Appendix D

Cultural Resources Supplemental Information Regarding the Substitution (36 CFR 800.8[c]) and Cultural Resources Mitigation Plan

Appendix D: Cultural Resources Supplemental Information Regarding the Substitution (36 CFR 800.8[c]) and Cultural Resources Mitigation Plan

Summary of the Substitution Process

The Advisory Council on Historic Preservation advises federal agencies to coordinate the compliance requirements of Section 106 of the National Historic Preservation Act (NHPA) and its regulations (36 CFR 800) with the requirements of the National Environmental Policy Act (NEPA). To this end, the Bureau of Land Management (BLM) has chosen to fulfill its obligations under Section 106 of the National Historic Preservation Act (NHPA) by using the process outlined in 36 CFR 800.8(c), otherwise known as Substitution, rather than the traditional Section 106 review process. The regulation allows federal agencies to "use the process and documentation required for the preparation of an Environmental Assessment/Finding of No Significant Impact (EA/FONSI) or an Environmental Impact Statement/Record of Decision (EIS/ROD) to comply with Section 106 in lieu of procedures set forth in 36 CFR 800.3 through 800.6." 36 CFR 800.8(c)(1). The agency official must notify the State Historic Preservation Offices/Tribal Historic Preservation Offices (SHPO/THPO) and the Advisory Council of Historic Preservation (ACHP) in advance of its intentions.

This process is intended to occur as part of the NEPA process and helps streamline Section 106 compliance. Notably, the substitution process incorporates the four major steps of the Section 106 process: 1) initiate the Section 106 process; 2) identify historic properties; 3) assess adverse effects; and 4) resolve adverse effects. It also requires consultation with the SHPO, relevant THPO (if appropriate), the ACHP, and Native American Tribes. The substitution process requires that the agency meet specific standards in developing environmental documents set forth in 36 CFR 800.8(c)(1), including:

- Identify consulting parties, including SHPO and/or THPO, ACHP, Native American Tribes through 36 CFR 800.3(f) and the NEPA scoping process (36 CFR 800.8(c)(1)(i));
- Identify historic properties and assess the undertaking's effects on such properties consistent with the standards and criteria in 36 CFR 800.4 and 800.5 (36 CFR 800.8(c)(1)(ii));
- Consult regarding the undertaking's effects on historic properties with SHPO and/or THPO, ACHP, other consulting parties and Native American Tribes that may attach religious and cultural significance to affected properties, during NEPA scoping, environmental analysis, and preparation of the Draft EIS (36 CFR 800.8(c)(1)(iii)); Involve the public consistent with the agency's NEPA procedures (36 CFR 800.8(c)(1)(iv)); and
- Through consultation, develop alternatives and proposed measures that might avoid, minimize, or mitigate any adverse effect of the undertaking on historic properties and describe the measures in the Draft EIS.

The consulting parties and public have an opportunity to review and comment on the Draft EIS (36 CFR 800.8(c)(2)). All consulting parties and/or the ACHP can object to the BLM during the public comment period allotted for the Draft EIS if they determine the Draft EIS has not met the standards set forth in 36 CFR 800.8(c). The consulting agencies may also object that the resolution of the effects on historic

properties proposed in the Draft EIS is inadequate. If the BLM receives such an objection, the BLM will then refer the matter to the ACHP. After publication of the Final EIS, the agency may approve the undertaking through a ROD, which must include binding commitment measures to avoid, minimize, or mitigate adverse effects (36 CFR 800.8(c)(4)). If the ROD makes a binding commitment to impose measures to resolve adverse effects, then neither a memorandum of agreement nor a programmatic agreement would be necessary for the undertaking.

The NHPA and NEPA have different vocabularies that are parallel but distinct from one another. Both NHPA and NEPA terms are used throughout this section, and the specific definitions of those terms are provided below (refer to Table 3-32). Note that "impacts" and "effects" are synonymous in NEPA and both terms may be used throughout this document; "effects" is the preferred term since it is also used in NHPA.

Table 1. NEPA and NHPA Terms and Definitions

NEPA Term and Definition	NHPA Term and Definition
Cultural Resources Effects considered under NEPA include cultural and historic (40 CFR § 1508.1(g)).	*Historic Property* Any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the NRHP (36 CFR § 800.16.(l)(1)). Properties of religious and cultural significance to Indian Tribes and Native Hawaiian organizations
Major Federal Action or Action Activity or decision subject to Federal control and responsibility, such as new and continuing activities including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by Federal agencies; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals (40 CFR § 1508.1(q)).	*Undertaking* A project, activities, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; and those requiring a Federal permit, license, or approval (36 CFR § 800.16(y)).
Affected Environment or Analysis Area The environment of the area(s) to be affected or created by the alternatives under consideration, including the reasonably foreseeable environmental trends and planned actions in the area(s) (40 CFR § 1502.15).	*Area of Potential Effects (APE)* The geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking (36 CFR § 800.16(d)).
Significance Used to describe the level of impact a proposed action may have. In considering whether the effects of the proposed action are significant, agencies shall analyze the potentially affected environment and degree of the effects of the action (40 CFR § 1501.3(b)).	*Significant* Used to describe the historic resources that have certain character defining features that make it historically significant and therefore eligible for listing in the NRHP with the requisite integrity. See NRHP eligibility criteria

NEPA Term and Definition	NHPA Term and Definition
Significant Effect or Impact See Significance above.	*Adverse Effect* Alteration to the characteristic of a historic property that qualify it for inclusion in the NRHP in a manner that would diminish its integrity (36 CFR § 800.5(a)(1)).
Public Involvement Agencies shall provide notice of NEPA-related public hearings or meetings and the availability of environmental documents. They shall solicit information and comments from the public and make EISs and their supporting documentation available subject to the Freedom of Information Act (40 CFR § 1506.6).	*Consultation* The process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them (36 CFR § 800.16(f)). Agencies are required to consult with certain parties (see below) and give the public an opportunity to comment.
Stakeholders The term "stakeholder" is used to refer to impacted entities, including members o the public, who participate in some part of the NEPA process.	*Consulting Parties* Parties that have consultation roes in the Section 106 process, including SHPOs; THPOs; Indian Tribes; Native Hawaiian organizations; local governments; applicants for Federal assistance, permit, licenses, and other approvals; the ACHP; and other individuals and organizations with demonstrated interest in the undertaking or the affected historic properties (36 CFR § 800.2(c)).
Cooperating Agencies Any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. A State, Tribal, or local agency of similar qualifications may by agreement with the lead agency become a cooperating agency (40 CFR § 1508.1(e)).	*Consulting Parties* See Consulting Parties above.
Mitigation Measures that avoid, minimize, or compensate for effects caused by a proposed action or alternatives as described in an environmental document or record of decision and that have a nexus to those affects. While NEPA requires consideration of mitigation, it does not mandate the form or adoption of any mitigation. Mitigation includes avoiding the impact; minimizing impacts by limiting the action and its implementation; rectify the impact by repairing,	*Mitigation* A measure to resolve adverse effects to identified historic property or properties by offsetting such effects. A nexus is required between the mitigation measure(s) and the adverse effects to historic properties.

NEPA Term and Definition	NHPA Term and Definition
rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance; and compensating for the impact by replacing or providing substitute resources or environments (40 CFR § 1508.1(s)).	
Effects/Impacts Effects and impacts are synonymous terms under NEPA. Changes to the human environment from the proposed action or alternatives that are reasonably foreseeable and including direct, indirect, and cumulative effects (40 CFR § 1508.1(g)).	*Effects* An "effect" means alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the NRHP (36 CFR § 800.16(i)). Adverse effects are described above and may include direct, indirect, or cumulative effects.
Cumulative Effects Effects on the environment that result from the incremental effects of the action when added to the effects of the other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR § 1508.1(g)(3)). An individual action may not have much effect, but it may be part of a pattern of actions whose combined effects on a resource are significant.	*Cumulative Effects* Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be further removed in distance, or be cumulative (36 CFR § 800.5(a)(1)). While the Section 106 regulations do not define "cumulative effects," the Council of Environmental Quality regulation definition of "cumulative impacts" is analogous and instructive.
Indirect Effects Reasonably foreseeable effects that are caused by the action and occur later in time or are farther removed in distance from the proposed action (40 CFR § 1508.1(g)(2)) These are often referred to as "downstream" impacts, or future impacts.	*Indirect Effects* Indirect effects may change the character of the property's use or physical features within the property's setting that contribute to its historic significance; are often audible and/or atmospheric.
Direct Effects An effect that occurs as a result of the action in the same place and at the same time as the action. Direct effects include actual changes to cultural or historic resource (40 CFR § 1508.1(g)(1)).	*Direct Effects* A direct effect to a historic property would include demolition of a historic building, major disturbance of an archaeological site, visual effects and viewshed intrusions, or any other actions that occur to the property itself.

Notes: Table is based on Attachment A: Definitions and Standards from the 2013 NEPA and NHPA: A Handbook for Integrating NEPA and Section 106, by the Council on Environmental Quality Executive Office of the President and the Advisory Council on Historic Preservation. The NEPA definitions have been updated to reflect the Council on Environmental Quality (CEQ) Revised Regulations (Revised 85 FR 43304) (September 14, 2020, as amended at 87 FR 23469, April 20, 2022).

Initiation of the Undertaking

Notification (36 CFR 800.8(c))

Section 106 regulations at 36 CFR § 800.8(c) require that the federal agency official notify in advance the SHPO and/or THPO (if relevant) and the ACHP of its intent to use the Substitution process for Section 106 purposes. The BLM sent notification of its intent to use Substitution to the SHPO and ACHP on April 14, 2023. The letter included notification of the BLM's election to use the NEPA substitution process described in 36 CFR 800.8, invited recipients to participate as consulting parties and cooperating agencies in the NHPA and NEPA processes, and provided information about the initial Area of Potential Effect (APE).

Identify Consulting Parties (36 CFR 800.8(c)(1)(i))

Under Section 106 of the NHPA, parties entitled to participate in consultation with the lead federal agency include SHPO and/or THPO, ACHP, Native American Tribes who might attach religious and cultural significance to historic properties in the APEs, certified local governments, project proponents, and individuals and organizations with a demonstrated interest in the undertaking, such as historical societies, property owners, and non-profit organizations. In a July 2022 letter, the BLM invited the following parties to consult under 36 CFR 800.3(f) as well as to participate as cooperating agencies under NEPA: Nevada SHPO, ACHP, Bureau of Indian Affairs, and Native American Tribes.

Identification of Historic Properties

Identify Historic Properties and Assess Effects (36 CFR 800.8(c)(1)(ii))

Description of the Area of Potential Effects (APE)

Pursuant to 36 CFR 800.4, the BLM established an initial APE and included those details as part of the notification and consultation letters sent to consulting parties. A (direct) physical effects APE (D-APE) as well as a visual, auditory, and atmospheric (VAA) APE were established. Chapter 3.5, *Cultural Resources,* outlines the extent of these APEs and includes the BLM's justification for how and why these were established.

Results of the Class I Cultural Resources Inventory

The results of the Class I inventory (cultural resource background literature research) identified data gaps, areas needing additional data collection or pedestrian inventory, and areas requiring measures to avoid potential adverse effects to historic properties. The Class I inventory identified 706 known cultural resource sites within the VAA APE. , 79 of which are located within the Project site (D-APE).

Results of the Class III Cultural Resources Inventory (Pedestrian Survey)

The Class III cultural resources inventory (pedestrian survey) and a pre-field records search resulted in the identification of numerous archaeological and historical sites located within the D-APE. The Class III inventory documented 79 previously unrecorded sites within the DAPE and six previously recorded sites were revisited/re-evaluated within the direct impacts APE. Of these 86 sites, 72 are historic-era sites, nine are prehistoric era sites, and four are multi-component sites (Stoner and Catacora 2023, 2023a, and 2023b). The nine pre-historic sites are all lithic scatters. The 72 historic-era sites focus mainly on prospecting and mining, transportation and infrastructure resources including roads, railroads, and transmission lines, unassociated historic refuse deposits, a ranching-related well and trough, and cadastral

markers. Please refer to Chapter 3.5.3.3 for the BLM's preliminary determinations of eligibility on sites identified within the D-APE.

Resources within the VAA APE

The Class I cultural resources inventory (records search and literature review) of the five-mile VAA APE identified 706 cultural resources; some of these resources are also within the D-APE as the D-APE is included in the VAA APE. Thirty-nine sites identified within the VAA APE were previously determined eligible for the NRHP under Criterion A, B, C and/or D. Sixteen of these 39 historic properties were found to not have visual, auditory, or atmospheric components (i.e., setting components) that support their eligibility determinations or listing and thus are not considered further in the VAA analysis. Between March 20 and 31, 2023, ASM conducted field visits of the remaining 23 historic properties to assess if they have line-of-site viewsheds of the Project that would be affected or may have setting components contributing to their site eligibility. Eighteen of the 23 historic properties visited by ASM were found to have either no direct line-of-sight to the Project area or do not have setting components that support their eligibility. These 18 historic properties were not considered further in the VAA analysis. The remaining six historic properties are in the foreground/middle ground zones of the VAA APE and have setting components that support their eligibility, and thus are the six resources considered for potential VAA impacts in the EIS. The sites are presented in the EIS, Section 3.5.3.3.

Summary

The BLM's identification effort can be considered reasonable and in good faith when it has appropriately considered the factors specified in 36 C.F.R. § 800.4(b)(1) – past planning, research and studies, the magnitude and nature of the Undertaking and the degree of federal involvement, the nature and extent of potential effects on historic properties, and the likely nature and location of historic properties within the APE.

The BLM has made the Class I and Class III inventory reports, and preliminary determinations of NRHP eligibility and effect of the undertaking on historic properties available to the consulting parties and requested agreement with these eligibility determinations, as required under 36 CFR 800.4(c)(2). Consultation with these parties is ongoing; the outcome of consultation will be disclosed in the ROD.

Assess Effects to Historic Properties

Consult Regarding the Effects of the Undertaking (36 CFR 800.8(c)(1)(iii))

The BLM requested consultation with consulting parties, including Native American Tribe and the SHPO, on its preliminary determinations of NRHP eligibility and finding of effect of the Project on cultural resources, on December 14, 2023.

The BLM received a response from the SHPO, dated January 16, 2024, concurring with the BLM's determination that three sites within the D-APE (S3327 [segment of the Southern Pacific Railroad], S3328 [segment US Highway 95]), and 26LY1450 [segments of the Wabuska Drain]) are eligible for listing in the NRHP. SHPO concurrence is pending for four sites the BLM has determined are eligible: (26LY3165 [segment of the Reese River Road]; and 26LY3287, 26LY3288, and 26LY3289 [pre-contact era sites]). The SHPO concurred with the BLM that 67 sites are not eligible for listing in the NRHP. The SHPO did not concur that five sites were not eligible; BLM has reevaluated the five sites and resubmitted its determinations to the SHPO for concurrence on May 1, 2024, which is pending.

The BLM received a response from the Fallon Paiute-Shoshone Tribe, dated January 26, 2024, requesting clarification on the BLM's determination of effects to prehistoric (pre-contact) sites, and suggested the BLM consider cumulative effects to all sites and isolated Native American objects, regardless of their NRHP eligibility status. Although sites determined not eligible for inclusion in the NRHP do not require avoidance or mitigation under the Section 106 process, the BLM, in response to the Fallon Paiute-Shoshone Tribe's request, is coordinating with the applicant avoid all sites and isolated resources not eligible for listing in the NRHP, to the extent practicable. MM CR-3 has been added to the Final EIS to require that ineligible sites are also avoided as practicable. The analysis has been updated to reflect the addition of the measure in Sections 3.5.4 and 3.6.4.

Consultation with these parties is ongoing; the outcome of consultation will be disclosed in the ROD.

Determination of Effect

The procedure for assessing adverse effects is described at 36 CFR 800.5. The regulations state that "an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative." The BLM has made a determination of effects to historic properties, as shown in the Table 2. One of the historic properties may be directly impacted and may also be visually impacted. Five other historic properties may be visually impacted. The remaining three historic properties would be avoided and thus would not be impacted by the Project.

Table 2. Determination of Effects to the Seven Identified Historic Properties within the Direct APE and Two Additional Historic Properties in the VAA APE Only

Site number	Site description	NRHP determination	Effects
26LY3165	Reese River Wagon Road	Eligible under Criterion A	Adverse effect from physical impacts due to alteration of the road and visual effects due to the alteration of the setting.
S3327	Southern Pacific Railroad	Eligible under Criterion A	Adverse effects from visual impacts of the gen-tie crossing the resource.
S3328	US Highway 95A [US95A]	Eligible under Criterion A	Adverse effects from visual impacts of the gen-tie crossing the resource.
26LY01450	Wabuska Drain Segments	Eligible under Criterion A	Adverse effects from visual impacts of the gen-tie crossing the resource.

Site number	Site description	NRHP determination	Effects
26LY2088	Y Hill (Historic Era Geoglyph)	Eligible under Criterion A	Adverse effect from visual impacts to rural setting.
26LY2887/D357	Sage Crest Drive-In Historic District	Eligible under Criteria A, C and D	Adverse effects from visual impacts to rural setting.
26LY3287	Multi-component artifact scatter with features	Eligible under Criterion D	No affects through complete avoidance
LY3288	Paleoindian lithic scatter	Eligible under Criterion D	No affects through complete avoidance
LY3289	Paleoindian lithic scatter	Eligible under Criterion D	No affects through complete avoidance

Consultation with consulting parties about the effect of the undertaking on historic properties is ongoing; the outcome of consultation will be disclosed in the ROD.

Public Involvement (36 CFR 800.8(c)(1)(iv)

The BLM understands that the views of the public are essential to informed Federal decision making in the Section 106 process. The BLM is using agency procedures for public involvement under NEPA in lieu of the public involvement requirements of Section 106. Chapter 4.2, *Public Involvement Process*, outlines the BLM's public involvement efforts for the Project.

Resolve Adverse Effects

Development of Alternatives and Treatment Measures (36 CFR 800.8(c)(1)(v))

The BLM worked with cooperating agencies and consulting parties who identified concerns, to develop alternatives and measures to avoid, minimize, or mitigate adverse effects (also referred to as treatment methods) of the undertaking. Mitigation measure (MM CR-1) was developed for the Project, establishing an Environmental Exclusion Area to avoid direct physical impacts/adverse effects to cultural resource sites of Native American religious and cultural significance. Measures for avoidance and procedures in the event of the discovery of cultural resources during project activities, are outlined in the draft Cultural Resources Monitoring and Post-Review Discovery Plan prepared for the Project (Appendix D, Attachment 3 of the EIS). The Cultural Resources Monitoring and Post-Review Discovery Plan, which mirrors the measures outlined in the EIS and includes protocols for archaeological and Native American monitors, has been provided to Tribes and the SHPO; any changes to this plan resulting from continued consultation will be included in ROD for the Project.

Adverse effects to NRHP-eligible resources are addressed and resolved through mitigation. Treatment for these resources is outlined in the draft Historic Properties Treatment Plan (HPTP) prepared for the Project (Appendix D, Attachment 2 of the EIS). The HPTP, which mirrors the treatments outlined in the EIS, has been provided to Tribes and the SHPO; the outcome of consultation for this plan will be included in ROD for the Project.

Proposed Treatment Measures

As part of compliance with 36 CFR 800.8, the BLM must consult on proposed treatment measures that might avoid, minimize, and mitigate impacts. Proposed treatment measures can include avoidance through project design, archival research, and cultural resources sensitivity training for construction personnel. Treatment measures for the six historic properties the BLM has determined would be adversely affected by the Project are outlined in the draft Cultural Resources Mitigation Plan (Appendix D) and the draft Historic Properties Treatment Plan (Appendix D). Redacted versions of these plans have been provided to protect confidential information regarding cultural resources, in accordance with 18 CFR 1312.18, and the Archaeological Resources Protection Act of 1979.

References

Stoner, Edward J., and Andrea Catacora. 2023. A Class III Cultural Resources Inventory of Approximately 6,669 Acres for the Libra Solar Project in Lyon and Mineral Counties, Nevada. BLM CRR-03-2927.

_____. 2023a. Addendum 1 to a Class III Cultural Resources Inventory of Approximately 6,669 Acres for the Libra Solar Project in Lyon and Mineral Counties, Nevada. BLM CRR-03-2927-1.

_____. 2023b. Addendum 2 to a Class III Cultural Resources Inventory of Approximately 6,669 Acres for the Libra Solar Project in Lyon and Mineral Counties, Nevada. BLM CRR-03-2927-2.

