INFORMATION HANDOUT

For Contract No. 02-4E6404
At 02-PLU-147-8.9/9.3

Identified by
Project ID 0212000011

PERMITS

PLAC - United States Army Corps of Engineers, Sacramento District

Application and Conditions for Non-Reporting Nationwide Permit No. 14 Dated July 28, 2015

PLAC - Permit Condition Responsibility (PCR) Summary

WATER QUALITY

PLAC - California Regional Water Quality Control Board, Central Valley Region

Clean Water Act §401 Technically Conditioned Water Quality Certification
Dated October 22, 2015

AGREEMENTS

PLAC - California Department of Fish and Wildlife, North Central Region

Streambed Alteration Agreement (Revision 2)
Notification No. 1600-2014-0296-R2
Dated November 3, 2015

OTHER INFORMATION

Water Source Information Dated November 10, 2015

Location for Stockpile of Caltrans Roadway Grindings Dated November 10, 2015

Revised Foundation Report Dated January 22, 2015

Aerially Deposited Lead Site Investigation Report Dated April 16, 2015

Asbestos And Lead-Containing Paint Survey Report Dated April 17, 2015

Final Hydraulics Report Dated March 27, 2014

ESA ACTION PLAN Dated June 11, 2014

Riparian Impacts, Figure 6, Dated May 21, 2015

PLAC - United States Army Corps of Engineers, Sacramento District

Application and Conditions for Non-Reporting Nationwide Permit No. 14 Dated July 28, 2015

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

M e m o r an n d u m

Serious drought.
Help save water!

To: Project File

Date: July 28, 2015

File: **EA: 02-4E640**
EFIS: 02-1200-0011
02-PLU-147-PM 8.9/9.3
Hamilton Branch Bridge Replacement

From: Chelsea Tran-Wong
Associate Environmental Planner, Natural Sciences
Office of Environmental Services, North Region-Redding-R1

Subject: NON-REPORTING U.S. ARMY CORPS NATIONWIDE PERMIT 14 (LINEAR TRANSPORTATION PROJECTS)

The California Department of Transportation (Caltrans) is proposing to remove the existing State Route (SR) 147 Hamilton Branch Creek Bridge and construct a new bridge on the same alignment. The proposed project will improve roadway safety with the removal of a seismically deficient and functionally obsolete bridge and improvement of a curved roadway alignment. The existing structure does not meet current standards for width, seismic stability, and bridge railing type or design. The proposed work will occur from post mile (PM) 8.9 to 9.3 in Plumas County near the community of Hamilton Branch. The new bridge will be a three span structure with two piers. The new abutments and piers will be located above the ordinary-high-water mark (OHWM) and outside of riparian zones. All construction activities will occur outside of the active channel and above OHWM of Hamilton Branch Creek and an intermittent tributary. Environmental Sensitive Area (ESA) fencing and fiber rolls will be installed along the banks of the Hamilton Branch Creek to prevent sediment and equipment from entering the creek and to minimize impacts to riparian vegetation. ESA fencing with fiber rolls will also be placed along the edge of the delineated riparian zone to prevent sediment and equipment from entering the intermittent channel and avoid impacts to riparian vegetation. Work will be conducted during the dry seasons when Hamilton Branch Creek and the intermittent stream are at the lowest seasonal flow.

There is a relict drainage located between SR 147 and the intermittent tributary. This intermittent tributary was relocated during the construction of the current bridge. The modification placed the intermittent tributary ~~to~~ at its current location, west of the fill slope of SR 147. This relict drainage will be impacted due to the widening of the roadway to conform to the new bridge. It is a by-product of past construction activities of the current bridge. It is a remnant of the intermittent tributary redirected in the 1940s. This relict drainage has no distinctive bed and bank and does not contain OHMW. It does not have good habitat conditions for fish or other aquatic wildlife.

The relict drainage is approximately 2-feet wide and 120-feet long. It has an estimated area of 0.006 acre. The relict drainage does not have flowing surface water at any given time of the year. However, standing water can occur within the potholes found at the upper end of the drainage

after a recent rain. These pot holes are not perceptible. If any, water contributing to the intermittent tributary would be minimal. Of the 0.006 acre, 0.002 acre will be permanently impacted due to the placement of fill materials to support the widened roadway to conform to the new bridge. Temporary impacted portion of the relict drainage will be restored, as practicable, to its pre-existing contour. In addition, work will be conducted during the dry seasons when the relict drainage is absent of water.

Attachment(s)
Nationwide Permit (NWP) Pre-Construction Notification (PCN) Form
Attachment A – NWP PCN Additional Information
Figure 1 – Project Vicinity
Figure 2 – Project Topographical Map
Figure 3 – Environment Study Limit (ESL) Maps
Figure 4 – Riparian Impacts Map
Figure 5 – Osprey Nest Location Map
Attachment B – Photos
Attachment C – General Plan/Foundation Plan
Attachment D – Final Hydrology and Hydraulics Report
Attachment E – NEPA Categorical Exclusion
Attachment F – 106 Compliance

14. Linear Transportation Projects. Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 31.) (Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

A. **Regional Conditions**

1. **Regional Conditions for California, excluding the Tahoe Basin**

http://www.spk.usace.army.mil/Portals/12/documents/regulatory/nwp/2012_nwps/2012-NWP-RC-CA.pdf

2. **Regional Conditions for Nevada, including the Tahoe Basin**

http://www.spk.usace.army.mil/Portals/12/documents/regulatory/nwp/2012_nwps/2012-NWP-RC-NV.pdf

3. **Regional Conditions for Utah**

http://www.spk.usace.army.mil/Portals/12/documents/regulatory/nwp/2012_nwps/2012-NWP-RC-UT.pdf

4. **Regional Conditions for Colorado**.

http://www.spk.usace.army.mil/Portals/12/documents/regulatory/nwp/2012_nwps//2012-NWP-RC-CO.pdf

B. **Nationwide Permit General Conditions**

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR §§ 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

☐ 1. **Navigation**.

☐ (a) No activity may cause more than a minimal adverse effect on navigation.

☐ (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

☐ (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters,

the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

☐ 2. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

☐ 3. **Spawning Areas**. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

☐ 4. **Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

☐ 5. **Shellfish Beds**. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

☐ 6. **Suitable Material**. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

☐ 7. **Water Supply Intakes**. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

☐ 8. **Adverse Effects From Impoundments**. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

☐ 9. **Management of Water Flows**. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

☐ 10. **Fills Within 100-Year Floodplains**. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

☐ 11. **Equipment**. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

☐ 12. **Soil Erosion and Sediment Controls**. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

☐ 13. **Removal of Temporary Fills**. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

☐ 14. **Proper Maintenance**. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

☐ 15. **Single and Complete Project**. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

☐ 16. **Wild and Scenic Rivers**. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

☐ 17. **Tribal Rights**. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

☐ 18. **Endangered Species**.

☐ (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which “may affect” a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

☐ (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to

demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.

☐ (c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

☐ (d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

☐ (e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

☐ (f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.noaa.gov/fisheries.html respectively.

☐ 19. **Migratory Birds and Bald and Golden Eagles**. The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

☐ 20. **Historic Properties**.

☐ (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

☐ (b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

☐ (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified

historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

☐ (d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non- Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

☐ (e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

☐ 21. **Discovery of Previously Unknown Remains and Artifacts**. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

☐ **22. Designated Critical Resource Waters**. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

☐ (a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

☐ (b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

☐ **23. Mitigation**. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

☐ (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

☐ (b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

☐ (c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

☐ (1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.

☐ (2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

☐ (3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

☐ (4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

☐ (5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

☐ (d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

☐ (e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

☐ (f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

☐ (g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

☐ **24. Safety of Impoundment Structures**. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

☐ **25. Water Quality**. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

☐ **26. Coastal Zone Management**. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

☐ **27. Regional and Case-By-Case Conditions**. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

☐ **28. Use of Multiple Nationwide Permits**. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

☐ **29. Transfer of Nationwide Permit Verifications**. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

> "When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."
>
> ----------
> (Transferee)
>
> ----------
> (Date)

☐ **30. Compliance Certification**. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

☐ (a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

☐ (b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

☐ (c) The signature of the permittee certifying the completion of the work and mitigation.

☐ **31. Pre-Construction Notification**.

☐ (a) **Timing**. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

☐ (1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

☐ (2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2)..

☐ (b) <u>Contents of Pre-Construction Notification</u>: The PCN must be in writing and include the following information:

☐ (1) Name, address and telephone numbers of the prospective permittee;

☐ (2) Location of the proposed project;

☐ (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

☐ (4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

☐ (5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

☐ (6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

☐ (7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

☐ (c) Form of Pre-Construction Notification: he standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

☐ (d) Agency Coordination:

☐ (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

☐ (2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via email, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where

there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

☐ (3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

☐ (4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

C. District Engineer's Decision

☐ 1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

☐ 2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10- acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

☐ 3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

D. **Further Information**

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project.

E. **Definitions**

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term “discharge” means any discharge of dredged or fill material.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water’s surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

I**ntermittent stream**: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas (see 33 CFR 328.3(e)).

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line, which is defined at 33 CFR 328.3(d).

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States. If a jurisdictional wetland is adjacent – meaning bordering, contiguous, or neighboring – to a waterbody determined to be a water of the United States under 33 CFR 328.3(a)(1)-(6), that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.

U.S. Army Corps of Engineers

South Pacific Division

Nationwide Permit Pre-Construction Notification (PCN) Form

This form integrates requirements of the U.S. Army Corps of Engineers Nationwide Permit Program within the South Pacific Division (SPD), including General and Regional Conditions. You MUST fill out all boxes related to the work being done. Fillable boxes in this form expand if additional space is needed.

Box 1 Project Name Hamilton Branch Bridge Replacement			
Applicant Name Rob Burnett		**Applicant Title** Project Manager	
Applicant Company, Agency, etc. Department of Transportation (Caltrans)		Applicant's internal tracking number (if any) EA: 02-4E640 EFIS: 02-1200-0011	
Mailing Address 1031 Butte Street, MS 30 Redding, CA 96001			
Work Phone with area code (530) 225-3439	Mobile Phone with area code	Home Phone with area code	Fax # with area code (530) 225-3019
E-mail Address rob.burnett@dot.ca.gov	Relationship of applicant to property: ☒ Owner ☐ Purchaser ☐ Lessee ☐ Other:		
Application is hereby made for verification that subject regulated activities associated with subject project qualify for authorization under a U.S. Army Corps of Engineers Nationwide Permit or Permits as described herein. I certify that I am familiar with the information contained in this application and, that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. I hereby grant to the agency to which this application is made the right to enter the above-described location to inspect the proposed, in-progress or completed work. I agree to start work only after all necessary permits have been received and to comply with all terms and conditions of the authorization.			
Signature of applicant		Date (mm/dd/yyyy) 7-28-15	

If anyone other than the person named as the Applicant will be in contact with the U.S. Army Corps of Engineers representing the Applicant regarding this project during the permit process, Box 2 MUST be filled out.

Box 2 Authorized Agent/Operator Name Chelsea Tran-Wong		**Agent/Operator Title** Associate Environmental Planner / Natural Sciences	
Agent/Operator Company, Agency, etc. Department of Transportation (Caltrans)		E-mail Address chelsea.tran-wong@dot.ca.gov	
Mailing Address 1031 Butte Street, MS 30 Redding, CA 96001			
Work Phone with area code (530)225-2471	Mobile Phone with area code	Home Phone with area code	Fax # with area code (530) 225-3019
I hereby authorize the above named authorized agent to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application. I understand that I am bound by the actions of my agent and I understand that if a federal or state permit is issued, I, or my agent, must sign the permit.			
Signature of applicant		Date (mm/dd/yyyy) 7-28-15	
I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief, such information is true, complete, and accurate.			
Signature of authorized agent Chelsea Tran-Wong		Date (mm/dd/yyyy) 7-28-15	

Revised March 21, 2012. For the most recent version of this form, visit your Corps District's Regulatory website.

Box 3 Name of Property Owner(s), if other than Applicant: N/A		
Owner Title	**Owner Company, Agency, etc.**	
Mailing Address		
Work Phone with area code	Mobile Phone with area code	Home Phone with area code

Box 4 Name of Contractor(s) (if known): TBD		
Contractor Title	**Contractor Company, Agency, etc.**	
Mailing Address		
Work Phone with area code	Mobile Phone with area code	Home Phone with area code

Box 5 Site Number 1 of 1. Project location(s), including street address, city, county, state, zip code where proposed activity will occur:

On State Route (SR) 147 between Post Mile (PM) 8.9 and 9.3 in Plumas County, California, in the community of Westwood (96137).

Waterbody (if known, otherwise enter "an unnamed tributary to"): The project Environmental Study Limits (ESL) include an unnamed ephemeral (relict) drainage that is a tributary to an unnamed intermittent drainage that is a tributary to Hamilton Branch Creek.

Tributary to what known, downstream waterbody: Hamilton Branch Creek of North Fork Feather River extends about 5 miles of water from Mountain Meadows Reservoir to Lake Almanor.

Latitude & Longitude (D/M/S, DD, or UTM with Zone): Latitude: 40.250 Longitude: -121.000	Section, Township, Range: Section 10, Township 45 North, Range 8 East
County Assessor Parcel Number (Include County name):	USGS Quadrangle map name: West Westwood, CA
Watershed (HUC and watershed name[1]): 18020121 North Fork Feather River Watershed [1]http://water.usgs.gov/GIS/regions.html	Size of permit area or project boundary: 0.006 acres 120 linear feet

Directions to the project location and other location descriptions, if known:

From Sacramento: Take I-5 N/State Hwy 99 N from I Street for 1 mile. Follow CA-99 N to CA-32 E in Chico for 84.4 miles and take exit 385 from CA-99 N. Turn right onto CA-32 E for 52.3 miles. Continue on Co Rte 13. Drive to CA-147 N for 5.5 miles to the project site.

Nature of Activity (Description of the project, include all features):

Please see Attachment A for explanation.

Project Purpose (Description of the reason or purpose of the project):

The purpose of this project is to provide a bridge across Hamilton Branch Creek that meets current design standards, has reduced maintenance, and has the ability to withstand seismic events.

Box 6 Reason(s) for discharge into Waters of the United States (Description of why dredged and/or fill material needs to be placed in Waters of the United States):

Please see Attachment A for explanation.

Proposed discharge of dredge and/or fill material. Indicate total surface area in **acres** and **linear feet** (where appropriate) of the proposed impacts to Waters of the United States, indicate water body type (tidal wetland, non-tidal wetland, riparian wetland, ephemeral stream/river, intermittent stream/river, perennial stream/river, pond/lake, vegetated shallows, bay/harbor, lagoon, ocean, etc.), and identify the impact(s) as permanent and/or temporary for each requested Nationwide Permit[1]:

[1] Enter the intended permit number(s). See Nationwide Permit regulations for permit numbers and qualification information: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/NationwidePermits.aspx

Water Body Type	Requested NWP Number: 14				Requested NWP Number:				Requested NWP Number:			
	Permanent		Temporary		Permanent		Temporary		Permanent		Temporary	
	Area	Length	Area	Length	Area	Length	Area	Length	Area	Length	Area	Length
Ephemeral Waters	0.004 acre	69-feet	0.002 acre	29-feet								
Pick One												
Pick One												
Pick One												
Pick One												
Total:												

Total volume (in cubic yards) and type(s) of material proposed to be dredged from or discharged into Waters of the United States:

Material Type	Total Volume Dredged	Total Volume Discharged
Rock Slope Protection (RSP)		
Clean spawning gravel		
River rock		
Soil/Dirt/Silt/Sand/Mud		
Concrete		
Structure		
Stumps/Root wads		
Other: Fill materials		9.3 cubic yards
Total:		9.3 cubic yards

Activity requires a written waiver to exceed specified limits of the Nationwide Permit? ☐ Yes ☒ No
If yes, provide Nationwide Permit number and name, limit to be exceeded, and rationale for each requested waiver:

Activity will result in the loss of greater than ½-acre of Waters of the United States? ☐ Yes ☒ No
If yes, provide an electronic copy (compact disc) or multiple hard copies (7) of the complete PCN for appropriate Federal and State Pre-discharge Notification (See General Condition #31, Pre-construction Notification, Agency Coordination, Section 2 and 4).

Describe direct and indirect effects caused by the activity and how the activity has been designed (or modified) to have minimal adverse effects on the aquatic environment (See General Condition #31, Pre-construction Notification, District Engineer's Decision, Section 1):

Please see Attachment A for explanation.

Potential cumulative impacts of proposed activity(if any):

N/A

Required drawings and figures (see each U.S. Army Corps of Engineers District's Minimum Standards Guidance):

Vicinity map: ☒ Attached (or mail copy separately if applying electronically)

To-scale Plan view drawing(s): ☒ Attached (or mail copy separately if applying electronically)

To-scale elevation and/or Cross Section drawing(s): ☒ Attached (or mail copy separately if applying electronically)

Numbered and dated pre-project color photographs: ☒ Attached (or mail copy separately if applying electronically)

Sketch drawing(s) or map(s): ☒ Attached (or mail copy separately if applying electronically)

Has a wetlands/waters of the U.S. delineation been completed?

☐ Yes, Attached[2] (or mail copy separately if applying electronically) ☒ No

If a delineation has been completed, has it been verified in writing by the Corps?

☐ Yes, Date of preliminary or approved jurisdictional determination (mm/dd/yyyy): Corps file number: ☒ No

[2]If available, provide ESRI shapefiles (NAD83) for delineated waters

For proposed discharges of dredged material resulting from navigation dredging into inland or near-shore waters of the U.S. (including beach nourishment), please attach[3] a proposed Sampling and Analysis Plan (SAP) prepared according to Inland Testing Manual (ITM) guidelines (including Tier I information, if available), or if disposed offshore, a proposed SAP prepared according to the Ocean Disposal Manual. ☐ Attached (or mail copy separately if applying electronically)

[3]Or mail copy separately if applying electronically

Is any portion of the work already complete? ☐ YES ☒ NO

If yes, describe the work:

Box 7 Authority:

Is Section 10 of the Rivers and Harbors Act applicable?: ☐ YES ☒ NO

Is Section 404 of the Clean Water Act applicable?: ☒ YES ☐ NO

Is the project located on U.S. Army Corps of Engineers property or easement?: ☐ YES ☒ NO

If yes, has Section 408 process been initiated?: ☐ YES ☐ NO

Would the project affect a U.S. Army Corps of Engineers structure?: ☐ YES ☒ NO

If yes, has Section 408 process been initiated?: ☐ YES ☐ NO

Is the project located on other Federal Lands (USFS, BLM, etc.)?: ☐ YES ☒ NO

Is the project located on Tribal Lands?: ☐ YES ☒ NO

Box 8 Is the discharge of fill or dredged material for which Section 10/404 authorization is sought part of a larger plan of development?: ☐ YES ☒ NO

If discharge of fill or dredged material is part of development, name and proposed schedule for that larger development (start-up, duration, and completion dates):

Location of larger development (if discharge of fill or dredged material is part of a plan of development, a map of suitable quality and detail of the entire project site should be included):

Box 9 Measures taken to avoid and minimize impacts to waters of the United States:

Please see Attachment A for a list of avoidance and minimization

Box 10 Proposed Compensatory Mitigation related to fill/excavation and dredge activities. Indicate in **acres** and **linear feet** (where appropriate) the total quantity of Waters of the United States proposed to be created, restored, enhanced and/or preserved for purposes of providing compensatory mitigation. Indicate water body type (tidal wetland, non-tidal wetland, riparian wetland, ephemeral stream/river, intermittent stream/river, perennial stream/river, pond/lake, vegetated shallows, bay/harbor, lagoon, ocean, etc.) or non-jurisdictional (uplands[1]). Indicate mitigation type (permittee-responsible on-site/off-site, mitigation bank, or in-lieu fee program). If the mitigation is purchase of credits from a mitigation bank, indicate the bank to be used, if known: N/A

[1] For uplands, please indicate if designed as an upland buffer.

Site Number	Water Body Type	Created		Restored		Enhanced		Preserved		Mitigation Type
		Area	Length	Area	Length	Area	Length	Area	Length	
	Pick One									Pick One
	Pick One									Pick One
	Pick One									Pick One
	Pick One									Pick One
	Pick One									Pick One
Total:										Pick One

If no mitigation is proposed, provide detailed explanation of why no mitigation would be necessary:

Please see Attachment A for explanation.

If permittee-responsible mitigation is proposed, provide justification for not utilizing a Corps-approved mitigation bank or in-lieu fee program:

Has a draft/conceptual mitigation plan been prepared in accordance with the April 10, 2008, Final Mitigation Rule[2] and District Guidelines?

[2]http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/mitig_info.aspx
[3]**Sacramento and San Francisco Districts**-http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/pdf/Mitigation_Monitoring_Guidelines.pdf
[4]**Los Angeles District**-http://www.spl.usace.army.mil/regulatory/mmg_2004.pdf
[5]**Albuquerque District**-http://www.spa.usace.army.mil/reg/mitigation/SPA%20Final%20Mitigation%20Guidelines_OLD.pdf

☐ Yes, Attached (or mail copy separately if applying electronically) ☐ No

If no, a mitigation plan must be prepared and submitted, if applicable.

Mitigation site(s) Latitude & Longitude (D/M/S, DD, or UTM with Zone):	USGS Quadrangle map name(s):
Assessor Parcel Number(s):	Section(s), Township(s), Range(s):

Other location descriptions, if known:
Directions to the mitigation location(s):

Box 11 Threatened or Endangered Species

Please list any federally-listed (or proposed) threatened or endangered species or critical habitat (or proposed critical habitat) within the project area (include scientific names (e.g., Genus species), if known):

a. None b.
c. d.
e. f.

Have surveys, using U.S. Fish and Wildlife Service/NOAA Fisheries protocols, been conducted?
☐ Yes, Report attached (or mail copy separately if applying electronically) ☐ No

If a federally-listed species would be impacted, please provide a description of the impactand a biological evaluation, if available.
☐ Yes, Report attached (or mail copy separately if applying electronically) ☐ Not attached

Has Section 7 consultation been initiated by another federal agency?
☐ Yes, Initiation letter attached (or mail copy separately if applying electronically) ☐ No

Has Section 10 consultation been initiated for the proposed project?
☐ Yes, Initiation letter attached (or mail copy separately if applying electronically) ☐ No

Has the USFWS/NOAA Fisheries issued a Biological Opinion?
☐ Yes, Attached (or mail copy separately if applying electronically) ☐ No
If yes, list date Opinion was issued (m/d/yyyy):

Box 12 Historic properties and cultural resources:

Are any cultural resources of any type known to exist on-site? ☒ Yes ☐ No

Please list any known historic properties listed, or eligible for listing, on the National Register of Historic Places:

a. See Attachment F for Section 106 documentation b.
c. d.
e. f.

Has a cultural resource records search been conducted?
☒ Yes, Report attached (or mail copy separately if applying electronically) ☐ No

Has a cultural resource pedestrian survey been conducted for the site?
☒ Yes, Report attached (or mail copy separately if applying electronically) ☐ No

Has another federal agency been designated the lead federal agency for Section 106 consultation?
☐ Yes, Designation letter/email attached (or mail copy separately if applying electronically) ☒ No

Has Section 106 consultation been initiated by another federal agency?
☐ Yes, Initiation letter attached (or mail copy separately if applying electronically) ☒ No

Has a Section 106 MOA or PA been signed by another federal agency and the SHPO?
☐ Yes, Attached (or mail copy separately if applying electronically) ☒ No
If yes, list date MOA or PA was signed (m/d/yyyy):

Box 13 Section 401 Water Quality Certification:
Applying for certification? ☒ Yes, Attached (or mail copy separately if applying electronically) ☐ No

Certification issued? ☐ Yes, Attached (or mail copy separately if applying electronically) ☒ No
Certification waived? ☐ Yes, Attached (or mail copy separately if applying electronically) ☒ No
Certification denied? ☐ Yes, Attached (or mail copy separately if applying electronically) ☒ No

Exempted activity? ☐ Yes ☒ No
Agency concurrence? ☐ Yes, Attached ☐ No
If exempt, state why:

Box 14 Coastal Zone Management Act:
Is the project located within the Coastal Zone? ☐ Yes ☒ No

If yes, applying for a coastal commission-approved Coastal Development Permit?
☐ Yes, Attached (or mail copy separately if applying electronically) ☐ No

If no, applying for separate CZMA-consistency certification?
☐ Yes, Attached (or mail copy separately if applying electronically) ☐ No

Permit/Consistency issued? ☐ Yes, Attached (or mail copy separately if applying electronically) ☐ No

Exempt? ☐ Yes ☐ No
Agency concurrence? ☐ Yes, Attached ☐ No
If exempt, state why:

Box 15 List of other certifications or approvals/denials received from other federal, state, or local agencies for work described in this application:

Agency	Type of Approval[4]	Identification Number	Date Applied	Date Approved	Date Denied
CDFW	1602 SAA	1600-2014-0296-R2	12/5/2014	Pending	
CVRWQCB	401 Certification		7/28/2015	Pending	

[4] Would include but is not restricted to zoning, building, and flood plain permits

Nationwide Permit General Conditions (GC) checklist:

(http://www.gpo.gov/fdsys/pkg/FR-2012-02-21/pdf/2012-3687.pdf)

Check	General Condition	Rationale for compliance with General Condition
☒	1. Navigation	There are no navigable waterways within or near the project vicinity. There will be no effects on navigation.
☒	2. Aquatic Life Movements	No disruption of aquatic life movement will take place as a result of this project by following avoidance and minimization measures.
☒	3. Spawning Areas	No spawning areas are located in the project area.
☒	4. Migratory Bird Breeding Areas	To avoid potential impacts to nesting migratory birds, vegetation removal (trees and shrubs) will take place between September 1 and February 15. Temporary ESA fencing will be installed to prevent encroachment of construction personnel and equipment in the vicinity of an established osprey nest tree, located near the southeast quadrant of the project study limits (Figure 5). Contractor will be required to hire a qualified biologist to monitor the nesting osprey during percussive pile driving and demolition operations utilizing percussive equipment.
☒	5. Shellfish Beds	No shellfish beds are located in the project vicinity.
☒	6. Suitable Material	Fill will meet suitable material standards and will be free from toxic pollutants. Fill will be limited to minimal amount necessary to accomplish the project.
☒	7. Water Supply Intakes	No water supply intakes exist.
☒	8. Adverse Effects from Impoundments	No impoundments are proposed.
☒	9. Management of Water Flows	The project will not permanently impede or restrict the passage of normal or expected high water flows.
☒	10. Fills Within 100-Year Floodplains	As defined in 23 CFR Section 650.105(q) and also included within Attachment D, the project does not constitute a significant floodplain encroachment.
☒	11. Equipment	Heavy equipment in the project area will be restricted to temporary access roads and current Caltrans right-of-way. Equipment will not stage within water features.
☒	12. Soil Erosion and Sediment Controls	Appropriate soil erosion and sediment controls will be used and maintained in effective operating condition during construction, and all exposed soils and other fills must be permanently stabilized at the earliest practicable date. Caltrans' standard erosion controls will be utilized to prevent soil erosion and sedimentation.
☒	13. Removal of Temporary Fills	Temporary fills will be removed and affected areas will be returned to pre-construction elevations and re-vegetated as appropriate.
☒	14. Proper Maintenance	The maintenance of roadway in the project area will be the responsibility of Caltrans and will be properly maintained.

☒	15. Single and Complete Project	Project is single and complete project.
☒	16. Wild and Scenic Rivers	The project site is not within any designated or proposed NWSR.
☒	17. Tribal Rights	No tribal rights will be impaired by this project.
☒	18. Endangered Species	See Box 11 above.
☒	19. Migratory Bird and Bald and Golden Eagle Permits	No eagle nests are present within project area. Suitable nesting trees within the project area will be removed outside of the active breeding season (September 1 and February 15). Temporary ESA fencing will be installed to prevent encroachment of construction personnel and equipment in the vicinity of an established osprey nest tree, located near the southeast quadrant of the project study limits (Figure 5). Contractor will be required to hire a qualified biologist to monitor the nesting osprey during percussive pile driving and demolition operations utilizing percussive equipment.
☒	20. Historic Properties	See Box 12 above.
☒	21. Discovery of Previously Unknown Remains and Artifacts	Caltrans Standard Provision 14-2.02.02 describes procedure to protect uncovered remains and artifacts.
☒	22. Designated Critical Resource Waters	Project does not include any Designated Critical Resource Waters.
☒	23. Mitigation	See Box 10 above.
☒	24. Safety of Impoundment Structures	No impoundments are proposed by this project.
☒	25. Water Quality	See Box 13 above.
☒	26. Coastal Zone Management	See Box 14 above.
☒	27. Regional and Case-by-Case Conditions	The proposed project will comply with all Regional and Case-by-Case Conditions outlined by the Army Corps of Engineers.
☒	28. Use of Multiple Nationwide Permits	Applicant is aware that if total proposed acreage of impacts exceed the acreage limit of the NWP with the highest specified acreage, no NWP can be issued.
☒	29. Transfer of Nationwide Permit Verifications	Applicant is aware of this permit transfer requirement.
☒	30. Compliance Certification	Applicant is aware of this post-construction requirement.
☒	31. Pre-Construction Notification	This is a non-reporting NPW-14, a PCN for this project was completed but not submitted.

Revised March 21, 2012. For the most recent version of this form, visit your Corps District's Regulatory website.

Sacramento District
Nationwide Permit Program
Regional Conditions Checklist for California

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG ®**

On March 18, 2012, the U.S. Army Corps of Engineers' South Pacific Division approved 26 regional conditions for the 2012 Nationwide Permits (NWP) in California, excluding the Lake Tahoe Basin, within the Sacramento District. This checklist is intended to assist applicants with completing the South Pacific Division Pre-Construction Notification Checklist and to ensure compliance with the regional conditions. This checklist does not include the full text of each regional condition.

Please refer to the *Final Sacramento District Nationwide Permit Regional Conditions for California, excluding the Lake Tahoe Basin* (http://www.spk.usace.army.mil/Portals/12/documents/regulatory/nwp/2012_nwps/2012-NWP-RC-CA.pdf) and the *List of Additional Information Required for Complete Pre-Construction Notification for California, Nevada and Utah*, when completing this checklist.

Please check the box to indicate you have read and have/will comply with the regional condition and provide a rationale on how you have/will comply with the condition.

Check	Regional Condition	Compliance Rationale
☒	**1. Pre-construction Notification.** PCN must include: ☒ Avoidance & minimization statement. ☒ Plan & cross-section drawings. ☒ Pre-project photos.	The information has been submitted with the PCN.
☒	**2. Pre-construction Notification.** PCN must be submitted for: ☐ Activities in a vernal pool. ☐ Activities in the Primary or Secondary Zone of the Legal Delta, Sacramento River, and San Joaquin River, and immediate tributaries. ☒ Crossings of perennial or intermittent waters. ☐ Activities within 100 feet of a natural spring. ☐ Activities located in areas designated as EFH.	A PCN has been completed for a NWP-14 non-reporting. The PCN will not be submitted.
☒	**3. Recordation.** Permittee will record the NWP verification.	The proposed project does not involve the designation of a preserve or a structure in a navigable water. OR I agree to record the NWP verification with the Registrar of Deeds.
☒	**4. Avoided Waters.** Permittee shall: ☐ Establish & maintain a preserve. ☐ Place avoided waters & buffers into a separate parcel; and ☐ Establish permanent legal protection.	
☒	**5. Temporary Fill.** PCN must include: ☐ Avoidance practicability statement. ☐ Description of the fill. ☐ Plan for restoration and/or revegetation. **Permittee will:** ☒ Use clean & washed gravel, ☐ Place a horizontal marker. ☒ Remove all temporary fill within 30 days.	Clean washed gravel will be placed into the side channel to level out low spots. All gravel will be removed from the channel once work is completed. This side channel will be restored, as practicable, to its pre-existing contour.

Revised January 7, 2013. For the most recent version of this checklist, visit the Sacramento District webpage

Check	Regional Condition	Compliance Rationale
☒	**6. Stream Crossings.** ☐ For Federally-listed fish species habitat, span the stream or river, or use bottomless arch culvert. ☐ Ensure only minor impacts would occur to fish and wildlife passage or expected high flows. ☒ No work within standing or flowing waters. ☐ Dewatering plans must be approved by the Corps. ☒ Will comply with Regional Condition 19; ☒ Will not result in a reduction of bankfull width or depth of streams or negatively alter the flood control capacity.	There will be no impact to Hamilton Branch Creek or the intermittent channel. Project work is scheduled during the dry season.
☒	**7. Lead Federal Agency.** Must submit documentation pertaining to the Corps Permit Area for ESA and Area of Potential Effect for NHPA.	Caltrans is acting as the lead federal agency. Please see Attachment F.
☒	**8. Compliance Certificate.** Must submit: ☐ As-built drawings. ☐ Post-construction photographs.	Applicant agrees to submit as-built drawings and post-construction photographs as required by this condition.
☒	**9. Permittee Responsible Mitigation**. Must submit a final compensatory mitigation & monitoring plan.	The activity does not involve permittee-responsible mitigation OR A final mitigation and monitoring plan will be submitted prior to initiation of construction activities. OR A final mitigation and monitoring plan has been submitted with the PCN.
☒	**10. Mitigation.** Must complete mitigation construction before or concurrent with commencement of project construction and/or submit proof of mitigation bank or ILF payment.	NA
☒	**11. Contractor Awareness.** Responsible for awareness and shall ensure permit & drawing availability.	Applicant agrees to have a copy of the permit and drawings available for review at the project site.
☒	**12. Limits of Disturbance.** Must clearly identify & ensure no work takes place outside of limits.	The project limits will be clearly identified in the field and on project designs.
☒	**13. Notification.** Must notify 10 days prior to initiation of project construction.	Applicant agrees to comply with this condition.
☒	**14. Inspections.** Must allow inspection of activity(s).	Applicant agrees to allow Corps representatives to inspect the project and any avoidance/mitigation areas.
☒	**15. Mather Core Recovery Area (Sacramento County).** NWPs (see list) revoked from use in vernal pools.	The activity does not involve impacts to vernal pools in the Mather Core Recovery Area.
☒	**16. Legal Delta.** NWPs (see list) revoked.	The activity does not involve impacts in the Legal Delta.
☒	**17. Secondary Zone.** Impacts must be mitigated within the Secondary Zone of the Legal Delta.	The activity would not occur within the Secondary Zone of the Legal Delta.
☒	**18. NWP 12 (Utility Lines).** ☐ Activity will not drain wetlands or waters. ☐ Permittee will stockpile top 6-12" of topsoil. ☐ Permittee will replace topsoil, and then re-seed. **PCN must be submitted when a utility line:** ☐ Results in a discharge of fill into perennial or intermittent waters, or special aquatic sites ☐ Results in a discharge of fill into greater than 100 linear feet of ephemeral waters; ☐ Includes construction of an access road, substation or foundation within waters; or ☐ Does not involve restoration of trenches to pre-project contours and conditions.	The activity will not involve NWP 12.

Check	Regional Condition	Compliance Rationale
☒	**19. NWPs 13 & 14.** For bank stabilization activity(s): ☐ Activity will use native vegetation, bioengineering design techniques, or a combination thereof. **PCN must be submitted when stabilization:** ☐ Involves hard-armoring or non-vegetated/non-bioengineered technique.	Proposed project does not involve rock armoring of streambed and banks. Upland temporary disturbed areas will be stabilized and reseeded with a suitable cover crop (such as winter wheat) that will not persist on site. A regionally appropriate California native seed mix will be applied to provide succession from the erosion control cover crop for the establishment of native plants.
☒	**20. NWP 23 (Categorical Exclusions).** ☐ Submit a PCN for all activities. ☐ Include a copy of the CE. ☐ Include final agency determinations for ESA, EFH, and NHPA.	The activity will not involve NWP 23.
☒	**21. NWP 27 (Aquatic Habitat Restoration).** PCN must be submitted when the activity: ☐ Results in a discharge of fill into perennial or intermittent waters, or special aquatic sites; or ☐ Results in a discharge of fill into greater than 100 linear feet of ephemeral waters.	The activity will not involve NWP 27.
☒	**22. NWPs 29 and 39 (Residential & Commercial Development).** Channelization or relocation of intermittent or perennial drainages is not authorized, except when relocation would result in a net increase in functions.	The activity will not involve NWPs 29 or 39.
☒	**23. Waivers (300 & 500 linear foot):** PCN must include: ☐ A narrative description; ☐ An analysis of the proposed impacts; ☐ Measures taken to avoid and minimize losses to waters; and ☐ A compensatory mitigation plan.	Caltrans is not requesting a waiver under this condition.
☒	**24. NWPs 29, 39, 40, 42, and 43:** Must establish and maintain upland vegetated buffers.	The activity will not involve NWPs 29, 39, 40, 42 or 43.
☒	**25. NWP 46 (Discharge in Ditches):** Will not cause the loss of greater than 0.5 acres of waters or the loss of more than 300 linear feet of ditch.	The activity will not involve NWP 46.
☒	**26. All NWPs.** All NWPs except (see list) are revoked for activities in histosols, fens, bogs and peatlands, and in wetlands contiguous with fens.	The activity would not occur in a histosols, fen, bog, peatland or wetland contiguous with a fen.

PLAC - Permit Condition Responsibility (PCR) Summary

PLAC CONDITION RESPONSIBILITY (PCR) SUMMARY

General:
This PCR Summary clarifies various PLAC requirements. Perform all work described in the PLACs on behalf of the Department unless otherwise stated below in Table 2. If a discrepancy exists between the PCR Summary and the PLAC, the PCR Summary governs.

Definitions:
Agency: A board, agency, or other entity that issues a PLAC
Activity: A task, event or other project element
PLAC Condition: A work activity and/or submittal required by a PLAC

Table 1 - Clarification of PLAC Requirements

PLAC Name	Section of the PLAC	PLAC Requirement
All PLACs	Applicable PLAC sections	**Submittals:** Submit to the Engineer when PLAC conditions require: 1. Communications. The Engineer will contact the agencies. 2. Records to be maintained, within 5 working days after the activity. 3. Submittals 5 days before the agencies require them. The Engineer will review and submit to the agencies. **Documents:** 1. Maintain copies of all PLACs and supporting documents at the jobsite. 2. Provide copies of all PLACs and supporting documents to all persons working at the project site, including but not limited to Contractors, subcontractors, inspectors and monitors **Expiration Dates in 2017:** In the event that construction work must be extended into 2018, the Department will obtain extensions for all PLACs.

California Department of Fish and Wildlife Streambed Alteration Agreement (Revision 2) Notification No: 1600-2014-0296-R2, dated November 3, 2015	Measures to Protect Fish and Wildlife Resources: 1. Administrative Measures	1.4: Both the Contractor and Caltrans will allow CDFW personnel to enter the project site at any time, after notifying the Resident Engineer, to verify compliance with the Agreement
	Measures to Protect Fish and Wildlife Resources: 2. Avoidance and Minimization Measures	Section 2.1 and throughout the Agreement: Use of the term "phase", e.g.: ..."1) no phase of the project...". CDFW clarified verbally, "...the term 'phase' applies to the immediate work activity (such as driving a temporary pile), not the end product (such as temporary trestle)." 2.5: Contractor will restrict all project activities to the designated work area and will maintain all fencing, stakes, and flags until the completion of project activities. "Flags" and "Flagging" includes Temporary Fence (Type ESA). 2.6: Use fiber rolls with biodegradable netting conforming to section 21-1.02P of the RSS.
	Liability	All persons working at the project site, including but not limited to Contractors, subcontractors, inspectors and monitors are liable for any violations to the Agreement that they commit or cause to be committed
California Regional Water Quality Control Board, Central Valley Region, Clean Water Act §401 Technically Conditioned Water Quality Certification, Dated October 22, 2015	Additional Technically Conditioned Certification Conditions	Items 12 and 15 apply to the Department and to all persons working at the project site, including but not limited to Contractors, subcontractors, inspectors and monitors
	Additional Storm Water Quality Conditions	Item 1 applies to the Department and to all persons working at the project site, including but not limited to Contractors, subcontractors, inspectors and monitors

Table 2 - Work to be Performed by the Department		
PLAC Name	**Section of the PLAC**	**PLAC Requirement**
California Department of Fish and Wildlife Streambed Alteration Agreement (Revision 2) Notification No: 1600-2014-0296-R2, dated November 3, 2015	Measures to Protect Fish and Wildlife Resources: 1. Administrative Measures	1.4.: Both the Contractor and Caltrans will agree to allow CDFW personnel to enter the project site at any time, after notifying the Resident Engineer, to verify compliance with the Agreement
	Measures to Protect Fish and Wildlife Resources: 3. Compensatory Measures	Measures 3.1 & 3.2
	Measures to Protect Fish and Wildlife Resources: 4. Reporting Measures	Measures 4.1, 4.2, 4.3

PLAC - California Regional Water Quality Control Board, Central Valley Region

Clean Water Act §401 Technically Conditioned Water Quality Certification
Dated October 22, 2015

22 October 2015

Ms. Chelsea Tran-Wong
Caltrans
1031 Butte Street, MS 30
Redding, CA 96001

CLEAN WATER ACT §401 TECHNICALLY CONDITIONED WATER QUALITY CERTIFICATION FOR DISCHARGE OF DREDGED AND/OR FILL MATERIALS FOR THE AMENDED HAMILTON BRANCH BRIDGE REPLACEMENT AT STATE ROUTE 147 PROJECT (WDID#5A32CR00146a), HAMILTON BRANCH, PLUMAS COUNTY

ACTION:

1. ☐ Order for Standard Certification
2. ■ Order for Technically-conditioned Certification
3. ☐ Order for Denial of Certification

WATER QUALITY CERTIFICATION STANDARD CONDITIONS:

1. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to §13330 of the California Water Code and §3867 of Title 23 of the California Code of Regulations (23 CCR).

2. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3. The validity of any non-denial certification action shall be conditioned upon total payment of the full fee required under 23 CCR §3833, unless otherwise stated in writing by the certifying agency.

4. Certification is valid for the duration of the described project. Caltrans shall notify the Central Valley Water Board in writing within 7 days of project completion.

ADDITIONAL TECHNICALLY CONDITIONED CERTIFICATION CONDITIONS:

In addition to the four standard conditions, Caltrans shall satisfy the following:

1. Caltrans shall notify the Central Valley Water Board in writing 7 days in advance of the start of any in-water activities.

2. Except for activities permitted by the U.S. Army Corps under §404 of the Clean Water Act, soil, silt, or other organic materials shall not be placed where such materials could pass into surface water or surface water drainage courses.

3. All areas disturbed by project activities shall be protected from washout or erosion.

4. Caltrans shall maintain a copy of this Certification and supporting documentation (Project Information Sheet) at the Project site during construction for review by site personnel and agencies. All personnel (employees, contractors, and subcontractors) performing work on the proposed project shall be adequately informed and trained regarding the conditions of this Certification.

5. An effective combination of erosion and sediment control Best Management Practices (BMPs) must be implemented and adequately working during all phases of construction.

6. All temporarily affected areas will be restored to pre-construction contours and conditions upon completion of construction activities.

7. Caltrans shall perform surface water sampling: 1) When performing any in-water work; 2) In the event that project activities result in any materials reaching surface waters or; 3) When any activities result in the creation of a visible plume in surface waters. The following monitoring shall be conducted immediately upstream out of the influence of the project and 300 feet downstream of the active work area. Sampling results shall be submitted to this office within two weeks of initiation of sampling and every two weeks thereafter. The sampling frequency may be modified for certain projects with written permission from the Central Valley Water Board.

Parameter	Unit	Type of Sample	Frequency of Sample
Turbidity	NTU	Grab	Every 4 hours during in water work
Settleable Material	ml/l	Grab	Same as above.
Visible construction related pollutants	Observations	Visible Inspections	Continuous throughout the construction period

8. Activities shall not cause turbidity increases in surface water to exceed:

   (a) where natural turbidity is less than 1 Nephelometric Turbidity Units (NTUs), controllable factors shall not cause downstream turbidity to exceed 2 NTU;
   (b) where natural turbidity is between 1 and 5 NTUs, increases shall not exceed 1 NTU;
   (c) where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent;
   (d) where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs;
   (e) where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent.

   Except that these limits will be eased during in-water working periods to allow a turbidity increase of 15 NTU over background turbidity as measured in surface waters 300 feet downstream from the working area. In determining compliance with the above limits, appropriate averaging periods may be applied provided that beneficial uses will be fully protected. Averaging periods may only be assessed by prior permission of the Central Valley Water Board.

9. Activities shall not cause settleable matter to exceed 0.1 ml/l in surface waters as measured in surface waters 300 feet downstream from the project.

10. The discharge of petroleum products or other excavated materials to surface water is prohibited. Activities shall not cause visible oil, grease, or foam in the work area or downstream. Caltrans shall notify the Central Valley Water Board immediately of any spill of petroleum products or other organic or earthen materials.

11. Caltrans shall notify the Central Valley Water Board immediately if the above criteria for turbidity, settleable matter, oil/grease, or foam are exceeded.

12. Caltrans shall comply with all Department of Fish and Wildlife 1600 requirements for the project.

13. Caltrans must obtain coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities issued by the State Water Resources Control Board for any project disturbing an area of 1 acre or greater.

14. The Conditions in this water quality certification are based on the information in the attached "Project Information." If the information in the attached Project Information is modified or the project changes, this water quality certification is no longer valid until amended by the Central Valley Water Board.

15. In the event of any violation or threatened violation of the conditions of this Order, the violation or threatened violation shall be subject to any remedies, penalties, process, or sanctions as provided for under State law and section 401 (d) of the federal Clean Water Act. The applicability of any State law authorizing remedies, penalties, process, or sanctions for the violation or threatened violation constitutes a limitation necessary to ensure compliance into this Order.

a. If Caltrans or a duly authorized representative of the project fails or refuses to furnish technical or monitoring reports, as required under this Order, or falsifies any information provided in the monitoring reports, the applicant is subject to civil monetary liabilities, for each day of violation, or criminal liability.

b. In response to a suspected violation of any condition of this Order, the Central Valley Water Board may require Caltrans to furnish, under penalty of perjury, any technical or monitoring reports the Central Valley Water Board deems appropriate, provided that the burden, including cost of the reports, shall be in reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

c. Caltrans shall allow the staff(s) of the Central Valley Water Board, or an authorized representative(s), upon the presentation of credentials and other documents, as may be required by law, to enter the project premises for inspection, including taking photographs and securing copies of project-related records, for the purpose of assuring compliance with this certification and determining the ecological success of the project.

16. Staff of the Central Valley Water Board has prepared total maximum daily load (TMDL) allocations that, once approved, would limit methylmercury in storm water discharges to the Sacramento-San Joaquin Delta. The Central Valley Water Board has scheduled these proposed allocations to be considered for adoption. When the Central Valley Water Board adopts the TMDL and once approved by the Environmental Protection Agency, the discharge of methylmercury may be limited from the proposed project. The purpose of this condition is to provide notice to Caltrans that methylmercury discharge limitations and monitoring requirements may apply to this project in the future and also to provide notice of the Central Valley Water Board's TMDL process and that elements of the planned construction may be subject to a TMDL allocation.

ADDITIONAL STORM WATER QUALITY CONDITIONS:

Caltrans shall also satisfy the following additional storm water quality conditions:

1. During the construction phase, Caltrans must employ strategies to minimize erosion and the introduction of pollutants into storm water runoff. These strategies must include the following:

   (a) the Storm Water Pollution Prevention Plan (SWPPP) must be prepared during the project planning and design phases and before construction;
   (b) an effective combination of erosion and sediment control Best Management Practices (BMPs) must be implemented and adequately working prior to the rainy season and during all phases of construction.

2. Caltrans must minimize the short and long-term impacts on receiving water quality from the Amended Hamilton Branch Bridge Replacement @ State Route 147 Project by implementing the following post-construction storm water management practices:

   (a) minimize the amount of impervious surface;
   (b) reduce peak runoff flows;

(c) provide treatment BMPs to reduce pollutants in runoff;
(d) ensure existing waters of the State (e.g., wetlands, vernal pools, or creeks) are not used as pollutant source controls and/or treatment controls;
(e) preserve and, where possible, create or restore areas that provide important water quality benefits, such as riparian corridors, wetlands, and buffer zones;
(f) limit disturbances of natural water bodies and natural drainage systems caused by development (including development of roads, highways, and bridges);
(g) use existing drainage master plans or studies to estimate increases in pollutant loads and flows resulting from projected future development and require incorporation of structural and non-structural BMPs to mitigate the projected pollutant load increases in surface water runoff;
(h) identify and avoid development in areas that are particularly susceptible to erosion and sediment loss, or establish development guidance that protects areas from erosion/ sediment loss;
(i) control post-development peak storm water run-off discharge rates and velocities to prevent or reduce downstream erosion, and to protect stream habitat.

3. Caltrans must ensure that all development within the project provides verification of maintenance provisions for post-construction structural and treatment control BMPs. Verification shall include one or more of the following, as applicable:

(a) the developer's signed statement accepting responsibility for maintenance until the maintenance responsibility is legally transferred to another party; or
(b) written conditions in the sales or lease agreement that require the recipient to assume responsibility for maintenance; or
(c) written text in project conditions, covenants and restrictions for residential properties assigning maintenance responsibilities to a home owner's association, or other appropriate group, for maintenance of structural and treatment control BMPs; or
(d) any other legally enforceable agreement that assigns responsibility for storm water BMP maintenance.

REGIONAL WATER QUALITY CONTROL BOARD CONTACT PERSON:

Scott A. Zaitz, R.E.H.S., Redding Branch Office, 364 Knollcrest Drive, Suite 205, Redding, California 96002, Scott.Zaitz@waterboards.ca.gov, (530) 224-4784

WATER QUALITY CERTIFICATION:

I hereby issue an order certifying that any discharge from Caltrans, Amended Hamilton Branch Bridge Replacement @ State Route 147 Project (WDID# 5A32CR00146a) will comply with the applicable provisions of §301 ("Effluent Limitations"), §302 ("Water Quality Related Effluent Limitations"), §303 ("Water Quality Standards and Implementation Plans"), §306 ("National Standards of Performance"), and §307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Resources Control Board Water Quality Order No. 2003-0017 DWQ "Statewide General Waste Discharge Requirements For Dredged Or Fill Discharges That Have Received State Water Quality Certification (General WDRs)."

Except insofar as may be modified by any preceding conditions, all certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with Caltrans's project description and the attached Project Information Sheet, and (b) compliance with all applicable requirements of the Water Quality Control Plan *for the Sacramento River and San Joaquin River*, Fourth Edition, revised October 2011 (Basin Plan).

Any person aggrieved by this action may petition the State Water Quality Control Board to review the action in accordance with California Water Code § 13320 and California Code of Regulations, title 23, § 2050 and following. The State Water Quality Control Board must receive the petition by 5:00 p.m., 30 days after the date of this action, except that if the thirtieth day following the date of this action falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Quality Control Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

(for) PAMELA C. CREEDON
Executive Officer

GDD:wrb:sjs

Enclosure: Water Quality Order No. 2003-0017 DWQ

cc w/o enclosures: Mr. Matt Kelley, U.S. Army Corp of Engineers, Redding
Department of Fish and Wildlife, Region 2, Rancho Cordova
U.S. Fish and Wildlife Service, Sacramento
Mr. Bill Jennings, CALSPA, Stockton

cc w/o enclosures by email: U.S. EPA, Region 9, San Francisco
Mr. Bill Orme, SWRCB, Certification Unit, Sacramento

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PROJECT INFORMATION

Application Date: 31 July 2015

Application Complete Date: 31 July 2015, Amendment received 20 October 2015

Applicant: Caltrans, Attn: Ms. Chelsea Tran-Wong

Project Name: Amended Hamilton Branch Bridge Replacement @ State Route 147 Project

Application Number: WDID No. 5A32CR00146a

Type of Project: Replacement of the existing Hamilton Branch Creek Bridge.

Project Location: Section 10, Township 45 North, Range 08 East, MDB&M.
Latitude: 40°15'11" and Longitude: -121°00'00"

County: Plumas County

Receiving Water(s) (hydrologic unit): Hamilton Branch Creek, which is tributary to Feather River. Feather River Hydrologic Unit-Mount Harkness Hydrologic Subarea No. 518.44

Water Body Type: Streambed

Designated Beneficial Uses: The Water Quality Control Plan *for the Sacramento River and San Joaquin River*, Fourth Edition, revised September 2009, has designated beneficial uses for surface and ground waters within the region. Beneficial uses that could be impacted by the project include: Municipal and Domestic Water Supply (MUN); Agricultural Supply (AGR); Industrial Supply (IND), Hydropower Generation (POW); Groundwater Recharge, Water Contact Recreation (REC-1); Non-Contact Water Recreation (REC-2); Warm Freshwater Habitat (WARM); Cold Freshwater Habitat (COLD); Migration of Aquatic Organisms (MIGR); Spawning, Reproduction, and /or Early Development (SPWN); and Wildlife Habitat (WILD).

Project Description (purpose/goal): The Amended Hamilton Branch Bridge Replacement @ State Route 147 Project consists of the construction of a new bridge on the same alignment as the existing bridge and removal of the existing Hamilton Branch Creek Bridge. The new structure will be a cast-in-place post-tensioned reinforced concrete-bridge with Cast-In-Drill-Hole piles at the piers and spread footings at the abutments. These foundations, including abutments and piers, will be located above the ordinary-high-water-mark and outside the riparian zone. The new bridge will be a 352-feet-long three span structure with two piers. The roadway at both ends of the bridge will be reconstructed and widened to match the width of the new bridge.

Construction of temporary access roads will provide access to the northwest quadrant, constructing a trestle crossing the creek, and continuing the access road to the southeast quadrant of the existing bridge. These temporary access roads will be graded, rocked, or stabilized prior to any rainfall events. Temporary stream crossings will be installed to provide access below to construct bridge foundations and false work and to remove the existing piers.

Preliminary Water Quality Concerns: Construction activities may impact surface waters with increased turbidity and settleable matter.

Proposed Mitigation to Address Concerns: Caltrans will implement Best Management Practices (BMPs) to control sedimentation and erosion. All temporary affected areas will be restored to pre-construction contours and conditions upon completion of construction activities. Caltrans will conduct turbidity and settleable matter testing during in-water work, stopping work if Basin Plan criteria are exceeded or are observed.

Fill/Excavation Area Project implementation will permanently impact 0.0035 acre/69 linear feet of un-vegetated streambed and temporarily impact 0.0015 acre/29 linear feet of un-vegetated streambed.

Dredge Volume: Not Applicable

U.S. Army Corps of Engineers Permit Number: Nationwide Permit #14 Linear Transportation Projects (Non-reporting)

Department of Fish and Wildlife Streambed Alteration Agreement: Caltrans applied for a Streambed Alteration Agreement on 5 December 2014. Lake & Streambed Alteration Agreement Number: 1600-2014-0296-R2

Possible Listed Species: None

Status of CEQA Compliance: Caltrans signed a final Determination approving a Negative Declaration on 15 July 2015 in compliance with Division 13 of the California Public Resources Code, stating the project will not have a significant effect on the environment.

Compensatory Mitigation: The applicant must comply with the U.S. Army Corps of Engineers' requirements for compensatory mitigation for the impacts to jurisdictional waters if required.

Application Fee Provided: On 31 July 2015 a certification application fee of $1,500.00 was submitted as required by 23 CCR §3833b(3)(A) and by 23 CCR §2200(e).

STATE WATER RESOURCES CONTROL BOARD

WATER QUALITY ORDER NO. 2003 - 0017 - DWQ

STATEWIDE GENERAL WASTE DISCHARGE REQUIREMENTS FOR DREDGED OR FILL DISCHARGES THAT HAVE RECEIVED STATE WATER QUALITY CERTIFICATION (GENERAL WDRs)

The State Water Resources Control Board (SWRCB) finds that:

1. Discharges eligible for coverage under these General WDRs are discharges of dredged or fill material that have received State Water Quality Certification (Certification) pursuant to federal Clean Water Act (CWA) section 401.

2. Discharges of dredged or fill material are commonly associated with port development, stream channelization, utility crossing land development, transportation water resource, and flood control projects. Other activities, such as land clearing, may also involve discharges of dredged or fill materials (e.g., soil) into waters of the United States.

3. CWA section 404 establishes a permit program under which the U.S. Army Corps of Engineers (ACOE) regulates the discharge of dredged or fill material into waters of the United States.

4. CWA section 401 requires every applicant for a federal permit or license for an activity that may result in a discharge of pollutants to a water of the United States (including permits under section 404) to obtain Certification that the proposed activity will comply with State water quality standards. In California, Certifications are issued by the Regional Water Quality Control Boards (RWQCB) or for multi-Region discharges, the SWRCB, in accordance with the requirements of California Code of Regulations (CCR) section 3830 et seq. The SWRCB's water quality regulations do not authorize the SWRCB or RWQCBs to waive certification, and therefore, these General WDRs do not apply to any discharge authorized by federal license or permit that was issued based on a determination by the issuing agency that certification has been waived. Certifications are issued by the RWQCB or SWRCB before the ACOE may issue CWA section 404 permits. Any conditions set forth in a Certification become conditions of the federal permit or license if and when it is ultimately issued.

5. Article 4, of Chapter 4 of Division 7 of the California Water Code (CWC), commencing with section 13260(a), requires that any person discharging or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the State,[1] file a report of waste discharge (ROWD). Pursuant to Article 4, the RWQCBs are required to prescribe waste discharge requirements (WDRs) for any proposed or existing discharge unless WDRs are waived pursuant to CWC section 13269. These General WDRs fulfill the requirements of Article 4 for proposed dredge or fill discharges to waters of the United States that are regulated under the State's CWA section 401 authority.

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[1] "Waters of the State" as defined in CWC Section 13050(e)

6. These General WDRs require compliance with all conditions of Certification orders to ensure that water quality standards are met.

7. The U.S. Supreme Court decision of *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) (the *SWANCC* decision) called into question the extent to which certain "isolated" waters are subject to federal jurisdiction. The SWRCB believes that a Certification is a valid and enforceable order of the SWRCB or RWQCBs irrespective of whether the water body in question is subsequently determined not to be federally jurisdictional. Nonetheless, it is the intent of the SWRCB that all Certification conditions be incorporated into these General WDRs and enforceable hereunder even if the federal permit is subsequently deemed invalid because the water is not deemed subject to federal jurisdiction.

8. The beneficial uses for the waters of the State include, but are not limited to, domestic and municipal supply, agricultural and industrial supply, power generation, recreation, aesthetic enjoyment, navigation, and preservation and enhancement of fish, wildlife, and other aquatic resources.

9. Projects covered by these General WDRs shall be assessed a fee pursuant to Title 23, CCR section 3833.

10. These General WDRs are exempt from the California Environmental Quality Act (CEQA) because (a) they are not a "project" within the meaning of CEQA, since a "project" results in a direct or indirect physical change in the environment (Title 14, CCR section 15378); and (b) the term "project" does not mean each separate governmental approval (Title 14, CCR section 15378(c)). These WDRs do not authorize any specific project. They recognize that dredge and fill discharges that need a federal license or permit must be regulated under CWA section 401 Certification, pursuant to CWA section 401 and Title 23, CCR section 3855, et seq. Certification and issuance of waste discharge requirements are overlapping regulatory processes, which are both administered by the SWRCB and RWQCBs. Each project subject to Certification requires independent compliance with CEQA and is regulated through the Certification process in the context of its specific characteristics. Any effects on the environment will therefore be as a result of the certification process, not from these General WDRs. (Title 14, CCR section 15061(b)(3)).

11. Potential dischargers and other known interested parties have been notified of the intent to adopt these General WDRs by public hearing notice.

12. All comments pertaining to the proposed discharges have been heard and considered at the November 4, 2003 SWRCB Workshop Session.

13. The RWQCBs retain discretion to impose individual or general WDRs or waivers of WDRs in lieu of these General WDRs whenever they deem it appropriate. Furthermore, these General WDRs are not intended to supersede any existing WDRs or waivers of WDRs issued by a RWQCB.

IT IS HEREBY ORDERED that WDRs are issued to all persons proposing to discharge dredged or fill material to waters of the United States where such discharge is also subject to the water quality certification requirements of CWA section 401 of the federal Clean Water Act (Title 33 United States Code section 1341), and such certification has been issued by the applicable RWQCB or the SWRCB, unless the applicable RWQCB notifies the applicant that its discharge will be regulated through WDRs or waivers of WDRs issued by the RWQCB. In order to meet the provisions contained in Division 7 of CWC and regulations adopted thereunder, dischargers shall comply with the following:

1. Dischargers shall implement all the terms and conditions of the applicable CWA section 401 Certification issued for the discharge. This provision shall apply irrespective of whether the federal license or permit for which the Certification was obtained is subsequently deemed invalid because the water body subject to the discharge has been deemed outside of federal jurisdiction.

2. Dischargers are prohibited from discharging dredged of fill material to waters of the United States without first obtaining Certification from the applicable RWQCB or SWRCB.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on November 19, 2003.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz
Gary M. Carlton
Nancy H. Sutley

NO: None.

ABSENT: None.

ABSTAIN: None.

Debbie Irvin
Clerk to the Board

PLAC - California Department of Fish and Wildlife, North Central Region

Streambed Alteration Agreement (Revision 2)
Notification No. 1600-2014-0296-R2
Dated November 3, 2015

State of California – The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670-4599
916-358-2900
www.wildlife.ca.gov

EDMUND G. BROWN, Jr. Governor
Charlton H. Bonham, Director

NOV 03 2015
Date

Denna Matagulay
California Department of Transportation
1657 Riverside Drive, MS 30
Redding, CA 96001

Subject: Final Lake or Streambed Alteration Agreement
Notification No. 1600-2014-0296-R2

Dear Ms. Matagulay:

Enclosed is the final Streambed Alteration Agreement (Agreement) for the Hamilton Branch Bridge Replacement Project (Project). Before the California Department of Fish and Wildlife (Department) may issue an Agreement, it must comply with the California Environmental Quality Act (CEQA). In this case, the Department, acting as a responsible agency, filed a notice of determination (NOD) on the same date it signed the Agreement. The NOD was based on information contained in the Mitigated Negative Declaration the lead agency prepared for the Project.

