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MEMORANDUM

Historic Resource Commission meeting of March 12, 2020

TO: Historic Resource Commission **Item E-3**

FROM: Hope Sullivan, AICP
Planning Manager

DATE: March 3, 2020

SUBJECT: E-3 HRC-2020-0001 For Possible Action: Discussion and possible action regarding a Section 106 Technical Report prepared for the Federal Aviation Administration (FAA) in coordination with the Carson City Airport Authority for fence improvements at the Carson City Airport, located on property zoned Public Regional (PR), located at 2600 College Parkway, APN 005-011-01.

This item is before the Historic Resource Commission as a consulting agency. The proposed fencing is to be funded through a grant from the FAA. Consistent with Section 106 of the National Historic Preservation Act, due to the federal funding, an analysis of the potential impacts on cultural resources has been prepared. This report concludes that no historic properties will be affected by the fence project. The Commission will review the report and provide comment as a consulting agency.

A Section 106 review process is a component of the National Historic Preservation Act (NHPA) of 1966. Section 106 of NHPA requires each federal agency to identify and assess the effects their actions will have on historic and cultural resources. The federal agency will consider public views and concerns about historic preservation issues when making final project decisions.

Attachment
Letter Dated January 30, 2020 from the FAA to Hope Sullivan with attached Cultural Resources Inventory of Fence Improvements at the Carson City Airport.

U.S. Department
of Transportation
Federal Aviation Administration

Western-Pacific Region
Airports Division
Phoenix Airports District Office

3800 N. Central Avenue
Suite 1025, 10th Floor
Phoenix, AZ 85012

January 30, 2020

Ms. Hope Sullivan
Planning Manager
Carson City
108 East Proctor Street
Carson City, NV 89701

Subject: Airport Improvement Program Grant for the Proposed Perimeter Fence and Access Gate Improvement Project at Carson City Airport, Carson City, Nevada

Dear Ms. Sullivan:

The Federal Aviation Administration (FAA), in coordination with the Carson City Airport Authority (Sponsor), considered the effects on cultural resources of issuing a grant for fence improvements as required by Section 106 of the National Historic Preservation Act. The FAA found that this undertaking would result in **no historic properties affected**. We've provided this documentation and seek your concurrence.

Description of the Undertaking

The FAA proposes to fund this grant project as part of our mission to ensure a safe and efficient aerospace system. The Sponsor plans to replace and conduct maintenance on two miles of existing perimeter fence at Carson City Airport so that it meets current security standards. Approximately 10,200 linear feet of the existing four-foot-tall wire fence will be replaced in the same alignment with a six-foot-tall chain link fence with barbed wire on top. The airport is located at 2600 College Parkway, in Carson City, Nevada. It is situated south of Arrowhead Drive, east of Goni Road, and north of East College Parkway on the northeast side of Interstate 580 and north of U.S. Highway 50. The surrounding area is zoned for mixed commercial and residential use.

The direct area of potential effects (APE) covers a 25-foot wide corridor on the interior side of the existing fence line at the airport (**Enclosure 1**). The visual indirect APE is the area 0.25-miles around the fence line (**Enclosure 2**). The direct APE is located in Sections 3 and 4 of Township 15 North, Range 20 East, and Sections 33 and 34 of Township 16 North, Range 20 East on the Mount Diablo Baseline and Meridian and occurs on USGS's New Empire 7.5-minute quadrangle map.

Identification Methods and Results

In 2019, SWCA Environmental Consultants completed a cultural resources inventory for the fence line project. The report is titled *Cultural Resources Inventory at the Carson City Airport, Carson City, Nevada,* prepared by archaeologists Ashlee Younie and Sean McMurry, and dated April 2019 (**Enclosure 3**). During fieldwork, they identified one archaeological site (26OR595) and three isolated artifact occurrences in the direct APE (Page 30). Three previously recorded sites (26OR22, 26OR34, 26OR595) were not re-identified, one of which (26OR22) was previously collected. During background research, they identified two previously recorded historic-period resources in the indirect APE: a building or structure (B382), about which little is known, and Shaw's Hot Springs (B549), also known as

Carson Hot Springs. The Sponsor prepared a map showing the project location and the construction dates for the developments surrounding the airport (**Enclosure 4**).

Resource Evaluations

The FAA finds that Site 26OR595, a prehistoric chipped stone artifact scatter, located within the direct APE is ineligible for inclusion in the National Register of Historic Places (NRHP) under any criteria. The site does not contain signs of temporally diagnostic artifacts, datable features, or other datable material necessary for chronological control. The few artifacts and low artifact diversity make it difficult to assess its functionality and cultural affiliation. Thus, it lacks data to address important research questions pertaining to chronology, technology, settlement patterns, or subsistence systems.

The FAA notes that Carson Hot Springs located at 1500 Hot Springs Road (#040132) and inside the indirect APE is listed in the Nevada State Register of Historic Places (not the NRHP as mentioned in the inventory report). S.T. Smith developed the springs as a resort in 1879, and it has been continually used as such since. The resort consists of a club house, a dwelling, and bath house, which were built before 1907 or 1940 and modified over time. The FAA treats it as eligible for purposes of this consultation.

The FAA notes that the previously unevaluated historic-period building (B382) is plotted near the intersection of Nye Lane and College Parkway. The FAA treats it as eligible for purposes of this consultation.

Effect Finding

The FAA makes a finding of no historic properties affected for this undertaking. Carson Hot Springs is located 0.25 miles west of the project and its views of the fence would be blocked by existing buildings located along Wedco Way. The historic-period building (B382) is situated 0.13 miles south of the project and its views of the fence would be blocked by the 1970s residential development called Morningside Estates. Overall, we are not introducing a new element to the built horizon, we are increasing the height of an existing element by two feet plus the barbed-wire on top.

Please concur with our resource evaluations and effect finding. If you have any questions, please contact me at (602) 792-1066 or email at matthew.h.bilsbarrow@faa.gov.

Sincerely,

Matthew H. Bilsbarrow
Environmental Planner

4 Enclosures

cc. w/o enc. Mr. Kenneth Moen (kmoen@flycarsoncity.com)

CULTURAL RESOURCES INVENTORY OF FENCE IMPROVEMENTS AT THE CARSON CITY AIRPORT, CARSON CITY, NEVADA

Prepared for

Coffman Associates, Inc.
4835 E. Cactus Road, Suite #235
Scottsdale, Arizona 85254
Attn: Judi Krauss, AICP

Prepared by

Ashlee Younie, M.A., RPA and Sean McMurry, Ph.D., RPA

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SWCA Project No. 53853

SWCA Cultural Resources Report No. 19-218

April 2019

Enclosure 3

Enclosure 2

EXECUTIVE SUMMARY

In February 2019, Coffman Associates, Inc., contracted with SWCA Environmental Consultants (SWCA) to complete a cultural resources inventory for fence line improvements at the Carson City Airport. The cultural resources inventory was needed for approximately 2 miles of existing fence on the borders of the Carson City Airport prior to fence replacement and maintenance (the Project). Coffman Associates, Inc., assists the Carson City Airport Authority (CCAA) with carrying out their Master Plan (March 2001). The CCAA's Master Plan is funded in part by Section 505 of the Federal Aviation Administration's (FAA's) Airport and Airway Improvement Act of 1982, as amended; which necessitates a cultural resources inventory in support of United States Code 300108, commonly known as Section 106 of the National Historic Preservation Act of 1966 (Section 106). The FAA is designated as the lead agency for Section 106 compliance of the Project.

The FAA identified the area of potential effects (APE) for direct impacts (direct APE) as a 25-foot-wide survey corridor on the inside of an existing fence line at the Carson City Airport. The FAA identified a visual indirect APE (indirect APE) as the area within 0.25 mile from the direct APE. The direct and indirect APEs will be collectively referred to as the Project Area.

The objectives of the inventory were to develop a context for resources expected in the Project Area, primarily the prehistoric occupation of Eagle Valley and the Carson City Airport; conduct a survey in the direct APE to a standard acceptable to the Nevada State Historic Preservation Office; and evaluate any identified cultural resources for inclusion on the National Register of Historic Places. With this information in place, the subsequent objectives were to identify the proposed changes to the Project Area and evaluate their direct effects on the historic integrity of properties eligible for the National Register of Historic Places within the direct APE, if any, and their indirect effects on any cultural resources within the indirect APE.

SWCA recommends a finding of *no historic properties affected* for the direct APE and *no historic properties affected* for the indirect APE.

CONTENTS

Appendices

Figures

Tables

PROJECT DESCRIPTION AND AREA OF POTENTIAL EFFECTS

In February 2019, Coffman Associates, Inc., contracted with SWCA Environmental Consultants (SWCA) to complete a cultural resources inventory for fence line improvements at the Carson City Airport. The cultural resources inventory was needed for approximately 2 miles of existing fence on the borders of the Carson City Airport prior to fence replacement and maintenance (the Project). Coffman Associates, Inc., assists the Carson City Airport Authority (CCAA) with carrying out their Master Plan (March 2001). The CCAA's Master Plan is funded in part by Section 505 of the Federal Aviation Administration's (FAA's) Airport and Airway Improvement Act of 1982, as amended; which necessitates a cultural resources inventory in support of United States Code 300108, commonly known as Section 106 of the National Historic Preservation Act of 1966 (Section 106). The FAA is designated as the lead agency for Section 106 compliance of the Project.

In this report, SWCA Environmental Consultants (SWCA) considers both the direct and indirect effects to cultural resources that could potentially result because of the Project. The FAA identified the area of potential effects (APE) for direct impacts (direct APE) as 25-foot-wide survey corridor on the inside of an existing 1974 fence line at the Carson City Airport. The FAA identified a visual indirect APE (indirect APE) as the area within 0.25 mile from the direct APE. This indirect APE was defined based on-site visits to the property and previous consultation between the FAA and the SHPO on other projects at the Carson City Airport. Maps depicting the direct and indirect APEs are in Appendix A. The direct and indirect APEs will be collectively referred to as the Project Area.

The direct APE is located in Sections 3 and 4 of Township (T) 15 and 16 North (N), Range (R) 20 East (E), and Sections 33 and 34 of T16N, R20E, Mount Diablo baseline and meridian on the U.S. Geological Survey (USGS) New Empire 7.5-minute quadrangle (Figure 1). The Project is centered around the Carson City Airport, located at 2600 College Parkway, Carson City, Nevada, 89706. The Project is located south of Arrowhead Drive, east of Goni Road, and north of East College Parkway in Carson City on the northeast side of Interstate 580 and north of U.S. Highway 50 (U.S. 50) The area is zoned for mixed commercial and residential use.

In general, the Project may indirectly impact cultural resources through visual, auditory, and atmospheric effects. For the Project, auditory and atmospheric effects would be intermittent and/or temporary and confined generally to the work areas within the direct APE. The maximum height of any permanent visual Project disturbances will be the height of the fence maintenance and new fence construction, which will be no greater than 10 feet. The Project Area is abutted by residential neighborhoods to the west, north, and south.

SWCA's cultural resources survey meets the general requirements of the Guidelines and Standards for Archaeological Inventory (revised January 2012), as published by the Bureau of Land Management (BLM), Nevada State Office, and accepted by the Nevada State Historic Preservation Office (SHPO).

SWCA staff involved in the archaeological assessment include project manager Victor Villagran, crew chief Ashlee Younie, who meets the Secretary of the Interior's Professional Qualification Standards (the Standards) for Archaeology and whose tasks included research, survey, and report support and writing; Mary Ann Vicari who meets the Standards for Archaeology and whose tasks included report support and GIS; Principal Investigator Sean McMurry, who meets the Standards for Archaeology and whose tasks included project management and report support and writing; and cultural resources specialist Nathan Rough, who assisted with survey.

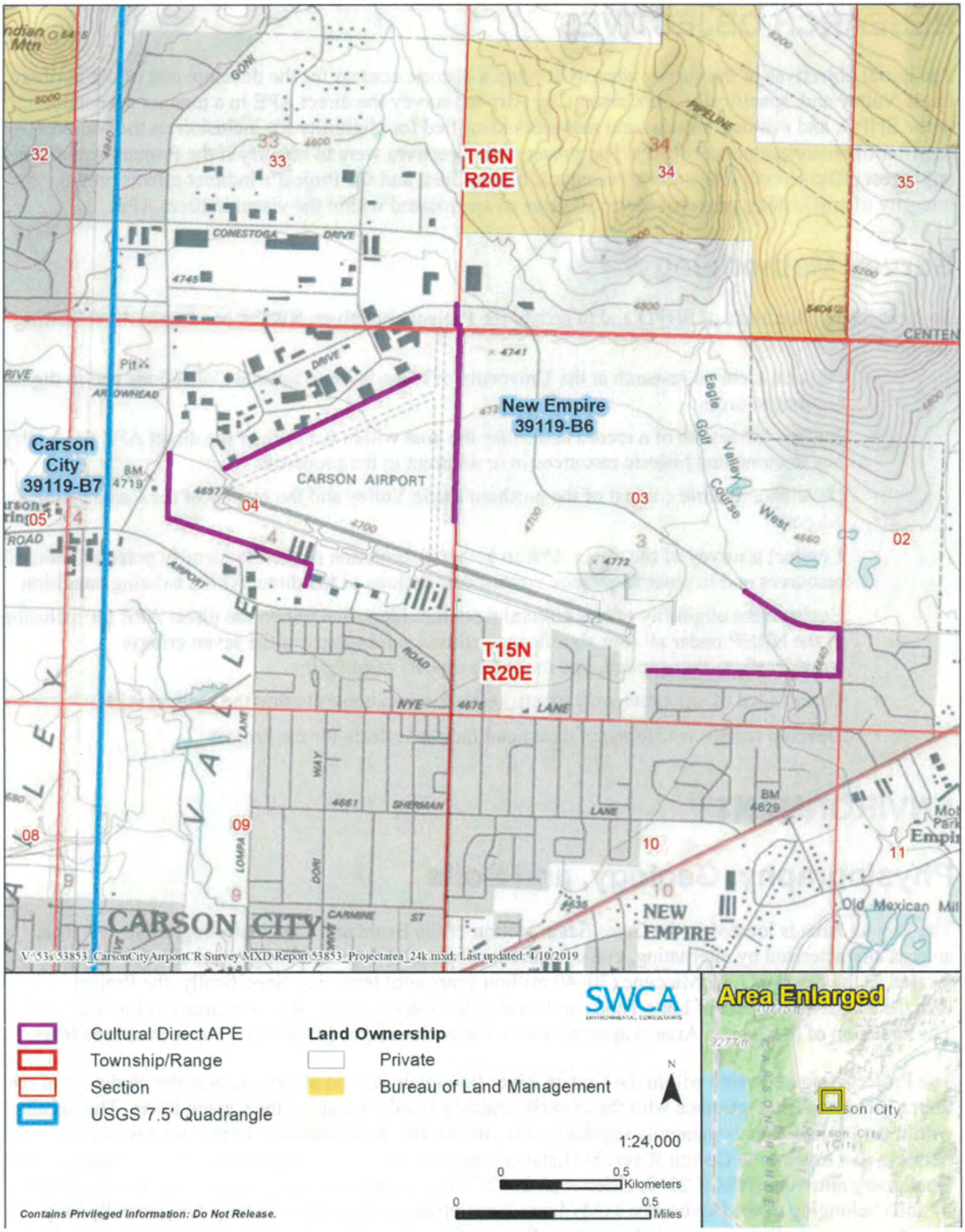

Figure 1. Project Area location.

RESEARCH OBJECTIVES

The initial objectives of the survey were to develop a historic context for the development of the northern Eagle Valley and, specifically, the Carson City Airport; survey the direct APE in a manner acceptable to the SHPO; and evaluate any cultural resources identified for eligibility for inclusion on the National Register of Historic Places (NRHP). The subsequent objectives were to identify if the Project would have any direct effects to eligible cultural resources, if identified, and the Project's indirect effects on the integrity of any historic properties over 50 years of age located within the visual indirect APE.

Survey Methodology

To meet the requirements of SHPO and to satisfy the Project objectives, SWCA conducted the following tasks.

- Perform archival research at the University of Nevada Reno Special Collections and in digital archival sources
- Review the results of a record search for the area within 0.5 mile of the direct APE to identify any documented historic resources in or adjacent to the properties
- Develop a historic context of the northern Eagle Valley and the history of the Carson City Airport
- Conduct a survey of the direct APE to gather information needed to identify potential cultural resources and in order to prepare written descriptions of the direct APE's existing condition
- Evaluate the eligibility of any cultural resources identified within the direct APE for inclusion in the NRHP under all four significance criteria, against any of the seven criteria considerations that applied, and the seven aspects of integrity
- Create a list of any previously identified cultural resources within the indirect APE
- Develop recommendations of direct and indirect effects for the Project

ENVIRONMENT

Physiography, Geology, and Soils

The Project Area is located in the Great Basin section of the Basin and Range physiographic province, an area characterized by alternating, evenly spaced, subparallel mountain ranges and alluvial basins formed as the result of Late Miocene (30–40 million years ago) tectonics. Specifically, the Project is in the Eagle Valley east of Lake Tahoe and west of the Carson River, where drainage is internal. The elevation of the Project Area is approximately 1,436 meters (m) (4,700 feet) above mean sea level.

The Project Area is located within the Carson River floodplain and on alluvial fans at the piedmont of the Sierra Mountains that interface with the easterly draining floodplain along the Carson River. The terrain within the Project Area is generally regular on the alluvial fan, with occasional ephemeral washes trending east toward the Carson River. Surficial deposits in the Project Area consist of Late Tertiary and Quaternary alluvium (NRCS 2019; Zeier et al. 2002:7–10). Landforms in the project area are dominated by soils belonging to the Haybourne sandy loam association. Soils in these settings are generally very deep to shallow well-drained soils formed in alluvium from igneous and metamorphic sources creating stratified sand and gravel to loam profiles. Soils vary from sandy and gravelly to sandy loam textures. Also present in the Project Area are Indiano variant gravelly fine sandy loams (NCRS 2019).

The current climate of the Project Area is characterized by its high desert location, within the Sierra Nevada rain shadow, which causes wide seasonal and daily temperature fluctuations. Historic climate records indicate that the mean annual precipitation in Project Area the Project Area is approximately 19 inches, most of which falls during the winter months. The average annual temperature is 52 degrees Fahrenheit (°F). The maximum average annual temperature is 66°F with the highest temperatures typically occurring in July. The mean annual low temperature is 37°F, with the lowest temperatures typically occurring in January (PRISM Climate Group 2019).

