.00	4.279		mg/Kg		86	28 - 145
Dibenz(a,h)anthracene	5.00	4.675		mg/Kg		94	32 - 149
Dibenzofuran	5.00	4.361		mg/Kg		87	29 - 143
Diethyl phthalate	5.00	4.557		mg/Kg		91	26 - 151
Dimethyl phthalate	5.00	4.581		mg/Kg		92	27 - 150
Di-n-butyl phthalate	5.00	4.281		mg/Kg		86	27 - 152
Di-n-octyl phthalate	5.00	4.892		mg/Kg		98	40 - 178
Fluoranthene	5.00	4.676		mg/Kg		94	33 - 156
Fluorene	5.00	4.302		mg/Kg		86	27 - 146
Hexachloro-1,3-butadiene	5.00	4.345		mg/Kg		87	22 - 140
Hexachlorobenzene	5.00	3.997		mg/Kg		80	20 - 143
Hexachlorocyclopentadiene	5.00	6.466		mg/Kg		129	10 - 172

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-475698/2-A
Matrix: Solid
Analysis Batch: 476532

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475698

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Hexachloroethane			5.00	3.974		mg/Kg		79	22 - 144		
Indeno[1,2,3-cd]pyrene			5.00	4.685		mg/Kg		94	38 - 157		
Isophorone			5.00	4.401		mg/Kg		88	15 - 165		
Naphthalene			5.00	4.291		mg/Kg		86	25 - 140		
Nitrobenzene			5.00	4.587		mg/Kg		92	17 - 136		
N-Nitrosodimethylamine			5.00	4.014		mg/Kg		80	10 - 134		
N-Nitrosodi-n-propylamine			5.00	4.245		mg/Kg		85	16 - 158		
n-Nitrosodiphenylamine(as diphenylamine)			5.00	4.740		mg/Kg		95	33 - 166		
Pentachlorophenol			7.50	6.552		mg/Kg		87	10 - 141		
Phenanthrene			5.00	4.358		mg/Kg		87	29 - 144		
Phenol			7.50	8.084		mg/Kg		108	19 - 164		
Pyrene			5.00	4.029		mg/Kg		81	17 - 156		
Pyridine			5.00	4.084		mg/Kg		82	10 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*88*		*10 - 134*
2-Fluorobiphenyl (Surr)	*73*		*14 - 142*
2-Fluorophenol (Surr)	*105*		*10 - 123*
Nitrobenzene-d5 (Surr)	*83*		*10 - 129*
p-Terphenyl-d14 (Surr)	*75*		*31 - 139*
Phenol-d6 (Surr)	*108*		*10 - 120*

Lab Sample ID: LCSD 570-475698/3-A
Matrix: Solid
Analysis Batch: 476532

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475698

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene			5.00	4.082		mg/Kg		82	24 - 137	0	30
1,2-Dichlorobenzene			5.00	4.086		mg/Kg		82	24 - 148	7	30
1,3-Dichlorobenzene			5.00	4.089		mg/Kg		82	22 - 144	6	30
1,4-Dichlorobenzene			5.00	3.905		mg/Kg		78	24 - 143	2	30
1-Methylnaphthalene			5.00	4.132		mg/Kg		83	26 - 143	3	24
2,4,5-Trichlorophenol			7.50	6.634		mg/Kg		88	24 - 139	1	21
2,4,6-Trichlorophenol			7.50	6.681		mg/Kg		89	26 - 140	5	23
2,4-Dichlorophenol			7.50	6.900		mg/Kg		92	24 - 139	0	27
2,4-Dimethylphenol			7.50	8.442		mg/Kg		113	23 - 136	3	27
2,4-Dinitrophenol			7.50	8.006		mg/Kg		107	10 - 174	10	27
2,4-Dinitrotoluene			5.00	4.581		mg/Kg		92	28 - 166	1	27
2,6-Dichlorophenol			7.50	6.827		mg/Kg		91	23 - 134	1	25
2,6-Dinitrotoluene			5.00	4.391		mg/Kg		88	30 - 157	2	25
2-Chloronaphthalene			5.00	4.316		mg/Kg		86	30 - 144	5	22
2-Chlorophenol			7.50	6.930		mg/Kg		92	26 - 157	5	30
2-Methylnaphthalene			5.00	3.999		mg/Kg		80	23 - 134	1	27
2-Methylphenol			7.50	7.385		mg/Kg		98	30 - 161	3	28
2-Nitroaniline			5.00	4.788		mg/Kg		96	16 - 142	6	30
2-Nitrophenol			7.50	7.105		mg/Kg		95	23 - 142	1	30
3,3'-Dichlorobenzidine			5.00	4.475		mg/Kg		90	28 - 143	8	23
3/4-Methylphenol			15.0	13.26		mg/Kg		88	10 - 120	10	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 570-475698/3-A
Matrix: Solid
Analysis Batch: 476532

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475698

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
3-Nitroaniline	5.00	4.464		mg/Kg		89	25 - 138	3	27
4,6-Dinitro-2-methylphenol	7.50	6.936		mg/Kg		92	10 - 144	3	23
4-Bromophenyl phenyl ether	5.00	3.984		mg/Kg		80	33 - 150	1	22
4-Chloro-3-methylphenol	7.50	7.194		mg/Kg		96	23 - 142	7	30
4-Chloroaniline	5.00	4.313		mg/Kg		86	12 - 120	8	29
4-Chlorophenyl phenyl ether	5.00	4.198		mg/Kg		84	29 - 143	4	23
4-Nitroaniline	5.00	4.906		mg/Kg		98	26 - 147	5	29
4-Nitrophenol	7.50	7.186		mg/Kg		96	10 - 145	2	30
Acenaphthene	5.00	3.970		mg/Kg		79	30 - 144	5	22
Acenaphthylene	5.00	4.565		mg/Kg		91	28 - 148	2	25
Aniline	5.00	4.636		mg/Kg		93	10 - 120	6	30
Anthracene	5.00	4.034		mg/Kg		81	30 - 149	3	24
Azobenzene	5.00	3.765		mg/Kg		75	14 - 147	1	30
Benzidine	5.00	2.663	J	mg/Kg		53	10 - 120	30	30
Benzo[a]anthracene	5.00	4.421		mg/Kg		88	27 - 156	0	24
Benzo[a]pyrene	5.00	4.782		mg/Kg		96	36 - 157	2	21
Benzo[b]fluoranthene	5.00	4.644		mg/Kg		93	35 - 159	4	21
Benzo[g,h,i]perylene	5.00	4.753		mg/Kg		95	30 - 156	2	25
Benzo[k]fluoranthene	5.00	4.578		mg/Kg		92	35 - 159	3	22
Benzoic acid	7.50	5.369		mg/Kg		72	10 - 136	6	20
Benzyl alcohol	5.00	4.532		mg/Kg		91	18 - 154	11	30
Bis(2-chloroethoxy)methane	5.00	4.227		mg/Kg		85	21 - 140	1	29
Bis(2-chloroethyl)ether	5.00	3.879		mg/Kg		78	22 - 151	9	30
bis (2-Chloroisopropyl) ether	5.00	4.263		mg/Kg		85	10 - 179	4	30
Bis(2-ethylhexyl) phthalate	5.00	4.321		mg/Kg		86	23 - 166	1	27
Butyl benzyl phthalate	5.00	4.148		mg/Kg		83	18 - 170	5	29
Chrysene	5.00	4.236		mg/Kg		85	28 - 145	1	21
Dibenz(a,h)anthracene	5.00	5.008		mg/Kg		100	32 - 149	7	25
Dibenzofuran	5.00	4.097		mg/Kg		82	29 - 143	6	24
Diethyl phthalate	5.00	4.584		mg/Kg		92	26 - 151	1	26
Dimethyl phthalate	5.00	4.488		mg/Kg		90	27 - 150	2	24
Di-n-butyl phthalate	5.00	4.105		mg/Kg		82	27 - 152	4	27
Di-n-octyl phthalate	5.00	4.776		mg/Kg		96	40 - 178	2	21
Fluoranthene	5.00	4.301		mg/Kg		86	33 - 156	8	26
Fluorene	5.00	4.421		mg/Kg		88	27 - 146	3	26
Hexachloro-1,3-butadiene	5.00	4.370		mg/Kg		87	22 - 140	1	30
Hexachlorobenzene	5.00	3.938		mg/Kg		79	20 - 143	1	25
Hexachlorocyclopentadiene	5.00	6.501		mg/Kg		130	10 - 172	1	27
Hexachloroethane	5.00	3.764		mg/Kg		75	22 - 144	5	30
Indeno[1,2,3-cd]pyrene	5.00	4.622		mg/Kg		92	38 - 157	1	25
Isophorone	5.00	4.196		mg/Kg		84	15 - 165	5	30
Naphthalene	5.00	4.333		mg/Kg		87	25 - 140	1	28
Nitrobenzene	5.00	4.355		mg/Kg		87	17 - 136	5	30
N-Nitrosodimethylamine	5.00	4.083		mg/Kg		82	10 - 134	2	30
N-Nitrosodi-n-propylamine	5.00	3.982		mg/Kg		80	16 - 158	6	30
n-Nitrosodiphenylamine(as diphenylamine)	5.00	4.678		mg/Kg		94	33 - 166	1	23
Pentachlorophenol	7.50	6.340		mg/Kg		85	10 - 141	3	25
Phenanthrene	5.00	4.248		mg/Kg		85	29 - 144	3	23

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 570-475698/3-A
Matrix: Solid
Analysis Batch: 476532

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475698

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenol			7.50	7.563		mg/Kg		101	19 - 164	7	30
Pyrene			5.00	3.943		mg/Kg		79	17 - 156	2	27
Pyridine			5.00	3.905		mg/Kg		78	10 - 120	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*91*		*10 - 134*
2-Fluorobiphenyl (Surr)	*71*		*14 - 142*
2-Fluorophenol (Surr)	*100*		*10 - 123*
Nitrobenzene-d5 (Surr)	*81*		*10 - 129*
p-Terphenyl-d14 (Surr)	*77*		*31 - 139*
Phenol-d6 (Surr)	*99*		*10 - 120*

Lab Sample ID: MB 570-475740/1-A
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475740

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.50	0.12	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
1,2-Dichlorobenzene	ND		0.50	0.084	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
1,3-Dichlorobenzene	ND		0.50	0.11	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
1,4-Dichlorobenzene	ND		0.50	0.096	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
1-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2,4,5-Trichlorophenol	ND		0.50	0.20	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2,4,6-Trichlorophenol	ND		0.50	0.12	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2,4-Dichlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2,4-Dimethylphenol	ND		0.50	0.13	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2,4-Dinitrophenol	ND		2.0	0.91	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2,4-Dinitrotoluene	ND		0.50	0.081	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2,6-Dichlorophenol	ND		0.50	0.11	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2,6-Dinitrotoluene	ND		0.50	0.086	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2-Chloronaphthalene	ND		0.50	0.087	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2-Chlorophenol	ND		0.50	0.13	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2-Methylnaphthalene	ND		0.50	0.10	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2-Methylphenol	ND		0.50	0.097	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2-Nitroaniline	ND		0.50	0.092	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
2-Nitrophenol	ND		0.50	0.14	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
3,3'-Dichlorobenzidine	ND		2.5	0.54	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
3/4-Methylphenol	ND		1.0	0.11	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
3-Nitroaniline	ND		0.50	0.084	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
4,6-Dinitro-2-methylphenol	ND		2.5	0.95	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
4-Bromophenyl phenyl ether	ND		0.50	0.073	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
4-Chloro-3-methylphenol	ND		0.50	0.093	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
4-Chloroaniline	ND		0.50	0.082	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
4-Chlorophenyl phenyl ether	ND		0.50	0.10	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
4-Nitroaniline	ND		0.50	0.10	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
4-Nitrophenol	ND		0.50	0.32	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Acenaphthene	ND		0.50	0.079	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Acenaphthylene	ND		0.50	0.096	mg/Kg		08/29/24 10:48	08/30/24 12:38	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 570-475740/1-A
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475740

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aniline	ND		0.50	0.095	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Anthracene	ND		0.50	0.078	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Azobenzene	ND		0.50	0.078	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Benzidine	ND		5.0	0.58	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Benzo[a]anthracene	ND		0.50	0.083	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Benzo[a]pyrene	ND		0.50	0.10	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Benzo[b]fluoranthene	ND		0.50	0.085	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Benzo[g,h,i]perylene	ND		0.50	0.089	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Benzo[k]fluoranthene	ND		0.50	0.095	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Benzoic acid	ND		2.5	0.67	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Benzyl alcohol	ND		0.50	0.17	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Bis(2-chloroethoxy)methane	ND		0.50	0.11	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Bis(2-chloroethyl)ether	ND		2.5	0.11	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
bis (2-Chloroisopropyl) ether	ND		0.50	0.12	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Bis(2-ethylhexyl) phthalate	ND		0.50	0.22	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Butyl benzyl phthalate	ND		0.50	0.24	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Chrysene	ND		0.50	0.083	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Dibenz(a,h)anthracene	ND		0.50	0.080	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Dibenzofuran	ND		0.50	0.095	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Diethyl phthalate	ND		0.50	0.12	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Dimethyl phthalate	ND		0.50	0.098	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Di-n-butyl phthalate	ND		0.50	0.11	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Di-n-octyl phthalate	ND		0.50	0.23	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Fluoranthene	ND		0.50	0.095	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Fluorene	ND		0.50	0.094	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Hexachloro-1,3-butadiene	ND		0.50	0.13	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Hexachlorobenzene	ND		0.50	0.080	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Hexachlorocyclopentadiene	ND		1.5	0.087	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Hexachloroethane	ND		0.50	0.092	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Indeno[1,2,3-cd]pyrene	ND		0.50	0.12	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Isophorone	ND		0.50	0.080	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Naphthalene	ND		0.50	0.14	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Nitrobenzene	ND		2.0	0.14	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
N-Nitrosodimethylamine	ND		0.50	0.089	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
N-Nitrosodi-n-propylamine	ND		0.50	0.086	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.50	0.085	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Pentachlorophenol	ND		2.5	1.8	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Phenanthrene	ND		0.50	0.072	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Phenol	ND		0.50	0.097	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Pyrene	ND		0.50	0.10	mg/Kg		08/29/24 10:48	08/30/24 12:38	1
Pyridine	ND		0.50	0.24	mg/Kg		08/29/24 10:48	08/30/24 12:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*78*		*10 - 134*	*08/29/24 10:48*	*08/30/24 12:38*	*1*
2-Fluorobiphenyl (Surr)	*79*		*14 - 142*	*08/29/24 10:48*	*08/30/24 12:38*	*1*
2-Fluorophenol (Surr)	*96*		*10 - 123*	*08/29/24 10:48*	*08/30/24 12:38*	*1*
Nitrobenzene-d5 (Surr)	*83*		*10 - 129*	*08/29/24 10:48*	*08/30/24 12:38*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 570-475740/1-A
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475740

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl-d14 (Surr)	85		31 - 139	08/29/24 10:48	08/30/24 12:38	1
Phenol-d6 (Surr)	93		10 - 120	08/29/24 10:48	08/30/24 12:38	1

Lab Sample ID: LCS 570-475740/2-A
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475740

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	5.00	4.163		mg/Kg		83	24 - 137
1,2-Dichlorobenzene	5.00	4.156		mg/Kg		83	24 - 148
1,3-Dichlorobenzene	5.00	4.042		mg/Kg		81	22 - 144
1,4-Dichlorobenzene	5.00	3.754		mg/Kg		75	24 - 143
1-Methylnaphthalene	5.00	3.898		mg/Kg		78	26 - 143
2,4,5-Trichlorophenol	7.50	6.532		mg/Kg		87	24 - 139
2,4,6-Trichlorophenol	7.50	6.428		mg/Kg		86	26 - 140
2,4-Dichlorophenol	7.50	6.643		mg/Kg		89	24 - 139
2,4-Dimethylphenol	7.50	9.036		mg/Kg		120	23 - 136
2,4-Dinitrophenol	7.50	4.668		mg/Kg		62	10 - 174
2,4-Dinitrotoluene	5.00	4.269		mg/Kg		85	28 - 166
2,6-Dichlorophenol	7.50	6.321		mg/Kg		84	23 - 134
2,6-Dinitrotoluene	5.00	4.222		mg/Kg		84	30 - 157
2-Chloronaphthalene	5.00	4.220		mg/Kg		84	30 - 144
2-Chlorophenol	7.50	6.802		mg/Kg		91	26 - 157
2-Methylnaphthalene	5.00	3.985		mg/Kg		80	23 - 134
2-Methylphenol	7.50	6.798		mg/Kg		91	30 - 161
2-Nitroaniline	5.00	4.250		mg/Kg		85	16 - 142
2-Nitrophenol	7.50	6.330		mg/Kg		84	23 - 142
3,3'-Dichlorobenzidine	5.00	3.931		mg/Kg		79	28 - 143
3/4-Methylphenol	15.0	13.50		mg/Kg		90	10 - 120
3-Nitroaniline	5.00	3.834		mg/Kg		77	25 - 138
4,6-Dinitro-2-methylphenol	7.50	5.539		mg/Kg		74	10 - 144
4-Bromophenyl phenyl ether	5.00	4.113		mg/Kg		82	33 - 150
4-Chloro-3-methylphenol	7.50	6.652		mg/Kg		89	23 - 142
4-Chloroaniline	5.00	3.571		mg/Kg		71	12 - 120
4-Chlorophenyl phenyl ether	5.00	4.248		mg/Kg		85	29 - 143
4-Nitroaniline	5.00	4.192		mg/Kg		84	26 - 147
4-Nitrophenol	7.50	5.950		mg/Kg		79	10 - 145
Acenaphthene	5.00	3.953		mg/Kg		79	30 - 144
Acenaphthylene	5.00	4.480		mg/Kg		90	28 - 148
Aniline	5.00	3.653		mg/Kg		73	10 - 120
Anthracene	5.00	4.223		mg/Kg		84	30 - 149
Azobenzene	5.00	4.101		mg/Kg		82	14 - 147
Benzidine	5.00	1.475	J	mg/Kg		30	10 - 120
Benzo[a]anthracene	5.00	4.172		mg/Kg		83	27 - 156
Benzo[a]pyrene	5.00	4.006		mg/Kg		80	36 - 157
Benzo[b]fluoranthene	5.00	4.189		mg/Kg		84	35 - 159
Benzo[g,h,i]perylene	5.00	4.182		mg/Kg		84	30 - 156
Benzo[k]fluoranthene	5.00	4.205		mg/Kg		84	35 - 159