Attachment 1: Libra Solar Project Cultural Resources Mitigation Plan

LIBRA SOLAR PROJECT CULTURAL RESOURCES MITIGATION PLAN

Introduction

The BLM has chosen to fulfill its obligations under Section 106 of the NHPA by using the process outlined in 36 CFR section 800.8(c), known as "Substitution," rather than the traditional Section 106 review process, for this Project. "Substitution" allows federal agencies' officials to "use the process and documentation required for the preparation of an Environmental Assessment/Finding of No Significant Impact or an EIS/ROD to comply with Section 106 in lieu of procedures set forth in 36 CFR 800.3 through 800.6" (36 CFR § 800.8(c)(1)). The BLM shall commit to the mitigation identified in this plan in the Record of Decision (ROD) and no further agreement documents (i.e., memorandum of agreement or programmatic agreement) shall be required.

The Libra Solar Project is anticipated to result in impacts to cultural resources, some of which may have physical adverse effects to historic properties or visual, auditory, and atmospheric (VAA) effects to National Register of Historic Places (NRHP)-eligible cultural resources (i.e., historic properties). Adverse effects to historic properties resulting from construction, operations and maintenance, and decommissioning of the Libra Solar Project would be mitigated according to the procedures outlined in this mitigation plan. All prehistoric (pre-contact) NRHP-eligible sites would be avoided. Adverse effects to six historic-period and built environment NHRP-eligible sites would require mitigation.

The draft Historic Properties Treatment Plan (HPTP) prepared for the Project (Appendix D, Attachment 2 of the EIS) would be made final and implemented; the conditions of implementation will be included in the ROD.

Libra Solar Project Cultural Resources Determination of Effects and Mitigation Measures

In order to establish the affected environment and determine existing resources that could be impacted by the Project, a Class I cultural resources inventory and report, and Class III cultural resources survey and report were completed (Stoner and Catacora 2023, 2023a, 2023b). During surveys, 79 sites were located within the D-APE.. Of the 79 sites, 65 are historic-era sites, nine are prehistoric (pre-contact) era sites, and five are multi-component sites (Stoner and Catacora 2023). The nine prehistoric (pre-contact) Native American sites are all lithic scatters. The 65 historic-era sites focus on prospecting and mining, transportation and infrastructure resources including roads, railroads, and transmission lines, unassociated historic refuse deposits, a ranching-related well and trough, and cadastral markers (Stoner and Catacora 2023).

The BLM has determined that seven of the 79 sites within the D-APE are historic properties (i.e., eligible for listing in the NRHP), and has determined the remaining sites are not eligible. Table 2 lists the seven sites eligible for listing in the NRHP along with which NRHP Criterion each site is eligible under. Mitigation is not prescribed for non-eligible sites.

Table 3 Libra Solar Project Cultural Sites Determined Eligible for Listing in the NRHP

Site number	Agency Site Number	Age	Site description	Direct APE or VAA	NRHP determination
26LY3165	3-12468	Historic	Reese River Wagon Road	Direct/VAA APE	Eligible under Criterion A
S3327	3-12474	Historic	Southern Pacific Railroad	Direct/VAA APE	Eligible under Criterion A
S3328	3-12478	Historic	US Highway 95A [US95A]	Direct/VAA APE	Eligible under Criterion A
26LY01450	3-5770	Historic	Wabuska Drain Segments	Direct/VAA APE	Eligible under Criterion A
26LY3287	3-8663	Prehistoric	Multi-component artifact scatter with features	Direct/VAA APE	Eligible under Criterion D
LY3288	3-11841	Prehistoric	Paleoindian lithic scatter	Direct/VAA APE	Eligible under Criterion D
LY3289	3-12493	Prehistoric	Paleoindian lithic scatter	Direct/VAA APE	Eligible under Criterion D
26LY2088	3-12494	Historic	Y Hill	VAA APE only	Eligible under Criterion A
26LY2887/D357	3-12495	Historic	Sage Crest Drive-In	VAA APE only	Eligible under Criteria A, C & D

MITIGATION MEASURES

Avoided Sites

The three prehistoric (pre-contact) historic properties, listed above (26LY3287 LY3288, and LY3289), have been determined eligible under Criterion D, and will be avoided through design. The Environmental Impact Statement (EIS) identifies an additional measure to ensure avoidance.

> ***MM CR-1: Pre-historic Site Environmental Exclusion Area (EEA).*** *An Environmental Exclusion Area (EEA) and at least 500-foot buffer shall be established around the three prehistoric sites within the Project application area. The EEA shall be completely removed from the Project footprint in the final engineering and design plans prior to construction, resulting in redefinition of the development area boundary and fence lines. The design engineers shall coordinate with the BLM or consulting archaeologist to verify full avoidance. Occupancy outside the established Project boundary shall be prohibited. EEAs shall be re-established during decommissioning.*

Unavoidable Sites within the Physical Effects and/or VAA APEs

Overview

The five historic period resources, eligible under Criterion A and the one historic period site eligible under Criteria A, C, and D, would all be subject to adverse effects that cannot be avoided. One of the historic properties, Reese River Wagon Road (26LY3165), would be subject to physical and visual adverse effects from changes to the roads material and width and the integrity of its rural setting. This road would serve as a primary access to the Project solar site. The other five historic properties would experience adverse visual effects to the setting of the resources from the crossing of the gen-tie over the resources.

The following section summarizes each historic property, the probable impacts, and the proposed treatment. As previously stated, the context and the details of the treatments are further defined in the HPTP and, which will be incorporated in the ROD for the Project.

This CRMP and the associated HPTP and MDP, thus, fulfill the following EIS mitigation:

> **MM CR-2: Cultural Resources Mitigation Plan, and Cultural Resources Monitoring and Post-Review Discovery Plan Requirements:** A Cultural Resources Mitigation Plan shall be prepared that shall address the one historic property that could be adversely impacted through physical disturbance and VAA impacts (Reese River Wagon Road [26LY3165]), as well as the resources that could be affected only by visual, atmospheric, and auditory effect (i.e., Y Hill [26LY2088], Sage Crest Drive-In [26LY2887], US95A [S3328], Wabuska Drain [26LY1450], and the Southern Pacific Railroad [S3327]). The plan shall include measures that include archival and documentary research, oral history interviews, and photo documentation to develop a historic context suitable for the development of an interpretive site with signage focusing on the themes of Community Development for the Sage Crest Drive in and Yerington "Y," Transportation for the Reese River Wagon Road, US Highway 95A, and the Southern Pacific Railroad, and Agricultural related infrastructure and water for the Wabuska Drain.
>
> The Cultural Resources Monitoring and Post-Review Discovery Plan shall identify when monitoring is required (i.e., during new ground disturbance), monitoring responsibilities, and the

actions to be taken should a resource be encountered in the field, including stopping work within a buffer distance of the resource until it can be inspected and addressed.

Site Number: 26LY3165 (3-12468)

Site Type and Cultural/Temporal Affiliation: *Reese River Wagon Road*
Euro American/1870, ca. 1880–1920s, and 1950s–1970s

Project Impacts: The site would be directly impacted by the Project through alteration and modernization, including changes to the road surface and width. The site would also be adversely affected visually, through alteration of the integrity of the rural setting of the site by development of the Project.

Mitigation Measures: The site would be subject to high resolution digital photography and black and white images would be printed on archivally stable photo paper and submitted to the BLM and SHPO. A Photography would also include a flyover and video documentation of the entire segment of the Reese River Road to be physically affected by the project. Archival and documentary research would be conducted to provide context and content including historic maps and images for interpretive signage focusing on the theme of historic transportation systems in Mason Valley. Signage would be placed on an interpretive site with good public access such as the intersection of Walker River Road and Reese River Road which is near the entrance to the Walker River State Recreation Area.

Site Number: S3327 (3-12474)

Site Type and Cultural/Temporal Affiliation: *Southern Pacific Railroad*
Euro American/since 1880 to present.

Probable Project Impacts: The site intersects the physical APE. The gen-tie crosses directly over the site and would not physically impact the site. The site may be adversely affected visually through introduction of a new modern component in the setting.

Mitigation Measures: Archival and documentary research would be conducted to provide context and content including historic maps and images for interpretive signage focusing on the theme of historic transportation systems in Mason Valley. Signage would be placed on an interpretive site with good public access such as the intersection of Walker River Road and Reese River Road which is near the entrance to the Walker River State Recreation Area.

Site Number: S3328 (3-12478)

Site Type and Cultural/Temporal Affiliation: *US Highway 95A (US95A)*
Euro American/since 1915 to present

Probable Project Impacts: The site intersects the physical APE but the gen-tie crosses directly over the site and would not physically affect the site. The site may be adversely affected visually through introduction of a new modern component in the setting.

Treatment: Archival and documentary research would be conducted to provide context and content including historic maps and images for interpretive signage focusing on the theme of historic transportation systems in Mason Valley. Signage would be placed on an interpretive site with good public

access such as the intersection of Walker River Road and Reese River Road which is near the entrance to the Walker River State Recreation Area.

Site Number: 26LY1450 (3-5770)

Site Type and Cultural/Temporal Affiliation: *Wabuska Drain Segments; Euro American 1938 to present*

Probable Project Impacts: The site intersects the physical APE. The gen-tie crosses directly over the site and would not physically affect the site. The site may be adversely affected visually, through introduction of a new modern component in the setting.

Mitigation Measures Archival and documentary research would be conducted to provide context and content including historic maps and images for interpretive signage focusing on the theme of Agricultural Infrastructure/Water in Mason Valley. Signage would be placed on an interpretive site with good public access such as the intersection of Walker River Road and Reese River Road which is near the entrance to the Walker River State Recreation Area.

Site Number: 26LY2088 (3-12494)

Site Type and Cultural/Temporal Affiliation: "Y" Hill; ca. 1936 to present

Project Impacts: The site is not within the area of physical effects; however, the site may be adversely affected visually through alteration of the rural character of the setting, important to the sites eligibility.

Mitigation Measures: Archival and documentary research would be conducted to provide context and content including historic maps and images for interpretive signage focusing on the theme of Community Development in Mason Valley. Signage would be placed on an interpretive site with good public access such as the intersection of Walker River Road and Reese River Road which is near the entrance to the Walker River State Recreation Area.

Site Number: 26LY2887 (3-12495)

Site Type and Cultural/Temporal Affiliation: Historic Drive-in Movie Theatre; 1952 to 1995

Project Impacts: The site is not within the area of physical effects; however, the site may be adversely affected visually through alteration of the rural character of the setting, important to the sites eligibility.

Mitigation Measures: Archival and documentary research would be conducted to provide context and content including historic maps and images for interpretive signage focusing on the theme of Community Development in Mason Valley. Signage would be placed on an interpretive site with good public access such as the intersection of Walker River Road and Reese River Road which is near the entrance to the Walker River State Recreation Area.

Attachment 2: A Historic Properties Treatment Plan for the Libra Solar Project in Lyon and Mineral Counties, Nevada

A Historic Properties Treatment Plan for the Libra Solar Project in Lyon and Mineral Counties, Nevada

BLM Report No. 3-2927-3

Prepared for:
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Portions of this document have been redacted to protect archaeological resources in accordance with 18 CFR 1312.18, and the Archaeological Resources Protection Act of 1979.

Submitted to:
Bureau of Land Management
Carson City District
Stillwater Field Office
5665 Morgan Mill Road
Carson City, Nevada 89701

BLM Cultural Resource Use Permit No. N-78810
PN 40500
March 2024

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1. INTRODUCTION

The United States Department of Interior, Bureau of Land Management (BLM) has chosen to fulfill its obligations under Section 106 of the NHPA by using the process outlined in 36 CFR section 800.8(c), known as "Substitution," rather than the traditional Section 106 review process, for this Project. "Substitution" allows federal agencies' officials to "use the process and documentation required for the preparation of an Environmental Assessment/Finding of No Significant Impact or an EIS/ROD to comply with Section 106 in lieu of procedures set forth in 36 CFR 800.3 through 800.6" (36 CFR § 800.8(c)(1)). The BLM shall commit to the mitigation identified in this plan in the Record of Decision (ROD), and no further agreement documents (i.e., memorandum of agreement or programmatic agreement) shall be required.

The Libra Solar Project is anticipated to result in impacts to cultural resources, some of which may have adverse effects to historic resources. Adverse effects to National Register of Historic Places (NRHP)-eligible cultural resources resulting from construction, operations and maintenance, and decommissioning of the Libra Solar Project would be mitigated according to the procedures outlined in this mitigation plan. Six historic-era NHRP-eligible sites will require mitigation.

The following Historic Properties Treatment Plan proposes measures to avoid, minimize, and/or mitigate any adverse effects to cultural resources based on their historical significance. Pre-contact era NRHP-eligible sites will be avoided. It should also be noted that a good faith effort will be made to avoid non-eligible pre-contact sites through design as well.

1.1 PROJECT BACKGROUND

In order to determine existing resources that could be impacted by the Project, a Class I cultural resources inventory and report, and Class III cultural resources inventory of approximately 7,005 acres in Lyon and Mineral Counties, Nevada (Figure 1.1) and report were completed (Stoner and Catacora 2023, 2023a, 2023b). During surveys, 80 previously unrecorded sites found within the physical impacts area of potential effects (APE). Two previously recorded sites were revisited/re-evaluated. Of these 82 sites, 68 are historic-era sites, ten are pre-contact era sites, and four are multi-component sites (Stoner and Catacora 2023a, 2023b, 2023c). The nine pre-historic sites are all lithic scatters. The 68 historic-era sites focus mainly on prospecting and mining, transportation and infrastructure resources including roads, railroads, and transmission lines, unassociated historic refuse deposits, a ranching-related well and trough, and cadastral markers. Seven of the 81 sites have been determined to be eligible for listing in the NRHP. Three of the seven are pre-contact sites that will be avoided. Two additional historic-era sites within the visual APE that have been determined eligible to the NRHP will be subject to adverse effects. Thus, mitigation of adverse effects is proposed for six historic-era sites listed in Table 1 and depicted in Figure 1.2.

Table 1. Libra Solar Project Historic Properties to be Treated.

Site number	Agency No.	Age	Site description	NRHP determination
26LY3165	3-12468	Historic	Reese River Wagon Road	Eligible under Criterion A
S3327	3-12474	Historic	Southern Pacific Railroad	Eligible under Criterion A
S3328	3-12478	Historic	US Highway 95A [US95A]	Eligible under Criterion A
26LY1450	3-5770	Historic	Wabuska Drain Segments	Eligible under Criterion A
26LY2088	3-8663	Historic	Y Hill	Eligible under Criterion A
26LY2887/D357	3-11841	Historic	Sagecrest Drive-In	Eligible under Criteria A, C and D

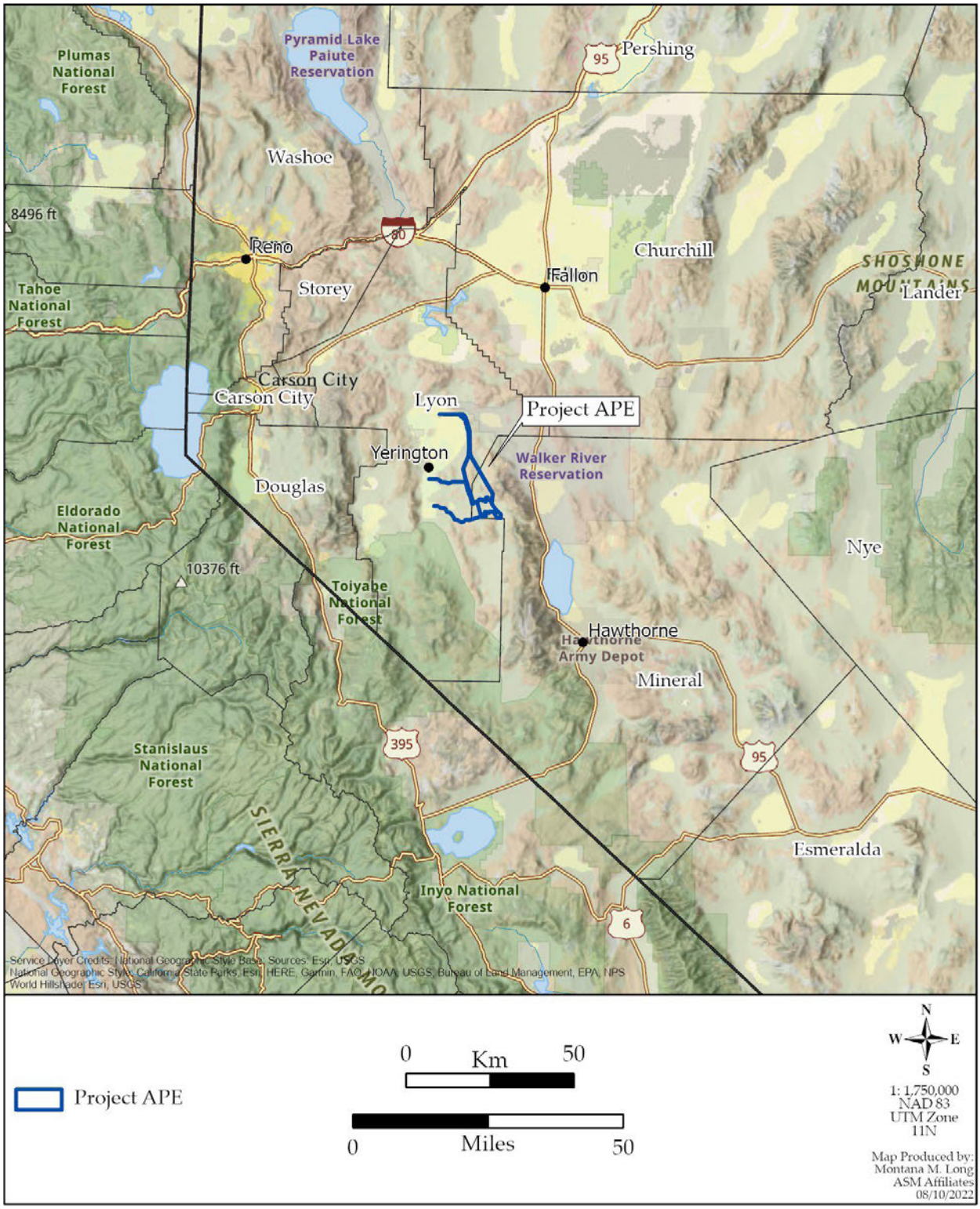
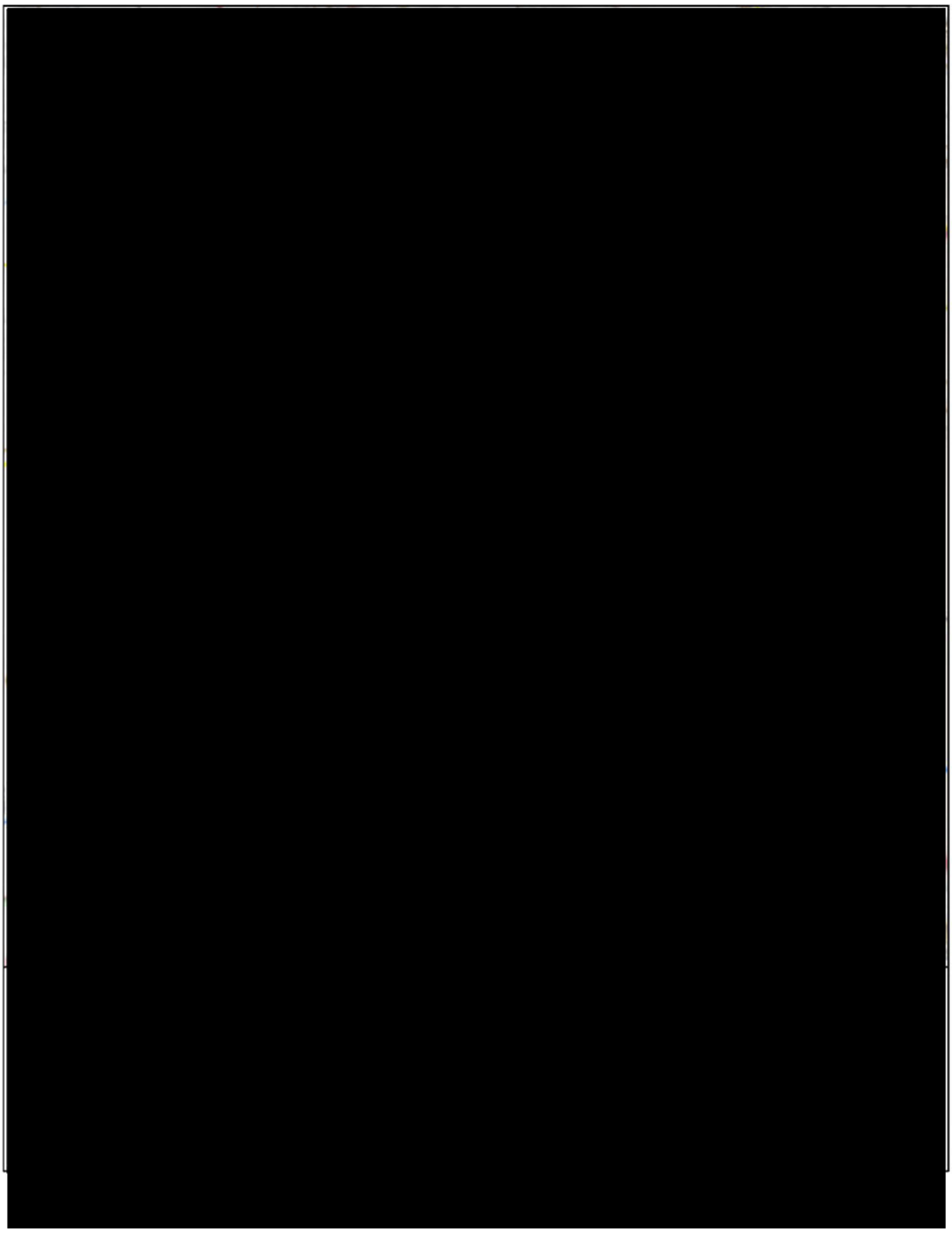


Figure 1.1 Project Location



2. ENVIRONMENTAL BACKGROUND

2.1 ENVIRONMENTAL SETTING

The project area is located generally in Mason Valley and the Wassuk Mountain Range in Lyon and Mineral Counties, Nevada. Elevations in the project area vary from 4,520 feet in East Walker River Valley up to 5,900 feet in the Wassuk Mountain Range. The highest elevation in the vicinity is Black Mountain's peak at 8,102 feet in elevation, but the peak is outside the current project area. Numerous unnamed, intermittent drainages are in the vicinity of the project area; they generally run down from the Wassuk Mountain Range into Mason Valley to the west.