Under CEQA, the filing of an NOD triggers a 30-day statute of limitations period during which an interested party may challenge the filing agency's approval of the Project. You may begin the Project before the statute of limitations expires if you have obtained all necessary local, state, and federal permits or other authorizations. However, if you elect to do so, it will be at your own risk.

If you have any questions regarding this matter, please contact Juan Lopez Torres, Senior Environmental Scientist (Specialist) at (916) 358-2951 or Juan.Torres@wildlife.ca.gov.

Sincerely,

Jeff Drongesen

for Tina Bartlett
Regional Manager

ec: Juan Lopez Torres, Juan.Torres@wildlife.ca.gov

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
NORTH CENTRAL REGION
1701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CA 95670

STREAMBED ALTERATION AGREEMENT (REVISION 2)
NOTIFICATION NO. 1600-2014-0296-R2

CALIFORNIA DEPARTMENT OF TRANSPORTATION
HAMILTON BRANCH BRIDGE REPLACEMENT PROJECT

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (Department) and California Department of Transportation (Permittee) as represented by Deena Matagulay.

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, Permittee notified the Department on December 5, 2014, that Permittee intends to complete the project described herein.

WHEREAS, pursuant to FGC section 1603, the Department has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in the Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed the Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with the Agreement.

PROJECT LOCATION

The project is located at the Hamilton Branch and an ephemeral unnamed stream on State Route (SR) 147 from post mile (PM) 8.9 to PM 9.3, in the County of Plumas, State of California. The project is located on the Westwood West U.S. Geological Survey (USGS) 7.5-minute quadrangle, R08E, T45N, Section 10; Latitude 40°17'30.58"N, Longitude 121° 4'31.12"W.

Exhibit A includes Figure 1 depicting the project location.

PROJECT DESCRIPTION

Caltrans proposes to construct a new bridge on the same alignment as the existing bridge and remove the existing Hamilton Branch Creek Bridge. The new structure will be cast in place post-tensioned reinforced concrete-bridge with cast-in-drilled–hole (CDIH) piles at the piers and spread footing at the abutments. The new bridge will be a three span structure with two piers and 352 feet long. The new bridge will have two 12-foot wide lanes and two 8-foot shoulders for a total useable width of 40 feet. The

roadway at both ends of the bridge will be reconstructed and widened to match the width of the new bridge. This widening will require earthwork consisting of pulverizing the existing asphalt and excavating existing roadway up to 1.4 feet deep. Other work associated to the bridge replacement will include installing bridge railing, replacing guardrails, and relocating overhead utilities.

Access will be provided to the northwest quadrant, constructing a trestle crossing the creek, and continuing the access road to the southeast quadrant of the existing bridge. These temporary access roads will be graded, rocked, or stabilized prior to any rainfall events to prevent sediment mobilization, and vehicle furrowing that could cause sediment delivery to the creek. Construction of the access roads will require grading up to 3 feet deep. Access roads will have an average width of approximately 25 feet. No in-water work will take place during the construction of the bridge. It is anticipated that this will be done by constructing two temporary trestles. One will be constructed parallel to and adjacent to the existing bridge and a second one will be constructed to support the existing bridge during demolition and provide catchment platform for falling debris. The steel vertical members will be driven into the earth with a pile driver. The trestles will span the creek and will be removed after construction.

Pier foundations will consist of CIDH piles with permanent steel casing. Each of the two bridge piers will be composed of two footings with four 36-inch diameter CIDH piles in each footing. Each pier consists of two 15-foot by 15-foot square footings with a 5-foot diameter column on top. The total footprint of each footing is 34.5 feet by 15 feet. The depth of the excavation needed to install the piers will be approximately 10 feet. Excavation will require driven sheet piles or other impermeable types of materials (i.e. water barrier system) to be used as cofferdams to protect the adjacent creek. If ground water is encountered during excavation, the area will be dewatered by pumping the water to an infiltration basin or a tank. When finished, existing ground material and rock slope protection will be placed over and around the footings.

The bridge abutment foundations will consists of reinforced concrete spread footings composed of Portland cement concrete and bar reinforcing steel. Excavation to a depth of at least 20 feet will be required for the construction of the abutments. Abutment 1 (south abutment) and abutment 2 (north abutment) will be 16 feet by 14 feet, with a 23-foot by 1-foot cantilever wingwall.

The proposed project will permanently impact 0.007 acres of Department jurisdictional areas consisting of 0.003 acres of riparian habitat and 0.004 of ephemeral drainage. A total of 0.188 acres of temporary impacts will occur as a result of the project consisting of 0.186 acres of riparian habitat and 0.002 acres of ephemeral drainage.

Exhibit A includes Figure 2 depicting the project impacts.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: nesting birds and aquatic and terrestrial plant and wildlife species.

The adverse effects the project could have on the fish or wildlife resources identified above include: disruption to nesting birds, disruption to aquatic or terrestrial plant and wildlife species, change in contour of channel or bank, soil compaction or other disturbance.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

Permittee shall meet each administrative requirement described below.

1.1 Documentation at Project Site. Permittee shall make the Agreement, any extensions and amendments to the Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to Department personnel, or personnel from another state, federal, or local agency upon request.

1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.

1.3 Notification of Conflicting Provisions. Permittee shall notify the Department if Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, the Department shall contact Permittee to resolve any conflict.

1.4 Project Site Entry. Permittee agrees that Department personnel may, with notification of the Resident Engineer, enter the project site at any time to verify compliance with the Agreement.

1.5 Does Not Authorize "Take." This Agreement does not authorize "take" of any listed species. Take is defined as hunt, pursue, catch, capture or kill or attempt to hunt, pursue, catch, capture, or kill. If there is potential for take of any listed species to occur, the Permittee shall consult with the Department as outlined in FGC Section 2081 and shall obtain the required state and federal threatened and endangered species permits.

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

2.1 Work Period in Dry Weather Only. Work within waters of the state shall be restricted to periods of low stream flow and dry weather. Precipitation forecasts

and potential increases in stream flow shall be considered when planning construction activities. Construction activities shall cease and all necessary erosion control measures shall be implemented prior to the onset of precipitation. Construction activities halted due to precipitation may resume when precipitation ceases and the National Weather Service 72-hour weather forecast indicates a 20% or less chance of precipitation, provided low stream flow conditions are still present. If a construction phase may cause the introduction of sediments into the stream: 1) no phase of the project shall be started, unless all work for that phase and all associated erosion control measures are completed prior to the onset of precipitation; 2) no phase of the project shall commence unless all equipment and materials are removed from the active channel at least 12 hours prior to the onset of precipitation and all associated erosion control measures are in place prior to the onset of precipitation; 3) if anticipated to stay in place over the winter, the temporary trestles (and falsework) will be designed to withstand high flows and not allow construction materials to flow downstream. Parts of the trestle (i.e., decking) will be removed if necessary; and 4) no work shall occur during a dry-out period of 24 hours after the above referenced wet weather. Weather forecasts shall be documented and provided upon request by the Department.

2.2 Nesting Birds. To avoid impacts to nesting birds, both ground and canopy nesters, construction activities shall not take place during the active nesting season (approximately February 1 through August 31). If avoidance of the active nesting season is not feasible, construction activities may occur only if focused surveys for active bird nests are conducted. The survey shall be conducted within a minimum ¼ mile radius of project activities. The results of the nest survey shall be submitted to the Department before the start of work. The results of the survey shall include the following information: name of biologist(s) conducting surveys, dates of survey, total field time of survey efforts, and the type of species nesting. If no active nests are found during the survey, no further consultation is required.

If the survey identifies an active nest, the Permittee shall prepare and submit to the Department a Bird Management and Monitoring Plan (Plan) which includes survey results and establishes the necessary buffers to avoid take of a nest pursuant to FGC 3503 and 3503.5. The Plan design shall be based upon site conditions, project activities, and species present or likely to be present during all construction activities. The Department shall respond within ten (10) calendar days.

For active nests, a buffer or installation of appropriate barriers shall be established between the construction activities and the active nest so that nesting activities are not interrupted. The buffer shall be delineated and shall be in effect throughout construction or until the nest is no longer active. The buffer(s) shall be determined based upon the life history of the individual species, including their sensitivity to noise, vibration, ambient levels of human activity and

general disturbance, the current site conditions (screening vegetation, terrain, etc.) and the various project-related activities necessary to implement the project.

If a lapse in project-related work of fifteen (15) calendar days or longer occurs, another focused survey and consultation with the Department shall be required before project work can be reinitiated.

2.3 Onsite Designated Biologist. **At least thirty (30) days before initiating ground- or vegetation-disturbing activities**, Permittee shall submit to the Department in writing the name, qualifications, business address, and contact information for a biological monitor (Designated Biologist). Permittee shall obtain the Department's written approval of the Designated Biologist prior to the commencement of project activities. The Designated Biologist shall be knowledgeable and experienced in the biology and natural history of local fish and wildlife resources present at the project site. The Designated Biologist shall be present during all proposed work within Department jurisdictional areas during nesting season (February 1 through August 31) and while the osprey nest is active. The Designated Biologist is responsible for monitoring all project activities, including preparation, construction, restoration, and any ground- or vegetation-disturbing activities in areas subject to this Agreement.

2.4 On-site Biologist with Stopwork Authorization. Permittee shall have a qualified designated biologist on site daily as required in measure 2.3 to ensure that Agreement conditions are being met and minimize impacts to fish and wildlife habitat. The biologist shall be authorized to stop construction in coordination with the Resident Engineer if necessary to protect fish and wildlife resources. If any sensitive, State-listed, Species of Special Concern, rare, or threatened or endangered species, are found the biologist shall inform the Department. If there is a threat of harm to any sensitive species, including the nesting osprey, or other aquatic wildlife the biologist shall halt construction in coordination with the Resident Engineer and notify the Department (see Contact Information section below). Consultation with the Department is required before re-commencing work.

2.5 Environmentally Sensitive Areas (ESAs). No more than five (5) calendar days prior to the start of project activities, the Permittee shall establish ESAs in the project area to prevent encroachment of construction personnel and equipment into areas of any known sensitive resources within or near the work area will be flagged to ensure that no activities are conducted in those areas. All potential sensitive habitats and native trees that can be reasonably avoided during construction activities shall be identified as ESAs. All construction personnel shall avoid ESAs. The Permittee shall avoid ESAs when siting all staging areas, spoils disposal areas, borrow pits, and construction equipment access routes. The ESAs will be identified on all engineering plans or construction specifications. The Permittee shall inspect the flagging before the start of each work day and the Permittee shall maintain the flagging until the completion of the project.

2.6 Sediment Control. Precautions to minimize turbidity/siltation shall be taken into account during project planning and implementation. This may require the placement of silt fencing, coir logs, coir rolls, straw bale dikes, or other siltation barriers so that silt and/or other deleterious materials are not allowed to pass to downstream reaches. **Monofilament mesh, jute netting and non-biodegradable synthetic erosion blankets are not authorized.** Passage of sediment beyond the sediment barrier(s) is prohibited. If any sediment barrier fails to retain sediment, corrective measures shall be taken. The sediment barrier(s) shall be maintained in good operating condition throughout the construction period and the following rainy season. Maintenance includes, but is not limited to, removal of accumulated silt and/or replacement of damaged siltation barriers. The Permittee is responsible for the removal of non-biodegradable silt barriers (such as plastic silt fencing) after the disturbed areas have been stabilized. Upon the Department determination that turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation shall be halted until effective Department approved control devices are installed or abatement procedures are initiated.

2.7 Best Management Practices. Permittee shall actively implement best management practices (BMPs) to prevent erosion and the discharge of sediment in to streams and lakes during project activities. BMPs shall be monitored daily and repaired if necessary to ensure maximum erosion and sediment control. Only certified weed-free materials shall be used in BMP applications. Fiber rolls or erosion control mesh shall be made of loose-weave mesh that is not fused at the intersections of the weave, such as jute, or coconut (coir) fiber, or other products without welded weaves. Non-welded weaves reduce entanglement risks to wildlife by allowing animals to push through the weave, which expands when spread. **Products with plastic monofilament or cross joints in the netting that are bound/stitched (such as found in straw wattles/fiber rolls and some erosion control blankets) which may cause entrapment of wildlife, shall not be allowed.**

2.8 Pollution and Litter. Permittee shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws and it shall be the responsibility of Permittee to ensure compliance.

2.8.1 Permittee shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter a lake, streambed, or flowing stream or be placed in locations that may be subjected to high storm flows.

2.8.2 Spoil sites shall not be located within a lake, streambed, or flowing stream or locations that may be subjected to high storm flows, where spoil shall be washed back into a lake, streambed, or flowing stream where it will

impact streambed habitat and aquatic or riparian vegetation.

2.8.3 Raw cement/concrete or washings thereof, asphalt, paint, or other coating material, oil or other petroleum products, or any other substances which could be hazardous to fish and wildlife resources resulting from project related activities shall be prevented from contaminating the soil and/or entering the waters of the state. These materials, placed within or where they may enter a lake, streambed, or flowing stream by Permittee or any party working under contract or with the permission of Permittee, shall be removed immediately.

2.8.4 No broken concrete, cement, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or washings thereof, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the state. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 100 feet of the high water mark of any lake, streambed, or flowing stream.

2.8.5 No equipment maintenance or fueling shall be done within or near any lake, streambed, or flowing stream where petroleum products or other pollutants from the equipment may enter these areas under any flow. If it is not feasible to move equipment (i.e., big crane) for fueling or maintenance, permittee shall implement a plan that includes measures to prevent any pollutants from entering Hamilton Branch. The Department shall be notified immediately by the Permittee of any spills and shall be consulted regarding clean-up procedures

2.9 Operating Equipment and Vehicle Leaks. Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily to prevent leaks of materials that could be deleterious to aquatic and terrestrial life or riparian habitat.

2.10 Stationary Equipment Leaks. Stationary equipment such as motors, pumps, generators, and welders, located within or adjacent to the stream shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak.

2.11 Staging and Storage Areas. Staging and storage areas for equipment, materials, fuels, lubricants, and solvents shall be located more than fifty (50) feet from the stream channel and banks. All equipment and fuel stored on site shall be bermed to contain any spilled material and shall be protected from rain. Berms shall consist of plastic covered dirt or sand bags.

2.12 Leave Wildlife Unharmed. If any wildlife is encountered during the course of construction, said wildlife shall be allowed to leave the construction area unharmed. If any listed wildlife is encountered, the Permittee shall contact the Department immediately or proceed as described in the Incidental Take Permit for the project.

2.13 Stabilized Areas with Soil. Soils exposed by project operations shall be treated to prevent sediment run-off and transport. Erosion control measures shall include the proper installation of BMPs and may include applications of seed, certified weed free straw, compost, fiber, commercial fertilizer, stabilizing emulsion mulch, or combinations thereof. Following construction all disturbed upland areas shall be stabilized and re-seeded with an erosion control mix consisting of regionally appropriate, native grass and forb species. Revegetation of such sites shall be completed as soon as possible after project activities in those areas cease.

3. Compensatory Measures

3.1 Habitat Restoration/Creation. Permittee shall restore 0.19 acres of riparian habitat. This habitat restoration/creation shall occur on-site. The habitat restoration shall follow the Restoration stipulations and conditions listed in Condition 3.2 of this Agreement.

3.2 Restoration Plan. No later than 60 days prior to commencing construction activities, Permittee shall submit to the Department for review and approval a Restoration Plan for the on-site restoration of 0.19 acres of riparian habitat. At a minimum, the Restoration Plan shall include the following information: (a) a description of the existing physical conditions of the proposed creation or restoration site, including water resources and habitat types, and a map that identifies the location of the site; (b) a plan for the preparation of the creation or restoration site, including the removal of nonnative plant species, non-wetland/riparian plant species, and grading; (c) a local California native plant palette; (d) a planting plan, including monitoring and maintenance measures and a timeline; (e) an irrigation plan; (f) procedures to ensure that nonnative plants are not introduced or allowed to sustain within the creation or restoration site and a nonnative plant removal plan; and (g) success standards with contingency measures. Monitoring and maintenance of the creation or restoration site shall be conducted annually for a minimum of three years, or until the Department determines the mitigation site is successful.

4. Reporting Measures

Permittee shall meet each reporting requirement described below.

4.1 Notification of Project Initiation. The Permittee shall notify the Department two (2) working days prior to beginning work within any of the ephemeral streams.

Notification shall be submitted as instructed in Contact Information section below. Email notification is preferred.

4.2 Notification of Project Completion. Upon completion of the project activities described in this Agreement, the project activities within the watercourse work area shall be digitally photographed. Photographs shall be submitted to the Department **within fifteen (15) days of completion**. Photographs and project commencement notification shall be submitted as instructed in Contact Information section below. Email submittal is preferred.

4.3 Annual Monitoring. Permittee shall submit an annual monitoring report to the Department **for three (3) years** after completion of the construction project. The report shall discuss the mitigation performance as it relates to the success criteria as required by the Restoration Plan. The report shall include photos from designated photo stations and other relevant information including: a summary of invasive species control, methods used to remove non-native plants, and a list of wildlife observed on site.

CONTACT INFORMATION

Any communication that Permittee or the Department submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or the Department specifies by written notice to the other.

To Permittee:

California Department of Transportation
Deena Matagulay
1657 Riverside Drive
Redding, CA 96001
Phone: 530-225-2471
Email: Deena.Matagulay@dot.ca.gov

Contact Person:

Chelsea Tran-Wong
1657 Riverside Drive
Redding, CA 96001
Phone: 530-225-2471
Email: chelsea.tran-wong@dot.ca.gov

To The Department:

Department of Fish and Wildlife
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Attn: Lake and Streambed Alteration Program
Notification #: 1600-2014-0296-R2
Phone: 916-358-2885
Fax: 916-358-2912
Email: R2LSA@wildlife.ca.gov

LIABILITY

Permittee shall be solely liable for any violations of the Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that the Agreement authorizes.

This Agreement does not constitute the Department's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

SUSPENSION AND REVOCATION

The Department may suspend or revoke in its entirety the Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before the Department suspends or revokes the Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before the Department suspends or revokes the Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused the Department to issue the notice.

ENFORCEMENT

Nothing in the Agreement precludes the Department from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the Agreement limits or otherwise affects the Department 's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from obtaining any other permits or authorizations that might be

required under other federal, state, or local laws or regulations before beginning the project or an activity related to it.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 *et seq.* (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 5948 (obstruction of stream).

Nothing in the Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

The Department may amend the Agreement at any time during its term if the Department determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by the Department and Permittee. To request an amendment, Permittee shall submit to the Department a completed Department "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in the Department's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter the Department approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to the Department a completed Department "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in the Department's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with FGC section 1605(b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the Agreement's term. To request an extension, Permittee shall submit to the Department a completed

Department "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in the Department's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). The Department shall process the extension request in accordance with FGC 1605(b) through (e).

If Permittee fails to submit a request to extend the Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (FGC § 1605, subd. (f)).

EFFECTIVE DATE

The Agreement becomes effective on the date of the Department's signature, which shall be: 1) after Permittee's signature; 2) after the Department complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at https://www.wildlife.ca.gov/Conservation/CEQA/Fees.

TERM

This Agreement shall expire **December 31, 2017**, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605(a)(2) requires.

EXHIBITS

The documents listed below are included as exhibits to the Agreement and incorporated herein by reference.

A. Figure 1 – Project Location
   Figure 2 – Project Plans
   Figure 3 – Impact Area

AUTHORITY

If the person signing the Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

AUTHORIZATION

This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project the Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify the Department in accordance with FGC section 1602.

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

FOR PERMITTEE

Deena Matagulay — 10/28/15

Deena Matagulay
Project Manager

Date

FOR DEPARTMENT OF FISH AND WILDLIFE

11/3/15

Tina Bartlett
Regional Manager

Date

Prepared by: Juan Lopez Torres
Senior Environmental Scientist (Specialist)

Exhibit A
Figure 1 – Project Location

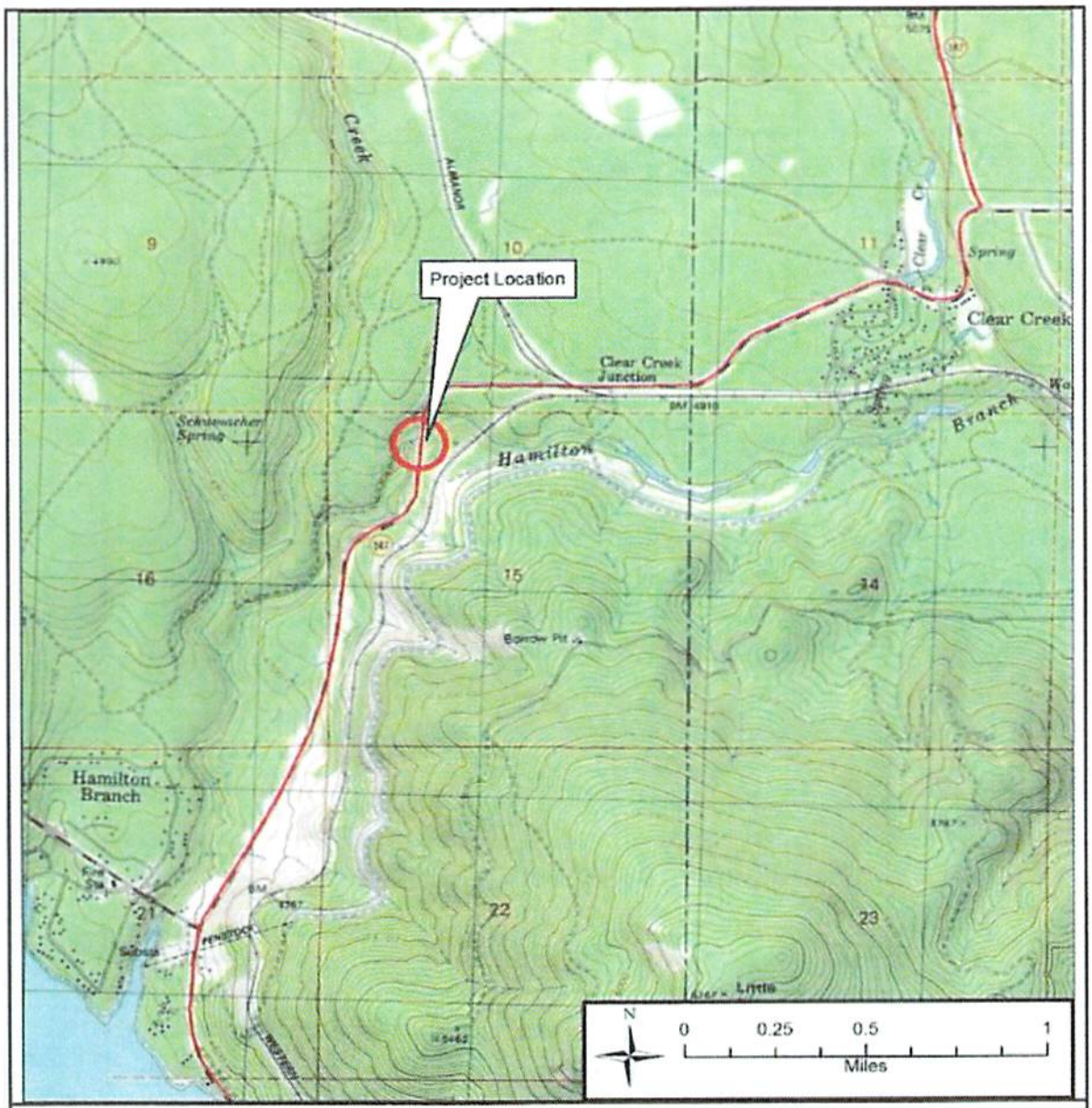


Figure 2 Project Location Map

Caltrans	State of California Department of Transportation	Hamilton Branch Bridge Replacement Project
	PLU-147-PM 8.9/9.3 02-4E640	

Figure 2 – Project Plans

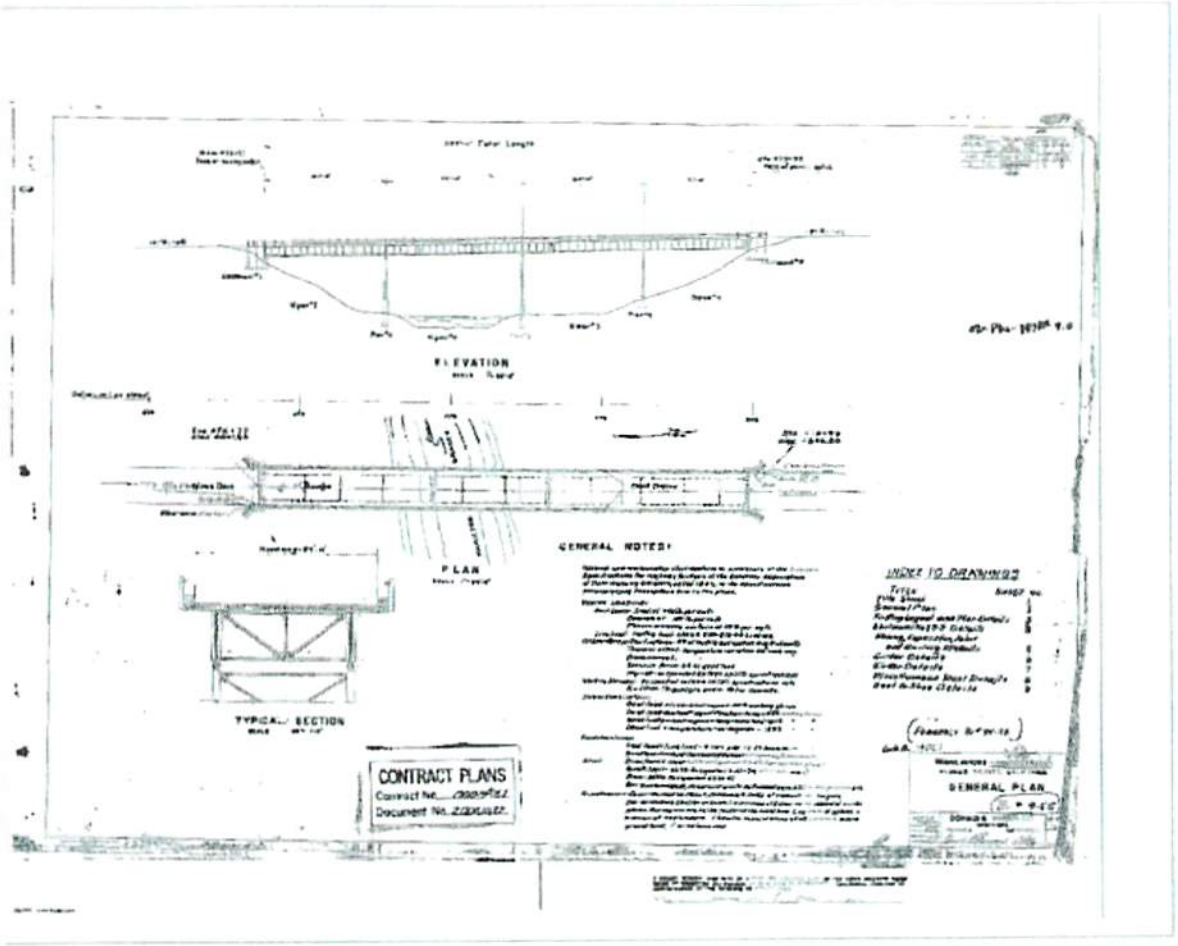


Figure 3 General Plan Existing Bridge

Caltrans	State of California Department of Transportation	Hamilton Branch Bridge Replacement Project
	PLU-147-PM 8.9/9.3 02-4E640	

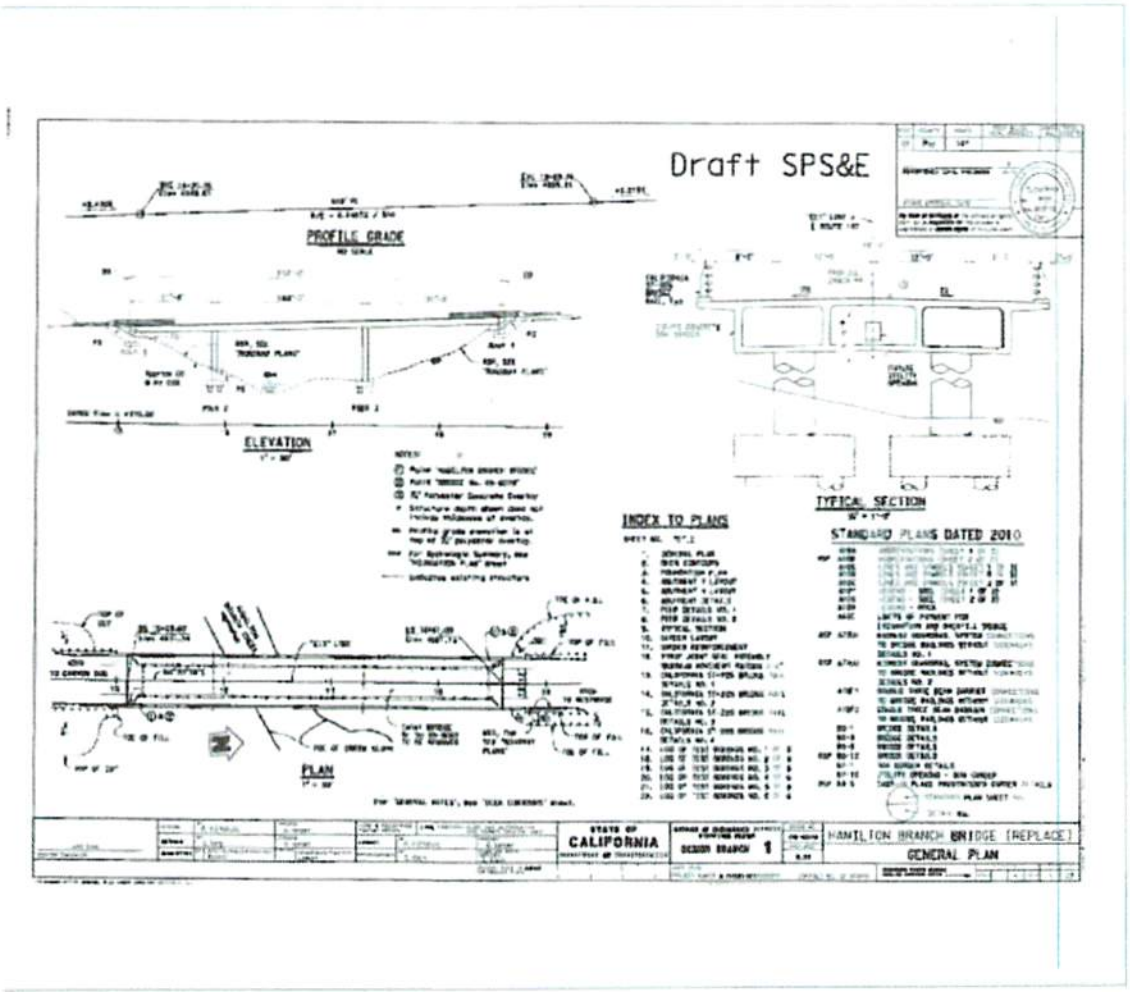
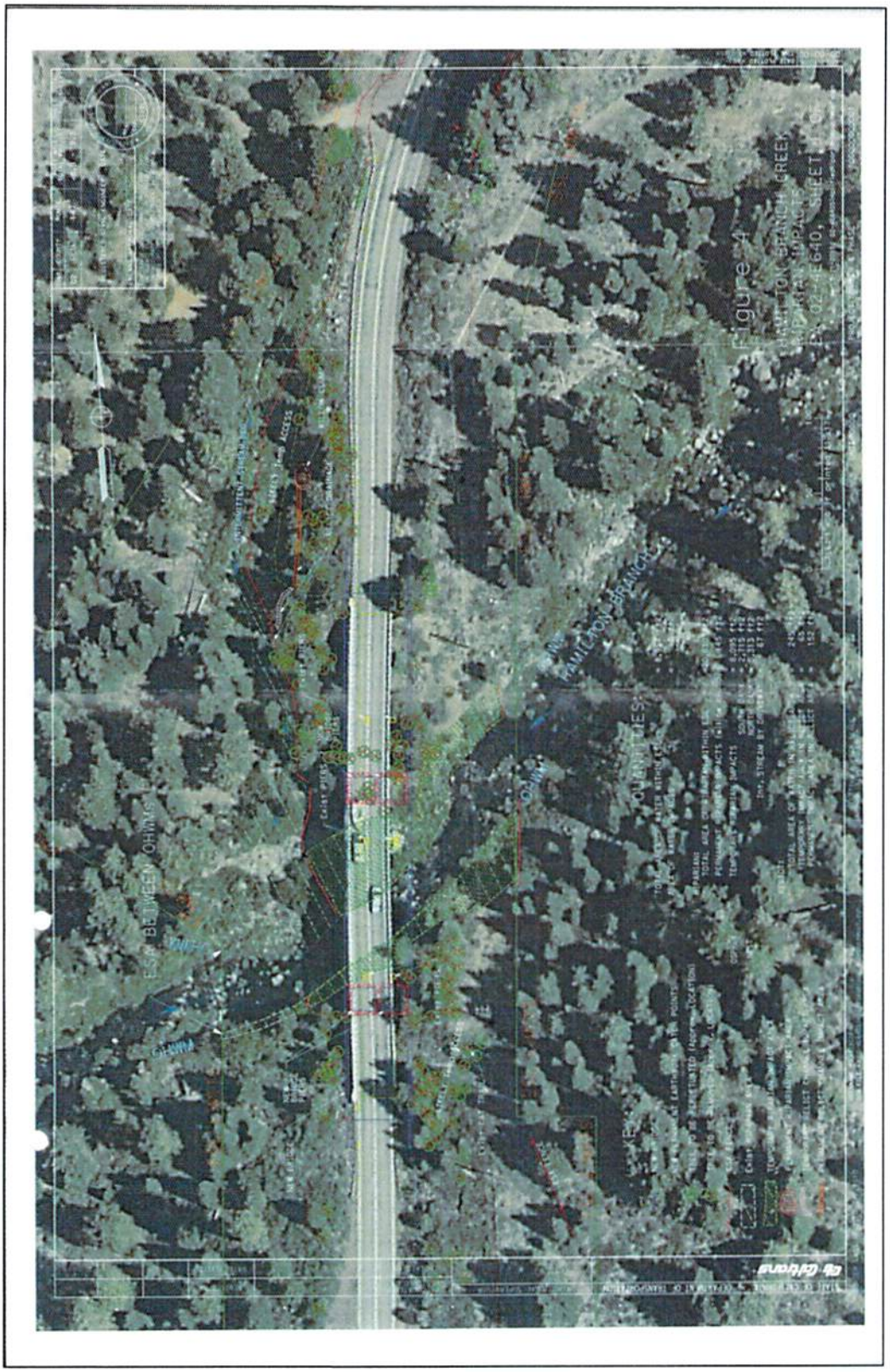


Figure 4 General Plan Proposed Bridge

Caltrans	State of California Department of Transportation	Hamilton Branch Bridge Replacement Project
	PLU-147-PM 8.9/9.3 02-4E640	

Figure 3 – Impact Area



Water Source Information Dated November 10, 2015

Contract 02-4E6401
Plu-147-8.9/9.3
November 10, 2015

Potential sources for non-potable water:

City of Susanville
66 North Lassen Street
Susanville, CA 96130
(530) 257-1000
info@cityofsusanville.org

Greenville
Indian Valley Community Services District
127 Crescent St. #1
Greenville, CA 95947
(530) 284-7224
http://www.indianvalleycsd.com/home.htm

Crescent Mills
Indian Valley Community Services District
127 Crescent St. #1
Greenville, CA 95947
(530) 284-7224
http://www.indianvalleycsd.com/home.htm

Sierra Pacific Industries
3950 Carson Road
Camino, CA 95709
(530) 644-2311
http://www.spi-ind.com/

Quincy
Quincy Community Services District
900 Spanish Creek Road
Quincy, CA 95971
(530) 283-0836
http://www.quincycsd.com/

Location for Stockpile of Caltrans Roadway Grindings Dated November 10, 2015

November 10, 2015

INFORMATIONAL HANDOUT

FOR A CONSTRUCTION CONTRACT
ON STATE ROUTE 147

(In Plumas County about 9 miles north of Canyon Dam at
Hamilton Branch Bridge)

The

Plumas 147 Hamilton Branch Bridge Replacement Project

PLU-147-PM 8.9/9.3

For

Location for Stockpile of Caltrans Roadway Grindings

A roadside pull-out located at: PLU-036-PM 15.2 (WB)

Note: The records from this compilation may be inspected in the District Office at 1657 Riverside Drive Redding, CA 96001 or Contact the Roadside Maintenance Chief: (530) 225-2482.

Facts stated herein are as known to the State of California, Caltrans, and are to be verified by the Contractor as per Section 2 “Bidding” of the 2010 Standard Specifications.

Table of Contents

General Information 2
Map: Project Location and Stockpile Site 3
Aerial: Project Location and Stockpile Site 4

General Information

The stockpile location is provided by Caltrans for use for the permanent stockpile of processed roadway material (a pulverized asphalt-concrete and sub-grade mixture) generated from the Hamilton Branch Roadway Bridge Replacement Project. The material can be deposited at an existing roadside pull-out on State Route 36 at PM 15.2 within Plumas County. The site is approximately 6.7 miles from the south end of the project via County Road A-13 and 5.8 miles from the north end of the project via the Community of Clear Creek.

This pull-out may be used by Caltrans Maintenance, other contractors, or the traveling public without exclusive use to anyone. Use of this site must be coordinated with the Caltrans Chester Maintenance Supervisor Adam Jansen who shall be contacted at least 1 week prior to the beginning of construction activities at (530) 258-2681.

Material placement and requirements for this disposal site:

- Processed material stockpiled in the pull-out can be left in piles as directed by the Chester Maintenance Supervisor; estimated quantity is 100 cubic yards.
- Any slash or man-made materials must be disposed at a landfill.
- Material may not be placed closer than 20 feet from the edge of pavement.
- Materials are to be placed within the site limits in an organized and safe manner, with no risk of instability to embankments, and shall be compacted in accordance with Section 19 of the 2010 Standard Specifications.
- The contractor bears all liability for damage to haul vehicles, any facility, or any equipment damaged by the contractor's use of the site. The State assumes no liability for damage to contractor's equipment.
- Construction Storm Water Best Management Practices shall apply to this site. This site must be included in the contractor's Storm Water Pollution Control Program. No additional compensation shall be made for placement of the erosion control measures at this location.
- Section 19 of the 2010 Standard Specifications will apply to all stockpile of grinding material from this project, including any material delivered to this site.
- Disposal or reuse of savaged materials will be in accordance with Section 14 and Section 15 of the 2010 Standard Specifications.

Location Map

Project Area & Grinding Stockpile Site

Site Plan Aerial

Stockpile Pull-out
PLU 36 - 15.2

Revised Foundation Report Dated January 22, 2015

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

M e m o r a n d u m

Serious Drought!
Help Save Water!

To: JEFF SIMS
CHIEF
BRIDGE DESIGN BRANCH 1
STRUCTURES DESIGN
DIVISION OF ENGINEERING SERVICES

Date: January 22, 2015

File: 02-PLU-147- PM 8.98
Hamilton Branch Bridge
(Replace)
Br. No. 09-0079 (new)
Br. No. 09-0065 (old)
EA 02-4E6401
EFIS: 0212000011

Attn: Pibulporn Vijitakula

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
Geotechnical Services – MS 5
Office of Geotechnical Design – North

Subject: **REVISED FOUNDATION REPORT FOR HAMILTON BRANCH BRIDGE (REPLACE)**

INTRODUCTION

Per your request dated July 7, 2014, the Office of Geotechnical Design North (OGDN) has prepared this Foundation Report (FR) for the replacement of the existing Hamilton Branch Bridge (Br. No. 09-0065) located on Route 147 at PM 8.98, in Plumas County, California (see Vicinity Map, Plate No. 1). This report supercedes the Foundation Report dated August 5, 2014.

SCOPE OF WORK

The content of this FR is intended to provide foundation information for the replacement of the existing Hamilton Branch Bridge. The scope of our work included performing a literature and historical review in an effort to obtain geotechnical and geological data pertaining to the subject site that could provide insight into the design and construction of the proposed bridge replacement. Our review included searching Caltrans intranet for available As Built and geotechnical report records from the Bridge Inspection Records Information System (BIRIS) and the Digital Archive of Geotechnical Data (GeoDOG) databases. A search of the internet and other available records for published geologic literature was also performed. A subsurface exploration program was performed in August 2013 as described in summary in the "Subsurface Investigation and Testing Program" section; the findings of the investigation are discussed in the "Subsurface Conditions" section. The elevations utilized to complete this FR were based on the NAVD88 vertical datum and the NAD83 horizontal datum in reference to the specified elevations unless otherwise noted.

PROJECT DESCRIPTION

According to the project files, the existing bridge was built in 1948 and was originally a county bridge. A Bridge Inspection Report (BIR) dated June 14, 2011 (Reference No. 15) states the bridge was built as a "four continuous (hinge in Span 3) non-composite riveted steel plate girder (2) spans with a reinforced concrete (RC) deck on RC pedestal seat abutments and steel column bents on RC pedestals, all founded on spread footings." The bridge extends approximately 322 feet in length and has an approximate width of 26.5 feet.

The General Plan sheet, dated June 18, 2014 (Reference No. 20) provided with the FR request proposes to replace the existing bridge (Br. No. 09-0065) using the same alignment. The new Hamilton Branch Bridge (Br. No. 09-0079) will be approximately 350 feet in length, approximately 44 feet in width, and will consist of a three-span cast-in-place/prestressed concrete box girder supported on two-column piers.

SUBSURFACE INVESTIGATION AND IN SITU TESTING PROGRAM

The OGDN conducted a subsurface investigation in August 2013. The subsurface investigation program consisted of placing a total of five mud rotary borings. Borings RC-13-001 thru RC-13-003 were drilled through the existing bridge deck due to limited access. A maximum depth below ground surface (BGS) of approximately 118 feet was achieved. The mud rotary borings were advanced using a self-casing wireline coring method. Sampling recovery of the subsurface materials was achieved by utilizing the Standard Penetration Test (SPT) sampler and "punch" core sampling in soil materials, and diamond coring in rock materials. Punch core and diamond coring samples were placed in core boxes and transported to the Caltrans Transportation Laboratory in Sacramento for storage. Photographs of the collected cores in core boxes are attached to this report as a courtesy (see Appendix A); viewing of the attached core photographs should not be substituted for core viewing as addressed in the 2010 Caltrans Standard Specifications Section 2-1.06B "Supplemental Project Information". A summary of information regarding the extent of borings drilled during the subsurface investigation program is provided in Table No. 1. The provided hammer efficiencies were obtained from the April 2013 "Standard Penetration Test (SPT) Hammer Efficiencies for Caltrans Drill Rigs" provided by the Caltrans Foundation Testing Branch (Reference No. 19); the hammer efficiencies are reported to be determined in general conformance with ASTM D4633 "Standard Test Method for Energy Measurement for Dynamic Penetrometers".

Table No. 1- Summary of the 2013 Subsurface Investigation for the Proposed Hamilton Branch Bridge (Br. No. 09-0079) Replacement Project

Boring No.	Completion Date	Drill Rig Type	Hammer Type	Hammer Efficiency (%)	Top of Boring Elevation (ft)	Depth Below Ground Surface, *Depth below Bridge Deck (ft)
RC-13-001	8/22/13	Acker	Auto	71	4853.8	113.7 *148.0
RC-13-002	8/21/13	CS2000	Auto	86	4857.1	110.2 *160.0
RC-13-003	8/24/13	CS2000	Auto	86	4859.1	118.0 *151.5
RC-13-004	8/23/13	Acker	Auto	71	4851.4	100.0
RC-13-005	8/26/13	Acker	Auto	71	4861.0	100.0

LABORATORY TESTING

Laboratory testing was performed on selected samples of the subsurface materials obtained from the 2013 subsurface investigation. Tests were performed to determine the corrosion and engineering properties of the subsurface materials. The corrosion test results for the soil samples are in the "Corrosion Evaluation" section of this report. Other laboratory tests of soil samples included direct shear, specific gravity, particle size analysis, Atterberg Limits, unit weight and moisture contents. Laboratory tests performed on rock samples include unconfined compressive strength tests and specific gravity determination. As a general guide, an effort was made for selection of specimens for rock compressive strength testing to generate a random testing frequency with the intent of providing a general representation of the subsurface conditions. It should be noted that upon reviewing the photos and the stress strain curves associated with the unconfined compressive strength testing of the rock, it appears vesicles observed in the rock cores specimens could be influencing the strength test results. The results of laboratory testing are presented in Appendix B, attached.

SITE GEOLOGY AND SUBSURFACE CONDITIONS

Regional Geology

The subject site is located on the southerly boundary of Cascade Range Geomorphic Province and the northerly boundary of the Sierra Nevada Geomorphic Province, with the Basin and Range Geomorphic Province bounding nearby to the east. According to the United States Geologic Survey (USGS) Scientific Investigation Map 2899 (Reference No. 12) the southernmost Cascade Range consists of a regional platform of basalt and basaltic andesite, with subordinate andesite and sparse dacite. Nested within these regional rocks are "volcanic centers", defined as large, long-lived, composite, calc-alkaline edifices erupting the full range of compositions from basalt to rhyolite, but dominated by andesite and dacite. Collectively,

volcanic centers mark the axis of the southernmost Cascade Range. Locally, the primary volcanic center is Lassen Peak (located about 25 miles northwesterly of the site, see Plate No. 3) which had a series of eruptions as recently as 1915. Regional volcanism built a broad platform that covers the southernmost Cascade Range. Two distinct parental magmas and their derivatives contribute to the suite of regional lavas in the Lassen area: calc-alkaline basalt and tholeiitic basalt. Calc-alkaline basalts are related to Cascade Arc magmatism and dominate the regional suite in both volume and abundance. Tholeiitic basalt is a volumetrically minor but widespread component of the regional volcanism and is related to the Basin and Range geologic province. Near the project site, the extensional Basin and Range Province is expanding westward into the Cascade Range, and the active Hat Creek and Lake Almanor Grabens are the westernmost major Basin and Range structures in the area.

The Sierra Nevada range is primarily comprises of Cretaceous granitic features, remnants of Paleozoic and Mesozoic metavolcanic and metasedimentary rocks, and Cenozoic volcanic and sedimentary rocks. The Paleozoic and Mesozoic metavolcanic and metasedimentary rocks were intruded by the granitic features approximately 77 to 225 million years ago, resulting in the local uplift and deformation of the overlying older rock.

Site Geology

Based on the review of the "Geologic Map of California: Westwood Sheet" (see Plate No. 2a), the site is generally mapped as Pleistocene Volcanic Rocks, Basalt (Qpv^b). An unpublished 2007 USGS "Geologic Map of the Westwood West, CA 7.5' QUAD" (Reference No. 10) indicates the site to be underlain by "tholeiitic basalt of Westwood". According to the 2010 USGS Scientific Investigation Map 2899 (Reference No. 12), lava flows of tholeiitic basalts, like the Westwood basalt, form widespread sheets that have a characteristic surface morphology. The upper and lower surfaces of flow units contain abundant spherical vesicles, and have a characteristic joint pattern of crudely hexagonal blocks. Flow-unit interiors are generally holocrystalline and diktytaxitic and are massive with a widely spaced blocky joint pattern. The upper surfaces have little relief and within about 400,000 to 500,000 years, the tholeiitic basalt flows in the Lassen area become flat surfaces with thick soil.

According to USGS Bulletin 1957 (Reference No. 6), locally, Paleozoic and Mesozoic metavolcanic and metasedimentary rocks are located on Keddie Ridge to the southeast of the site; these rocks are volcanic arc rocks and rocks of the Shoo Fly complex of the Northern Sierra terrane. Specifically, the Taylor Formation (andesitic flows, tuff breccias and tuff) and the Peale Formation (green and gray tuffaceous siltstone and sandstone) are indentified to be present.

During site visits, alluvium consisting of sand, cobbles and boulders (up to 5 feet in dimension) were also visible throughout the channel of the river overlying the basalt. Rock slope protection (RSP) (up to 8 feet in dimension) exists in and on the banks of the river channel and appears to be utilized as armor protection for the existing Abutment 1, Pier 2 and Pier 3.

Subsurface Conditions

During the 2013 subsurface investigation, five borings (RC-13-001 through RC-13-005) were drilled in the existing northbound lane of Route 147. Borings RC-13-001 through RC-13-003 were drilled through the existing bridge deck and Borings RC-13-004 and RC-13-005 were drilled adjacent southerly and northerly of the existing bridge, respectively. A generalized summary describing the materials that were encountered at each boring location is presented below.

Borings RC-13-004 and RC-13-005 encountered approximately 1.3 and 1.7 feet of asphalt concrete and roadbase overlying approximately 15.0 feet of medium dense and dense sand with some very loose layers of clayey gravel with sand and basalt cobbles. Underlying this material is 78 and 86 feet of igneous rock (basalt) encountered in borings RC-13-004 and RC-13-005, respectively, to the bottom of the boring around 100 feet BGS.

Boring RC-13-001 encountered approximately 10 feet of clayey gravel with sand materials overlying roughly 102 feet of igneous rock (basalt); the basalt extended to the depth of exploration of around 114 BGS.

Boring RC-13-002 encountered approximately 63 feet of igneous rock (basalt). Portions of the basalt was noted to be decomposed to a clayey gravel with sand; based on recoveries, the encountered decomposed portions were estimated to be as thick as 5 feet. Fractures within the basalt were noted to sometimes be filled with clay. Underlying the basalt is approximately 10 feet of soft to hard sandy lean clay, fat clay and sandy fat clay with metavolcanic boulders and cobbles, overlying roughly 20 feet of silty sand and silty gravel with sand. These clay, sand and gravel soil materials are underlain by metamorphic rock (metavolcanics) extending to the depth of exploration of around 110 BGS.

Boring RC-13-003 encountered approximately 100 feet of igneous rock (basalt) with fractures observed to be sometimes filled with clay; similarly to boring RC-13-002, portions up to 5 feet in length of the basalt were noted to be decomposed to a soil (silty sand and poorly graded gravel with sand). Underlying the basalt, approximately 16 feet of hard fat clay (with a metavolcanic boulder), sandy fat clay with gravel, and very dense silty sand was encountered to the depth of exploration of around 113 BGS.

In summary, based on the soil materials encountered underlying the igneous rock (basalt), the basalt formation appears to be "capping" what is likely older alluvium or lacustrine soil deposits (often termed a "caprock" condition). Underlying the alluvium or lacustrine deposits is likely "basement" rocks consisting of metavolcanics. The basalt rock mass varies from blocky to highly fractured were typically noted to be vesicular. The contact surface between the basalt and the underlying soil is expected to be irregular. For a more detailed description of the subsurface conditions, please refer to the LOTBs that will be in the Contract plans.

Groundwater

During the 2013 subsurface investigation, groundwater was measured in Boring RC-13-002 at an approximate elevation of 4800 feet. Boring RC-13-002 was located in an active traffic lane and a mud rotary drilling method was used; therefore, the drill mud may have influenced the measured groundwater surface elevation. According to the "Final Hydraulic Report: for Hamilton Branch Creek" (Reference No. 21), the 100-year base flood water surface elevation of the Hamilton Branch Creek is 4803.4 feet. The water level in the Hamilton Branch Creek should be considered for both design and construction as it will influence local groundwater levels.

SCOUR EVALUATION

The "Final Hydraulic Report: for Hamilton Branch Creek" (Reference No. 21) states that "Structure Hydraulics does not have any scour concerns with the proposed structure. It appears that both Pier 2 and 3 are outside of the 100-year base flood water surface elevation. In addition, the footings will be placed below the existing ground elevation and are supported on pile extensions."

FAULTING/GEOLOGIC HAZARDS

The project site is located within an area with a series of "active" (late-Quaternary in age/movement in the past 700,000 years) north-northeast trending faults that include the Almanor Fault Zone (USGS Fault No. 21; California Geologic Survey, CGS Fault No. 56). Based on a review of available geologic and fault data, the nearest fault (active or inactive) to the site is the late-Quaternary Walker Spring fault (see Plate Nos. 2a and 3) with a ground surface projection located as close as approximately 9,000 feet (1.7 miles) easterly from the site (according to Google Earth USGS KML files).

According to Memo To Designers 20-10, fault rupture analyses will be performed for bridges where any portion of the structure falls within an Alquist-Priolo Earthquake Fault Zone (EFZ) or where any portion of a structure falls within 1,000 ft of an "unzoned" fault (not in an EFZ) that is Holocene or younger in age (ruptured in last 11,700 years). According to the EFZ maps (Reference No. 14), the proposed bridge structure is not located in an EFZ. The nearest unzoned Holocene fault is the Indian Valley fault (CGS Fault No. 66) located 12.2 miles southerly of the project site (see Plate No. 3). Therefore, a fault rupture analyses does not appear necessary.

Based on the conditions encountered in the site subsurface exploration, the potential for soil liquefaction does not exist for the subsurface materials anticipated to support the proposed bridge.

SEISMICITY/SEISMIC DESIGN RECOMMENDATIONS

On May 23, 2013, a magnitude 5.7 earthquake struck to the south of Lake Almanor and is reported to be the strongest earthquake within the region in the last roughly 60 years. The epicenter of the 2013 earthquake was about approximately 7 miles southerly of the project site (see Plate No. 3). Based on recent research, the causative fault of the May 2013 earthquake has yet to be determined.

Based on the Caltrans ARS Online Tool (Version 2.3.06), the nearest active fault for the site is the "Walker Spring 2011 CFM" fault (Caltrans Fault ID No. 47) with a MMax of 6.5. The fault is located east of the bridge site (see Plate No. 2a). The ARS Online Tool indicates that the Walker Spring 2011 CFM if the controlling fault and the closest distance to the fault rupture plane is estimated to be 1.7 miles from the bridge site.

Based on the 2013 subsurface investigation, a V_{S30} (the weighted average shear wave velocity for the top 100 feet of foundation materials) of 1850 feet per second is considered to be applicable to the anticipated foundation materials.

Based on the "Methodology for Developing Design Response Spectrum for Use in Seismic Design Recommendations, November 2012", (Reference No. 17) the design ground motion is the highest spectral acceleration as obtained by any of, or a combination of, the following three methods for the Hamilton Branch Bridge.

1) Statewide minimum deterministic spectrum requirements with MMax of 6.5, vertical strike-slip event with a rupture distance of 7.5 miles.
2) The nearest active controlling fault as shown on the ARS Online Tool (Version 2.3.06).
3) The USGS 5% Probability of Exceedance in 50 years (975 years return period).

Based on the V_{S30}, the Acceleration Response Spectrum (ARS) for the Hamilton Branch Bridge site is based on method 2 as stated above. The peak ground acceleration is estimated to be 0.37g as shown on the attached ARS curve (see Plate No. 4).

CORROSION EVALUATION

Composite soil samples were collected from Borings RC-13-001, RC-13-003 through RC-13-005 during the 2013 subsurface investigation. The Materials Engineering and Testing Services, Corrosion and Structural Concrete Field Investigation Branch tested the composite samples for corrosive potential. The Corrosion and Structural Concrete Field Investigation Branch considers a site to be corrosive if one or more of the following conditions exist for the representative soil samples: pH is 5.5 or less, chloride concentration is 500 ppm or greater, sulfate concentration is 2000 ppm or greater. The minimum resistivity serves as an indicator for the possible presence of soluble salts and is not used to define a site as being corrosive. It is the practice of the Corrosion Technology Branch that if the minimum resistivity of the sample is greater than 1000 ohm-cm, the sample is considered to be non-corrosive and testing to determine the sulfate and chloride content is not performed.

The results of the laboratory tests (see Appendix B) determined that the composite samples were considered to be non-corrosive. Refer to Table No. 2 for a summary of the test results.

Table No. 2 - Corrosion Test Summary of the Composite Samples for the Hamilton Branch Replacement Bridge (Br. No. 09-0079)

Corrosion Lab Number	TL101 Number	Boring Number	Sample Depth (ft)	pH	Minimum Resistivity (ohm-cm)	Chloride Content (ppm)	Sulfate Content (ppm)
CR20130426	C701653	RC-13-001	38.0-47.0	6.20	4664	N/A	N/A
CR20130427	C701654	RC-13-003	41.9-43.0	6.58	5244	N/A	N/A
CR20130428	C701655	RC-13-004	22.0-23.0	6.72	2310	N/A	N/A
CR20130429	C701656	RC-13-005	32.0-36.5	6.81	5220	N/A	N/A

AS-BUILT FOUNDATION DATA

As shown on the As-Built General Plan (1946), the existing bridge is supported on spread footings at all support locations with the following notations for foundation loads: (1)"dead load plus live load" equaling a maximum of 4 tsf and (2)"dead load plus live load plus horizontal load" equaling a maximum of 6 tsf. The bottom of footing elevations provided below in Table No. 3 were included on the Footing and Layout and Pier Details (1946) and the Abutments No. 1 Details (1946).

Table No. 3 – As-Built Foundation Data

Support Location	Bottom of Footing Elevation (ft)	
	based on the NAVD 88	based on the NGVD 1929
Abutment 1 & Wingwall	4836.2	4832.8
Pier 2	4801.4	4798.0
Pier 3	4801.4	4798.0
Pier 4	4811.4	4808.0
Abutment 5 & Wingwall	4843.1	4839.7

FOUNDATION RECOMMENDATIONS

According to the Draft General Plan sheet (dated May 16, 2014), the proposed Hamilton Branch Bridge (replacement) will be replaced using the same alignment. Spread footings were selected as the foundation type for support of Abutments, and 36-inch Cast-In-Drilled-Hole (CIDH) piles were selected to support the piers. Accordingly, foundation recommendations are provided below for these foundation types.

Abutments 1 and 4

Based on the subsurface investigation, the Abutment 1 proposed bottom of footing (BOF) elevation is located in the fill materials consisting of very loose and dense clayey gravel with sand and basalt cobbles, and underlain by decomposed basalt rock consisting of medium dense clayey gravel with sand. The Abutment 4 proposed BOF elevation is located within the basalt rock with layers of dense clayey gravel with sand; the basalt at this location is overlain by loose and medium dense fill consisting of clayey gravel with sand and cobbles. The top of the basalt rock elevation is anticipated to vary significantly within the footprint of the proposed Abutment 1 and 4 footprints; therefore, in an effort to avoid loose materials below the BOF, OGDN recommends a footing inspection as discussed in the construction considerations below.

Spread footings are recommended for foundational support at Abutment 1 and 4 locations. Table No. 4 provides the General Foundation Design Data provided by Structure Design. Tables Nos. 5 and 6 are the summary of the controlling loads provided by Structure Design. Table No. 7 provides the foundation design recommendations and Table No. 8 provides the Data Table for the spread footings which are based on the assumption that acceptable foundation support materials are verified in the field.

Table No. 4 – General Foundation Design Data

Foundation Data								
Support Location	**Design Method**	**Foundation Type**	**Approx. Finished Grade Elevation (ft)**	**Bottom of Footing Elevation (ft)**	**Footing/Pile Cap Size (ft)**		**Permissible Settlement Under Service Load (in)**	**Number of Piles per Support**
					B	**L**		
Abut 1	LRFD	Spread Footing	4842.0	4834.5	14.0	46.0	1	N/A
Pier 2	LRFD	36” CIDH	4816.8	4802.0	15.0	15.0	N/A	8
Pier 3	LRFD	36” CIDH	4810.0	4802.0	15.0	15.0	N/A	8
Abut 4	LRFD	Spread Footing	4851.0	4844.0	14.0	48.7	1	N/A

Table No. 5 – Shallow Foundation Load Data
(LRFD Service-I Limit State Loads for Controlling Load Combinations[1])

Support Location	Total Load					Permanent Load				
	P_{Total} (kips) Net	M_X (kip-ft)	M_Y (kip-ft)	V_X (kips)	V_Y (kips)	P_{Perm} (kips) Net	M_X (kip-ft)	M_Y (kip-ft)	V_X (kips)	V_Y (kips)
Abut 1	550	1420	N/A	N/A	120	190	455	N/A	N/A	185
Abut 4	895	1700	N/A	N/A	335	465	290	N/A	N/A	190

Table No. 6 – Shallow Foundation Load Data
(LRFD Strength, Construction and Extreme Event Loads for Controlling Load Combinations[1])

Support Location	Strength/Construction Limit State (Controlling Group)					Extreme Event Limit State (Controlling Group)				
	P_{Total} (kips) Gross	M_X (kip-ft)	M_Y (kip-ft)	V_X (kips)	V_Y (kips)	P_{Total} (kips) Gross	M_X (kip-ft)	M_Y (kip-ft)	V_X (kips)	V_Y (kips)
Abut 1	2565	3010	N/A	N/A	20	N/A	N/A	N/A	N/A	N/A
Abut 4	3370	3295	N/A	N/A	115	N/A	N/A	N/A	N/A	N/A

Table No. 7 - Foundation Design Recommendations for Spread Footings

Support Location	Footing Size (ft)		Bottom of Footing Elevation (ft)	Minimum Footing Embedment Depth (ft)	Total Permissible Support Settlement (inches)	Service Limit State	Strength or Construction Limit State $\Phi_b = 0.45$	Extreme Event Limit State $\Phi_b = 1.00$
	L	B				Permissible Net Contact Stress[2] (ksf)	Factored Gross Nominal Bearing Resistance[3] (ksf)	Factored Gross Nominal Bearing Resistance[3] (ksf)
Abut 1	46.0	14.0	4834.5	4.0	1.0	4.0	9.0	N/A
Abut 4	48.7	14.0	4844.0	4.0	1.0	4.0	9.0	N/A

Notes:
1. Controlling load combination is the one resulting in the highest ratio of $q_{g,u}/q_R$ for foundations on soil, or $q_{g,max}/q_R$ for foundations on rock.
2. For Service-I Limit State, controlling load combination is the one resulting in the highest ratio of $q_{n,u}/q_{pn}$ for foundations on soil, or $q_{g,max}/q_R$ for foundations on rock. Permissible Net Contact Stresses were calculated for controlling load combinations.
3. For Strength, Construction, and Extreme Event Limit State, controlling load combination is the one resulting in the highest ration of $q_{g,u}/q_R$ for foundations on soil, or $q_{g,max}/q_R$ for foundations on rock, Factored Gross Nominal Bearing Resistances were calculated for controlling load combinations.