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 570-475740/2-A
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475740

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benzoic acid	7.50	4.114		mg/Kg		55	10 - 136
Benzyl alcohol	5.00	4.320		mg/Kg		86	18 - 154
Bis(2-chloroethoxy)methane	5.00	4.100		mg/Kg		82	21 - 140
Bis(2-chloroethyl)ether	5.00	4.331		mg/Kg		87	22 - 151
bis (2-Chloroisopropyl) ether	5.00	4.300		mg/Kg		86	10 - 179
Bis(2-ethylhexyl) phthalate	5.00	4.132		mg/Kg		83	23 - 166
Butyl benzyl phthalate	5.00	4.261		mg/Kg		85	18 - 170
Chrysene	5.00	4.104		mg/Kg		82	28 - 145
Dibenz(a,h)anthracene	5.00	4.241		mg/Kg		85	32 - 149
Dibenzofuran	5.00	4.134		mg/Kg		83	29 - 143
Diethyl phthalate	5.00	4.239		mg/Kg		85	26 - 151
Dimethyl phthalate	5.00	4.338		mg/Kg		87	27 - 150
Di-n-butyl phthalate	5.00	4.143		mg/Kg		83	27 - 152
Di-n-octyl phthalate	5.00	4.181		mg/Kg		84	40 - 178
Fluoranthene	5.00	4.160		mg/Kg		83	33 - 156
Fluorene	5.00	4.156		mg/Kg		83	27 - 146
Hexachloro-1,3-butadiene	5.00	4.311		mg/Kg		86	22 - 140
Hexachlorobenzene	5.00	4.199		mg/Kg		84	20 - 143
Hexachlorocyclopentadiene	5.00	6.413		mg/Kg		128	10 - 172
Hexachloroethane	5.00	3.795		mg/Kg		76	22 - 144
Indeno[1,2,3-cd]pyrene	5.00	4.044		mg/Kg		81	38 - 157
Isophorone	5.00	3.816		mg/Kg		76	15 - 165
Naphthalene	5.00	3.917		mg/Kg		78	25 - 140
Nitrobenzene	5.00	4.142		mg/Kg		83	17 - 136
N-Nitrosodimethylamine	5.00	3.505		mg/Kg		70	10 - 134
N-Nitrosodi-n-propylamine	5.00	4.000		mg/Kg		80	16 - 158
n-Nitrosodiphenylamine(as diphenylamine)	5.00	4.805		mg/Kg		96	33 - 166
Pentachlorophenol	7.50	4.364		mg/Kg		58	10 - 141
Phenanthrene	5.00	4.180		mg/Kg		84	29 - 144
Phenol	7.50	6.880		mg/Kg		92	19 - 164
Pyrene	5.00	4.197		mg/Kg		84	17 - 156
Pyridine	5.00	3.315		mg/Kg		66	10 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*86*		*10 - 134*
2-Fluorobiphenyl (Surr)	*77*		*14 - 142*
2-Fluorophenol (Surr)	*98*		*10 - 123*
Nitrobenzene-d5 (Surr)	*77*		*10 - 129*
p-Terphenyl-d14 (Surr)	*85*		*31 - 139*
Phenol-d6 (Surr)	*97*		*10 - 120*

Lab Sample ID: LCSD 570-475740/3-A
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475740

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	5.00	4.166		mg/Kg		83	24 - 137	0	30
1,2-Dichlorobenzene	5.00	4.230		mg/Kg		85	24 - 148	2	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 570-475740/3-A
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475740

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,3-Dichlorobenzene	5.00	4.088		mg/Kg		82	22 - 144	1	30
1,4-Dichlorobenzene	5.00	3.864		mg/Kg		77	24 - 143	3	30
1-Methylnaphthalene	5.00	3.990		mg/Kg		80	26 - 143	2	24
2,4,5-Trichlorophenol	7.50	6.171		mg/Kg		82	24 - 139	6	21
2,4,6-Trichlorophenol	7.50	6.674		mg/Kg		89	26 - 140	4	23
2,4-Dichlorophenol	7.50	6.759		mg/Kg		90	24 - 139	2	27
2,4-Dimethylphenol	7.50	9.106		mg/Kg		121	23 - 136	1	27
2,4-Dinitrophenol	7.50	4.587		mg/Kg		61	10 - 174	2	27
2,4-Dinitrotoluene	5.00	4.390		mg/Kg		88	28 - 166	3	27
2,6-Dichlorophenol	7.50	6.423		mg/Kg		86	23 - 134	2	25
2,6-Dinitrotoluene	5.00	4.367		mg/Kg		87	30 - 157	3	25
2-Chloronaphthalene	5.00	4.383		mg/Kg		88	30 - 144	4	22
2-Chlorophenol	7.50	7.045		mg/Kg		94	26 - 157	4	30
2-Methylnaphthalene	5.00	4.086		mg/Kg		82	23 - 134	3	27
2-Methylphenol	7.50	7.013		mg/Kg		94	30 - 161	3	28
2-Nitroaniline	5.00	4.155		mg/Kg		83	16 - 142	2	30
2-Nitrophenol	7.50	6.535		mg/Kg		87	23 - 142	3	30
3,3'-Dichlorobenzidine	5.00	3.862		mg/Kg		77	28 - 143	2	23
3/4-Methylphenol	15.0	13.83		mg/Kg		92	10 - 120	2	30
3-Nitroaniline	5.00	3.865		mg/Kg		77	25 - 138	1	27
4,6-Dinitro-2-methylphenol	7.50	5.794		mg/Kg		77	10 - 144	4	23
4-Bromophenyl phenyl ether	5.00	4.217		mg/Kg		84	33 - 150	3	22
4-Chloro-3-methylphenol	7.50	6.707		mg/Kg		89	23 - 142	1	30
4-Chloroaniline	5.00	3.594		mg/Kg		72	12 - 120	1	29
4-Chlorophenyl phenyl ether	5.00	4.326		mg/Kg		87	29 - 143	2	23
4-Nitroaniline	5.00	4.177		mg/Kg		84	26 - 147	0	29
4-Nitrophenol	7.50	6.122		mg/Kg		82	10 - 145	3	30
Acenaphthene	5.00	4.078		mg/Kg		82	30 - 144	3	22
Acenaphthylene	5.00	4.689		mg/Kg		94	28 - 148	5	25
Aniline	5.00	3.725		mg/Kg		74	10 - 120	2	30
Anthracene	5.00	4.323		mg/Kg		86	30 - 149	2	24
Azobenzene	5.00	4.083		mg/Kg		82	14 - 147	0	30
Benzidine	5.00	1.495	J	mg/Kg		30	10 - 120	1	30
Benzo[a]anthracene	5.00	4.274		mg/Kg		85	27 - 156	2	24
Benzo[a]pyrene	5.00	4.125		mg/Kg		82	36 - 157	3	21
Benzo[b]fluoranthene	5.00	4.309		mg/Kg		86	35 - 159	3	21
Benzo[g,h,i]perylene	5.00	4.296		mg/Kg		86	30 - 156	3	25
Benzo[k]fluoranthene	5.00	4.260		mg/Kg		85	35 - 159	1	22
Benzoic acid	7.50	4.180		mg/Kg		56	10 - 136	2	20
Benzyl alcohol	5.00	4.388		mg/Kg		88	18 - 154	2	30
Bis(2-chloroethoxy)methane	5.00	4.209		mg/Kg		84	21 - 140	3	29
Bis(2-chloroethyl)ether	5.00	4.414		mg/Kg		88	22 - 151	2	30
bis (2-Chloroisopropyl) ether	5.00	4.363		mg/Kg		87	10 - 179	1	30
Bis(2-ethylhexyl) phthalate	5.00	4.197		mg/Kg		84	23 - 166	2	27
Butyl benzyl phthalate	5.00	4.310		mg/Kg		86	18 - 170	1	29
Chrysene	5.00	4.208		mg/Kg		84	28 - 145	3	21
Dibenz(a,h)anthracene	5.00	4.293		mg/Kg		86	32 - 149	1	25
Dibenzofuran	5.00	4.184		mg/Kg		84	29 - 143	1	24
Diethyl phthalate	5.00	4.281		mg/Kg		86	26 - 151	1	26

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 570-475740/3-A
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475740

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dimethyl phthalate			5.00	4.475		mg/Kg		90	27 - 150	3	24
Di-n-butyl phthalate			5.00	4.214		mg/Kg		84	27 - 152	2	27
Di-n-octyl phthalate			5.00	4.295		mg/Kg		86	40 - 178	3	21
Fluoranthene			5.00	4.217		mg/Kg		84	33 - 156	1	26
Fluorene			5.00	4.278		mg/Kg		86	27 - 146	3	26
Hexachloro-1,3-butadiene			5.00	4.385		mg/Kg		88	22 - 140	2	30
Hexachlorobenzene			5.00	4.215		mg/Kg		84	20 - 143	0	25
Hexachlorocyclopentadiene			5.00	6.572		mg/Kg		131	10 - 172	2	27
Hexachloroethane			5.00	3.862		mg/Kg		77	22 - 144	2	30
Indeno[1,2,3-cd]pyrene			5.00	4.136		mg/Kg		83	38 - 157	2	25
Isophorone			5.00	3.871		mg/Kg		77	15 - 165	1	30
Naphthalene			5.00	3.960		mg/Kg		79	25 - 140	1	28
Nitrobenzene			5.00	4.107		mg/Kg		82	17 - 136	1	30
N-Nitrosodimethylamine			5.00	3.538		mg/Kg		71	10 - 134	1	30
N-Nitrosodi-n-propylamine			5.00	4.019		mg/Kg		80	16 - 158	0	30
n-Nitrosodiphenylamine(as diphenylamine)			5.00	4.744		mg/Kg		95	33 - 166	1	23
Pentachlorophenol			7.50	4.615		mg/Kg		62	10 - 141	6	25
Phenanthrene			5.00	4.249		mg/Kg		85	29 - 144	2	23
Phenol			7.50	7.028		mg/Kg		94	19 - 164	2	30
Pyrene			5.00	4.262		mg/Kg		85	17 - 156	2	27
Pyridine			5.00	3.297		mg/Kg		66	10 - 120	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*86*		*10 - 134*
2-Fluorobiphenyl (Surr)	*78*		*14 - 142*
2-Fluorophenol (Surr)	*98*		*10 - 123*
Nitrobenzene-d5 (Surr)	*74*		*10 - 129*
p-Terphenyl-d14 (Surr)	*84*		*31 - 139*
Phenol-d6 (Surr)	*97*		*10 - 120*

Lab Sample ID: 570-196762-17 MS
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: RB10-0.5
Prep Type: Total/NA
Prep Batch: 475740

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4-Trichlorobenzene	ND		4.99	2.635	J	mg/Kg		53	50 - 125
1,2-Dichlorobenzene	ND		4.99	3.007	J	mg/Kg		60	42 - 125
1,3-Dichlorobenzene	ND		4.99	2.909	J	mg/Kg		58	40 - 125
1,4-Dichlorobenzene	ND		4.99	2.877	J	mg/Kg		58	45 - 125
1-Methylnaphthalene	ND	F1	4.99	2.871	J	mg/Kg		58	54 - 125
2,4,5-Trichlorophenol	ND		7.49	4.208	J	mg/Kg		56	35 - 125
2,4,6-Trichlorophenol	ND		7.49	3.961	J	mg/Kg		53	33 - 126
2,4-Dichlorophenol	ND		7.49	4.389	J	mg/Kg		59	45 - 125
2,4-Dimethylphenol	ND		7.49	4.930	J	mg/Kg		66	44 - 125
2,4-Dinitrophenol	ND		7.49	ND		mg/Kg		NC	10 - 125
2,4-Dinitrotoluene	ND	F1	4.99	2.056	J F1	mg/Kg		41	47 - 125
2,6-Dichlorophenol	ND		7.49	4.527	J	mg/Kg		60	38 - 125
2,6-Dinitrotoluene	ND		4.99	2.524	J	mg/Kg		51	41 - 125

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-196762-17 MS
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: RB10-0.5
Prep Type: Total/NA
Prep Batch: 475740

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2-Chloronaphthalene	ND		4.99	2.967	J	mg/Kg		59	47 - 125
2-Chlorophenol	ND		7.49	4.370	J	mg/Kg		58	49 - 125
2-Methylnaphthalene	ND		4.99	2.758	J	mg/Kg		55	42 - 125
2-Methylphenol	ND		7.49	4.482	J	mg/Kg		60	46 - 125
2-Nitroaniline	ND	F1 F2	4.99	1.929	J F1	mg/Kg		39	43 - 125
2-Nitrophenol	ND		7.49	4.503	J	mg/Kg		60	25 - 126
3,3'-Dichlorobenzidine	ND		4.99	ND		mg/Kg		NC	29 - 125
3/4-Methylphenol	ND		15.0	8.829	J	mg/Kg		59	26 - 125
3-Nitroaniline	ND	F1	4.99	ND	F1	mg/Kg		0	39 - 125
4,6-Dinitro-2-methylphenol	ND		7.49	ND		mg/Kg		NC	10 - 125
4-Bromophenyl phenyl ether	ND		4.99	2.960	J	mg/Kg		59	47 - 125
4-Chloro-3-methylphenol	ND		7.49	4.237	J	mg/Kg		57	53 - 125
4-Chloroaniline	ND	F1	4.99	1.134	J F1	mg/Kg		23	33 - 125
4-Chlorophenyl phenyl ether	ND		4.99	3.621	J	mg/Kg		73	49 - 125
4-Nitroaniline	ND		4.99	2.149	J	mg/Kg		43	35 - 125
4-Nitrophenol	ND	F1	7.49	ND	F1	mg/Kg		0	22 - 134
Acenaphthene	ND		4.99	2.933	J	mg/Kg		59	51 - 125
Acenaphthylene	ND		4.99	3.236	J	mg/Kg		65	54 - 125
Aniline	ND	F1	4.99	ND	F1	mg/Kg		0	24 - 125
Anthracene	ND		4.99	3.343	J	mg/Kg		67	50 - 125
Azobenzene	ND		4.99	2.759	J	mg/Kg		55	48 - 125
Benzidine	ND		4.99	ND		mg/Kg		NC	10 - 126
Benzo[a]anthracene	ND		4.99	3.245	J	mg/Kg		65	62 - 125
Benzo[a]pyrene	ND		4.99	2.750	J	mg/Kg		55	55 - 131
Benzo[b]fluoranthene	ND		4.99	3.061	J	mg/Kg		61	49 - 128
Benzo[g,h,i]perylene	ND		4.99	2.981	J	mg/Kg		60	56 - 125
Benzo[k]fluoranthene	ND		4.99	3.079	J	mg/Kg		62	48 - 125
Benzoic acid	ND	F1	7.49	ND	F1	mg/Kg		0	10 - 125
Benzyl alcohol	ND		4.99	2.863	J	mg/Kg		57	47 - 125
Bis(2-chloroethoxy)methane	ND		4.99	2.754	J	mg/Kg		55	48 - 125
Bis(2-chloroethyl)ether	ND		4.99	3.413	J	mg/Kg		68	43 - 125
bis (2-Chloroisopropyl) ether	ND		4.99	3.105	J	mg/Kg		62	46 - 125
Bis(2-ethylhexyl) phthalate	2.6	J F1	4.99	3.062	J F1	mg/Kg		10	50 - 125
Butyl benzyl phthalate	ND		4.99	3.170	J	mg/Kg		64	58 - 125
Chrysene	ND		4.99	3.301	J	mg/Kg		66	53 - 125
Dibenz(a,h)anthracene	ND	F1	4.99	2.762	J F1	mg/Kg		55	57 - 125
Dibenzofuran	ND		4.99	2.986	J	mg/Kg		60	47 - 125
Diethyl phthalate	ND		4.99	2.959	J	mg/Kg		59	53 - 125
Dimethyl phthalate	ND		4.99	3.132	J	mg/Kg		63	52 - 125
Di-n-butyl phthalate	ND		4.99	2.848	J	mg/Kg		57	49 - 125
Di-n-octyl phthalate	ND		4.99	3.015	J	mg/Kg		60	57 - 125
Fluoranthene	ND		4.99	3.444	J	mg/Kg		69	50 - 125
Fluorene	ND		4.99	3.087	J	mg/Kg		62	54 - 125
Hexachloro-1,3-butadiene	ND		4.99	3.500	J	mg/Kg		70	43 - 125
Hexachlorobenzene	ND		4.99	3.439	J	mg/Kg		69	55 - 125
Hexachlorocyclopentadiene	ND	F1	4.99	ND	F1	mg/Kg		0	10 - 150
Hexachloroethane	ND		4.99	2.559	J	mg/Kg		51	27 - 125
Indeno[1,2,3-cd]pyrene	ND	F1	4.99	2.516	J F1	mg/Kg		50	55 - 125
Isophorone	ND		4.99	2.539	J	mg/Kg		51	50 - 125