The climate in the project area is semi-arid. Based on a 118-year climate record for the weather station in Yerington, Nevada, the average maximum temperature in the area is 68.8 degrees Fahrenheit (F) and the average minimum temperature is 33.9 degrees F. The coldest monthly average temperature occurs in January at 32.0 degrees F, and the hottest monthly average is in July at 92.3 degrees F. The average annual precipitation is 5.06 inches, with an average snowfall of 6.7 inches (Western Regional Climate Center 2015).

2.2 VEGETATION

The vegetation within the project area is characterized by a shadscale community. This community is dominated by low, dispersed, small-leaved shrubs and scrubs (IMACS 1992), primarily shadscale (*Atriplex confertifolia*), with Mormon tea (*Ephedra nevadensis*) occurring in the higher elevations. Other vegetation observed in the project area includes greasewood (*Sarcobatus vermicu/atus*), budsage (*Artemisia spinescens*), rabbitbrush (*Chrysothamnus spp.*), and cheatgrass (*Bromus tectorum*).

2.3 FAUNA

Large mammal species in the region include mule deer (*Odocoileus hemionus)* (Hall 1995). Smaller mammals in the area include coyote *(Canis latrans),* kit fox *(Vulpes macrotis),* badger *(Taxidea taxus),* Townsend's groundsquirrel *(Spermophius townsendil),* least chipmunk *(Eutamias minimus),* striped skunk *(Mephitis mephitis major),* packrat *(Neotoma cinerea),* desert cottontail rabbit *(Syvilagus audubonz),* jackrabbit *(Lepus californicus),* and Great Basin pocket mouse *(Perognathus panus)* (Hall 1995).

Birds in the area include raven *(Conus corax),* red-tailed hawk *(Buteo jamaicensis),* northern harrier *(Circus cyaneus),* homed lark *(Eremophia alpestris),* and black-billed magpie *(Pica pica)* (Ross-Hauer 2008).

Common reptile species noted are desert homed lizard *(Phrynosoma platyrhinos),* gopher snake *(Pituophis catenifer),* Great Basin collared lizard *(Crotaphytu bicinctores),* and Great Basin rattlesnake *(Crotalus viridis)* (Mead and Bell 1994).

2.4 GEOLOGY, GEOMORPHOLGY AND SOILS

The project area straddles low hills between Mason Valley to the northwest and the Wassuk Range to the east. The Wassuk Range is typical of the north-trending mountain ranges in the Great Basin, with an asymmetrical cross section that has a steep fault scarp to the east and a gradually sloping western flank (Moore 1969). The range is bounded by normal faults, one of which transects northwest-to-south through the project area (Moore 1969: Plate I).

The bedrock varies considerably across the project area and is summarized here from Moore (1969). The oldest rocks are Jurassic and Triassic age metavolcanics (JTrv) near the project's western margin and metasedimentary (JTrs) rock near its center. These ancient deposits include andesite breccias, tuffs, basalt, rhyolite, interbedded volcanic-derived sedimentary rocks, and limestones, occasional metamorphosed greenschist, and interbeds of conglomerate, limy shale, dolomite, and gypsum. Cretaceous age granitic porphyry (Kgp), porphyritic quartz monzonite (Kpg), and undivided nonporphyritic quartz monzonite, granodiorite, and hybrid mafic rocks (Kg), often comprise the hills and surrounding ridges. A shear zone in the granodiorite is the focus of copper mining activity (e.g., the Blue Jay Mine; Moore 1969:28). The Tertiary age Hartford Hill formation (Th) is common in low hills within the project area and characterized as rhyolite tuff that includes biotite rhyolite pumice tuff-breccia and welded tuff with a black, glassy basalt layer that may have provided toolstone grade material of interest in the past.

Later sedimentary rocks of Tertiary or Quaternary age (Ts) are immediately south of the project area and include lacustrine and fluvial sediments, sandstone, mudstone, shale, marl, diatomite, limestone, and calcareous tufa along with interbeds of tuffaceous rocks, lava flows, and breccias (Moore 1969). The youngest sediments in the project area are Quaternary age alluvium (Qal) and playas (Qp) that include alluvium capping the pediments that extend from the eastern slopes of the Wassuk Range, alluvial fan gravel, stream-laid gravel, some talus material, dune sand, and fine sand, silt, and clay of river flood plains or playa deposits (Moore 1969). Tool grade cherts were noted scattered throughout the Quaternary age alluvial (Qa) deposits during fieldwork and may have been targeted by pre-contact inhabitants in the region. Many of the Quaternary fine-grained deposits (Qp) are associated with pluvial Lake Lahontan that flooded the Mason Valley in the northwestern portion of the project area ca. 15,000 years ago (Adams 2007; Adams and Wesnousky 1998; Mifflin and Wheat 1979; Thompson et al. 1986). The Walker River now winds through these old lake deposits as it journeys northeast through this irrigated valley and swings around the northern margin of the Wassuk Range before continuing southward toward Walker Lake (Moore 1969). Evidence suggests that the path of this river may have switched several times during the Holocene, emptying in the Carson Sink to the north rather than toward the Walker River (Adams 2003, 2007; Benson and Thompson 1987; King 1993, 1996).

The Quaternary age sedimentary deposits are of greatest interest to archaeologists given their age and importance in landform processes that affect archaeological sites. Landforms in the project area are dominated by low-angle pediments extending from the western slopes of the Wassuk Range below Black Mountain and a series of alluvial fans that fringe the low hills; they are created as water carries sediments and gravels from the tops of the hills downslope and distributes them across the fan. The water and finest-grained sediment may continue down to the alluvial plain in the floor of Mason Valley, but most of the coarser-grained sand, gravels, and cobbles are left behind on these slopes. Examination of aerial photographs demonstrates the different ages of these alluvial fans. The darkest-colored fans are most ancient due to well-developed desert pavements with a mantle of varnished gravels. The lightest-colored fans are the youngest given that recent alluvial activity has disturbed the area. In these younger fans, desert pavements either have not yet formed or are gradually developing with rocks just beginning to form a surface mantle. After they are stable, they may begin to accumulate the clay, iron, and manganese oxide varnish characteristic of ancient desert pavements.

Desert pavement formation, which was once thought to be limited to deflation of fine materials that left a gravel lag, is now known to be complex. Varying processes can create the familiar armored surface that is generally topped by one to two stones above a fine silt or sand. Often there is vesicular A-horizon soil atop the fine-grained material (Goudie 2008). Desert pavement development models include an accretionary version in which aeolian dust deposited atop the pavement is then washed into the subsurface where it accumulates (McFadden et al. 1987). These fine-grained deposits are protected from aeolian erosion by the gravel lag or desert pavement (Matmon et al. 2009). Traditionally geologists believed that desert pavements

took many thousands of years to develop; however, recent work has shown that desert pavements may heal/develop more rapidly than expected. Haff and Werner (1996) have shown that pavements can heal at a rate of slightly more than 20 cm per century (Ahlstrom & Roberts 2001).

USDA has classified the soils (USDA soilweb) across the entire project area because of its proximity to the agricultural valley containing the town of Yerington. The hilltops and slopes are most commonly part of the Theon Series. This soil is generally loam to gravely clay loam atop shallow bedrock 11 to 21 inches (~28 to 53 cm) below the surface. The Yerington Series is next most common and found on many of the alluvial fans. This soil can be characterized as loamy sands and sands extending over 60 inches (152 cm) deep that are sometimes topped by gravels. Other soil types present in minor amounts include the Cleaver, Juva, Obanion, Patna, Rawe, Sagouspe, Tocan, and Malpais Series (USDA soilweb).

3. CULTURE HISTORY

3.1 PRE-CONTACT BACKGROUND

If possible, all non NRHP eligible sites will be avoided through project design. Thus, no pre-contact background is relevant to this document. For a detailed discussion of the pre-contact culture history, the reader is referred to Stoner and Catacora (2023a).

3.2 ETHNOHISTORIC BACKGROUND

The project area is within the traditional territory of the Northern Paiute. Historic ethnographic evidence for the Northern Paiute people (Fowler and Liljeblad 1986; Fowler 1989; Hattori and King 1985; Wheat 1967) indicates that they were distributed across the northwestern Great Basin but consisted of numerous sub-groups that were politically and culturally distinct but shared a common linguistic background. Their territory as defined by their language was bounded on the west by the Sierra Nevada Range, the Pit and Klamath watershed to the northwest, and on the north by the mountains dividing the Snake and Columbia drainages. The eastern edge ran from the east side of Mono Lake northeast through the Desatoya Range (Fowler and Liljeblad 1986:435).

The Northern Paiute were semi-nomadic, seasonally exploiting resources within a particular area, then congregating in a larger group during winter encampments (Fowler and Liljeblad 1986:436). Most groups returned to certain areas seasonally. The Northern Paiute overlapped territories with the Northern and Western Shoshone to the east and north of the region. To the west, they overlapped areas with the Washoe in the Virginia Range and the Pinenut Mountains. Both groups harvested pinyon nuts in these areas until the 1860s, when the massive timber harvests for the Comstock mines denuded the mountain slopes. To the south lived the Owens Valley Paiute, who created a cohesive sociopolitical entity. Group names were often (but not always) terms based on the names of foods exploited by the group but could be altered to include place names and other resources (Fowler and Liljeblad 1986:436).

The project area falls within the territory utilized by at least one Northern Paiute band and probably some Washoe groups. The area of the current project, which is just west of the Walker River Valley, would have been primarily associated with the Tovusidokado ("grass-nut eaters") (Fowler and Liljeblad 1986:437-438). It would have been only one of the areas accessed by the group and was likely used by additional groups depending on conditions in other areas. Fowler and Liljeblad (1986:437-438) note that in the southernmost part of Northern Paiute territory, around Mono Lake and the nearby mountain ranges, groups intermingled with both the Owens Valley Paiute and the Eastern Miwok. While the southern Washoe were known to fish in the fall with the Northern Paiutes along the Walker River (d'Azevedo 1986:473), it is not clear if they ventured into the project area habitually. There are few resources within the project area that would not have been more readily available to the Washoe in their home territories along the Sierra Nevada Front.

Tensions over land rights between settlers and the Northern Paiute peaked in 1860, during the uprising referred to as the Pyramid Lake War. From then on, the federal government sought to restrict the Northern Paiute to reservations, resulting in further loss of traditional subsistence and cultural territories. The situation continued to worsen over the next few decades. As white settlers continued to encroach on lands suitable for farming, ranching, and mining, natives were confined to smaller, less productive areas and forced to adjust to European culture and values. The Indian Reorganization Act of 1934 ended the massive loss of Indian land and encouraged organized tribes to form their own governments, manage their tribal lands, and preserve their cultural heritage.

[redacted]

The contrasting view is that the variation in the language supports an in-situ development over a longer period. The Smith Valley/Pine Grove Hills are well known because of Jack Wilson, known as "Wovoka," the Paiute "Messiah." Wilson was from the area southwest of Mason Valley. Indian people considered Wovoka to be a prophet because he introduced the Ghost Dance religion of the 1890s. Wovoka's religion advocated living peacefully and in harmony with Anglo settlers. The first ceremony occurred near Walker Lake, but his message spread far and wide among native people fighting for their land and traditional lifestyles. However, the message of peace went awry; during a Ghost Dance in the northern plains, the massacre at Wounded Knee occurred, marking the end of Native American life as it once was. Today most Northern Paiutes from the Mason Valley area live in the Yerington Indian Colony, established around 1917, or the Campbell Ranch Reservation, created in 1940 (Hittman 1984).

3.3 HISTORIC BACKGROUND

The project area is in Mason Valley and extends to the base of the Wassuk Mountain Range and is south and east of Yerington, Nevada. It is located to the south of major overland trails across Nevada and is fairly close to the East Walker River. As a result of its relative proximity to major transportation routes and a well-known water source, the project area may have experienced Euro American exploration as early as the 1820s. Most of the region's development, however, occurred in the late nineteenth and early twentieth centuries.

Mason Valley is best known for its agriculture, which has been an important shaping force in the area since the 1860s due to the valley's ample water supply. Other historical activities played a crucial role in the development of this part of the valley, including ranching, mining, the establishment of transportation networks, and the growth of the long-lived settlement of Yerington. The cultural resources of the project area are related to all these activities and date from the 1870s to the present day. The following discussion explores the different historical themes relevant to the project area.

Exploration and Settlement

As noted above, the project area is relatively close to the East Walker River, which runs roughly north/south through this part of Mason Valley. The area's proximity to the river meant it likely saw more Euro American exploration in the early to mid-nineteenth century than did many other parts of Nevada. Jedediah Smith crossed the Wassuk Range in 1827, and Peter Skene Ogden explored the Walker River area several times between 1828 and 1830 (Hulse 1998:38 in Ross-Hauer 2008:19). By the early 1840s, emigrants traveling west to California were using established overland trails, and additional exploration by John C. Fremont and others expanded the available routes with multiple branches in western Nevada.

One of these routes, the Carson River Route, branched off from Humboldt Sink to Churchill Valley, Dayton, Genoa, and on to California; this route became very popular after the discovery of gold in California in 1848. Starting in the early 1850s, a branch from this main route, the Sonora Route, left the Carson River Route near what became Fort Churchill and ran west/southwest to the California mining camp of Sonora. Apparently, the route was developed with the support of Sonora's residents, who wanted to persuade others to settle there (McBride 2002:15). The Sonora Route was the closest major trail to the current project area, and some of the people who decided to settle in Mason Valley traveled this route.

As Euro American incursion into Mason Valley and the Walker River area continued, some emigrants saw the promise of the well-watered valley and opted to settle there. The discovery of the Comstock Lode silver deposit in 1859 caused a tremendous rush of fortune-seekers into Nevada, leading to a mining boom and generating prospecting activity across the state. Gold and silver were found at what would become Aurora in 1860, leading to an additional rush of population southwest of the project area. Ranchers and farmers in outlying areas, including Mason Valley, established themselves as suppliers of beef, grain, and other goods to the new mining communities. A network of wagon roads sprang up to enable transportation of products to Virginia City and elsewhere, and the community that would become Yerington was founded at a junction of two of these small roads.

Yerington and Other Mason Valley Communities

Yerington may have been established as early as 1860 or 1861 during the Aurora boom, as a small way station catering to those passing through the area (Comp et al. 1987:8; Willis 1912:952). Little documentation survives to confirm this, though, and the first verifiable settlement seems to have been established around 1870, when local rancher William R. Lee settled 160 acres next to the Walker River (Rocha 1997). Others settled at the crossroads location, and soon founded a store, blacksmith shop, saloon, and post office. The post office was known as Mason Valley and retained that name until the 1890s.

The community was informally known as Pizen Switch, a name that multiple apocryphal tales try to explain as some combination of the "poison" available at the local saloon, the willow "switches" of which the saloon was built, a local cowboy practice of "switching off" their horses to get a drink, and a fuzzy connection to a railroad switch (Willis 1912: 953-954; Rocha 1997). Whatever the etymology of what N.W. Willis deemed an "opprobrious cognomen" (1912:953), the settlement was clearly not large or significant enough to necessitate a formal name and was little more than a waypoint between some of the valley's larger ranches.

Pizen Switch grew through the 1870s, until it included around 200 residents, a one-room school, at least 20 businesses, a Methodist church, and a mail and stage connection to Carson City (Rocha 1997). By 1879, its occupants decided a more respectable name was in order, and they decided to call it Greenfield in honor of the green agricultural fields of Mason Valley; people came from all over the region to celebrate the christening of the new town and its new dance hall (Rocha 1997). Ranching and farming were well-established as Mason Valley's predominant economic drivers by the early 1880s, and mining was growing into a major force there as well. Hopes that the new Carson & Colorado Railroad (C&CRR) would run through the town were unfounded, as the line bypassed Greenfield in 1881. The town still benefited from its relative proximity to the C&CRR, though, as its already extensive transportation network now had a quicker connection to regional and national rail systems.

In 1883, Lyon County's southern boundary expanded south to include all of Mason Valley, including Greenfield. The town continued to grow into the region's primary commercial and social hub and upgraded its built environment as it went. Many of Greenfield's early wooden buildings were replaced by structures of brick and hand-cut native stone, prompted both by a drive for more permanent, professional buildings and by fires that destroyed most of the town in 1883 and 1884 (Comp et al. 1987:8). Another major fire, in 1893, again destroyed much of the town; as of 1987, because of that fire and significant demolitions in the mid to late twentieth century, the only pre-1893 buildings that survived in town were the Barton (Lee) House (1871) and O'Keefe's Insurance (Model Meat Market), an 1890 brick and native stone building (Comp et al. 1987:8).

The 1890s brought another name change to the community, as its residents campaigned to change the name of the post office from Mason Valley to Greenfield. Federal postal officials refused in 1893, arguing that the nation already had too many Greenfields (Rocha 1997). As a second choice, residents agreed on the

name Yerington as a "pretty name for our village and post office," and as a compliment to one of Nevada's most representative men, who has been identified with almost every enterprise of importance inaugurated in western Nevada for many years (Mason Valley Tidings 22 March 1894 in Rocha 1997). This honoree was H.M. Yerington, a prosperous Carson City businessman who served as general manager of the Virginia & Truckee Railroad (V&TRR) and was involved in the establishment of the C&CRR. As discussed in Guy Rocha's 1997 investigation of myths about Yerington's naming, there is no direct evidence that residents named their town after Yerington in hopes he'd return the compliment by building a branch line of the C&CRR to the community. However, it is a likely scenario. From 1894 on, the town was known as Yerington.

Yerington became the Lyon County seat in 1911, reflecting its rise in importance due to the copper boom and the resulting economic and population growth. From 1907 until about 1920, the town grew to become the dominant community in the region, and its commercial and residential areas grew accordingly, with a significant increase in construction (Comp et al. 1987:9). Growth slowed after World War I and during the Great Depression, as mining declined, and the general economic fortunes of Mason Valley followed those of the nation. Yerington maintained a stable existence serving the needs of Mason Valley's ranchers, fanners, and miners through this period.

As few histories of Yerington have been written, very little information is available on the town's occupants or its infrastructure during the historic period. According to a 1912 source, by that year Yerington had a new public-school building, a pumping plant supplying drinking water from wells, and a new sewer system, all of which was the likely result of the copper boom (Willis 1912:956). Additional research into census rolls, newspaper records, and other primary documents is required to better illustrate the demographics of the community and what day-to-day life was like there from the 1870s to the 1960s. Judging by the extensive dump sites inventoried during the current project, residents have disposed of their refuse in informal areas east of town for at least 100 years. Today, Yerington has all the usual modem conveniences, including municipal refuse disposal and a landfill.