Table No. 8 - Spread Footing Data Table

Support Location	Service[2] Permissible Net Contact Stress (Settlement) (ksf)	Strength/Construction[3] Factored Gross Nominal Bearing Resistance $\Phi_b = 0.45$ (ksf)	Extreme Event[3] Factored Gross Nominal Bearing Resistance $\Phi_b = 1.00$ (ksf)
Abut 1	4.0	9.0	N/A
Abut 4	4.0	9.0	N/A

Notes:
1. Controlling load combination is the one resulting in the highest ratio of $q_{g,u}/q_R$ for foundations on soil, or $q_{g,max}/q_R$ for foundations on rock.
2. Controlling load combination for Service Limit State is the one resulting in the highest ratio of $q_{n,u}/q_{pn}$ for foundations on soil, or $q_{g,max}/q_R$ for foundations on rock.
3. Controlling load combination For Strength, Construction, and Extreme Event Limit State is the one resulting in the highest ratio of $q_{g,u}/q_R$ for foundations on soil, or $q_{g,max}/q_R$ for foundations on rock.

The recommended Service Limit, Permissible Net Contact Stress and Strength/Construction Limit State, Factored Gross Nominal Bearing Resistance are based on the following design criteria:

1) The spread footing will have an effective width that will produce an equivalent uniform vertical stress, which does not exceed the values of the Service Limit, Permissible Net Contact Stress and the Strength/Construction Limit State, Factored Gross Nominal Bearing Resistance.

2) The spread footing is to be constructed at or below the bottom of footing elevation and have the minimum footing embedment depth shown in Table No. 7.

Piers 2 and 3

The following foundation recommendations are provided for pile cap supported piers utilizing 36-inch CIDH piles. The recommended pile tip elevations for the piers are based on the cut-off elevations and factored loads provided with the FR request from the Office of Bridge Design North, Branch 1 per Memo To Designers 3-1 (June 2014). The calculated geotechnical resistance of all CIDH piles is based on side resistance only. At the pier locations, one pile diameter of skin friction was excluded at the top and bottom of the pile. Table No. 4 provides the General Foundation Design Data provided by Structure Design. Table No. 9 provides the foundation recommendations for Piers 2 and 3 and Table No. 10 provides the Pile Data Table for Piers 2 and 3.

Table No. 9 - Pile Foundation Recommendations for Piers 2 and 3.

Support Location	Pile Type	Cut-off Elevation (ft)	Service-1 Limit State Load (kips) per Support		Total Permissible Support Settlement (inches)	Required Factored Nominal Resistance (kips)				Design Tip Elevations (ft)	Specified Tip Elevation (ft)
						Strength/Construction		Extreme Event			
			Total	Permanent		Comp. (φ = 0.7)	Tension (φ = 0.7)	Comp. (φ = 1.0)	Tension (φ = 1.0)		
Pier 2	36-inch CIDH	4802.25	3800	2300	1	715	0	440	0	4762.0 (a-1) 4784.5 (a-II)	4762.0
Pier 3	36-inch CIDH	4802.25	3960	2800	1	730	0	445	0	4762.0 (a-1) 4784.5 (a-II)	4762.0

Notes:

1. Design tip elevations are controlled by: (a-I) Compression (Strength Limit), (b-I) Tension (Strength Limit), (a-II) Compression (Extreme Event), and (b-II) Tension (Extreme Event), (c) Settlement, and (d) Lateral Load.
2. The specified tip elevation shall not be raised above the design tip elevations.
3. Design tip elevation for Lateral Load is provided by SD.
4. There is no Design Tip Elevation for settlement because the piles are embedded in rock.

Table No. 10 - Pile Data Table for Piers 2 and 3

Location	Pile Type	Nominal Resistance (kips)		Design Tip Elevation (ft)	Specified Tip Elevation (ft)
		Compression	Tension		
Pier 2	36-inch CIDH	1030	0	4762.0 (a)	4762.0
Pier 3	36-inch CIDH	1050	0	4762.0 (a)	4762.0

Notes:

1. Design tip elevations for Piers 2 and 3 locations are controlled by: (a) Compression, (b) Tension, (c) Settlement, (d) Lateral Load.
2. The Specified Tip Elevation shall not be raised above the design tip elevations.
3. There is no Design Tip Elevation for settlement because the piles are embedded in rock.
4. Design Tip Elevation for Lateral Load is provided by SD.

GENERAL NOTES TO THE DESIGNER

1. It is recommended that a Type "D" excavation is to be shown on the plans at the Pier 2 location.

SUPPLEMENTAL PROJECT INFORMATION

Section 2-1.06B "Supplemental Project Information" of the 2010 Standard Specifications addresses supplemental information ("as specified in the special provisions") made available to Bidders by Caltrans. The following items are being provided for insertion into the table in Section 2-1.06B of the project special provisions.

Included in the Information Handout:

- Foundation Report for Hamilton Branch Bridge (Replace), (Br. No. 09-0079) dated January 22, 2015.

Included with the project plans:

- Log of Test Borings (Hamilton Branch Bridge (Replace), Br. No. 09-0079).

Available for inspection at the Transportation Laboratory:

- Core Samples.

CONSTRUCTION CONSIDERATIONS

Cores Samples

1. As previously noted, photographs of the collected cores in core boxes are attached to this report as a courtesy (see Appendix A); viewing of the attached core photographs should not be substituted for core viewing. It is highly recommended that the Contractor inspect/observe the core samples prior to bidding as addressed in the 2010 Caltrans Standard Specifications Section 2-1.06B "Supplemental Project Information".

Spread Footing – Abutments 1 and 4

1. As discussed in the foundation recommendations section of the report above, the Office of Geotechnical Design North requires the inspection of the foundation materials exposed within the footing excavation to verify material that will meet the criteria for the provided design recommendations.

CIDH Piles - Piers 2 and 3

1. As indicated in the "Groundwater" section of this FR, groundwater was measured during the 2013 subsurface investigation. Groundwater is expected to be encountered during construction. CIDH piles with inspection pipes ("wet method" pile installation per Caltrans BCM 130-7.0, Reference No. 22) will be necessary for the construction of the CIDH piles.

2. Within the subsurface materials underlying the site, significant variation in the weathering, fracturing and hardness of the basalt was encountered, even within relatively short distances (see LOTB sheets). The Contractor should anticipate significantly varying rock

conditions laterally (between adjacent pile locations) and vertically (within each pile excavation).

3. The contractor may encounter difficulties during drilling for CIDH piles due to the presence of fresh, very hard and very strong (unconfined compressive strength as high as 17,223 PSI, see Appendix B) cobbles, boulders and rock materials as indicated by our subsurface exploration and lab testing. These materials will likely result in relatively slow rock drilling.

4. The self-casing wire-line drill system drilling techniques utilized during the subsurface investigations make it difficult to directly assess borehole stability and the potential for sidewall collapse. The encountered subsurface conditions shown on the LOTBs, and the surface exposures observed in field investigations, suggest that drill-hole sidewall collapse and materials caving should be anticipated when constructing CIDH piles.

5. Soils containing gravels, cobbles and boulders beneath the site could result in sidewall collapse within the pile excavation. Decomposed and intensely fractured rock encountered beneath the site could result in sidewall collapse within the pile excavation. Thus, temporary casing may be needed to maintain the integrity of the pile holes prior to placing concrete. If temporary casing is used during installation of CIDH piles, it shall be removed before or during concrete placement.

6. The Contractor should anticipate difficult drilling and construction measures for CIDH piles due to the presence of boulder-size Rock Slope Protection (RSP) on the bank and in the channel (near Borings RC-13-001, RC-13-002 and RC-13-003). The Contractor should be prepared to drill through the RSP section, or perform other remedial measures during the construction of the piles, which could include breaking-up the RSP and/or removal by sub-excavation.

7. The Office of Geotechnical Design North should be invited to a pre-construction meeting.

CLOSURE

The foundation recommendations included in this report are based on specific project information regarding structure type and structure location that has been provided by the Office of Structure Design, Design Branch 1. Any questions regarding the foundation recommendations should be directed to the attention of Jacqueline A Martin (916) 227-1051 or Mark Hagy (916) 227-1077, of the Geotechnical Services, Office of Geotechnical Design-North.

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MARK HAGY, G.E.
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Attachments:

References

Plates:

Plate No. 1	Vicinity Map
Plate Nos. 2a and 2b	Geology Map
Plate No. 3	Fault Map
Plate No. 4	Design Acceleration Response Spectrum

Appendix A

Plate Nos. 1a thru 5b	Core Photographs

Appendix B — Laboratory Test Results

cc: DPM – Eric Orr (E-Copy)
Reid Buell (E-Copy)

REFERENCES

1. Caltrans (1946) As-Built General Plan for the Hamilton Branch Bridge (Br. No. 09-0065, formerly 9C-22) dated January 1946.

2. Caltrans (1946) As-Built Footing Layout and Pier Details for the Hamilton Branch Bridge (Br. No. 09-0065, formerly 9C-22) dated January 1946.

3. Caltrans (1946) As-Built Abutments No. 1, No. 3 and No. 5 Details for the Hamilton Branch Bridge (Br. No. 09-0065, formerly 9C-22) dated January 1946.

4. Caltrans (1946) As-Built Bent and Shoe Details for the Hamilton Branch Bridge (Br. No. 09-0065, formerly 9C-22) dated January 1946.

5. DMG (1960) "Geologic Map of California: Westwood Sheet"", California Department of Conservation, Division of Mines and Geology, compilation by Lydon, P.A., Gay, T.E., and Jennings, C.W., Scale 1: 250,000, 1960.

6. USGS (1992) "Stratigraphy of Paleozoic and Lower Mesozoic Rocks in the Northern Sierra Terrane, California", United States Geologic Survey Bulletin 1957, by David S. Harwood, dated August 17, 1990.

7. FHWA (2001) Federal Highway Administration (FHWA), Shallow Foundations (Pub. No. FHWA NHI-01-023, June 2001.

8. Caltrans (2001) Upstream Channel Section for the Hamilton Branch Bridge (Br. No. 09-0065) by Huang on September 5, 2001.

9. Caltrans (2001) Bridge Inspection Report by Kevin Flora for Bridge Number 09-0065 dated July 12, 2001.

10. USGS (2007) "Geologic Map of the Westwood West, CA 7.5' QUAD", unpublished United States Geologic Survey map, Scale 1:24,000.

11. Caltrans (2009) "Development of the Caltrans Deterministic PGA Map and Caltrans ARS Online", M. Merriam, Geotechnical Services, and T. Shantz, Division of Research & Innovation, Caltrans.

12. USGS (2010) "Geologic Map of Lassen Volcanic National Park and Vicinity, California", United States Geologic Survey Scientific Investigation Map 2899, dated 2010.

13. FHWA (2010) Federal Highway Administration (FHWA), Drilled Shafts: Construction Procedures and LRFD Design Methods – Volumes I and II (Pub. No. FHWA NHI-10-016, FHWA GEC 010), May 2010.

14. CGS (2011) " Alquist-Priolo Earthquake Fault Zone Maps", obtained from California Geologic Survey at http://www.quake.ca.gov/gmaps/ap/ap_maps.htm.

15. Caltrans (2011) Bridge Inspection Report by Tim Campbell for Bridge Number 09-0065 dated June 14, 2011.

16. AASHTO (2012) "AASHTO LRFD Bridge Design Specifications", 6th Edition.

17. Caltrans (2012) "Methodology for Developing Design Response Spectrum for Use in Seismic Design Recommendations", Caltrans Geotechnical Services, dated November 2012.

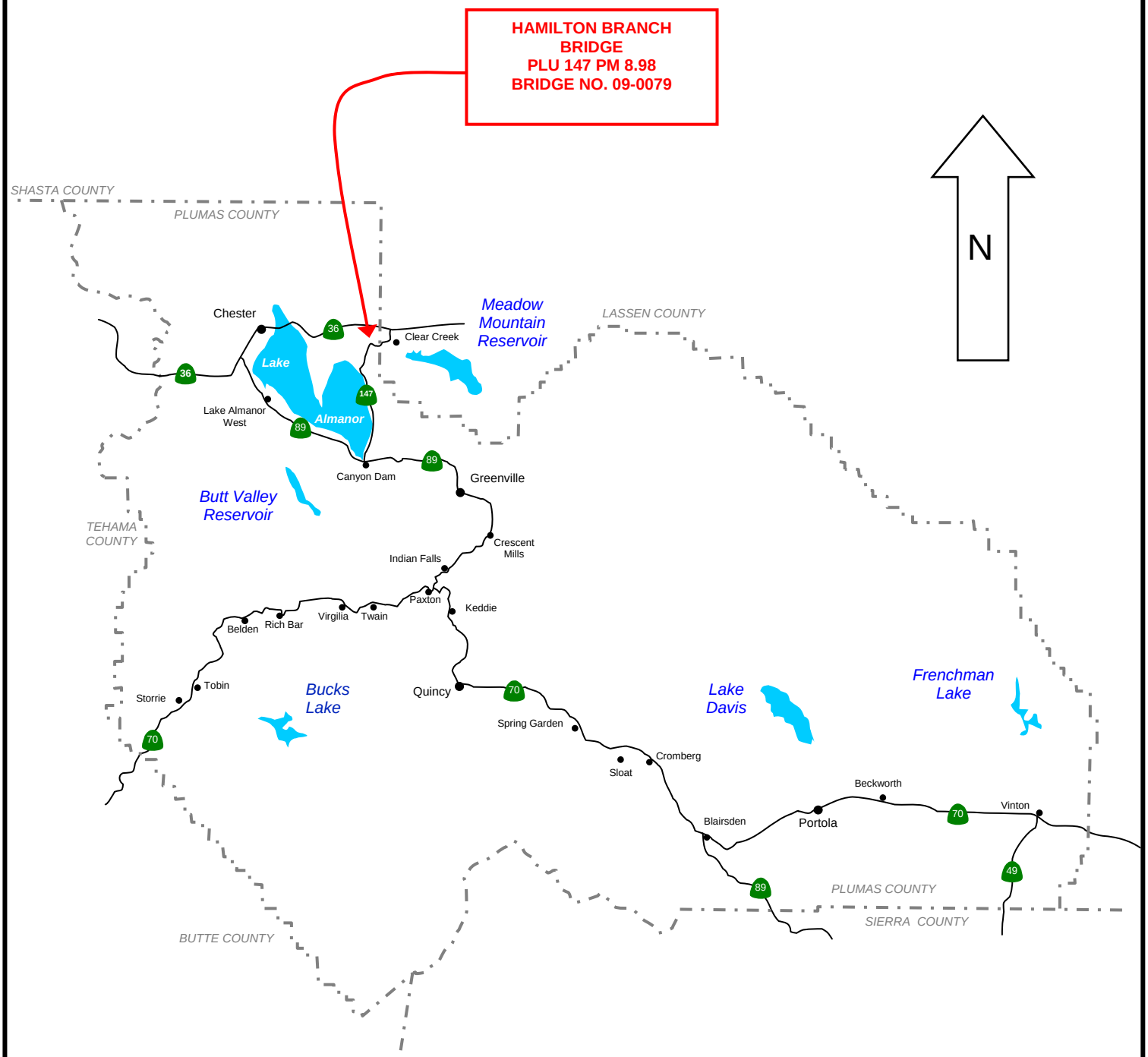
18. Caltrans (2012) "Corrosion Guidelines", Corrosion and Structure Concrete Field Investigation Branch, Materials Engineering and Testing Services, Caltrans, Version 2.0, November 2012.

19. Caltrans (2013) "Standard Penetration Test (SPT) Hammer Efficiencies For Caltrans Drill Rigs", Foundation Testing Branch, Caltrans Geotechnical Services, dated April 2013 available at http://www.dot.ca.gov/hq/esc/geotech/sr_logging_manual/srl_manual.html.

20. Caltrans (2014) "General Plan", Caltrans Division of Engineering Services, Structure Design, Design Branch 1, revision date June 18, 2014.

21. Caltrans (2014) "Final Hydraulic Report: Hamilton Branch Creek", written by Neal Alie, reviewed by Steve Ng, California Dept. of Transportation, Structure Design Services, Structure Hydraulics and Hydrology, 02-PLU-147- PM 8.98, 02-4E6400, Project I.D. 0212000011, dated March 27, 2014.

22. Caltrans (2014) "CIDH Concrete Piling", Bridge Construction Memo 130-7.0, Section 130-Foundations, Caltrans Bridge Construction Records & Procedures Manual, Volume II, dated June 30, 2014.



NO SCALE

CALTRANS
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - North

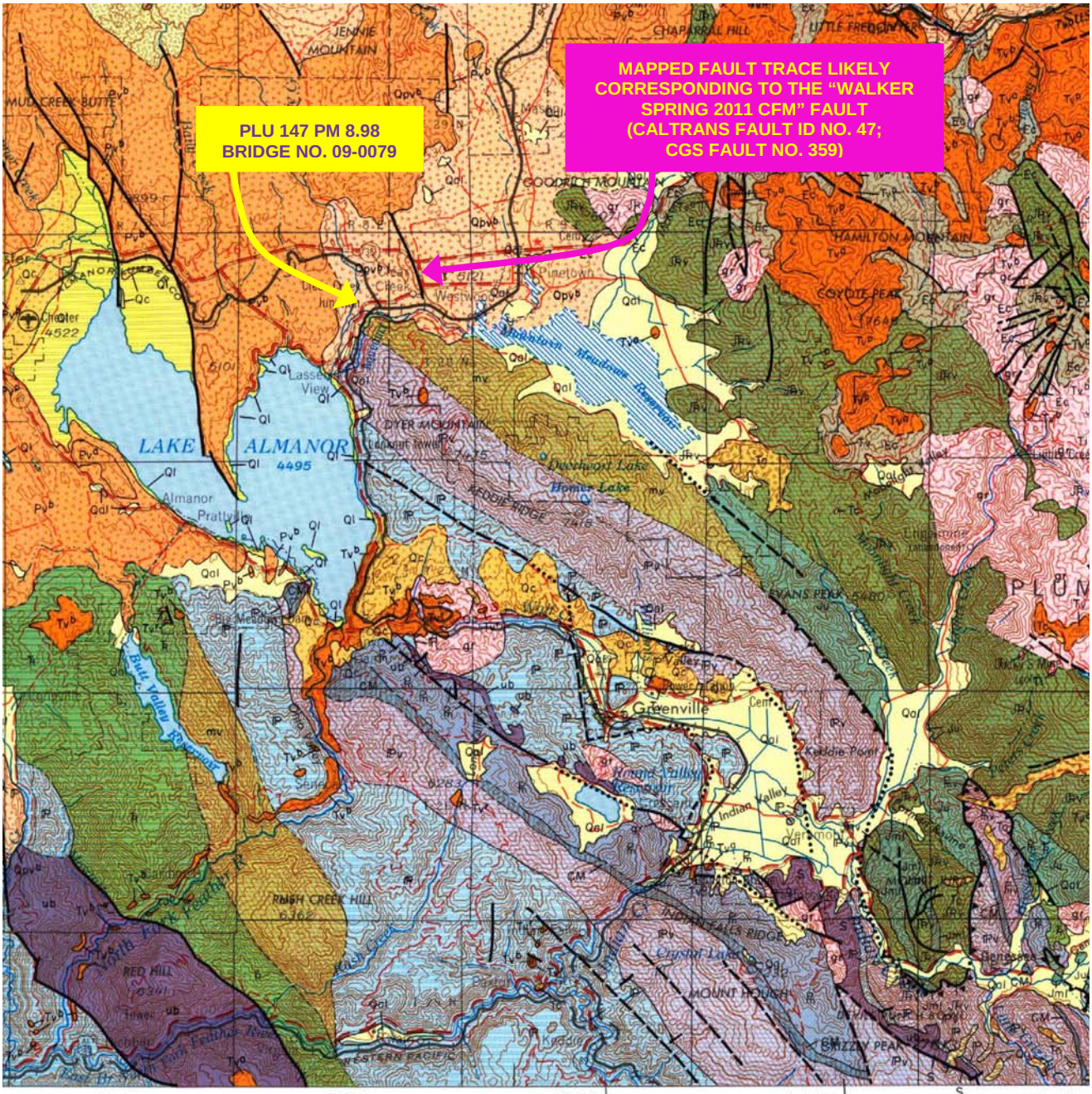
EA: 02-4E6401

Date: January 2015

VICINITY MAP

02-PLU-147 PM 8.98; BRIDGE NO. 09-0079
HAMILTON BRANCH BRIDGE
REVISED FOUNDATION REPORT

Plate
No. 1



Scale 1:250,000

5 0 5 10 15 20 Statute Miles

5 0 5 10 15 20 25 30 Kilometers

CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS

GEOLOGIC MAP OF CALIFORNIA

OLAF P. JENKINS EDITION

WESTWOOD SHEET

COMPILATION BY P. A. LYDON, T. E. GAY, JR. AND C. W. JENNINGS 1960

N

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**GEOLOGY MAP (1 of 2)**
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**	Plate No. 2a

EXPLANATION

SEDIMENTARY AND METASEDIMENTARY ROCKS

CENOZOIC

QUATERNARY

Recent

- Qs — Dune sand
- Qal — Alluvium
- Qsc — Stream channel deposits (GREAT VALLEY)
- Qf — Fan deposits (GREAT VALLEY)
- Qb — Basin deposits (GREAT VALLEY)
- Qst — Salt deposits
- Ql — Quaternary lake deposits
- Qg — Glacial deposits
- Qt — Quaternary nonmarine terrace deposits

Pleistocene

- Qm — Pleistocene marine and marine terrace deposits
- Qc — Pleistocene nonmarine
- QP — Plio-Pleistocene nonmarine

TERTIARY

Pliocene

- Pc — Undivided Pliocene nonmarine
- Puc — Upper Pliocene nonmarine
- Pu — Upper Pliocene marine
- Pmlc — Middle and/or lower Pliocene nonmarine
- Pml — Middle and/or lower Pliocene marine

Miocene

- Mc — Undivided Miocene nonmarine
- Muc — Upper Miocene nonmarine
- Mu — Upper Miocene marine
- Mmc — Middle Miocene nonmarine
- Mm — Middle Miocene marine
- Ml — Lower Miocene marine

Oligocene

- Φc — Oligocene nonmarine
- Φ — Oligocene marine

Eocene

- Ec — Eocene nonmarine
- E — Eocene marine

Paleocene

- Epc — Paleocene nonmarine
- Ep — Paleocene marine

Undivided

- QTc — Cenozoic nonmarine
- Tc — Tertiary nonmarine
- Tl — Tertiary lake deposits
- Tm — Tertiary marine

IGNEOUS AND META-IGNEOUS ROCKS

- Qrv — Recent volcanic: Qrv^r —rhyolite; Qrv^a —andesite; Qrv^b —basalt; Qrv^p —pyroclastic rocks
- Qpv — Pleistocene volcanic: Qpv^r —rhyolite; Qpv^a—andesite; Qpv^b —basalt; Qpv^p —pyroclastic rocks
- Quaternary and/or Pliocene cinder cones
- Pv — Pliocene volcanic: Pv^r —rhyolite; Pv^a—andesite; Pv^b —basalt; Pv^p —pyroclastic rocks
- Mv — Miocene volcanic: Mv^r —rhyolite; Mv^a —andesite; Mv^b —basalt; Mv^p —pyroclastic rocks
- Φv — Oligocene volcanic: $Φrv^r$—rhyolite; $Φrv^a$ —andesite; $Φrv^b$—basalt; $Φv^p$—pyroclastic rocks
- Ev — Eocene volcanic: Ev^r —rhyolite; Ev^a —andesite; Ev^b —basalt; Ev^p —pyroclastic rocks
- QTv — Cenozoic volcanic: QTv^r—rhyolite; QTv^a—andesite; QTv^b —basalt; QTv^p —pyroclastic rocks
- Ti — Tertiary intrusive (hypabyssal) rocks: Ti^r—rhyolite; Ti^a—andesite; Ti^b—basalt
- Tv — Tertiary volcanic: Tv^r —rhyolite; Tv^a —andesite; Tv^b —basalt; Tv^p —pyroclastic rocks

MESOZOIC

CRETACEOUS

- K — Undivided Cretaceous marine
- Ku — Upper Cretaceous marine
- Kl — Lower Cretaceous marine

JURASSIC

- Jk — Knoxville formation
- Ju — Upper Jurassic marine
- Jml — Middle and/or Lower Jurassic marine

TRIASSIC

- R — Triassic marine

KJf — Franciscan formation

- KJfv — Franciscan volcanic and metavolcanic rocks
- gr — Mesozoic granitic rocks
- bi — Mesozoic basic intrusive rocks
- ub — Mesozoic ultrabasic intrusive rocks
- JRv — Jura-Trias metavolcanic rocks

UNDIVIDED

- m ls — Pre-Cretaceous metamorphic rocks (ls = limestone or dolomite)
- ms — Pre-Cretaceous metasedimentary rocks
- P ls — Paleozoic marine (ls = limestone or dolomite)
- mv — Pre-Cretaceous metavolcanic rocks
- gr-m — Pre-Cenozoic granitic and metamorphic rocks
- Pv — Paleozoic metavolcanic rocks

PALEOZOIC

PERMIAN

- Pr — Permian marine
- Pmv — Permian metavolcanic rocks

CARBONIFEROUS

- C — Undivided Carboniferous marine
- CP — Pennsylvanian marine
- CM — Mississippian marine
- Cv — Carboniferous metavolcanic rocks

DEVONIAN

- D — Devonian marine
- Dv — Devonian metavolcanic rocks
- pDv — Undivided pre-Devonian and Devonian metavolcanic rocks

SILURIAN

- S — Silurian marine

ORDOVICIAN

- O — Ordovician marine

CAMBRIAN

- Є — Cambrian marine
- Є? — Cambrian – Precambrian marine

PRECAMBRIAN

- pЄ — Undivided Precambrian metamorphic rocks pЄg = gneiss, pЄs = schist
- lpЄ — Later Precambrian sedimentary and metamorphic rocks
- epЄ — Earlier Precambrian metamorphic rocks
- pЄgc — Undivided Precambrian granitic rocks

HEAVY BORDER ON BOXES INDICATES UNITS THAT APPEAR ON THIS SHEET

Contact
Dashed where approximately located, gradational or inferred

Fault
Dashed where approximately located; dotted where concealed

Thrust fault
Barbs on upper plate; dashed where approximately located, dotted where concealed

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**GEOLOGY MAP LEGEND (2 of 2)**
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**	Plate No. 2b

EXPLANATION:

Fault traces on land are indicated by solid lines where well located, by dashed lines where approximately located or inferred, and by dotted lines where concealed by younger rocks or by lakes or bays. Fault traces are queried where continuation or existence is uncertain.

FAULT CLASSIFICATION COLOR CODE
(Indicating Recency of Movement)

Fault along which historic (last 200 years) displacement has occurred.

Holocene fault displacement (during past 11,700 years) without historic record.

Late Quaternary fault displacement (during past 700,000 years).

Quaternary fault (age undifferentiated).

Pre-Quaternary fault (older that 1.6 million years) or fault without recognized Quaternary displacement.

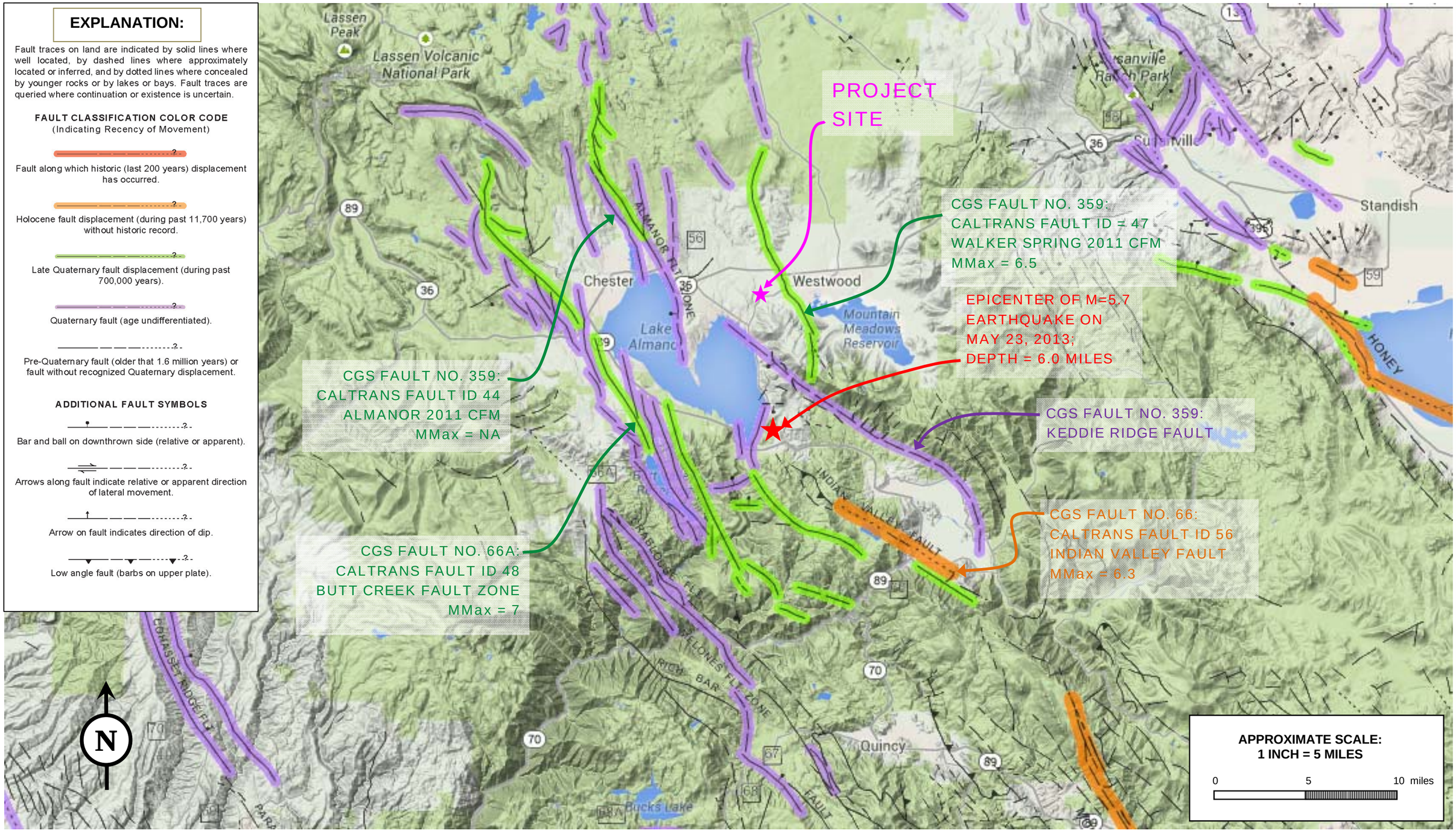
ADDITIONAL FAULT SYMBOLS

Bar and ball on downthrown side (relative or apparent).

Arrows along fault indicate relative or apparent direction of lateral movement.

Arrow on fault indicates direction of dip.

Low angle fault (barbs on upper plate).



Reference: Portion of the "2010 Fault Activity Map of California"; California Geological Survey, Geologic Data Map No. 6; Compilation and Interpretation by: Charles W. Jennings and William A. Bryant; Graphics by: Milind Patel, Ellen Sander, Jim Thompson, Barbara Wanish and Milton Fonseca; Obtained at http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html

CALTRANS
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - North

EA: 02-4E6401

Date: January 2015

FAULT MAP

02-PLU-147 PM 8.98; BRIDGE NO. 09-0079
HAMILTON BRANCH BRIDGE
REVISED FOUNDATION REPORT

Plate No. 3

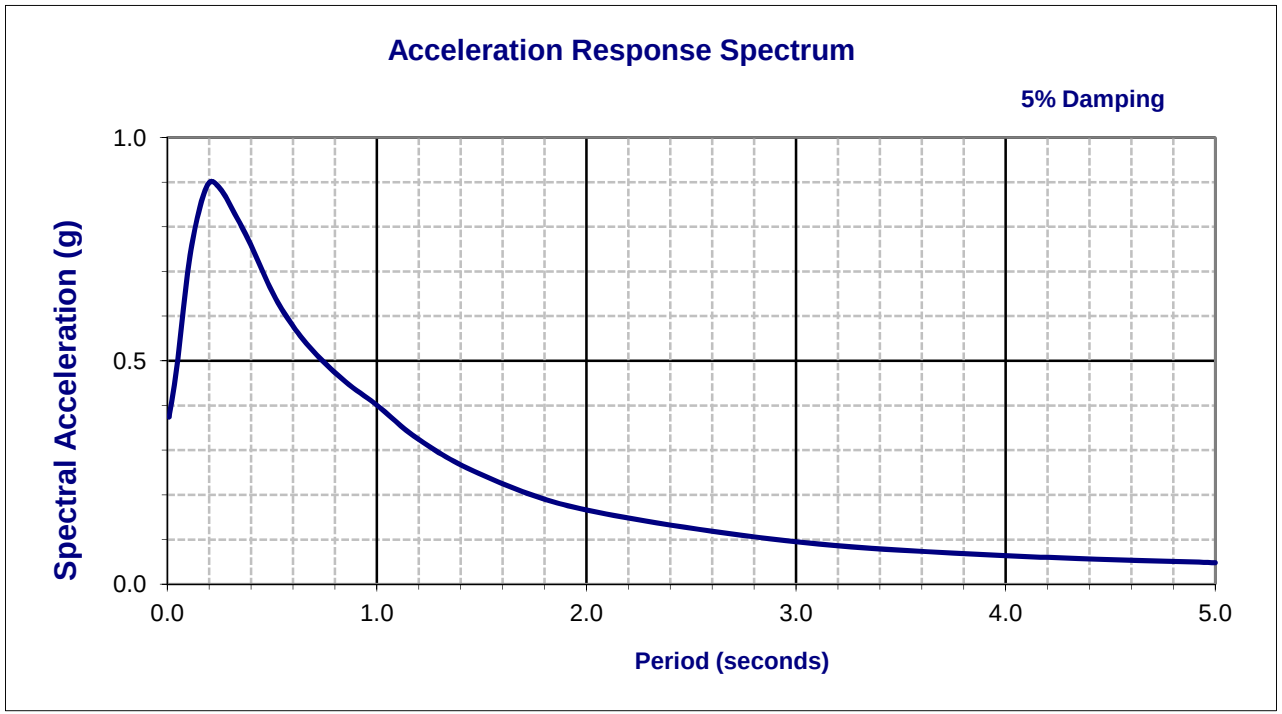
Hamilton Branch Bridge (Replace)

Bridge No. 09-0079
EFIS 0212000011

Latitude 40.2918
Longitude -121.0753

Control **Deterministic**

Period (s)	Sa(g)
0.010	0.374
0.050	0.497
0.100	0.704
0.150	0.831
0.200	0.898
0.250	0.887
0.300	0.849
0.400	0.759
0.500	0.655
0.600	0.578
0.700	0.520
0.850	0.453
1.000	0.401
1.200	0.324
1.500	0.245
2.000	0.166
3.000	0.095
4.000	0.064
5.000	0.048



Deterministic Procedure Data

Fault	Walker Spring 2011 CFM	
Fault ID	47	
Style	N	
Mmax	6.5	
Dip	90	deg
Z_{TOR}	0.0	miles
Z_{BOT}	6.2	miles

R_{rup}	1.7	miles
R_{jb}	1.7	miles
R_x	1.7	miles
V_{S30}	1850	ft/s
$Z_{1.0}$	N/A	ft
$Z_{2.5}$	N/A	miles

CALTRANS
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - North

EA: 02-4E6401

Date: January 2015

ACCELERATION RESPONSE SPECTRUM FOR DESIGN

02-PLU-147 PM 8.98; BRIDGE NO. 09-0079
HAMILTON BRANCH BRIDGE
REVISED FOUNDATION REPORT

Plate No. 4

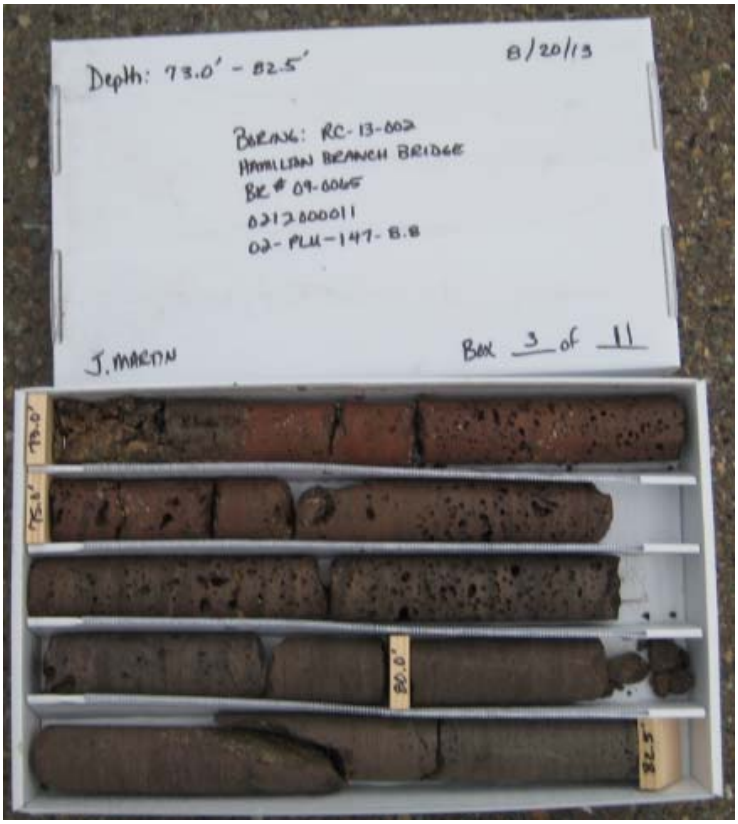
Appendix A

Core Photographs

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-001 CORE PHOTOS (1 of 3)**
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**	Plate No. A-1a

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-001 CORE PHOTOS (2 of 3)**
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**	Plate No. A-1b

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-001 CORE PHOTOS (3 of 3)**	
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**		Plate No. A-1c



CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-002 CORE PHOTOS (1 of 3)**
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**	Plate No. A-2a

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-002 CORE PHOTOS (2 of 3)**
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**	Plate No. A-2b

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-002 CORE PHOTOS (3 of 3)**	
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**		Plate No. A-2c

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-003 CORE PHOTOS (1 of 3)**	
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**		Plate No. A-3a

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-003 CORE PHOTOS (2 of 3)**	
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**		Plate No. A-3b

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-003 CORE PHOTOS (3 of 3)**	
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**		Plate No. A-3c

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-004 CORE PHOTOS (1 of 3)**
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**	Plate No. A-4a

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-004 CORE PHOTOS (2 of 3)**	
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**		Plate No. A-4b

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-004 CORE PHOTOS (3 of 3)**	
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**		Plate No. A-4c

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-005 CORE PHOTOS (1 of 2)**	
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**		Plate No.A-5a

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 02-4E6401 Date: January 2015	**RC-13-005 CORE PHOTOS (2 of 2)**
	02-PLU-147 PM 8.98; BRIDGE NO. 09-0079 **HAMILTON BRANCH BRIDGE** **REVISED FOUNDATION REPORT**	Plate No. A-5b

Appendix B

Laboratory Test Results

OFFICE OF GEOTECHNICAL SUPPORT
GEOTECHNICAL LABORATORY TRACKING FORM

GL Tracking No. 13-083

Project Information

Project Name: Hamilton Branch Bridge
Structure No.: 09-0065
District: 02
County: PLU
Route: 147
PM: 8.8-

Project Charging

District: 02
EA: 4E6400
FA:
Activity Code: 160
MSA Code:
Sub Job:
Special Designation:

Client Information

Last Name: Martin
First Name: Jackie
Office: GDN
Phone: 227-1051

Dates

Dates Sampled: 2013-08-20
Samples Received: 2013-11-15
Samples to Grade Bench: 2013-11-18
Client's Due: 2014-02-01
GL Staff Due: 2014-01-17
Estimated Delivery: 2014-01-31

TL-101 Numbers

C701653-56,C704858-60

Comments

Project: 0212000011
Phase: 0

	Number Tests Requested	Number Tests Completed	Date Testing Started	Date Testing Completed
Unit Weight				
Moisture Content	3			
Specific Gravity	3			
Mechnical Analysis	2			
Atterberg Limits	1			
Consolidation				
Triaxial UU				
Triaxial CU				
Unconfined Comp	27			
Point Load				
Direct Shear	1			
Permeability				
Compaction Curve				
Swell Potential				
Collapse Potential				
Expansion Index				
Shrinkage Limit				
Corrosion	4			
Sand Equivalent				
R-Value				
Organic Content				
pH				
Cation Exchange				

BORING SAMPLE RECORD

GL TRACKING NO. 13-083
TESTING DUE:

PROJECT NAME: Hamilton Branch Bridge
DIST-CO-RTE-PM: 02-PLU-147-8.8-
DIST-EA: 02-4E6400
SUB JOB:
CLIENT: Jackie Martin

FA: ACT. CODE: 160
SPECIAL DESG:

BR. NO: 09-0065
MSA CODE:

PHONE: 227-1051

Boring ID	Sample No.	Tube No.	Depth	Test Type																Remarks
				Unit Weight	Moisture Content	Specific Gravity	Mechanical Analysis	Atterberg	Consolidation	Triaxial UU	Triaxial CU	Unconfined Compression	Point Load	Direct Shear	Permeability	Compaction	Corrosion	Other		
RC-13-001	01-2		38-47														X			
RC-13-001	03		48.4-49.3									X								
RC-13-001	06		63-63.9									X								
RC-13-001	09		75.2-76.1									X								
RC-13-001	11		87-87.8									X								
RC-13-001	13		98.4-99.1									X								
RC-13-001	15		105.9-106.9									X								
RC-13-002	01		54.3-55									X								
RC-13-002	03		64.2-65			X						X								
RC-13-002	07		82-82.5									X								
RC-13-002	11		100.6-101.2									X								
RC-13-002	11A		103.5-104.2									X								
RC-13-002	14		116-116.5		X		X	X												
RC-13-002	16		126.4-127		X		X													
RC-13-002	19		140.5-141.1		X									X						3000-6000-12000
RC-13-003	01		41.9-43														X			
RC-	03		51.7-									X								

13-003			52.5																
RC-13-003	05		61.5-62									X							
RC-13-003	07		73.5-74									X							
RC-13-003	10		86-86.5									X							
RC-13-003	12		98-99			X						X							
RC-13-003	14		105-106									X							

BORING SAMPLE RECORD

GL TRACKING NO. 13-083
TESTING DUE:

PROJECT NAME: Hamilton Branch Bridge
DIST-CO-RTE-PM: 02-PLU-147-8.8-
DIST-EA: 02-4E6400
SUB JOB:
CLIENT: Jackie Martin

FA: ACT. CODE: 160
SPECIAL DESG:

BR. NO: 09-0065
MSA CODE:

PHONE: 227-1051

Boring ID	Sample No.	Tube No.	Depth	Test Type															Remarks
				Unit Weight	Moisture Content	Specific Gravity	Mechanical Analysis	Atterberg	Consolidation	Triaxial UU	Triaxial CU	Unconfined Compression	Point Load	Direct Shear	Permeability	Compaction	Corrosion	Other	
RC-13-004	12		22-23														X		
RC-13-004	14		29.1-30									X							
RC-13-004	15		33.7-34.2			X													
RC-13-004	17		43.8-44.5									X							
RC-13-004	19		50.5-51.5									X							
RC-13-004	20		57.9-58.5									X							
RC-13-004	23		73.4-74									X							
RC-13-005	13-14		32-36.5														X		
RC-13-005	17		44.2-45									X							
RC-13-005	22		60.4-61.2									X							
RC-13-005	25		77.3-78									X							
RC-13-005	26		81-81.8									X							
RC-13-005	27		87.3-88.2									X							

Results sent to: JACKIE MARTIN

Division of Engineering Services
Materials Engineering and Testing Services
Corrosion and Structural Concrete Field Investigation Branch

Report Date: 12/16/2013
Reported by Michael Mifkovic

CORROSION TEST SUMMARY REPORT - SOIL

EA

EFIS: **0212000011**

Bridge # **09-0065**

Dist/Co/Rte/PM **02 / PLU /147/ / 8.98 PM**

Bridge Name **Hamilton Branch (Replacement)**

CORROSION LAB #	TL101 #	BORE #	DEPTH (FT) START	DEPTH (FT) END	MINIMUM RESISTIVITY[1] (ohm-cm)	pH[1]	CHLORIDE CONTENT[2] (ppm)	SULFATE CONTENT[3] (ppm)	IS SAMPLE CORROSIVE?
SOIL SAMPLE FROM:									
CR20130426	C701653	RC-13-001	38	47	4664	6.2			NO
CR20130427	C701654	RC-13-003	41.9	43	5244	6.58			NO
CR20130428	C701655	RC-13-004	22	23	2310	6.72			NO
CR20130429	C701656	RC-13-005	32	36.5	5220	6.81			NO

This site is not corrosive to foundation elements (see note below).

Note: For Structural Elements, the Department considers a site corrosive if one or more of the following conditions exist: pH is 5.5 or less, chloride concentration is 500 ppm or greater, sulfate concentration is 2000 ppm or greater. Resistivity is not considered for Structural Elements. MSE backfill shall conform to the requirements of section 47-2.02C Structure Backfill in the 2010 Standard Specifications.

[1]CT 643, [2]CT 422, [3]CT 417

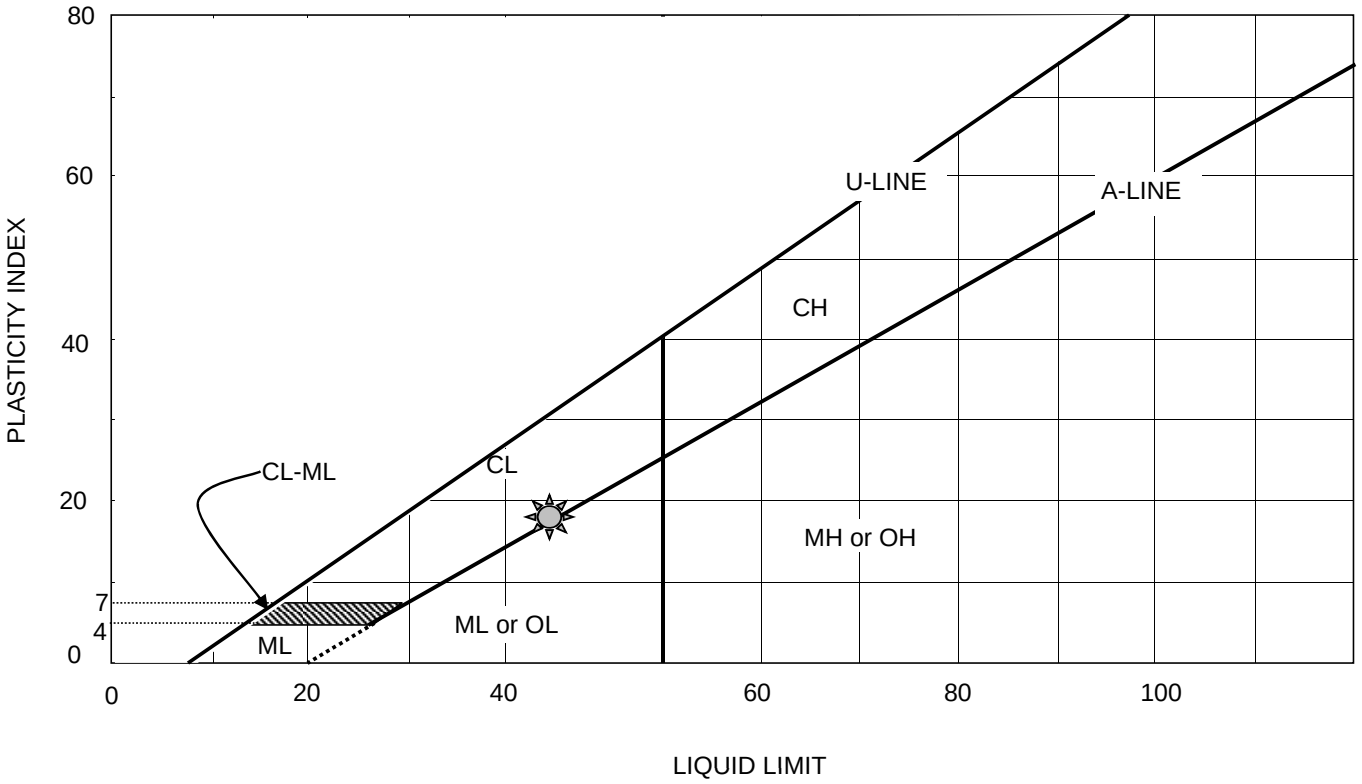
CALIFORNIA DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL LABORATORY

GL TRACKING NO : 13-083
Dist - EA: 02-4E6400
Report Date: February 4, 2014
Page: 1/2

CLASSIFICATION TEST SUMMARY

SAMPLE ID	% FINER THAN																	ATTERBERG LIMITS		AS RECEIVED		Gs
	3"	2 1/2"	2"	1 1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200	5μ	1μ	LL	PI	γ_d (pcf)	%m	
RC-13-001_01-2																						
RC-13-001_03																						
RC-13-001_06																						
RC-13-001_09																						
RC-13-001_11																						
RC-13-001_13																						
RC-13-001_15																						
RC-13-002_01																						
RC-13-002_03																						2.31
RC-13-002_07																						
RC-13-002_11																						
RC-13-002_11A																						
RC-13-002_14							100	98	93	90	86	83	78	73	69	48	36	43	17		28.1	
RC-13-002_16											100	95	78	42	27	7	1				25.0	
RC-13-002_19																					18.1	
RC-13-003_01																						
RC-13-003_03																						
RC-13-003_05																						
RC-13-003_07																						
RC-13-003_10																						
RC-13-003_12																						2.78
RC-13-003_14																						
RC-13-004_12																						
RC-13-004_14																						
RC-13-004_15																						2.69
RC-13-004_17																						

ATTERBERG LIMITS TEST (ASTM D4318/CAL TEST 204)



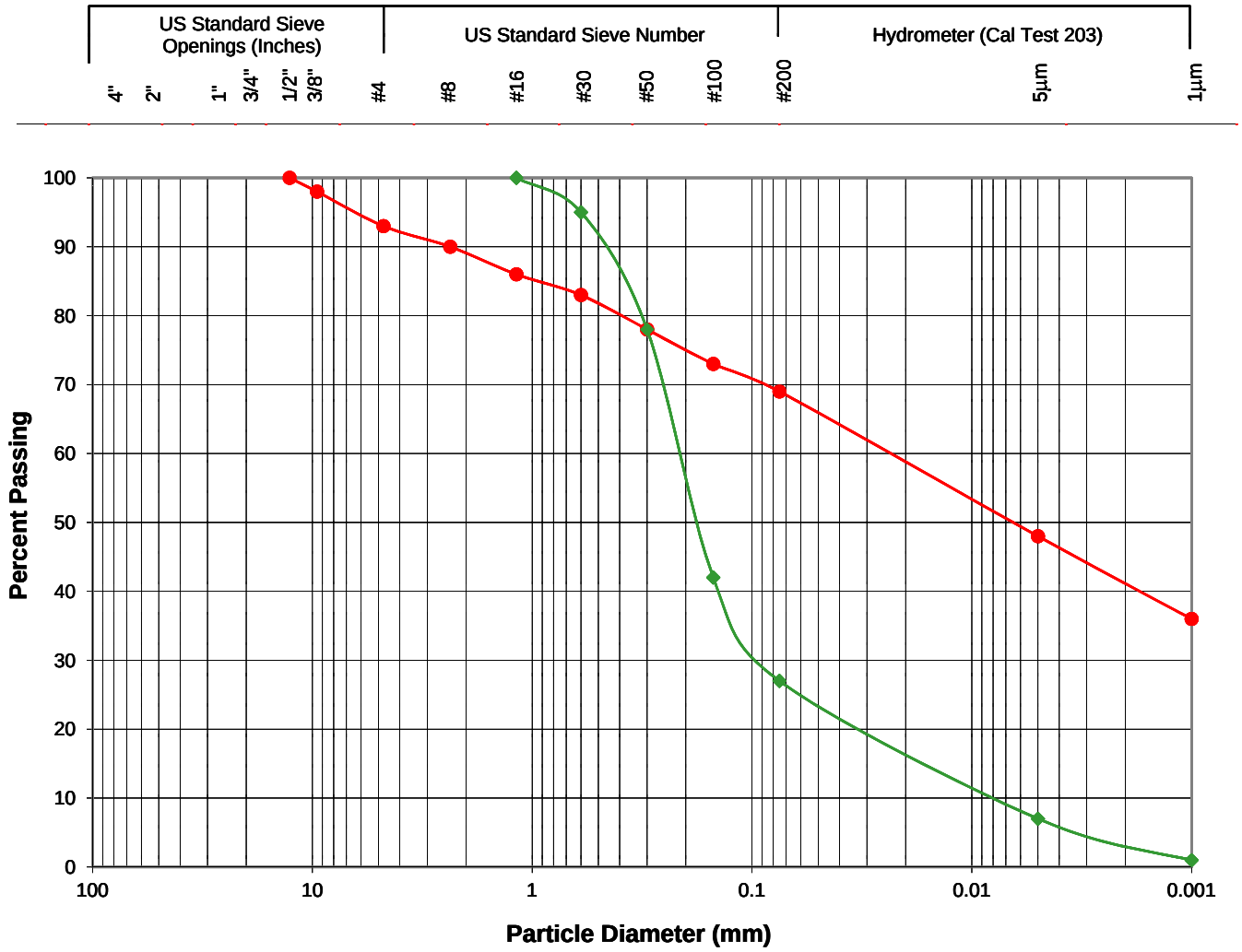
SYMBOL	SAMPLE ID	SAMPLE LOCATION	LIQUID LIMIT (%)	PLASTICITY INDEX	CLASSIFICATION
☀	2-14	Boring No. RC-13-002: 116.0'-116.5'	43	17	CL

CALTRANS
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design - North

Project Name:	HAMILTON BRANCH BRIDGE
EA:	02-4E6401
D-Co-Rt-PM:	02-PLU-147-PM 8.98
Test Date:	August-14

Plate No. B-1

Particle-Size Analysis Test Results



GRAVELS		SANDS			SILT	CLAY
Coarse	Fine	Coarse	Medium	Fine		

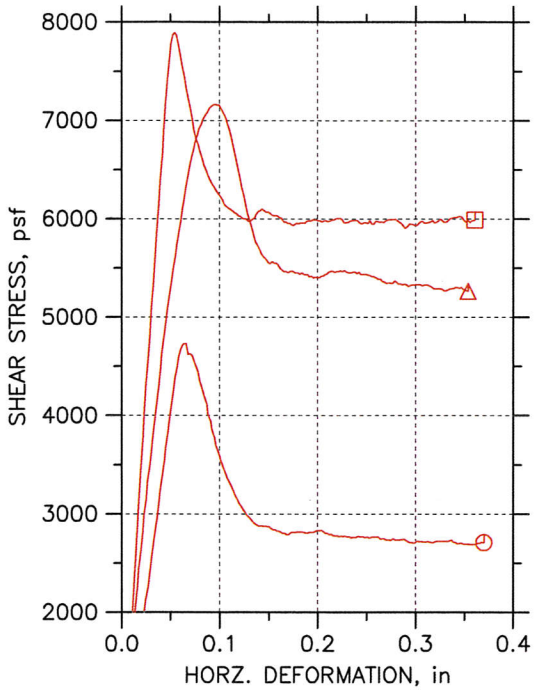
Sample ID:

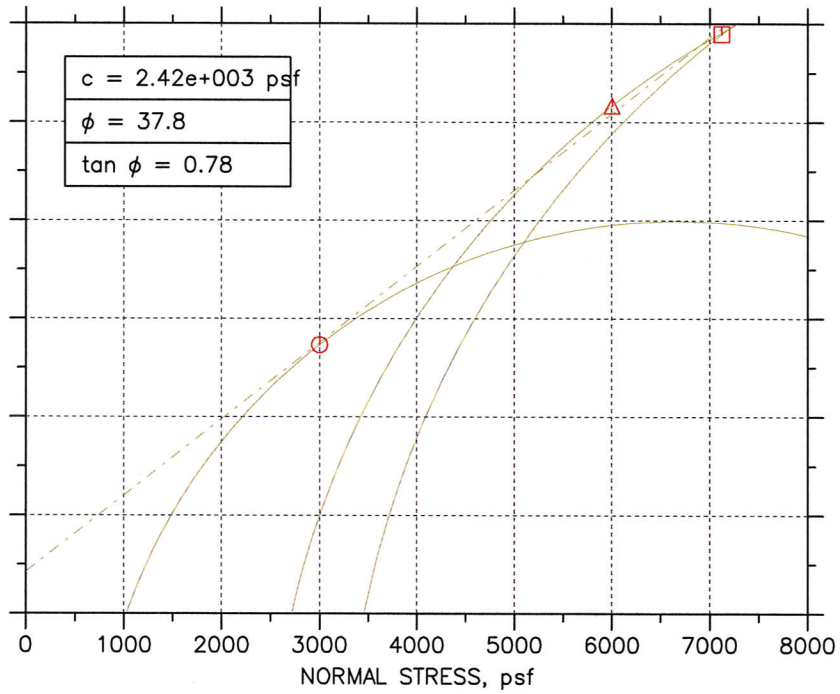
- 2-14: Boring No. RC-13-002; 116.0'-116.5'
- 2-16: Boring No. RC-13-002, 126.4'-127.0'

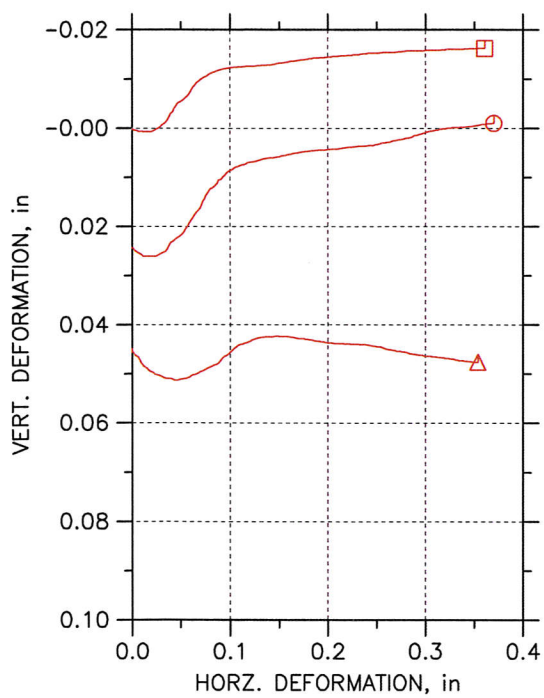
CALTRANS
Division of Engineering Services
Geotechnical Services
Office of Geotechnical Design
Branch - North

Project:	HAMILTON BRANCH BRIDGE
EA:	02-4E6401
D.-Co.-Rt.-:	02-PLU-147-PM 8.98
Date:	August-14
Plate No. B-2	

DIRECT SHEAR TEST REPORT







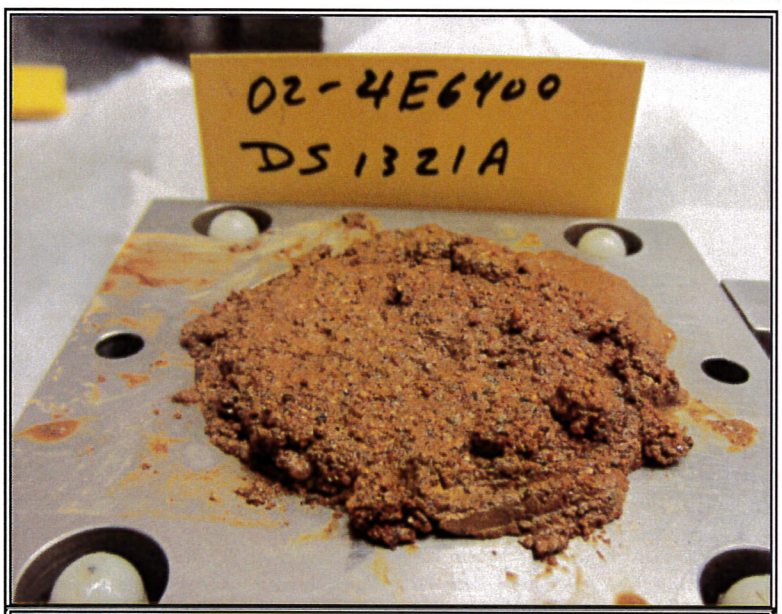
Symbol		⦶	△	⊡	
Test No.		DS1321A	DS1321B	DS1321C	
Sample No.		19	19	19	
Shape		Circular	Circular	Circular	
Initial	Dimension, in	2.375	2.375	2.375	
	Area, in^2	4.4301	4.4301	4.4301	
	Height, in	1	1	1	
	Water Content, %	21.81	21.39	19.57	
	Dry Density, pcf	100.96	104.91	103.71	
	Saturation, %	87.93	95.21	84.50	
	Void Ratio	0.66961	0.60665	0.6253	
Consol. Height, in		0.97677	0.95716	1	
Consol. Void Ratio		0.63082	0.53783	0.6253	
Final	Water Content, %	24.79	19.59	23.63	
	Dry Density, pcf	100.86	110.16	102.05	
	Saturation, %	99.70	99.77	97.91	
	Void Ratio	0.67126	0.53016	0.65168	
Normal Stress, psf		3001.3	6000.9	7120.4	
Max. Shear Stress, psf		4731.9	7165.7	7894.1	
Ult. Shear Stress, psf		2709.6	5264.2	5987.3	
Time to Failure, min		24.504	36.002	28.001	
Disp. Rate, in/min		0.004	0.004	0.004	
Implied Specific Gravity		2.70	2.70	2.70	
Liquid Limit		---	---	---	
Plastic Limit		---	---	---	
Plasticity Index		---	---	---	

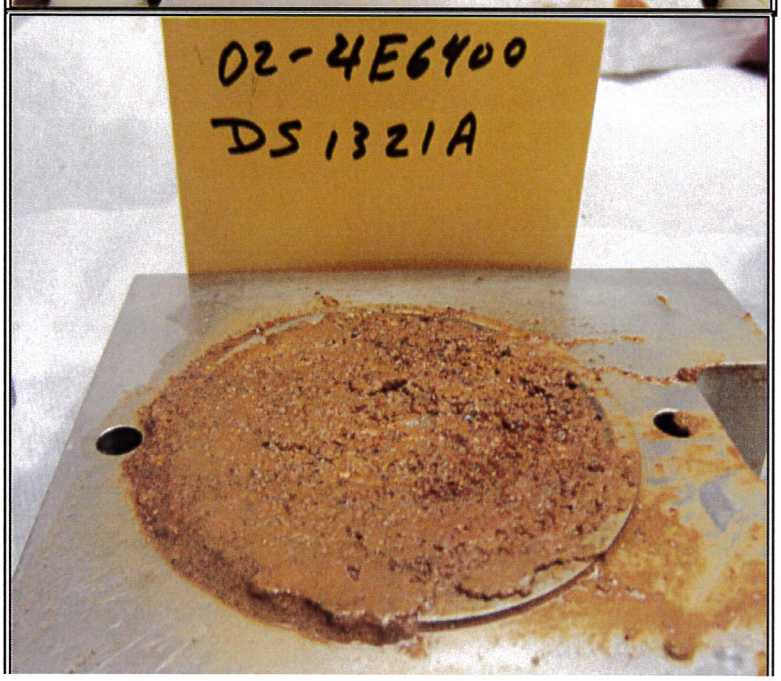
Project: HAMILTON BEACH BRDGE	
Location: 02-PLU-147-8.8	
Project No.: 02-4E6400	
Boring No.: RC-13-002	
Sample Type: TUBE	
Description: Moist, REDISH BROWN SILTY CLAY	
Remarks: ASTM D 3080. Sample description is not a soil classification.	