Flora and Fauna

The Project Area is within the Upper Sonoran life zone. Currently, the Project Area is dominated by Inter-Mountain Basin Big Sagebrush Shrubland. Areas to the north, including the Virginia Mountain Range, contain supports Inter-Mountain Basins Big Sagebrush Shrubland and limited pockets of Great Basin Xeric Mixed Sagebrush Shrubland (USGS 2004).

Sagebrush (*Artemisia* spp.), and Mountain mahogany (*Cercocarpus* spp.) are dominant in non-disturbed areas in the Project Area. Greenleaf manzanita (*Arctostaphylos patula*), blackbrush (*Coleogyne ramosissima*), Gambel oak (*Quercus gambelii*), Sonoran scrub oak (*Quercus turbinella*), and bunch grasses, including needle-and-thread grass (*Hesperostipa comate*), Idaho fescue (*Festuca idahoensis*), bluebunch wheatgrass (*Pseudoroegneria spicata*), Great Basin wild rye (*Leymus cinereus*), and muttongrass (*Poa fendleriana*), may be present. Rabbitbrush (*Chrysothamnus nauseosus*) and cheat grass (*Bromus tectorum*) are also common, particularly in areas that have been disturbed, burned, or previously cleared. Other plants within the Project Area include antelope bitterbrush (*Purshia tridentata*), desert peach (*Prunus andersonii*), ephedra (*Ephedra* spp.), and Indian ricegrass (*Oryzopsis hymenoides*) (Branch and McMurry 2012; USGS 2005; Zeier et al. 2002:10–12).

Zeier et al. (2002), citing Hagerty (1970), provide a comprehensive overview of mammals known to be present currently in the Eagle Valley region. Their lists include small mammals such as jackrabbit (*Lepus californicus*), cottontail (*Sylvilagus nuttallii grangeri*), ground squirrel (*Spermophilus* spp.), kangaroo rat (*Dipodomys* spp.), wood rat (*Neotoma* spp.), long-tailed weasel (*Mustela frenata nevadensis*), badger (*Taxidea taxus taxi*), skunk (*Mephitis mephitis*), kit fox (*Vulpes velox*), and porcupine (*Erethizon dorsatum epixanthum*). Various species of skunk, beaver, bats, myotis, voles, mice, gopher, squirrel, chipmunk, shrew, and mole are also present (Smithsonian Institution 2013). Larger mammals likely were more common within the Project Area historically before growth and urban encroachment of Carson City, and include coyote (*Canis latrans lestes*), bobcat (*Lynx rufus baileyi*), prong-horned antelope (*Antilocapra americana*), mountain sheep (*Ovis canadensis californiana*), mule deer (*Odocoileus hemionus*), black bear (*Ursus americanus*), mountain lion (*Felis concolor*), and feral horse (*Equus ferus*) (Branch and McMurry 2012; Hagerty 1970; Smithsonian Institution 2013; Zeier et al. 2002). Reptiles include rattlesnake (*Crotalus oreganus lutosus*), bull snake (*Pituophis catenifer deserticola*), and small lizards (Robinson et al. 2007). Birds, such as mountain quail (*Oreortyx picta*), sage grouse (*Centrocercus urophasianus*), and mourning dove (*Zenaida macroura*), and various raptors, including hawks and eagles, are also known to be present (Branch and McMurry 2012; Zeier et al. 2002:12).

PREHISTORIC OVERVIEW

The Project is in the western Great Basin, which includes western Nevada as well as a portion of California along the Sierra Nevada Mountains. The cultural chronological framework for this area has been divided into three subregions on the basis of culture history and ecology: East Slope, Lahontan Basin, and Central Great Basin (Elston 1982, 1986; also see Elston 2002). The East Slope Subregion, also

referred to as the Sierra Front, includes the eastern slope of the Sierra Nevada and the adjacent western Great Basin bordering California and Nevada. The current project is encompassed within the general chronological framework for the Sierra Front, which is divided into the following periods: Pre-Archaic, Early Archaic, Middle Archaic, and Late Archaic.

A cultural chronology specific to the Sierra Front presented by Zeier et al. in 2002 for the Eagle Valley area provides the basic framework for chronology in the Project Area. As noted by Zeier et al. (2002:97–98), McGuire (2000; also see Hildebrandt and King 2000) proposed an additional framework as a result of a recent large-scale study extending from northwestern California to Reno; and this framework is referenced as the California–Great Basin Interface chronology.

Pre-Archaic (11,500–8000 B.P.)

During the terminal Pleistocene and Early Holocene, Pre-Archaic sites within the western Great Basin are mostly diffuse scatters of lithic tools and debitage (Elston 1986:137). They are mainly surface finds; few of the sites are buried. The artifact assemblages recovered from Pre-Archaic sites include stemmed and concave base projectile points, large bifacial knives, crescentic objects, choppers, gravers, punches, and a variety of scrapers with steep, well-formed edges. Implements used for grinding seeds are found in late Pre-Archaic assemblages from the northern and eastern portions of the Great Basin but are rare or absent within the western part of the Great Basin, including the Sierra Front (Elston 1986:137, 2002:14).

The traditional view of terminal Pleistocene Paleoindian hunter-gatherers has focused on the hunting of megafauna, although more attention has been given recently to small game acquisition by late Pleistocene foragers. The frequent association of larger sites in the interior of the Great Basin on valley margins along rivers and in marshy settings on floodplain terraces and former deltas adjacent to shallow lakes suggests the Pre-Archaic adaptive strategy was oriented toward wetlands and lacustrine resources (Elston 1986:137; 2002:14). In contrast, Pre-Archaic sites in upland settings typically have very small scatters of isolated projectile points. Overall, the archaeological record in the Great Basin suggests that small groups of hunter-gatherers during the Pre-Archaic were highly mobile, and unlike later Holocene cultures, they did not construct permanent structures, store resources, or grind seeds.

The Tahoe Reach phase is the regional expression of the Pre-Archaic within the Sierra Front (Elston et al. 1977). According to Elston (2002:14), there is no archaeological evidence for the diet of hunter-gatherers during this time period within this region. In other parts of the western Great Basin, however, the remains of rabbits, large game (including bison), birds, fish, and shellfish indicate their diet was relatively broadly based. Although the majority of known Pre-Archaic sites occur in lowland wetland settings, a high-altitude site (4Pla164) on Squaw Valley Creek with a radiocarbon date of 8130 B.P. demonstrates Paleoindian hunter-gatherers also exploited the natural resources of the Sierra Nevada, presumably on a seasonal basis.

Great Basin environments changed dramatically at the close of the Pleistocene. The extent of vast Pleistocene lake systems, like Lake Lahontan, was considerably reduced, posing new challenges for local hunter-gatherers. According to Elston (2002:15) and Zeier et al. (2002:101), the most likely locations for buried Pre-Archaic sites in the vicinity of the Eagle Valley area are in the lowlands near Artesia Lake, the ancient beaches of Lake Wellington in Smith Valley, and the Pleistocene-age terraces along the Carson and West Walker rivers in the Carson, Dayton, and Smith Valleys. Jennings (1964) views the desiccation at the end of the Pleistocene as the cause of the subsistence shift to a regional "Desert Culture" or "Desert Archaic."

Early Archaic (8000–5000 B.P.)

Jennings (1957) formulated the concept of the Desert Culture—perceived as a very stable adaptation of small, mobile hunter-gatherer groups throughout the Great Basin—from his excavations at Danger Cave in Utah. Additional scholars of the Early Archaic in the Great Basin have documented a shift in exploitation of a more diverse resource base compared to the Pre-Archaic with an increase in the number of sites or their visibility as hunter-gatherer groups became less mobile and relied more on plant foods and small game (e.g., Aikens and Madsen 1986; Elston 1986). Ground stone implements and large storage pits and/or pit houses were identified at sites in the Surprise Valley dating to 6500 B.P. (O'Connell 1975). As the climate during the Early Holocene became warmer and drier, it appears that the exploitation of wetland resources intensified during the Early Archaic in general.

Within the Sierra Front, the regional expression of the Early Archaic—the Spooner phase—has relatively little archaeological evidence and is poorly understood (Elston 2002:15). Although large side-notched projectile points (i.e., Northern Side-notched) are representative of the Early Archaic north of Honey Lake between 7,000 and 5,000 years ago (McGuire 2000), these projectile point styles are uncommon to the south (Elston 2002:15). No temporally diagnostic or other time-sensitive artifacts have been recovered that may be attributed to the Spooner phase (Elston et al. 1994).

The most likely locations for the recovery of Spooner phase cultural material are large springs, such as Hobo Hot Springs, Nevada Hot Springs, and Saratoga-Dangberg (Elston 2002:15). Large Early Archaic sites, for example, are associated with hot springs marshes in Surprise Valley dating to 6500 B.P. (O'Connell 1975), and at springs in the northern Great Basin (Fagan 1974).

Middle Archaic (5000–1300 B.P.)

During the Middle Archaic, western Great Basin hunter-gatherer groups exploited a wide range of resources in the lowlands and uplands, including seeds and small and large game. In addition to stone tools and faunal remains, artifacts include manos and metates, and bedrock grinding slicks. The human population appears to have continued to be relatively small, with a high degree of residential mobility, although reoccupation of ecological "sweet spots" increased the degree of visibility of habitation sites during this period (Elston 2002:16). Ecological "sweet spots" included favored locales, such as Hobo Hot Springs and Saratoga Hot Springs, which were occupied during the long Sierran winters. Reoccupation of these and other key locales, perhaps yearly, resulted in a rich accumulation of artifacts and the creation of habitation middens. Although house pits, storage pits, and burials were previously thought common components of Middle Archaic sites (Elston 1986), scholars now realize these features are relatively uncommon during this period (Elston 2002:16; Zeier and Elston 1992).

Within the Sierra Front, the regional expression of the Middle Archaic—the Martis Complex—was initially defined on both the western and eastern sides of the Sierra Nevada (Elsasser 1960; also see Elston 1971; Elston et al. 1977; Heizer and Elsasser 1953). Characteristics of this well-documented Martis Complex include an emphasis on hunting and seed collecting. Projectile points were large, heavy, and roughly flaked; they also varied in form. An abundance of distinctive tool forms included finger-held drills or punches, large biface blades and cores, spokeshave-notched tools with a concave edge, and basalt pressure-retouched flake "scrapers."

For the manufacture of flaked tools, there was an apparent preference for using local basalt other than chert or obsidian (Elsasser 1960; Heizer and Elsasser 1953). Research in the Truckee Meadows area indicates artifact classes characteristic of Martis Complex assemblages include bifaces, large points, perforators, and retouched flakes (Moore and Burke 1992:19–21). Most of the bifaces appear to have

been used as scrapers, with tool stone preference ranging from Steamboat sinter, basalt, cherts, and nonlocal obsidian, to local obsidian. Nonlocal obsidian found in the Eagle Valley was obtained along a north-south trade route from sources such as Mt. Hicks and the Pine Grove Hills. Although tool stone preference in the Truckee Meadows area indicates Steamboat sinter was preferred over basalt, Elston (2002:16) states that "the preferential (not exclusive) use of basalt for projectile points should be diagnostic" of the Martis Complex.

The Martis Complex is divided into two phases. Diagnostic projectile points of the Early Martis phase include Martis Contracting Stem, Martis Split Stem, and Steamboat. Ranging in age between 5,000 and 3,000 years ago, the Early Martis phase roughly coincides with the Gatecliff phase in the central Great Basin to the east and the Windmiller Pattern to the west in California's Sacramento Valley, Sacramento–San Joaquin Delta, and San Francisco Bay region. Diagnostic artifacts of the Late Martis phase include Martis Corner-notched, Elko Corner-notched, and Elko Eared projectile points. Ranging in age between 3,000 and 1,300 years ago, the Late Martis phase roughly coincides with the Berkeley Pattern to the west in California's Sacramento Valley, Sacramento–San Joaquin Delta, and San Francisco Bay region.

The most likely locations for the recovery of Martis Complex cultural material within the Eagle Valley area would be preferred locales or "sweet spots" such as hot springs with midden accumulations formed by repeated reoccupations (Elston 2002:16). In general, upland sites would represent specialized activity areas for hunting or small seed gathering. Because pinyon pines were not established in foothills and mountains surrounding the Eagle Valley area until after 1,300 years ago, it is likely that none of the sites dating to the Martis Complex would represent pinyon gathering camps, green cone roasting features, or pinyon caching features.

Late Archaic (1300–150 B.P.)

The Late Archaic is characterized by the introduction of the bow and arrow, as evidenced by small, light projectile points, and an increase in diet breadth that included a more intensive use of plants and fish and a reduced emphasis on large game (Elston 1986, 2002:16–17; Elston et al. 1994; Zeier and Elston 1986). Because pinyon pines were now well established in the Great Basin, plant use during this period included the procurement and processing of green cone pine nuts. Along with a somewhat less elaborate lithic technology and the reduction in tool size, there was a shift in tool stone preference from basalt to cryptocrystalline material. Residential mobility was reduced during the Late Archaic and there is evidence of habitation at winter base camps or field camps of locales for which there is no earlier evidence of occupation (e.g., between "sweet spots"). The majority of these changes were described by Heizer and Elsasser (1953) for the Kings Beach Complex (also see Elston, et al. 1977).

The more intensive use of plants during the Late Archaic is indicated by the changes in milling equipment, including bedrock mortars, pestles, and hullers (Elston 1979, 1986, 2002:17). Ethnographic studies indicate that hullers, which are pairs of thin flat stones intermediate in size between manos and metates, were used for cracking nut hulls (Riddell 1960; Wheat 1967). In the archaeological record, radiocarbon ages for hullers, frequently recovered from cache pits, range between 1080 and 820 B.P. This shift in milling technology may be related to the advent of pinyon processing.

As summarized by Elston (2002:17), the availability of pinyon nuts after 1300 B.P. in the western Great Basin may be related to the changes in residential locations and long-term field camps evidenced by the Late Archaic archaeological record. Long-term field camps for nut procurement appear for the first time in the archaeological record. Long-term camps include pits or stone rings (generally 2–5 m in diameter), as well as green-cone roasting and caching pits in the Pine Nut Mountains. Excavations of cache pits, house pits, hearths, and other features during this period suggest a reduction in residential mobility.

The catalyst for the shifts in technology, subsistence, and settlement appearing in the Late Archaic here and in other parts of the Great Basin may include one or more of the following: climate change (warming and drying); the northward movement of pinyon pine to this area; the combined effect of climate change and the arrival of pinyon on the montane ecosystems; regional population growth and ensuing demographic pressure; and immigration and replacement of native populations (Numic expansion, see Bettinger and Baumhoff 1982; Elston 2002:17; Lamb 1958; Rhode and Madsen 1994). Although the archaeological record cannot be used to detect the replacement of the local population by Numic-speaking peoples into the region from the Mojave Desert area because both used the same technology, recent DNA analysis of the remains recovered from Stillwater Marsh (Kaestle et al. 1999) supports this hypothesis. The genetic data indicate the remains are more like Yuman, Penutian, and northern Hokan (Achomawi/Atseguewi) than the Northern Paiute, the historic occupants of the marsh. Combined with radiocarbon dates, the genetic evidence indicates this replacement occurred after 600 years ago, or 700 years after the start of the Late Archaic.

Nonlocal obsidian from sources, such as Mt. Hicks and the Pine Grove Hills, were traded in the Eagle Valley along north-south routes during the Late Archaic. Evidence of marine shell beads suggest groups in the Eagle Valley were part of a prehistoric trade network in the western Great Basin since the Early Archaic, originating across the Sierra Nevada in California (Hughes and Bennyhoff 1986).

Applicable to the Project Area, the Kings Beach Complex is divided into two phases: Early Kings Beach and Late Kings Beach. Diagnostic projectile points of the Early Kings Beach phase include Rosegate and Gunther series points. Ranging in age from between 1,300 and 700 years ago, the Early Kings Beach phase may represent the initial Washoe ethnographic pattern (Elston 1971). Diagnostic projectile points of the Late Kings Beach phase (700–150 B.P.) are the Desert series (Drews 1986; McGuire 2000; Zeier and Elston 1986).

ETHNOHISTORIC PERIOD

The Project Area is within an area historically occupied by the Washoe primarily and the Northern Paiute to the east. Ethnographic data on these groups discussed in Rucks (2002) and Bengston (2002), among other sources, and are summarized here.

Washoe

The territory of the Washoe included the Lake Tahoe Basin and the crest of the Sierra Nevada mountains around Lake Tahoe between Honey and Mono Lakes, extending on the east through the Carson, Eagle, and Washoe Valleys to the Pine Nut Mountains on the western edge of the Great Basin (d'Azevedo 1986:467–468). Their language is an isolate, with no recognizable relationships to the dominant Numic language family speakers to the east or any of the Penutian language stock Native American groups to the west (Mithun 2001:557). Neighboring groups included the Maidu to the north, the Northern Paiute to the east, the Nisenan to the west, and the Miwok to the south and southwest.

There are little or no records of the Washoe until after the 1849 California gold rush and 1858 Nevada silver strike because of their remoteness in the high Sierra. Because the Washoe stayed away from early settlers, the bulk of our information begins around the turn of the twentieth century. Since that time, considerable ethnographic work with the Washoe has been accomplished, continuing to the present day (d'Azevedo 1986:498; Downs 1966:3).

The Washoe separated themselves into "local groups" that inhabited various ranges in the mountain regions (d'Azevedo 1986:470). The groups were made of "a cluster of closely related households, sharing the same or nearby winter camps and identified with its own leader" (d'Azevedo 1986:483). Local groups and sometimes neighboring tribes jointly used resource collecting areas, which extended outward from the Washoe core area. These areas were large, because they depended on the seasonal availability of food resources within the relatively dry Great Basin and in three major altitudinal ecological zones on the eastern and western slopes of the Sierra Nevada Mountains. The territories of six of the 10 known local groups were fully within California or extended into it.

Permanent winter villages were established by local groups on high ground near springs and rivers, usually at the nexus of several ecological zones. Individual, circular houses were usually 12 to 15 feet in diameter, made of poles interlocked at the top like a cone. The sides were covered with bark slabs or thatched with grass, tule, and willow (d'Azevedo 1986:479–481). Temporary summer dwellings were dome-shaped and thatched with grass and tule. Unlike the tribes to the west, the Washoe did not construct communal sweat lodges, dance houses, or granaries. The Washoe practiced a variety funeral methods, including cremation (Kroeber 1925:573), tree or scaffold exposure, burial under logs, or burial in remote places (d'Azevedo 1986:488).