Yerington is the closest town to the current project area and is the longest-lived and most influential community in Mason Valley, but it was not the only historic community in the region. Wabuska, about 12 miles north of Yerington, was a small settlement that gained regional prominence in 1881 when it became a station on the C&CRR. It later became the departure point for the Nevada Copper Belt Railroad (NCBRR), and along with the rest of Mason Valley experienced some growth during the copper boom of 1907 to 1920. ln the midst of the boom, Wabuska had a school, seven saloons, grocery stores, an impressive railroad depot, and a population of about 100 (Paher 1970:81). The town declined when the copper boom ended, and today has only a few residents.

Mason, about three miles southwest of Yerington, was founded at the beginning of the copper boom in 1906 and grew significantly with the coming of the NCBRR in 1910 (Paher 1970:81). The NCBRR located its major facilities in the town, which also served as the main residential area for miners working at operations in the nearby Singatse Range; by 1914 Mason's population was close to 1,000, rivaling Yerington's (Paher 1970:81). The town declined at the end of the copper boom and saw its end when the NCBRR was abandoned in 1947.

Like Mason, Thompson was a town entirely dependent on the mining industry. The Mason Valley Mines Company established its first smelter at the north end of Mason Valley, near Wabuska, in 1910 and built another soon after, with both in full operation by 1914 (Paher 1970:79). By that point, a townsite had grown to house the smelter workers and boasted saloons, stores, multiple other businesses, and a population of about 350 (Paher 1970:79, 81). After a promising start, the mill town ran into difficulty when operations stopped and re-started several times between 1914 and 1928. Thompson quickly lost its population and today little remains of the townsite.

Other far-flung small settlements in the greater regional community included Buckskin, Pine Grove, Rockland, and Nordyke; these were almost entirely dependent on the mining industry and had relatively sporadic occupations as a result.

Ranching and Agriculture

Agricultural endeavors, both farming and ranching, have been the longest-lived and most influential economic activities in the Mason Valley region. Thanks to the Walker River, the area is well-watered and can support large-scale farming as well as grazing on both private and public land. One of the earliest ranchers in the valley was Nathaniel A. "Hock" Mason, for whom the valley is named, who first saw the region during an 1854 cattle drive and returned in 1859 to claim land. He built up a cattle operation over about 20,000 acres, in part from an earlier abandoned claim once belonging to William Dickson and was a dominant force in the valley (Horton 1996: II-7; Ross-Hauer 2008:21; Willis 1912:951). Another early Mason Valley ranching operation was owned in partnership by Henry Miller and Charles Lux (Miller et Lux); Miller partly backed Mason's operation and eventually gained control of it when drought and a harsh winter forced Mason into bankruptcy in 1889 (Horton 1996: II-7). The Paiute residents of Mason Valley were early adopters of Euro American ranching and farming techniques, and performed much of the agricultural labor, from riding herd to harvesting. They played a major role in the development of ranching and farming in the region.

Many other ranching and farming operations started in Mason Valley in the 1860s and 1870s, focusing on providing cattle, sheep, eggs, chickens, dairy products, vegetables, and grains to the booming mining communities of western Nevada. They thrived for a decade or two, until the decline of the Comstock and an economic downturn between about 1880 and 1890 led to a drop in prices and the abandonment of many ranching and farming operations (Willis 1912:953). The signing of the Homestead Act in 1862, and the later Desert Land Entry Act of 1877, encouraged homesteaders to settle this and other valleys for agricultural purposes, and led to an influx of would-be farmers and ranchers. In the 1910s and 1920s, Mason Valley saw a particularly heavy amount of filing for "relatively marginal agricultural lands" under the Desert Land Entry and Homestead Acts (Horton 1996: III-3, III-5); most of these claims were destined for failure. Even the comparatively well-watered Mason Valley was a challenging place to grow crops, and the only feasible way to profit from cattle or sheep ranching was to control vast tracts of both privately and federally owned grazing lands. The most successful ranching operations were those that, like Miller's, consolidated their water rights and land into large livestock companies (Ross-Hauer 2008:21).

Irrigation clearly was of crucial importance, and the struggle for water rights was a major shaper of the valley's political and social landscape. After a particularly long litigation battle concerning water use in Mason and Antelope Valleys, farmers in Mason and Smith Valleys came together to form an irrigation district; the Walker River Irrigation District (WRID) was established in 1919 and included all the Walker River's irrigated area except that located within the Walker River Indian Reservation (Horton 1996: III-4). Using bonds bought by local ranchers, the WRID constructed several reservoirs and established oversight over the region's irrigation networks. A severe drought between 1928 and 1935, as well as the general economic impact of the Great Depression, led to the WRID defaulting on its debts (Horton 1996: III-6). As part of a refinancing loan, the WRID was required to reduce its irrigated acreage to a more sustainable and economical 58,000 acres (down from about 90,000) (Horton 1996: 111-7). Disputes over water rights have continued in Mason Valley into the present day, involving farmers, ranchers on private lands, and on allotments within the Walker River Indian Reservation.

In 1955, the State of Nevada purchased nearly 9,000 acres in the northern part of Mason Valley from a cattle operation that was originally part of the Miller et Lux holdings, and from it created the Mason Valley Wildlife Management Area (Horton 1996:UI-I 0). Aside from this wildlife refuge, much of the rest of

Mason Valley continues to be used for agricultural purposes, helping to make Lyon County the top agricultural county in Nevada. The autumn onion harvest is a particularly notable event in the valley, and a reminder of the area's deep agricultural roots.

Transportation Networks

As noted above, Mason Valley had an extensive road network as early as the 1860s. Some of the roads likely started as a series of connectors and cut-offs branching from major overland trails and going to and from the Walker River. An example of this is the "Reese River Road" which originated at Mason to the east and generally ran east-west and over the Wassuk Range through Reese River Canyon where it intersected a road on the west shore of Walker Lake which is now U.S. Highway 95 (GLO 1869, 1870). Another named road is the "Road to Yerington" which diverges from the Reese River Road in the project area and proceeds to the northwest (USGS 1911). The road system expanded rapidly after the Comstock boom, as local ranchers and farmers moved their products by wagon team and as prospectors began exploring the area's mountain ranges. The early General Land Office (GLO) maps of the area containing the current project area show numerous roads crisscrossing the valley (most unnamed or labeled as "Neighborhood Road"); they connected individual farms and ranches to each other and to the major roads in the area (GLO 1869, 1870).

All the overland routes across Nevada were eclipsed in 1868-69, with the completion of the transcontinental railroad across the state; the line followed the original Humboldt/Truckee trail, largely paralleled today by Interstate 80. The preponderance of freight and passenger travel moved from trail to rail, and telegraph and stage lines abandoned their routes and stations to relocate along the railroad right-of-way. Completion of the transcontinental railroad expanded the geographical reach of Mason Valley's farmers and ranchers, although they still had to freight their products by wagon road to rail hubs. The completion of the C&CRR line in 1881 meant the region's residents had much closer access to state and national transportation networks, even though the line bypassed Greenfield (later Yerington) and the current Project Area.

In 1909, construction began on the NCBRR from Wabuska to the copper mines on the Smith Valley side of the Singatse Range. Built partially using railroad bonds purchased by eager Yerington residents, the rail line reached Yerington by early 1910 but did not run through the town; instead, it followed the Walker River, and the local depot was about a mile away from the actual town (Myrick 1962:215-216). The NCBRR was completed in 1911 and embarked on a copper mining-dependent life, hauling much more ore than human freight north to Wabuska, where there was now a connection to the Southern Pacific Railroad. Although it served as an important connector between the Yerington District and national rail networks and was a jumping-off point for people traveling to and from revived mining communities like Aurora, Bodie, and Bridgeport, the line was never very financially successful. It lost much of what little passenger traffic it had when several companies established "auto stage" routes between Yerington, Wabuska, and other points, using automobiles to ferry passengers to and from the Southern Pacific line (Myrick 1962:227-228).

As the copper boom prompted even more travel through the valley, road networks expanded, and older wagon roads were improved for automobile traffic. Passengers, mail, and some freight came to rely more heavily on the newly improved roads. The NCBRR's fortunes declined along with that of the entire district as the copper boom faded; passenger service limped along until 1945, with much reduced freight service, until abandonment was authorized in 1946 and operation ceased in 1947 (Myrick 1962:228-229). The region's road network continued to expand and improve, and soon came to include major state highways running through Mason Valley such as U.S. Highway 95 Alt, which was commissioned in 1941.

4. SITE SUMMARIES

Six NRHP eligible sites will be adversely affected by the Libra Solar project, and treatment is proposed to mitigate the adverse effects. The six NRHP eligible sites are described below.

Site 26LY3165/CrNV-03-12468 consists of two segments of the historic Reese River Road which is oriented roughly E-W and contains associated features and artifact concentrations. [redacted]

The site has been impacted by sheet wash erosion and use. It retains integrity of Location, Setting, Design, Materials, Workmanship, Feeling, and Association and thus has high integrity.

The site is composed of two segments of a named historic wagon road known at various times at the "Road to Reese River", "Reese River Road", and "Road to Walker Lake", along with associated mining features and historic refuse concentrations. It is best evaluated under Historic Property Types I: Transportation and Infrastructure (Roads), II: Refuse Deposits, and III: Mining Resources, specifically Type IIIa: Mine Exploration and Associated Sites and Features. Based on historical maps, aerial photos, and diagnostic artifacts, this road falls into the period of significance for Property Type I (1859 to 1972). The road was an important element of the local transportation network in the nineteenth and early twentieth centuries, and it connected the settlement of Mason in Mason Valley to Walker Lake and is thus recommended eligible to the NRHP under Criterion A. The historic prospect features and debris concentrations, however, do not contribute to the site eligibility. The road is not associated with an individual important in the development or use of the area's transportation network and is recommended not eligible under Criterion B. The road is not engineered, and it does not represent unique or specialized methods of construction, technology, or artistic expression, and is recommended not eligible under Criterion C. Based on the site's limited data potential and lack of interpretive value, the site is recommended not eligible under Criterion D.

S3327/CrNV-03-12474 is two segments of the Southern Pacific Railroad line that in total measure 2,271 ft./0.43 mi. long x 16 ft. wide (36,336 sq. ft.)

[redacted]

[redacted]

The recorded segments are in good condition and well maintained for modern use. The two segments have integrity of Location, Setting, and Association. Since the current railroad is modern, it does not retain integrity of Design, Materials, Workmanship, or Feeling and thus has no historic integrity.

The C&CRR which later became the S.P.R.R., is a major railroad transportation route for goods and supplies in western Nevada and can be associated with the research themes of commerce, transportation, and railroads. Thus, the entire railroad is recommended as eligible for inclusion in the NRHP under Criterion A. The railroad segments in the project area do not appear to have been distinctly associated with the lives of any significant person. Consequently, the segments of the railroad within the inventoried tracts are recommended as being not eligible for inclusion in the NRHP under Criterion B. The railroad in the ROW does not retain its original integrity of design, construction methods, or workmanship and is recommended as being not eligible under Criterion C. In addition, the segments of the railroad in the project area can provide no information beyond that reported here and are recommended as being not eligible for inclusion in the NRHP under Criterion D.

S3328/CrNV-03-12478 is a segment of the historic U.S. Highway 95 Alt. (US95A) It measures 1,962 ft./0.37 mi. long x 90 ft. wide (323,678 sq. ft.) [redacted]

[redacted]

[redacted]

The recorded segment is in good condition and well maintained for modern use. The segment has integrity of Location, Setting, and Association. Since the current highway is modern, it does not retain integrity of Design, Materials, Workmanship, or Feeling and thus has no historic integrity.

The road from Schurz to Yerington depicted on the 1915 GLO Plat Map [redacted] became an important alternate route of U.S. Highway 95 and now connects the town of Schurz to Interstate 80 via the cities of Yerington and Fernley. It provides a route for goods and supplies in western Nevada and can be associated with the research themes of commerce and transportation. Thus, the entire highway is recommended eligible for inclusion in the NRHP under Criterion A. The highway segment in the project area does not appear to have been distinctly associated with the lives of any significant person. Consequently, it is not recommended eligible under Criterion B. The highway segment does not retain its original integrity of design, construction methods, workmanship, or feeling and is not recommended eligible under Criterion C. In addition, the segment of the highway in the project area can provide no information beyond that reported here and is recommended as not eligible for inclusion in the NRHP under Criterion D.

Site 26LY1450/CrNV-03-5770 is a set of two historic earthen drainage canals, aligned E-W, in northern Mason Valley [redacted] These are currently features of the Walker River Irrigation District which delivers water to the Smith and Mason Valleys.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

The site has been determined to be eligible for listing on the NRHP under Criterion A only.

Site 26LY2088/CrNV-03-8663 is the "Y Hill" in Yerington, Nevada. It measures 197 ft. (north/south) x 427 ft. (east/west) and is the town marker for Yerington. [redacted]

[redacted]

[redacted]

[redacted]

According to Stoner et al. (2015) as a site with a geoglyph that represents the town of Yerington, it was evaluated under Property Type I: Community Development Resources. The site's feature (Feature 1, the "Y" geoglyph) represents a pattern of development in the region and the town of Yerington's identity, and it falls within the period of significance for this project (1860 to 1935). Thus, the site is associated with events important in local or regional history (the settlement of the town of Yerington, town tradition, and community pride) and was determined eligible under Criterion A. The site is not associated with an individual important in the development or settlement of the town, and is not eligible under Criterion B. It does not represent unique or specialized methods of construction or artistic expression and is not eligible under Criterion C. Lastly, the site lacks potential to provide additional archaeological or historical information that would shed light on previously undocumented aspects of the history or archaeology of the area; the continuing upkeep of the geoglyph has resulted in a loss of integrity, leaving the site with little interpretive potential. The site is not eligible under Criterion D.

Site 26LY2887/D357 is the Sagecrest Drive-in theater. [redacted]

[redacted]

[redacted]

The Sagecrest Drive-in Historical District consists of three buildings, two structures, four concentrations of associated refuse, and a constructed landscape of parking lanes. The architectural and archaeological elements retain integrity of location and setting along U.S. Highway 95 Alt. between Weed Heights and Yerington. The three buildings have been altered since the historic period, but are generally intact as examples of the design, materials, and workmanship of 1950s drive-in architecture. It is not clear when the two structures were constructed. Given that they do not display either period specific features, or aspects of their design specific to their use within the drive-in theatre, they are recommended as being non-contributing elements. The landscape elements, i.e. the parking lanes, are overgrown and unpaved, but retain their original form. The artifact concentrations consist of mass-produced items that do not demonstrate integrity of design, materials, or workmanship in a significant way. Concentrations 1- 3 are highly disturbed artifact scatters in secondary context; Concentration 4, while impacted by modem activity, appears to retain integrity of location and setting as the unofficial dump for the theater and/or concession stand. The Sagecrest Drive-in is unoccupied and a derelict example of an early 1950s drive-in theater. Though it has been altered since its initial opening in 1952, it retains much of its historic integrity. It was an important recreational landscape for the local community that was shared by a large sub-set of the population. Drive-in theaters of the 1950s era are recognized as an increasingly rare resource class that played an important role in the development of automobile and entertainment culture in the mid-twentieth century. The theater retains its core structural elements, including its screen, ticket booth, and projection booth/concession stand. Further, the built landscape of the Drive-in remains evident. For these reasons, the archaeological and architectural components of the District are recommended eligible to the National Register of Historic Places (NRHP) under Criteria A and C. The archaeological component of the Historic District includes a large historic refuse scatter (Concentration 4) that represents the unofficial refuse disposal area for the facility. It contains several thousand artifacts that reflect the composition of the goods being sold and brought into the theater by its patrons. Further analysis of the contents of the artifact assemblage contained here has the potential to yield information relevant to questions of Community Development because the concentration includes multiple discrete deposits, it has the potential to demonstrate changes in the types of concessions offered over time. It may also yield information relevant to the economy of the region, i.e. the selling of local products at the drive-in versus mass-produced national brands. For these reasons, the archaeological component of the District is also recommended eligible to the National Register and contributing to the District under Criterion D.

5. RESEARCH DESIGN

5.1 INTRODUCTION

Six archaeological sites (26LY3165/CrNV-03-12468, the Reese River wagon road; S3327/ CrNV-03-12474, the Southern Pacific Railroad; S328/ CrNV-03-12478, U.S. Highway 95A; 26LY1450/ CrNV-03-5770, the Wabuska Drain; 26LY2088/CrNV-03-8663, a Historic Geoglyph; and 26LY2887/D359/ CrNV-03-11841, the Sagecrest Drive-In Theatre) have been determined eligible for listing on the NRHP and will be adversely affected by the proposed Libra Solar project. These sites fall into three historic property types. Following a discussion of the property types, the theoretical framework of the plan is presented, and appropriate research themes are identified. Research questions are posed under each research theme and data needs and expectations are explicated.

5.2 PROPERTY TYPES

Central to all cultural resources studies is the historical context, and central to the historical context are its three elements—time, place, and theme. The physical manifestations of historic patterns, i.e., sites and districts, are best linked to the historical contexts through the concept of property types. The National Park Service defines a property type as "a grouping of properties defined by common physical and associative attributes" (National Park Service 1991:53).

This section presents a discussion of property types that link the historical context and research design to the cultural resources of the survey area. The property types offer the first level of analysis of resources recorded in field surveys because they are defined in ways that reflect the known or expected characteristics of the field resources. Beyond that, property types also describe the physical characteristics and associative values that a resource must possess to be considered eligible to the National Register. As a representative of the property type, they can be linked to the historical context, and their significance and integrity can then be evaluated.

The historical context and its associated property types function systematically to support the decision-making process in cultural resources management. The context functions as a vehicle for consistent resource evaluation and a guidance document for the types and quantities of data needed to address a research design for the Libra project area.

Historic Property Type 1: Transportation Systems Resources

Transportation system resources have relevance to historic research themes (see below) as well as being examples of various types of transportation, and (civil) engineering. Furthermore, the evolution of these properties through time offers evidence about changing socioeconomic patterns within the Mason Valley and Lyon and Mineral Counties. Transportation and infrastructure related sites include:

1a. Wagon Roads
1b. Roads
1c. Highways
1d. Railways and associated features

The trails, roads, highways, railways, and infrastructure resources included in this property type share several categorical as well as common characteristics. The categories reflect the types of vehicles used and the modes of transportation. The categories relevant to this property type are:

Wagon/stage roadway related resources: trails, roads, fords, road cuts, bridges, retaining walls, freight/stage stations, toll gates, toll houses, outbuildings, construction/maintenance camps, campsites, roadside debris;

Automobile highway related resources: highways, automobile roads, fords, road cuts, bridges/culverts, tunnels, right-of-way markers, signs, retaining walls, maintenance station or facilities, construction/maintenance camps, roadside dumps/debris, traveler facilities, campsites.

Railroad related resources: grade/road bed, rail line/tracks, spurs/sidings, bridges, culverts, trestles, wyes, cuts, fills, track/rail stands, telephone/telegraph lines, stations, section house, outbuildings, refuse scatters/dumps, privy/privy pit/vault, signals and signs, snow fences, water tanks, towers and stand pipes, coaling/fueling towers/facilities, track stands, construction camps, and trackside dumps and debris; and the characteristics common across the various modes of transportation include:

1. The resources served as internal linkages that connected the local community together and to the larger region and beyond;
2. The linear resources may be unique in their association with the community (e.g., alley or side street) or may have been shared with much larger transportation systems (e.g., SPRR, US95A); and
3. The commonly used road materials include steel, wood, dirt, stone, asphalt, concrete, and gravel.

Historic Property Type 2: Community Development Resources

While all the cultural resources of the project area are related to community development in one way or another, some of them cannot be tied to a particular economic activity like ranching or mining. These resources are associated with the evolution and maintenance of the regional community as well as with particular settlements, Yerington in particular. Infrastructure features like utility lines, communication systems, municipal water lines, sewer lines, and dumping areas fall under this property type, as do features that related to community social activities. The Sagecrest Drive-In and the "Y Hill" above Yerington fall under the community development property type.

Historic Property Type 3: Ranching and Agricultural Sites

The specific architectural and archaeological features associated with ranching and other agricultural pursuits in the Study Area occur individually (e.g., a trough) or as part of a cluster (e.g., tent pads and ranch buildings and features). These properties individually or collectively served a support role, providing agricultural products, such as beef and wool, for export outside the county and region. The types of resources range from ranch houses and headquarter complexes, to water diversion and storage (irrigation) systems. Ranching and agricultural sites, buildings, and features include:

3a. Buildings
3b. Structures
3c. Irrigation

Ranching and agricultural resources commonly occur as parts of a functional land use system. The categories relevant to this property type are:

Domestic built environment: houses, hand's houses, bunkhouses, root cellars/storm cellars, milk houses/sheds, icehouses, outhouses/privies, sheepherder's wagons/trailers, camps, and campsites.