1/10/14

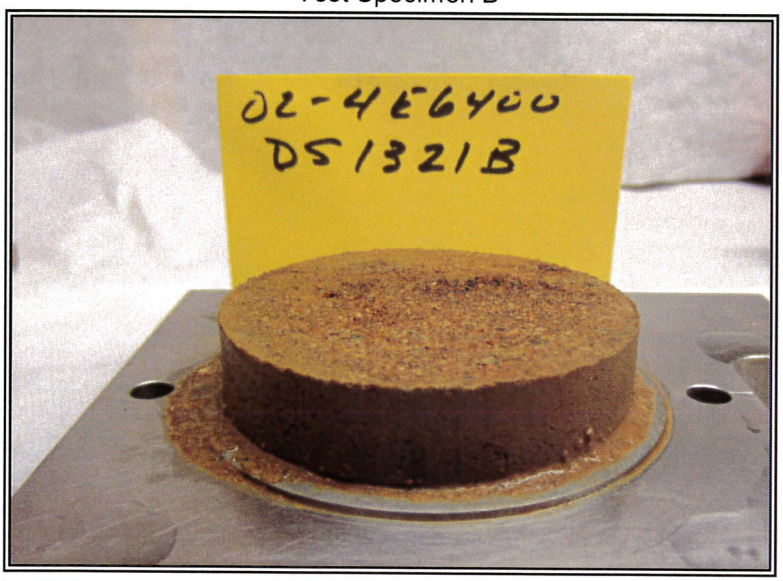
Tue, 07-JAN-2014 13:44:58

DIRECT SHEAR
JOB : 02-4E6400
SAMPLE : RC-13-002-19
Test Specimen A





DIRECT SHEAR
JOB : 02-4E6400
SAMPLE : RC-13-002-19
Test Specimen B



DIRECT SHEAR
JOB : 02-4E6400
SAMPLE : RC-13-002-19
Test Specimen C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF GEOTECHNICAL SUPPORT
GEOTECHNICAL LABORATORY

UNCONFINED COMPRESSION TEST RESULTS (ASTM D7012 Method C)

JOB LOCATION **02-PLU-147 PM 8.8** GL No. **13-083** DATE **12/12/2013**

TEST BY **jg**

JOB NUMBER **02-4E6400 Hamilton Branch Bridge** Bridge No. **09-0065** CHECKED BY **LP 1/3/14**

SAMPLE NO.	DEPTH FT.	DIA. IN.	LENGTH IN.	L/D RATIO	WEIGHT LBS.	LOAD LBS.	DENSITY PCF	STRENGTH PSI	REMARKS
RC-13-001-03	48.4-49.3	2.39	5.00	2.09	2.1	36409	163	8116	
RC-13-001-06	63-63.9	2.40	5.00	2.08	2.1	65602	163	14501	
RC-13-001-09	75.2-76.1	2.39	5.01	2.10	2.1	20195	161	4502	
RC-13-001-11	87-87.8	2.39	5.00	2.09	1.6	8742	126	1949	
RC-13-001-13	98.4-99.1	2.39	5.01	2.10	1.8	14990	138	3341	
RC-13-001-15	105.9-106.9	2.39	5.00	2.09	1.6	17369	122	3872	
RC-13-002-01	54.3-55	2.40	5.00	2.08	2.0	24754	155	5472	
RC-13-002-03	64.2-65	2.39	5.00	2.09	1.7	23801	135	5305	
RC-13-002-07	82-82.5	2.39	5.00	2.09	2.1	32765	161	7303	
RC-13-002-11	100.6-101.2								*
RC-13-002-11A	103.5-104.2	2.39	5.00	2.09	1.6	11397	126	2540	

Note: No moistures recorded

* Sample fell apart while preparing for testing -- Not suitable for testing

** The test specimen length/diameter ratio was not in compliance with the test method

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF GEOTECHNICAL SUPPORT
GEOTECHNICAL LABORATORY

UNCONFINED COMPRESSION TEST RESULTS (ASTM D7012 Method C)

JOB LOCATION **02-PLU-147 PM 8.8** GL No. **13-083** DATE **12/12/2013**

TEST BY **jg**

JOB NUMBER **02-4E6400 Hamilton Branch Bridge** Bridge No. **09-0065** CHECKED BY **LP 1/3/14**

SAMPLE NO.	DEPTH FT.	DIA. IN.	LENGTH IN.	L/D RATIO	WEIGHT LBS.	LOAD LBS.	DENSITY PCF	STRENGTH PSI	REMARKS
RC-13-003-03	51.7-52.5	2.40	5.00	2.08	2.2	43672	166	9654	
RC-13-003-05	61.5-62.0	2.38	5.00	2.10	2.0	37870	156	8512	
RC-13-003-07	73.5-74.0	2.39	5.00	2.09	2.1	42095	164	9383	
RC-13-003-10	86.0-86.5	2.40	5.01	2.09	1.9	20068	145	4436	
RC-13-003-12	98.0-99.0	2.39	5.01	2.10	2.2	52244	170	11645	
RC-13-003-14	105-106	2.39	5.00	2.09	2.2	55665	172	12408	
RC-13-004-14	29.1-30.0	2.39	5.00	2.09	1.8	25846	136	5761	
RC-13-004-17	43.8-44.5	2.40	5.00	2.08	2.1	67692	163	14963	
RC-13-004-19	50.5-51.5	2.40	5.01	2.09	2.2	77913	168	17223	
RC-13-004-20	57.9-58.5	2.40	5.01	2.09	2.2	51203	164	11318	
RC-13-004-23	73.4-74.0	2.40	5.01	2.09	2.1	49449	164	10931	

Note: No moistures recorded

* Sample fell apart while preparing for testing -- Not suitable for testing

** The test specimen length/diameter ratio was not in compliance with the test method

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
OFFICE OF GEOTECHNICAL SUPPORT
GEOTECHNICAL LABORATORY

UNCONFINED COMPRESSION TEST RESULTS (ASTM D7012 Method C)

JOB LOCATION **02-PLU-147 PM 8.8** GL No. **13-083** DATE **12/12/2013**

TEST BY **jg**

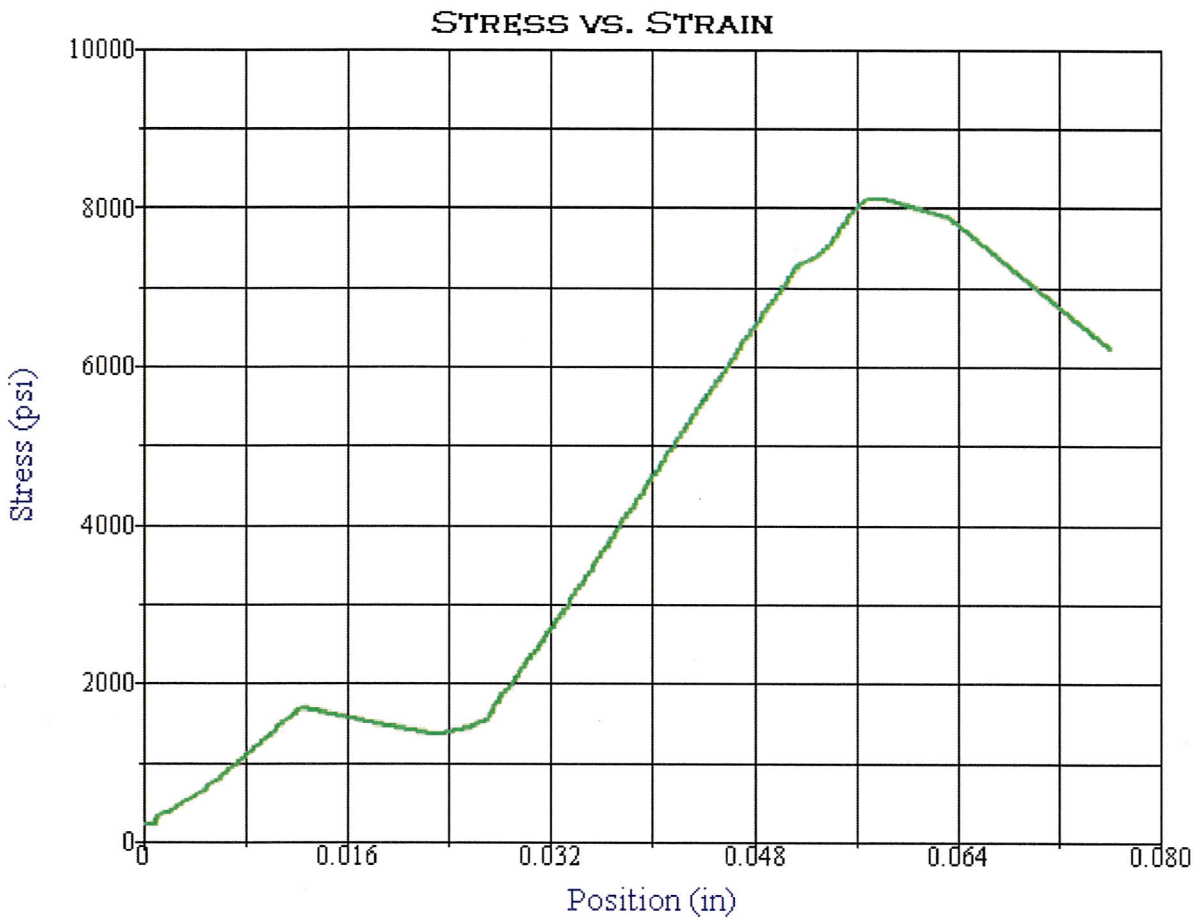
JOB NUMBER **02-4E6400 Hamilton Branch Bridge** Bridge No. **09-0065** CHECKED BY **LP 1/3/14**

SAMPLE NO.	DEPTH FT.	DIA. IN.	LENGTH IN.	L/D RATIO	WEIGHT LBS.	LOAD LBS.	DENSITY PCF	STRENGTH PSI	REMARKS
RC-13-005-17	44.2-45.0	2.38	5.00	2.10	2.1	21919	166	4927	
RC-13-005-22	60.4-61.2	2.39	5.00	2.09	2.0	28431	156	6337	
RC-13-005-25	77.3-78.0	2.39	5.00	2.09	2.1	53187	160	11855	
RC-13-005-26	81.0-81.8	2.40	5.00	2.08	2.2	59354	166	13120	
RC-13-005-27	87.3-88.2	2.39	5.01	2.10	2.2	50047	172	11156	

Note: No moistures recorded

* Sample fell apart while preparing for testing -- Not suitable for testing

** The test specimen length/diameter ratio was not in compliance with the test method

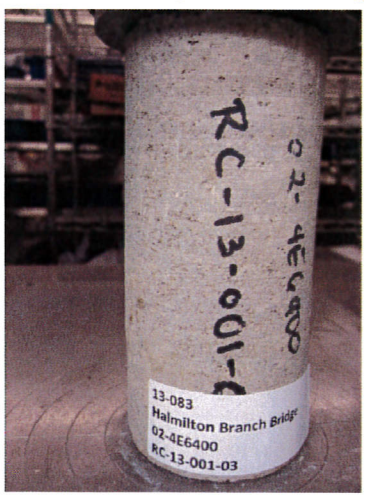


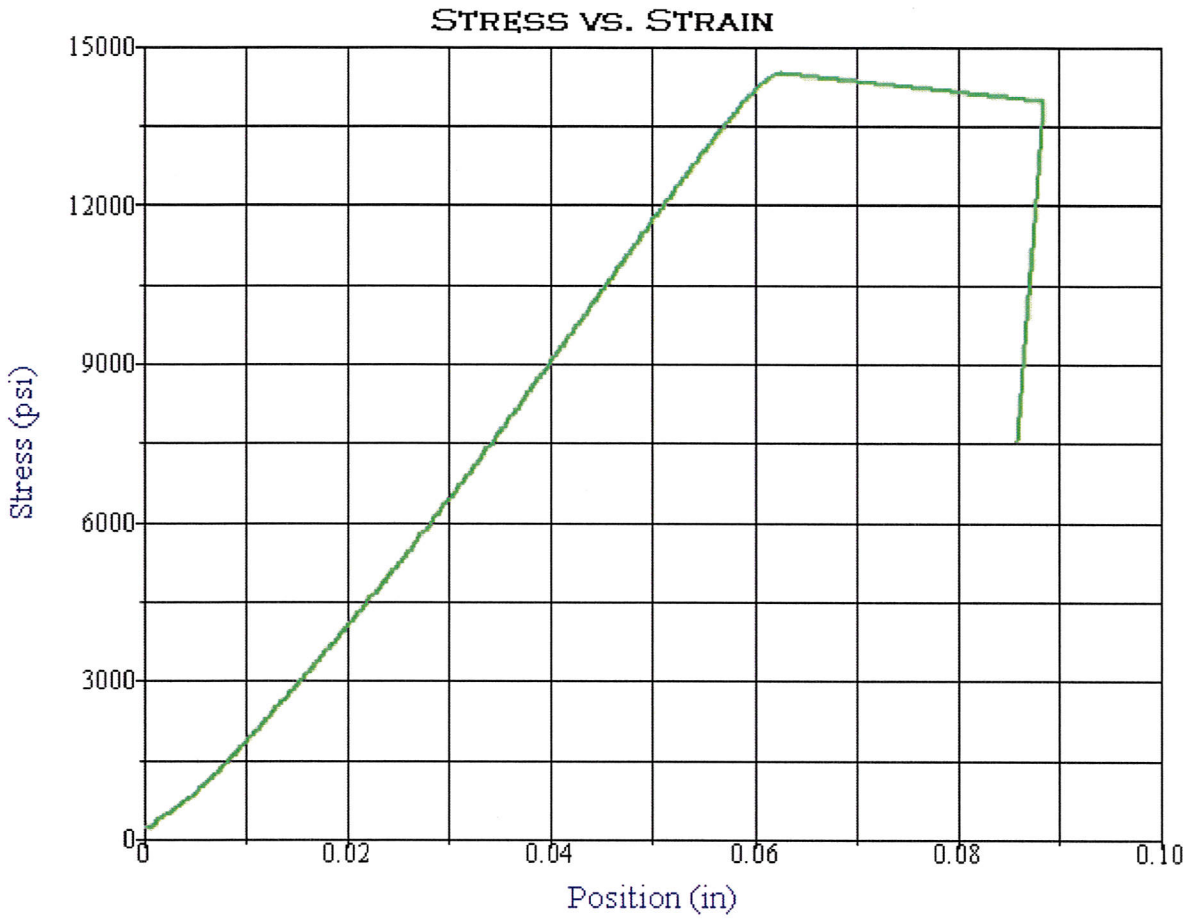
Test Summary

Counter:	2441
Elapsed Time:	00:03:43
Operator:	jg
Sample:	RC-13-001-03
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/12/2013
Start Time:	9:06:21 AM
End Date:	12/12/2013
End Time:	9:10:04 AM
Workstation:	D1K00YB12441
Tested By:	jg
Lab:	Q13-061

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	36409 lbf
Compressive Strength:	8116 psi



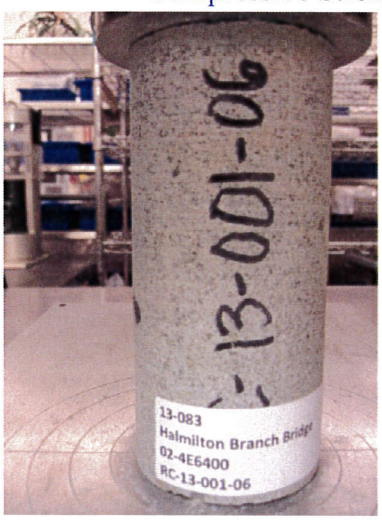


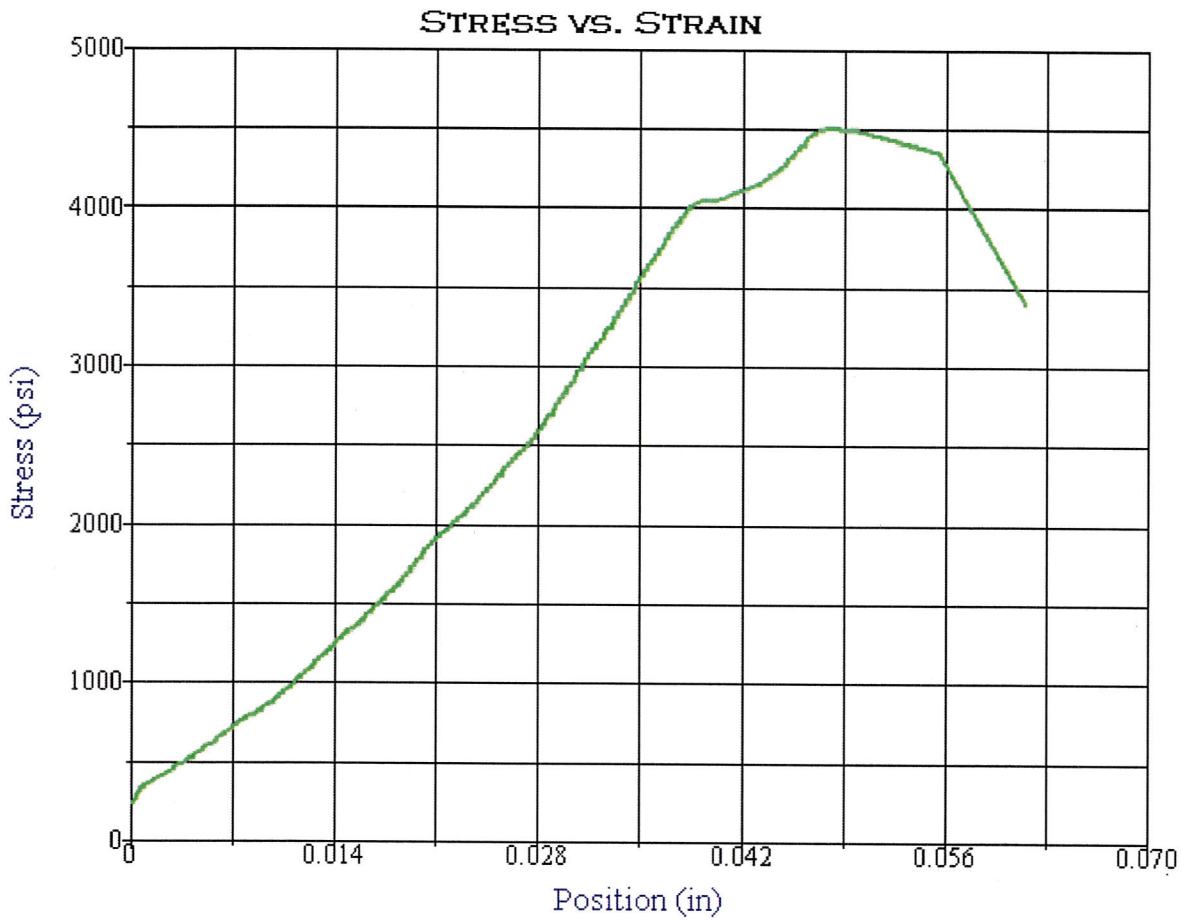
Test Summary

Counter:	2442
Elapsed Time:	00:06:45
Operator:	jg
Sample:	RC-13-001-06
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/12/2013
Start Time:	9:26:29 AM
End Date:	12/12/2013
End Time:	9:33:14 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-062

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.4000 in
Area:	4.5239 in²
Maximum Load:	65602 lbf
Compressive Strength:	14501 psi



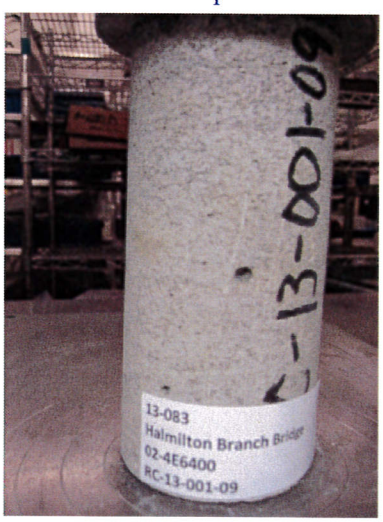


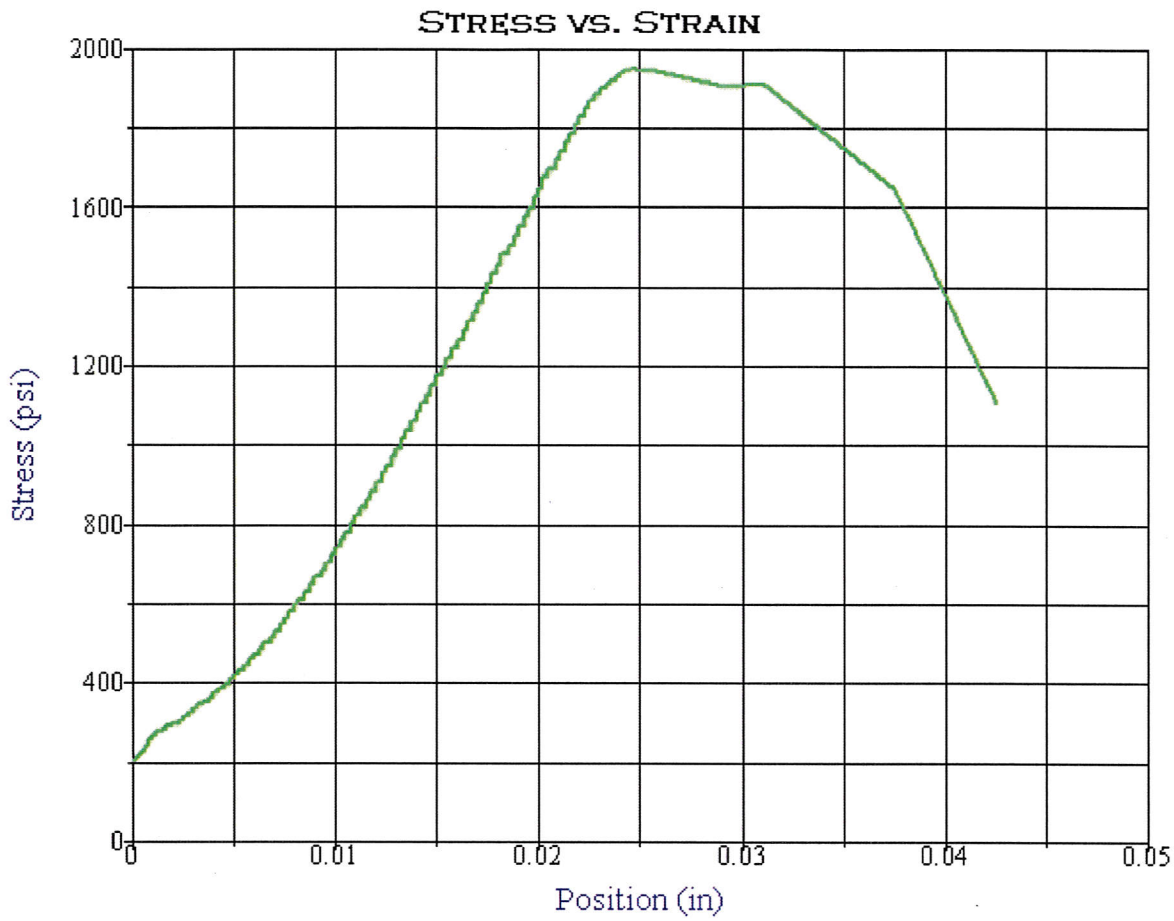
Test Summary

Counter:	2443
Elapsed Time:	00:02:00
Operator:	jg
Sample:	RC-13-001-09
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/12/2013
Start Time:	9:42:25 AM
End Date:	12/12/2013
End Time:	9:44:25 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-063

Test Results

Specimen Gage Length:	5.0100 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	20195 lbf
Compressive Strength:	4501 psi



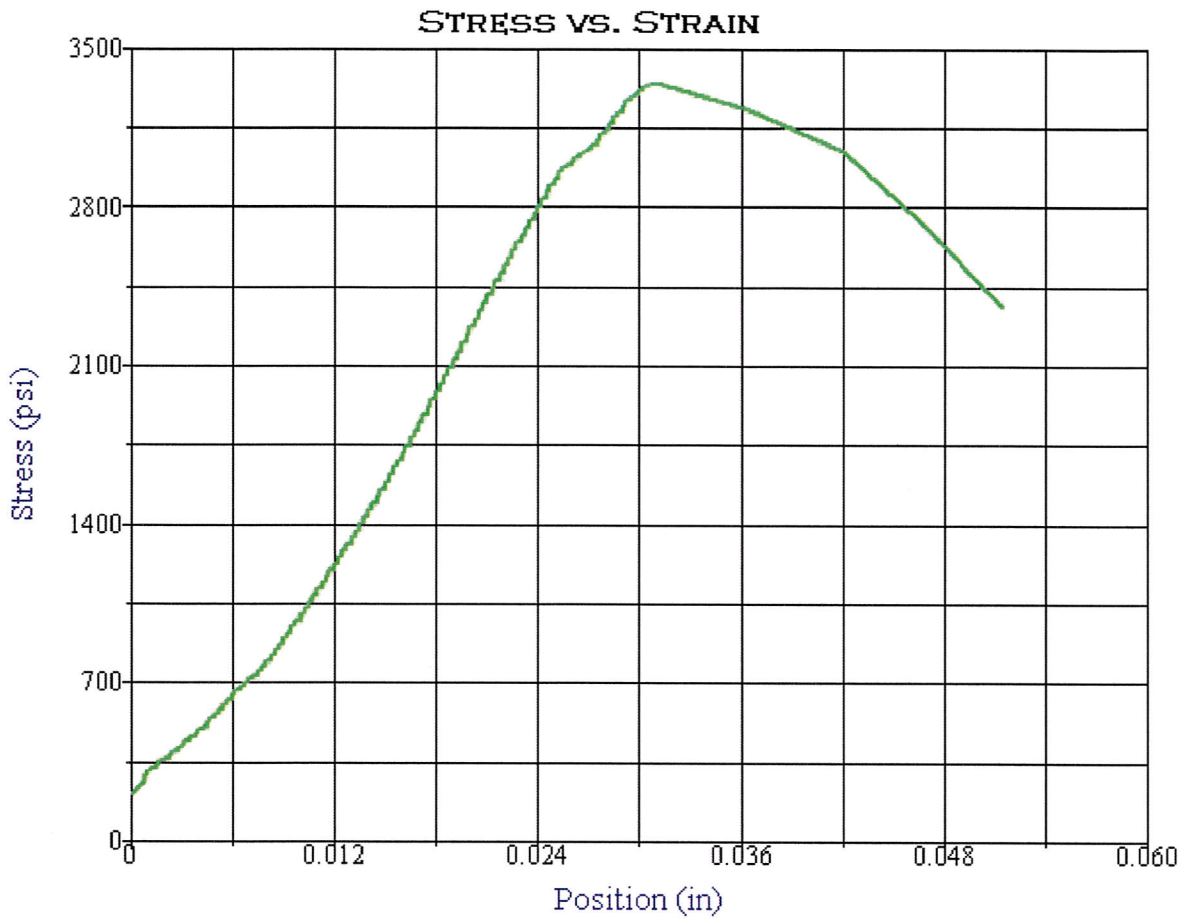


Test Summary

Counter:	2444
Elapsed Time:	00:00:49
Operator:	jg
Sample:	RC-13-001-11
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/12/2013
Start Time:	9:53:05 AM
End Date:	12/12/2013
End Time:	9:53:54 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-064

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	8742 lbf
Compressive Strength:	1949 psi

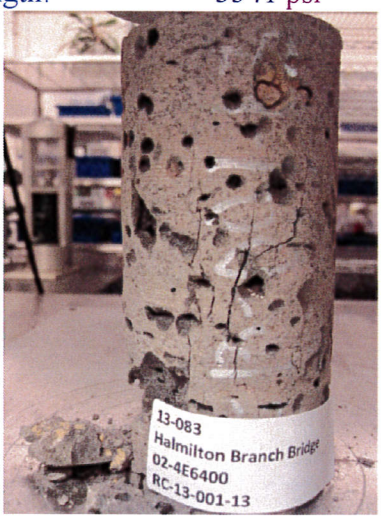


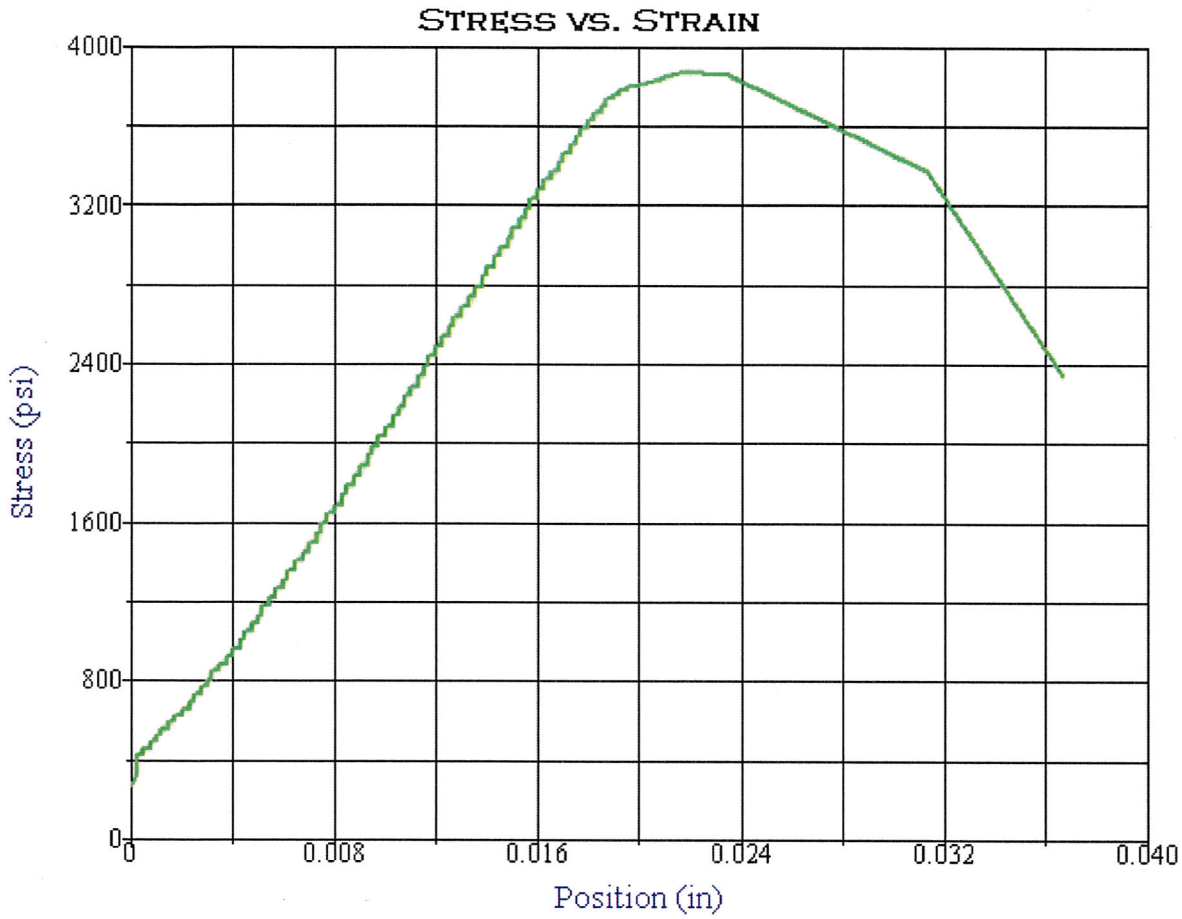
Test Summary

Counter:	2445
Elapsed Time:	00:01:28
Operator:	jg
Sample:	RC-13-001-13
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/12/2013
Start Time:	10:06:14 AM
End Date:	12/12/2013
End Time:	10:07:42 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-065

Test Results

Specimen Gage Length:	5.0100 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	14990 lbf
Compressive Strength:	3341 psi



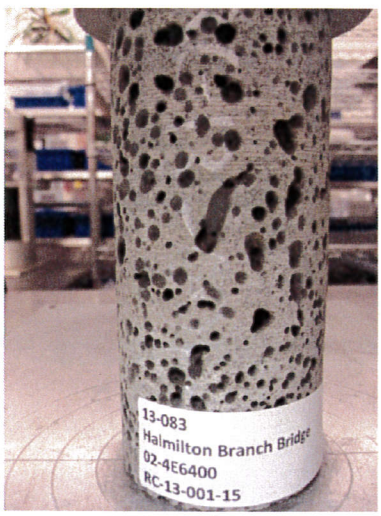


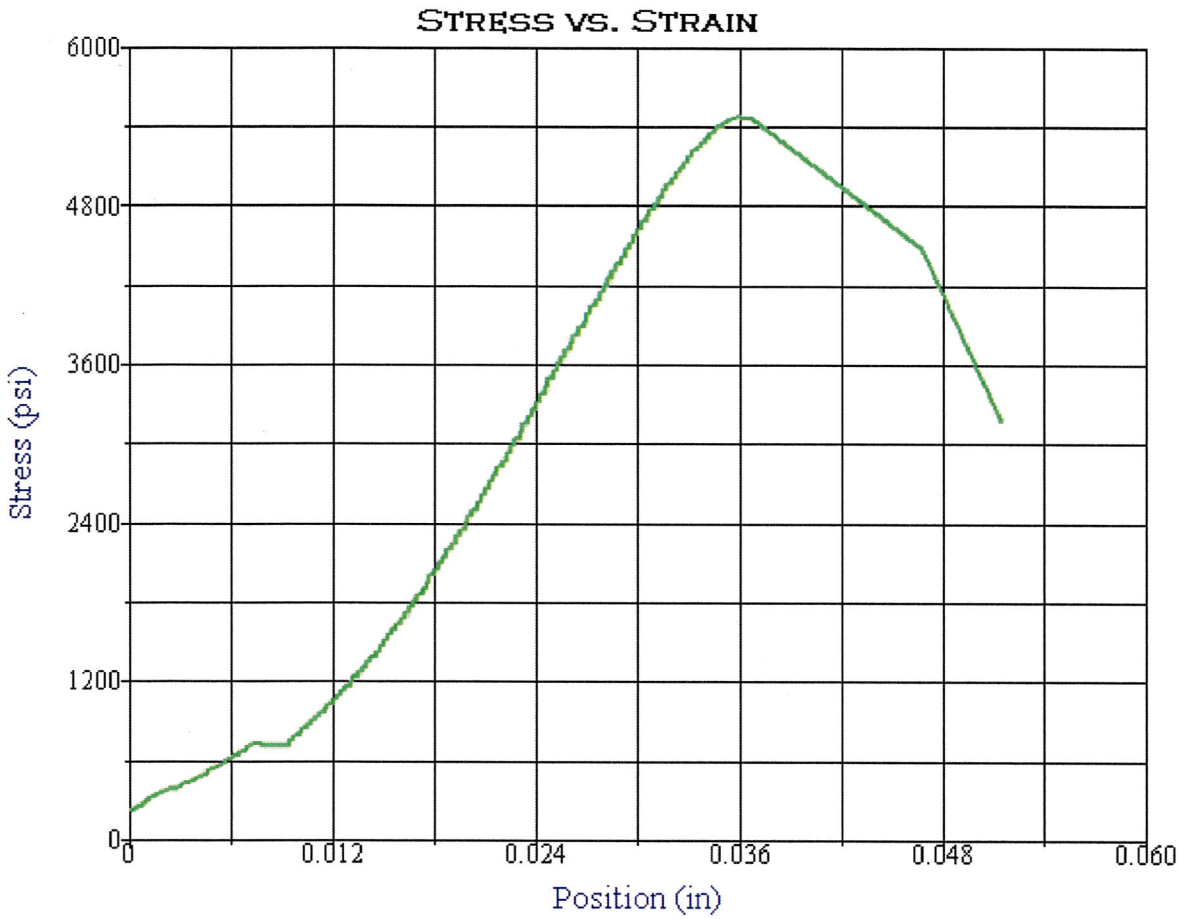
Test Summary

Counter:	2446
Elapsed Time:	00:01:40
Operator:	jg
Sample:	RC-13-001-15
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/12/2013
Start Time:	10:17:07 AM
End Date:	12/12/2013
End Time:	10:18:47 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-066

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	17369 lbf
Compressive Strength:	3872 psi



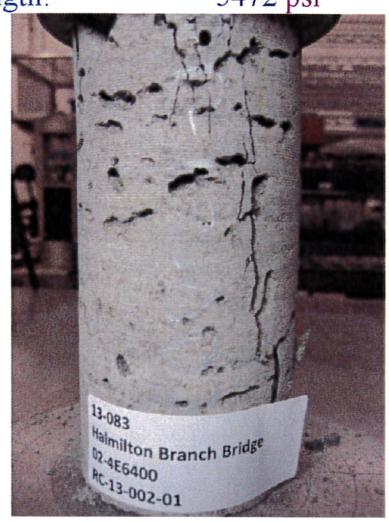


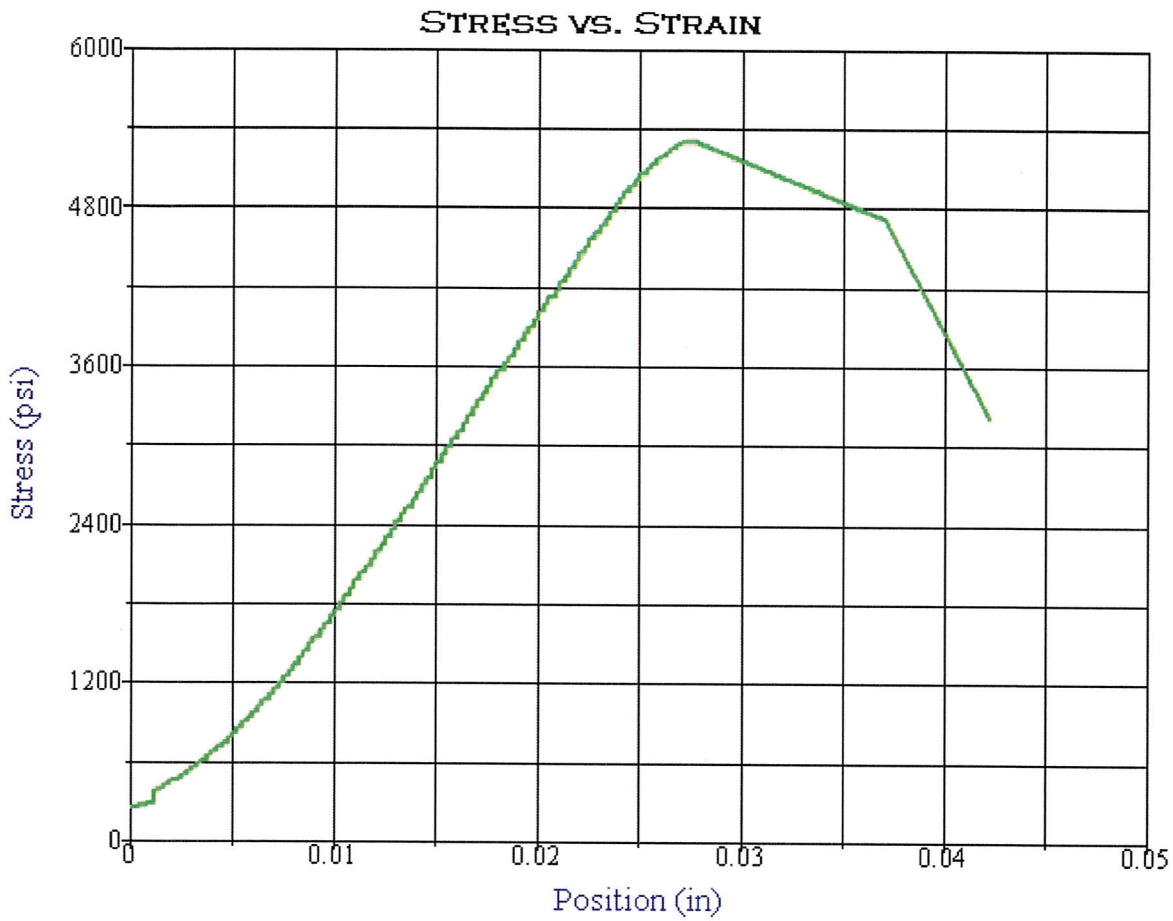
Test Summary

Counter:	2447
Elapsed Time:	00:02:28
Operator:	jg
Sample:	RC-13-002-01
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/12/2013
Start Time:	10:25:39 AM
End Date:	12/12/2013
End Time:	10:28:07 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-067

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.4000 in
Area:	4.5239 in²
Maximum Load:	24754 lbf
Compressive Strength:	5472 psi



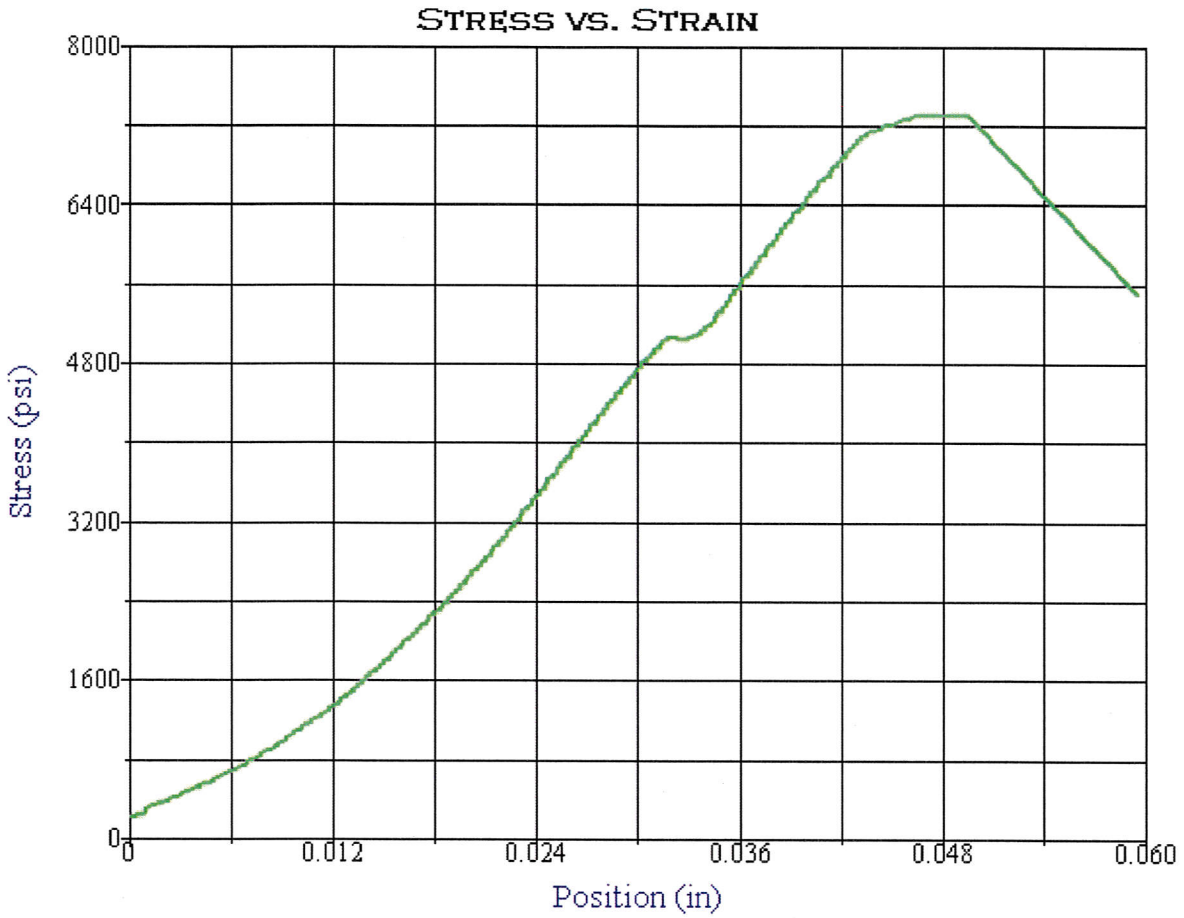


Test Summary

Counter:	2448
Elapsed Time:	00:02:21
Operator:	jg
Sample:	RC-13-002-03
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-E64000
Procedure Name:	Cores test for Soil lab
Start Date:	12/18/2013
Start Time:	9:35:30 AM
End Date:	12/18/2013
End Time:	9:37:51 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-068

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	23801 lbf
Compressive Strength:	5305 psi

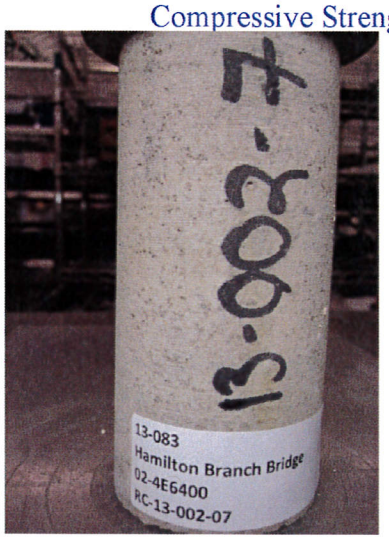


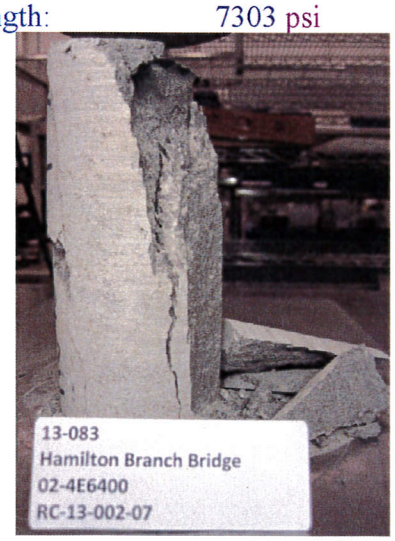
Test Summary

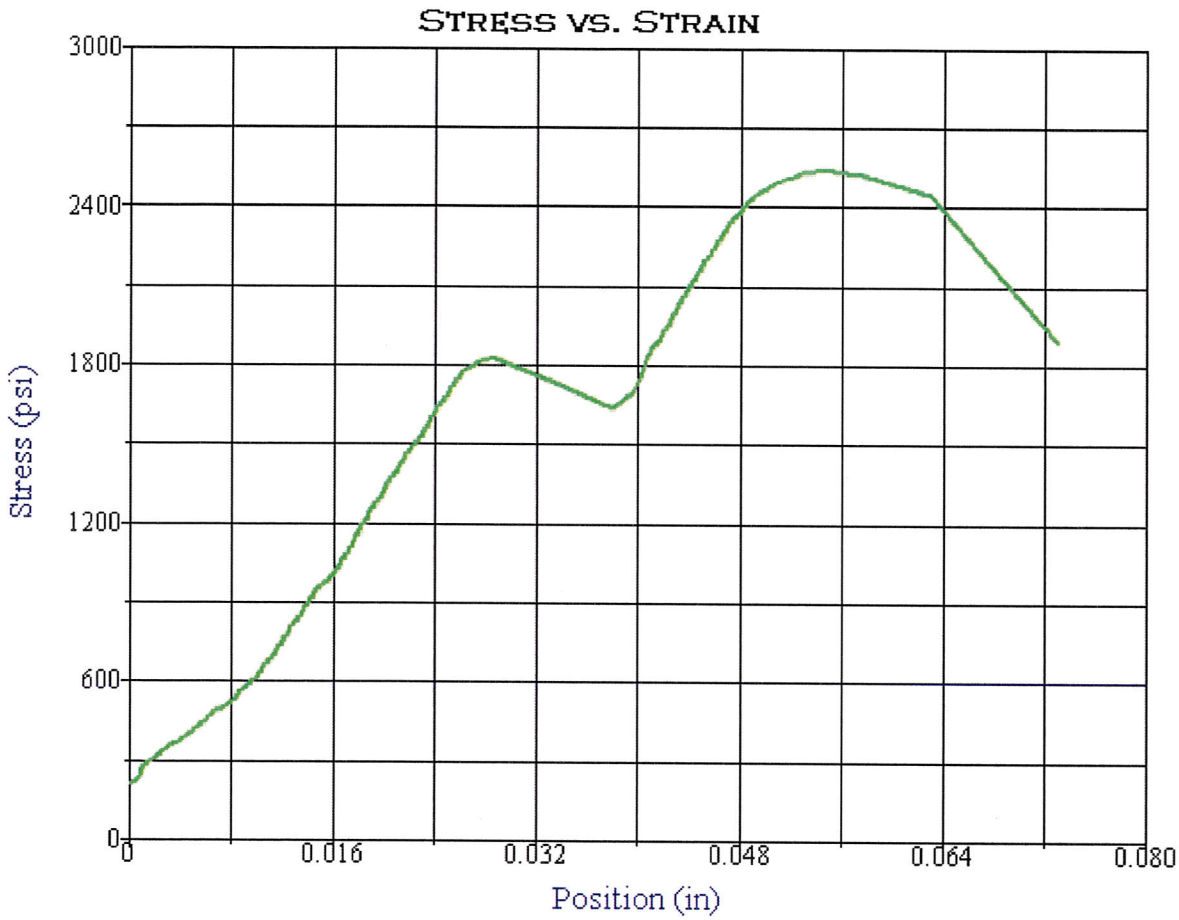
Counter:	2449
Elapsed Time:	00:03:21
Operator:	jg
Sample:	RC-13-002- 07
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/18/2013
Start Time:	9:48:57 AM
End Date:	12/18/2013
End Time:	9:52:18 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-069

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	32765 lbf
Compressive Strength:	7303 psi





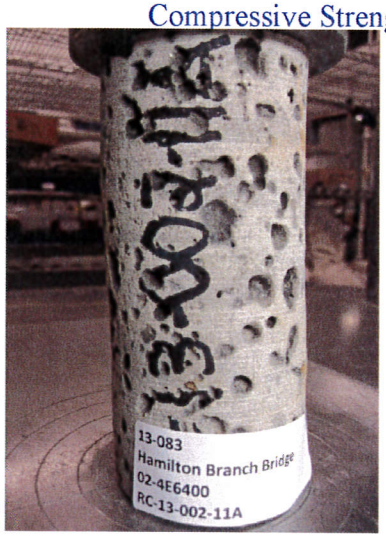


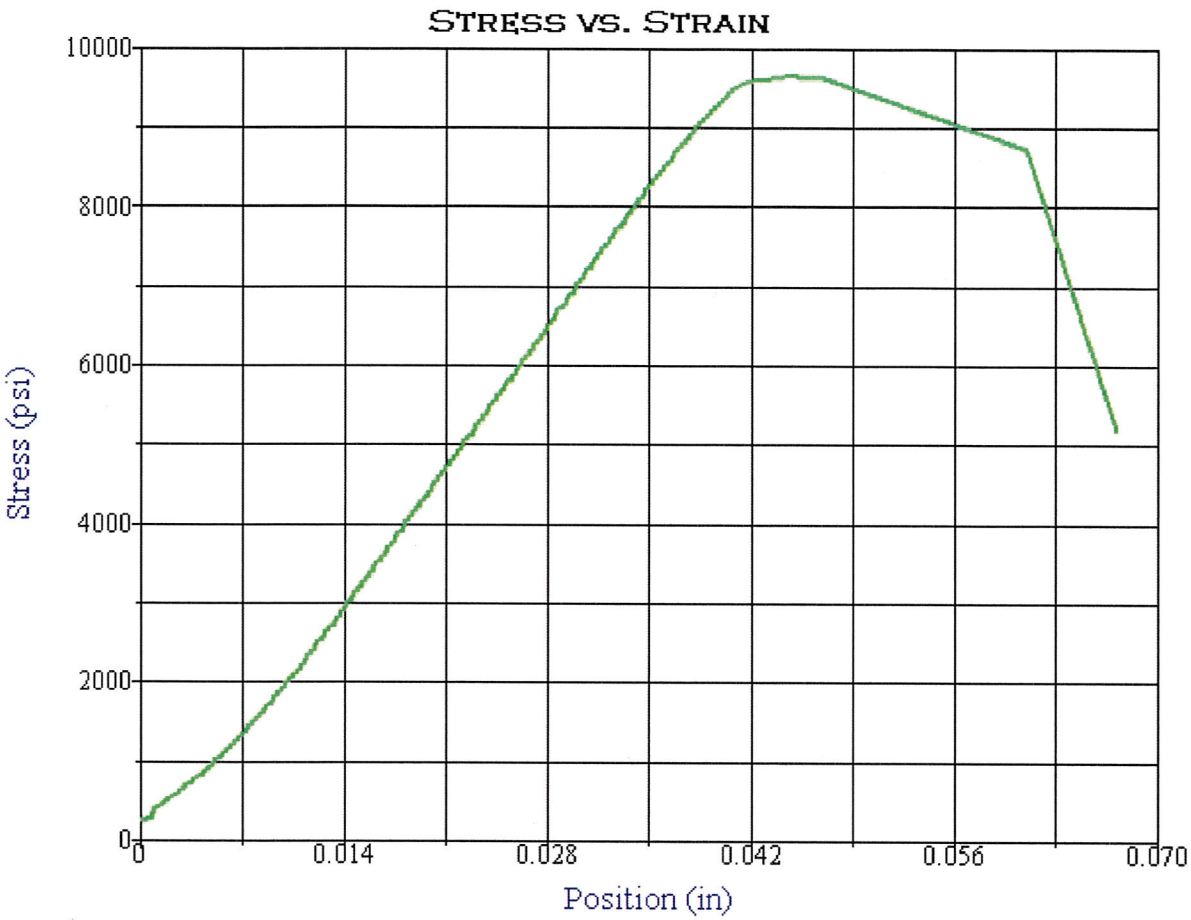
Test Summary

Counter:	2450
Elapsed Time:	00:01:06
Operator:	jg
Sample:	RC-13-002-11A
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/18/2013
Start Time:	2:03:11 PM
End Date:	12/18/2013
End Time:	2:04:17 PM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-071

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	11397 lbf
Compressive Strength:	2540 psi



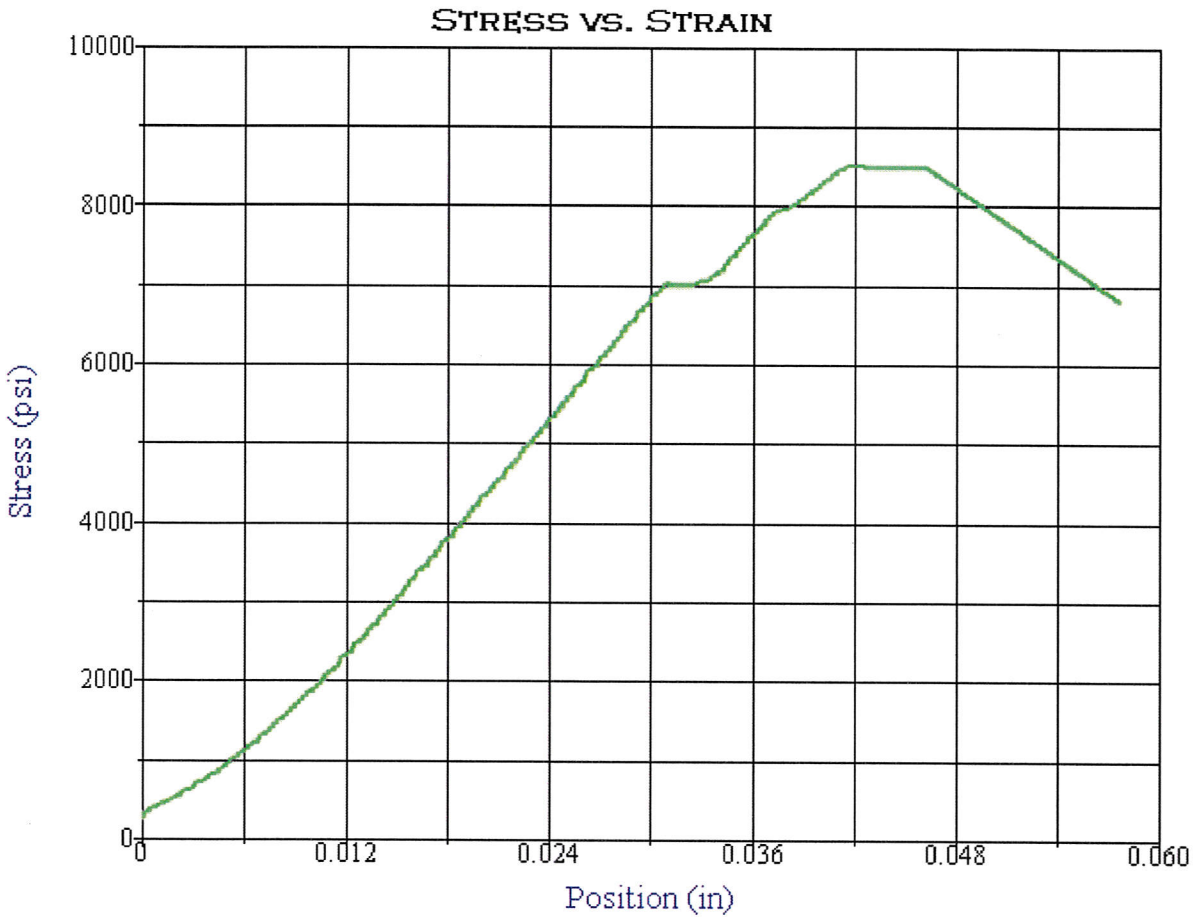


Test Summary

Counter:	2451
Elapsed Time:	00:04:25
Operator:	jg
Sample:	RC-13-003-03
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/19/2013
Start Time:	10:01:33 AM
End Date:	12/19/2013
End Time:	10:05:58 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-072

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.4000 in
Area:	4.5239 in²
Maximum Load:	43672 lbf
Compressive Strength:	9654 psi

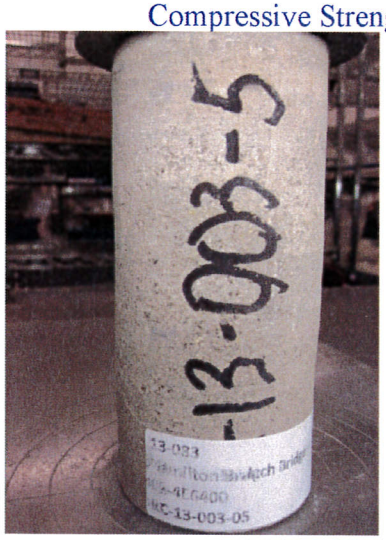


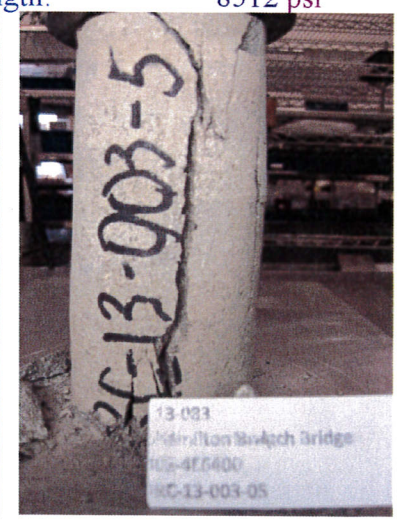
Test Summary

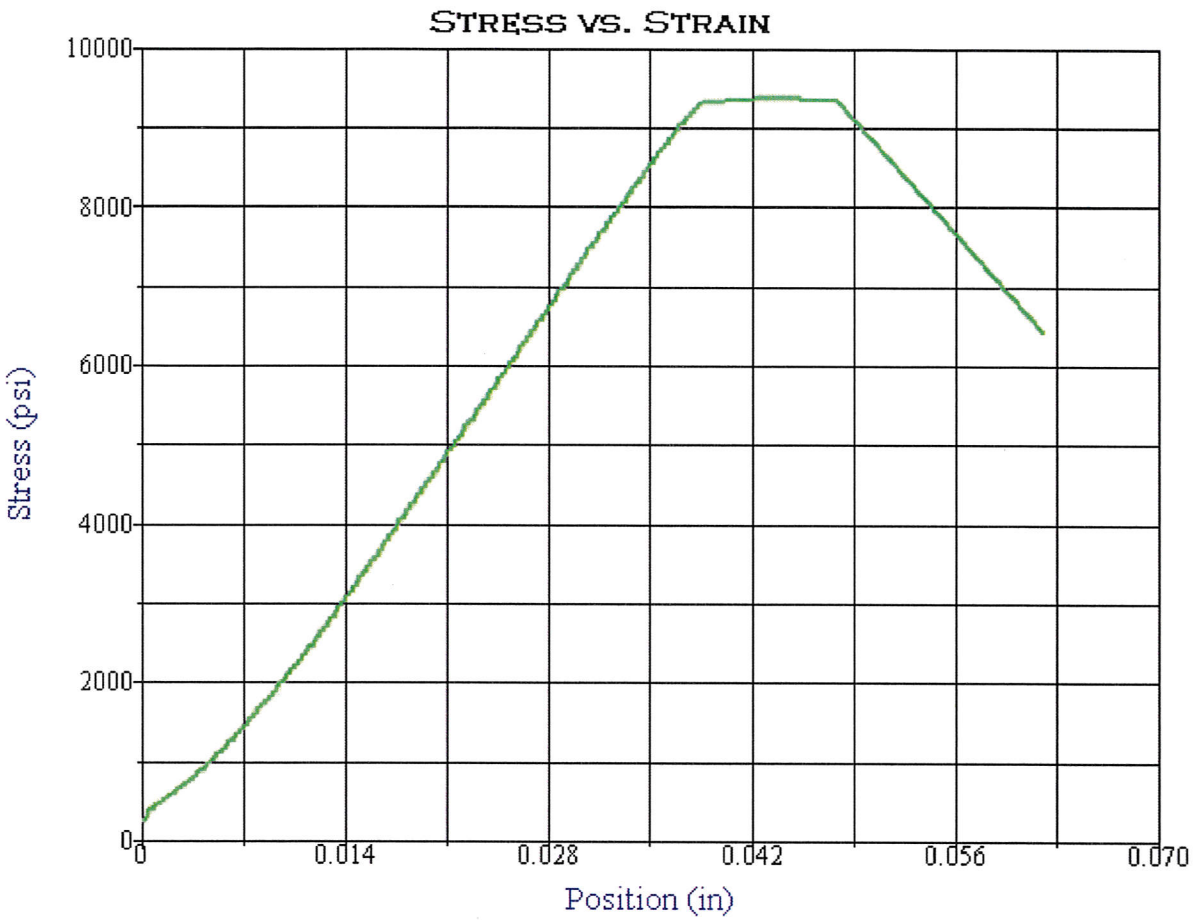
Counter:	2452
Elapsed Time:	00:03:54
Operator:	jg
Sample:	RC-13-003-05
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/19/2013
Start Time:	10:15:08 AM
End Date:	12/19/2013
End Time:	10:19:02 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-073

