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MEMORANDUM

Historic Resource Commission meeting of July 11, 2019

TO: Historic Resource Commission **Item E-5**

FROM: Hope Sullivan, AICP
Planning Manager

DATE: July 2, 2019

SUBJECT: HRC-19-113 For Possible Action: Discussion and possible action regarding a Section 106 Technical Report prepared for the US Army Corps of Engineers for the Lompa Ranch Flood Control Channels proposed on property located north of East Fifth Street, east of Saliman Road, and south of Robinson Street. (Hope Sullivan, hsullivan@carson.org)

This item is before the Historic Resource Commission as a consulting agency. The proposed Lompa Ranch Flood Control Channels require permitting by the US Army Corps of Engineers. As part of this permitting, the applicant has prepared a Section 106 Technical Report to determine if the proposed project will have an adverse impact on any properties eligible for listing or listed on the National Register of Historic Places. The report is intended to identify alternatives that could avoid, minimize or mitigate these impacts. 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 resources. The federal agency will consider public views and concerns about historic preservation issues when making final project decisions.

Attachment
Lompa Ranch Flood Control Channels – Draft Section 106 Technical Report

Lompa Ranch Flood Control Channels - DRAFT

Section 106 Technical Report

September 7, 2018

Prepared for:

U.S. Army Corps of Engineers,
Sacramento Division
Reno Regulatory Field Office
300 Booth Street Room 3050
Reno, Nevada 89509

Stantec Consulting Services, Inc
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Reno, NV 89511

Revision	Description	Author		Quality Check		Independent Review	

Sign-off Sheet

This document entitled Lompa Ranch Flood Control Channels Section 106 Technical Report was prepared by Stantec Consulting Services Inc. (“Stantec”) for the account of Ryder Homes (the “Client”). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec’s professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

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Prepared by _____

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Reviewed by _____

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Approved by _____

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Ross Smith

Approved by _____

(signature)

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Executive Summary

Between July 23 and 26, and on August 13, 2018, Stantec Consulting Services, Inc. (Stantec) conducted archaeological and architectural history studies on behalf of Ryder Homes as part of the permitting process with the United States Army Corps of Engineers (USACE) for the proposed construction of flood channels in Carson City, Nevada. The proposed project will entail construction and improvement to two flood channels that are located within the 100-year floodplain of the Lompa Ranch property, situated within the eastern portion of Carson City, Nevada. As the proposed project will require permits and notices to proceed from the USACE under Section 404 of the Clean Water Act and/or Section 10 of Rivers and Harbors Act, it is considered an undertaking subject to compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended and its implementing regulations (36 Code of Federal Regulations [CFR] 800). The purpose of this study was to identify and document archaeological and historic built resources within the Project Area of Potential Effects (APE), to evaluate such resources for National Register of Historic Places (NRHP) eligibility, and to assess the project effects on historic properties.

The initial part of the study included an archival records search of the APE and the surrounding Study Area conducted at the Nevada Cultural Resources Information System (NVCRIS) as well as an intensive 100% pedestrian survey of approximately 186.1 acres of land for archaeological resources, and 184.3 acres of land for urban architectural resources. No archaeological resources were identified within the APE during the course of the study; however, the NVCRIS identified the previously identified NRHP-eligible Lompa Ranch Historic District. This historic district, which is identified as significant as a formative agricultural property in the Eagle Valley, includes a number of contributing buildings, structures, and site features. The proposed project is located entirely within this district and has the potential to affect the agricultural fields, which is considered a contributing site feature. As such, the proposed project, particularly the construction of the King's Canyon Creek Channel, has the potential to cause both direct and indirect adverse effects. Therefore, Stantec is making a recommendation of Adverse Effects.

Abbreviations

ADI	Area of Direct Impacts
APE	Area of Potential Effects
NDOT	Nevada Department of Transportation
NHPA	National Historic Preservation Act of 1966, and as amended.
NHPO	Nevada State Historic Preservation Office
NRHP	National Register of Historic Places
NVCRIS	Nevada Cultural Resource Information System
SHPO	Nevada State Historic Preservation Officer
TRM	Turf reinforce matting
USACE	U.S. Army Corps of Engineers

Glossary

Adverse Effects	Any direct or indirect change that affects the character of a historic property.
Area of Direct Impacts	The project area where physical work is occurring.
Area of Potential Effects	The identified geographic area where a potential project may have direct and indirect effects on historic properties
Historic Properties	Any building, site, structure, object, or historic district that is either listed, or eligible for listing, on the National Register of Historic Places
Undertaking	A proposed project that has the potential to cause adverse effects.

1.0 INTRODUCTION

1.1 DEFINITION OF UNDERTAKING

The proposed project (Undertaking) involves construction of flood channels along existing creeks in Carson City, Nevada. These creeks are defined as waters of the United States, and therefore are under the purview of the US Army Corps of Engineers (USACE). To receive the relevant permits and notice to proceed, the project proponent must meet requirements of Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act, in order to receive a permit from the USCACE, Sacramento District. As a federal agency, USACE must comply with Section 106 of the National Historic Preservation Act (NHPA), which requires the identification, assessment, and mitigation of potential adverse effects on any historic properties resulting from an undertaking.

1.2 PURPOSE

The purpose of this document is to provide the necessary information for the Section 106 consultation process related to the proposed Undertaking. Per the requirements of 36 CFR Section 800.5(a) of Section 106 of the NHPA, the following document provides a recommendation of Finding of Adverse Effects based upon the analysis and application of the criteria of adverse effects to identified historic properties within the Area of Potential Effects (APE). Supporting materials specific to the Undertaking, such as project plans and other documentation, are provided as appendix items to be reviewed as part of the overall Section 106 Submittal.

The assessment of project impacts on cultural and built environment resources is generally a two-step process: 1) determine whether the APE contains cultural resources (defined as prehistoric archaeological, historic archaeological, or historic architectural resources) and the potential for any properties that may qualify as historic properties, and, if the APE is found to contain a historic properties, then 2) determine whether project would cause a substantial adverse change to the resource. If no historic properties are found within the identified APE, then no assessment of adverse effects is required.

1.3 LOCATION OF THE UNDERTAKING

The Undertaking is located in Carson City, -119.74434 Longitude, 39.16608 Latitude, in the Carson River Basin, Eagle Valley Groundwater Basin (Hydrographic Area 104). The Project Area is in Township 15 North, Range 20 East, Section 16, Mount Diablo Baseline and Meridian on the Carson City and New Empire, Nevada United States Geological Survey 7.5-minute quadrangle. Elevation of the Undertaking project site is 4,640 feet above mean sea level. The project area is roughly bounded by E. 5th Street to the south, I-580 to the east, E. William and E. Robinson Streets to the north, and N. Saliman Road to the west (**Figure 1 and Figure 2**)

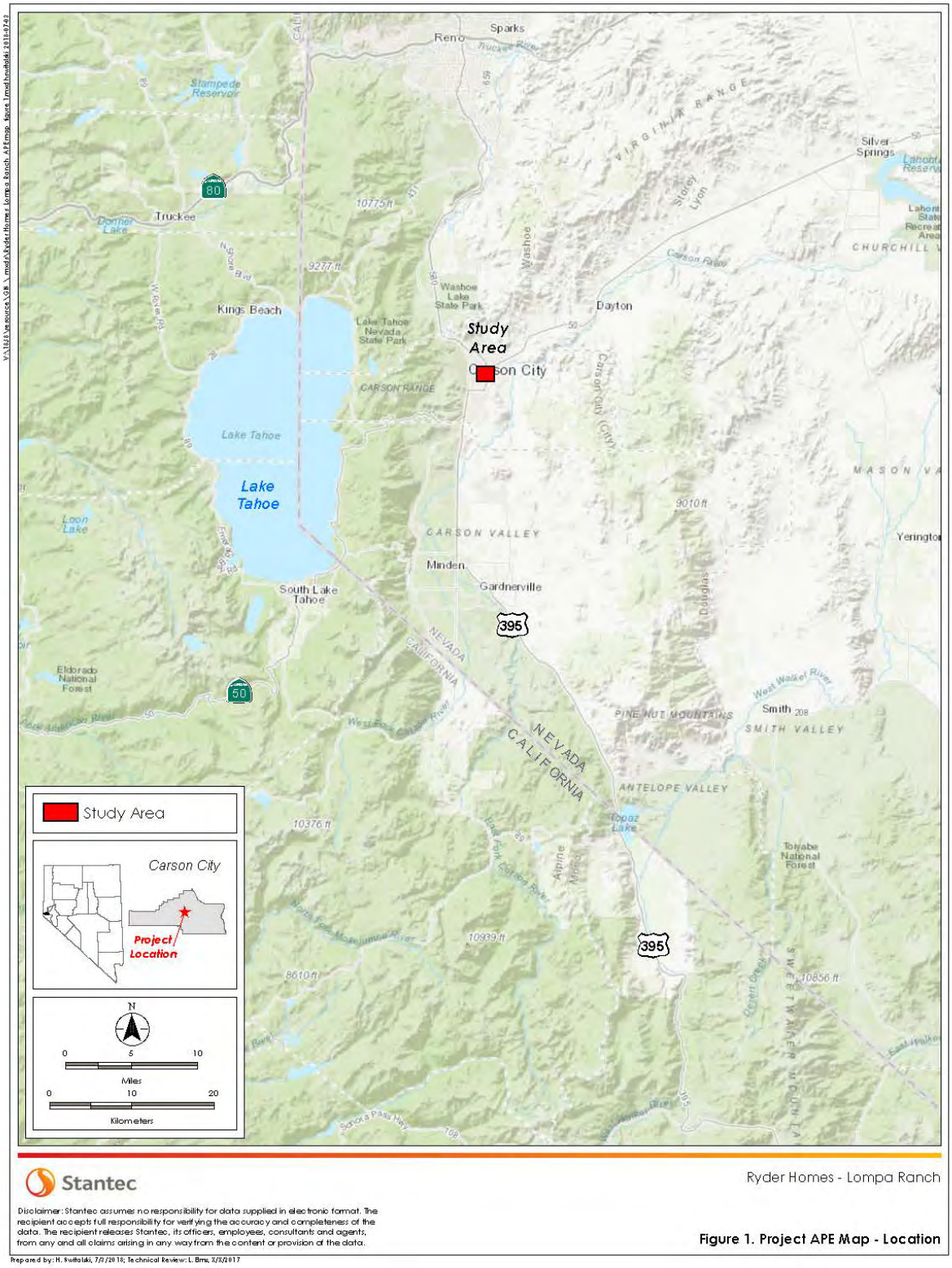

Figure 1. Project Location Map showing general location. Prepared by Stantec, 2018.

Figure 2. Project Location Map, showing specific project area. Prepared by Stantec, 2018.

2.0 BACKGROUND

2.1 ENVIRONMENTAL BACKGROUND

The overall Study Area (one-half mile radius surrounding the Project APE) is located within Eagle Valley in the western portion of the Great Basin. The Great Basin is a large interior drainage characterized by basin and range faulting which has led to a series of roughly parallel north-south trending valleys. The term Great Basin is applied to hydrographic, biological, floristic, physiographic, topographic and ethnographic geographic areas. The name was originally coined by John C. Fremont who recognized the hydrographic nature of the landform as having no connection to water. Some 150 mountain ranges wind their way through the Great Basin, each with an associated valley (Sutton 2004). Two geomorphic provinces are included in the Great Basin: the Modoc Plateau and the Basin-Range Province. The Basin-Range Province, or the physiographic Great Basin, is comprised of north-south-trending valleys and mountain ranges associated with fault and stretching of the terrain. This province occupies a large portion of the Great Basin, including Nevada and extending into western Utah, northern Arizona, and portions of eastern California (Schonhherr 1995:11).

During the Pleistocene, much of the present-day western and northern Nevada was covered by Lake Lahontan. At its peak approximately 12,000 years ago, this large body of water had a surface area of over 8,500 square miles with its largest component centered at the location of the present-day Carson Sink (approximately 30 miles northeast of the current Study Area). Climate change around 10,000 years ago led to a gradual desiccation of the lake with gradual decrease in precipitation. As a result, the lake has mostly disappeared in its original form by about 9,000 years ago. As the surface elevations dropped the lake broke up into smaller lakes, most of which rapidly dried up, leaving only a playa. These ancient playas include the Black Rock Desert, Carson Sink, and the Humboldt Sink. The only remnants include Walker Lake and Pyramid Lake. Winnemucca Lake has been dry since the 1930s and Honey Lake undergoes frequent periods of desiccation.

The immediate Study Area is surrounded by the Carson Range escarpment to the west, Pine Nut Mountain to the east, Virginia Range and Washoe Lake to the north, and Carson Valley to the south. The western Great Basin, including Eagle Valley, is influenced by the Sierra Nevada range to the west, which traps moisture from the Pacific Ocean. As a result, the climate is arid and has a biseasonal pattern characterized by winter and summer precipitation and spring and fall drought. There is a considerable variation from year to year in both the monthly and annual precipitation. Such variation is not uncommon as great as 300 to 400 percent. A relatively light rainfall in June, with appreciable increase in July and August is characteristic (Sampson 1925:24-25). On the average, precipitation varies from five to 20 inches per year, with most occurring as snow between November and May.

Generally, the growth of desert vegetation in the Great Basin is delayed until spring, whereas the growth period in warm deserts occurs primarily during the winter when most of the precipitation falls. The most common shrub in the Great Basin is Great Basin Sagebrush. At lower elevations, in desert basins, a variety of saltbushes can be found (Schonhherr 1995:12). Above the sagebrush elevation, or often mixed with it, are pinyon pines (*Pinus monophylla*) and junipers (*Juniperus osteosperma*) that may form an open forest. The vegetation in this belt clearly shows that little precipitation and the shallowness of the soils are important factors that limit the growth and the density of the vegetative stand (Sampson 1925:27-28).

2.2 CULTURAL BACKGROUND

The Study Area encompasses lands in western Nevada and western portion of the Great Basin. It is believed that people have inhabited this portion of North American for at least 10,000 years. A number of formal archaeological investigations have been conducted in the western Great Basin. General summaries of prehistory of this region are presented in Heizer (1951), Lanning (1963), Thomas (1981), McGuire (2002) and are summarized in McGuire and Hildebrandt (2016). The following general time periods are summarized for the western Great Basin and are presented to provide a temporal framework for this study.

2.2.1 Prehistory

Archaeological sequences for the Great Basin and Mojave Desert are typically grouped into Late Pleistocene, Early, Middle, and Late Holocene time frames with periods and phase definitions varying by regions. The earliest period of human occupation is recognized throughout the west by the presence of fluted projectile points and associated artifacts, which have traditionally been interpreted as tools that were used for hunting megafauna. First evidence of human occupation, albeit limited, dates to the Paleoindian (14,500 to 12,800 Before Present [B.P.]) and Paleoarchaic (12,800 to 7800 B.P.) periods are generally recognized as tools and artifacts that were used for hunting megafauna where important economic resources reached their highest densities. Paleoindian findings from this time period are limited to a series of Great Basin Concave Base projectile points and small obsidian flaked stone concentrations (McGuire and Hildebrandt 2016). Paleoarchaic sites appear to be much more common and tend to be represented by Great Basin Stemmed projectile points, bifaces, and a limited number of other flaked stone tools. Most of these assemblages appear to reflect small group of hunters reworking their tool kits as they traversed through the area.

With the onset of the Middle Holocene, the climate became dryer and hotter throughout the western deserts. Under these conditions, the subsistence focus most likely shifted away from the lakeshores and toward upland resources and it appears that human populations nearly doubled during this time period (approximately 7800 to 5700 BP) (Wells and Backes 2005). Artifact assemblages remain rather narrow, often composed of norther side notches and Humboldt Concave Base points, bifaces and debitage and reflect use of the region by small groups of mobile hunters.

Early Archaic (5700 to 3800 BP) Period is largely characterized by the Gatecliff and Humboldt projectile points. Once again, climatic conditions had changed, this time to the cooler, moister Late Holocene. An increase in population, trade and social complexity occurred with the more favorable conditions. Hunting of a variety of fauna, including mountain sheep, was an important part of the economy (Hildebrandt et al. 2016; Wells and Backes 2005). Simultaneous to this population increase and dispersal, a full complement of site types began to emerge, with large-scale residential areas becoming significant for the first time. This trend continued forward into the Middle Archaic Period where the relative frequency of residential sites almost doubled compared with the Early Archaic interval. Plant macrofossil and archaeofaunal assemblages also become more abundant and diversified at this time, probably marking a broadening of the diet breadth.

The Late Archaic (1300 to 600 BP) was most likely a time of profound cultural change in the Great Basin, possibly induced by severe drought, population increase, resource intensification, ethnic displacement, and technological changes. This was a period of the Medieval Climatic Anomaly (MCA), that may have disrupted settlement and subsistence systems in California and the Great Basin (Jones et al. 1999). This period also marks the introduction of

bow and arrow, which are represented by small corner-notched projectile points referred to as Rose Springs, Eastgate, or Rosegate. In parts of the Great Basin, there was a significant decline in the use of large game relative to small game during the Late Archaic as well as local exploitation of root crops with large root processing complexes comprised of hearth features and ovens present in the archaeological record. Milling stones, which are usually interpreted as indicating the importance of seed processing that are abundantly present throughout the region and are common at sites from this time period.

The Terminal Period (600 BP to Contact) is characterized by the general expansion of human populations into the region exploring wide range of habitats and marks the beginning of the Numic expansion, which most researchers believe emanated from southeastern California (Wells and Backes 2005; Yohe 1992). This time period is represented by major villages and numerous other sites in the southern Great Basin and the Mojave Desert. However, Elston (1982) observed that residential group size in the western Great Basin decreased during this time, and settlement systems became more dispersed, very characteristic of short-terms occupations by small family units. Along with root and seed intensification, the Terminal Period also suggests an increasing reliance on small-game resources with much less focus on large and medium sized game.

2.2.2 Ethnography

The ethnographic group that is believed to have inhabited this portion of the western Great Basin is the Washoe. The Washoe are the only people of the Great Basin whose language is not Numic, and there can be very little doubt that the Washoe had long tenure in their known area of historic occupation and that their presence predates the arrival of their Numic-speaking neighbors. The Washoe occupied a large area south, east and north of Lake Tahoe with the Northern Paiute located immediately east and the Nisenan and Miwok located immediately west and southwest, respectively. The area occupied by the Washoe contained three major life zones providing an abundant and varied plant and animal species. The Boreal zone around Lake Tahoe and along the crest of the Sierra Nevada ranged from 6,000 to 10,000 feet, and included the Jeffrey pine, fir, sugar pine forests, streams, and mountain meadows. Fish were abundant as well as large game, including mountain sheep, deer, pronghorn antelope as well as species of smaller animals. In the Transition zone along the lower elevations of the Sierra Nevada between 4,500 and 6,000 feet, Jeffrey pine and fir forests merged with juniper, pinon and sage brush belts in the Pine Nut Mountains, which divide the region from the drier and more extensive Upper Sonoran zone. Three major lakes: Honey Lake, Washoe Lake, and Topaz Lake with their interior drainage and seasonal marshlands provided an abundance of fish, water fowl, and variety of plants. The major habitation centers of the Washoe were on the floors of the large valleys averaging about 4,500 feet in elevation, where water, vegetation, and game were abundant in relatively mild climate. These areas traditionally also contained year-around settlements with east access to nearby resources (D'Azevedo 1986).

The extensive Washoe territorial range beyond the core area was generally open to joint use by the Washoe and nearby groups, where in some cases the Washoe ventured as far east as Walker Lake and Mono Lake to obtain fish and kutsavi, and further west along the North Fork of the American River and Mokelumne River to collect acorn. Despite the detailed knowledge of vast region around them, the Washoe had access to a variety of resources close at hand. While seasonal movement occurred regularly, most groups hunted and gathered in the vicinity of their traditional habitation sites, from which they dispersed during the summer and fall to temporary habitation and hunting sites. D'Azevedo (1986:472) pointed out that there was very little evidence that the Washoe suffered periodic starvation of winter shortages of food prior to the disruption of their core habitation territory by White settlers in the

19th century. However, he argues, that periods of food shortages did likely occur at times due to unusual climatic changes or potential crop failures.

According to D'Azevedo (1986), permanent settlements were located on high grounds near rivers and springs within a variety of ecological zones, and within short distances, roughly one or two days away. Individual houses were usually separated from each other for protection and privacy. While temporary camps may have been utilized anywhere in the region at different times of the year, permanent settlements were not abandoned during intensive periods of gathering and/or hunting to allow for elderly persons and young children to remain behind. This indicates that the Washoe appeared to have been less compelled to continual and/or seasonal movement in search for food than the Northern Paiute and Western Shoshone.

The Washoe had access to a number of resources including fish, such as trout, Tahoe suckers, Lahontan tui chub, and Lahontan sucker, among others. The prominence of fishing among the Washoe is indicated by the relatively large inventory of implements and techniques used for this purpose, including: spears, cordage lines, with bone hooks, harpoons, dams for diversion, basketry, weirs, and many types of fish traps. The gathering of plant products was pursued intensively from early spring until late fall, where seasonal availability of such foods was one of the major factors in population dispersal and frequent movement over a larger range. The Washoe also gathered pine nuts, acorn, as well as berries, including the western chokecherry, elderberry, buckberry, Sierra plum and Sierra gooseberry. Variety of strawberries were picked in mountain meadows and were highly prized. Manzanita berries were gathered in the Sierra Nevada and were often traded with the nearby Miwok. D'Azevedo (1986:473) points out that the ethnographic record lists over 170 plants that were used by the Washoe indicating the importance of vegetal foods in Washoe subsistence.

The principal large mammals hunted by the Washoe were mule deer, pronghorn antelope, and mountain sheep, which were hunted using bow and arrows. Deer and mountain sheep were hunted at high elevations by a group of 5-10 men. On occasions, individual hunters or pairs of hunters made frequent trips in search of deer and were led by an admired hunter of one who had dreamed of deer. Pronghorn antelope were rarely stalked individually, but large groups of hunters who drove the animals in to V-shaped corrals constructed of junipers, sagebrush, or rock for the hunters to shoot and ambush their prey. In some cases, large groups of pronghorn were driven over cliffs and killed in great numbers.

The Spanish presence in the Southwest, beginning in the 1540s, seems to have had little direct impact on the Washoe for roughly 250 years. There were probably direct impacts and the people were probably aware of the presence of the Spanish long before actual contact. However, when in 1776 the Spanish priests Francisco Garces, Francisco Atanasio Dominguez, and Escalante documented the first direct contact with the nearby Southern Paiute, they noted little evidence of any foreign presence among them (Kelly and Fowler 1986:386). Spanish explorers knew of the Truckee and Carson Rivers by the end of 1700s, and trappers and traders first visited the current Study Area probably sometime in the early 1820 and early 1830s.

The Washoe and their territory were virtually unknown to the American settlers before the 1850s, except for sparse reports by trappers and explorers (D'Azevedo 1963; Hamilton 1905). The first reports seemed to have been made by Jedediah Smith and a party of trappers who followed the Mojave Indian Trail and who headed north and crossed the Sierra Nevada over Walker Pass sometime in 1825 or 1826. The area was not systematically explored until John Freemont, who was exploring the Rocky Mountains and northwest, arrived in 1844 with guide Kit Carson. Freemont famed for his role as one of the first government sponsored explorers, coined the descriptive terms "Great Basin" as

the vast stretch of semi-arid land between Wasatch Mountain and Sierra Nevada. By the late 19th century the impacts of the Spanish, and now the American settlers, trappers, and ranchers had an irreversible impact on the Washoe. Within years many of the newcomers had established trading posts, settlements, and begun to fence the land and water holes for ranches. The discovery of Comstock Lode at Virginia City in 1858 created a deluge of more than 20,000 miners and fortune seekers in to the Washoe territory in search of gold and silver.

2.2.3 Historical Context

Settlers first arrived in the Eagle Valley in 1851, when a group of miners from California established a trading post near modern-day Carson City. For much of the latter half of the 19th century, mining dominated Eagle Valley due to its proximity to the Comstock Lode. Wagon trains passed through through Eagle Valley, enroute to California and the trading outpost of early Carson City, which expanded. This expansion led Carson City to become a town in 1858, and more people began to settle in the area. Commercial ranching and farming operations were launched in the area in the early 1860s to meet the needs of the growing population. Access to water was an early issue, with the majority being diverted for nearby mining operations, leaving little for agricultural purposes. When mining efforts were abandoned in the late 1890s, farmers utilized former mining ditches for irrigation in addition to building new irrigation infrastructure (Snyder, 2004).

2.2.3.1 Lompa Ranch

The Lompa Ranch is located in the Eagle Valley, on the eastern side of current Carson City. The current area has been reduced over time, most notably with the construction and encroachment of the I-580 Freeway, as well as other parts of the city development. The current property is approximately 360 acres.

The land that became Lompa Ranch went through a variety of owners, beginning in 1865, when John Jacob Musser sold a 240-acre portion of it to A.D. Treadway. In 1870, Treadway sold some of his land to R.S Mesick and J. Seely, but also purchased new land from P.H. Clayton. By 1873, he sold more of his property to C.A.V. Putnam, John R. Johnson, and John B. Bradley. In 1875, Putnam sold 80 acres to the Nevada Agricultural Mining & Mechanical Society. Treadway sold off more of his original land in 1875 as well, to J.H. Adams. This was followed in 1878 by the sale of a piece of property to Richard Kirman, and finally in 1881, Treadway sold his last 65-acre parcel to William Smyth. C.A.V. Putnam sold the rest of his property to William Smyth in 1891and by the end of the year, Smyth sold 100 square feet of the property to Richard Kirman. Smyth passed his holdings onto Hannah Duffy and in 1898, the administrator of her estate sold them to P.H. Peterson. Peterson immediately sold half the land (318 acres) to Richard Kirman and in 1907, repeated this process when Peterson purchased part of the Duffy Ranch to the south of Kirman's property and then immediately sold it to Kirman. Soon after, Kirman's widow sold the entire ranch property to Wildes & Company in 1907. By 1908, the company sold the ranch to Sam Imelli and the following year, Imelli sold it to Joe Moroni and Steve Belli.

Steve Belli became the sole owner of the ranch in May 1919 when the property became known as Belli Ranch. In 1927, he acquired a new parcel of land on the corner of East 5th Street and Saliman Road. By 1936, Belli sold the ranch to Simone "Sam" Lompa and Rinaldo Crimetti. Lompa and Crimetti deeded a portion of the ranch to the State of Nevada in 1937, for use as a secondary road to the prison, which corresponds with today's E. 5th Street. They operated the ranch as partners until Crimetti sold his half to Lompa in 1940, which brought the total property under Lompa's ownership to an approximate 820 acres. When Lompa and Crimetti purchased the ranch in 1936, there were several extant buildings scattered across the property including a small house, blacksmith shop, granary, and barn,

likely built by Belli between 1909 and 1936. Lompa built a new house on the property in 1940, converting the original house to a bunkhouse. He also added several stone buildings to the property, which supported the many agricultural endeavors at the ranch. Lompa and his wife originally operated the property as a dairy farm, but eventually expanded to include sheep and cattle. In the 1960s, Lompa made a deal with Carson City that forfeited their water rights. Sam Lompa died in 1969 with ranch operation passing to his wife Eva and son, Sam, continued. In the 1970s, Sam Lompa drilled a well on the property to ease their water issues. By 1991, the ranch acreage had decreased to 550 acres (down from about 820 acres in 1940). Following Eva Lompa's death in 2003, ownership of the property passed down to their three children. By 2004, the ranch totaled 359.62 acres, straddling East 5th Street and surrounded by increasing urban development.

3.0 UNDERTAKING DESCRIPTION

3.1 DESCRIPTION OF THE UNDERTAKING

The proposed project involves the channelization of two creeks, Ash and King Canyon, that extend east-west across the proposed project site. These channels will typically be open, trapezoidal or V-shaped, concreted lined, and earth bottom. Other upgrades include the construction of service access roads at each channel, as well as installation of box culverts to accommodate service crossings. Additional site upgrades associated with the project include the installation of rock check dams, maintenance access ramps, and grade check structures. No perimeter security fencing will be installed along the channel alignments.

For reference, selected drawings of the Undertaking are located in **Appendix A**.

3.1.1 Channels

3.1.1.1 Ash Canyon Creek Channel

The Ash Canyon Creek channel begins on the east side of the Project Area at the intersection of Robinson Road and Saliman Road for an approximate distance of 3,000-feet. The channel will direct flow to the east, along the south side of Robinson Road, to the swale adjacent to I-580. The Ash Canyon Creek channel will be an earthen, open, 5-foot deep trapezoidal channel, with 3:1 side slopes. The channel will be 40-feet wide with a 4-foot shoulder and 12-foot wide maintenance road on the north side. One road crossing with the north to south Spine Road is expected. The design for this road crossing is a Jensen Precast bottomless concrete box culvert. The flow will not be trapped behind the road crossing but will be allowed to flow under the road in the box culvert (Kimley Horn and Associates, 2017a and 2017b).

3.1.1.2 King Canyon Creek Channel

The Kings Canyon Creek channel will travel adjacent to East 5th Street; follow the east, north, and west property boundaries of the Lompa homestead; and continue to join Vicee Canyon Creek, Ash Canyon Creek, and the Voltaire Canyon/Tributaries H & I watersheds before flowing under the bridge at I-580. The proposed channel would be 26-feet wide, 6-feet deep, with 3:1 side slopes, and includes a bench at 3-feet for a 12-foot wide maintenance road. The

entire drainage easement will have a total width of 74-feet and extend for an approximate distance of 4,000 feet (Kimley Horn and Associates, 2017a and 2017b).

3.1.1.3 Culvert Crossings & Grade Checks

Culvert crossings were designed for all the proposed roadway crossings. A three-lane road running north to south across the site, named “Spine Road”, will cross both channels. Two additional culverts for the entrance roads will cross each of the Kings Canyon Channel (AR-4) and Ash Canyon Channel (AR-3) for a total of six proposed culverts. All the channel crossings are proposed to use a Jensen Precast bottomless concrete box culvert. The Kings Canyon Channel (AR-4) may require the use of two bottomless concrete box culverts (i.e., double barrel box culvert). The dimensions of the box culverts will by 22 feet by seven-foot three inches (Kimley Horn and Associates, 2017a and 2017b – See Appendix A).

Riprap will be used to line the inside walls of the culvert foundations to mitigate any scour. Riprap sizing would be approximately 10.5 inches average diameter (NDOT Class 300 riprap and bedding). The riprap would be placed on the inside foundation along the upstream and downstream wingwalls and culvert walls at a depth of two feet with eight inches of base stone below the riprap where it does not sit directly on top of the foundation footing. The riprap would extend out 2 feet horizontally from the foundation with a bottom elevation the same as the bottom of the foundation and two feet from the end of the foundation toward the culvert wall. The riprap would then be covered with channel fill material and top soil to the final channel invert elevation (Kimley Horn and Associates, 2018 – See Appendix A).

Permanent drop/grade check structures will be provided downstream of each culvert and at regular intervals to prevent headcut erosion and channel degradation. The grade check structures will be constructed of vinyl sheet piling set within concrete caps set at the bottom of the channel. The concrete caps will extend the full width of the channel bottom and be approximately 18-inches deep by 12-inces wide. The vinyl sheeting will be set within the cap and extend to a depth of 4-feet below the newly constructed channel bottom. To prevent erosion, the outer banks of the Kings Canyon Creek channel will be lined with a Turf Reinforcement Matting (TRM) rated to handle the higher velocities in the outer channel to prevent erosion of the channel bank and minimize the decrease in channel velocities due to the change of flow direction. Additional TRM will be used on the other channel banks where the velocity during the 1% annual chance event exceeds five feet per second. This material is also rated as effective when used in 90-degree bends, which occurs in the Kings Canyon Creek channel and Ash Canyon Creek channel. TRM products work in conjunction with natural grasses to provide an erosion resistant surface for the channel banks (Kimley Horn and Associates, 2017a and 2017b – See Appendix A).

3.1.2 Service Roads & Access Points

A service access road is provided in the left bank of the Kings Canyon Creek channel and along the left top of bank for the Ash Canyon Creek channel. In addition, a service access road and multi-use trail has been designed between Robinson Street and the Ash Canyon Creek channel, along with maintenance ramps that allow access to the channel bottom and a turn-around area. Access points, channel bottom access, and turn around locations would also be constructed. Access points would be every 660-feet along the channels, constructed with slopes of 5:1 or gentler, for maintenance and silt removal from the channels. Entrance and exit from the maintenance roads will be provided at the beginning and end of the flood control channels. (Kimley Horn and Associates, 2017 and 2018 – See Appendix A). The channels are designed to convey the 1% annual chance (100-year) event, 24-hour peak flow with 1-foot of

freeboard to the top of the channel banks and 18-inches to the top of the roadway crossings in each channel (Kimley Horn and Associates, 2017 and 2018).

3.1.3 Construction Approach

The channels will be constructed in phases with the Ash Canyon Channel first, followed by the Kings Canyon Channel; each channel will be constructed from the downstream end to the upstream. The Undertaking will be conducted using various largescale equipment to excavate and grade the area, as well as prepare the site for the associated upgrades. All construction staging will occur in the identified project site, adjacent to the proposed channel alignments. Some select areas of stockpile and equipment storage have been identified and are included near the proposed channel alignments. Access to the site during construction will occur from E. Robinson Street and N. Saliman Road. This will largely be utilized by construction personnel, haul and water trucks, and other mid-to-small scale equipment.

4.0 AREA OF POTENTIAL EFFECTS

The APE is a defined geographical area in which historic properties have the potential to be affected by the activities associated with an undertaking. This may include direct effect (such as physical alterations) and indirect effects (such as obstructions of visual corridors) that have the potential to affect the historic character of a property. Any changes to the historic character of an identified historic property located within the APE would be considered to have an effect. With the consideration of indirect effects, an APE may extend beyond the undertaking site and include historic properties that are not subject to the physical components of the proposed work.

The APE is located in the eastern portion of Carson City, within Lompa Ranch, which in the past had been used for sheep and cattle ranching. The entire property appears to be located within an alluvial fan that appears to be intersected by a series of shallow and narrow ephemeral washes that carry water runoff and deposits from the nearby Carson Range located to the west. Several city owned and maintained roadways bound the property to the east, west, south, and north, which are surrounded by modern commercial and residential developments. The entire APE is devoid of any roadways and it is comprised of an active pasture with several irrigation ditches surrounding the property.

4.1 BOUNDARIES

The following APE includes those areas in which the associated scope has the potential to affect historic properties through both physical changes that may change a properties physical integrity, and indirect changes that may alter a property's integrity of setting or feeling. For the proposed Undertaking, the horizontal boundaries are primarily defined by the large open-spaces associated with the NRHP-eligible Lompa Ranch Historic District, with some deviations consistent with logical geographical boundaries. The northern boundary extends east from the intersection of N. Salinas Road and E. Robinson Street, then extends north along the eastern limit of the Carson High School property, and continues east along the boundary of the open space. This extends to the I-580 Freeway, which forms the eastern boundary of the APE. The southern half of the APE is consistent with the boundaries of the Lompa Ranch Historic District, which is consistent with Parcel 010-041-62. The boundary then extends west along E. 5th Street before extending north along N. Salinas Road towards E. Robinson Street to form the western boundary of the APE.

The vertical boundaries of the APE are important, as much of the proposed Undertaking involves the construction of channels that range in depth to approximately 10 feet below the current grade. The areas of this below-grade disturbance are at specific locations within the identified project site. These areas are referred to as the Area of Direct Impact (ADI), where direct effects could occur to above and below ground historic properties may occur. A map illustrating the location of the APE, ADI, and area that was subject to the records search (Study Area) are included in (**Figure 3**):

Area of Potential Effects

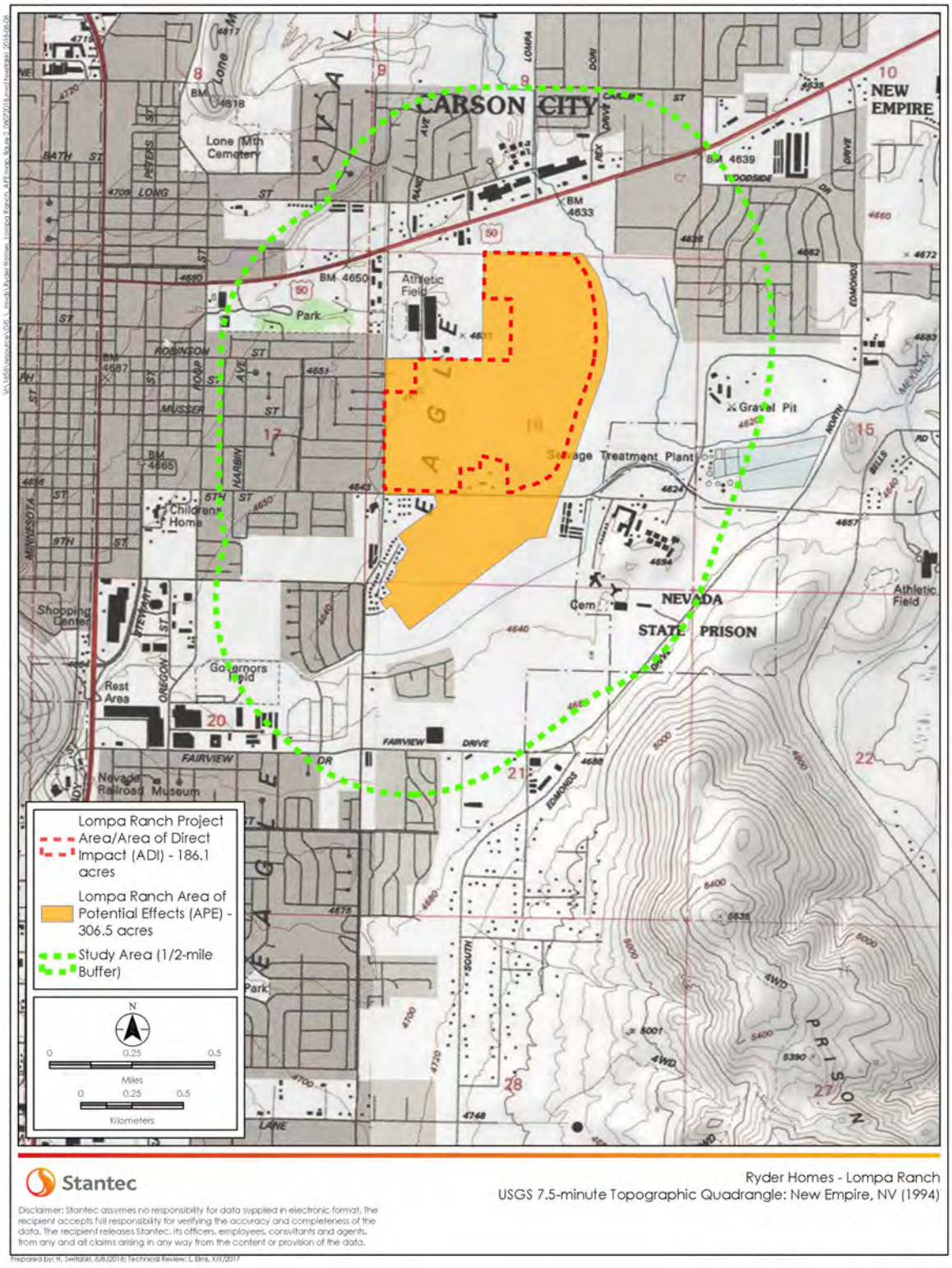

Figure 3. Project APE Map. Prepared by Stantec, 2018.

5.0 HISTORIC PROPERTIES WITHIN THE APE

According to 36 CFR Section 800.16(1)(1), historic properties may include any district, site, building, structure, or object that is included in, or eligible for, listing in the NRHP. The following sections outline the efforts for identifying historic properties within the identified APE and the overall findings. Historic properties that have the potential to be directly affected by the Undertaking are specifically called out in detail under **Section 5.2.3**.

5.1 IDENTIFICATION EFFORTS

5.1.1 Literature Review

A records search of the Study Area (one-half mile radius surrounding the Project APE) to account for potential historic properties that may be subject to potential indirect adverse effects) was conducted by Stantec personnel at the NVCRIS on July 18, 2018. The records search was conducted to identify if previously recorded historic properties are present within the project's vicinity and to determine the scale of previous survey and study efforts. The records search reviewed all previously documented prehistoric and historic archaeological sites, built environment resources, as well as a review of all known cultural resource survey reports, excavation reports, and regional overviews.

Results of the records search indicated that one positive cultural resources survey (Drews 2009) and three negative cultural resource surveys (Nevada State Museum n.d.; Slaughter 2013; Steinberg et al. 1978) were previously conducted within the current APE or within portions of the current APE. Additionally, 17 negative cultural resource studies (Creger 2009; Dansie 1976a, 1976b; Hatoff 1977, 1989; Ingbar 1993; Johnson 1988, 1991; Kuffner 1983; Moore 1981; Obermayr and Zeanah 1998; Pinzl 1980; Risse 2010; Seelinger 1977; Slaughter 2013b; Steinberg 1979; Steinberg et al. 1978; Young 1989; Zeier 1985) and seven positive cultural resource studies (Chambers Group 2012; Drews 2011; Hoihmann 2009; Kautz and Risse 2006; Kimball et al. 2010; Simons et al. 2006; Slaughter 2013a) have been previously conducted within a 1-mile radius of the current APE (**Table 1**). Provided below is a brief summary of cultural resource studies conducted within the current APE.

Table 1. Summary of Previous Cultural Resources Studies within the Study Area

Author	Report Year	Title	SHPO Report Number	Study Results
Chambers Group	2012	Master Cultural Resource Report: A Class III Cultural Resource Inventory for the Digital 395 Broadband Project (#5569)	8013	Positive
Creger, C. Cliff	2009	Carson Bypass Phase 2B, Clearview Phase	3605	Negative
Dansie, Amy	1976	Archaeological Resources Short Report: Proposed Juvenile Facility, E. Fifth Street Site	13-8	Negative
Dansie, Amy	1976	Report of Field Investigations: State Public Works Projects	13-7	Negative
Drews, Michael	2009	A Class III Cultural Resource Inventory for the Proposed Robinson Street Waterline Between Saliman Road and Butti Drive, Carson City, Nevada	6622	Positive

Historic Properties within the APE

Author	Report Year	Title	SHPO Report Number	Study Results
Drews, Michael	2011	Archaeological Monitoring for the Carson City Brownfields Assessment Project at the Former V&T Engine house and Shops, Carson City, Nevada	7454	Positive
Hatoff, B.W.	1989	BLM Cultural Resources Report: R/W for Sewer Line to Proposed Carson City Senior Center	13-62	Negative
Hatoff, Brian W.	1977	Cultural Resources Report for Prison Hill Recreation Management Plan: Cr Report Number: 3-132(P)	13-15	Negative
Hohmann, John W.	2009	Persistent Places--Persistent Concepts: Excavations at a Prehistoric Great Basin Village Site, Carson City, Nevada	5651	Positive
Ingbar, E.E.	1993	An Archaeological Evaluation of the NDOT U.S. 395 Bypass and Graves Lane Extension Rights-of-way, Carson City, Nevada	13-72	Negative
Johnson, Frank	1991	A Cultural Resource Inventory of Two Valve Assembly Locations at Prison Facilities in Carson City, Nevada, and a Valve Assembly Near Fallon in Churchill County, Nevada	18-377	Negative
Johnson, Frank W.	1988	Cultural Resources Survey of Southwest Gas Corporation Gas Transmission Mains in Carson City, Storey and Lyon Counties, Nevada	18-252	Negative
Kautz, Robert R. and Danielle Risse	2006	Carson City's "China Town,' The Archaeology of Urban Nevada	22151	Positive
Kimball, Monique; Risse, Danielle and Barbi Malinky Harmon	2010	Cultural Resources Inventory for the Moffat Safe School Zone Project, Carson City, Nevada	6494	Positive
Kuffner, C.	1983	Preliminary Archaeological Investigation of the Proposed Carson City Sewer Pipeline Corridor from Edmonds Drive to Morgan Mill Road, Carson City, Nevada	13-65	Negative
Moore, J.	1981	Cultural Resources Report: US 50 Overlay. E.A. 71069: Ndot-095-81C	18-144	Negative
Nevada State Museum	n.d.	Carson Sewer Reconnaissance	13-2	Negative
Obermayr, E. and D. Zeanah	1998	A Class III Cultural Resources Inventory and Evaluation of the Proposed Prison Hill Land Exchange	13-100	Negative
Pinzl, John J.	1980	Cultural Resources Report Field Worksheet: R&PP - N-225357 - Carson City School District: Cr Report #: 3-359(N)	13-31	Negative
Risse, Danielle	2010	Addendum to A Cultural Resources Survey of Carson City, Nevada, Corporate Yard Hydraulic Improvements	5930	Negative

Historic Properties within the APE

Author	Report Year	Title	SHPO Report Number	Study Results
Seelinger, Evelyn	1977	Archaeological Resources Short Report: Carson City Treatment Plant Expansion Project - Reconnaissance (Project #13-13, Contract NAS #234-C)	13-13	Negative
Simons, Dwight; Kimball, Monique; and Robert Kautz	2006	Cultural Resources Inventory of Carson City, Nevada, Corporate Yard Hydraulic Improvements	505	Positive
Slaughter, Suzan F.	2013	The Hells Bells Road Pedestrian Safe Route to Schools Project	9246	Positive
Slaughter, Suzan R.	2013	A Class I Archaeological Inventory and Historic Architecture Assessment for the Proposed East 5th Street Bike & Pedestrian Improvements Project in Carson City, Carson City County, Nevada	9265	Negative
Steinberg, L.	1979	Cultural Resources Report - Historical &Archaeological: Fifth and Stewart Streets, E.A. 70919	13-28	Negative
Steinberg, Larry Seth and Paula A. Sutton	1978	Inventory and Assessment of Historical Landmarks and Structures Encountered by the Proposed U.S. 395 Carson City Bypass Corridors	13-20	Negative
Young, B.	1989	Cultural Resource Inventory of Sierra Pacific Power Company's Proposed Transmission Line G28, Carson City, Nevada	13-63	Negative
Zeier, Charles D.	1985	Cultural Resources Short Report: The Archaeological Reconnaissance of a Parcel Between Airport and Edmonds Roads, East of Carson City, Nevada	13-47	Negative

Drews (2009) conducted an archaeological survey for the proposed Robinson Street waterline between Saliman Road and Butti Drive. Based on the information provided by Drews (2009) the survey commenced at Saliman Road, immediately southwest of Carson City High School, and proceeded east to Butti Drive. This survey intersected the current APE immediately south of Carson City High School and resulted in the identification and documentation of a single prehistoric resource. The prehistoric resource (OR131) is a prehistoric lithic scatter and was documented immediately south of Butti Drive, approximately 0.4 miles east of the current APE. No other resources were identified and reported by Drews (2009).

Additionally, the records search revealed that one historic built environment resource (the Lompa Ranch Historic District) was previously documented within the APE. Additionally, 35 resources (16 historic, 14 prehistoric, two multi-component, and three unknown) have been previously documented within a one-mile radius of the current APE (**Table 2**). A brief summary of the previously documented Lompa Ranch is provided in Section 5.1.1.1.

Table 2. Summary of Cultural Resources Previously Documented within the Study Area

USGS 7.5' quad.	Trinomial	Site ID	Component	Description
Various	DO704	DO704	Historic	Carson Route of the Emigrant Trail
Carson City	OR10	OR10	Prehistoric	Isolated find
Carson City	OR11	OR11	Prehistoric	Isolated find
New Empire	OR129	OR129	Prehistoric	Lithic scatter
New Empire	OR13	OR13	Historic	Refuse deposit
New Empire	OR130	OR130	Prehistoric	Lithic scatter
New Empire	OR131		Prehistoric	Lithic and groundstone scatter*
Carson City	OR16	OR16	Prehistoric	Lithic scatter
Carson City	OR165	OR165	Historic	Simeon Lee's House
Carson City	OR17	OR17	Historic	Peter Wolf's House
Carson City	OR180	OR180	Historic	Virginia and Truckee Railroad Engine House
New Empire	OR19	OR19	Historic	Refuse deposit
Carson City	OR199		Historic	Carson City Chinatown*
New Empire	OR2	OR2	Prehistoric	Lithic scatter
New Empire	OR20	OR20	Prehistoric	Lithic scatter
New Empire	OR201	OR201	Historic	Stone well
New Empire	OR202	OR202	Historic	Refuse deposit
New Empire	OR203	OR203	Historic	McDonald's Toll Road
New Empire	OR21	OR21	Prehistoric	Lithic scatter
New Empire	OR213	OR213	Prehistoric/Historic	Lithic scatter and Refuse deposit
Unknown	OR235	OR235	Unknown	Not on file
Carson City	OR294	OR294	Historic	City dump
New Empire	OR295	3-5211	Historic	Refuse deposit
New Empire	OR297	3-5213	Historic	Prospects, backdirt piles, artifacts
New Empire	OR298	3-5214	Historic	Irrigation ditch
New Empire	OR3	OR3	Prehistoric/Historic	Lithic scatter with groundstone and possible habitation site
Carson City	OR314		Historic	Brick wall foundations, domestic/structural debris*
Carson City	OR48	OR48	Prehistoric	Isolated find
Carson City	OR50	OR50	Prehistoric	Lithic scatter
Carson City	OR51	OR51	Prehistoric	Lithic scatter
New Empire	OR53	OR53	Prehistoric	Lithic scatter
Carson City	OR536	3-1422	Historic	Mexican Ditch*
Carson City	OR563		Historic	Debris scatter

Historic Properties within the APE

Carson City	OR58	OR58	Historic	Clear Creek Station
New Empire	OR59	OR59	Prehistoric	Isolated find

**resource eligible for the NRHP*

As part of the archival research at the NVCRIS, the following sources were consulted: the Nevada State Archaeological Inventory Records, NRHP, Nevada State Register of Historic Places, Nevada Points of Historical Interest, Inventory of Historic Structures, and Historical Landmarks for Carson City. Additionally, the Carson, NV (1893); Carson City, NV (1893, 1968, 1974); and Dayton, NV (1956) topographic quadrangles examined for the presence of historic period features within the current APE and the Study Area.

5.1.1.1 Built Environment

The records search revealed only one built environment property located within the identified APE, the NRHP-eligible Lompa Ranch Historic District. The Lompa Ranch Historic District was identified and evaluated in 2004 by the Nevada Department of Transportation (NDOT) as part of the expansion of the Intersetate-580 Freeway. It was found to be significant under criteria under A, B, and C with a period of significance ranging from 1865 to 1955. A NRHP nomination for the historic district was prepared in 2004 by John W. Snyder of P.S. Preservation Services and submitted to SHPO for review. Records indicated that SHPO representatives commented on the draft nomination on June 9, 2006 and made the following recommendations:

- Include the remaining intact irrigation features in the nomination.
- Review the Lompa-owned parcels, particularly those that have been affected by the construction of the Freeway and bypass systems.
- The evaluation under Criterion B is dubious and historical significance under this criterion is doubtful. The evaluation should be revised.
- Include an integrity statement within the other nomination.
- Include the 1970s main ranch house as a non-contributing property within the historic district
- Address the cottowwood trees along the E. 5th Street corridor as contributing features.
- The ranch is not one of the “last vestiges” of agricultural development in the eagle valley, as stated in the nomination.

It does not appear that any additional edits to the Lompa Ranch Historic District NRHP nomination were ever made, nor was a final version of the nomination ever formally submitted to SHPO for concurrence. Although concurrence on the Lompa Ranch Historic District’s eligibility for listing on the NRHP was never attained, the property continues to appear on NVCIS record searches as an eligible resource. Additionally, a Historic American Building Survey (HABS) report was prepared to document the historic district as a mitigation measure for the eventual construction of the freeway.

5.1.2 Field Surveys

5.1.2.1 Archaeology

Stantec conducted an intensive 100% pedestrian survey of the entire 186-acre APE between July 23 and 26, 2018. The survey was conducted on a bright and sunny day, with excellent visibility, and an average temperature of 95°F. The topography within the APE was relatively flat with slope less than 3°. The entire 193.8-acre APE appeared to be

relatively undeveloped with evidence of cattle and sheep ranching as suggested by feeding troughs, cattle trails, and irrigation/water diversion ditches within the property.

The APE was accessed via Saliman Road and via an existing paved roadway immediately south of Carson City High School. The survey commenced in the northwestern portion of the property, and parallel transects, spaced 10-15 meters apart were walked in the north-south direction, along Saliman Road. Upon arrival a large construction fill/soils pile was observed immediately east of the Church of the Latter-Day Saints (located at 411 North Saliman Road) and south of Carson City High School. This large construction soils pile measures approximately 5.4 acres and in some areas exceeded 3 meters in height (**Figure 4**). As a result, this portion of the APE was not surveyed for cultural resources.

Figure 4. Overview of the APE with a large construction fill/soils pile on the left, view east (Stantec IMG_103324).

Ground visibility within this portion of the APE was relatively good, with ground visibility between 60 and 70%. However, as the survey continued in the easterly direction and away from Saliman Road, the ground visibility decreased considerably with patches of knee-high grasses obscuring the ground (**Figure 5**). At this point it became apparent that an alternate survey strategy had to be implemented to account for the poor ground visibility within the APE. To ensure proper survey coverage and good ground visibility a shovel surface scrape, measuring one by one meter, was placed every 20 to 40 meters (**Figure 6**). Each surface scrape was excavated within a shovel where the obscuring vegetation was scraped and ground surface was exposed to satisfactory levels (to allow for 100% ground visibility). This methodology was implemented in areas where ground visibility was less than 50%. Areas within the survey area that appeared to have fair to excellent (more than 50%) ground visibility were surveyed and the surface scrape method was not implemented.

The eastern portion of the APE, along Saliman Road, was surveyed in north-south trending transects, until the last transects reached the north-south trending barbed wire fence, separating this portion of the property from an adjacent

pasture. As this was a good starting feature, transects from this point on were walked in the east-west direction and terminated at the property's eastern most boundary, immediately west of Highway 395/Nevada State Route 50 (**Figure 7**).

Figure 5. Overview of the APE along North Saliman Road with dense vegetation obscuring the ground visibility, view south (Stantec IMG_083339).

Figure 6. Typical surface scrape excavated to expose the ground surface (Stantec Img_085301).

This portion of the property was characterized by existing cattle trails, several irrigation/water diversion ditches, and numerous feeding troughs. Additionally, several “underground sewer” signs and manhole covers, suggested the presence of the recently installed sewer line. Furthermore, the northern portion of the APE, immediately east of Carson High School and south of East Williams Street, exhibited two large drainage channels, portions of which running through the school appeared to be lined with concrete. As a result of the water run-off from nearby hills, this portion of the APE had several deep erosional gullies/drainages with soil sediments and modern refuse deposited and scattered throughout this portion of the APE. As the survey continued through the northern portion of the APE, stratigraphy within each gully and areas exposed on each side of the embankment of the gully were examined for presence of buried deposits, soil discoloration, etc. No new or previously documented archaeological resources were observed during the survey.

Figure 7. Overview of the APE within the eastern portion of the property with Highway 395/ State Route 50 in the background, view east (Stantec IMG_131432).

5.1.2.2 Built Environment

A survey of the built environment within the APE was conducted on August 13, 2018 by a Santec Architectural Historian who meets the *Secretary of the Interior’s Professional Qualifications* for Architectural History. The investigation involved a windshield survey of the perimeter of the identified APE. Known historic properties that were identified in the records search, particularly the contributing structures to the Lompa Ranch Historic District, were also surveyed and documented to confirm their existing condition and integrity. Both the irrigation ditches and the cottonwood trees, which were not surveyed in the original NRHP nomination for the district and specifically requested to be included in the 2006 SHPO response letter, were also surveyed and evaluated as part of this effort.

Lompa Ranch Historic District

The majority of the built environment survey area is characterized by open fields, which are largely associated with the previously identified Lompa Ranch Historic District (**Figure 8**). The historic district is characterized primarily by its collection of agrarian buildings, support structures, and overall rural setting (**Figure 9 and Figure 10**). While the districts previously identified boundaries has been encroached upon by increasing urban development of Carson City and the construction of the east-adjacent Interstate-580 Freeway, the large open spaces of the fields and concentrated collection of ranch buildings, previously identified as contributing features to the historic district, all continue to exhibit historical character and significance associated with the NRHP criteria A and C.[1] In addition to the contributing properties identified in the original 2004 NRHP nomination for the Lompa Ranch Historic District, additional features, such as the SHPO recommended irrigation ditches, were also surveyed (**Figure 11**). The survey determined that both the irrigation ditches and cottonwood trees are contributors to the historic district.

The irrigation ditches are a network of earthen channels that extend throughout the historic district. The main portion of the ditches are located on the northern half of the property and extend from a primary channel that runs east-west along E. 5th Street. These channels are loosely connected and often tie into existing creek beds. Similar channels exist on the southern half of the property as well. The cottonwoods are located within the central portion of the historic district, particularly at the entrance to the ranch along E. 5th Street. Both the cottownwood trees and the irrigation ditches are clearly visible in historic aerial photographs from 1954, which falls within the period of significance of the Lompa Ranch Historic District: 1865-1955.

[1] In the original 2004 NRHP Lompa Ranch Historic District nomination, the property was evaluated under criterion B and identified as significant for associations with specific individuals of importance. However, the SHPO response disagreed with this section of the evaluation and recommended that the district was not significant under this criterion. Stantec agrees with the SHPO's evaluation and does not consider the potential Lompa Ranch Historic District to be significant under Criterion B for associations with any important individuals.

Figure 8. Agricultural Fields of Lompa Ranch Historic District. Looking southeast towards the central portion of the historic district (background) from N. Saliman Road (Stantec IMG_P1020316).

Figure 9. Central portion of the Lompa Ranch Historic District with contributing buildings and structures. Looking northwest from E. 5th Street (Stantec IMG_P1020363)

Figure 10. Contributing properties of the Lompa Ranch Historic District, located on the south side of E. 5th Street, looking southwest (Stantec IMG_P1020367).

Historic Properties within the APE

Figure 11. Existing irrigation ditch and location of the proposed King's Canyon Creek Channel. Looking east along E. 5th Street (Stantec IMG_P1020325).

Other Properties

Properties located within the identified APE that are not associated with the historic district and have not been previously surveyed include the following:

- *Church of Jesus Christ of Latter-Day Saints*, 411 N Saliman Road, constructed 1991.
- *Carson High School Solar Panel Array*, E Robinson Street, constructed 2011.

Both of these properties feature recent buildings and structures constructed well outside the 50-year threshold age requirement for listing in the NRHP. Furthermore, neither of these properties appear to exhibit any exceptional significance that would qualify under NRHP Criteria Consideration G: Properties that Have Achieved Significance Within the Past 50 Years. As such, neither properties qualify as historic properties for the purposes of Section 106 consultation.

5.2 IDENTIFIED HISTORIC PROPERTIES

Historic properties may include any district, site, building, structure, or object that is included or eligible for listing in the NRHP (36 CFR Section 800.16(1)(1)). The historic records search and field survey efforts described above were archaeological and built environment historic properties within the identified APE.

5.2.1 Archaeological Properties

As part of the current archaeological study, approximately 186.1 acres of land were inventoried to determine whether cultural resources would be affected by the proposed project. No cultural resources were observed during the current study and no additional studies or construction constraints are recommended at this time.

The methods and techniques used by Stantec are considered sufficient for the identification and evaluation of cultural resources visible at the ground surface. However, there is always a possibility that buried archaeological deposits could be found during construction and earth disturbing activities. In the event that cultural resources are encountered during construction activities, all work must stop, and a qualified archaeologist(s) shall be contacted immediately. Further, in the event that any human remains are encountered or in the event that unassociated funerary objects or grave goods are discovered, work in the immediate (within 200 feet) vicinity of the discovery shall cease until the County Coroner has made all the necessary findings as to the origin and distribution of such remains. Additionally, some Counties and agencies may require that an archaeological monitor be present during ground disturbing activities such as excavation, grading, and discing.

5.2.2 Built Environment Historic Properties

Based upon previous studies revealed during the records search, additional literature review and research, and the August 2018 field survey, built environment historic properties are known to exist within the identified APE. This includes the potentially NRHP-eligible Lompa Ranch Historic District and its associated contributing properties, which are located entirely within the identified APE.

For the purposes of Section 106 consultation, the potentially NRHP-eligible Lompa Ranch Historic District is treated as a historic property. This includes the contributing properties and features identified in the original 2004 NRHP nomination, the resulting recommendations by SHPO, and observable conditions discovered during the field survey conducted by Stantec in August 2018. Based upon this previous documentation and resulting studies, the following table outlines the NRHP-eligible Lompa Ranch Historic District. The table includes the associated features, the years constructed, their contributing status in relation to the district, original and current evaluations, and their status as a qualified historic property for the purposes of Section 106 consultation, as defined previously.

Table 3. NRHP Eligible Lompa Ranch Historic District

Feature Name / Historic Use	Year Built	Contributing Status	Evaluation	Historic Property
Ranch House	c.1970	Non-contributing building	• Was not evaluated during the 2004 survey, but identified as a non-contributor by SHPO in 2006. • Status confirmed in 2018 survey.	No
Lompa House	1940	Non-contributing building	• Surveyed and evaluated in 2004 during Section 106 Consultation, found altered with no integrity. • Status confirmed in 2018 survey.	No
Milking Barn	1909-1936	Contributing Building	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Pump House	1940	Contributing Building	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Blacksmith Shop	1909-1936	Contributing Building	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes

Historic Properties within the APE

Feature Name / Historic Use	Year Built	Contributing Status	Evaluation	Historic Property
Shop	1940	Contributing Building	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Implement Garage	1909-1936	Contributing Buildin	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Granary Building	1940	Contributing Building	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Wood Shed	1940	Contributing Building	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Dairy (Milk House)	1940	Contributing Building	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Garage	1940	Contributing Building	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Root Cellar	1909-1936	Contributing Building	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Bunk House	c.1953	Contributing Building	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Hay Barn	c.1900	Contributing Building	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Windmill #1	1940	Contributing Structure	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Windmill #2	1874	Contributing Structure	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Corrals	c.1900	Contributing Structure	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Agricultural Fields (approx.359 acres)	1865	Contributing Site	• Surveyed and evaluated in 2004 during Section 106 Consultation. • Status confirmed in 2018 survey.	Yes
Irrigation ditches	1940	Contributing Site	• Was not evaluated during the 2004 survey – no status given. • Surveyed and evaluated in 2018 by Stantec – found eligible as contributing site feature to Lompa Ranch Historic District.	Yes, as determined by this current study
Cottonwood Trees		Contributing Site	• Was not evaluated during the 2004 survey – no status given.	Yes, as determined

Feature Name / Historic Use	Year Built	Contributing Status	Evaluation	Historic Property
			• Surveyed and evaluated in 2018 by Stantec – found eligible as contributing site feature to Lompa Ranch Historic District.	by this current study

5.2.3 Properties Within the ADI

As outlined previously, the Undertaking is located entirely within the identified boundaries of the potential Lompa Ranch Historic District. Both of the proposed flood control channels and their associated features have the potential to cause physical affects to contributing properties, which are located within the proposed alignments of these project features. As such, these properties are located within the ADI and have the potential to be physically affected by the Undertaking:

- *Agricultural Fields*: The agricultural fields surrounding the central portion of the Lompa Ranch Historic District, both to the north of the south, are identified as a contributing site to the district. This expanse of open space helps convey the significance of the property and its associations with multi-generational agricultural practices in the region, particularly during the period of significance associated with the district. The agricultural fields contribute to the historic district's overall historic character and sense of place.

- *Irrigation Ditches*: Located throughout the north and south fields of the Lompa Ranch Historic District, linear irrigation ditches are identified as contributing site features to the district. These linear, earthen ditches were constructed during the period of significance and were used to distribute water throughout the ranch property. The irrigation ditches contribute to the historic district and are considered historic properties.