Local group households usually consisted of extended, multigenerational families (d'Azevedo 1986:470). A headman was chosen from among the households, often with a hereditary leadership background, and frequently had marriage connections with numerous other local groups. Additional political roles among the Washoe included war leaders and the head of the communal rabbit hunt. In historic times, under Euro-American influence, a headman might become the spokesman for several groups.

Washoe territory provided them with a rich variety of local food resources, and groups also dispersed as much as 20 to 40 miles in any direction outside their core area to collect seasonally available foods (e.g., acorns, pine nuts, spawning fishes) (d'Azevedo 1986:472–479). Trout, suckers, tui chub, white fish, and other fish were caught in large numbers from numerous lakes, including Tahoe, Mono, Walker, Pyramid, and Honey lakes, as well as the rivers and creeks feeding these lakes, and dried for later use. Although mule deer, antelope, and mountain sheep were the primary big game, the relative abundance of rabbits and hares made them more important. Porcupine, beaver, chipmunks, squirrels, gophers, woodchucks, badgers, and birds were also eaten, but reptiles were strictly avoided. Insects, such as locusts and grasshoppers, provided a highly nutritious supplement to the diet.

Because the spring growing season was short in the high elevations of the Washoe core area, the community dispersed widely to make effective use of harvesting locations (d'Azevedo 1986:473; Downs 1966:25–35). Acorns were the main staple for the western and northern groups, whereas pine nuts filled that role in the south and east. More than 170 plants were used, including several grass species; sunflower, wild mustard, wild rye, pigweed, and other plant seeds; lily, wild onion, bitterroot, tule, and cattail bulbs and roots; three species of "Indian potatoes"; a variety of berries (elderberry, chokecherry, buckberry, serviceberry, currants, wild plum, manzanita, gooseberry, and strawberry); greens and shoots (watercress, miner's lettuce, and wild rhubarb); and mushrooms.

To gather and collect food resources, the Washoe used a wide array of tools, implements, and enclosures (d'Azevedo 1986:477–478). These included bows and arrows, traps and snares, nets, and rock blinds for hunting land mammals and birds; and duck and other shaped decoys for hunting waterfowl. Communal hunting drives were used to take both large and small mammals, using large nets and clubs. Snowshoes were made for winter hunting trips. Cedar bark and tule rafts were used for lake fishing and reaching bird eggs along the banks. Woven tools—seed beaters, burden baskets, and carrying nets—and sharpened digging sticks were used to collect plant resources.

The Washoe processed and cooked food resources with a variety of tools, including baskets, wooden fire pokers, paddles for stirring mush, and implements for lifting hot stones into cooking baskets. Bountiful harvests of unprocessed acorns and pine nuts were cached in the family-held groves where they were collected. Around Honey and Pyramid lakes, the Northern Paiute and northernmost Washoe groups jointly used acorn gathering and fishing areas. Trade was more frequent among Washoe groups and the Northern Paiute, but the Washoe also acquired acorns, seashells, and skins from the Wintu, and exported salt, obsidian, pine nuts, and rabbit skins to the Maidu (d'Azevedo 1986:471). The Washoe occasionally traveled to the Pacific coast for mussels and other shellfish (Downs 1966:36–37).

External relations with many Native American groups were not always friendly. There were frequent clashes when Washoe groups encountered the Sacramento River Valley Miwok, Maidu, and Nisenan in the foothill gathering locales, because each claimed the same resource areas. Conflicts have also been recorded with the Konkow to the southwest and the Atsugewi and Achumawi to the northwest; the Washoe would have had to cross Maidu and Northern Paiute lands to reach these groups (d'Azevedo 1986:469).

The Washoe had little or no contact with Europeans, except for the occasional fur trapper, until the 1849 gold rush and the 1858 silver strike in Virginia City, Nevada, brought miners and settlers through their territory. Even after this, there is little mention of the Washoe in settler accounts for several years because they moved their camps away from Euro-American immigrants. Following attempts to drive off settlers, and facing increasing attacks by Paiutes who had acquired guns and horses, many Washoe sought accommodation with ranchers and farmers who had appropriated their lands (d'Azevedo 1986:494). The Washoe soon were prevented from fishing in Lake Tahoe and other prime areas by Euro-American commercial fisheries, and loggers cut down the pinyon pine forests. Faced with such difficulties, many Washoe participated in the Ghost Dance of the 1870s, a religious movement that diffused among Great Basin native peoples and prophesized an end to Euro-American expansion. Later, the Peyote Cult religion gained widespread popularity and is now organized in the form of the Native American Church.

By 1859, the Washoe were urged to move to proposed reservations at Pyramid and Walker Lakes with the Paiutes, but Washoe leaders refused to take their people to the homeland of a tribe that was now their enemy. Between 1887 and 1917, the federal government, the state of Nevada, and sympathetic Euro-Americans set aside small parcels of land for the Washoe, in mostly worthless land, including Dresslerville Colony, Reno-Sparks Colony, and Carson Colony in Nevada. In 1936, the Washoe Tribe of Nevada and California was formed under regulations of the 1934 Indian Reorganization Act and started taking actions on their own behalf. They submitted land compensation claims to the Indian Claims Commission along with other California and Nevada tribes and received a monetary award in the 1970s, which the Washoe invested in lands and businesses (d'Azevedo 1986:497).

Although the Washoe escaped the waves of infectious epidemics encountered by California coastal and valley tribes, and avoided direct contact with Euro-American immigrants, the miners and settlers affected their traditional collecting, hunting, and fishing areas heavily. As a consequence, their numbers were reduced by 1910 to perhaps 800 from a pre-Contact population estimated at 1,500 (Kroeber 1925:570), As of 1984, the Washoe estimated a population of 1,530 on the tribal rolls (d'Azevedo 1986:493). Today, the tribe has four communities—one in California at Woodfords, and three in Nevada at Carson, Dresslerville, and Stewart—and shares the Reno-Sparks Indian Colony with the Paiute and Shoshone (Washoe Tribe of Nevada and California 2008). The Washoe tribal headquarters is located at Gardnerville, Nevada, with tribal trust parcels in Alpine, Placer, and Sierra Counties, California, and Douglas, Carson, and Washoe Counties, Nevada.

Modern Washoe groups still collect pine nuts in the Virginia Range as well as the Pine Nut Mountains to the southeast. The ethnographic record suggests that pine nut collection was often associated with larger social gatherings, because "the Washoe established winter camps near the [pinyon] groves" (Pendleton et al. 1982:43). The significance of the Pine Nut Mountains to the Washoe is also indicated by the fact that in the 1800s, the tribe was deeded 64,000 acres to use as a pine nut preserve (Pendleton et al. 1982:89).

Northern Paiute

The Northern Paiute historically occupied an extremely large territory within the Great Basin in eastern California, western Nevada, and southeast Oregon (Fowler and Liljeblad 1986; Kroeber 1925). Northern Paiute is also the language spoken by this group, which belongs to the Western Numic branch of the Uto-Aztecan language family (Mithun 2001:539). Near the Project Area, neighboring groups included the Washoe and Atsugewi to the west and the Maidu to the southwest.

A diverse environment with a variety of resources available for exploitation by hunters, gatherers, and fishermen existed within the approximately 70,000 square miles of Northern Paiute territory (Fowler and Liljeblad 1986:437–439). Northern Paiute in the Walker River and Walker Lake area, south east of the Project Area, took advantage of the abundance of fish, including migrating cutthroat trout (*Salmo clarki henshawi*) and suckers (*Catostomus* spp.), for example. In the Mono Basin, waterfowl were an important resource, as well as the faunal species (e.g., deer, bighorn sheep, and marmots) associated with the surrounding hills and mountains that were covered with pinyon/juniper, Jeffrey pine, and lodgepole pine.

Subsistence was heavily influenced by the seasonal availability of resources. The Northern Paiute were semi-nomadic and separated into small groups for resource gathering, hunting, and fishing (Fowler and Liljeblad 1986:436–437). Groups seasonally occupied foraging districts; the borders of these foraging districts were relatively fluid. Small groups clustered together some of the year; the larger clusters were mainly composed of closely related families. Shelters varied seasonally and by area (Fowler and Liljeblad 1986:443). Dome-shaped winter dwellings averaged 8 to 15 feet in diameter and were covered with mats woven together from cattails. Summer shelters were mainly woven windbreaks.

To gather and collect food resources, the Northern Paiute used a wide array of tools, implements, and enclosures (Fowler and Liljeblad 1986:439–443). These included 1) bows and arrows, traps and snares, nets, and rock blinds for hunting land mammals and birds and 2) nets, weirs, platforms, and boats made of bundles of tule for hunting waterfowl and fishing. Woven tools—seed beaters, burden baskets, and carrying nets—and sharpened digging sticks were used to collect plant resources.

The Northern Paiute processed and cooked food resources with a variety of tools, including baskets, paddles for stirring mush, spoons, storage bags, and implements for lifting hot stones into cooking baskets. Pine nuts, sunflower seeds, rice grass, and berries were processed with manos and metates, or mortars and pestles; berries were also dried whole for use in soups and stews. Gathered in the fall, pine nuts were a key winter food. Also dictated by the seasons, trade between groups was very important; such activity most likely occurred primarily in the warm summer months when the high mountain passes were not covered in deep snow (Burton 1990). Commonly traded items included pine nuts, seeds, obsidian, baskets, pigments, salt, pumice stones, acorns, arrows, and shell money (Hall 1983).

Contact with Europeans increased dramatically with the discovery of gold at Coloma in 1848, the 1849 gold rush, and the 1858 silver strike in Virginia City, Nevada. Thousands of miners and settlers then passed through Northern Paiute territory on the Overland Trail. This mass migration, along with the establishment of large settlements like Virginia City and ranches to support the growing towns, had a significant effect on the natural resources on which the indigenous peoples were dependent. In addition

to the decline in natural resources, introduced diseases reduced the native population; violent incidents also occurred with increased contact, including the brief Pyramid Lake War in 1860. Faced with such difficulties, many Northern Paiute participated in the first Ghost Dance of the 1870s, created by the Northern Paiute Prophet Wodziwob, and again in 1890 under the revival of the Ghost Dance by the Northern Paiute Prophet Wovoka. Later, the Native American Church gained support in the 1930s and 1940s, as did the Sweat Lodge movement in the 1960s.

Reservations for the Northern Paiute were established beginning in 1859, including Pyramid Lake and Walker River in Nevada. Additional colonies and reservations were established throughout Northern Paiute territory in California, Nevada, and Oregon. The closet Native population is the Yerington Paiute Tribe, located approximately 35 linear miles south east of the project. The reservation and colony lands, established in 1934, covers an area of approximately 1,671 acres (Yerington Paiute Tribe 2015). In addition to the Yerington Paiute Tribe, there are Northern Paiutes living on the Fort Bidwell Reservation, the Cedarville Rancheria, and the Bridgeport Paiute Indian Colony.

Modern groups of Northern Paiute continue to collect pine nuts in the Pine Nut Mountains area, southeast of the project. The ethnographic record suggests that pine nut collection was associated with a set of cultural practices that include "pine nut prayer-dances and hand games" (Pendleton et al. 1982:50).

HISTORIC OVERVIEW

Early Exploration and Settlement

Euro-American exploration in the vicinity of the Project Area began in 1829 when Peter Skene Ogden brought his Snake Country Expedition into the unfamiliar space of present-day Nevada. It is believed that Ogden's group may have explored the Lower Carson River in 1829, but his exact route is unknown (McBride 2002:3). In early 1844, the John C. Frémont expedition spent about 2 weeks in and around the Eagle Valley (McBride 2002:9). Frémont's group explored the area, becoming the first Euro-Americans to see nearby Lake Tahoe and mapping the Carson River and Carson Sink as well (McBride 2002:9). Frémont returned to the area the following year in 1845 to re-map the Carson River basin (McBride 2002:9).

After 1850, exploration of the Great Basin became less common and Euro-American emigration became the predominate activity. It is believed that Joseph Chiles led an emigrant party off the traditional California Trail route and may have detoured south, following the Carson River Route prior to 1848 (McBride 2002: 11). It is unclear how close to the Project Area this first Carson River Route group came. That same year, the Carson Emigrant Road was established south of the Project Area by a Mormon battalion travelling from California (McBride 2002:12). Traffic along the trail is estimated around 400 travelers using this route that would late become known as part of the Mormon Emigrant Trail in 1848 (McBride 2002:12).

After 1849, as many as 6,000 travelers likely passed near or south of Eagle Valley as they made their way to California for the Gold Rush (McBride 2002:12). The high volume of traffic led to the development of a wagon road, named Johnson's Cut-off, between Eagle Valley and Placerville (McBride 2002:15). This wagon road connected Eagle Valley to Lake Tahoe's south shore via Echo and Spooner Summits (McBride 2002:15). In the 1850s, traffic along this route led to the establishment of Eagle Ranch and later Carson City.

Carson City

In 1851, Frank Hall settled Eagle Station and Ranch south west of the Project Area. Two years later, Reese & Co. from nearby Mormon Station purchased Eagle Ranch. Changing hands again in 1858, Eagle Ranch, as well as most of the valley, was purchased by Abraham Curry and his investors. Curry surveyed and established Carson City formally that year as well, just in time for the Comstock Mining Boom (McBride 2002:21). The small city grew from a settlement of ranchers who had populated Eagle Valley in the early 1850s thanks to Curry and his investors. The attorneys named the town Carson City after one of Frémont's scouts. A logistically efficient location, Carson City became well-known before 1860 because of stage lines, telegraph services, and well-travelled wagon routes and many people began building up the town (McBride 2002:21; Bertolini 2017:20–28).

After 1859, when the Comstock Mining District opened, traffic was no longer predominately westward into California, but also eastward into the Virginia Mountain Range and Eagle Valley (McBride 2002:15). The discovery of the Comstock Lode made Carson City an important freight and transportation center as well as a hub for the timber harvest in the Lake Tahoe basin until the mines began to decline in the 1880s. Carson City became the capital of Nevada 1861.

Transportation

Roads were, and continue to be, the primary connection between all users of Eagle Valley. Two highways and several state routes crisscross around the Project Area. Early on, dirt roads predominately connected emigrants travelling west and then provided routes for industry as mining and logging industries became productive in the area. Eagle Valley and Carson City became transportation hubs as early as the 1840s.

Wagon and Automobile Routes

U.S. HIGHWAY 50

After the Federal Highway System was established in 1920, many roads were renamed, or rather numbered, and this pattern was applied to creating U.S. 50. Parts of Johnson's Cut-off became U.S. 50 in the twentieth century, and the portion closest to the Project Area briefly became Kings Canyon Road during the mining boom on the Comstock, north of the Project Area (McBride 2002: 15). Much of U.S. 50 was unpaved and graveled until the late 1930s when most of it was finally paved. The 1937 General Highway Map for Carson City depicts U.S. 50 as a paved road (Nevada Department of Transportation 2018, 1937). U.S. 50 is well-known by tourists and locals as a through-fare between California and Utah. In the late 1980s, U.S. 50 gained additional national attention as the "loneliest road in America," thanks to a Life magazine article (Travel Nevada 2013).

INTERSTATE 580 (FORMALLY U.S. ROUTE 395)

U.S. Route 395 (U.S. 395) was established in Nevada in 1937 (Nevada Department of Transportation 1937). A major interstate transportation artery, only 85 miles are in Nevada. Like U.S. 50, existing travel ways were cobbled together to create the new highway system. Later in the 1960s, plans to reroute and rebuild U.S. 395 to new Interstate Highway standards began, but the project was not completed until recently in 2017 (Interstate Guide 2019). U.S. 395 was re-signed as Interstate 580 in 2012.

Air Travel

The Wright Brothers' first flight of an airplane in 1904 ushered in a new era in transportation. It was not until after several years later that improvements in airplane design made flying over the deserts of Nevada feasible, however (Valentine 1996). The first flight in Nevada took place at Carson City's Raycraft Ranch on June 23, 1910 and it was the highest altitude flight (4,675 feet) flown that time (Dreiling 2015). The use of airplanes during World War I proved the machine's practicality during conflict. After the war, a glut of aircraft, aircraft-related items, and trained pilots encouraged the U.S. government to find other uses. The United States Postal Service began funding the use of airplanes for mail delivery in 1918 (Valentine 1996). Private individuals also used airplanes early in the twentieth century. Attempting to fly over the imposing Sierra Nevada mountains was a common challenge undertaken by early fliers, and both Reno and Carson City served as common landing areas on the eastern side of the mountains. Carson City welcomed the first successful flight over the Sierra Nevada mountains in March of 1919 (Dreiling 2015). It was well-recognized that the early airplane industry was quite dangerous. With the goal of increasing safety and making efficient use of airplanes, federal regulation of various aspects of the industry increased throughout the twentieth century. By 1967, the U.S. government had created the FAA under the auspices of the newly formed Department of Transportation (FAA 2017).

CARSON CITY AIRPORT (1928–PRESENT)

The Carson City Airport was established in Carson City, Nevada, in 1928 with a meager 1.02 acres of land (CCAA 2018). From humble beginnings, it grew in 1958 when a prominent local family donated 240 acres to Carson City for the purpose of expanding the airport (CCAA 2018). For its first 30 years, there was only one runway, which is now Taxiway C (CCAA 2018). After expansion, the Carson City Airport remained limited in services and maintained dirt runways. In 1960, the community again improved the airport when the Carson City Sheriff's Aero Squadron financed paving and improvements of a ramp on the south side of the runway (CCAA 2018).

Over the years, the Carson City Airport has been an important facility to many different users including the Carson City Sheriff's Aero Squadron, the US. Forest Service, the Nevada Division of Forestry, and numerous fixed-base operators.

Ranching and Agriculture

Nevada's arid climate and mountainous topography make agriculture and ranching of all types difficult; nonetheless, Euro-American agriculturalists adapted to Nevada by employing open range grazing, fenced and rotational grazing, irrigation, and selective plant and animal varieties. Despite these localized efforts to effectively raise plants and animals in Nevada, the history of land use and agriculture here is also inextricably linked to the passage of several land management and policy acts. As the most arid state in the Union, Nevada also has the greatest percentage of public land in state, necessitating strategic management of all activities and resources contained therein at the federal level. Federal land management laws and policy are discussed below first, before localized histories about agricultural enterprise types and adaptions near the Project Area are detailed.