Operational built environment: barns, animal sheds, poultry houses, silos, loafing/pole barns, bins, corrals/holding pens, shearing pens, livestock dips, milk houses, hay corrals, equipment sheds, wells, windmills, pumphouses, cisterns, stock trails, and stock paths.

Irrigation related resources: canals, ditches, laterals, spreaders, diversion dams, headgates, flumes of various types, pipes, siphons, drop boxes, weirs, and parshall flumes.

A variety of factors influenced the locations, types, and numbers of the agriculturally related resources. These range from water availability and land open for claims to grazing lease boundaries.

5.3 HISTORIC THEORETICAL PERSPECTIVES

This theme of Community Development addresses the overall development of local and regional community in the project area, including incorporated towns like Yerington as well as the more loosely organized overall community of the Mason Valley region. It addresses the day-to-day living and working conditions of residents, encompassing issues related to industrial and non-industrial workplaces, housing, lifestyle (including health and nutrition), boundaries, transportation and communication networks, class, and social structure. The ways in which the regional community organized along the lines of class, social power, and/or cultural identity represent an interesting problem area, especially given the interactions between agriculturally based residents and miners. The negotiation of social and economic relations was an important shaping element in the community. Social class (e.g., the contrast between a working class of laborers and a middle class of supervisors, foremen, executives, merchants, and shopkeepers) played a role in community dynamics, as did the perceived differences between groups related to different industries.

The negotiation of social power, including the evolution of a distinct working class that defines relationships between workers and other members of the community, is a key research area. This is important in the project area because of the diverse groups that came here to work in the early twentieth century. The material expression of the social structure of the local and regional community may include housing, settlement layout, and other architectural remains as symbols of power, wealth, gender, or labor strategies such as isolated camps, workers' barracks or workers' clubs.

This research design makes a distinction between the terms "community" and "settlement"; community is defined as a dynamic set of social interactions within a particular physical or metaphorical area (e.g., a neighborhood, a town, a church congregation, a union auxiliary, a mining district), and a settlement is the physical manifestation of one or more communities. This distinction is based on studies of mining communities by Knapp (1998) and Lawrence (1998). Knapp states:

> Within a mining settlement, the social interactions that occurred, and the social and ethnic stratification that developed, will be evident to varying degrees in artifact morphology and settlement patterns...The social and economic organization of mining *communities,* of course, can only be inferred from these material remnants, their spatial arrangement and their contextual coherence, which in turn must be considered within a framework built upon the productive, technological and ideological dimensions of mining. Where documentary evidence is preserved, another arena of investigation may be opened [1998:14].

In other words, the concept of community may be explored through the physical remains of settlements. This fundamental concept applies to sites outside of a mining context, especially to those associated with large-scale industrial activity. Lawrence states that the definition of community includes "a mental construct of shared interaction and values that differentiates a group from the outside world" (1998:41). With this in mind, it is clear that the topics of social class, power, and identity are highly relevant to the exploration of community development in the project area.

The region supported settlements of varying sizes and complexities, including isolated work camps, ranches, farms, homesteads, railroad stations, towns, and company towns. The establishment and maintenance of infrastructure is a crucial stage in the development of these settlements. Utilities like electric power, water conveyance systems, and sewer were tied to economic growth and stability, and were commonly helped along by investment from large corporations like railroad companies. They impacted community spatial organization, commercial development, residential growth, and municipal services, not to mention quality of life. Of course, not all infrastructure resources are directly associated with the nearest community; an electrical transmission line, for example, may pass through (and provide power to) Yerington, but is also designed to serve the larger region. The archaeological and documentary data associated with settlements will help answer questions about the community as a whole, as well as the region as a grouping of multiple sub-communities.

Social class and social power were important shaping forces in the community. This research design draws on the definitions of class proposed by Wurst and Fitts (1999), in which social class is regarded as a dynamic concept in which members of different groups continually negotiate power and position. The traditional definition of class as a static, hierarchical descriptive category is not very useful in the study of actual human interactions within their contexts. The broader concept of class as explicated by Wurst and Fitts also goes beyond the dialectic dominance-resistance model used by Paynter and McGuire (1991), which is highly relevant to the study of industrial communities, but which is often used too simplistically. Paynter and McGuire's definition of social power broadens the concept to include power negotiations on a scale ranging from the individual to the state level:

> The Weberian notion of power as the ability to thwart by controlling public and formal institutions is but one way in which people exert power. More broadly, power exists in all human relations, as the capacity to alter events. This capacity rests on a number of bases, including the control of force, consciousness, tools, and the ability to create pleasure and a positive social sense of self (1991:13).

Within the project area, negotiations of social power between and among groups were an important shaping force in the community. Labor, both organized and individual, is a crucial component of this research domain. Some of the most important issues in industrial labor history focus on the cultural and social relationships of wage workers in the community (e.g., Brody 1980; Dubofsky 1985; Gutman 1976). Other manifestations of the community's social structure can be found in the ways people obtained and exchanged goods, related to each other socially, and shaped their physical environments. Issues of social class and social power are especially interesting in contextualized comparisons between mining-based and agriculturally based settlements in the area.

Cultural identity is also an important component of community; this covers a continuum of interrelated concepts, usually expressed in archaeological writing as "race", "ethnic group", and "nationality". While all these concepts come into play when addressing cultural identity in communities, Killick's (1998:284) definition of ethnic groups as groups that "form around shared interests and values, and sometimes (but not always) around shared language, shared class position or a putative common origin" is the most useful. The project area is likely to have contained people of different ethnic groups, and the interactions of these groups were important in shaping the community. As illustrated by the work of Ferguson (1992) and Costello

(1998), people actively use material things to create, demonstrate affiliation with, and modify cultural identity. Archaeologically, physical expressions of cultural identity can be found in consumer artifacts, building styles, and other data sources.

5.4 RESEARCH THEMES

Historic Research Themes relating to Historic Transportation Systems, Community Development, and Ranching and Agriculture are detailed in the Nevada Comprehensive Preservation Plan and include Transportation, Exploration and Settlement, Land Use, Community Development, Ranching and Agriculture, The People-Basques and Chinese, and Commerce and Industry (White et al. 1991). Transportation Systems, Community Development, and Ranching and Agricultural Sites may be significant under one or more of the four National Register criteria if they can answer affirmatively one or more of the questions that follow:

Theme 1: Transportation Systems

The segments of three linear Transportation Systems sites have been found eligible to the NRHP under Criterion A only.

Criterion A:

- Is the resource a segment of one of the main roads, railroads, or highways from outside Yerington area to the rest of Nevada or a connector route into California, to other places in the region, or is it a segment of feeder road of major local significance?
- Is the resource representative of one of the above-mentioned roads, railroads, or highways?
- How much of the original road, railroad, or highway exists? Do longer or more representative segments remain elsewhere?
- Is the resource an outstanding example of the roads, railroads, or highways of the particular era that are not preserved elsewhere in the region?
- Is the resource associated with an event important to local or regional history?
- Does the property have interpretive values?

Data Needs/Applicability: All Theme 1 (Transportation Systems) resources are linear and include one wagon road (Reese River Road), one railroad (the SPRR); one historic highway (US95A); and one irrigation related site (Wabuska Drain). Data needed to address the research questions applicable to these sites under Criterion A includes:

Archival and Documentary Data including:

- Relevant photographs from the Lyon County Libraries, the Nevada Historical Society, and the University of Nevada Special Collections.
- Relevant aerial photographs and historic maps.
- State Highway Engineer and NDOT Records.
- Southern Pacific Railroad Archive

Theme 2: Community Development

The Yerington "Y" is community development-related resource determined eligible to the NRHP under Criterion A and the Sagcrest Drive-In has been determined eligible under Criteria A, C, and D. The following questions are relevant to both sites under Criterion A only:

Criterion A:

- Is the property directly associated with community development in the region?
- Does the site represent activities related to the establishment, creation, and evolution of a distinctive regional community?
- Is the site an outstanding example of the community development resources of the era that are not preserved elsewhere in the region? Do better, more representative sites exist elsewhere?
- Is the property associated with an event important in local or regional history?

Data Needs/Applicability: Theme 1 resources are linear and include the "Y Hill" which has been determined eligible under Criterion A, and the Sagecrest Drive-In which is a historic district determined eligible under Criteria A, C, and D.

Archival Data: The archival data include:

- Relevant photographs from the Lyon County Libraries, the Nevada Historical Society, and the University of Nevada Special Collections.

Oral History: The oral history data includes:

- Interviews of long-time Yerington residents, teachers, administrators, and alumni of Yerington High School, and Lyons Club members involved with the yearly maintenance of the geoglyphs.
- Oral histories held by the University of Nevada Oral History Program of people who worked to establish or maintain the geoglyph.
- Interviews with long-time Yerington residents regarding the importance of the drive-in theatre to the community.

Community Development Data Expectations: It is anticipated that historic photos may be available of the geoglyph and the drive-in theater and that local residents will have useful information about their history.

Theme 3: Ranching and Agriculture

The Wabuska Drain segments have been determined eligible under Criterion A only.

Criterion A:

- Is the resource an important part of the local irrigation district? Is it a relatively complete example of a time period or trend in local agricultural development?
- How much of the original drain survives? Do more representative examples remain elsewhere?
- Is the resource associated with an event important to local or state history?

Data Needs/Applicability: There is only one Theme 3 (Ranching and Agriculture) resource. It is composed of a segment of the Wabuska Drain and has been determined eligible under Criterion A.

Archival and Documentary Data including:

- Relevant photographs from the Lyon County Libraries, the Nevada Historical Society, and the University of Nevada Special Collections.
- Relevant aerial photographs and historic maps.
- State Water Engineer Records.
- Irrigation District Records.

6. RECOMMENDED TREATMENT

6.1 OVERVIEW

The six historic-era resources, eligible under Criterion A, would all be subject to adverse effects that cannot be avoided or otherwise minimized. One of the sites, 26LY3165/CRNV-03-12468, the Reese River Wagon Road, would be subject to physical adverse effects from changes to the road's material and width. This road would serve as a primary access to the Project solar site. Three sites (S3327/CrNV-03-12474, S3328/CrNV-03-12478, and 26LY01450/CrNV-03-5770) would experience visual adverse effects from the crossing of the gen-tie over the resources, and project elements may be visible from two sites located within the viewshed (26LY2088/CRNV-03-8663, and 26LY2887/D357). The following section summarizes each historic property, the probable impacts, and the proposed mitigation.

Transportation Resources

Reese River Wagon Road
Site Number: 26LY3165/CRNV-03-12468

Site Type and Cultural/Temporal Affiliation: Euro American/1870, ca. 1880–1920s, and 1950s–1970s

Project Impacts: The site would be directly impacted by the Project through alteration and modernization, including changes to the road surface and width.

Southern Pacific Railroad
Site Number: S3327/CrNV-03-12474

Site Type and Cultural/Temporal Affiliation: Euro American/since 1880 to present.

Probable Project Impacts: The site is located outside the physical disturbance area of the Project, but the gen-tie would cross directly over the site. The site may be adversely impacted visually.

US Highway 95A
Site Number: S3328/CrNV-03-12478

Site Type and Cultural/Temporal Affiliation: Euro American/since 1915-present.

Probable Project Impacts: The site is located outside the physical disturbance area of the Project, but the gen-tie would cross directly over the site. The site may be adversely impacted visually.

Mitigation Measures: Archival and documentary research will focus on historic wagon roads, railroads, and early automobile roads in Mason Valley. ASM proposes to develop a permanent interpretive exhibit that will incorporate information from the archival and documentary research, including historic photographs, and other materials as well as oral histories. Panels will include approximately 200 words of narrative text, as well as maps, photographs, and images that tell the story and significance of the historic transportation related resources. The exhibit will be installed in a location accessible to the public. The interpretive exhibit will be developed by a qualified team including a graphic designer and an SOI qualified historian. Exhibit panels will contain Quick Response (QR) codes which will enable members of the public to connect to a website containing additional content including a full narrative history of events including historic photographs and maps. A managed public forum will also allow members of the public to post personal photographs and memories related to the resources.

Community Development Resources

"Y Hill"
Site Number: 26LY2088/CrNV-03-8663

Site Type and Cultural/Temporal Affiliation: Euro American/ca. 1909 to present.

Probable Project Impacts: The site is located outside the physical disturbance area of the Project, but the the site may be adversely impacted visually.

Mitigation Measures: The Yerington "Y" (26Ly2088/CrNV-03-8663) is eligible for listing on the NRHP under Criterion A. It will be visually affected and provides an interpretive opportunity to study regional history. ASM proposes a pamphlet size popular publication that focuses on the importance of such sites in terms of community development and identity and place.

Sagecrest Drive-in Theatre
Site Number: 26LY2887/D357

Site Type and Cultural/Temporal Affiliation: Euro American/ca. 1952 to 1995.

Probable Project Impacts: The site is located outside the physical disturbance area of the Project, but the site may be adversely impacted visually.

Mitigation Measures: The "Y Hill" is eligible for listing on the NRHP under Criterion A only. The Sagecrest Drive-in (26LY2887/D357) has been designated a Historic District eligible to the NRHP under Criteria A, C, and D. The qualities that make the district eligible under Criteria C and D will not be affected since it is well outside of the physical APE. It will, however, be visually affected and provides an interpretive opportunity to study regional history. ASM proposes a pamphlet size popular publication that focuses on the importance of such sites in terms of community development and identity and place. The pamphlet will be made available to the public and place in various locations in and around Yerington including the Lyon County Chamber of Commerce, the Lyon County Museum and local motels and hotels. The pamphlet will contain narrative text, as well as maps, photographs, and images that tell the story and significance of the community development related resources. It will be developed by a qualified team including a graphic designer and an SOI qualified historian. Pamphlets will contain Quick Response (QR) codes which will enable members of the public to connect to a website containing additional content including a full narrative history of events including historic photographs and maps. A managed public forum will also allow members of the public to post personal photographs and memories related to the resources.

Ranching and Agricultural Resources

Wabuska Drain Segment
Site Number: 26LY1450/CrNV-03-5770

Site Type and Cultural/Temporal Affiliation: Euro American/ca. 1951 to present.

Probable Project Impacts: The site is located outside the physical disturbance area of the Project, but the gen-tie would cross directly over the site. The site may be adversely impacted visually.

Mitigation Measures: Archival and documentary research and focusing on historic irrigation and water management in Mason Valley. ASM proposes to develop a permanent interpretive exhibit that will incorporate information from the archival and documentary research, including historic photographs, and other materials as well as oral histories. Panels will include approximately 200 words of narrative text, as well as maps, photographs, and images that tell the story and significance of the historic transportation related resources. The exhibit will be installed in a location accessible to the public. The interpretive exhibit will be developed by a qualified team including a graphic designer and an SOI qualified historian. Exhibit panels will contain Quick Response (QR) codes which will enable members of the public to connect to a website containing additional content including a full narrative history of events including historic photographs and maps. A managed public forum will also allow members of the public to post personal photographs and memories related to the resources.

7. TREATMENT METHODS

7.1 HISTORIC RESEARCH

Documentary/Archival Research

The documentary and archival research will be completed by or under the direct supervision of the Project Historian. The distinction between documentary and archival sources and research is made to avoid confusion in the discussion of primary and secondary sources. Experience indicates that specialists from different disciplines treat different types of data as either secondary or primary.

Two principals will guide the archival task. The first is a continual questioning of the source; is it reliable, can it be corroborated by other sources and what is its bias? The second principle is to have the researchers always on the lookout for another piece of evidence, and from those, build a history in as judicious and unbiased a way as possible. As can be seen from this short discussion, every effort will be made to assure that the notes and other materials will be compiled to meet the highest professional standards as explained in works such as *The Modern Researcher* (Barzun and Graff, 1977).

ASM will conduct research at libraries and archives at Yerington, Nevada. In Reno, the Project Historian will examine the holdings of various libraries at the University of Nevada, Reno, and other repositories. On campus, ASM's historian will examine the holdings of the Nevada Bureau of Mines and Geology, the W.M. Keck Earth Sciences and Mining Research Information Center, the Special Collections Department of the Mathewson-IGT Knowledge Center, and the Mary B. Ansari Map Library. Also, in Reno the historian will review the collections held by the Nevada Historical Society. In Carson City, the Project Historian will search the archives of the Nevada Department of Transportation. The Project Historian plans to research on-line sources including:

- Records of the Bureau of Land Management (BLM), Nevada State Office (http://www.nv.blm.gov/LandRecords/) including General Land Office and Mineral Survey plats and field notes.
- Records for the Nevada State Water Engineer (http://water.nv.gov).
- Newspaper Archives (http://www.newspaperarchive.com/).
- Nevada Historical Census/Census (http://nvshpo.org/census)

This research will assure that primary and secondary sources that may hold data pertinent to the study of this site within the framework of the research design presented here will be examined as part of the treatment process.

Oral History

Any oral interviews will be conducted with participants identified as having knowledge of the project area, such as individuals who worked for the Yerington public schools, members of the Lions Club or who are long-time residents and thus are knowledgeable about the Yerington "Y", the Sagecrest Drive-in and their immediate surroundings. Efforts will be made to avoid second-generation interviews, as those frequently are much less reliable. Interviews will be conducted following the *Principles* and *Best Practices* established by the Oral History Association, including the recommended methods for digital recordation and translation. Oral histories will be conducted by historians who meet the *SOI Professional Qualification Standards*. ASM will work with the BLM, and the Nevada SHPO, to develop an appropriate consent form and deed to fulfill all legal and regulatory requirements to protect the rights of the participants and protect the agencies and ASM from liability. The Project Historian will conduct pre-interview meetings or conversations with the subject to allay fears about digital recording and to establish any other ground rules.

Upon written consent, oral histories will be recorded using at least two separate audio recorders, utilizing at least one external microphone, as well as one video recorder. Oral histories will be archived at the University of Nevada Oral History Program and will be made part of the permanent project collection. Another facet of the oral history will be research in the holdings of the University of Nevada Oral History Program for data relevant to the study of the physical and visual APEs.

8. KEY PROJECT PERSONNEL

The project will be completed by or under the direct supervision of persons meeting qualifications set forth in the Secretary of the Interior's Professional Qualifications Standards and who have been permitted for such work, as necessary, by the Bureau of Land Management, and Nevada State Museum for principal investigator, and specialists (Appendix B). The supervisory team proposed to conduct the treatment of sites within the physical and visual APEs has extensive collective experience in prehistoric and historic archaeology, western history, and the conduct of large multidisciplinary treatment projects. [redacted]

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REFERENCES CITED

Adams, Kenneth D.
2003 Age and Paleoclimatic Significance of Late Holocene Lakes in the Carson Sink, NV, USA. *Quaternary Research* 60:294-306.
2007 Late Holocene Sedimentary Environments and Lake-Level Fluctuations at Walker Lake, Nevada, USA. *Geological Society of America Bulletin*, 119(1-2):126-139.

Adams, K.D. and S.G. Wesnousky
1998 Shoreline Processes and the Age of the Lake Lahontan Highstand in the Jessup Embayment, Nevada. *Geological Society of America Bulletin* 110(10):1319-1332.

Ahlstrom, Richard V. N., and Heidi Roberts
2001 Desert Pavement and Buried Archaeological Features in the Arid West: A Case Study from Southern Arizona. *Journal of California and Great Basin Anthropology* Vol. 23, No. 1, pp. 1-26.

Barzun, J. and Graff, H.
1977 *The Modern Researcher.* Harcourt, Brace and Jovanovich, New York.

Benson, L.V. and R.S. Thompson
1987 Lake-Level Variation in the Lahontan Basin for the Last 50,000 years. *Quaternary Research* 28:69-85.

Brody, David
1980 *Workers in Industrial America*. Oxford University Press, New York.

Comp, T. Allan, Elizabeth Beckham, Randolf Langenbach, Katherine R. Boyne, Robert F. Joiner, Lynn Hughes, Michael Bruk, Cavid Soffa and Gordon White
1987 *Downtown Yerington, Nevada: A Preservation Study of Downtown Yerington, 1987.* The Yerington Project.

Costello, Julia
1998 Bread Fresh from the Oven: Memories of Italian Breadbaking in the California Mother Lode. *Historical Archaeology* 32(1):66-73.

d'Azevedo, Warren L.
1986 Washoe. In Great Basin, edited by Warren d'Azevedo, pp. 466-498.*Handbook of North American Indians*, Vol. 11, William G. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Dubofsky, Melvyn
1985 *Industrialism and the American Worker*, Second Edition. Harland Davidson, Inc., Arlington Heights, Illinois.