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-196762-17 MS
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: RB10-0.5
Prep Type: Total/NA
Prep Batch: 475740

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Naphthalene	ND		4.99	2.805	J	mg/Kg		56	39 - 127
Nitrobenzene	ND		4.99	3.201	J	mg/Kg		64	43 - 125
N-Nitrosodimethylamine	ND		4.99	2.661	J	mg/Kg		53	36 - 125
N-Nitrosodi-n-propylamine	ND		4.99	2.828	J	mg/Kg		57	47 - 125
n-Nitrosodiphenylamine(as diphenylamine)	ND		4.99	3.282	J	mg/Kg		66	57 - 134
Pentachlorophenol	ND		7.49	ND		mg/Kg		NC	10 - 125
Phenanthrene	ND		4.99	3.383	J	mg/Kg		68	51 - 125
Phenol	ND		7.49	4.296	J	mg/Kg		57	45 - 125
Pyrene	ND		4.99	3.442	J	mg/Kg		69	56 - 125
Pyridine	ND	F1	4.99	ND	F1	mg/Kg		0	17 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*52*		*10 - 134*
2-Fluorobiphenyl (Surr)	*56*		*14 - 142*
2-Fluorophenol (Surr)	*58*		*10 - 123*
Nitrobenzene-d5 (Surr)	*52*		*10 - 129*
p-Terphenyl-d14 (Surr)	*63*		*31 - 139*
Phenol-d6 (Surr)	*57*		*10 - 120*

Lab Sample ID: 570-196762-17 MSD
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: RB10-0.5
Prep Type: Total/NA
Prep Batch: 475740

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	ND		5.00	2.546	J	mg/Kg		51	50 - 125	3	20
1,2-Dichlorobenzene	ND		5.00	2.927	J	mg/Kg		59	42 - 125	3	20
1,3-Dichlorobenzene	ND		5.00	2.976	J	mg/Kg		60	40 - 125	2	21
1,4-Dichlorobenzene	ND		5.00	2.643	J	mg/Kg		53	45 - 125	8	24
1-Methylnaphthalene	ND	F1	5.00	2.672	J F1	mg/Kg		53	54 - 125	7	20
2,4,5-Trichlorophenol	ND		7.49	4.427	J	mg/Kg		59	35 - 125	5	20
2,4,6-Trichlorophenol	ND		7.49	4.411	J	mg/Kg		59	33 - 126	11	20
2,4-Dichlorophenol	ND		7.49	4.271	J	mg/Kg		57	45 - 125	3	20
2,4-Dimethylphenol	ND		7.49	5.130		mg/Kg		68	44 - 125	4	20
2,4-Dinitrophenol	ND		7.49	ND		mg/Kg		NC	10 - 125	NC	22
2,4-Dinitrotoluene	ND	F1	5.00	2.130	J F1	mg/Kg		43	47 - 125	3	20
2,6-Dichlorophenol	ND		7.49	4.543	J	mg/Kg		61	38 - 125	0	20
2,6-Dinitrotoluene	ND		5.00	2.622	J	mg/Kg		52	41 - 125	4	20
2-Chloronaphthalene	ND		5.00	2.861	J	mg/Kg		57	47 - 125	4	20
2-Chlorophenol	ND		7.49	4.240	J	mg/Kg		57	49 - 125	3	20
2-Methylnaphthalene	ND		5.00	2.621	J	mg/Kg		52	42 - 125	5	20
2-Methylphenol	ND		7.49	4.113	J	mg/Kg		55	46 - 125	9	20
2-Nitroaniline	ND	F1 F2	5.00	2.424	J F2	mg/Kg		49	43 - 125	23	20
2-Nitrophenol	ND		7.49	4.541	J	mg/Kg		61	25 - 126	1	21
3,3'-Dichlorobenzidine	ND		5.00	ND		mg/Kg		NC	29 - 125	NC	20
3/4-Methylphenol	ND		15.0	8.021	J	mg/Kg		54	26 - 125	10	20
3-Nitroaniline	ND	F1	5.00	ND	F1	mg/Kg		0	39 - 125	NC	20
4,6-Dinitro-2-methylphenol	ND		7.49	ND		mg/Kg		NC	10 - 125	NC	24
4-Bromophenyl phenyl ether	ND		5.00	2.941	J	mg/Kg		59	47 - 125	1	20

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 570-196762-17 MSD
Matrix: Solid
Analysis Batch: 476109

Client Sample ID: RB10-0.5
Prep Type: Total/NA
Prep Batch: 475740

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Chloro-3-methylphenol	ND		7.49	4.604	J	mg/Kg		61	53 - 125	8	20
4-Chloroaniline	ND	F1	5.00	1.123	J F1	mg/Kg		22	33 - 125	1	20
4-Chlorophenyl phenyl ether	ND		5.00	3.319	J	mg/Kg		66	49 - 125	9	20
4-Nitroaniline	ND		5.00	2.313	J	mg/Kg		46	35 - 125	7	20
4-Nitrophenol	ND	F1	7.49	ND	F1	mg/Kg		0	22 - 134	NC	21
Acenaphthene	ND		5.00	2.685	J	mg/Kg		54	51 - 125	9	20
Acenaphthylene	ND		5.00	3.320	J	mg/Kg		66	54 - 125	3	20
Aniline	ND	F1	5.00	ND	F1	mg/Kg		0	24 - 125	NC	20
Anthracene	ND		5.00	3.195	J	mg/Kg		64	50 - 125	5	20
Azobenzene	ND		5.00	2.974	J	mg/Kg		60	48 - 125	8	20
Benzidine	ND		5.00	ND		mg/Kg		NC	10 - 126	NC	30
Benzo[a]anthracene	ND		5.00	3.214	J	mg/Kg		64	62 - 125	1	20
Benzo[a]pyrene	ND		5.00	2.744	J	mg/Kg		55	55 - 131	0	20
Benzo[b]fluoranthene	ND		5.00	2.881	J	mg/Kg		58	49 - 128	6	20
Benzo[g,h,i]perylene	ND		5.00	2.859	J	mg/Kg		57	56 - 125	4	20
Benzo[k]fluoranthene	ND		5.00	3.196	J	mg/Kg		64	48 - 125	4	20
Benzoic acid	ND	F1	7.49	ND	F1	mg/Kg		0	10 - 125	NC	35
Benzyl alcohol	ND		5.00	2.953	J	mg/Kg		59	47 - 125	3	20
Bis(2-chloroethoxy)methane	ND		5.00	2.907	J	mg/Kg		58	48 - 125	5	20
Bis(2-chloroethyl)ether	ND		5.00	3.248	J	mg/Kg		65	43 - 125	5	20
bis (2-Chloroisopropyl) ether	ND		5.00	2.988	J	mg/Kg		60	46 - 125	4	20
Bis(2-ethylhexyl) phthalate	2.6	J F1	5.00	3.056	J F1	mg/Kg		10	50 - 125	0	20
Butyl benzyl phthalate	ND		5.00	3.047	J	mg/Kg		61	58 - 125	4	20
Chrysene	ND		5.00	3.357	J	mg/Kg		67	53 - 125	2	20
Dibenz(a,h)anthracene	ND	F1	5.00	2.458	J F1	mg/Kg		49	57 - 125	12	20
Dibenzofuran	ND		5.00	2.779	J	mg/Kg		56	47 - 125	7	20
Diethyl phthalate	ND		5.00	2.841	J	mg/Kg		57	53 - 125	4	20
Dimethyl phthalate	ND		5.00	2.971	J	mg/Kg		59	52 - 125	5	20
Di-n-butyl phthalate	ND		5.00	2.748	J	mg/Kg		55	49 - 125	4	20
Di-n-octyl phthalate	ND		5.00	3.034	J	mg/Kg		61	57 - 125	1	20
Fluoranthene	ND		5.00	3.181	J	mg/Kg		64	50 - 125	8	20
Fluorene	ND		5.00	2.929	J	mg/Kg		59	54 - 125	5	20
Hexachloro-1,3-butadiene	ND		5.00	3.560	J	mg/Kg		71	43 - 125	2	20
Hexachlorobenzene	ND		5.00	3.437	J	mg/Kg		69	55 - 125	0	20
Hexachlorocyclopentadiene	ND	F1	5.00	ND	F1	mg/Kg		0	10 - 150	NC	33
Hexachloroethane	ND		5.00	2.345	J	mg/Kg		47	27 - 125	9	27
Indeno[1,2,3-cd]pyrene	ND	F1	5.00	2.631	J F1	mg/Kg		53	55 - 125	4	20
Isophorone	ND		5.00	2.645	J	mg/Kg		53	50 - 125	4	20
Naphthalene	ND		5.00	2.720	J	mg/Kg		54	39 - 127	3	20
Nitrobenzene	ND		5.00	2.820	J	mg/Kg		56	43 - 125	13	20
N-Nitrosodimethylamine	ND		5.00	2.367	J	mg/Kg		47	36 - 125	12	26
N-Nitrosodi-n-propylamine	ND		5.00	2.573	J	mg/Kg		52	47 - 125	9	20
n-Nitrosodiphenylamine(as diphenylamine)	ND		5.00	3.428	J	mg/Kg		69	57 - 134	4	20
Pentachlorophenol	ND		7.49	ND		mg/Kg		NC	10 - 125	NC	20
Phenanthrene	ND		5.00	3.291	J	mg/Kg		66	51 - 125	3	20
Phenol	ND		7.49	4.221	J	mg/Kg		56	45 - 125	2	20
Pyrene	ND		5.00	3.359	J	mg/Kg		67	56 - 125	2	20
Pyridine	ND	F1	5.00	ND	F1	mg/Kg		0	17 - 125	NC	27

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	*52*		*10 - 134*
2-Fluorobiphenyl (Surr)	*55*		*14 - 142*
2-Fluorophenol (Surr)	*63*		*10 - 123*
Nitrobenzene-d5 (Surr)	*56*		*10 - 129*
p-Terphenyl-d14 (Surr)	*63*		*31 - 139*
Phenol-d6 (Surr)	*58*		*10 - 120*

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 570-477717/3-A
Matrix: Solid
Analysis Batch: 477672

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 477717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.099	0.044	mg/Kg		09/05/24 11:40	09/05/24 12:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*103*		*42 - 126*	*09/05/24 11:40*	*09/05/24 12:40*	*1*

Lab Sample ID: MB 570-477717/4-A
Matrix: Solid
Analysis Batch: 477672

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 477717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		4.0	1.8	mg/Kg		09/05/24 11:40	09/05/24 12:58	20

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*96*		*42 - 126*	*09/05/24 11:40*	*09/05/24 12:58*	*20*

Lab Sample ID: LCS 570-477717/1-A
Matrix: Solid
Analysis Batch: 477672

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 477717

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (C4-C13)			1.98	2.194		mg/Kg		111	70 - 124		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*110*		*42 - 126*

Lab Sample ID: LCSD 570-477717/2-A
Matrix: Solid
Analysis Batch: 477672

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 477717

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)			1.97	1.973		mg/Kg		100	70 - 124	11	18

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*104*		*42 - 126*

Method: 8015B - Gasoline Range Organics - (GC) (Continued)

Lab Sample ID: MB 570-477949/3-A
Matrix: Solid
Analysis Batch: 477961

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 477949

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.099	0.044	mg/Kg		09/05/24 18:34	09/05/24 22:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*42 - 126*	*09/05/24 18:34*	*09/05/24 22:49*	*1*

Lab Sample ID: LCS 570-477949/1-A
Matrix: Solid
Analysis Batch: 477961

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 477949

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	1.95	1.934		mg/Kg		99	70 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*42 - 126*

Lab Sample ID: LCSD 570-477949/2-A
Matrix: Solid
Analysis Batch: 477961

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 477949

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	1.95	1.903		mg/Kg		97	70 - 124	2	18

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*42 - 126*

Lab Sample ID: MB 570-478267/3-A
Matrix: Solid
Analysis Batch: 478349

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 478267

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C4-C13)	ND		0.10	0.044	mg/Kg		09/06/24 15:33	09/06/24 19:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*42 - 126*	*09/06/24 15:33*	*09/06/24 19:17*	*1*

Lab Sample ID: LCS 570-478267/1-A
Matrix: Solid
Analysis Batch: 478349

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 478267

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	1.99	1.969		mg/Kg		99	70 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*42 - 126*

Method: 8015B - Gasoline Range Organics - (GC) (Continued)

Lab Sample ID: LCSD 570-478267/2-A
Matrix: Solid
Analysis Batch: 478349

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 478267

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)			1.98	2.090		mg/Kg		105	70 - 124	6	18

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*42 - 126*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 570-475314/1-A
Matrix: Solid
Analysis Batch: 476384

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475314

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		5.0	4.6	mg/Kg		08/28/24 11:06	08/31/24 08:15	1
TPH as Motor Oil (C17-C44)	ND		25	10	mg/Kg		08/28/24 11:06	08/31/24 08:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*110*		*60 - 138*	*08/28/24 11:06*	*08/31/24 08:15*	*1*

Lab Sample ID: LCS 570-475314/2-A
Matrix: Solid
Analysis Batch: 476384

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475314

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]			400	423.2		mg/Kg		106	80 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*111*		*60 - 138*

Lab Sample ID: LCS 570-475314/6-A
Matrix: Solid
Analysis Batch: 476384

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475314

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
TPH as Motor Oil (C17-C44)			400	444.5		mg/Kg		111	77 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*124*		*60 - 138*

Lab Sample ID: LCSD 570-475314/3-A
Matrix: Solid
Analysis Batch: 476384

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475314

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			400	413.2		mg/Kg		103	80 - 130	2	20

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 570-475314/3-A
Matrix: Solid
Analysis Batch: 476384

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475314

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
n-Octacosane (Surr)	107		60 - 138

Lab Sample ID: LCSD 570-475314/7-A
Matrix: Solid
Analysis Batch: 476384

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475314

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)			400	438.1		mg/Kg		110	77 - 125	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
n-Octacosane (Surr)	130		60 - 138

Lab Sample ID: 570-196762-1 MS
Matrix: Solid
Analysis Batch: 476384

Client Sample ID: RB1-0.5
Prep Type: Total/NA
Prep Batch: 475314

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]	39		398	438.8		mg/Kg		101	43 - 165		

Surrogate	MS %Recovery	MS Qualifier	Limits
n-Octacosane (Surr)	91		60 - 138

Lab Sample ID: 570-196762-1 MS
Matrix: Solid
Analysis Batch: 476384

Client Sample ID: RB1-0.5
Prep Type: Total/NA
Prep Batch: 475314

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Motor Oil (C17-C44)	130		398	506.4		mg/Kg		94	44 - 161		

Surrogate	MS %Recovery	MS Qualifier	Limits
n-Octacosane (Surr)	89		60 - 138

Lab Sample ID: 570-196762-1 MSD
Matrix: Solid
Analysis Batch: 476384

Client Sample ID: RB1-0.5
Prep Type: Total/NA
Prep Batch: 475314

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	39		397	460.0		mg/Kg		106	43 - 165	5	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
n-Octacosane (Surr)	100		60 - 138

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 570-196762-1 MSD
Matrix: Solid
Analysis Batch: 476384

Client Sample ID: RB1-0.5
Prep Type: Total/NA
Prep Batch: 475314

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)	130		396	553.7		mg/Kg		107	44 - 161	9	37

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*110*		*60 - 138*

Lab Sample ID: MB 570-480608/1-A
Matrix: Solid
Analysis Batch: 480785

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 480608

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		5.0	4.6	mg/Kg		09/13/24 12:44	09/13/24 21:26	1
TPH as Motor Oil (C17-C44)	ND		25	10	mg/Kg		09/13/24 12:44	09/13/24 21:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*120*		*60 - 138*	*09/13/24 12:44*	*09/13/24 21:26*	*1*