Federal Land Management Laws and Policy

Public lands in the arid west were subject to increasing problems with open-range grazing including property rights issues and over-stocked landscapes (Bertolini 2017; Muhn and Stuart 1988:35; Young and Sparks 2002). Several laws were passed in the years between 1862 and 1934 that attempted to reform the use, acquisition, and development of uninhabited or public lands, which directly affected the practice

of agriculture in Nevada. In 1934, the Taylor Grazing Act was passed in response to degrading public landscape conditions and in response to land rights issues. The Taylor Grazing Act's outcomes are viewed as a nexus for the federal government's active assertion of control over the management of public grazing lands. It not only increased the extent of federal oversight and involvement in the management of land, but also reflected changing ideas about land use and natural resource stewardship.

Americans adapted to the changing federal land management laws in similar ways, and thereby refined rugged Nevada landscapes for livestock production. A common adaptation to the end of open-grazing was intensified irrigation practices.

Irrigation

Whether growing plants for human and animal consumption, watering livestock, or watering a homestead, irrigation is a key part of agriculture in Nevada. Native plant communities in Nevada cannot support large-scale livestock enterprises, so often hay or grains are farmed in Nevada on ranches that have water rights. In Eagle Valley there were opportunities to exploit surface water or own vested water rights. Common-law riparian doctrine and vested water rights allowed Americans to use and divert water to serve their needs exclusively. Ranchers in Eagle Valley and the surrounding areas had an easier time than most Nevadans supporting livestock or farming because of access to water.

Early irrigation in Eagle Valley likely involved commonplace methods aided by topography. Diverting water from ephemeral or intermittent springs coming out of the valley floor and then coaxing water down-gradient to drain and saturate the desert surfaces was a simple way to irrigate large areas (Young and Sparks 2002:143). Flooding and furrow methods were employed in many lowland areas across the American West (Peterson 1913:7). Irrigation is a lasting and visible manifestation on the landscape, and is evidenced by ditches, check levees, and dams.

Competition over water rights led to considerable conflict between ranchers and ore mill operators in the Eagle Valley area. A lawsuit filed over access to water from the Carson River was decided in 1897 in favor of ranching interests, and this led to the construction of several reservoirs and the expansion of irrigation systems. With the decline of Comstock mining activities, ranching became the primary economic activity in the area and dominated land use patterns from the 1890s through the 1970s (Bertolini 2017:28–31; McMurry et al. 2016).

Ranching and Livestock Raising

Over the past 150 years, northern Nevada has been occupied by large herds of livestock, including cattle, sheep, and horses, whose numbers at times greatly exceeded the human population. In general, cattle ranchers were most likely to homestead a small acreage of land, and then utilize open-range practices; in contrast, sheep raisers often had no homestead and only utilized open-range practices (Young and Sparks 2002).

Intensive livestock ranching in the Eagle Valley area began in the early 1860s when livestock enterprises began developing networks to Lake Tahoe and Virginia City. Intensive livestock raising and ranching on public land was strategic in Nevada through seasonal landscape exploitation patterns which utilized the natural productivity of vegetation. In general, herds of all types of livestock were commonly grazed in the more mountainous areas in the summer and overwintered in the desert bottoms near water in the winter, sometimes on a home ranch. Seasonal gathering of herds occurred in the spring and fall when branding or sorting for sale was important. In relation to the Project Area, home ranches were common in Eagle Valley and summer grazing was common in the nearby Pine Nut Mountains to the east.

SHEEP

Sheep were initially grazed in large herds in northern Nevada starting in the 1860s. Often, herds of sheep were spread out over the landscape to ensure feed for thousands of animals at a time as they traveled through areas to rail lines or out of state (Georgetta 1972). Large sheep drives were common throughout the northern part of Nevada, and likely within the Project Area, through the 1860s. As settlement of the area began restricting the available space and forage for ranging sheep in the late 1800s, sheep grazing became less practical in Eagle Valley (Bertolini 2017:43).

CATTLE AND HORSES

Cattle and horses became the prominent livestock types ranged and managed by ranches shortly after landscape-scale sheep ranching fell out of favor in the Project Area. Settlement and organization of cattle ranches near the Project Area solidified in the 1860s, after which overall livestock numbers grew. Livestock raising in the area grew to importance because of the increasing need for meat. Cattle ranchers did particularly well supplying the nearby mining industries with fresh beef (Bertolini 2017).

HISTORIC CONTEXT

All sites recorded during the Project were evaluated for eligibility for inclusion in the NRHP. The criteria for NRHP eligibility, or significance, as outlined in 36 Code of Federal Regulations 60.4, are as follows:

> The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> A. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B. that are associated with the lives of persons significant in our past; or
>
> C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> D. that have yielded, or may likely yield, information important in prehistory or history.

In evaluating whether cultural resources in the Project Area meet any of the above criteria and retain integrity, eligibility factors and aspects of integrity specific to the types of sites identified must be considered. For properties eligible under Criterion D, such as archaeological sites that have information potential, less attention is given to their overall condition than if they were eligible under Criterion A, B, or C. Archaeological sites have undoubtedly been affected by cultural and natural formation processes that have altered the deposited materials and their spatial distributions (Little et al. 2000). Therefore, for sites that are eligible under Criterion D, integrity is based on the site's potential to yield data that address research questions identified in the historic context (Little et al. 2000). The eligibility factors to be considered for cultural resources identified in the Project Area can be grouped into a series of prehistoric and historic research themes, discussed below.

Prehistoric Research Themes

Although prehistoric sites may be evaluated under NRHP eligibility Criteria A, B, and C, developing prehistoric contexts for these criteria has proven difficult, as research pertinent to the Project Area has not resulted in enough information pertaining to specific important events in prehistory or prehistoric individuals. Therefore, prehistoric components identified in this study area are likely not recommended eligible under Criterion A or B, and individual site eligibility recommendations will reflect this. Prehistoric resources may be recommended eligible under Criterion C if they contain constructed cultural features that are unique, outstanding, or representative of a type. While such features are rare in Nevada and do not occur in the current Project Area, each individual resource's NRHP recommendation will also include a statement reflecting this. Prehistoric resources within this Project Area are most frequently evaluated with respect to Criterion D, considered with regard to important research questions pertinent to the region. Here, a context is developed for the Project Area in order to provide a basis for evaluating whether prehistoric sites in the area are eligible for the NRHP under Criterion D. Research topics for prehistoric sites in the region can be usefully grouped into the following three research domains: chronology; land use, technology, and mobility; and subsistence.

Chronology

Chronology building is a fundamental component of any archaeological research project. An understanding of chronology enables researchers to construct histories of site occupation, providing the foundation for further research questions. Historically, archaeologists have relied on relative dating methods to gain chronological control over cultural deposits. Drawn from the natural sciences, the Law of Superposition has provided the basis for using stratigraphic correlation to date archaeological features. Seriation techniques, by which artifacts are dated on the basis of typological occurrence or frequency, provide another means of relative dating. The advent of radiocarbon dating in the 1950s revolutionized archaeology by allowing cultural remains to be directly dated, a method improved upon with the innovation of accelerator mass spectrometry techniques.

Several questions related to chronology can be posed in the course of archaeological research. The questions are as follows:

- Are there multiple occupations represented at the site?
- What are the oldest and youngest components represented?
- Was the site continuously occupied over the duration?
- If the site was abandoned, how long was the abandonment?
- Are there contemporaneous sites in the area?
- Do they demonstrate similar occupational patterns?

Chronological information can be derived from archaeological sites in western Nevada using a variety of potential sources, including temporally diagnostic artifacts such as projectile points. Other evidence can be obtained from hydration measurements of obsidian, luminescence dating of pottery, and radiocarbon dates from organic materials. Many sites in the Great Basin are unstratified as a result of the lack of sediment accumulation and due to highly erosional conditions, which result in the deflation of archaeological materials. The resulting palimpsest of cultural remains makes differentiating between separate occupational events problematic. Additionally, surface settings are not ideal for the preservation of organic materials needed for radiocarbon dating. Due to these limitations, prehistoric sites in the Great Basin are often best dated using diagnostic artifact associations.

Given the constraints on potential dating sources at sites in western Nevada, questions relating to site chronology can be addressed in several ways. Finding temporally diagnostic artifacts is critical to determining occupational time frames. After identifying archaeological sites that contain temporally diagnostic artifacts, artifact types can then be compared to assemblages from other sites in the area. Comparing diagnostic artifacts from nearby sites will help determine site contemporaneity and bracket the youngest and oldest occupations within the survey area. Inter-site comparisons of temporally diagnostic artifact assemblages will reveal landscape-scale patterns of occupation and abandonment, shedding light on synchronic mobility and seasonal settlement behavior. High-resolution chronological data can also enable interpretations regarding the effects of environmental change on settlement behavior. Diachronic patterning resulting from multiple or continuous occupations can be inferred from sites containing temporally diagnostic artifacts from sequential archaeological phases. Additional sources of chronologic data include radiocarbon assays on organics derived from thermal features. Due to the poor preservation rates of perishable organic materials in exposed, surface contexts, the potential for radiocarbon dating is highest in buried archaeological deposits. Buried sites with intact stratigraphy can also be relatively dated on the basis of stratigraphic relationships.

It has been argued that the standard projectile point sequences for the Great Basin could use further resolution. Standard projectile point sequences for the Great Basin have been found to overlook some of the variation in projectile point assemblages in some regions of the western of the Great Basin (Young and Garner 2009). Young and Garner (2009) highlight examples from the extreme western and northwestern Great Basin in which projectile point types assigned to specific time periods are found earlier or later than would be expected from the standard Great Basin projectile point chronologies (Bettinger and Taylor 1974; Thomas 1981). For example, projectile point diversity during the Middle Archaic has been found to be much higher in some areas of western Nevada than would be expected (Young and Garner 2009). Deviations from the standard projectile point sequence have also been observed for the Late Archaic period, with Rose Spring series points from some areas of the western Great Basin either predating or postdating their accepted 1300 to 650 B.P. date range (Young and Garner 2009). With a large assemblage of projectile points obtained from well-dated contexts within the Project Area, future research could examine how well the standard projectile point chronologies apply to the Lahontan and Lower Valleys and Forty Mile Desert areas.

Another source of chronological control is obsidian hydration dating, which relies on consistent rates of environmental humidity uptake by volcanic glass (Michels 1967; Stevenson et al. 1989). However, care must be used in applying obsidian hydration rims to absolute dates because variability in chemical composition and regional environment can result in the differential uptake of water (Ridings 1996). To date, the most successful applications of obsidian hydration dating in the Great Basin region have relied on relative dating correlated with temporal phases, rather than the determination of absolute dates (Jones and Beck 1990; Schroedl 1995). Several researchers stress the need to develop regional obsidian hydration chronologies to normalize for local environmental variables (Ezzo 1995:140–142; Kelly et al. 1990). Obsidian projectile points, when paired with obsidian sourcing and hydration data, can be particularly useful as they can also be used to develop and refine source-specific relative obsidian source chronologies for the western Great Basin.

A prehistoric site that has the potential to address the research theme of chronology will have temporally diagnostic artifacts that can be clearly assigned to an archaeological period. In the Project Area, these include projectile points. Any sites yielding thermal features and/or organic material will also be considered eligible for the NRHP, for their potential to provide radiometric dates. Sites with buried, stratified deposits would also be considered eligible for the NRHP due to the greater potential for absolute and relative dating. Finally, sites with large obsidian assemblages relative to other assemblages in the Project Area (more than 100 artifacts), particularly those containing diagnostic tools, will be considered eligible for their ability to contribute to regional obsidian hydration chronologies.

Land Use, Technology, and Mobility

What is known about land use, technology, and mobility patterns in this region of the prehistoric western Great Basin thus far has come largely from the excavation of wetland village sites within adjoining areas of the Carson Desert (i.e., Kelly 2001), the excavation of stratified cave sites such as Lovelock and Humboldt Caves (review in Kelly 2001), and the analysis of lithic artifacts from throughout the western Great Basin (i.e., Jones et al. 2003). Additional data from the Project Area could provide insight into prehistoric land use, technology, and mobility strategies within the Lahontan and Lower Valleys and Forty Mile Desert.

Lithic debris, including flaked and ground stone tools and debitage from tool production, constitutes the most prominent class of data recovered from prehistoric archaeological sites in the Great Basin and surrounding regions. Lithic debris provides direct evidence of past technological activities, and the study of the raw materials used and tool types produced can provide evidence of material acquisition and trade, as well as activities and site functions that can be used to address issues of land use and mobility (Andrefsky 1998). The statewide context identifies a crucial need for lithic studies, particularly for understudied surface lithic scatters (Lyneis 1982). The statewide context specifically delineates the need for studies of each of the following: the spatial organization of lithic sites, the economy of lithic raw material procurement and use, the functions of stone tools from wear patterns and residue analysis, trade and exchange of lithic raw materials, and projectile point chronology (Lyneis 1982). These issues could be addressed from lithic scatters within the Project Area.

More often than not, the function of most small sites in western Nevada was to procure and process resources. Site location with respect to natural resources can often provide essential clues about the kinds of subsistence and other activities that were conducted at the site. Artifact assemblage data can provide important information for reconstructing aboriginal land use patterns over time. Similarities between assemblages might suggest static behavioral patterns prehistorically, whereas changes in the size and nature of tool assemblages and the location and size of sites might suggest an adaptation of strategies through specialized uses of the landscape.

Binford (1980) organizes settlement systems along a continuum from "collectors" to "foragers." Collectors are more logistically organized, conducting food-procurement forays in small task groups and storing food in specialized facilities. Archaeological proxies of collector strategies include residential camps inhabited by the entire group and small, temporary camps inhabited for the purposes of food procurement and infield processing. Foragers, on the other hand, are described as groups that gather food on a daily basis. Forager systems can be recognized archaeologically through the presence of seasonally occupied residential camps.

Bettinger and Baumhoff (1982) break down mobility systems into two groups: "travelers" and "processors." Travelers utilize only high-ranking resources and move on to a new area after exhausting the available high-ranking resources. Processors, on the other hand, exploit both high- and low-ranking resources within their area of residence and are therefore less residentially mobile.

Another aspect of mobility commonly cited as a significant component of hunter-gatherer behavior is foraging range. Foraging range is usually determined using lithic source provenance data (Beck and Jones 1990). Interpreting lithic source provenance based on the geochemical makeup of obsidian and fine-grained volcanics found at archaeological sites will indicate a general range of mobility. This is only a useful indicator of mobility if there are known source locations within the area. Exotic material, when present at sites, raises the question of whether source materials were traded or obtained directly from the

source itself. For most periods of Great Basin prehistory, it is unlikely that the occurrence of exotic tool stone indicates trade, owing to the inferred low level of interaction among groups and the risk of relying on trade to replenish such a critical resource (Jones et al. 2003).

The following questions can be addressed on the basis of evidence found at archaeological sites regarding these behavioral patterns:

- What natural resources were being exploited within and adjacent to the study area?
- What was the intensity and duration of site use?
- Was there single or intermittent site visitation, or was the given locale used intensively for an extended period of time?
- Were exploitation strategies embedded in other activities, such as travel from one base camp to another, or were people visiting this area for the sole purpose of exploiting its resources?
- What methods were used to process resources, and for what purpose were resources exploited and/or processed?
- What kinds of resources were used?
- What lithic production strategy was employed at these sites? Does it change over time?

To address research on land use, technology, and mobility, sites must contain large, intact, diverse assemblages of lithic artifacts. Obsidian debitage found at sites can be sourced to provide an idea of foraging range and mobility strategy. The composition of lithic artifact assemblages can also yield information as to site function. Primary processing sites located closer to sources of raw tool stone material exhibit specific artifact patterning and tend to contain early-stage bifaces, core reduction flakes, and/or biface reduction flakes. Secondary processing sites located farther away from lithic sources tend to contain larger proportions of biface thinning and/or refining debitage. Another approach to understanding site function based on lithic artifact assemblages involves comparing curated and expedient tool technologies. Sites that contain relatively large quantities of curated lithic technology (specialized tools continually remodified for reuse) usually indicate a more mobile group. Sites that contain more expedient technology (tools that lack specific design and are only made for the task at hand) are considered representative of more sedentary groups (Binford 1979).

Within the topics discussed above, prehistoric sites that would be considered eligible for the NRHP should contain or have the potential to contain lithic artifacts that can be sourced and relatively large lithic tool and debitage assemblages. In the Project Area, any sites with large obsidian assemblages (more than 100 artifacts), particularly those containing diagnostic obsidian tools, will be considered eligible for the NRHP, due to the rarity of regional lithic provenance data sets and accompanying models of prehistoric mobility patterns and settlement systems. Sites that satisfy these criteria will be evaluated as eligible for the NRHP. Small diffuse surface scatters containing only a small obsidian assemblage and lacking other temporally diagnostic artifacts will be considered ineligible for the NRHP, due to inadequate sample size.

Subsistence

Great Basin subsistence systems have changed over time from a focus on hunting and procurement of wetland resources to an emphasis on seeds and other vegetal foods. This shift is apparent in the archaeological record with the increase in ground stone artifacts, which suggest that seed reliance and processing for dietary needs increased over time (Jones et al. 2003). Direct evidence of subsistence remains in the form of faunal and floral remains provides the best avenue for addressing issues of subsistence change as well as to help reconstruct past environments and seasonality. Reconstructing

prehistoric subsistence economies is a basic research concern for the Project Area and identifying sites with the potential to recover archaeological faunal and floral remains is of utmost importance. Several examples of research topics and questions that would benefit from the recovery of subsistence remains in the Project Area are presented next, followed by general data needs for sites considered significant for their ability to address subsistence-related issues.

Many researchers have highlighted the increase in the number of artiodactyl bones recovered from archaeological sites in the Great Basin and California after 5000 B.P. as an important avenue of research. A growing debate has emerged about the reasons behind this increase. Broughton and Bayham (2003), Byers and Broughton (2004), and Byers et al. (2005) argue that large artiodactyl assemblages at Middle Archaic sites can be attributed to a surge in game populations during the ameliorative Late Holocene. Hildebrandt and McGuire (Hildebrandt and McGuire 2002; McGuire and Hildebrandt 2005), on the other hand, attribute the emphasis on large-game procurement to cultural factors, arguing that hunting conferred prestige and increased mating opportunities. Based on concentrations of aboriginal pronghorn corrals and projectile point "kill sites" dating to this period, Hockett (2005) and McGuire and Hildebrandt (2005) suggest Middle Archaic foragers began to engage in communal hunting strategies. This hypothesis accounts for the changes in hunting technology, as well as the increase in artiodactyl remains in Middle Archaic assemblages. Whatever the cause, archaeologists seem to agree that big game were prevalent at archaeological sites dating between 5000 and 3500 B.P. The recovery of additional deposits with large numbers of faunal remains spanning distinct components could provide additional data to address this and other subsistence themes. In addition, the recovery of evidence of communal hunting in the Project Area could shed more light on the timing and nature of this activity and associated social changes within the central Great Basin.