Elston, R. G.
1986 Prehistory of the Western Area. In Great Basin, edited by W.L. d'Azevedo, pp. 135-148. *Handbook of North American Indians*, vol. 11, W.G. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Ferguson, Leland
1992 *Uncommon Ground: Archaeology and Early African America, 1650-1800*. Smithsonian Institution Press, Washington, D.C.

Fowler, Catherine S.
1989 Willard Z. Park's Ethnographic Notes on the Northern Paiute of Western Nevada, 1933-1940. *University of Utah Anthropological Papers* No. 114. University of Utah Press, Salt Lake City.

Fowler, Catherine S., and Sven Liljeblad
1986 Northern Paiute. In Great Basin, edited by Warren L. d'Azevedo, pp. 435-465. *Handbook of North American Indians*, Vol. 11, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D. C.

General Land Office (GLO)
1869 Survey plat for Township 12 North, Range 25 East. On file with Bureau of Land Management
1870 Survey plat for Township 12 North, Range 27 East. On file with Bureau of Land Management
1884 Survey plat for Township 11North, Range 26 East. On file with Bureau of Land Management.
1909 Survey plat for Township 15 North, Range 26 East. On file with the Bureau of Land Management.
1915 Survey plat for Township 13 North, Range 26 East. On file with the Bureau of Land Management.

Goudie, Andrew S.
2008 The History and Nature of Wind Erosion in Deserts. *Annual Review of Earth and Planetary Sciences* 36: 97-119.

Gutman, Herbert G.
1976 *Work, Culture, and Society in an Industrializing America*. Oxford University Press, New York.

Haff, P.K. and B.T. Werner
1996 Dynamical Processes on Desert Pavements and the Healing of Surficial Disturbances. *Quaternary Research* 45: 38-46.

Hall, E. Raymond
1995 *Mammals of Nevada*. University of Nevada Press, Reno.

Hattori, E.M. and R.T. King
1985 A Select Historical and Archaeological Survey of Carson Valley. *Desert Research Institute Technical Report* No. 43, University of Nevada, Reno.

Hittman, Michael
1984 *A Numu History: The Yerington Paiute Tribe.* Yerington: Yerington Paiute Tribe.

Horton, Gary A.,
1996 *Walker River Chronology: A Chronology of the Walker River and Related Water Issues*. Nevada River Chronology Publication Series, Nevada Division of Water Planning, Carson City.

Hulse, James W.
1998 *Silver State* (second edition). University of Nevada Press, Reno.

Intermountain Antiquities Computer System (IMACS)
1992 *User's Guide: Instructions and Computer Codes for Use with the IMACS Site Form*. Prepared by the University of Utah and the U.S. Forest Service.

Killick, David
1998 On the Value of Mixed Methods in Studying Mining Communities. In *Social Approaches to an Industrial Past: The Archaeology and Anthropology of Mining*, edited by A. Bernard Knapp, Vincent C. Pigott, Eugenia W. Herbert, pp. 279-290. Routledge Press, London.

Kimball, Monique (compiler)
2011 Guide to Historic Artifacts. Unpublished manuscript on file at WCRM, Sparks, Nevada.

King, G.Q.
1993 Late Quaternary History of the Lower Walker River and its Implications for the Lahontan Paleolake System. *Physical Geography* 14(1):81-96.
1996 Geomorphology of a Dry Valley: Adrian Pass, Lahontan Basin, Nevada. *Association of Pacific Coasts Geographers Yearbook* 58:89-114

Knapp, A. Bernard
1998 Social Approaches to the Archaeology and Anthropology of Mining. In S*ocial Approaches to an Industrial Past: The Archaeology and Anthropology of Mining*, edited by A. Bernard Knapp, Vincent C. Pigott, Eugenia W. Herbert, pp. 1-24. Routledge Press, London.

Lawrence, Susan
1998 Gender and Community Structure on Australian Colonial Goldfields. In *Social Approaches to an Industrial Past: The Archaeology and Anthropology of Mining*, edited by A. Bernard Knapp, Vincent C. Pigott, Eugenia W. Herbert, pp. 39-58. Routledge Press, London.

Lockhart, Bill and Russ Hoenig
2018 The Bewildering Array of Owens-Illinois Glass Co. Logos and Codes. Electronic document, https://sha.org/bottle/pdffiles/OwensIllinois2015.pdf, accessed 12/15/2022.

Lockhart, Bill, Beau Schriever, Bill Lindsey, and Carol Serr
2016 Kerr Glass Mfg. Co. Electronic documenthttps://sha.org/bottle/pdffiles/KerrGlass.pdf, accessed 12/15/2022.

Madsen, David B., and David Rhode
1994 Introduction. In *Across the West: Population Movement and the Expansion of the Numa*, edited by David B. Madsen and David Rhode, pp. 3-5. University of Utah Press, Salt Lake City.

Malinky, Barbara
2009 Cultural Resources Inventory for a Ditch Near Wabuska, Lyon County, Nevada. Under NSM Rpt. No. 3-2479 / SHPO Rpt. No. 4350.

Mason Valley Tidings
1894 *The renaming of Yerington*, 22 March 1894.

Matmon, A., O. Simhai, R. Amit, I. Haviv, N. Porat, E. McDonald, L. Benedetti, R. Finkel
2009 Desert Pavement-Coated Surfaces in Extreme Deserts Present the Longest-Lived Landforms on Earth. *GSA Bulletin* 121(5/6):688-697.

McBride, Terri
2002 *Exploration and Early Settlement in Nevada: Historic Context.* Nevada State Historic Preservation Office, Carson City.

McFadden, Leslie D., Stephen G Wells, and Michael J. Jercinovich
1987 Influences of Eolian and Pedogenic Processes on the Origin and Evolution of Desert Pavements. *Geology*. V. 15, 504-508.

Mead, Jim I., and Christopher J. Bell
1994 Late Pleistocene and Holocene Herpetofaunas of the Great Basin and Colorado Plateau. In *Natural History of the Colorado Plateau and Great Basin*, edited by Kimball Harper, Larry St. Clair, Kaye Thorne, and Wilford Hess, pp. 255-276. University Press of Colorado.

Mifflin, M.D. and M.M. Wheat
1979 Pluvial Lakes and Estimated Pluvial Climates of Nevada. *Nevada Bureau of Mines and Geology, Bulletin 94*. Mackay School of Mines, University of Nevada, Reno.

Moore, J. G.
1969 *Nevada Bureau of Mines and Geology, Bulletin 75*: Geology and Mineral Deposits of Lyon, Douglas, and Ormsby Counties, Nevada, MacKay School of Mines, University of Nevada, Reno.

Myrick, David F.
1962 *Railroads of Nevada and Eastern California*. Howell-North Books, Berkeley.

National Park Service
1991 How to Apply National Register Criteria. *National Register of Historic Places Bulletin* 15, National Park Service, Washington D.C.
2004 36CFR60. <http://www.dr.nps.gov/nr/regulations.htm>. National Register of Historic Places, National Park Service, Washington, D.C., last modified in 2004.

Paher, Stanley W.
1970 *Nevada Ghost Towns & Mining Camps*. Nevada Publications, Las Vegas.

Paynter, R., and R. H. McGuire
1991 The Archaeology of Inequality: Material Culture, Domination, and Resistance. In *The Archaeology of Inequality*, edited by R.H. McGuire and R. Paynter, pp. 1-27. Basil Blackwell Inc., Cambridge, Massachusetts.

Pollock, Alain et al.
2020 An Assessment of Cultural Resources for the Anaconda Copper Mine Land Disposal, Yerington, Nevada. Under BLM CRR 3-2831.1 / SHPO Rpt. No. 26479.

Rocha, Guy
1997 Myth # 19: What's in a Name? Yerington Wasn't Always Yerington. *Sierra Sage,* Carson City/Carson Valley, July 1997.

Ross-Hauer, JoEllen
2008 *A Class III Cultural Resources Inventory of 1980 Acres for the Ann Mason Project, Lyon County, Nevada*. BLM Report No. CR3-2441 (P), Carson City, Nevada. Prepared by Chambers Group, Inc. for Enviroscientists Inc.

Stoner, Edward J, Mary C. Ringhoff, Renee Corona Kolvet, and Jaclyn Raley
2015 *A Class III Cultural Resources Inventory for the Yerington Lands Conveyance, Lyon and Mineral Counties, Nevada*. BLM Report No. CRR-3-2610.

Stoner, Edward J., and Andrea Catacora
2023a *A Class III Cultural Resources Inventory of Approximately 6,669 Acres for the Libra Solar Project in Lyon and Mineral Counties, Nevada*. BLM CRR-03-2927.
2023b *Addendum 1 to a Class III Cultural Resources Inventory of Approximately 6,669 Acres for the Libra Solar Project in Lyon and Mineral Counties, Nevada*. BLM CRR-03-2921-1.
2023c *Addendum 2 to a Class III Cultural Resources Inventory of Approximately 6,669 Acres for the Libra Solar Project in Lyon and Mineral Counties, Nevada*. BLM CRR-03-2927-2.

Thompson, R.S., L.V. Benson, and E.M. Hattori
1986 A Revised Chronology for the Last Pleistocene Lake Cycle in the Central Lahontan Basin. *Quaternary Research* 25(1): 1-9.

United States Geological Survey
1911 Yerington, Nevada 15' Quadrangle.

Western Regional Climate Center
2015 Climate Summary for Lovelock, Nevada. Electronic document, http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?nv4698, accessed February 24, 2015.

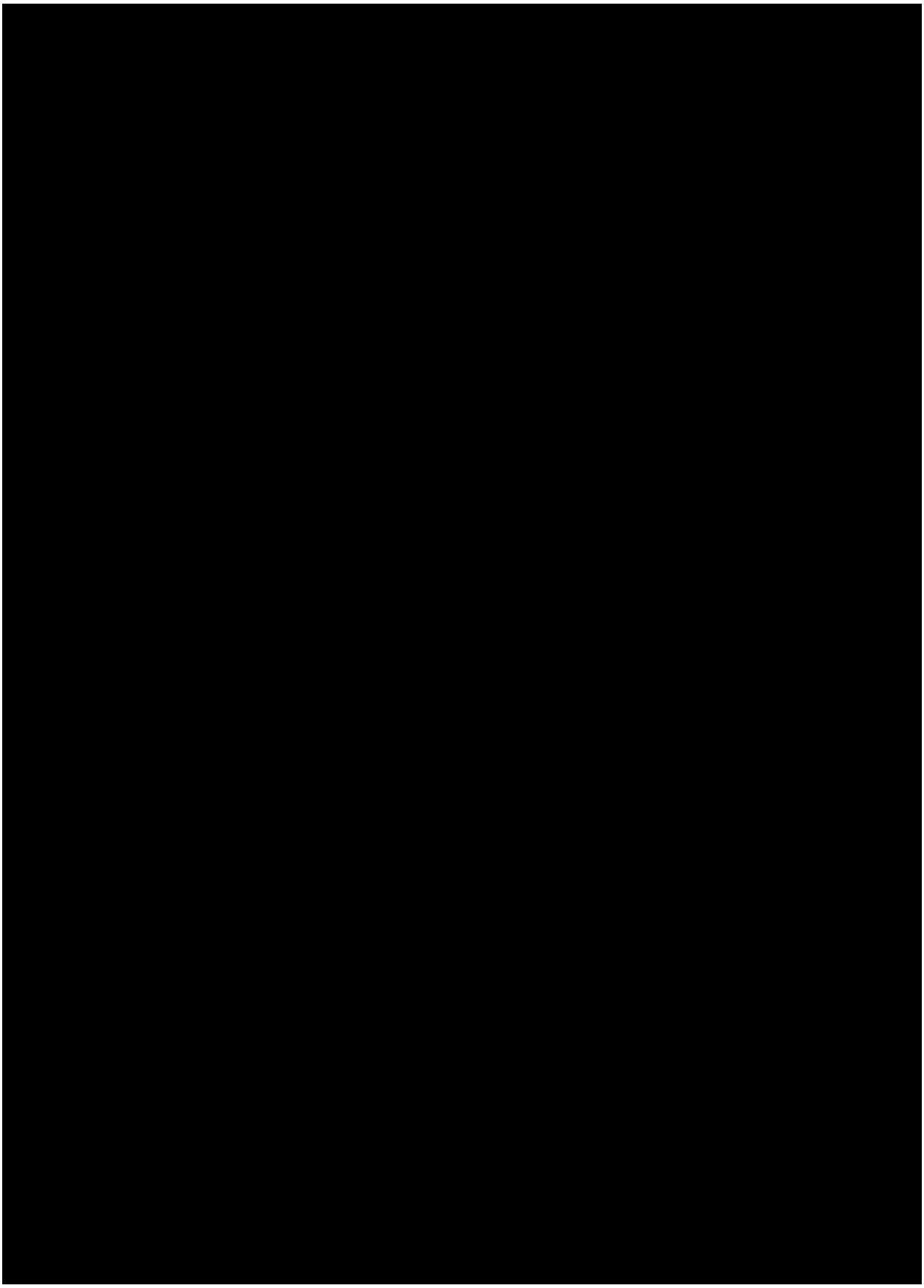
Wheat, M. M.
1967 *Survival Arts of the Primitive Paiutes*. University of Nevada Press, Reno.

White, William G., Ronald M. James, and Richard Bernstein (editors)
1991 *Nevada Comprehensive Plan* (2nd edition). Nevada Division of Historic Preservation and Archaeology, Carson City.

Willis, N.W.
1912 Lyon County. In *The History of Nevada Volume II* (Sam P. Davis, editor), pp. 950-956. Electronic document: http://www.nevadaobserver.com/History%20Of%20Lyon %20 County %20%281912%29.htm. Last updated 6 November 2005, accessed 20 March 2012.

Wurst, L., and R. K. Fitts
1999 Introduction: Why Confront Class? *Historical Archaeology* 33(1):1-6.

APPENDICES



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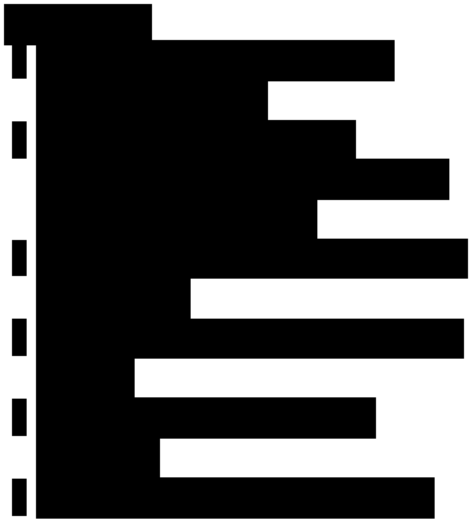

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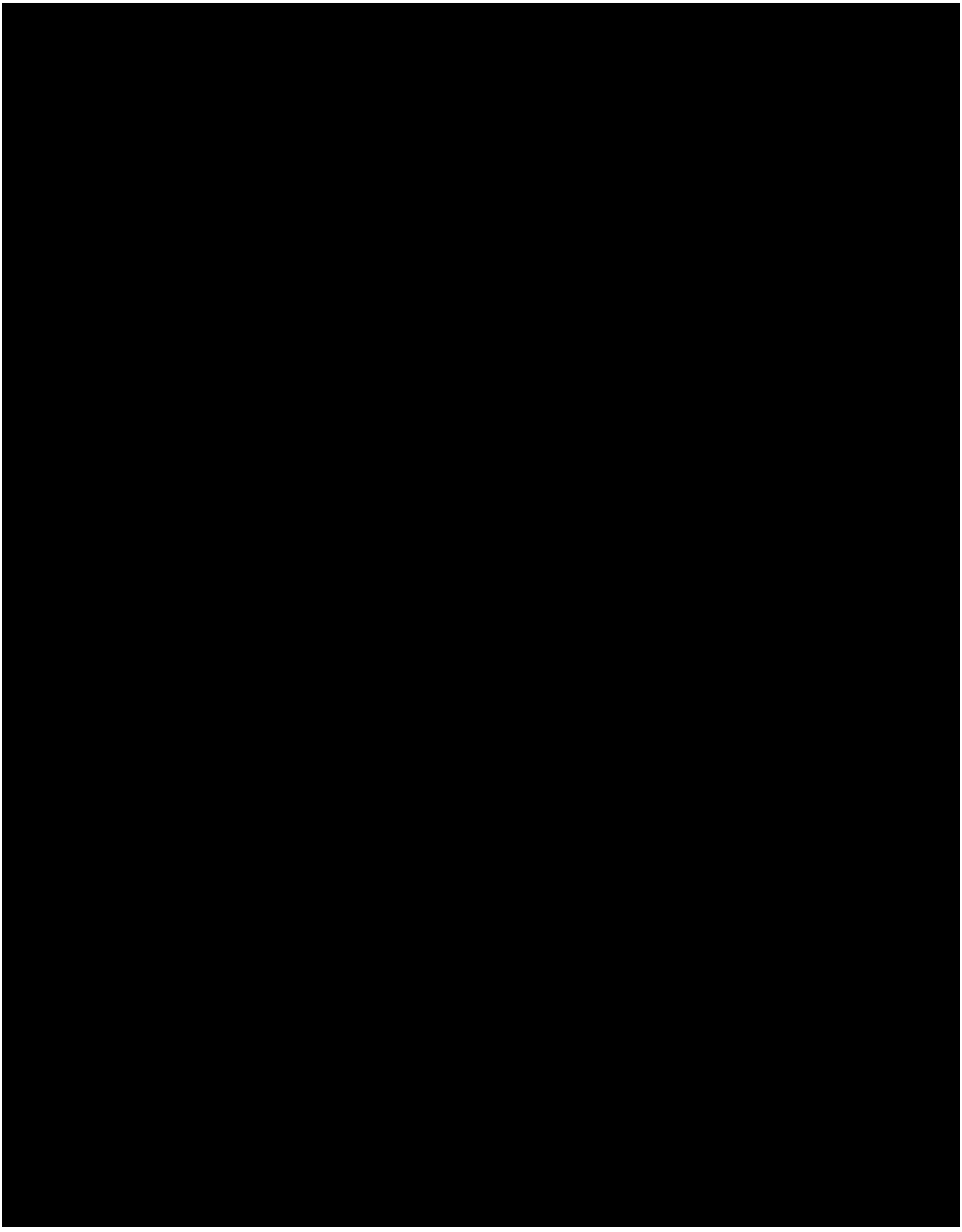

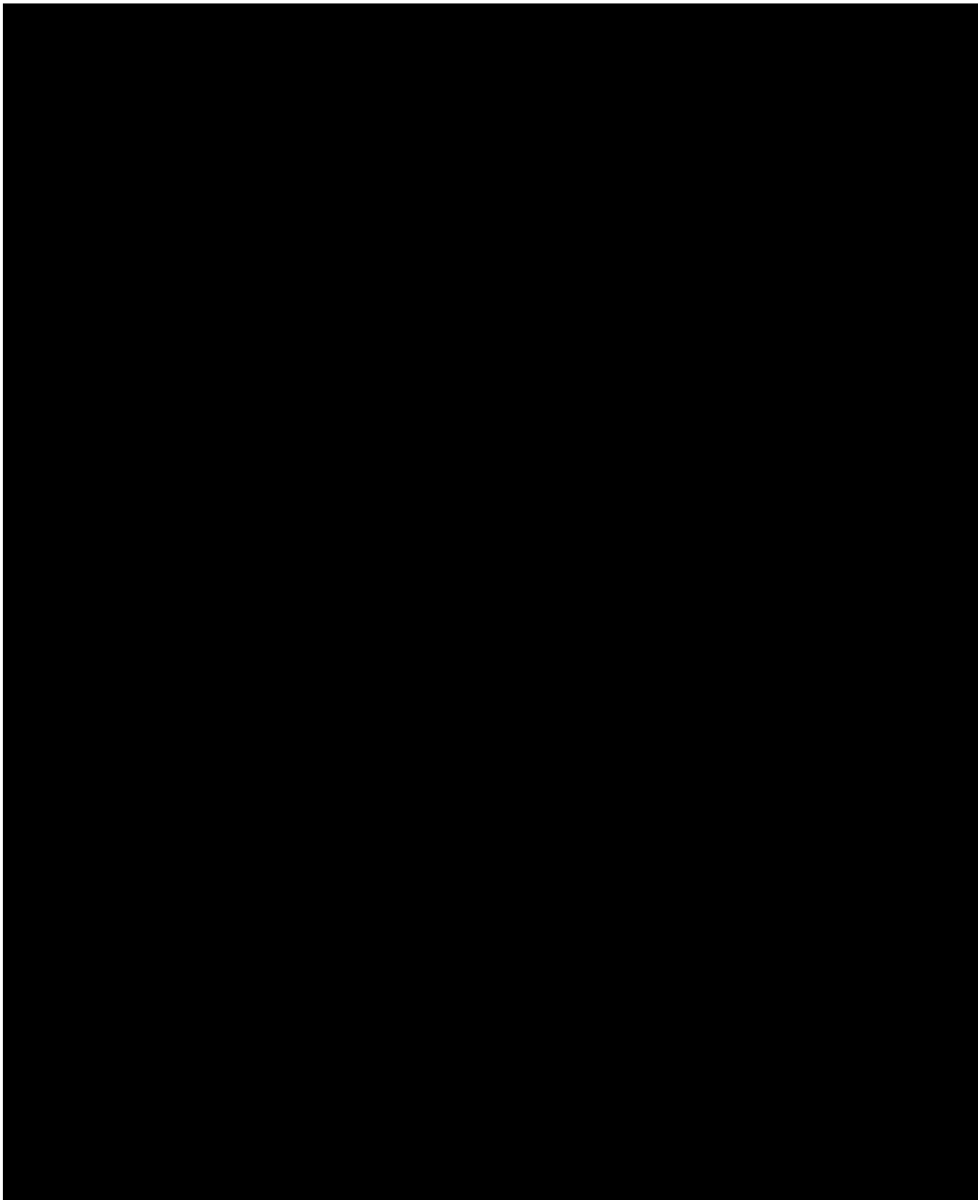

Attachment 3: A Cultural Resources Monitoring and Post-Review Discovery Plan for the Libra Solar Project in Lyon and Mineral Counties, Nevada

A Cultural Resources Monitoring and Post-Review Discovery Plan for the Libra Solar Project in Lyon and Mineral Counties, Nevada

BLM Report No. 3-2927-4

Prepared for:
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Portions of this document have been redacted to protect archaeological resources in accordance with 18 CFR 1312.18, and the Archaeological Resources Protection Act of 1979

Submitted to:

Bureau of Land Management
Carson City District
Stillwater Field Office
5665 Morgan Mill Road
Carson City, Nevada 89701

BLM Cultural Resource Use Permit No. N-78810
PN 40500
May 6, 2024

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1. INTRODUCTION

1.1 PROJECT BACKGROUND and DESCRIPTION

Arevia Power (Arevia) proposes to construct a 700 MW solar/700 MW battery facility and interconnector in Lyon and Mineral Counties, Nevada known as the Libra Project. The proposed solar installation and transmission lines will entail ground-disturbing activity during its construction. This document is a cultural resources avoidance and monitoring plan for the construction phase of the project and is based on what is currently known as of this writing. Should supplemental information be obtained during project development or ongoing consultation, the plan may be amended.