Lab Sample ID: LCS 570-480608/2-A
Matrix: Solid
Analysis Batch: 480785

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 480608

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Diesel Range Organics [C10-C28]			400	385.8		mg/Kg		96	80 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*105*		*60 - 138*

Lab Sample ID: LCS 570-480608/6-A
Matrix: Solid
Analysis Batch: 480785

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 480608

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
TPH as Motor Oil (C17-C44)			400	452.1		mg/Kg		113	77 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane (Surr)	*105*		*60 - 138*

Lab Sample ID: LCSD 570-480608/3-A
Matrix: Solid
Analysis Batch: 480785

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 480608

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			400	383.9		mg/Kg		96	80 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*107*		*60 - 138*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 570-480608/7-A
Matrix: Solid
Analysis Batch: 480785

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 480608

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)			400	448.2		mg/Kg		112	77 - 125	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*106*		*60 - 138*

Lab Sample ID: 570-196762-1 MS
Matrix: Solid
Analysis Batch: 480785

Client Sample ID: RB1-0.5
Prep Type: Total/NA
Prep Batch: 480608

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Diesel Range Organics [C10-C28]	56	H	400	437.1		mg/Kg		95	43 - 165

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*106*		*60 - 138*

Lab Sample ID: 570-196762-1 MS
Matrix: Solid
Analysis Batch: 480785

Client Sample ID: RB1-0.5
Prep Type: Total/NA
Prep Batch: 480608

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
TPH as Motor Oil (C17-C44)	210	H	396	673.1		mg/Kg		118	44 - 161

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
n-Octacosane (Surr)	*110*		*60 - 138*

Lab Sample ID: 570-196762-1 MSD
Matrix: Solid
Analysis Batch: 480785

Client Sample ID: RB1-0.5
Prep Type: Total/NA
Prep Batch: 480608

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	56	H	398	435.4		mg/Kg		95	43 - 165	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*99*		*60 - 138*

Lab Sample ID: 570-196762-1 MSD
Matrix: Solid
Analysis Batch: 480785

Client Sample ID: RB1-0.5
Prep Type: Total/NA
Prep Batch: 480608

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
TPH as Motor Oil (C17-C44)	210	H	400	710.2		mg/Kg		126	44 - 161	5	37

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
n-Octacosane (Surr)	*102*		*60 - 138*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 570-475336/1-A ^2
Matrix: Solid
Analysis Batch: 475643

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 475336

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.94	1.90	mg/Kg		08/28/24 11:55	08/28/24 20:17	2
Lead	ND		1.96	1.30	mg/Kg		08/28/24 11:55	08/28/24 20:17	2

Lab Sample ID: LCS 570-475336/2-A ^2
Matrix: Solid
Analysis Batch: 475643

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 475336

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			185	177.6		mg/Kg		96	80 - 120		
Lead			185	188.5		mg/Kg		102	80 - 120		

Lab Sample ID: LCSD 570-475336/3-A ^2
Matrix: Solid
Analysis Batch: 475643

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 475336

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic			185	176.4		mg/Kg		95	80 - 120	1	20
Lead			185	185.7		mg/Kg		100	80 - 120	1	20

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Prep Batch: 475698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-1	RB1-0.5	Total/NA	Solid	3546	
570-196762-2	RB1-1.0	Total/NA	Solid	3546	
570-196762-3	RB2-0.5	Total/NA	Solid	3546	
570-196762-4	RB2-1.0	Total/NA	Solid	3546	
570-196762-5	RB5-0.5	Total/NA	Solid	3546	
570-196762-6	RB5-1.0	Total/NA	Solid	3546	
570-196762-7	RB3-0.5	Total/NA	Solid	3546	
570-196762-8	RB3-1.0	Total/NA	Solid	3546	
570-196762-9	RB4-0.5	Total/NA	Solid	3546	
570-196762-10	RB4-1.0	Total/NA	Solid	3546	
570-196762-11	RB6-0.5	Total/NA	Solid	3546	
570-196762-12	RB6-1.0	Total/NA	Solid	3546	
570-196762-13	RB8-0.5	Total/NA	Solid	3546	
570-196762-14	RB8-1.0	Total/NA	Solid	3546	
570-196762-15	RB9-0.5	Total/NA	Solid	3546	
570-196762-16	RB9-1.0	Total/NA	Solid	3546	
MB 570-475698/1-A	Method Blank	Total/NA	Solid	3546	
LCS 570-475698/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 570-475698/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	

Prep Batch: 475740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-17	RB10-0.5	Total/NA	Solid	3546	
570-196762-18	RB10-1.0	Total/NA	Solid	3546	
MB 570-475740/1-A	Method Blank	Total/NA	Solid	3546	
LCS 570-475740/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 570-475740/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
570-196762-17 MS	RB10-0.5	Total/NA	Solid	3546	
570-196762-17 MSD	RB10-0.5	Total/NA	Solid	3546	

Analysis Batch: 476109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-17	RB10-0.5	Total/NA	Solid	8270C	475740
MB 570-475740/1-A	Method Blank	Total/NA	Solid	8270C	475740
LCS 570-475740/2-A	Lab Control Sample	Total/NA	Solid	8270C	475740
LCSD 570-475740/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C	475740
570-196762-17 MS	RB10-0.5	Total/NA	Solid	8270C	475740
570-196762-17 MSD	RB10-0.5	Total/NA	Solid	8270C	475740

Analysis Batch: 476532

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-1	RB1-0.5	Total/NA	Solid	8270C	475698
570-196762-2	RB1-1.0	Total/NA	Solid	8270C	475698
570-196762-3	RB2-0.5	Total/NA	Solid	8270C	475698
570-196762-4	RB2-1.0	Total/NA	Solid	8270C	475698
570-196762-5	RB5-0.5	Total/NA	Solid	8270C	475698
570-196762-6	RB5-1.0	Total/NA	Solid	8270C	475698
570-196762-7	RB3-0.5	Total/NA	Solid	8270C	475698
570-196762-8	RB3-1.0	Total/NA	Solid	8270C	475698
570-196762-9	RB4-0.5	Total/NA	Solid	8270C	475698
570-196762-10	RB4-1.0	Total/NA	Solid	8270C	475698

GC/MS Semi VOA (Continued)

Analysis Batch: 476532 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-11	RB6-0.5	Total/NA	Solid	8270C	475698
570-196762-12	RB6-1.0	Total/NA	Solid	8270C	475698
570-196762-13	RB8-0.5	Total/NA	Solid	8270C	475698
570-196762-14	RB8-1.0	Total/NA	Solid	8270C	475698
570-196762-15	RB9-0.5	Total/NA	Solid	8270C	475698
570-196762-16	RB9-1.0	Total/NA	Solid	8270C	475698
MB 570-475698/1-A	Method Blank	Total/NA	Solid	8270C	475698
LCS 570-475698/2-A	Lab Control Sample	Total/NA	Solid	8270C	475698
LCSD 570-475698/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C	475698

Analysis Batch: 478519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-18	RB10-1.0	Total/NA	Solid	8270C	475740

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Analysis Batch: 477672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-1	RB1-0.5	Total/NA	Solid	8015B	477717
570-196762-2	RB1-1.0	Total/NA	Solid	8015B	477717
570-196762-4	RB2-1.0	Total/NA	Solid	8015B	477717
570-196762-5	RB5-0.5	Total/NA	Solid	8015B	477717
570-196762-6	RB5-1.0	Total/NA	Solid	8015B	477717
570-196762-7	RB3-0.5	Total/NA	Solid	8015B	477717
MB 570-477717/3-A	Method Blank	Total/NA	Solid	8015B	477717
MB 570-477717/4-A	Method Blank	Total/NA	Solid	8015B	477717
LCS 570-477717/1-A	Lab Control Sample	Total/NA	Solid	8015B	477717
LCSD 570-477717/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B	477717

Prep Batch: 477717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-1	RB1-0.5	Total/NA	Solid	5030C	
570-196762-2	RB1-1.0	Total/NA	Solid	5030C	
570-196762-4	RB2-1.0	Total/NA	Solid	5030C	
570-196762-5	RB5-0.5	Total/NA	Solid	5030C	
570-196762-6	RB5-1.0	Total/NA	Solid	5030C	
570-196762-7	RB3-0.5	Total/NA	Solid	5030C	
MB 570-477717/3-A	Method Blank	Total/NA	Solid	5030C	
MB 570-477717/4-A	Method Blank	Total/NA	Solid	5030C	
LCS 570-477717/1-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 570-477717/2-A	Lab Control Sample Dup	Total/NA	Solid	5030C	

Prep Batch: 477949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-8	RB3-1.0	Total/NA	Solid	5030C	
570-196762-9	RB4-0.5	Total/NA	Solid	5030C	
570-196762-11	RB6-0.5	Total/NA	Solid	5030C	
570-196762-12	RB6-1.0	Total/NA	Solid	5030C	
570-196762-15	RB9-0.5	Total/NA	Solid	5030C	
570-196762-16	RB9-1.0	Total/NA	Solid	5030C	
570-196762-17	RB10-0.5	Total/NA	Solid	5030C	

GC VOA (Continued)

Prep Batch: 477949 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-18	RB10-1.0	Total/NA	Solid	5030C	
MB 570-477949/3-A	Method Blank	Total/NA	Solid	5030C	
LCS 570-477949/1-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 570-477949/2-A	Lab Control Sample Dup	Total/NA	Solid	5030C	

Analysis Batch: 477961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-8	RB3-1.0	Total/NA	Solid	8015B	477949
570-196762-9	RB4-0.5	Total/NA	Solid	8015B	477949
570-196762-11	RB6-0.5	Total/NA	Solid	8015B	477949
570-196762-12	RB6-1.0	Total/NA	Solid	8015B	477949
570-196762-15	RB9-0.5	Total/NA	Solid	8015B	477949
570-196762-16	RB9-1.0	Total/NA	Solid	8015B	477949
570-196762-17	RB10-0.5	Total/NA	Solid	8015B	477949
570-196762-18	RB10-1.0	Total/NA	Solid	8015B	477949
MB 570-477949/3-A	Method Blank	Total/NA	Solid	8015B	477949
LCS 570-477949/1-A	Lab Control Sample	Total/NA	Solid	8015B	477949
LCSD 570-477949/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B	477949

Prep Batch: 478267

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-3	RB2-0.5	Total/NA	Solid	5030C	
570-196762-10	RB4-1.0	Total/NA	Solid	5030C	
570-196762-13	RB8-0.5	Total/NA	Solid	5030C	
570-196762-14	RB8-1.0	Total/NA	Solid	5030C	
MB 570-478267/3-A	Method Blank	Total/NA	Solid	5030C	
LCS 570-478267/1-A	Lab Control Sample	Total/NA	Solid	5030C	
LCSD 570-478267/2-A	Lab Control Sample Dup	Total/NA	Solid	5030C	

Analysis Batch: 478349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-3	RB2-0.5	Total/NA	Solid	8015B	478267
570-196762-10	RB4-1.0	Total/NA	Solid	8015B	478267
570-196762-13	RB8-0.5	Total/NA	Solid	8015B	478267
570-196762-14	RB8-1.0	Total/NA	Solid	8015B	478267
MB 570-478267/3-A	Method Blank	Total/NA	Solid	8015B	478267
LCS 570-478267/1-A	Lab Control Sample	Total/NA	Solid	8015B	478267
LCSD 570-478267/2-A	Lab Control Sample Dup	Total/NA	Solid	8015B	478267

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Prep Batch: 475314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-1	RB1-0.5	Total/NA	Solid	3550C	
MB 570-475314/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 570-475314/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCS 570-475314/6-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 570-475314/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
LCSD 570-475314/7-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
570-196762-1 MS	RB1-0.5	Total/NA	Solid	3550C	
570-196762-1 MS	RB1-0.5	Total/NA	Solid	3550C	

GC Semi VOA (Continued)

Prep Batch: 475314 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-1 MSD	RB1-0.5	Total/NA	Solid	3550C	
570-196762-1 MSD	RB1-0.5	Total/NA	Solid	3550C	

Analysis Batch: 476384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-1	RB1-0.5	Total/NA	Solid	8015B	475314
MB 570-475314/1-A	Method Blank	Total/NA	Solid	8015B	475314
LCS 570-475314/2-A	Lab Control Sample	Total/NA	Solid	8015B	475314
LCS 570-475314/6-A	Lab Control Sample	Total/NA	Solid	8015B	475314
LCSD 570-475314/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	475314
LCSD 570-475314/7-A	Lab Control Sample Dup	Total/NA	Solid	8015B	475314
570-196762-1 MS	RB1-0.5	Total/NA	Solid	8015B	475314
570-196762-1 MS	RB1-0.5	Total/NA	Solid	8015B	475314
570-196762-1 MSD	RB1-0.5	Total/NA	Solid	8015B	475314
570-196762-1 MSD	RB1-0.5	Total/NA	Solid	8015B	475314

Prep Batch: 480608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-1	RB1-0.5	Total/NA	Solid	3550C	
570-196762-2	RB1-1.0	Total/NA	Solid	3550C	
570-196762-3	RB2-0.5	Total/NA	Solid	3550C	
570-196762-4	RB2-1.0	Total/NA	Solid	3550C	
570-196762-5	RB5-0.5	Total/NA	Solid	3550C	
570-196762-6	RB5-1.0	Total/NA	Solid	3550C	
570-196762-7	RB3-0.5	Total/NA	Solid	3550C	
570-196762-8	RB3-1.0	Total/NA	Solid	3550C	
570-196762-9	RB4-0.5	Total/NA	Solid	3550C	
570-196762-10	RB4-1.0	Total/NA	Solid	3550C	
570-196762-11	RB6-0.5	Total/NA	Solid	3550C	
570-196762-12	RB6-1.0	Total/NA	Solid	3550C	
570-196762-13 - DL	RB8-0.5	Total/NA	Solid	3550C	
570-196762-14 - DL	RB8-1.0	Total/NA	Solid	3550C	
570-196762-15 - DL	RB9-0.5	Total/NA	Solid	3550C	
570-196762-16	RB9-1.0	Total/NA	Solid	3550C	
570-196762-17	RB10-0.5	Total/NA	Solid	3550C	
570-196762-18	RB10-1.0	Total/NA	Solid	3550C	
MB 570-480608/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 570-480608/2-A	Lab Control Sample	Total/NA	Solid	3550C	
LCS 570-480608/6-A	Lab Control Sample	Total/NA	Solid	3550C	
LCSD 570-480608/3-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
LCSD 570-480608/7-A	Lab Control Sample Dup	Total/NA	Solid	3550C	
570-196762-1 MS	RB1-0.5	Total/NA	Solid	3550C	
570-196762-1 MS	RB1-0.5	Total/NA	Solid	3550C	
570-196762-1 MSD	RB1-0.5	Total/NA	Solid	3550C	
570-196762-1 MSD	RB1-0.5	Total/NA	Solid	3550C	

Analysis Batch: 480785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-1	RB1-0.5	Total/NA	Solid	8015B	480608
570-196762-2	RB1-1.0	Total/NA	Solid	8015B	480608
570-196762-3	RB2-0.5	Total/NA	Solid	8015B	480608

GC Semi VOA (Continued)

Analysis Batch: 480785 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-4	RB2-1.0	Total/NA	Solid	8015B	480608
570-196762-5	RB5-0.5	Total/NA	Solid	8015B	480608
570-196762-6	RB5-1.0	Total/NA	Solid	8015B	480608
570-196762-7	RB3-0.5	Total/NA	Solid	8015B	480608
570-196762-8	RB3-1.0	Total/NA	Solid	8015B	480608
570-196762-9	RB4-0.5	Total/NA	Solid	8015B	480608
570-196762-10	RB4-1.0	Total/NA	Solid	8015B	480608
570-196762-11	RB6-0.5	Total/NA	Solid	8015B	480608
570-196762-12	RB6-1.0	Total/NA	Solid	8015B	480608
570-196762-16	RB9-1.0	Total/NA	Solid	8015B	480608
570-196762-17	RB10-0.5	Total/NA	Solid	8015B	480608
570-196762-18	RB10-1.0	Total/NA	Solid	8015B	480608
MB 570-480608/1-A	Method Blank	Total/NA	Solid	8015B	480608
LCS 570-480608/2-A	Lab Control Sample	Total/NA	Solid	8015B	480608
LCS 570-480608/6-A	Lab Control Sample	Total/NA	Solid	8015B	480608
LCSD 570-480608/3-A	Lab Control Sample Dup	Total/NA	Solid	8015B	480608
LCSD 570-480608/7-A	Lab Control Sample Dup	Total/NA	Solid	8015B	480608
570-196762-1 MS	RB1-0.5	Total/NA	Solid	8015B	480608
570-196762-1 MS	RB1-0.5	Total/NA	Solid	8015B	480608
570-196762-1 MSD	RB1-0.5	Total/NA	Solid	8015B	480608
570-196762-1 MSD	RB1-0.5	Total/NA	Solid	8015B	480608