No other historic properties, either archaeological or built environment, are located within the Undertaking's ADI.

6.0 ANALYSIS OF ADVERSE EFFECTS

6.1 CRITERIA OF ADVERSE EFFECT

According to Section 106 of the NHPA, 36 CFR Section 800.5(a)(2), examples of adverse effects include the following:

i. Physical destruction of or damage to all or part of the property;

ii. Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;

iii. Removal of the property from its historic location;

iv. Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;

v. Introduction of visual atmospheric or audible elements that diminish the integrity of the property's significant historic features'

vi. Neglect of a property which causes its deterioration, except where such neglect and deterioration recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

vii. Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restriction or conditions to ensure long-term preservation of the property's historic significance.

Pursuant to 36 CFR Section 800.5(a)(1), the criteria of adverse effects are applied to all historic properties that are located within the Undertaking's APE. This application and analysis of the Undertaking components through the aforementioned criteria will produce a finding of either Adverse Effects or No Adverse Effects, which will be presented as a recommendation to the SHPO as part of the consultation process.

6.2 ANALYSIS OF EFFECTS

The following analysis of the Undertaking is conducted per the examples of adverse effects as outlined under 36 CFR Section 800.5(a)(2):

6.2.1 Criterion i
Physical destruction of or damage to all or part of the property.

The Undertaking involves the construction of flood control channels throughout the agricultural fields of the Lompa Ranch Historic District, which is an identified contributing site feature to the district. This involves the excavation and channelization of existing creek ways and irrigation ditches, as well as new construction. The construction of the Ash Canyon Creek Channel will traverse the northern section of the agricultural fields and will intersect with a small northern portion of the contributing irrigation ditches that extend throughout the landscape. While this will disturb a select linear area of the fields, the vast majority of the contributing landscape will be retained in its existing condition following the completion of the project. As for the irrigation ditches, the proposed channel will extend perpendicular through the northernmost portion of the remaining ditches. The northern section of the irrigation ditches were extensively altered during the construction of the north adjacent solar panel facilities and the gravel extension of E. Robinson Street into the property. As such, the construction of the proposed Ash Canyon Creek Channel will only alter a minimal section of the remaining northernmost end of the primary irrigation ditch, leaving the majority of the irrigation ditches in their existing condition.

Unlike the previously mentioned channels, the proposed King's Canyon Creek Channel will result in the damage to both the contributing agricultural fields and irrigation ditches. The proposed channel will result in the complete remodeling of the eastern section of the irrigation ditches that runs parallel to E. 5th Street. The alignment will also extend throughout the areas of the agricultural fields that are closest in proximity to the central portion of the Lompa Ranch Historic District with its contributing buildings and structures. Although much of the contributing agricultural fields and irrigation ditch network, particularly in the southern half of the district, will remain in their existing condition, the degree of alterations and the proximity to the central area of the historic district and high concentration of contributing properties will result in damage to a significant part of the property,

Therefore, the Undertaking would result in an Adverse Effect under Criterion i.

6.2.2 Criterion ii

Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Section 68) and applicable guidelines.

The following section analyses the proposed Undertaking under the Secretary of the Interior's Standards for Rehabilitation. Rehabilitation is the appropriate treatment standards for assessing the Undertaking, because the proposed work involves "making possible an efficient compatible use for a property through repair, alterations and additions while preserving those portions or features that convey its historical, cultural or architectural values" (36 CFR Section 68.2(b)).

6.2.2.1 Rehabilitation Standard 1

A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.

In terms of use, the land subject to the Undertaking no longer retains its historic use as a working ranch and agricultural property. Currently, the area remains an undeveloped and underutilized field and is considered an important floodplain in the Carson River watershed. Although the proposed Undertaking will leave the majority of the property in its existing condition, the construction of the new flood channels will heighten the existing use of the area in terms of flood control issues. As described previously, Ash Canyon Creek Channel will be located on the northern portion of the property, removed from the central portion of the historic district and the majority of the contributing properties. However, the proposed King's Creek Canyon Channel will be constructed around, and directly adjacent to, this central portion of the district, effectively separating the primary ranch buildings from the surrounding agricultural fields and altering a significant aspect of the historic district's spatial relationship. The construction of this channel will also result in the alteration of sections of the contributing irrigation ditch network. As such, the channelization of part of the irrigation ditches and alteration to the spatial relationships within the historic district would be a significant change to the Lompa Ranch Historic District.

Therefore, the Undertaking would not adhere to Rehabilitation Standard 1.

6.2.2.2 Rehabilitation Standard 2

The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.

The proposed Undertaking involves the construction of several channels throughout the contributing agricultural fields of the identified NRHP-eligible Lompa Ranch Historic District. The Ash Canyon Creek Channel will be constructed towards the northern end of the historic district, located approximately 1,800 feet from the central portion of this historic district, which includes the main ranch complex and its contributing buildings and structures. Additionally, The

majority of the work associated with the channel will occur below grade and will not be visible from most vantage points throughout the district. Although this channel will alter a select, linear area of the agricultural field, the construction of the Ash Creek Canyon Channel is set at a distance from the main ranch complex and will not drastically alter the spaces or spatial relationships of the broader agricultural fields of the historic district. Large swaths of the agricultural fields will continue to relate to the central portion of the historic district and continue to convey the overall historic character of the district. However, the proposed King's Canyon Creek Channel will be constructed towards the center of the historic district and will bound the parcels of the central ranch complex. This 74-foot wide concrete lined channel and its associated elements will effectively separate the main ranch buildings of the Lompa Ranch Historic District from its contributing agricultural fields, disrupting the spatial relationship between the contributing buildings from its broader context and setting. Although the majority of the contributing ranch buildings and structures will be preserved in their existing condition, the construction of the King's Canyon Creek Channel and its proximity to the contributing buildings will alter the historic character of the Lompa Ranch Historic District.

Therefore, the Undertaking would not adhere to Rehabilitation Standard 2.

6.2.2.3 Rehabilitation Standard 3

Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other buildings, will not be undertaken.

The Undertaking involves the construction of flood control channels throughout the contributing open spaces of the Lompa Ranch Historic District. This work and all associated features will be clearly contemporary in construction and design and would not create a false sense of historical development. Additionally, no conjectural features or elements from other buildings will be added to any part of historic district and its associated contributing properties. Therefore, the Undertaking would adhere to Rehabilitation Standard 3.

6.2.2.4 Rehabilitation Standard 4

Changes to a property that have acquired historic significance in their own right will be retained and preserved.

The Undertaking does not include proposed changes to any aspect of a property that has acquired historic significance in their own right. Therefore, the Undertaking would adhere to Rehabilitation Standard 4.

6.2.2.5 Rehabilitation Standard 5

Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.

As described previously, the Undertaking involves alterations to the agricultural fields of the Lompa Ranch Historic District with no work proposed for the central ranch complex and its contributing buildings and structures. All character-defining features, finishes, materials, and examples of construction techniques exhibited by these contributing structures will remain in their existing condition.

The eastern section of the irrigation ditches will be altered as part of the construction of the King's Canyon Creek Channel. Although these alterations will result in substantial alterations to one specific section of the contributing

irrigation ditch, the vast majority of the irrigation ditches will be untouched as part of the project and continued to exhibit their distinctive physical characteristics and contribute to the overall Lompa Ranch Historic District.

Therefore, the Undertaking would adhere to Rehabilitation Standard 5.

6.2.2.6 Rehabilitation Standard 6

Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old design, color, texture and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

The Undertaking does not involve the treatment of any deteriorated distinctive feature to any historic property. Work is limited to contemporary site improvements only, leaving the contributing ranch buildings and their features in the existing condition. Therefore, the Undertaking would adhere to Rehabilitation Standard 6.

6.2.2.7 Rehabilitation Standard 7

Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

The Undertaking does not involve chemical or physical treatments of any historic materials associated with a historic property. Therefore, the Undertaking would adhere to Rehabilitation Standard 7.

6.2.2.8 Rehabilitation Standard 8

Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

As outlined in **Section 5.2.1**, no archaeological below-grade historic properties were identified in the project area. However, in the event that archaeological materials are encountered during the execution of the Undertaking, all work will be halted, the appropriate Cultural Resources Specialist at USACE will be notified, and the appropriate procedures outlined by the USACE shall be followed. Therefore, the Undertaking would adhere to Rehabilitation Standard 8.

6.2.2.9 Rehabilitation Standard 9

New additions, exterior alterations or related new construction will not destroy historic materials, features and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.

As described under Rehabilitation Standard 2, the King's Canyon Channel of the Undertaking would alter the spatial relationship of the central ranch complex and the immediate agricultural fields. While this channel will be clearly contemporary in nature, its placement immediately adjacent to the central ranch complex, combined with its size and scale, will effectively separate the majority of the contributing properties to the Lompa Ranch Historic District from its

contributing site features and overall agricultural setting. This alteration to the spatial relationship between resulting from the construction of the King's Canyon Channel would adversely affect the historic district's integrity of setting, feeling, and association.

Therefore, the Undertaking would not adhere to Rehabilitation Standard 9.

6.2.2.10 Rehabilitation Standard 10

New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Although the proposed Undertaking, particularly the construction of the southern King's Canyon Channel, would alter the spatial relationship and overall historic integrity of the Lompa Ranch Historic District, the proposed work is reversible. Following the removal of the proposed King's Canyon and Ash Creek Canyon Channels, the select areas of the agricultural fields disturbed by their construction could be restored to the pre-existing condition as agricultural open space. This would revert the overall property to its existing condition, restoring the integrity of setting, feeling, and association of the Lompa Ranch Historic District.

Therefore, the proposed project would adhere to Rehabilitation Standard 10.

6.2.3 Criterion iii

Removal of a property from its historic location.

The Undertaking would not involve the removal of any historic property from its location. Therefore, the Undertaking would not cause an adverse effect under Criterion iii.

6.2.4 Criterion iv

Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance.

The proposed Undertaking involves the construction of several flood channels in the former agricultural lands of the Lompa Ranch, which is a contributing site feature to the historic district of the same name. While there are no new uses proposed for these fields, the construction of the proposed channels will alter the spatial relationships within the historic district. In particular, the King's Canyon Channel proposed alignment will follow the perimeter of the central portion of the historic district, effectively separating the majority of the primary contributing buildings from the broader agricultural fields of the historic district. The rural and agrarian nature of the contributing agricultural fields are integral to the setting of the historic district as a ranch and agricultural property. As such, the construction of the King's Canyon Channel as proposed will change the physical features that contribute to the historic character and setting of the Lompa Ranch Historic District. Therefore, the Undertaking would cause an adverse effect under Criterion iv.

6.2.5 Criterion v

Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features.

As described previously, the Undertaking involves the construction of several flood channels through the contributing agricultural fields of the Lompa Ranch Historic District. Audible and atmospheric elements associated with the Undertaking will occur during the construction phase and will be temporary in nature. Following the completion of the flood channels, the audible and atmospheric conditions of the will largely revert to their existing condition with no effect on the integrity of the historic district or any of the identified contributing properties.

The construction of the proposed channels would introduce new visual elements to the Lompa Ranch Historic District. Although the Ash Canyon Channel will traverse the northern portion of the contributing agricultural fields, the placement of the channel is approximately 1,800-feet from the central core of the historic district. This distance from the central portion of the historic district, combined with the primarily below-grade work proposed for the channel, will mitigate potential visual effects that would diminish the integrity of the historic district, particularly the relationship between the concentration of contributing buildings and structures with the broader agricultural fields and setting. However, the construction of the King's Canyon Channel will effectively isolate the central portion of the historic district from the broader fields by aligning with the immediate parcel boundaries. The construction of this channel and associated features will have an approximate width of 74-feet and directly abut the central portion of the district. The concrete lined drainage channel with its associated upgrades will create a solid visual separation between the central portion of the historic district and the contributing agricultural fields at the northern half of the district. This visual separation caused by the King's Canyon Channel will diminish the integrity of setting, feeling, and association of the Lompa Ranch Historic District.

Therefore, the Undertaking would cause an adverse effect under Criterion v.

6.2.6 Criterion vi

Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization.

The Undertaking would not involve the neglect of a property that would result in its deterioration. Therefore, the Undertaking would not cause an adverse effect to historic properties under Criterion vi.

6.2.7 Criterion vii

Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

The Undertaking does not involve the transfer, lease, or sale of property out of Federal ownership or control. The property is privately owned and the USACE would continue to have purview over the proposed flood channels following the completion of the Undertaking. Therefore, the proposed Undertaking would not result in an adverse effect under Criterion vii.

6.2.8 Summary of Finding of Effect Analysis

The above analysis illustrates that the proposed Undertaking would have both direct and indirect effects on historic properties located within the APE. The Undertaking involves the construction of two new flood control channels through former agricultural fields east of Carson City, which are a contributing site feature to the identified NRHP-eligible Lompa Ranch Historic District. The proposed Kings Canyon Creek Channel would involve the excavation and channelization of the eastern portion of the irrigation ditch network, a contributing structure to the historic district, and would result in physical alterations and damage to sections of the broader feature. The channel alignment would extend around the central portion of the historic district and would separate the primary ranch complex and the concentration of the contributing buildings and structures from the surrounding agricultural fields, affecting the spatial organization of the historic district and its historic character. Although the majority of the contributing buildings and structures of the Lompa Ranch Historic District would be retained in their existing condition, the Undertaking would have direct and indirect effects that would diminish the integrity of the historic district, its contributing properties, and significant historic features.

7.0 RECOMMENDATION OF EFFECT

The Undertaking, which involves the construction of two flood control channels and associated features, would have the potential to directly and indirectly alter the historic characteristics that qualify historic properties for listing in the NRHP. Although the central portion of the NRHP-eligible Lompa Ranch Historic District would be retained in its existing condition, the Undertaking would have direct physical effects on other contributing features to the district, as well as indirect effects that would diminish the historic character and integrity of the district as a whole. Based upon the analysis using the criteria of adverse effects, as outlined in 36 CFR Part 800.5(b), Stantec recommends a finding of Adverse Effects.

8.0 REFERENCES

Chambers Group
2012 *Master Cultural Resource Report: A Class III Cultural Resources Inventory for the Digital 395 Broadband Project.* Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Creger, C.
2009 *Carson Bypass Phase 2B, Clearview Phase*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

D'Azevedo, W.
1963 The Washoe Indians of California and Nevada*. University of Utah Anthropological Papers 67*. Salt Lake City.

1986 Washoe. In *Handbook of North American Indians*, Vol. 11, *Great Basin*, edited by W. D'Azevedo, pp. 466-498. Washington: Smithsonian Institution.

Dansie, A.
1976a *Archaeological Resources Short Report: Proposed Juvenile Facility, East Fifth Street Site.* Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

1976b *Report of Field Investigation: State Public Works Projects.* Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Drews, M.
2009a *A Class III Cultural Resources Inventory for the Proposed Robinson Street Waterline Between Saliman Road and Butti Drive, Carson City, Nevada*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

2009b *Archaeological Monitoring for the Carson City Brownfields Assessment Project at the Former V&T Enginehouse and Shops, Carson City, Nevada*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Due, J.
1951 *The Carson and Colorado Railroad*. Economic Geography, Vol. 27, No. 3. Taylor and Francis Publishers.

Elston, R.
1982 Good times, hard times: prehistoric culture change in western Great Basin. In *Man and Environment in the Great Basin*, edited by D. B. Madsen and J. O'Connell, pp. 186-206. Washington, DC: Society for American Archaeology.

Galloway, J.

1947 Early Engineering Works Contributory to the Comstock. *University of Nevada Bulletin, Geology and Mining Series No. 45*. University of Nevada, Reno.

Hall, M.
1990 *The OXBOW Archaeological Incident: Investigations at Twenty-three Locations Between Owens Valley, Eastern California, and Walker Basin, Southwestern Nevada, Volume* I. Virginia City, Nevada: Archaeological Research Services.

Hamilton, W.
1905 *My Sixty Years on the Plains, Trapping, Trading, and Indian Fighting*. New York: Forest and Stream (reprinted 1960).

Hatoff, B.
1977 *Cultural Resources Report for Prison Hill Recreation Management Plan: CR Report Number: 3-132(P*). Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

1989 *BLM Cultural Resources Report: Right-of-Way for Sewer Line to Proposed Carson City Senior Center*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Heizer, R.
1951 *Preliminary Report on the Leonard Rockshelter Site, Pershing County, Nevada.* American Antiquity 17(2), pp. 89-98.

Hohmann, J.
2009 *Persistent Places-Persistent Concepts: Excavation at a Prehistoric Great Village Site, Carson City, Nevada*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Ingbarr, E.
1993 *An Archaeological Evaluation of the NDOT US 395 Bypass and Graves Lane Extension of Right-of-Way, Carson City, Nevada*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Johnson, F.
1988 *Cultural Resources Survey of Southwest Gas Corporation Gas Transmission Mains in Carson City, Storey and Lyon Counties, Nevada*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

1991 *Cultural Resource Inventory of Two Valve Assembly Locations at Prison Facilities in Carson City, Nevada, and a Valve Assembly Near Fallon in Churchill County, Nevada*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Jones, T.
1999 *Environmental Imperatives Reconsidered – Demographic Crises in Western North America During the Medieval Climatic Anomaly*. Current Anthropology 40 (2), pp. 137-169.

Kautz, R., and D. Risse
2006 *Carson City's China Town: the Archaeology of Urban Nevada.* Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Kelly, I., and C. Fowler
1986 Southern Paiute. In *Handbook of North American Indians*, Vol. 11, Great Basin, edited by Warren d'Azevedo, pp. 368-397. Washington: Smithsonian Institution.

Kimball, M., D. Risse, and B. Malinky Harmon
2010 *Cultural Resources Inventory for the Moffat Safe School Zone Project, Carson City, Nevada*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Kuffner, C.
1983 *Preliminary Archaeological Investigation of the Proposed Carson City Sewer Pipeline Corridor from Edmonds Drive to Morgan Mill Road, Carson City, Nevada*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Lanning, E. P.
1963 *Archaeology of the Rose Spring Site, CA-INY-372*. University of California Publications in American Archaeology and Ethnology 49 (3), pp. 237-336.

McGuire, K.
2002 *Boundary Lands: Archaeological Investigations Along the California-Great Basin Interface*. Nevada State Museum Anthropological Papers 24, pp. 1-134.

McGuire, K., and W. Hildebrandt
2016 *Prehistory of Nevada's Northern Tier: Archaeological Investigations Along the Ruby Pipeline*. Anthropological Papers of the American Museum of Natural History, No. 101.

Moore, J
1981 *Cultural Resources Report: US 50 Overlay, EA 71069: NDOT-095-81C*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Nevada State Museum
n.d. *Carson Sewer Reconnaissance*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Obermayr, E, and D. Zeanah
1998 *A Class III Cultural Resources Inventory and Evaluation of the Proposed Prison Hill Land Exchange*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Pinzl, J.
1980 *Cultural Resources Report Field Worksheet: R&PP-N-225357 – Carson City School District, CR Report 3-359 (N).* Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Risse, D.

2010 *Addendum to a Cultural Resources Survey of Carson City, Nevada, Corporate Yard Hydraulic Improvements*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Sampson, A.
1925 The Foothill-Montane-Alpine Flora and its Environment. In: *Contributions from United States National Herbarium, Vol. 25, Flora of Utah and Nevada*, ed. Ivar Tidestrom, pp. 24-32. Washington: Government Printing Office.

Seelinger, E.
1977 *Archaeological Resources Short Report: Carson City Treatment Plant Expansion Project – Reconnaissance Project 13-3*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Schoenherr, A.
1995 *A Natural History of California*. Los Angeles: University of California Press.

Simons, D., M. Kimball, and R. Kautz
2006 *Cultural Resources Inventory of Carson City, Nevada, Corporate Yard Hydraulic Improvements*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Slaughter, S.
2013a *The Hells Bells Road Pedestrian Safe Route to Schools Project*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

2013b *A Class I Archaeological Inventory and Historic Architecture Assessment for the Proposed East 5th Street Bike and Pedestrian Improvements Project in Carson City, Carson City County, Nevada*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Steinberg, L.
1979 *Cultural Resources Report – Historical and Archaeological: Fifth and Stewart Streets, EA 70919*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Steinberg, L., L. Seth, and P. Sutton
1978 *Inventory and Assessment of Historical Landmarks and Structures Encountered by the Proposed US 395 Carson City Bypass Corridors*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Sutton, M.
2010 The Del Rey Tradition and its Place in the Prehistory of Southern California. *Pacific Coast Archaeological Society Quarterly* 44(2):1-54.

Snyder, John W.
2004 Lompa Ranch Historic District, National Register Nomination.

Thomas, D. H.

1981 How to Classify the Projectile Points from Monitor Valley, Nevada. *Journal of California and Great Basin Anthropology 3,* pp. 7-43.

Wells, H., and C. Backes
2005 *Bierman Cave Revisited: A Survey on the Southern Range, China Lake Naval Air Weapons Station, San Bernardino County, California*. Unpublished manuscript on file at Ancient Enterprises, Santa Monica.

Yohe, R.
1992 *A Reevaluation of Western Great Basin Cultural Chronology and Evidence for the Timing of the Introduction of the Bow and Arrow to Eastern California Based on New Excavations at the Rose Spring Site (CA-INY-372)*. Ph.D. dissertation, University of California, Riverside.

Young, B.
1989 *Cultural Resource Inventory of Sierra Pacific Power Company's Proposed Transmission Line G28, Carson City, Nevada*. Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

Zeier, C.
1985 *Cultural Resources Short Report: The Archaeological Reconnaissance of a Parcel Between Airport and Edmonds Roads, East of Carson City, Nevada.* Report on file at the Nevada State Historic Preservation Office, Cultural Resources Information System.

APPENDIX

Appendix A SELECTED DRAWINGS

ENGINEERS STANDARD NOTES

1. ALL WORK SHALL CONFORM TO THE LATEST EDITION OF CARSON CITY'S STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS PROJECTS AND NEVADA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS AND PLANS FOR ROAD AND BRIDGE CONSTRUCTION. IF THERE IS A CONFLICT BETWEEN THE TWO STANDARDS, THE CITY STANDARDS SHALL APPLY AND THE ENGINEER SHOULD BE NOTIFIED PRIOR TO CONSTRUCTION
2. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY ARISING FROM THE PERFORMANCE OF THE CONTRACTOR'S WORK.
3. CONTRACTOR SHALL NOTIFY CARSON CITY AND ALL UTILITY COMPANIES INVOLVED IN THE DEVELOPMENT AT LEAST 48 HOURS PRIOR TO THE BEGINNING OF WORK.
4. CONTRACTOR SHALL NOTIFY "UNDERGROUND SERVICE ALERT" AND HAVE THE CONSTRUCTION AREA MARKED AT LEAST 48 HOURS PRIOR TO ANY WORK BEING PERFORMED.
5. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED FROM A SEARCH OF AVAILABLE RECORDS. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN HEREON AND ANY OTHERS NOT OF RECORD OR NOT SHOWN ON THESE PLANS. ALL DAMAGES THERETO CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE APPROPRIATE SPECIFICATIONS AND STANDARDS OF CARSON CITY AT THE EXPENSE OF THE CONTRACTOR.
6. CONTRACTOR SHALL VERIFY ALL EXISTING UNDERGROUND FACILITIES PRIOR TO THE START OF CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PLANS, SPECIFICATIONS, THE SOILS AND/OR GEOLOGY REPORTS, AND THE SITE CONDITIONS PRIOR TO COMMENCING WORK. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE GIVEN, CONSTRUCTION SHALL BE SHOWN FOR SIMILAR WORK. SHOULD CONFLICTING INFORMATION BE FOUND ON THE PLANS OR IN THE FIELD, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER BEFORE PROCEEDING WITH THE WORK IN QUESTION.
8. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL JOINING CONDITIONS FOR GRADING, DRAINAGE AND UNDERGROUND FACILITIES INCLUDING LOCATION AND ELEVATION OF EXISTING UNDERGROUND FACILITIES AT CROSSINGS WITH PROPOSED UNDERGROUND FACILITIES. IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND SHALL NOT BEGIN CONSTRUCTION UNTIL THE CONDITIONS HAVE BEEN EVALUATED.
9. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE ENGINEER PRIOR TO THEIR REUSE.

CITY STANDARD NOTES

1. ALL WORK SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (SSPWC) AND THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION" (SDPWC) AS ADOPTED BY CARSON CITY. THE CONTRACTOR SHALL OBTAIN A PERMIT FOR PUBLIC WORKS CONSTRUCTION FROM THE CARSON CITY PERMIT CENTER PRIOR TO THE START OF CONSTRUCTION.
2. ALL TRAFFIC CONTROL AND BARRICADING WITHIN THE CARSON CITY RIGHT-OF-WAY SHALL CONFORM TO SECTION 100.33, 332.04 AND 332.05 OF THE STANDARD SPECIFICATIONS, PART 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND THE UNR T2 CENTER, TEMPORARY TRAFFIC CONTROL GUIDELINES LATEST EDITION. A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AD APPROVED BY THE CARSON CITY ENGINEERING DIVISION PRIOR TO ANY STREET CLOSURES.
3. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT "CALL BEFORE YOU Dig" (811) OR (1-800-227-2600) AT LEAST TWO (2) WORKING DAYS PRIOR TO START OF CONSTRUCTION AND COMPLY WITH THE REQUIREMENTS OF NRS AND NAC 455 THROUGHOUT THE COURSE OF THE WORK, SEWER SERVICE LATERALS ARE NOT OWNED OR MARKED BY CARSON CITY.
4. THE CONTRACTOR SHALL CALL THE CARSON CITY ENGINEERING DIVISION (755-283-4775) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL ONE (1) WORKING DAY PRIOR TO REQUIRED INSPECTIONS AND TESTING. THE REQUIRED INSPECTIONS AND TESTING ARE LISTED ON THE INSPECTION RECORD ISSUED WITH EACH PERMIT. THE CONTRACTOR MUST HAVE THE PERMIT NUMBER AND THE DESCRIPTION LISTED ON THE INSPECTION RECORD TO SCHEDULE REQUIRED INSPECTIONS AND TESTING. FOR CITY CONTRACTED PROJECTS, THE CONTRACTOR SHALL SCHEDULE INSPECTIONS PER THE CONTRACT DOCUMENTS.
5. FINAL INSPECTIONS WILL BE PERFORMED BY CARSON CITY ENGINEERING DIVISION ACCORDING TO THE CARSON CITY INSPECTIONS AND TESTING PROCEDURES. NOTE: THESE PROCEDURES REQUIRE SUBMITTAL OF RECORD DRAWING PRINTS BY THE CONTRACTOR AND 10 WORKING DAYS TO PREPARE A FINAL PUNCH LIST. ALL CONDITIONS OF THE FINAL INSPECTION MUST BE COMPLETED PRIOR TO FINAL ACCEPTANCE OR ANY APPROVAL OF A CERTIFICATE OF OCCUPANCY BY THE CARSON CITY ENGINEERING DIVISION.
6. MODIFICATIONS TO THE APPROVED PLANS REQUIRES REVIEW AND APPROVAL BY THE CARSON CITY ENGINEERING DIVISION. WORK PERFORMED WITHOUT WRITTEN APPROVAL BY CARSON CITY ENGINEERING WILL REQUIRE REMOVAL AT THE CONTRACTORS EXPENSE.
7. THE APPROVED PLAN, PERMIT AND INSPECTION RECORD MUST BE ON THE JOB SITE AT ALL TIMES.
8. PLAN APPROVAL FOR SEWER AND WATER CONSTRUCTION SHALL EXPIRE ONE YEAR FROM DATE OF APPROVAL UNLESS CONSTRUCTION HAS BEEN INITIATED. (CCMC 12.06.180F, 12.01.140D)
9. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR ACQUIRING A STORMWATER DISCHARGE PERMIT FROM THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP) INCLUDING DEVELOPING, SUBMITTING AND IMPLEMENTING A STORM WATER POLLUTION PREVENTION PLAN (SWPP). THE CONTRACTOR SHALL DEVELOP, PLACE AND MAINTAIN STORM WATER PROTECTION DEVICES IN COMPLIANCE WITH THE NEVADA CONTRACTORS FIELD GUIDE FOR CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (JUNE 2008).

EROSION CONTROL NOTES

1. THE PRACTICE OF EROSION AND SEDIMENT CONTROL IS A DYNAMIC ACTIVITY WHICH REQUIRES FLEXIBILITY AND COMMITMENT BY THE CONTRACTOR TO SUCCESSFULLY IMPLEMENT. THIS EROSION AND SEDIMENT CONTROL PLAN IS INTENDED TO PROVIDE THE GUIDANCE TO THE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PREVENT DISCHARGE OF SEDIMENT FROM THE SITE TO ANY WATERCOURSE, DRAINAGE SYSTEM, OR ADJACENT PROPERTY AND TO PROTECT WATERCOURSES AND ADJACENT PROPERTIES FROM DAMAGE BY EROSION OR DEPOSITION WHICH MAY RESULT FROM THE PERMITTED GRADING.
2. THE CONTRACTOR SHALL COMPLY WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (N.P.D.E.S.) GENERAL PERMIT, WASTE DISCHARGE REQUIREMENTS AND ALL FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS RELATING TO DISCHARGE OF STORM WATER RUNOFF ASSOCIATED WITH CONSTRUCTION ACTIVITY.
3. THE LOCATION AND TYPE OF THE EROSION AND SEDIMENT CONTROL PRACTICES SHOWN ON THIS PLAN ARE GUIDELINES ONLY. IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE PRACTICES IN SUCH A MANNER AS TO COMPLY WITH THE N.P.D.E.S. PERMIT. THE CONTRACTOR SHALL ADJUST, MODIFY AND MAINTAIN THE EROSION AND SEDIMENT CONTROL MEASURES TO FIT THE PARTICULAR SITE CONDITIONS AND PHASE OF CONSTRUCTION OR AS DIRECTED BY THE LOCAL AGENCY OR ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT CONSTRUCTION UNTIL SUCH TIME THAT THE ENTIRE PROJECT HAS BEEN STABILIZED AND ACCEPTED BY THE LOCAL AGENCY.
5. THE CONTRACTOR SHALL CONDUCT INSPECTIONS OF THE SITE PRIOR TO ANTICIPATED STORM EVENTS, AND AFTER ACTUAL EVENTS TO IDENTIFY AREAS CONTRIBUTING TO DISCHARGE OF STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY AND TO EVALUATE WHETHER CONTROL PRACTICES TO REDUCE POLLUTANT LOADING ARE ADEQUATE AND PROPERLY IMPLEMENTED IN ACCORDANCE WITH THE TERMS OF THE N.P.D.E.S. GENERAL PERMIT OR WHETHER ADDITIONAL CONTROL PRACTICES ARE NEEDED. A RECORD OF THE CONTRACTOR'S INSPECTIONS SHALL BE SUBMITTED TO THE OWNER AND ENGINEER. THE CONTRACTOR'S RECORD OF INSPECTION SHALL INCLUDE THE DATE OF INSPECTION, THE INDIVIDUAL WHO PERFORMED THE INSPECTION, AND THE OBSERVATIONS.
6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE OR BE CAPABLE OF BEING IN PLACE WITHIN 24 HOURS. FAILURE TO COMPLY MAY RESULT IN IMMEDIATE SUSPENSION OF ALL GRADING ACTIVITIES WITHOUT PRIOR NOTICE.
7. ALL DISTURBED SLOPES GREATER THAN 10:1 SHALL BE BROADCAST WITH CLEAN, SMALL GRAIN STRAW (WHEAT, RICE, BARELY, OAT) AT A RATE OF 2,000 LBS. PER ACRE (25 BALES PER ACRE) IF SEEDED AND 4,000 LBS. PER ACRE (50 BALES) IF UNSEEDED. STRAW SHALL BE PRESSED IN PLACE ON SLOPES EQUAL TO OR GREATER THAN 3:1 OR SHALL HAVE EROSION NETTING INSTALLED.
8. ALL BARE AREAS WITHIN 50 FEET OF NATURAL DRAINAGE SHALL BE COVERED WITH STRAW MULCH AT THE RATE OF 3,000 LBS. PER ACRE IF UNSEEDED OR 2,000 LBS. PER ACRE IF SEEDED AND STRAW SHALL BE PRESSED IN PLACE.
9. STRAW BALES SHALL BE STOCKPILED ON SITE AT A RATE OF 1.5 BALES PER PROJECT ACRE. STOCKPILED STRAW SHALL BE COVERED TO ASSURE A DRY SUPPLY OF STRAW.
10. FIBER ROLLS SHALL BE INSTALLED FOLLOWING THE CONTOUR TO PROJECT AREAS FROM SEDIMENTATION CAUSED BY SHEET AND RILL EROSION. THE FIBER ROLLS SHALL BE INSTALLED ON DISTURBED SLOPES WHERE SEDIMENT HAS THE CAPABILITY OF BEING TRANSPORTED TO STORM DRAIN INLETS, WELANDS OR DRAINAGE AREAS. FIBER ROLL SPACING REQUIREMENTS ARE: 1) 200 FEET ON SLOPES FROM 0-15% WITH A 1/2 TO 1 ACRE DRAINAGE AREA, AND 2) 100 FEET ON 15+% SLOPES WITH LESS THAT 1/2 ACRE DRAINAGE AREA.
11. ALL STOCKPILED SOIL SHALL BE COVERED (OR CAPABLE OF BEING COVERED WITHIN 24 HOURS) WITH STRAW MULCH AT A RATE OF 1 BALE PER 1000 SQUARE FEET OR WITH PLASTIC SHEETING. ALL STOCKPILED SOIL SHALL HAVE FIBER ROLLS PLACED AT THE TOE OF THE MATERIAL. IN ADDITION, NO MATERIAL SHALL BE STOCKPILED WITHIN 50 FEET OF PERENNIAL AND INTERMITTENT DRAINAGE SWALES (AS MEASURED FROM THE CENTERLINE OF THE DRAINAGE).
12. TEMPORARY PERIMETER DIVERSION DIKES OR PERIMETER SWALES SHALL BE CONSTRUCTED AT THE TOP OF EXPOSED SLOPES OR OTHER DISTURBED AREAS TO DIVERT NON-SEDIMENT LADEN STORM WATER FROM ENTERING DISTURBED AREAS AND AT THE BOTTOM OF DISTURBED AREAS TO DIRECT SEDIMENT LADEN STORM WATER TO SEDIMENT TRAPS UNTIL THE SLOPES ARE STABILIZED. WATER MAY BE TRANSPORTED WITH A FLEXIBLE PIPE SLOPE DRAIN IF NEEDED.
13. CROSS-SLOPE TEMPORARY DRAINS, DIKES/WATER BARS AND INTERCEPTOR SWALES SHALL BE CONSTRUCTED WITH SEDIMENT TRAPS AT THE OUTLETS ON DISTURBED AREAS THAT ARE USED FOR ROADS, PARKING, OR OTHER GRADED AREAS WHICH HAVE NOT BEEN STABILIZED BY GRAVEL SURFACING OR VEGETATIVE MEANS.

GRADE OF DISTURBED AREA	SPACING OF CROSS DRAINS
2-5%	300 FEET
5-10%	150 FEET
10-15%	75 FEET
15-20%	50 FEET

14. SEDIMENT TRAPS SHALL BE CONSTRUCTED ACROSS DRAINAGE WAYS, STORM DRAIN INLETS/OUTLETS OR OTHER LOCATIONS TO COLLECT INTERCEPT AND TRAP SEDIMENT-LADEN RUN-OFF. THE TEMPORARY TRAPS SHOULD BE CONSTRUCTED USING EXISTING TERRAIN WHERE FEASIBLE. STORM DRAIN INLETS SHALL BE PROTECTED FROM SEDIMENT.
15. SEDIMENT AND TRASH ACCUMULATED IN DRAINAGE OR SEDIMENT TRAPS SHALL BE MONITORED AND REMOVED ON A REGULAR BASIS BY CONTRACTOR TO REMAIN IN COMPLIANCE. TRASH SHALL BE REMOVED AT LEAST WEEKLY.
16. ALL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE MONITORED BY THE CONTRACTOR DURING AND AFTER ALL STORMS TO ENSURE CONTROL FEATURES ARE WORKING PROPERLY. ALTERNATIVE MEASURES MUST BE INSTALLED IF ORIGINAL MEASURES FAIL.
17. IF CONCRETE WASHOUT IS PERFORMED ON-SITE, IT SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT STORM WATER POLLUTION PREVENTION PLAN AND LOCATED WHERE INDICATED ON THIS SET OF IMPROVEMENT PLANS.
18. CONTRACTOR SHALL IMPLEMENT WASTE MANAGEMENT BMPS IN COMPLIANCE WITH THE CURRENT CASQA CONSTRUCTION MANUAL.

REVEGETATION NOTES:

1. ALL AREAS OF CONSTRUCTION DISTURBANCE INCLUDING CUTS AND FILLS WHERE NATURAL COVER AND RE-VEGETATION HAVE BEEN REMOVED, OR WHERE PREVIOUSLY DISTURBED AREAS EXIST, SHALL BE SEEDED EXCEPT WHERE ROCK MATERIAL DISPLACES SOIL.
2. AFTER FINAL DISTURBANCE, SITE SHOULD BE PREPARED TO ACCEPT SEED BY RAKING. REMOVING ANY FOREIGN MATERIAL I.E.: FLOATING ROCKS, DISCARDED BUILDING MATERIALS, ETC.

GRADING NOTES

1. GRADING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE IMPROVEMENT PLANS AND THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORTS PREPARED BY RCI RESOURCES CONCEPT INC. DATED OCTOBER 24, 2016. ALL GRADING WORK WILL ALSO BE SUBJECT TO THE APPROVAL OF THE GEOTECHNICAL ENGINEER.
2. ALL GRADING SHALL CONFORM WITH APPENDIX J- CALIFORNIA BUILDING CODE AND STANDARDS PERTAINING THEREOF AND SOILS REPORT BY RCI RESOURCES CONCEPT INC. DATED OCTOBER 24, 2016.
3. SURFACE DRAINAGE TO BE ONE (1%) PERCENT MINIMUM TO APPROVED DRAINAGE FACILITIES, EXCEPT AS WAIVED BY THE BUILDING OFFICIAL.
4. GEOTECHNICAL ENGINEER AND BUILDING OFFICIAL WILL BE NOTIFIED FORTY-EIGHT (48) HOURS TO PLACING OF ANY FILL MATERIAL.
5. ALL FILL TO BE COMPACTED TO A MINIMUM OF NINETY (90%) PERCENT MAXIMUM DENSITY AS DETERMINED BY APPROVED METHOD PER APPENDIX J OF THE CURRENT CALIFORNIA BUILDING CODE AND CERTIFIED BY TESTS AND REPORT FROM SOILS ENGINEER.
6. FILL MATERIAL SHALL BE PLACED IN LAYERS NOT EXCEEDING SIX (6) INCHES IN COMPACTED THICKNESS AND COMPACTED AT OPTIMUM MOISTURE CONTENT BY AN APPROVED METHOD.
7. ALL FILL AREAS TO BE CLEARED OF ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FOR A STRUCTURE FILL AND THE AREA SCARIFIED TO A DEPTH OF SIX (6) INCHES.
8. FACES OF ALL CUT AND FILL SLOPES TO BE SHALL BE PLANTED WITH A GROUND COVER INDIGENOUS TO THE AREA AND MAINTAINED AGAINST EROSION.
9. ALL CUT AND/OR FILL SLOPE SHALL NOT BE STEEPER THAN TWO (2) HORIZONTAL TO ONE (1) VERTICAL.
10. BERMS OR DRAINAGE DEVICES ARE REQUIRED AT TOP OF ALL FILL SLOPES.
11. DIVERTER TERRACES (SWALES) WITH THREE (3) FEET MINIMUM WIDTH AND ONE (1) FOOT MINIMUM DEPTH ARE REQUIRED AT TOP OF CUT AND FILL SLOPES WHEN EXISTING TERRAIN SLOPES TOWARD TOP OF CUT.
12. FILL AREAS SLOPING STEEPER THAN FIVE TO ONE (5:1) SHALL BE KEYED AND BENCHED TO SUPPORT FILL.
13. ALL FILL SLOPES SHALL NOT CUT WITHIN TWELVE (12) FEET HORIZONTALLY OF THE TOP OF EXISTING AND/OR PLANNED SLOPES.
14. ALL SLOPES IN EXCESS OF THREE (3) FEET MINIMUM WIDTH AND ONE (1) FOOT MINIMUM DEPTH ARE REQUIRED AT TOP OF CUT SLOPES WHEN EXISTING TERRAIN SLOPES TOWARD TOP OF CUT.

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ACRE OR ASPHALT CONCRETE
BEG	BEGIN
BFP	BACK FLOW PREVENTOR
BU	BUBBLE UP DRAIN
BW	BACK OF WALK
CB	CATCH BASIN
CL	CENTER LINE
CO	CLEAN OUT
CT	CALTRANS
DCDV	DOUBLE CHECK DETECTOR VALVE
DCV	DETECTOR CHECK VALVE
DI	DROP INLET
DWY	DRIVEWAY
EL	ELECTRICAL/ELEVATION
ELEV	ELEVATION
EX	EXISTING
F	FIRE
FOB	FACE OF BUILDING
FC	FACE OF CURB
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FN	FENCE
FS	FINISH SURFACE
FW	FIRE WATER
GB	GRADE BREAK
GM	GAS METER
GN	GROUND
GR	GRATE
GV	GATE VALVE
HC	HANDICAP
HP	HIGH POINT
INV.	INVERT ELEVATION
IRR	IRRIGATION
JB	JUNCTION BOX
LA	LANDSCAPE AREA
LF	LINEAR FEET
LP	LOW POINT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MON	MONUMENT
NF	NOT FOUND
NIC	NOT IN CONTRACT
OC	ON CENTER
OD	OUTER DIAMETER
OH	OVER HEAD
PB	PULL BOX
PED	PEDESTAL
PIP	PROTECT IN PLACE
PIV	POST INDICATOR VALVE
PL	PROPERTY LINE
PR	PROPOSED
POC	POINT OF CONNECTION
PUE	PUBLIC UTILITY EASEMENT
PSSE	PUBLIC SANITARY SEWER EASEMENT
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RIM	RIM ELEVATION
R/W OR ROW	RIGHT OF WAY
SD	STORM DRAIN
SDCB	STORM DRAIN CATCH BASIN
SDCO	STORM DRAIN CLEAN OUT
SDDI	STORM DRAIN DROP INLET
SDJB	STORM DRAIN JUNCTION BOX
SDMH	STORM DRAIN MANHOLE
SDAD	STORM DRAIN AREA DRAIN
SDBU	STORM DRAIN BUBBLE UP
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEAN OUT
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SW	SIDEWALK
T/TEL	TELEPHONE LINE
TRS	TRANSFORMER
TB	TOP OF BANK
TBDIF	TO BE DETERMINED IN FIELD
(TBR)	TO BE REMOVED
TC	TOP OF CURB
TG	TOP OF GRATE
TW	TOP OF WALK
TYP.	TYPICAL
VLT	VAULT
W	WATER
WM	WATER METER
WV	WATER VALVE

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

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Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C1.0 COVER SHEET.dwg GENERAL NOTES May 18, 2018 11:07am by: todd.cochran
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No.	DATE
1	05/18/2018
2	ADDRESS COMMENTS FROM CARSON CITY
3	
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REVISIONS

Kimley»Horn
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STATE OF NEVADA REGISTERED No. 017782 Professional Engineer JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS | DRAWN BY: JK | DESIGNED BY: CJ | CHECKED BY: TC

CLIENT: RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT: LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS

SHEET TITLE: GENERAL NOTES

DATE 12/20/2017

PROJECT NO. 018016015

SHEET NUMBER C1.1

NOT FOR CONSTRUCTION -MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C1.0 COVER SHEET.dwg SPECIFICATIONS May 18, 2018 11:07am by: todd.cochran

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SPECIFICATIONS

HIGH PERFORMANCE TURF REINFORCEMENT MAT (HPTRM)

1 DEFINITIONS

- *A.* *HIGH PERFORMANCE TURF REINFORCEMENT MAT (HPTRM):* A LONG-TERM, NON-DEGRADABLE RECP COMPOSED OF UV-STABILIZED, NON-DEGRADABLE, SYNTHETIC FIBERS, NETTINGS AND/OR FILAMENTS PROCESSED INTO THREE-DIMENSIONAL REINFORCEMENT MATRICES DESIGNED FOR PERMANENT AND CRITICAL HYDRAULIC APPLICATIONS WHERE DESIGN DISCHARGES EXERT VELOCITIES AND SHEAR STRESSES THAT EXCEED THE LIMITS OF MATURE NATURAL VEGETATION. HPTRMS PROVIDE SUFFICIENT THICKNESS, STRENGTH AND VOID SPACE TO PERMIT SOIL FILLING AND/OR RETENTION AND THE DEVELOPMENT OF VEGETATION WITHIN THE MATRIX. THE HPTRM MARV TENSILE STRENGTH PER ASTM D-6818 IS 3000 LBS/FT IN THE WEAKEST PRINCIPLE DIRECTION.
- *B.* *ROLLED EROSION CONTROL PRODUCT (RECP):* A TEMPORARY DEGRADABLE OR LONG-TERM NON-DEGRADABLE MATERIAL MANUFACTURED OR FABRICATED INTO ROLLS DESIGNED TO REDUCE SOIL EROSION AND ASSIST IN THE GROWTH, ESTABLISHMENT AND PROTECTION OF VEGETATION.
- *C.* *MINIMUM AVERAGE ROLL VALUE (MARV):* PROPERTY VALUE CALCULATED AS TYPICAL MINUS TWO STANDARD DEVIATIONS. STATISTICALLY, IT YIELDS A 97.7 PERCENT DEGREE OF CONFIDENCE THAT ANY SAMPLE TAKEN DURING QUALITY ASSURANCE TESTING WILL EXCEED VALUE REPORTED.
- *D.* *SECURING PIN:* A DEVICE DESIGNED TO TEMPORARILY HOLD THE HPTRM IN PLACE WHILE EITHER VEGETATION ESTABLISHES, OR THE INSTALLATION OF THE HPTRM OCCURS. THE SECURING PIN OFFERS NO LONG TERM VALUE TO PERMANENT TIE-DOWN OF THE HPTRM IN ARMORING SOLUTION.
- *E.* *TRILOBAL MONOFILAMENT YARN:* A MULTI-DIMENSIONAL POLYMER FIBER CONSISTING OF A MINIMUM OF THREE POINTS, PROVIDING INCREASED SURFACE AREA AND GROOVES/CHANNELS ALONG THE FIBER TO CAPTURE ADDITIONAL MOISTURE AND SEDIMENT TO ENHANCE VEGETATIVE GROWTH.

2 DELIVERY, STORAGE, AND HANDLING

- A. HPTRM LABELING, SHIPMENT AND STORAGE SHALL FOLLOW ASTM D 4873.
- B. PRODUCT LABELS SHALL CLEARLY SHOW THE MANUFACTURER OR SUPPLIER NAME, STYLE NAME, AND ROLL NUMBER.
- C. EACH SHIPPING DOCUMENT SHALL INCLUDE A NOTATION CERTIFYING THAT THE MATERIAL IS IN ACCORDANCE WITH THE MANUFACTURER'S CERTIFICATE.
- D. EACH HPTRM ROLL SHALL BE WRAPPED WITH A MATERIAL THAT WILL PROTECT THE HPTRM FROM DAMAGE DUE TO SHIPMENT, WATER, SUNLIGHT, AND CONTAMINANTS. (THIS WILL BE WAIVED FOR HPTRMS HAVING A 90% RETENTION OF STRENGTH AFTER 6000 HOURS OF EXPOSURE PER ASTM D-4355.)
- E. THE PROTECTIVE WRAPPING SHALL BE MAINTAINED DURING PERIODS OF SHIPMENT AND STORAGE.
- F. DURING STORAGE, HPTRM ROLLS SHALL BE ELEVATED OFF THE GROUND AND ADEQUATELY COVERED TO PROTECT THEM FROM THE FOLLOWING: SITE CONSTRUCTION DAMAGE, EXTENDED EXPOSURE TO ULTRAVIOLET (UV) RADIATION, PRECIPITATION, CHEMICALS THAT ARE STRONG ACIDS OR STRONG BASES, FLAMES, SPARKS, TEMPERATURES IN EXCESS OF 71 DEG C (160 DEG F)M AND ANY OTHER ENVIRONMENTAL CONDITION THAT MIGHT DAMAGE THE HPTRM.

3 PRODUCTS

3.1 MANUFACTURERS

- A. APPROVED MANUFACTURERS:
  1. PROPEX OPERATING COMPANY, LLC
     4019 INDUSTRY DRIVE
     CHATTANOOGA, TN 37419
     (800) 621-1273
- B. ALTERNATE HPTRM MANUFACTURERS:
  1. ANY ALTERNATE PRODUCTS SEEKING APPROVAL MUST BE SUBMITTED TO THE ENGINEER 10 DAYS PRIOR TO THE BID DATE. FOR ACCEPTANCE ON THIS PROJECT, ANY ALTERNATES SEEKING APPROVAL MUST MEET THE REQUIREMENTS OUTLINED IN THIS DOCUMENT. THE ALTERNATE'S PRODUCT SPECIFICATIONS AND A PRODUCT SAMPLE MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

3.2 MATERIALS

- A. PYRAMAT 75 HPTRM:
  1. THREE-DIMENSIONAL, LOFTY WOVEN POLYPROPYLENE RECP SPECIALLY DESIGNED FOR EROSION CONTROL APPLICATIONS ON LEVEES, STEEP SLOPES, AND VEGETATED WATERWAYS.
  2. MATRIX COMPOSED OF TRILOBAL MONOFILAMENT YARNS WOVEN INTO UNIFORM CONFIGURATION OF RESILIENT PYRAMID-LIKE PROJECTIONS THAT MINIMIZE WATERING REQUIREMENTS WHILE ENHANCING VEGETATION ESTABLISHMENT.
  3. MUST BE A HOMOGENEOUS MATRIX, AND NOT COMPRISED OF LAYERS, COMPOSITES, OR DISCONTINUOUS MATERIALS, OR OTHERWISE LOOSELY HELD TOGETHER BY STITCHED OR GLUED NETTING.
  4. THE WOVEN MATRIX OF TRILOBAL YARNS MUST BE HEAT-SET TO IMPROVE INTERLOCK AND MINIMIZE YARN DISPLACEMENT AROUND ANCHORS AND PINS, WHICH ALSO RESULTS IN GREATER FLEXIBILITY FOR IMPROVED CONFORMANCE TO UNEVEN SURFACES.
  5. MATERIAL IS TO EXHIBIT VERY HIGH INTERLOCK AND REINFORCEMENT CAPACITY WITH BOTH SOIL AND ROOT SYSTEMS AND DEMONSTRATE HIGH TENSILE MODULUS.
  6. THE HPTRM SHOULD MEET THE FOLLOWING VALUES:

PROPERTY	TEST METHOD	TEST PARAMETERS	UNITS	PROPERTY REQUIREMENT
THICKNESS [1]	ASTM D-6525	MINIMUM	MM (IN)	10 (0.40)
LIGHT PENETRATION [1] (% PASSING)	ASTM D-6567	MAXIMUM	PERCENT	10
TENSILE STRENGTH [1]	ASTM D-6818	MINIMUM	KN/M (LB/FT)	58 X 44 (4,000 X 3,000)
TENSILE ELONGATION [1]	ASTM D-6818	MINIMUM	PERCENT	40 X 35
RESILIENCY [1]	ASTM D-6524	MINIMUM	PERCENT	80
FLEXIBILITY [2, 3]	ASTM D-6575	MAXIMUM	MG-CM (IN-LB)	615,000 (0.534)
UV RESISTANCE [2]	ASTM D-4355	MINIMUM	PERCENT	90 AT 3,000 HRS [4] 90 AT 6,000 HRS

NOTES:

1. MINIMUM AVERAGE ROLL VALUE (MARV)
2. TYPICAL VALUE
3. A SMALLER VALUE FOR FLEXIBILITY DENOTES A MORE FLEXIBLE MATERIAL
4. THIRD PARTY / INDEPENDENT TESTING VALUES MUST BE PROVIDED SHOWING UV RESISTANCE TESTING FOR TWO CONSECUTIVE YEARS INCLUDING MOST RECENT YEAR

  7. PERFORMANCE PROPERTIES:
     - a) FLUME TESTING: IN A VEGETATED STATE, THE HPTRM MUST DEMONSTRATE ACCEPTABLE PERFORMANCE (AS DEFINED BY THE ENGINEER) WHEN SUBJECTED TO AT LEAST 0.5 HRS OF CONTINUOUS FLOW PRODUCING THE FOLLOWING CONDITIONS.
       - 1) PERMISSIBLE VELOCITY: 7.6 M/SEC (25 FT/SEC)
       - 2) PERMISSIBLE TRACTIVE FORCE (SHEAR STRESS): 770 PA (16 PSF)
       - 3) PERFORMANCE MAY BE DEMONSTRATED BY:
         - i. FLUME TESTING AT AN INDEPENDENT FACILITY UNDER CONDITIONS SIMILAR TO THIS PROJECT PROVIDED THAT THE MANUFACTURER CAN DEMONSTRATE THAT THE MATERIAL TESTED IS FUNCTIONALLY EQUIVALENT TO THE MATERIAL BEING SUPPLIED. THIS MAY BE DEMONSTRATED BY PROVIDING INDEX PROPERTY TEST RESULTS (LISTED IN 2.2.A.4) FROM A GAI-LAP ACCREDITED LABORATORY FOR BOTH THE TESTED AND SUPPLIED MATERIALS.
         - ii. A DOCUMENTED CASE HISTORY OF SUCCESSFUL PERFORMANCE (AS DEFINED BY THE ENGINEER) AT AN INSTALLATION SIMILAR TO THIS PROJECT WHERE (DOCUMENTED) HYDRAULIC FORCES MET OR EXCEEDED THE REQUIREMENTS LISTED ABOVE PROVIDED THAT THE MANUFACTURER CAN DEMONSTRATE THAT THE CASE HISTORY MATERIAL IS FUNCTIONALLY EQUIVALENT TO THE MATERIAL BEING SUPPLIED. THIS MAY BE DEMONSTRATED BY PROVIDING INDEX PROPERTY TEST RESULTS (LISTED IN 2.2.A.4) FROM A GAI-LAP ACCREDITED LABORATORY FOR BOTH THE CASE HISTORY AND SUPPLIED MATERIALS.
     - b) FUNCTIONAL LONGEVITY: IN ADDITION TO THE UV RESISTANCE PER ASTM D-4355 STATED ABOVE, THE HPTRM MUST HAVE A DOCUMENTED INSTALLATION SHOWING A MINIMUM RETAINED TENSILE STRENGTH OF 70% PER ASTM D-6818 AFTER A MINIMUM OF 10 YEARS OF EXPOSURE TO A MINIMUM SOLAR RADIATION OF 21.7 MJ/M2-DAY.

3.3 ACCESSORIES

- A. SECURING PINS:
  1. SECURING PINS SHOULD BE AT LEAST 5 MM (0.2 IN.) DIAMETER STEEL WITH A 38 MM (1.5 IN.) STEEL WASHER AT THE HEAD OF THE PIN. SECURING PINS SHOULD BE DRIVEN FLUSH TO THE SOIL SURFACE.
  2. LENGTH: 600 MM (24 INCHES); SUFFICIENT GROUND PENETRATION TO RESIST PULLOUT.
  3. PLACEMENT: THE PINS PROVIDE FOR TEMPORARY TIE-DOWN OF THE HPTRM TO THE SLOPE TO AID WITH VEGETATION ESTABLISHMENT. LOCATIONS OF THE PINS ALONG TRENCHES ARE INDICATED IN THE DRAWINGS AT THE CENTER OF THE 0.3 M X 0.3 M (1 FT X 1FT) TRENCH SPACED 0.3 M (1 FT) APART. LOCATIONS OF THE PINS ALONG THE VERTICAL OVERLAPS ARE SPACED 0.3 M (1 FT) APART. HPTRM ROLLS WIDER THAN 3.2 M (10.5 FT) MUST NOT HAVE A PIN SPACING GREATER THAN 0.45 M (1.5 FT) IN ANY DIRECTION TO MINIMIZE WRINKLING OF THE MATERIAL COMMON TO WIDE ROLL WIDTH GEOSYNTHETICS AND THE LOSS OF INTIMATE CONTACT BENEATH THE HPTRM.
  4. HEAVIER METAL STAKES MAY BE REQUIRED IN ROCKY SOILS
  5. DEPENDING ON SOIL PH AND DESIGN LIFE OF THE PIN, GALVANIZED OR STAINLESS STEEL PINS MAY BE REQUIRED.

4 EXECUTION

4.1 PREPARATION

- A. GRADE AND COMPACT AREAS TO BE TREATED WITH HPTRM (COMPACTED AS INDICATED OR AS DIRECTED BY ENGINEER). SUBGRADE SHALL BE UNIFORM AND SMOOTH.
- B. REMOVE LARGE ROCKS, SOIL CLODS, VEGETATION, AND OTHER SHARP OBJECTS SO THAT THE INSTALLED MAT WILL HAVE DIRECT CONTACT WITH THE SOIL SURFACE.
- C. PREPARE SEEDBED BY LOOSENING 50 TO 75 MM (2 TO 3 IN) OF SOIL ABOVE FINAL GRADE. THIS MAY BE ACCOMPLISHED WITH A ROTARY TILLER ON SLOPES 3H:1V OR FLATTER.
- D. SELECT AND APPLY SOIL AMENDMENTS, FERTILIZER, AND SEED (IF APPLICABLE), (IN AN AMOUNT EQUIVALENT TO 50% OF THE TOTAL MIXTURE REQUIRED TO BE INSTALLED ON THE SOIL SURFACE) IN ACCORDANCE WITH SECTION SEEDING AND SODDING BELOW, TO SCARIFIED SURFACE PRIOR TO INSTALLATION OF HPTRM. DO NOT MULCH AREAS WHERE HPTRM IS TO BE PLACED. SOIL AMENDMENTS SHOULD BE APPROVED BY THE CITY.
- E. KEEP AREAS MOIST AS NECESSARY TO ESTABLISH VEGETATION. WHEN WATERING SEEDED AREAS, USE FINE SPRAY TO PREVENT EROSION OF SEEDS OR SOIL. IF AS A RESULT OF RAIN, PREPARED SEEDBED BECOMES CRUSTED OR ERODED, OR IF ERODED PLACES, RUTS, OR DEPRESSIONS EXIST FOR ANY REASON, REWORK SOIL UNTIL SMOOTH AND RESEED SUCH AREAS.
- F. EXCAVATE A CREST OF SLOPE (COS) TRENCH 300 MM (12 IN.) WIDE BY 300 MM (12 IN.) DEEP, A MINIMUM OF 900 MM (3 FT.) OVER THE CREST OF EACH SIDE SLOPE. EXCAVATE AN INITIAL CHANNEL (IC) AND TERMINAL CHANNEL (TC) TRENCH 300 MM (12 IN.) WIDE BY 300 MM (12 IN.) DEEP AT THE CHANNEL ARMORING LIMITS.

4.2 INSTALLATION

- A. INSTALL HPTRM AT ELEVATION AND ALIGNMENT INDICATED.
- B. BEGINNING AT DOWNSTREAM END OF CHANNEL, PLACE INITIAL END OF FIRST ROLL OF HPTRM IN ONE OF THE COS TRENCHES AND SECURE WITH SECURING PINS AT 300 MM (12 IN) INTERVALS.
- C. UNROLL THE HPTRM DOWN THE INITIAL SIDE SLOPE AND UP THE OPPOSING SIDE SLOPE, TERMINATING THE HPTRM EDGE IN THE IC TRENCH.
- D. SECURE THE HPTRM END IN THE OPPOSITE COS TRENCH WITH SECURING PINS AT 300 MM (12 IN) INTERVALS.
- E. POSITION ADJACENT UPSTREAM ROLLS IN SAME MANNER, OVERLAPPING PRECEDING ROLL MINIMUM 75 MM (3 IN) UNTIL THE ARMORING LIMITS ARE COMPLETED AND THE LAST HPTRM PANEL EDGE TERMINATES IN THE TC TRENCH.
- F. BACKFILL AND COMPACT THE TRENCHES WITH SPECIFIED SOIL OR AS DIRECTED BY ENGINEER.
- G. SECURE HPTRM TO CHANNEL BOTTOM AND SIDE SLOPES WITH SECURING PINS AT A FREQUENCY OF 2.5 PINS PER SQUARE METER (2 PINS PER SQUARE YARD). INCREASED ANCHORING FREQUENCY MAY BE REQUIRED IF SITE CONDITIONS ARE SUCH THAT THE ENGINEER DETERMINES IT NECESSARY.
- H. ALTERNATE INSTALLATION METHODS MUST BE APPROVED BY ENGINEER PRIOR TO EXECUTION.
- I. SOIL FILL AND SEED OR SOD THE HPTRM:
  1. INSTALLED HPTRM SHALL BE SEEDED (OR RE-SEEDED) AND SOIL FILLED.
  2. DO NOT PLACE EXCESSIVE SOIL ABOVE MATERIAL.
  3. BROADCAST ADDITIONAL SEED OR MULCH (IF APPLICABLE) ABOVE SOIL-FILLED MAT AND IRRIGATE AS NECESSARY TO ESTABLISH/MAINTAIN VEGETATION.
- J. RUBBER-TIRED VEHICLES MUST BE USED, AND SHARP TURNS AVOIDED. NO HEAVY AND/OR TRACKED EQUIPMENT OR SHARP TURNS ARE PERMITTED ON THE INSTALLED HPTRM. AVOID ANY TRAFFIC OVER THE HPTRM IF LOOSE OR WET SOIL CONDITIONS EXIST.
- K. SUPPLIER'S REPRESENTATIVE SHALL BE ONSITE DURING CONSTRUCTION TO MAKE SURE PRODUCT IS INSTALLED CORRECTLY.
- L. SOILS TEST SHALL BE PERFORMED TO DETERMINE SEED MIXTURE AND TOP SOIL SPECIFICATIONS. SEED MIXTURE AND SOIL SPECIFICATIONS SHOULD BE APPROVED BY THE CITY.

ARTICULATING CONCRETE BLOCK (ACB) SYSTEM

PART 1: GENERAL

1.01 DESCRIPTION

- A. WORK SHALL CONSIST OF FURNISHING ALL MATERIAL, LABOR, SERVICES AND RELATED ITEMS TO COMPLETE THE INSTALLATION OF ENVIROFLEX® TAPERED, VERTICALLY INTERLOCKING ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM.
- B. WORK INCLUDES INSTALLING THE MATERIALS IN CONFORMITY WITH THE LINES, GRADES, DESIGN, AND DIMENSIONS SHOWN IN THE CONSTRUCTION DRAWINGS.

1.03 SUBMITTALS/CERTIFICATION

- A. PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA, INCLUDING INSTALLATION INSTRUCTIONS.
- B. TESTING: A REPORT OF TESTING FOR THE ENVIROFLEX® IN SUBSTANTIAL CONFORMANCE WITH FHWA RD-89-199, AT THE SAME TIME AS THE ENVIROFLEX® AND GEOTEXTILE DATA SUBMITTAL. THE REPORT SHALL CLEARLY STATE IF THE CRITICAL SHEAR STRESS ASSOCIATED WITH THE STABILITY THRESHOLD OF THE ENVIROFLEX® SYSTEM WAS DERIVED FROM LABORATORY TESTING THAT INCLUDED A SUB-BLOCK DRAINAGE LAYER AS A COMPONENT OF THE TESTED SYSTEM.
- C. SAMPLES: SUBMIT MANUFACTURER'S SAMPLE OF TAPERED, OVERLAPPING ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM.
- D. WARRANTY: SUBMIT MANUFACTURER'S STANDARD WARRANTY.