Another theme in current research into subsistence change in the western Great Basin is that involving Late Archaic resource intensification. Resource intensification during the Late Archaic period appears to have been brought on by population pressure, leading to an expansion in habitat use and an increase in the harvesting and storage of seed and root plants. In the western and central Great Basin, intensive pinyon exploitation is associated with this period of resource intensification. In the nearby Stillwater Range, paleoenvironmental and archaeological data show that pinyon was available by approximately 1500 B.P. (Kelly 2001). Additional research in the area could shed light whether intensification in general increases within the Project Area during the Late Archaic period. Signatures of increasing resource intensification through time include increases in the remains of plants and other resources with high collection and processing costs, shifts from highly specialized and curated artifacts to more expedient tools, increases in the number of ground stone artifacts, increasing uniformity in site types, and the utilization of previously unoccupied biotic settings such as alpine areas.

Data requirements for addressing these and other research issues related to subsistence are dateable, single-component assemblages containing floral and faunal remains or residues. Surface assemblages with middens, discrete features, and fire-cracked rock have the potential to contain floral and faunal remains that could address issues of subsistence change. In addition to the recovery of faunal and botanical materials, specialized studies of certain tool types could also provide important information for studying subsistence strategies employed at a site. Ground stone, for example, can be analyzed for the presence and variety of starches, phytoliths, pollen, and protein residues. These analyses potentially indicate whether ground stone tools were used to process plants or animals, and to provide insights about the past climate. Protein-residue analysis conducted on chipped stone tools could likewise provide insights into the animals and plants that a tool was used to process. Recovery of material from stratigraphically intact and temporally controlled contexts would be required to address subsistence research issues.

Ethnographic Research Themes

The Project Area includes traditional territories of both the Northern Paiute and the Washoe. The 2002 historic context identifies the following potential ethnographic research themes relevant to the Eagle Valley area (Zeier et al. 2002:124):

- Traditional stories
- Boundaries
- Resource manipulation and technology
- Religion and medicine
- Significant people and beings
- The post-Contact response
- Adjustment
- Persistence

The overarching periods of significance for ethnographic research within the Pine Nut Mountains are also presented in the 2002 historic context (Zeier et al. 2002:119):

- The Mythological Past: When Animals Were People
- The *Saiduka* period (ending with or conflated with a period of conflict with the Pitt River Indians or Modoc)
- The Aboriginal lifeway
- Initial Contact:
- 1769–1825: Spanish influences, including diseases
- 1825–1849: Contact with Early Explorers and first emigrants
- Post-Contact Adjustment
- 1849–1860: the California Gold Rush to the Pyramid Lake War
- 1860–1899: Reservations and Protest
- Allotments and colonies: 1870–1917

Adjustment

Increasing contact between Native and non-Native groups in the nineteenth and twentieth centuries resulted in significant changes to Native American lifeways. One major change involved responding to the commercial and industrial Euro-American economy. While evidence from other areas provides some indications of how Native Americans adjusted and they were certainly still present in the area, there is scant historical evidence about how Native Americans in the Eagle Valley area participated in mining, ranching, and agriculture (Zeier et al. 2002:133–134).

Property types associated with the adjustment period include ethnohistoric sites and historic sites where documentary evidence confirms the presence of Native Americans. These sites will likely yield a combination of artifacts used in prehistoric times (such as lithic artifacts and ground stone) and historic times. Ground stone implements remained a staple for Native groups long after the introduction of Euro-

American goods. Historical artifacts may exhibit evidence of modification. Glass was occasionally knapped. Cans were also modified (Sprengler and Giambastiani 2015). Perforated can lids occasionally were used to size basketry fibers (Arkush 1995; Johnson and Giambastiani 2005), rectangular fuel cans were modified to be used as stoves (Jackson 2005), and food cans were folded or had handles added to serve as drinking or cooking vessels (Mills 2003). Nails or heavy gauge wire were sharpened into awls (Arkush 1995), and wire was also used to construct wooden pinyon poles (Fenenga 1975).

Properties that definitively exhibit post-Contact Native American adjustment to changing economic, political, and social conditions will be recommended eligible under Criterion A. If a site has an important relationship to an individual who has been identified within the context of Northern Paiute and/or Washoe history as a significant historic figure, the site will be recommended eligible under Criterion B. Outstanding examples of sites associated with Native American adjustment may be eligible under Criterion C. Finally, sites that provide could yield information important for understanding how Native Americans adjusted to changes in their traditional lifeways would be eligible under Criterion D (Zeier et al. 2002:135).

RESEARCH QUESTIONS AND DATA NEEDS

Research questions surrounding Native American adjustment in the Eagle Valley area are as follows:

- What traditional Native American artifacts (e.g., flaked stone, ground stone) and features (e.g., habitations, caches) are present?
- What evidence exists of modified Euro-American artifacts and features?
- What is the spatial relationship between traditional Native American artifacts and modified Euro-American artifacts?
- When was the site occupied? How does the occupation time frame tie into the larger ethnographic context of the area?
- Is there evidence in either the associated artifacts or the arrangement of features that may suggest the ethnicity and/or gender of site's occupants?
- What was the site's function? How does the function tie into the larger ethnographic and historic context of the area?

Data requirements to address research issues related to Native American adjustment at sites that can be definitively tied to a Native American occupation include information related to chronology, site function, and identity. Sites with evidence of Native American participation in mining, ranching, agriculture, and charcoal and wood production are needed to more fully develop the histories of these industries. Archival data, oral history, and site artifact assemblages containing datable material fitting into a tight time frame could be used to refine when and how areas were used. Spatial patterning between features, such as transportation corridors, habitation features, and features related to subsistence activities, can provide information about the larger feature system. Refuse dumps and scatters may provide data about gender, ethnic identity, and economic status of the workers.

Historical Research Themes

Historic period research foci relevant to the Pine Nut Mountains are those from the 2002 Pine Nut Mountains historic context that were described in the preceding cultural setting section. A more recent report (Northrup and Johnson 2004:38–45) has refined the discussion of these themes in order to facilitate NRHP eligibility evaluation. Within the Project Area transportation, settlement, and agriculture have the

greatest potential to be addressed. The research questions and data requirements for each of the other relevant historic themes are discussed below.

Transportation

Property types associated with the transportation theme are likely to include roads and associated features such as road cuts, retaining walls, culverts and bridges, as well as construction camps, construction equipment, and roadside refuse scatters. Three time periods related to transportation within Eagle Valley apply to the Project Area: the Emigrant period (1841–1860), the Toll Road period (1860–1900), and the highway period (1937-1969).

To be eligible under Criterion A, transportation resources should be associated with a major transportation route that "had a profound effect on such things as settlement, commerce, or agriculture" (Northrup and Johnson 2004:40). If a site has an important relationship to an individual who played a significant role in transportation history, it is eligible under Criterion B. Eligibility factors under Criterion C include unique or innovative types of construction or engineering. A site is eligible under Criterion D if it has potential to provide information about such things as the evolution of transportation networks, associations with specific ethnic groups, or the role of transportation in the regional economy.

Integrity requires that the various characteristics and physical features conveying the property's historical identity be present in much the same way they were during its period of significance (McClelland et al. 1999:21–23). Roads must contain relatively unaltered road-specific materials, associated features, and the environment, despite modern usage or improvements. The original location, feeling, association, and character of a specific road must be exhibited. The integrity of materials and workmanship must be retained by road-specific materials such as drainage ditches, culverts, signage, and protective barriers. Parallel utility lines, corrals, water sources, and any other associated features must display their original purpose. Finally, artifacts associated with roads must exhibit specific uses, such as a campsite or maintenance stockpile (Branch and McMurry 2012).

RESEARCH QUESTIONS AND DATA NEEDS

Research questions surrounding transportation routes in Eagle Valley include:

- Do the physical characteristics of the transportation route provide information concerning its construction and maintenance?
- What materials and techniques were used to build and maintain the transportation route?
- Is there any evidence of modification to the route, such as efforts made to modify a wagon road so that it could accommodate automobile traffic? Has the route been realigned to avoid impassable areas or other hazards?
- Does the property support the historical record concerning use, construction, and location of the transportation routes?
- Can roadside debris answer questions about use of the transportation route or habits of the travelers? What does this information indicate about the economic development of the region traversed (Branch and McMurry 2012)?

Abandoned road segments, including those with associated debris, can help denote the primary and secondary uses of the route and may provide information about route maintenance. Debris associated with transportation routes may indicate types of products transported along the route, the modes of transportation (wagon versus automobile), and whether the route was strictly used for a solitary purpose

or if a variety of travelers used the route as an opportunity to gain access to other areas. Artifact assemblages with datable material fitting into a tight time frame would also refine when the route was traveled and if its use changed over time. Evidence of stations, campsites, or other stopping points could also provide information on the use of the transportation system (Branch and McMurry 2012).

Agriculture

The historical theme of agriculture in the Project Area may be represented by sites related to livestock ranching. Cattle operations in densely populated areas of Nevada like Eagle Valley involved fixed landscape features such as base ranches, line camp cabins, fences, and corrals. Two periods of significance for agriculture in Eagle Valley are divided by the 1934 Taylor Grazing Act: the Pre-Allotment period (1890 to 1934), and the Allotment period (1934 to present).

To be eligible under Criterion A, Northrup and Johnson (2004:43–44) suggest that agricultural properties should be associated with a main ranch or farm headquarters and be associated with some important development in local ranching or farming. To be eligible under Criterion B, a site should be clearly associated with an individual who played an important role in the development of farming or ranching. An agricultural property is eligible under Criterion C if it is architecturally significant or represents a unique and identifiable grouping of buildings and other features. To be eligible under Criterion D, a site should have the potential to provide significant information about historic agriculture.

Regarding integrity, agricultural operations regularly include maintenance and upkeep of constructed features such as corrals, fences, water conveyance systems, and buildings. While this is an essential feature of a functioning farm/ranch, improvements that detract from a property's ability to convey its historical identity or period of significance can create a loss of integrity. The replacement of older materials (e.g., wooden fence posts) with modern ones (e.g., steel T-posts) can decrease the integrity of materials and feeling. Isolated features should be intact enough to convey their original function, and modern modifications must not have impaired their historic fabric and character. Landscape-scale features such as fields and pastures should not be impacted by subsequent land alteration to the degree that design, setting, workmanship, and association are affected. Farms, ranches, and agricultural homesteads should still convey the characteristics that make them significant.

RESEARCH QUESTIONS AND DATA NEEDS

The following research questions related to ranching within the Project Area may be addressed:

- Do material remains at ranching sites reflect patterns or changes over time in the economic self-sufficiency of the ranch, as seen through the availability of manufactured and homemade equipment, tools, etc., especially during the Great Depression, droughts, and other periods of economic and environmental adversity in the region?
- Does the site provide information about rancher-labor relations, including living and working conditions, worker autonomy, and communications both at and between the home ranch and remote ranching locations?
- What does the spatial organization of the built environment of ranching sites indicate about ranch operations, especially regarding ranching techniques and technologies as responses to changing economic, political, and environmental demands?

Spatial patterning between features, such as the main ranching facility, corrals, pastures, outbuildings, and campsites, can provide information about the larger feature system. Refuse dumps and scatters that can be definitively related to ranching may provide data about gender, ethnic identity, and economic status of

the workers. Artifact assemblages with datable material fitting into a tight time frame would also refine when the areas were used and may result in additional information from archival sources.

FILE SEARCH RESULTS AND INVENTORY EXPECTATIONS

A file search was conducted to identify previous cultural resources projects and previously recorded archaeological sites and architectural resources within the direct and indirect APEs. The archaeological file search was conducted to identify previous cultural resources projects and previously recorded archaeological sites within 0.5 mile (0.8 km) of the direct APE. The search included the review of cultural resource files from the Nevada Cultural Resources Inventory System (NVCRIS), General Land Office (GLO) plat maps available online through the BLM Nevada office, and historical topographic quadrangles available online through the USGS. SWCA archeologist Ashlee Younie performed the NVCRIS file search for archaeology and architectural resources in March 2019, under the authority of Nevada State Antiquities Permit No. 248. Ms. Younie also performed the historic maps review in March 2019.

Nevada Cultural Resource Inventory System Review

The NVCRIS review identified 26 prior cultural resources projects within the records search area, all of which overlap with the direct APE. In total, these prior projects identified 28 archaeological sites within the archival review area, three of which fall inside the direct APE and 11 of which are within the indirect APE. The three previously recorded sites within the direct APE (26OR22, 26OR34, and 26OR66) consist of two isolated lithic artifacts and a lithic scatter that have not been evaluated for the NRHP.

A total of 10 previously recorded sites have been recorded within the indirect APE, consisting of lithic scatters varying in size and concentration density, a potential historic homestead, and historic debris. Only one of these sites (OR1) has been recommended eligible for the NRHP; the remaining nine sites are not eligible or unevaluated for the NRHP. The projects and sites identified during the literature review are summarized in Table 1 and Table 2, as well as depicted in the records search results map in Appendix B.

In addition, one known resource listed on the NRHP, the Carson Hot Springs, is located within indirect APE.

Table 1. Previous Projects within a 0.5-Mile-Wide Buffer of the Direct APE

Agency Report No.	Author(s); Organization	Date	Report or Project Title	Inside Direct APE?	Inside Indirect APE?
8094	McCabe, Susan	1/11/2006	North Carson City Fuel Treatment Project	No	Yes
8457	McCabe, Allen and D. Craig Young	8/1/2007	Cultural Resources Inventory for Sierra Pacific Power Company's 107 Line Reconstruction Project in Carson City County, Nevada	No	Yes
18-262	Hemphill, Martha L.	Unknown	Class III Cultural Resources Inventory Along the Proposed AT&T Optic Facility Corridor Across Northern Nevada	Yes	Yes
13-48	Stornetta, S.	Unknown	An Intensive Archaeological Survey of a Proposed Arrowhead Drive Extension and Golf Course Expansion Carson City, Nevada	No	Yes

Agency Report No.	Author(s); Organization	Date	Report or Project Title	Inside Direct APE?	Inside Indirect APE?
30813	Adkins, R. et al	Unknown	Final Report on Cultural Resources for the Paiute Pipeline Expansion II Project North Tahoe, South Tahoe, and Incline Village Loops	No	Yes
13-13	Seelinger, Evelyn	Unknown	Archaeological Resources Short Report: Carson City Treatment Plant Expansion Project - Reconnaissance (Project #13-13, Contract NAS #234-C) (from NADB)	No	Yes
18-144	Moore, J.	Unknown	Cultural Resources Report: US 50 Overlay. E.A. 71069: Ndot-095-81C (from NADB)	No	Yes
13-51	Hatoff, B.W.	Unknown	BLM Cultural Resources Report: R&PP for Carson City Regional Park Expansion and Eagle Valley Golf Course Expansion	No	Yes
13-20	Steinberg, Larry Seth and Paula A. Sutton	Unknown	Inventory and Assessment of Historical Landmarks and Structures Encountered by the Proposed U.S. 395 Carson City Bypass Corridors (from NADB)	Yes	Yes
13-11	McCollister, Michael J.	Unknown	Antiquities Site Inventory: Cr Report: BLM 3-34 (N) (from NADB)	No	Yes
13-35	Pinzl, John J.	Unknown	Cultural Resources Report Field Worksheet: Right-Of-Way - N-29800 - Michael Oliver: Cr Report #: 3-447(N) (from NADB)	No	Yes
13-18	Hatoff, Brian W.	Unknown	Cr Report No.: BLM 3-147(N): Bureau Motion Classification (Nevada State Highway Department Hanger Sites) (from NADB)	No	Yes
13-21	Petersen, F. (Editor)	Unknown	Test Excavation of Site 26Or1 Near Carson Hot Springs, Carson City, Nevada (from NADB)	No	Yes
13-45	Rusco, M. K., J. R. Firby, and J. O. Davis,	Unknown	Humboldt Project, Rye Patch Archaeology Phase III - Final Report (from NADB)	No	Yes
13-72	Ingbar, E.E.	Unknown	An Archaeological Evaluation of the NDOT U.S. 395 Bypass and Graves Lane Extension Rights-of-Way, Carson City, Nevada	No	Yes
18-87	Unknown	Unknown	Unknown	Yes	Yes
13-48	Stornetta, S.	Unknown	An Intensive Archaeological Survey of a Proposed Arrowhead Drive Extension and Golf Course Expansion Carson City, Nevada	Yes	Yes
NDOT CC00-042P	Unknown	Unknown	Unknown	No	Yes
NDOT CC00-042P	Unknown	Unknown	Unknown	No	Yes
6270	Chambers Group, Inc.	11/1/2010	Cultural Resource Inventory of the New Carson City Nevada Medical Center Project, Carson City, Nevada	No	Yes
7144	Jurich, Denise and Jesse Martinez	5/1/2011	Cultural Resource Inventory for the Carson City Airport North Apron Replacement Project, Carson City, Nevada	Yes	Yes
8013	Chambers Group	2/1/2012	Master Cultural Resource Report: A Class III Cultural Resource Inventory for the Digital 395 Broadband Project (#5569)	No	Yes

Agency Report No.	Author(s); Organization	Date	Report or Project Title	Inside Direct APE?	Inside Indirect APE?
4846	Jurich, Denise M.; Martinez, Jesse	2/23/2009	Cultural Resource Inventory for the Carson City Airport North Apron Reconstruction, Carson City, Nevada	No	Yes
6666	Chambers Group	4/5/2011	Addendum to Cultural Resource Inventory of the New Carson City Medical Center Project, Carson City, Nevada: Report of Test Excavation at 26OR537	No	Yes
8035	Amick, Daniel S. and D. Craig Young	12/15/1994	Report on Archaeological Monitoring at 26OR1 During Construction of Goni Road, Carson City, Nevada	No	Yes
8036	Young, D. Craig	5/1/2000	An Overview of Archaeological Sites and Mitigation Efforts Along Hot Springs Creek, Carson City, Nevada	No	Yes

Table 2. Previously Recorded Sites within a 0.5-Mile-Wide Buffer of the Direct APE