Analysis Batch: 481211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-13 - DL	RB8-0.5	Total/NA	Solid	8015B	480608
570-196762-14 - DL	RB8-1.0	Total/NA	Solid	8015B	480608
570-196762-15 - DL	RB9-0.5	Total/NA	Solid	8015B	480608

Metals

Prep Batch: 475336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-1	RB1-0.5	Total/NA	Solid	3051A	
570-196762-2	RB1-1.0	Total/NA	Solid	3051A	
570-196762-3	RB2-0.5	Total/NA	Solid	3051A	
570-196762-4	RB2-1.0	Total/NA	Solid	3051A	
570-196762-5	RB5-0.5	Total/NA	Solid	3051A	
570-196762-6	RB5-1.0	Total/NA	Solid	3051A	
570-196762-7	RB3-0.5	Total/NA	Solid	3051A	
570-196762-8	RB3-1.0	Total/NA	Solid	3051A	
570-196762-9	RB4-0.5	Total/NA	Solid	3051A	
570-196762-10	RB4-1.0	Total/NA	Solid	3051A	
570-196762-11	RB6-0.5	Total/NA	Solid	3051A	
570-196762-12	RB6-1.0	Total/NA	Solid	3051A	
570-196762-13	RB8-0.5	Total/NA	Solid	3051A	
570-196762-14	RB8-1.0	Total/NA	Solid	3051A	
570-196762-15	RB9-0.5	Total/NA	Solid	3051A	
570-196762-16	RB9-1.0	Total/NA	Solid	3051A	
570-196762-17	RB10-0.5	Total/NA	Solid	3051A	
570-196762-18	RB10-1.0	Total/NA	Solid	3051A	
MB 570-475336/1-A ^2	Method Blank	Total/NA	Solid	3051A	

Metals (Continued)

Prep Batch: 475336 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-475336/2-A ^2	Lab Control Sample	Total/NA	Solid	3051A	
LCSD 570-475336/3-A ^2	Lab Control Sample Dup	Total/NA	Solid	3051A	

Analysis Batch: 475643

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-1	RB1-0.5	Total/NA	Solid	6010B	475336
570-196762-2	RB1-1.0	Total/NA	Solid	6010B	475336
570-196762-3	RB2-0.5	Total/NA	Solid	6010B	475336
570-196762-4	RB2-1.0	Total/NA	Solid	6010B	475336
570-196762-5	RB5-0.5	Total/NA	Solid	6010B	475336
570-196762-6	RB5-1.0	Total/NA	Solid	6010B	475336
570-196762-7	RB3-0.5	Total/NA	Solid	6010B	475336
570-196762-8	RB3-1.0	Total/NA	Solid	6010B	475336
570-196762-9	RB4-0.5	Total/NA	Solid	6010B	475336
570-196762-10	RB4-1.0	Total/NA	Solid	6010B	475336
570-196762-11	RB6-0.5	Total/NA	Solid	6010B	475336
570-196762-12	RB6-1.0	Total/NA	Solid	6010B	475336
570-196762-13	RB8-0.5	Total/NA	Solid	6010B	475336
570-196762-14	RB8-1.0	Total/NA	Solid	6010B	475336
570-196762-15	RB9-0.5	Total/NA	Solid	6010B	475336
570-196762-16	RB9-1.0	Total/NA	Solid	6010B	475336
570-196762-17	RB10-0.5	Total/NA	Solid	6010B	475336
570-196762-18	RB10-1.0	Total/NA	Solid	6010B	475336
MB 570-475336/1-A ^2	Method Blank	Total/NA	Solid	6010B	475336
LCS 570-475336/2-A ^2	Lab Control Sample	Total/NA	Solid	6010B	475336
LCSD 570-475336/3-A ^2	Lab Control Sample Dup	Total/NA	Solid	6010B	475336

Lab Chronicle

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Client Sample ID: RB1-0.5

Date Collected: 08/26/24 08:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.08 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		10	1 mL	1 mL	476532	08/31/24 17:59	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.00 g	5 mL	477717	09/05/24 11:40	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477672	09/05/24 19:22	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.01 g	10 mL	475314	08/28/24 11:06	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	476384	08/31/24 12:22	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3550C			10.01 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 00:33	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.54 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 20:35	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB1-1.0

Date Collected: 08/26/24 09:15
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.03 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		10	1 mL	1 mL	476532	08/31/24 18:22	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.12 g	5 mL	477717	09/05/24 11:40	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477672	09/05/24 19:40	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.05 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 00:54	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.49 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 20:38	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB2-0.5

Date Collected: 08/26/24 09:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.01 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		10	1 mL	1 mL	476532	08/31/24 18:45	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.09 g	5 mL	478267	09/06/24 15:33	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	478349	09/06/24 20:33	A9VE	EET CAL 4
	Instrument ID: GC73									

Lab Chronicle

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Client Sample ID: RB2-0.5

Date Collected: 08/26/24 09:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			10.05 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 01:15	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.46 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 20:44	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB2-1.0

Date Collected: 08/26/24 09:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.08 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		5	1 mL	1 mL	476532	08/31/24 19:09	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.03 g	5 mL	477717	09/05/24 11:40	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477672	09/05/24 20:18	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.03 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 01:36	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.47 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 20:47	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB5-0.5

Date Collected: 08/26/24 09:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.01 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		10	1 mL	1 mL	476532	08/31/24 19:32	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.10 g	5 mL	477717	09/05/24 11:40	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477672	09/05/24 20:37	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.07 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		10	10 mL	10 mL	480785	09/14/24 01:57	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.48 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 20:49	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Lab Chronicle

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Client Sample ID: RB5-1.0
Date Collected: 08/26/24 09:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.10 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		10	1 mL	1 mL	476532	08/31/24 19:55	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.05 g	5 mL	477717	09/05/24 11:40	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477672	09/05/24 20:56	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.05 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		10	10 mL	10 mL	480785	09/14/24 02:17	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.52 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 20:51	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB3-0.5
Date Collected: 08/26/24 10:05
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.06 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		5	1 mL	1 mL	476532	08/31/24 20:18	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.13 g	5 mL	477717	09/05/24 11:40	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477672	09/05/24 21:15	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.08 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 02:38	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.54 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 20:54	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB3-1.0
Date Collected: 08/26/24 10:10
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.10 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		10	1 mL	1 mL	476532	08/31/24 20:41	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.14 g	5 mL	477949	09/05/24 18:34	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477961	09/06/24 00:05	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.03 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 02:59	SP9M	EET CAL 4
	Instrument ID: GC48									

Lab Chronicle

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Client Sample ID: RB3-1.0
Date Collected: 08/26/24 10:10
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3051A			0.53 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 20:56	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB4-0.5
Date Collected: 08/26/24 10:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.10 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		5	1 mL	1 mL	476532	08/31/24 21:05	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.04 g	5 mL	477949	09/05/24 18:34	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477961	09/06/24 00:24	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.05 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 03:19	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.46 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 20:58	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB4-1.0
Date Collected: 08/26/24 10:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.04 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		1	1 mL	1 mL	476532	08/31/24 21:28	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.12 g	5 mL	478267	09/06/24 15:33	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	478349	09/06/24 20:52	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.06 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 03:40	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.54 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 21:01	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Lab Chronicle

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Client Sample ID: RB6-0.5

Date Collected: 08/26/24 10:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-11

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.04 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		1	1 mL	1 mL	476532	08/31/24 21:51	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.21 g	5 mL	477949	09/05/24 18:34	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477961	09/06/24 01:01	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.03 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 04:01	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.47 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 21:03	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB6-1.0

Date Collected: 08/26/24 10:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-12

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.07 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		1	1 mL	1 mL	476532	08/31/24 22:14	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.02 g	5 mL	477949	09/05/24 18:34	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477961	09/06/24 01:20	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.04 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 05:03	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.46 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 21:05	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB8-0.5

Date Collected: 08/26/24 11:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.05 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		1	1 mL	1 mL	476532	08/31/24 22:37	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			1.00 g	5 mL	478267	09/06/24 15:33	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	478349	09/06/24 21:11	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C	DL		10.05 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B	DL	10	10 mL	10 mL	481211	09/16/24 15:18	SP9M	EET CAL 4
	Instrument ID: GC48									

Lab Chronicle

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Client Sample ID: RB8-0.5

Date Collected: 08/26/24 11:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-13

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3051A			0.48 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 21:12	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB8-1.0

Date Collected: 08/26/24 11:35
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-14

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.05 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		10	1 mL	1 mL	476532	08/31/24 23:00	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			1.02 g	5 mL	478267	09/06/24 15:33	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	478349	09/06/24 21:30	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C	DL		5.10 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B	DL	10	10 mL	10 mL	481211	09/16/24 15:38	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.52 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 21:14	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB9-0.5

Date Collected: 08/26/24 11:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-15

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.01 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		5	1 mL	1 mL	476532	08/31/24 23:24	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.08 g	5 mL	477949	09/05/24 18:34	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477961	09/06/24 01:38	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C	DL		10.00 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B	DL	10	10 mL	10 mL	481211	09/16/24 15:59	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.47 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 21:17	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB9-1.0

Lab Sample ID: 570-196762-16

Date Collected: 08/26/24 12:00

Matrix: Solid

Date Received: 08/27/24 18:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.01 g	2 mL	475698	08/29/24 09:56	V3FP	EET CAL 4
Total/NA	Analysis	8270C		1	1 mL	1 mL	476532	08/31/24 23:47	PQS1	EET CAL 4
	Instrument ID: GCMSSS									
Total/NA	Prep	5030C			5.13 g	5 mL	477949	09/05/24 18:34	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477961	09/06/24 01:57	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.04 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 06:26	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.49 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 21:19	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB10-0.5

Lab Sample ID: 570-196762-17

Date Collected: 08/26/24 12:20

Matrix: Solid

Date Received: 08/27/24 18:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.04 g	2 mL	475740	08/29/24 10:48	V3FP	EET CAL 4
Total/NA	Analysis	8270C		10	1 mL	1 mL	476109	08/30/24 14:34	CG	EET CAL 4
	Instrument ID: GCMS83									
Total/NA	Prep	5030C			5.01 g	5 mL	477949	09/05/24 18:34	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477961	09/06/24 02:16	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.03 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 06:47	SP9M	EET CAL 4
	Instrument ID: GC48									
Total/NA	Prep	3051A			0.48 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 21:21	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Client Sample ID: RB10-1.0

Lab Sample ID: 570-196762-18

Date Collected: 08/26/24 12:25

Matrix: Solid

Date Received: 08/27/24 18:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			20.00 g	2 mL	475740	08/29/24 10:48	V3FP	EET CAL 4
Total/NA	Analysis	8270C		10	1 mL	1 mL	478519	09/08/24 00:04	J7WE	EET CAL 4
	Instrument ID: GCMSTT									
Total/NA	Prep	5030C			5.09 g	5 mL	477949	09/05/24 18:34	A9VE	EET CAL 4
Total/NA	Analysis	8015B		1	5 g	5 mL	477961	09/06/24 02:35	A9VE	EET CAL 4
	Instrument ID: GC73									
Total/NA	Prep	3550C			10.06 g	10 mL	480608	09/13/24 12:44	NV8K	EET CAL 4
Total/NA	Analysis	8015B		1	10 mL	10 mL	480785	09/14/24 07:07	SP9M	EET CAL 4
	Instrument ID: GC48									

Lab Chronicle

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Client Sample ID: RB10-1.0

Date Collected: 08/26/24 12:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3051A			0.48 g	50 mL	475336	08/28/24 11:55	RF8W	EET CAL 4
Total/NA	Analysis	6010B		2			475643	08/28/24 21:24	VZ0K	EET CAL 4
	Instrument ID: ICP11									

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Laboratory: Eurofins Calscience

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	3082	07-31-26

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8270C	3546	Solid	1,2,4-Trichlorobenzene
8270C	3546	Solid	1-Methylnaphthalene
8270C	3546	Solid	2,4,5-Trichlorophenol
8270C	3546	Solid	2,4,6-Trichlorophenol
8270C	3546	Solid	2-Methylphenol
8270C	3546	Solid	3/4-Methylphenol
8270C	3546	Solid	4,6-Dinitro-2-methylphenol
8270C	3546	Solid	Azobenzene
8270C	3546	Solid	bis (2-Chloroisopropyl) ether
8270C	3546	Solid	Hexachloro-1,3-butadiene
8270C	3546	Solid	Hexachlorobenzene
8270C	3546	Solid	Hexachlorocyclopentadiene
8270C	3546	Solid	Hexachloroethane
8270C	3546	Solid	Phenol
8270C	3546	Solid	Pyrene
8270C	3546	Solid	Pyridine

Oregon	NELAP	4175	02-02-25

Method Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Method	Method Description	Protocol	Laboratory
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	EET CAL 4
8015B	Gasoline Range Organics - (GC)	SW846	EET CAL 4
8015B	Diesel Range Organics (DRO) (GC)	SW846	EET CAL 4
6010B	Metals (ICP)	SW846	EET CAL 4
3051A	Preparation, Metals, Microwave Assisted	SW846	EET CAL 4
3546	Microwave Extraction	SW846	EET CAL 4
3550C	Ultrasonic Extraction	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-196762-1	RB1-0.5	Solid	08/26/24 08:30	08/27/24 18:55
570-196762-2	RB1-1.0	Solid	08/26/24 09:15	08/27/24 18:55
570-196762-3	RB2-0.5	Solid	08/26/24 09:20	08/27/24 18:55
570-196762-4	RB2-1.0	Solid	08/26/24 09:25	08/27/24 18:55
570-196762-5	RB5-0.5	Solid	08/26/24 09:50	08/27/24 18:55
570-196762-6	RB5-1.0	Solid	08/26/24 09:55	08/27/24 18:55
570-196762-7	RB3-0.5	Solid	08/26/24 10:05	08/27/24 18:55
570-196762-8	RB3-1.0	Solid	08/26/24 10:10	08/27/24 18:55
570-196762-9	RB4-0.5	Solid	08/26/24 10:25	08/27/24 18:55
570-196762-10	RB4-1.0	Solid	08/26/24 10:30	08/27/24 18:55
570-196762-11	RB6-0.5	Solid	08/26/24 10:50	08/27/24 18:55
570-196762-12	RB6-1.0	Solid	08/26/24 10:55	08/27/24 18:55
570-196762-13	RB8-0.5	Solid	08/26/24 11:30	08/27/24 18:55
570-196762-14	RB8-1.0	Solid	08/26/24 11:35	08/27/24 18:55
570-196762-15	RB9-0.5	Solid	08/26/24 11:55	08/27/24 18:55
570-196762-16	RB9-1.0	Solid	08/26/24 12:00	08/27/24 18:55
570-196762-17	RB10-0.5	Solid	08/26/24 12:20	08/27/24 18:55
570-196762-18	RB10-1.0	Solid	08/26/24 12:25	08/27/24 18:55

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Loc: 570

CHAIN-OF-CUSTODY F 196762

DATE: 08/26/

PAGE: 1 OF

LABORATORY CLIENT: Rincon Consultants	CLIENT PROJECT NAME / NO.: Los Patos Bridge
ADDRESS: 319 E Carrillo St, Suite 105	P.O. NO.:
CITY: Santa Barbara STATE: CA ZIP: 93101	PROJECT CONTACT: Lauren Vigliotti
TEL: (916) 379-7748 E-MAIL: lvigliotti@rinconconsultants.com	LAB CONTACT OR QUOTE NO.: 570208864-0
	GLOBAL ID: LOG CODE: SAMPLER(S): (PRINT) Zach Berghorst

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

570-196762 Chain of Custody

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	lead + arsenic	8VOCs by 8270	PAHs 8270C	TPHg,d,o by 8015M
1	RB1-0.5	08/26/24	0830	S	3	X			X	X	X	X
2	RB1-1.0	"	0915	"	"	"			X	X	X	X
3	RB2-0.5	"	0920	"	"	"			X	X	X	X
4	RB2-1.0	"	0925	"	"	"			X	X	X	X
5	RB5-0.5	"	0950	"	"	"			X	X	X	X
6	RB5-1.0	"	0955	"	"	"			X	X	X	X
7	RB3-0.5	"	1005	"	"	"			X	X	X	X
8	RB3-1.0	"	1010	"	"	"			X	X	X	X
9	RB4-0.5	"	1025	"	"	"			X	X	X	X
10	RB4-1.0	"	1030	"	"	"			X	X	X	X

	Date	Time		Date	Time
Relinquished by: (Signature)	8-26-24	1253	Received by: (Signature/Affiliation) EC	8/27/24	1253
Relinquished by: (Signature) EC	8/27/24	1855	Received by: (Signature/Affiliation)	8-27-24	1855
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature/Affiliation)	Date:	Time:

1.9/2.4 sc6

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CHAIN-OF-CUSTODY RECORD

DATE: 08/26/24

PAGE: 2 OF 2

LABORATORY CLIENT: Rincon Consultants	CLIENT PROJECT NAME / NO.: Los Patos Bridge
ADDRESS: 319 E Carrillo St, Suite 105	P.O. NO.:
CITY: Santa Barbara STATE: CA ZIP: 93101	PROJECT CONTACT: Lauren Vigliotti
TEL: (916) 379-7748 E-MAIL: lvigliotti@rinconconsultants.com	LAB CONTACT OR QUOTE NO.: 57020864-0
GLOBAL ID:	LOG CODE:
SAMPLER(S): (PRINT) Zach Berghorst	

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Lead & arsenic	SVOCs by 8270	PAHs by 8270C	TPH g, d, o by 8015M
11	RB6-0.5	08/26/24	1050	S	3	X			X	X	X	X
12	RB6+0		1055						X	X	X	X
13	RB8-0.5		1130						X	X	X	X
14	RB8-1.0		1135						X	X	X	X
15	RB9-0.5		1155						X	X	X	X
16	RB9-1.0		1200						X	X	X	X
17	RB10-0.5		1220									
18	RB10-1.0		1225									

	Date	Time		Date	Time
Relinquished by: (Signature)	8-26-24	1253	Received by: (Signature/Affiliation) EC	8/27/24	1253
Relinquished by: (Signature) EC	8/22/24	1855	Received by: (Signature/Affiliation)	8-27-24	1855
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature/Affiliation)	Date:	Time:

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Loc: 570

CHAIN-OF-CUSTODY F 196762

DATE: 08/26/

PAGE: 1 OF

LABORATORY CLIENT: Rincon Consultants	CLIENT PROJECT NAME / NO.: Los Patos Bridge
ADDRESS: 319 E Carrillo St, Suite 105	P.O. NO.:
CITY: Santa Barbara STATE: CA ZIP: 93101	PROJECT CONTACT: Lauren Vigliotti
TEL: (916) 379-7748 E-MAIL: lvigliotti@rinconconsultants.com	LAB CONTACT OR QUOTE NO.: 570208864-0
GLOBAL ID:	LOG CODE:
	SAMPLER(S): (PRINT) Zach Berghorst

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

570-196762 Chain of Custody

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	lead + arsenic	8VOCs by 8270	PAHs 8270C	TPHg,d,o by 8015M
1	RB1-0.5	08/26/24	0830	S	3	X			X	X	X	X
2	RB1-1.0	"	0915	"	"	"			X	X	X	X
3	RB2-0.5	"	0920	"	"	"			X	X	X	X
4	RB2-1.0	"	0925	"	"	"			X	X	X	X
5	RB5-0.5	"	0950	"	"	"			X	X	X	X
6	RB5-1.0	"	0955	"	"	"			X	X	X	X
7	RB3-0.5	"	1005	"	"	"			X	X	X	X
8	RB3-1.0	"	1010	"	"	"			X	X	X	X
9	RB4-0.5	"	1025	"	"	"			X	X	X	X
10	RB4-1.0	"	1030	"	"	"			X	X	X	X

	Date	Time		Date	Time
Relinquished by: (Signature)	8-26-24	1253	Received by: (Signature/Affiliation) EC	8/27/24	1253
Relinquished by: (Signature) EC	8/27/24	1855	Received by: (Signature/Affiliation)	8-27-24	1855
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature/Affiliation)	Date:	Time:

1.9/2.4 sc6

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For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN-OF-CUSTODY RECORD

DATE: 08/26/24

PAGE: 2 OF 2

LABORATORY CLIENT: Rincon Consultants	CLIENT PROJECT NAME / NO.: Los Patos Bridge
ADDRESS: 319 E Carrillo St, Suite 105	P.O. NO.:
CITY: Santa Barbara STATE: CA ZIP: 93101	PROJECT CONTACT: Lauren Vigliotti
TEL: (916) 379-7748 E-MAIL: lvigliotti@rinconconsultants.com	LAB CONTACT OR QUOTE NO.: 57020864-0
GLOBAL ID:	LOG CODE:
SAMPLER(S): (PRINT) Zach Berghorst	

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Lead & arsenic	SVOCs by 8270	PAHs by 8270C	TPHg, d, o by 8015M
11	RB6-0.5	08/26/24	1050	S	3	X			X	X	X	X
12	RB6-1.0	"	1055	"	"	"			X	X	X	X
13	RB8-0.5	"	1130	"	"	"			X	X	X	X
14	RB8-1.0	"	1135	"	"	"			X	X	X	X
15	RB9-0.5	"	1155	"	"	"			X	X	X	X
16	RB9-1.0	"	1200	"	"	"			X	X	X	X
17	RB10-0.5	"	1220	"	"	"						
18	RB10-1.0	"	1225	"	"	"						

	Date	Time		Date	Time
Relinquished by: (Signature)	8-26-24	1253	Received by: (Signature/Affiliation) EC	8/27/24	1253
Relinquished by: (Signature) EC	8/22/24	1855	Received by: (Signature/Affiliation)	8-27-24	1855
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature/Affiliation)	Date:	Time:

Login Sample Receipt Checklist

Client: Rincon Consultants

Job Number: 570-196762-1

Login Number: 196762
List Number: 1
Creator: Ferreira, Bruno

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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1 2 3 4 5 6 7 8 9 10 11 12 13 14

ANALYTICAL REPORT

PREPARED FOR

Attn: Lauren Vigliotti
Rincon Consultants
4825 J St
Suite 200
Sacramento, California 95819

Generated 10/3/2024 6:11:33 PM

JOB DESCRIPTION

Los Patos Bridge

JOB NUMBER

570-196762-2

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin CA 92780

See page two for job notes and contact information.

myEOL

Job Notes

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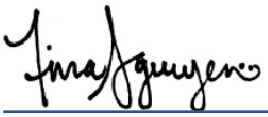
The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Calscience Project Manager.

Authorization



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Authorized for release by
Tina Nguyen, Project Manager
Tina.Nguyen@et.eurofinsus.com
(657)210-6301

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Definitions/Glossary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-2

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
570-196762-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 8/27/2024 6:55 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C.

Metals
Method 6010D - STLC Citrate: The following samples were sieved per the procedure; however, the samples contained material that would not pass through the sieve: RB8-1.0 (570-196762-14), RB9-0.5 (570-196762-15), RB10-0.5 (570-196762-17) and RB10-1.0 (570-196762-18). This material was removed and not extracted. The material removed is described in the CA WET spreadsheet. In preparation batch 280-668677

Method 6010D - STLC Citrate: Insufficient samples were provided to perform the leaching procedure with the required 50g for the following samples: RB8-1.0 (570-196762-14), RB9-0.5 (570-196762-15) and RB10-0.5 (570-196762-17). The volume of leaching fluid was adjusted proportionally to maintain a 10:1 ratio of leaching fluid to weight of sample. Reporting limits (RLs) are not affected. In preparation batch 280-668677

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-2

Client Sample ID: RB5-0.5 — Lab Sample ID: 570-196762-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.379	J	0.500	0.0527	mg/L	1		6010B	TCLP
Lead	37.5		0.0450	0.0137	mg/L	1		6010D	STLC Citrate

Client Sample ID: RB3-1.0 — Lab Sample ID: 570-196762-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.297	J	0.500	0.0527	mg/L	1		6010B	TCLP
Lead	20.4		0.0450	0.0137	mg/L	1		6010D	STLC Citrate

Client Sample ID: RB4-0.5 — Lab Sample ID: 570-196762-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	3.04		0.0450	0.0137	mg/L	1		6010D	STLC Citrate

Client Sample ID: RB8-0.5 — Lab Sample ID: 570-196762-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.107	J	0.500	0.0527	mg/L	1		6010B	TCLP
Lead	2.80		0.0450	0.0137	mg/L	1		6010D	STLC Citrate

Client Sample ID: RB8-1.0 — Lab Sample ID: 570-196762-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	6.55		0.0450	0.0137	mg/L	1		6010D	STLC Citrate

Client Sample ID: RB9-0.5 — Lab Sample ID: 570-196762-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	2.97		0.0450	0.0137	mg/L	1		6010D	STLC Citrate

Client Sample ID: RB10-0.5 — Lab Sample ID: 570-196762-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	8.53		0.0450	0.0137	mg/L	1		6010D	STLC Citrate

Client Sample ID: RB10-1.0 — Lab Sample ID: 570-196762-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0560	J	0.500	0.0527	mg/L	1		6010B	TCLP
Lead	14.3		0.0450	0.0137	mg/L	1		6010D	STLC Citrate

This Detection Summary does not include radiochemical test results.

Method: SW846 6010B - Metals (ICP) - TCLP

Client Sample ID: RB5-0.5
Date Collected: 08/26/24 09:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.379**	**J**	0.500	0.0527	mg/L		09/22/24 23:01	09/23/24 18:38	1

Client Sample ID: RB3-1.0
Date Collected: 08/26/24 10:10
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-8
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.297**	**J**	0.500	0.0527	mg/L		09/22/24 23:01	09/23/24 18:40	1

Client Sample ID: RB4-0.5
Date Collected: 08/26/24 10:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.500	0.0527	mg/L		09/22/24 23:01	09/23/24 18:43	1

Client Sample ID: RB8-0.5
Date Collected: 08/26/24 11:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.107**	**J**	0.500	0.0527	mg/L		09/22/24 23:01	09/23/24 18:45	1

Client Sample ID: RB8-1.0
Date Collected: 08/26/24 11:35
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-14
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.500	0.0527	mg/L		09/22/24 23:01	09/23/24 18:47	1

Client Sample ID: RB9-0.5
Date Collected: 08/26/24 11:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-15
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.500	0.0527	mg/L		09/22/24 23:01	09/23/24 18:50	1

Client Sample ID: RB10-0.5
Date Collected: 08/26/24 12:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.500	0.0527	mg/L		09/22/24 23:01	09/23/24 18:57	1

Client Sample ID: RB10-1.0
Date Collected: 08/26/24 12:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-18
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.0560**	**J**	0.500	0.0527	mg/L		09/24/24 09:37	09/24/24 21:58	1

Method: SW846 6010D - Metals (ICP) - STLC Citrate

Client Sample ID: RB5-0.5
Date Collected: 08/26/24 09:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-5
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	37.5		0.0450	0.0137	mg/L		09/27/24 08:20	09/27/24 16:22	1

Client Sample ID: RB3-1.0
Date Collected: 08/26/24 10:10
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-8
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	20.4		0.0450	0.0137	mg/L		09/27/24 08:20	09/27/24 16:38	1

Client Sample ID: RB4-0.5
Date Collected: 08/26/24 10:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-9
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	3.04		0.0450	0.0137	mg/L		09/27/24 08:20	09/27/24 16:42	1

Client Sample ID: RB8-0.5
Date Collected: 08/26/24 11:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-13
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.80		0.0450	0.0137	mg/L		09/27/24 08:20	09/27/24 16:46	1

Client Sample ID: RB8-1.0
Date Collected: 08/26/24 11:35
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-14
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	6.55		0.0450	0.0137	mg/L		09/30/24 09:10	10/01/24 13:59	1

Client Sample ID: RB9-0.5
Date Collected: 08/26/24 11:55
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-15
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	2.97		0.0450	0.0137	mg/L		09/30/24 09:10	10/01/24 14:04	1

Client Sample ID: RB10-0.5
Date Collected: 08/26/24 12:20
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-17
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	8.53		0.0450	0.0137	mg/L		09/30/24 09:10	10/01/24 14:09	1

Client Sample ID: RB10-1.0
Date Collected: 08/26/24 12:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-18
Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	14.3		0.0450	0.0137	mg/L		09/30/24 09:10	10/01/24 14:13	1

Method: 6010B - Metals (ICP)

Lab Sample ID: LB 570-484151/1-A
Matrix: Solid
Analysis Batch: 484470

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 484151

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.500	0.0527	mg/L		09/24/24 09:37	09/24/24 21:17	1

Lab Sample ID: LCS 570-484151/2-A
Matrix: Solid
Analysis Batch: 484470

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 484151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	2.00	2.103		mg/L		105	80 - 120

Lab Sample ID: LCSD 570-484151/3-A
Matrix: Solid
Analysis Batch: 484470

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 484151

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lead	2.00	2.093		mg/L		105	80 - 120	0	20

Lab Sample ID: LB 570-483080/1-B
Matrix: Solid
Analysis Batch: 484034

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 483604

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.500	0.0527	mg/L		09/22/24 23:01	09/23/24 17:00	1

Lab Sample ID: LCS 570-483080/2-B
Matrix: Solid
Analysis Batch: 484034

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 483604

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	2.00	1.855		mg/L		93	80 - 120

Lab Sample ID: LCSD 570-483080/3-B
Matrix: Solid
Analysis Batch: 484034

Client Sample ID: Lab Control Sample Dup
Prep Type: TCLP
Prep Batch: 483604

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lead	2.00	1.818		mg/L		91	80 - 120	2	20

Method: 6010D - Metals (ICP)

Lab Sample ID: LB 280-668349/1-C
Matrix: Solid
Analysis Batch: 669038

Client Sample ID: Method Blank
Prep Type: STLC Citrate
Prep Batch: 668878

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0450	0.0137	mg/L		09/27/24 08:20	09/27/24 15:43	1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 280-668349/2-C
Matrix: Solid
Analysis Batch: 669038

Client Sample ID: Lab Control Sample
Prep Type: STLC Citrate
Prep Batch: 668878

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lead			10.0	9.984		mg/L		100	80 - 120		

Lab Sample ID: LB 280-668677/1-B
Matrix: Solid
Analysis Batch: 669384

Client Sample ID: Method Blank
Prep Type: STLC Citrate
Prep Batch: 669099

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0450	0.0137	mg/L		09/30/24 09:10	10/01/24 13:49	1

Lab Sample ID: LCS 280-668677/2-B
Matrix: Solid
Analysis Batch: 669384

Client Sample ID: Lab Control Sample
Prep Type: STLC Citrate
Prep Batch: 669099

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lead			10.0	8.849		mg/L		88	80 - 120		

Metals

Leach Batch: 483080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-5	RB5-0.5	TCLP	Solid	1311	
570-196762-8	RB3-1.0	TCLP	Solid	1311	
570-196762-9	RB4-0.5	TCLP	Solid	1311	
570-196762-13	RB8-0.5	TCLP	Solid	1311	
570-196762-14	RB8-1.0	TCLP	Solid	1311	
570-196762-15	RB9-0.5	TCLP	Solid	1311	
570-196762-17	RB10-0.5	TCLP	Solid	1311	
LB 570-483080/1-B	Method Blank	TCLP	Solid	1311	
LCS 570-483080/2-B	Lab Control Sample	TCLP	Solid	1311	
LCSD 570-483080/3-B	Lab Control Sample Dup	TCLP	Solid	1311	

Prep Batch: 483604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-5	RB5-0.5	TCLP	Solid	3010A	483080
570-196762-8	RB3-1.0	TCLP	Solid	3010A	483080
570-196762-9	RB4-0.5	TCLP	Solid	3010A	483080
570-196762-13	RB8-0.5	TCLP	Solid	3010A	483080
570-196762-14	RB8-1.0	TCLP	Solid	3010A	483080
570-196762-15	RB9-0.5	TCLP	Solid	3010A	483080
570-196762-17	RB10-0.5	TCLP	Solid	3010A	483080
LB 570-483080/1-B	Method Blank	TCLP	Solid	3010A	483080
LCS 570-483080/2-B	Lab Control Sample	TCLP	Solid	3010A	483080
LCSD 570-483080/3-B	Lab Control Sample Dup	TCLP	Solid	3010A	483080

Leach Batch: 483794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-18	RB10-1.0	TCLP	Solid	1311	

Analysis Batch: 484034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-5	RB5-0.5	TCLP	Solid	6010B	483604
570-196762-8	RB3-1.0	TCLP	Solid	6010B	483604
570-196762-9	RB4-0.5	TCLP	Solid	6010B	483604
570-196762-13	RB8-0.5	TCLP	Solid	6010B	483604
570-196762-14	RB8-1.0	TCLP	Solid	6010B	483604
570-196762-15	RB9-0.5	TCLP	Solid	6010B	483604
570-196762-17	RB10-0.5	TCLP	Solid	6010B	483604
LB 570-483080/1-B	Method Blank	TCLP	Solid	6010B	483604
LCS 570-483080/2-B	Lab Control Sample	TCLP	Solid	6010B	483604
LCSD 570-483080/3-B	Lab Control Sample Dup	TCLP	Solid	6010B	483604

Prep Batch: 484151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-18	RB10-1.0	TCLP	Solid	3010A	483794
LB 570-484151/1-A	Method Blank	Total/NA	Solid	3010A	
LCS 570-484151/2-A	Lab Control Sample	Total/NA	Solid	3010A	
LCSD 570-484151/3-A	Lab Control Sample Dup	Total/NA	Solid	3010A	

Analysis Batch: 484470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-18	RB10-1.0	TCLP	Solid	6010B	484151

Metals (Continued)