1.05 QUALITY ASSURANCE

- A. SINGLE SOURCE RESPONSIBILITY: OBTAIN ONE COLOR, TYPE AND VARIETY OF INTERLOCKING AND OVERLAPPING ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM FROM A SINGLE LOT MANUFACTURED BY A SINGLE SOURCE. MATERIALS SHALL BE AVAILABLE AND BE CONSISTENT IN QUALITY, APPEARANCE AND PHYSICAL PROPERTIES WITHOUT DELAYING PROGRESS OF WORK.
- B. PRIOR TO COMMENCING THE WORK OF THIS SECTION, VERIFY THE ACCURACY OF LAYOUT AND GRADING. VERIFY THAT ALL SUB-GRADES AND BASE AND/ OR DRAINAGE COURSE AGGREGATE CONDITIONS ARE AS SPECIFIED. NOTIFY THE ENGINEER OF ANY DISCREPANCIES AND COORDINATE THE CORRECTION OF THOSE DISCREPANCIES WITH OTHER TRADES AS NECESSARY.

1.06 DELIVERY, STORAGE AND HANDLING

- A. DELIVER MATERIALS TO SITE IN MANUFACTURER'S ORIGINAL PALLETIZED CONFIGURATION WITH LABELS CLEARLY IDENTIFYING PRODUCT STYLE NUMBER, COLOR, NAME AND MANUFACTURER.
- B. CHECK ALL MATERIALS UPON DELIVERY TO ASSURE THAT THE PROPER TYPE, GRADE, COLOR, AND CERTIFICATION HAVE BEEN RECEIVED.
- C. STORE MATERIALS IN CLEAN, DRY AREA IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- D. PROTECT ALL MATERIALS FROM DAMAGE DUE TO JOBSITE CONDITIONS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. DAMAGED MATERIALS SHALL NOT BE INCORPORATED INTO THE WORK.

1.07 PROJECT CONDITIONS

- A. REVIEW INSTALLATION PROCEDURES AND COORDINATE ENVIROFLEX® INSTALLATION WITH OTHER WORK AROUND INSTALLATION AREA.
- B. ALL ADJACENT HARDSCAPE, PAVING, AND CUT-OFF WALLS, REQUIRED BY CONSTRUCTION DOCUMENTS SHALL BE COMPLETED ALONG WITH THE INSTALLATION OF THE ENVIROFLEX® PAVING MATS.
- C. GRADIENTS FOR ENVIROFLEX® INTERLOCKING ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM CAN VARY FROM FLAT TO 2:1 MAX SLOPES. FOR STEEPER CONDITIONS, CONSULT WITH A QUALIFIED CIVIL AND SOILS ENGINEER.
- D. PROTECT PARTIALLY COMPLETED INSTALLATION AGAINST DAMAGE FROM RUN-ON OR OTHER CONSTRUCTION TRAFFIC WHEN WORK IS IN PROGRESS.

PART 2: PRODUCTS

2.01 MANUFACTURER

- A. CORPORATE HEADQUARTERS: SOIL RETENTION PRODUCTS, INC., 2501 STATE STREET, CARLSBAD, CA 92008. PHONE: 760-966-6090 AND 800-346-7995, FAX: 760-966-6099, WEBSITE: WWW.SOILRETENTION.COM, E-MAIL: SALES@SOILRETENTION.COM.
- B. ANY ALTERNATE PRODUCTS SEEKING APPROVAL MUST BE SUBMITTED TO THE ENGINEER 10 DAYS PRIOR TO THE BID DATE. FOR ACCEPTANCE ON THIS PROJECT, ANY ALTERNATES SEEKING APPROVAL MUST MEET THE REQUIREMENTS OUTLINED IN THIS DOCUMENT. THE ALTERNATE'S PRODUCT SPECIFICATIONS AND A PRODUCT SAMPLE MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

2.02 INTERLOCKING AND OVERLAPPING ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM

- A. TAPERED, OVERLAPPING ARTICULATING CONCRETE BLOCK REVETMENT SYSTEM SHALL BE MANUFACTURED WITH FIBER REINFORCED CONCRETE AND NOT BE CAPABLE OF HAVING ONE BLOCK PROTRUDE AGAINST DIRECTION OF FLOW RELATIVE TO ANOTHER BLOCK.

		4” ENVIROFLEX	6” ENVIROFLEX
PROPERTY	**UNIT**	**VALUE**	**VALUE**
SPECIFIC WEIGHT	LBS./CU. FT.	130 – 150	130 – 150
COMPRESSIVE STRENGTH	PSI	4000	4000
MAXIMUM ABSORPTION	LBS./CU. FT.	10	10
NOMINAL DIMENSIONS	INCHES (L X W X H)	21.5 X 21.5 X 4	21.5 X 21.5 X 6
NET COVERAGE PER BLOCK	SQ. FT.	3.21	3.21
TOTAL BLOCK WEIGHT	LBS.	119	176
UNIT BLOCK WEIGHT	LBS./SQ. FT.	37	54.8
OPEN AREA (NOMINAL)	PERCENT	21.5	21.5
FIBER REINFORCEMENT CAST IN BLOCK	LBS./CU.YD	2.5	2.5
ALLOWABLE UNIT PROTRUSION	INCHES / BLOCK	0	0
MINIMUM VERTICAL INTERLOCK	INCHES / BLOCK	.5	.5

- B. BASE AGGREGATE (IF REQUIRED FOR SUBGRADE IMPROVEMENT OR BEARING CAPACITY) - CRUSHED PERMEABLE BASE, CRUSHED MISCELLANEOUS BASE (CMB), CRUSHED AGGREGATE BASE (CAB), CRUSHED ROCK OR SIMILAR STRUCTURAL MATERIAL NORMALLY USED AS A BASE COURSE FOR PAVEMENT SYSTEMS AND MEETING THE GRADATION AND OR PERMEABILITY REQUIREMENTS SHOWN ON THE DRAWINGS
- C. FILTER FABRIC - APPROPRIATE FILTER WEAVE FABRIC BY MIRAFI INC. OR EQUAL SPECIFIED AND APPROVED BY THE ENGINEER
- D. DRAINAGE LAYER - APPROXIMATELY 4” MINIMUM THICK LAYER OF ANGULAR CRUSHED STONE OR AS SPECIFIED BY THE ENGINEER.
- E. INFILL - TOP SOIL WITH SEED AS SPECIFIED BY ENGINEER.
- F. CUT OFF WALL - AS REQUIRED BY THE ENGINEER AND SPECIFICATIONS AND INCLUDED ON THE DRAWINGS.

PART 3: EXECUTION

3.01 SUBGRADE PREPARATION

- A. STABLE AND COMPACTED SUBGRADE SOIL SHALL BE PREPARED TO THE LINES, GRADES AND CROSS SECTIONS SHOWN ON THE CONTRACT DRAWINGS. TERMINATION TRENCHES AND TRANSITIONS BETWEEN SLOPES, EMBANKMENT CRESTS, BENCHES, BERMS AND TOES SHALL BE COMPACTED, SHAPED AND UNIFORMLY GRADED TO FACILITATE THE DEVELOPMENT OF INTIMATE CONTACT BETWEEN THE ENVIROFLEX® SYSTEM AND THE UNDERLYING GRADE. TERMINATION BETWEEN THE ENVIROFLEX® CONCRETE BLOCK REVETMENT SYSTEM AND A CONCRETE SLAB, WALL OR SIMILAR STRUCTURE, SHALL BE SECURED IN A MANNER WHICH PREVENTS SOIL MIGRATION.
- B. THE SUBGRADE SOIL CONDITIONS SHALL MEET OR EXCEED THE REQUIRED MATERIAL PROPERTIES DESCRIBED ELSEWHERE IN THE DOCUMENT PRIOR TO PLACEMENT OF THE SYSTEM. SOILS NOT MEETING THE REQUIREMENTS SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIAL. UNSATISFACTORY SOILS, SOILS HAVING EXCESSIVE IN-PLACE MOISTURE CONTENT AND SOILS CONTAINING CLODS, ROOTS, SOD, BRUSH, OR OTHER ORGANIC MATERIALS SHALL BE REMOVED, BACKFILLED WITH APPROVED MATERIAL AND COMPACTED. IT IS RECOMMENDED THAT THE SUBGRADE BE UNIFORMLY COMPACTED TO A MINIMUM OF 90 PERCENT OF STANDARD PROCTOR DENSITY (ASTM D 698) OR AS DIRECTED BY THE ENGINEER OF RECORD. SHOULD THE SUBGRADE SURFACE FOR ANY REASON BECOME ROUGH CORRUGATED UNEVEN TEXTURED OR TRAFFIC MARKED PRIOR TO ENVIROFLEX® INSTALLATION, SUCH UNSATISFACTORY PORTION SHALL BE SCARIFIED, REWORKED, RE-COMPACTED OR REPLACED AS DIRECTED BY THE ENGINEER. EXCAVATION OF THE SUBGRADE ABOVE THE WATER LINE SHALL NOT BE MORE THAN 2 INCHES (50 MM) BELOW THE GRADE INDICATED ON THE CONTRACT DRAWINGS. WHERE SUCH AREAS ARE BELOW THE ALLOWABLE GRADES, THEY SHALL BE BROUGHT TO GRADE BY PLACING AND COMPACTING APPROVED MATERIAL IN LAYERS NOT EXCEEDING 6 INCHES (150 MM) THICK. WHERE SUCH AREAS ARE ABOVE THE ALLOWABLE GRADES, THEY SHALL BE BROUGHT TO GRADE BY REMOVING MATERIAL OR REWORKING EXISTING MATERIAL AND COMPACTING. THE SUBGRADE SHALL BE RAKED, SCREEDED, OR ROLLED BY HAND OR MACHINE TO ACHIEVE A SMOOTH COMPACTED SURFACE THAT IS FREE OF LOOSE MATERIAL.
- C. CARE SHALL BE EXERCISED SO AS NOT TO EXCAVATE BELOW THE GRADES SHOWN ON THE CONTRACT DRAWINGS, UNLESS DIRECTED BY THE ENGINEER TO REMOVE UNSATISFACTORY MATERIALS. ANY EXCESSIVE EXCAVATION SHALL BE FILLED WITH APPROVED BACKFILL MATERIAL AND COMPACTED.
- D. THE AREAS TO RECEIVE THE ENVIROFLEX® SYSTEM SHALL BE GRADED TO ESTABLISH A SMOOTH SURFACE AND ENSURE THAT INTIMATE CONTACT IS ACHIEVED BETWEEN THE SUBGRADE SURFACE AND THE GEOTEXTILE, AND BETWEEN THE GEOTEXTILE OR DRAINAGE LAYER AND THE BOTTOM SURFACE OF THE ENVIROFLEX BLOCK.

3.02 PLACEMENT OF GEOTEXTILE

- A. IMMEDIATELY PRIOR TO PLACING THE GEOTEXTILE AND ENVIROFLEX® SYSTEM, THE PREPARED SUBGRADE SHALL BE INSPECTED. THE GEOTEXTILE SHALL BE PLACED DIRECTLY ON THE PREPARED AREA, IN INTIMATE CONTACT WITH THE SUBGRADE AND FREE OF FOLDS OR WRINKLES. THE GEOTEXTILE SHALL BE PLACED IN SUCH A MANNER THAT PLACEMENT OF THE OVERLYING MATERIALS WILL NOT EXCESSIVELY STRETCH OR TEAR THE GEOTEXTILE. AFTER GEOTEXTILE PLACEMENT, THE WORK AREA SHALL NOT BE DISTURBED SO AS TO RESULT IN A LOSS OF INTIMATE CONTACT BETWEEN THE CONCRETE BLOCK, THE GEOTEXTILE, AND THE SUBGRADE. THE GEOTEXTILE SHALL NOT BE LEFT EXPOSED LONGER THAN THE MANUFACTURER'S RECOMMENDATION TO MINIMIZE POTENTIAL DAMAGE DUE TO ULTRAVIOLET RADIATION.
- B. THE GEOTEXTILE SHALL BE PLACED SO THAT UPSTREAM STRIPS OVERLAP DOWNSTREAM STRIPS AND SO THAT UPSLOPE STRIPS OVERLAP DOWN SLOPE STRIPS. OVERLAPS SHALL BE IN THE DIRECTION OF FLOW WHEREVER POSSIBLE. THE LONGITUDINAL AND TRANSVERSE JOINTS SHALL BE OVERLAPPED AT LEAST 2 FEET. THE GEOTEXTILE SHALL EXTEND BEYOND THE TOP, TOE AND SIDE TERMINATION POINTS OF THE REVETMENT. IF NECESSARY TO EXPEDITE CONSTRUCTION AND TO MAINTAIN THE RECOMMENDED OVERLAPS ANCHORING PINS, “U” - STAPLES OR WEIGHTS SHALL BE USED.

3.03 PLACEMENT OF DRAINAGE LAYER

- A. DRAINAGE LAYER OF GRANULAR ROCK SHALL BE SPREAD BY RUBBER TRACKED EQUIPMENT AND / OR SCREEDING. A UNIFORM LEVEL SURFACE SHALL BE ACHIEVED BEFORE PLACING THE BLOCK. THE DEPTH OF THE DRAINGE LAYER SHOULD BE 4” MINIMUM.

3.04 PLACEMENT OF TAPERED VERTICALLY INTERLOCKING ENVIROFLEX® ARTICULATED CONCRETE BLOCK SYSTEM

- A. THE ENVIROFLEX® CONCRETE BLOCK SYSTEM SHALL BE PLACED ON THE GEOTEXTILE / DRAINAGE LAYER IN SUCH A MANNER AS TO PRODUCE A SURFACE THAT ACHIEVES INTIMATE CONTACT WITH THE GEOTEXTILE.
- B. PLACEMENT OF THE ENVIROFLEX® SYSTEM WHETHER DONE WITH A GRAPPLING DEVICE MULTIPLE UNITS AT A TIME OR INDIVIDUAL UNITS PLACED BY HAND SHALL BE PERFORMED TO ENSURE THAT THE INDIVIDUAL BLOCKS HAVE INTIMATE CONTACT AND ARE VERTICALLY INTERLOCKED. IN AREAS OF CURVATURE OR GRADE CHANGE, ALIGNMENT OF AN INDIVIDUAL BLOCK WITH ADJACENT BLOCKS SHALL BE ORIENTED SUCH THAT INTIMATE CONTACT BETWEEN THE BLOCK, GRAVEL, GEOTEXTILE, AND SUBGRADE IS MAINTAINED AND BLOCK TO BLOCK INTERCONNECTION IS ACHIEVED. SOME BLOCK CUTTING AND/OR REINFORCED POURED CONCRETE OF IRREGULAR TRANSITION SECTIONS MAY BE REQUIRED.
- C. CARE SHALL BE TAKEN DURING BLOCK INSTALLATION SO AS TO AVOID DAMAGE TO THE GEOTEXTILE OR SUBGRADE DURING THE INSTALLATION PROCESS. PREFERABLY, WHERE THE GEOTEXTILE IS LAID ON THE GROUND PRIOR TO THE ENVIROFLEX® INSTALLATION, THE ENVIROFLEX® PLACEMENT SHALL BEGIN AT THE DOWNSTREAM SECTION AND PROCEED UPSTREAM. ON SLOPED SECTIONS WHERE PRACTICAL, PLACEMENT SHALL BEGIN AT THE TOE OF THE SLOPE AND PROCEED UP-SLOPE. VERTICAL OVERLAP SHALL BE MAINTAINED AND NO PROTRUSIONS ALLOWED AGAINST THE DIRECTION OF FLOW. WHERE REQUIRED BY THE SPECIFICATIONS, JOINING OF STRUCTURES AND ADJACENT BLOCKS CAN BE ACCOMPLISHED AFTER THE BLOCKS HAVE BEEN SET IN PLACE.

3.05 TERMINATION TRENCHES

- A. TERMINATION OF BLOCKS SHALL BE AGAINST CONCRETE STRUCTURES, CUT-OFF WALLS, OR IN EXCAVATED TRENCHES WHICH SHALL BE PROPERLY BACKFILLED WITH APPROVED MATERIAL FLUSH WITH THE TOP OF THE FINISHED SURFACE OF THE BLOCKS. THE INTEGRITY OF THE TRENCH BACKFILL SHALL BE MAINTAINED TO ENSURE A FINISHED SURFACE THAT IS FLUSH WITH THE TOP SURFACE OF THE ARTICULATING BLOCKS.

3.06 FINISHING

- A. THE OPEN AREA OF THE ARTICULATING CONCRETE BLOCK SYSTEM SHALL BE BACKFILLED WITH SUITABLE SOIL FOR REVEGETATION WITHIN THE CELLS OF THE SYSTEM AND SHALL BE COMPLETED AS SOON AS PRACTICABLE AFTER THE REVETMENT HAS BEEN INSTALLED.

GEOTEXTILES

ALL GEOTEXTILES SHALL CONFORM TO NEVADA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2014) SECTION 731.03.02 GEOTEXTILE (CLASS 1).

No.	REVISIONS	DATE
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3		
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1	ADDRESS COMMENTS FROM CARSON CITY	05/18/2018

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No. 017797
JEFFREY T. COCHRAN
J. Todd Cochran
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA)
FLOOD CHANNEL PLANS

SHEET TITLE:
SPECIFICATIONS

DATE
12/20/2017
PROJECT NO.
018016015
SHEET NUMBER
C1.2

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Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C2.0 EXISTING CONDITIONS.dwg C2.0 EXISTING CONDITIONS May 18, 2018 11:08am by: todd.cochran
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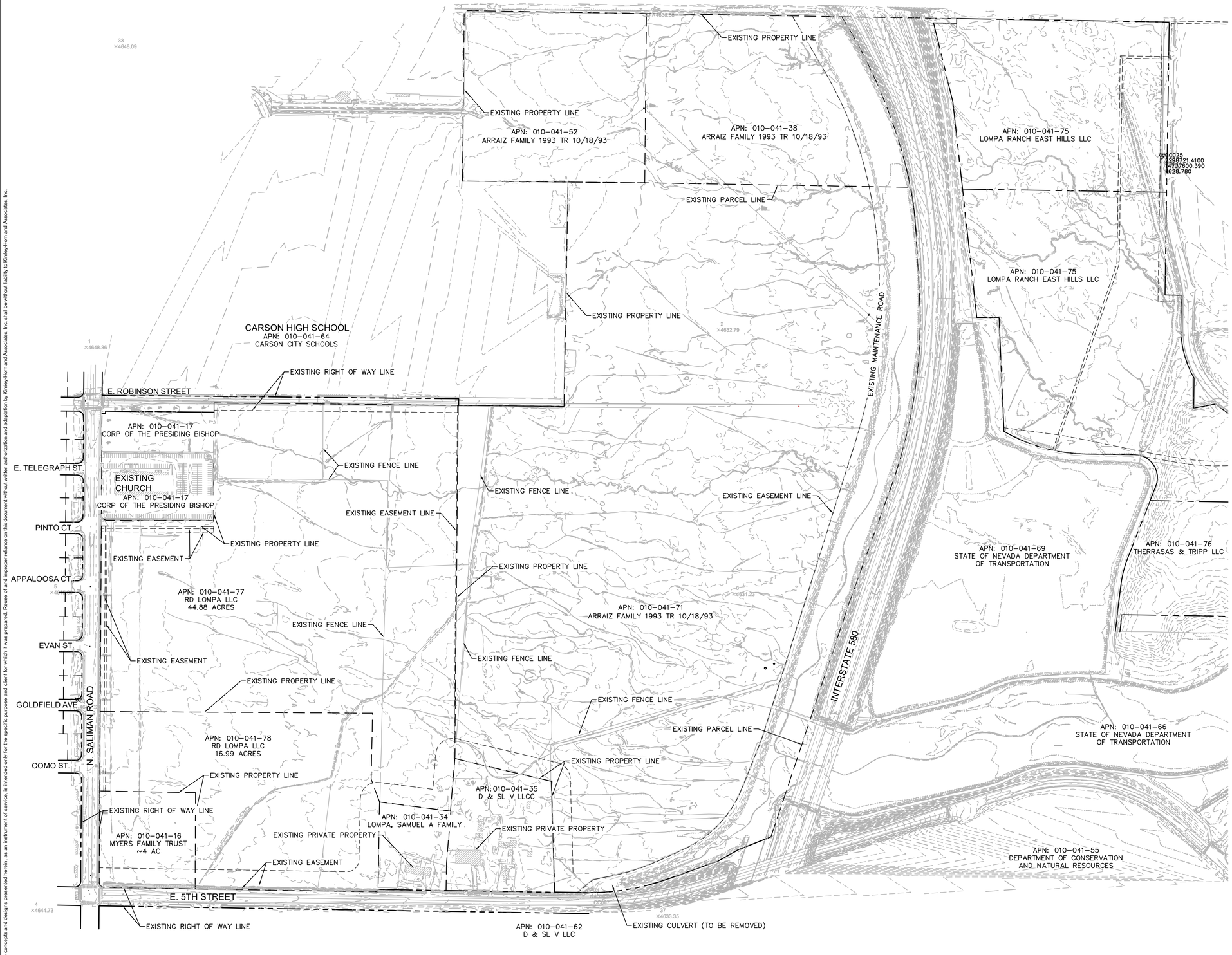

SURVEY:

SURVEY CONTROL PREPARED BY CORNERSTONE LAND SURVEYING, INC. FIELD SURVEY CONDUCTED ON 10/09/2015. REVISED CALCULATIONS PREPARED 6/13/2016.

BASIS OF BEARING:

NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983/1994 (NAD 83/94). BEARINGS AND DISTANCES HEREON REFLECT GRID COORDINATES MULTIPLIED BY A COMBINED GRID TO GROUND FACTOR OF 1.0002 (ALSO KNOWN AS CARSON CITY MODIFIED)

BENCHMARK:

ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), AS ESTABLISHED BY USGS BENCHMARK V357, PID KR0998.

LEGEND:

△ PHOTO CONTROL POINT

▽ CARSON CITY SURVEY CONTROL MONUMENT

NORTH

GRAPHIC SCALE IN FEET
0 100 200 400

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STATE OF NEVADA
REGISTERED
No. 017281
Professional Engineer
JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
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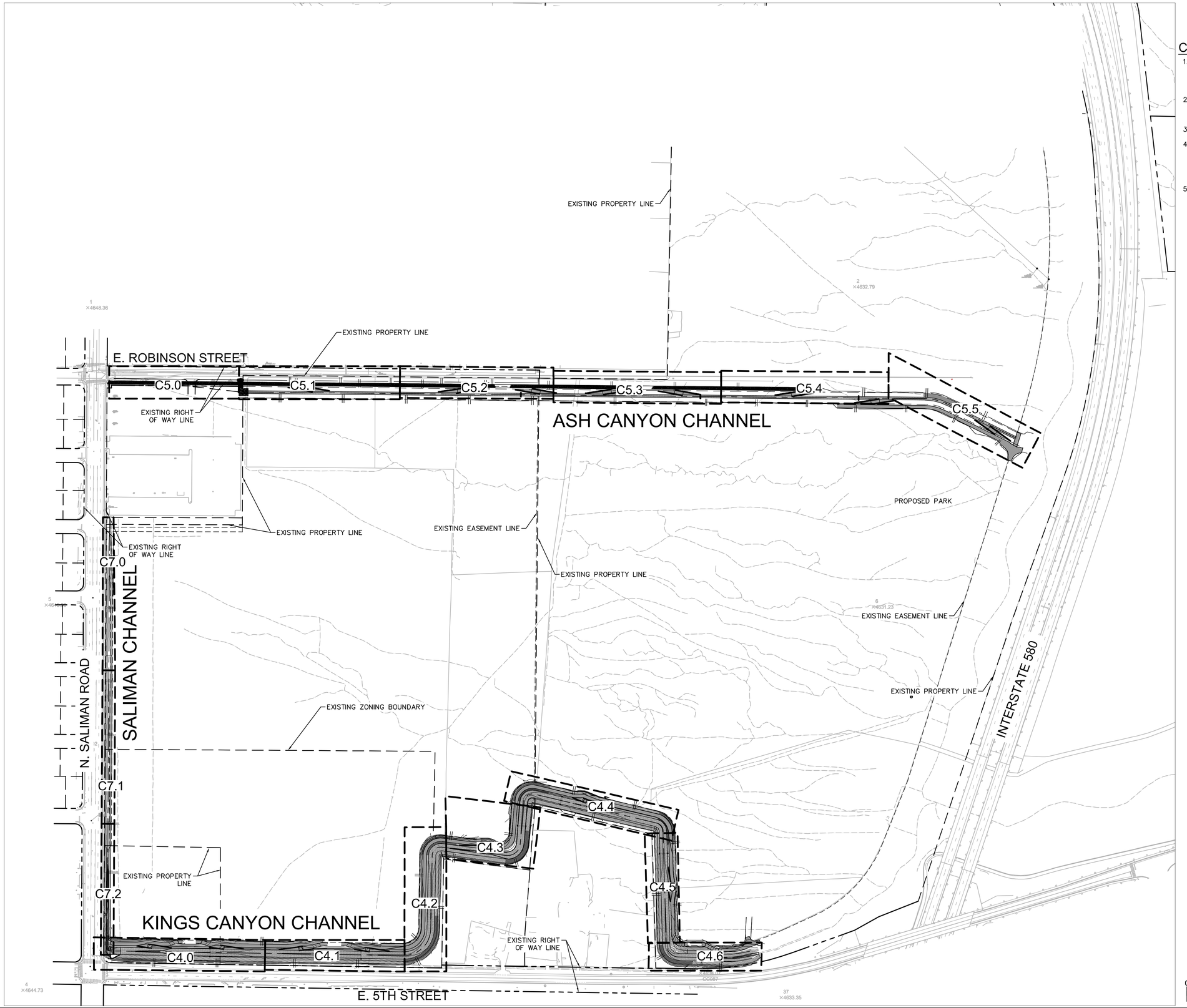
Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C3.1 KEY MAP.dwg KEY MAP May 18, 2018 11:38am by: todd.cochran



CONSTRUCTION NOTES:

1. CONSTRUCTION OF FLOOD CONTROL CHANNELS SHOULD BEGIN AT DOWNSTREAM END AND CONTINUE UPSTREAM (EAST TO WEST) SO THAT STORMWATER RUNOFF IS ALLOWED TO DRAIN DOWNSTREAM.
2. ALL EROSION CONTROL BEST MANAGEMENT PRACTICES SHALL BE INSTALLED PER THE EROSION AND SEDIMENTATION CONTROL PLANS PRIOR TO CONSTRUCTION.
3. TOP SOIL SHALL BE STOCKPILED AND PROTECTED FROM EROSION.
4. FINAL CHANNEL GRADES SHOULD BE INSPECTED BY GEOTECHNICAL ENGINEER TO IDENTIFY UNSUITABLE MATERIAL. UNSUITABLE MATERIAL SHOULD BE OVER EXCAVATED AND BACKFILLED WITH TOP SOIL OR OTHER SOIL AS DIRECTED BY THE ENGINEER.
5. CHANNEL VEGETATION SHALL BE IRRIGATED UNTIL PERMANENT VEGETATION HAS BECOME ESTABLISHED AS DEFINED IN THE NDEP PERMIT.

No.	REVISIONS	DATE
1	ADDRESS COMMENTS FROM CARSON CITY	05/18/2018
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STATE OF NEVADA REGISTERED No. 017297 Professional Engineer JEFFREY T. COCHRAN
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exp. 12/31/18

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PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA)
FLOOD CHANNEL PLANS

SHEET TITLE:
KEY MAP

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
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NORTH

GRAPHIC SCALE IN FEET
0 80 160 320

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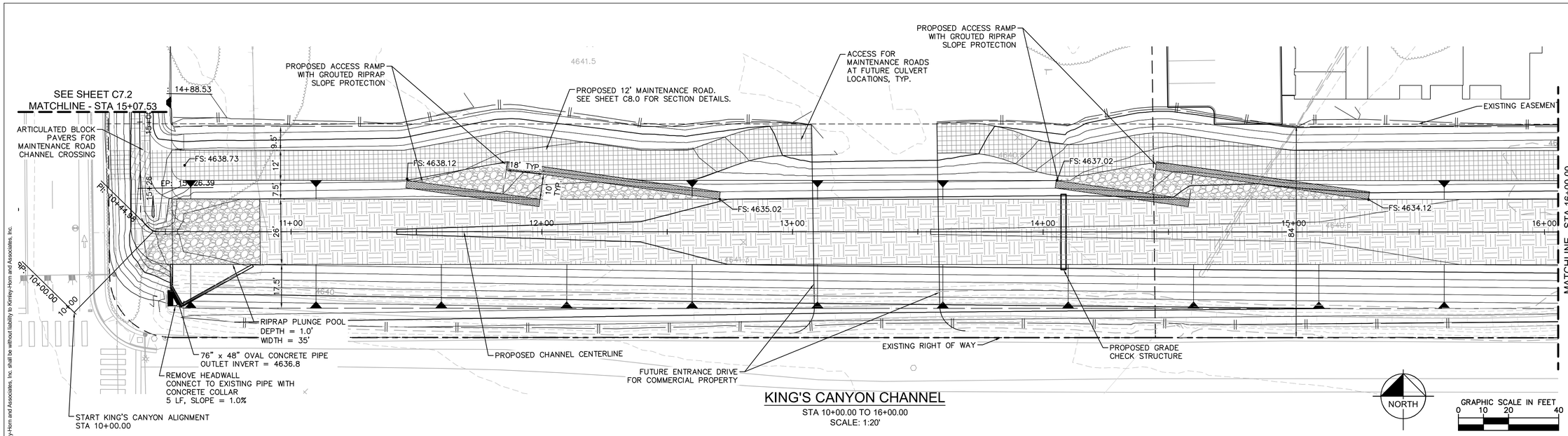
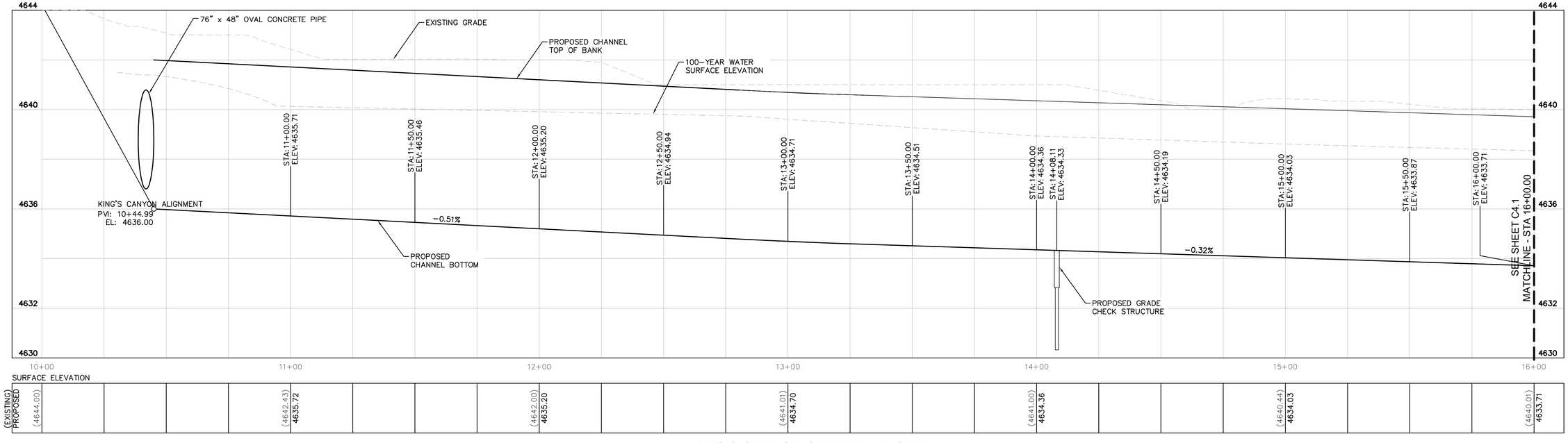


KING'S CANYON CHANNEL

STA 10+00.00 TO 16+00.00
SCALE: 1:20'



KING'S CANYON CHANNEL PROFILE

STA 10+00.00 TO 16+00.00
SCALE: 1"=20' HORIZ, 1"=2' VERT

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- MAINTENANCE ROAD (NATIVE SOIL)
- ACCESS ROAD (TYPE 2 AGGREGATE BASE)
- GROUTED RIPRAP
- ARTICULATED BLOCK PAVERS
- GRADE CHECK STRUCTURE

GENERAL NOTES

1. TURF REINFORCEMENT MAT TO BEGIN AT START OF CURVE AND END 50' PAST END OF CURVATURE.
2. TOP SOIL SHALL BE STOCKPILED AND PROTECTED FROM EROSION.
3. FINAL CHANNEL GRADES SHOULD BE INSPECTED BY GEOTECHNICAL ENGINEER TO IDENTIFY UNSUITABLE MATERIAL. UNSUITABLE MATERIAL SHOULD BE OVER EXCAVATED AND BACKFILLED WITH TOP SOIL OR OTHER SOIL AS DIRECTED BY THE ENGINEER.
4. CHANNEL VEGETATION SHALL BE IRRIGATED UNTIL PERMANENT VEGETATION HAS BECOME ESTABLISHED AS DEFINED IN THE NDEP PERMIT.
5. MAINTENANCE ROAD TO BE CONSTRUCTED PER GEOTECHNICAL ENGINEER'S DESIGN FOR SUBSURFACE COMPACTION AND TYPE 2 AGGREGATE BASE DESIGN.

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

No.	REVISIONS	DATE
1	ADDRESS COMMENTS FROM CARSON CITY	05/18/2018
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RENO, NEVADA 89511
PHONE: (775) 787-7552

STATE OF NEVADA REGISTERED No. 017797 Professional Engineer JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS

SHEET TITLE:
KING'S CANYON CHANNEL - STA 10+00 TO 16+00

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C4.0

NOT FOR CONSTRUCTION -MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C4.0 KING CANYON.dwg C4.0 STA 10+00 to 16+00 May 18, 2018 11:08am by: todd.cochran
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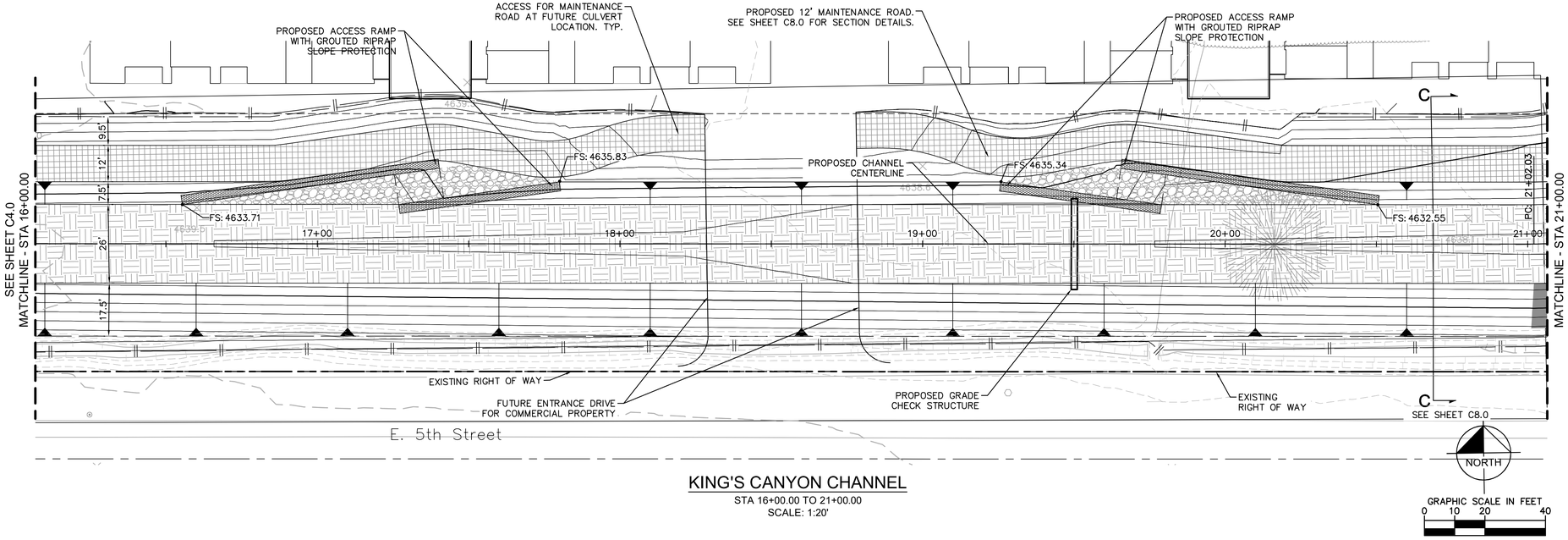
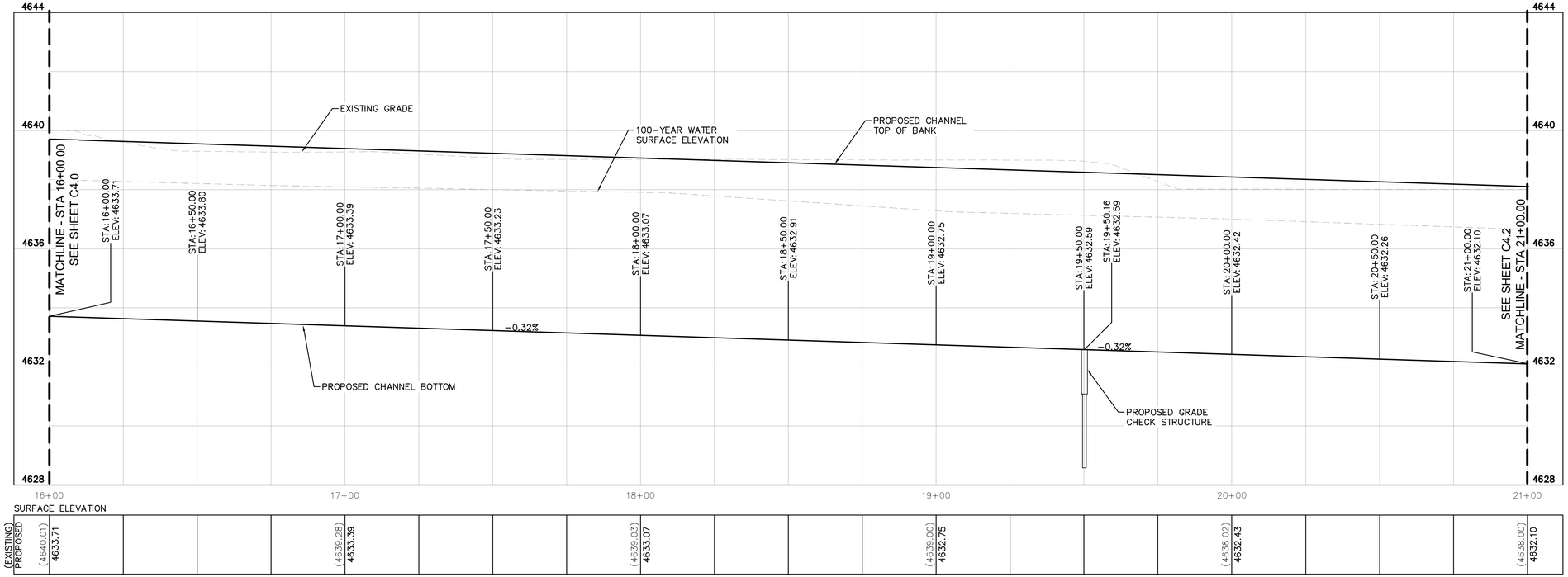


KING'S CANYON CHANNEL

STA 16+00.00 TO 21+00.00
SCALE: 1:20'



KING'S CANYON CHANNEL PROFILE

STA 16+00.00 TO 21+00.00
SCALE: 1"=20' HORIZ, 1"=2' VERT

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- MAINTENANCE ROAD (NATIVE SOIL)
- ACCESS ROAD (TYPE 2 AGGREGATE BASE)
- GROUTED RIPRAP
- GRADE CHECK STRUCTURE

GENERAL NOTES

1. TURF REINFORCEMENT MAT TO BEGIN AT START OF CURVE AND END 50' PAST END OF CURVATURE.
2. TOP SOIL SHALL BE STOCKPILED AND PROTECTED FROM EROSION.
3. FINAL CHANNEL GRADES SHOULD BE INSPECTED BY GEOTECHNICAL ENGINEER TO IDENTIFY UNSUITABLE MATERIAL. UNSUITABLE MATERIAL SHOULD BE OVER EXCAVATED AND BACKFILLED WITH TOP SOIL OR OTHER SOIL AS DIRECTED BY THE ENGINEER.
4. CHANNEL VEGETATION SHALL BE IRRIGATED UNTIL PERMANENT VEGETATION HAS BECOME ESTABLISHED AS DEFINED IN THE NDEP PERMIT.

No.	REVISIONS	DATE
1	ADDRESS COMMENTS FROM CARSON CITY	05/18/2018
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STATE OF NEVADA REGISTERED Professional Engineer JEFFREY T. COCHRAN No. 017091
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS

SHEET TITLE:
KING'S CANYON CHANNEL - STA. 16+00 TO 21+00

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C4.1

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Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C4.0 KING CANYON.dwg C4.1 STA 16+00 to 21+00 May 18, 2018 11:08am by: toddl.cochran
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Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C4.0 KING CANYON.dwg C4.2 STA 21+00 TO 25+79.60 May 18, 2018 11:08am by: todd.cochran
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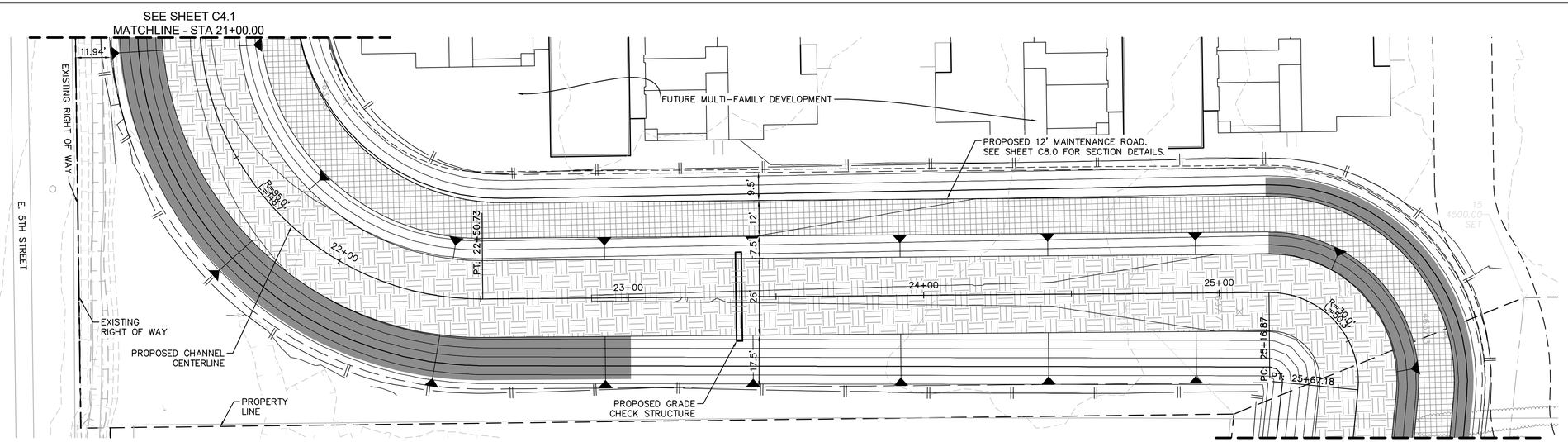

KING'S CANYON CHANNEL

STA 21+00.00 TO 25+79.60
SCALE: 1:20'

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- MAINTENANCE ROAD (NATIVE SOIL)
- ACCESS ROAD (TYPE 2 AGGREGATE BASE)
- GRADE CHECK STRUCTURE

GENERAL NOTES

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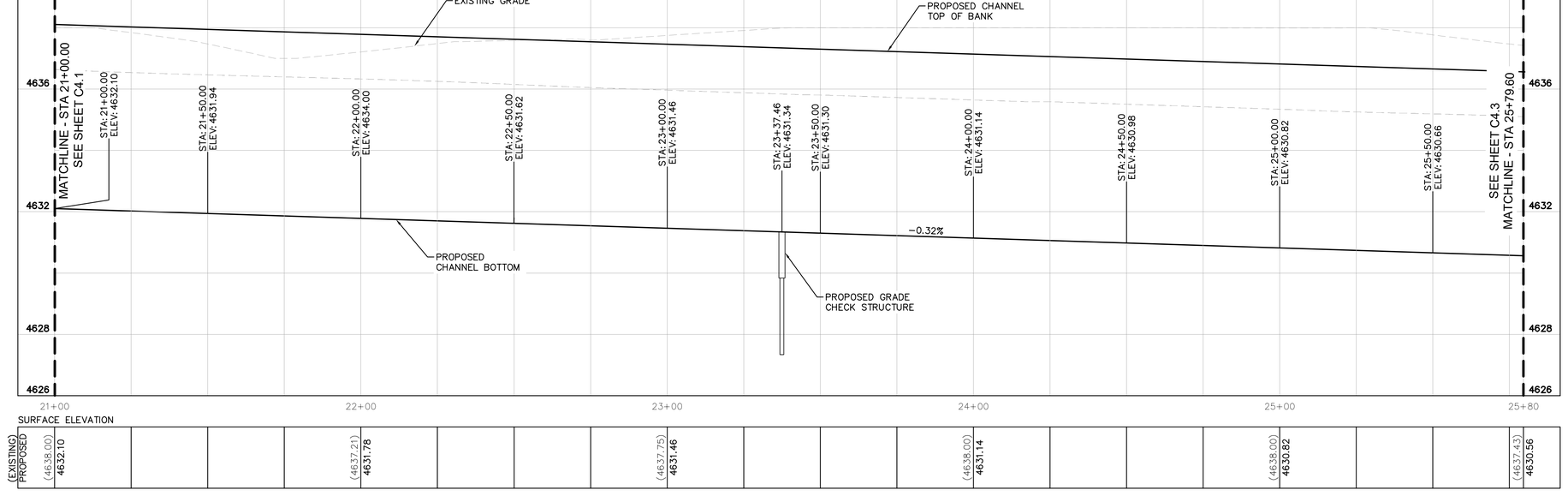

SURFACE ELEVATION																			
(EXISTING)				(4637.21)			(4637.75)			(4638.00)			(4638.00)			(4637.43)			
PROPOSED	(4638.00) 4632.10			4631.78			4631.46			4631.14			4630.82			4630.56		

KING'S CANYON CHANNEL PROFILE

STA 21+00.00 TO 25+79.60
SCALE: 1" =20' HORIZ, 1" =2' VERT

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

No.	DATE	REVISIONS
1	05/18/2018	ADDRESS COMMENTS FROM CARSON CITY
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PHONE: (775) 787-7552

STATE OF NEVADA REGISTERED No. 017797 Professional Engineer JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA)
FLOOD CHANNEL PLANS

SHEET TITLE:
KING'S CANYON CHANNEL - STA 21+00 TO 25+79.60

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C4.2

NOT FOR CONSTRUCTION - MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lompranch_floodchannels\CAD\Plan Set\C4.0 KING CANYON.dwg C4.3 STA 25+79.60 TO 29+89.81 May 18, 2018 11:08am by: todd.cochran
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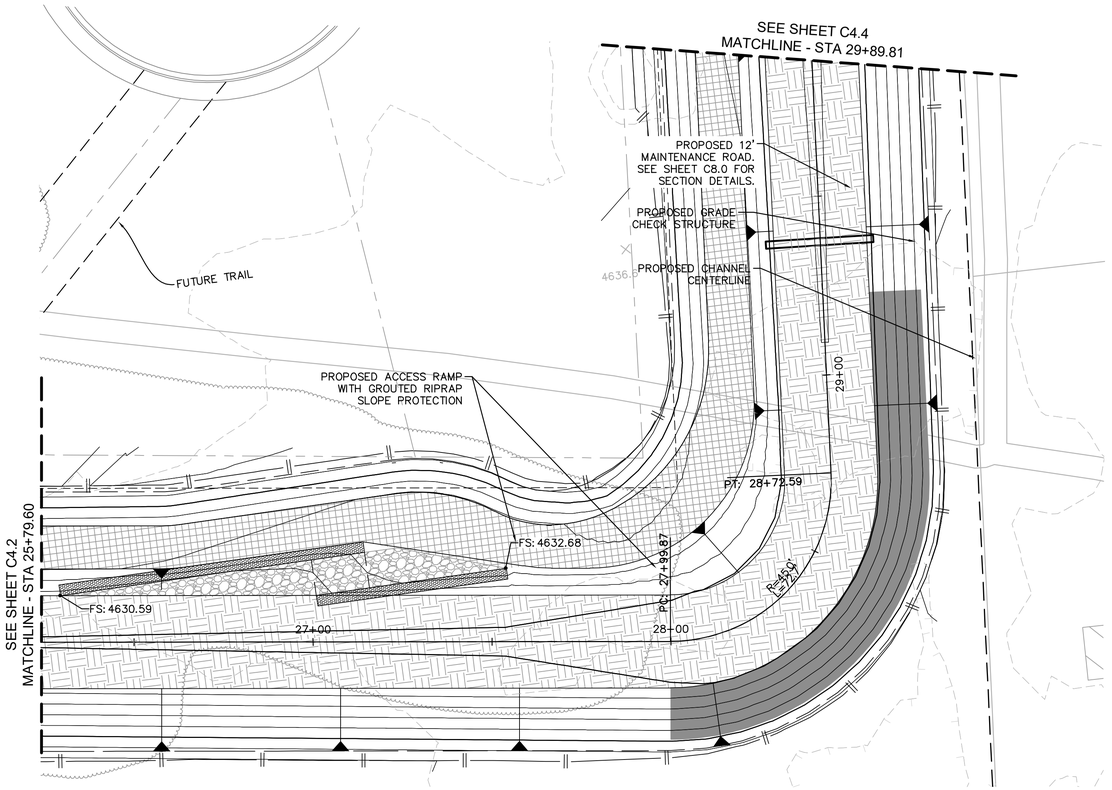

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- MAINTENANCE ROAD (NATIVE SOIL)
- ACCESS ROAD (TYPE 2 AGGREGATE BASE)
- GROUTED RIPRAP
- GRADE CHECK STRUCTURE

GENERAL NOTES

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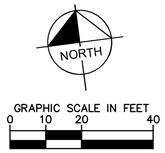
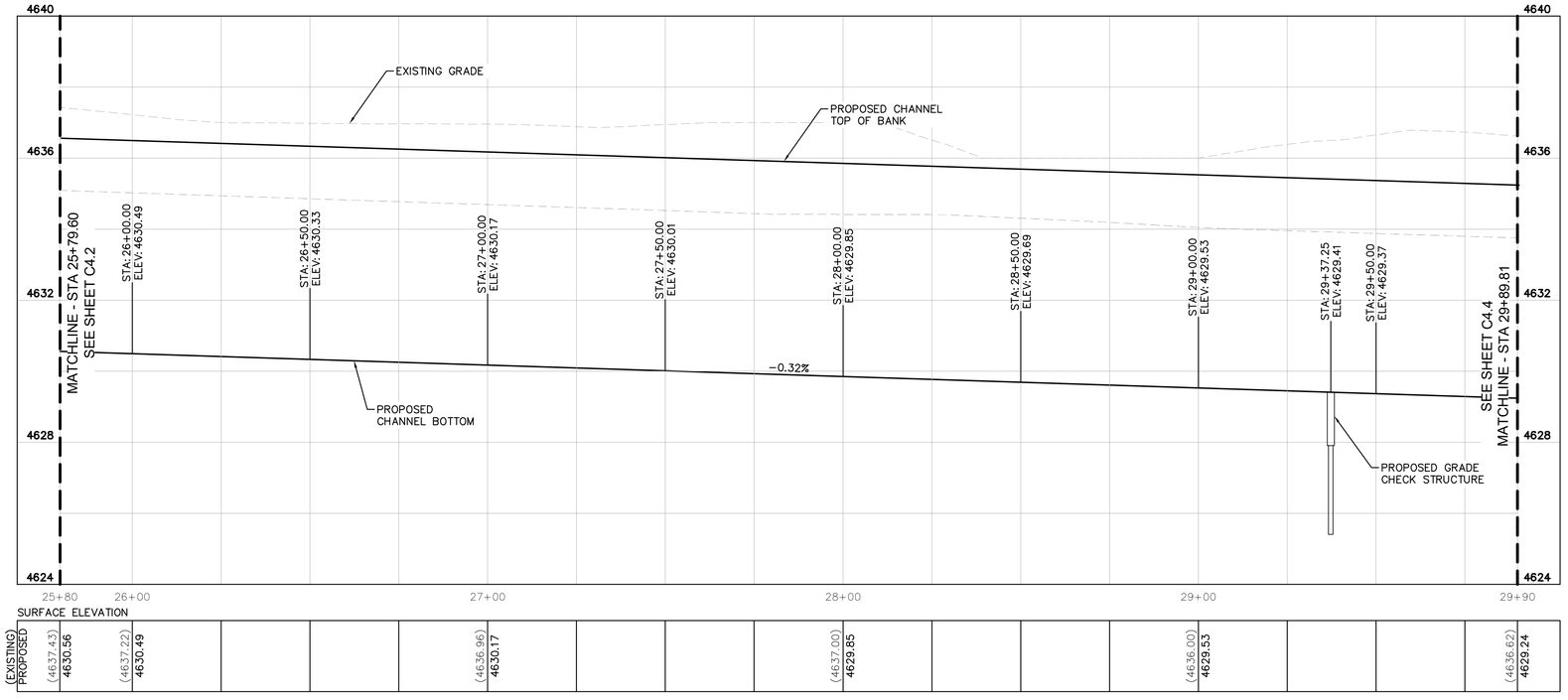


KING'S CANYON CHANNEL

STA 25+79.60 TO 29+89.81
SCALE: 1:20'



KING'S CANYON CHANNEL PROFILE

STA 25+79.60 TO 29+89.81
SCALE: 1"=20' HORIZ, 1"=2' VERT

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

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REVISIONS: 1 ADDRESS COMMENTS FROM CARSON CITY

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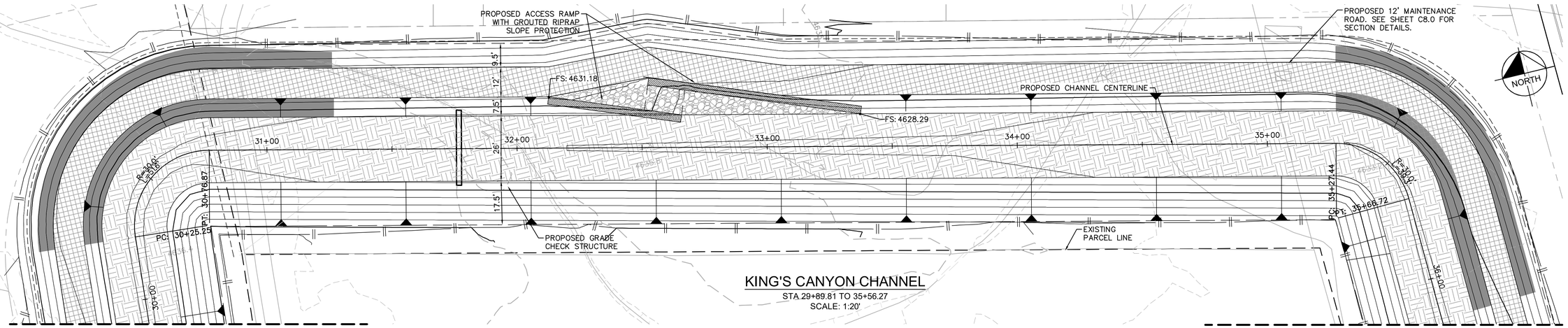
STATE OF NEVADA REGISTERED No. 017797 Professional Engineer JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT: RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT: LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS
SHEET TITLE: KING'S CANYON CHANNEL - STA 25+79.60 TO 29+89.81

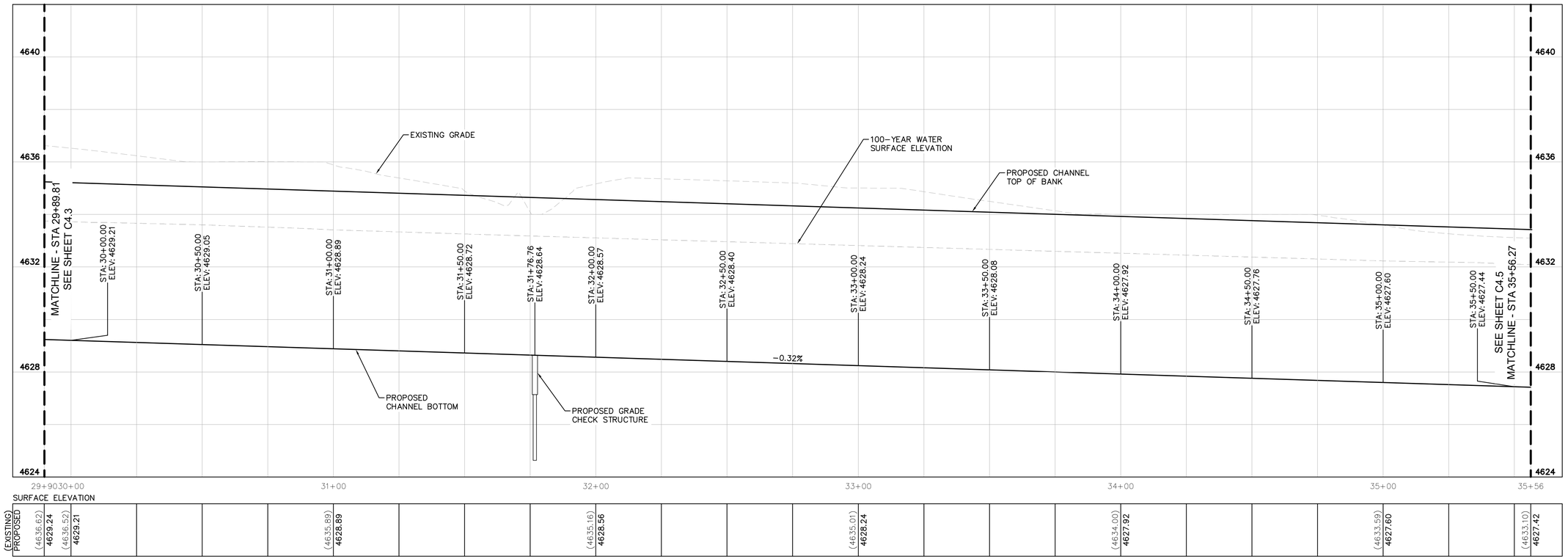
DATE 12/20/2017
PROJECT NO. 018016015
SHEET NUMBER C4.3



KING'S CANYON CHANNEL

STA 29+89.81 TO 35+56.27
SCALE: 1:20'

GRAPHIC SCALE IN FEET
0 10 20 40



SURFACE ELEVATION																							
(EXISTING)	(4636.62)				(4635.89)				(4635.16)				(4635.01)				(4634.00)				(4633.59)			(4633.10)
PROPOSED	4629.24	4629.21			4628.89				4628.56				4628.24				4627.92				4627.60			4627.42

KING'S CANYON CHANNEL PROFILE

STA 29+89.81 TO 35+56.27
SCALE: 1"=20' HORIZ, 1" =2' VERT

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- MAINTENANCE ROAD (NATIVE SOIL)
- ACCESS ROAD (TYPE 2 AGGREGATE BASE)
- GROUTED RIPRAP
- GRADE CHECK STRUCTURE

GENERAL NOTES

1. TURF REINFORCEMENT MAT TO BEGIN AT START OF CURVE AND END 50' PAST END OF CURVATURE.
2. TOP SOIL SHALL BE STOCKPILED AND PROTECTED FROM EROSION.
3. FINAL CHANNEL GRADES SHOULD BE INSPECTED BY GEOTECHNICAL ENGINEER TO IDENTIFY UNSUITABLE MATERIAL. UNSUITABLE MATERIAL SHOULD BE OVER EXCAVATED AND BACKFILLED WITH TOP SOIL OR OTHER SOIL AS DIRECTED BY THE ENGINEER.
4. CHANNEL VEGETATION SHALL BE IRRIGATED UNTIL PERMANENT VEGETATION HAS BECOME ESTABLISHED AS DEFINED IN THE NDEP PERMIT.