The Libra Project would occur almost entirely on public lands managed by the Bureau of Land Management (BLM) Carson City District, Stillwater Field Office. The solar installation area is entirely on BLM land but the transmission lines and main access routes cross small parcels of private lands.

In order to determine existing resources that could be impacted by the Project, a Class I cultural resources inventory and report, and Class III cultural resources inventory of approximately 7,005 acres in Lyon and Mineral Counties, Nevada (Figure 1) and report were completed (Stoner and Catacora 2023a, 2023b, 2023c). [redacted] Thus, mitigation of adverse effects is proposed for six historic-era sites and a plan has been prepared to resolve those effects (see Stoner 2024).

The three pre-contact sites are eligible for listing on the NRHP under Criterion D but will not be adversely affected by the project as they will be avoided by design and the creation of an Environmental Exclusion Area. As stated in the Environmental Impact Statement (EIS):

> ***Mitigation Measure (MM) CR-1: Pre-contact Site Environmental Exclusion Area (EEA).*** *An Environmental Exclusion Area (EEA) and at least 500-foot buffer shall be established around the three pre-contact sites within the Project application area. The EEA shall be completely removed from the Project footprint in the final engineering and design plans prior to construction, resulting in redefinition of the development area boundary and fence lines. The design engineers shall coordinate with the BLM or consulting archaeologist to verify full avoidance. Occupancy outside the established Project boundary shall be prohibited. EEAs shall be re-established during decommissioning.*

Thus, the three eligible pre-contact sites will remain in place and undisturbed by the project. In addition to the three eligible pre-contact sites, there are eight pre-contact sites that have been determined not eligible for listing on the NRHP and four pre-contact isolated artifacts (Table 1, Figure 2). Under Section 106 of the National Historic Preservation Act (NHPA) there are no adverse effects to sites that are not eligible for the NRHP, and no further work is required. The Tribes, including the Fallon Paiute-Shoshone Tribe, however, are concerned about the boom in renewable energy projects and transmission lines in the region and the cumulative effects on and degradation to these sites. They point out that the resources are often

evaluated in purported isolation and view the sites, regardless of their National Register status, as interconnected with the landscape. They refer to these sites as Tribal cultural resources and prefer that they all be preserved regardless of NRHP eligibility. Of the nine noneligible sites listed in Table 1, four are in areas that were inventoried but are no longer part of the physical APE. These four sites will remain in place and will not be impacted by the project. The other five noneligible sites are within the physical APE. The proponent has agreed to try to avoid impacting these sites and preserve them in place as much as possible through project design.

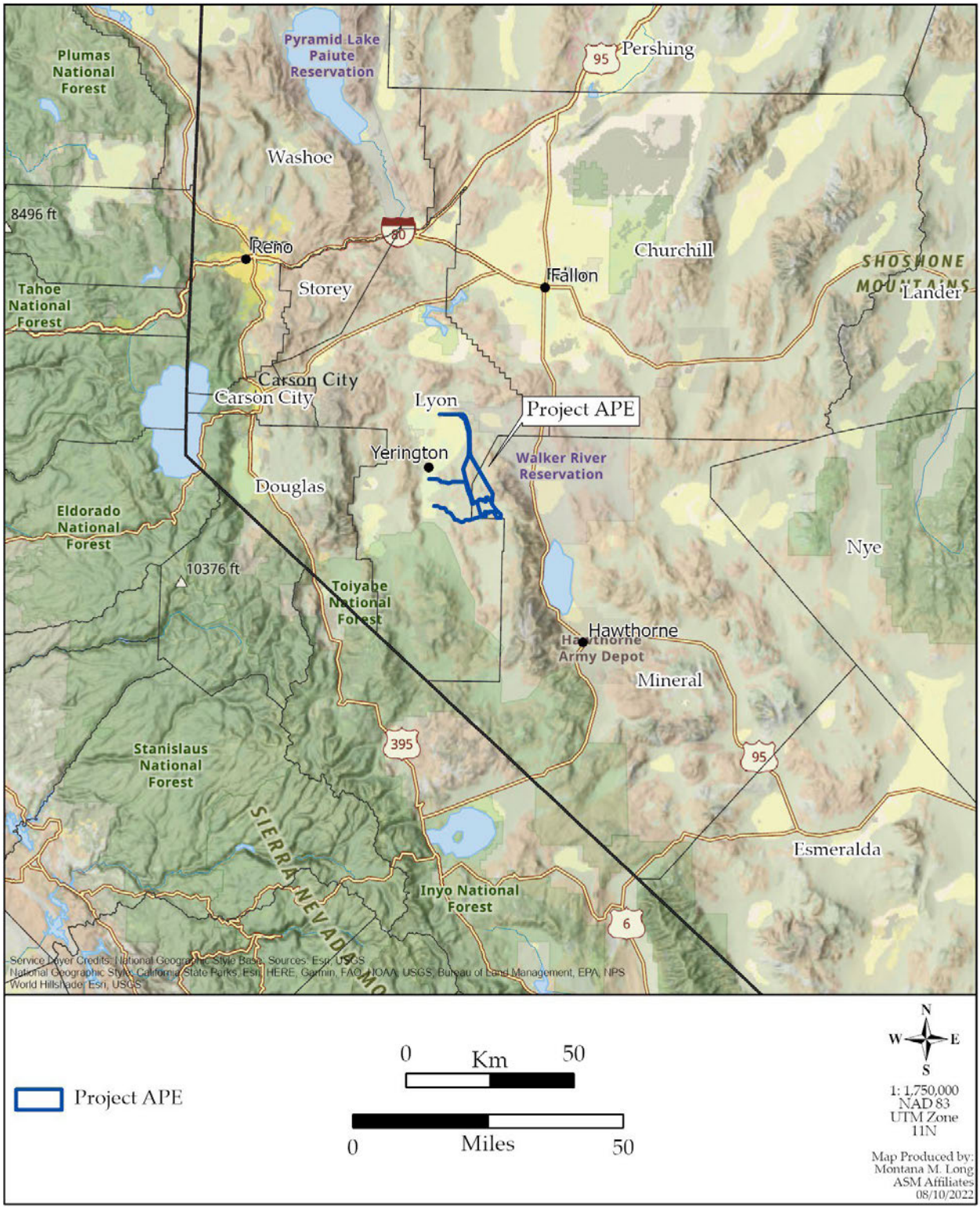

Figure 1. Project Location

Table 1. Pre-contact Sites and Isolates (n =16)

State No.	Agency No. (CrNV-)	Property Type/Description	NRHP	Comments
26LY1877	03-05598	[redacted]	[redacted]	[redacted]
26MN3267	03-12422	[redacted]	[redacted]	[redacted]
26LY3142	03-12440	[redacted]	[redacted]	[redacted]
26MN3275	03-12456	[redacted]	[redacted]	[redacted]
26MN3276	03-12457	[redacted]	[redacted]	[redacted]
26LY3161	03-12472	[redacted]	[redacted]	[redacted]
26MN3287	03-12493	[redacted]	[redacted]	[redacted]
26MN3288	03-12494	[redacted]	[redacted]	[redacted]
26MN3289	03-12495	[redacted]	[redacted]	[redacted]
26MN3296	03-12502	[redacted]	[redacted]	[redacted]
26LY3160	03-12505	[redacted]	[redacted]	[redacted]
26LY3365	03-12981	[redacted]	[redacted]	[redacted]
	LS-ISO-003	[redacted]	[redacted]	[redacted]
	LS-ISO-012	[redacted]	[redacted]	[redacted]
	LS-ISO-015	[redacted]	[redacted]	[redacted]
	LS-ISO-016	[redacted]	[redacted]	[redacted]

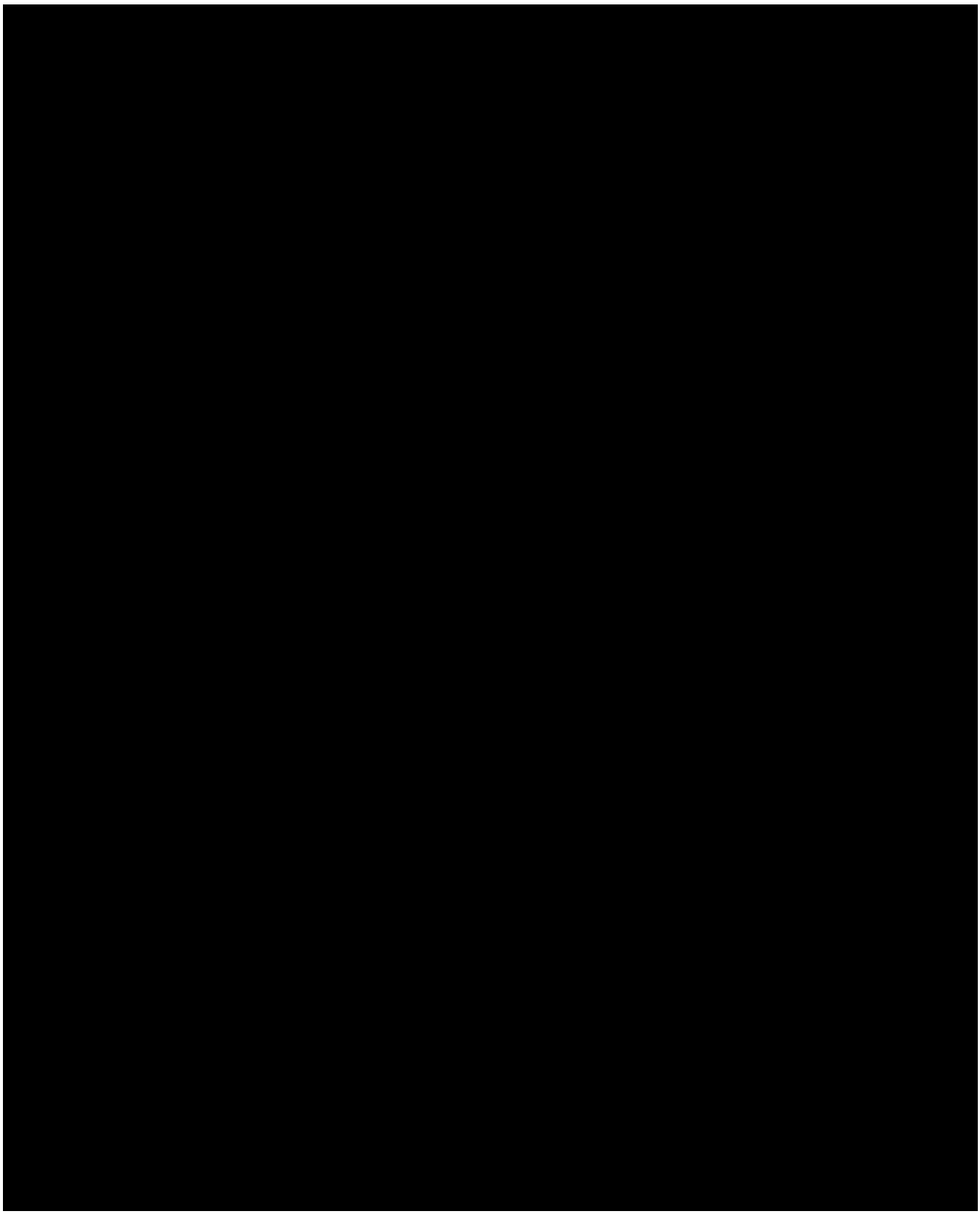

Figure 2. Project APE and Site Locations

2. REGULATORY GUIDANCE AND PRIOR PROJECT WORK

As a federal undertaking, the Project must comply with Section 106 of the National Historic Preservation Act of 1966 (36 Code of Federal Regulations [CFR] § 800, revised 2004), which mandates federal agencies to consider the effects of undertakings on historic properties (i.e., cultural resources that are listed in or potentially eligible for listing in the National Register).

A Class III cultural resources inventory of the Project APE was required as part of the Section 106 review and compliance process. The BLM Carson City District is the federal land-managing agency. ASM completed the Class III Cultural Resources Inventories between July 12, 2022, and September 28, 2023, and detailed findings and recommendations in a technical report and two addenda (Stoner and Catacora 2023a, 2023b, and 2023c).

The BLM determined that the Project would have adverse effect on six historic properties and a Historic Properties Treatment Plan (HPTP) has been prepared to mitigate physical and visual effects to these historic era sites (Stoner 2024). BLM determined that the Project would have no adverse effect to three pre-contact sites assuming they will be avoided. The three NRHP eligible pre-contact sites listed in Table 1 will be avoided by the establishment of an Environmental Exclusion Area (EEA) and periodic monitoring of this area to ensure avoidance. For the historic-era resources determined not eligible for listing on the National Register, there would be no effect and no additional work is recommended. For the non-eligible pre-contact resources located within the physical APE an attempt will be made to avoid them through project design.

2.1 ENVIRONMENTAL EXCLUSION AREA (EEA)

An EEA containing the three eligible pre-contact sites will be demarcated by a 500-foot buffer. Per the EIS (Mitigation Measure CR-1) the EEA shall be completely removed from the Project footprint in the final engineering and design plans prior to construction, resulting in redefinition of the development area boundary and fence lines (Figure 3). The design engineers shall coordinate with the BLM or consulting archaeologist to verify full avoidance. Occupancy outside the established Project boundary shall be prohibited.

To ensure that the project does not inadvertently encroach on the EEA, the construction of boundary fence lines will be monitored. In addition, the historic properties within the EEA will be periodically monitored to assess their condition and ensure preservation in place.

3. TRIBAL CONSULTATION AND MONITORING

Government-to-government consultation by the BLM is ongoing. Native American Tribes consulted about the project include the Yerington Paiute Tribe, the Walker River Paiute Tribe, the Fallon Paiute-Shoshone Tribe, Yomba Shoshone Tribe, Pyramid Lake Paiute Tribe, Washoe Tribe of Nevada and California, the Bridgeport Indian Colony, and the Reno-Sparks Indian Colony.

The project proponent (or their BLM permitted archaeological contractor) will inform said parties a minimum of one week in advance of proposed project activities near the EEA or near the areas containing non-eligible pre-contact sites within the physical APE. Tribal monitors will be given the opportunity to be present during ground-disturbing work to ensure that EEA violations do not occur and agreed upon protocols are followed if impacts to the three non-eligible pre-contact resources within the physical APE cannot be avoided. Archaeological monitors will also be present during Project activities near the EEA.

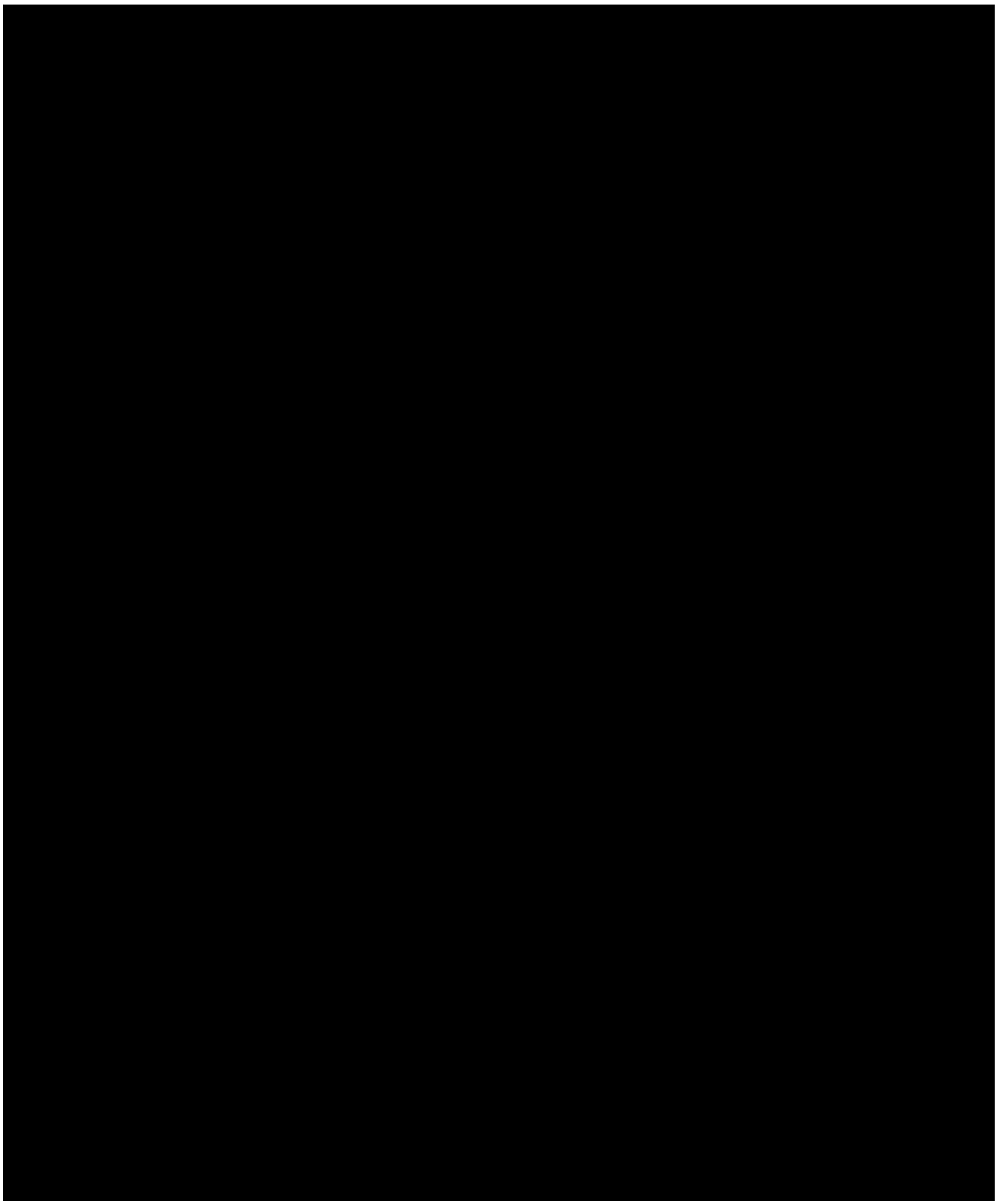

Figure 3. Environmental Exclusion Area.