Analysis Batch: 484470 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 570-484151/1-A	Method Blank	Total/NA	Solid	6010B	484151
LCS 570-484151/2-A	Lab Control Sample	Total/NA	Solid	6010B	484151
LCSD 570-484151/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	484151

Leach Batch: 668349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-5	RB5-0.5	STLC Citrate	Solid	CA WET Citrate	
570-196762-8	RB3-1.0	STLC Citrate	Solid	CA WET Citrate	
570-196762-9	RB4-0.5	STLC Citrate	Solid	CA WET Citrate	
570-196762-13	RB8-0.5	STLC Citrate	Solid	CA WET Citrate	
LB 280-668349/1-C	Method Blank	STLC Citrate	Solid	CA WET Citrate	
LCS 280-668349/2-C	Lab Control Sample	STLC Citrate	Solid	CA WET Citrate	

Leach Batch: 668677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-14	RB8-1.0	STLC Citrate	Solid	CA WET Citrate	
570-196762-15	RB9-0.5	STLC Citrate	Solid	CA WET Citrate	
570-196762-17	RB10-0.5	STLC Citrate	Solid	CA WET Citrate	
570-196762-18	RB10-1.0	STLC Citrate	Solid	CA WET Citrate	
LB 280-668677/1-B	Method Blank	STLC Citrate	Solid	CA WET Citrate	
LCS 280-668677/2-B	Lab Control Sample	STLC Citrate	Solid	CA WET Citrate	

Prep Batch: 668878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-5	RB5-0.5	STLC Citrate	Solid	3010A	668349
570-196762-8	RB3-1.0	STLC Citrate	Solid	3010A	668349
570-196762-9	RB4-0.5	STLC Citrate	Solid	3010A	668349
570-196762-13	RB8-0.5	STLC Citrate	Solid	3010A	668349
LB 280-668349/1-C	Method Blank	STLC Citrate	Solid	3010A	668349
LCS 280-668349/2-C	Lab Control Sample	STLC Citrate	Solid	3010A	668349

Analysis Batch: 669038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-5	RB5-0.5	STLC Citrate	Solid	6010D	668878
570-196762-8	RB3-1.0	STLC Citrate	Solid	6010D	668878
570-196762-9	RB4-0.5	STLC Citrate	Solid	6010D	668878
570-196762-13	RB8-0.5	STLC Citrate	Solid	6010D	668878
LB 280-668349/1-C	Method Blank	STLC Citrate	Solid	6010D	668878
LCS 280-668349/2-C	Lab Control Sample	STLC Citrate	Solid	6010D	668878

Prep Batch: 669099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-14	RB8-1.0	STLC Citrate	Solid	3010A	668677
570-196762-15	RB9-0.5	STLC Citrate	Solid	3010A	668677
570-196762-17	RB10-0.5	STLC Citrate	Solid	3010A	668677
570-196762-18	RB10-1.0	STLC Citrate	Solid	3010A	668677
LB 280-668677/1-B	Method Blank	STLC Citrate	Solid	3010A	668677
LCS 280-668677/2-B	Lab Control Sample	STLC Citrate	Solid	3010A	668677

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-2

Metals

Analysis Batch: 669384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-196762-14	RB8-1.0	STLC Citrate	Solid	6010D	669099
570-196762-15	RB9-0.5	STLC Citrate	Solid	6010D	669099
570-196762-17	RB10-0.5	STLC Citrate	Solid	6010D	669099
570-196762-18	RB10-1.0	STLC Citrate	Solid	6010D	669099
LB 280-668677/1-B	Method Blank	STLC Citrate	Solid	6010D	669099
LCS 280-668677/2-B	Lab Control Sample	STLC Citrate	Solid	6010D	669099

Lab Chronicle

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-2

Client Sample ID: RB5-0.5
Date Collected: 08/26/24 09:50
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.16 g	2000 mL	483080	09/20/24 17:00	BG9Y	EET CAL 4
TCLP	Prep	3010A			5 mL	50 mL	483604	09/22/24 23:01	XBO9	EET CAL 4
TCLP	Analysis	6010B		1			484034	09/23/24 18:38	P1R	EET CAL 4
	Instrument ID: ICP10									
STLC Citrate	Leach	CA WET Citrate			50.35 g	503.5 mL	668349	09/23/24 19:17	DFB1	EET DEN
STLC Citrate	Prep	3010A			10 mL	50 mL	668878	09/27/24 08:20	SMK	EET DEN
STLC Citrate	Analysis	6010D		1			669038	09/27/24 16:22	ADL	EET DEN
	Instrument ID: MT_051									

Client Sample ID: RB3-1.0
Date Collected: 08/26/24 10:10
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.13 g	2000 mL	483080	09/20/24 17:00	BG9Y	EET CAL 4
TCLP	Prep	3010A			5 mL	50 mL	483604	09/22/24 23:01	XBO9	EET CAL 4
TCLP	Analysis	6010B		1			484034	09/23/24 18:40	P1R	EET CAL 4
	Instrument ID: ICP10									
STLC Citrate	Leach	CA WET Citrate			50.24 g	502.4 mL	668349	09/23/24 19:17	DFB1	EET DEN
STLC Citrate	Prep	3010A			10 mL	50 mL	668878	09/27/24 08:20	SMK	EET DEN
STLC Citrate	Analysis	6010D		1			669038	09/27/24 16:38	ADL	EET DEN
	Instrument ID: MT_051									

Client Sample ID: RB4-0.5
Date Collected: 08/26/24 10:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.16 g	2000 mL	483080	09/20/24 17:00	BG9Y	EET CAL 4
TCLP	Prep	3010A			5 mL	50 mL	483604	09/22/24 23:01	XBO9	EET CAL 4
TCLP	Analysis	6010B		1			484034	09/23/24 18:43	P1R	EET CAL 4
	Instrument ID: ICP10									
STLC Citrate	Leach	CA WET Citrate			50.03 g	500.3 mL	668349	09/23/24 19:17	DFB1	EET DEN
STLC Citrate	Prep	3010A			10 mL	50 mL	668878	09/27/24 08:20	SMK	EET DEN
STLC Citrate	Analysis	6010D		1			669038	09/27/24 16:42	ADL	EET DEN
	Instrument ID: MT_051									

Client Sample ID: RB8-0.5
Date Collected: 08/26/24 11:30
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.37 g	2000 mL	483080	09/20/24 17:00	BG9Y	EET CAL 4
TCLP	Prep	3010A			5 mL	50 mL	483604	09/22/24 23:01	XBO9	EET CAL 4
TCLP	Analysis	6010B		1			484034	09/23/24 18:45	P1R	EET CAL 4
	Instrument ID: ICP10									

Lab Chronicle

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-2

Client Sample ID: RB8-0.5

Lab Sample ID: 570-196762-13

Date Collected: 08/26/24 11:30

Matrix: Solid

Date Received: 08/27/24 18:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
STLC Citrate	Leach	CA WET Citrate			50.04 g	500.4 mL	668349	09/23/24 19:17	DFB1	EET DEN
STLC Citrate	Prep	3010A			10 mL	50 mL	668878	09/27/24 08:20	SMK	EET DEN
STLC Citrate	Analysis	6010D		1			669038	09/27/24 16:46	ADL	EET DEN
	Instrument ID: MT_051									

Client Sample ID: RB8-1.0

Lab Sample ID: 570-196762-14

Date Collected: 08/26/24 11:35

Matrix: Solid

Date Received: 08/27/24 18:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.18 g	2000 mL	483080	09/20/24 17:00	BG9Y	EET CAL 4
TCLP	Prep	3010A			5 mL	50 mL	483604	09/22/24 23:01	XBO9	EET CAL 4
TCLP	Analysis	6010B		1			484034	09/23/24 18:47	P1R	EET CAL 4
	Instrument ID: ICP10									
STLC Citrate	Leach	CA WET Citrate			43.13 g	431.3 mL	668677	09/25/24 14:05	EKB	EET DEN
STLC Citrate	Prep	3010A			10 mL	50 mL	669099	09/30/24 09:10	AES	EET DEN
STLC Citrate	Analysis	6010D		1			669384	10/01/24 13:59	ADL	EET DEN
	Instrument ID: MT_052									

Client Sample ID: RB9-0.5

Lab Sample ID: 570-196762-15

Date Collected: 08/26/24 11:55

Matrix: Solid

Date Received: 08/27/24 18:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.18 g	2000 mL	483080	09/20/24 17:00	BG9Y	EET CAL 4
TCLP	Prep	3010A			5 mL	50 mL	483604	09/22/24 23:01	XBO9	EET CAL 4
TCLP	Analysis	6010B		1			484034	09/23/24 18:50	P1R	EET CAL 4
	Instrument ID: ICP10									
STLC Citrate	Leach	CA WET Citrate			35.64 g	356.4 mL	668677	09/25/24 14:05	EKB	EET DEN
STLC Citrate	Prep	3010A			10 mL	50 mL	669099	09/30/24 09:10	AES	EET DEN
STLC Citrate	Analysis	6010D		1			669384	10/01/24 14:04	ADL	EET DEN
	Instrument ID: MT_052									

Client Sample ID: RB10-0.5

Lab Sample ID: 570-196762-17

Date Collected: 08/26/24 12:20

Matrix: Solid

Date Received: 08/27/24 18:55

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.30 g	2000 mL	483080	09/20/24 17:00	BG9Y	EET CAL 4
TCLP	Prep	3010A			5 mL	50 mL	483604	09/22/24 23:01	XBO9	EET CAL 4
TCLP	Analysis	6010B		1			484034	09/23/24 18:57	P1R	EET CAL 4
	Instrument ID: ICP10									
STLC Citrate	Leach	CA WET Citrate			39.28 g	392.8 mL	668677	09/25/24 14:05	EKB	EET DEN
STLC Citrate	Prep	3010A			10 mL	50 mL	669099	09/30/24 09:10	AES	EET DEN
STLC Citrate	Analysis	6010D		1			669384	10/01/24 14:09	ADL	EET DEN
	Instrument ID: MT_052									

Lab Chronicle

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-2

Client Sample ID: RB10-1.0

Date Collected: 08/26/24 12:25
Date Received: 08/27/24 18:55

Lab Sample ID: 570-196762-18

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			100.06 g	2000 mL	483794	09/23/24 11:34	BG9Y	EET CAL 4
TCLP	Prep	3010A			5 mL	50 mL	484151	09/24/24 09:37	BG9Y	EET CAL 4
TCLP	Analysis	6010B		1			484470	09/24/24 21:58	P1R	EET CAL 4
	Instrument ID: ICP11									
STLC Citrate	Leach	CA WET Citrate			50.21 g	502.1 mL	668677	09/25/24 14:05	EKB	EET DEN
STLC Citrate	Prep	3010A			10 mL	50 mL	669099	09/30/24 09:10	AES	EET DEN
STLC Citrate	Analysis	6010D		1			669384	10/01/24 14:13	ADL	EET DEN
	Instrument ID: MT_052									

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-2

Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	3082	07-31-26
Oregon	NELAP	4175	02-02-25

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-25
A2LA	ISO/IEC 17025	2907.01	10-31-25
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	11-30-25
Arizona	State	AZ0713	12-20-24
Arkansas DEQ	State	19-047-0	04-21-25
California	State	2513	01-08-25
Colorado	Petroleum Storage Tank Program	4025 (or)	01-08-25
Colorado	State	CO00026	06-30-25
Connecticut	State	PH-0686	09-30-24 *
Florida	NELAP	E87667-57	06-30-25
Georgia	State	4025-011	01-08-25
Illinois	NELAP	2000172024-9	05-31-25
Iowa	State	370	12-01-24
Kansas	NELAP	E-10166	04-30-25
Kentucky (WW)	State	KY98047	12-31-24
Louisiana	NELAP	30785	06-30-14 *
Louisiana (All)	NELAP	30785	06-30-25
Minnesota	NELAP	1788752	12-31-24
Nevada	State	CO000262024-08	07-31-25
New Hampshire	NELAP	2053	04-28-25
New Jersey	NELAP	230001	06-30-25
New York	NELAP	59923	04-01-25
North Dakota	State	R-034	01-08-25
Oklahoma	NELAP	8614	08-31-24 *
Oregon	NELAP	4025	01-08-25
Pennsylvania	NELAP	013	07-31-25
South Carolina	State	72002001	01-08-24 *
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183	09-30-25
US Fish & Wildlife	US Federal Programs	058448	07-31-25
USDA	US Federal Programs	P330-20-00065	12-19-25
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO00026	07-31-25
Virginia	NELAP	460232	06-14-25
Washington	State	C583	08-03-25
West Virginia DEP	State	354	11-30-24
Wisconsin	State	999615430	08-31-25
Wyoming (UST)	A2LA	2907.01	10-31-25

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-2

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	EET CAL 4
6010D	Metals (ICP)	SW846	EET DEN
1311	TCLP Extraction	SW846	EET CAL 4
3010A	Preparation, Total Metals	SW846	EET CAL 4
3010A	Preparation, Total Metals	SW846	EET DEN
CA WET Citrate	California - Waste Extraction Test with Citrate Leach	CA-WET	EET DEN

Protocol References:

CA-WET = California Waste Extraction Test, from Title 22

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Rincon Consultants
Project/Site: Los Patos Bridge

Job ID: 570-196762-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-196762-5	RB5-0.5	Solid	08/26/24 09:50	08/27/24 18:55
570-196762-8	RB3-1.0	Solid	08/26/24 10:10	08/27/24 18:55
570-196762-9	RB4-0.5	Solid	08/26/24 10:25	08/27/24 18:55
570-196762-13	RB8-0.5	Solid	08/26/24 11:30	08/27/24 18:55
570-196762-14	RB8-1.0	Solid	08/26/24 11:35	08/27/24 18:55
570-196762-15	RB9-0.5	Solid	08/26/24 11:55	08/27/24 18:55
570-196762-17	RB10-0.5	Solid	08/26/24 12:20	08/27/24 18:55
570-196762-18	RB10-1.0	Solid	08/26/24 12:25	08/27/24 18:55

Tina Nguyen

From: Tina Nguyen
Sent: Wednesday, September 18, 2024 3:44 PM
To: Lauren Vigliotti
Subject: RE: [EXT] RE: Eurofins Calscience sample confirmation files from 570-196762-1 Los Patos Bridge

Hi Lauren,

I had the lab pull the samples and we have enough volume for your request below.

As discussed, we will subcontract STLC to Eurofins Denver for analysis. Please note that this will be by 6010**D** method. The lab will sub sample and send out the samples for delivery on Friday.

Kind Regards,

Tina Nguyen
Project Manager

Eurofins Environment Testing Southwest, LLC
2841 Dow Avenue, Suite 100
Tustin, CA 92780

Direct: 657-210-6301
Mobile: 657-250-0229
Lab: 714-895-5494

Tina.Nguyen@ET.eurofinsUS.com
www.EurofinsUS.com/Env

Follow Us! LinkedIn

From: Lauren Vigliotti <lvigliotti@rinconconsultants.com>
Sent: Wednesday, September 18, 2024 12:46 PM
To: Tina Nguyen <Tina.Nguyen@et.eurofinsus.com>
Subject: RE: [EXT] RE: Eurofins Calscience sample confirmation files from 570-196762-1 Los Patos Bridge

Unverified Sender: The sender of this email has not been verified. Review the content of the message carefully and verify the identity of the sender before acting on this email: replying, opening attachments or clicking links.