NOT FOR CONSTRUCTION -MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C4.0 KING CANYON.dwg C4.4 STA 29+89.81 TO 35+56.27 May 18, 2018 11:09am by: todd.cochran
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STATE OF NEVADA REGISTERED Professional Engineer No. 017797 JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS

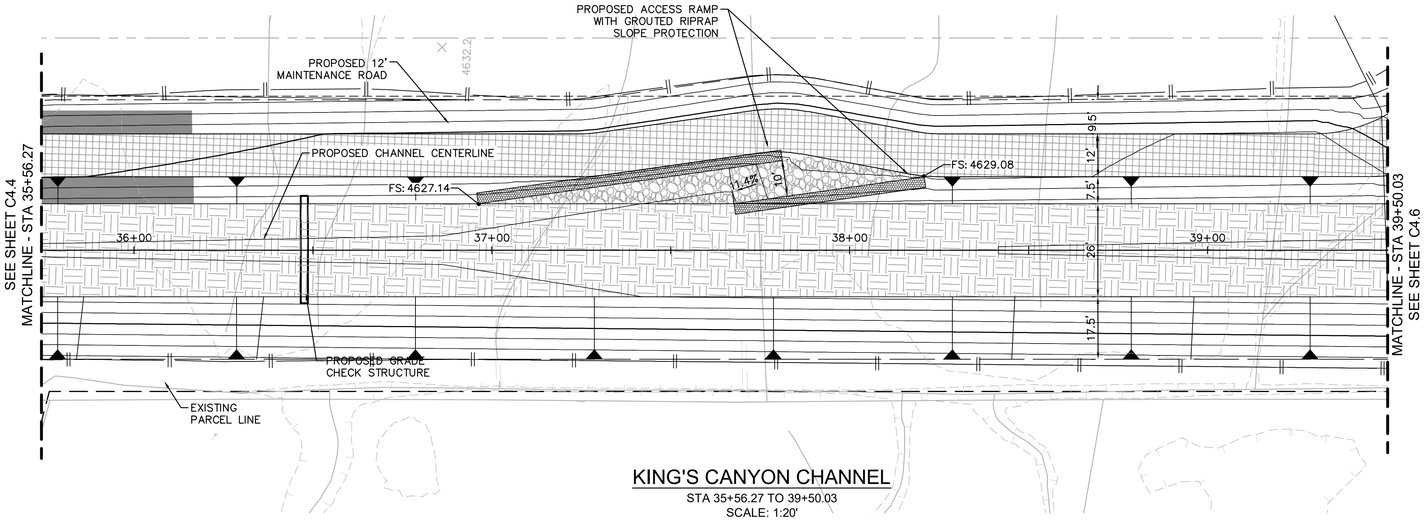
SHEET TITLE:
KING'S CANYON CHANNEL - STA 29+89.81 TO 35+56.27

DATE
12/20/2017

PROJECT NO.
018016015

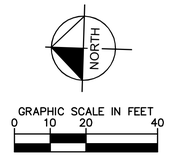
SHEET NUMBER
C4.4

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



KING'S CANYON CHANNEL

STA 35+56.27 TO 39+50.03
SCALE: 1:20'



LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
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- GRADE CHECK STRUCTURE

GENERAL NOTES

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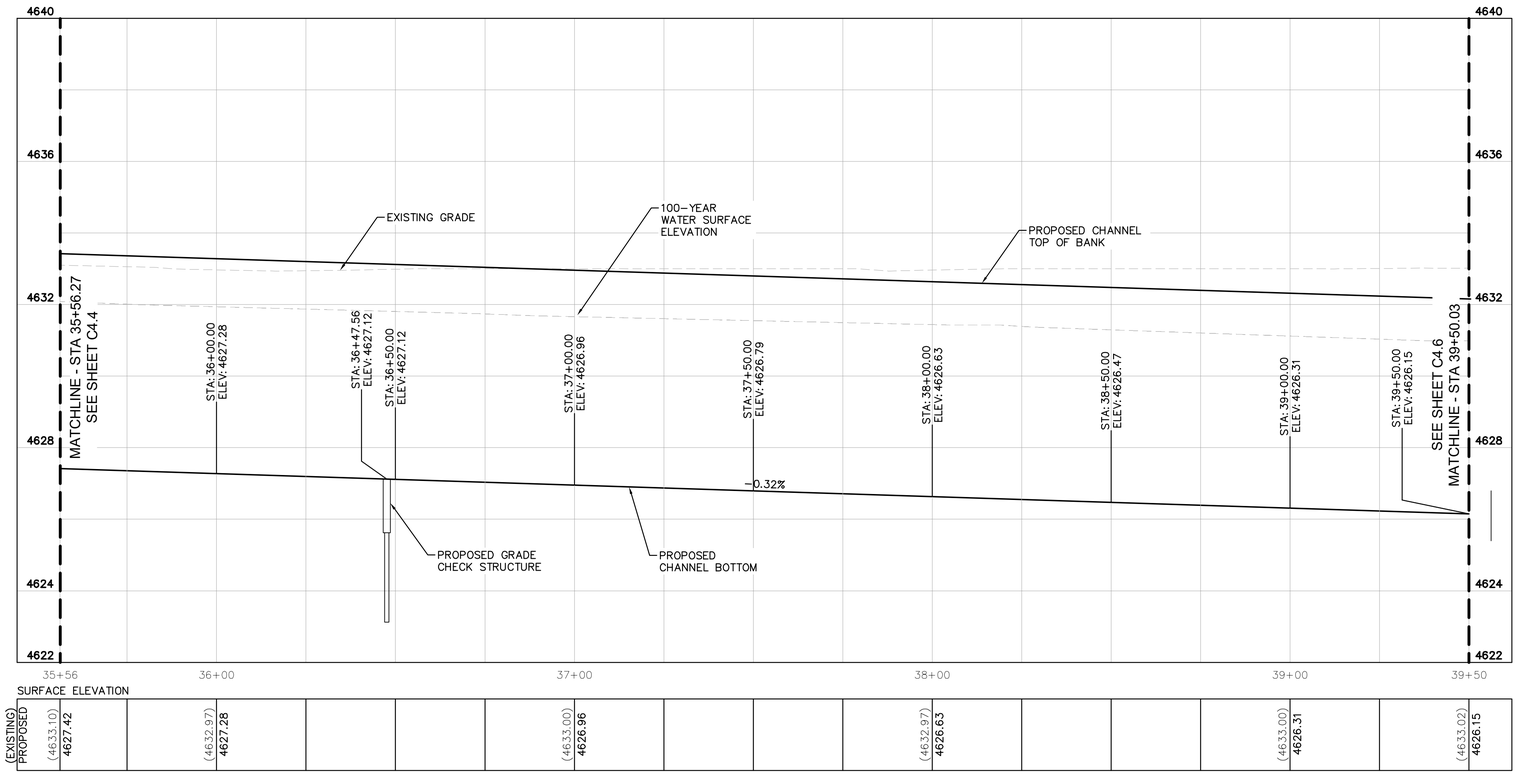

KING'S CANYON CHANNEL PROFILE

STA 35+56.27 TO 39+50.03
SCALE: 1" : 20' HORIZ, 1" =2' VERT

No.	REVISIONS	DATE
1	ADDRESS COMMENTS FROM CARSON CITY	05/18/2018
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PHONE: (775) 787-7552

STATE OF NEVADA
REGISTERED
No. 017797
Professional Engineer
JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA)
FLOOD CHANNEL PLANS

SHEET TITLE:
KING'S CANYON CHANNEL - STA 35+56.27 TO 39+50.03

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C4.5

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

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Drawing name: K:\arnt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C4.0 KING CANYON.dwg C4.5 STA 35+56.27 TO 39+50.03 May 18, 2018 11:09am by: todd.cochran
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Drawing name: K:\amt_waterresources\018016015_lompanranch_floodchannels\CAD\Plan Set\C4.0 KING CANYON.dwg C4.6 STA 39+50.03 TO 43+06.70 May 18, 2018 11:09am by: todd.cochran
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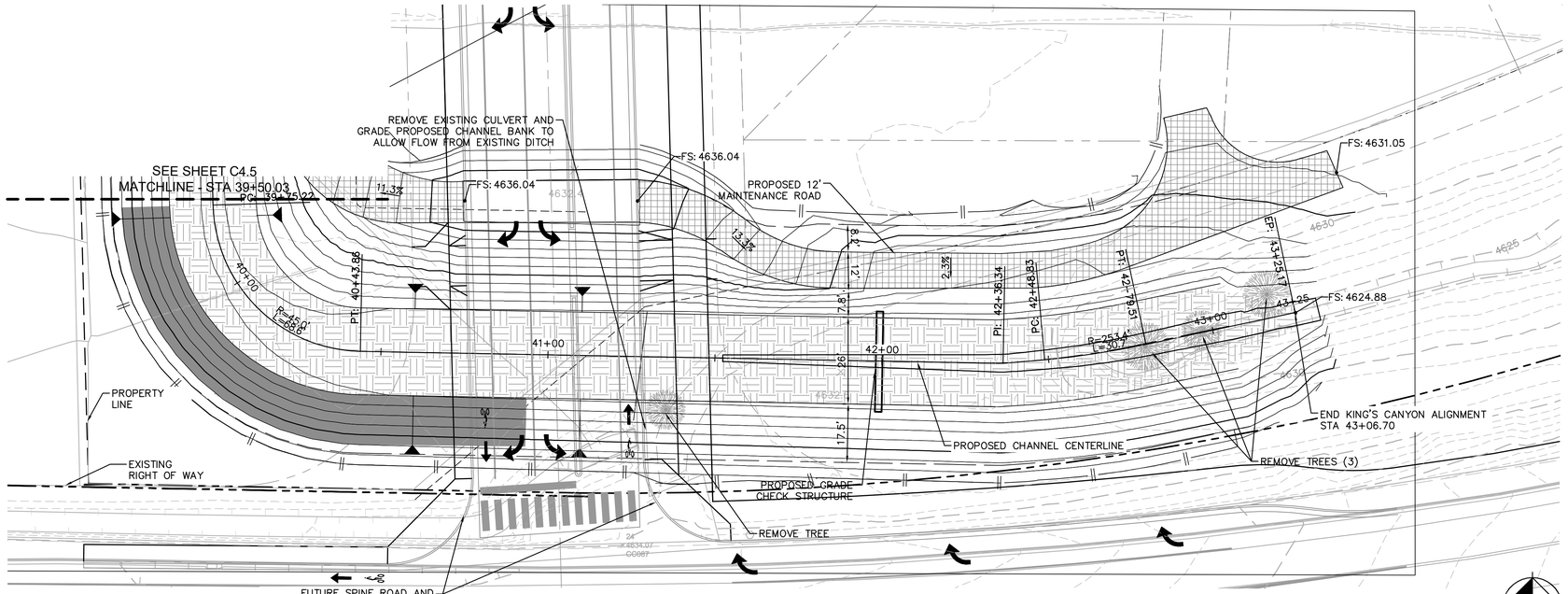

KING'S CANYON CHANNEL

STA 39+50.03 TO 43+06.70
SCALE: 1:20'

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- MAINTENANCE ROAD (NATIVE SOIL)
- ACCESS ROAD (TYPE 2 AGGREGATE BASE)
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- GRADE CHECK STRUCTURE

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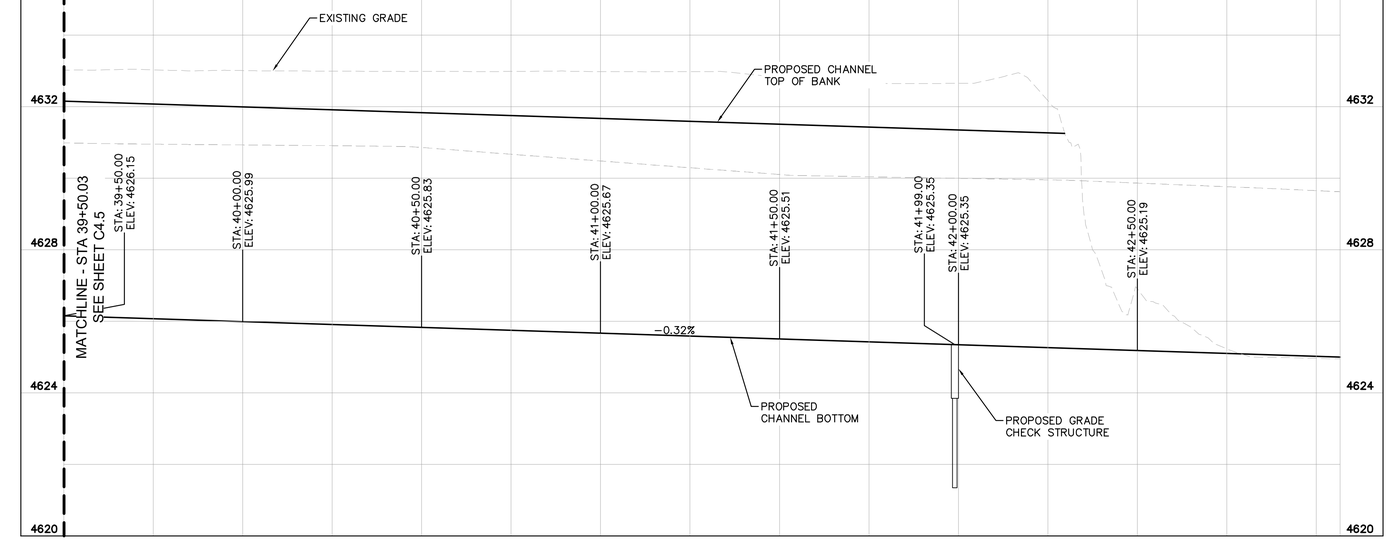
NORTH

GRAPHIC SCALE IN FEET
0 10 20 40



KING'S CANYON CHANNEL PROFILE

STA 39+50.03 TO 43+06.70
SCALE: 1" =20' HORIZ, 1"=2' VERT

No.	REVISIONS	DATE
1	ADDRESS COMMENTS FROM CARSON CITY	05/18/2018
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PHONE: (775) 787-7552

STATE OF NEVADA
REGISTERED
No. 017855
Professional Engineer
JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS

SHEET TITLE:
KING'S CANYON CHANNEL - STA 39+50.03 TO 43+06.70

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C4.6

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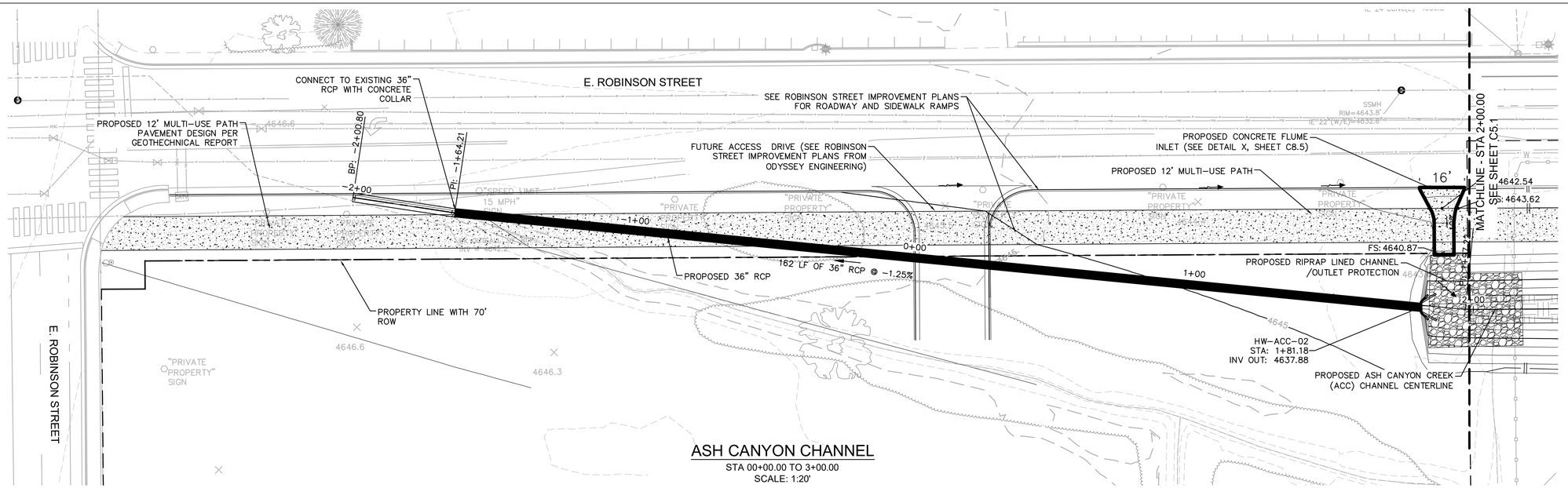
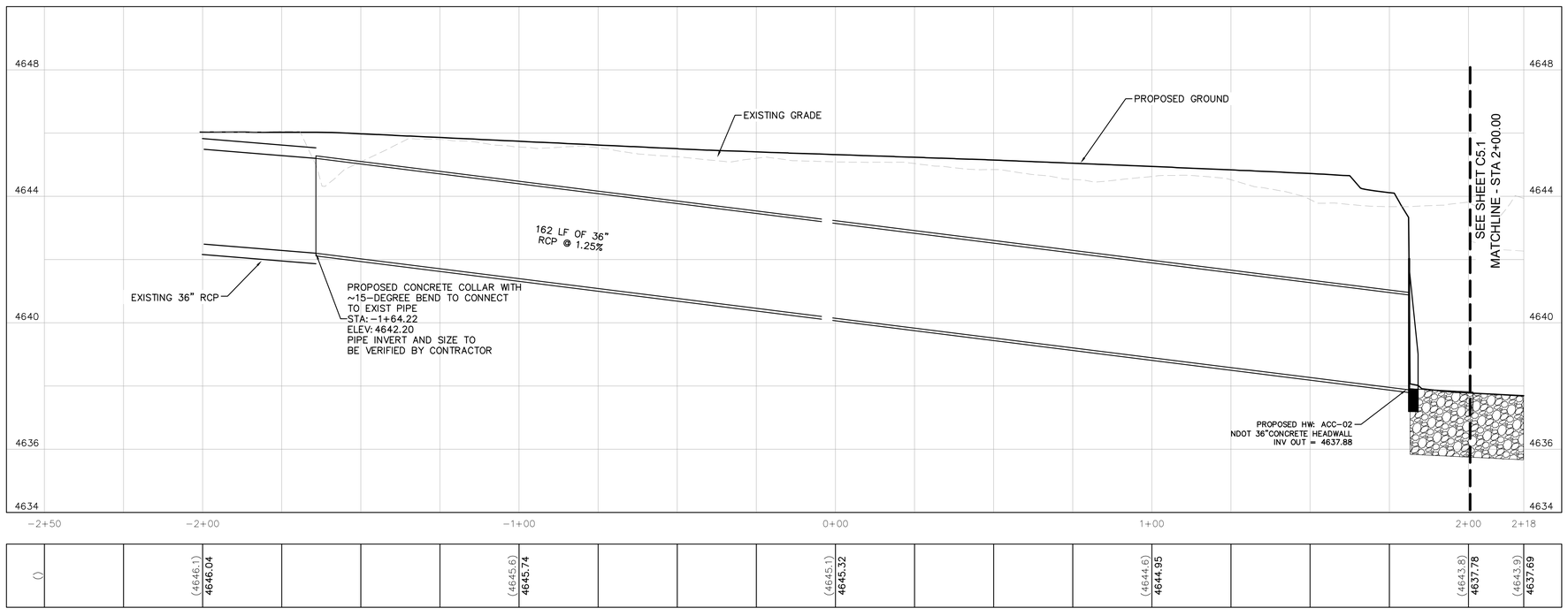


ASH CANYON CHANNEL

STA 00+00.00 TO 3+00.00
SCALE: 1:20'

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40



ASH CANYON CHANNEL PROFILE

STA 00+00.00 TO 2+00.00
SCALE: 1"=20' HORIZ, 1"=2' VERT

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- FLOW DIRECTION
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- CONCRETE MAINTENANCE ROAD/MULTI-USE PATH
- ACCESS ROAD (TYPE 2 AGGREGATE BASE)
- GRADE CHECK STRUCTURE

GENERAL NOTES

1. TURF REINFORCEMENT MAT TO BEGIN AT START OF CURVE AND END 50' PAST END OF CURVATURE.
2. TOP SOIL SHALL BE STOCKPILED AND PROTECTED FROM EROSION.
3. FINAL CHANNEL GRADES SHOULD BE INSPECTED BY GEOTECHNICAL ENGINEER TO IDENTIFY UNSUITABLE MATERIAL. UNSUITABLE MATERIAL SHOULD BE OVER EXCAVATED AND BACKFILLED WITH TOP SOIL OR OTHER SOIL AS DIRECTED BY THE ENGINEER.
4. CHANNEL VEGETATION SHALL BE IRRIGATED UNTIL PERMANENT VEGETATION HAS BECOME ESTABLISHED AS DEFINED IN THE NDEP PERMIT.

NOT FOR CONSTRUCTION -MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C5.0 ASH VALLEY.dwg C5.0 STA 00+00.00 TO 2+25.00 May 18, 2018 11:09am by: todd.cochram
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PHONE: (775) 787-7552

STATE OF NEVADA REGISTERED Professional Engineer JEFFREY T. COCHRAN
No. 017867
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT: RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT: LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS
SHEET TITLE: ASH CANYON CHANNEL - STA 00+00.00 TO 2+00.00

DATE 12/20/2017
PROJECT NO. 018016015
SHEET NUMBER C5.0

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

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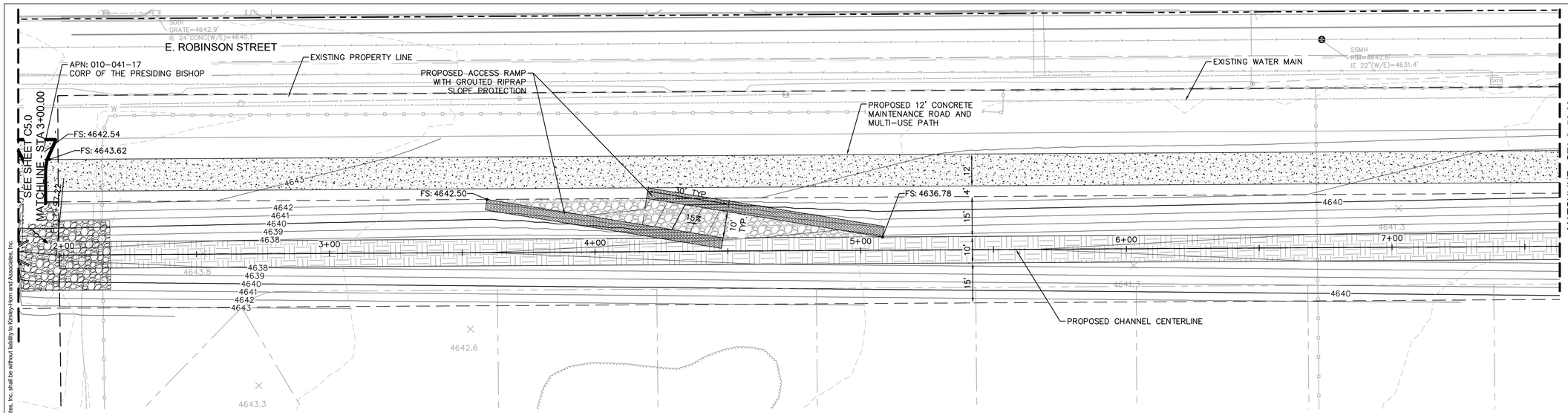
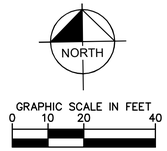
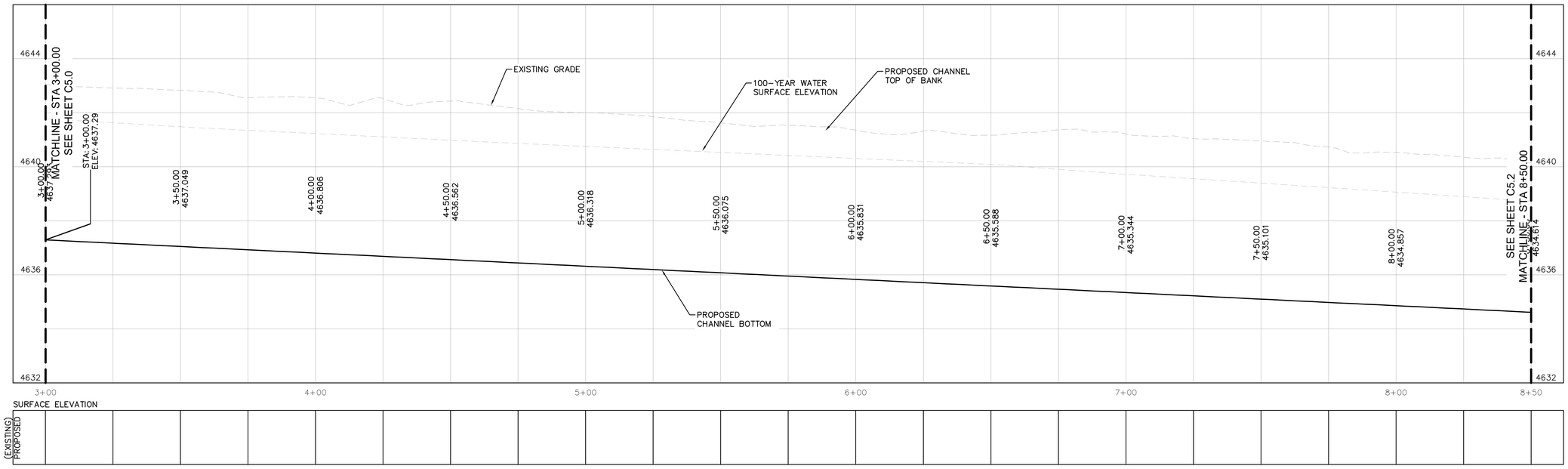


ASH CANYON CHANNEL

STA 3+00.00 TO 8+50.00
SCALE: 1:20'





ASH CANYON CHANNEL PROFILE

STA 2+00.00 TO 8+50.00
SCALE: 1"=20' HORIZ, 1"=2' VERT

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- CONCRETE MAINTENANCE ROAD/MULTI-USE PATH
- ACCESS RAMP (TYPE 2 AGGREGATE BASE)
- GROUTED RIPRAP
- GRADE CHECK STRUCTURE

GENERAL NOTES

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STATE OF NEVADA REGISTERED
No. 017701 Professional Engineer
JEFFREY T. COCHRAN
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exp. 12/31/18

SCALE: SEE PLANS			
DRAWN BY:	JK	DESIGNED BY:	CJ
CHECKED BY:	TC		

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA)
FLOOD CHANNEL PLANS

SHEET TITLE:
ASH CANYON CHANNEL - STA 2+00.00 TO 8+50.00

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C5.1

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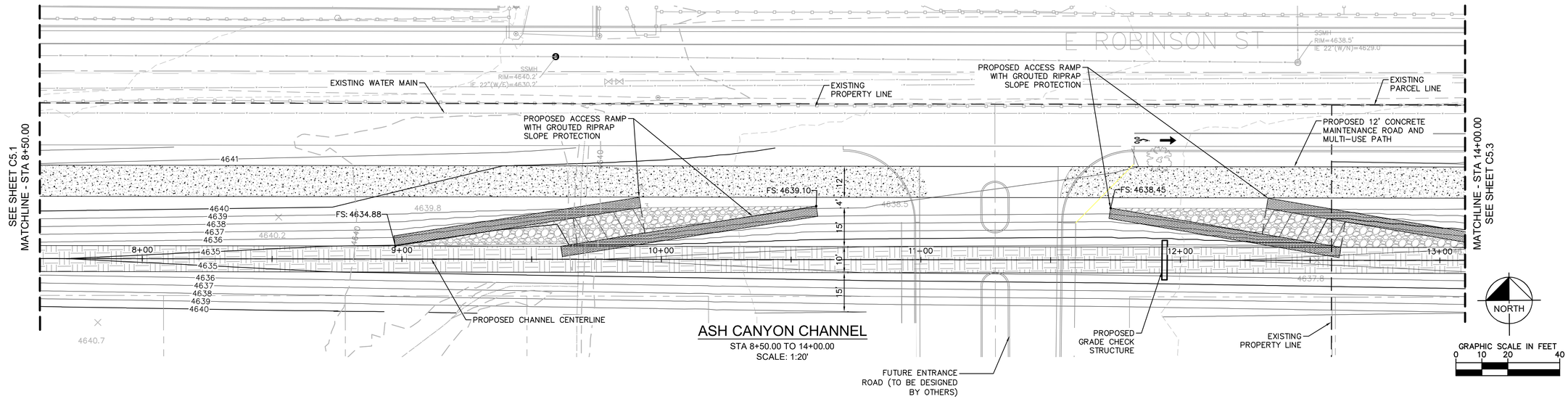
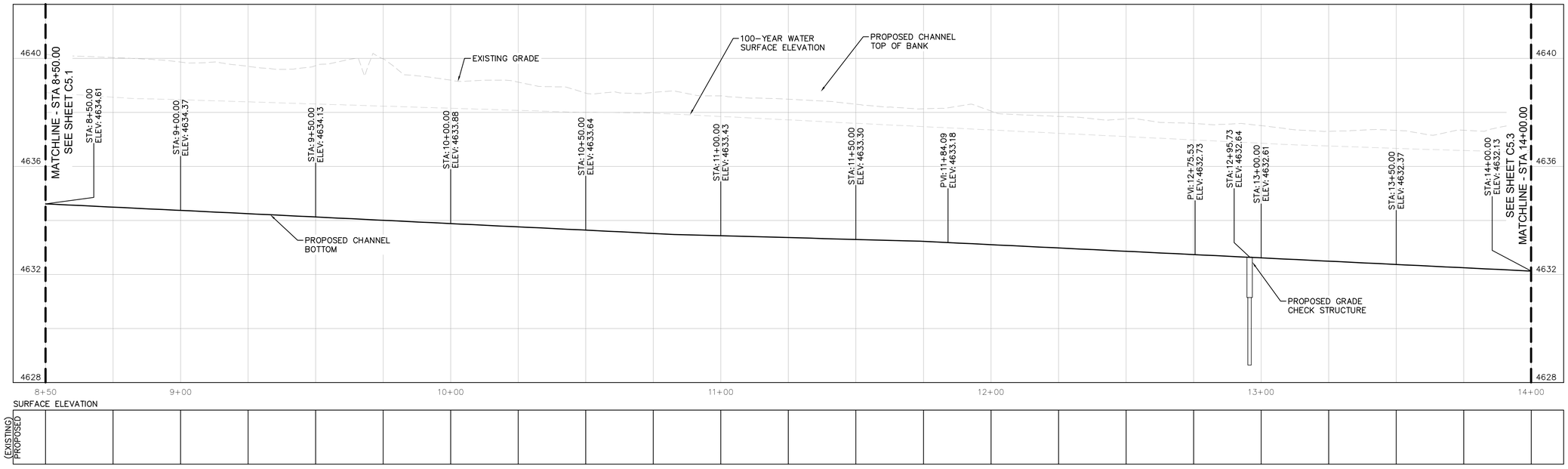


ASH CANYON CHANNEL

STA 8+50.00 TO 14+00.00
SCALE: 1:20'



ASH CANYON CHANNEL PROFILE

STA 8+50.00 TO 14+00.00
SCALE: 1"=20' HORIZ, 1"=2' VERT

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- CONCRETE MAINTENANCE ROAD/MULTI-USE PATH
- ACCESS RAMP (TYPE 2 AGGREGATE BASE)
- GROUTED RIPRAP
- GRADE CHECK STRUCTURE

GENERAL NOTES

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STATE OF NEVADA REGISTERED No. 017797 Professional Engineer JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE:	SEE PLANS
DRAWN BY:	JK
DESIGNED BY:	CJ
CHECKED BY:	TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA)
FLOOD CHANNEL PLANS

SHEET TITLE:
ASH CANYON CHANNEL -
STA 8+50.00 TO 14+00.00

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C5.2

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Drawing name: K:\amt_waterresources\018016015 Jompararanch_floodchannels\CAD\Plan Set\C5.0 ASH VALLEY.dwg C5.3 STA 14+00.00 TO 20+00.00 May 18, 2018 11:10am by: todd.cochran
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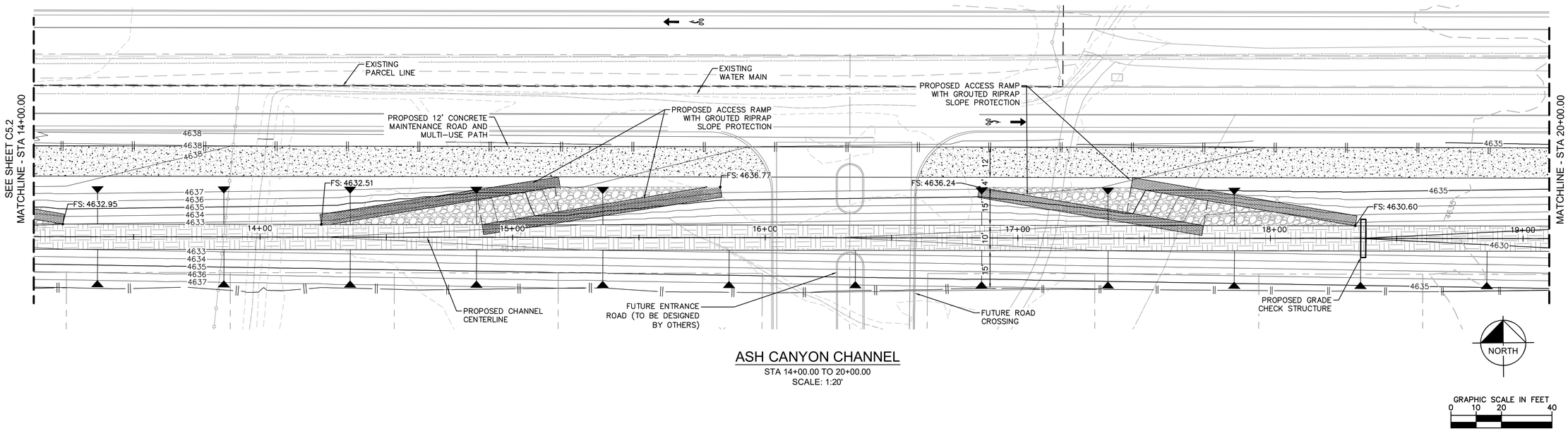
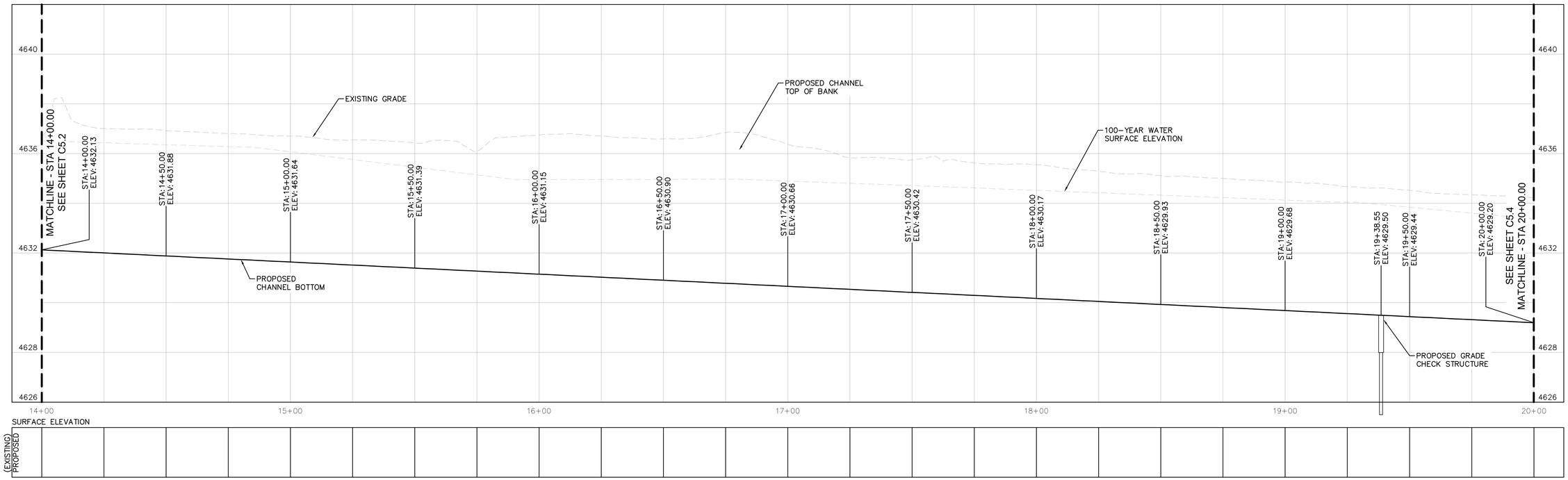


ASH CANYON CHANNEL

STA 14+00.00 TO 20+00.00
SCALE: 1:20'



ASH CANYON CHANNEL PROFILE

STA 14+00.00 TO 20+00.00
SCALE: 1"=20' HORIZ, 1"=2' VERT

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- CONCRETE MAINTENANCE ROAD/MULTI-USE PATH
- ACCESS RAMP (TYPE 2 AGGREGATE BASE)
- GROUTED RIPRAP
- GRADE CHECK STRUCTURE

GENERAL NOTES

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5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS

SHEET TITLE:
ASH CANYON CHANNEL - STA 14+00.00 TO 20+00.00

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C5.3

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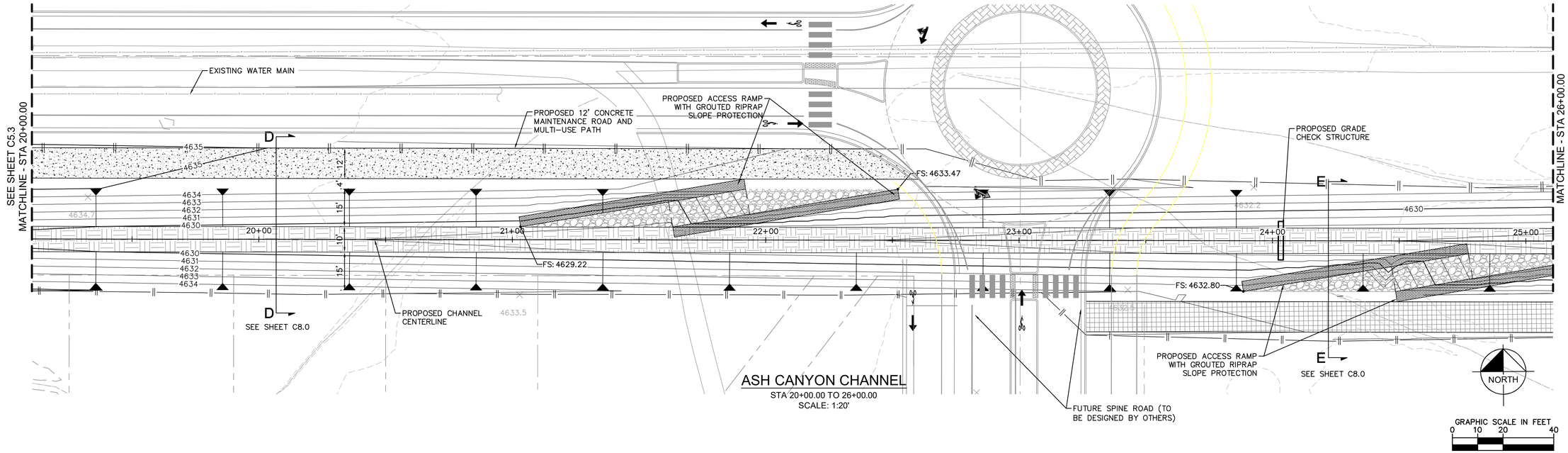
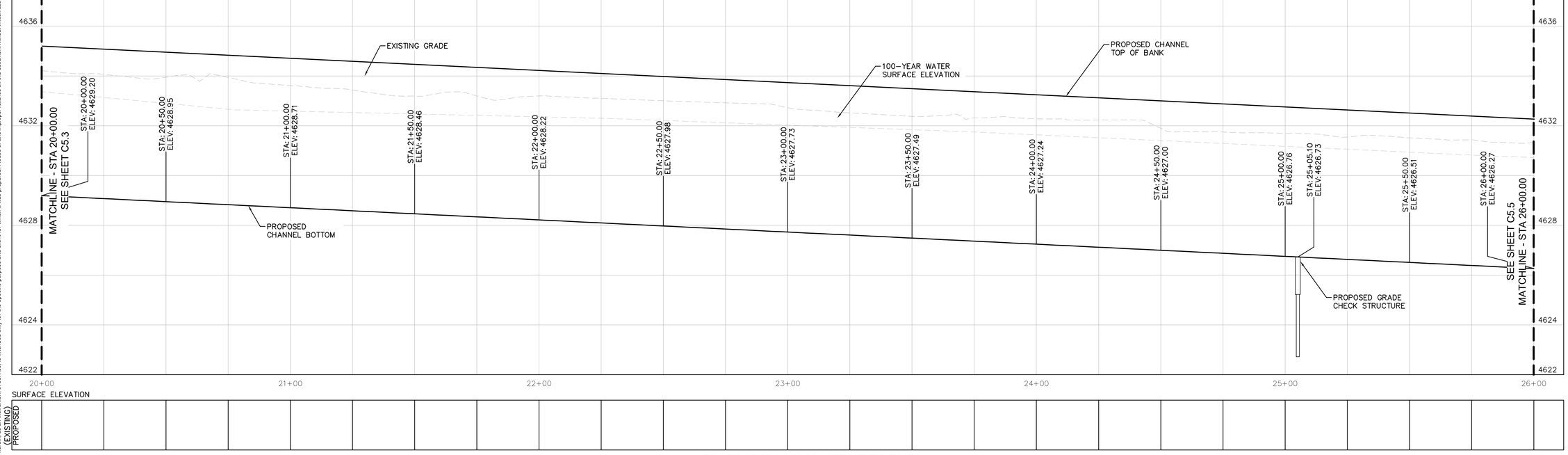


ASH CANYON CHANNEL

STA 20+00.00 TO 26+00.00
SCALE: 1:20'



ASH CANYON CHANNEL PROFILE

STA 20+00.00 TO 26+00.00
SCALE: 1"=20' HORIZ, 1"=2' VERT

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- CONCRETE MAINTENANCE ROAD/MULTI-USE PATH
- ACCESS RAMP (TYPE 2 AGGREGATE BASE)
- GROUTED RIPRAP
- GRADE CHECK STRUCTURE

GENERAL NOTES

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5/17/2018
exp. 12/31/18

SCALE:	SEE PLANS
DRAWN BY:	JK
DESIGNED BY:	CJ
CHECKED BY:	TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA)
FLOOD CHANNEL PLANS

SHEET TITLE:
ASH CANYON CHANNEL - STA 20+00.00 TO 26+00.00

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C5.4

Drawing name: K:\ant_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C5.0 ASH VALLEY.dwg C5.4 STA 20+00.00 TO 26+00.00 May 18, 2018 11:10am by: todd.cochran
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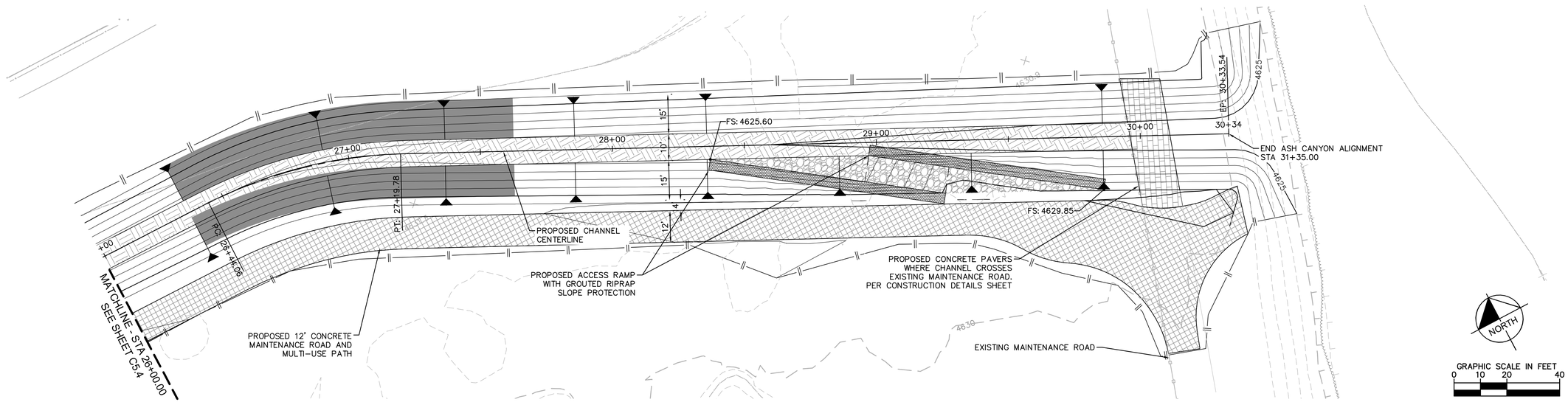
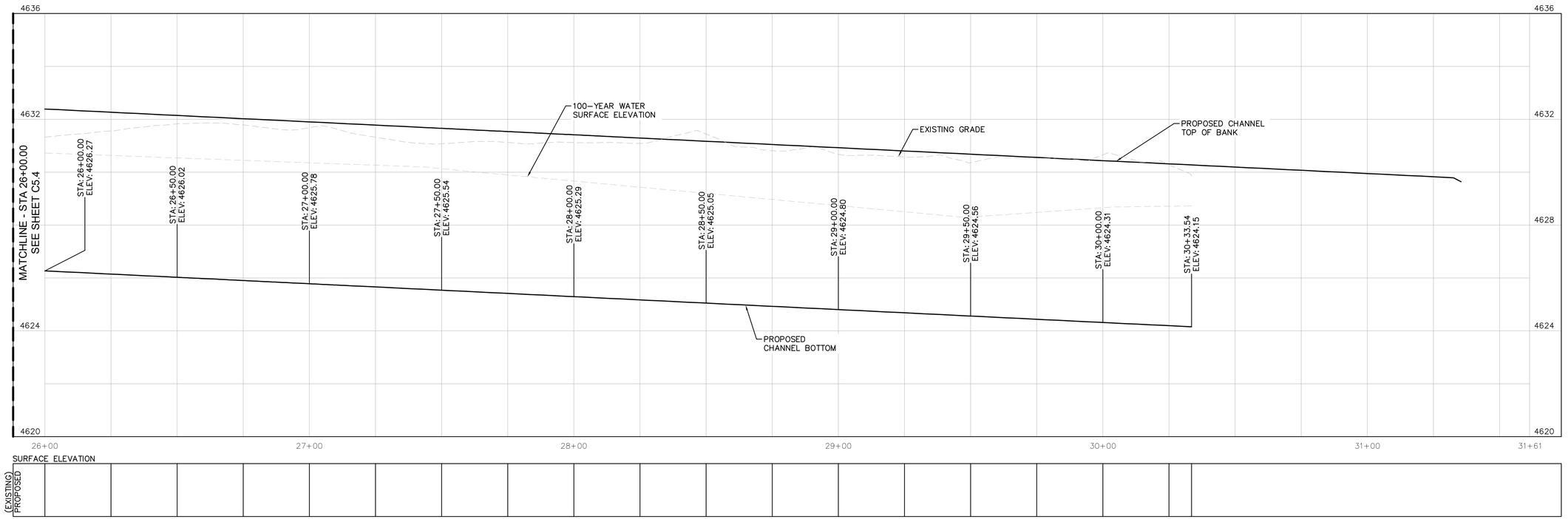


ASH CANYON CHANNEL

STA 26+00.00 TO 31+61.31
SCALE: 1:20'



ASH CANYON CHANNEL PROFILE

STA 26+00.00 TO 31+61.31
SCALE: 1"=20' HORIZ, 1"=2' VERT

LEGEND

- EXISTING ROW
- EXISTING CONTOUR
- SLOPE CATCH LINE
- 3:1 SLOPE ARROW
- GRASS PAVERS
- TURF REINFORCEMENT MAT
- CHANNEL BOTTOM (NATIVE GRASSES)
- CONCRETE MAINTENANCE ROAD/MULTI-USE PATH
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- GRADE CHECK STRUCTURE

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PHONE: (775) 787-7552

STATE OF NEVADA REGISTERED No. 017797 Professional Engineer JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT: RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT: LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS
SHEET TITLE: ASH CANYON CHANNEL - STA 26+00.00 TO 31+61.31

DATE 12/20/2017
PROJECT NO. 018016015
SHEET NUMBER C5.5

NOT FOR CONSTRUCTION -MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C5.0 ASH VALLEY.dwg C5.5 26+00.00 TO 31+61.31 May 18, 2018 11:10am by: todd.cochran
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Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C8.0 TYPICAL SECTIONS.dwg CONSTRUCTION DETAILS 1 May 18, 2018 11:11am by: todd.cochran

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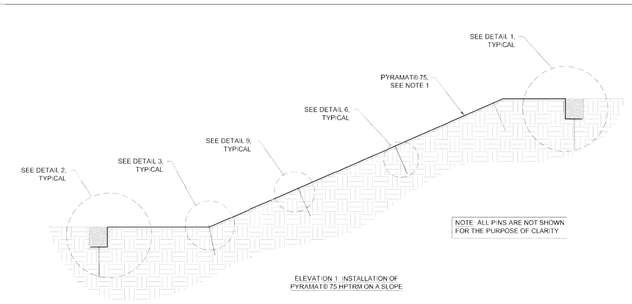
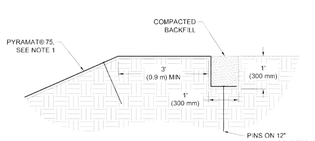
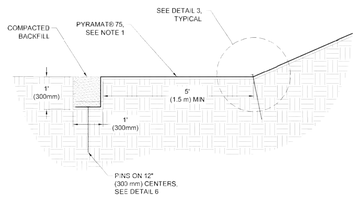


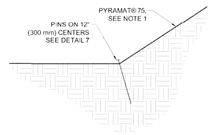
ELEVATION 1: INSTALLATION OF PYRAMAT® 75 HPTRM ON A SLOPE



DETAIL 1: CREST OF SLOPE (COS) TRENCH

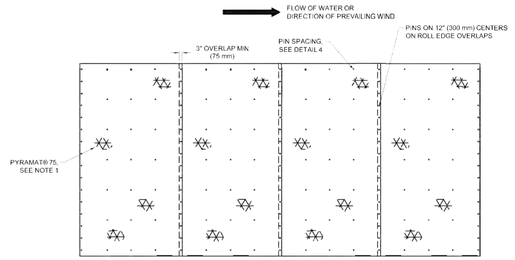


DETAIL 2: TOE OF SLOPE (TOS) TRENCH



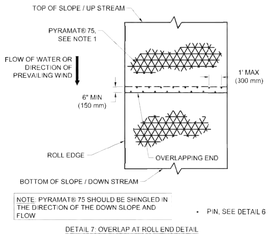
DETAIL 3: BREAK IN SLOPE INTERFACE

DETAIL 4: P/N PATTERN

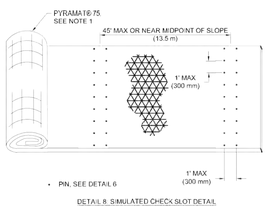


DETAIL 5: P/N PATTERN

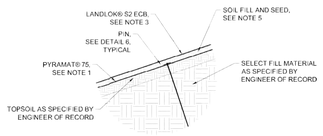
DETAIL 6: P/N



DETAIL 7: OVERLAP AT ROLL END DETAIL



DETAIL 8: SIMULATED CHECK SLOT DETAIL



DETAIL 9: VEGETATION ESTABLISHMENT

PIN SCHEDULE	
SECURING DEVICE	P/N
HORIZONTAL P/N SPACING	2' (0.60 m)
VERTICAL P/N SPACING	2.5' (0.75 m)
EMBEDMENT DEPTH	PER MANUFACTURERS DESIGN

PYRAMAT® 75 HPTRM ON A SLOPE FOR EROSION CONTROL GENERAL INSTALLATION GUIDELINES

GENERAL NOTES

1. PYRAMAT® 75 HPTRM is a three-dimensional, lofty, woven polypropylene geotextile that is available in green or tan which is specially designed for erosion control applications on steep slopes and vegetated waterways. The matrix is composed of polypropylene monofilament yarns featuring X3® technology woven into a uniform configuration of resilient pyramid-like projections. The material exhibits very high interlock and reinforcement capacity with both soil and root systems, demonstrates superior UV resistance, and enhances seedling emergence.
2. The 12", 18", and 24" Securing Pins are composed of a wire, mushroomed at the top. A washer is then placed on the wire and the wire is crimped or swedged about 3-1/2" below the top so the washer will not slide off. The end of the wire is cut at a 45 degree angle for easy penetration of the soil. These Pins with washers conform to industry standards for erosion control pins with washers.
3. LANDLOK® 52 Erosion Control Blankets consist of 100% wheat straw mechanically bound and covered on both sides by netting. The straw is homogeneously blended and evenly distributed throughout the blanket. The netting is photodegradable polypropylene with mesh openings of approximately 3/8 in. by 3/8 in. (11 mm by 11 mm). The blanket is sewn on approximately 2 in. (51 mm) centers with photodegradable polypropylene thread. This product is NTPEP approved for AASHTO standards.

VEGETATION ESTABLISHMENT

4. Prepare seedbed by loosening 50 to 75 mm (2 to 3 in) of soil above final grade. Apply seed in an amount equivalent to 60% of the hay mixture required to be installed on the soil surface, to scarified surface prior to installation of the PYRAMAT® 75 HPTRM. Select and apply soil amendments and fertilizer, to scarified surface prior to installation of the PYRAMAT® 75 HPTRM. A site specific soil test should be performed to help determine what soil amendments, such as lime and fertilizer, need to be incorporated into the soil to promote healthy vegetation.
5. The installed PYRAMAT® 75 HPTRM shall be soil filled and seeded with the remaining 40% of the seed mixture. Do not place excessive soil above material. Once soil fill and additional seed is in place, surface protection should be accomplished by installing LANDLOK® 52 Erosion Control Blanket (ECB) atop the seed layer. LANDLOK® 52 ECB is to be secured using 6" U-shaped staples with a frequency of 2.0 staples per square meter (1.7 staples per square yard).
6. Irrigate as necessary to establish and maintain vegetation until 75% of vegetation has established and has reached a height of 2 inches. Frequent, light irrigation will need to be applied to seeded areas if natural rain events have not occurred within two weeks of seeding.

BEFORE INSTALLATION BEGINS

7. Coordinate with a Propex Representative. A pre-construction meeting is suggested with the construction team and a representative from Propex. This meeting should be scheduled by the contractor with at least a two week notice.
8. Gather the Tools Needed: Tools that you will need to install PYRAMAT® 75 HPTRM include a pair of industrial shears to cut PYRAMAT® 75 HPTRM and tape measure.
9. Determine how to Establish Vegetation: The method of vegetation establishment should be determined prior to the start of installation. Different vegetation establishment methods require different orders of installation. Refer to Establish Vegetation for further guidance.
10. Please consult the Propex Website for the most up to date installation guidelines.

Propex GEOSOLUTIONS

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EROSION CONTROL INSTALLATION DETAILS

Please note that the information presented herein is general information only. It is for conceptual use only and not intended to be used for construction. While every effort has been made to ensure its accuracy, this information should not be used for a specific application without independent professional examination and verification of its suitability, applicability, and accuracy. This engineering drawing is protected by the Copyright Act, 17 U.S.C. §101 et seq. and may be used ONLY with the express written permission of Propex in connection with Propex products. Any copying, distributing, and/or creation of a derivative work without permission of Propex is prohibited and is subject of actual damages, statutory damages and attorney's fees under the Copyright Act.

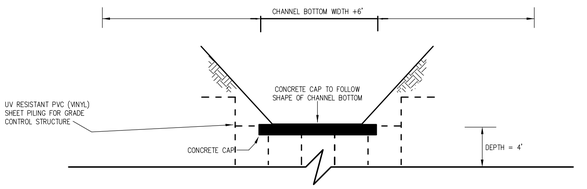
1 of 1

PYRAMAT® HIGH PERFORMANCE TURF REINFORCEMENT MAT (HPTRM)
PYRAMAT® 75 INSTALLATION DETAILS FOR SLOPES

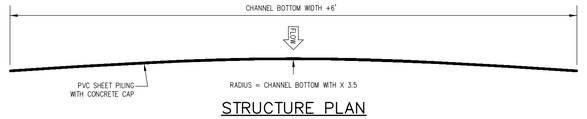
Rev	Date	Drawn By	Scale
	02/15/2017	J. HILL	NTS

*ALL DIMENSIONS ARE TO BE VERIFIED BY ENGINEER OF RECORD

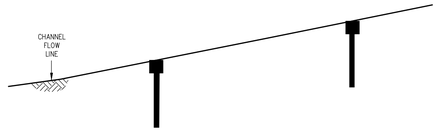
TURF REINFORCMENT MATTING
SCALE: N.T.S



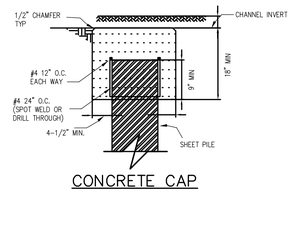
GRADE CHECK STRUCTURE ELEVATION



STRUCTURE PLAN



CHECK STRUCTURE PROFILE



CONCRETE CAP

GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL USACE 404 AND ENVIRONMENTAL PERMITS.
2. BEFORE ANY WORK BEGINS IN ENVIRONMENTALLY SENSITIVE AREAS, TEMPORARY EROSION CONTROL MEASURES AND BEST MANAGEMENT PRACTICES, AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER SHALL BE IN PLACE.
3. ALL TEMPORARY FENCING FOR PROTECTED AREAS SHALL BE INSTALLED BEFORE THE COMMENCEMENT OF WORK.
4. ALL STEEL SHEET PILING STRUCTURES SHALL BE TYPE I.
5. STRUCTURE LOCATIONS SHOWN ON THE PLANS.

GRADE CONTROL STRUCTURE
SCALE: N.T.S

No.	REVISIONS	DATE
1	ADDRESS COMMENTS FROM CARSON CITY	05/18/2018
2		
3		
4		
5		
6		
7		

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5370 KIETZKE LANE, SUITE 100
RENO, NEVADA 89511
PHONE: (775) 787-7552

STATE OF NEVADA REGISTERED No. 017797 Professional Engineer JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT: RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3768

PROJECT: LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS

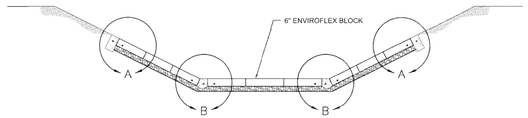
SHEET TITLE: CONSTRUCTION DETAILS

DATE 12/20/2017

PROJECT NO. 018016015

SHEET NUMBER C8.1

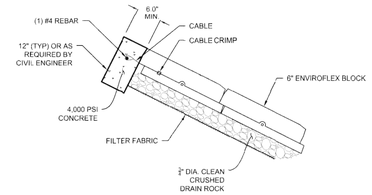
ENVIROFLEX® - 6" BLOCK



TYPICAL ENVIROFLEX® LINED TRAPEZOIDAL CHANNEL SECTION

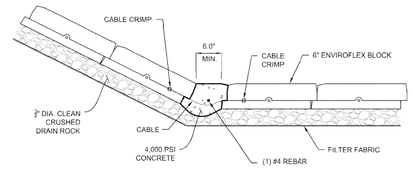
N.T.S.

TAPERED, VERTICALLY INTERLOCKING ARTICUALTING CONCRETE BLOCK (ACB) SYSTEM



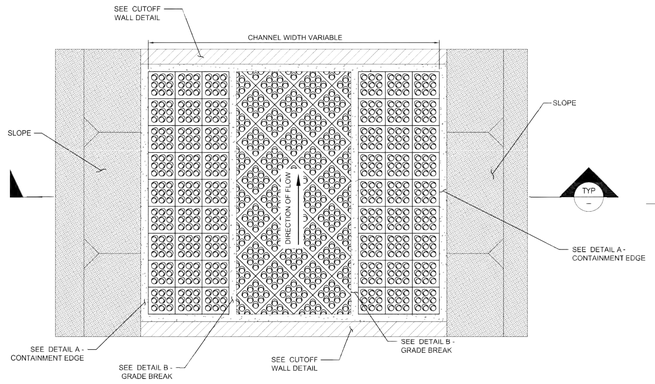
DETAIL A - CONTAINMENT EDGE

N.T.S.



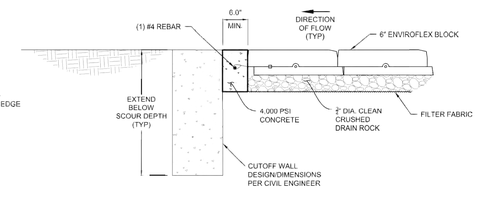
DETAIL B - GRADE BREAK

N.T.S.



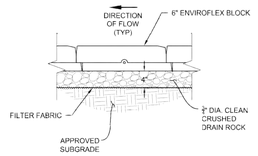
TYPICAL ENVIROFLEX® LINED TRAPEZOIDAL CHANNEL

N.T.S.



TYPICAL CUTOFF WALL DETAIL

N.T.S.



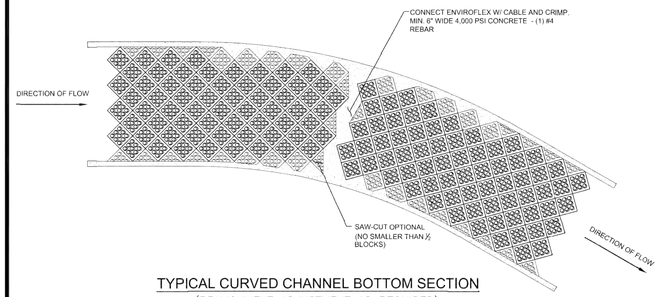
TYPICAL SECTION

(W/ 4" DRAINAGE LAYER)

N.T.S.

6" ENVIROFLEX DESIGN CRITERIA		
W/ 4" DRAINAGE LAYER		
CRITICAL SHEAR STRESS	*PSF*	*24.8*
VELOCITY LIMIT	*FT/SEC*	*23.3*

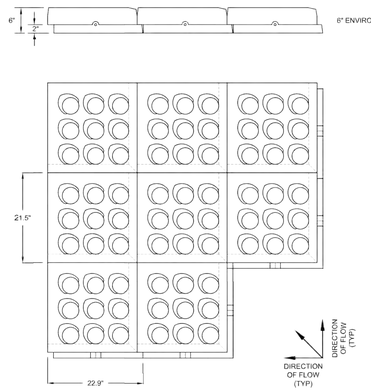
NO CONNECTORS OR CABLES WERE USED IN THE TESTING FOR THE VALUES LISTED ABOVE.



TYPICAL CURVED CHANNEL BOTTOM SECTION

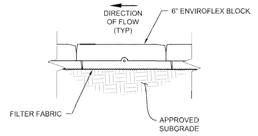
(REALIGNMENT ADJUSTMENT AS REQUIRED)

N.T.S.



ENVIROFLEX® BLOCK DETAILS

N.T.S.



TYPICAL SECTION

(OPTIONAL – W/ NO DRAINAGE LAYER)

N.T.S.

6" ENVIROFLEX DESIGN CRITERIA		
W/ NO DRAINAGE LAYER		
CRITICAL SHEAR STRESS	*PSF*	*8.6*
VELOCITY LIMIT	*FT/SEC*	*12.1*

NO CONNECTORS OR CABLES WERE USED IN THE TESTING FOR THE VALUES LISTED ABOVE.

SOIL RETENTION PRODUCTS INC.

2501 STATE STREET, CARLSBAD, CA 92008 800-346-7995

WWW.SOILRETENTION.COM

CONCRETE PAVERS

SCALE: N.T.S

NOT FOR CONSTRUCTION -MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_flooddchannels\CAD\Plan Set\C8.0 TYPICAL SECTIONS.dwg CONSTRUCTION DETAILS 2 May 18, 2018 11:11am by: todd.cochran
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No.	DATE
1	05/18/2018
2	
3	
4	
5	
6	
7	

REVISIONS

ADDRESS COMMENTS FROM CARSON CITY

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5370 KIETZKE LANE, SUITE 100
RENO, NEVADA 89511
PHONE: (775) 787-7552

STATE OF NEVADA REGISTERED Professional Engineer JEFFREY T. COCHRAN No. 021786

5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS

SHEET TITLE:
CONSTRUCTION DETAILS

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C8.2

NOT FOR CONSTRUCTION - MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C8.0 TYPICAL SECTIONS.dwg CONSTRUCTION DETAILS 3 May 18, 2018 11:12am by: todd.cochran

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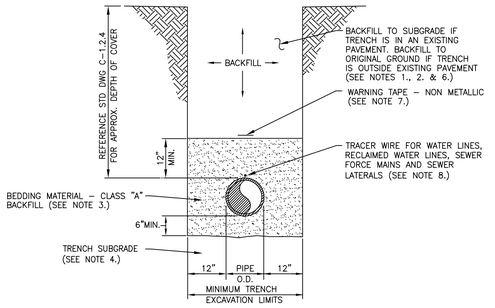


TYPICAL TRENCH SECTION
NTS

NOTES:

1. WATER DENSIFIED BACKFILL AND TUNNELING SHALL BE BY SPECIAL PROVISION ONLY.
2. BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF CLASS E BACKFILL AS SPECIFIED IN SUBSECTION 200.03.06 OF THE SSPWC. MATERIAL SHALL BE PLACED IN LIFT THICKNESS SPECIFIED IN SUBSECTION 305.10 OF THE SSPWC AND DENSIFIED TO 90% RELATIVE COMPACTION.
3. BEDDING SHALL CONFORM TO THE REQUIREMENTS OF CLASS A BACKFILL AS SPECIFIED IN SUBSECTION 200.03.02 OF THE SSPWC. MATERIAL SHALL BE DENSIFIED TO 90% RELATIVE COMPACTION.
4. PLANS SHALL INCLUDE A DETAIL FOR SUBGRADE STABILIZATION INCLUDING BACKFILL MATERIAL, STRUCTURAL GEOTEXTILE FILTER FABRIC AND MODIFIED CUTOFF COLLARS WHEN POTENTIAL FOR UNSTABLE SUBGRADES EXIST, SUBJECT TO THE APPROVAL OF THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
5. FOR TRENCHES IN ROADWAY SECTION, SEE PAVEMENT PATCH DETAIL (DWG. No. C-5.1.6).
6. FOR THE PURPOSE OF PAYMENT; EXCAVATION AND BACKFILL QUANTITIES ARE BASED ON THESE STANDARD DRAWINGS, AND NO ADDITIONAL COMPENSATION WILL BE MADE. SHORING OR SLOPED CUT SLOPES MAY BE NECESSARY, BUT THERE WILL BE NO ADDITIONAL PAYMENT. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
7. PLACE NON METALLIC WARNING TAPE 1 FOOT ABOVE ALL BURIED PIPES AND CONDUITS.
8. TRACER WIRE SHALL BE 12 GAUGE (MINIMUM THICKNESS) INSULATED SOLID COPPER OR COPPER–CLAD STEEL CORE WIRE. INSULATION SHALL BE 30 MIL HDPE. PLANS SHALL SPECIFY WIRE STRENGTH AND INSULATION THICKNESS FOR BORING APPLICATIONS. SPLICES SHALL BE CONNECTED BY WIRE NUTS, SEALED WITH AQUA SEAL OR SILICON FILLED, AND DOUBLE WRAPPED WITH U/L LISTED ELECTRICAL TAPE. TRACER WIRE COLOR SHALL BE, BLUE FOR WATER, PURPLE FOR RECLAIMED WATER, AND GREEN FOR SEWER.