Smithsonian No. (26-)	Agency No.	Type	Class	NRHP Eligibility	Inside Direct APE?	Inside Indirect APE?
OR1	–	Campsite	Prehistoric	Eligible	No	Yes
OR9	3-3291	Campsite	Prehistoric	Unevaluated	No	No
OR10	3-3292	Isolated lithic	Prehistoric	Unevaluated	No	No
OR11	3-3293	Isolated lithic	Prehistoric	Unevaluated	No	No
OR12	3-3294	Lithic scatter	Prehistoric	Unevaluated	No	No
OR22	–	Isolated lithic	Prehistoric	Unevaluated	Yes	Yes
OR23	3-3302	Lithic scatter	Prehistoric	Unevaluated	No	No
OR34	–	Lithic scatter	Prehistoric	Unevaluated	Yes	Yes
OR49	–	Lithic scatter	Prehistoric	Unevaluated	No	No
OR52	–	Isolated lithic	Prehistoric	Unevaluated	No	Yes
OR64	–	Possible homestead, structures present	Historic	Unevaluated	No	Yes
OR65	–	Eaton house	Historic	Unevaluated	No	No
OR66	–	Isolated lithic	Prehistoric	Unevaluated	Yes	Yes
OR67	–	Isolated lithic	Prehistoric	Unevaluated	No	No
OR68	–	Historic trash scatter	Historic	Unevaluated	No	No
OR72	–	Small lithic scatter, lithic reduction area	Prehistoric	Unevaluated	No	No
OR73	–	Isolated lithic	Prehistoric	Unevaluated	No	No
OR74	–	Isolated barrel hoop	Historic	Unevaluated	No	Yes
OR75	–	Isolated strand of wire, three twined strands	Historic	Unevaluated	No	No
OR76	–	Small lithic scatter	Prehistoric	Unevaluated	No	Yes
OR77	–	Isolated ground stone	Prehistoric	Unevaluated	No	Yes
OR78	–	Small lithic scatter	Prehistoric	Unevaluated	No	Yes
OR81	–	Task site with ground stone and lithic scatter	Prehistoric	Ineligible	No	Yes
OR82	–	Lithic scatter	Prehistoric	Ineligible	No	No
OR186	–	Trash dump	Historic	Ineligible	No	No

Smithsonian No. (26-)	Agency No.	Type	Class	NRHP Eligibility	Inside Direct APE?	Inside Indirect APE?
OR202	–	Refuse scatter with Asian ceramics	Historic	Eligible	No	No
OR213	30-43	Lithic scatter and historic debris scatter	Prehistoric/Historic	Ineligible	No	No
OR537	–	Lithic scatter with features	Prehistoric	Eligible	No	No

Four previously completed architectural projects have been conducted within the records search buffer (Table 3). These projects identified four architectural resources within the records search area, none of which overlap the direct APE (Table 4). Two of these architectural resources, an unknown resource (B382) and Shaw's Hot Springs (B549), are within the indirect APE. These inventories and resources are depicted in the records search results map in Appendix B.

Table 3. Previous Architecture Projects within a 0.5-Mile-Wide Buffer of the Direct APE

Agency Report No.	Author(s); Organization	Date	Report or Project Title	Inside Direct APE?	Inside Indirect APE?
A_23	McCabe, Susan	1995	Carson City Bypass, Carson City, Nevada: Historical/Architectural Survey Report - Phase I	Yes	Yes
A_20	McCabe, Allen and D. Craig Young	1993	Kit Carson Trail Sites Inventory - Inventory of Trail Sites, Kit Carson Trail, Carson City	No	No
A_11	Hemphill, Martha L.	1978	Inventory of Structures and Impacts by Corridor (Final Inventory of Buildings Located During the Field Survey of the Eight Alternative Carson City Bypasses)	Yes	Yes
A_21	Stornetta, S.	1999	Historical Architectural Survey Report - Phase II - Carson Bypass on US Highway 395 in Carson City	No	Yes

Table 4. Previous Architectural Resources within a 0.5-Mile-Wide Buffer of the Direct APE

Smithsonian No. (26-)	Agency No.	Type	Eligibility	Inside Direct APE?	Inside Indirect APE?
B379	–	Unknown	Unevaluated	No	No
B383	–	Eaton House	Unevaluated	No	No
B382	–	Unknown	Unevaluated	No	Yes
B549	–	Shaw's Hot Springs	Not Eligible	No	Yes

Maps Review

During the review of historical GLO plat maps and USGS topographic quadrangles (Tables 5 and 6), one historic-era unnamed road and one spring feature were identified within the Project Area. The features are depicted on the historical GLO survey plats dating to the 1860s. Review of historical USGS topographic quadrangles revealed the recent historical presence of the Carson City Airport property (Appendix B).

Table 5. Historical U.S. Geological Survey Topographic Quadrangles Reviewed and Historical Features Present within Project Area

State	Map Name	Date	Scale	Features
NV	New Empire	1968	1:24,000	Carson City Airport
NV	Carson	1893	1:125,000	None
NV	Carson	1910	1:125,000	None
NV	Carson	1945	1:125,000	None

Table 6. Historical General Land Office Plat Maps Reviewed and Historical Features Present within Project Area

Township, Range	Map Date	Surveyor and Date	Approver and Date	Feature
15N, 20E	1861	James Lawson 1961 and Butler Tess 1862	John W. North 1862	Unnamed dirt road, "warm springs"

Expectations

Based on the file search results and condition of the project area, SWCA expected to encounter small lithic and historic debris scatters within the direct APE. Due to the high level of modern disturbances within and surrounding the Carson City Airport, it is likely that the majority of existing sites have been damaged or destroyed.

INVENTORY RESULTS

The cultural resources inventory of two linear miles of fence lines at the Carson City Airport resulted in the identification of one new prehistoric archaeological site (26OR595) and three prehistoric isolated finds. It should be noted that the fence line within the direct APE was last upgraded in 1974 based on Carson City Airport records, and, therefore, is not considered an historic resource.

The newly identified site is detailed below, and the IMACS form is provided in Appendix C. All isolated finds were prehistoric lithics of various material types, including one obsidian lithic artifact. Isolated finds are detailed in Appendix D. A survey results map is included in Appendix E.

The three previously recorded prehistoric sites (26OR22, 26OR34, and 26OR66) mapped within the APE were not observed at the time of the survey. The sites, consisting of two prehistoric isolated finds and one lithic scatter, have likely been destroyed within the direct APE due to construction and maintenance of the airport. The sites are in an area that experienced a high level of disturbance due to airport expansion. Arrowhead Drive, the Carson City Airport, modern businesses and the Arrowhead Dr Industrial Park, the Eagle Valley Golf Course, as well as an active gravel mining operation have also obscured the ground surface on or adjacent to the sites.

Site 26OR22 was a lithic isolate site, originally recorded in 1979 by L. Steinberg (Steinberg 1979). The isolate was collected in 1979, and SWCA was not able to locate any additional flakes or other artifacts.

Site 26OR34 is a diffuse lithic scatter with artifact concentrations, originally recorded in 1980 by M. and B. Brown (Brown and Brown 1980) and then amended in 1984 by S. Stornetta (Stornetta 1984a). SWCA was not able to relocate or identify any flakes, burned bone, or other artifacts during this site revisit.

Site 26OR66 was a lithic isolate site originally recorded in 1984 by S. Stornetta (Stornetta 1984b). SWCA was not able to relocate the isolate or any additional artifacts or features.

26OR595

Site Description

Site 26OR595 is a sparse lithic scatter located on an alluvial fan within the northeastern part of Eagle Valley, south of the Virginia Mountain Range. The site is situated between a modern chain link fence and a drainage ditch that parallels a paved road. This paved road connects runways at the Carson City Airport. The site's artifact assemblage consists of two biface reduction flakes, one yellow crypto-crystalline silicate tertiary reduction flake and one fine-grained volcanic secondary reduction flake. The maximum density of artifacts is 1/m2. No tools were observed. No features were observed.

The site is situated on an alluvial fan. Disturbances to the site include the construction of the chain link fence and general airport activities.

Eligibility Recommendation

Site 26OR595, a prehistoric lithic scatter, is recommended not eligible for inclusion in the NRHP under any criteria. The site does not contain any obsidian, temporally diagnostic artifacts, datable features, or other datable materials necessary for chronological control. Because of the limited artifact count and diversity, it would be difficult to assess the functionality of this site, and a cultural affiliation cannot be determined. No ceramic or ground stone artifacts were observed. Overall, the site does not have sufficient data potential to address research questions pertaining to chronology, technology, settlement patterning, or subsistence systems. Therefore, the site lacks the significant data potential as required for NRHP eligibility under Criterion D.

There is no evidence that the site is associated with any events that have made a significant contribution to the broad patterns of prehistory. In addition, no evidence was observed that would connect this site with any significant persons, and this site does not contain any artistic components, such as rock art, that possess a high artistic value. Therefore, the site is recommended ineligible for the NRHP under Criteria A, B, and C.

In summary, 26OR595 is recommended not eligible for inclusion in the NRHP under any criteria.

CONCLUSIONS, RECOMMENDATIONS, AND FINDING OF EFFECTS

SWCA, under contract to Coffman Associates, Inc., completed a cultural resources inventory of two linear miles at the Carson City Airport to assist the CCAA with carrying out their Master Plan. This cultural resources inventory was needed for approximately 2 miles of existing fences on the borders of the Carson City Airport prior to fence replacement and maintenance. Since the CCAA's Master Plan is funded in part by the FAA's Airport and Airway Improvement Act of 1982, FAA was designated as the lead agency for Section 106 compliance of the Project.

As part of this cultural resources project, SWCA developed a context for resources expected in the Project Area, primarily prehistoric occupation of Eagle Valley and the Carson City Airport; conducted a survey in the direct APE to a standard acceptable to the SHPO; evaluated cultural resources identified within the

direct APE for inclusion on the NRHP, and created a list of previously identified historic properties within the indirect APE. With this information in place, SWCA is able to make recommendations about the Project's direct and indirect effects on cultural resources.

SWCA identified a single site within the direct APE, which is recommended as not eligible for inclusion in the NRHP. Therefore, SWCA recommends a finding of *no historic properties affected* within the direct APE.

SWCA also identified a total of 13 resources within the indirect APE, consisting of a single NRHP-eligible site, nine ineligible/unevaluated archaeological sites, two ineligible/unevaluated architectural resources, and one NRHP-listed resource (Carson Hot Springs). It is SWCA's opinion that the integrity of these resources is unlikely to be affected by the Project. The maximum height of any permanent visual Project disturbances will be the height of the fence maintenance and new fence construction, which will be no greater than 10 feet. The surrounding area within the indirect APE has undergone numerous periods of residential and commercial construction. Various fence line types constructed at different times are currently present in the Project Area, so the proposed fencing changes should not be visually intrusive. The proposed Project is no larger in scope or disturbance compared to previous fence line installation and maintenance projects implemented as part of Carson City Airport operations. In summary, the Project will not adversely affect the visual portion of the historic properties present within the indirect APE. Thus, SWCA recommends a finding of *no historic properties affected* within the indirect APE.

No mitigation measures are recommended for the Project. Ground disturbance associated with the Project is expected to be minimal and confined to previously disturbed ground. SWCA recommends that no archaeological monitoring is required for the Project. The techniques employed as part of SWCA's investigations related to the project are considered sufficient for locating and documenting cultural resources that may be present in the Project Area and that are available for visual inspection. In the event that additional cultural materials are discovered during project activities, all work in the immediate vicinity of the discovery should cease immediately, and the FAA should be contacted.

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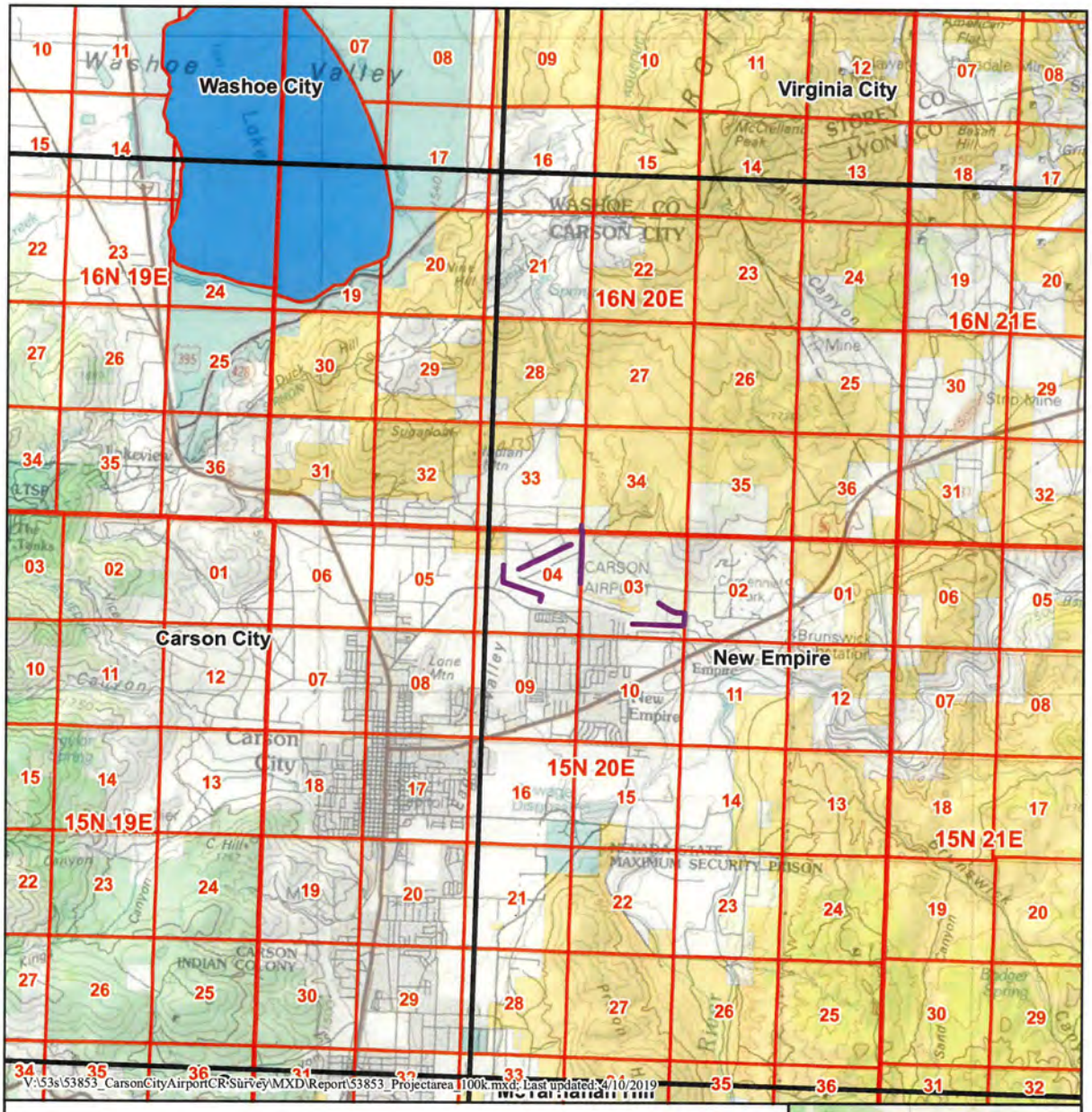
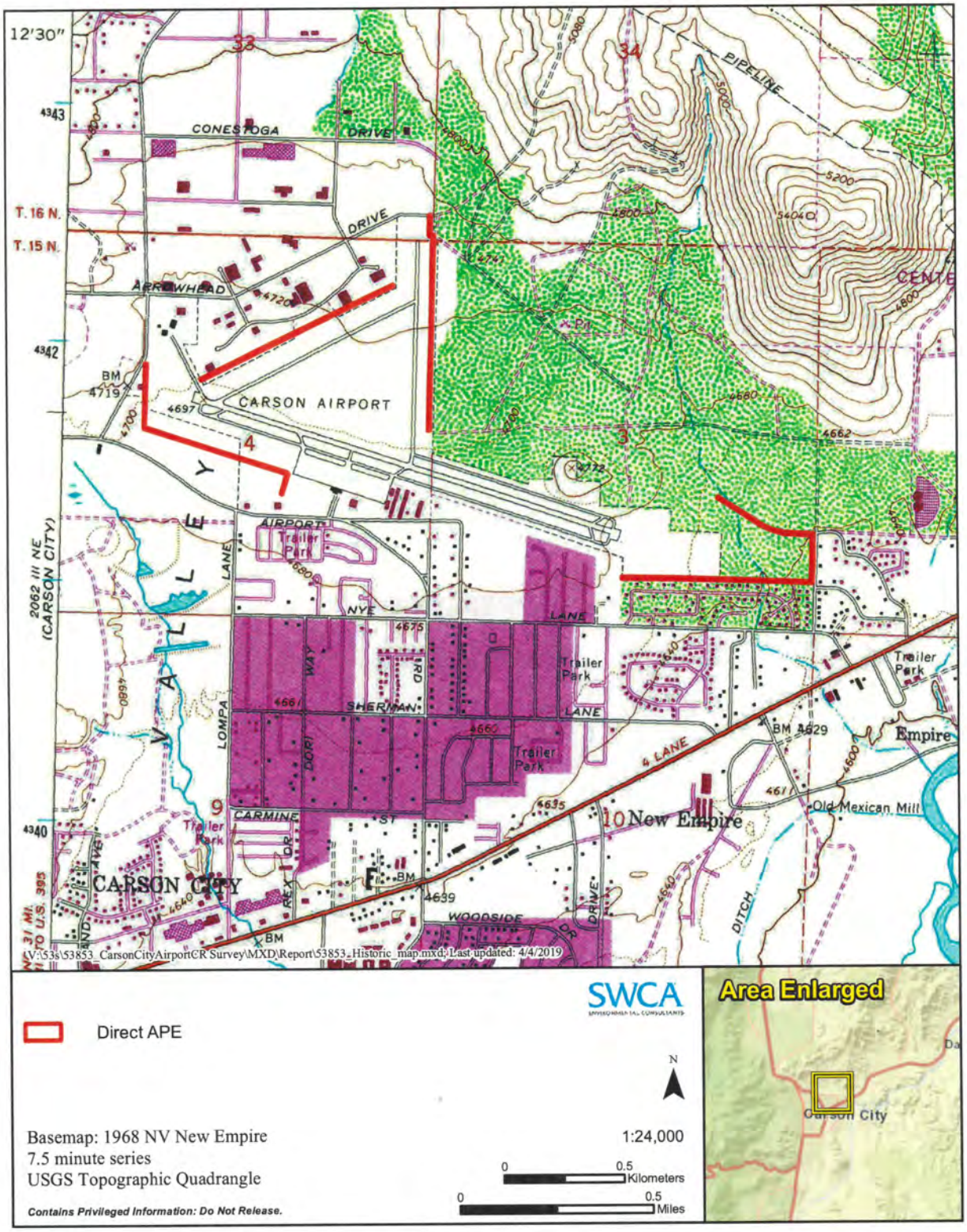
APPENDIX A