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3800 in
Area:	4.4488 in²
Maximum Load:	37870 lbf
Compressive Strength:	8512 psi





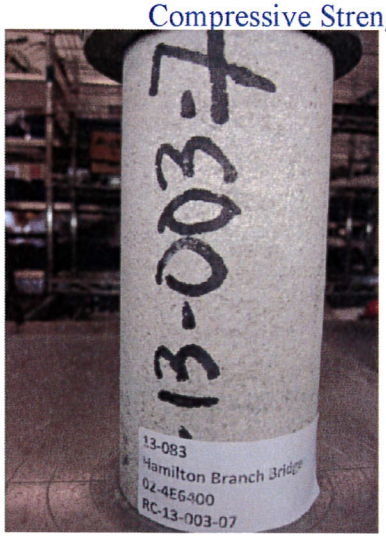


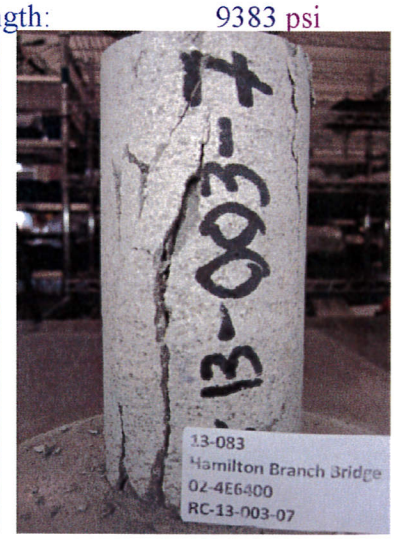
Test Summary

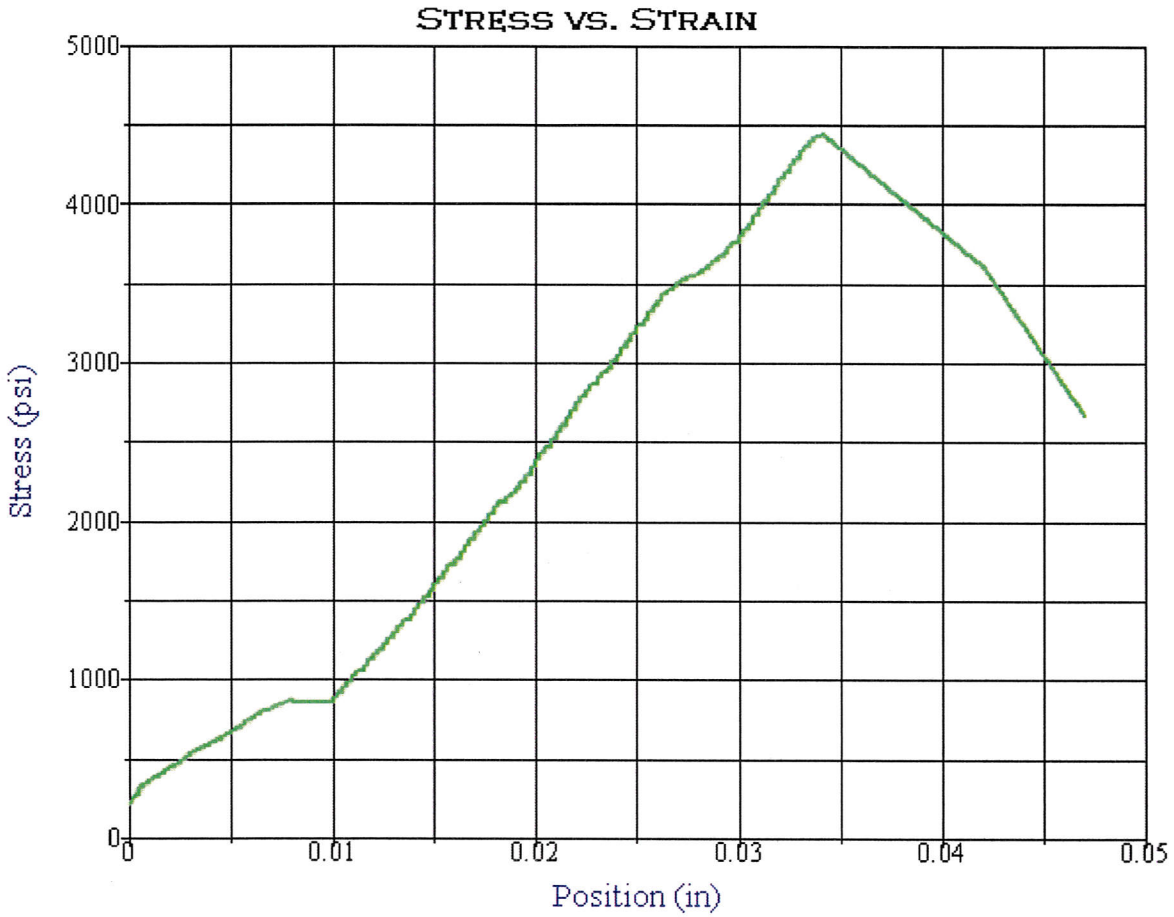
Counter:	2453
Elapsed Time:	00:04:17
Operator:	jg
Sample:	RC-13-003-07
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/19/2013
Start Time:	10:25:52 AM
End Date:	12/19/2013
End Time:	10:30:09 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-074

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	42095 lbf
Compressive Strength:	9383 psi





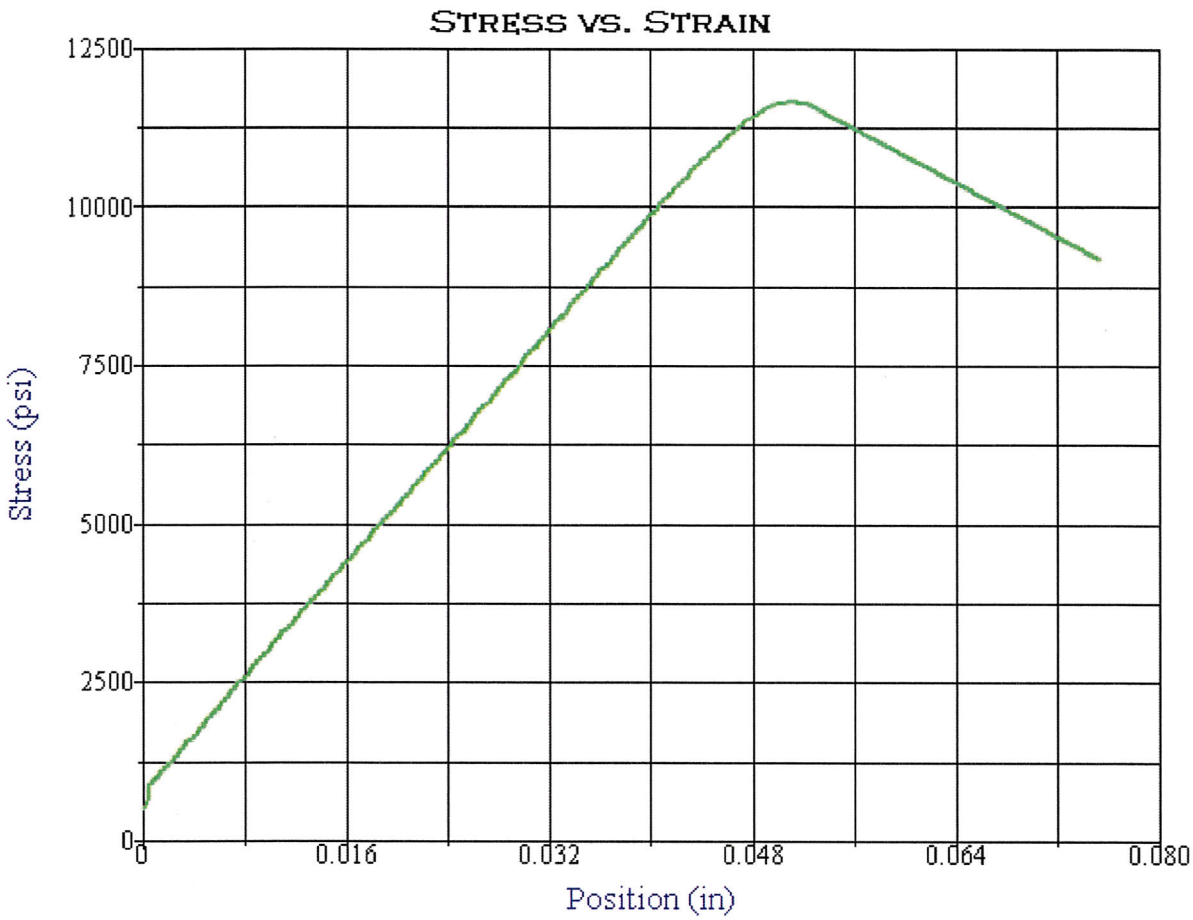


Test Summary

Counter:	2454
Elapsed Time:	00:01:58
Operator:	jg
Sample:	RC-13-003-10
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/19/2013
Start Time:	10:38:26 AM
End Date:	12/19/2013
End Time:	10:40:24 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-075

Test Results

Specimen Gage Length:	5.0100 in
Diameter:	2.4000 in
Area:	4.5239 in²
Maximum Load:	20068 lbf
Compressive Strength:	4436 psi

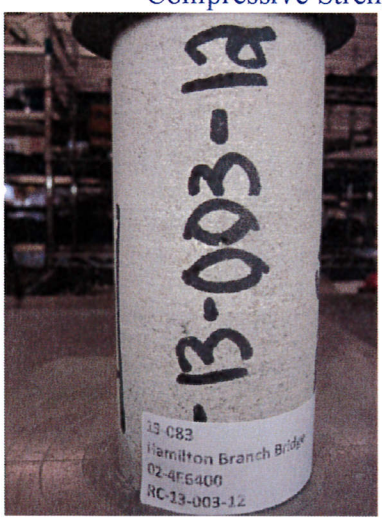


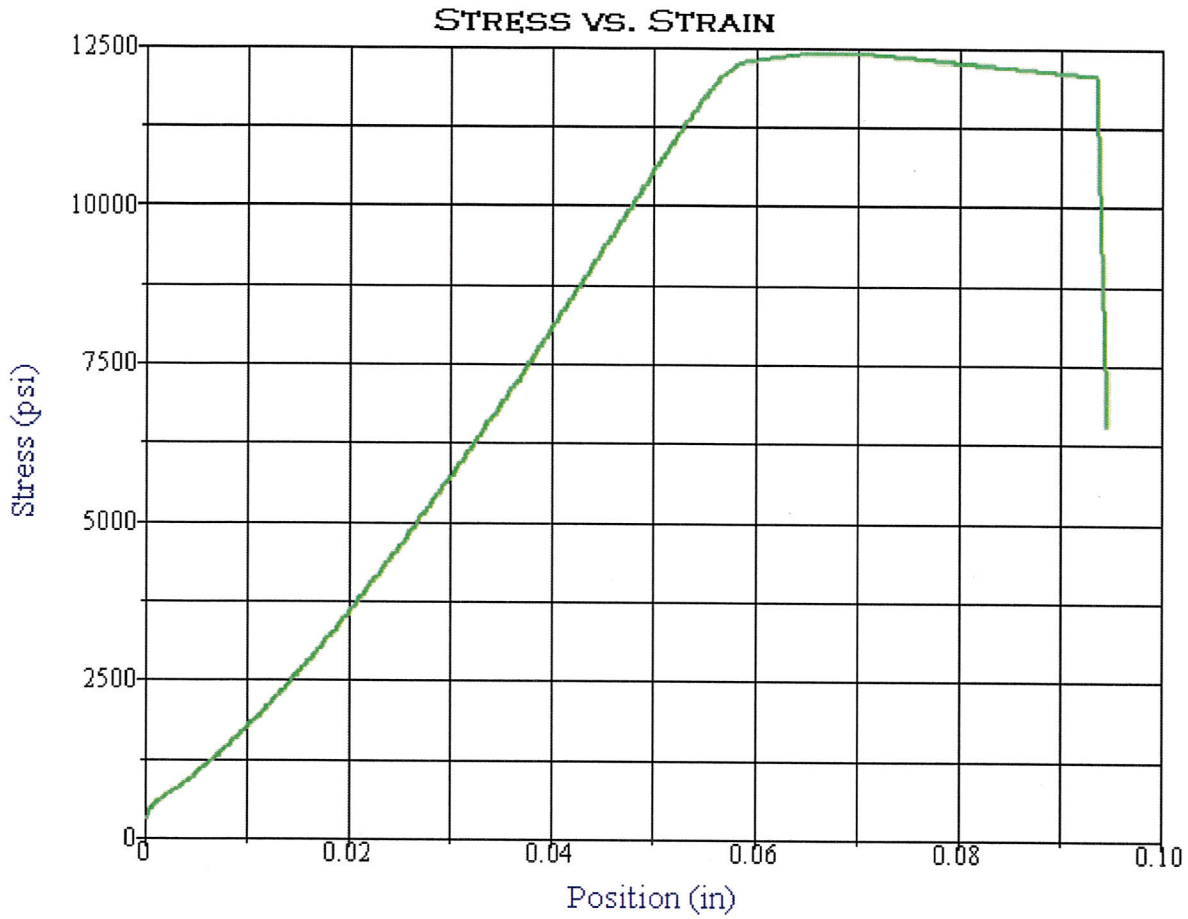
Test Summary

Counter:	2455
Elapsed Time:	00:05:08
Operator:	jg
Sample:	RC-13-003-12
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/19/2013
Start Time:	10:49:24 AM
End Date:	12/19/2013
End Time:	10:54:32 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-076

Test Results

Specimen Gage Length:	5.0100 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	52244 lbf
Compressive Strength:	11645 psi



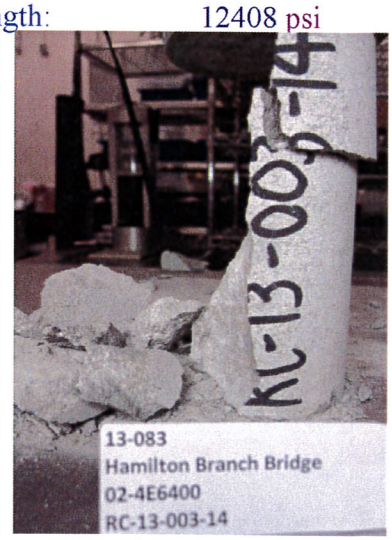


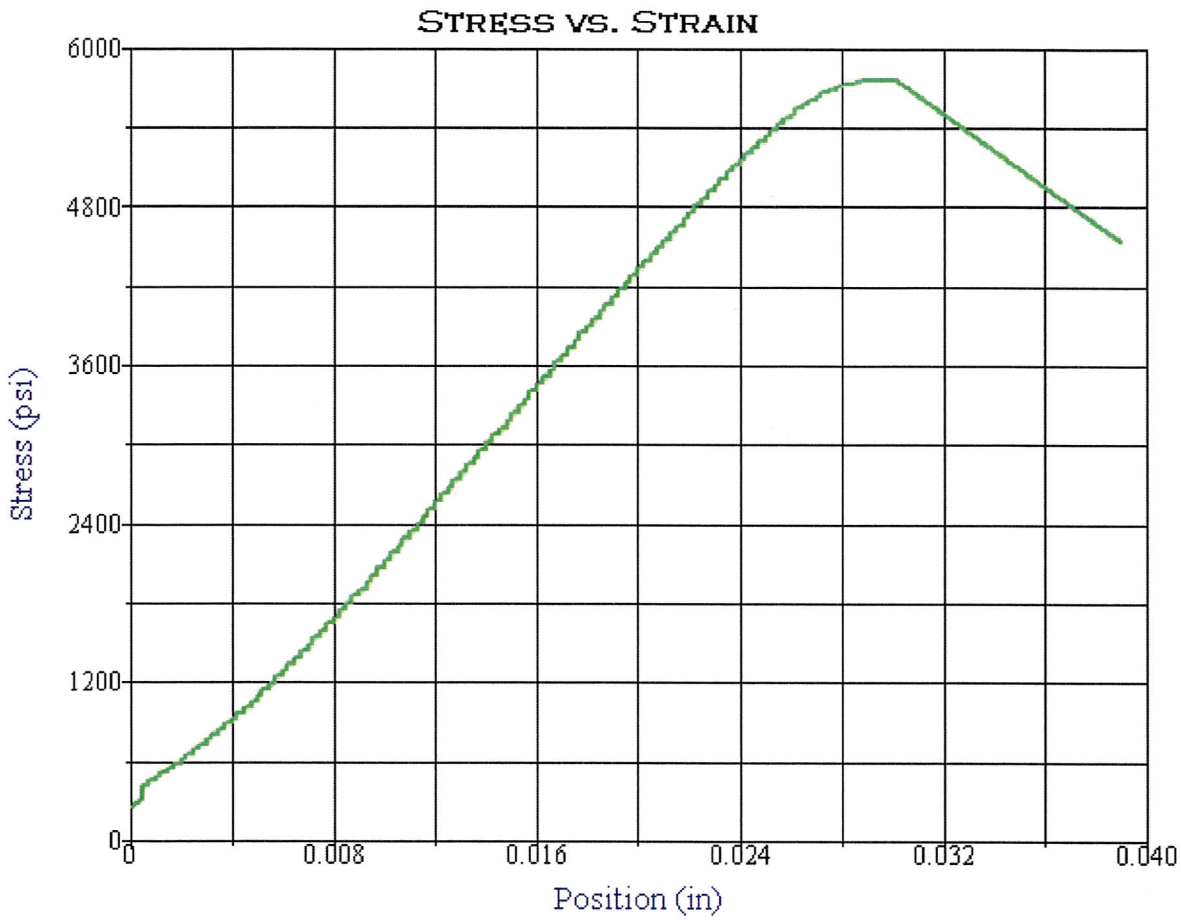
Test Summary

Counter:	2456
Elapsed Time:	00:05:41
Operator:	jg
Sample:	RC-13-003-14
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/20/2013
Start Time:	10:50:04 AM
End Date:	12/20/2013
End Time:	10:55:45 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-077

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	55665 lbf
Compressive Strength:	12408 psi



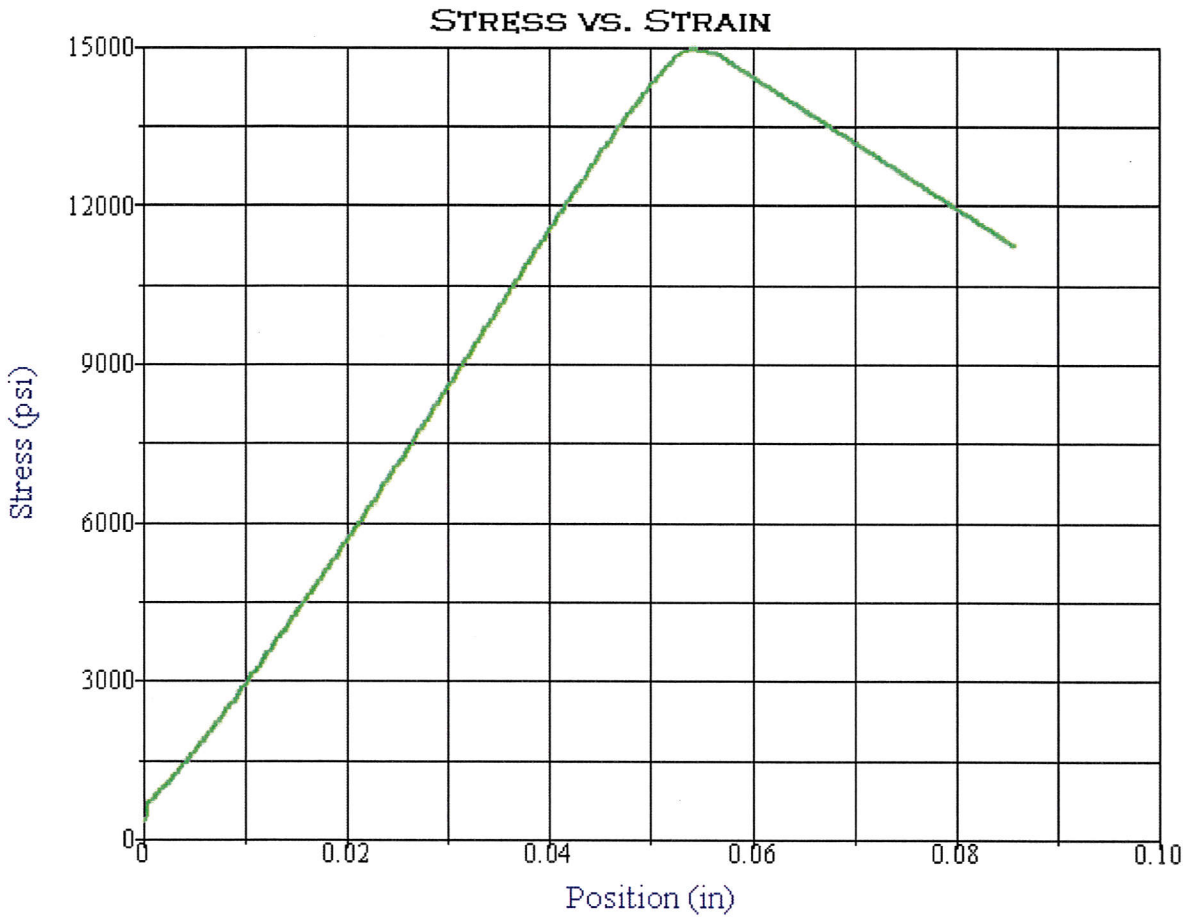


Test Summary

Counter:	2457
Elapsed Time:	00:02:33
Operator:	jg
Sample:	RC-13-004-14
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/20/2013
Start Time:	11:05:58 AM
End Date:	12/20/2013
End Time:	11:08:31 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-078

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	25846 lbf
Compressive Strength:	5761 psi

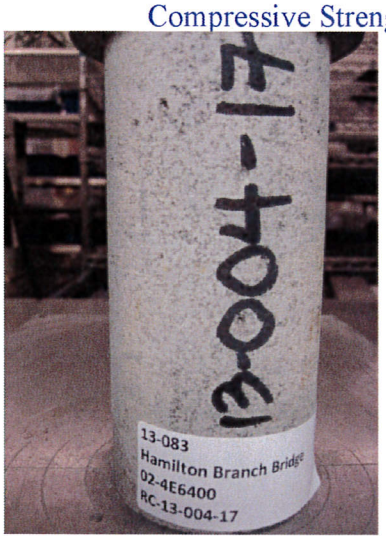


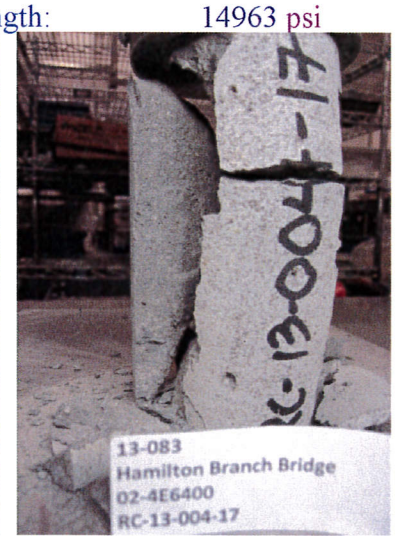
Test Summary

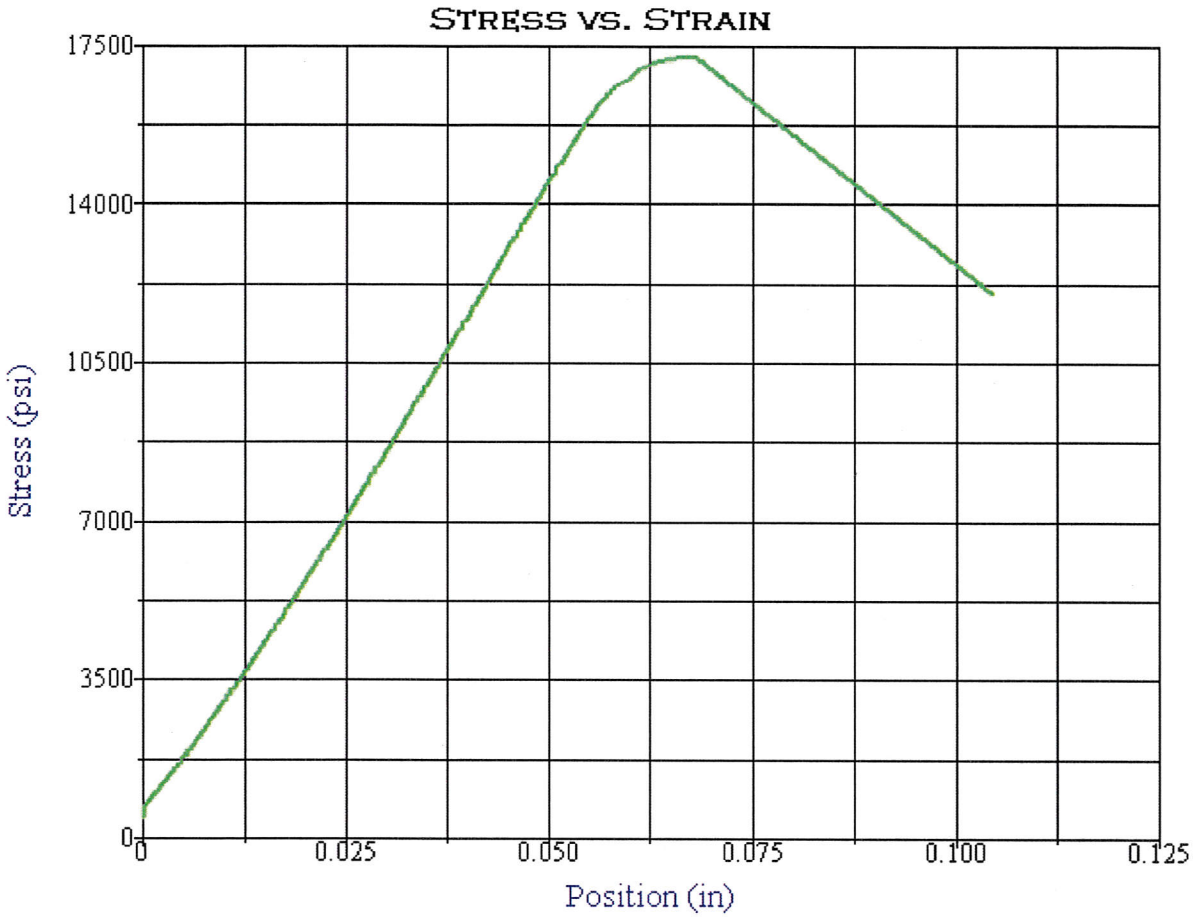
Counter:	2458
Elapsed Time:	00:06:50
Operator:	jg
Sample:	RC-13-004-17
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/20/2013
Start Time:	11:14:34 AM
End Date:	12/20/2013
End Time:	11:21:24 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-079

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.4000 in
Area:	4.5239 in²
Maximum Load:	67692 lbf
Compressive Strength:	14963 psi





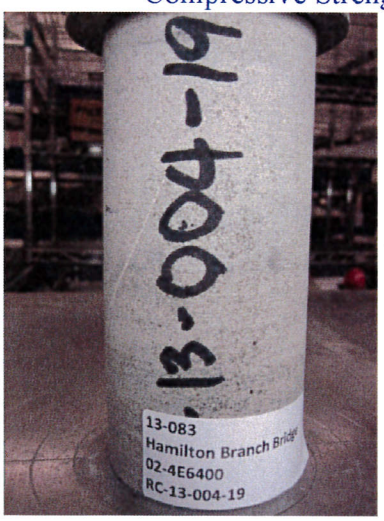


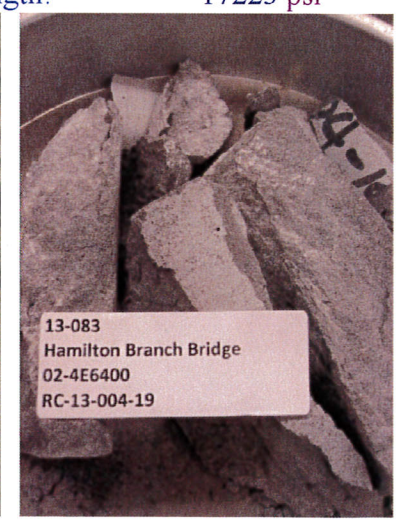
Test Summary

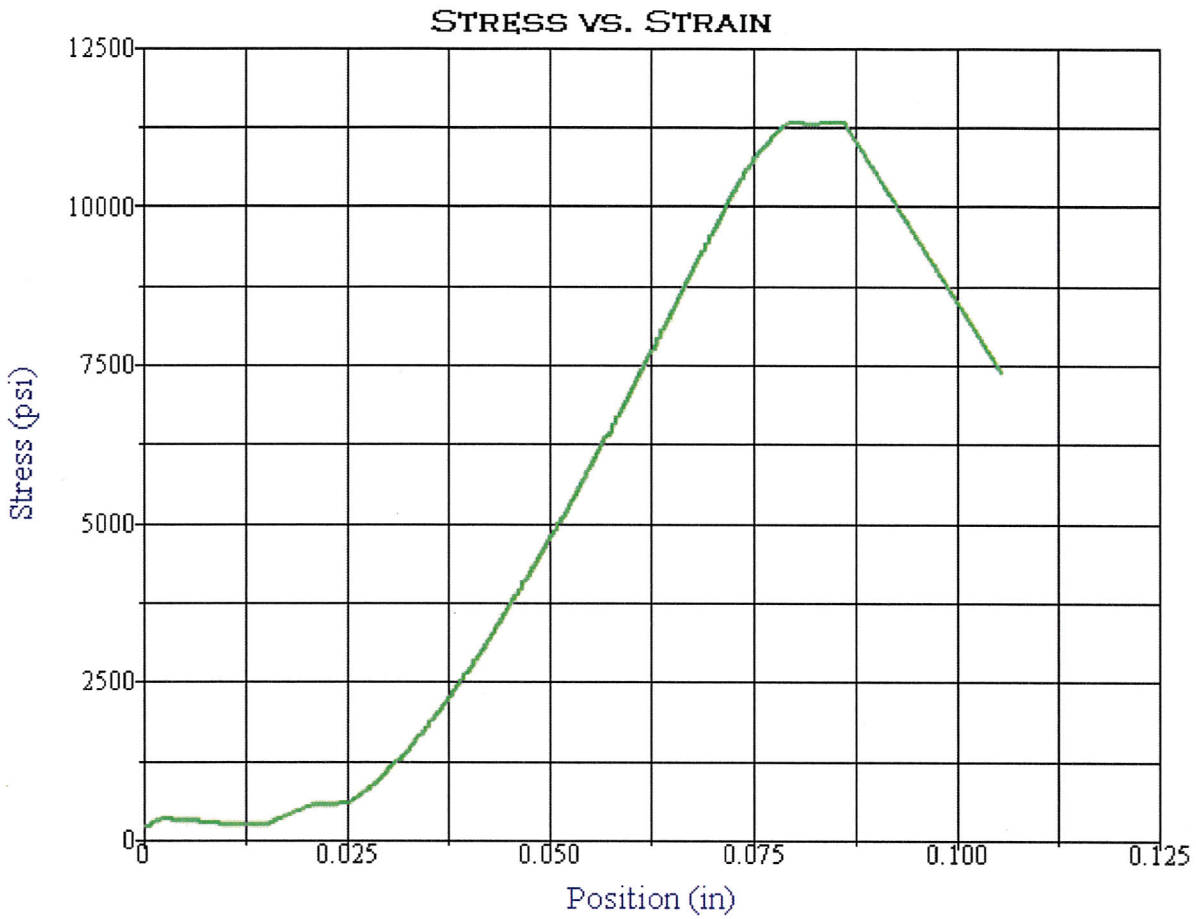
Counter:	2459
Elapsed Time:	00:07:52
Operator:	jg
Sample:	RC-13-004-19
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/20/2013
Start Time:	11:27:12 AM
End Date:	12/20/2013
End Time:	11:35:04 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-080

Test Results

Specimen Gage Length:	5.0100 in
Diameter:	2.4000 in
Area:	4.5239 in²
Maximum Load:	77913 lbf
Compressive Strength:	17223 psi





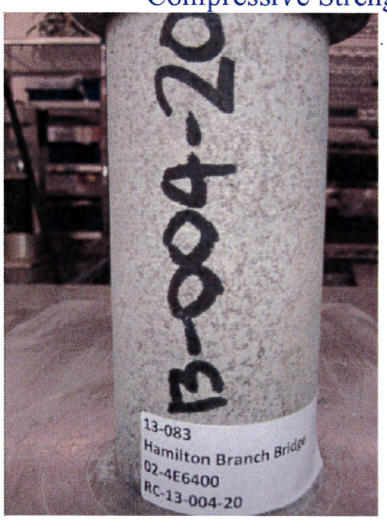


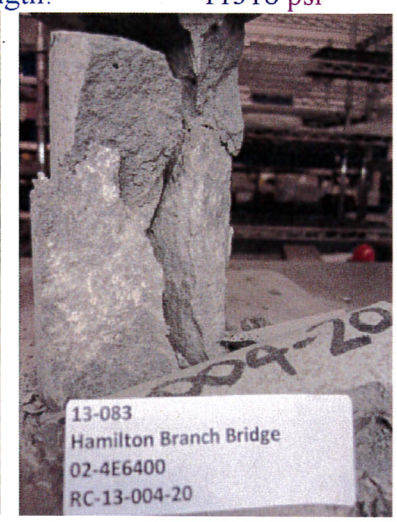
Test Summary

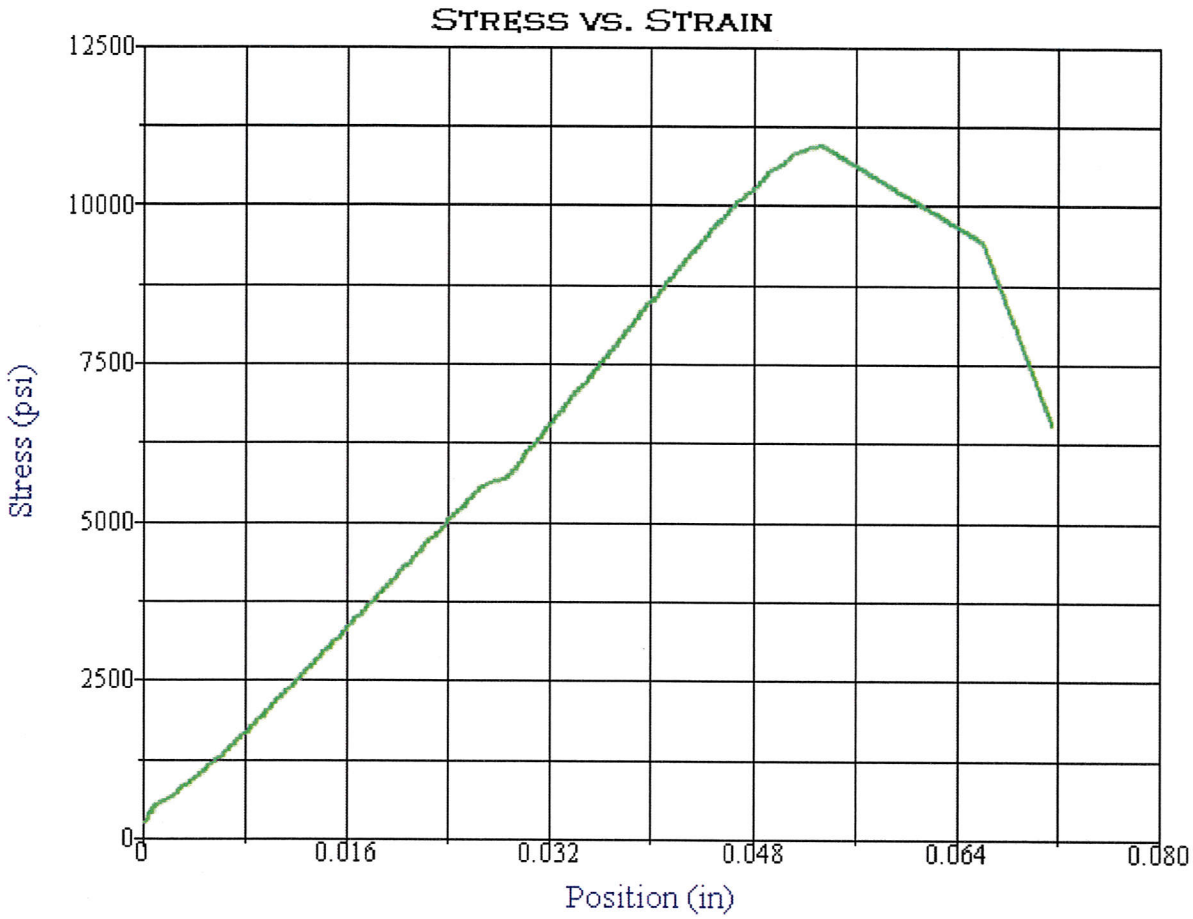
Counter:	2460
Elapsed Time:	00:05:15
Operator:	jg
Sample:	RC-13-004-20
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/20/2013
Start Time:	11:45:32 AM
End Date:	12/20/2013
End Time:	11:50:47 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-081

Test Results

Specimen Gage Length:	5.0100 in
Diameter:	2.4000 in
Area:	4.5239 in²
Maximum Load:	51203 lbf
Compressive Strength:	11318 psi





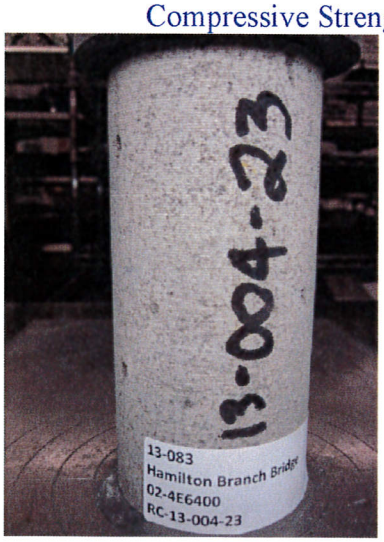


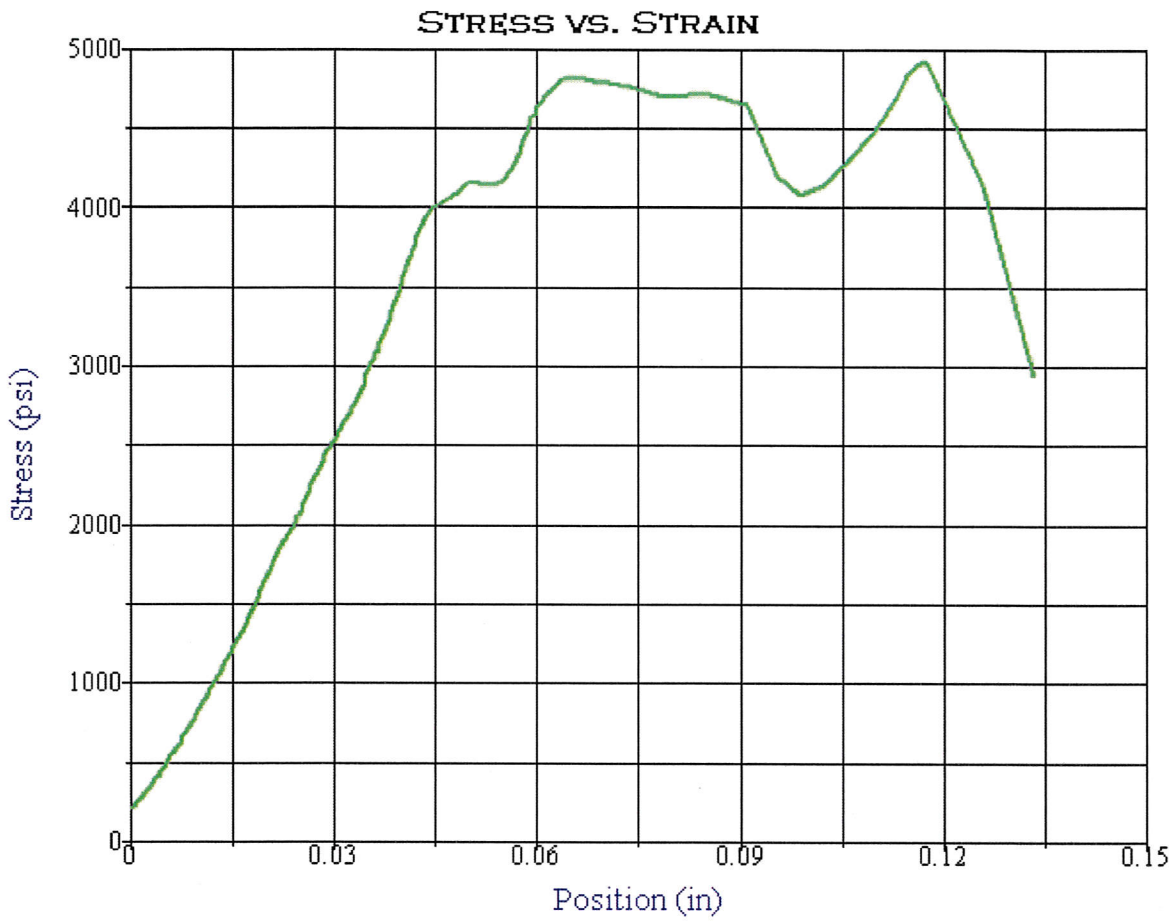
Test Summary

Counter:	2461
Elapsed Time:	00:05:00
Operator:	jg
Sample:	RC13-004-23
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/23/2013
Start Time:	8:36:49 AM
End Date:	12/23/2013
End Time:	8:41:49 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-082

Test Results

Specimen Gage Length:	5.0100 in
Diameter:	2.4000 in
Area:	4.5239 in²
Maximum Load:	49449 lbf
Compressive Strength:	10931 psi



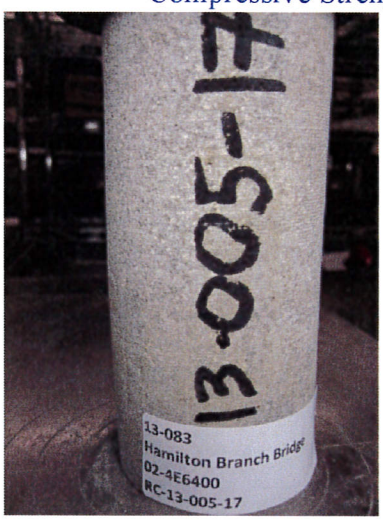


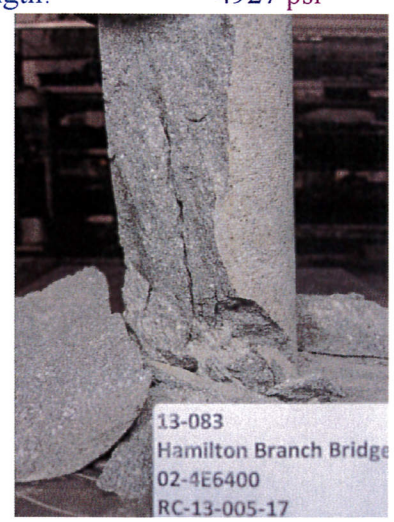
Test Summary

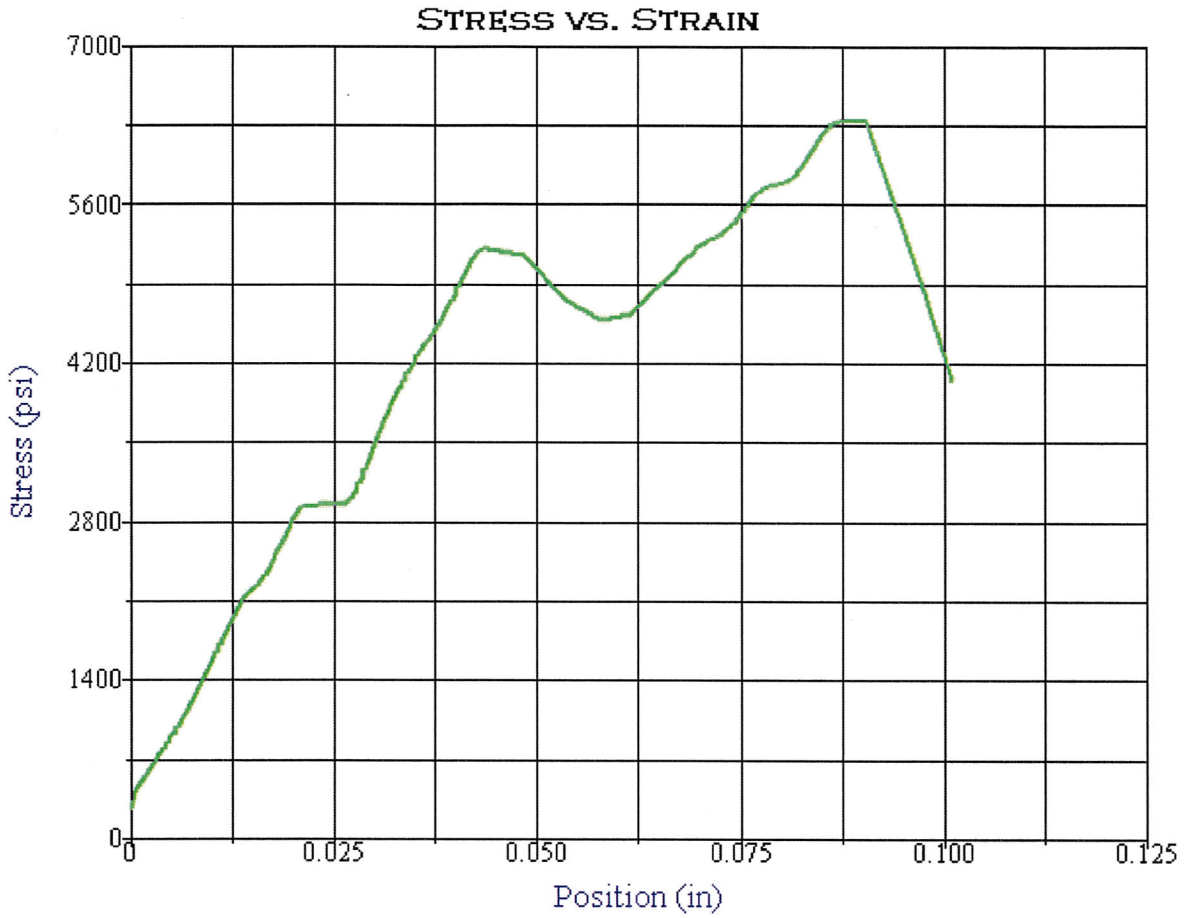
Counter:	2462
Elapsed Time:	00:02:14
Operator:	jg
Sample:	RC-13-005-17
Resident Engineer:	
Ticket:	GL#13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/23/2013
Start Time:	8:51:13 AM
End Date:	12/23/2013
End Time:	8:53:27 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-083

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3800 in
Area:	4.4488 in²
Maximum Load:	21919 lbf
Compressive Strength:	4927 psi





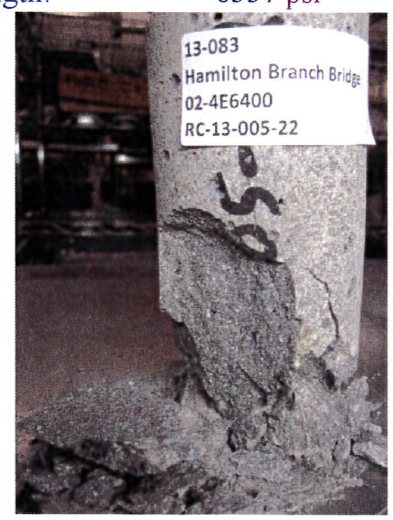


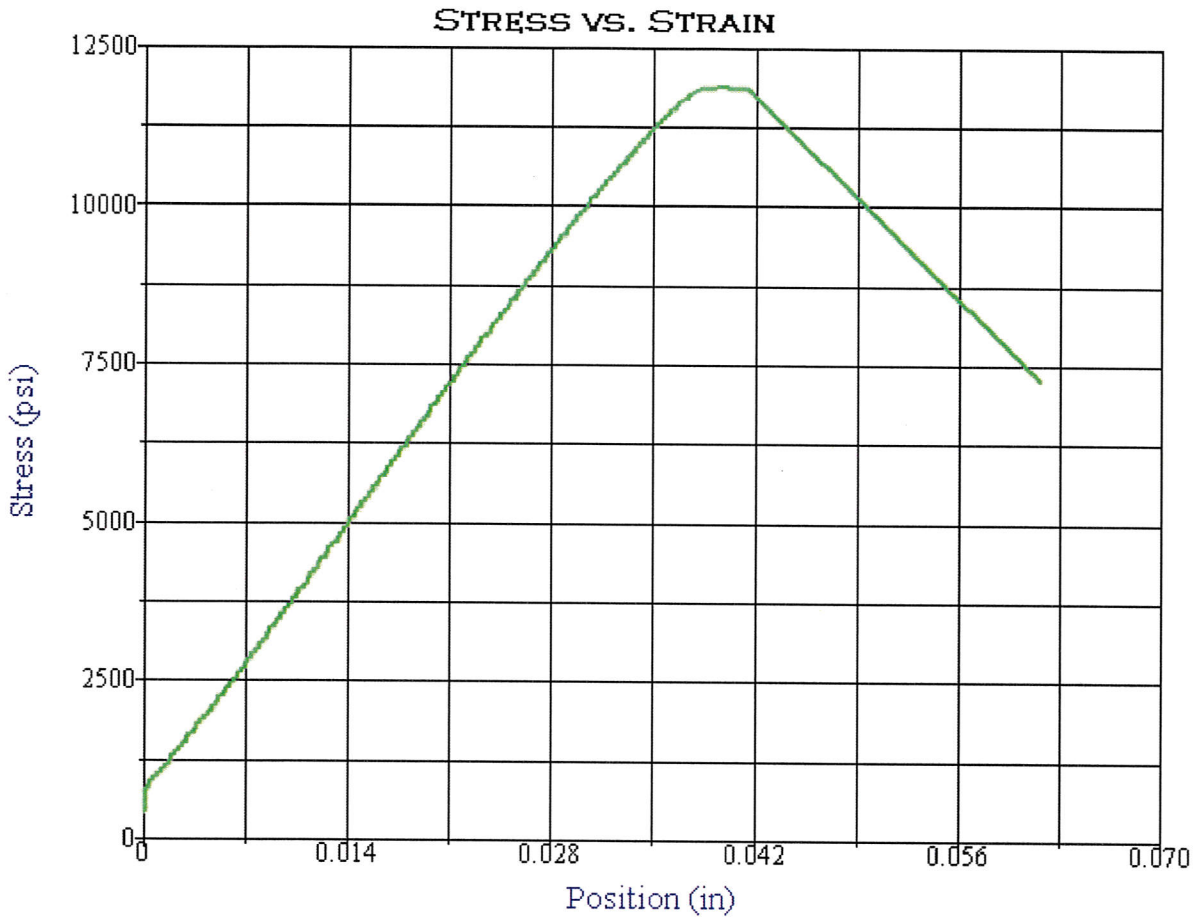
Test Summary

Counter:	2463
Elapsed Time:	00:02:49
Operator:	jg
Sample:	RC-13-005-22
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/23/2013
Start Time:	8:59:50 AM
End Date:	12/23/2013
End Time:	9:02:39 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-084

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	28431 lbf
Compressive Strength:	6337 psi



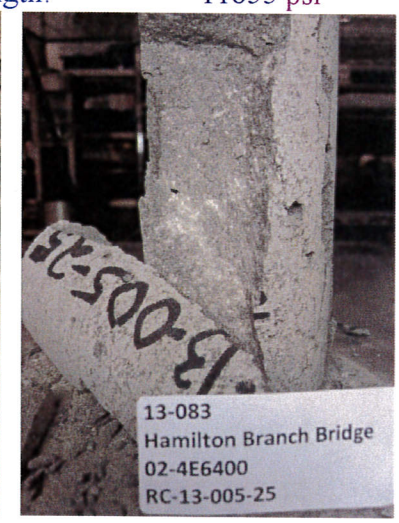


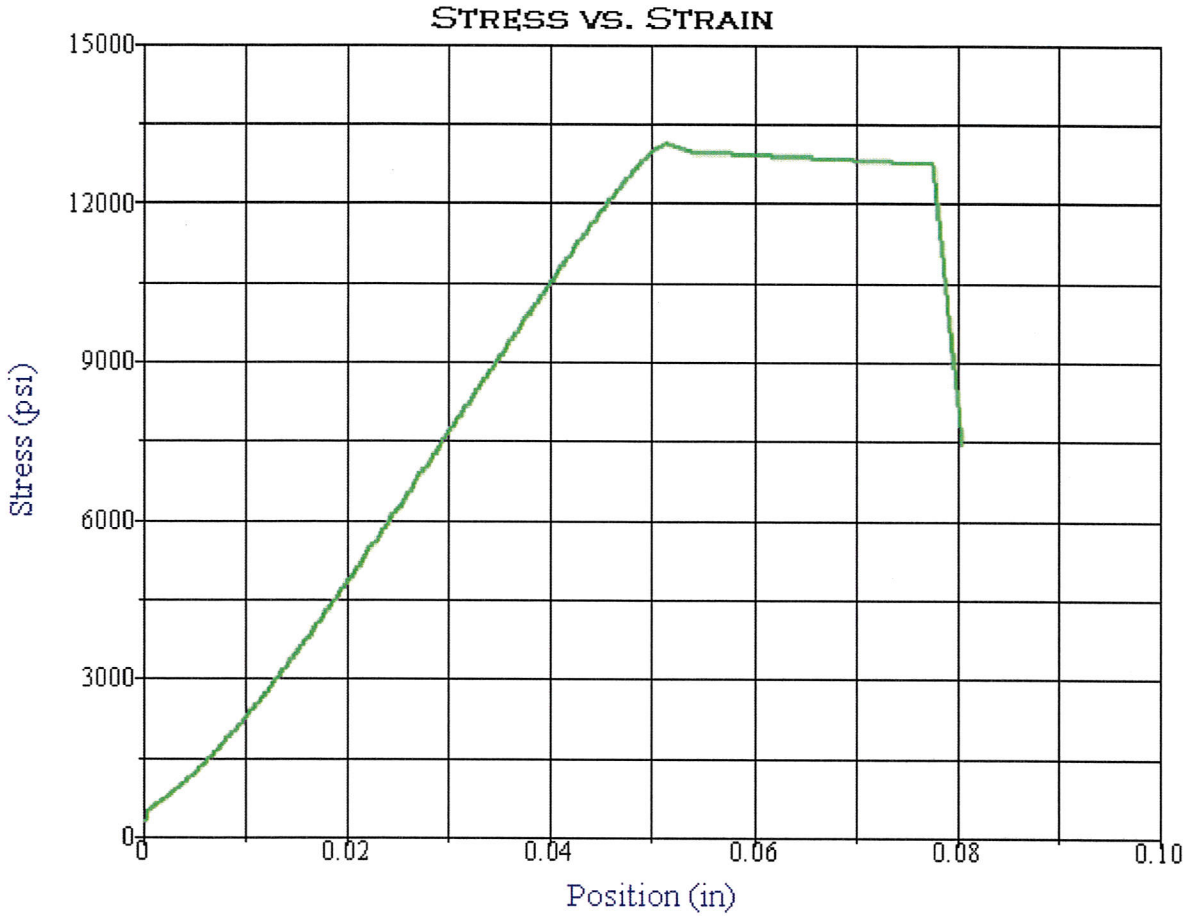
Test Summary

Counter:	2464
Elapsed Time:	00:05:15
Operator:	jg
Sample:	RC-13-005-25
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/23/2013
Start Time:	9:08:22 AM
End Date:	12/23/2013
End Time:	9:13:37 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-085

Test Results

Specimen Gage Length:	5.0000 in
Diameter:	2.3900 in
Area:	4.4863 in²
Maximum Load:	53187 lbf
Compressive Strength:	11855 psi





Test Summary

Counter:	2465
Elapsed Time:	00:06:01
Operator:	jg
Sample:	RC-13-005-26
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-4E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/23/2013
Start Time:	9:19:37 AM
End Date:	12/23/2013
End Time:	9:25:38 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-086

Test Results

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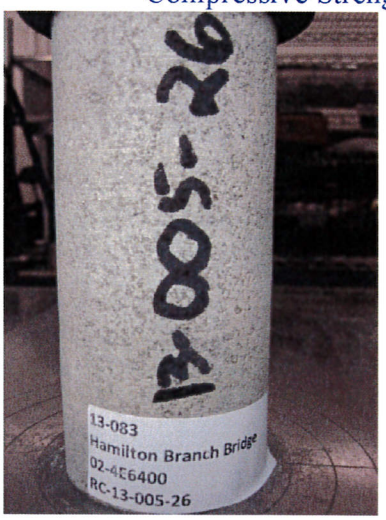
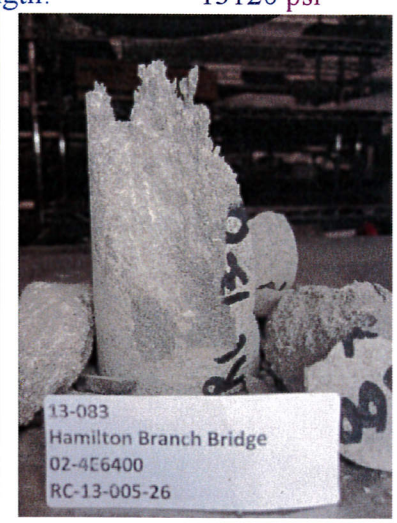
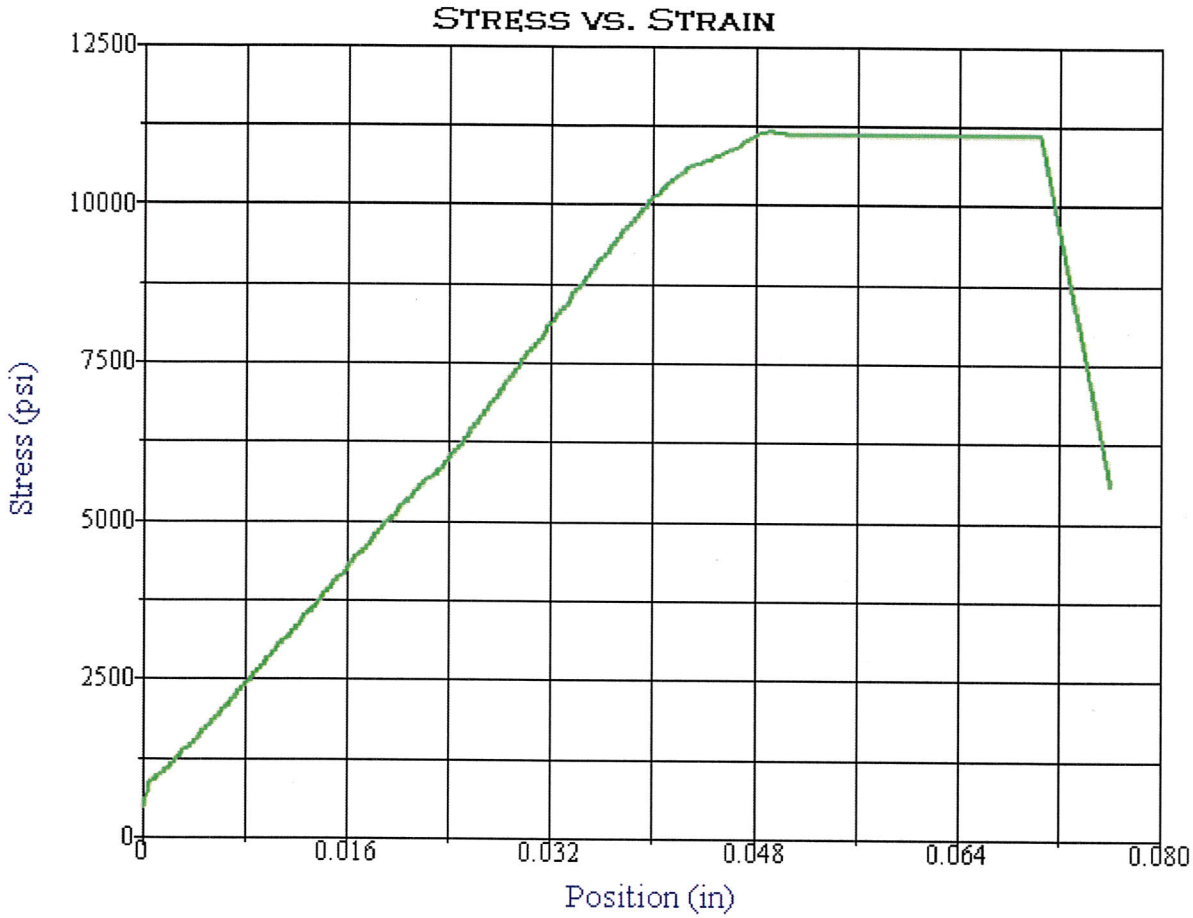
Diameter:	2.4000 in
Area:	4.5239 in²
Maximum Load:	59354 lbf
Compressive Strength:	13120 psi







Test Summary

Counter:	2466
Elapsed Time:	00:04:56
Operator:	jg
Sample:	RC-13-005-27
Resident Engineer:	
Ticket:	GL# 13-083
E.A./CONTRACT NUMBER:	02-2E6400
Procedure Name:	Cores test for Soil lab
Start Date:	12/23/2013
Start Time:	9:31:39 AM
End Date:	12/23/2013
End Time:	9:36:35 AM
Workstation:	D1K00YB1
Tested By:	jg
Lab:	Q13-087

Test Results

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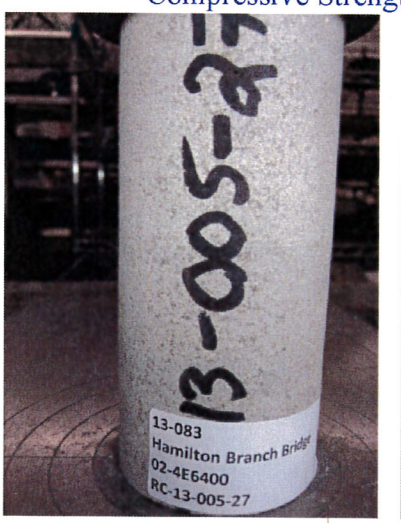
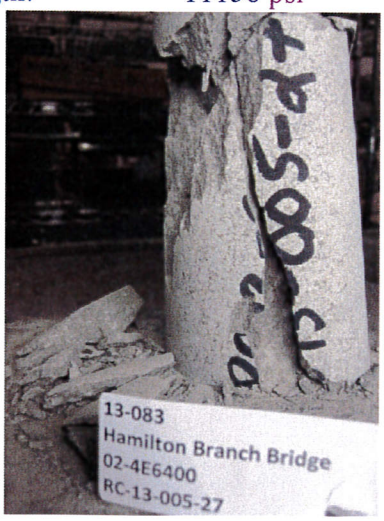
Compressive Strength:	11156 psi





Aerially Deposited Lead Site Investigation Report Dated April 16, 2015

AERIALLY DEPOSITED LEAD SITE INVESTIGATION REPORT

State Routes 36, 70, 89, and 147 Bridge Projects Lassen and Plumas Counties, California

PREPARED FOR:

CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 3
ENVIRONMENTAL ENGINEERING OFFICE
703 B STREET
MARYSVILLE, CALIFORNIA 95901

PREPARED BY:

GEOCON CONSULTANTS, INC.
3160 GOLD VALLEY DRIVE, SUITE 800
RANCHO CORDOVA, CALIFORNIA 95742

GEOCON PROJECT NO. S9805-01-48
TASK ORDER NO. 48, CONTRACT NO. 03A2132
EAs 02-4G7401, 02-1C7501, 02-0E1801, AND 02-4E6401

APRIL 2015

GEOCON
CONSULTANTS, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. S9805-01-48
April 16, 2015

Mr. Mark Melani
California Department of Transportation - District 3
Environmental Engineering Office
703 B Street
Marysville, California 95901

Subject: AERIALLY DEPOSITED LEAD SITE INVESTIGATION
STATE ROUTES 36, 70, 89, AND 147 BRIDGE PROJECTS
LASSEN AND PLUMAS COUNTIES, CALIFORNIA
CONTRACT NO. 03A2132, TASK ORDER NO. 48,
EA NOS. 02-4G7401, 02-1C7501, 02-0E1801, AND 02-4E6401

Dear Mr. Melani:

In accordance with California Department of Transportation (Caltrans) Contract No. 03A2132, Task Order No. 48, and Expense Authorization Numbers 02-4G7401, 02-1C7501, 02-0E1801, and 02-4E6401, we have performed environmental engineering services at the project sites. The projects consist of roadway shoulders along State Route 36 at Post Mile (PM) 3.4 in Lassen County, and bridge locations along State Route 70 at PM 14.9, State Route 89 at PM 30.0, and State Route 147 at PM 8.98 in Plumas County, California. The accompanying report summarizes the services performed including the excavation of 60 hand-auger borings for the collection of soil samples for aerially deposited lead analysis and surveying three bridges for suspect asbestos-containing materials and lead-containing paint, collecting bulk samples, and submitting the samples to the laboratory for analysis. The bridge survey report was submitted under separate cover.