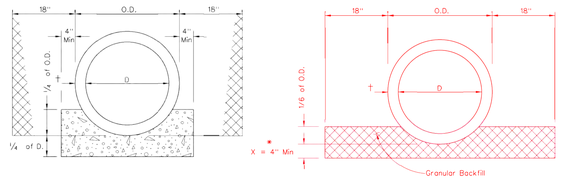
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			TRENCH EXCAVATION AND BACKFILL	DRAWING NO. C–1.2.1 (305)
APPROVED BY:		7/09		DATE 7/2009

TRENCH EXCAVATION AND BACKFILL
SCALE: N.T.S

1. MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE SSPWC.
2. MARKING TAPE SHALL BE INSTALLED 12 INCHES ABOVE ALL STORM DRAIN PIPE. TAPE WIDTH SHALL BE 3 INCHES; THICKNESS SHALL BE FOUR (4) MIL OR GREATER AND SHALL BE GREEN AND BEAR LARGE PRINTING DENOTING "CAUTION BURIED STORM DRAIN LINE BELOW" OR EQUIVALENT WORDING.
3. PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS, (CURB AND GUTTER TRANSITION ONLY, ALL UNEXPOSED CONCRETE MAY BE 3000 PSI) MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5%, SLUMP AT 1 TO 4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202.
4. REINFORCING STEEL SHALL BE GRADE 40 AND HAVE 1.5 INCHES MINIMUM CLEAR COVER.
5. EACH CATCH BASIN SHALL HAVE A 4 INCH ALUMINUM BLUE DISK WITH FISH IMAGE AND THE WORDS "NO DUMPING! DRAINS TO RIVER" (ALMETEK SD–4 OR APPROVED EQUAL) INSTALLED ON THE TOP OF THE CURB BOX.
6. FRAMES AND GRATES SHALL BE MATCHED TO ACHIEVE A CLOSE TOLERANCE FIT, WITH MINIMAL GAPS, AS APPROVED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
7. STORM DRAINAGE IMPROVEMENTS SHALL INCORPORATE WATER QUALITY AND EROSION CONTROLS IN ACCORDANCE WITH THE NEVADA "HANDBOOK OF BEST MANAGEMENT PRACTICES".
8. PRECAST MANHOLES SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE PLASTIC GASKET MATERIAL SUCH AS RAM–NEK OR APPROVED EQUAL PER MANUFACTURERS RECOMMENDATIONS.
9. TRACER WIRE SHALL BE ATTACHED TO ANY STORM DRAIN LATERAL WHICH IS NOT PERPENDICULAR TO THE STORM DRAIN MAIN.
10. MANHOLES LOCATED OUTSIDE PAVED AREAS SHALL REQUIRE ALL WEATHER ACCESS ROADWAY CONSISTING OF 6 INCHES TYPE 2, CLASS B AGGREGATE BASE (CONFORMING TO THE SSPWC SECTION 200.01.02) AND STORM DRAIN MANHOLE MARKERS BE INSTALLED. STORM DRAIN MANHOLE MARKERS SHALL BE GREEN CARSONITE UTILITY MARKER (CUM 375), 5 FEET–2 INCHES (5'–2") WITH DECAL READING "STORM DRAIN MANHOLE". PLACE MARKERS ON EASEMENT LINE NEAREST TO MANHOLE OR AS DIRECTED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
11. MANHOLE CONCRETE COLLARS SHALL BE LEFT 2 1/2 INCHES TO 3 INCHES BELOW FINISHED ASPHALT SURFACE. APPLY AN APPROVED TACK COAT (CONFORMING TO THE SSPWC SECTION 316) AND FILL VOID BETWEEN ADJACENT PAVEMENT AND FRAME WITH TYPE 3 AC 20 PAVING (CONFORMING TO THE SSPWC SECTION 320). APPLY FOG SEAL (CONFORMING TO SSPWC SECTION 317) TO THE ASPHALT SURFACE. ALL CUTS IN PAVING SHALL BE STRAIGHT AND EVEN. EXCEPTION: WHEN STRUCTURE NOT LOCATED IN ASPHALT PAVEMENT OR LOCATED IN AN UNPAVED AREA, EXTEND CONCRETE TO FINISH GRADE.
12. GRATES SHALL BE PLACED OUTSIDE OF THE PEDESTRIAN TRAVELED WAY. GRATE OPENINGS SHALL NOT EXCEED 0.5 INCHES IN WIDTH OR 4 INCHES IN LENGTH. GRATES SHALL BE TRAFFIC RATED AND ADA COMPLIANT.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			STORM DRAIN GENERAL NOTES	DRAWING NO. C–4.1.1
APPROVED BY:		7/09		DATE 7/2009

STORM DRAIN GENERAL NOTES
SCALE: N.T.S



CLASS A BEDDING (RCP)

CLASS C BEDDING (RCP, CMP, AND HDPE) STANDARD BEDDING

NOTES:

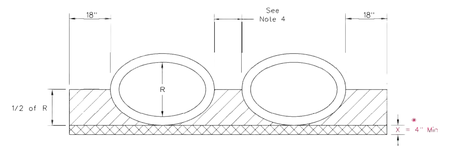
1. Minimum depths as specified on sheet R-1.1.1, Notes 6 and 8 will prevail when these conditions are encountered.
2. Concrete shall be class A or AA. Additional excavation for class A bedding to be included in the unit bid price per cubic yard of concrete.
3. Class C bedding shall be carefully shaped to fit pipe prior to installation.
4. See sheet R-2.1.1 or headwall details for appropriate pipe separation.

RCP
* Normal foundation, X= O.D./24 min (not less than 4" min).
If rock foundation, X= O.D./12 min (not less than 6" min).

CMP
* If rock foundation, X= 1/2" per foot of average fill over pipe (12" min - 24" max).

HDPE
* X= 4" for D ≤ 24", X= 6" for D ≥ 30".

LEGEND:
- GRANULAR BACKFILL
- CLASS A SLURRY BACKFILL



BEDDING FOR MULTIPLE HE RCP CULVERTS

CULVERT BEDDING
SCALE: N.T.S

ALLOWABLE FILL HEIGHT FOR REINFORCED CONCRETE PIPE

Pipe Size I.D.	FILL HEIGHT IN FEET III A	III C	IV A	IV C	V A	V C	Pipe Class Bedding Class
24"	23	17	35	26	53	40	
30"	23	17	35	26	53	40	
36"	23	17	35	26	52	40	
42"	23	17	34	26	52	40	
48"	23	17	34	26	52	40	
54"	22	17	34	26	52	40	
60"	22	17	34	26	51	40	
66"	22	17	33	26	51	39	
72"	22	17	33	25	51	39	
84"	21	16	33	25	50	39	
90"	21	16	33	25	50	39	
96"	21	16	32	25	50	39	
102"	21	16	32	25	49	39	
108"	21	16	32	25	49	39	
114"	20	16	32	25	49	39	
120"	20	16	31	25	49	39	
126"	20	16	31	25	48	39	
132"	20	16	31	25	48	39	
138"	20	16	31	25	48	39	
144"	19	15	30	25	47	39	

Pipe Size HE RCP	FILL HEIGHT IN FEET III C	III D	Pipe Class Bedding Class
19" X 30"	14	22	
24" X 38"	14	22	
29" X 45"	14	22	
34" X 53"	14	22	
38" X 60"	14	22	
43" X 68"	14	22	
48" X 76"	14	22	
53" X 83"	14	22	
58" X 91"	14	22	
68" X 106"	14	22	
72" X 113"	14	22	
77" X 121"	14	22	

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CULVERT BEDDING AND ALLOWABLE FILL HEIGHT FOR RCP AND HE RCP

R-1.1.6 (603,604)	Signed Original On File
ADOPTED 8/96 REVISED 12/15	CHIEF HYDRAULICS ENGR.

No.	DATE	REVISIONS
7		
6		
5		
4		
3		
2	05/18/2018	ADDRESS COMMENTS FROM CARSON CITY
1		

Kimley»Horn
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5370 KIETZKE LANE, SUITE 100
RENO, NEVADA 89511
PHONE: (775) 787-7552

STATE OF NEVADA REGISTERED Professional Engineer No. 017787 JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

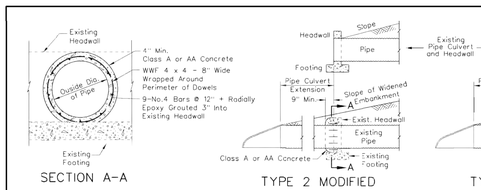
SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT: RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT: LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS

SHEET TITLE: CONSTRUCTION DETAILS

DATE 12/20/2017
PROJECT NO. 018016015
SHEET NUMBER C8.3



SECTION A–A

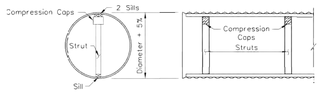
TYPE 2 MODIFIED

TYPE 1 MODIFIED

For Additional Information See Sheet R–1.1.2

PIPE CULVERT EXTENSION

▨ – LIMITS OF REMOVAL



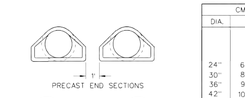
END VIEW

For Strut, Cap, Sill Size, and Spacing Use Manufacturers Recommendations. Struts, Caps and Sills To Be the Same Dimension. For Maximum Fill Heights, See Sheet R–1.3.1.2 Under Columns Designated "E". Struts Shall Be Left in Place Until Fill Has Been Completed and Compacted, Unless Otherwise Directed By the Engineer.

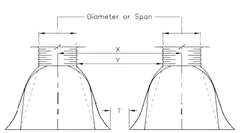
FIELD STRUTTING CMP

SEPARATION FOR MULTIPLE INSTALLATIONS WITH END SECTIONS

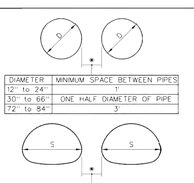
CMP/HDPE DIA.	X	Y	CMAP SPAN	X	Y	RCP DIA.	X	Y
			21" X 15"	5" – 2"	3" – 5"	18"	4" – 4"	2" – 6"
			24" X 18"	5" – 10"	3" – 10"	24"	5" – 5"	3"
			28" X 20"	6" – 6"	4" – 2"	30"	6" – 6"	3" – 6"
24"	6" – 8"	4" – 8"	35" X 24"	7" – 8"	4" – 9"	36"	7" – 7"	4"
30"	8"	5" – 6"	42" X 29"	9" – 3"	5" – 9"	42"	8" – 2"	4"
36"	9" – 4"	6" – 4"	49" X 33"	10" – 3"	6" – 2"	48"	8" – 9"	4"
42"	10" – 8"	7" – 2"	57" X 38"	11" – 6"	6" – 9"	54"	8" – 7"	3" – 4"
48"	11" – 6"	7" – 6"	64" X 43"	12" – 6"	7" – 2"			
54"	12" – 6"	8"	71" X 47"	13" – 6"	7" – 7"			
60"	13" – 6"	8" – 6"	77" X 52"	14" – 6"	8" – 1"			
66"	14"	8" – 6"	83" X 57"	15" – 6"	8" – 7"			
72"	14" – 6"	8" – 6"						
78"	15"	8" – 6"						
84"	15" – 6"	8" – 6"						



MULTIPLE INSTALLATIONS WITH END SECTIONS



When Y Distance Exceeds 5', Structure Excavation and Backfill Quantities Shall Be Calculated For Each Culvert.



DIAMETER	MINIMUM SPACE BETWEEN PIPES
12" to 24"	ONE HALF DIAMETER OF PIPE
30" to 66"	3'
72" to 84"	

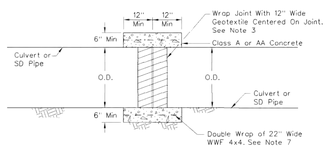
SPAN	MIN. SPACE BETWEEN PIPE ARCHES
17" to 35"	One Third Span of Pipe Arch
42" to 83"	

* When Headwalls Are Used or Anticipated For Future Use, Space As Per Headwalls Standard.

MULTIPLE INSTALLATIONS WITHOUT HEADWALLS

NOTES:

1. Concrete collar to be used for making repair connections, connect dissimilar pipe materials, extend or connect similar pipe materials where bell and spigot connections are not possible, and where specified.
2. Maintain proper alignment, line, and grade across the joint. Secure pipe sections adequately on each side of joint prior to casting concrete to prevent any inadvertent displacement or misalignment.
3. In lieu of a geotextile wrap, rubber boat adapters, coupling bands, or other special adapters specific to the application and as recommended by the manufacturer may be used to facilitate construction and maintain joint integrity. Use appropriate connection devices if required by the engineer or special provisions to provide a competent or water tight connection. Maintain a minimum of 6 inches of concrete cover on the outside of any special connection devices.
4. For HDPE pipe, use an embedded waterstop gasket on each side of the joint where water tight connections are required and where required by the Engineer.
5. No direct payment for concrete collars or associated connection devices. Payment to be included in the payment for pipe.
6. Where angle bends are specified, miter pipe ends to provide a tight joint connection with a maximum 1 inch gap tolerance.
7. Provide a minimum of 1 inch concrete cover from collar ends and 2 inches minimum clearance from inner to outer surface of concrete collar.



CONCRETE COLLAR

CULVERT INSTALLATION
SCALE: N.T.S

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CULVERT INSTALLATION

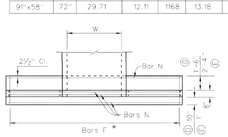
R-2.1.1 (601-606)	Signed Original On File
ADOPTED 8/69 REVISED 5/09	CHIEF HYDRAULICS ENGR.

QUANTITIES SHOWN BELOW ARE FOR ONE HEADWALL.

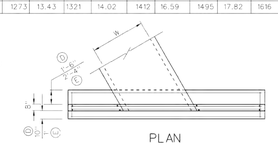
OVAL RCP SIZE W & H	LENGTH OF REINFORCING BARS SINGLE OVAL RCP 0° SKEW No. 5 F	No. 5 G	No. 4 M	No. 4 N	No. 4 K	15° SKEW No. 5 F	No. 5 G	No. 4 M	No. 4 N	No. 4 K	30° SKEW No. 5 F	No. 5 G	No. 4 M	No. 4 M1	No. 4 N	No. 4 K	45° SKEW No. 5 F	No. 5 G	No. 4 M	No. 4 M1	No. 4 N	No. 4 K
68"x43"	13'2"–9"	10'7"–10"	12'5"–8"	9'8"–2"	10'6	14'2"–9"	12'7"–10"	6'5"–6"	6'6"–10"	9'9"–8"	11'6	15'2"–9"	12'7"–10"	6'8"–4"	6'6"–10"	9'8'20"–4"	12'6	16'2"–9"	13'7"–10"	6'8"–5"	6'9"–2"	6'6"–10"	9'8'21"–10"	13'6
76"x48"	15'2"–9"	12'8"–4"	12'6"–4"	9'8'20"–4"	12'6"–6"	16'2"–9"	13'8"–4"	6'8"–2"	6'7"–7"	9'8'22	13'6"–6"	16'2"–9"	13'8"–4"	6'8"6	6'7"–7"	9'8'22"–9"	13'6"–6"	17'2"–9"	15'8"–4"	6'8"5"–10"	6'7"–7"	9'8'24"–5"	15'6"–6"
91"x58"	25'6"3"–9"	18'9"–8"	16'7"–7"	10'8'20"–4"	12'7"–6"	27'6"3"–9"	20'9"–8"	8'6"7"–5"	8'9"–11"	10'8'26"–4"	13'7"–6"	28'6"3"–9"	21'9"–8"	8'6"7"–3"	8'8'9"–11"	10'8'27"–9"	14'7"–6"	30'6"3"–9"	23'9"–8"	8'8'7"–1"	8'8'9"–11"	10'8'29"–2"	15'8"7"–6"
										DOUBLE OVAL RCP												
68"x43"	19'8'2"–9"	11'8"7"–10"	12'6"–8"	9'8'26"–8"	11'6"	21'8'2"–9"	12'8"7"–10"	6'6"5"–6"	6'6"–10"	9'8'28"–6"	12'6"	21'8'2"–9"	12'8"7"–10"	6'6"5"–4"	6'6"–11"	9'8'30"–2"	13'6"	24'8'2"–9"	16'8"7"–10"	6'6"5"–2"	6'6"–10"	9'8'33"–10"	16'6"
76"x48"	21'8'2"–9"	13'8"–4"	12'6"–4"	9'8'29"–10"	13'6"–6"	22'8'2"–9"	14'8"–4"	6'6"–2"	6'7"–7"	9'8'31"–10"	14'6"–6"	24'8'2"–9"	16'8"–4"	6'8"6	6'7"–7"	9'8'34"–2"	13'6"–6"	26'8'2"–9"	19'8"–4"	6'8"5"–2"	6'7"–7"	9'8'37"–10"	19'6"–6"
91"x58"	37'8'3"–9"	21'8'9"–8"	16'7"–7"	10'8'35"–9"	14'7"–6"	39'8'3"–9"	23'8'9"–8"	8'6"7"–5"	8'8'9"–11"	10'8'38"–2"	15'7"–6"	41'8'3"–9"	26'8'9"–8"	8'6"7"–3"	8'8'9"–11"	10'8'40"–5"	17'7"–6"	46'8'3"–9"	31'8'9"–8"	8'8'7"–1"	8'8'9"–11"	10'8'45"–4"	20'8'7"–6

QUANTITIES SHOWN BELOW ARE FOR TWO HEADWALLS.

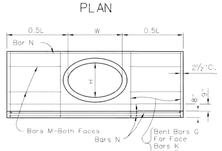
OVAL RCP SIZE W x H	RCP SIZE	OVAL RCP AREA SQ.FT.	SINGLE OVAL RCP 0° SKEW CONC. CU. YD.	0° SKEW STEEL LB.	15° SKEW CONC. CU. YD.	15° SKEW STEEL LB.	30° SKEW CONC. CU. YD.	30° SKEW STEEL LB.	45° SKEW CONC. CU. YD.	45° SKEW STEEL LB.	DOUBLE OVAL RCP 0° SKEW CONC. CU. YD.	0° SKEW STEEL LB.	15° SKEW CONC. CU. YD.	15° SKEW STEEL LB.	30° SKEW CONC. CU. YD.	30° SKEW STEEL LB.	45° SKEW CONC. CU. YD.	45° SKEW STEEL LB.	X	K	L	H
68"x43"	54"	16.62	7.19	628	7.82	683	7.98	720	8.54	767	9.86	789	10.58	848	11.07	897	12.11	1031	1'–2½"	2'–2"	12'–9"	6'–11"
76"x48"	60"	20.55	8.39	746	9.13	805	9.32	813	9.73	889	11.47	921	12.31	985	13.06	1075	15.66	1207	1'–2½"	2'–2½"	14'–3"	7'–5"
91"x58"	72"	29.71	12.11	1168	13.18	1273	13.43	1321	14.02	1412	16.59	1495	17.82	1616	18.61	1730	20.36	1965	1'–3½"	2'–3½"	17'	8'–5"



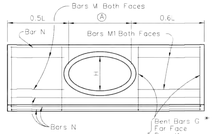
PLAN



SECTION FOR ALL HEADWALLS



ELEVATION SINGLE OVAL RCP 0° SKEW



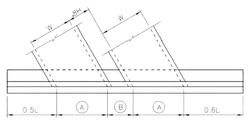
ELEVATION SINGLE OVAL RCP 0° TO 45° SKEW

NOTES:

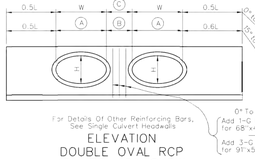
1. Concrete shall be class A or AA.
2. Reinforcing steel shall be deformed bars with maximum spacing of 18 inches set 2 ½ inches clear of surface of concrete except as noted. Bar ends shall be kept 1½ inches clear of surface of concrete. Reinforcing bars may be cut and bent in field.
3. Footings shown are at minimum depth and shall be extended if soil is unsuitable or liable to scour.
4. Culvert pipes to be set on a skew shall be mitered when headwalls are constructed. When headwalls are not constructed the pipes shall not be mitered except in overflow section.
5. Dimensions K, Y, L, and H to remain constant regardless of minor variations in wall thickness due to class of pipe used.
6. For estimating headwall quantities on skewed culverts:
0° to 10° – use quantities for 0° skew.
11° to 25° – use quantities for 15° skew.
26° to 40° – use quantities for 30° skew.
41° to 55° – use quantities for 45° skew.
over 55° – calculate quantities required.
Culverts should be installed on 5° increments where it is feasible

LEGEND:
- (A) – W/COS, SKEW ANGLE
- (B) – .8H/COS, SKEW ANGLE
- (C) – .8H @ RIGHT ANGLE TO PIPE
- (D) – FOR 68"X43" AND 76"X48"
- (E) – FOR 91"X58"
- * – @18" CENTERS 68"X43" AND 76"X48"; @12" CENTERS 91"X58"

CULVERT HEADWALL OVAL PIPE
SCALE: N.T.S



PLAN



For Details Of Other Reinforcing Bars, See Single Culvert Headwalls

ELEVATION DOUBLE OVAL RCP 15° TO 45° SKEW

0° To 45° Skew
Add 1–G Bar and 1–K Bar for 68"x43" and 76"x48"
Add 3–G Bars and 2–K Bars for 91"x58"

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CULVERT HEADEALLS 68" x 43" OVAL RCP TO 91" x 58" OVAL RCP

R-2.7.2 (502)	Signed Original On File
ADOPTED 8/69 REVISED 10/15	CHIEF HYDRAULICS ENGR.

NOT FOR CONSTRUCTION -MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C8.0 TYPICAL SECTIONS.dwg CONSTRUCTION DETAILS 4 May 18, 2018 11:12am by: todd.cochran

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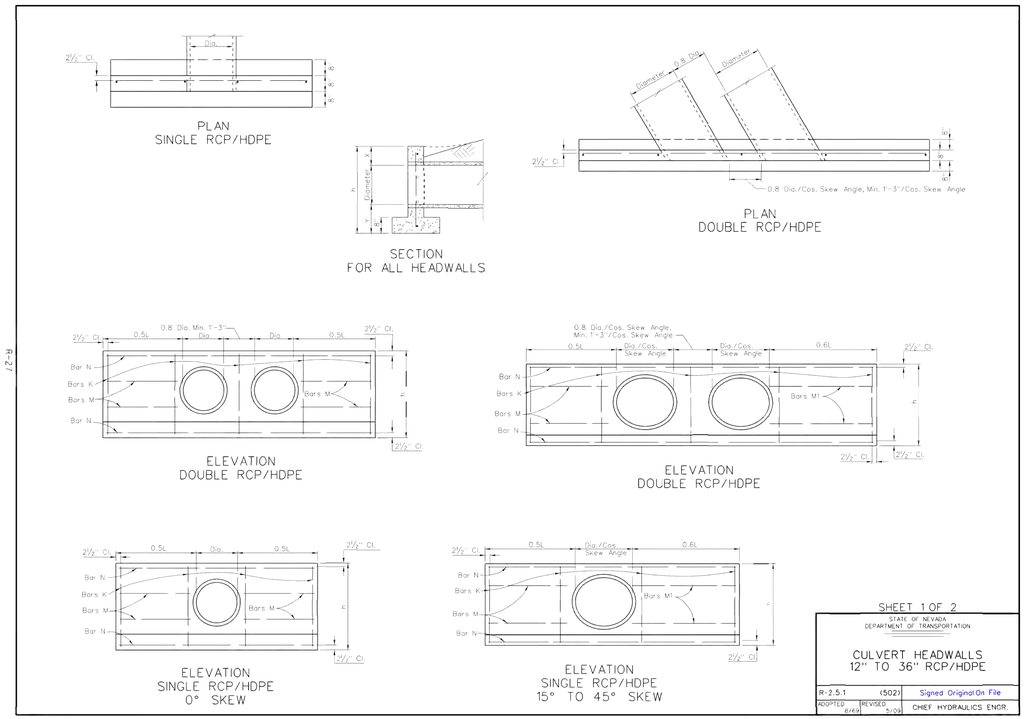
R-2.7



SHEET 1 OF 2
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CULVERT HEADWALLS
12" TO 36" RCP/HDPE

R-2.5.1	(502)	Signed Original On File
ADOPTED 6/69	REVISED 5-03	CHIEF HYDRAULICS ENGR.

CULVERT HEADWALL
12" - 36"
SCALE: N.T.S

QUANTITIES SHOWN BELOW ARE FOR ONE HEADWALL.

RCP/ HDPE SIZE DIA.	LENGTH OF REINFORCING BARS																			
	SINGLE RCP/HDPE					SINGLE OR DOUBLE RCP/HDPE									DOUBLE RCP/HDPE					
	0° -45°		0°	15°	30°	45°	0°	15°		30°		45°			0° -45°		0°	15°	30°	45°
	NO. 4	NO. 5	NO. 5	NO. 5	NO. 5	NO. 5	NO. 4	NO. 4	NO. 5	NO. 4	NO. 5	NO. 4	NO. 5	NO. 4	NO. 5	NO. 5	NO. 5	NO. 5	NO. 5	NO. 5
	K	N	N	N	N	N	M	M	M1	M	M1	M	M1	K	K	N	N	N	N	N
12"	602' -9"	204' -9"	285' -2"	285' -4"	285' -7"	285' -7"	201' -7"	181' -5"	182' -1"	181' -4"	182' -2"	181' -1"	182' -5"	207'	207'	207' -6"	207' -11"	207' -11"	207' -11"	208' -9"
15"	603' -1"	206'	286' -6"	286' -8"	287'	287'	202' -1"	181' -11"	182' -8"	181' -10"	182' -9"	181' -7"	183'	703' -1"	208' -6"	209' -2"	209' -7"	209' -7"	209' -7"	210' -7"
18"	603' -4"	207'	287' -8"	287' -10"	288' -2"	288' -2"	402' -5"	202' -3"	203' -1"	202' -2"	203' -2"	201' -11"	203' -5"	703' -4"	209' -9"	210' -6"	211'	211'	211'	212' -1"
21"	603' -8"	208'	288' -9"	288' -11"	289' -5"	289' -5"	402' -9"	202' -7"	203' -6"	202' -6"	203' -7"	202' -3"	203' -10"	703' -8"	211' -2"	212'	212' -7"	212' -7"	212' -7"	213' -10"
24"	603' -11"	209'	289' -10"	290' -1"	290' -7"	290' -7"	403' -2"	203'	204'	202' -11"	204' -1"	202' -8"	204' -4"	903' -11"	212' -7"	213' -7"	214' -2"	214' -2"	214' -2"	215' -8"
27"	604' -2"	210'	290' -10"	291' -1"	291' -9"	291' -9"	403' -6"	203' -4"	204' -4"	203' -3"	204' -5"	203'	204' -8"	904' -2"	214' -1"	215' -1"	215' -10"	215' -10"	215' -10"	217' -6"
30"	604' -6"	211' -3"	291' -3"	291' -7"	292' -7"	292' -7"	404'	203' -10"	205'	203' -9"	205' -1"	203' -6"	205' -4"	904' -6"	215' -9"	216' -11"	217' -9"	217' -9"	217' -9"	219' -7"
33"	604' -10"	212' -3"	293' -4"	293' -8"	294' -4"	294' -4"	404' -3"	204' -1"	205' -3"	204'	205' -4"	203' -9"	205' -7"	904' -10"	217' -3"	218' -6"	219' -5"	219' -5"	219' -5"	221' -5"
36"	1085' -1"	213' -3"	294' -5"	294' -9"	295' -7"	295' -7"	604' -8"	304' -6"	305' -9"	304' -5"	305' -10"	304' -2"	306' -1"	1185' -1"	218' -8"	220'	220'	220'	220'	223' -2"

QUANTITIES SHOWN BELOW ARE FOR TWO HEADWALLS.

RCP/ HDPE SIZE DIA.	RCP/ HDPE AREA SQ. FT.	SINGLE RCP/HDPE								DOUBLE RCP/HDPE								X	Y	L	h
		0° SKEW		15° SKEW		30° SKEW		45° SKEW		0° SKEW		15° SKEW		30° SKEW		45° SKEW					
		CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB				
12"	0.79	1.00	46	1.09	49	1.10	49	1.14	50	1.41	59	1.52	62	1.58	64	1.73	67	10"	1' - 2"	4'	3'
15"	1.23	1.32	55	1.45	58	1.47	59	1.52	60	1.80	70	1.93	73	2.01	75	2.18	79	10'/4"	1' - 2'/4"	5'	3' - 3'/2"
18"	1.77	1.62	69	1.77	73	1.80	74	1.85	75	2.19	85	2.31	89	2.40	91	2.60	96	10'/2"	1' - 2'/4"	5' - 9"	3' - 3"
21"	2.41	1.95	77	2.13	82	2.16	83	2.23	85	2.59	95	2.79	101	2.90	103	3.13	108	10'/4"	1' - 2'/4"	6' - 6"	3' - 10'/4"
24"	3.14	2.27	96	2.48	102	2.52	103	2.60	105	3.01	116	3.24	122	3.37	125	3.64	131	11"	1' - 3"	7' - 3"	4' - 2"
27"	3.98	2.62	105	2.86	111	2.90	112	2.99	114	3.48	128	3.75	134	3.89	137	4.21	144	11"	1' - 3"	8'	4' - 5"
30"	4.91	3.08	117	3.37	123	3.41	124	3.44	127	4.07	141	4.38	148	4.55	152	4.90	159	11'/2"	1' - 3'/2"	9'	4' - 9"
33"	5.94	3.50	125	3.82	132	3.87	134	3.98	137	4.62	153	4.98	160	5.17	164	5.56	172	11'/4"	1' - 3'/4"	9' - 9"	5' -1'/2"
36"	7.07	3.93	161	4.29	169	4.34	171	4.47	174	5.19	190	5.59	200	5.80	204	6.24	213	1'	1' - 4"	10' - 6"	5' - 4"

NOTES:

1. Concrete shall be class A or AA.
2. Reinforcing steel shall be deformed bars with maximum spacing of 18 inches set 2 ½ inches clear of surface at concrete except as noted. Bar ends shall be kept 1½ inches clear of surface of concrete. Reinforcing bars may be cut and bent in field.
3. Footings shown are of minimum depth and shall be extended if soil is unsuitable or liable to scour.
4. Culvert pipes to be set on a skew shall be mitered when headwalls are constructed. When headwalls are not constructed the pipes shall not be mitered except in overflow section.
5. For estimating headwall quantities on skewed culverts
   0° to 10° - use quantities for 0° skew.
   11° to 25° - use quantities for 15° skew.
   26° to 40° - use quantities for 30° skew.
   41° to 55° - use quantities for 45° skew.
   over 55° - calculate quantities required.
   Culverts should be installed on 5° increments where it is feasible.
6. Dimensions X,Y,L, and h to remain constant regardless of minor variations in wall thickness due to class or type of pipe used.
7. See sheet R-2.9.1 for details if connecting to HDPE pipe.

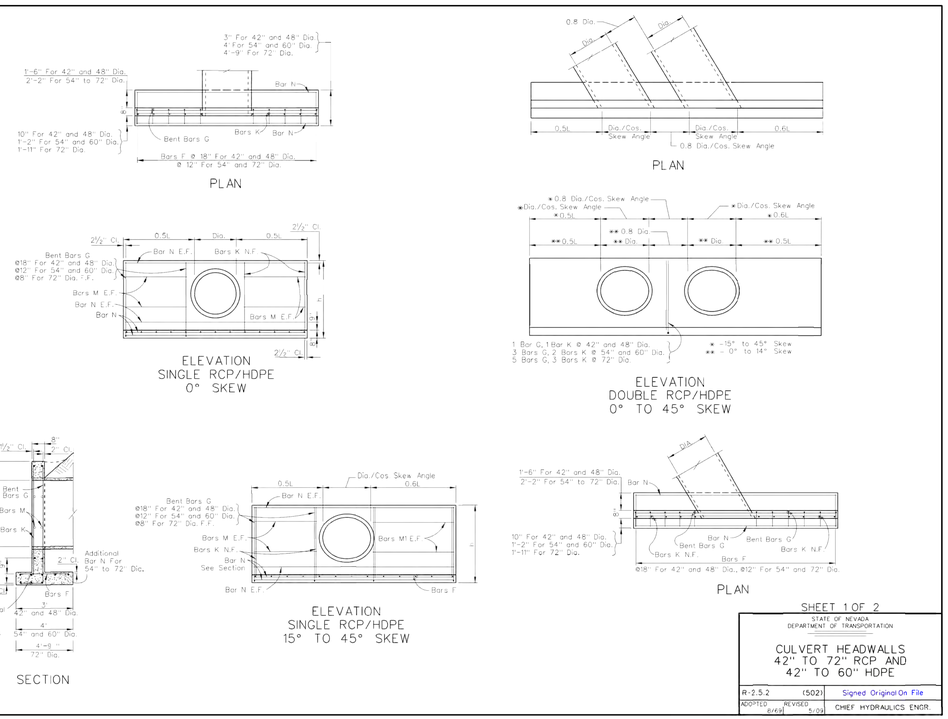
SHEET 2 OF 2
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CULVERT HEADWALLS
12" TO 36" RCP/HDPE

R-2.5.1.1	(502)	Signed Original On File
ADOPTED 6/69	REVISED 5-03	CHIEF HYDRAULICS ENGR.

R-2.8

R-2.9



SHEET 1 OF 2
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CULVERT HEADWALLS
42" TO 72" RCP AND
42" TO 60" HDPE

R-2.5.2	(502)	Signed Original On File
ADOPTED 6/69	REVISED 5/09	CHIEF HYDRAULICS ENGR.

CULVERT HEADWALL
42" - 72"
SCALE: N.T.S

QUANTITIES SHOWN BELOW ARE FOR ONE HEADWALL.

RCP/ HDPE SIZE DIA.	LENGTH OF REINFORCING BARS																			
	SINGLE RCP/HDPE																			
	0° SKEW				15° SKEW				30° SKEW				45° SKEW							
	NO. 5		NO. 4		NO. 5		NO. 4		NO. 5		NO. 4		NO. 5		NO. 4					
	F	G	M	N	K	F	G	M	M1	N	K	F	G	M	M1	N	K	F	G	M	M1	N	K
42"	1282'-9"	1187'-6"	1285'-5"	985'-3"	1085'-8"	1382'-9"	1187'-6"	685'-3"	686'-6"	985'6"-7"	1185'-8"	1382'-9"	1187'-6"	685'-1"	686'-6"	985'7"	1185'-8"	1482'-9"	1287'-6"	684'-11"	686'-6"	985'-11"	1285'-8"
48"	1382'-9"	1287'-6"	1286'-3"	985'7"-6"	1086'-3"	1482'-9"	1287'-6"	686'-1"	686'-6"	985'9"-6"	1186'-3"	1582'-9"	1488'-1"	685'-11"	687'-5"	985'9"-6"	1186'-3"	1582'-9"	1488'-1"	685'-9"	687'-5"	985'20"-6"	1186'-3"
54"	2183'-9"	1689'-1"	1687'-1"	1086'19"-9"	1286'-10"	2383'-9"	1889'-1"	886'-11"	888'-5"	1086'21"-6"	1386'-10"	2383'-9"	1889'-1"	886'-9"	888'-5"	10822'	1386'-10"	2483'-9"	1989'-1"	886'-7"	888'-5"	10823'-2"	1486'-10"
60"	2383'-9"	1889'-8"	1687'-9"	1086'21"-9"	1487'-5"	2583'-9"	2089'-8"	887'-7"	889'-4"	1086'23"-8"	1587'-5"	2583'-9"	2089'-8"	887'-5"	889'-4"	10824'-3"	1587'-5"	2783'-9"	2289'-8"	887'-3"	889'-4"	10825'-6"	1687'-5"
72"	2784'-6"	3081'-7"	2089'-11"	12826'	1688'-7"	2984'-6"	3381'-7"	1089'-2"	1091'-3"	12828'-3"	1888'-7"	3084'-6"	3481'-7"	1089'	1091'-3"	12829'	1888'-7"	3284'-6"	3781'-7"	1088'-10"	1091'-3"	12830'-6"	1988'-7"
DOUBLE RCP/HDPE																				
42"	1682'-9"	1187'-6"	1285'-5"	982'-6"	1185'-8"	1782'-9"	1287'-6"	685'-3"	686'-6"	982'3"-11"	1285'-8"	1882'-9"	1387'-6"	685'-1"	686'-6"	9824'-3"	1385'-8"	2082'-9"	1587'-6"	684'-11"	686'-6"	9826'-10"	1585'-8"
48"	1882'-9"	1388'-1"	1286'-3"	9824'-9"	1386'-3"	1982'-9"	1488'-1"	686'-1"	687'-5"	9826'-6"	1486'-3"	2082'-9"	1588'-1"	685'-11"	687'-5"	9827'-10"	1586'-3"	2282'-9"	1788'-1"	685'-9"	687'-5"	9830'-9"	1786'-3"
54"	2383'-9"	1989'-1"	1687'	10827'-10"	1486'-10"	2383'-9"	2189'-1"	886'-11"	888'-5"	10829'-10"	1586'-10"	3283'-9"	2289'-1"	886'-9"	888'-5"	10831'-4"	1686'-10"	3683'-9"	2689'-1"	886'-7"	888'-5"	10834'-6"	1886'-10"
60"	3283'-9"	2189'-8"	1687'-9"	10830'-9"	1487'-5"	3483'-9"	2489'-8"	887'-7"	889'-4"	10833'	1587'-5"	3683'-9"	2589'-8"	887'-5"	889'-4"	10834'-8"	1787'-5"	4083'-9"	2989'-8"	887'-3"	889'-4"	10838'-3"	1987'-5"
72"	3784'-6"	3581'-7"	2089'-11"	12836'-10"	1988'-7"	4084'-6"	3981'-7"	1089'-2"	1091'-3"	12839'-5"	2188'-7"	4284'-6"	4281'-7"	1089'	1091'-3"	12841'-5"	2288'-7"	4684'-6"	4881'-7"	1088'-10"	1091'-3"	12845'-10"	2588'-7"

QUANTITIES SHOWN BELOW ARE FOR TWO HEADWALLS.

RCP/ HDPE SIZE DIA.	RCP/ HDPE AREA SQ. FT.	SINGLE RCP/HDPE								DOUBLE RCP/HDPE								X	Y	L	h
		0° SKEW		15° SKEW		30° SKEW		45° SKEW		0° SKEW		15° SKEW		30° SKEW		45° SKEW					
		CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB	CONC CU. YD	STEEL LB				
42"	9.62	6.10	571	6.66	624	6.76	627	6.98	666	8.18	692	8.50	748	9.15	790	9.91	877	1' - 0⅞"	2' - 0⅞"	12"	6' - 6½"
48"	12.57	7.41	688	8.10	745	8.21	781	8.45	792	9.88	829	10.65	899	11.07	935	11.96	1030	1' - 1"	2' - 1"	15" - 9"	7' - 2"
54"	15.90	9.81	990	10.71	1091	10.87	1096	11.21	1146	13.11	1236	14.12	1340	14.68	1395	15.86	1562	1' - 1½"	2' - 1½"	15' - 6"	7' - 9"
60"	19.64	11.29	1137	12.32	1244	12.50	1250	12.88	1332	15.08	1407	16.25	1537	16.88	1596	18.25	1774	1' - 2"	2' - 2"	17"	8' - 4"
72"	28.27	15.62	1825	17.05	2002	17.30	2045	17.83	2170	20.87	2247	22.49	2464	23.36	2596	25.26	2881	1' - 3"	2' - 3"	20' - 3"	9' - 6"

NOTES:

1. Concrete shall be class A or AA.
2. Reinforcing steel shall be deformed bars with maximum spacing of 18 inches set 2 ½ inches clear of surface of concrete except as noted. Bar ends shall be kept 1½ inches clear of surface of concrete. Reinforcing bars may be cut and bent in field.
3. Footings shown are of minimum depth and shall be extended if soil is unsuitable or liable to scour.
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   26° to 40° - use quantities for 30° skew.
   41° to 55° - use quantities for 45° skew.
   over 55° - calculate quantities required.
   Culverts should be installed on 5° increments where it is feasible.
6. Dimensions X,Y,L, and h to remain constant regardless of minor variations in wall thickness due to class or type of pipe used.
7. See sheet R-2.9.1 for details if connecting to HDPE pipe.

SHEET 2 OF 2
STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

CULVERT HEADWALLS
42" TO 72" RCP AND
42" TO 60" HDPE

R-2.5.2.1	(502)	Signed Original On File
ADOPTED 6/69	REVISED 5/09	CHIEF HYDRAULICS ENGR.

No.	DATE
1	05/18/2018
2	ADDRESS COMMENTS FROM CARSON CITY
3	
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REVISIONS

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RENO, NEVADA 89511
PHONE: (775) 787-7552

STATE OF NEVADA
REGISTERED
No. 9017
Professional Engineer
JEFFREY T. COCHRAN

5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA)
FLOOD CHANNEL PLANS

SHEET TITLE:
CONSTRUCTION DETAILS

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C8.4

NOT FOR CONSTRUCTION -MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C8.0 TYPICAL SECTIONS.dwg CONSTRUCTION DETAILS 5 May 18, 2018 11:13am by: todd.cochran

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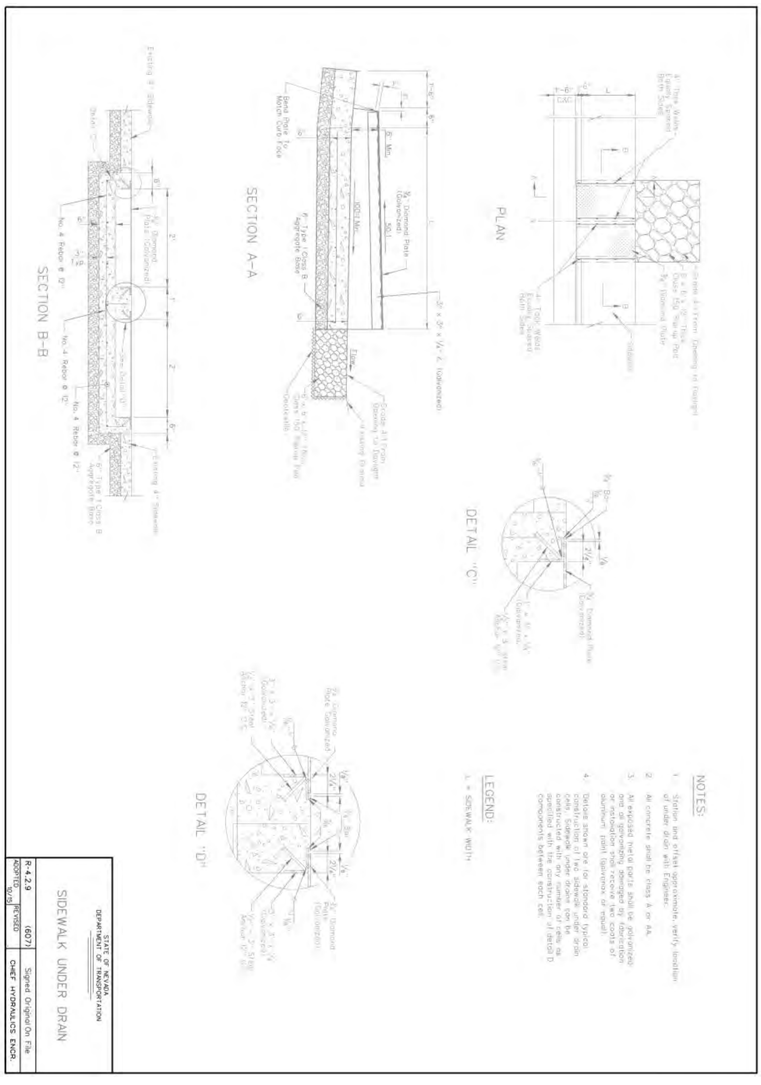

PROJECT: LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS	CLIENT: RYDER NV MANAGEMENT, LLC	SCALE: SEE PLANS
SHEET TITLE: CONSTRUCTION DETAILS	985 DAMONTE RANCH PARKWAY SUITE 140 RENO, NEVADA 89521 PHONE: 775-823-3788	DRAWN BY: JK
		DESIGNED BY: CJ
		CHECKED BY: TC

JEFFREY T. COCHRAN — No. 017729 — STATE OF NEVADA — REGISTERED PROFESSIONAL ENGINEER — 12/20/2018 — exp. 12/31/19

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No.	REVISIONS	DATE
7		
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2		
1	ADDRESS COMMENTS FROM CARSON CITY	05/18/2018

SHEET NUMBER C8.5

PROJECT NO. 018016015

DATE 12/20/2017

NOT FOR CONSTRUCTION -MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C8.0 TYPICAL SECTIONS.dwg TYPICAL SECTIONS May 18, 2018 11:11am by: todd.cochran

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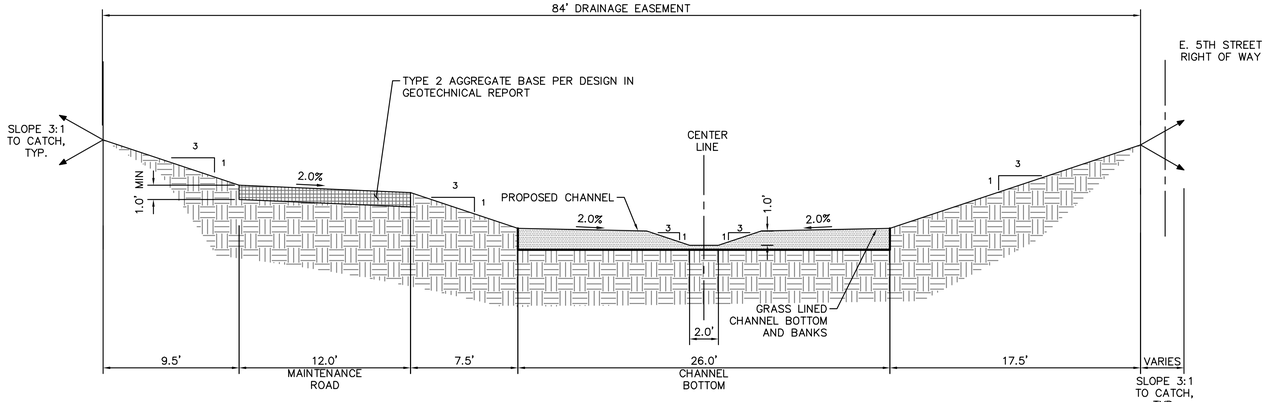
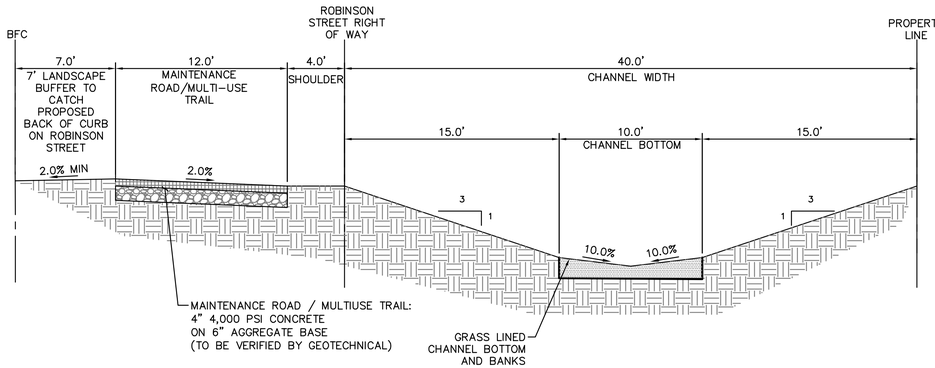
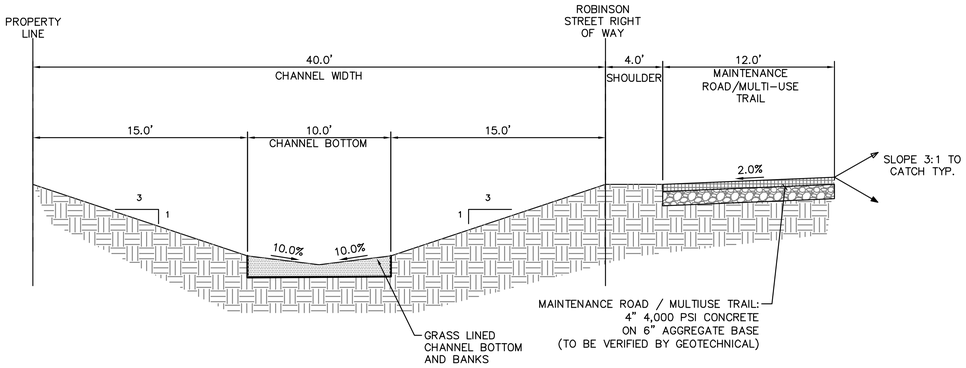


KING'S CANYON CREEK (KCC) CHANNEL
TYPICAL SECTION C-C
SCALE: 1'=5"



ASH CANYON CREEK (ACC) CHANNEL (WEST OF SPINE ROAD)
TYPICAL SECTION D-D
SCALE: 1'=5"



ASH CANYON CREEK (ACC) CHANNEL (EAST OF SPINE ROAD)
TYPICAL SECTION D-D
SCALE: 1'=5"

No.	REVISIONS	DATE
1	ADDRESS COMMENTS FROM CARSON CITY	05/18/2018
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STATE OF NEVADA REGISTERED No. 017787 Professional Engineer JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE:	SEE PLANS
DRAWN BY:	JK
DESIGNED BY:	CJ
CHECKED BY:	TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT:
LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS

SHEET TITLE:
TYPICAL SECTIONS

DATE
12/20/2017

PROJECT NO.
018016015

SHEET NUMBER
C8.0

NOT FOR CONSTRUCTION -MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C9.0 EROSION CONTROL.dwg EROSION CONTROL PLAN May 18, 2018 11:13am by: todd.cochran
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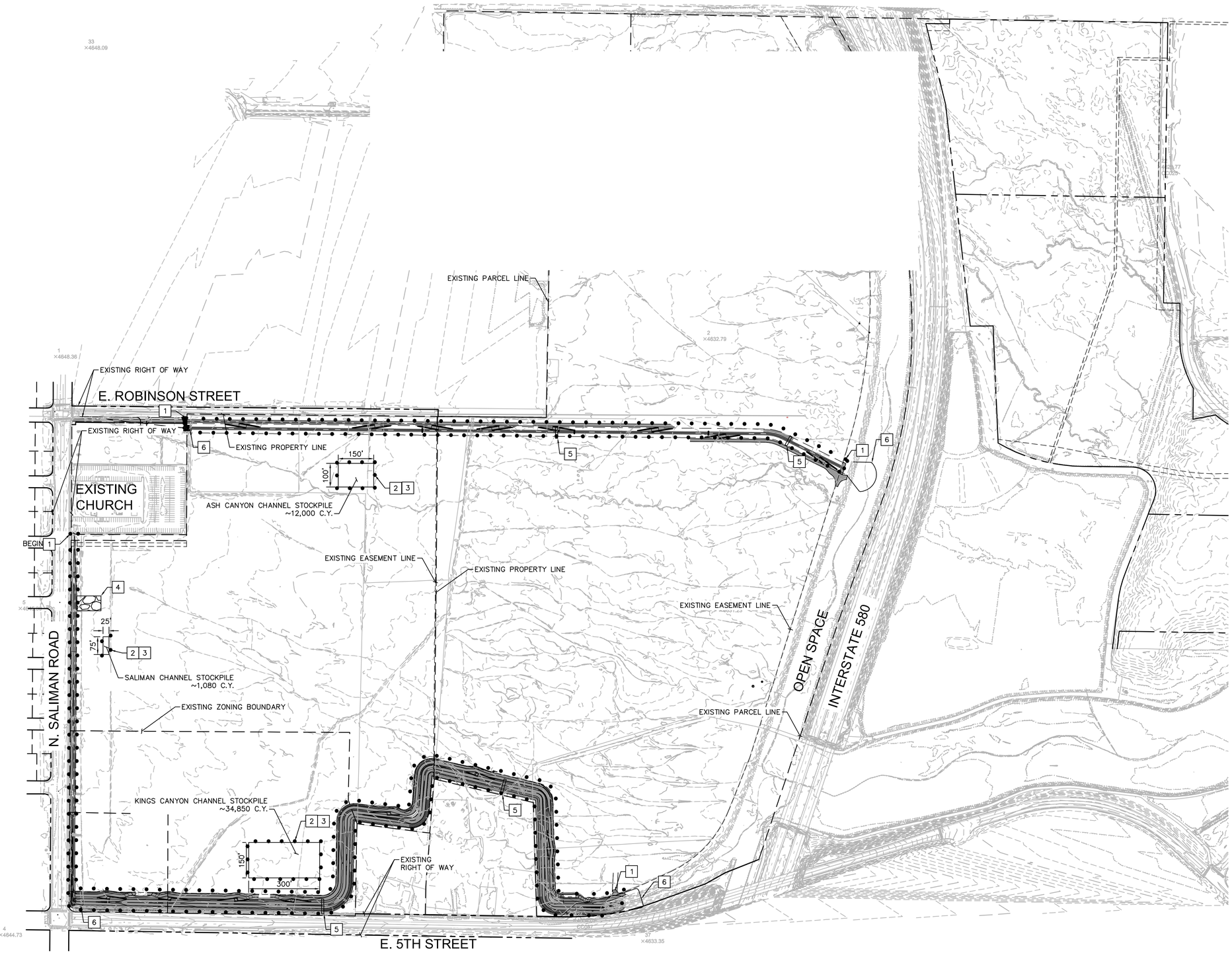

LEGEND

- STAKED FIBER ROLL OR SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- STOCKPILE & STAGING AREA
- CONCRETE WASH STATION
- INLET PROTECTION

EROSION CONTROL NOTES

1. INSTALL STAKED FIBER ROLL OR SILT FENCING, CONTRACTOR TO VERIFY WITH ENGINEER. SEE DETAIL 1 OR 7 ON SHEET C9.1
2. INSTALL STAKED FIBER ROLL AT TOE OF MATERIAL STOCKPILE. SEE DETAIL 1 ON SHEET C9.1.
3. COVER AND SURROUND BASE OF MATERIAL STOCKPILE AT END OF DAY. SEE DETAIL 2 ON SHEET C9.1
4. INSTALL STABILIZED CONSTRUCTION ENTRANCE. SEE DETAIL 5 ON SHEET C9.1
5. INSTALL TEMPORARY CHECK DAM
6. INSTALL RIP RAP OUTLET PROTECTION. SEE DETAIL 8 ON SHEET C9.1.

GENERAL NOTES

1. PROTECT IN PLACE ALL EXISTING DRAINAGE INLETS.
2. REFER TO PROJECT SWPPP FOR ADDITIONAL INFORMATION

NORTH

GRAPHIC SCALE IN FEET
0 100 200 400

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

No.	REVISIONS	DATE
1	ADDRESS COMMENTS FROM CARSON CITY	05/18/2018
2		
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STATE OF NEVADA
REGISTERED
Professional Engineer
JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE: SEE PLANS
DRAWN BY: JK
DESIGNED BY: CJ
CHECKED BY: TC

CLIENT:
RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

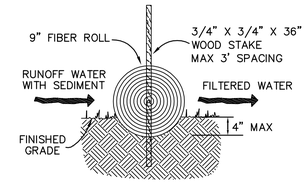
PROJECT:
LOMPA RANCH NORTH (SPA)
FLOOD CHANNEL PLANS

SHEET TITLE:
EROSION CONTROL PLAN

DATE
12/20/2017

PROJECT NO.
018016015

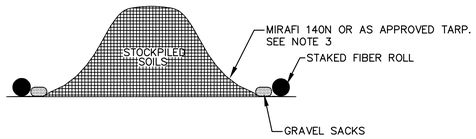
SHEET NUMBER
C9.0



NOTES:

1. PREPARE SLOPE BEFORE THE FIBER ROLL PROCEDURE IS STARTED.
2. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" TO 4" DEEP, OR AS SHOWN ON PLANS.
3. USE A STRAIGHT BAR TO DRIVE HOLES THROUGH THE FIBER ROLL AND INTO THE SOIL FOR WOODEN STAKES.
4. DRIVE THE STAKE THROUGH THE PREPARED HOLE INTO THE SOIL. LEAVE ONLY ONE OR TWO INCHES OF STAKE EXPOSED ABOVE FIBER ROLL.
5. INSTALL STAKES THREE FEET ON CENTER THROUGH THE LENGTH OF THE FIBER ROLL.
6. ADJACENT FIBER ROLLS SHALL TIGHTLY ABUT AND OVERLAP A MINIMUM OF 3 FEET.
7. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND FIBER ROLL.

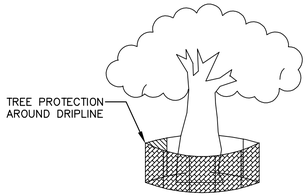
1 STAKED FIBER ROLL
NTS



NOTES:

1. STOCKPILED MATERIAL SHALL BE LOCATED WITHIN THE LIMITS OF CONSTRUCTION DELINEATED ON EROSION CONTROL PLAN. SOILS FROM THE STOCKPILE SHALL BE SELF CONTAINED AS DEPICTED ABOVE AND REMAIN COMPLETELY SEPARATE AT ALL TIMES.
2. CONTRACTOR SHALL INSTALL STAKED FIBER ROLLS AROUND THE PERIMETER OF STOCKPILE.
3. STOCKPILES SHALL BE COVERED WITH MIRAFI 140N OR APPROVED TARP MATERIAL THAT IS SECURELY WEIGHTED AROUND THE ENTIRE PERIMETER WITH GRAVEL SACKS.
4. ALL STOCKPILED MATERIALS SHALL BE REMOVED FROM THE SITE PRIOR TO FINAL INSPECTION.

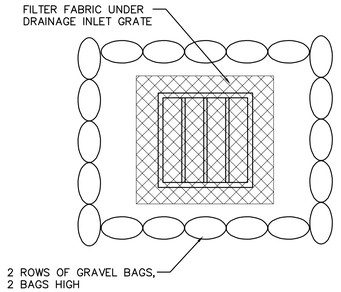
2 STOCKPILE (TYP)
NTS



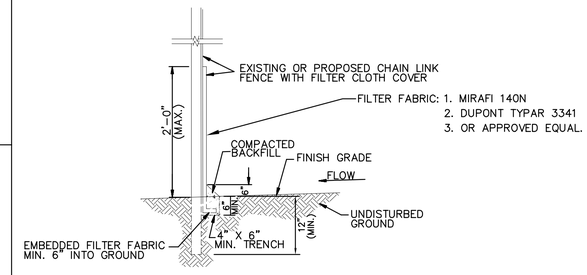
NOTES:

1. TREE PROTECTION SHALL ADHERE TO THE CITY OF MENLO PARK REQUIREMENTS. SEE TREE PROTECTION PLANS FOR ADDITIONAL DETAILS.
2. TREE PROTECTION FENCING SHALL BE CHAIN LINK AND STAKED AS APPROVED BY THE ENGINEER.

3 TREE PROTECTION DETAIL
NTS



4 DRAINAGE INLET PROTECTION
NTS

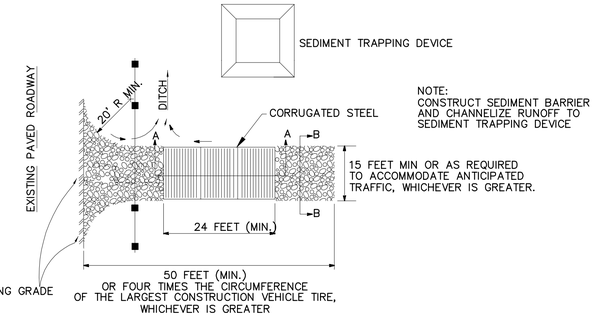


CROSS-SECTION

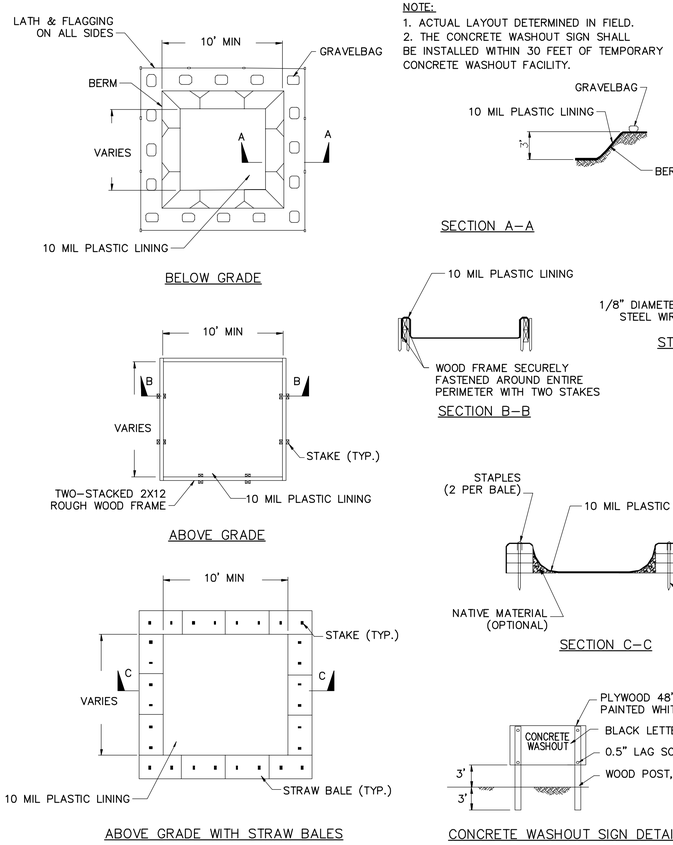
NOTE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

7 SILT FENCE/SEDIMENTATION DETAIL
NTS

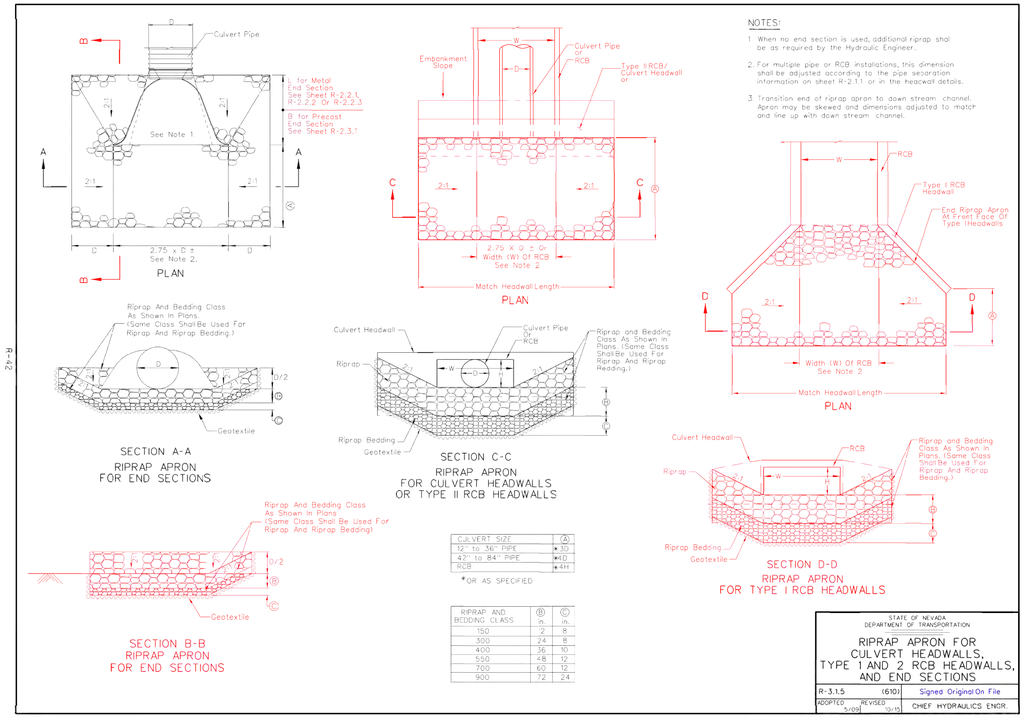


5 CONSTRUCTION ENTRANCE
NTS



NOTE:
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF TEMPORARY CONCRETE WASHOUT FACILITY.