Hi Tina:
Please run the following samples for STLC and TCLP lead:
RB3-1.0
RB4-0.5
RB5-0.5
RB8-0.5
RB8-1.0
RB9-0.5
RB10-0.5
RB10-1.0

Thank you!

eurofins | Environment Testing Calscience

2841 Dow Avenue, Suite 100, Tustin, CA 92780 • (714) 895-5494

For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

Loc: 570

CHAIN-OF-CUSTODY F 196762

DATE: 08/26/

PAGE: 1 OI

LABORATORY CLIENT: Rincon Consultants	CLIENT PROJECT NAME / NO.: Los Patos Bridge
ADDRESS: 319 E Carrillo St, Suite 105	P.O. NO.:
CITY: Santa Barbara STATE: CA ZIP: 93101	PROJECT CONTACT: Lauren Vigliotti
TEL: (916) 379-7748 E-MAIL: lvigliotti@rinconconsultants.com	LAB CONTACT OR QUOTE NO.: 570208864-0
GLOBAL ID:	LOG CODE:
	SAMPLER(S): (PRINT) Zach Berghorst

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

570-196762 Chain of Custody

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	lead + arsenic	8VOCs by 8270	PAHs 8270C	TPHg,d,o by 8015M
1	RB1-0.5	08/26/24	0830	S	3	X			X	X	X	X
2	RB1-1.0	"	0915	"	"	"			X	X	X	X
3	RB2-0.5	"	0920	"	"	"			X	X	X	X
4	RB2-1.0	"	0925	"	"	"			X	X	X	X
5	RB5-0.5	"	0950	"	"	"			X	X	X	X
6	RB5-1.0	"	0955	"	"	"			X	X	X	X
7	RB3-0.5	"	1005	"	"	"			X	X	X	X
8	RB3-1.0	"	1010	"	"	"			X	X	X	X
9	RB4-0.5	"	1025	"	"	"			X	X	X	X
10	RB4-1.0	"	1030	"	"	"			X	X	X	X

	Date	Time		Date	Time
Relinquished by: (Signature)	8-26-24	1253	Received by: (Signature/Affiliation) EC	8/27/24	1253
Relinquished by: (Signature) EC	8/27/24	1855	Received by: (Signature/Affiliation)	8-27-24	1855
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature/Affiliation)	Date:	Time:

1.9/2.4 sc6

eurofins | Environment Testing Calscience

2841 Dow Avenue, Suite 100, Tustin, CA 92780 • (714) 895-5494

For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN-OF-CUSTODY RECORD

DATE: 08/26/24

PAGE: 2 OF 2

LABORATORY CLIENT: Rincon Consultants	CLIENT PROJECT NAME / NO.: Los Patos Bridge
ADDRESS: 319 E Carrillo St, Suite 105	P.O. NO.:
CITY: Santa Barbara STATE: CA ZIP: 93101	PROJECT CONTACT: Lauren Vigliotti
TEL: (916) 379-7748 E-MAIL: lvigliotti@rinconconsultants.com	LAB CONTACT OR QUOTE NO.: 57020864-0
GLOBAL ID:	LOG CODE:
SAMPLER(S): (PRINT) Zach Berghorst	

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAYS ☒ STANDARD

EDD:

☐ COELT EDF ☐ OTHER

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Lead & arsenic	SVOCs by 8270	PAHs by 8270C	TPH g, d, o by 8015M
11	RB6-0.5	08/26/24	1050	S	3	X			X	X	X	X
12	RB6+0		1055						X	X	X	X
13	RB8-0.5		1130						X	X	X	X
14	RB8-1.0		1135						X	X	X	X
15	RB9-0.5		1155						X	X	X	X
16	RB9-1.0		1200						X	X	X	X
17	RB10-0.5		1220									
18	RB10-1.0		1225									

	Date	Time		Date	Time
Relinquished by: (Signature)	8-26-24	1253	Received by: (Signature/Affiliation) EC	8/27/24	1253
Relinquished by: (Signature) EC	8/22/24	1855	Received by: (Signature/Affiliation)	8-27-24	1855
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature/Affiliation)	Date:	Time:

Login Sample Receipt Checklist

Client: Rincon Consultants

Job Number: 570-196762-2

Login Number: 196762
List Number: 1
Creator: Ferreira, Bruno

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Rincon Consultants

Job Number: 570-196762-2

Login Number: 196762
List Number: 2
Creator: Little, Matthew L

List Source: Eurofins Denver
List Creation: 09/20/24 04:08 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	False	Refer to Job Narrative for details.
COC is filled out in ink and legible.	N/A	
COC is filled out with all pertinent information.	N/A	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	N/A	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix E

Alternatives Memorandum

Rincon Consultants, Inc.

209 East Victoria Street
Santa Barbara, California 93101

805 319 4092 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

July 23, 2020

Project No. 18-06252

James Faber
Project Manager
Ty Lin International
707 Wilshire Boulevard, Suite 4900
Los Angeles, CA 90017
Via email: james.faber@tylin.com

Subject: **Potential Preservation Alternatives and Mitigation Options for the Los Patos Underpass Removal Project, City and County of Santa Barbara, California**

Dear Mr. Faber:

Rincon Consultants, Inc. (Rincon) was retained to address potential preservation alternatives and mitigation options for the Los Patos Underpass Removal Project. The proposed project would remove the Los Patos Underpass (Bridge No. 51-0235; subject structure), located above the US 101 Southbound Los Patos in the City and County of Santa Barbara, California. Constructed in 1901, the Los Patos Underpass is a utilitarian railroad underpass that features support abutments and a pier constructed of local sandstone. The City of Santa Barbara (City) is seeking to remove the Los Patos Underpass, which is owned and operated by the Union Pacific Railroad (UPRR). UPRR has determined that the underpass will need to be retired because the U.S. Route 101 off-ramp at Los Patos Way is being vacated and will no longer be needed.

The Los Patos Underpass was previously evaluated by Rincon and found eligible for listing in the California Register of Historical Resources (CRHR) and as a City of Santa Barbara Landmark or Structure of Merit.[1] As a structure eligible for listing in the CRHR and for local designation, the underpass qualifies as a historical resource as defined in Section 15064.5 of the California Environmental Quality Act (CEQA) Guidelines. In December 2019, the report findings were presented to the City Historic Landmarks Commission (HLC) where the conclusions were approved by the majority of the commissioners.

In April 2020, the historical resources assessment was updated and presented to HLC for a revised review/approval. The purpose of the assessment revision was to address minor recommendations made by the HLC members and to clarify that the underpass retained one character-defining feature: the sandstone abutments and pier. The report also was modified to state that the non-character-defining features of the underpass include the wooden ties, rails, ballast, girders, wooden posts and cable railing. The HLC motioned to continue a vote on approving the report, due to the majority belief that the steel

[1] Carmack, Shannon and Susan Zamudio-Gurrola. 2019. *Historic Structure/Site Report for Los Patos Way Off-Ramp Underpass, City and County of Santa Barbara, California*. Prepared for T.Y. Lin International by Rincon Consultants, Inc.

girders should be included as a character-defining feature of the underpass. As a result of the HLC's findings that the steel girders should be included as a character-defining feature of the underpass, it is anticipated that the project will result in the demolition of the underpass and that an Environmental Impact Report (EIR) is required to avoid and address significant adverse impacts to the historical resource.

This memorandum was prepared at the request of the City Public Works Department to assess potential preservation alternatives and mitigation measure options as part of the project's ongoing environmental review process. The effort was overseen by Shannon Carmack, Rincon Principal and Architectural History Program Manager, with assistance from Architectural Historians Steven Treffers, M.H.P. and Susan Zamudio-Gurrola, MHP. Ms. Carmack, Mr. Treffers and Ms. Zamudio-Gurrola exceed the Secretary of the Interior's *Professional Qualification Standards* (PQS) for architectural history and history.

Preservation Alternatives

The Los Patos Underpass would be demolished as part of the proposed project. As a property which has been found eligible for local and state designation, the underpass is considered a historical resource and its demolition would result in a significant impact as defined by Section 15064.5 of the CEQA Guidelines. When significant impacts are identified during the CEQA review process, Section 15126.6 of the CEQA Guidelines requires the project EIR explore a range of reasonable alternatives which would feasibly attain most of the basic project objectives, but would avoid or substantially lessen any of its significant effects. Every conceivable alternative to a project need not be considered, rather a reasonable range of potentially feasible alternatives should be assessed to inform decision making and assist in public participation. The City as the lead agency is responsible for selecting a range of project alternatives and is required to publicly disclose its reasoning for selecting those alternatives. The following discussion presents four potential alternatives to provide the City with preliminary information regarding the development of alternatives to support the EIR and compliance with Section 15126.6 of the CEQA Guidelines.

Alternative 1. Preservation in Place

This alternative would entail the retention and preservation of the Los Patos Underpass in-situ. The structure would be retained in its current location and would continue to carry rail but would no longer operate as an active underpass due to the closure of the Los Patos offramp from U.S.-101. The structure would be kept in its current location and with the retention and preservation of the sandstone abutments and pier, and steel girders. Although the structural feasibility of this approach is currently unknown, this alternative assumes these physical features would able to be preserved in a manner consistent with the *Secretary of the Interior's Standards for the Treatment of Historic Properties* (SOI Standards).

Impacts: Because the subject structure would be preserved in place in compliance with the SOI Standards, it would retain the physical characteristics which convey its significance. It would therefore avoid impacts to a historical resource per Section 15064.5(b) of the CEQA Guidelines.

Ability to Meet Project Objectives: The UPRR has determined the existing underpass will need to be removed due to increased maintenance and structural concerns; therefore this alternative would not meet the objectives of the project.

Alternative 1a. Partial Preservation

This alternative would entail the partial preservation of the Los Patos Underpass. The steel girders would be removed and replaced with a modern superstructure and the sandstone abutments and pier would

be retained and preserved to the greatest extent feasible. It is assumed that some degree of alteration to the sandstone abutments and pier would be necessary to accommodate the removal and replacement of the rail superstructure.

Impacts: The steel girders have been found to be a character-defining feature of the Los Patos Underpass. They, in conjunction with the sandstone abutments and pier, convey the historical significance of the underpass. Therefore, the removal of the steel girders and replacement with a modern superstructure, would negatively alter the physical characteristics that justify the state and local eligibility of the structure. As a result, this alternative would result in a significant and unavoidable impact under CEQA.

Ability to Meet Project Objectives: Although this alternative would potentially reduce the impact to the historic structure by retaining a portion of it, this alternative would still result in a significant and unavoidable impact to a historical resource. Further, this alternative would not meet the project objective of removing the underpass.

Alternative 2. Full Relocation

Under this alternative, the Los Patos Underpass, including the steel girders and sandstone abutments and pier, would be relocated to a yet-to-be determined receiver site. It is presumed the underpass could not be relocated to another crossing within the existing rail line as it may not be permitted by UPRR due to logistical and safety concerns. A site would therefore need to be selected which could include a pedestrian crossing or distinct location within a park. It is presumed a technical study would be prepared which would confirm relocation was feasible and the underpass and its components would be transported whole or dissembled and assembled on site. Once relocated, the underpass would be rehabilitated, and interpretive signage would be installed to present historic information about the underpass.

Impacts: In accordance with CEQA, relocation of an historical resource may avoid an adverse impact to a resource provided that the new location is compatible with the original character and use of the historical resource and the resource retains its eligibility for listing on the California Register (14 CCR Section 4852(d)(1)). The underpass serves a very specific function as a railroad underpass, so there are no feasible options for “adaptive reuse” and identifying a compatible site with similar conditions is not likely. If the underpass was to be reused as a pedestrian crossing, it would lack the association of rail line from which it derives much of its significance; a consideration that would be further amplified by its placement within an incompatible location such as a park. Its integrity of setting, location, feeling and association would be diminished as a result of the relocation, leaving it without sufficient historic integrity to convey its significance as a historical resource. The underpass would therefore be materially impaired, and the project would still result in a significant and unavoidable impact under CEQA.

Ability to Meet Project Objectives: Although this alternative has the potential to meet the project objectives, it would still result in a significant and unavoidable impact to a historical resource.

Alternative 2a. Partial Relocation

Under this alternative, the sandstone abutments and pier would be relocated to a receiver site. Given that the underpass would not move without its superstructure, it is presumed the new location would be a park or similar site. It is further presumed a technical study would be prepared which would confirm relocation was feasible and the stone abutments and pier components would be transported whole or dissembled and assembled on site. Once relocated, the underpass components would be rehabilitated, and interpretive signage would be installed to present historic information about the underpass.

Impacts: As discussed above, relocation of an historical resource may avoid an adverse impact to a resource provided that the new location is compatible with the original character and use of the historical resource and the resource retains its eligibility for listing on the California Register (14 CCR Section 4852(d)(1)). The partial relocation of the underpass to a park would change its use and setting. This alternative would not result in any real use of the underpass; rather it would be presented as a relic, which would work to tell the history of its design and associations with the history of Santa Barbara. Nonetheless, it would no longer retain integrity or the physical characteristics that justify its eligibility for state and local designation. This alternative therefore would result in a significant and unavoidable impact under CEQA.

Ability to Meet Project Objectives: Although this alternative has the potential to meet the project objectives, it would still result in a significant and unavoidable impact to a historical resource.

Mitigation Measure Options

The following options were explored as potential measures to mitigate impacts resulting from the demolition of the Los Patos Underpass. Although none of these mitigation measures would be capable of mitigating impacts to a level of less than significant, they would mitigate impacts to the greatest extent feasible.

Historic American Engineering Record (HAER) Documentation

Impacts resulting from the demolition of the subject structure could be minimized through archival documentation of the structure in as-built and as-found condition. The City would ensure that documentation of the structure would be completed prior to its demolition in the form of Historic American Engineering Record (HAER) documentation. This would include a historical report consistent with the requirements outlined in the *Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation: HAER Guidelines for Historical Reports*. The written narrative would include: a historical context covering the history of sandstone construction and the development of the railroad in Santa Barbara; a physical description of the underpass; and available information on the underpass' design and history. The documentation would include large-format, black-and-white photographs including elevations and significant details such as the sandstone block post and abutments and steel-riveted girders. Information in the existing historic structure/site report may be utilized and supplemented by additional historic research utilizing primary and secondary source information, as needed. UPRR should be consulted for any available information, drawings or images. The documentation should be completed by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards (PQS) for History and/or Architectural History.[2] The documentation package should be submitted to the Library of Congress (LOC) in accordance with National Park Service and LOC guidelines. An archival-quality copy of the documentation should be submitted to the City of Santa Barbara Planning Department/Urban Historian, the Santa Barbara Historical Museum Gledhill Library, and the Santa Barbara Public Library main branch, where it would be available to local researchers. Completion of this mitigation measure would be monitored and enforced by the City of Santa Barbara.

[2] National Park Service, *Archaeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines: Professional Qualifications Standards*, electronic document available at http://www.cr.nps.gov/local-law/arch_stnds_9.htm (accessed April 4, 2017).

Reconstruction/Replication

Reconstruction/replication of the underpass as near as possible to its original location could be considered as a potential mitigation option. Reconstruction is defined as "the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure or object for the purpose of replicating its appearance at a specific period of time and in its historic location."[3] *The Secretary of the Interior's Standards for the Treatment of Historic Properties* states when a contemporary depiction is required to understand and interpret a property's historic value; when no other property with the same associative value has survived; and when sufficient historical documentation exists to ensure an accurate reproduction, reconstruction may be considered as a treatment. However, because of the potential for historical error in the absence of sound physical evidence, this treatment can be justified only rarely and thus, is the least frequently undertaken of the four treatments of historical properties.[4] Thus, if undertaken, reconstruction of the Los Patos Underpass should rely on detailed physical and documentary evidence such as HAER documentation to ensure the reconstruction is as accurate as possible. Work should follow the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The cost and availability of materials to authentically replicate the structure may create an obstacle. Because of the large-scale nature of an overpass structure, a reconstruction effort may be constrained by modern code and safety requirements.

Development of Interpretive Plan

An interpretive plan could be developed focusing on the significant historic themes associated with the Los Patos Underpass, particularly its design and construction, and the history of the railroad and sandstone construction in the City of Santa Barbara. The plan should include an interpretive display or other suitable interpretive approaches developed by a PQS-qualified historic preservation professional in coordination with a graphic designer and approved by the City of Santa Barbara. The interpretive display should be installed at an appropriate site such as the City-owned Andree Clark Bird Refuge, the open space park adjacent to the UPRR alignment. The interpretive plan should be completed and approved by the City prior to demolition of the underpass, and the display should be installed on-site within one year of the completion of the proposed project. The interpretive display should remain in public view for a minimum of ten years, and if removed, appropriately archived.

Interpretive Video

An interpretive video could be created by a qualified videographer providing a visual overview of the Los Patos Underpass with a focus on its design, construction, materials, setting and history. The video shall include an overview of the history of the railroad and sandstone construction in the City of Santa Barbara. A copy of the video should be distributed to the City of Santa Barbara Planning Department/Urban Historian, the Santa Barbara Historical Museum Gledhill Library, and the Santa Barbara Public Library main branch.

Interpretive Website

A dedicated website could be created to provide public access to the documentary material produced such as the HAER documentation report and archival photographs, the interpretive video, and/or

[3] Grimmer, Anne E. 2017. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings.* National Park Service 2017. Washington, D.C.
[4] Ibid.

information from the interpretive display. The website should remain active for a minimum of 5 years and be hosted by the City of Santa Barbara.

Salvaging of Materials for Reuse

The Los Patos Underpass's ashlar square-cut sandstone, a significant material and character-defining-feature of the structure, could be salvaged for re-use, such as: in the interpretive display; relocation to the new bridge at Cabrillo Boulevard as an aesthetic feature; as facing on abutments or center pier for a different undercrossing in a more prominent location; or another appropriate use such as a work of public art. The removal work should be completed by a professional with experience removing historic stone to ensure that the sandstone can be reused.

Conclusion

As discussed above, the Los Patos Underpass was previously recommended eligible for listing in the CRHR and as a City of Santa Barbara Landmark or Structure of Merit and is considered a historical resource as defined by CEQA. Demolition of the structure would constitute a significant adverse impact to cultural resources because it would materially impair the significance of an historical resource. One of the preliminary alternatives would have the potential to avoid significant impacts but would not meet the project objectives as currently defined. Proposed measures would help to mitigate impacts to the greatest extent feasible however impacts would remain significant and unavoidable.

Should you have any questions or comments regarding this report, please do not hesitate to contact me at 501-239-5860 ext. 102, or scarmack@rinconconsultants.com

Sincerely,

Rincon Consultants, Inc.

Steven Treffers, MHP
Senior Architectural Historian

Shannon Carmack
Principal, Architectural History Program Manager