The contents of this report reflect the views of the author, who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

Please contact us if you have any questions concerning the contents of this report or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS, INC.

Gemma G. Reblando
Project Geologist

John E. Juhrend, PE, CEG
Principal/Senior Engineer

REGISTERED PROFESSIONAL ENGINEER
JOHN JUHREND
No. 46681
CIVIL
STATE OF CALIFORNIA

(8 + 8 CD) Addressee

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AERIALLY DEPOSITED LEAD SITE INVESTIGATION REPORT

1.0 INTRODUCTION

This Aerially Deposited Lead (ADL) Site Investigation Report for State Routes 36, 70, 89, and 47 Bridge Projects was prepared under California Department of Transportation (Caltrans) Contract No. 03A2132, Task Order (TO) No. 48, and Expense Authorization (EA) Numbers 02-4G7401, 02-1C7501, 02-0E1801, and 02-4E6401.

1.1 Project Description and Proposed Improvements

The project consists of the following locations in Lassen and Plumas Counties, California.

- State Route 36 (SR-36) near Post Mile (PM) 3.4 in the vicinity of the Union Pacific Railroad (UPRR) approximately 0.3 mile west of the SR-36 and Mooney Road intersection in Westwood, Lassen County (EA 02-4G7401);
- State Route 70 (SR-70) near PM 14.9 in the vicinity of the Yellow Creek Bridge (Bridge No. 09-0008) in Plumas County (EA 02-1C7501);
- State Route 89 (SR-89) near PM 30.0 in the vicinity of the Lake Almanor Spillway Bridge (Bridge No. 09-0044) in Plumas County (EA 02-0E1801); and
- State Route 147 (SR-147) near PM 8.98 in the vicinity of the Hamilton Creek Bridge (Bridge No. 09-0065) in Plumas County (EA 02-4E6401).

Caltrans proposes bridge replacement/renovation and use of adjacent right-of-way (ROW) for staging during construction (SR-70 Yellow Creek Bridge only). The approximate project locations are depicted on the Vicinity Map, Figure 1 and Site Plans, Figures 2 through 5.

1.2 General Objectives

Construction of planned bridge and related roadway improvements at the project locations will require the disturbance of soil and may generate excess soil. The purpose of the scope of services outlined in TO No. 48 was to evaluate the project locations for potential impacts due to ADL from motor vehicle exhaust in the surface and near-surface soils. The investigative results will be used by Caltrans to inform the construction contractor if ADL-impacted soil is present within the project boundaries for construction worker health and safety, and soil management and disposal purposes.

Additionally, we performed an asbestos-containing material (ACM) and lead-containing paint (LCP) bridge survey at the SR-70 Yellow Creek Bridge, SR-89 Lake Almanor Spillway Bridge, and SR-147 Hamilton Creek Bridge in Plumas County, California. The ACM and LCP bridge survey reports are being submitted under separate cover.

2.0 BACKGROUND

Caltrans requested the site investigation to provide data regarding the potential presence of ADL in soil within the proposed bridge project improvement areas.

Regulatory criteria to classify a waste as "California hazardous" for handling and disposal purposes are contained in the California Code of Regulations (CCR), Title 22, Division 4.5, Chapter 11, Article 3, § 66261.24. Criteria to classify a waste as "Resource, Conservation, and Recovery Act (RCRA) hazardous" are contained in Chapter 40 of the Code of Federal Regulations (40 CFR), § 261.

2.1 Potential Lead Soil Impacts

Ongoing testing by Caltrans has indicated that ADL exists along major freeway routes due to emissions from vehicles powered by leaded gasoline.

2.2 Hazardous Waste Determination Criteria

For waste containing metals, the waste is classified as California hazardous when: 1) the representative total metal content equals or exceeds the respective Total Threshold Limit Concentration (TTLC); or 2) the representative soluble metal content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) based on the standard Waste Extraction Test (WET). A waste may have the potential of exceeding the STLC when the waste's total metal content is greater than or equal to ten times the respective STLC value, since the WET uses a 1:10 dilution ratio. Hence, when a total metal is detected at a concentration greater than or equal to ten times the respective STLC, and assuming that 100 percent of the total metals are soluble, soluble metal analysis is required. A material is classified as RCRA hazardous, or Federal hazardous, when the representative soluble metal content equals or exceeds the Federal regulatory level based on the Toxicity Characteristic Leaching Procedure (TCLP).

The above regulatory criteria are based on chemical concentrations. Wastes may also be classified as hazardous based on other criteria such as ignitability and corrosivity; however, for the purposes of this investigation, toxicity (i.e., representative lead concentrations) is the primary factor considered for waste classification since waste generated during the construction activities would not likely warrant testing for ignitability or corrosivity. Waste that is classified as either California-hazardous or RCRA-hazardous requires management as a hazardous waste.

The Department of Toxic Substances Control (DTSC) regulates and interprets hazardous waste laws in California. DTSC generally considers excavated or transported materials that exhibit "hazardous waste" characteristics to be a 'waste' requiring proper management, treatment and disposal. Soil that contains lead above hazardous waste thresholds and is left in-place would not be necessarily classified by DTSC as a 'waste.' The DTSC has provided site-specific determinations that "movement of wastes within an area of contamination does not constitute 'land disposal' and, thus, does not trigger

hazardous waste disposal requirements." Therefore, lead-impacted soil that is scarified in-place, moisture-conditioned, and recompacted during roadway improvement activities might not be considered a 'waste.' DTSC should be consulted to confirm waste classification. It is noted that in addition to DTSC regulations, health and safety requirements and other local agency requirements may also apply to the handling and disposal of lead-impacted soil.

3.0 SCOPE OF SERVICES

The scope of services requested by Caltrans in TO No. 48 included the collection of soil samples for analysis to determine lead content and the preparation of this report.

3.1 Pre-field Activities

We retained the services of Advanced Technology Laboratories, Inc. (ATL), a Caltrans-approved and California-certified analytical laboratory, to perform the chemical analyses of soil samples.

3.2 Field Activities

On March 20, 23, and 24, 2015, 156 soil samples were collected from 60 hand-auger borings located along the unpaved shoulder areas of SR-36 in Westwood and in the unpaved areas in the vicinity of the three bridges along SR-70, SR-89, and SR-147. The soil borings were advanced to the maximum sampling depth of 2.5 feet. Soil samples were collected at depth intervals of 0.0 to 0.5 foot, 1.0 to 1.5 feet, and 2.0 to 2.5 feet.

We selected the sample locations in the field under the direction of Geocon's Task Order manager. Details of the field activities are presented in the following sections.

4.0 INVESTIGATIVE METHODS

4.1 Soil Sampling Procedures

The following borings were advanced along the shoulder areas or in the vicinity of the bridge structures at the four project locations. The approximate boring locations are depicted on Figures 2 through 5.

- Borings WRHA1 through WRHA16 were advanced along the shoulders of SR-36 near PM 3.4 in the vicinity of the UPRR;
- Borings HA1 through HA12 were advanced along SR-70 in the vicinity of the Yellow Creek Bridge, and SA1 through SA4 were advanced along SR-70 approximately 0.6 mile west of Yellow Creek Bridge at a proposed construction staging area;
- Borings LAHA1 through LAHA16 were advanced along SR-89 in the vicinity of the Lake Almanor Spillway Bridge; and
- Borings HBHA1 through HBHA12 were advanced along SR-147 in the vicinity of the Hamilton Creek Bridge.

A total of 124 soil samples were collected from 60 borings at the four project locations and staging area for lead analyses. Soil samples were collected using a hand-auger and transferred directly to labeled Ziploc® re-sealable plastic bags. The soil samples were then homogenized in the field and subsequently placed in an ice chest, and delivered to ATL for analytical testing under chain-of-custody (COC) documentation. Following sample collection, the borings were backfilled with excess soil cuttings. Soil types were noted on the daily field log.

The coordinates of the boring locations were determined using a differential global positioning system (GPS). The GPS was utilized during the field activities to locate the horizontal position of the boring locations with an error of no more than 3.3 feet. The latitude and longitude of the boring locations are summarized in Table 1.

4.2 Quality Assurance/Quality Control (QA/QC) Procedures

QA/QC procedures were performed during the field exploration activities. These procedures included the decontamination of sampling equipment before each sample was collected and providing COC documentation for each sample submitted to the laboratory. The soil sampling equipment was cleansed between borings by washing the equipment with an Alconox® solution followed by a double rinse with deionized water. The decontamination water was discharged to the ground surface within the Caltrans ROW, away from the roadway and storm drain inlets.

4.3 Laboratory Analyses

The soil samples collected from SR-70 Yellow Creek Bridge were submitted to ATL for the following analyses under expedited 48-hour or 72-hour turnaround time (TAT). The remaining samples were submitted to ATL and analyzed for the following analyses under standard TAT. The laboratory was instructed to homogenize the soil samples prior to analysis in accordance with Contract 03A2132 requirements.

- One hundred twenty-four soil samples were analyzed for total lead following United States Environmental Protection Agency (EPA) Test Method 6010B.
- Fifteen soil samples were analyzed for WET soluble lead following EPA Test Method 6010B.
- Three soil samples were analyzed for TCLP soluble lead following EPA Test Method 6010B.

QA/QC procedures were performed by ATL as applicable for each method of analysis with specificity for each analyte listed in the test method's QA/QC. QA/QC measures for the lead analysis included the following:

- One method blank for every ten samples, batch of samples or type of matrix, whichever was more frequent.

- One sample analyzed in duplicate for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One spiked sample for every ten samples, batch of samples or type of matrix, whichever was more frequent, with the spike made at ten times the detection limit or at the analyte level.

Prior to submitting the samples to the laboratories, the COC documentation was reviewed for accuracy and completeness.

5.0 FIELD OBSERVATIONS AND INVESTIGATIVE RESULTS

5.1 Soil Conditions

The soil material observed at the four project locations generally consisted of silty sand to depths ranging from 0.5 to 0.7 foot, a mix of sand and gravel to a depth of approximately 1.5 feet, and a mix of gravel and cobble to the maximum sampling depth of 2.5 feet. Refusal was encountered at depths ranging from 0.5 to 2.0 feet in several borings, which resulted in inability to collect soil samples at sample depth intervals of 1.0 to 1.5 feet and 2.0 to 2.5 feet.

5.2 Soil Analytical Results

The lead analytical results for each project location are discussed in the following sections and summarized in Table 2. A copy of the ATL laboratory reports and COC documentation are in Appendix A.

5.2.1 SR-36 Westwood Railroad (EA 02-4G7401)

Total lead was detected in the 34 soil samples analyzed at concentrations ranging from 1.9 to 83 mg/kg. Three soil samples collected from this location had total lead concentrations greater than 50 mg/kg (i.e., ten times the STLC for lead of 5.0 mg/l) and were further analyzed for WET soluble lead.

WET soluble lead was detected in the three soil samples analyzed at concentrations ranging from 2.0 to 4.8 mg/l, less than the STLC for lead of 5.0 mg/l.

5.2.2 SR-70 Yellow Creek Bridge (EA 02-1C7501)

Total lead was detected in the 20 soil samples analyzed at concentrations ranging from 3.1 to 1,700 mg/kg. Four of the 20 soil samples collected from this location had total lead concentrations greater than 50 mg/kg (ten times the STLC for lead of 5.0 mg/l) but less than the lead TTLC of 1,000 mg/kg. The four samples were further analyzed for WET soluble lead. One sample had a total lead concentration greater than 1,000 mg/kg (lead TTLC) and was further analyzed for TCLP soluble lead.

WET soluble lead was detected in the four soil samples analyzed at concentrations ranging from 2.8 to 16 mg/l. Two of the four soil samples had WET soluble lead concentrations greater than the STLC for lead of 5.0 mg/l.

TCLP soluble lead was reported for the only sample analyzed (HA5-0) at 2.0 mg/l, less than the Federal RCRA hazardous waste threshold for lead of 5.0 mg/l.

The five soil samples collected from borings SA1 through SA4 located at the proposed staging area approximately 0.6 mile west of Yellow Creek Bridge had total lead concentrations ranging from 2.6 to 23 mg/kg, less than 50 mg/kg (ten times the STLC for lead of 5.0 mg/l).

5.2.3 SR-89 Lake Almanor Spillway Bridge (EA 02-0E1801)

Total lead was detected in the 39 soil samples analyzed at concentrations ranging from 3.2 to 250 mg/kg. Only one soil sample (LAHA4-1) collected from this location had a total lead concentration greater than 50 mg/kg (i.e., ten times the STLC for lead of 5.0 mg/l) and was further analyzed for WET soluble lead. Sample LAHA4-1 was also analyzed for TCLP soluble lead since the total lead concentration is greater than 100 mg/kg (i.e., twenty times the TCLP for lead of 5.0 mg/l).

WET soluble lead was not detected at a concentration exceeding the laboratory reporting limit of 1.0 mg/l in the only sample analyzed.

TCLP soluble lead was not detected at a concentration exceeding the laboratory reporting limit of 0.05 mg/l in the only sample analyzed.

5.2.4 SR-147 Hamilton Creek Bridge (EA 02-4E6401)

Total lead was detected in the 26 soil samples analyzed at concentrations ranging from 4.6 to 100 mg/kg. Seven soil samples collected from this location had total lead concentrations greater than 50 mg/kg (i.e., ten times the STLC for lead of 5.0 mg/l) and were further analyzed for WET soluble lead. One sample (HBHA6-0) was also analyzed for TCLP soluble lead since the total lead concentration is greater than 100 mg/kg (i.e., twenty times the TCLP for lead of 5.0 mg/l).

WET soluble lead was detected in the seven soil samples analyzed at concentrations ranging from 1.5 to 3.0 mg/l, less than the STLC for lead of 5.0 mg/l.

TCLP soluble lead was not detected at a concentration exceeding the laboratory reporting limit of 0.05 mg/l in the only sample analyzed.

5.3 Laboratory QA/QC

We reviewed the QA/QC provided with the ATL laboratory reports. The relative percent differences for sample duplicates were outside acceptance criteria. Calculation is based on raw values as noted in the laboratory reports. The laboratory also noted that sample HA7-0 was diluted due to failing internal standard in the original run. Based on the laboratory QA/QC data, no additional qualification of the data presented herein is necessary, and the data are of sufficient quality for the purposes of this report.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 SR-36 Westwood Railroad (EA 02-4G7401)

Soil excavated from the surface to a depth of 2.5 feet or shallower within this area as represented by borings WRHA1 through WRHA16 will not require special soil handling and disposal procedures based on lead content and can be reused or disposed of as non-hazardous soil since the total lead concentrations are less than 50 mg/l (ten times the STLC for lead of 5.0 mg/l) or the WET soluble lead concentrations are less than the STLC for lead of 5.0 mg/l.

6.2 SR-70 Yellow Creek Bridge (EA 02-1C7501)

Soil excavated to a depth of 2.5 feet or shallower within this area as represented by borings HA1, HA3, HA4, and HA6 through HA12 (i.e., excluding borings HA2 and HA5) located along the highway shoulders will not require special soil handling and disposal procedures based on lead content and can be reused or disposed of as non-hazardous soil since the total lead concentrations are less than 50 mg/kg (ten times the STLC for lead of 5.0 mg/l) or the WET soluble lead concentrations are less than the STLC for lead of 5.0 mg/l.

Soils excavated beneath the bridge and adjacent areas in the vicinity of borings HA2 and HA5 should be stockpiled separately since these soils are likely impacted with bridge paint (from bridge barrier rails or structural steel bridge members). The excavated soil beneath the bridge should be either (1) managed and disposed of as a California hazardous waste or (2) stockpiled and resampled to confirm waste classification in accordance with specific disposal facility acceptance criteria, if applicable.

Based on the TCLP soluble lead result of less than 5.0 mg/l, soil generated at the project location will not likely require disposal as a RCRA hazardous waste. If soil within the project limits is scarified in-place, moisture-conditioned, and recompacted during roadway improvement activities, it may not be considered a "waste."

Proposed Staging Area

Surface samples (from depth interval of 0.0 to 0.5 foot) collected from the proposed staging area located approximately 0.6 mile west of Yellow Creek Bridge as represented by borings SA1 through SA4 will not require special soil handling and disposal procedures based on lead content and can be reused or disposed of as non-hazardous soil since the total lead concentrations are less than 50 mg/l (ten times the STLC for lead of 5.0 mg/l).

6.3 SR-89 Lake Almanor Spillway Bridge (EA 02-0E1801)

Soil excavated from the surface to a depth of 2.5 feet or shallower within this area as represented by borings LAHA1 through LAHA16 will not require special soil handling and disposal procedures based on lead content and can be reused or disposed of as non-hazardous soil since the total lead concentrations are less than 50 mg/l (ten times the STLC for lead of 5.0 mg/l) or the WET soluble lead concentration is less than the STLC for lead of 5.0 mg/l.

Based on the TCLP soluble lead result of less than 5.0 mg/l, soil generated at the project location will not require disposal as a Federal RCRA hazardous waste.

6.4 SR-147 Hamilton Creek Bridge (EA 02-4E6401)

Soil excavated from the surface to a depth of 2.5 feet or shallower within this area as represented by borings HBHA1 through HBHA12 will not require special soil handling and disposal procedures based on lead content and can be reused or disposed of as non-hazardous soil since the total lead concentrations are less than 50 mg/l (ten times the STLC for lead of 5.0 mg/l) or the WET soluble lead concentrations are less than the STLC for lead of 5.0 mg/l.

Based on the TCLP soluble lead result of less than 5.0 mg/l, soil generated at the project location will not require disposal as a Federal RCRA hazardous waste.

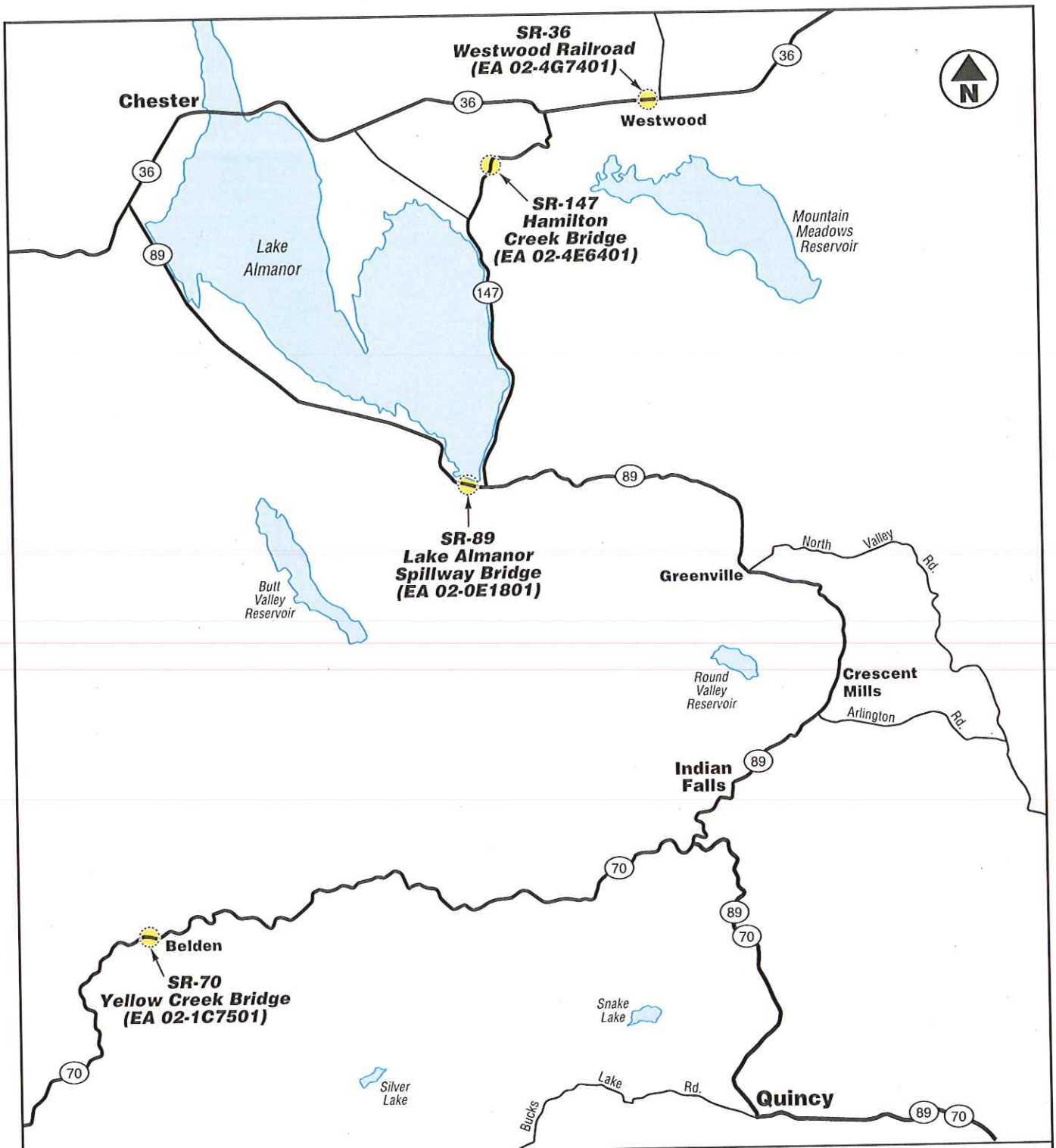
6.5 Worker Protection

Per Caltrans' requirements, the contractor(s) should prepare a project-specific Lead Compliance Plan (CCR Title 8, § 1532.1, the "Lead in Construction" standard) to minimize worker exposure to lead-impacted materials. The plan should include protocols for environmental and personnel monitoring, requirements for personal protective equipment, and other health and safety protocols and procedures for the handling of lead-impacted materials.

7.0 REPORT LIMITATIONS

This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. We strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.



0 5
Scale in Miles

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3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
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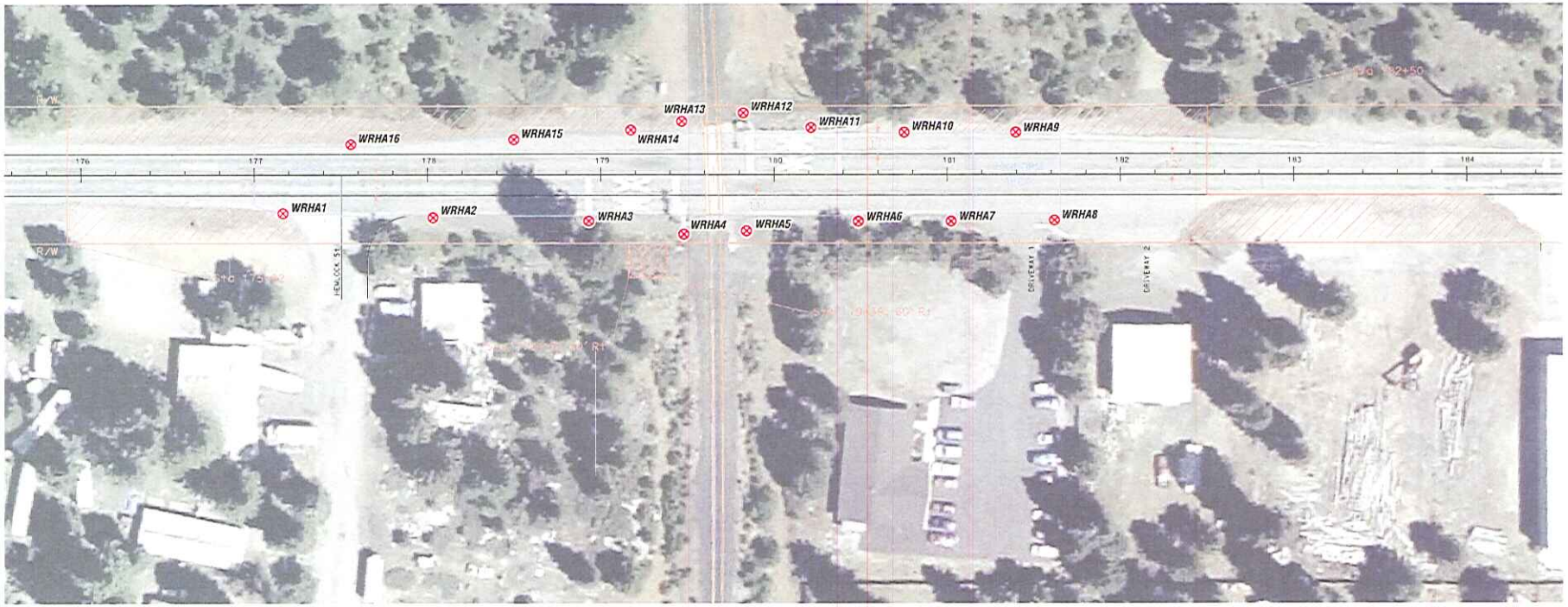
State Routes 36, 70, 89, and 147 Bridge Projects

Plumas County, California

VICINITY MAP

GEOCON Proj. No. S9805-01-48

Task Order No. 48 | April 2015 | Figure 1



LEGEND:

WRHA12 ⊗ Approximate Hand-Auger Boring Location

N

0 60

Scale in Feet

GEOCON CONSULTANTS, INC.

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State Routes 36, 70, 89, and 147 Bridge Projects		
Plumas County, California	**SITE PLAN**	
GEOCON Proj. No. S9805-01-48	**SR-36 Westwood Railroad**	
Task Order No. 48, EA 02-4G7401	April 2015	Figure 2

LEGEND:

HA12 ⊗ Approximate Hand-Auger Boring Location

N

0 50

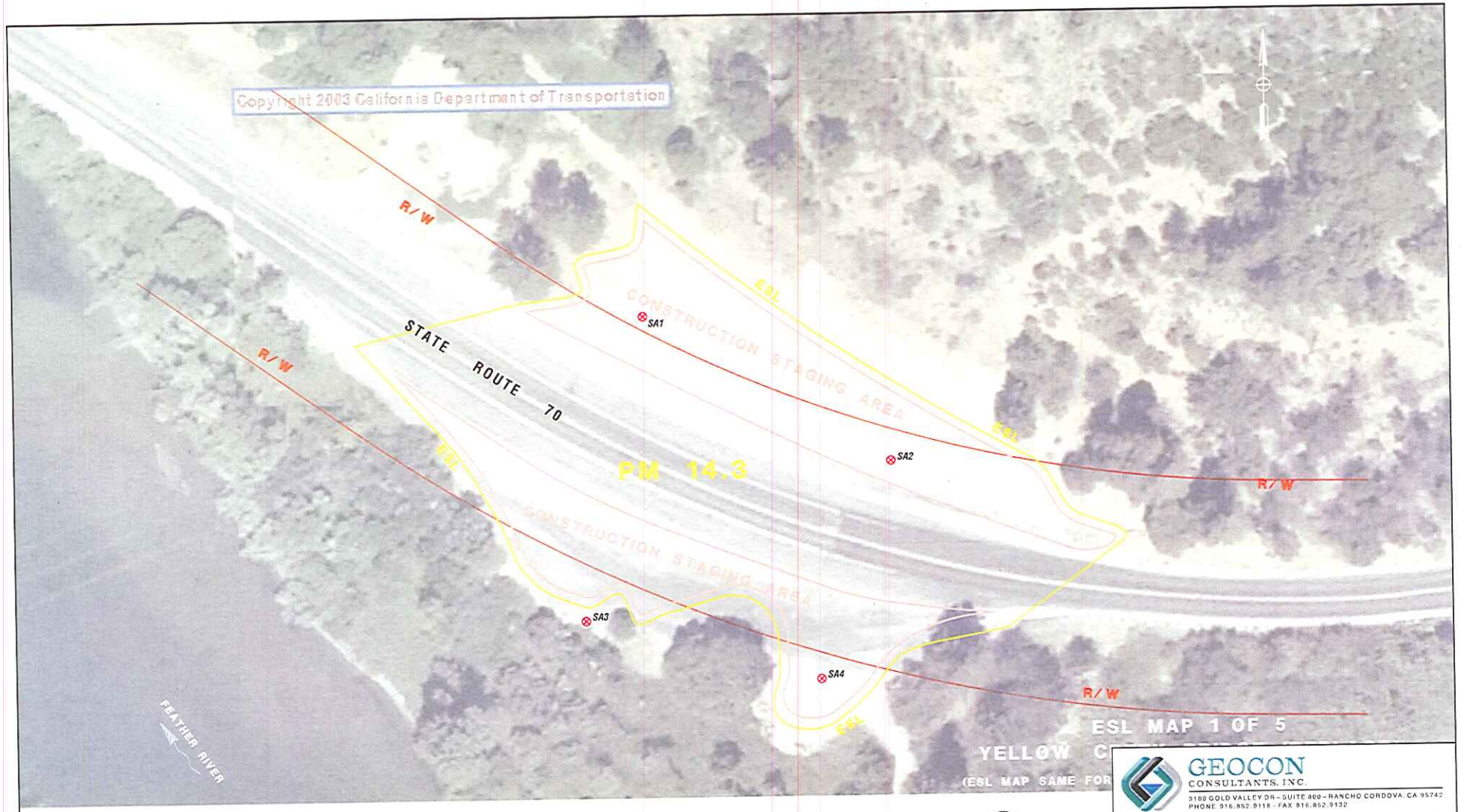
Scale in Feet

GEOCON CONSULTANTS, INC.

3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

State Routes 36, 70, 89, and 147 Bridge Projects

Plumas County, California	**SITE PLAN**	
GEOCON Proj. No. S9805-01-48	**SR-70 Yellow Creek Bridge**	
Task Order No. 48, EA 02-1C7501	April 2015	Figure 3-1



LEGEND:

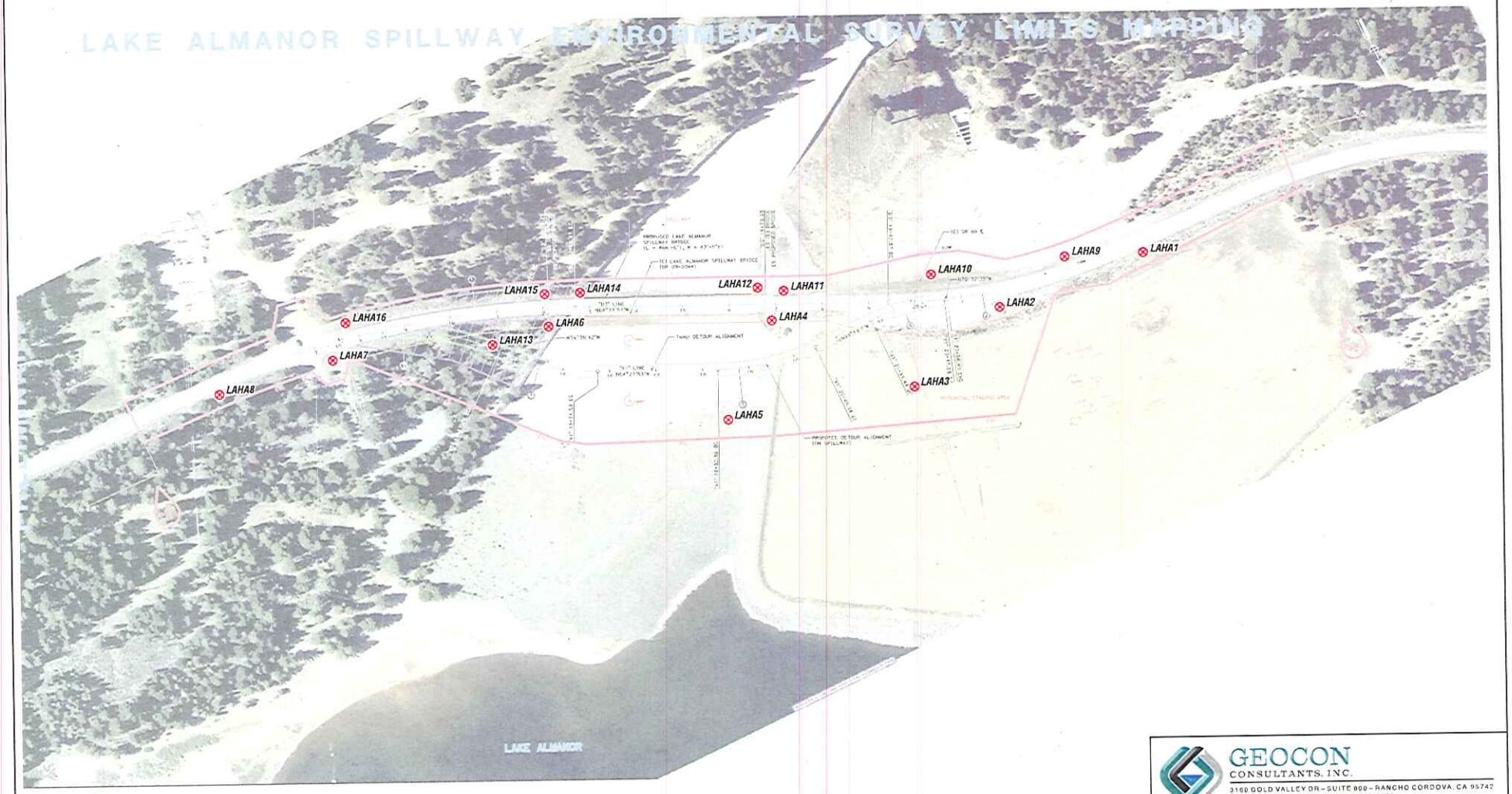
SA4 ⊗ Approximate Hand-Auger Boring Location

N

0 50
Scale in Feet

GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

State Routes 36, 70, 89, and 147 Bridge Projects		
Plumas County, California	**SITE PLAN** SR-70 Yellow Creek Bridge	
GEOCON Proj. No. S9805-01-48		
Task Order No. 48, EA 02-1C7501	April 2015	Figure 3-2



LEGEND:

LAHA16 ⊗ Approximate Hand-Auger Boring Location

N

0 200

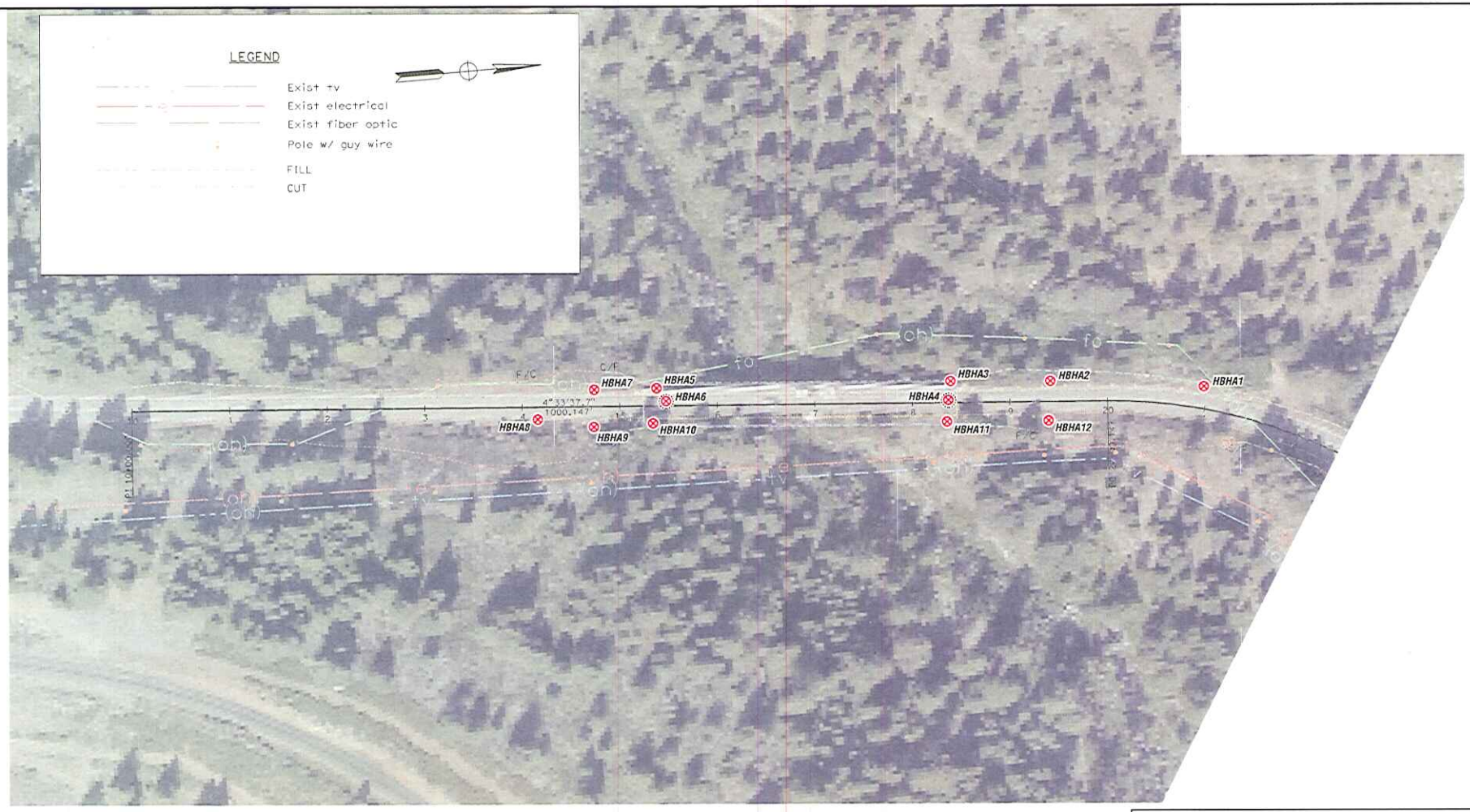
Scale in Feet

GEOCON CONSULTANTS, INC.

3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

State Routes 36, 70, 89, and 147 Bridge Projects

Plumas County, California	**SITE PLAN** SR-89 Lake Almanor Spillway Bridge	
GEOCON Proj. No. S9805-01-48		
Task Order No. 48, EA 02-0E1801	April 2015	Figure 4



LEGEND:

HBHA12 ⊗ Approximate Hand-Auger Boring Location

HBHA6 ⊗ Approximate Hand-Auger Boring Location (Beneath Bridge)

N

0 100

Scale in Feet

GEOCON CONSULTANTS, INC.

3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

State Routes 36, 70, 89, and 147 Bridge Projects	
Plumas County, California	**SITE PLAN**
GEOCON Proj. No. S9805-01-48	**SR-147 Hamilton Creek Bridge**
Task Order No. 48, EA 02-4E6401	April 2015 — Figure 5

TABLE 1
SUMMARY OF SOIL BORING COORDINATES
EA NOS. 02-4G7401, 02-1C7501, 02-0E1801, AND 02-4E6401
STATE ROUTES 36, 70, 89, AND 147 BRIDGE PROJECTS
LASSEN AND PLUMAS COUNTIES, CALIFORNIA

BORING ID	SAMPLE DATE	LATITUDE	LONGITUDE
STATE ROUTE 36 WESTWOOD RAILROAD (EA 02-4G7401)			
WRHA1	03/24/15	40.314698226	-121.000185504
WRHA2	03/24/15	40.314728276	-120.999747775
WRHA3	03/24/15	40.314744153	-120.999641880
WRHA4	03/24/15	40.314747057	-120.999338573
WRHA5	03/24/15	40.314724821	-120.999217354
WRHA6	03/24/15	40.314757227	-120.999019825
WRHA7	03/24/15	40.314772983	-120.998813327
WRHA8	03/24/15	40.314758320	-120.998506291
WRHA9	03/24/15	40.314922578	-120.998659178
WRHA10	03/24/15	40.314914119	-120.998806162
WRHA11	03/24/15	40.314915296	-120.998999252
WRHA12	03/24/15	40.314891207	-120.999202765
WRHA13	03/24/15	40.314901932	-120.999325604
WRHA14	03/24/15	40.314873018	-120.999539695
WRHA15	03/24/15	40.314873005	-120.999707671
WRHA16	03/24/15	40.314856531	-121.000012845
STATE ROUTE 70 YELLOW CREEK BRIDGE (EA 02-1C7501)			
HA1	03/20/15	40.007084147	-121.250698397
HA2	03/20/15	40.007126401	-121.250530090
HA3	03/20/15	40.007238568	-121.250465100
HA4	03/20/15	40.007317234	-121.250245887
HA5	03/20/15	40.007120162	-121.249901879
HA6	03/20/15	40.007107426	-121.249614305
HA7	03/20/15	40.007008167	-121.249723127
HA8	03/20/15	40.007031762	-121.249983236
HA9	03/20/15	40.006987401	-121.250613981
HA10	03/20/15	40.006955421	-121.250804250
HA11	03/20/15	40.006923366	-121.251145642
HA12	03/20/15	40.006663245	-121.252101502
SA1	03/20/15	40.004293652	-121.260746658
SA2	03/20/15	40.004077406	-121.260224441
SA3	03/20/15	40.003810191	-121.260806029
SA4	03/20/15	40.003698691	-121.260526139
STATE ROUTE 89 LAKE ALMANOR SPILLWAY BRIDGE (EA 02-0E1801)			
LAHA1	03/23/15	40.173834638	-121.091411570
LAHA2	03/23/15	40.173797241	-121.090892137
LAHA3	03/23/15	40.174078412	-121.090015657
LAHA4	03/23/15	40.173195607	-121.089184458
LAHA5	03/23/15	40.173608478	-121.088772599
LAHA6	03/23/15	40.172653851	-121.087776348
LAHA7	03/23/15	40.172242622	-121.086077319
LAHA8	03/23/15	---	---
LAHA9	03/23/15	40.173691685	-121.091718329

TABLE I
SUMMARY OF SOIL BORING COORDINATES
EA NOS. 02-4G7401, 02-1C7501, 02-0E1801, AND 02-4E6401
STATE ROUTES 36, 70, 89, AND 147 BRIDGE PROJECTS
LASSEN AND PLUMAS COUNTIES, CALIFORNIA

BORING ID	SAMPLE DATE	LATITUDE	LONGITUDE
LAHA10	03/23/15	40.173437418	-121.090696428
LAHA11	03/23/15	40.173188713	-121.089487259
LAHA12	03/23/15	40.173079839	-121.089230929
LAHA13	03/23/15	40.172543516	-121.087413375
LAHA14	03/23/15	40.172599074	-121.087923901
LAHA15	03/23/15	40.172524976	-121.087673418
LAHA16	03/23/15	40.172142949	-121.086525533
STATE ROUTE 147 HAMILTON CREEK BRIDGE (EA 02-4E6401)			
HBHA1	03/23/15	40.293117849	-121.075163019
HBHA2	03/23/15	40.292779493	-121.075230280
HBHA3	03/23/15	40.292329315	-121.075286435
HBHA4	03/23/15	40.292316204	-121.075202337
HBHA5	03/23/15	40.291483369	-121.075372244
HBHA6	03/23/15	40.291489324	-121.075316765
HBHA7	03/23/15	40.291350730	-121.075390273
HBHA8	03/23/15	---	---
HBHA9	03/23/15	40.291293463	-121.075296760
HBHA10	03/23/15	40.291511678	-121.075265119
HBHA11	03/23/15	40.292322783	-121.075171603
HBHA12	03/23/15	40.292636577	-121.075127797

Notes:
--- = GPS data not available

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS
EA NOS. 02-4G7401, 02-1C7501, 02-0E1801, AND 02-4E6401
STATE ROUTES 36, 70, 89, AND 147 BRIDGE PROJECTS
LASSEN AND PLUMAS COUNTIES, CALIFORNIA

BORING ID	TOP OF SAMPLE INTERVAL (feet)	TOTAL LEAD (mg/kg)	WET LEAD (mg/l)	TCLP LEAD (mg/l)
STATE ROUTE 36 WESTWOOD RAILROAD (EA 02-4G7401)				
WRHA1-0	0.0	9.1	---	---
WRHA1-1	1.0	59	2.2	---
WRHA1-2	2.0	70	2.0	---
WRHA2-0	0.0	11	---	---
WRHA2-1	1.0	3.5	---	---
WRHA3-0	0.0	10	---	---
WRHA3-1	1.0	3.1	---	---
WRHA4-0	0.0	2.8	---	---
WRHA4-1	1.0	12	---	---
WRHA5-0	0.0	4.6	---	---
WRHA6-0	0.0	3.0	---	---
WRHA6-1	1.0	7.4	---	---
WRHA6-2	2.0	6.9	---	---
WRHA7-0	0.0	3.9	---	---
WRHA7-1	1.0	38	---	---
WRHA7-2	2.0	83	4.8	---
WRHA8-0	0.0	12	---	---
WRHA8-1	1.0	9.9	---	---
WRHA8-2	2.0	7.4	---	---
WRHA9-0	0.0	1.9	---	---
WRHA9-1	1.0	4.0	---	---
WRHA10-0	0.0	2.5	---	---
WRHA10-1	1.0	9.2	---	---
WRHA10-2	2.0	5.0	---	---
WRHA11-0	0.0	2.4	---	---
WRHA11-1	1.0	2.7	---	---
WRHA12-0	0.0	2.0	---	---
WRHA13-0	0.0	6.1	---	---
WRHA14-0	0.0	23	---	---
WRHA14-1	1.0	16	---	---
WRHA15-0	0.0	7.6	---	---
WRHA15-1	1.0	31	---	---
WRHA16-0	0.0	7.7	---	---
WRHA16-1	1.0	20	---	---

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS
EA NOS. 02-4G7401, 02-1C7501, 02-0E1801, AND 02-4E6401
STATE ROUTES 36, 70, 89, AND 147 BRIDGE PROJECTS
LASSEN AND PLUMAS COUNTIES, CALIFORNIA

BORING ID	TOP OF SAMPLE INTERVAL (feet)	TOTAL LEAD (mg/kg)	WET LEAD (mg/l)	TCLP LEAD (mg/l)
STATE ROUTE 70 YELLOW CREEK BRIDGE (EA 02-1C7501)				
HA1-0	0.0	17	---	---
HA2-0	0.0	210	16	---
HA2-1	1.0	72	6.8	---
HA2-2	2.0	130	4.3	---
HA3-0	0.0	20	---	---
HA4-0	0.0	3.1	---	---
HA5-0	0.0	1,700	---	2.0
HA5-1	1.0	42	---	---
HA6-0	0.0	44	---	---
HA6-1	1.0	75	2.8	---
HA6-2	2.0	8.0	---	---
HA7-0	0.0	15	---	---
HA7-1	1.0	9.6	---	---
HA8-0	0.0	43	---	---
HA9-0	0.0	45	---	---
HA10-0	0.0	5.1	---	---
HA11-0	0.0	25	---	---
HA11-1	1.0	27	---	---
HA11-2	2.0	20	---	---
HA12-0	0.0	27	---	---
SA1-0	0.0	4.4	---	---
SA1-1	1.0	23	---	---
SA2-0	0.0	4.2	---	---
SA3-0	0.0	6.9	---	---
SA4-0	0.0	2.6	---	---

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS
EA NOS. 02-4G7401, 02-1C7501, 02-0E1801, AND 02-4E6401
STATE ROUTES 36, 70, 89, AND 147 BRIDGE PROJECTS
LASSEN AND PLUMAS COUNTIES, CALIFORNIA

BORING ID	TOP OF SAMPLE INTERVAL (feet)	TOTAL LEAD (mg/kg)	WET LEAD (mg/l)	TCLP LEAD (mg/l)
STATE ROUTE 89 LAKE ALMANOR SPILLWAY BRIDGE (EA 02-0E1801)				
LAHA1-0	0.0	22	---	---
LAHA1-1	1.0	5.9	---	---
LAHA1-2	2.0	6.8	---	---
LAHA2-0	0.0	5.9	---	---
LAHA2-1	1.0	4.4	---	---
LAHA2-2	2.0	5.9	---	---
LAHA3-0	0.0	8.6	---	---
LAHA3-1	1.0	6.6	---	---
LAHA3-2	2.0	7.6	---	---
LAHA4-0	0.0	13	---	---
LAHA4-1	1.0	250	<1.0	<0.05
LAHA4-2	2.0	12	---	---
LAHA5-0	0.0	6.4	---	---
LAHA6-0	0.0	23	---	---
LAHA7-0	0.0	26	---	---
LAHA8-0	0.0	14	---	---
LAHA8-1	1.0	9.1	---	---
LAHA8-2	2.0	11	---	---
LAHA9-0	0.0	7.7	---	---
LAHA10-0	0.0	11	---	---
LAHA10-1	1.0	9.0	---	---
LAHA10-2	2.0	8.4	---	---
LAHA11-0	0.0	20	---	---
LAHA11-1	1.0	3.2	---	---
LAHA11-2	2.0	4.8	---	---
LAHA12-0	0.0	18	---	---
LAHA12-1	1.0	10	---	---
LAHA12-2	2.0	11	---	---
LAHA13-0	0.0	18	---	---
LAHA13-1	1.0	7.0	---	---
LAHA13-2	2.0	9.7	---	---
LAHA14-0	0.0	13	---	---
LAHA14-1	1.0	21	---	---
LAHA15-0	0.0	12	---	---
LAHA15-1	1.0	7.2	---	---
LAHA15-2	2.0	9.0	---	---
LAHA16-0	0.0	9.7	---	---
LAHA16-1	1.0	8.6	---	---
LAHA16-2	2.0	9.1	---	---

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS
EA NOS. 02-4G7401, 02-1C7501, 02-0E1801, AND 02-4E6401
STATE ROUTES 36, 70, 89, AND 147 BRIDGE PROJECTS
LASSEN AND PLUMAS COUNTIES, CALIFORNIA

BORING ID	TOP OF SAMPLE INTERVAL (feet)	TOTAL LEAD (mg/kg)	WET LEAD (mg/l)	TCLP LEAD (mg/l)
STATE ROUTE 147 HAMILTON CREEK BRIDGE (EA 02-4E6401)				
HBHA1-0	0.0	7.4	---	---
HBHA1-1	1.0	13	---	---
HBHA1-2	2.0	26	---	---
HBHA2-0	0.0	6.3	---	---
HBHA2-1	1.0	40	---	---
HBHA2-2	2.0	24	---	---
HBHA3-0	0.0	17	---	---
HBHA3-1	1.0	7.4	---	---
HBHA3-2	2.0	6.1	---	---
HBHA4-0	0.0	98	2.7	---
HBHA5-0	0.0	21	---	---
HBHA5-1	1.0	13	---	---
HBHA6-0	0.0	100	2.0	<0.05
HBHA7-0	0.0	26	---	---
HBHA7-1	1.0	13	---	---
HBHA8-0	0.0	62	1.8	---
HBHA8-1	1.0	8.9	---	---
HBHA9-0	0.0	24	---	---
HBHA9-1	1.0	86	2.7	---
HBHA10-0	0.0	51	1.5	---
HBHA10-1	1.0	4.6	---	---
HBHA10-2	2.0	6.3	---	---
HBHA11-0	0.0	92	3.0	---
HBHA11-1	1.0	76	1.7	---
HBHA12-0	0.0	34	---	---
HBHA12-1	1.0	29	---	---

Notes:
WRHA1-0
Top of 0.5-foot-long sampling depth interval in feet below ground surface
Boring identification
WET = Waste Extraction Test
TCLP = Toxicity Characteristic Leaching Procedure
mg/kg = Milligrams per kilogram
mg/l = Milligrams per liter
--- = Not analyzed
< = Less than the laboratory reporting limit

APPENDIX A

ADVANCED TECHNOLOGY
LABORATORIES

April 01, 2015

Rebecca Silva
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742
Tel: (916) 852-9118
Fax:(916) 852-9132

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1501082

Client Reference : Plumas-Lassen Bridges, S9805-01-48

Enclosed are the results for sample(s) received on March 25, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WRHA1-0	1501082-01	Soil	3/24/15 7:12	3/25/15 8:20
WRHA1-1	1501082-02	Soil	3/24/15 7:14	3/25/15 8:20
WRHA1-2	1501082-03	Soil	3/24/15 7:20	3/25/15 8:20
WRHA2-0	1501082-04	Soil	3/24/15 7:24	3/25/15 8:20
WRHA2-1	1501082-05	Soil	3/24/15 7:28	3/25/15 8:20
WRHA3-0	1501082-06	Soil	3/24/15 7:39	3/25/15 8:20
WRHA3-1	1501082-07	Soil	3/24/15 7:40	3/25/15 8:20
WRHA4-0	1501082-08	Soil	3/24/15 7:42	3/25/15 8:20
WRHA4-1	1501082-09	Soil	3/24/15 7:44	3/25/15 8:20
WRHA5-0	1501082-10	Soil	3/24/15 7:50	3/25/15 8:20
WRHA6-0	1501082-11	Soil	3/24/15 7:57	3/25/15 8:20
WRHA6-1	1501082-12	Soil	3/24/15 7:58	3/25/15 8:20
WRHA6-2	1501082-13	Soil	3/24/15 7:59	3/25/15 8:20
WRHA7-0	1501082-14	Soil	3/24/15 8:07	3/25/15 8:20
WRHA7-1	1501082-15	Soil	3/24/15 8:09	3/25/15 8:20
WRHA7-2	1501082-16	Soil	3/24/15 8:11	3/25/15 8:20
WRHA8-0	1501082-17	Soil	3/24/15 8:16	3/25/15 8:20
WRHA8-1	1501082-18	Soil	3/24/15 8:18	3/25/15 8:20
WRHA8-2	1501082-19	Soil	3/24/15 8:20	3/25/15 8:20
WRHA9-0	1501082-20	Soil	3/24/15 8:28	3/25/15 8:20
WRHA9-1	1501082-21	Soil	3/24/15 8:32	3/25/15 8:20
WRHA10-0	1501082-22	Soil	3/24/15 8:40	3/25/15 8:20
WRHA10-1	1501082-23	Soil	3/24/15 8:43	3/25/15 8:20
WRHA10-2	1501082-24	Soil	3/24/15 8:44	3/25/15 8:20
WRHA11-0	1501082-25	Soil	3/24/15 8:45	3/25/15 8:20
WRHA11-1	1501082-26	Soil	3/24/15 8:48	3/25/15 8:20
WRHA12-0	1501082-27	Soil	3/24/15 8:55	3/25/15 8:20
WRHA13-0	1501082-28	Soil	3/24/15 9:04	3/25/15 8:20
WRHA14-0	1501082-29	Soil	3/24/15 9:10	3/25/15 8:20
WRHA14-1	1501082-30	Soil	3/24/15 9:12	3/25/15 8:20
WRHA15-0	1501082-31	Soil	3/24/15 9:23	3/25/15 8:20
WRHA15-1	1501082-32	Soil	3/24/15 9:26	3/25/15 8:20
WRHA16-0	1501082-33	Soil	3/24/15 9:32	3/25/15 8:20
WRHA16-1	1501082-34	Soil	3/24/15 9:34	3/25/15 8:20

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Lead by ICP-AES EPA 6010B

Analyte: Lead **Analyst: SB**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501082-01	WRHA1-0	**9.1**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:00	
1501082-02	WRHA1-1	**59**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:00	
1501082-03	WRHA1-2	**70**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:01	
1501082-04	WRHA2-0	**11**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:03	
1501082-05	WRHA2-1	**3.5**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:06	
1501082-06	WRHA3-0	**10**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:06	
1501082-07	WRHA3-1	**3.1**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:07	
1501082-08	WRHA4-0	**2.8**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:08	
1501082-09	WRHA4-1	**12**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:09	
1501082-10	WRHA5-0	**4.6**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:09	
1501082-11	WRHA6-0	**3.0**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 16:33	
1501082-12	WRHA6-1	**7.4**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:12	
1501082-13	WRHA6-2	**6.9**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:13	
1501082-14	WRHA7-0	**3.9**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 15:14	
1501082-15	WRHA7-1	**38**	mg/kg	0.99	1	B5C0765	03/31/2015	03/31/15 15:19	
1501082-16	WRHA7-2	**83**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:21	
1501082-17	WRHA8-0	**12**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:22	
1501082-18	WRHA8-1	**9.9**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:23	
1501082-19	WRHA8-2	**7.4**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:24	
1501082-20	WRHA9-0	**1.9**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:24	
1501082-21	WRHA9-1	**4.0**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:25	
1501082-22	WRHA10-0	**2.5**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 16:34	
1501082-23	WRHA10-1	**9.2**	mg/kg	0.99	1	B5C0765	03/31/2015	03/31/15 15:27	
1501082-24	WRHA10-2	**5.0**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:27	
1501082-25	WRHA11-0	**2.4**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 16:35	
1501082-26	WRHA11-1	**2.7**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:32	
1501082-27	WRHA12-0	**2.0**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 16:36	
1501082-28	WRHA13-0	**6.1**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:34	
1501082-29	WRHA14-0	**23**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:34	
1501082-30	WRHA14-1	**16**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:35	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Lead by ICP-AES EPA 6010B

Analyte: Lead

Analyst: SB

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501082-31	WRHA15-0	**7.6**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:36	
1501082-32	WRHA15-1	**31**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:37	
1501082-33	WRHA16-0	**7.7**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:37	
1501082-34	WRHA16-1	**20**	mg/kg	1.0	1	B5C0765	03/31/2015	03/31/15 15:40	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