6 CONCRETE WASHOUT DETAIL
NTS



CULVERT SIZE	Ⓐ
12" to 36" PIPE	*30
42" to 84" PIPE	*0.D
RCB	*W

*OR AS SPECIFIED

RIPRAP AND BEDDING CLASS	Ⓑ in.	Ⓒ in.
150	12	8
300	24	8
400	36	10
550	48	12
700	60	12
900	72	24

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
RIPRAP APRON FOR CULVERT HEADWALLS, TYPE 1 AND 2 RCB HEADWALLS, AND END SECTIONS

R-3.1.5	(610)	Signed Original On File
ADOPTED 1-09	REVISED 12-15	CHIEF HYDRAULICS ENGR.

8 CULVERT OUTLET PROTECTION
NTS

No.	DATE	REVISIONS
1	05/18/2018	ADDRESS COMMENTS FROM CARSON CITY
2		
3		
4		
5		
6		
7		

Kimley»Horn
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5370 KIETZKE LANE, SUITE 100
RENO, NEVADA 89511
PHONE: (775) 787-7552

STATE OF NEVADA REGISTERED No. 017787 Professional Engineer JEFFREY T. COCHRAN
5/17/2018
exp. 12/31/18

SCALE:	SEE PLANS	
DRAWN BY:	JK	
DESIGNED BY:	CJ	
CHECKED BY:	TC	

CLIENT: RYDER NV MANAGEMENT, LLC
985 DAMONTE RANCH PARKWAY
SUITE 140
RENO, NEVADA 89521
PHONE: 775-823-3788

PROJECT: LOMPA RANCH NORTH (SPA) FLOOD CHANNEL PLANS

SHEET TITLE: EROSION CONTROL DETAILS

DATE 12/20/2017

PROJECT NO. 018016015

SHEET NUMBER C9.1

NOT FOR CONSTRUCTION -MAY 17, 2018

Drawing name: K:\amt_waterresources\018016015_lomparanch_floodchannels\CAD\Plan Set\C9.1 EROSION CONTROL DETAILS.dwg EROSION CONTROL DETAILS May 18, 2018 11:13am by: todd.cochran
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

Appendix B NVCRIS RECORDS SEARCH RESULTS

Selected Features from Archaeological Inventory

Report ID	Lead Agency	Lead Agency Report ID	Report Date	Report Title	Report Author
13-2			1/1/1900 12:00:00 AM	Nevada State Museum: Carson Sewer Reconnaissance	
18-144	BLM Battle Mountain	6-163	6/3/1905 12:00:00 AM	Cultural Resources Report: US 50 Overlay. E.A. 71069: Ndot-095-81C (from NADB)	Moore, J.
13-8			5/29/1905 12:00:00 AM	Archaeological Resources Short Report: Proposed Juvenile Facility, E. Fifth Street Site (Nas/NC) (from NADB)	Dansie, Amy
13-13			5/30/1905 12:00:00 AM	Archaeological Resources Short Report: Carson City Treatment Plant Expansion Project - Reconnaissance (Project #13-13, Contract NAS #234-C) (from NADB)	Seelinger, Evelyn
13-7			5/29/1905 12:00:00 AM	Report of Field Investigations: State Public Works Projects (from NADB)	Dansie, Amy
13-20			5/31/1905 12:00:00 AM	Inventory and Assessment of Historical Landmarks and Structures Encountered by the Proposed U.S. 395 Carson City Bypass Corridors (from NADB)	Steinberg, Larry Seth and Paula A. Sutton
13-20			5/31/1905 12:00:00 AM	Inventory and Assessment of Historical Landmarks and Structures Encountered by the Proposed U.S. 395 Carson City Bypass Corridors (from NADB)	Steinberg, Larry Seth and Paula A. Sutton
13-20			5/31/1905 12:00:00 AM	Inventory and Assessment of Historical Landmarks and Structures Encountered by the Proposed U.S. 395 Carson City Bypass Corridors (from NADB)	Steinberg, Larry Seth and Paula A. Sutton
13-47			6/7/1905 12:00:00 AM	Cultural Resources Short Report: The Archaeological Reconnaissance of a Parcel Between Airport and Edmonds Roads, East of Carson City, Nevada (from NADB)	Zeier, Charles D.
NSM 13-120			1/1/1900 12:00:00 AM		

Selected Features from Archaeological Inventory

Report ID	Lead Agency	Lead Agency Report ID	Report Date	Report Title	Report Author
505	Army		9/5/2006 12:00:00 AM	Cultural Resouces Inventory of Carson City, Nevada, Corporate Yard Hydraulic Improvements	Simons, Dwight; Kimball, Monique; and Robert Kautz
6622			10/7/2010 12:00:00 AM	A Class III Cultural Resource Inventory for the Proposed Robinson Street Waterline Between Saliman Road and Butti Drive, Carson City, Nevada	Drews, Michael
6622			10/7/2010 12:00:00 AM	A Class III Cultural Resource Inventory for the Proposed Robinson Street Waterline Between Saliman Road and Butti Drive, Carson City, Nevada	Drews, Michael
9265	FHWA	MS-0025(023)	1/23/2013 12:00:00 AM	A Class I Archaeological Inventory and Historic Architecture Assessment for the Proposed East 5th Street Bike & Pedestrian Improvements Project in Carson City, Carson City County, Nevada	Slaughter, Suzan R.
5651	NDOT		6/1/2009 12:00:00 AM	Persistent Places--Persistent Concepts: Excavations at a Prehistoric Great Basin Village Site, Carson City, Nevada	Hohmann, John W.

Selected Features from Archaeological Sites

Trinomial	Site Age	Resource Type	Site Description	SHPO Eligibility	SHPO Criteria	SHPO Date
DO704	Unknown					
OR203	Historic					
OR50	Prehistoric					
OR58	Historic					
OR13	Historic					
OR2	Prehistoric					
OR3	Prehistoric/Historic	Site	open lithic scatter with groundstone and possible aboriginal camp	Ineligible		

Selected Features from National & State Register

National Reg. Reference No.	Historic Name	Current Name	State Reg. Listing	National Reg. Listing	Level of Significance	Criterion A	Criterion B	Criterion C	Criterion D
15000320	Nevada State Prison	Nevada Territorial Prison		10/2/2015 12:00:00 AM	State	y	n	n	y

Selected Features from Rural Architectural Inventory

Report ID	Lead Agency	Lead Agency Report ID	Report Date	Report Title	Report Author
505			09/2006	Cultural Resouces Inventory of Carson City, Nevada, Corporate Yard Hydraulic Improvements	Simons, Dwight; Kimball, Monique; and Robert Kautz

Selected Features from Urban Architectural Inventory

Report ID	Lead Agency	Lead Agency Report ID	Report Date	Report Title	Report Author
A_11			1978	Inventory of Structures and Impacts by Corridor (Final Inventory of Buildings Located During the Field Survey of the Eight Alternative Carson City Bypasses)	
A_23			1995	Carson City Bypass, Carson City, Nevada: Historical/Architectural Survey Report - Phase I	Koval, Ana B.
A_715			2006	East Carson City II, Carson City, Nevada - Historic Resources Survey and Inventory Report	Painter, Diana
A_21			1999	Historical Architectural Survey Report - Phase II - Carson Bypass on US Highway 395 in Carson City	
20598	HPF	P14AS00012(1)	2015	An Architectural Inventory of the Nevada State Prison, Carson City, Nevada	Ross-Hauer, JoEllen

Selected Features from Urban Architectural Resources

Resource ID	Historic Name	Current Name	City	County	SHPO Eligibility	SHPO Criteria	SHPO Date
B551	Nevada State Prison	Nevada State Prison	Carson City	Carson Cit	No Info	<Null>	
B4956	Unknown	207/209 S Pratt Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4957	901 E Second St	International Soundex Reunion Registry	Carson City	Carson Cit	Ineligible	<Null>	
B4980	Unknown	222 S Harbin Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4976	Unknown	918 E Fifth St	Carson City	Carson Cit	Eligible	<Null>	
B4977	Unknown	240 S Harbin Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4978	Unknown	230 S Harbin Ave	Carson City	Carson Cit	Ineligible	<Null>	
B552	Unknown	Unknown	Carson City	Carson Cit	No Info	<Null>	
B380	Unknown	Unknown	Carson City	Carson Cit	No Info	<Null>	
B558	Unknown	Unknown	Carson City	Carson Cit	No Info	<Null>	
B555	Unknown	Thurman's Ranch House Restaurant	Carson City	Carson Cit	No Info	<Null>	
B554	Unknown	Unknown	Carson City	Carson Cit	No Info	<Null>	
B557	Unknown	Unknown	Carson City	Carson Cit	No Info	<Null>	
B556	Unknown	Super Sport Motors	Carson City	Carson Cit	No Info	<Null>	
B553	Unknown	Unknown	Carson City	Carson Cit	No Info	<Null>	
B4972	Unknown	311 N Pratt Ave	Carson City	Carson Cit	Eligible	<Null>	
B4970	Unknown	301 N Pratt Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4985	Unknown	910 E Telegraph St	Carson City	Carson Cit	Ineligible	<Null>	
B4986	Unknown	914 E Telegraph St	Carson City	Carson Cit	Ineligible	<Null>	

Selected Features from Urban Architectural Resources

Resource ID	Historic Name	Current Name	City	County	SHPO Eligibility	SHPO Criteria	SHPO Date
B4987	Unknown	412 N Harbin Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4988	Unknown	418 N Harbin Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4989	Unknown	500 N Harbin Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4990	Unknown	528 N Harbin Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4952	Unknown	221 S Pratt Ave	Carson City	Carson Cit	Eligible	<Null>	
B4953	Unknown	229 S Pratt Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4979	Unknown	224/226 S Harbin Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4950	Unknown	906/910 E Fifth St	Carson City	Carson Cit	Ineligible	<Null>	
B4949	Unknown	421 S Pratt Ave	Carson City	Carson Cit	Ineligible	<Null>	
B559	Wungunema House	Unknown	Carson City	Carson Cit	No Info	<Null>	
B550	Unknown	Lompa Ranch	Carson City	Carson Cit	No Info	<Null>	
B4984	Unknown	228 N Harbin Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4981	Unknown	204 N Harbin Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4982	Unknown	212 N Harbin Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4983	Unknown	909 E Telegraph St	Carson City	Carson Cit	Ineligible	<Null>	
B4959	Unknown	201 N Pratt	Carson City	Carson Cit	Ineligible	<Null>	
B4960	Unknown	209 N Pratt Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4962	Unknown	211 N Pratt Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4963	Unknown	215 N Pratt Ave	Carson City	Carson Cit	Ineligible	<Null>	
B4966	Unknown	219 N Pratt	Carson City	Carson Cit	Ineligible	<Null>	

Selected Features from Urban Architectural Resources

Resource ID	Historic Name	Current Name	City	County	SHPO Eligibility	SHPO Criteria	SHPO Date
B10291	Pearl and Burton Wungnema House	Pearl and Burton Wungnema House	Carson City	Carson Cit			
S1239	Security Fence	Security Fence	Carson City	Carson City	Ineligible		7/8/2015 12:00:00 AM
D171	Chain Link Security Fence	Chain Link Security Fence	Carson City	Carson City			
D171	Quarry	Quarry	Carson City	Carson City			
B13180	Butcher Shop	Butcher Shop	Carson City	Carson City	Eligible	A & C	7/8/2015 12:00:00 AM
D171	Nevada State Prison Cemetery	Nevada State Prison Cemetery	Carson City	Carson City			
B13184	Cell Block A	Cell Block A	Carson City	Carson City	Eligible	A & C	7/8/2015 12:00:00 AM
B13183	Administrative Building	Administrative Building and Hospital Wing	Carson City	Carson City	Eligible	A & C	7/8/2015 12:00:00 AM
B13182	Warden's House, Investigation House	Warden's House	Carson City	Carson City	Eligible	A & C	7/8/2015 12:00:00 AM
B13187	Unknown	Electrical Shop	Carson City	Carson City	Eligible	C	7/8/2015 12:00:00 AM
S1132	Fossilized Sloth Footprint Tunnel	Fossilized Sloth Footprint Tunnel	Carson City	Carson City			
B13793	Sally Port	Courthouse	Carson City	Carson City	Eligible	A & C	7/8/2015 12:00:00 AM
B13181	5th Street Guard Tower	Old 5th Street Guard Tower	Carson City	Carson City	Eligible	A & C	7/8/2015 12:00:00 AM
S1128	Pump House	Old Pump House	Carson City	Carson City	Ineligible		7/8/2015 12:00:00 AM

Selected Features from Urban Architectural Resources

Resource ID	Historic Name	Current Name	City	County	SHPO Eligibility	SHPO Criteria	SHPO Date
D171	Prison Yard	Prison Yard	Carson City	Carson City			
D171	Front Yard and Parking Area	Front Yard and Parking Area	Carson City	Carson City			
D171	West Lawn and Garden	West Lawn and Garden	Carson City	Carson City			
B13188	Cell Block B	Cell Block B	Carson City	Carson City	Eligible	C	7/8/2015 12:00:00 AM
B13197	Armory	Property Warehouse/Old Armory	Carson City	Carson City	Ineligible		7/8/2015 12:00:00 AM
B13186	Storage and Maintenance Office	Storage and Maintenance Office	Carson City	Carson City	Eligible	C	7/8/2015 12:00:00 AM
B13191	Cottage 1	Cottage 1	Carson City	Carson City	Eligible	C	7/8/2015 12:00:00 AM
B13192	Cottage 2	Cottage 2	Carson City	Carson City	Eligible	C	7/8/2015 12:00:00 AM
B13193	Cottage 3	Cottage 3	Carson City	Carson City	Eligible	C	7/8/2015 12:00:00 AM
B13194	Cottage 4	Cottage 4	Carson City	Carson City	Eligible	C	7/8/2015 12:00:00 AM
B13195	Cottage 5	Cottage 5	Carson City	Carson City	Eligible	C	7/8/2015 12:00:00 AM
B13196	Cottage 6	Cottage 6	Carson City	Carson City	Eligible	C	7/8/2015 12:00:00 AM
S1130	Greenhouse	Greenhouse Foundation	Carson City	Carson City	Ineligible		7/8/2015 12:00:00 AM
B13190	Boiler Plant	Boiler Plant	Carson City	Carson City	Ineligible		7/8/2015 12:00:00 AM

Selected Features from Urban Architectural Resources

Resource ID	Historic Name	Current Name	City	County	SHPO Eligibility	SHPO Criteria	SHPO Date
B13185	Horse Stable	Dog Kennel	Carson City	Carson City	Eligible	C	7/8/2015 12:00:00 AM
B13792	Cell Block C	Cell Block C	Carson City	Carson City	Ineligible		7/8/2015 12:00:00 AM
B13189	License Plate Factory	License Plate Factory	Carson City	Carson City	Ineligible		7/8/2015 12:00:00 AM
B13796	Tower Two	Tower Two	Carson City	Carson City	Ineligible		7/8/2015 12:00:00 AM
B13795	Main Gate Tower	Tower One	Carson City	Carson City	Ineligible		7/8/2015 12:00:00 AM
B13797	Tower Three	Tower Three	Carson City	Carson City	Eligible	C	7/8/2015 12:00:00 AM
B13794	Culinary and Dining Hall	Culinary and Dining Hall	Carson City	Carson City	Ineligible		7/8/2015 12:00:00 AM
B13799	Gymnasium and Bookbindery	Gymnasium and Bookbindery	Carson City	Carson City			
S1240	Shed	Shed	Carson City	Carson City			
B13800	Maintenance Shop	Maintenance Shop	Carson City	Carson City			
OR569	Prison Trash Dump	Prison Trash Dump	Carson City	Carson City			

Appendix C 2004 NATIONAL REGISTER NOMINATION – LOMPA RANCH HISTORIC DISTRICT

Nat. Reg. Of Historic Places: Lompa Ranch
F 842.C33 S69 CC-09-018R
08015320
Nevada Department of Transportation Research Library

NPS Form 10-900
(Rev. 8-02)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

1. Name of Property

historic name: Lompa Ranch

other name/site number: N/A

2. Location

street & number: 2200 East 5th Street
not for publication: N/A
city/town: Carson City **vicinity:** N/A
state: NV **county:** Carson City **code:** 510 **zip code:** 89701-8336

3. Classification

Ownership of Property: Private

Category of Property: District

Number of Resources within Property:

Contributing		Non-contributing
12	buildings	1
1	sites	
3	structures	
	objects	
16	Total	1

Number of contributing resources previously listed in the National Register: 0

Name of related multiple property listing: N/A

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria.

___ See continuation sheet.

_____ _____

Signature of certifying official **Date**

_____

State or Federal agency and bureau:

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

___ See continuation sheet.

_____ _____

Signature of commenting or other official **Date**

_____

State or Federal agency and bureau

5. National Park Service Certification

I, hereby certify that this property is:

____ entered in the National Register _____
___ See continuation sheet.

____ determined eligible for the National Register _____
___ See continuation sheet.

____ determined not eligible for the National Register _____

____ removed from the National Register _____

____ other (explain): _____

_____ _____

Signature of Keeper **Date of Action**

6. Function or Use

Historic: Domestic/Agriculture & Subsistence **Sub:** Single House/Storage, Agricultural Outbuilding, Animal Facility, Agricultural Field, Processing

Current: Domestic/Agriculture & Subsistence **Sub:** Single House/Storage, Agricultural Outbuilding, Animal Facility, Agricultural Field, Processing

7. Description

Architectural Classification: No Style
Other

Other Description: Western Ranch/Farm Vernacular

Materials: foundation concrete; wood; stone; **roof** wood; metal; asphalt; **walls** wood; stone; stucco; metal; **other**

Present and historical physical appearance.
X See continuation sheet.

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties: _____.

Applicable National Register Criteria: A, B, C

Criteria Considerations (Exceptions):

Areas of Significance: Agriculture

Period(s) of Significance: 1865-1955

Significant Date(s): 1865, 1909-1940

Significant Person(s): Musser, John Jacob; Treadway, Aaron D.

Cultural Affiliation: Euro-American

Architect/Builder: Belli, Steve; Lompa, Simone

Significance of property, and criteria, criteria considerations, and areas and periods of significance noted above.
X See continuation sheet.

9. Major Bibliographical References

_X_ See continuation sheet.

Previous documentation on file (NPS):

_ preliminary determination of individual listing (36 CFR 67) has been requested.
_ previously listed in the National Register
_ previously determined eligible by the National Register
_ designated a National Historic Landmark
_ recorded by Historic American Buildings Survey # _____
_ recorded by Historic American Engineering Record # _____

Primary Location of Additional Data:

X State historic preservation office
_ Other state agency
_ Federal agency
_ Local government
_ University
_ Other -- Specify Repository:

10. Geographical Data

Acreage of Property: Three Hundred Fifty Nine and 62/100 (359.62) acres

UTM References:

	Zone	Easting	Northing		Zone	Easting	Northing
A	11	262822	4339240	B	11	263825	4339194
C	11	263087	4336817	D	11	262293	4337132

Verbal Boundary Description: See Continuation Sheet

Boundary Justification: The boundary encompasses the present limits of the Lompa Ranch that retain historic integrity.

11. Form Prepared By

Name/Title: John W. Snyder, Principal
Organization: P.S. Preservation Services
Date: December 31, 2004
Street & Number: P. O. Box 2650
Telephone: (775) 849-2930
City or Town: Carson City State: NV ZIP: 89702

The Lompa Ranch Historic District includes those buildings and structures comprise the ranch complex itself, as well as the agricultural fields lying within its fenced boundaries. With a period of significance encompassing the earliest beginning of ranching in 1865 to fifty years ago, it is a complex which includes some 12 contributing buildings, 1 non-contributing building, 3 contributing structures, and the agricultural fields which are considered to be a contributing site. Descriptions of the individual buildings and structures follow. Common names are used, with map numbers in parentheses.

The District is located on the historic eastern outskirts of Carson City, Nevada. Set in the Eagle Valley with the mountains of the Sierra Nevada Range dominating the skyline in the west, the District is located on East 5th Street, which bisects the property..

The District is roughly rectangular, aligned predominantly east-west, and encompasses approximately 359.62 acres of flat terrain. The ranch buildings and structures are clustered and front on East 5th Street.

Lompa House (Building #1): **Non-contributing Building**

Located on the north side of East 5th Street, the one-story Lompa ranch house is of wood frame construction, with hip and gable roof forms. It has been heavily altered with aluminum siding, sliding aluminum windows, and composition shingle roof. Because the alterations largely post-date the period of significance and impact upon the ability of the building to convey a sense of time and place, it is considered a non-contributing building within the district.

Milking Barn (Building #2): **Contributing Building**

West of the house stands the large milking barn, a Dutch-plan (also known as a basilica-plan) structure with central mow and flanking stalls. This is a timber-framed structure with gable roof; exterior walls are board-and-batten, while the roof is clad in corrugated metal. There are loft doors on the gable ends, with hoist beams and rigging still in place. Double-leaf hinged doors open into the central mow area, while single-leaf doors access the side stalls. Manure windows are located down the length of each side, allowing for cleaning of the milking and feed stalls; the milking stalls are on the south side of the barn. Inside, the mow area has a wood plank floor, and the heavy timber bents dominate the interior space.

Pump House (Building #3): **Contributing Building**

The pump house stands just outside the fenced yard surrounding the house, just west of the residence. This low structure has heavily-mortared stone masonry walls of coursed rubble, and a low-pitched gable rood clad in old Nevada license plates, probably obtained surplus from the License Plate Factory at the nearby Nevada State Prison.

Blacksmith Shop and Shop (Buildings #4 and #5) **Contributing Buildings**

Four outbuildings stand to the north of the milking barn (Building #2). The closest are the blacksmith shop and shop, both of single-wall construction, with vertical plank exteriors, and with reused wood sash windows of various sizes and types. Both buildings have gable roofs of medium pitch, that of the Blacksmith Shop clad in corrugated metal, and that of the Shop clad in sawn wood shingles.

Implement Garage (Building #6) **Contributing Building**

Just north of the Shop (Building #5) is an open Implement Garage of wood frame construction, with unbattened vertical plank walls. Its low-pitched gable roof is clad in corrugated metal, and the east side is completely open, with wood posts supporting the roof.

Granary (Building #7) **Contributing Building**

To the northwest of Buildings #4, 5 and 6, the Granary stands alone. This is a wooden single-wall building with frame elements on the exterior, wood plank door, and gable roof clad in sawn wood shingles. The Granary's floor joists rest on timber sills that in turn rest on stone piers. The gable ends are clad in board-and-batten.

Wood Shed (Building #8) **Contributing Building**

Standing just north of the House (Building #1), the Woodshed is a single-wall wood structure with vertical plank exterior. Its gable roof, clad in sawn wood shingles, has open eaves and exposed rafter tails.

Dairy (Milk House) (Building #9) **Contributing Building**

Standing just north of the Woodshed (Building #8) is the Dairy, a one-story building of stone masonry construction whose exterior is parged in cement stucco. Its gable roof is clad in sawn wood shingles, and it has 1/1 double-hung wood sash windows.

Garage (Building #10) **Contributing Building**

Located northwest of the Dairy (Building #9), the garage is also of stone masonry construction, with gable roof clad in corrugated metal. Windowless, and with large roll-up doors, the exterior of the building has been parged with cement stucco.

Root Cellar (Building #11): **Contributing Building**

Adjacent to the Garage (Building #10) on the east, and north of the Dairy (Building #9), the Root Cellar is a one-story stone masonry building parged in cement stucco, and is windowless. Its gable roof is clad in sawn wood shingles.

Bunk House (Building #12): **Contributing Building**

Northeast of the House (Building #1), the Bunkhouse stands within a corral area. The one-story Bunkhouse—the original ranch house—rests on a stone masonry perimeter foundation, and is of single-wall construction, but now exhibits a variety of exterior cladding: the south wall is board-and-batten, the north wall is of clapboards, and the east and west walls are clad in scribed plywood. There are small fixed windows in the east and west walls, just below the eaves. In the north (main) façade are a four-lite replacement door, and an original 6/6 double-hung wood sash window. There is an exterior stone chimney with brick stack on the east side of the bunkhouse. Its gable roof is clad in corrugated metal that has been applied over the original wood shingle roofing.

Hay Barn (Building #13): **Contributing Building**

The smaller of the two barns on the property, the Hay Barn stands south of East 5th Street. This is a wood frame structure clad in board-and-batten siding, with steeply-pitched gable roof clad in

corrugated metal. This barn originally stood west of Saliman Street on the site of the juvenile center; former owners gave it to Mrs. Lompa, who moved it to the present site.

Windmills (Structures #1 and #2) **Contributing Structures**

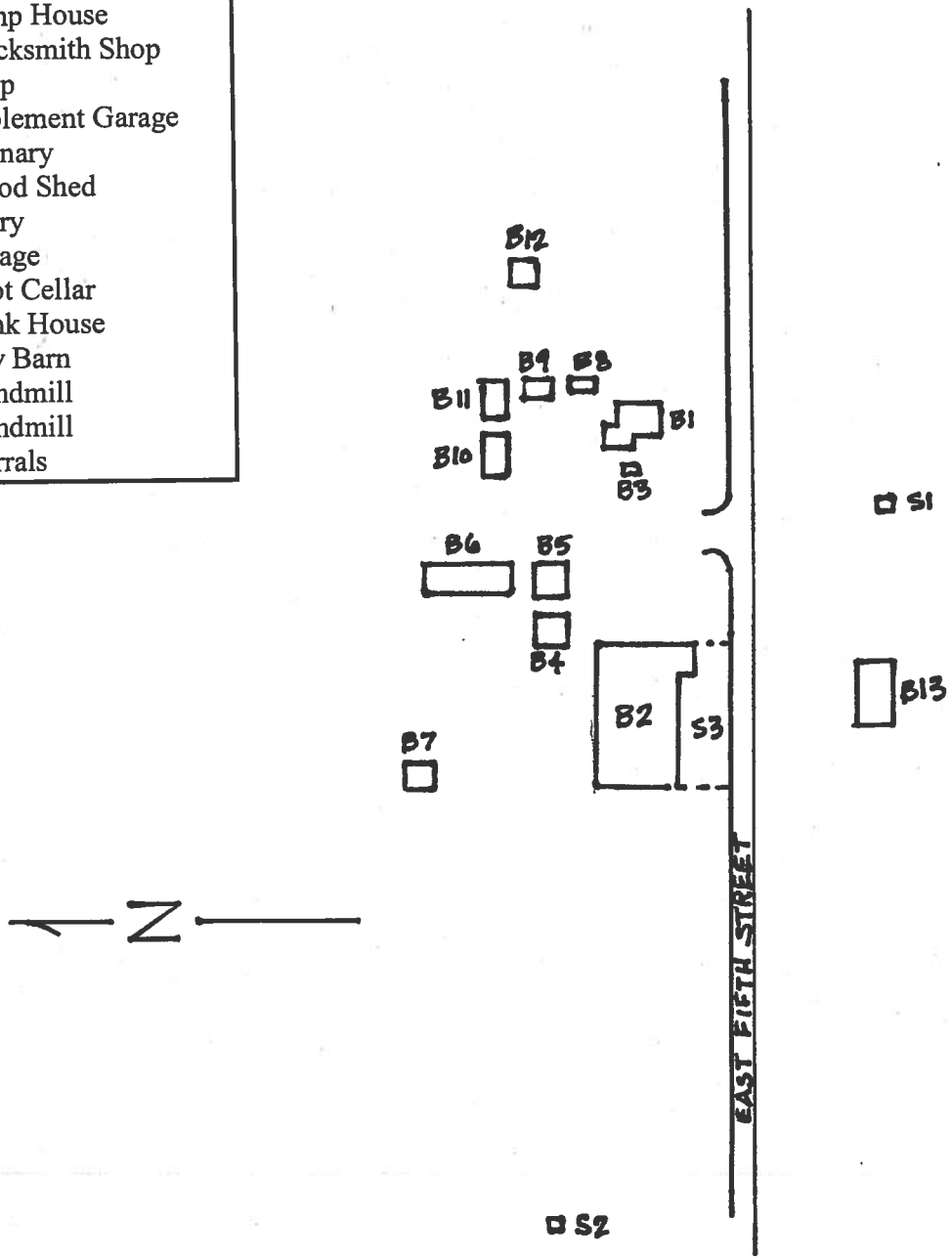
A windmill on a low wooden tower stands south of East 5th Street, near the Hay Barn, while a second windmill stands north of East 5th Street, in the field well to the west of the building complex.

Corrals (Structures #3) **Contributing Structures**

Board-fenced corrals front East 5th Street, south of the Milking Barn (Building #2), with a stock loading chute on its east side, and east of the House (Building #1), with the Bunk House (Building #12) standing within the eastern corral.

SKETCH MAP (no scale)

B1. Lompa House
B2. Milking Barn
B3. Pump House
B4. Blacksmith Shop
B5. Shop
B6. Implement Garage
B7. Granary
B8. Wood Shed
B9. Dairy
B10. Garage
B11. Root Cellar
B12. Bunk House
B13. Hay Barn
S1. Windmill
S2. Windmill
S3. Corrals



PHOTOGRAPHS

The following information applies to all photographs:
Name of photographer: John Snyder
Date of photograph: October 20, 2004
Location of original negatives: Nevada Department of Transportation, Cultural Resources Section, Environmental Services Division, 1263 S. Stewart Street, Carson City, Nevada 89712

Photo 1. Lompa House (non-contributive), Lompa Ranch Historic District, north façade, view south-southwest.
Photo 2. Lompa House (non-contributive), Lompa Ranch Historic District, oblique view of south façade and east side, view north-northwest.
Photo 3. Lompa House (non-contributive), Lompa Ranch Historic District, oblique view of south façade and west side, view north-northeast.
Photo 4. Milking Barn (contributive), Lompa Ranch Historic District, east façade, view west.
Photo 5. Milking Barn (contributive), Lompa Ranch Historic District, oblique view of east façade and south side, view northwest.
Photo 6. Milking Barn (contributive), Lompa Ranch Historic District, oblique view of east façade and south side, view northwest.
Photo 7. Milking Barn (contributive), Lompa Ranch Historic District, south side, view north.
Photo 8. Milking Barn (contributive), Lompa Ranch Historic District, interior, view west.
Photo 9. Milking Barn (contributive), Lompa Ranch Historic District, interior, view west.
Photo 10. Pump House (contributive), Lompa Ranch Historic District, oblique view of west side and south end, showing roof clad with license plates.
Photo 11. Contextual view to north-northwest showing, left to right, northeast corner of Milking Barn (contributive), south side of Granary (middle distance) (contributive), south façade of Blacksmith Shop (contributive), south façade of Shop (contributive), portion of south end and east side of Implement Garage (contributive), Lompa Ranch Historic District.
Photo 12. Contextual view to northwest showing, left to right, south façade and portion of east side of Blacksmith Shop (contributive), south façade and east side of Shop (contributive), portion of south end and east side of Implement Garage (contributive), Lompa Ranch Historic District.
Photo 13. Contextual view of east side of Shop (contributive), Lompa Ranch Historic District, view west.
Photo 14. Contextual view of east side of Shop (contributive), portion of south end and east side of Implement Garage (contributive), Lompa Ranch Historic District, view northwest.
Photo 15. View of Ford Model A truck, Lompa Ranch Historic District, view north-northeast.
Photo 16. Detail view of Ford Model A truck, Lompa Ranch Historic District, view northeast.
Photo 17. Granary (contributive), Lompa Ranch Historic District, oblique view of south side and east end, view northwest.

Photo 18. Granary (contributive), Lompa Ranch Historic District, oblique view of east end and north side with Windmill (contributive structure 2) in distance at right, view west-southwest.

Photo 19. Contextual view to south showing, left to right, Implement Garage (contributive), Blacksmith Shop (contributive), Milking Barn (contributive), Granary (contributive), Lompa Ranch Historic District.

Photo 20. Contextual view to southwest showing, left to right, east side and north end of Wood Shed (contributive), portion of north façace of Lompa House (non-contributive), portion of east side of Dairy (contributive), Lompa Ranch Historic District.

Photo 21. Contextual view to east-northeast showing, left to right, south side of Garage (contributive), portion of west end and south side of Root Cellar (contributive), west side and south end of Dairy (contributive), west side and south end of Bunk House (contributive), west side of Wood Shed (contributive) in shadow, Lompa Ranch Historic District.

Photo 22. Contextual view to northeast showing, left to right, west end and south side of Garage (contributive), portion of west end and south side of Root Cellar (contributive), west side and south end of Dairy (contributive), west side and south end of Bunk House (contributive), portion of west side of Wood Shed (contributive) in shadow, Lompa Ranch Historic District.

Photo 23. Bunk House (contributive), Lompa Ranch Historic District, oblique view showing north façade and west side, view east-southeast.

Photo 24. Bunk House (contributive), Lompa Ranch Historic District, oblique view showing south end and east side, view northwest.

Photo 25. Hay Barn (contributive), Lompa Ranch Historic District, oblique view showing east end and north side, view west-southwest.

Photo 26. Contextual view to north of south side of Hay Barn (contributive), showing Milking Barn (contributive) and Corral (contributive structure 3) in distance across East Fifth Street, Lompa Ranch Historic District.

Photo 27. Contextual view to northeast of west end and south side of Hay Barn (contributive), showing Milking Barn (contributive) at left, Windmill (contributive structure 1) in distance at right, Lompa Ranch Historic District.

Photo 28. Windmill (contributive structure 1), Lompa Ranch Historic District, view to west-northwest.

Photo 29. Contextual view to west showing Windmill (contributive structure 1) with Hay Barn (contributive) in middle distance at left, Lompa Ranch Historic District.

Photo 30. Contextual view to north showing Windmill (contributive structure 1) with Milking Barn (contributive) and Corral (contributive structure 3) in distance across East Fifth Street, Lompa Ranch Historic District.

Photo 31. Corral and stock loading chute (contributive structure 3) with Milking Barn (contributive) in background, Lompa Ranch Historic District, view north-northwest from north shoulder of East Fifth Street.

The 434.5-acre Lompa Ranch Historic District includes 13 buildings and 3 structures, of which 12 buildings and all 3 structures (or 93.5%) contribute to the District's significance. Dating to the earliest years of the development of the Eagle Valley and of Carson City, the Lompa Ranch today represents the last vestige of the area's history of ranching. Though development of the property as a ranch dates to the 1860s, the buildings that exist today date to the first half of the 20th century. Some of the most significant figures in the history of the area have owned the property, though none actually lived there. Today the ranch lies surrounded by urban and suburban development. The property is associated with important events and significant persons, and has buildings having architectural significance as rare surviving examples of their types in the local context. The District meets National Register criterion A at the local level of significance for its association with the development of ranching and farming in the Eagle Valley, and is virtually the sole surviving ranch with continuity to the earliest years of this area in the Nevada Territory. The District meets National Register criterion B at the local level of significance for its association with the life of John Jacob Musser, one of the original owners of the Eagle Valley as well as one of the founders of Carson City, and with the life of Aaron D. Treadway, one of the earliest and most important agriculturists in the Eagle Valley. Under National Register criterion C at the local level of significance, the District represents buildings and structures that are characteristic of the various modes of stone masonry, wood frame, and wooden single-wall construction associated with working ranch complexes; while its buildings and structures are architecturally undistinguished, they comprise a significant whole, representing a largely intact early 20th century Nevada ranch.

To place the Lompa Ranch in context, it is necessary to look briefly at the early history of Nevada, and the overall history of the Eagle Valley.

Historical Context: Prologue

Actual development of the Carson City area began in 1851, when a group of California miners, working eastward from the Placerville, California area, established a small trading post, which they named Eagle Ranch, in Eagle Valley. The establishment of Johnson's Cut-Off emigrant route, laid out in 1852 and passing along the south shore of Lake Tahoe, linked Placerville with the Eagle Ranch. The locale thus became a gateway between the deserts of the Great Basin, and the high passes of the Sierra Nevada.

At Eagle Ranch owners, Joseph and Frank Barnard, George Follensbee, A.J. Rollins, and Frank and W.L. Hall operated their trading post, gardened, harvested hay from native grasses, and did business with the emigrants passing through until 1854. In 1855 the group sold the property to Mormon settlers, who held it until a general recall of all the Saints to Salt Lake City in 1857

caused them to sell out to John Mankin.[1] In turn, Mankin sold it to Abraham Curry the following year.[2]

By the time Abraham Z. Curry, a businessman-immigrant from New York City, reached the area, high land prices and increasing numbers of miners confronted him. Though the Mormons themselves had returned to Salt Lake City a year earlier to help Brigham Young defend Deseret against President James Polk's threats of military action, they had left a legacy of inflated land prices for the prime real estate in Genoa, one valley to the south, and Franktown, one valley to the north of Eagle Valley. Sellers were unwilling to negotiate. Great numbers of prospectors were in evidence throughout the Carson River Valley, perhaps sensing the riches nearby; they would discover and open the Comstock the following year. Wagon trains of immigrants continued to wend their way through the Eagle Valley and into California on nearby trails, and the Overland Stage Line used Eagle Station for supplies. Refusing to bow to the high prices in Genoa and Franktown, Curry, with partners F.M. Proctor, B.F. Green, and J.J. Musser, sought out Eagle Valley, buying most of it, including the ranch and trading post, from Mankin for a reported $500 and a few horses.[3]

The ambitious Curry, likely anxious to increase the value of *his* lands in a manner similar to those he had spurned for that very reason, immediately began promoting the valley as the site for the state capital. Curry's promotional abilities must be admired: Nevada had not yet become a territory, and statehood did not even seem on the horizon.

It was the Northwest Ordinance of 1787 that had established the United States' territorial system. Modified by the Wisconsin Organic Act of 1838, the system required newly settled areas to pass through at least two states of political maturation before admission to statehood. By 1854, questions of sovereignty led Congress to grant to the Kansas and Nebraska Territories the decision of whether to allow slavery. By the end of that decade, the question of slavery had led to the very real specter of civil war.[4]

It was against this background that Curry began his promotion. His capital had no buildings yet erected; and his first attempt to plat the city failed when the surveyor refused to work in return for ownership of "a full city block" of what he viewed as worthless desert. Curry persevered

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[1] Palmer, Rebecca Lynn, "Historic American Engineering Record, Kings Canyon Road (Placerville Road, Lake Tahoe Wagon Road), HAER No. NV-11."
[2] Historic Environment Consultants, "Historic Property Survey Report and Multiple Resource Area Nomination to the National Register of Historic Places for Carson City, Nevada"; Humphreye, Noreen I.K., "National Register of Historic Places Inventory—Nomination Form, David Small House"; *History of Nevada, with Illustrations and Biographical Sketches of its Prominent Men and Pioneers*, Myron Angel, ed.
[3] Carlson, Helen S., *Nevada Place Names: A Geographical Dictionary.*
[4] Adams, George R., "National Register of Historic Places Inventory – Nomination Form, Stewart-Nye House."

however, and managed to find another surveyor who, in 1858, platted a town site with wide city streets and a four-square-block area for the Capitol and its attendant offices. Curry then built a stone house for himself. The partners also discovered a warm spring on the ranch site, adjacent to a large sandstone deposit. Establishment of the post office on November 18, 1858 gave official recognition to the town.[5]

By the following spring Curry and his friend William Ormsby had named the town after Kit Carson, guide for Frémont's 1844 expedition through the area and for whom the Carson River was also named. In June 1859, Captain James H. Simpson described the town as comprising a dozen small frame houses, two stores—one of which was Ormsby's—with some buildings of sandstone taken from Curry's quarry at the warm springs. The discovery of the nearby Comstock Lode later that summer reversed the flow of traffic to California established by the California Gold Rush a decade earlier. This discovery of silver deposits in the Mt. Davidson area by H. Comstock, Emanuel Penrod, and James Fennimore set off a twenty-year era of intense mining activity. Now, thousands of miners and others scrambled eastward *from* California as they followed the lure of the silver strike. The route took many through the dusty streets of Carson City, whose population grew to nearly a thousand by 1860.

The secession of southern states in 1860-61 brought a return to stricter policies regarding territories, but the federal government was anxious to keep the West in the Union. Thus between 1861 and 1864, the Congress extended territorial status to all remaining unorganized areas except Oklahoma: the Colorado, Dakota, and Nevada Territories all received recognition in 1861, and the Idaho and Arizona Territories in 1864. With Congressional creation of the Territory of Nevada in 1861 and nearby Genoa in decline, the government selected Carson City as territorial capital on November 25, 1861. President Lincoln appointed New Yorker, James Nye as the first territorial governor. William Stewart, a Comstock lawyer and politician who had already moved from Virginia City to Carson City, traveled to San Francisco to meet Nye, and convinced him to allow Carson City to remain the seat of territorial government rather than moving it to the seemingly more logical choice of Virginia City. The streamlined admission of Nevada to the Union in 1864 was the direct result of Republican desire to insure control of Congress and passage of the 13th Amendment following that year's elections. Since the majority of the politicians in the fledgling Nevada Territory were Republicans, the Republican majority in the Congress passed the Nevada Enabling Act in 1864. Curry's dream had reached fruition in only six years.[6]

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[5] Castleman, Deke, *Nevada Handbook*; Bancroft, Hubert Howe, *The Works of Hubert Howe Bancroft, Volume XXV, History of Nevada, Colorado, and Wyoming 1540-1888.*

[6] Castleman; Ossa, Rebecca, "National Register of Historic Places Registration Form, Virginia & Truckee Railroad Depot – Carson City, Nevada"; Humphreys, Noreen I.K. "National Register of Historic Places Inventory—Nomination Form, Ormsby-Rosser House"; Marschall, John P., "The House of Olcovich"; Adams.

Beyond Stewart's efforts with Nye, other factors influenced Carson City's selection: the fertile soil of the Eagle Valley surrounded it, it had plenty of wood for fuel, good water, and a good supply of local building stone at Curry's quarry at the warm springs. Previously, Curry had walled up the warm springs and built a bathhouse of hand-hewn stone. In 1861 he completed a stone hotel, measuring one hundred feet by thirty-two feet, at the site, which lay at the east end of his toll road (now East 5th Street) from Carson City.

Ranching and Farming in the Eagle Valley

Though early Mormon settlers had undertaken subsistence farming during their years in the area, it was the mineral strikes in the Comstock and the subsequent mining boom that drove the need for commercial ranching and farming in the Eagle and Carson Valleys. As early as 1861, the market for all types of agricultural produce was such that virtually all of the better lands on the Truckee, Walker, and Carson rivers within a 50-mile radius had already been claimed. Carson City became the transportation and supply hub for the Comstock, and through it to the mining communities moved lumber and cordwood, work animals, and farm produce—beef, sheep, hay, vegetables and grains. But if the needs of the miners provided the impetus for the valleys' farmers and ranchers, their claims of water rights to drive the mills necessary for gold and silver production directly affected the abilities of the agriculturalists to adequately meet those needs.

With the miners controlling the waters of the Carson River north of the valley, there was a severe shortage of water available for irrigation.[7] By 1880, of the 8,000 acres of agricultural land available in Ormsby County (today Carson City County), only 1,164 acres were under cultivation due to lack of water.[8] A proposal for a reservoir on the upper Carson River in the late 1880s went unbuilt for political and fiscal reasons, and would really only have served to keep the water-powered mills running through the dry season, without direct benefit to agriculture.

It was only after 1897 when the mining mills upstream on the Carson River were finally abandoned that water rights became available for local farmers, and it was not until the early years of the 20th century that farmers converted local mining ditches such as the Mexican Ditch to agricultural use. Even then, much of the farming and ranching of the Eagle Valley remained dry farming, or depended on springs and windmill-pumped wells.[9]

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[7] This contrasted sharply with the farms and ranches of the Truckee Meadows at Reno, where adequate water supplies were available from the Truckee River and local streams, often provided via ditches.

[8] A proposed tunnel to deliver water from Lake Tahoe to the Carson Valley in 1887 came to naught, and the problem continued unabated. Townley, *Alfalfa Country*, p.79.

[9] Lance McNees and Jeff Johnston, "A Class III Cultural Resource Inventory for the Proposed Silver Saddle Ranch Subdivision, Carson City, Nevada", May 1995.

With the Comstock in decline by the 1880s, local farmers began freighting hay and grain to mining camps in Esmeralda County and at Bodie, California. But the construction of the Carson and Colorado Railroad in 1881 brought cheaper California products, killing the local market. The price of hay dropped so low in 1881-82 that Nevada farmers refused to sell.[10]

Lompa Ranch History

The property that today comprises the Lompa Ranch is an aggregation of smaller properties that have passed through various hands. On December 18, 1865, J.J. Musser—one of Curry's partners—sold the north half of the southwest quarter, the south half of the northwest quarter, the northwest quarter of the southeast quarter, and the southwest quarter of the northeast quarter of Section 16 to A.D. Treadway.[11] This gave Treadway a 240-acre ranch fronting on Curry's Toll Road, with its southeast corner opposite the Nevada State Prison—formerly Curry's Warm Springs Hotel.

In October 1870, Treadway sold a "small portion" of land adjacent to the prison to Virginia City residents R.S. Mesick and J. Seely.[12] The following month, Treadway obtained the first of the ranch property south of the Toll Road, purchasing the land from P.H. Clayton and his wife.[13] On May 31, 1873 Treadway sold the property north of the road to C.A.V. Putnam, but held back a 200 by 200 foot lot "planted with trees" opposite what was still being called the Warm Springs Hotel.[14]

In July 1873 Treadway obtained a patent on the southwest quarter of the southeast quarter of Section 16. While a portion of this land was that obtained from Clayton, it is not clear how Treadway came to claim the remainder of that forty-acre parcel, but that patent would lead directly to Treadway's claims for ownership of the prison property.[15] The following month he sold a small triangular parcel comprising perhaps half an acre and abutting the hotel/prison to John R. Johnson and John B. Bradley.[16]

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[10] *Alfalfa Country*, pp.66-7. Farmers eventually gave in and sold their hay at rock-bottom prices rather than let it rot in the fields.
[11] Carson City County Recorder, Book 9, p.491.
[12] Carson City County Recorder, Book 14, p.94. Interestingly, the recorded document refers to the property as adjacent "Curry's Hotel (aka Warm Springs Hotel)" rather than as the Nevada State Prison.
[13] Carson City County Recorder, Book 15, p.150. Because the written description of the property hinges on a starting point—the southwest corner of the Warm Spring Hotel's stable—which no longer exists, it is not possible to determine how much land the purchase entailed. Only 235 feet deep, it does not appear to have been a sizeable purchase.
[14] Carson City County Recorder, Book 15, p.225.
[15] Carson City County Recorder, Book 15, p.204. It is interesting that this action in July is recorded on an earlier page than the previous transaction in May.
[16] Carson City County Recorder, Book 15, p.284.

In March 1875, Putnam sold 80 acres at the west end of the property to the Nevada Agricultural, Mining & Mechanical Society.[17] This would become the site of the local horseracing track.

In April 1873 Treadway sold the tree-covered lot opposite the hotel and prison, held back from his previous sale to Putnam, to Johnson and Bradley, giving them property on both sides of the road.[18] Over the next six years, in a series of three transactions, Treadway disposed of the rest of his property east of Carson City as he consolidated activities at his home ranch to the west of town. In December 1875 he filed a quitclaim deed to J.H. Adams for a portion of the southeast quarter of the southeast quarter of Section 16 adjacent to the Warm Springs Hotel. In 1878 he sold his remaining property north of Warm Springs Road (as it was now called) to Richard Kirman. Finally, in 1881 he sold a 65-acre parcel lying in the southwest quarter of the southwest quarter of Section 15, and the southeast quarter of the southeast quarter of Section 16 to William Smyth.[19]

In early 1891 Putnam sold out to Smyth, giving the latter ownership of the property fronting on the north side of Warm Springs Road, with the exception of the racetrack property. Later than year Smyth sold 100 square feet of property on the north side of the road near the Warm Springs property to Kirman.[20]

The Smyth holdings passed to Hannah Duffy, whose ranch included the lands south of Warm Springs Road. In August 1898 one W. Woodburn, administrator of her estate, sold the land north of the road to P.H. Peterson. Two days later, Peterson sold the south half of the southwest quarter, the northwest quarter of the southwest quarter, and "so much of the southwest quarter and the northwest quarter of the southeast quarter as lies south of the" Prison Road plus more, totaling about 318 acres, to Kirman. This process was repeated nine years later when, in May 1907, Woodburn sold the remainder of the Duffy Ranch south of Kirman's holdings to Peterson, with Peterson selling the next day to Kirman. Kirman now owned much of Section 16, and a good portion of Section 21 to the south.[21] The next change of hands was not long in coming.

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[17] Carson City County Recorder, Book 16, p.261. The entry in the Recorder's book is interesting in that it describes the 80 acres as being in the northwest quarter of the southwest quarter of Section 16. Inasmuch as a quarter of a quarter only comprises 40 acres, it would seem that at least half of the acreage mush have been in the adjoining Section, and must already have been in Putnam's ownership.

[18] Carson City County Recorder, Book 16, p.285.

[19] Carson City County Recorder, Book 18, p.611; Book 22, p.57. Based on maps, the sale to Kirman must have been property north of the Putnam property. The sale to Smyth is the first mention of Treadway holdings in Section 15, though we may have missed an earlier entry in the Recorder's books in tracing chain of title on the Lompa Ranch.

[20] Carson City County Recorder, Book 27, p.30; Book 27, p.140.

[21] Carson City County Recorder, Book 29, p.105; Book 29, p.109, Book 32, p.73; Book 32, p.125. Nothing in the materials examined explains why Peterson seems to have been acting as Kirman's proxy.

Little more than a week elapsed before Elizabeth Kirman, widow, and her son Richard sold the ranch property on May 25, 1907 to Wildes & Company. The company, which was a partnership between Tasker L. Oddie and F.L. Wildes, retained the property until January 1908, when they sold it on to Sam Imelli of Gardnerville for $10.00 in gold coin. A year later almost to the day, Imelli sold the property north and south of the Prison Road to Joe Moroni and Steve Belli.[22]

Moroni and Belli owned—and presumably operated—the ranch jointly for the next decade, until Moroni sold his half interest to Belli on May 7, 1919 and the property became known as the Belli Ranch. In 1925 Belli added Allesandrina Belli to the title. The final Belli acquisition came in 1927 when Ormsby County, in a tax sale, sold a small parcel and house at the southeast corner of Prison Road (East 5th Street) and Saliman Road. Their ownership came to an end on October 29, 1936 when the Bellis sold the ranch to Simone "Sam" Lompa of Reno and Rinaldo Crimetti of Douglas County.[23]

In 1937 the two partners deeded a portion of the property to the State of Nevada for use as a prison feeder road. The following year Crimetti sold a quarter-acre lot to Lompa. The ranch—then around 820 acres—finally came into Lompa's sole ownership in 1940, when Crimetti sold his undivided half interest to his partner.[24]

When Simone Lompa and Rinaldo Crimetti took ownership of the property in late 1936, the extant buildings consisted of a small house (today the bunkhouse), barn, granary, and blacksmith shop, and had probably been built by Belli between 1909 and 1936. Lompa built the rest of the buildings that today comprise the Lompa Ranch complex. He built the present house in 1940 for his new wife, at which time the original house became a bunkhouse for ranch hands. The stone buildings he erected with the help of "Smokehouse" Johnson, a trustee from the adjacent Nevada State Prison. He also employed other prison labor, as available, on the farm.[25]

Simone Lompa had come to Nevada from his native Switzerland and was employed in ranching and farming in Reno before buying the Eagle Valley Property.[26] He married 24-year old Eva Maddelena, of Italian-Swiss parentage, on January 15, 1939.[27] They spent their wedding night at

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[22] Carson City County Recorder, Book 32, p.126; Book 32, 127, Book 36, p.2.
[23] Carson City County Recorder, Book 37, p.106; Book 37, p.552; Book 38, p.139; Book 43, p.75.
[24] Carson City County Recorder, Book 43, p. 163; Book 43, p.418; Book 46, p.157.
[25] Sam Lompa, personal communication, October 2004. The Lompa heirs recall their father as treating the prison inmates fairly and humanely, and that there was never any trouble from these men.
[26] "Lompa's last stand," *Carson City Appeal*, September 22, 1991. Simone Lompa was born in Ticino, the only Italian-speaking state in Switzerland. Ticino was also the original home of the Belli family, from whom Lompa bought his ranch.
[27] "Eva: A Carson lifetime," *Carson City Appeal*, September 22, 1991. Eva's father was from northern Italy, while her mother was from Bidogno, Switzerland; Eva was born in Beckwourth, California on April 17, 1915.

the ranch, and Eva later recalled having to rise early the next morning to milk the dairy cows.[28] Simone and Eva ran a dairy herd and grew rye on the property. They sold their dairy products locally[29], and stored the rye in the granary. In later years the family expanded the operation to include sheep and beef cattle.

Simone "Sam" Lompa died in Carson City on April 28, 1969 aged 71 years.[30] The ranch passed to Eva's ownership and she continued to live in the house. Their son, Sam took over running the ranch, living in a new house a few hundred feet east of his mother's house; he continues overseeing the ranch today. By 1991, ranch acreage was down to 550. A deal with Carson City in the 1960s ended up costing the Lompas valuable water rights, and Sam was forced to drill a well in the 1970s. Even with this, there is not enough water—the perennial problem of Eagle Valley agriculturalists—to grow native hay, requiring the purchase of hay from other sources to carry the stock through the winters.

Following Eva's death in July 2003 the ranch passed to their three children, Sam, Dorothy, and Martha. Today the Lompa Ranch consists of 359.62 acres straddling East 5th Street.[31] Surrounded by urban development, and with the new Carson City Bypass freeway about to bisect it, requiring the removal of another 82 acres, the ranch is the last active vestige of ranching and farming in the Eagle Valley/Carson City area, a lone reminder of one of the area's most significant pioneer activities.

Other Owners of Note

The property that became today's Lompa Ranch has had, as noted previously, a number of owners through the years. Among these were three who enjoyed sufficient local significance to warrant specific note herein.

John Jacob Musser. Born in Chambersburg, Pennsylvania in 1829, Musser was a lawyer who appears to have come west around the time of the California Gold Rush. After a stint as a miner in Plumas County, California, he served as District Attorney in Downieville, California from 1855 to 1858. In that latter year he moved to the Eagle Valley—then in the western Utah Territory—where he joined Abraham Curry, Francis Proctor, and Benjamin Green in purchasing the Eagle Ranch and founding Carson City.

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[28] Martha Lompa Keating, Dorothy Arraiz, Sam Lompa, personal communication, October 2004.
[29] Though in a 1999 interview, Eva Lompa recounted to the author that they also shipped cream to the Crystal Creamery in Sacramento, California.
[30] "Area Deaths," *Reno Evening Gazette*, April 30, 1969, p.14.
[31] Information supplied by the Division of Right-of-Way, Nevada Department of Transportation.

Musser opened a law practice in Carson City in 1859. That same year delegates to a constitutional convention to establish the Nevada Territory selected him as president of the convention. Following the death of James Crane, Musser was elected to Congress in November 1859 where he continued his efforts toward the establishment of the Nevada Territory. In 1861 he was granted a charter to establish a water system for Carson City, as well as a franchise for a gas company.

With Nevada established as a territory in 1861, Musser ran as a Territorial Delegate to Congress in 1862, but lost. In 1863 he was appointed prosecuting attorney of the Second Judicial District. He also continued his private law practice, and remained a close friend of Curry. Musser served on the Democratic County Convention in 1866, first as temporary chairman and then as a member. Musser moved south to White Pine County to practice the law. After a year there he returned to Carson City, where he died in 1871.

Though John J. Musser was one of the earliest owners of a portion of the Lompa Ranch, there is no evidence he ever resided on the property. During the period, directories list both his residence and offices as within Carson City itself.[32]

Aaron D. Treadway. Known locally as Farmer Treadway, Uncle Treadway, or Uncle Tred, Aaron D. Treadway was another of the earliest residents of Carson City/Eagle Valley. Born in Connecticut in 1815, he first moved to Macon, Georgia and then to Illinois by 1840. In 1847 he ser as First Lieutenant of Company 1, Fifth Illinois Regiment in the Mexican-American War of 1846-48 before returning to Alton, Illinois. He was among the thousands who went west during the Gold Rush. He resided principally in Sacramento, California until 1859, at which time he moved east to settle in the Eagle Valley when it was still part of the Utah Territory. Treadway helped form the first territorial government after the Nevada Territory was created in 1861.

Treadway's principal ranch property about a quarter mile west of Carson City, adjacent to the Virginia & Truckee Railroad, and whereon was located Treadway Park, used by Carsonites through the years; excursion trains from Reno regularly stopped at Treadway Park.

In 1866 he served with Musser as a delegate to the Democratic County Convention. He was among those who donated land for a Children's Home at Fifth and Stewart Streets in Carson City in 1870. That same year he was involved in a suit against the state concerning ownership of the Nevada State Prison property. In 1881 he nearly lost his home ranch to foreclosure after co-signing a note for an individual who failed to make good on his loan. Only a bit of shrewd

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[32] Mary B. Ansari, *Carson City Place Names*, p.36; "Proceedings in the Democratic County Convention Yesterday", *Carson Daily Appeal*, October 11, 1866, 3:2; "Designing a capital", *Nevada Appeal*, May 16, 1999, Focus p.1; *Directory of Nevada Territory*, xerox copy, Nevada State Library and Archives Ready Reference.

maneuvering avoided the judgment. Marrying his brother's widow, Treadway then filed a homestead on the contested property. Eventually the judge in the case found in his favor. In 1886 Governor Adams appointed him to the state Agricultural Association.

Treadway's wife died in 1885. By the time of his death in 1903, he had disposed of all of his property save the lot on which stood his house.

Like Musser, Aaron Treadway never resided at what he had called the Warm Springs Ranch. Other than period maps which show his name on the property, the only mention of it in connection with him was when he advertised pasturage at that property or at Treadway's Ranch in 1866.[33]

Richard Kirman, Jr. Governor of Nevada from 1935-38, Richard Kirman briefly owned the Lompa Ranch property with his widowed mother. His father, Richard Kirman, though primarily involved in mining interests on Mt. Davidson, acquired the property between 1881 and 1907. The younger Kirman was born in Virginia City in 1877 while his father followed mining.

He attended local schools in Virginia City, and Lincoln High School in San Francisco and, while studying business there, met Mabelle Jean King whom he married in San Francisco on January 19, 1898. The couple returned to Nevada just before the turn of the 20th century.

In 1899 Kirman won a seat as an Ormsby County (today Carson City County) Assemblyman. From 1902 to 1904 he served as a regent of the University of Nevada, and was Mayor of Reno from 1907-1909, the period that included his brief ownership of the Lompa Ranch property with his widowed mother. Following his term as governor, he was president of the Farmers and Merchants Bank, residing in Reno. Mabelle Kirman died in 1947, and Kirman survived her until his death in 1959.

There is no evidence that either Kirman lived at the Lompa Ranch property. The younger Kirman lived in Virginia City until moving to San Francisco to attend school, while newspapers merely noted his father's occasional visits to Carson City from Virginia City. By the time he and his

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[33] "Democratic Primaries", *Carson Daily Appeal*, 10/09/1866, 3:1; "Stock Ranched", *Carson Daily Appeal*, 10/11/1866, 3:4; "A Site Agreed Upon for the State Orphan's Home", *Carson Daily Appeal*, 01/27/1870, 3:1; "*Carson Daily Appeal*, 03/05/1870, 3:1; "Under The Hammer; Farmer Treadway Ranch Sold Yesterday at Public Auction", *Carson Morning Appeal*, 08/06/1881, 3:4; "A Worthy Lady Gone", *Reno Evening Gazette*, 12/10/1884, n.p.; "A Good Movement", *Carson Daily Index*, 05/15/1886, 3:2; "Aaron D. Treadway: Known Throughout Nevada as Farmer Treadway", *Reno Weekly Gazette& Stockman*, 10/01/1891, p.7; "The Passing of Farmer Treadway", *Nevada State Journal*, 01/31/1903, n.p.; *Directory of Nevada Territory*, Xerox copy, Nevada State Library & Archives Ready Reference.

bride returned to Nevada, they only lived in the Carson City area briefly before moving to Reno; no directories list them at the ranch.[34]

[34] *Directory of Nevada Territory*, Xerox copy, NSLA Ready Reference; "The Norra Mine, *Carson Daily Index*, 10/20/1885, 3:3; "A New Comstock", *Carson Daily Index*, 10/21/1885, 3:1; Nevada State Archives Guide to the Governors' Records, http://dmla.clan.lib.nv.us/docs/nsla/archives/gov/kirman.htm

Books:

Ansari, Mary B., *Carson City Place Names*. Reno: Camp Nevada, n.d.

Directory of Nevada Territory, xerox copy, Nevada State Library & Archives, Ready Reference.

Elliott, Russell R. *History of Nevada*, 2nd edition, revised. Lincoln: University of Nebraska Press, 1973, 1987.

Polk's Reno City, Washoe County and Carson City Directory, vol. 1920-21. Seattle: R.L. Polk & Co., 1920.

Polk's Reno (Nevada) City Directory 1948 Including Sparks, Carson City and Washoe County, San Francisco: R.L. Polk & Co., 1948.

Townley, John M. *Alfalfa Country: Nevada Land, Water & Politics in the 19th Century*. Helen Marye Thomas Memorial Series: No. 3. Reno: University of Nevada, n.d.

Newspapers:

"A Good Movement", *Carson Daily Index*, May 15, 1886, 3:2.

"A New Comstock", *Carson Daily Index*, October 21, 1885, 3:1.

"A New Race Track; One To Be Built At Treadway Park—An Additional Attraction For Picnics", *Carson Morning Appeal*, March 20, 1881, 3:2.

"A Site Agreed Upon for the State Orphan's Home", *Carson Daily Appeal*, January 27, 1870, 3:1.

"A Worthy Lady Gone", *Reno Evening Gazette*, December 10, 1884, n.p.

"Aaron D. Treadway: Known Throughout Nevada as Farmer Treadway", *Reno Weekly Gazette& Stockman*, October 1, 1891, p.7.

"Accident", *Carson Daily Appeal*, May 17, 1865, 2:1.

"Area Deaths", *Reno Evening Gazette*, April 30, 1969, 14:2.

"Belligerent Jurors", *Carson Morning Appeal*, April 8, 1881, 3:2.

"Benefit of Mrs. Geo. Gillis", *Carson Daily Appeal*, June 8, 1866, 1:2.

Bourelle, Andy. "State starts action to acquire land", *Reno Gazette-Journal*, September 6, 2002, 1:4-6.

"Business in Carson", *Carson Daily Appeal*, August 29, 1869, 2:1-3.

Carson Daily Appeal, December 20, 1865, 4:4; January 3, 1866, 4:5; August 26, 1869, 3:1; March 5, 1870, 3:1; April 24, 1870, 3:2.

Carson Daily Index, April 18, 1885, 3:3; July 9, 1885, 3:3; July 14, 1885, 3:1; September 16, 1885, 3:1; March 11, 1886, 3:2.

"Carson family objects to bypass through ranch", *Sparks Tribune*, January 23, 1995, 2:3-6.

"Decree in the Carson Water Suit", *Carson Daily Index*, November 18, 1885, 3:2.

"Decree in the Water Suits", *Carson Daily Index*, November 22, 1885, 2:1.

"Democratic Primaries", *Carson Daily Appeal*, October 9, 1866, 3:1.

"Designing a capital", *Nevada Appeal*, May 16, 1999, Focus p.1.