Project Area Map


Washoe City
Virginia City
Carson City
New Empire
16N 19E
16N 20E
16N 21E
15N 19E
15N 20E
15N 21E
V:\53s\53853_CarsonCityAirportCRSurvey\MXD\Report\53853_Projectarea_100k.mxd; Last updated: 4/10/2019
Cultural Direct APE
USGS 7.5' Quadrangle
Township Boundary
Section Boundary
Land Ownership
Bureau of Land Management
Forest Service
Nevada State
Private
Regional Park
Water
N
1:100,000
0 1 Kilometers
0 1 Miles
Contains Privileged Information: Do Not Release.
SWCA
Area Enlarged
Reno

APPENDIX B

Records Search Results Maps


12'30"
CONESTOGA
DRIVE
PIPELINE
T. 16 N.
T. 15 N.
ARROWHEAD
CARSON AIRPORT
AIRPORT
Trailer Park
LANE
NYE
SHERMAN
LOMPA
WAY
RD
DORI
CARMINE
ST
REX
DR
WOODSIDE
DRIVE
4 LANE
New Empire
Empire
Old Mexican Mill
CARSON CITY
DITCH
BM 4719
BM 4639
BM 4629
2062 III NE (CARSON CITY)
NV 31 MI. TO U.S. 395
V:\53\53853_CarsonCityAirportCR Survey\MXD\Report\53853_Historic_map.mxd; Last updated: 4/4/2019
SWCA
Direct APE
N
Basemap: 1968 NV New Empire
7.5 minute series
USGS Topographic Quadrangle
1:24,000
0 0.5 Kilometers
0 0.5 Miles
Contains Privileged Information: Do Not Release.
Area Enlarged
Carson City

APPENDIX C

IMACS Site Form

Eligibility: Non-significant A ☐ B ☐ C ☐ D ☐ By: Ashlee Younie Concur:

12
Las Vegas

Nevada IMACS Site Form

Administrative and Environmental Data

1. State Site No: 26OR595
2. County: Carson City
3. BLM Site Number:
4. Project Name: Carson City Airport CR Inventory
5. Temp. Site No: ANY-S-1
6. BLM Report Number:
7. Site/Property Name:
8. Site Class: Prehistoric
   Site Area: 8 x 6 meters
   Historic Theme/Affiliation: Unknown
   Dating Method: None
   Depth of Cultural Fill: Surface

9. Site Description:

Site 26OR595 is a sparse lithic scatter located on an alluvial fan within the northeastern part of Eagle Valley, south of the Virginia Mountain Range. The site is situated between a modern chain link fence and a drainage ditch that parallels a paved road. This paved road connects runways at the Carson City Airport. The site's artifact assemblage consists of two biface reduction flakes, one yellow crypto-crystalline silicate tertiary reduction flake and one fine-grained volcanic secondary reduction flake. The maximum density of artifacts is 1/m2. No tools were observed. No features were observed.

The site is situated on an alluvial fan. Disturbances to the site include the construction of the chain link fence and general airport activities.

National Register Justification:
Site 26OR595, a prehistoric lithic scatter, is recommended not eligible for inclusion in the NRHP under any criteria. The site does not contain any obsidian, temporally diagnostic artifacts, datable features, or other datable materials necessary for chronological control. Because of the limited artifact count and diversity, it would be difficult to assess the functionality of this site, and a cultural affiliation cannot be determined. No ceramic or ground stone artifacts were observed. Overall, the site does not have sufficient data potential to address research questions pertaining to chronology, technology, settlement patterning, or subsistence systems. Therefore, the site lacks the significant data potential as required for NRHP eligibility under Criterion D.

There is no evidence that the site is associated with any events that have made a significant contribution to the broad patterns of prehistory. In addition, no evidence was observed that would connect this site with any significant persons, and this site does not contain any artistic components, such as rock art, that possess a high artistic value. Therefore, the site is recommended ineligible for the NRHP under Criteria A, B, and C.

In summary, 26OR595 is recommended not eligible for inclusion in the NRHP under any criteria.

10. Elevation: 4710 feet above sea level

11. UTM Grid: Zone 11

Easting	Northing	Datum
262767	4342090	NAD83

12. Township/Range (to quarter section only):

Township	Range	Section	Q
15 North	20 East	4	NW

13. Meridian: Mt. Diablo/7
14. Map Reference: New Empire (1994)
15. Landowner: Carson City Airport
16.
17. Photographs: Camera 1:
307, 309, 310;
Digital copies stored at the SWCA Las Vegas office.
18. Recorded by: Ashlee Younie
19. Survey Organization: SWCA
    Date Recorded: 3/14/2019
20. Distance to Permanent Water: 5.5 x 100 meters
    Type of Water: Spring/seep
21. Geographic Unit: Eagle Valley
22. Primary Landform: Alluvial Fan
23. Depositional Context: Fan
24. Vegetation Community: Big Sagebrush

Artifact Summary: Record all culturally modified materials and artifacts (including but not limited to: projectile points bifaces, debitage, groundstone, beads, FCR, textiles, glass, cans, ceramics, ect.) using IMACS User Guide categories.

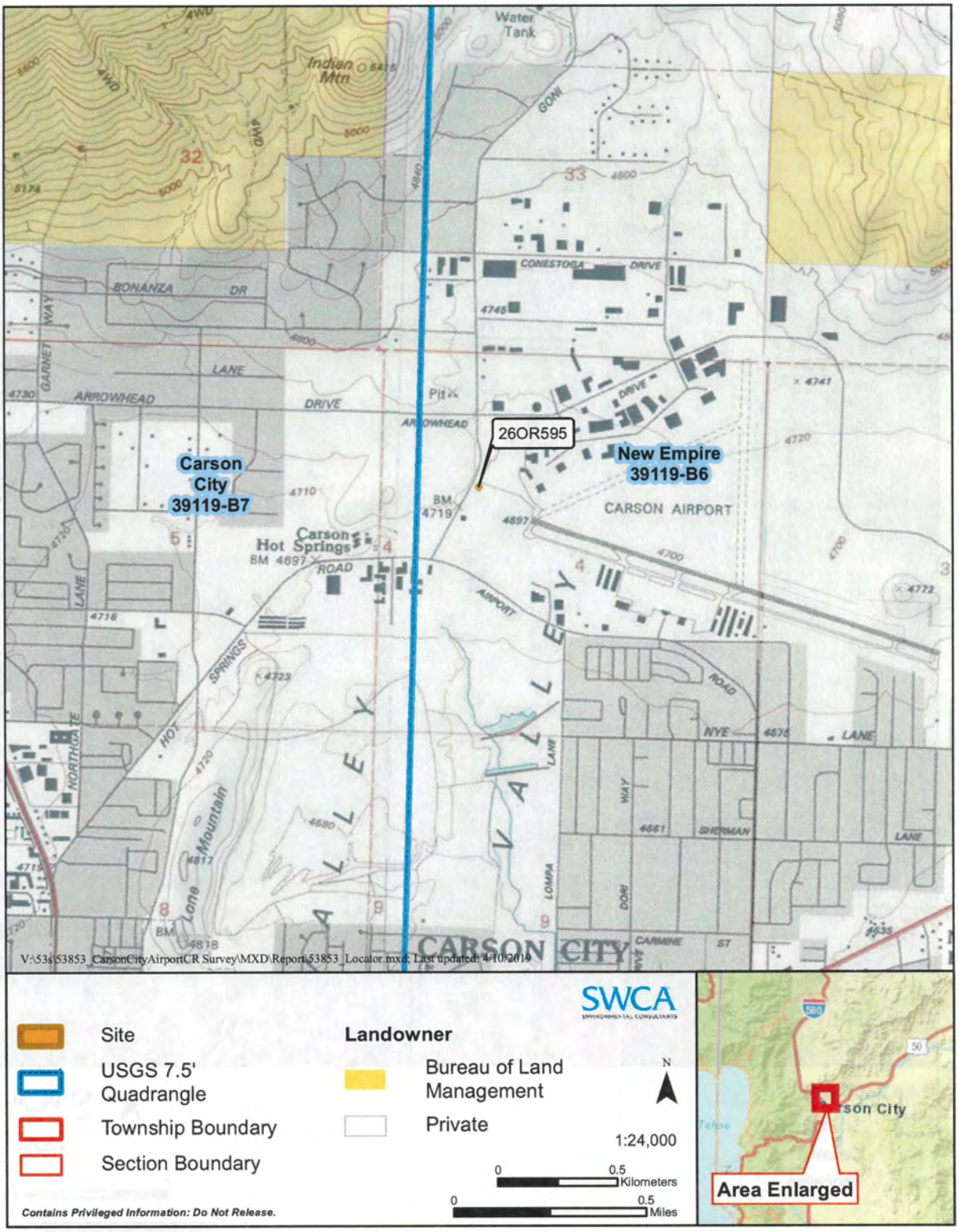
General Site Prehistoric Artifacts					
Temporary Text- Add a paragraph description of the artifacts found in the site.					
	Count	**Density (m)**	**Material**	**Artifact**	**Comments**
	1	1	CCS-Cryptocrystalline silicates	Debitage	one yellow crypto-crystalline sillicate tertiary reduction flake
	1	1	FGV	Debitage	one fine-grained volcanic secondary reduction flake

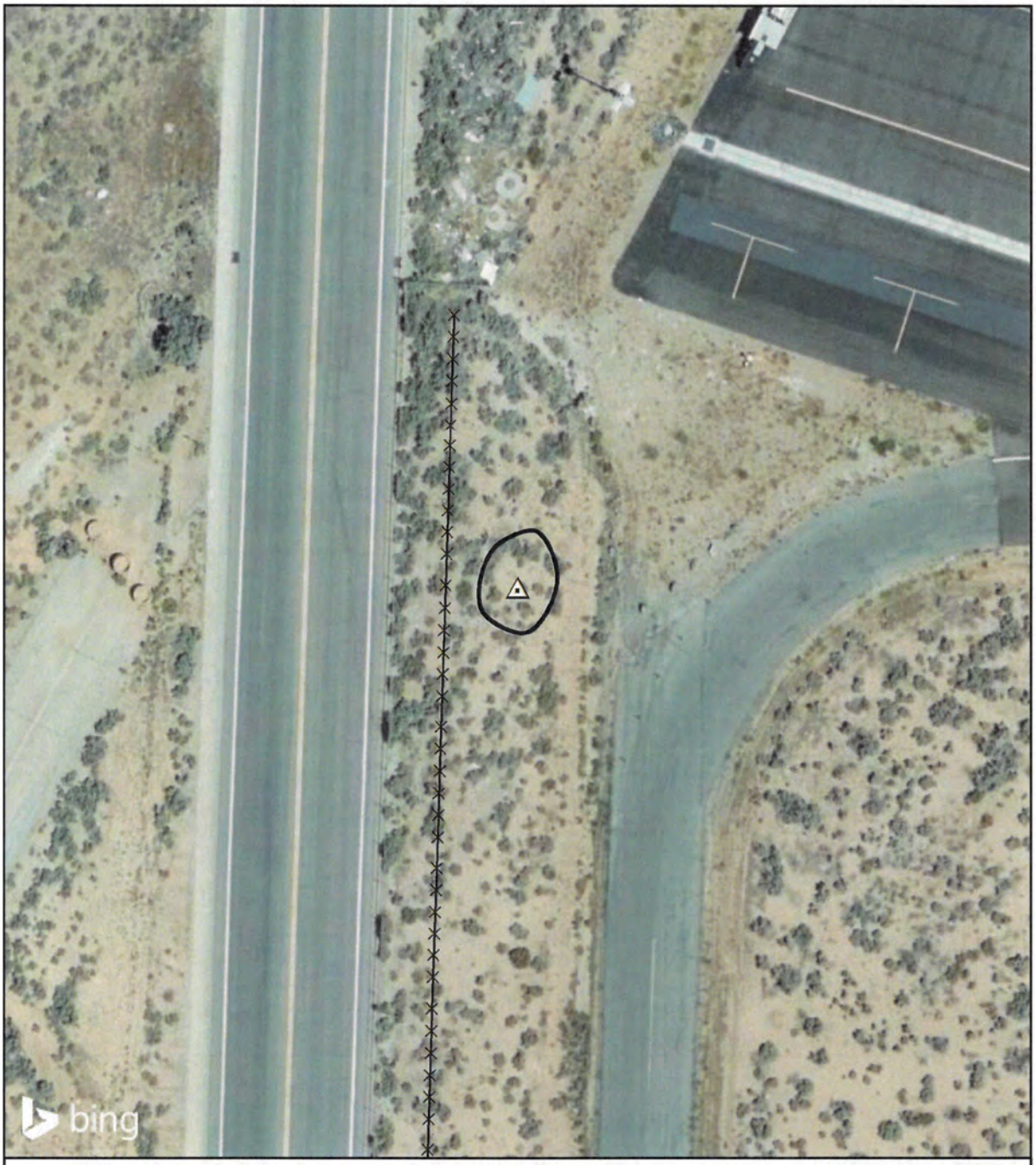
Feature Description:

No features were observed at this site.

References:

Bureau of Land Management and Nevada State Historic Preservation Office
2014 The State Protocol Agreement Between the Nevada Bureau of Land Management and the Nevada State Historic Preservation Office. December 2014 ed.


26OR595
Carson City 39119-B7
New Empire 39119-B6
CARSON AIRPORT
Carson Hot Springs
CARSON CITY
Indian Mtn
Water Tank
Lone Mountain
V:\53s\53853_CarsonCityAirportCR Survey\MXD\Report\53853_Locator.mxd; Last updated: 4/10/2019
SWCA
Site
USGS 7.5' Quadrangle
Township Boundary
Section Boundary
Landowner
Bureau of Land Management
Private
N
1:24,000
0 0.5 Kilometers
0 0.5 Miles
Contains Privileged Information: Do Not Release.
Area Enlarged



Site 26OR595

Site Boundary

Datum

Fenceline

N

SWCA
ENVIRONMENTAL CONSULTANTS

1:500

0 10 Meters

0 50 Feet

V:\53s\53853_CarsonCityAirportCR Survey\MXD\Report\53853_Sketch.mxd; Last updated: 4/9/2019

Contains Privileged Information: Do Not Release.

26OR595

. 26OR595. Camera 1-307. Site overview, View towards fenceline (facing west).

26OR595

. 26OR595. Camera 1-309. Site overview, View towards airport runway (facing east).

26OR595

. 26OR595. Camera 1-310. Site overview, Showing fencline and runway (facing south).

Photo Log

Camera #	Photo #	Site #	Date	Description	Type	Direction
Camera 1	307	26OR595	3/14/2019	View towards fenceline	Site overview	west
Camera 1	309	26OR595	3/14/2019	View towards airport runway	Site overview	east
Camera 1	310	26OR595	3/14/2019	Showing fencline and runway	Site overview	south