QUALITY CONTROL SECTION

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5C0764 - EPA 3050 Modified_S									
Blank (B5C0764-BLK1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
Blank (B5C0764-BLK2)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
LCS (B5C0764-BS1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	49.3561	1.0	50.0000		98.7	80 - 120			
Duplicate (B5C0764-DUP1)		**Source: 1501082-14**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	5.66246	1.0		3.93591	NR		36.0	20	R
Duplicate (B5C0764-DUP2)		**Source: 1501082-04**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	8.48302	1.0		10.8569	NR		24.5	20	R
Matrix Spike (B5C0764-MS1)		**Source: 1501082-14**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	220.702	0.99	247.525	3.93591	87.6	35 - 129			
Matrix Spike (B5C0764-MS2)		**Source: 1501082-04**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	259.498	1.0	252.525	10.8569	98.5	35 - 129			
Matrix Spike Dup (B5C0764-MSD1)		**Source: 1501082-14**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	237.287	1.0	250.000	3.93591	93.3	35 - 129	7.24	20	
Batch B5C0765 - EPA 3050 Modified_S									
Blank (B5C0765-BLK1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
Blank (B5C0765-BLK2)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
LCS (B5C0765-BS1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	49.6329	1.0	50.0000		99.3	80 - 120			
Duplicate (B5C0765-DUP1)		**Source: 1501082-34**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	24.2148	1.0		19.8928	NR		19.6	20	
Duplicate (B5C0765-DUP2)		**Source: 1501082-24**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	6.07592	1.0		5.01532	NR		19.1	20	
Matrix Spike (B5C0765-MS1)		**Source: 1501082-34**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	260.951	1.0	250.000	19.8928	96.4	35 - 129			
Matrix Spike (B5C0765-MS2)		**Source: 1501082-24**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	228.617	1.0	250.000	5.01532	89.4	35 - 129			

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5C0765 - EPA 3050 Modified_S (continued)									
Matrix Spike Dup (B5C0765-MSD1)		**Source: 1501082-34**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	249.478	1.0	250.000	19.8928	91.8	35 - 129	4.50	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____
Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: Ontrac

Sample Condition Upon Receipt:
1. CHILLED Y ☐ N ☑
2. HEADSPACE (VOA) Y ☐ N ☐
3. CONTAINER INTACT Y ☑ N ☐
4. SEALED Y ☐ N ☑
5. # OF SPLS MATCH COC Y ☑ N ☐
6. PRESERVED Y ☐ N ☑

Client: Geocon Consultants, Inc
Address: 3160 Gold Valley Drive, Suite 800
Tel: 916-852-9118
Attention: Rebecca Silva
City: Rancho Cordova State: CA Zip Code: 95742
Fax: 916-852-9132
Project Name: Plumas Lassen Bridge Project #: 59805-01-48 Sampler: J. Esquivel (Signature)

Relinquished by: (Signature and Printed Name)	Date	Time	Received by: (Signature and Printed Name)	Date	Time
J. Esquivel	3/24/15	1500	Ontrac	3/24/15	1500
				3/25/15	830

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Rebecca Silva 3/24/15 (Print Name, Date)
(Signature)

Send Report To: Attn: _____ Co: _____ Addr: _____ City: State: Zip:

Bill To: Attn: _____ Co: _____ Addr: _____ City: State: Zip:

Special Instructions/Comments:
Homogenize samples for lead analysis
Caltrans Contract ~~06A1895~~ 03A2132
Please copy Kari Cook on the results and include an excel file. Thank you. (cook@geoconinc.com)

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.
Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested: Total lead (6010B)

SPECIFY APPROPRIATE MATRIX: SOIL, WATER, GROUND WATER, WASTEWATER

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode _____ OTHER _____

ITEM	LAB USE ONLY: Lab No.	Sample Description: Sample ID / Location	Date	Time	Total lead (6010B)	SOIL	WATER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	1501082-1	WRHA1-0	3/24	712	X	X		E	1	baggie		
	-2	WRHA1-1		714								
	-3	WRHA1-2		720								
	-4	WRHA2-0		724								
	-5	WRHA2-1		728								
	-6	WRHA3-0		730								
	-7	WRHA3-1		740								
	-8	WRHA4-0		742								
	-9	WRHA4-1		744								
	-10	WRHA5-0		750								
	-11	WRHA6-0		757								
	-12	WRHA6-1		758								
	-13	WRHA6-2		759								
	-14	WRHA7-0		807								
	-15	WRHA7-1		809								
	-16	WRHA7-2		811								
	-17	WRHA8-0		816								
	-18	WRHA8-1		818								
	-19	WRHA8-2		820								
	-20	WRHA9-0		828								

- TAT starts 8AM the following day if samples received after 3 PM

TAT: ☐ A = Overnight ≤24 hrs ☐ B = Emergency Next Workday = Critical 2 Workdays ☐ D = Urgent 3 Workdays ☒ E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____
Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other:

Sample Condition Upon Receipt
1. CHILLED Y ☐ N ☑
2. HEADSPACE (VOA) Y ☐ N ☐
3. CONTAINER INTACT Y ☑ N ☐
4. SEALED Y ☐ N ☑
5. # OF SPLS MATCH COC Y ☑ N ☐
6. PRESERVED Y ☐ N ☑

Client: Geocon Consultants, Inc
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA Zip Code: 95742
Tel: 916-852-9118
Fax: 916-852-9132
Attention: Rebecca Silva
Project Name: Plumas-Lassen Bridges Project #: 59605-01-46
Sampler: Julio Esquivel (Signature)

	Date	Time		Date	Time
Relinquished by: (Signature and Printed Name) Julio Esquivel	3/24/15	1900	Received by: (Signature and Printed Name) Ontrac	3/24/15	1900
Relinquished by: (Signature and Printed Name)			Received by: (Signature and Printed Name)	3/25/15	820
Relinquished by: (Signature and Printed Name)			Received by: (Signature and Printed Name)		

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Rebecca Silva 3/24/15
Print Name Date
Signature

Send Report To:
Attn:
Co:
Addr:
City: State: Zip:

Bill To:
Attn:
Co:
Addr:
City: State: Zip:

Special Instructions/Comments:
Homogenize samples for lead analysis
Caltrans Contract ~~06A1895~~ 03A2132.
Please copy Kari Cook on the results and include an excel file. Thank you. (cook@geoconinc.com)

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.
Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested: Total lead (6010B)

SPECIFY APPROPRIATE MATRIX: SOIL, WATER, GROUND WATER, WASTEWATER

PRESERVATION

QA/QC: RTNE ☐ CT ☑ SWRCB Logcode ☐ OTHER

ITEM	LAB USE ONLY: Lab No.	Sample Description: Sample ID / Location	Date	Time	Total lead (6010B)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Type	REMARKS
	1507082-21	WRHA9-1	3/24	832	X	X				E	1	baggie	
	-22	WRHA10-0		840									
	-23	WRHA10-1		843									
	-24	WRHA10-2		844									
	-25	WRHA11-0		845									
	-26	WRHA11-1		848									
	-27	WRHA12-0		855									
	-28	WRHA13-0		907									
	-29	WRHA14-0		910									
	-30	WRHA14-1		912									
	-31	WRHA15-0		923									
	-32	WRHA15-1		926									
	-33	WRHA16-0		932									
	-34	WRHA16-1		934									

- TAT starts 8AM the following day if samples received after 3 PM

TAT: ☐ A = Overnight ≤ 24 hrs ☐ B = Emergency Next Workday ☐ C = Critical 2 Workdays ☐ D = Urgent 3 Workdays ☒ E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives:
H=HCl N=HNO_3 S=H_2SO_4 C=4°C
Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

ADVANCED TECHNOLOGY
LABORATORIES

April 09, 2015

Rebecca Silva
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742
Tel: (916) 852-9118
Fax:(916) 852-9132

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1501082

Client Reference : Plumas-Lassen Bridges, S9805-01-48

Enclosed are the results for sample(s) received on March 25, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WRHA1-1	1501082-02	Soil	3/24/15 7:14	3/25/15 8:20
WRHA1-2	1501082-03	Soil	3/24/15 7:20	3/25/15 8:20
WRHA7-2	1501082-16	Soil	3/24/15 8:11	3/25/15 8:20

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

STLC Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: RR**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501082-02	WRHA1-1	**2.2**	mg/L	1.0	20	B5D0261	04/08/2015	04/09/15 10:09	
1501082-03	WRHA1-2	**2.0**	mg/L	1.0	20	B5D0261	04/08/2015	04/09/15 10:15	
1501082-16	WRHA7-2	**4.8**	mg/L	1.0	20	B5D0261	04/08/2015	04/09/15 10:17	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

QUALITY CONTROL SECTION

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5D0261 - STLC_S Extraction									
Blank (B5D0261-BLK1)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	ND	1.0			NR				
Blank (B5D0261-BLK2)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	ND	1.0			NR				
LCS (B5D0261-BS1)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.05001		2.00000		103	80 - 120			
Duplicate (B5D0261-DUP1)		**Source: 1501083-11**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	0.073518	1.0		0.075710	NR		2.94	20	
Duplicate (B5D0261-DUP2)		**Source: 1501082-02**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.08247	1.0		2.17456	NR		4.33	20	
Matrix Spike (B5D0261-MS1)		**Source: 1501083-11**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.57689		2.50000	0.075710	100	44 - 130			
Matrix Spike (B5D0261-MS2)		**Source: 1501082-02**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	4.35665		2.50000	2.17456	87.3	44 - 130			
Matrix Spike Dup (B5D0261-MSD1)		**Source: 1501083-11**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.75879		2.50000	0.075710	107	44 - 130	6.82	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

Notes and Definitions

ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Diane Galvan

From: Gemma Reblando [reblando@geoconinc.com]
Sent: Thursday, April 02, 2015 10:59 AM
To: Diane Galvan
Subject: Results/EDD/Invoice - Plumas-Lassen Bridges (1501082)

Hi Diane – please analyze samples WRHA1-1, WRHA1-2, and WRHA7-2 for WET soluble lead under standard TAT.

Thanks,
Gemma

ADVANCED TECHNOLOGY
LABORATORIES

March 26, 2015

John Juhrend
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742
Tel: (916) 852-9118
Fax:(916) 852-9132

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1501037

Client Reference : Plumas-Lassen Bridges, S9805-01-48

Enclosed are the results for sample(s) received on March 23, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : John Juhrend
Rancho Cordova , CA 95742	Reported : 03/26/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HA1-0	1501037-01	Soil	3/20/15 12:30	3/23/15 11:38
HA2-0	1501037-02	Soil	3/20/15 12:44	3/23/15 11:38
HA2-1	1501037-03	Soil	3/20/15 12:46	3/23/15 11:38
HA2-2	1501037-04	Soil	3/20/15 12:48	3/23/15 11:38
HA3-0	1501037-05	Soil	3/20/15 12:52	3/23/15 11:38
HA4-0	1501037-06	Soil	3/20/15 13:00	3/23/15 11:38
HA5-0	1501037-07	Soil	3/20/15 13:06	3/23/15 11:38
HA5-1	1501037-08	Soil	3/20/15 13:10	3/23/15 11:38
HA6-0	1501037-09	Soil	3/20/15 13:15	3/23/15 11:38
HA6-1	1501037-10	Soil	3/20/15 13:18	3/23/15 11:38
HA6-2	1501037-11	Soil	3/20/15 13:20	3/23/15 11:38
HA7-0	1501037-12	Soil	3/20/15 13:31	3/23/15 11:38
HA7-1	1501037-13	Soil	3/20/15 13:36	3/23/15 11:38
HA8-0	1501037-14	Soil	3/20/15 13:40	3/23/15 11:38
HA9-0	1501037-15	Soil	3/20/15 13:52	3/23/15 11:38
HA10-0	1501037-16	Soil	3/20/15 13:54	3/23/15 11:38
HA11-0	1501037-17	Soil	3/20/15 14:04	3/23/15 11:38
HA11-1	1501037-18	Soil	3/20/15 14:05	3/23/15 11:38
HA11-2	1501037-19	Soil	3/20/15 14:06	3/23/15 11:38
HA12-0	1501037-20	Soil	3/20/15 14:08	3/23/15 11:38
SA1-0	1501037-21	Soil	3/20/15 14:30	3/23/15 11:38
SA1-1	1501037-22	Soil	3/20/15 14:35	3/23/15 11:38
SA2-0	1501037-23	Soil	3/20/15 14:38	3/23/15 11:38
SA3-0	1501037-24	Soil	3/20/15 14:53	3/23/15 11:38
SA4-0	1501037-25	Soil	3/20/15 14:48	3/23/15 11:38

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : John Juhrend
Rancho Cordova , CA 95742	Reported : 03/26/2015

Total Metals by ICP-AES EPA 6010B

Analyte: Lead **Analyst: RR**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501037-01	HA1-0	**17**	mg/kg	1.0	1	B5C0569	03/23/2015	03/23/15 14:51	
1501037-02	HA2-0	**210**	mg/kg	1.0	1	B5C0569	03/23/2015	03/23/15 14:58	
1501037-03	HA2-1	**72**	mg/kg	1.0	1	B5C0569	03/23/2015	03/23/15 15:00	
1501037-04	HA2-2	**130**	mg/kg	1.0	1	B5C0569	03/23/2015	03/23/15 15:01	
1501037-05	HA3-0	**20**	mg/kg	1.0	1	B5C0569	03/23/2015	03/23/15 15:03	
1501037-06	HA4-0	**3.1**	mg/kg	1.0	1	B5C0569	03/23/2015	03/23/15 15:08	
1501037-07	HA5-0	**1700**	mg/kg	1.0	1	B5C0569	03/23/2015	03/23/15 15:10	
1501037-08	HA5-1	**42**	mg/kg	1.0	1	B5C0569	03/23/2015	03/23/15 15:12	
1501037-09	HA6-0	**44**	mg/kg	1.0	1	B5C0569	03/23/2015	03/23/15 15:14	
1501037-10	HA6-1	**75**	mg/kg	1.0	1	B5C0569	03/23/2015	03/23/15 15:16	
1501037-11	HA6-2	**8.0**	mg/kg	1.0	1	B5C0570	03/23/2015	03/23/15 15:25	
1501037-12	HA7-0	**15**	mg/kg	2.0	2	B5C0570	03/23/2015	03/23/15 15:55	D5
1501037-13	HA7-1	**9.6**	mg/kg	1.0	1	B5C0570	03/23/2015	03/23/15 15:35	
1501037-14	HA8-0	**43**	mg/kg	1.0	1	B5C0570	03/23/2015	03/23/15 15:37	
1501037-15	HA9-0	**45**	mg/kg	1.0	1	B5C0570	03/23/2015	03/23/15 15:39	
1501037-16	HA10-0	**5.1**	mg/kg	1.0	1	B5C0570	03/23/2015	03/23/15 15:44	
1501037-17	HA11-0	**25**	mg/kg	1.0	1	B5C0570	03/23/2015	03/23/15 15:46	
1501037-18	HA11-1	**27**	mg/kg	1.0	1	B5C0570	03/23/2015	03/23/15 15:48	
1501037-19	HA11-2	**20**	mg/kg	1.0	1	B5C0570	03/23/2015	03/23/15 15:49	
1501037-20	HA12-0	**27**	mg/kg	1.0	1	B5C0570	03/23/2015	03/23/15 15:51	
1501037-21	SA1-0	**4.4**	mg/kg	1.0	1	B5C0571	03/23/2015	03/23/15 14:12	
1501037-22	SA1-1	**23**	mg/kg	1.0	1	B5C0571	03/23/2015	03/23/15 14:19	
1501037-23	SA2-0	**4.2**	mg/kg	1.0	1	B5C0571	03/23/2015	03/23/15 14:20	
1501037-24	SA3-0	**6.9**	mg/kg	1.0	1	B5C0571	03/23/2015	03/23/15 14:22	
1501037-25	SA4-0	**2.6**	mg/kg	1.0	1	B5C0571	03/23/2015	03/23/15 14:23	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : John Juhrend
Rancho Cordova , CA 95742	Reported : 03/26/2015

TCLP Metals by ICP-AES EPA 6010B

Analyte: Lead

Analyst: RR

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501037-07	HA5-0	**2.0**	mg/L	0.050	1	B5C0630	03/25/2015	03/25/15 16:48	

STLC Metals by ICP-AES by EPA 6010B

Analyte: Lead

Analyst: RR

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501037-02	HA2-0	**16**	mg/L	1.0	20	B5C0671	03/26/2015	03/26/15 12:47	
1501037-03	HA2-1	**6.8**	mg/L	1.0	20	B5C0671	03/26/2015	03/26/15 12:51	
1501037-04	HA2-2	**4.3**	mg/L	1.0	20	B5C0671	03/26/2015	03/26/15 12:55	
1501037-10	HA6-1	**2.8**	mg/L	1.0	20	B5C0671	03/26/2015	03/26/15 13:00	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : John Juhrend
Rancho Cordova , CA 95742	Reported : 03/26/2015

QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5C0569 - EPA 3050B_S									
Blank (B5C0569-BLK1)					Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	ND	1.0			NR				
LCS (B5C0569-BS1)					Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	51.9264	1.0	50.0000		104	80 - 120			
Duplicate (B5C0569-DUP1)		Source: 1501037-01			Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	15.8653	1.0		17.1393	NR		7.72	20	
Matrix Spike (B5C0569-MS1)		Source: 1501037-01			Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	123.148	1.0	125.000	17.1393	84.8	35 - 129			
Matrix Spike Dup (B5C0569-MSD1)		Source: 1501037-01			Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	123.846	1.0	125.000	17.1393	85.4	35 - 129	0.566	20	
Batch B5C0570 - EPA 3050B_S									
Blank (B5C0570-BLK1)					Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	ND	1.0			NR				
LCS (B5C0570-BS1)					Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	47.1552	1.0	50.0000		94.3	80 - 120			
Duplicate (B5C0570-DUP1)		Source: 1501037-11			Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	7.05835	1.0		7.99049	NR		12.4	20	
Matrix Spike (B5C0570-MS1)		Source: 1501037-11			Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	109.348	1.0	125.628	7.99049	80.7	35 - 129			
Matrix Spike Dup (B5C0570-MSD1)		Source: 1501037-11			Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	107.173	1.0	125.000	7.99049	79.3	35 - 129	2.01	20	
Batch B5C0571 - EPA 3050B_S									
Blank (B5C0571-BLK1)					Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	ND	1.0			NR				
LCS (B5C0571-BS1)					Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	47.1605	1.0	50.0000		94.3	80 - 120			
Duplicate (B5C0571-DUP1)		Source: 1501037-21			Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	4.66532	1.0		4.35882	NR		6.79	20	
Matrix Spike (B5C0571-MS1)		Source: 1501037-21			Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	104.057	1.0	125.000	4.35882	79.8	35 - 129			
Matrix Spike Dup (B5C0571-MSD1)		Source: 1501037-21			Prepared: 3/23/2015 Analyzed: 3/23/2015				

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : John Juhrend
Rancho Cordova , CA 95742	Reported : 03/26/2015

Total Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5C0571 - EPA 3050B_S (continued)									
Matrix Spike Dup (B5C0571-MSD1) - Continued		**Source: 1501037-21**			Prepared: 3/23/2015 Analyzed: 3/23/2015				
Lead	102.865	1.0	125.000	4.35882	78.8	35 - 129	1.15	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : John Juhrend
Rancho Cordova , CA 95742	Reported : 03/26/2015

TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5C0630 - EPA 3010A_S									
Blank (B5C0630-BLK1)					Prepared: 3/25/2015 Analyzed: 3/25/2015				
Lead	ND	0.050			NR				
Blank (B5C0630-BLK2)					Prepared: 3/25/2015 Analyzed: 3/25/2015				
Lead	ND	0.050			NR				
LCS (B5C0630-BS1)					Prepared: 3/25/2015 Analyzed: 3/25/2015				
Lead	1.00519	0.050	1.00000		101	80 - 120			
Duplicate (B5C0630-DUP1)		**Source: 1500533-42**			Prepared: 3/25/2015 Analyzed: 3/25/2015				
Lead	0.005921	0.050		4.2252E-3	NR		33.4	20	R
Duplicate (B5C0630-DUP2)		**Source: 1500532-03**			Prepared: 3/25/2015 Analyzed: 3/25/2015				
Lead	0.013128	0.050		0.014857	NR		12.4	20	
Matrix Spike (B5C0630-MS1)		**Source: 1500533-42**			Prepared: 3/25/2015 Analyzed: 3/25/2015				
Lead	2.22877	0.050	2.50000	4.2252E-3	89.0	77 - 121			
Matrix Spike (B5C0630-MS2)		**Source: 1500532-03**			Prepared: 3/25/2015 Analyzed: 3/25/2015				
Lead	2.20695	0.050	2.50000	0.014857	87.7	77 - 121			
Matrix Spike Dup (B5C0630-MSD1)		**Source: 1500533-42**			Prepared: 3/25/2015 Analyzed: 3/25/2015				
Lead	2.10064	0.050	2.50000	4.2252E-3	83.9	77 - 121	5.92	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : John Juhrend
Rancho Cordova , CA 95742	Reported : 03/26/2015

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5C0671 - STLC_S Extraction									
Blank (B5C0671-BLK1)					Prepared: 3/26/2015 Analyzed: 3/26/2015				
Lead	ND	1.0			NR				
LCS (B5C0671-BS1)					Prepared: 3/26/2015 Analyzed: 3/26/2015				
Lead	2.06229		2.00000		103	80 - 120			
Duplicate (B5C0671-DUP1)		**Source: 1500895-01**			Prepared: 3/26/2015 Analyzed: 3/26/2015				
Lead	9.80721	1.0		10.1057	NR		3.00	20	
Matrix Spike (B5C0671-MS1)		**Source: 1500895-01**			Prepared: 3/26/2015 Analyzed: 3/26/2015				
Lead	12.1762		2.50000	10.1057	82.8	44 - 130			
Matrix Spike Dup (B5C0671-MSD1)		**Source: 1500895-01**			Prepared: 3/26/2015 Analyzed: 3/26/2015				
Lead	12.3688		2.50000	10.1057	90.5	44 - 130	1.57	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : John Juhrend
Rancho Cordova , CA 95742	Reported : 03/26/2015

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
D5	Sample diluted due to failing internal standard in the original run.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____
Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☑ Other:

Sample Condition Upon Receipt:
1. CHILLED 18.5 Y ☐ N ☑ 4. SEALED Y ☐ N ☑
2. HEADSPACE (VOA) Y ☐ N ☐ 5. # OF SPLS MATCH COC Y ☑ N ☐
3. CONTAINER INTACT Y ☑ N ☐ 6. PRESERVED Y ☐ N ☑

Client: Geocon Consultants, Inc
Attention: Rebecca Silva
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA Zip Code: 95742
Tel: 916-852-9118
Fax: 916-852-9132

Project Name: Plumas-Lassen Bridges Project #: 59805-01-48 Sampler: J. Esquivel (Signature)

Relinquished By: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
J. Esquivel	3/20/15	1640	Fed Ex	3/20/15	1640
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
			Fedex	3/23/15	1133
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Rebecca Silva
Print Name Date
Signature

Send Report To:
Attn: John Juhrend
Co: juhrend@geoconinc.com
Addr:
City: State: Zip:

Bill To:
Attn: Kari Cook
Co: cook@geoconinc.com
Addr:
City: State: Zip:

Special Instructions/Comments:
Homogenize samples for lead analysis
Caltrans Contract 06A1895

Please copy Kari Cook on the results and include an excel file. Thank you. (cook@geoconinc.com)

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested: Total lead (6010B)

Note: Max reporting limit for analysis sat water on page margin

SPECIFY APPROPRIATE MATRIX: SOIL, WATER, GROUND WATER, WASTEWATER

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode _____ OTHER _____

ITEM	LAB USE ONLY: Lab No.	Sample Description: Sample ID / Location	Date	Time	Total lead (6010B)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
		HA1-0	3/20/15	1230	X	X				24hr	1	baggie		
		HA2-0		1244										
		HA2-1		1246										
		HA2-2		1248										
		HA3-0		1252										
		HA4-0		1300										
		HA5-0		1306										
		HA5-1		1310										
		HA6-0		1315										
		HA6-1		1318										
		HA6-2		1320										
		HA7-0		1331										
		HA7-1		1336										
		HA8-0		1340										
		HA9-0		1352										
		HA10-0		1354										
		HA11-0		1404										
		HA11-1		1405										
		HA11-2		1406										
		HA12-0		1408										

■ TAT starts 8AM the following day if samples received after 3 PM

TAT: ☐ A = Overnight ≤ 24 hrs ☐ B = Emergency Next Workday ☐ C = Critical 2 Workdays ☐ D = Urgent 3 Workdays ☐ E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Note: 24-Hour TAT on all samples, if lead > 50 ppm and less than 1,000 ppm then run 3-day TAT N.E.T. for lead. If lead > 1,000 ppm then run 3-day TAT TCLP for lead

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____
Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☑ Other: ____

Sample Condition Upon Receipt:
1. CHILLED 18.C Y ☐ N ☑
2. HEADSPACE (VOA) Y ☐ N ☐
3. CONTAINER INTACT Y ☑ N ☐
4. SEALED Y ☐ N ☑
5. # OF SPLS MATCH COC Y ☑ N ☐
6. PRESERVED Y ☐ N ☑

Client: Geocon Consultants, Inc
Attention: Rebecca Silva
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA Zip Code: 95742
Tel: 916-852-9118
Fax: 916-852-9132

Project Name: Plumas-Lasien Bridges Project #: S9805-01-48 Sampler: J. Esquivel (Signature)

Relinquished by: (Signature and Printed Name) J. Esquivel Date: 3/20/15 Time: 1640 Received by: (Signature and Printed Name) Fed Ex Date: 3/20/15 Time: 1640

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Fedex Date: 3/23/15 Time: 1133

Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Rebecca Silva
Print Name Date
Signature

Send Report To: Attn: John Juhrend
Co: juhrend@geoconinc.com
Addr:
City: State: Zip:

Bill To: Attn: Kari Cook
Co: cook@geoconinc.com
Addr:
City: State: Zip:

Special Instructions/Comments:
Homogenize samples for lead analysis
Caltrans Contract 06A1895

Please copy Kari Cook on the results and include an excel file. Thank you. (cook@geoconinc.com)

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested: Total lead (6010B) — Very sample for lead analysis, see note on page margin

SPECIFY APPROPRIATE MATRIX: SOIL, WATER, GROUND WATER, WASTEWATER

QA/QC: RTNE CT ☑; SWRCB Logcode ____; OTHER ____

ITEM	LAB USE ONLY: Lab No.	Sample ID / Location	Date	Time	Total lead (6010B)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
		SA1-0	3/20/15	1430	X	X				24hr	1	baggie		
		SA1-1	↓	1435	↓	↓				↓	↓	↓		
		SA2-0		1438										
		SA3-0		1453										
		SA4-0		1448										

Note: 24-hour TAT on all samples; If lead >50 ppm and less than 1,000 ppm then run 3-day TAT WET, TCLP for lead; If lead >1,000 ppm then run 2-day TAT TCLP for lead

- TAT starts 8AM the following day if samples received after 3 PM

TAT: ☐ A = Overnight ≤ 24 hrs ☐ B = Emergency Next Workday ☐ C = Critical 2 Workdays ☐ D = Urgent 3 Workdays ☐ E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Diane Galvan

From: John Juhrend [juhrend@geoconinc.com]
Sent: Monday, March 23, 2015 12:17 PM
To: Rebecca Silva; Dave Watts, CAC; Diane Galvan
Cc: Wendy & Julio; Gemma Reblando; Carmen Aguila; Cord Dennig; Kari Cook
Subject: RE: S9805-01-48 paint samples (4 each) - Pb analyses

Hi Diane – you may have already received this message but can you place the highest priority on same day analysis of the lead paint and ADL soil samples for this project?

The samples were supposed to have been submitted to ATL on Saturday for same day analysis.

Please reply and confirm.

Thank-you!

John

John Juhrend, PE, CEG, CEM | *Principal / Senior Engineer*
Geocon Consultants, Inc.
3160 Gold Valley Drive Suite 800, Rancho Cordova, CA 95742
Tel 916.852.9118, ext. 501 Mobile 916.508.1911
www.geoconinc.com

ADVANCED TECHNOLOGY
LABORATORIES

April 01, 2015

Rebecca Silva
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742
Tel: (916) 852-9118
Fax:(916) 852-9132

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1501083

Client Reference : Plumas-Lassen Bridges, S9805-01-48

Enclosed are the results for sample(s) received on March 25, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LAHA1-0	1501083-01	Soil	3/23/15 12:20	3/25/15 8:20
LAHA1-1	1501083-02	Soil	3/23/15 12:21	3/25/15 8:20
LAHA1-2	1501083-03	Soil	3/23/15 12:22	3/25/15 8:20
LAHA2-0	1501083-04	Soil	3/23/15 12:27	3/25/15 8:20
LAHA2-1	1501083-05	Soil	3/23/15 12:29	3/25/15 8:20
LAHA2-2	1501083-06	Soil	3/23/15 12:30	3/25/15 8:20
LAHA3-0	1501083-07	Soil	3/23/15 12:35	3/25/15 8:20
LAHA3-1	1501083-08	Soil	3/23/15 12:36	3/25/15 8:20
LAHA3-2	1501083-09	Soil	3/23/15 12:38	3/25/15 8:20
LAHA4-0	1501083-10	Soil	3/23/15 12:44	3/25/15 8:20
LAHA4-1	1501083-11	Soil	3/23/15 12:46	3/25/15 8:20
LAHA4-2	1501083-12	Soil	3/23/15 12:48	3/25/15 8:20
LAHA5-0	1501083-13	Soil	3/23/15 12:53	3/25/15 8:20
LAHA6-0	1501083-14	Soil	3/23/15 13:02	3/25/15 8:20
LAHA13-0	1501083-15	Soil	3/23/15 13:13	3/25/15 8:20
LAHA13-1	1501083-16	Soil	3/23/15 13:16	3/25/15 8:20
LAHA13-2	1501083-17	Soil	3/23/15 13:17	3/25/15 8:20
LAHA7-0	1501083-18	Soil	3/23/15 13:21	3/25/15 8:20
LAHA8-0	1501083-19	Soil	3/23/15 13:25	3/25/15 8:20
LAHA8-1	1501083-20	Soil	3/23/15 13:26	3/25/15 8:20
LAHA8-2	1501083-21	Soil	3/23/15 13:28	3/25/15 8:20
LAHA9-0	1501083-22	Soil	3/23/15 13:40	3/25/15 8:20
LAHA10-0	1501083-23	Soil	3/23/15 13:48	3/25/15 8:20
LAHA10-1	1501083-24	Soil	3/23/15 13:50	3/25/15 8:20
LAHA10-2	1501083-25	Soil	3/23/15 13:53	3/25/15 8:20
LAHA11-0	1501083-26	Soil	3/23/15 13:56	3/25/15 8:20
LAHA11-1	1501083-27	Soil	3/23/15 13:57	3/25/15 8:20
LAHA11-2	1501083-28	Soil	3/23/15 13:58	3/25/15 8:20
LAHA12-0	1501083-29	Soil	3/23/15 14:02	3/25/15 8:20
LAHA12-1	1501083-30	Soil	3/23/15 14:03	3/25/15 8:20
LAHA12-2	1501083-31	Soil	3/23/15 14:04	3/25/15 8:20
LAHA14-0	1501083-32	Soil	3/23/15 14:11	3/25/15 8:20
LAHA14-1	1501083-33	Soil	3/23/15 14:14	3/25/15 8:20
LAHA15-0	1501083-34	Soil	3/23/15 14:17	3/25/15 8:20

Certificate of Analysis

Geocon Consultants, Inc.	Project Number :	Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To :	Rebecca Silva
Rancho Cordova , CA 95742	Reported :	04/01/2015

LAHA15-1	1501083-35	Soil	3/23/15 14:18	3/25/15 8:20
LAHA15-2	1501083-36	Soil	3/23/15 14:20	3/25/15 8:20
LAHA16-0	1501083-37	Soil	3/23/15 14:25	3/25/15 8:20
LAHA16-1	1501083-38	Soil	3/23/15 14:26	3/25/15 8:20
LAHA16-2	1501083-39	Soil	3/23/15 14:30	3/25/15 8:20

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Lead by ICP-AES EPA 6010B

Analyte: Lead **Analyst: SB**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501083-01	LAHA1-0	**22**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:45	
1501083-02	LAHA1-1	**5.9**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:46	
1501083-03	LAHA1-2	**6.8**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:46	
1501083-04	LAHA2-0	**5.9**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:49	
1501083-05	LAHA2-1	**4.4**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:49	
1501083-06	LAHA2-2	**5.9**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:50	
1501083-07	LAHA3-0	**8.6**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:51	
1501083-08	LAHA3-1	**6.6**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:52	
1501083-09	LAHA3-2	**7.6**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:52	
1501083-10	LAHA4-0	**13**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:53	
1501083-11	LAHA4-1	**250**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:55	
1501083-12	LAHA4-2	**12**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:58	
1501083-13	LAHA5-0	**6.4**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 16:36	
1501083-14	LAHA6-0	**23**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 15:59	
1501083-15	LAHA13-0	**18**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 16:00	
1501083-16	LAHA13-1	**7.0**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 16:01	
1501083-17	LAHA13-2	**9.7**	mg/kg	0.99	1	B5C0766	03/31/2015	03/31/15 16:02	
1501083-18	LAHA7-0	**26**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 16:02	
1501083-19	LAHA8-0	**14**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 16:03	
1501083-20	LAHA8-1	**9.1**	mg/kg	1.0	1	B5C0766	03/31/2015	03/31/15 16:04	
1501083-21	LAHA8-2	**11**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:11	
1501083-22	LAHA9-0	**7.7**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:11	
1501083-23	LAHA10-0	**11**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:12	
1501083-24	LAHA10-1	**9.0**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:13	
1501083-25	LAHA10-2	**8.4**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:14	
1501083-26	LAHA11-0	**20**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:16	
1501083-27	LAHA11-1	**3.2**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:17	
1501083-28	LAHA11-2	**4.8**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:17	
1501083-29	LAHA12-0	**18**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:18	
1501083-30	LAHA12-1	**10**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:19	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Lead by ICP-AES EPA 6010B

Analyte: Lead **Analyst: SB**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501083-31	LAHA12-2	**11**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:21	
1501083-32	LAHA14-0	**13**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:22	
1501083-33	LAHA14-1	**21**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:23	
1501083-34	LAHA15-0	**12**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:25	
1501083-35	LAHA15-1	**7.2**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:26	
1501083-36	LAHA15-2	**9.0**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:27	
1501083-37	LAHA16-0	**9.7**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:27	
1501083-38	LAHA16-1	**8.6**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:28	
1501083-39	LAHA16-2	**9.1**	mg/kg	1.0	1	B5C0767	03/31/2015	03/31/15 16:29	

Certificate of Analysis

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3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

QUALITY CONTROL SECTION

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5C0766 - EPA 3050 Modified_S									
Blank (B5C0766-BLK1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
Blank (B5C0766-BLK2)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
LCS (B5C0766-BS1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	50.2125	1.0	50.0000		100	80 - 120			
Duplicate (B5C0766-DUP1)		**Source: 1501083-20**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	10.5915	1.0		9.08352	NR		15.3	20	
Duplicate (B5C0766-DUP2)		**Source: 1501083-10**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	8.76114	1.0		13.3742	NR		41.7	20	R
Matrix Spike (B5C0766-MS1)		**Source: 1501083-20**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	225.829	1.0	250.000	9.08352	86.7	35 - 129			
Matrix Spike (B5C0766-MS2)		**Source: 1501083-10**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	226.106	1.0	250.000	13.3742	85.1	35 - 129			
Matrix Spike Dup (B5C0766-MSD1)		**Source: 1501083-20**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	221.287	1.0	250.000	9.08352	84.9	35 - 129	2.03	20	
Batch B5C0767 - EPA 3050 Modified_S									
Blank (B5C0767-BLK1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
Blank (B5C0767-BLK2)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
LCS (B5C0767-BS1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	47.6101	1.0	50.0000		95.2	80 - 120			
Duplicate (B5C0767-DUP1)		**Source: 1501083-39**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	8.44862	1.0		9.06233	NR		7.01	20	
Duplicate (B5C0767-DUP2)		**Source: 1501083-30**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	10.8410	1.0		10.3188	NR		4.94	20	
Matrix Spike (B5C0767-MS1)		**Source: 1501083-39**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	227.902	1.0	250.000	9.06233	87.5	35 - 129			
Matrix Spike (B5C0767-MS2)		**Source: 1501083-30**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	223.612	1.0	250.000	10.3188	85.3	35 - 129			

Certificate of Analysis

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3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5C0767 - EPA 3050 Modified_S (continued)									
Matrix Spike Dup (B5C0767-MSD1)		**Source: 1501083-39**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	223.418	1.0	250.000	9.06233	85.7	35 - 129	1.99	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____
Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: _____

Sample Condition Upon Receipt:
1. CHILLED Y ☐ N ☑
2. HEADSPACE (VOA) Y ☐ N ☐
3. CONTAINER INTACT Y ☑ N ☐
4. SEALED Y ☐ N ☑
5. # OF SPLS MATCH COC Y ☑ N ☐
6. PRESERVED Y ☐ N ☑

Client: Geocon Consultants, Inc
Attention: Rebecca Silva
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA Zip Code: 95742
Tel: 916-852-9118
Fax: 916-852-9132

Project Name: Plumas Lassen Bridges Project #: 59805-01-48 Sampler: Julio Esquivel (Signature)

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Julio Esquivel	3/24/15	1500	Ontrac	3/24/15	1500
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date: 3/25/15	Time: 8AM
Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Rebecca Silva 3/24/15
Print Name Date
Signature

Send Report To:
Attn:
Co:
Addr:
City: State: Zip:

Bill To:
Attn:
Co:
Addr:
City: State: Zip:

Special Instructions/Comments:
Homogenize samples for lead analysis
Caltrans Contract ~~06A1806~~ 03A2132

Please copy Kari Cook on the results and include an excel file. Thank you. (cook@geoconinc.com)

Sample/Records Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode ____ OTHER ____

ITEM	LAB USE ONLY: Lab No.	Sample ID / Location	Date	Time	Total lead (6010B)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Type	PRESERVATION	REMARKS
	1501083-1	LAHA1-0	3/23/15	1220	X	X				E	1	baggie		
	-2	LAHA1-1		1221										
	-3	LAHA1-2		1222										
	-4	LAHA2-0		1227										
	-5	LAHA2-1		1229										
	-6	LAHA2-2		1230										
	-7	LAHA3-0		1235										
	-8	LAHA3-1		1236										
	-9	LAHA3-2		1238										
	-10	LAHA4-0		1244										
	-11	LAHA4-1		1246										
	-12	LAHA4-2		1248										
	-13	LAHA5-0		1253										
	-14	LAHA6-0		1302										
	-15	LAHA13-0		1313										
	-16	LAHA13-1		1316										
	-17	LAHA13-2		1317										
	-18	LAHA7-0		1321										
	-19	LAHA8-0		1325										
	-20	LAHA8-1		1326										

* TAT starts 8AM the following day if samples received after 3 PM

TAT: ☐ A = Overnight ≤ 24 hrs ☐ B = Emergency Next Workday ☐ C = Critical 2 Workdays ☐ D = Urgent 3 Workdays ☒ E = Routine 7 Workdays

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O.#: _____
Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: ontrac

Sample Condition Upon Receipt:
1. CHILLED Y ☐ N ☑
2. HEADSPACE (VOA) Y ☐ N ☐
3. CONTAINER INTACT Y ☑ N ☐
4. SEALED Y ☐ N ☑
5. # OF SPLS MATCH COC Y ☑ N ☐
6. PRESERVED Y ☐ N ☑

Client: Geocon Consultants, Inc
Attention: Rebecca Silva
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA ~~Zip Code:~~ 95742
Tel: 916-852-9118
Fax: 916-852-9132

Project Name: Plumas-Lassen Bridges Project #: 59805-01-48 Sampler: Julio Esquivel (Signature)

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Julio Esquivel	3/24/15	1500	ontrac	3/24/15	1500
				3/25/15	1220

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Rebecca Silva 3/24/15
Print Name Date
Signature

Send Report To: Attn: _____ Co: _____ Addr: _____ City: _____ State: _____ Zip: _____

Bill To: Attn: _____ Co: _____ Addr: _____ City: _____ State: _____ Zip: _____

Special Instructions/Comments:
Homogenize samples for lead analysis.
Caltrans Contract ~~06A1895~~ 03A2132.
Please copy Kari Cook on the results and include an excel file. Thank you. (cook@geoconinc.com)

Sample/Records Archived & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.
Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode _____ OTHER _____

ITEM	LAB USE ONLY: Lab No.	Sample Description: Sample ID / Location	Date	Time	Total lead (6010B)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	1501027-21	LAHA8-2	3/23/15	1328	X	X				E	1	baggie		
	-22	LAHA9-0		1340										
	-23	LAHA10-0		1348										
	-24	LAHA10-1		1350										
	-25	LAHA10-2		1353										
	-26	LAHA11-0		1356										
	-27	LAHA11-1		1357										
	-28	LAHA11-2		1358										
	-29	LAHA12-0		1403										
	-30	LAHA12-1		1403										
	-31	LAHA12-1		1404										
	-32	LAHA14-0		1411										
	-33	LAHA14-1		1414										
	-34	LAHA15-0		1417										
	-35	LAHA15-1		1418										
	-36	LAHA15-2		1420										
	-37	LAHA16-0		1423										
	-38	LAHA16-1		1426										
	-39	LAHA16-2		1430										

■ TAT starts 8AM the following day if samples received after 3 PM

TAT: ☐ A = Overnight ≤24 hrs ☐ B = Emergency Next Workday ☐ C = Critical 2 Workdays ☐ D = Urgent 3 Workdays ☒ E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

ADVANCED TECHNOLOGY
LABORATORIES

April 09, 2015

Rebecca Silva
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742
Tel: (916) 852-9118
Fax:(916) 852-9132

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1501083

Client Reference : Plumas-Lassen Bridges, S9805-01-48

Enclosed are the results for sample(s) received on March 25, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LAHA4-1	1501083-11	Soil	3/23/15 12:46	3/25/15 8:20

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

TCLP Metals by ICP-AES EPA 6010B

Analyte: Lead

Analyst: RR

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501083-11	LAHA4-1	**ND**	mg/L	0.050	1	B5D0241	04/08/2015	04/09/15 10:51	

STLC Metals by ICP-AES by EPA 6010B

Analyte: Lead

Analyst: RR

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501083-11	LAHA4-1	**ND**	mg/L	1.0	20	B5D0261	04/08/2015	04/09/15 10:20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

QUALITY CONTROL SECTION

TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5D0241 - EPA 3010A_S									
Blank (B5D0241-BLK1)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	ND	0.050			NR				
LCS (B5D0241-BS1)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	0.983352	0.050	1.00000		98.3	80 - 120			
Duplicate (B5D0241-DUP1)		**Source: 1501065-23**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	0.112723	0.050		0.120524	NR		6.69	20	
Matrix Spike (B5D0241-MS1)		**Source: 1501065-23**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.45145	0.050	2.50000	0.120524	93.2	77 - 121			
Matrix Spike Dup (B5D0241-MSD1)		**Source: 1501065-23**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.30655	0.050	2.50000	0.120524	87.4	77 - 121	6.09	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5D0261 - STLC_S Extraction									
Blank (B5D0261-BLK1)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	ND	1.0			NR				
Blank (B5D0261-BLK2)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	ND	1.0			NR				
LCS (B5D0261-BS1)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.05001		2.00000		103	80 - 120			
Duplicate (B5D0261-DUP1)		**Source: 1501083-11**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	0.073518	1.0		0.075710	NR		2.94	20	
Duplicate (B5D0261-DUP2)		**Source: 1501082-02**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.08247	1.0		2.17456	NR		4.33	20	
Matrix Spike (B5D0261-MS1)		**Source: 1501083-11**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.57689		2.50000	0.075710	100	44 - 130			
Matrix Spike (B5D0261-MS2)		**Source: 1501082-02**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	4.35665		2.50000	2.17456	87.3	44 - 130			
Matrix Spike Dup (B5D0261-MSD1)		**Source: 1501083-11**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.75879		2.50000	0.075710	107	44 - 130	6.82	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

Notes and Definitions

ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Diane Galvan

From: Gemma Reblando [reblando@geoconinc.com]
Sent: Thursday, April 02, 2015 10:30 AM
To: Diane Galvan
Subject: Results/EDD/Invoice - Plumas-Lassen Bridges (1501083)

Hi Diane – please analyze sample LAHA4-1 for WET and TCLP soluble lead under standard TAT.

Thanks,
Gemma

ADVANCED TECHNOLOGY
LABORATORIES

April 01, 2015

Rebecca Silva
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742
Tel: (916) 852-9118
Fax:(916) 852-9132

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1501081
Client Reference : Plumas-Lassen Bridges, S9805-01-48

Enclosed are the results for sample(s) received on March 25, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HBHA1-0	1501081-01	Soil	3/23/15 15:08	3/25/15 8:20
HBHA1-1	1501081-02	Soil	3/23/15 15:09	3/25/15 8:20
HBHA1-2	1501081-03	Soil	3/23/15 15:11	3/25/15 8:20
HBHA2-0	1501081-04	Soil	3/23/15 15:13	3/25/15 8:20
HBHA2-1	1501081-05	Soil	3/23/15 15:14	3/25/15 8:20
HBHA2-2	1501081-06	Soil	3/23/15 15:15	3/25/15 8:20
HBHA3-0	1501081-07	Soil	3/23/15 15:23	3/25/15 8:20
HBHA3-1	1501081-08	Soil	3/23/15 15:24	3/25/15 8:20
HBHA3-2	1501081-09	Soil	3/23/15 15:25	3/25/15 8:20
HBHA4-0	1501081-10	Soil	3/23/15 15:27	3/25/15 8:20
HBHA11-0	1501081-11	Soil	3/23/15 15:31	3/25/15 8:20
HBHA11-1	1501081-12	Soil	3/23/15 15:33	3/25/15 8:20
HBHA12-0	1501081-13	Soil	3/23/15 15:43	3/25/15 8:20
HBHA12-1	1501081-14	Soil	3/23/15 15:46	3/25/15 8:20
HBHA5-0	1501081-15	Soil	3/23/15 15:56	3/25/15 8:20
HBHA5-1	1501081-16	Soil	3/23/15 16:01	3/25/15 8:20
HBHA6-0	1501081-17	Soil	3/23/15 16:03	3/25/15 8:20
HBHA10-0	1501081-18	Soil	3/23/15 16:05	3/25/15 8:20
HBHA10-1	1501081-19	Soil	3/23/15 16:06	3/25/15 8:20
HBHA10-2	1501081-20	Soil	3/23/15 16:07	3/25/15 8:20
HBHA7-0	1501081-21	Soil	3/23/15 16:18	3/25/15 8:20
HBHA7-1	1501081-22	Soil	3/23/15 16:20	3/25/15 8:20
HBHA8-0	1501081-23	Soil	3/23/15 16:28	3/25/15 8:20
HBHA8-1	1501081-24	Soil	3/23/15 16:30	3/25/15 8:20
HBHA9-0	1501081-25	Soil	3/23/15 16:35	3/25/15 8:20
HBHA9-1	1501081-26	Soil	3/23/15 16:36	3/25/15 8:20

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Lead by ICP-AES EPA 6010B

Analyte: Lead **Analyst: SB**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501081-01	HBHA1-0	**7.4**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:29	
1501081-02	HBHA1-1	**13**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:30	
1501081-03	HBHA1-2	**26**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:31	
1501081-04	HBHA2-0	**6.3**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:32	
1501081-05	HBHA2-1	**40**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:32	
1501081-06	HBHA2-2	**24**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:33	
1501081-07	HBHA3-0	**17**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:34	
1501081-08	HBHA3-1	**7.4**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:36	
1501081-09	HBHA3-2	**6.1**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:37	
1501081-10	HBHA4-0	**98**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:38	
1501081-11	HBHA11-0	**92**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:40	
1501081-12	HBHA11-1	**76**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:41	
1501081-13	HBHA12-0	**34**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:41	
1501081-14	HBHA12-1	**29**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:42	
1501081-15	HBHA5-0	**21**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:43	
1501081-16	HBHA5-1	**13**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:45	
1501081-17	HBHA6-0	**100**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:46	
1501081-18	HBHA10-0	**51**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:47	
1501081-19	HBHA10-1	**4.6**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:47	
1501081-20	HBHA10-2	**6.3**	mg/kg	1.0	1	B5C0763	03/31/2015	03/31/15 14:48	
1501081-21	HBHA7-0	**26**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 14:55	
1501081-22	HBHA7-1	**13**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 14:56	
1501081-23	HBHA8-0	**62**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 14:57	
1501081-24	HBHA8-1	**8.9**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 14:57	
1501081-25	HBHA9-0	**24**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 14:58	
1501081-26	HBHA9-1	**86**	mg/kg	1.0	1	B5C0764	03/31/2015	03/31/15 14:59	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

QUALITY CONTROL SECTION

Lead by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5C0763 - EPA 3050 Modified_S									
Blank (B5C0763-BLK1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
Blank (B5C0763-BLK2)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
LCS (B5C0763-BS1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	53.5904	1.0	50.0000		107	80 - 120			
Duplicate (B5C0763-DUP1)		**Source: 1501081-20**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	5.82216	1.0		6.32248	NR		8.24	20	
Duplicate (B5C0763-DUP2)		**Source: 1501081-10**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	81.6792	0.99		98.2597	NR		18.4	20	
Matrix Spike (B5C0763-MS1)		**Source: 1501081-20**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	232.533	1.0	250.000	6.32248	90.5	35 - 129			
Matrix Spike (B5C0763-MS2)		**Source: 1501081-10**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	284.730	1.0	250.000	98.2597	74.6	35 - 129			
Matrix Spike Dup (B5C0763-MSD1)		**Source: 1501081-20**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	220.169	1.0	250.000	6.32248	85.5	35 - 129	5.46	20	
Batch B5C0764 - EPA 3050 Modified_S									
Blank (B5C0764-BLK1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
Blank (B5C0764-BLK2)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	ND	1.0			NR				
LCS (B5C0764-BS1)					Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	49.3561	1.0	50.0000		98.7	80 - 120			
Duplicate (B5C0764-DUP1)		**Source: 1501082-14**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	5.66246	1.0		3.93591	NR		36.0	20	R
Duplicate (B5C0764-DUP2)		**Source: 1501082-04**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	8.48302	1.0		10.8569	NR		24.5	20	R
Matrix Spike (B5C0764-MS1)		**Source: 1501082-14**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	220.702	0.99	247.525	3.93591	87.6	35 - 129			
Matrix Spike (B5C0764-MS2)		**Source: 1501082-04**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	259.498	1.0	252.525	10.8569	98.5	35 - 129			

Certificate of Analysis

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3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Lead by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5C0764 - EPA 3050 Modified_S (continued)									
Matrix Spike Dup (B5C0764-MSD1)		**Source: 1501082-14**			Prepared: 3/31/2015 Analyzed: 3/31/2015				
Lead	237.287	1.0	250.000	3.93591	93.3	35 - 129	7.24	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/01/2015

Notes and Definitions

R	RPD value outside acceptance criteria. Calculation is based on raw values.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____
Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: ☐

Sample Condition Upon Receipt:
1. CHILLED Y ☐ N ☑
2. HEADSPACE (VOA) Y ☐ N ☐
3. CONTAINER INTACT Y ☑ N ☐
4. SEALED Y ☐ N ☑
5. # OF SPLS MATCH COC Y ☑ N ☐
6. PRESERVED Y ☐ N ☑

Client: Geocon Consultants, Inc
Address: 3160 Gold Valley Drive, Suite 800
Tel: 916-852-9118
Attention: Rebecca Silva
City: Rancho Cordova State: CA Zip Code: 95742
Fax: 916-852-9132
Project Name: Plumas-Lassen Bridges Project #: 59805-01-48
Sampler: Julio Esquivel (Signature)

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Julio Esquivel	3/24/15	1500	Ontrac	3/24/15	1500
				3/25/15	0730

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Rebecca Silva 3/24/15
Print Name Date
Signature

Send Report To:
Attn: _____
Co: _____
Addr: _____
City: State: Zip:

Bill To:
Attn: _____
Co: _____
Addr: _____
City: State: Zip:

Special Instructions/Comments:
Homogenize samples for lead analysis
Caltrans Contract ~~06A1895~~ 03A2132
Please copy Kari Cook on the results and include an excel file. Thank you. (cook@geoconinc.com)

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

QA/QC: RTNE ☐ CT ☑ SWRCB Logcode ☐ OTHER _____

ITEM	LAB USE ONLY: Lab No.	Sample Description: Sample ID / Location	Date	Time	Total lead (6010B)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Type	PRESERVATION	REMARKS
	1501085-1	HBHA1-0	3/23	1508	X	X				E	1	baggie		
	-2	HBHA1-1		1509										
	-3	HBHA1-2		1511										
	-4	HBHA2-0		1513										
	-5	HBHA2-1		1514										
	-6	HBHA2-2		1515										
	-7	HBHA3-0		1523										
	-8	HBHA3-1		1524										
	-9	HBHA3-2		1525										
	-10	HBHA4-0		1527										
	-11	HBHA11-0		1531										
	-12	HBHA11-1		1533										
	-13	HBHA12-0		1543										
	-14	HBHA12-1		1546										
	-15	HBHA5-0		1556										
	-16	HBHA5-1		1601										
	-17	HBHA6-0		1603										
	-18	HBHA10-0		1605										
	-19	HBHA10-1		1606										
	-20	HBHA10-2		1607										

■ TAT starts 8AM the following day if samples received after 3 PM

TAT: ☐ A = Overnight ≤ 24 hrs ☐ B = Emergency Next Workday ☐ C = Critical 2 Workdays ☐ D = Urgent 3 Workdays ☒ E = Routine 7 Workdays

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

CHAIN OF CUSTODY RECORD

Advanced Technology Laboratories
3275 Walnut Avenue
Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

FOR LABORATORY USE ONLY

P.O. #: _____
Logged By: _____ Date: _____

Method of Transport: Client ☐ ATL ☐ CA OverN ☐ FedEx ☐ Other: [illegible]

Sample Condition Upon Receipt:
1. CHILLED Y ☐ N ☑
2. HEADSPACE (VOA) Y ☐ N ☐
3. CONTAINER INTACT Y ☑ N ☐
4. SEALED Y ☐ N ☑
5. # OF SPLS MATCH COC Y ☑ N ☐
6. PRESERVED Y ☐ N ☑

Client: Geocon Consultants, Inc
Attention: Rebecca Silva
Address: 3160 Gold Valley Drive, Suite 800
City: Rancho Cordova State: CA Zip Code: 95742
Tel: 916-852-9118
Fax: 916-852-9132

Project Name: Plumas-Lassen Bridges Project #: 59905-01-48 Sampler: Julio Esquivel (Signature)

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
Julio Esquivel	3/24/15	1500	Ontrac	3/24/15	1500
				3/25/15	1220

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: Rebecca Silva 3/24/15
Print Name Date
Signature

Send Report To: Attn: _____ Co: _____ Addr: _____ City: State: Zip:

Bill To: Attn: _____ Co: _____ Addr: _____ City: State: Zip:

Special Instructions/Comments:
Homogenize samples for lead analysis
Caltrans Contract ~~06A1895~~ 03A2132
Please copy Kari Cook on the results and include an excel file. Thank you. (cook@geoconinc.com)

Sample/Records Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.

Storage Fees (applies when storage is requested):
- Sample :$2.00 / sample /mo (after 45 days)
- Records: $1 /ATL workorder /mo (after 1 year)

Circle or Add Analysis(es) Requested

SPECIFY APPROPRIATE MATRIX

QA/QC: RTNE ☐ CT ☑ SWRCB ☐ Logcode ____ OTHER ____

ITEM	LAB USE ONLY: Lab No.	Sample Description: Sample ID / Location	Date	Time	Total lead (6010B)	SOIL	WATER	GROUND WATER	WASTEWATER	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	1501081-21	HBHA7-0	3/23/15	1618	X	X				E	1	baggie		
	-22	HBHA7-1	↓	1620	↓	↓				↓	↓	↓		
	-23	HBHA8-0		1628										
	-24	HBHA8-1		1630										
	-25	HBHA9-0		1635										
	-26	HBHA9-1		1636										

■ TAT starts 8AM the following day if samples received after 3 PM

TAT: ☐ A = Overnight ≤ 24 hrs ☐ B = Emergency Next Workday ☐ C = Critical 2 Workdays ☐ D = Urgent 3 Workdays ☒ E = Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

ADVANCED TECHNOLOGY
LABORATORIES

April 09, 2015

Rebecca Silva
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742
Tel: (916) 852-9118
Fax:(916) 852-9132

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1501081
Client Reference : Plumas-Lassen Bridges, S9805-01-48

Enclosed are the results for sample(s) received on March 25, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HBHA4-0	1501081-10	Soil	3/23/15 15:27	3/25/15 8:20
HBHA11-0	1501081-11	Soil	3/23/15 15:31	3/25/15 8:20
HBHA11-1	1501081-12	Soil	3/23/15 15:33	3/25/15 8:20
HBHA6-0	1501081-17	Soil	3/23/15 16:03	3/25/15 8:20
HBHA10-0	1501081-18	Soil	3/23/15 16:05	3/25/15 8:20
HBHA8-0	1501081-23	Soil	3/23/15 16:28	3/25/15 8:20
HBHA9-1	1501081-26	Soil	3/23/15 16:36	3/25/15 8:20

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

STLC Metals by ICP-AES by EPA 6010B

Analyte: Lead **Analyst: RR**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501081-10	HBHA4-0	**2.7**	mg/L	1.0	20	B5D0261	04/08/2015	04/09/15 09:49	
1501081-11	HBHA11-0	**3.0**	mg/L	1.0	20	B5D0261	04/08/2015	04/09/15 09:52	
1501081-12	HBHA11-1	**1.7**	mg/L	1.0	20	B5D0261	04/08/2015	04/09/15 09:54	
1501081-17	HBHA6-0	**2.0**	mg/L	1.0	20	B5D0261	04/08/2015	04/09/15 09:56	
1501081-18	HBHA10-0	**1.5**	mg/L	1.0	20	B5D0261	04/08/2015	04/09/15 09:58	
1501081-23	HBHA8-0	**1.8**	mg/L	1.0	20	B5D0261	04/08/2015	04/09/15 10:04	
1501081-26	HBHA9-1	**2.7**	mg/L	1.0	20	B5D0261	04/08/2015	04/09/15 10:06	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

QUALITY CONTROL SECTION

STLC Metals by ICP-AES by EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5D0261 - STLC_S Extraction									
Blank (B5D0261-BLK1)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	ND	1.0			NR				
Blank (B5D0261-BLK2)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	ND	1.0			NR				
LCS (B5D0261-BS1)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.05001		2.00000		103	80 - 120			
Duplicate (B5D0261-DUP1)		**Source: 1501083-11**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	0.073518	1.0		0.075710	NR		2.94	20	
Duplicate (B5D0261-DUP2)		**Source: 1501082-02**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.08247	1.0		2.17456	NR		4.33	20	
Matrix Spike (B5D0261-MS1)		**Source: 1501083-11**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.57689		2.50000	0.075710	100	44 - 130			
Matrix Spike (B5D0261-MS2)		**Source: 1501082-02**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	4.35665		2.50000	2.17456	87.3	44 - 130			
Matrix Spike Dup (B5D0261-MSD1)		**Source: 1501083-11**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.75879		2.50000	0.075710	107	44 - 130	6.82	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

Notes and Definitions

ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Diane Galvan

From: Gemma Reblando [reblando@geoconinc.com]
Sent: Thursday, April 02, 2015 12:38 AM
To: Diane Galvan
Subject: Results/EDD/Invoice - Plumas-Lassen Bridges (1501081)

Hi Diane,
Please analyze the seven samples with total lead greater than 50 mg/kg for WET soluble lead under standard TAT.

Thanks,
Gemma

ADVANCED TECHNOLOGY LABORATORIES

April 09, 2015

Rebecca Silva
Geocon Consultants, Inc.
3160 Gold Valley Drive, Suite 800
Rancho Cordova, CA 95742
Tel: (916) 852-9118
Fax:(916) 852-9132

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1501081

Client Reference : Plumas-Lassen Bridges, S9805-01-48

Enclosed are the results for sample(s) received on March 25, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HBHA6-0	1501081-17	Soil	3/23/15 16:03	3/25/15 8:20

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

TCLP Metals by ICP-AES EPA 6010B

Analyte: Lead

Analyst: RR

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501081-17	HBHA6-0	**ND**	mg/L	0.050	1	B5D0241	04/08/2015	04/09/15 10:48	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

QUALITY CONTROL SECTION

TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5D0241 - EPA 3010A_S									
Blank (B5D0241-BLK1)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	ND	0.050			NR				
LCS (B5D0241-BS1)					Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	0.983352	0.050	1.00000		98.3	80 - 120			
Duplicate (B5D0241-DUP1)		**Source: 1501065-23**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	0.112723	0.050		0.120524	NR		6.69	20	
Matrix Spike (B5D0241-MS1)		**Source: 1501065-23**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.45145	0.050	2.50000	0.120524	93.2	77 - 121			
Matrix Spike Dup (B5D0241-MSD1)		**Source: 1501065-23**			Prepared: 4/8/2015 Analyzed: 4/9/2015				
Lead	2.30655	0.050	2.50000	0.120524	87.4	77 - 121	6.09	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : Plumas-Lassen Bridges, S9805-01-48
3160 Gold Valley Drive, Suite 800	Report To : Rebecca Silva
Rancho Cordova , CA 95742	Reported : 04/09/2015

Notes and Definitions

ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Diane Galvan

From: Gemma Reblando [reblando@geoconinc.com]
Sent: Thursday, April 02, 2015 12:44 AM
To: Diane Galvan
Subject: Results/EDD/Invoice - Plumas-Lassen Bridges (1501081)

Hi Diane,
Please analyze sample HBHA6-0 for TCLP soluble lead under standard TAT.