"Dissolution", *Alton Telegraph & Democratic Review* (Alton, IL), September 11, 1841, n.p.

"District Court Proceedings", *Carson Daily Appeal*, June 10, 1865, 3:2; August 8, 1865, 3:2.

"District Court—Second Judicial District", *Carson Daily Appeal*, March 6, 1866, 3:2.

"Docket of the District Court", *Carson Daily Appeal*, September 1, 1865, 3:1.

Dornan, Geoff. "Family fights plan: CC ranchers oppose road", *Nevada Appeal*, November 29, 1994, 1:6.

"Eva: A Carson lifetime", *Carson City Appeal*, September 22, 1991, Lifestyle 1:2.

Hammon, Amanda. "Lompa family rejects state's offer for freeway ranch land", *Nevada Appeal*, July 25, 2002, n.p.

"Lompas' last stand", *Carson City Appeal*, September 22, 1991, Lifestyle 1:2.

"Mexican War Veterans", *Carson Daily Index*, June 1, 1886, 3:2.

"New Year's Ball", *Carson Daily Appeal*, December 19, 1865, 2:5.

"Not Pleuro-Pneumonia", *Carson Daily Index*, October 15, 1885, 3:2.

"Noted and Quoted", *Carson Daily Index*, March 11, 1886, 3:1.

"Old Timers", *Carson Daily Index*, May 8, 1885, 3:2.

"Peaceful Tribes", *Nevada State Journal*, November 27, 1879, n.p.

"Proceedings in the Democratic County Convention Yesterday", *Carson Daily Appeal*, October 11, 1866, 3:2.

"Proceedings in the District Court, Ormsby County", *Carson Daily Appeal*, December 23, 1865, 3:2.

"Proceedings in the Second District Court", *Carson Daily Appeal*, December 13, 1865, 3:2.

"Prolific Ground; Carson Land Which Pays $1,000 to the Acre", *Carson Morning Appeal*, May 7, 1881, 3:2.

"Property owner questions bypass: Duana Lompa: Expressway plan is redundant", *Nevada Appeal*, January 23, 1995, 1:2-6, 8:5-6 .

"Raising up the Chiefs," *Carson Daily Index*, January 30, 1886, 3:2.

"Reduction Works for Carson", *Carson Daily Index*, October 13, 1885, 3:2

"Residents hit 'Mickey Mouse' bypass", *Nevada Appeal*, February 9, 1995, 1:2-5.

"Severe Accident", *Carson Daily Index*, October 25, 1885, 3:3.

"Shall The City Be Drained?; How Water Can Be Utilized In Warding Off Disease; The Citizens Can Chose Between Disease and Taxes", *Carson Morning Appeal*, May 8, 1881, 3:3.

"Simone Lompa", *Reno Evening Gazette*, April 30, 1969, 14:2.

"State to conduct field study on bypass", *Nevada Appeal*, August 6, 1995, 1:4-6, 4:3-6.

"Stock Ranched", *Carson Daily Appeal*, October 11, 1866, 3:4.

"Suit Against the Bondsmen of E. Rhoades, Late State Treasurer, Deceased", *Carson Daily Appeal*, March 24, 1870, 3:1.

"Supreme Court Proceedings", *Carson Daily Appeal*, September 27, 1865, 3:1.

"The Norra Mine, *Carson Daily Index*, October 20, 1885, 3:3.

"The Passing of Farmer Treadway", *Nevada State Journal*, January 31, 1903, n.p.

"The Race Track", *Carson Morning Appeal*, May 6, 1881, 2:1.

"Town, State and County", *Carson Daily Index*, October 23, 1885, 3:1.

"Treadway's Park", *Nevada State Journal*, May 12, 1887, p.2.

"Under The Hammer; Farmer Treadway Ranch Sold Yesterday at Public Auction", *Carson Morning Appeal*, August 6, 1881, 3:4.

"Washoe Fruit", *Carson Daily Appeal*, September 8, 1869, 3:4.

Records

Carson City County Recorder, Book 9, p.491; Book 14, p.94; Book 15, p.150; Book 15, p.204; Book 15, p.225; Book 15, p.284; Book 16, p.261; Book 16, p.285; Book 16, p.526; Book 18, p.611; Book 22, p.57; Book 27, p.30; Book 27, p.140; Book 29, p.105; Book 29, p.109; Book 32, p.73; Book, 32, p.125; Book 32, p.126; Book 32, p.127; Book 36, p.2; Book 37, P.106; Book 37, p.552; Book 38, p.139; Book 43, p.75; Book 43, P.163; Book 43, p.418; Book 46, p.157.

Reports

McNees, Lance and Jeff Johnston. "A Class III Cultural Resource Inventory for the Proposed Silver Saddle Ranch Subdivision, Carson City, Nevada." Reno: TRC Mariah Associates Inc., May 1995.

Preliminary Report Dated June 5, 2002, Exhibit "A", on file at Nevada Department of Transportation, Division of Right-of-Way, Carson City.

Maps

"Parcel Map, Eva Lompa & The First Interstate Bank of Nevada, A Division of Parcel D of P.M. No. 678, Portions of Section 16, T.15.N., R.20E., MD.M, Carson City Nev., Sheets 1 of 2 and 2 of 2", 1983.

"Parcel Map for Eva Lompa, Parcel Map No. 2, Portions of Section 16, T·15·N, R·20·E, M.D.B. & M., Carson City, Nevada", August 31, 1978.

"Parcel Map for Eva Lompa and First Interstate Bank of Nevada No. 3: A Division of a Portion of the S 1/2 Sec. 16 and the N 1/2 Sec. 21, T.15N, R.20E, M.D.B.M., Carson City, Nevada", August 17, 1979.

"Parcel Map for Eva Lompa and The First Interstate Bank of Nevada: A Division of Parcel D of Parcel Map No. 974 and being portions of Section 16, T 15N, R 20E, MDM, Carson City, Nevada", April 21, 1983.

"Parcel Map for Eva Lompa and The First Interstate Bank of Nevada: Portions of S 1/2 Section 16 and N 1/2 Section 21, T 15N, R 20E, MDM, Carson City, Nevada", December 8, 1981.

"Parcel Map for Eva Lompa Trust & Estate of Simone Lompa, Situate in N 1/2 Section 21, T15N, R20E, M.D.M., Carson City, Nevada, Sheet 1 of 1", March 30, 1998.

"Parcel Map for State of Nevada, Division of State Lands for and in Behalf of Department of Prisons, Situate in N 1/2 Section 21, T15N, R20E, M.D.M., Carson City, Nevada, Sheet 1 of 1", March 30, 1998

"Record of Survey for Carson City School District: A Boundary Line Adjustment Located Within a Portion of Section 16, T.15N, R.20E, M.D.B. & M.", December 13, 1991.

"Record of Survey for Carson City School District: A Boundary Line Adjustment Located Within a Portion of Section 16, T.15N, R.20E, M.D.B. & M.", July 31, 1992.

Internet Resources

Nevada State Archives Guide to the Governors' Records,
http://dmla.clan.lib.nv.us/docs/nsla/archives/gov/kirman.htm

Parcel I:
Parcel A: Parcel D as shown on Parcel Map No. 975 for EVA LOMPA AND THE FIRST INTERSTATE BANK, filed in the office of the recorder of Carson City, Nevada, on June 29, 1983, as File No. 19422, Official Records.

EXCEPTING THEREFROM all that portion of said land as described in Grant, Bargain, Sale Deed to Stanton Park Development, Inc., a Nevada Corporation, as contained in that certain Lot Line Adjustment, recorded on January 10, 1991, as File No. 110824, Offical Records.

FURTHER EXCEPTING THEREFROM all that portion of Parcel D as described in Grant, Bargain, Sale Deed to the Carson City School District, as contained in that certain Lot Line Adjustment, recorded on September 4, 1991, as File No. 119656, Official Records.

FURTHER EXCEPTING THEREFROM all that portion of said land as described in Grant, Bargain, Sale Deed to the Carson City School District, as contained in that certain Lot Line Adjustment, recorded on October 15, 1992, as File No. 135591, Official Records.

FURTHER EXCEPTING THEREFROM all those portions of said land as described in Grant, Bargain, and Sale Deeds to Carson City, a consolidated municipality and a political subdivision of the State of Nevada, recorded on July 16, 1996, as File No.'s 191690, 191691 and 191692, Official Records.

Parcel B: All that portion of said land granted to Eva Lompa, an unmarried woman and Eva Lompa and First Interstate Bank of Nevada, Co-Trustees of the Estate of Simone Lompa, deceased, and Eva Lompa Trustee of the Eva Lompa Family Trust Agreement dated May 25, 1982, as described in Grant, Bargain, Sale Deed as contained in that certain Lot Line Adjustment recorded on October 15, 1992, as File No. 135591, Official Records, more particularly described as follows:

All that certain real property situate in Carson City, State of Nevada, lying within the Northwest one quarter (NW ¼) of Section Sixteen (16), Township Fifteen (15) North, Range Twenty (20) East, M.D.B.&M., more particularly described as follows:

BEGINNING at the intersection of the East line of Parcel A of Parcel Map No. 678, recorded August 31, 1978, Official Records, Carson City, Nevada, with the centerline of East Robinson Street, said POINT OF BEGINNING being further described as being the Northwest corner of that parcel granted from Eva Lompa, et al, to Carson City School District that per Boundary Line Adjustment recorded as Document No. 119656, and as shown on Record of Survey Map No. 1916, recorded January 16, 1992, Official Records, Carson City, Nevada:

Thence South 89°28'26" East along said centerline of East Robinson Street and the Easterly prolongation thereof, a distance of 1,062.44 feet;

Thence South 00°59'16" West 350.01 feet;

Thence North West 89°28'26" West 1,058.42 feet to said East line of Parcel A;

Thence North 00°19'46" East along said East line 350.00 feet to said POINT OF BEGINNING.

Reference is hereby made to those certain Record of Survey Map No.'s 1916 and 1960 to support boundary line adjustments for the Carson City School District recorded on January 16, 1992, as File No. 124203 and recorded on October 15, 1992, as File No. 135590, Official Records.

PARCEL II:
Parcel C of Parcel Map for EVA LOMPA AND FIRST NATIONAL BANK OF NEVADA NO. 3, in Carson City, State of Nevada, according to the map recorded August 17, 1979 as Document No. 90142 in Map Book 3, Page 764 of Official Records.

EXCEPTING THEREFROM that portion of said land described as follows:

Commending at the Northwest corner of Parcel A as shown and located on the Recorded Parcel Map No. 764, of the Official Records of Carson City, Nevada; thence South 4°42'23" West, 607.67 feet; thence South 83°12'14" West, 28.28 feet; thence North 6°21'37" East, 217.37 feet; thence South 83°38'23" East, 10.00 feet; thence North 6°21'27" East, 396.48 feet to the point of beginning.

ALSO EXCEPTING THEREFROM that portion of said land described as follows:

Commencing at the Southeast corner of the Linear Park as shown and located on that Record of Survey, recorded January 16, 1981 as Document No. 175, in Map Book 4, Page 865 of Official Records.

Thence South 61°49'47" West 235.00 feet; thence South 82°53'37" East, 193.48 feet; thence North 07°06'23" East 136.87 feet to the point of beginning.

ALSO EXCEPTING THEREFROM that portion of said land conveyed to Newman Construction, Ltd., a Nevada corporation by deed dated September 17, 1979 and recorded September 21, 1979 as Document No. 90929, in Book 61, Page 637 of Official Records.

ALSO EXCEPTING THEREFROM that portion of said land conveyed to Newman Construction, Ltd., a Nevada Corporation by deed dated October 2, 1980 and recorded October 6, 1980 as Document No. 99238 in Book 285, Page 323 of Official Records.

ALSO EXCEPTING THEREFROM Parcels A, B, C, and D of parcel Map for Eva Lompa and The First Interstate Bank of Nevada, in Carson City, State of Nevada, according to the map recorded December 8, 1981 as Document No. 8284, in Map Book 4, Page 916 of Official Records.

ALSO EXCEPTING THEREFROM Parcels 1 and 2 as set forth on that certain Parcel Map filed for State of Nevada, Division of State Lands, for an on behalf of Department of Prisons, filed in the office of the County Recorder of Carson City, Nevada, on March 30, 1993 in Book 8 of Maps, Page 2268, Official Records, as File No. 215450.

PARCEL III:
Parcel G as shown on Parcel Map No. 974 for EVA LOMPA AND THE FIRST INTERSTATE BANK, filed in the office of the recorder of Carson City, Nevada, on June 27, 1983, as File No. 19350 of Official Records.

PARCEL IV:
Parcel H as shown on Parcel Map No. 975 for EVA LOMPA AND THE FIRST INTERSTATE BANK, filed in the office of the recorder of Carson City, Nevada on June 29, 1983, as File No. 19422 of Official Records.

PARCEL V:
All of a certain parcel of land situate within the Southeast ¼ of Section 16, Township 15 North, Range 20 East, M.D.B.&M., Carson City Nevada, particularly described as follows;

All of Parcel D of Parcel Map No. 916 as shown and located on that certain Parcel Map for EVA LOMPA AND FIRST NATIONAL BANK OF NEVADA, which is recorded in the Official Records of Carson City, on December 8, 1981, as File No. 8284.

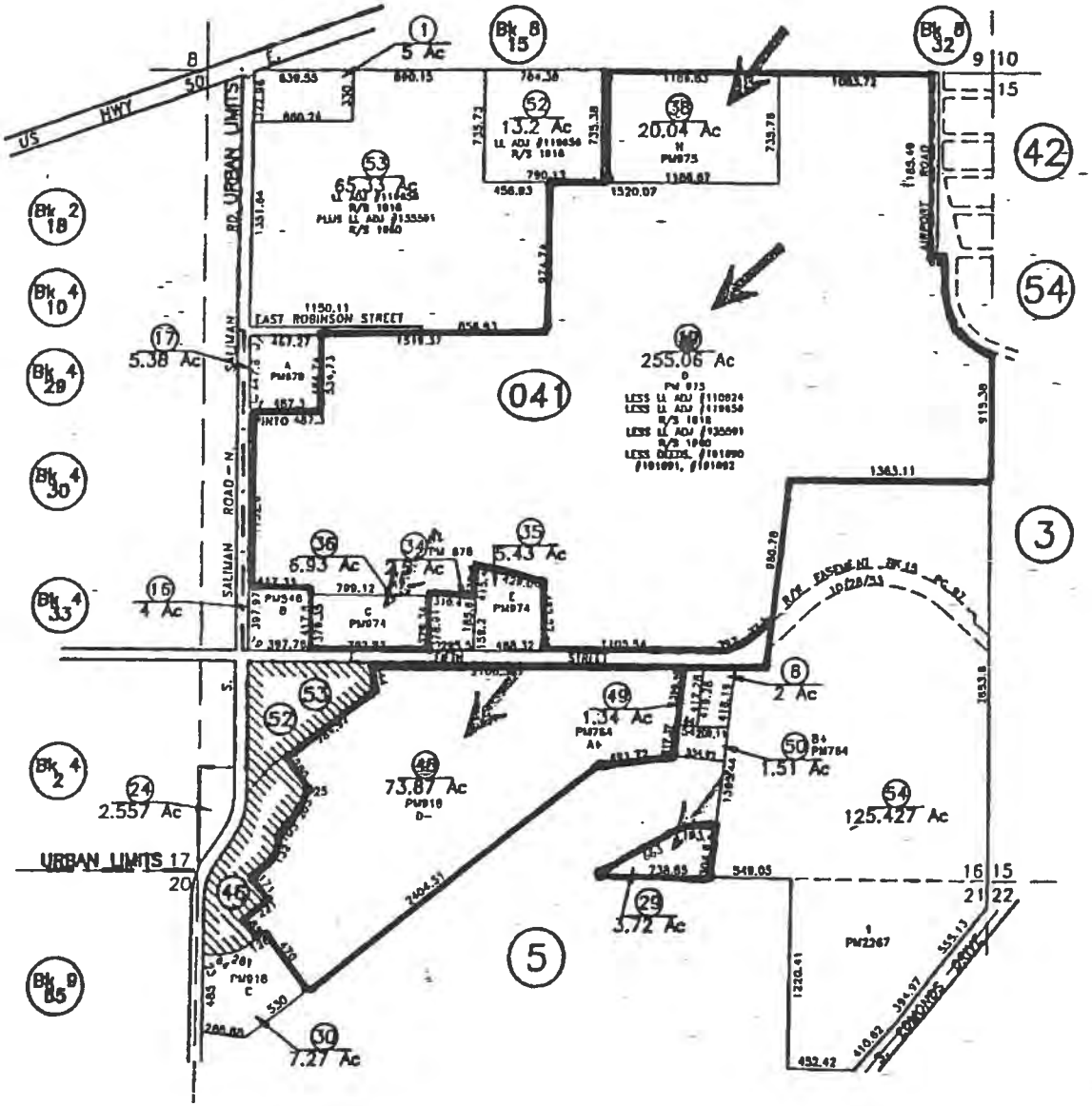
EXCEPTING THEREFROM the following described parcel; commencing at the Northwest corner of Parcel A as shown and located on the recorded Parcel Map No. 764, of the Official Records of Carson City, Nevada; thence South 4°42'23" West, 607.67 feet; thence South 83°12'14" West 28.28 feet; thence North 6°21'37" East, 217.37 feet; thence South 83°38'23" East, 10.00 feet; thence North 6°21'27" East, 396.48 feet to the point of beginning.

PARCEL VI:
Parcel 1, as set forth on that certain Parcel Map for EVA LOMPA & ESTATE OF SIMONE LOMPA, filed in the office of the County Recorder of Carson City, Nevada, on March 30, 1998 in Book 8 of Maps, Page 2268, Official Records as File No. 215450.

PARCEL VII:
Parcel 2, as set forth on that certain Parcel Map filed for STATE OF NEVADA DIVISION OF STATE LANDS FOR AND IN BEHALF OF DEPARTMENT OF PRISONS, filed in the office of the County Recorder of Carson City, Nevada on March 30, 1998 in Book 8 of Maps, Page 2267, Official Records, as File No. 215449.

10-04

SECTION 16 AND
PORTION NW 1/4 SECTION 21, T.16 N., R.20 E., M.D.B. & M.



Scale: 1" =800'
Revised 2/5/99

NOTE
SOME PARCELS DELINEATED HEREON MAY NOT BE PRESENTED IN TRUE SIZE, SHAPE, OR LOCATION DUE TO DISCREPANCIES BETWEEN LOT LINES.

CARSON CITY, NEVADA
THIS MAP IS PREPARED FOR THE USE OF THE CARSON CITY ASSESSOR FOR ASSESSMENT AND ILLUSTRATIVE PURPOSES ONLY. IT DOES NOT REPRESENT A SURVEY. NO LIABILITY IS ASSUMED AS TO THE SUFFICIENCY OR ACCURACY OF THE DATA DELINEATED HEREON.

Changed PM reference of 10-041-19 from PM974 to PM975

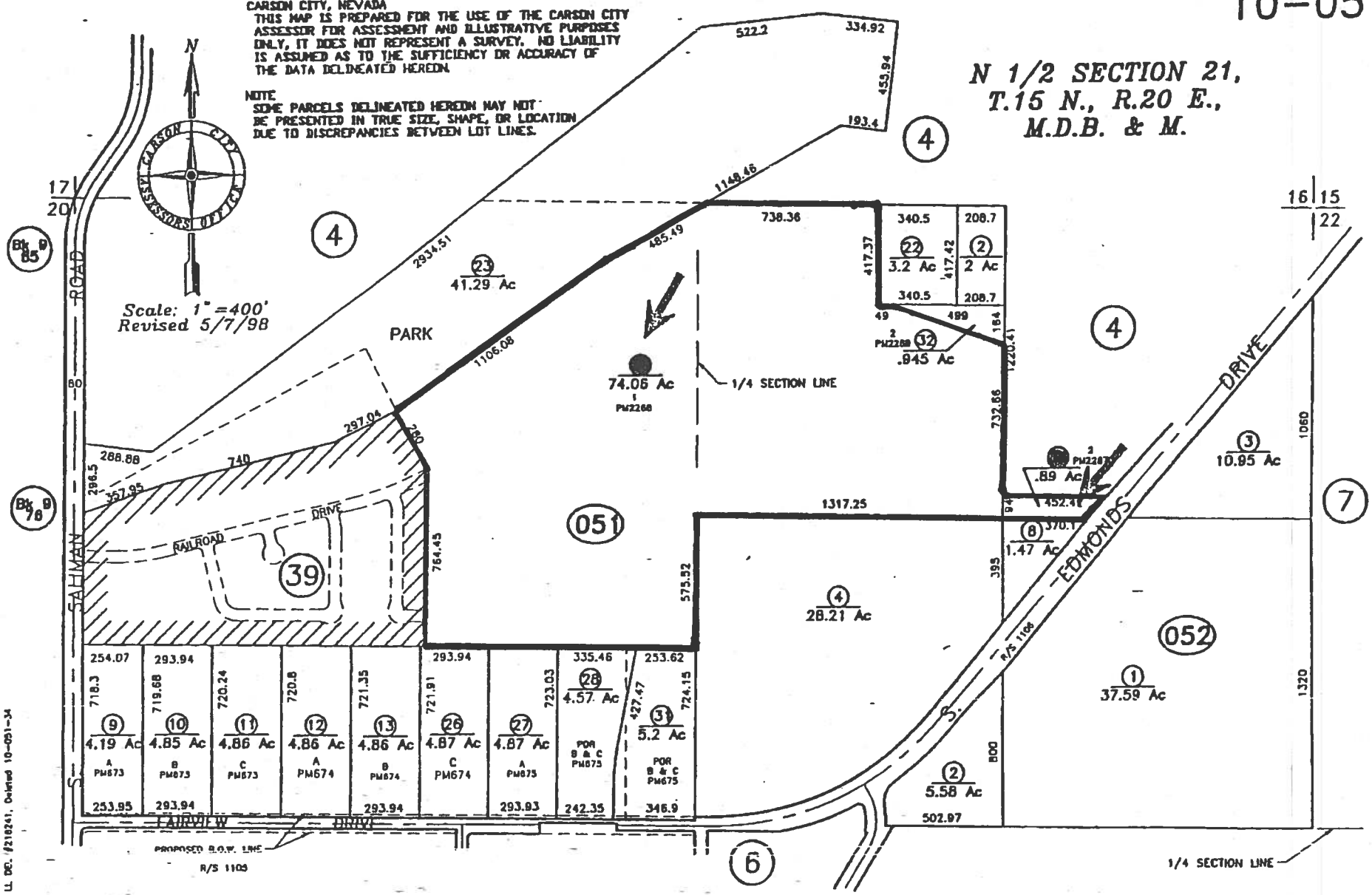
Northern Nevada Title Company does not represent this plat as a survey of the land indicated hereon, although believed correct, no liability is assumed as to the accuracy thereof.

10-05

CARSON CITY, NEVADA
THIS MAP IS PREPARED FOR THE USE OF THE CARSON CITY ASSESSOR FOR ASSESSMENT AND ILLUSTRATIVE PURPOSES ONLY, IT DOES NOT REPRESENT A SURVEY. NO LIABILITY IS ASSUMED AS TO THE SUFFICIENCY OR ACCURACY OF THE DATA DELINEATED HEREON.

NOTE
SOME PARCELS DELINEATED HEREON MAY NOT BE PRESENTED IN TRUE SIZE, SHAPE, OR LOCATION DUE TO DISCREPANCIES BETWEEN LOT LINES.

N 1/2 SECTION 21, T.15 N., R.20 E., M.D.B. & M.



Northern Nevada Title Company does not represent this plat as a survey of the land indicated hereon, although believed correct, no liability is assumed as to the accuracy thereof.

LL DOC. #218241, Deleted 10-051-34

Lompa Ranch
2200 East 5TH Street
Carson City
Carson City County
Nevada

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

December 2004

LOMPA RANCH

INDEX TO PHOTOGRAPHS

Lompa Ranch
2200 East Fifth Street
Carson City
Carson City County
Nevada

Documentation: 11 photographs (2003)
20 photographs (2004)

John Snyder, Photographer (2003) and Field Director (2004)
Ed Andersen, Photographer (2004)

EXTERIOR PHOTOGRAPHS

Photo Lompa-1 Contextual view to south; Hay Barn at center, 210mm lens. Nevada State Prison visible at extreme left. [2003]

Photo Lompa-2 Contextual view to east; Hay Barn at center, 210mm lens. [2003]

Photo Lompa-3 Contextual view to west from in front of Nevada State Prison, 210mm lens. Bunkhouse at center with bright roof. Large cottonwood trees at left line East 5th Street and were planted by Nevada State Prison inmates in the early 1930s. [2003]

Photo Lompa-4 Contextual view to west-northwest from north side of East 5th Street, 210mm lens. Bunkhouse at right center, Dairy at center, House just visible in trees at left. [2003]

Photo Lompa-5 Contextual view to northwest from north side of East 5th Street, 150mm lens. Bunkhouse at center, with Dairy and Woodshed visible to its left. [2003]

Photo Lompa-6 Contextual view to east-southeast from south side of East 5th Street, 150mm lens. Rinkel Barn at left, Nevada State Prison visible in distance. [2003]

Photo Lompa-7 Contextual view to north-northeast from north side of East 5th Street just west of driveway, 150mm lens. Garage at left, Dairy just visible at center; House is hidden in trees at right. [2003]

Photo Lompa-8 Contextual view to north-northwest from driveway entrance at north side of East 5th Street, 90mm lens. Hay Barn at left. [2003]

Photo Lompa-9 Contextual view to northwest from field south of East 5th Street, 90mm lens. Hay Barn at center. [2004]

Photo Lompa-10 Contextual view to west-southwest in field south of East 5th Street. 135mm lens. Rinkel Barn at center. [2004]

Photo Lompa-11 Contextual view to northeast from south field, 210mm lens. Rinkel Barn at right, Hay Barn in background across East 5th Street. [2004]

Photo Lompa-12 Contextual view to southeast, 135mm lens. Granary at right center, with Hay Barn behind it; Blacksmith Shop at center, with Implement Shed at left center; Bunkhouse at far left. [2004]

Photo Lompa-13 Contextual view to west-southwest, 210mm lens. Granary at left, west windmill in distance. [2004]

Photo Lompa-14 Contextual view to southwest from yard near House, 135mm lens. Rinkel Barn at center, across East 5th Street. [2004]

Photo Lompa-15 Front of House, view to south, 135mm lens. [2004]

Photo Lompa-16 Rear of House, view to north-northwest, 90mm lens. [2004]

Photo Lompa-17 Rear of House, view to north-northeast, 150mm lens. [2003]

Photo Lompa-18 Pumphouse, view to northeast, 135mm lens. [2004]

Photo Lompa-19 From left to right: Garage, Cellar, Dairy, Bunkhouse, view to northeast, 90mm lens. [2004]

Photo Lompa-20 From left to right: Woodshed, House, Dairy, view to southwest, 90mm lens. [2004]

Photo Lompa-21 Bunkhouse, view to southeast of north façade and west side, 135mm lens. Original clapboard siding on façade, and T1-11 plywood siding on west side. [2004]

Photo Lompa-22 Bunkhouse, view to west-northwest of south end and east side, 135mm lens. Board-and-batten siding on end, and T1-11 siding on side. [2004]

Photo Lompa-23 South side of Hay Barn and corral, view to north-northeast from south side of East 5th Street, 90mm lens. [2003]

Photo Lompa-24 South side of Hay Barn from within corral, view to north, 90mm lens. [2004]

Photo Lompa-24 South side and east façade of Hay Barn, view to north-northwest with corral and stock chute in foreground, 135mm lens. [2004]

Photo Lompa-25 Oblique view of south side and east façade of Hay Barn, view to northwest, 135mm lens. [2004]

Photo Lompa-26 East façade of Hay Barn, view to west, 135m lens. [2004]

Photo Lompa-27 Oblique view of east façade and north side of Hay Barn, view to southwest, 90mm lens. [2004]

Photo Lompa-29 Interior of Hay Barn, view to west, 90mm lens with electronic flash fill. [2004]

Photo Lompa-30 Left to right: Hay Barn, Granary, Blacksmith Shop, Shop, view to north-northeast, 90mm lens. Implement Shed roof is just visible behind Shop. [2004]

Photo Lompa-31 Left to right: Blacksmith Shop, Shop, Implement Shed, view to northwest, 135mm lens. [2004]

Photo Lompa-32 South façade of Blacksmith Shop, view to northwest, 135mm lens. [2004]

Photo Lompa-33 Oblique view of south façade and east end of Granary, view to northwest, 135mm lens. [2004]

Photo Lompa-34 South façade of Granary, view to north, 135mm lens. [2004]

Photo Lompa-35 East end of Granary, view to west, 135mm lens. [2004]

Photo Lompa-36 South windmill, view to southwest from south side of East 5th Street, 150mm lens. [2003]

Photo Lompa-37 South windmill, view to northwest, 135mm lens. Lettering on windmill sail reads, "Woodin & Little, San Francisco, Calif. USA." [2004]

Photo Lompa-38 East façade of Rinkel Barn, view to west, 135mm lens. [2004]

Photo Lompa-39 Oblique view of east façade and south side of Rinkel Barn, view to northwest, 135mm lens. [2004]

Photo Lompa-40 South side of Rinkel Barn, view to north, 135mm lens. [2004]

Photo Lompa-41 Oblique view of north side and west end of Rinkel Barn, view to southeast, 210mm lens. [2003]

LOMPA RANCH

Location: 2200 East 5th Street, Carson City, Carson City County, Nevada. UTM coordinates: 11-262892-4338121 (center of Hay Barn)

Significance: Dating to the earliest years of the development of the Eagle Valley and of Carson City, the Lompa Ranch today represents the last vestige of the area's history of ranching. Though development of the property as a ranch dates to the 1860s, the buildings that exist today date to the first half of the 20th century. Some of the most significant figures in the history of the area have owned the property, though none actually lived there. Today the ranch lies surrounded by urban and suburban development. The property is associated with important events and significant persons, and has buildings having architectural significance as rare surviving examples of their types in the local context. The Lompa Ranch has been nominated to the National Register of Historic Places under criteria A, B, and C at the local level of significance.

Description: The Lompa Ranch complex flanks East 5th Street on both north and south, and consists of the Lompa House and associated outbuildings: bunk house, feed barns, granary, equipment storage sheds, blacksmith shop, shop, pump house, etc. The bulk of the buildings are located on the north side of East 5th Street.

The one-story ranch house is of wood frame construction, with hip and gable roof forms. It has been heavily altered with aluminum siding, sliding aluminum windows, and composition shingle roof.

West of the house stands the large hay barn, a Dutch-plan (also known as a basilica-plan) structure with central mow and flanking stalls. This is a timber-framed structure with gable roof; exterior walls are board-and-batten, while the roof is clad in corrugated metal. There are loft doors on the gable ends, with hoist beams and rigging still in place. Double-leaf hinged doors open into the central mow area, while single-leaf doors access the side stalls. Manure windows are located down the length of each side, allowing for cleaning of the feed stalls. Inside, the mow area has a wood plank floor, and the heavy timber bents dominate the interior space.

A stone masonry pumphouse stands just outside the fenced yard surrounding the house, just west of the residence.

Four outbuildings stand to the north of the hay barn. The closest are the blacksmith shop and shop, both of single-wall construction vertical plank exterior, and with reused wood sash windows of various sizes and types, and gable roofs of medium pitch. Just north of the shop is an open implement garage of wood frame construction, with low-pitched gable roof. To the northwest of this small group of buildings, the granary stands

alone. This is a wooden single-wall building with frame elements on the exterior, wood plank door, and gable roof clad in sawn wood shingles. The granary's floor joists rest on timber sills that in turn rest on stone piers. The gable ends have exterior vertical planking.

Just north of the house are a wood shed, garage, root cellar, and dairy. The woodshed is a single-wall wood structure with vertical plank exterior, and gable roof with open eaves and exposed rafter tails. The dairy (milkhouse) and root cellar are one-story stone masonry building with stuccoed exterior, 1/1 double-hung windows, and shingled gable roof. The garage is also of stone masonry construction, with gable roof, as is the windowless root cellar.

Just east of this group of outbuildings, a bunkhouse stands within a corral area. The one-story bunkhouse—the original ranch house—rests on a stone masonry perimeter foundation, and is of single-wall construction, but now exhibits a variety of exterior cladding: the south wall is board-and-batten, the north wall is of clapboards, and the east and west walls are clad in scribed plywood. There are small fixed windows in the east and west walls, just below the eaves. In the north (main) façade are a four-lite replacement door, and an original 6/6 double-hung wood sash window. There is an exterior stone chimney with brick stack on the east side of the bunkhouse.

Board-fenced corrals front East 5th Street, south of the large barn, and east of the house; a stock loading chute is located on the east side of the corral.

A smaller hay barn stands south of East 5th Street. This is a wood frame structure clad in board-and-batten siding, with steeply-pitched gable roof clad in corrugated metal. This barn originally stood west of Saliman Street on the site of the juvenile center; former owners gave it to Mrs. Lompa, who moved it to the present site.[1] A windmill on a small wooden tower also stands south of East 5th Street, near the small barn, while a second windmill stands north of East 5th Street, in the field well to the west of the building complex.

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[1] Eva: A Carson lifetime, *Carson City Appeal*, September 22, 1991. This barn, built around 1903, originally stood on the Rinkel property on Curry Street. From there it was moved to Bill Harris property. Harris sold the bar to Gracie Partridge who moved it once more to her property on Saliman Street. The Lompas acquired the structure from Partridge and moved it to its present location.

Historical Context: **Prologue**

Actual development of the Carson City area began in 1851, when a group of California miners, working eastward from the Placerville, California area, established a small trading post, which they named Eagle Ranch, in Eagle Valley. The establishment of Johnson's Cut-Off emigrant route, laid out in 1852 and passing along the south shore of Lake Tahoe, linked Placerville with the Eagle Ranch. The locale thus became a gateway between the deserts of the Great Basin, and the high passes of the Sierra Nevada.

At Eagle Ranch owners, Joseph and Frank Barnard, George Follensbee, A.J. Rollins, and Frank and W.L. Hall operated their trading post, gardened, harvested hay from native grasses, and did business with the emigrants passing through until 1854. In 1855 the group sold the property to Mormon settlers, who held it until a general recall of all the Saints to Salt Lake City in 1857 caused them to sell out to John Mankin.[2] In turn, Mankin sold it to Abraham Curry the following year.[3]

By the time Abraham Z. Curry, a businessman-immigrant from New York City, reached the area, high land prices and increasing numbers of miners confronted him. Though the Mormons themselves had returned to Salt Lake City a year earlier to help Brigham Young defend Deseret against President James Polk's threats of military action, they had left a legacy of inflated land prices for the prime real estate in Genoa, one valley to the south, and Franktown, one valley to the north of Eagle Valley. Sellers were unwilling to negotiate. Great numbers of prospectors were in evidence throughout the Carson River Valley, perhaps sensing the riches nearby; they would discover and open the Comstock the following year. Wagon trains of immigrants continued to wend their way through the Eagle Valley and into California on nearby trails, and the Overland Stage Line used Eagle Station for supplies. Refusing to bow to the high prices in Genoa and Franktown, Curry, with partners F.M. Proctor, B.F. Green, and J.J. Musser, sought out Eagle Valley, buying most of it, including the ranch and trading post, from Mankin for a reported $500 and a few horses.[4]

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[2] Palmer, Rebecca Lynn, "Historic American Engineering Record, Kings Canyon Road (Placerville Road, Lake Tahoe Wagon Road), HAER No. NV-11."
[3] Historic Environment Consultants, "Historic Property Survey Report and Multiple Resource Area Nomination to the National Register of Historic Places for Carson City, Nevada"; Humphreye, Noreen I.K., "National Register of Historic Places Inventory—Nomination Form, David Small House"; *History of Nevada, with Illustrations and Biographical Sketches of its Prominent Men and Pioneers*, Myron Angel, ed.
[4] Carlson, Helen S., *Nevada Place Names: A Geographical Dictionary.*

The ambitious Curry, likely anxious to increase the value of *his* lands in a manner similar to those he had spurned for that very reason, immediately began promoting the valley as the site for the state capital. Curry's promotional abilities must be admired: Nevada had not yet become a territory, and statehood did not even seem on the horizon.

It was the Northwest Ordinance of 1787 that had established the United States' territorial system. Modified by the Wisconsin Organic Act of 1838, the system required newly settled areas to pass through at least two states of political maturation before admission to statehood. By 1854, questions of sovereignty led Congress to grant to the Kansas and Nebraska Territories the decision of whether to allow slavery. By the end of that decade, the question of slavery had led to the very real specter of civil war.[5]

It was against this background that Curry began his promotion. His capital had no buildings yet erected; and his first attempt to plat the city failed when the surveyor refused to work in return for ownership of "a full city block" of what he viewed as worthless desert. Curry persevered however, and managed to find another surveyor who, in 1858, platted a town site with wide city streets and a four-square-block area for the Capitol and its attendant offices. Curry then built a stone house for himself. The partners also discovered a warm spring on the ranch site, adjacent to a large sandstone deposit. Establishment of the post office on November 18, 1858 gave official recognition to the town.[6]

By the following spring Curry and his friend William Ormsby had named the town after Kit Carson, guide for Frémont's 1844 expedition through the area and for whom the Carson River was also named. In June 1859, Captain James H. Simpson described the town as comprising a dozen small frame houses, two stores—one of which was Ormsby's—with some buildings of sandstone taken from Curry's quarry at the warm springs. The discovery of the nearby Comstock Lode later that summer reversed the flow of traffic to California established by the California Gold Rush a decade earlier. This discovery of silver deposits in the Mt. Davidson area by H. Comstock, Emanuel Penrod, and James Fennimore set off a twenty-year era of intense mining activity. Now, thousands of miners and others scrambled eastward *from* California as they followed the lure of the silver

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[5] Adams, George R., "National Register of Historic Places Inventory – Nomination Form, Stewart-Nye House."

[6] Castleman, Deke, *Nevada Handbook*; Bancroft, Hubert Howe, *The Works of Hubert Howe Bancroft, Volume XXV, History of Nevada, Colorado, and Wyoming 1540-1888.*

strike. The route took many through the dusty streets of Carson City, whose population grew to nearly a thousand by 1860. The secession of southern states in 1860-61 brought a return to stricter policies regarding territories, but the federal government was anxious to keep the West in the Union. Thus between 1861 and 1864, the Congress extended territorial status to all remaining unorganized areas except Oklahoma: the Colorado, Dakota, and Nevada Territories all received recognition in 1861, and the Idaho and Arizona Territories in 1864. With Congressional creation of the Territory of Nevada in 1861 and nearby Genoa in decline, the government selected Carson City as territorial capital on November 25, 1861. President Lincoln appointed New Yorker, James Nye as the first territorial governor. William Stewart, a Comstock lawyer and politician who had already moved from Virginia City to Carson City, traveled to San Francisco to meet Nye, and convinced him to allow Carson City to remain the seat of territorial government rather than moving it to the seemingly more logical choice of Virginia City. The streamlined admission of Nevada to the Union in 1864 was the direct result of Republican desire to insure control of Congress and passage of the 13th Amendment following that year's elections. Since the majority of the politicians in the fledgling Nevada Territory were Republicans, the Republican majority in the Congress passed the Nevada Enabling Act in 1864. Curry's dream had reached fruition in only six years.[7]

Beyond Stewart's efforts with Nye, other factors influenced Carson City's selection: the fertile soil of the Eagle Valley surrounded it, it had plenty of wood for fuel, good water, and a good supply of local building stone at Curry's quarry at the warm springs. Previously, Curry had walled up the warm springs and built a bathhouse of hand-hewn stone. In 1861 he completed a stone hotel, measuring one hundred feet by thirty-two feet, at the site, which lay at the east end of his toll road (now East 5th Street) from Carson City.

Ranching and Farming in the Eagle Valley

Though early Mormon settlers had undertaken subsistence farming during their years in the area, it was the mineral strikes in the Comstock and the subsequent mining boom that drove the need for commercial ranching and farming in the Eagle and Carson Valleys. As early as 1861, the market for all types of agricultural produce was such that virtually all of the better lands

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[7] Castleman; Ossa, Rebecca, "National Register of Historic Places Registration Form, Virginia & Truckee Railroad Depot – Carson City, Nevada"; Humphreys, Noreen I.K. "National Register of Historic Places Inventory—Nomination Form, Ormsby-Rosser House"; Marschall, John P., "The House of Olcovich"; Adams.

on the Truckee, Walker, and Carson rivers within a 50-mile radius had already been claimed. Carson City became the transportation and supply hub for the Comstock, and through it to the mining communities moved lumber and cordwood, work animals, and farm produce—beef, sheep, hay, vegetables and grains. But if the needs of the miners provided the impetus for the valleys' farmers and ranchers, their claims of water rights to drive the mills necessary for gold and silver production directly affected the abilities of the agriculturalists to adequately meet those needs.

With the miners controlling the waters of the Carson River north of the valley, there was a severe shortage of water available for irrigation.[8] By 1880, of the 8,000 acres of agricultural land available in Ormsby County (today Carson City County), only 1,164 acres were under cultivation due to lack of water.[9] A proposal for a reservoir on the upper Carson River in the late 1880s went unbuilt for political and fiscal reasons, and would really only have served to keep the water-powered mills running through the dry season, without direct benefit to agriculture.

It was only after 1897 when the mining mills upstream on the Carson River were finally abandoned that water rights became available for local farmers, and it was not until the early years of the 20th century that farmers converted local mining ditches such as the Mexican Ditch to agricultural use. Even then, much of the farming and ranching of the Eagle Valley remained dry farming, or depended on springs and windmill-pumped wells.[10]

With the Comstock in decline by the 1880s, local farmers began freighting hay and grain to mining camps in Esmeralda County and at Bodie, California. But the construction of the Carson and Colorado Railroad in 1881 brought cheaper California products, killing the local market. The price of hay dropped so low in 1881-82 that Nevada farmers refused to sell.[11]

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[8] This contrasted sharply with the farms and ranches of the Truckee Meadows at Reno, where adequate water supplies were available from the Truckee River and local streams, often provided via ditches.

[9] A proposed tunnel to deliver water from Lake Tahoe to the Carson Valley in 1887 came to naught, and the problem continued unabated. Townley, *Alfalfa Country*, p.79.

[10] Lance McNees and Jeff Johnston, A Class III Cultural Resource Inventory for the Proposed Silver Saddle Ranch Subdivision, Carson City, Nevada , May 1995.

[11] *Alfalfa Country*, pp.66-7. Farmers eventually gave in and sold their hay at rock-bottom prices rather than let it rot in the fields.

Lompa Ranch History

The property that today comprises the Lompa Ranch is an aggregation of smaller properties that have passed through various hands. On December 18, 1865, J.J. Musser—one of Curry's partners—sold the north half of the southwest quarter, the south half of the northwest quarter, the northwest quarter of the southeast quarter, and the southwest quarter of the northeast quarter of Section 16 to A.D. Treadway.[12] This gave Treadway a 240-acre ranch fronting on Curry's Toll Road, with its southeast corner opposite the Nevada State Prison—formerly Curry's Warm Springs Hotel.

In October 1870, Treadway sold a "small portion" of land adjacent to the prison to Virginia City residents R.S. Mesick and J. Seely.[13] The following month, Treadway obtained the first of the ranch property south of the Toll Road, purchasing the land from P.H. Clayton and his wife.[14]
On May 31, 1873 Treadway sold the property north of the road to C.A.V. Putnam, but held back a 200 by 200 foot lot "planted with trees" opposite what was still being called the Warm Springs Hotel.[15]

In July 1873 Treadway obtained a patent on the southwest quarter of the southeast quarter of Section 16. While a portion of this land was that obtained from Clayton, it is not clear how Treadway came to claim the remainder of that forty-acre parcel, but that patent would lead directly to Treadway's claims for ownership of the prison property.[16] The following month he sold a small triangular parcel comprising perhaps half an acre and abutting the hotel/prison to John R. Johnson and John B. Bradley.[17]

In March 1875, Putnam sold 80 acres at the west end of the property to the Nevada Agricultural, Mining & Mechanical

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[12] Carson City County Recorder, Book 9, p.491.
[13] Carson City County Recorder, Book 14, p.94. Interestingly, the recorded document refers to the property as adjacent "Curry's Hotel (aka Warm Springs Hotel)" rather than as the Nevada State Prison.
[14] Carson City County Recorder, Book 15, p.150. Because the written description of the property hinges on a starting point—the southwest corner of the Warm Spring Hotel's stable—which no longer exists, it is not possible to determine how much land the purchase entailed. Only 235 feet deep, it does not appear to have been a sizeable purchase.
[15] Carson City County Recorder, Book 15, p.225.
[16] Carson City County Recorder, Book 15, p.204. It is interesting that this action in July is recorded on an earlier page than the previous transaction in May.
[17] Carson City County Recorder, Book 15, p.284.

Society.[18] This would become the site of the local horseracing track.

In April 1873 Treadway sold the tree-covered lot opposite the hotel and prison, held back from his previous sale to Putnam, to Johnson and Bradley, giving them property on both sides of the road.[19] Over the next six years, in a series of three transactions, Treadway disposed of the rest of his property east of Carson City as he consolidated activities at his home ranch to the west of town. In December 1875 he filed a quitclaim deed to J.H. Adams for a portion of the southeast quarter of the southeast quarter of Section 16 adjacent to the Warm Springs Hotel. In 1878 he sold his remaining property north of Warm Springs Road (as it was now called) to Richard Kirman. Finally, in 1881 he sold a 65-acre parcel lying in the southwest quarter of the southwest quarter of Section 15, and the southeast quarter of the southeast quarter of Section 16 to William Smyth.[20]

In early 1891 Putnam sold out to Smyth, giving the latter ownership of the property fronting on the north side of Warm Springs Road, with the exception of the racetrack property. Later than year Smyth sold 100 square feet of property on the north side of the road near the Warm Springs property to Kirman.[21]

The Smyth holdings passed to Hannah Duffy, whose ranch included the lands south of Warm Springs Road. In August 1898 one W. Woodburn, administrator of her estate, sold the land north of the road to P.H. Peterson. Two days later, Peterson sold the south half of the southwest quarter, the northwest quarter of the southwest quarter, and "so much of the southwest quarter and the northwest quarter of the southeast quarter as lies south of the" Prison Road plus more, totaling about 318 acres, to Kirman. This process was repeated nine years later when, in May 1907, Woodburn sold the remainder of the Duffy Ranch south of Kirman's holdings to Peterson, with Peterson selling the next day to Kirman. Kirman now owned much of Section 16, and a good

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[18] Carson City County Recorder, Book 16, p.261. The entry in the Recorder's book is interesting in that it describes the 80 acres as being in the northwest quarter of the southwest quarter of Section 16. Inasmuch as a quarter of a quarter only comprises 40 acres, it would seem that at least half of the acreage mush have been in the adjoining Section, and must already have been in Putnam's ownership.

[19] Carson City County Recorder, Book 16, p.285.

[20] Carson City County Recorder, Book 18, p.611; Book 22, p.57. Based on maps, the sale to Kirman must have been property north of the Putnam property. The sale to Smyth is the first mention of Treadway holdings in Section 15, though we may have missed an earlier entry in the Recorder's books in tracing chain of title on the Lompa Ranch.

[21] Carson City County Recorder, Book 27, p.30; Book 27, p.140.

portion of Section 21 to the south.[22] The next change of hands was not long in coming.

Little more than a week elapsed before Elizabeth Kirman, widow, and her son Richard sold the ranch property on May 25, 1907 to Wildes & Company. The company, which was a partnership between Tasker L. Oddie and F.L. Wildes, retained the property until January 1908, when they sold it on to Sam Imelli of Gardnerville for $10.00 in gold coin. A year later almost to the day, Imelli sold the property north and south of the Prison Road to Joe Moroni and Steve Belli.[23]

Moroni and Belli owned—and presumably operated—the ranch jointly for the next decade, until Moroni sold his half interest to Belli on May 7, 1919 and the property became known as the Belli Ranch. In 1925 Belli added Allesandrina Belli to the title. The final Belli acquisition came in 1927 when Ormsby County, in a tax sale, sold a small parcel and house at the southeast corner of Prison Road (East 5th Street) and Saliman Road. Their ownership came to an end on October 29, 1936 when the Bellis sold the ranch to Simone "Sam" Lompa of Reno and Rinaldo Crimetti of Douglas County.[24]

In 1937 the two partners deeded a portion of the property to the State of Nevada for use as a prison feeder road. The following year Crimetti sold a quarter-acre lot to Lompa. The ranch—then around 820 acres—finally came into Lompa's sole ownership in 1940, when Crimetti sold his undivided half interest to his partner.[25]

When Simone Lompa and Rinaldo Crimetti took ownership of the property in late 1936, the extant buildings consisted of a small house (today the bunkhouse), barn, granary, and blacksmith shop, and had probably been built by Belli between 1909 and 1936. Lompa built the rest of the buildings that today comprise the Lompa Ranch complex. He built the present house in 1940 for his new wife, at which time the original house became a bunkhouse for ranch hands. The stone buildings he erected with the help of "Smokehouse" Johnson, a trustee from

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[22] Carson City County Recorder, Book 29, p.105; Book 29, p.109, Book 32, p.73; Book 32, p.125. Nothing in the materials examined explains why Peterson seems to have been acting as Kirman's proxy.
[23] Carson City County Recorder, Book 32, p.126; Book 32, 127, Book 36, p.2.
[24] Carson City County Recorder, Book 37, p.106; Book 37, p.552; Book 38, p.139; Book 43, p.75.
[25] Carson City County Recorder, Book 43, p. 163; Book 43, p.418; Book 46, p.157.

the adjacent Nevada State Prison. He also employed other prison labor, as available, on the farm.[26]

Simone Lompa had come to Nevada from his native Switzerland and was employed in ranching and farming in Reno before buying the Eagle Valley Property.[27] He married 24-year old Eva Maddelena, of Italian-Swiss parentage, on January 15, 1939.[28] They spent their wedding night at the ranch, and Eva later recalled having to rise early the next morning to milk the dairy cows.[29] Simone and Eva ran a dairy herd and grew rye on the property. They sold their dairy products locally[30], and stored the rye in the granary. In later years the family expanded the operation to include sheep and beef cattle.

Simone "Sam" Lompa died in Carson City on April 28, 1969 aged 71 years.[31] The ranch passed to Eva's ownership and she continued to live in the house. Their son, Sam took over running the ranch, living in a new house a few hundred feet east of his mother's house; he continues overseeing the ranch today. By 1991, ranch acreage was down to 550. A deal with Carson City in the 1960s ended up costing the Lompas valuable water rights, and Sam was forced to drill a well in the 1970s. Even with this, there is not enough water—the perennial problem of Eagle Valley agriculturalists—to grow native hay, requiring the purchase of hay from other sources to carry the stock through the winters.

Following Eva's death in July 2003 the ranch passed to their three children, Sam, Dorothy, and Martha. Today the Lompa Ranch consists of 359.62 acres straddling East 5th Street.[32] Surrounded by urban development, and with the new Carson City Bypass freeway about to bisect it, requiring the removal of another 82 acres, the ranch is the last active vestige of ranching

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[26] Sam Lompa, personal communication, October 2004. The Lompa heirs recall their father as treating the prison inmates fairly and humanely, and that there was never any trouble from these men.

[27] Lompa s last stand, *Carson City Appeal*, September 22, 1991. Simone Lompa was born in Ticino, the only Italian-speaking state in Switzerland. Ticino was also the original home of the Belli family, from whom Lompa bought his ranch.

[28] Eva: A Carson lifetime, *Carson City Appeal*, September 22, 1991. Eva s father was from northern Italy, while her mother was from Bidogno, Switzerland; Eva was born in Beckwourth, California on April 17, 1915.

[29] Martha Lompa Keating, Dorothy Arraiz, Sam Lompa, personal communication, October 2004.

[30] Though in a 1999 interview, Eva Lompa recounted to the author that they also shipped cream to the Crystal Creamery in Sacramento, California.

[31] Area Deaths, *Reno Evening Gazette* , April 30, 1969, p.14.

[32] Information supplied by the Division of Right-of-Way, Nevada Department of Transportation.

and farming in the Eagle Valley/Carson City area, a lone reminder of one of the area's most significant pioneer activities.

Other Owners of Note

The property that became today's Lompa Ranch has had, as noted previously, a number of owners through the years. Among these were three who enjoyed sufficient local significance to warrant specific note herein.

John Jacob Musser. Born in Chambersburg, Pennsylvania in 1829, Musser was a lawyer who appears to have come west around the time of the California Gold Rush. After a stint as a miner in Plumas County, California, he served as District Attorney in Downieville, California from 1855 to 1858. In that latter year he moved to the Eagle Valley—then in the western Utah Territory—where he joined Abraham Curry, Francis Proctor, and Benjamin Green in purchasing the Eagle Ranch and founding Carson City.

Musser opened a law practice in Carson City in 1859. That same year delegates to a constitutional convention to establish the Nevada Territory selected him as president of the convention. Following the death of James Crane, Musser was elected to Congress in November 1859 where he continued his efforts toward the establishment of the Nevada Territory. In 1861 he was granted a charter to establish a water system for Carson City, as well as a franchise for a gas company.

With Nevada established as a territory in 1861, Musser ran as a Territorial Delegate to Congress in 1862, but lost. In 1863 he was appointed prosecuting attorney of the Second Judicial District. He also continued his private law practice, and remained a close friend of Curry. Musser served on the Democratic County Convention in 1866, first as temporary chairman and then as a member. Musser moved south to White Pine County to practice the law. After a year there he returned to Carson City, where he died in 1871.

Though John J. Musser was one of the earliest owners of a portion of the Lompa Ranch, there is no evidence he ever resided on the property. During the period, directories list both his residence and offices as within Carson City itself.[33]

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[33] Mary B. Ansari, *Carson City Place Names*, p.36; "Proceedings in the Democratic County Convention Yesterday", *Carson Daily Appeal*, October 11, 1866, 3:2; "Designing a capital", *Nevada Appeal*, May 16, 1999, Focus p.1; *Directory of Nevada Territory*, xerox copy, Nevada State Library and Archives Ready Reference.

Aaron D. Treadway. Known locally as Farmer Treadway, Uncle Treadway, or Uncle Tred, Aaron D. Treadway was another of the earliest residents of Carson City/Eagle Valley. Born in Connecticut in 1815, he first moved to Macon, Georgia and then to Illinois by 1840. In 1847 he ser as First Lieutenant of Company 1, Fifth Illinois Regiment in the Mexican-American War of 1846-48 before returning to Alton, Illinois. He was among the thousands who went west during the Gold Rush. He resided principally in Sacramento, California until 1859, at which time he moved east to settle in the Eagle Valley when it was still part of the Utah Territory. Treadway helped form the first territorial government after the Nevada Territory was created in 1861.

Treadway's principal ranch property about a quarter mile west of Carson City, adjacent to the Virginia & Truckee Railroad, and whereon was located Treadway Park, used by Carsonites through the years; excursion trains from Reno regularly stopped at Treadway Park.

In 1866 he served with Musser as a delegate to the Democratic County Convention. He was among those who donated land for a Children's Home at Fifth and Stewart Streets in Carson City in 1870. That same year he was involved in a suit against the state concerning ownership of the Nevada State Prison property. In 1881 he nearly lost his home ranch to foreclosure after co-signing a note for an individual who failed to make good on his loan. Only a bit of shrewd maneuvering avoided the judgment. Marrying his brother's widow, Treadway then filed a homestead on the contested property. Eventually the judge in the case found in his favor. In 1886 Governor Adams appointed him to the state Agricultural Association.

Treadway's wife died in 1885. By the time of his death in 1903, he had disposed of all of his property save the lot on which stood his house.

Like Musser, Aaron Treadway never resided at what he had called the Warm Springs Ranch. The only mention of it in connection with him was when he advertised pasturage at that property or at Treadway's Ranch in 1866.[34]

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[34] "Democratic Primaries", *Carson Daily Appeal*, 10/09/1866, 3:1; "Stock Ranched", *Carson Daily Appeal*, 10/11/1866, 3:4; "A Site Agreed Upon for the State Orphan's Home", *Carson Daily Appeal*, 01/27/1870, 3:1; "*Carson Daily Appeal*, 03/05/1870, 3:1; "Under The Hammer; Farmer Treadway Ranch Sold Yesterday at Public Auction", *Carson Morning Appeal*, 08/06/1881, 3:4; "A Worthy Lady Gone", *Reno Evening Gazette*, 12/10/1884, n.p.; "A Good Movement", *Carson Daily Index*, 05/15/1886, 3:2; "Aaron D. Treadway: Known Throughout Nevada as Farmer Treadway", *Reno Weekly*

Richard Kirman, Jr. Governor of Nevada from 1935-38, Richard Kirman briefly owned the Lompa Ranch property with his widowed mother. His father, Richard Kirman, though primarily involved in mining interests on Mt. Davidson, acquired the property between 1881 and 1907. The younger Kirman was born in Virginia City in 1877 while his father followed mining. He attended local schools in Virginia City, and Lincoln High School in San Francisco and, while studying business there, met Mabelle Jean King whom he married in San Francisco on January 19, 1898. The couple returned to Nevada just before the turn of the 20th century.

In 1899 Kirman won a seat as an Ormsby County (today Carson City County) Assemblyman. From 1902 to 1904 he served as a regent of the University of Nevada, and was Mayor of Reno from 1907-1909, the period that included his brief ownership of the Lompa Ranch property with his widowed mother. Following his term as governor, he was president of the Farmers and Merchants Bank, residing in Reno. Mabelle Kirman died in 1947, and Kirman survived her until his death in 1959.

There is no evidence that either Kirman lived at the Lompa Ranch property. The younger Kirman lived in Virginia City until moving to San Francisco to attend school, while newspapers merely noted his father's occasional visits to Carson City from Virginia City. By the time he and his bride returned to Nevada, they only lived in the Carson City area briefly before moving to Reno; no directories list them at the ranch.[35]

Gazette& Stockman, 10/01/1891, p.7; "The Passing of Farmer Treadway", *Nevada State Journal*, 01/31/1903, n.p.; *Directory of Nevada Territory*, Xerox copy, Nevada State Library & Archives Ready Reference.

[35] *Directory of Nevada Territory*, Xerox copy, NSLA Ready Reference; "The Norra Mine, *Carson Daily Index*, 10/20/1885, 3:3; "A New Comstock", *Carson Daily Index*, 10/21/1885, 3:1; Nevada State Archives Guide to the Governors' Records, http://dmla.clan.lib.nv.us/docs/nsla/archives/gov/kirman.htm

Sources:

Books

Ansari, Mary B., *Carson City Place Names*. Reno: Camp Nevada, n.d.

Directory of Nevada Territory, xerox copy, Nevada State Library & Archives, Ready Reference.

Elliott, Russell R. *History of Nevada*, 2nd edition, revised. Lincoln: University of Nebraska Press, 1973, 1987.

Polk's Reno City, Washoe County and Carson City Directory, vol. 1920-21. Seattle: R.L. Polk & Co., 1920.

Polk's Reno (Nevada) City Directory 1948 Including Sparks, Carson City and Washoe County, San Francisco: R.L. Polk & Co., 1948.

Townley, John M. *Alfalfa Country: Nevada Land, Water & Politics in the 19th Century*. Helen Marye Thomas Memorial Series: No. 3. Reno: University of Nevada, n.d.

Newspapers

"A Good Movement", *Carson Daily Index*, May 15, 1886, 3:2.

"A New Comstock", *Carson Daily Index*, October 21, 1885, 3:1.

"A New Race Track; One To Be Built At Treadway Park—An Additional Attraction For Picnics", *Carson Morning Appeal*, March 20, 1881, 3:2.

"A Site Agreed Upon for the State Orphan's Home", *Carson Daily Appeal*, January 27, 1870, 3:1.

"A Worthy Lady Gone", *Reno Evening Gazette*, December 10, 1884, n.p.

"Aaron D. Treadway: Known Throughout Nevada as Farmer Treadway", *Reno Weekly Gazette& Stockman*, October 1, 1891, p.7.

"Accident", *Carson Daily Appeal*, May 17, 1865, 2:1.

"Area Deaths", *Reno Evening Gazette*, April 30, 1969, 14:2.

"Belligerent Jurors", *Carson Morning Appeal*, April 8, 1881, 3:2.

"Benefit of Mrs. Geo. Gillis", *Carson Daily Appeal*, June 8, 1866, 1:2.

Bourelle, Andy. "State starts action to acquire land", *Reno Gazette-Journal*, September 6, 2002, 1:4-6.

"Business in Carson", *Carson Daily Appeal*, August 29, 1869, 2:1-3.

Carson Daily Appeal, December 20, 1865, 4:4; January 3, 1866, 4:5; August 26, 1869, 3:1; March 5, 1870, 3:1; April 24, 1870, 3:2.

Carson Daily Index, April 18, 1885, 3:3; July 9, 1885, 3:3; July 14, 1885, 3:1; September 16, 1885, 3:1; March 11, 1886, 3:2.

"Carson family objects to bypass through ranch", *Sparks Tribune*, January 23, 1995, 2:3-6.

"Decree in the Carson Water Suit", *Carson Daily Index*, November 18, 1885, 3:2.

"Decree in the Water Suits", *Carson Daily Index*, November 22, 1885, 2:1.

"Democratic Primaries", *Carson Daily Appeal*, October 9, 1866, 3:1.

"Designing a capital", *Nevada Appeal*, May 16, 1999, Focus p.1.

"Dissolution", *Alton Telegraph & Democratic Review* (Alton, IL), September 11, 1841, n.p.

"District Court Proceedings", *Carson Daily Appeal*, June10, 1865, 3:2; August 8, 1865, 3:2.

"District Court—Second Judicial District", *Carson Daily Appeal*, March 6, 1866, 3:2.

"Docket of the District Court", *Carson Daily Appeal*, September 1, 1865, 3:1.

Dornan, Geoff. "Family fights plan: CC ranchers oppose road", *Nevada Appeal*, November 29, 1994, 1:6.

"Eva: A Carson lifetime", *Carson City Appeal*, September 22, 1991, Lifestyle 1:2.

Hammon, Amanda. "Lompa family rejects state's offer for freeway ranch land", *Nevada Appeal,* July 25, 2002, n.p.

"Lompas' last stand", *Carson City Appeal*, September 22, 1991, Lifestyle 1:2.

"Mexican War Veterans", *Carson Daily Index*, June 1, 1886, 3:2.

"New Year's Ball", *Carson Daily Appeal*, December 19, 1865, 2:5.

"Not Pleuro-Pneumonia", *Carson Daily Index*, October 15, 1885, 3:2.

"Noted and Quoted", *Carson Daily Index*, March 11, 1886, 3:1.

"Old Timers", *Carson Daily Index*, May 8, 1885, 3:2.

"Peaceful Tribes", *Nevada State Journal*, November 27, 1879, n.p.

"Proceedings in the Democratic County Convention Yesterday", *Carson Daily Appeal*, October 11, 1866, 3:2.

"Proceedings in the District Court, Ormsby County", *Carson Daily Appeal*, December 23, 1865, 3:2.

"Proceedings in the Second District Court", *Carson Daily Appeal*, December 13, 1865, 3:2.

"Prolific Ground; Carson Land Which Pays $1,000 to the Acre", *Carson Morning Appeal*, May 7, 1881, 3:2.

"Property owner questions bypass: Duana Lompa: Expressway plan is redundant", *Nevada Appeal*, January 23, 1995, 1:2-6, 8:5-6.

"Raising up the Chiefs," *Carson Daily Index*, January 30, 1886, 3:2.

"Reduction Works for Carson", *Carson Daily Index*, October 13, 1885, 3:2

"Residents hit 'Mickey Mouse' bypass", *Nevada Appeal*, February 9, 1995, 1:2-5.

"Severe Accident", *Carson Daily Index*, October 25, 1885, 3:3.

"Shall The City Be Drained?; How Water Can Be Utilized In Warding Off Disease; The Citizens Can Chose Between Disease and Taxes", *Carson Morning Appeal*, May 8, 1881, 3:3.