The project proponent (or their BLM permitted archaeological contractor) will contact the appropriate tribal representatives to retain and schedule available monitors, accordingly. If monitors are unavailable, the undertaking may proceed with the express written consent (i.e., e-mail communication) of the BLM.

3.1 TRIBAL MONITOR AUTHORITY AND RESPONSIBILITIES

Tribal monitors have the authority to temporarily halt ground-disturbing activities to assess and view uncovered cultural materials or sediment. If tribal monitors identify previously unknown cultural resources, they will notify the archaeological monitor or Principal Investigator/Project Manager (PI/PM) immediately. The PI/PM will notify appropriate Project personnel who will assess the need for further documentation or action and follow procedures described below in the *Discovery Plan.*

4. QUALIFICATION AND TRAINING OF PROJECT PERSONNEL

All archaeological monitoring activities shall be conducted under the supervision of personnel meeting the *Secretary of the Interior's Standards and Guidelines (as amended and annotated), Professional Qualifications Standards* and listed on a BLM Cultural Use Permit. Key personnel involved in the archaeological monitoring efforts will be responsible primarily for conducting the monitoring; archaeological fieldwork and analysis; report preparation; and, as necessary, coordination with BLM, construction contractors, and Native American tribal monitors. The responsibilities of key personnel are described below.

4.1 PRINCIPAL INVESTIGATOR AND PROJECT MANAGER

Archaeological monitors will be under the direct supervision of a Principal Investigator (PI) and Project Manager (PM), who shall be Qualified Archaeologists meeting the Secretary of Interior's Professional Qualifications (U.S. Department of the Interior 2008). The PI/PM will have overall responsibility for implementing the *Cultural Resources Monitoring and Post-Review Discovery Plan* and will be the primary point of contact between the archaeological contractor, the proponent, and the BLM for the Project.

4.2 ARCHAEOLOGICAL MONITORS AUTHORITY AND RESPONSIBILITY

The archaeological monitor(s) will have experience and familiarity with archaeological materials and general excavation methods and will be supervised by qualified personnel listed on the BLM Cultural Use Permit. The archaeological monitor(s) shall have the authority to halt or re-direct construction activities to avoid archaeological materials uncovered by initial ground-disturbing activities, and to assess their significance. Monitors will be responsible for observing ground-disturbing activities associated with the Project, and will:

- maintain a daily written log of monitoring activities, including area(s) worked, photographs, as appropriate, and related communications;
  be fully knowledgeable about this *Cultural Resources Monitoring and Post-Review Discovery Plan* and where previous sites have been found, recorded, and evaluated;
- make decisions regarding an interruption in project work to determine if archaeological resources are present, to assess the importance of any encountered resources, or to recover archaeological information according to terms of this plan;
- notify the appropriate Project and agency personnel of previously unknown archaeological resources;
- appropriately document newly encountered archaeological resources

- recommend actions necessary or appropriate to protect those resources until they can be formally evaluated; and
- implement approved actions necessary to protect those resources.

4.3 AWARENESS TRAINING FOR KEY PROJECT PERSONNEL

All key Project personnel (environmental inspectors, supervisors, and construction personnel) will receive cultural resources awareness training and orientation prior to the start of construction activities. Key project personnel and archaeological monitors will have this *Cultural Resources Monitoring and Post-Review Discovery Plan Plan* on-site.

All new project personnel added after Project work begins will receive the same training and orientation before working on-site; training may be conducted in-person by the archaeological monitor (e.g., "tailgate meeting") or provided virtually via pre-recorded video, slide presentation, or video conference. The Tribal monitor(s) may also assist with the cultural awareness training. Cultural resources training will convey:

- The types of cultural resources that may be encountered during Project work.
- Basic artifact recognition.
- The steps outlined in the *Discovery Plan* regarding the protection of resource encounters until they can be properly evaluated by a Qualified Archaeologist.
- The steps outlined in the *Discovery Plan* concerning the notification of the appropriate Project and agency personnel.
- The necessity of reporting Post-Review Discoveries in a timely manner and complying with other stipulations provided in this plan.
- Project roles and responsibilities for the BLM archaeologist and Project archaeological and tribal monitors.
- The authority of archaeological and tribal monitors to halt work.
- The understanding that if construction personnel observe cultural material or what appears to be a cultural resource, the BLM archaeologist and/or representative shall be contacted immediately.
- The requisite contact information.
- The explicit understanding that cultural resources and human remains are not to be disturbed.
- The procedures to follow if cultural material or human burials are observed:
    - Project work halts immediately.
    - The location is secured and made off-limits to ground disturbing activities.
    - The construction supervisor and the BLM archaeologist are called immediately.
    - Project work does not resume until authorized by the BLM archaeologist.
- The need to treat any human remains and other items, protected under the Native American Graves Protection and Repatriation Act (NAGPRA; 25 USC §§ 3001–3013) with dignity and respect.

5. MONITORING PLAN

An archaeological and/or tribal monitor will be present for all ground-disturbing work (e.g., auguring, driving, or parking on access roads) occurring within a 30-meter (100-foot) buffer of the EEA. The monitor(s) will observe all ground-disturbing activities at that location in case project activity reveals discoveries or sensitive Native American remains. The monitor(s) will also prevent unnecessary ground disturbance near EEA, including stopping work before potential inadvertent adverse effects (direct ground disturbance, runoff, erosion, etc.). As part of this plan, no exclusion fencing is expected for the EEA; however, depending on the implementation of construction and monitoring efforts, BLM may determine

that temporary physical marking, such as pin-flags, wooden stakes/lathe, or exclusion fencing, will be necessary. Construction personnel and contractors will be made aware of this policy during environmental training.

Arevia or its cultural contractor (ASM) will notify the BLM at least two weeks prior to beginning any ground-disturbing activities requiring archaeological and/or tribal monitoring. The notification to the BLM will be made via email and phone and will, at a minimum, include information regarding the dates and locations of ground-disturbing activities. The BLM will notify Arevia (or its permitted archeological contractor) of the Project locations requiring archaeological and/or tribal monitors.

5.1 PROJECT MONITORING

Monitoring both during project construction and periodically is recommended for three pre-contact sites that have been determined to be historic properties. An EEA will be established for sites 26MN3287/CrNV-03-12493, 26MN3288/CrNV-03-12494, and 26MN3289/CrNV-03-12495. The EEA will consist of a 500 ft buffer around the three sites which are clustered in the same area. The proposed EEA will be removed completely from the installation area footprint and the installation area will be fenced. Archaeological and tribal representatives will monitor the construction of the fence in the vicinity of the EEA. In addition, archaeological and tribal representatives will monitor sites 26MN3287/CrNV-03-12493, 26MN3288/CrNV-03-12494, and 26MN3289/CrNV-03-12495 quarterly, for a period of time to be determined by the BLM, to ensure that these important ancient sites are preserved.

6. DISCOVERY PLAN

It is possible that previously undocumented artifacts or features associated with known sites may be found near the established EEA. It is also possible that previously undocumented archaeological sites or isolates might be identified in the APE by Project personnel, environmental inspectors, or archaeological or tribal monitors. This plan addresses the actions to be taken should discoveries occur during Project implementation. Potential discoveries are divided into two categories, each requiring distinct management procedures: (1) treatment of previously unknown artifacts, features, site components, or sites; and (2) treatment of human remains. The procedures to be followed should such discoveries be made during Project implementation are reviewed in the following sections and summarized in Table 2.

Table 2. Discovery and Notification Procedures

Resource Type	Definition	Procedure
Isolated Find	Single artifacts or undatable features separated by at least 30 meters.	Archaeological monitor will record, photograph, and geo-reference.
Archaeological Site	Two or more artifacts in association (within 30 meters), or feature associated with any artifacts or other features.	Archaeological monitor to redirect construction, contact PI/PM, erect exclusionary flagging or fencing if necessary, and record; Archaeological monitor and PI/PM to notify the BLM Archaeologist and consult with BLM regarding the resource's National Register significance.
Potential Human Remains	Initial assessment by Archaeological Monitor.	Archaeological monitor to halt and redirect construction, contact the BLM Archaeologist, tribal monitor (if not present), and PI/PM, and erect exclusionary flagging or fencing if necessary. If remains are human and confirmed to be Native American, the BLM Archaeologist will initiate the NAGPRA process.

Note: BLM – Bureau of Land Management; NAGPRA – Native American Graves Protection and Repatriation Act, PI/PM – Principal Investigator/Project Manager.

6.1 POST-REVIEW DISCOVERIES AND NOTIFICATION PROCEDURES

Notification Procedures

When a potential discovery is made and secured, a "chain of command" protocol for reporting finds must be followed. Construction personnel, tribal monitors, and archaeological monitors shall temporarily halt or redirect the work at that location and report all discoveries to the Project archaeological PI who will in turn notify ASM, Arevia, and the BLM as appropriate.

Post-Review Discoveries

If Arevia construction activities encounter buried cultural resources or previously undocumented finds, the archaeological and/or tribal monitor will temporarily halt or redirect work at the location and perform an initial assessment to determine whether the discovery is a site or an isolated find. The monitor(s) will notify the PI/PM, who will notify the appropriate BLM and Project personnel of the location and nature of the find.

If the find is an isolate, the archaeological monitor shall record the isolate following applicable procedures outlined below under *Cultural Resources Identification and Documentation*, and work can resume when documentation is complete. If the find is more substantive and may be considered part of a known site or a previously undocumented site, then the archaeological monitor, in consultation with the Project PI/PM, will temporarily halt or redirect the work within 30 meters (100 feet) of the find until the BLM can assess the find's significance with regards to National Register eligibility. The monitors and the PI/PM will follow applicable procedures outlined below under *Cultural Resources Identification, Documentation, and Evaluation*. Significance will be assessed using the National Register eligibility criteria identified in 36 CFR 60, as well as the research design used for assessing site significance during the Class III inventory and evaluation phase of the Project (Stoner and Catacora 2023a, 2023b, and 2023c).

If a National Register eligibility recommendation cannot be made, additional testing may be required to further delineate the nature, extent, and significance of the discovery with regards to the National Register

aspects of integrity. Testing will be limited to a sufficient level needed for resource evaluation. Additional treatment or monitoring may be necessary depending on the outcome of consultation between the BLM, SHPO, and Tribes. Any return to work (i.e., NTP) after the report of a post-review discovery will be approved by the BLM in writing.

Inadvertent Adverse Effects

An inadvertent adverse effect is any unplanned disturbance to a historic property during Project implementation. An inadvertent adverse effect could result during Project construction, monitoring, or associated Project activities. The effect may be an accident or the result of non-compliance with this plan or construction, environmental training, or safety program protocols.

In the event of an inadvertent adverse effect, non-compliance, or accident at a historic property, Arevia personnel, contractors, or archaeological/tribal monitors will stop work immediately within 30 meters (100 feet) and report the incident to the PI/PM or Project agent who will in turn contact the appropriate BLM personnel via phone call and email. The individual reporting the incident will provide the location and nature of the effect (e.g., mechanical disturbance, unauthorized artifact collecting) and the BLM will assess the severity of the effect and determine whether mitigation or additional work is necessary. Any return to work (i.e., notice to proceed) after the report of an inadvertent adverse effect will be approved by the BLM in writing.

6.2 CULTURAL RESOURCES INDENTIFICATION, DOCUMENTATION, AND EVALUATION

Resource definitions will follow those for BLM lands, wherein two or more artifacts in association (within 30 meters) comprise a site, while single artifacts are isolated finds (BLM 2019). Single features unassociated with other features or artifact scatters (30 meters minimum distance) that are undatable (e.g., prospect pit, adit, shaft) are also recorded as isolates. Previously undiscovered cultural resources more than 45 years in age will be documented as isolates or sites, as described below.

Site data, features, roads/trails, and diagnostic artifacts will be georeferenced with a hand-held GPS device, with which UTM coordinates (Zone 11N, NAD83) will be secured to submeter accuracy (i.e., ±50 centimeters). Wooden stakes or other permanent datum markers will not be embedded as site markers; however, whenever possible monitors will endeavor to geo-reference a relatively permanent local object (e.g., power pole, boulder) as a site datum. All features will be described, photographed, and mapped to scale.

Resource Documentation

The archaeological monitor will record all newly identified isolates or sites within the APE and document all information that will be needed for Intermountain Antiquities Computer System (IMACS) site forms and monitoring logs, such as the location of artifacts and features within sites, landscape features, site datum points, and other pertinent data. All documentation will meet current BLM standards and will be included in the Project monitoring report.

Site data, features, roads/trails, and diagnostic artifacts will be georeferenced with a hand-held GPS device, with which UTM coordinates (Zone 11N, NAD83) will be secured to submeter accuracy (i.e., ±50 centimeters). Wooden stakes or other permanent datum markers will not be embedded as site markers; however, whenever possible monitors will endeavor to geo-reference a relatively permanent local object (e.g., power pole, boulder) as a site datum. All features will be described, photographed, and mapped to

scale. Manufacturing marks, embossing, and technological characteristics of bottles, cans, ceramics, and other materials will be documented and quantified as needed to distinguish chronological components.

If the find is determined to be an isolate, the archaeological monitor will:

- Document location coordinates recorded in UTM, the type and quantity of materials, the size and shape of the feature, any construction details, probable function, and any relationship to nearby cultural materials.
- Consult with the PI/PM, if necessary, to determine whether the isolate is a unique or unusual (e.g., temporally diagnostic) historic or precontact artifact that is in imminent danger due to its proximity to a road, wash, or other activity such as looting. If so, the BLM shall be notified and will direct whether the find should be collected or moved out of the immediate area.
- Communicate that work can again proceed—communication with the BLM is not necessary for most isolated resources.

If the find meets the criteria for a site as defined above, then the archaeological monitor will:

- Secure the location and halt work briefly as necessary to examine soils and possible archaeological features.
- Coordinate with Arevia on-site personnel to divert work around the discovery of any potentially significant archaeological resource until a qualified archaeologist can assess the significance of the find.
- Notify the archaeological PI/PM, who will in turn notify appropriate Project personnel. The BLM, ASM, and Arevia will be notified of all discoveries, except for classes of properties jointly determined by the BLM and SHPO as not eligible for the National Register (e.g., isolates or "Unassociated Pre-contact or Historic Artifact Scatters") as defined in Part 1, Section V.B.1(a) of the Nevada BLM Statewide Protocol Agreement (BLM 2014). These exceptions are defined below under *Categorical Determinations: Classes of Properties Not Eligible for the National Register* (see page 13). If there is any question whether a resource meets these definitions, the PI/PM will notify and consult with the BLM.
- Record geospatial data and other information necessary to complete IMACS site forms and maps.
- Follow instructions from the PI/PM and/or BLM regarding return to work (i.e., NTP) after the site documentation and evaluation is complete.

Evaluation for National Register Eligibility

The BLM will evaluate post-review discoveries for National Register significance according to the criteria for evaluation found in 36 CFR § 60.4 and National Register Bulletin 15, including Traditional Cultural Properties (TCPs) and properties of religious and cultural significance (National Register Bulletin 38). As appropriate, BLM will invite consulting parties to consult.

If the resource is more substantive or may be potentially recommended to be significant, the following procedures shall be implemented:

1. The PI/PM will notify the BLM no later than 24 hours following the time of discovery.

2. The PI/PM shall provide a National Register eligibility recommendation for the discovery to the BLM that will include a site record and a summary report of the testing operations, if appropriate. Evaluations of cultural resources will be made, if possible,

from the data collected during monitoring.

3. The BLM, within two (2) working days of receipt of the notification of the discovery, shall notify the SHPO, Tribes, and other federal agencies, as appropriate, of the discovery and will provide a National Register eligibility determination for the discovery.

4. The SHPO, Tribes, and other federal agencies, as appropriate, shall have seven (7) working days from receipt to comment on the BLM determination of National Register eligibility for the discovery. If no timely response is received, the BLM will finalize the determination.

5. If the BLM, in consultation with the SHPO, Tribes, and federal agencies, determines that a discovery is a historic property and cannot be avoided through project re-design, the BLM shall direct Arevia, through the PI/PM, to develop an historic properties treatment plan (HPTP) that is consistent with the *Secretary of Interior's Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-44742) (Standards) and that takes into consideration the ACHP's Section 106 Archaeology Guidance (2009; available online at www.achp.gov/archguide), and any other applicable guidelines or standards.

6. The BLM will review and comment on any or all draft HPTPs within thirty (30) calendar days of receipt.

7. The BLM shall provide comments on any or all draft HPTPs to the PI/PM, and the PI/PM shall revise any or all of the draft HPTPs to address the BLM comments within ten (10) calendar days of their receipt of those comments.

8. Upon BLM approval of any or all HPTPs, the BLM shall submit the draft HPTPs to the SHPO and appropriate Tribes or federal agencies for review.

9. The SHPO, and the Tribes or federal agencies, as appropriate, shall provide comments to the BLM within thirty (30) calendar days of receipt of any or all draft HPTPs. If no comments are received within the comment period, the BLM may finalize any or all of the draft HPTPs.

10. The PI/PM will address any comments provided by the consulting parties and supply final HPTPs to the BLM within ten (10) calendar days of their receipt of those comments.

11. Upon approval of a final HPTP by the BLM, the BLM shall provide final copies of the HPTPs to the SHPO, the Tribes, and federal agencies, as appropriate, and authorize Arevia to initiate the finalized HPTPs.

Curation of Archaeological Remains

Any materials gathered during construction shall be curated at the Nevada State Museum in accordance with the archaeological contractor's curation agreement for collections from BLM lands in Nevada.

6.3 INADVERTENT DISCOVERY OF HUMAN REMAINS

There is potential for the discovery of Native American human remains during Project construction and monitoring. Although such discoveries are not anticipated or considered highly likely in the Project area, such a discovery would be important to local Tribes. If human remains or fragmentary bones that are suspected to be human, associated and unassociated funerary objects, or sacred objects are found during

the Project, all work will cease immediately within 50 meters (165 feet) of the find, and the BLM District's Authorized Officer will be notified immediately via phone call and email.

Discoveries on public lands involving Native American human remains or funerary objects are governed by the Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001 et seq. and will follow the processes required under that law, including procedures for notification and consultation with Native American tribes. If the inadvertent discovery is located on private lands, the procedures required under SHPO's *Procedures for the Protection of Indian Burial Sites* and Nevada state law (NRS 383.150 to383.190) shall be followed.

Arevia (or its archaeological contractor) will also notify the appropriate county coroner in accordance with state and local laws regarding the discovery of human remains. Monitors will secure the area and move work to another location until appropriate Tribes and agencies make decisions according to applicable law. Any return to work (i.e., notice to proceed) after the discovery of human remains will be approved by the BLM in writing.

7. REPORTING SCHEDULE

Monitors shall provide daily updates to the PI/PM, who shall provide a biweekly summary to the BLM archaeologist. The BLM will be notified immediately of the discovery of new sites. Within 30 days after monitoring has been completed, Arevia (or its archaeological contractor) will draft a monitoring report detailing the implementation of this *Cultural Resources Monitoring and Post-Review Discovery Plan* for review and approval by the BLM. The draft monitoring report will summarize the activities monitored and will include a table of newly recorded sites and isolates, fieldwork dates, daily monitoring logs, and new and updated IMACS site records.

8. REFERENCES CITED

Bureau of Land Management (BLM)

2019 Guidelines *and Standards for Archaeological Inventory, 6th edition.* Bureau of Land Management, Nevada.

Stoner, Edward J.

2024 A Historic Properties Treatment Plan for the Libra Solar Project in Lyon and Mineral Counties, Nevada. BLM Report No. 3-2927-3.

Stoner, Edward J., and Andrea Catacora

2023a A Class III Cultural Resources Inventory of Approximately 6,669 Acres for the Libra Solar Project in Lyon and Mineral Counties, Nevada. BLM CRR-03-2927.

2023b Addendum 1 to a Class III Cultural Resources Inventory of Approximately 6,669 Acres for the Libra Solar Project in Lyon and Mineral Counties, Nevada. BLM CRR-03-2921-1.

2023c Addendum 2 to a Class III Cultural Resources Inventory of Approximately 6,669 Acres for the Libra Solar Project in Lyon and Mineral Counties, Nevada. BLM CRR-03-2927-2.

White, William G., Ronald M. James, and Richard Bernstein (editors)

1991 *Nevada Comprehensive Plan* (2nd edition). Nevada Division of Historic Preservation and Archaeology, Carson City.