Thanks,
Gemma

Sent from my iPhone

Asbestos And Lead-Containing Paint Survey Report Dated April 17, 2015

ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT

Hamilton Branch Bridge (09-0065)
Plumas County, California

PREPARED FOR:

CALIFORNIA DEPARTMENT OF TRANSPORTATION – DISTRICT 3
ENVIRONMENTAL ENGINEERING OFFICE
703 B STREET
MARYSVILLE, CALIFORNIA 95901

PREPARED BY:

GEOCON CONSULTANTS, INC.
3160 GOLD VALLEY DRIVE, SUITE 800
RANCHO CORDOVA, CALIFORNIA 95742

GEOCON PROJECT NO. S9805-01-48
TASK ORDER NO. 48, CONTRACT NO. 03A2132

APRIL 2015

GEOCON
CONSULTANTS, INC.
GEOTECHNICAL ■ ENVIRONMENTAL ■ MATERIALS

Project No. S9805-01-48
April 17, 2015

Mark Melani, Task Order Manager
Caltrans District 3
703 B Street
Marysville, California 95901

Subject: ASBESTOS AND LEAD-CONTAINING PAINT SURVEY REPORT
HAMILTON BRANCH BRIDGE (09-0065)
PLUMAS COUNTY, CALIFORNIA
02-PLU-147, PM 8.98, CONTRACT 03A2132, EA 02-4E6401, E-FIS: 02 1200 0011

Dear Mr. Melani:

In accordance with the request of the California Department of Transportation (Caltrans), we have performed an asbestos and lead-containing paint (LCP) survey of the Hamilton Branch Bridge (09-0065) located at Post Mile (PM) 8.98 on Highway 147 in Plumas County, California. The project location is depicted on the Vicinity Map, Figure 1, and Site Plan, Figure 2.

We surveyed the bridge for suspect asbestos-containing materials (ACM) and LCP, collected bulk suspect ACM and LCP samples, and submitted the samples to laboratories for analyses.

GENERAL OBJECTIVES

Our scope of services included the determination of the presence and quantity of asbestos and LCP at the project location prior to bridge replacement activities. The information obtained from this investigation will be used by Caltrans for waste profiling, determining California Occupational Safety and Health Administration (Cal/OSHA) applicability, and coordinating asbestos and LCP disturbance activities.

BACKGROUND

Asbestos

The Code of Federal Regulations (CFR), 40 CFR 61, Subpart M, National Emissions Standards for Hazardous Air Pollutants (NESHAP) and Federal Occupational Safety and Health Administration (FED OSHA) classify ACM as any material or product that contains *greater than* 1% asbestos. Nonfriable ACM is classified by NESHAP as either Category I or Category II material defined as follows:

- **Category I** – asbestos-containing packings, gaskets, resilient floor coverings, and asphalt roofing products.
- **Category II** – all remaining types of nonfriable asbestos-containing material not included in Category I that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.

Regulated asbestos-containing material (RACM), a hazardous waste when friable, is classified as any manufactured material that contains *greater than* 1% asbestos by dry weight *and* is:

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure); or
- Category I material that has become friable; or
- Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- Category II nonfriable material that has a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

Activities that disturb materials containing *any* amount of asbestos are subject to certain requirements of the Cal/OSHA asbestos standard contained in Title 8, California Code of Regulations (CCR) §1529. Typically, removal or disturbance of more than 100 square feet of material containing more than 0.1% asbestos must be performed by a registered asbestos abatement contractor, but associated waste labeling is not required if the material contains 1% or less asbestos. When the asbestos content of a material exceeds 1%, virtually all requirements of the standard become effective.

Materials containing more than 1% asbestos are also subject to NESHAP regulations (40 CFR Part 61, Subpart M). RACM (friable ACM and nonfriable ACM that will become friable during demolition operations) must be removed from structures prior to demolition. Certain nonfriable ACM and materials containing 1% or less asbestos may remain in structures during demolition; however, there are waste handling/disposal issues and Cal/OSHA work requirements that must be addressed. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

With respect to potential worker exposure, notification, and registration requirements, Cal/OSHA defines asbestos-containing construction material (ACCM) as construction material that contains more than 0.1% asbestos (Title 8, CCR 341.6).

Lead Paint

Construction activities (including demolition) that disturb materials or paint containing *any* amount of lead are subject to certain requirements of the Cal/OSHA lead standard contained in Title 8, CCR §1532.1. Deteriorated paint is defined by Title 17, CCR, Division 1, Chapter 8 §35022 as a surface coating that is cracking, chalking, flaking, chipping, peeling, non-intact, failed, or otherwise separating from a substrate. Demolition of a deteriorated paint component would require waste characterization and appropriate disposal. Intact paint on a component is currently accepted by most landfills and recycling facilities; however, contractors are responsible for segregating and characterizing waste streams prior to disposal.

For a solid waste containing lead, the waste is classified as California hazardous when: 1) the representative total lead content equals or exceeds the respective Total Threshold Limit Concentration (TTLC) of 1,000 milligrams per kilogram (mg/kg); or 2) the representative soluble lead content equals or exceeds the respective Soluble Threshold Limit Concentration (STLC) of 5 milligrams per liter (mg/l) based on the standard Waste Extraction Test (WET). A waste has the potential for exceeding the lead STLC when the waste's representative total lead content is greater than or equal to ten times the respective STLC value since the WET uses a 1:10 dilution ratio. Hence, when total lead is detected at a concentration greater than or equal to 50 mg/kg, and assuming that 100 percent of the total lead is soluble, soluble lead analysis is required. Lead-containing waste is classified as "Resource, Conservation, and Recovery Act" (RCRA) hazardous, or Federal hazardous, when the representative

soluble lead content equals or exceeds the Federal regulatory level of 5 mg/l based on the Toxicity Characteristic Leaching Procedure (TCLP).

The above regulatory criteria are based on chemical concentrations. Wastes may also be classified as hazardous based on other criteria such as ignitability; however, for the purposes of this investigation, toxicity (i.e., lead concentration) is the primary factor considered for waste classification since waste generated during the construction activities would not likely warrant testing for ignitability or other criteria. Waste that is classified as either California-hazardous or RCRA-hazardous requires management as a hazardous waste.

Potential hazards exist to workers who remove or cut through paint coatings during demolition. Dust containing hazardous concentrations of lead may be generated during scraping or cutting materials coated with paint. Torching of these materials may produce hazardous fumes. Therefore, air monitoring and/or respiratory protection may be required during the demolition of materials coated with lead-containing paint. Guidelines regarding regulatory provisions for construction work where workers may be exposed to lead are presented in Title 8, CCR §1532.1.

Architectural Drawings and Previous Survey Activities

We reviewed structure as-built plans provided by Caltrans prior to field activities. We did not observe specifications or notes regarding the use of asbestos-containing materials or lead paint in the architectural plans provided. Previous asbestos survey reports were not available for our review.

SCOPE OF SERVICES

Mr. David Watts, a California-Certified Asbestos Consultant (CAC), certification No. 98-2404 (expiration September 16, 2015), and Certified Lead Paint Inspector/Assessor and Project Monitor with the California Department of Public Health (DPH), certification numbers I-1734 and M-1734 (expiration December 4, 2015), performed the asbestos and LCP survey at the project location on March 20, 2015.

Asbestos

Suspect ACM were grouped into homogeneous areas with representative samples randomly collected from each. In addition, each potential ACM was evaluated for friability. A total of four bulk asbestos samples representing two suspect materials (i.e., asphalt and concrete) were collected.

Our procedures for inspection and sampling are discussed below:

- Collected bulk asbestos samples after first wetting friable materials with a light mist of water. The samples were then cut from the substrate and transferred to labeled containers.
- Relinquished bulk asbestos samples under chain-of-custody protocol to EMSL Analytical, Inc., a California-licensed and Caltrans-approved subcontractor, for asbestos analysis in accordance with United States Environmental Protection Agency (EPA) Test Method 600/R-93/116 using polarized light microscopy (PLM). EMSL Analytical, Inc. is a laboratory accredited by the National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program (NIST-NVLAP) for bulk asbestos fiber analysis. The laboratory analyses were requested on a five-day turnaround time.

Materials represented by the samples collected are shown in the attached photographs.

Lead Paint

A total of eight bulk paint samples were collected from suspect LCP observed at the project location. Mr. Watts field-composited the suspect LCP samples into four paint schemes prior to submittal to the laboratory. We observed no deteriorated suspect LCP during our survey. Our sampling procedures are discussed below:

- Collected bulk samples of suspect LCP using techniques presented in HUD guidelines. In addition, the painted areas were evaluated for evidence of deterioration such as flaking or cracking.
- Relinquished bulk LCP samples under chain-of-custody protocol to Advanced Technology Laboratories, a California-licensed and Caltrans-approved subcontractor, for lead analysis in accordance with EPA Test Method 6010B. Advanced Technology Laboratories is accredited by the DPH for lead analysis. The laboratory analyses were requested on a five-day turnaround time.

Materials represented by the samples collected are shown in the attached photographs.

INVESTIGATIVE RESULTS

Asbestos

Asbestos was not detected in samples of the suspect materials collected during our survey. Sample group identification numbers, material descriptions, approximate quantities, friability assessments, and the analytical laboratory test results for asbestos are summarized below. Reproductions of the laboratory report and chain-of-custody documentation are attached.

Polarized Light Microscopy (PLM) - EPA Test Method 600/R-93/116				
Sample Group	**Description of Material**	**Approximate Quantity**	**Friable**	**Asbestos Content**
1	Concrete	NA	NA	ND
2	Asphalt	NA	NA	ND

NA = Not applicable (asbestos not detected)
ND = Not detected

Lead Paint

Samples representing intact white and yellow traffic striping exhibited representative total lead concentrations of 6.2 and 4.9 mg/kg, respectively.

A sample representing intact white paint applied to the bridge barriers exhibited a representative total lead concentration of 4.3 mg/kg.

A sample representing intact gray paint applied to the structural steel bridge members exhibited a representative total lead concentration of 180,000 mg/kg and a representative TCLP lead concentration of 730 mg/l.

Sample group identification numbers, material descriptions, and the analytical laboratory test results for paint are summarized below. Reproductions of the laboratory reports and chain-of-custody documentation are attached.

Sample No.	Paint Description	Approximate Quantity Peeling/Flaking	Total Lead (mg/kg)	TCLP Lead (mg/l)
P1A/B	White traffic striping	Intact	6.2	---
P2A/B	Yellow traffic striping	Intact	4.9	---
P3A/B	White paint (barriers)	Intact	4.3	---
P4A/B	Gray paint (steel members)	Intact	180,000	730

mg/kg = milligrams per kilogram
mg/l = milligrams per liter (EPA Test Method 6010B)
TCLP = Toxicity Characteristic Leaching Procedure (EPA Test Method 1311)
--- = not analyzed

RECOMMENDATIONS

Asbestos

Since no asbestos was detected in samples collected during our survey, the Cal/OSHA asbestos standard (Title 8, CCR §1529) does not apply for planned work. In addition, debris from materials represented by samples collected during our survey would not be considered a California hazardous waste based on asbestos content.

Written notification to the U.S. EPA Region IX and the California Air Resources Board is required ten working days prior to commencement of *any* demolition activity (whether asbestos is present or not).

Lead Paint

White and yellow traffic striping, and white paint applied to the bridge barriers sampled during our survey would not be classified as a California or Federal hazardous waste based on lead content, if stripped, blasted, or otherwise separated from the substrate.

Gray paint applied to the structural steel bridge members sampled during our survey would be classified as a California and Federal hazardous based on lead content if stripped, blasted, or otherwise separated from the substrate.

Contractors are responsible for informing the landfill of the contractor's intent to dispose of RCRA waste, California hazardous waste, and/or architectural components containing intact LCP. Some landfills and recycling facilities may require additional waste characterization. Contractors are responsible for segregating and characterizing waste streams prior to disposal.

We recommend that all paints at the project location be treated as lead-containing for purpose of determining the applicability of the Cal/OSHA lead standard during maintenance, renovation, and demolition activities. This recommendation is based on LCP sample results and the fact that lead was a common ingredient of paints manufactured before 1978 and is still an ingredient of some paints. In accordance with Title 8, CCR, §1532.1(p), written notification to the nearest Cal/OSHA district office is required at least 24 hours prior to certain lead-related work. Compliance and training requirements regarding construction activities where workers may be exposed to lead are presented in Title 8, CCR, §1532.1, subsections (e) and (l), respectively.

The removal, transportation, placement, handling, and disposal of LCP must result in no visible dust.

REPORT LIMITATIONS

This asbestos and LCP survey was conducted in conformance with generally accepted standards of practice for identifying and evaluating asbestos and LCP in structures. The survey addressed only the structure identified above. Due to the nature of structure surveys, asbestos and LCP use, and laboratory analytical limitations, some ACM or LCP at the project location may not have been identified. Spaces such as cavities, voids, crawlspaces, and pipe chases may have been concealed to our investigator. Previous renovation work may have concealed or covered spaces or materials or may have partially demolished materials and left debris in inaccessible areas. Additionally, renovation activities may have partially replaced ACM with indistinguishable non-ACM. Asbestos and/or LCP may exist in areas of the structure that were not accessible or sampled in conjunction with this TO.

During renovation or demolition operations, suspect materials may be uncovered which are different from those accessible for sampling during this assessment. Personnel in charge of renovation/demolition should be alerted to note materials uncovered during such activities that differ substantially from those included in this or previous assessment reports. If suspect ACM and/or LCP are found, additional sampling and analysis should be performed to determine if the materials contain asbestos or lead.

This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report and will require an update to reflect additional information obtained.

This report is not a comprehensive site characterization and should not be construed as such. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein. Therefore, the report should be deemed conclusive with respect to only the information obtained. We make no warranty, express or implied, with respect to the content of this report or any subsequent reports, correspondence or consultation. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.

The contents of this report reflect the views of the author who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the State of California or the Federal Highway Administration. This report does not constitute a standard, specification, or regulation.

Please contact us should you have any questions concerning the contents of this report or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS INC.

David A. Watts, CAC No. 98-2404
Senior Project Scientist

John E. Juhrend, PE, CEG
Principal/Senior Engineer

(2 + 2 CD) Addressee

Attachments: Vicinity Map, Figure 1
Site Plan, Figure 2
Site Photographs (1 through 3)
Analytical Laboratory Reports and Chain-of-custody Documentation

Please contact us should you have any questions concerning the contents of this report or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS INC.

David A. Watts, CAC No. 98-2404
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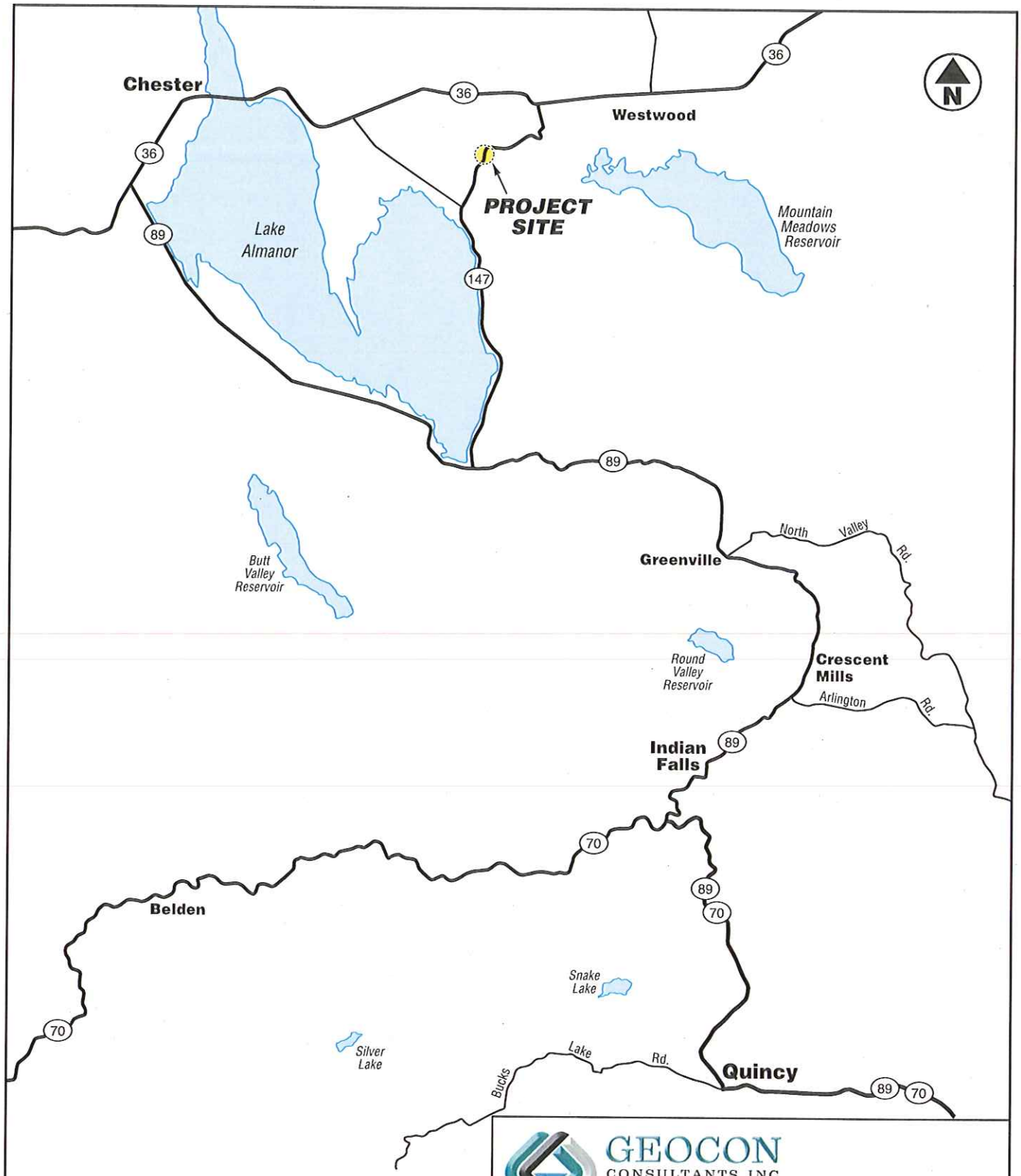
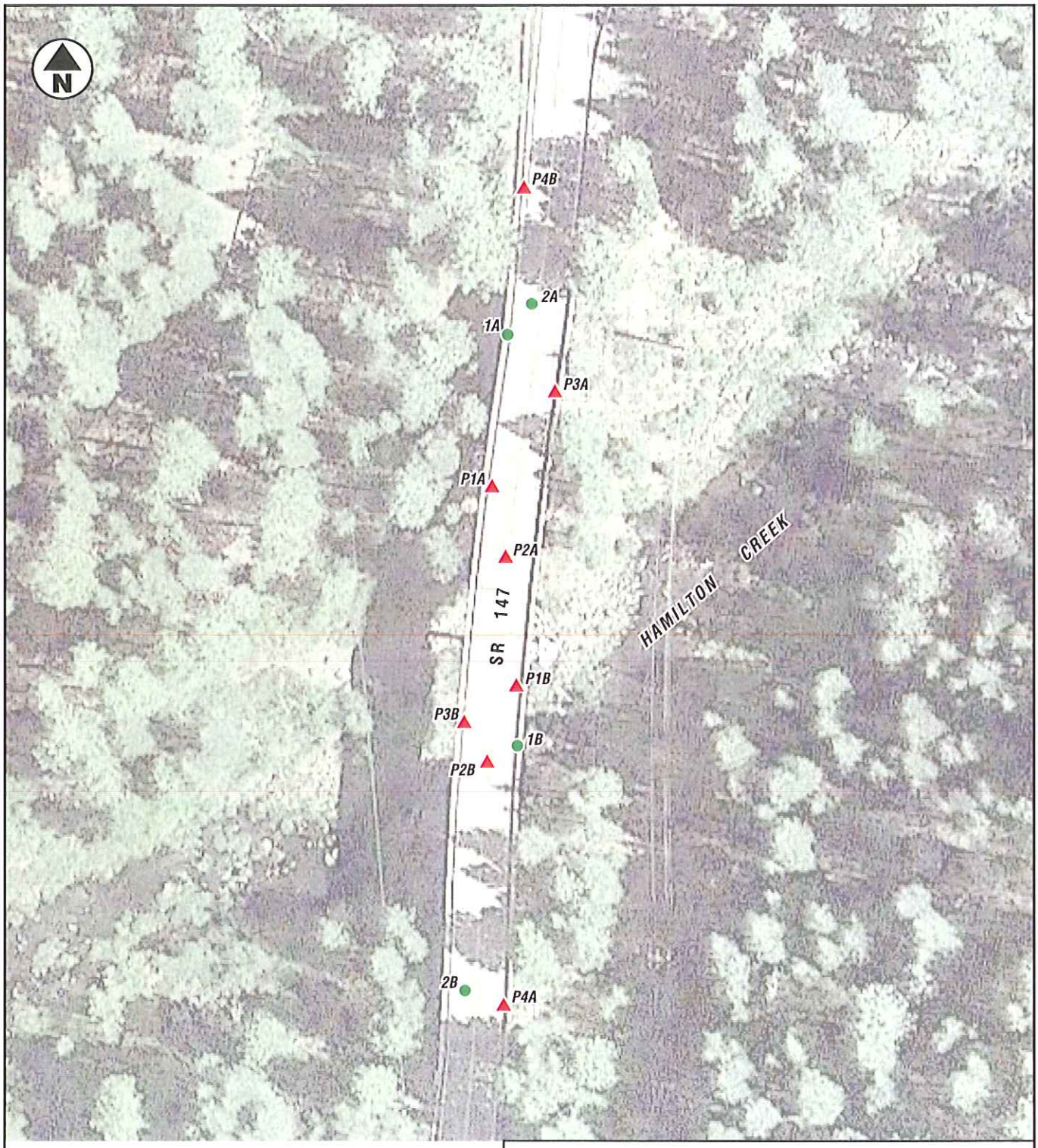
(2 + 2 CD) Addressee

Attachments: Vicinity Map, Figure 1
Site Plan, Figure 2
Site Photographs (1 through 3)
Analytical Laboratory Reports and Chain-of-custody Documentation



GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

Hamilton Branch Bridge (09-0065)		
Plumas County, California	**VICINITY MAP**	
GEOCON Proj. No. S9805-01-48		
Task Order No. 48, EA 02-4E6401	April 2015	Figure 1



LEGEND:

- Approximate Asbestos Sample Location
- Approximate Paint Sample Location

0 50
Scale in Feet

GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR – SUITE 800 – RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 – FAX 916.852.9132

Hamilton Branch Bridge (09-0065)		
Plumas County, California	**SITE PLAN**	
GEOCON Proj. No. S9805-01-48		
Task Order No. 48, EA 02-4E6401	April 2015	Figure 2

Photo 1 – Hamilton Branch Bridge (09-0065) at PM 8.98 on Highway 147 in Plumas County, California

Photo 2 – Bridge abutment

Photo 3 – Bridge span and columns

GEOCON
CONSULTANTS, INC.
3160 GOLD VALLEY DR - SUITE 800 - RANCHO CORDOVA, CA 95742
PHONE 916.852.9118 - FAX 916.852.9132

PHOTOGRAPHS 1, 2, & 3		
Hamilton Branch Bridge Plumas County, California		
S9805-01-48		April 2015

EMSL Analytical, Inc
464 McCormick Street, San Leandro, CA 94577
Phone/Fax (510) 895-3675 / (510) 895-3680
http://www.EMSL.com sanleandrolab@emsl.com

EMSL Order:	091504099
CustomerID:	GECN21
CustomerPO:	S9805-01-48
ProjectID:	03A2132

Attn: **Dave Watts**
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550

Phone:	(925) 371-5900
Fax:	(925) 371-5915
Received:	03/24/15 9:15 AM
Analysis Date:	3/30/2015
Collected:	3/20/2015

Project: **HAMILTON BRANCH S9805-01-48**

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
0065-1A-Concrete *091504099-0001*		Gray Non-Fibrous Homogeneous		30% Quartz 30% Ca Carbonate 40% Non-fibrous (other)	**None Detected**
0065-1B-Concrete *091504099-0002*		Gray Non-Fibrous Homogeneous		30% Quartz 30% Ca Carbonate 40% Non-fibrous (other)	**None Detected**
0065-2A-Asphalt *091504099-0003*		Black Non-Fibrous Homogeneous		40% Quartz 40% Matrix 20% Non-fibrous (other)	**None Detected**
0065-2B-Asphalt *091504099-0004*		Black Non-Fibrous Homogeneous		40% Quartz 40% Matrix 20% Non-fibrous (other)	**None Detected**

Analyst(s)
Alexander Shmurakov (4)

Chris Dojlidko, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%
Samples analyzed by EMSL Analytical, Inc San Leandro, CA NVLAP Lab Code 101048-3, WA C884

Report Amended: 03/31/2015 09:23:27 Replaces Report Amended: 03/31/2015 09:19:43. Reason Code: Data Entry-Change to Location

THIS IS THE LAST PAGE OF THE REPORT.

OrderID: 091504099

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS / TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*:

№ 091504099

03A2132

EMSL ANALYTICAL, INC.
SAN LEANDRO, CA 94577
PHONE: (510) 895-3675
FAX: (510) 895-3680

Company: GEOCON	EMSL-Bill to: ☒ Same ☐ Different If Bill to is Different note instructions in Comments** *Third Party Billing requires written authorization from third party*
Street: 6671 BRISA ST	
City: LIVERMORE State/Province: CA	Zip/Postal Code: 94550 Country: USA
Report To (Name): D. WATTS	Fax #: 925-371-5915
Telephone #: 925-371-5900	Email Address: WATTS@GEOCONINC.COM
Project Name/Number: HAMILTON BRANCH 59805-01-48	
Please Provide Results: ☐ Fax ☒ Email	Purchase Order: U.S. State Samples Taken: CA

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☒ 1 Week ☐ 2 Week

**For TEM Air 3 hours/6 hours, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☒ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ EPA Protocol (Semi-Quantitative)
- ☐ EPA Protocol (Quantitative)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Samplers Name: D. WATTS **Samplers Signature:** [signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
0065-1A/B	CONCRETE	NA	20 MAR 2015
↓ -2 ↓	ASPHALT	↓	↓

Client Sample # (s): **Total # of Samples:** 4

Relinquished (Client): [signature] **Date:** 3/23/15 **Time:** 1600

Received (Lab): [signature] **Date:** 3/24/15 3/23/15 **Time:** 9:15a 1600

Comments/Special Instructions:

ADVANCED TECHNOLOGY
LABORATORIES

March 31, 2015

Dave Watts
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
Tel: (925) 961-5273
Fax:(925) 371-5915

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1501060
Client Reference : HAMILTON BRANCH, S9805-01-48

Enclosed are the results for sample(s) received on March 24, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : HAMILTON BRANCH, S9805-01-48
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 03/31/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
0065-P1A/B	1501060-01	Paint	3/20/15 0:00	3/24/15 13:43
0065-P2A/B	1501060-02	Paint	3/20/15 0:00	3/24/15 13:43
0065-P3A/B	1501060-03	Paint	3/20/15 0:00	3/24/15 13:43
0065-P4A/B	1501060-04	Paint	3/20/15 0:00	3/24/15 13:43

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : HAMILTON BRANCH, S9805-01-48
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 03/31/2015

Total Metals by ICP-AES EPA 6010B

Analyte: Lead **Analyst: RR**

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501060-01	0065-P1A/B	**6.2**	mg/kg	2.0	1	B5C0704	03/27/2015	03/30/15 10:34	
1501060-02	0065-P2A/B	**4.9**	mg/kg	2.0	1	B5C0704	03/27/2015	03/30/15 10:38	
1501060-03	0065-P3A/B	**4.3**	mg/kg	2.0	1	B5C0704	03/27/2015	03/30/15 10:43	
1501060-04	0065-P4A/B	**180000**	mg/kg	100	50	B5C0704	03/27/2015	03/30/15 10:10	D6

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : HAMILTON BRANCH, S9805-01-48
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 03/31/2015

QUALITY CONTROL SECTION

Total Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5C0704 - EPA 3050B_S									
Blank (B5C0704-BLK1)					Prepared: 3/27/2015 Analyzed: 3/30/2015				
Lead	ND	1.0			NR				
LCS (B5C0704-BS1)					Prepared: 3/27/2015 Analyzed: 3/30/2015				
Lead	48.1236	1.0	50.0000		96.2	80 - 120			
LCS Dup (B5C0704-BSD1)					Prepared: 3/27/2015 Analyzed: 3/30/2015				
Lead	46.8473	1.0	50.0000		93.7	80 - 120	2.69	20	
Duplicate (B5C0704-DUP1)		**Source: 1501059-02**			Prepared: 3/27/2015 Analyzed: 3/30/2015				
Lead	4.41342	2.0		3.96247	NR		10.8	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : HAMILTON BRANCH, S9805-01-48
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 03/31/2015

Notes and Definitions

D6	Sample required dilution due to high concentration of target analyte.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

CHAIN OF C[illegible]TODY RECORD

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

P.O.#: _____ Quote #: _____
Logged By: _____ Date: _____
NOTE: Please include your Quote No. to ensure proper pricing of your project.

FOR LABORATORY USE ONLY:

Method of Transport: ☐ Client ☐ ATL ☐ FedEx ☐ OnTrac ☑ GSO ☐ Other: _____

Sample Condition Upon Receipt:
1. CHILLED Y☐ N☑ 4. CUSTODY SEAL Y☐ N☑
2. HEADSPACE (VOA) Y☐ N☐ 5. # OF SPLS MATCH COC Y☑ N☐
3. CONTAINER INTACT Y☑ N☐ 6. PRESERVED Y☐ N☑

Client: Geocon Consultants, Inc.
Attn: D. WATTS
Address: 6671 Brisa Street
City: Livermore State: CA Zip Code: 94550
TEL: (925) 371-5900
FAX: (925) 371-5915

Project Name: HAMILTON BRANCH Project #: S9805-01-48 Sampler: (Printed Name) D. WATTS (Signature) [signature]

Relinquished by: (Signature and Printed Name) [signature] Date: 3/23/15 Time: 1700 Received by: (Signature and Printed Name) GSO Date: 3/23/15 Time: 1700
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) [signature] Date: 3/24/15 Time: 1743
Relinquished by: (Signature and Printed Name) Date: Time: Received by: (Signature and Printed Name) Date: Time:

I hereby authorize ATL to perform the work indicated below:
Project Mgr /Submitter: D. WATTS 3/20/15 (Print Name, Date)
[signature] (Signature)

Send Report To: Attn: _____ Co: SEE "CLIENT" Addr: _____ City: State: Zip:

Bill To: Attn: _____ Co: _____ Addr: _____ City: State: Zip:

Special Instructions/Comments:
PAINT CHIPS – Total Pb
Anticipate Soluble Requests

Sample/Records - Archival & Disposal
Unless otherwise requested by client, all samples will be disposed 45 days after receipt and records will be disposed 1 year after submittal of final report.
Storage Fees (applies when storage is requested):
- Sample : $2.00 / sample / mo (after 45 days)
- Records : $1.00 / ATL workorder / mo (after 1 year)

Circle or Add Analysis(es) Requested

ITEM	LAB USE ONLY: Batch #: Lab No.	Sample Description: Sample I.D. / Location	Date	Time	8081A (Pesticides)	8082 (PCB)	8260B (Volatiles)	8270C (BNA)	6010B (Total Metal) - Pb	8015B (GRO) / 8021 (BTEX)	8015B (DRO)	TITLE 22 / CAM 17 (6010 / 7000)	PAINT	SEDIMENT	SOLID	SOIL	DRINKING WATER	GROUND WATER	WASTEWATER	STORMWATER	AQUEOUS	TAT	Container(s) #	Container(s) Type	PRESERVATION	REMARKS
	1501060 - 1	0065 - P1A/B	3/20/15	VAR				X					X									E	1	Bag		WTS
	- 2	- P2A/B																								YTS
	- 3	- P3A/B																								BAR
	- 4	- P4A/B																								GIR

QA/QC: RTNE ☐ CT ☑ Legal ☐ SWRCB ☐ Logcode _____ OTHER _____

• TAT starts 8 a.m. following day if samples received after 5 p.m.

TAT: ☐A= Overnight ≤ 24 hrs ☐B= Emergency Next workday ☐C= Critical 2 Workdays ☐D= Urgent 3 Workdays ☐E= Routine 7 Workdays

Container Types: T=Tube V=VOA L=Liter P=Pint J=Jar B=Tedlar G=Glass P=Plastic M=Metal

Preservatives: H=HCl N=HNO_3 S=H_2SO_4 C=4°C Z=$Zn(AC)_2$ O=NaOH T=$Na_2S_2O_3$

Rev. 2010-0707

DISTRIBUTION: White with report, Yellow to folder, Pink to submitter.

ADVANCED TECHNOLOGY
LABORATORIES

April 07, 2015

Dave Watts
Geocon Consultants, Inc.
6671 Brisa Street
Livermore, CA 94550
Tel: (925) 961-5273
Fax:(925) 371-5915

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1501060
Client Reference : HAMILTON BRANCH, S9805-01-48

Enclosed are the results for sample(s) received on March 24, 2015 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : HAMILTON BRANCH, S9805-01-48
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 04/07/2015

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
0065-P4A/B	1501060-04	Paint	3/20/15 0:00	3/24/15 13:43

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : HAMILTON BRANCH, S9805-01-48
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 04/07/2015

TCLP Metals by ICP-AES EPA 6010B

Analyte: Lead

Analyst: RR

Laboratory ID	Client Sample ID	Result	Units	PQL	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1501060-04	0065-P4A/B	**730**	mg/L	2.5	50	B5D0163	04/06/2015	04/06/15 14:53	D6

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : HAMILTON BRANCH, S9805-01-48
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 04/07/2015

QUALITY CONTROL SECTION

TCLP Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/L)	PQL (mg/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B5D0163 - EPA 3010A_S									
Blank (B5D0163-BLK1)					Prepared: 4/6/2015 Analyzed: 4/6/2015				
Lead	ND	0.050			NR				
LCS (B5D0163-BS1)					Prepared: 4/6/2015 Analyzed: 4/6/2015				
Lead	1.05875	0.050	1.00000		106	80 - 120			
LCS Dup (B5D0163-BSD1)					Prepared: 4/6/2015 Analyzed: 4/6/2015				
Lead	1.01466	0.050	1.00000		101	80 - 120	4.25	20	
Duplicate (B5D0163-DUP1)		**Source: 1501176-01**			Prepared: 4/6/2015 Analyzed: 4/6/2015				
Lead	2.79639	0.050		2.30405	NR		19.3	20	

Certificate of Analysis

Geocon Consultants, Inc.	Project Number : HAMILTON BRANCH, S9805-01-48
6671 Brisa Street	Report To : Dave Watts
Livermore , CA 94550	Reported : 04/07/2015

Notes and Definitions

D6	Sample required dilution due to high concentration of target analyte.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

Diane Galvan

From: Dave Watts, CAC [watts@geoconinc.com]
Sent: Tuesday, March 31, 2015 4:26 PM
To: Diane Galvan
Subject: Re: Results/EDD/Invoice - HAMILTON BRANCH (1501060)
Attachments: image001.jpg

Tclp on P4 please. Same tat. Thanks.

David Watts, Geocon
925-785-5340
watts@geoconinc.com
Sent from my iPhone

Final Hydraulics Report Dated March 27, 2014

State of California

Business, Transportation and Housing Agency

Memorandum

To: Jeff Sims, Chief
Office of Bridge Design Services
Design Branch 1
Att: P. Vijitakula

Date: March 27, 2014

File: Hamilton Branch Bridge
Br. No. 09-0065
02-PLU-147-PM 8.98
EA 02-4E6401
Project ID 0212000011

From: Neal Alie
Division of Engineering Services
Office of Design and Technical Services
Structure Hydraulics and Hydrology

Subject: Final Hydraulic Report for Hamilton Branch Bridge

Attached for your records is the Final Hydraulic Report for the above referenced project. If you have any questions, please contact me at (916) 227-0444 or my mobile at (916) 224-9640.

Sincerely,

Neal Alie
Hydrology/Hydraulics Engineer

cc: Steve Ng

State of California – Department of Transportation
Division of Engineering Services
Structure Design Services

Structure Hydraulics and Hydrology

FINAL HYDRAULIC REPORT

Hamilton Branch Creek

Located in Plumas County

Bridge No. 09-0065

Bridge Replacement

02-Plu-147-PM 8.98

EA 02-4E6400
Project ID 0212000011

March 27, 2014

WRITTEN BY:
Neal Alie

REVIEWED BY:
Steve Ng

This report has been prepared under my direction as the professional engineer in responsible charge of the work, in accordance with the provisions of the Professional Engineers Act of the State of California

REGISTERED ENGINEER

C 56398

REGISTRATION NUMBER

REGISTERED PROFESSIONAL ENGINEER
NEAL ALIE
C 56398
EXP. 06/30/2015
CIVIL
STATE OF CALIFORNIA

Hydrology/Hydraulic Report

General

The Hamilton Creek Bridge (Br. No. 09-0065) is located on State Route 147 in Plumas County, 2.3 miles north east of Lake Almanor. The structure was built in 1948 and became part of the State Highway system in 1961. The structure is a 4 span continuous steel girder (2) on steel (2) column piers on RC pedestals and cantilever abutments all on spread footings. The bridge is approximately 322 feet long and 27 feet wide.

Structure Design is proposing to replace the existing structure with a new bridge due to a number of structural deficiencies. The proposed new structure will be a 3 span CIP/PS concrete box girder supported on (2) RC columns on spread footings with piles. The new bridge will be 345.0 feet long, 44.0 feet wide with a structural thickness of 5.75 feet.

This report makes extensive reference to the (1) Caltrans Bridge Maintenance Reports, (2) General plans and profiles submitted by structures, (3) Caltrans As-Built Plans (4) District Hydraulic Studies, 9/4/2012, (5) PG&E information obtained from Mr. Scott D. Perkins, Land Agent-Hydro Support, (530) 896-4256, 2/4/2014.

All Elevations used in this report are based on NGVD 1929.

Drainage Basin

Hamilton Branch Creek starts at the outlet of the Mountain Meadows Reservoir (Indian Ole Dam) and flows west for 3.3 miles to the bridge site (elevation 4800 feet) then flows south west for approximately 2.2 miles discharging into Lake Almanor. At elevation 5000 feet Mountain Meadows Reservoir is fed by Robbers, Goodrich, Duffy, Cottonwood, Mountain Meadows, Greenville and Deer heart Creeks with a watershed of approximately 158 sqmi. The Reservoir is manmade located in Lassen County also called Walker Lake with its waters impounded by the Indian Ole Dam. Indian Ole Dam is a buttress dam with a crest length of 264 feet, 26 feet high with 8 feet of freeboard. The reservoir is very shallow and storage can drop to 1700 acre-feet in a dry year.

Approximately 2 miles downstream from the reservoir is Hamilton Branch Diversion Dam. At this location a portion of the releases from the reservoir is diverted to a man made canal with a maximum capacity of 200 cfs that flows for approximately 3 miles to the Hamilton Branch Powerhouse immediately upstream from the mouth of Lake Almanor. An additional control structure is located approximately 3 miles downstream from the reservoir at the Red Bridge Pump.

In addition to the regulated flows from Mountain Meadows Reservoir, Hamilton Branch Creek has a tributary named Dry Creek. Dry Creek is located 1.4 miles upstream from the bridge site and drains a watershed of approximately 14.0 square miles. The total watershed drainage area at the bridge site is 172 square miles.

The average annual precipitation based on the Oregon Climate Service Prism Program (Annual normal from 1981 to 2010) is approximately 36 inches.

Discharge

The majority of the Hamilton Branch Creek Watershed is regulated by PG&E at the Mountain Meadows Reservoir which serves as a regulating reservoir for PG&E's power plant at the confluence of Hamilton Branch Creek and Lake Almanor. According to PG&E the maximum flow released from the Mountain Meadows Reservoir immediately downstream at the Indian Ole Dam is 3161.0 cubic feet per second.

The USGS California Streamstats program was used to calculate a 100-year discharge of 2370.0 cubic feet per second for the Dry Creek watershed. There are also several other smaller unnamed watersheds that are tributaries to Hamilton Branch Creek with a total 100-year flow of 1377 cubic feet per second. A total 100-year discharge of **6900.0 cubic feet per second** will be used for this report.

Stage, Velocity and Waterway

The Hydraulic Program (BrEase) was used to perform a one-dimensional hydraulic analysis to calculate the water surface elevations and velocity for the existing structure. The General Plans and As-Builts were referenced to acquire the planned deck elevation height.

The proposed freeboard is measured from the water surface elevation to the lowest chord of the soffit of the structure. The parameters used to model the existing structure included a 100-year discharge of 6900.0 cubic feet per second; a manning's roughness coefficient of 0.055 and a channel slope of 0.024 ft/ft. The results were tabulated below:

	WSEL	Average Velocity	Available Freeboard
100-year Base Flood 6900 cfs	4803.4 ft	12.5 fps	**41.7 ft**

The minimum soffit elevation of the proposed structure is 4845.1 feet with an available freeboard of 41.7 feet. The existing structure has more than adequate

waterway to pass a 100 year flood event.

Streambed and Scour

Existing condition

The streambed at the bridge site is heavily armored with bedrock. There are bedrock outcroppings at the banks and directly under the bridge.

The stream banks and the existing Bridge Abutment 1, Piers 2 and 3 are all protected with large size RSP that appears to be in good condition. Some of the large rocks at Abutment 1 have fallen into the channel under the bridge but this does not pose a significant problem. There was no RSP protection at Pier 4 or Abutment 5. All the existing Piers are outside of the main stream flow.

In 2001 the Bridge's scour potential was assessed in accordance with FHWA Technical Advisory T5140.23, "Evaluating Scour at Bridges" and within current Caltrans guidelines, the bridge was determined to be **not scour critical.** The item 113 code was changed to 5, "Bridge foundations determined to be stable for calculated scour conditions, scour within limits of footing or piles."

Structure Hydraulics does not have any scour concerns with the proposed structure. It appears that both Pier 2 and 3 are outside of the 100-year water surface elevation. In addition the footings will be placed below the existing ground elevation and are supported on pile extensions.

Drift

There is no history of a drift problem.

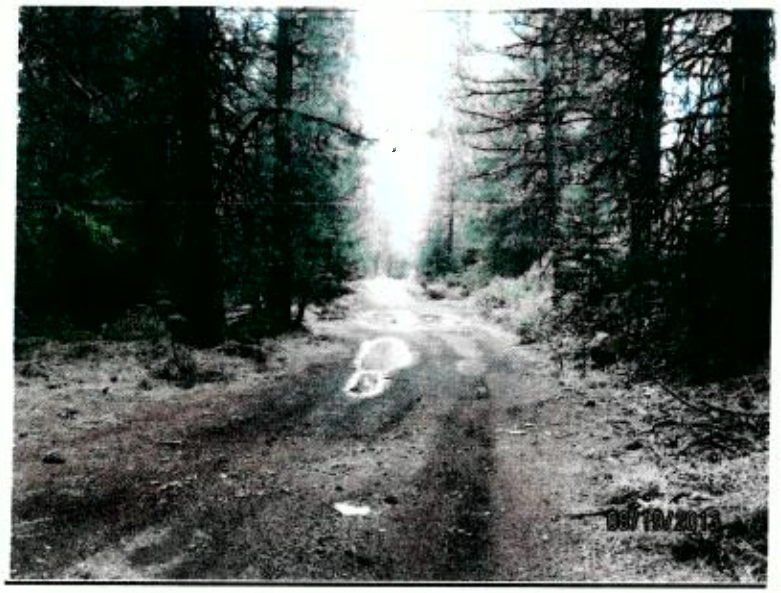
Bank Protection

The existing bridge does have RSP protection at the abutments and piers. The average velocity (See "Stage, Velocity and required Waterway" section above) is provided to assist the District hydraulic engineers in the design of bank protection if necessary.

HYDROLOGIC SUMMARY FOR HAMILTON BRANCH CREEK Br. No. 09-0065			
Drainage Area: 172 sqmi			
	Design Flood	**Base Flood**	**Overtopping Flood/Flood of Record**
Frequency	50-yr	100-yr	N/A
Discharge	N/A	6900 cfs	N/A
Water Surface Elevation at Bridge	N/A	4803.4 ft	N/A
Flood plain data are based upon information available when the plans were prepared and are shown to meet federal requirements. The accuracy of said information is not warranted by the State and interested or affected parties should make their own investigation.			

ESA ACTION PLAN Dated June 11, 2014

ESA ACTION PLAN FOR HAMILTON BRANCH BRIDGE REPLACEMENT PROJECT
02-PLU-147; PM 8.9/9.3
EA 4E640; EFIS 0212000011-0



Prepared for:

Chris Quiney Chris Quiney Date 6/11/14
Chief, Environmental Management Office
North Region – RDG (R1)
California Department of Transportation
1657 Riverside Drive
Redding, CA 96049

Prepared by:

Blossom Hamusek Blossom Hamusek Date 6/11/14
Associate Environmental Planner (Archaeology)
PQS Principal Investigator (Prehistory/Historical Archaeology)
North Region Office of Environmental Management, R1

Reviewed for Approval:

Erin Dwyer Date 6/11/14
Associate Environmental Planner (Archaeology)
PQS Principal Investigator (Prehistory/Co PI Historical Archaeology)
North Region Office of Environmental Management, District 3

June 2014

SUMMARY OF ESA ACTION PLAN

The California Department of Transportation (Caltrans), as part of its NEPA assignment of federal responsibilities by the Federal Highway Administration, effective October 1, 2012 and pursuant to 23 U.S.C. 326, is proposing to replace the Hamilton Branch Bridge (Br. No. 09-0065) on State Route (SR) 147 at Post Mile (PM) 8.98 over Hamilton Branch Creek in northern Plumas County, California. The project is necessary in order to provide a bridge structure over Hamilton Branch Creek that meets modern highway design standards. The specific project is located about nine miles north of Canyon Dam and one-half mile west of Clear Creek Junction on SR 147 between post miles 8.9 to 9.3. It is depicted on the Westwood West, 7.5' USGS topographical quadrangle in Township 28 North, Range 8 East, NW ¼ and NE ¼ of NW ¼ of Section 15 (Exhibits 1 and 2).

One historic archaeological property will be protected by an ESA – CA-LAS-2595H. The ESA shall consist of an area within and near the limits of construction where access is prohibited for the preservation of archaeological resource as shown on the final Plans, Specifications, and Estimates (PS&E plans). The Engineer, in consultation with the Caltrans Archaeologist, will determine the exact location of the boundaries of the ESA in the field. No work shall be conducted within the ESA.

PRE-CONSTRUCTION

1. Prior to beginning of work, the Caltrans Project Archaeologist shall ensure that the boundaries of the ESA for archaeological site CA-LAS-2595H are clearly described and illustrated in the PS&E plans prepared to guide the construction of the project.
2. This ESA Action Plan will be part of the Resident Engineer Pending File and the Environmental Commitment Record.
3. The importance of the ESA will be discussed with the Contractor and Caltrans construction personnel during the preconstruction meeting by the Caltrans Project Archaeologist and/or Caltrans Environmental Construction Liaison. The discussion will include all restrictions on the ESA (no construction activities, tree falling, vegetation removal, equipment, materials, or personnel shall be permitted within the fenced ESA), and the ESA shall be fenced as the first order of work. The Contractor and Caltrans construction personnel will also be informed of historic preservation laws that protect historical resources against disturbance.

DURING CONSTRUCTION

1. Prior to beginning of work, the boundaries of the ESA shall be clearly delineated by the placement of temporary fence. The installation of the ESA fencing shall take place under the direction of the Caltrans Resident Engineer, Caltrans Archaeologist, and/or Caltrans Environmental Construction Liaison. The Contractor shall notify the Resident Engineer and the Caltrans Archaeologist ten (10) working days in advance of ESA fence installation to allow the Caltrans Archaeologist to monitor the ESA fence installation. The ESA fence shall be installed as a first order of work as described in the PS&E package, and shall be installed as shown on the Plans. No entry will be allowed in the ESA under any condition.
2. The ESA and associated temporary fence shall remain in place during the course of construction.
3. Vehicle access, storage or transport of materials, or equipment, or other project related activities are prohibited within the boundaries of the ESA. The Contractor shall take measures to ensure that his forces do not enter or disturb this area and shall ensure the integrity of the ESA.
4. If the ESA is breached, as outlined in Section 14-1.02A, the contractor will immediately notify the Engineer and secure the area and stop all operations within 60 feet of the ESA boundary. If the ESA is damaged, the Department determines what efforts are necessary to remedy the damage and who performs the remedy; the Contractor is responsible for remedies

and charges in accordance with Section 14-1.02A, Paragraph 4 of the Amendments of the Standard Specification.

AFTER CONSTRUCTION

1. When no longer required for the work, as determined by the Resident Engineer in consultation with the Caltrans Archaeologist, temporary fence shall be removed by the Contractor. The Resident Engineer shall ensure that it shall be removed from the site, except as otherwise provided in this section. The Resident Engineer will inform the Caltrans Archaeologist when construction is completed.

Anticipated dates and duration for ESA will be from Fall 2015 through Fall 2016. The ESA will be installed as the first order of work and will remain in place during the entire construction process.

PROJECT DESCRIPTION

At the present time there are four alternatives being proposed, four build alternatives being proposed, three build alternatives (Alternatives 1, 2 and 3), as well as a no build alternative. A bridge rehabilitation alternative was initially considered but is not being proposed at this time. With the rehabilitation alternative, significant structural work would be required to strengthen and widen the bridge in order to attain the desired width, which, in addition to the installation of new bridge railing, reconstruction of approach slabs, and replacement of the deck, all serve to make bridge replacement a more cost effective option. All three build alternatives propose to remove the existing bridge and construct a new bridge on the same alignment – the only difference being is the type of bridge structure being proposed. A summary of the three build alternatives can be found in the attached Archaeological Survey Report (ASR) on pages 3-6 (see Attachment B of HPSR).

The Area of Potential Effects (APE) for all three build alternatives are the same, encompassing an area that extends within the state ROW from PM 8.9 to 9.3 and measures approximately 2701 feet long by 473 feet at its widest. It includes all existing right-of-way (ROW), temporary construction easements, utility relocations, equipment staging areas and the boundaries of all cultural resources within or immediately adjacent to the proposed project and encompasses 13.78 acres (see Exhibit 3: Sheets 1 – 3 of HPSR).

The ESA Action plan was prepared in accordance with Stipulation X.B.1.a and Attachment 5 of the January 2014 *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (2014 First Amended PA).

One historic archaeological site will be protected by this ESA. This linear resource represents the remains of a partially paved/dirt road grade in the approximate location of where the Lassen Overland Emigrant Trail (CA-LAS-2595H; FS No. 05-06-51-834), was suspected to pass through this area. The trail in this location serves as an informal parking area on its eastern end and on its western end serves as a graded and partially paved dirt road that follows Hamilton Branch Creek south to the community of Hamilton Branch. Through the project limits, the grade extends approximately 670 feet in a generally east/west direction through the northern portion of the project limits and measures approximately 20 feet wide on the east side of SR 147 and 665 feet long, 20 feet wide on the west side of SR 147. The only refuse noted was modern trash and based on the paving remnants, the grade may have served as a segment of Legislative Route Number 02-PLU-183A (or Federal Aid Secondary Route [FAS] 523-1), the precursor of SR 147. The ESA limits are depicted on Figure 1 attached to this ESA Action Plan.

ESA METHODS

Protective measures include the following:

- ESA signage
- Protective fencing
- Access restriction to ESA
- Periodic monitoring of ESA fencing by PQS during construction
- Specific contractural language in final PS&E package

The ESA will be demarcated in the field by the installation of temporary orange fencing. It will include the entire limits of CA-LAS-2595H within the APE and incorporate an area measuring 20 feet wide by 1340 feet long. Attention will be directed in the PS&E package to Section 7 – 1.02 "LAWS," Section 7 – 1.02R "Environmental Stewardship," Section 14 – 1.02. "Environmentally Sensitive Area," Section 14 – 1.03 "Type ESA Temporary Fence," and Section 14 – 02 "Archaeological Resources," of the 2010 Standard Specifications regarding State and Federal regulations, permits or agreements which pertain to an ESA.

COORDINATION MEETING

The Contractor shall attend a mandatory construction coordination meeting with the Engineer, Environmental Construction Liaison, and/or Caltrans Archaeologist(s) to specifically discuss the ESA. The meeting shall be scheduled in advance of commencing construction operations in order to comply with other requirements specified herein. The meeting time shall be between 8:00 AM and 3:00 PM, Monday through Friday, except legal holidays. The Contractor shall submit the request for the meeting with the Engineer, Environmental Construction Liaison and Caltrans archaeologist in writing not less than 10 calendar days in advance of the meeting. The purpose of the meeting will be:

- To have the Engineer inform the Contractor in the field of the archaeological resources located within and adjacent to the project work areas.
- To have the Engineer inform the Contractor in the field of the ESA's related to those resources.

PROCEDURE FOR ARCHAEOLOGICAL DISCOVERIES DURING CONSTRUCTION

Immediately upon discovery of archaeological materials during the construction operations, stop all work within a 60-foot radius of the archaeological materials and immediately notify the Engineer. Archaeological materials found during construction are the property of the State. Do not resume work within the 60-foot radius of the find until the Engineer gives you written approval. If, in the opinion of the Engineer, completion of the work is delayed or interfered with by reason of an archeological find or investigation or recovery of archeological materials, you will be compensated for resulting losses and an extension of time will be granted in the same manner as provided for in Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

The Department may use other forces to investigate and recover archaeological materials from the location of the find. When ordered by the Engineer, the Contractor shall furnish labor, material, tools and equipment, to secure the location of the find, and assist in the investigation or recovery of archaeological materials and the cost will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

Full compensation for immediately notifying the Engineer and leaving undisturbed and in place archaeological materials discovered on the job site shall be considered as included in the various items of work and no additional compensation will be allowed therefore.

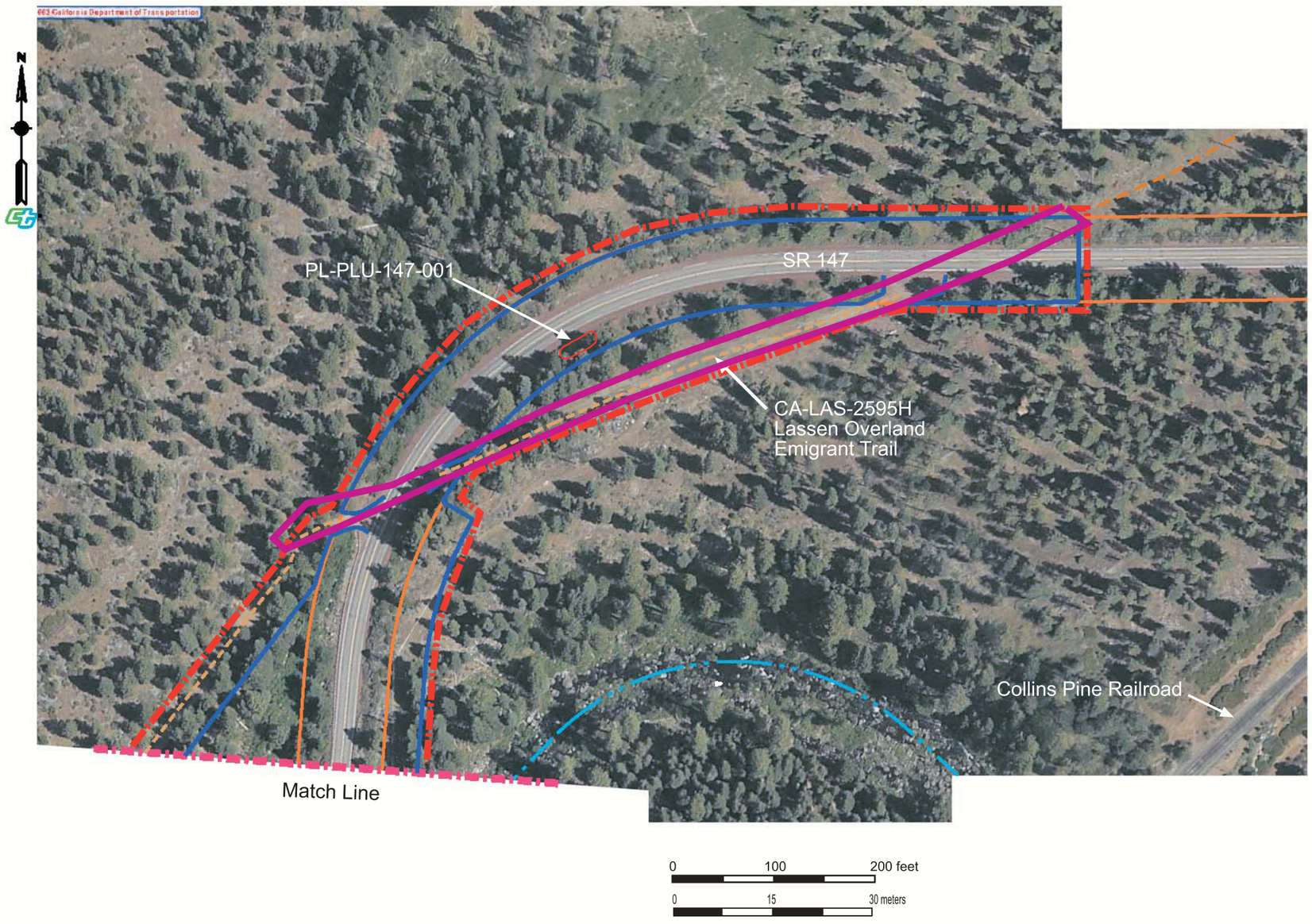
COPY PROVIDED TO PROJECT DEVELOPMENT X YES _____NO

COPY ATTACHED TO THE NO ADVERSE EFFECT WITH STANDARD CONDITIONS HISTORICAL PROPERTY SURVEY REPORT
X YES _____NO

ESA Action Plan: Hamilton Branch Bridge: CA-LAS-2595H
Tasks and Responsible Parties

STAGE	*TASK*	*RESPONSIBLE PARTY*	*TASK COMPLETED* **(date and initial)**
Prior to construction	The Caltrans PQS Project Archaeologist (PQS) will ensure that the ESA for site CA-LAS-2595H is clearly described and illustrated in the plans, specifications, and estimates (PS&E) prepared to guide the construction of the undertaking.	Caltrans PQS, Project Manager, Project Engineer	
	All responsible parties, including the Caltrans PQS, will review the PS&E package. Ensure that the SSP's for ESA are included in PS&E package	Caltrans PQS, Project Manager, Project Engineer	
	Caltrans PQS will ensure that the ESA Action Plan is included in Environmental Commitment Record (ECR) and the RE Pending File	Caltrans Environmental Branch Chief, Caltrans PQS, Project Manager and Project Engineer	
	The ESA and other Standard Conditions will be discussed during the pre-construction meeting. The importance of ESAs will be discussed with construction personnel and it will be stressed that no construction activity (including storing or staging of equipment or materials) shall occur within the ESA and that workers must remain outside of the ESA at all times. Additionally, construction personnel will be informed of historic preservation laws that protect archaeological sites against any disturbance or removal of artifacts.	Caltrans RE, Contractor, Caltrans Environmental Construction Liaison and Caltrans PQS	
	The Caltrans RE will notify the Caltrans PQS at least two weeks in advance of construction to ensure that the PQS will be available to monitor fence installation and allow for a field review of ESA locations.	Caltrans RE, Caltrans PQS, Caltrans Environmental Construction Liaison, Caltrans, Environmental Branch Chief, Contractor	
	All responsible parties perform field review of ESA location at least one calendar week prior to construction activities.	Caltrans RE, Caltrans PQS, Caltrans Environmental Construction Liaison, Contractor	
During Construction	The Contractor shall install temporary plastic ESA fencing around site CA-LAS-2595H. The fencing will be installed as the first order of work under the direction of the Caltrans RE. The fencing shall be installed at least one calendar week prior to initiating any work in those areas (see attached ESA map). The Caltrans PQS will coordinate this activity with the Environmental Construction Liaison and will be present to supervise and monitor fence installation.	Caltrans RE, Contractor, Caltrans PQS, Caltrans Environmental Construction Liaison	

STAGE	*TASK*	*RESPONSIBLE PARTY*	*TASK COMPLETED* **(date and initial)**
During construction	Caltrans RE and PQS will stay in contact regarding fencing integrity and any construction activities taking place within the vicinity of the ESA. Caltrans PQS and/or the Caltrans Environmental Construction Liaison which conduct weekly inspections to ensure the integrity of the ESAs	Caltrans Resident Engineer, or Inspectors if applicable, and Caltrans PQS	
Post Construction	Caltrans Environmental Construction Liaison will contact the Caltrans PQS when construction is complete.	Caltrans PQS and Environmental Construction Liaison	
	The Contractor, under supervision of the Environmental Construction Liaison and/or Caltrans PQS, will remove temporary fencing at the conclusion of construction	Caltrans PQS and Environmental Construction Liaison	
Responsible parties as of 6/11/14	Caltrans Archaeologist/PQS Environmental Branch Chief Environmental Construction Liaison Resident Engineer Contractor	Blossom Hamusek Chris Quiney Ed Espinoza To be determined To be determined	blossom.hamusek@dot.ca.gov 530-225-3148 chris.quiney@dot.ca.gov 530-225-3174 edward.j.espinoza@dot.ca.gov 530-225-3302



LEGEND

- Area of Potential Effects
- Temporary Construction Easement and Area of Direct Impact
- Right-of-Way
- Hamilton Branch Creek
- ESA Fenced Boundary

Figure 1
Environmentally Sensitive Area for CA-LAS-2595H

State of California
Department of Transportation

02-PLU-147
P.M. 8.9/9.3
E.A. 4E640
EFIS 02120000110

Riparian Impacts, Figure 6, Dated May 21, 2015

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	PLU	147	8.9 - 9.3		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

Figure 6

HAMILTON BRANCH CREEK
RIPARIAN IMPACTS
EA 02-4E640, SHEET 1 OF 1

ver 5-21-2015, 02-4E640SimplifiedRiparianImpactMap5.dgn

REVISED BY | DATE REVISED

CALCULATED BY | DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

LAST REVISION 00-00-00 | DATE PLOTTED => 23-JUL-2015 | TIME PLOTTED => 11:29

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