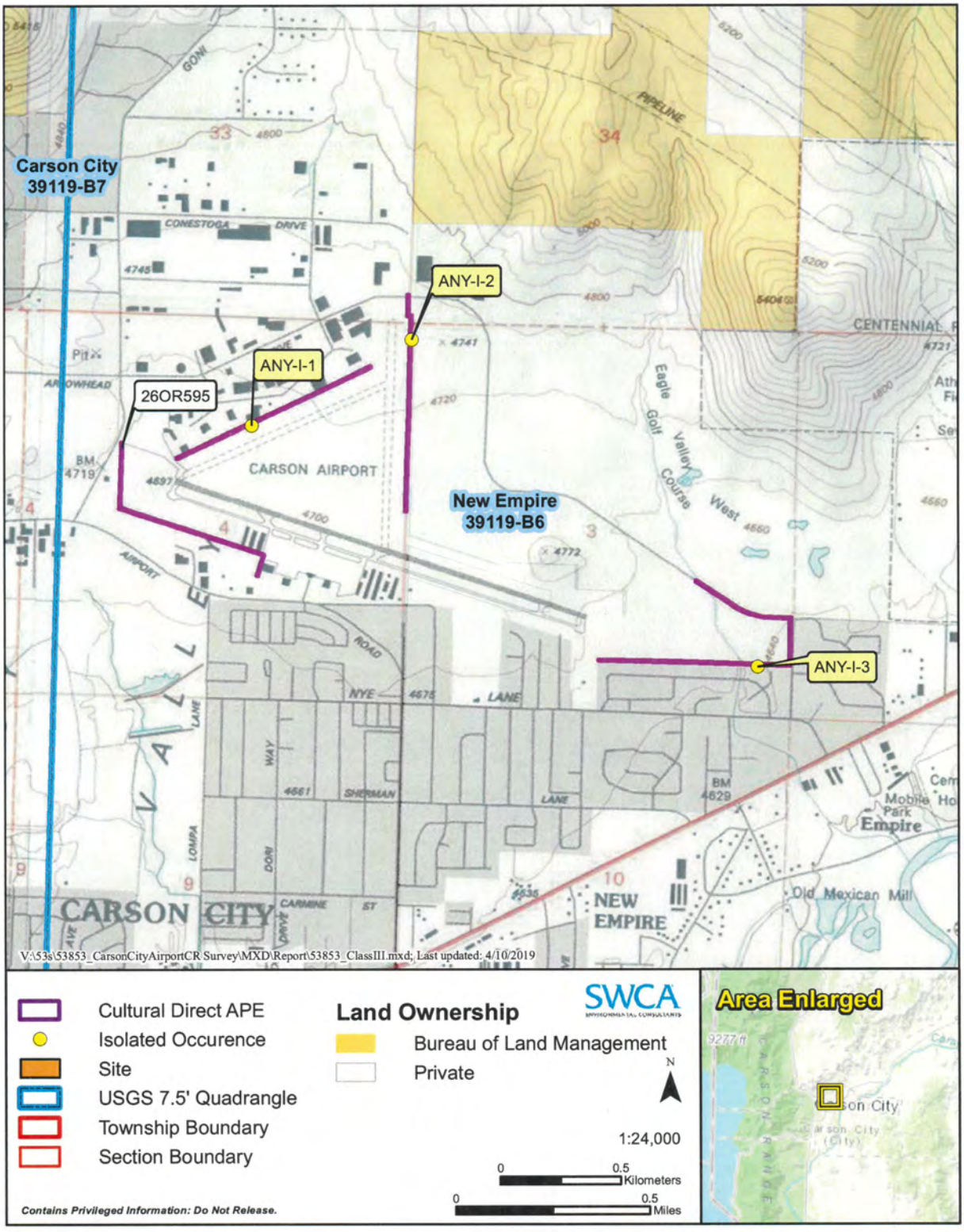
APPENDIX D

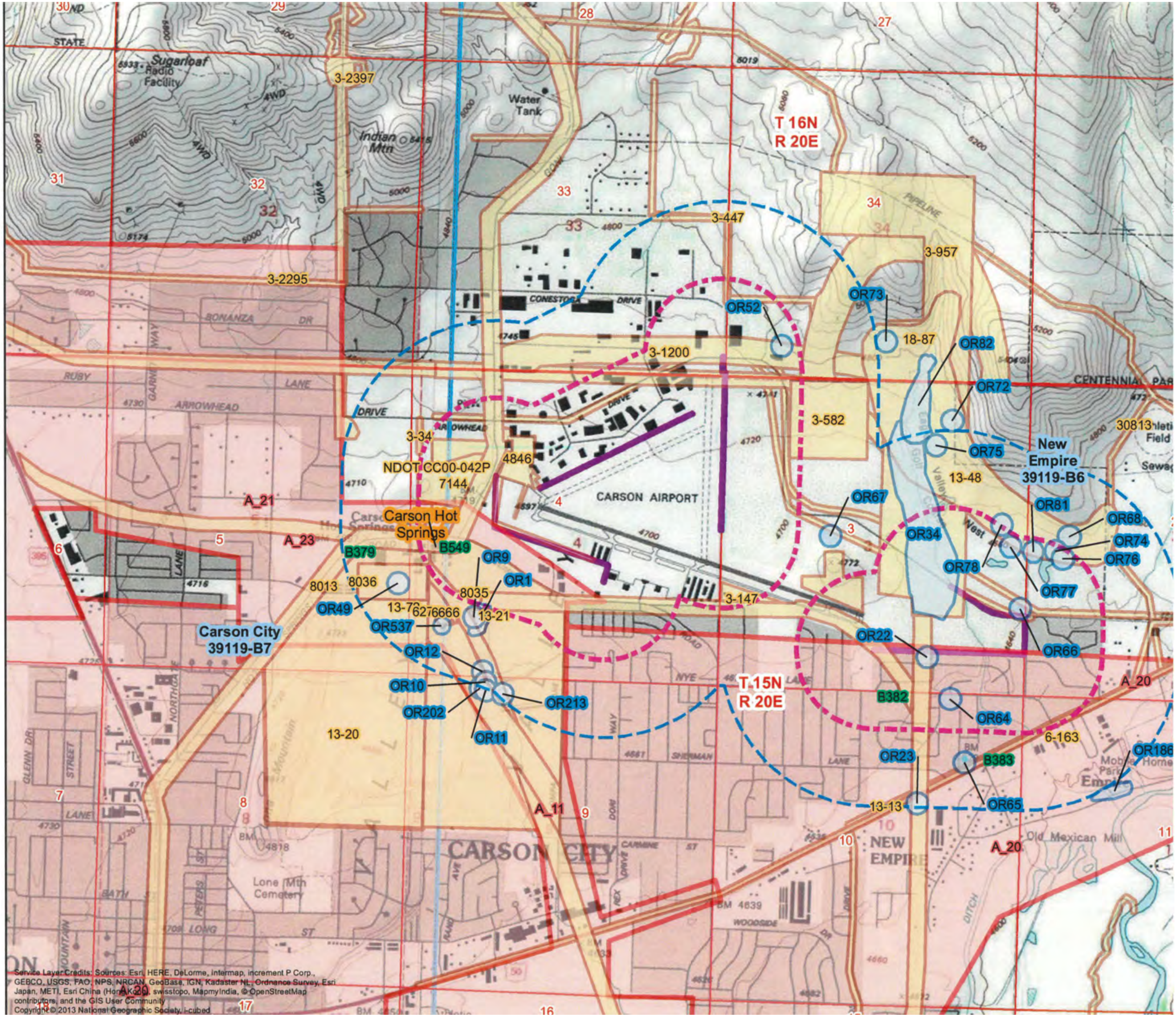
Isolated Finds Table

Field ID No.	Isolated Finds Description	Age	Easting	Northing
ANY-I-1	Red CCS tertiary flake	Prehistoric	263306	4342179
ANY-I-2	Obsidian tertiary flake	Prehistoric	263970	4342542
ANY-I-3	FGV tertiary flake	Prehistoric	265405	4341170

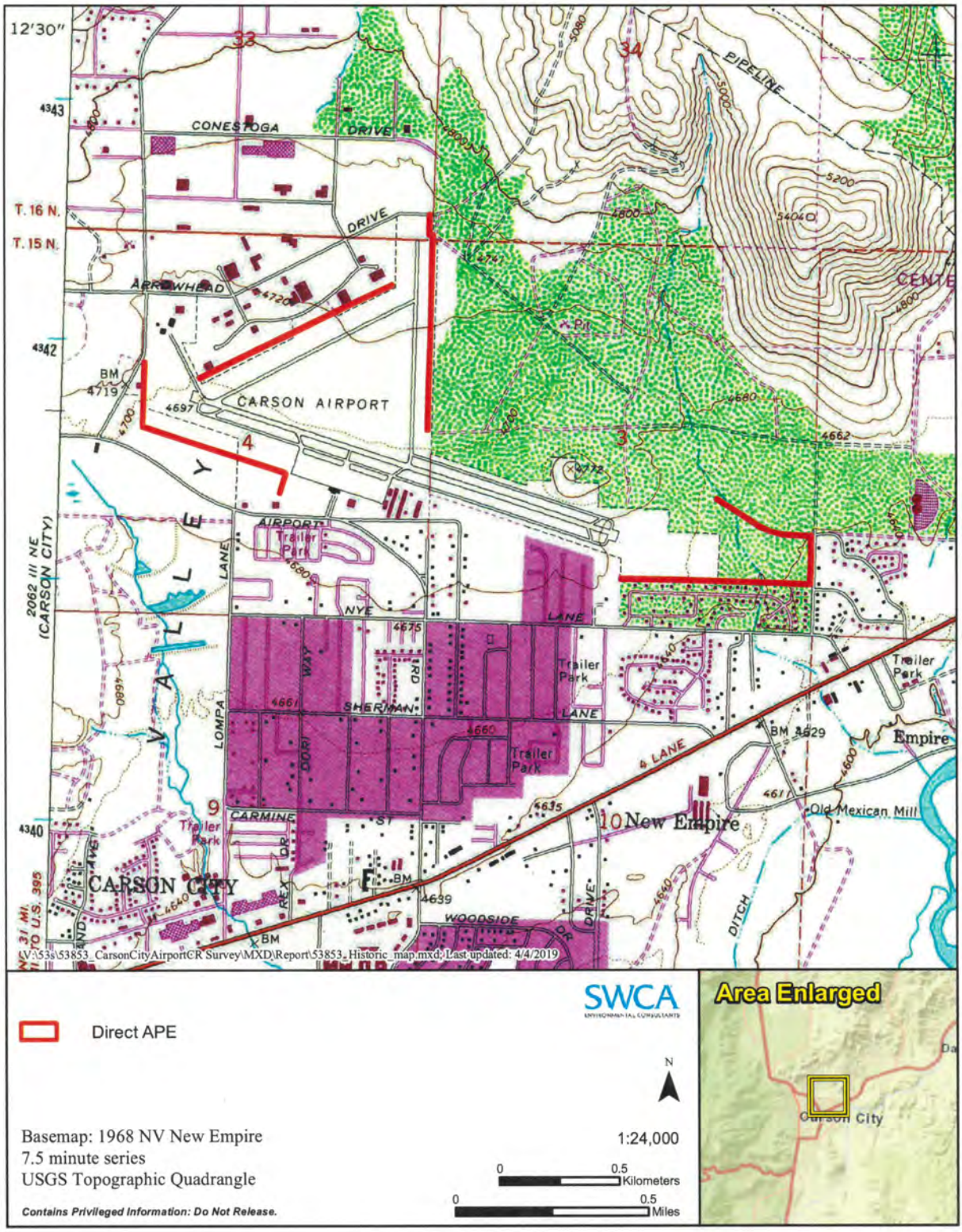
APPENDIX E

Inventory Results Map

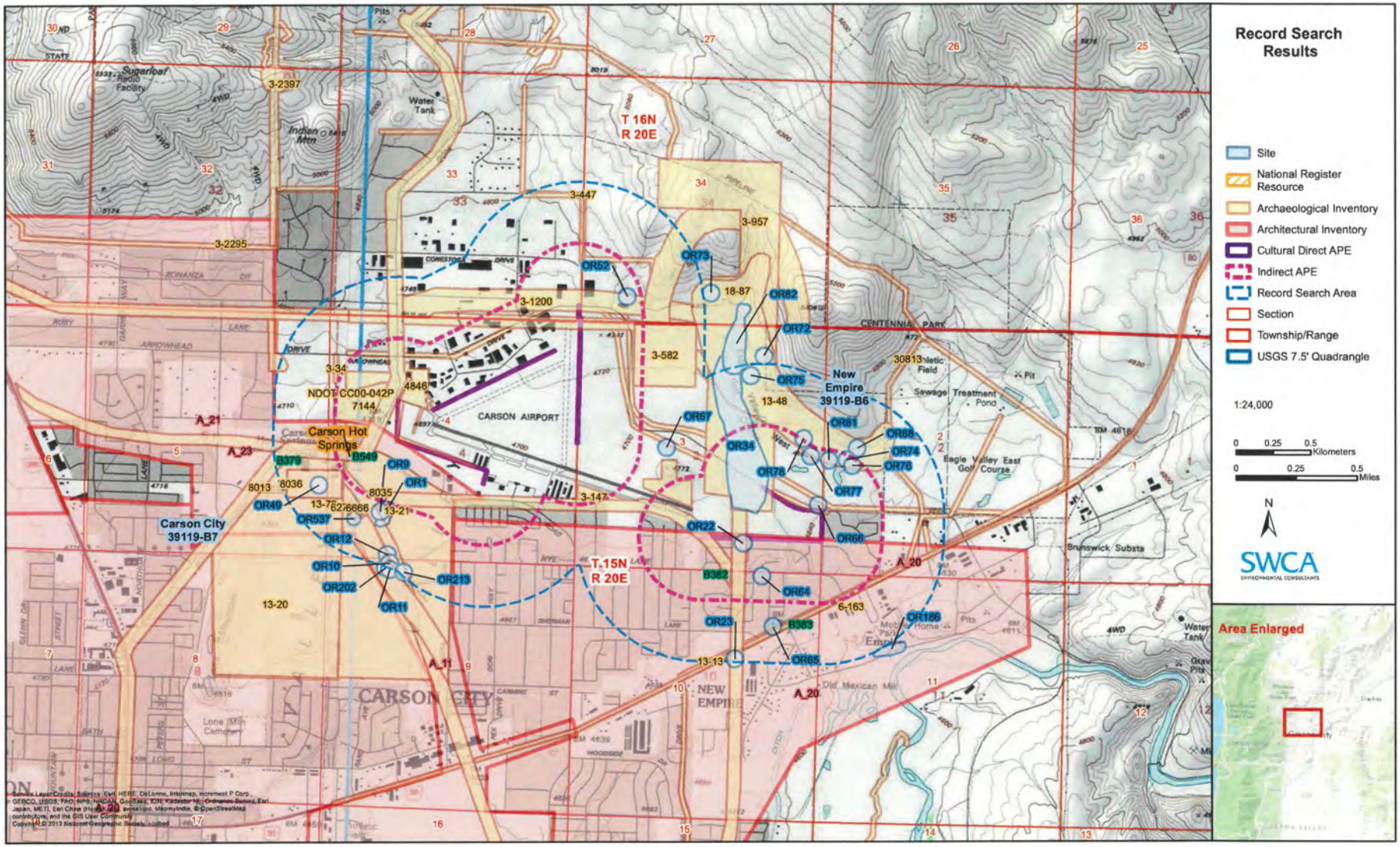

Carson City
39119-B7
New Empire
39119-B6
ANY-I-1
ANY-I-2
ANY-I-3
26OR595
CARSON AIRPORT
CARSON CITY
NEW EMPIRE
Empire
CONESTOGA DRIVE
PIPELINE
CENTENNIAL
Eagle Valley Golf Course
NYE LANE
SHERMAN LANE
CARMINE ST
V:\53s\53853_CarsonCityAirportCR Survey\MXD\Report\53853_ClassIII.mxd; Last updated: 4/10/2019
Cultural Direct APE
Isolated Occurence
Site
USGS 7.5' Quadrangle
Township Boundary
Section Boundary
Land Ownership
Bureau of Land Management
Private
SWCA
N
1:24,000
0
0.5
Kilometers
0
0.5
Miles
Contains Privileged Information: Do Not Release.
Area Enlarged



T 16N
R 20E
T 15N
R 20E
Sugarloaf
Radio
Facility
Indian
Mtn
Water
Tank
3-2397
3-2295
3-447
3-957
OR73
18-87
OR52
3-1200
OR82
OR72
3-582
OR75
New
Empire
39119-B6
13-48
3-34
NDOT CC00-042P
7144
4846
CARSON AIRPORT
OR67
3
OR81
OR68
OR74
OR76
OR78
OR77
OR34
Carson Hot
Springs
B379
B549
A_21
A_23
8013
8036
OR9
OR1
8035
13-21
OR49
13-76276666
OR537
Carson City
39119-B7
3-147
OR22
OR66
OR12
OR10
OR202
OR213
OR11
13-20
B382
OR64
6-163
A_20
OR23
B383
OR186
13-13
OR65
A_11
CARSON CITY
NEW
EMPIRE
Lone Mtn
Cemetery
Old Mexican Mill
CONESTOGA DRIVE
BONANZA DR
RUBY LANE
ARROWHEAD DRIVE
CENTENNIAL PARK
Athletic Field
30813
Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Copyright© 2013 National Geographic Society, i-cubed



Enclosure 1: Direct APE



Enclosure 2. Indirect APE and Background Research Results

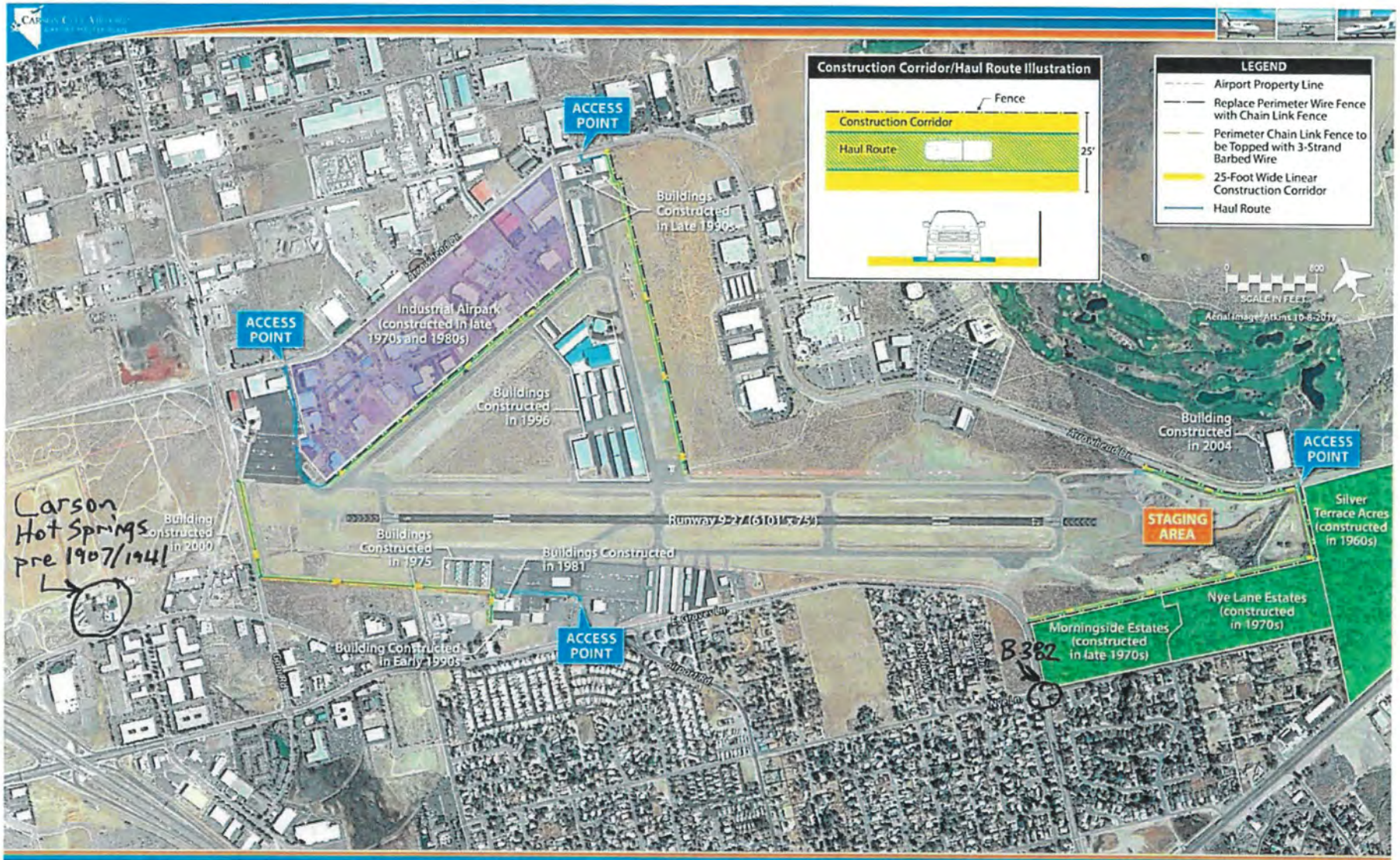


Exhibit 1
PROPOSED PERIMETER FENCE IMPROVEMENTS

Enclosure 4