"Simone Lompa", *Reno Evening Gazette*, April 30, 1969, 14:2.

"State to conduct field study on bypass", *Nevada Appeal*, August 6, 1995, 1:4-6, 4:3-6.

"Stock Ranched", *Carson Daily Appeal*, October 11, 1866, 3:4.

"Suit Against the Bondsmen of E. Rhoades, Late State Treasurer, Deceased", *Carson Daily Appeal*, March 24, 1870, 3:1.

"Supreme Court Proceedings", *Carson Daily Appeal*, September 27, 1865, 3:1.

"The Norra Mine, *Carson Daily Index*, October 20, 1885, 3:3.

"The Passing of Farmer Treadway", *Nevada State Journal*, January 31, 1903, n.p.

"The Race Track", *Carson Morning Appeal*, May 6, 1881, 2:1.

"Town, State and County", *Carson Daily Index*, October 23, 1885, 3:1.

"Treadway's Park", *Nevada State Journal*, May 12, 1887, p.2.

"Under The Hammer; Farmer Treadway Ranch Sold Yesterday at Public Auction", *Carson Morning Appeal*, August 6, 1881, 3:4.

"Washoe Fruit", *Carson Daily Appeal*, September 8, 1869, 3:4.

Records

Carson City County Recorder, Book 9, p.491; Book 14, p.94; Book 15, p.150; Book 15, p.204; Book 15, p.225; Book 15, p.284; Book 16, p.261; Book 16, p.285; Book 16, p.526; Book 18, p.611; Book 22, p.57; Book 27, p.30; Book 27, p.140; Book 29, p.105; Book 29, p.109; Book 32, p.73; Book, 32, p.125; Book 32, p.126; Book 32, p.127; Book 36, p.2; Book 37, P.106; Book 37, p.552; Book 38, p.139; Book 43, p.75; Book 43, P.163; Book 43, p.418; Book 46, p.157.

Reports

McNees, Lance and Jeff Johnston. "A Class III Cultural Resource Inventory for the Proposed Silver Saddle Ranch Subdivision, Carson City, Nevada." Reno: TRC Mariah Associates Inc., May 1995.

Preliminary Report Dated June 5, 2002, Exhibit "A", on file at Nevada Department of Transportation, Division of Right-of-Way, Carson City.

Maps

"Parcel Map, Eva Lompa & The First Interstate Bank of Nevada, A Division of Parcel D of P.M. No. 678, Portions of Section 16, T.15.N., R.20E., MD.M, Carson City Nev., Sheets 1 of 2 and 2 of 2", 1983.

"Parcel Map for Eva Lompa, Parcel Map No. 2, Portions of Section 16, T·15·N, R·20·E, M.D.B. & M., Carson City, Nevada", August 31, 1978.

"Parcel Map for Eva Lompa and First Interstate Bank of Nevada No. 3: A Division of a Portion of the S 1/2 Sec. 16 and the N 1/2 Sec. 21, T.15N, R.20E, M.D.B.M., Carson City, Nevada", August 17, 1979.

"Parcel Map for Eva Lompa and The First Interstate Bank of Nevada: A Division of Parcel D of Parcel Map No. 974 and being portions of Section 16, T 15N, R 20E, MDM, Carson City, Nevada", April 21, 1983.

"Parcel Map for Eva Lompa and The First Interstate Bank of Nevada: Portions of S 1/2 Section 16 and N 1/2 Section 21, T 15N, R 20E, MDM, Carson City, Nevada", December 8, 1981.

"Parcel Map for Eva Lompa Trust & Estate of Simone Lompa, Situate in N 1/2 Section 21, T15N, R20E, M.D.M., Carson City, Nevada, Sheet 1 of 1", March 30, 1998.

"Parcel Map for State of Nevada, Division of State Lands for and in Behalf of Department of Prisons, Situate in N 1/2 Section 21, T15N, R20E, M.D.M., Carson City, Nevada, Sheet 1 of 1", March 30, 1998

"Record of Survey for Carson City School District: A Boundary Line Adjustment Located Within a Portion of Section 16, T.15N, R.20E, M.D.B. & M.", December 13, 1991.

"Record of Survey for Carson City School District: A Boundary Line Adjustment Located Within a Portion of Section 16, T.15N, R.20E, M.D.B. & M.", July 31, 1992.

Internet Resources

Nevada State Archives Guide to the Governors' Records, http://dmla.clan.lib.nv.us/docs/nsla/archives/gov/kirman.htm

Project Information: The Nevada Department of Transportation (NDOT), with the assistance of the Federal Highway Administration (FHWA) is planning a new freeway on new alignment that will pass through the Lompa Ranch, requiring the use of 82 acres, and will further alter the historic setting of the ranch. This documentation, to the standards of the Historic American Buildings Survey (HABS) Architectural Data Form (formerly Level III), has been prepared as mitigation for any impacts to the historic integrity of the Lompa Ranch and its setting.

Appendix D 2006 SHPO RESPONSE LETTER REGARDING THE LOMPA RANCH HISTORIC DISTRICT NATIONAL REGISTER NOMINATION

STATE OF NEVADA
DEPARTMENT OF CULTURAL AFFAIRS
Nevada State Historic Preservation Office
100 N. Stewart Street
Carson City, Nevada 89701
(775) 684-3448 • Fax (775) 684-3442
www.nvshpo.org

KENNY C. GUINN
Governor

SCOTT K. SISCO
Interim Director

RONALD M. JAMES
State Historic Preservation Officer

June 9, 2006

Hal Turner, Archaeologist
Environmental Services Division
Nevada Department of Transportation
1263 S. Stewart Street
Carson City, NV 89712

Dear Mr. Turner:

I have reviewed the National Register of Historic Places (NRHP) nomination of the Lompa Ranch in Carson City. The following few items should be addressed in the final draft of the nomination:

Irrigation Ditches. Although the narrative included in the Lompa Ranch Historic District discusses the issue of water as it relates to the development of agriculture in Carson City (Eagle Valley), there is no mention of the irrigation features that exist on the Lompa Ranch property. The multiple ditches and associated structures/features that are a contributing element to the property as a whole and its function as an agricultural enterprise needs to be addressed in the nomination. Unfortunately, the construction along the eastern portion of the ranch associated with the Carson City Bypass has affected the integrity of some of these; however, the remaining intact irrigation features need to be included in the nomination. The ranch would not have survived as long as it has without these.

Inclusion of Other Lompa-owned Parcels. There seems to be some confusion over what parcels should be included in the nomination. According to the map provided with the nomination that (I believe, but it's not labeled) shows the boundary of the Lompa Ranch Historic District, the two parcels where the present ranch house (non-contributing) and most of the ranch buildings are located fall outside the nominated district. According to the Carson City Assessor's, these parcels are owned by the Lompa family or their family trust. These should be included within the district boundary. However, you might consider decreasing the district along the eastern portion as it is now nominated; the historic integrity of the field (and irrigation features) has been negatively affected due to NDOT construction.

Criterion B, "Important Persons." As the nomination reads currently, the application of Criterion B to the Lompa Ranch Historic District's significance is doubtful. In order for the property to be successfully listed under Criterion B, the property itself must somehow be associated with the community's recognition of the "important person." In other words, if Abraham Curry had made his fortune during and due to his operating the ranch, then indeed this criterion would be applicable. The property's association with important individuals in history should be substantial.

Integrity Statement. There is no integrity statement in the nomination. Please insert a statement on the qualities of historic integrity at the Lompa Ranch Historic District, per the NRHP guidelines, in terms of "location, design, setting, materials, workmanship, feeling and association." I usually insert my integrity statements at the beginning of Section 7 (Description) and/or at the conclusion of Section 8 (Statement of Significance).

I have some other comments:

- Please include the 1970s main ranch house in the district since it is the main residence for the ranch (but non-contributing).
- Why were the cottonwoods that formerly lined the 5th Street corridor along the ranch property not addressed as contributing features, or as no longer extant?
- On page 1 and 8 of Section 8, it is stated that this ranch is the "last vestige" of the agricultural development of Eagle Valley. This is somewhat inaccurate. The Anderson Home Ranch off of west King Street in Carson City is still operating and has been since 1889, and the Silver Saddle Ranch has been preserved as a working ranch property along the Carson River.

Thank you for your submission of the Lompa Ranch Historic District NRHP nomination. I look forward to receiving a final draft. Please feel free to call me if you have any questions, at (775) 684-3445, or email me at tmcbride@clan.lib.nv.us .

Sincerely,

Terri McBride
National Register Coordinator

Appendix E PREPARED NEVADA ARA FORMS

SHPO Resource Number:
Other Resource Number: Rev. 2017

NEVADA STATE HISTORIC PRESERVATION OFFICE

Historic District Resource Assessment (RA) Form

For SHPO Use Only	SHPO Concurrence?: Y / N	Date:			
Survey Date	08-13-2018	Recorded By	Rebecca Riggs	Agency Report #	

1. District Overview & Information

District Historic Name	Lompa Ranch Historic District
Current/Common Name	Lompa Ranch
City, Zip Code(s)	Carson City, 89701
County	Carson City
Subdivision(s)	

UTMs (NAD 83, UTM Zone 11 North)

Coordinate #	Easting	Northing
#	*(enter additional points as needed)*	
#	262892	4338121
#		
#		

USGS Info	Township: 15N	Range: 20E	Section: 16, 21	USGS 7.5' Map & Date: New Empire Quadrangle, 1994

Total Acres in the District	359.62				
Ownership	Private ☒	Public-Local ☐	Public-State ☐	Public-Federal ☐	Multiple ☐
Should the district's location be kept confidential?	Yes ☐	No ☒			

2. National Register Eligibility

Is the district listed in the National Register?	Yes ☐	No ☒	If yes, provide:	Date Listed:	NRIS #:
If not already listed, complete the information below:					
Eligible Under:	Criterion A ☒	Criterion B ☐	Criterion C ☒	Criterion D ☐	
	Not Eligible ☐	Unevaluated ☐			
Area(s) of Significance	Agriculture				
Period(s) of Significance	1865-1955				
Total **Resources**:20	**Contributing**:18	**Non-contributing**:2			
Integrity – Does the resource possess integrity in all or some of the 7 aspects?					
General Integrity:	Intact ☒	Altered ☐	Moved ☐	Date(s):	

Location ☒	Design ☐	Materials ☒	Workmanship ☐	Setting ☐	Feeling ☐	Association ☒

Condition of District?	Good ☐	Fair ☒	Poor ☐
Explanation	Buildings in the district show age and use, have not been maintained to their original condition, but are still in their original location, with original materials.		
Threats to Resource?	Subdivision development		

3. District Inventory

SHPO RESOURCE # AND/OR TRINOMIAL	*NAME*	*ADDRESS*	*YEAR BUILT*	*CONTRIBUTING? (YES OR NO)*
B1	Lompa House (old)	**2200 East 5th Street Carson City, NV 89701**	**1940**	**No**
B2	Milking Barn	**2200 East 5th Street Carson City, NV 89701**	**1909-1936**	**Yes**
B3	Pump House	**2200 East 5th Street Carson City, NV 89701**	**1940**	**Yes**
B4 and B5	Blacksmith Shop and Shop	**2200 East 5th Street Carson City, NV 89701**	**1909-1936**	**Yes**
B6	Implement Garage	**2200 East 5th Street Carson City, NV 89701**	**1940**	**Yes**
B7	Granary	**2200 East 5th Street Carson City, NV 89701**	**1909-1936**	**Yes**
B8	Wood Shed	**2200 East 5th Street Carson City, NV 89701**	**1940**	**Yes**
B9	Dairy (Milk House)	**2200 East 5th Street Carson City, NV 89701**	**1940**	**Yes**
B10	Garage	**2200 East 5th Street Carson City, NV 89701**	**1940**	**Yes**
B11	Root Cellar	**2200 East 5th Street Carson City, NV 89701**	**1940**	**Yes**
B12	Bunk House	**2200 East 5th Street Carson City, NV 89701**	**1909-1936**	**Yes**
B13	Hay Barn	**2200 East 5th Street Carson City, NV 89701**	**c.1953**	**Yes**
B14	Ranch House	**1840 East 5th Street Carson City, NV 89701**	**1973**	**No**
S1 and S2	Windmills	**2200 East 5th Street Carson City, NV 89701**	**c.1900**	**Yes**
S3	Corrals	**2200 East 5th Street Carson City, NV 89701**	**1940**	**Yes**
ST4	Irrigation Ditches	**2200 East 5th Street Carson City, NV 89701**	**1874**	**Yes**
ST5	Cottonwood Trees	**2200 East 5th Street Carson, City, NV 89701**	**c.1900**	**Yes**
ST6	Agricultural Fields	**2200 East 5th Street Carson, City, NV 89701**	**1865**	**Yes**

4. Narrative Eligibility Justification

Provide a detailed explanation of the district's eligibility for the National Register, including supporting historic information, methods for evaluation under the four criteria, a discussion of the seven aspects of integrity, and conclusions about eligibility.

The Lompa Ranch is located in the Eagle Valley, on the eastern side of current Carson City. The current area has been reduced over time, most notably with the construction and encroachment of the I-580 Freeway, as well as other parts of the city development. The current property is approximately 360 acres.

The land that became Lompa Ranch went through a variety of owners, beginning in 1865, when John Jacob Musser sold a 240-acre portion of it to A.D. Treadway. In 1870, Treadway sold some of his land to R.S Mesick and J. Seely, but also purchased new land from P.H. Clayton. By 1873, he sold more of his property to C.A.V. Putnam, John R. Johnson, and John B. Bradley. In 1875, Putnam sold 80 acres to the Nevada Agricultural Mining & Mechanical Society. Treadway sold off more of his original land in 1875 as well, to J.H. Adams. This was followed in 1878 by the sale of a piece of property to Richard Kirman, and finally in 1881, Treadway sold his last 65-acre parcel to William Smyth. C.A.V. Putnam sold the rest of his property to William Smyth in 1891and by the end of the year, Smyth sold 100 square feet of the property to Richard Kirman. Smyth passed his holdings onto Hannah Duffy and in 1898, the administrator of her estate sold them to P.H. Peterson. Peterson immediately sold half the land (318 acres) to Richard Kirman and in 1907, repeated this process when Peterson purchased part of the Duffy Ranch to the south of Kirman's property and then immediately sold it to Kirman. Soon after, Kirman's widow sold the entire ranch property to Wildes & Company in 1907. By 1908, the company sold the ranch to Sam Imelli and the following year, Imelli sold it to Joe Moroni and Steve Belli.

Steve Belli became the sole owner of the ranch in May 1919 when the property became known as Belli Ranch. In 1927, he acquired a new parcel of land on the corner of East 5th Street and Saliman Road. By 1936, Belli sold the ranch to Simone "Sam" Lompa and Rinaldo Crimetti. Lompa and Crimetti deeded a portion of the ranch to the State of Nevada in 1937, for use as a secondary road to the prison, which corresponds with today's E. 5th Street. They operated the ranch as partners until Crimetti sold his half to Lompa in 1940, which brought the total property under Lompa's ownership to an approximate 820 acres. When Lompa and Crimetti purchased the ranch in 1936, there were several extant buildings scattered across the property including a small house, blacksmith shop, granary, and barn, likely built by Belli between 1909 and 1936. Lompa built a new house on the property in 1940, converting the original house to a bunkhouse. He also added several stone buildings to the property, which supported the many agricultural endeavors at the ranch. Lompa and his wife originally operated the property as a dairy farm, but eventually expanded to include sheep and cattle. In the 1960s, Lompa made a deal with Carson City that forfeited their water rights. Sam Lompa died in 1969 with ranch operation passing to his wife Eva and son, Sam, continued. In the 1970s, Sam Lompa drilled a well on the property to ease their water issues. By 1991, the ranch acreage had decreased to 550 acres (down from about 820 acres in 1940). Following Eva Lompa's death in 2003, ownership of the property passed down to their three children. By 2004, the ranch totaled 359.62 acres, straddling East 5th Street and surrounded by increasing urban development.

2004 National Register Evaluation

The Lompa Ranch Historic District was identified and evaluated in 2004 by P.S. Preservation Services for the Nevada Department of Transportation (NDOT) as part of the expansion of the Intersetate-580 Freeway. The historic district was found to be significant at the local level under criteria under A, B, and C with a period of significance ranging from 1865 to 1955. A NRHP nomination for the historic district was prepared in 2004 by John W. Snyder of P.S. Preservation Services and submitted to SHPO for review. Records indicated that SHPO representatives commented on the draft nomination on June 9, 2006 and made the following recommendations:

- Include the remaining intact irrigation features in the nomination.
- Review the Lompa-owned parcels, particularly those that have been affected by the construction of the Freeway and bypass systems.

- The evaluation under Criterion B is dubious and historical significance under this criterion is doubtful. The evaluation should be revised.
- Include an integrity statement within the other nomination.
- Include the 1970s main ranch house as a non-contributing property within the historic district
- Address the cottonwood trees along the E. 5th Street corridor as contributing features.
- The ranch is not one of the "last vestiges" of agricultural development in the eagle valley, as stated in the nomination.

It does not appear that any additional edits to the Lompa Ranch Historic District NRHP nomination were ever made, nor was a final version of the nomination ever formally submitted to SHPO for concurrence.

Current National Register Eligibility

In 2018, the Lompa Ranch Historic District was resurveyed. The survey effort referenced both the original 2004 National Register nomination, as well as the 2006 SHPO recommendations, outlined above. The survey confirmed the existence of the originally identified contributing properties, as well as the contributing status of the irrigation ditches and cottonwood trees located on the property. This account has also been updated to include the 1970s Ranch House as a non-contributor to the historic district.

Criterion A
The 2004 nomination identified the district and its contributing properties as significant under criterion A at the local level "for its association with the development and of ranching and farming in the Eagle Valley." This evaluation of the property as an early and prominent agricultural property in the region appears to be consistent with the current conditions; the property conveys significance as an early and prominent agricultural property in the Eagle Valley. Therefore, the property appears to be significant under Criterion A.

Criterion B
The 2004 nomination identified the district as significant under criterion B at the local level of significance "for its association with the life of John Jacob Musser, one of the original owners of the Eagle Valley, as well as one of the founders of Carson City, and with the life of Aaron D. Treadway, one of the earliest and most important agriculturalists in the Eagle Valley." However, upon review by both SHPO in 2006 and the author in 2018, this does not appear to be true. First, the Lompa Ranch in its current state is more associated with Simone "Sam" Lompa, who owned the ranch during the 20th century. John Jacob Musser was an influential individual who is closely associated with the founding of Carson City, who is undoubtedly better represented by other properties in Carson City, which better reflect his achievements as a founder. Similarly, Aaron D. Treadway was a prolific figure in early Carson City, who is already represented by other significant properties in the region, which appear to have stronger and more definable associations than the Lompa Ranch property. As for Samuel Lompa, he appears to be a typical rancher and does not rise to a level of significance that would qualify the property for eligibility under Criterion B. Therefore, the Lompa Ranch Historic District does not appear to be significant under Criterion B.

Criterion C
The 2004 nomination identified the Lompa Ranch Historic District as significant at the local level for its collections of "buildings and structures that are characteristic of the various modes of stone masonry, wood frame, and wooden single-wall construction associated with working ranch complexes." The nomination also acknowledges that the buildings lack architectural distinction, but collective represent an intact early 20th century ranch. Currently, these buildings remain and continue to convey significance for its regional architecture and as a ranch property type. Therefore, the Lompa Ranch Historic District appears to be significance under Criterion C.

Criterion D
Criterion D was not addressed in the 2004 nomination, and currently does not appear exhibit historic

significance under said criterion.

Integrity

Overall, the Lompa Ranch Historic District retains a high degree of integrity. The ranch and its contributors have not been moved and retain their original location. While some properties, such as the 1940 Lompa House, have undergone alterations, the majority of the contributing properties exhibit few changes and appear to retain their integrity of materials, design, and workmanship. In terms of setting, the property has been encroached upon by urban development over the last several decades, including the general expansion of the city, as well as the construction of the I-580 Freeway to the east. Despite this, large expanses of the agricultural fields remain intact and buffer the property, particularly the central portion and concentration of contributing buildings and structures, from the development. As such, the large undeveloped fields retain the historic districts integrity of setting. Overall, the Lompa Ranch Historic District continues to convey the feeling and overall historical associations as an early 20th century ranch property.

Therefore, the Lompa Ranch Historic District appears to retain sufficient integrity to be eligible for listing in the National Register.

5. Written Description

Provide a written description of the district, including all character-defining features or elements. Be sure to describe accessory resources as well.

The Lompa Ranch Historic District is comprised of 20 resources, 18 of which are contributors to the district and two of which are not. Included in the district are buildings, structures, and the agricultural fields with irrigation ditches that surround the main complex. The ranch is located on the eastern side of Carson City, Nevada in the Eagle Valley, with the Sierra Nevada mountains to the west. The district is bordered on the west by N. Saliman Road, by East 5th Street to the south, by Nevada State Route 580 to the east, and by Carson High School and E. William Street to the north. Lompa House (old) and the current Lompa House used as the primary residence, are the two buildings on the property that are not contributors to the district. They are located on the north side of E. 5th Street and Lompa House (old) is a one-story wood frame house, featuring a hipped and gabled roof with composite shingles. Alterations to the house include the addition of aluminum siding and windows. The newer Ranch House on the property was built in 1973 and is a one-story Ranch style brick house with a hipped roof composed of composite shingles.

The first contributing building to the district is the milking barn, located west of Lompa House. It is the largest building on the property with a wood frame and gable roof. The roof is composed of corrugated metal, while the siding is board and batten and loft doors on either end of the barn. There are also double-leaf hinged doors that open into the center of the barn. The pump house also sits to the west of the house and is a small building with stone masonry walls and gabled roof composed of Nevada license plates. To the north of the milking barn are four outbuildings, including the blacksmith shop, shop, implement garage, and granary. Both the blacksmith shop and shop are single wall, wood frame buildings with gable roofs. The blacksmith shop roof is composed of corrugated metal and the shop roof is composed of wood shingles. The implement garage is located north of the shop and is an open wood frame building with wood plank walls and a corrugated metal roof supported by wood posts. To the northwest of the implement garage is the granary, which is a single wall wood, wood frame building with a gable roof clad in wood shingles. North of Lompa House is the woodshed, a single wall, wood frame building with a gable roof clad in wood shingles.

To the north of woodshed is the dairy, one of the buildings on the property that is stone masonry construction. It features a gable roof composed of wood shingles. Northwest of the dairy is the garage, also of stone masonry construction. It also has a gable roof, but it is composed of corrugated metal. East of the garage is the root cellar, another stone masonry building with a gable roof composed of wood shingles. To the northeast of Lompa House is the bunk house, which was the original ranch house. It is a single wall, wood frame building with a gable roof composed of corrugated metal. The two visible walls are different, with the north side of the building being board and batten and the east side composed of scribed plywood with a small fixed window. A stone chimney makes up a portion of the east side of the bunk house and the entire building sits on a stone masonry foundation. The hay barn is on the south side of East 5th Street and is a wood frame building with a gable roof composed of corrugated metal. It is not original to the property and was previously located west of N. Saliman Street.

Two windmills are located on the property, one on the north side of East 5th Street, west of the ranch buildings. The second one is on the south side of East 5th Street, east of the hay barn. They are both metal windmills. There are two contributing board-fenced corral structures on the property, one south of the milking barn and one east of the house that encloses the bunk house. The contributing agricultural fields encompass the majority of the historic district and were historically used for cattle grazing and cultivation of potatoes, grain, alfalfa, and hay. Unlined dirt irrigation ditches throughout the fields contributed to the use of the fields for agricultural purposes. Cottonwood trees on the north side of East 5th Street are also contributing features to the district, having been planted around Lompa House during the district's period of significance.

6. References

List references used to research and evaluate the individual property.

Snyder, John W. Lompa Ranch National Register of Historic Places Registration Form. Prepared by P.S. Preservation Services for the National Park Service, United States Department of the Interior. NPS Form 10-900, OMB No. 1024-0018. December 31, 2004.

Ormsby County, Carson City. Application for Permit to Appropriate the Public Water of the State of Nevada. Steve Belli, Jr. September 10, 1931.

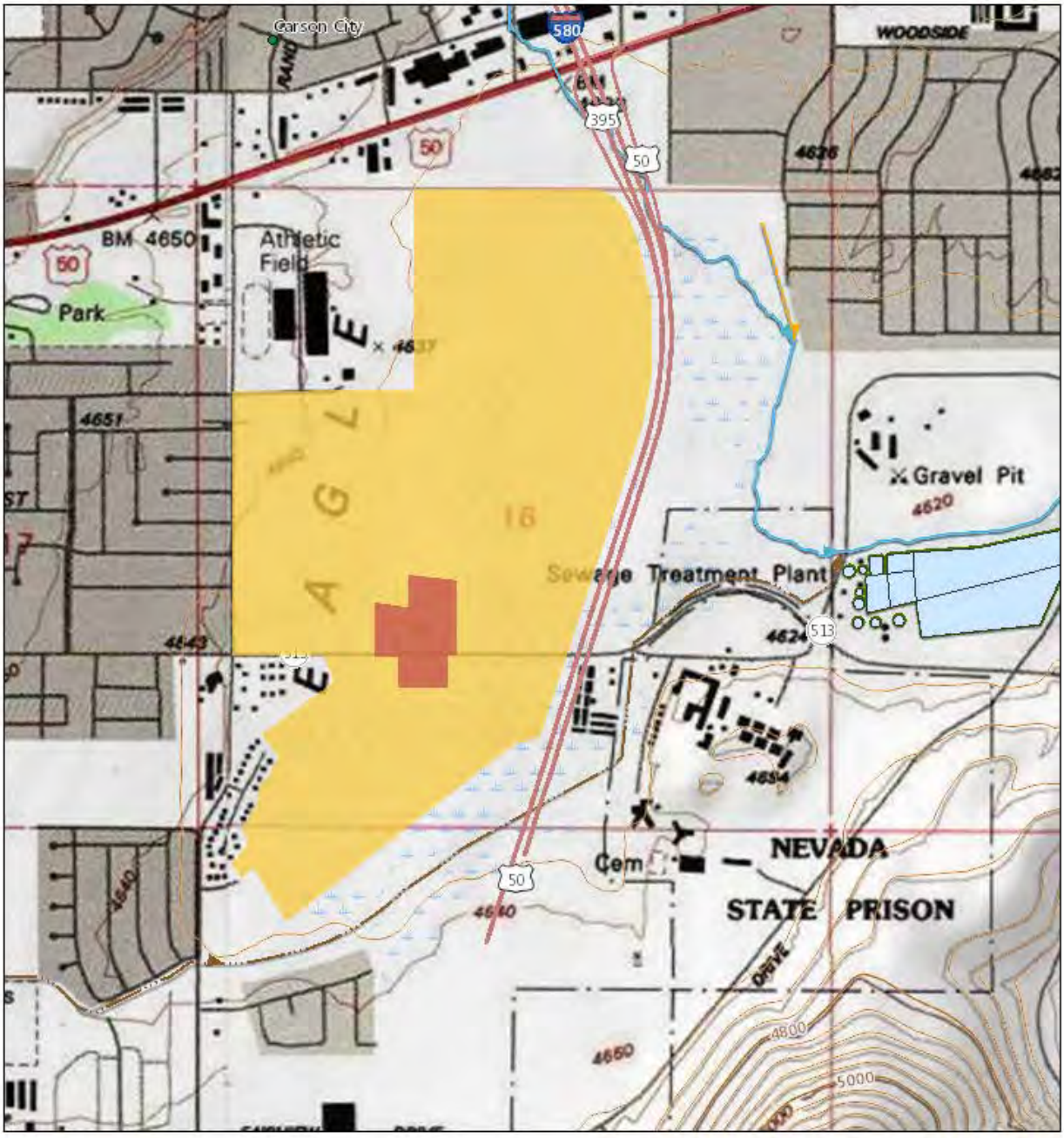
State of Nevada. Proof of Appropriation of Water for Irrigation. Approved by Harry E. Macnelly for Simone Lompa. Ormsby County, Carson City. January 31, 1945.

Carson City Assessor. Assessor Parcel Detail for Parcel 010-041-34. Accessed September 7, 2018. http://www.ccapps.org/cgi-bin/asw101?Parcel=01004134.

7. District Location Map

Use a USGS quadrangle map at large extent to show general area of historic district, including district boundary.

Lompa Ranch Historic District Location Map | Carson City, NV
Source: USGS Map, edited by Stantec (2018).



8. Site Plan Map

Use aerial imagery, drafting software, or a hand-drawn sketch (to scale) showing, at minimum, all contributing and non-contributing resources and their spatial relationship to one another.

9. Photographs

Include as many photographs as needed to accurately depict the district, including examples of representative properties or property types, streetscapes, landscapes, etc.

Elevation: Immediate surroundings, west side of ranch along N. Saliman Road Direction facing: East
Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Secondary, irrigation ditch on corner of N. Saliman Road and East 5th Street
Direction facing: Northeast Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Secondary, continuation of irrigation ditch and windmill in background on north side of East 5th Street Direction facing: East Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Primary, 1973 house on Lompa Ranch property on north side of East 5th Street Direction facing: North Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Primary, milking barn and surrounding buildings on north side of East 5th Street
Direction facing: North Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Primary, closer view of milking barn and corrals on north side of East 5th Street
Direction facing: North Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Primary, east side of milking barn and Lompa House on north side of East 5th Street
Direction facing: North Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Primary, Lompa House on north side of East 5th Street
Direction facing: North Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Primary, shop, blacksmith shop, and implement garage on north side of East 5th Street
Direction facing: Northwest Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Primary and immediate surroundings, wood shed, dairy, and bunk house on north side of East 5th Street Direction facing: North Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Secondary, wood shed, dairy, bunk house, and root cellar on north side of East 5th Street
Direction facing: West Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Secondary, bunk house, root cellar, dairy, garage, and wood shed on north side of East 5th Street Direction facing: Northwest Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Secondary, milking barn, implement garage, root cellar, dairy, and bunk house on north side of East 5th Street Direction facing: Northwest Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Secondary, hay barn and windmill on south side of East 5th Street Direction facing: West
Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Primary, windmill on south side of East 5th Street Direction facing: South
Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Primary, hay barn on south side of East 5th Street Direction facing: Southwest
Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Primary, hay barn on south side of East 5th Street Direction facing: Southwest
Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Immediate surroundings, irrigation ditches on north edge of property, south of E. Robinson Street Direction facing: South Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Immediate surroundings, irrigation ditch through property south of E. Robinson Street
Direction facing: West Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Immediate surroundings, irrigation ditch through property south of E. Robinson Street
Direction facing: North Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Secondary and immediate surroundings, irrigation ditch through property and view of ranch complex Direction facing: Southeast Photographer: Rebecca Riggs Date: 8/13/18

Elevation: Secondary, back of ranch complex including the bunk house, root cellar, garage, implement garage, granary, and milking barn Direction facing: South Photographer: Rebecca Riggs Date: 8/13/18

Appendix F PROFESSIONAL QUALIFICATIONS

Garret Root

Senior Architectural Historian

Garret has more than eight years of experience in cultural resource management, research, and regulatory compliance relating to the built environment. He has served as an Architectural Historian on a multitude of documentation projects, including those under Sections 106 and 110 of the National Historic Preservation Act (NHPA), California Environmental Quality Act (CEQA), and several local preservation ordinances.

Garret has extensive knowledge in all facets of project development, including methodology development and Area of Potential Effects (APE) development, research, intensive survey, field recordation and management, report documentation, and agency review. Garret has a wide range of experience with California research repositories including National Archives, California State Library and Archives, and county Assessor and Recorder offices. His professional experience in archives and research enables him to identify key research themes and establish effective baselines for evaluation. In addition to his demonstrated research ability, Garret has extensive field knowledge in a variety of areas, including urban, rural, military, agricultural, and infrastructural settings. From this broad-based background, Garret adds technical skill, efficiency, and strong regional knowledge to all of his projects and documentation efforts.

DEGREES

MA, Public History, California State University, Sacramento, 2011

BA, History, California State University, Chico, 2009

CERTIFICATIONS

PG&E Hydro Field Safety Certified, September 2017

MEMBERSHIPS

Preservation Sacramento, Board President

California Preservation Foundation, Member

National Council on Public History

Phi Alpha Theta Historical Honor Society

PROJECT EXPERIENCE

Historic Resource Evaluation Report Cresta Dam– Plumas County, CA (Senior Architectural Historian)

Garret served as Senior Architectural Historian for the project, which included intensive property survey of a dam along the Feather River in Plumas County. The project was undertaken as FERC compliance part for Pacific Gas and Electric Company.

Historic Resource Evaluation Report Donner Lake Dam– Placer County, CA (Senior Architectural Historian)

Garret served as Senior Architectural Historian for the project, which included intensive property survey of a dam along the Feather River in Plumas County. The project was undertaken as emergency work for Truckee Meadows Water Authority.

Big Creek Hydroelectric System Historic District Facilities Repair and Maintenance Plan, Southern California Edison– Fresno County, CA* (Architectural Historian)

Garret served as Architectural Historian for the project, which included creation of template for maintenance plan, creation of resource sheet for each contributor, and identification of appropriate maintenance activities.

Historic Resource Inventory and Evaluation Report, Bucks Creek Hydroelectric Project, FERC Project No. 619, November 2015– Plumas National Forrest, CA* (Architectural Historian)

Garret served as Architectural Historian for the project, which included survey of all historic period buildings including the penstock, dams, tunnels, infrastructure, the powerhouse and recreational facilities including campgrounds, resorts, and recreational subdivisions. Garret collected research related to all of the facilities and assisted in writing the historic context for these PG&E resources. The project included CRHR and NRHP evaluation of all resources.

PGE Humboldt Bay Power Plant Decommissioning– Humboldt County, CA* (Architectural Historian)

** denotes projects completed with other firms*

Garret Root

Senior Architectural Historian

Garret assisted in mitigation measures carried out for the decommissioning of the Humboldt Bay Power Plant. Mitigation measures included a Historic American Engineering Record (HAER), oral histories, a museum exhibit, and a commemorative coffee table book. Garret wrote, edited, and assembled the HAER which is located in the Library of Congress (HAER CA-2293). Additionally Garret conducted oral histories of previous employees, designed and wrote interpretative panels for a museum exhibit.

Big Creek Hydroelectric System Historic District Facilities Repair and Maintenance Plan, Southern California Edison– Fresno County, CA* *(Architectural Historian)*

Garret served as Architectural Historian for the project, which included creation of template for maintenance plan, creation of resource sheet for each contributor, and identification of appropriate maintenance activities.

Historic Resource Evaluation Report, Pacific Gas and Electric Company, Substation M– San Francisco, CA* *(Architectural Historian)*

Garret served as Architectural Historian for the project, which included survey of a historic period substation, in the San Francisco. The project included CRHR and NRHP inventory and evaluation of a PGE substation.

Historic Resource Evaluation Report, Pacific Gas and Electric Company, Cheney Substation– Placer County, CA* (Architectural Historian)

Garret served as Architectural Historian for the project, which included survey of a historic period substation, in the western Fresno County. The project was undertaken as part of CEQA compliance and included CRHR and NRHP inventory and evaluation of a PGE substation.

Historical Resources Inventory and Evaluation Report, Pit 1 Fall River Weir and Gate Replacement Project – Shasta County, CA* (Architectural Historian)

Garret assisted in Historic Resources Inventory and Evaluation Report of the Fall River Weir and Pit River Number 1 Intake and Diversion Dam in Shasta County. Garret's duties included fieldwork and resource documentation, research, document preparation, and assisting in writing context and evaluations for these PG&E resources.

Historical Resources Inventory and Evaluation Report, Lower Cherry Aqueduct Rehabilitation Project – Tuolumne County, CA* (Architectural Historian)

Garret assisted in Historic Resources Inventory and Evaluation Report of the Lower Cherry Aqueduct, part of the Hetch Hetchy system in Tuolumne County. Garret's duties included fieldwork and resource documentation, research, document preparation, and assisting in writing context and evaluations for these SFPUC resources.

Historical Resources Inventory and Evaluation Report, Mountain Tunnel Access and Audit Improvement Project– Tuolumne County, CA* (Architectural Historian)

Garret assisted in Historic Resources Inventory and Evaluation Report of Mountain Tunnel, part of the Hetch Hetchy system in Tuolumne County. Garret's duties included fieldwork and resource documentation, research, document preparation, and assisting in writing context and evaluations for these SFPUC resources.

Pre Application Document (PAD), Narrows Hydroelectric System– Yuba County, CA* (Architectural Historian)

Garret assisted in preparation of the Narrows PAD for PG&E. Garret's duties included research, PAD preparation and editing.

Balch Camp, Fresno: Historical Resources Inventory and Evaluation – Fresno County, CA * (Architectural Historian)

Garret assisted in Historic Resources Inventory and Evaluation Report for the PGE company town, Balch Camp. Garret's duties included fieldwork and resource documentation, research, document preparation, and assisting in writing context and evaluations.

PUBLICATIONS

Garret Root and Rand Herbert, 2013. From Sawdust to Uranium: *The History of Electrical Power Generation in Humboldt County and Pacific Gas and Electric Company's Humboldt Bay Power Plant, 1883-2019*

Garret Root, 2014. *A Legacy in Stone and Concrete: The Old Carmel River and San Clemente Dams*

** denotes projects completed with other firms*

Daniel Herrick

Architectural Historian

Although Daniel is a new addition to Stantec's growing Cultural Resources team, he has been a practicing cultural resources professional in California for the last five years. Over his career, Daniel has gained experience preparing various historic resource evaluations, conditions assessments, and historic preservation planning documents. He has extensive research experience throughout California and the United States, utilizing numerous archival resources for a variety of projects and property types. In addition to an extensive understanding of preparing documentation for compliance with Section 106 of the National Historic Preservation Act (NHPA), the California Environmental Quality Act (CEQA), and various local frameworks, Daniel has experience in developing documents related to the appropriate reuse and restoration of historical buildings, structures, and sites. Daniel has consulted on many reuse and rehabilitation projects for historic buildings, providing guidance on compliance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. He also has an acute understanding of evaluating historic districts and developing design recommendations for context-sensitive infill construction projects.

Daniel is familiar with a variety of international, national, and regional historical contexts, but has a notably strong understanding of the recently built environment, including Post-War property types and architectural styles. Daniel also has a fascination with cultural landscapes and landscape architecture. He brings cross-discipline knowledge and a wholistic approach to all projects to provide a thorough and well executed product.

DEGREES

MHC, Heritage Conservation, University of Southern California, Los Angeles, USA, 2014

BA, History, University of Calgary, Calgary, Canada, 2009

CERTIFICATIONS

Secretary of the Interior's Professional Qualifications Standards for Architectural History & History

Avports Airfield Safety Training

MEMBERSHIPS

American Planning Association, California Chapter

California Preservation Foundation

DOCOMOMO

National Trust for Historic Preservation

Preservation Sacramento

PROJECT EXPERIENCE

Historic Preservation Planning & Incentives

Mills Act Application for the Glendale Masonic Temple, Glendale, California* (Cultural Resources Planner)

Dan served as a cultural resources planner for the Mills Act Application for the Glendale Masonic Temple. This involved the documentation of the rehabilitation work at the property and submitting all required materials per the City's requirements.

Mills Act Application for 807 Montgomery Street, San Francisco, California* (Cultural Resources Planner)

Dan served as a cultural resources planner for the Mills Act Application for 807 Montgomery Street in San Francisco. This involved the documentation of the rehabilitation work at the property and submitting all required materials per the City's requirements.

Carson Block Façade Rehabilitation Federal Historic Tax Credit, Eureka, California* (Architectural Historian)

** denotes projects completed with other firms*

Daniel Herrick

Architectural Historian

Dan served as an architectural historian in the preparation of the Federal Historic Tax Credit application for the Façade Rehabilitation project of the Carson Block building in Eureka, California.

West Hollywood Multi-Family Preservation Incentives Project, West Hollywood, California* (Architectural Historian)

Dan served as an architectural historian in the preparation of the Multifamily Preservation Incentives Project in the City of West Hollywood, California. This project involved the development of specific incentives geared towards property owners and the successful preservation and rehabilitation of their historic multi-family properties.

Historic Resource Evaluations & Nominations

Historic Resource Evaluation Report 712-760 S. Grand View Street, Los Angeles, California* (Architectural Historian)

Dan served as an architectural historian for the project, which included the documentation and evaluation of a Bungalow Court. The project was undertaken as a preliminary historic investigation for due diligence purposes.

Historic Resource Evaluation Report Former Broadway Department Store, Los Angeles, California* (Architectural Historian)

Dan served as an Architectural historian for the project, which included the documentation and evaluation of a Mid-Century former Broadway Department Store in the San Fernando Valley. The project was undertaken as a preliminary historic investigation for due diligence purposes.

Historic Resource Evaluation Report UCLA Faculty Center, Los Angeles, California* (Architectural Historian)

Dan served as an architectural historian for the project, which included the documentation and evaluation of the Faculty Center at UCLA. The project was undertaken as a response to an alternative historic resource nomination.

Historic Resource Evaluation Report 9720 Wilshire Blvd., Beverly Hills, California* (Architectural Historian)

Dan served as architectural historian for the project, which included the documentation and evaluation of a Mid-Century commercial building. The project was undertaken as an intensive evaluation of the property, which was identified in a historic resources survey.

Historic Resource Evaluation Report Eureka Highschool Gymnasium, Eureka, California* (Architectural Historian)

Dan served as architectural historian for the project, which included the documentation and evaluation of a Mid-Century high school gymnasium. The project was undertaken as part of CEQA due diligence.

Capitol Towers Garden Apartments National Register Nomination, Sacramento, California* (Architectural Historian)

Dan served as architectural historian for the project, which included the research, preparation, and submission of a National Register of Historic Places nomination for the Mid-Century Capitol Towers Garden Apartments located in downtown Sacramento. While the nomination was approved by the California Historical Resource Commission and was determined a historical resource. The project was undertaken as an effort by concerned local citizens to protect the property.

Cultural Resource Management & Interpretive Plans

Sacramento Valley Station Interpretive Plan, Sacramento, California* (Architectural Historian)

Dan served as architectural historian for the project, which included developing a preliminary interpretive plan for the historic Sacramento Valley Station as part of the site's recent rehabilitation. The plan is a phased approach that identified key historic themes, acceptable locations for interpretive materials, and the development of initial narratives.

Historic Context Statements & Surveys

SurveyLA Asian American Historic Context Statement, Los Angeles, California* (*Architectural Historian)*

Dan served as architectural historian for the project, which included the research and development of the City of Los Angeles' citywide historic context statement for Asian American communities. The project was undertaken as part of the broader SurveyLA program.

SurveyLA Historic Context Statements, Los Angeles, California* (Historic Preservation Intern)

Dan served as a historic preservation intern for the City of Los Angeles' SurveyLA program, which included researching and developing relevant historic context statements for various historical themes and property types.

** denotes projects completed with other firms*

Daniel Herrick

Architectural Historian

Historic Structures Reports, Conditions Assessments, & Property Documentation

Tioga Pass Resort Winter 2016-2017 Damage & Stabilization Documentation, Lee Vining, California* (Architectural Historian)

Dan served as an architectural historian for the project, which involved the documentation of the Tioga Pass Resort Historic District and the damage sustained from heavy snow loads during Winter 2016-2017. DPR 523 Forms were updated for all properties and included both documentation of the damaged condition and the stabilization efforts leading into the Winter of 2017-2018. All documentation was developed and provided to the US Forest Service per their requirements for Section 106 compliance.

Napa State Hospital Conditions Assessment & Earthquake Repairs Project, Napa, California* (Architectural Historian)

Dan served as an architectural historian in the preparation of the project, which included assessing damage to three historic buildings sustained from the 2014 earthquake. This focused on the documentation historic materials and character-defining features of the buildings. It also included accessibility upgrades and a Secretary of the Interior's Standards analysis of the proposed repair and rehabilitation work.

SMUD Headquarters Rehabilitation Construction Monitoring, Sacramento, California* (Architectural Historian)

Dan served as an architectural historian in project, which involved monitoring the hazardous materials abatement phase at the National Register-listed SMUD HQ building. Monitoring activities involved prescribing protective measures, developing a salvage plan and cataloging system for important historical materials, and the documentation of progress through field reports of all work related to character-defining features at the property. This work was part of the mitigation measures developed per CEQA.

National Historic Preservation Act (NHPA) Section 106 Review

Section 106 Consultation NASA Ames Research Center Undertakings, Moffett Field, California* (Architectural Historian)

Dan served as an architectural historian for various projects at NASA Ames Research Center, which included the preparation of Technical Reports that identified APE and analyzed potential direct and indirect effects to historic resources.

Section 106 Consultation California Air National Guard Undertakings, Moffett Field, California* (Architectural Historian)

Dan served as an architectural historian for various projects at NASA Ames Research Center, which included the preparation of Technical Reports that identified respective Areas of Potential Effects and analyzed potential direct and indirect effects to historic resources.

Angel Island Officers Row Conditions Assessment, Angel Island, California* (Architectural Historian)

Dan served as an architectural historian for the project, which involved the documentation of deteriorating conditions of the Officers Housing at Angel Island State Historic Park. Standards compliant repair and rehabilitation strategies were developed based on the conditions assessment.

Fiddyment Ranch Conditions Assessment, Roseville, California* (Architectural Historian)

Dan served as architectural historian for the project, which involved the documentation of the historic Fiddyment Ranch property in Roseville, CA and its conditions. Work involved establishing a construction chronology for the property, identifying important historical features, and preparing Secretary of the Interior Standards compliant rehabilitation and repair recommendations.

Tustin LTA Hangar No.2 Conditions Assessment & Historic Structures Report, Tustin, California* (Architectural Historian)

Dan served as an architectural historian in the preparation of a conditions assessment for the historic Lighter-Than-Air Hangar No.2 in the City of Tustin. Conditions Assessment work included documentation of deteriorating conditions throughout the structure, including the safe operation of a boom lift to reach inaccessible spaces throughout the structure. This work served as the basis for a Historic Structures Report, which outlined Secretary of the Interior's Standards-compliant rehabilitation and repair strategies for the property.

Orange Coast College Historic Structures Report & Preservation Alternatives, Costa Mesa, California* (Architectural Historian)

Dan served as an architectural historian in the preparation of the Historic Structures Report and Preservation Alternatives for the Mid-Century campus at Orange Coast College. The project was undertaken as part of the implementation of the Master Plan and its compliance with CEQA.

Eames House (Case Study No.9) HABS Documentation, Los Angeles, California* (Architectural Historian)

Dan served as an architectural historian on the survey team that documented the iconic Eames House, a National Historic Landmark in Los Angeles, CA. This was a volunteer effort coordinated by the Getty Conservation Institute, the Eames Foundation, and the USC School of Architecture.

** denotes projects completed with other firms*

Daniel Herrick

Architectural Historian

Rehabilitation Feasibility Studies, Infill Construction Design Review, & Secretary of the Interior's Standards Compliance

Greek Theatre Historical Resource Study, Los Angeles, California* (Architectural Historian)
Dan served as an architectural historian in the preparation of the Historical Resource Study for the Greek Theatre concert venue in Los Angeles. Work involved the development of a construction chronology and identification of character-de3fining features of the property, as well as a Secretary of the Interior's Standards analysis for the proposed plaza upgrades and limited rehabilitation work to the property.

Leo Carrillo Ranch Historic Park Stables Rehabilitation & Chicken Coop Reconstruction, Carlsbad, California* (Architectural Historian)
Dan served as an architectural historian in the research and preparation of Rehabilitation and Reconstruction plans for properties at the historic Leo Carrillo Ranch. Work included extensive research, conditions documentation, developing construction chronologies, and the identification of character-defining features. All efforts were instrumental in informing the designs developed for the project.

Kerckhoff Marine Laboratory Rehabilitation Feasibility Study, Newport Beach, California* (Architectural Historian)
Dan served as an architectural historian in the preparation of the Feasibility Study for the rehabilitation of the Kerckhoff Marine Laboratory, operated by the California Institute of Technology. The feasibility study focused on modernizing the facilities, while respecting the historic building and pertinent City of Newport Beach zoning codes.

Los Angeles US Federal Courthouse (312 N. Spring Street) Rehabilitation Feasibility Study, Los Angeles, California* (Architectural Historian)
Dan served as an architectural historian for the project, which aimed to perform seismic upgrades and successfully rehabilitate the historic courthouse. Additional work included preparing a Cultural Landscape Assessment for the property and identified areas where xeriscaping would not adversely affect the historical features and character of the property.

Peabody Werden House Relocation Project, Los Angeles, California* (Architectural Historian)
Dan served as an architectural historian in the relocation of the historic Peabody Werden House in Boyle Heights, Los Angeles, California. Work involved moving the 19th century residence to an adjacent parcel to allow for the construction of a new affordable housing project. The property was extensively documented, and all character-defining features were identified in preparation of the relocation plan. An analysis of the project was prepared to illustrate that the relocation followed the Secretary of the Interior's Standards and CEQA.

LA Plaza Cultural Village Design Study, Los Angeles, California* (Architectural Historian)
Dan served as an architectural historian in the preparation of the Design Study for the LA Plaza Cultural Village mixed-use development, located adjacent to the LA Plaza Historic District. Involved consulting on the design of the project to ensure compatibility within the setting of the historic district. The project was undertaking as part of CEQA mitigation measures.

Fullerton Family Housing Infill Construction Compatibility Analysis, Fullerton, California* (Architectural Historian)
Dan served as an architectural historian in the preparation in a compatibility analysis for the development of the Fullerton Family Housing project, adjacent to known historical sites. This involved reviewing the proposed design for consistencies within the historic setting.

Access Barrier Removal Project, Department of Food & Agriculture Building (1220 N Street), Sacramento, California* (Architectural Historian)
Dan served as an architectural historian for the access barrier removal and accessibility upgrades project at the historic California Department of Food & Agriculture building in Sacramento. The project involved providing historic preservation consultation on the proposed designs and preparing a Secretary of the Interior's Standards analysis to determine potential effects on the historic character of the property. This work was conducted per California Public Resources Code (PRC) Section 5024 and 5024.5.

Access Barrier Removal Project, Department of Rehabilitation Building (721 Capitol Mall), Sacramento, California* (Architectural Historian)
Dan served as an architectural historian for the access barrier removal and accessibility upgrades project at the historic California Department of Rehabilitation building in Sacramento. The project involved providing historic preservation consultation on the proposed designs and preparing a Secretary of the Interior's Standards analysis to determine potential effects on the historic character of the property. This work was conducted per California Public Resources Code (PRC) Section 5024 and 5024.5.

Design Guidelines & Master Planning

F-65 Regional Park Master Plan Historic Reuse Consultation, Roseville, California* (Architectural Historian)
Dan served as an architectural historian in the preparation of the master plan for the F-65 Regional Park Master Plan in Roseville, CA. This included developing appropriate reuse strategies for the historic Fiddyment Ranch property and its integration into the broader plan for the park.

** denotes projects completed with other firms*

Daniel Herrick

Architectural Historian

West Hollywood West Neighborhood Preservation Overlay Zone & Design Guidelines, West Hollywood, California* (Architectural Historian)

Dan served as an architectural historian in the project, which involved the creation of a Neighborhood Preservation Overlay Zone and accompanying Design Guidelines for West Hollywood West, an early 20th century streetcar suburb in West Hollywood. The project is intended to manage infill development to ensure that the overall character of the neighborhood is retained through sensitive design and appropriate alterations within the overlay zone.

PUBLICATIONS

Daniel Herrick, 2014. SoCal Ski Hills: A Typological Analysis of a Cultural Landscape.

AWARDS

2016 Los Angeles Business Journal Commercial Real Estate Bronze Award – Glendale Masonic Temple.*

2015 American Planning Association Award of Merit for Planning Best Practices – West Hollywood West Overlay District & Design Guidelines.*

2014 Graduate Research Award in Heritage Conservation. University of Southern California, School of Architecture.

** denotes projects completed with other firms*

Hubert Switalski

Senior Archaeologist/Field Director

Mr. Hubert Switalski has diversified experience in areas of project management and project support as an archaeologist, and GIS analyst since 1994. Mr. Hubert Switalski has 23 years of experience in conducting archaeological investigations and project management in California, Nevada, Idaho, Oklahoma, and New York. He also has an extensive experience in providing support on environmental and engineering projects for State, Federal and private agencies. Mr. Switalski's professional expertise includes prehistoric and historic archaeology, predictive modeling, Cultural Resources Management, and Geographic Information Systems (GIS). Over the last 20 years he has been involved in over 500 archaeological surveys and participated in 20 test excavations for private and commercial firms, as well as State and Federal agencies. Additionally, he has successfully participated and managed over 25 GIS-based projects supporting larger archaeological, environmental and engineering efforts. Between 2005 and 2013, Mr. Switalski had supported Southern California Edison Company (SCE) by managing the On-Call Archaeological and Paleontological Services contract for various Operations and Maintenance Programs in southern and eastern California. Over the last five years, Mr. Switalski has been supporting cultural resource projects in southern and northern California on behalf of California Resources Corporation, Plains-All American Pipeline, Pacific Gas and Electric, Kern County Waste Management Department, Orange County Parks, and many others.

Mr. Switalski has more than 20 years of specialized experience in GIS and Cultural Resource Management. Since 1996, he has been involved in numerous large-scale projects where he successfully developed and implemented innovative strategies using the latest in GPS mapping and GIS technology. Most recently Mr. Switalski successfully designed the methodology for implementation of Archaeological Predictive Model used to delineate areas of high sensitivity along proposed transmission lines as planned by SCE for the Tehachapi Wind Power Transmission System Project. Furthermore, over the last 16 years he has worked with numerous and very diverse data sets including: civil engineering AutoCAD data, aquatic and riparian coverages, wetland data, archaeological data sets, project specific data from numerous environmental and engineering firms. Over the last three years Mr. Switalski has been providing GIS support services on behalf of California Resources Corporation and California Rail Builders as part of the California High Speed Rail project.

EDUCATION

BA, Anthropology, California State University, Bakersfield, 1996

MA, Anthropology, California State University, Bakersfield, MA candidate

PROJECT EXPERIENCE

Plains All-American Pipeline, Line 63 Reroute Project, Angeles National Forest, Los Angeles County, California (Field Director)

Hubert directed a 10-month long project in support of Plains All-American Pipeline Company during the 2.5 mile reroute of Line 63. Hubert led a team of archaeological monitors to and coordinates with the client and construction crew daily monitoring activities and tasks. Hubert was responsible for the execution of the project, client communication, directing the field crew, and preparation of the final monitoring report.

Prior to construction and reroute of Line 63, Hubert was involved with permitting and preparation of environmental review documents, review of prior survey reports and preparation of Transportation and Resource Protection Plan that was submitted to ANF.

Coachella Canal Lining Project, Coachella Valley Water Irrigation District, Riverside County, CA (Archaeologist / Co-author)*

Hubert was responsible for coordination cultural resource efforts as part of the Coachella Canal Lining Project, on behalf of the Coachella Valley Water Irrigation District (CVWID). Project duties included, but were not limited to: archival research, field surveys, coordination efforts between agencies (BLM), and prepared final survey reports. The fieldwork resulted in the discovery of archaeological resources that could be affected by the proposed project. Additionally, Mr. Switalski prepared a monitoring plan, which was implemented during the mitigation phase of the project.

** denotes projects completed with other firms*

Hubert Switalski

Archaeologist/Field Director

Holcomb Valley Lake Development Project, Boy Scouts of America, San Bernardino County, CA (Field Director/Lead Author)*

Hubert directed an extensive archival research, an archaeological inventory of 180 acres of land, and the preparation of a final survey report. The study was conducted on behalf of the Pacific Custom Pools (PCP) for the proposed development of a lake for recreational use on the Holcomb Valley Boy Scout Ranch (HVSR), under the guidelines of CEQA. The survey resulted in the discovery of three new archaeological resources and two isolated finds. All resources were documented, and two of the three documented resources were determined to be potentially eligible for nomination to the NRHP as contributing elements of a larger, late 19th century mining district.

Southern California Edison, Archaeological Survey and Historical Resource Evaluation for the Proposed Rhinedollar 12kV Distribution Line Rebuild Project, Lee Vining Creek Hydroelectric System, Lee Vining, Mono County, California (Field Director/Lead Author)*

Hubert conducted an archaeological study between Poole Powerhouse and Ellery Lake for the proposed line rebuild of a historic distribution line that was constructed in 1924. Hubert conducted the background research, coordinated and led the field effort, and prepared the final survey report. The study was conducted under the guidelines of Section 106 of the NHPA. The initial evaluation of the Rhinedollar distribution line revealed that the resource lacked the potential to meet any of the NRHP eligibility criteria as a single entity or a contributing element to a larger historic district (Lee Vining Hydroelectric System) due to the lack of integrity.

On-Call Archaeological and Paleontological Consulting and Reporting Services*, Various Locations, Southern and Eastern California (Project Manager)*

Hubert served as the program manager for a team of archaeologists conducting as-needed archaeological and historical studies and monitoring projects throughout Southern California Edison's (SCE) service area. He managed more than 350 projects on behalf of SCE including the Deteriorated Pole Replacement Program and Hazard Tree Removal Project. Supporting SCE by providing archaeological surveys and evaluations for numerous operations and maintenance projects, most projects included surveys for the deteriorated power pole replacement project, line realignments and extensions, undergrounding of existing facilities, installation of new facilities and distribution line to private and commercial entities, and power pole equipment replacement. Projects were generally performed on private lands, but also included public lands managed by Bureau of Land Management (various California field offices) and the USDS Forest Service. He also successfully implemented innovative approaches to site and feature mapping utilizing the latest in GIS and GPS technologies during archaeological surveys and excavations, as well as conducted numerous records searches, assisted in preparation of excavation reports, and prepared survey and monitoring reports.

California Resources Corporation, Archaeological Survey of over 500 acres of land for the Proposed 7H to 9D Pipeline Project, Kern County, California (Field Director)

Hubert directed and archaeological Phase I study for the proposed natural gas pipeline between the ancient Buena Vista Lake and Buena Vista Hills in Kern County, California. The survey was conducted on behalf of under CEQA guidelines to provide findings and recommendations on cultural resources that could be impacted by the proposed project. The survey resulted in the discovery of 29 new historic period resources associated with oil exploration and production. The final report assisted CRC with final construction and alignment of the pipeline with least possible impacts to cultural resources.

Southern California Edison Company, Santa Barbara County Reliability Project, Santa Barbara and Ventura, California (Archaeologist/Lead Author)*

Hubert directed a Phase I cultural resources study on behalf of SCE for the proposed Santa Barbara County Reliability Project with the objective to document and assess cultural resources located within the Project Area that could be impacted by the proposed project. He directed and led the overall survey effort during which 983 acres 85.5 linear miles were inventoried for cultural resources. The survey resulted in the identification and documentation of six resources.

Tulare Solar Center, Tulare County, CA (Archaeologist/Lead Author)*

Hubert directed and lead an archaeological inventory project for the proposed 1,150-acre Tulare Solar Center near the community of Richgrove, Tulare County, California. The survey was conducted on behalf of Tulare Solar Center, LLC and Tulare County under CEQA

** denotes projects completed with other firms*

guidelines to provide findings and recommendations for cultural resources that could be adversely impacted by the construction and installation of a photovoltaic facility. He was responsible for the execution of the project, client communication, directing the field crew, and preparation of the final survey report. The survey resulted in the identification and documentation of five historic period resources

Archaeological and Historical Survey on Behalf of the Lemhi Gold Trust, Lemhi Gold Exploration Project, Lemhi County, Idaho (Field Director, Co-author)

Hubert served as the Field Director for a team of archaeologists conducting an archaeological survey nearly 500 acres for the proposed open pit mining operation. While the project was located on privately owned lands, it was anticipated that any future activities conducted within or near the subject property would require a Special Use Permit from the Salmon-Challis National Forest, thus, the study was conducted in compliance with Section 106 of the NHPA.

The survey included a complete inventory of 500 acres and resulted in the identification of eight historic period resources which were updated, recorded, and were evaluated for NR eligibility. All of the resources were associated with mining activities that took place along Ditch Creek during the latter part of the 19th century. All of the resources were found to be ineligible due to the overall lack of integrity which was compromised during logging activities in the late 1970s and 80s.

Monitoring and Test Excavation for Southern California Edison Preventive Breakdown Maintenance Project Along Portions of Autumn and Falls Distributions Circuits, Inyo National Forest, Twin Lakes Campground, Near Mammoth Lakes, Mono County, California (Field Director/Lead Author)

Hubert conducted archaeological monitoring for SCE as part of removal of tree-attachment overhead distribution line and its extension via an underground conduit to five cabins. The project was conducted to prevent damage to overhead circuit due to adverse weather conditions.

During trenching an undocumented historic period refuse deposit was encountered, which prompted stoppage of work. Hubert developed methodology and research design for testing the new identified deposit and directed an excavation of 14 Shovel Test Pits (STPs) to determine the extent of the deposit and to evaluate the deposit for eligibility to the National Register of Historic Places (NRHP).

Based on field data and analysis of 82 collected artifacts the deposit was associated with the nearby Twins Lake Recreational Residence Tract but was found not eligible for nomination to the NRHP as it was deemed to be an isolated, small historic refuse scatter.

Damage Assessment of CA-SBR-10266 (FS 05-12-51-0001), Southern California Edison Company, San Bernardino National Forest, California (Field Director/Lead Author)*

Directed an excavation of a small lithic scatter (CA-SBR-10266) located on lands administered by the San Bernardino National Forest (SBNF). The purpose of the excavation was to determine the extent of potential damage that may have occurred to the resource as a result of tree removal activities during the Hazard Tree Removal Project (HTR). As part of the project he prepared the research design, conducted background research, directed the field excavation, and prepared the final excavation report, under the guidelines of Section 106.

Kern River Valley Fire Damage Assessment, Southern California Edison Company, Sequoia National Forest, Kern County, California (Archaeologist/Lead Author)*

Hubert directed and lead an archaeological survey of 64 damaged power poles along the Mustang distribution line located on lands managed by the Sequoia National Forest and the Bureau of Land Management, that were affected by the Kern River Valley Fire. The inventory was conducted under the guidelines of Section 106 and resulted in the identification and documentation of two historic period resources.

Department of Veteran Affairs, Los Angeles National Cemetery, Los Angeles, CA. (Archaeologist/Lead Author)*

Mr. Switalski completed an archaeological inventory of archaeological and historical properties on behalf of the Department of Veterans Affairs (VA), National Cemetery Association (NCA), for the proposed columbarium expansion project, under the guidelines of Section 106. The project will entail the construction of a 10,000 niches columbarium, as well as, memorial walls to commemorate those veterans whose remains are unavailable for burial. Mr. Switalski was responsible for the execution of the project, including background research, fieldwork, report preparation, and consultation with the SHPO on behalf of the VA.

Hubert Switalski

Archaeologist/Field Director

REPORTS AND PRESENTATIONS

Switalski, Hubert, and Michelle Cross. 2017. *Heritage Resources Monitoring Report on Behalf of Plains All-American Pipeline for the Line 2000 Ten Anomaly Repair and South Reservoir Summit Emergency Response Project, Angeles National Forest, Los Angeles County, California.* Report submitted to Angeles National Forest, Arcadia, California.

Switalski, Hubert, and Michelle Cross. 2016. *Heritage Resource Monitoring Report for Plains All-American Pipeline Line 63 Reroute Project, Angeles National Forest, Los Angeles County, California.* Report submitted to Angeles National Forest, Arcadia, California.

Switalski, Hubert. 2016. *Archaeological Survey of Approximately 75 acres of Land Near the Tehachapi Sanitary Landfill, Tehachapi, Kern County, California.* Report submitted to Kern County Waste Management Department, Bakersfield, California.

Switalski, Hubert, and Victoria Harvey. 2016. *Cultural Resources Survey Report for the Proposed Prado Dam Tank Farm Demolition and Grading Project, Near Corona, Riverside County, California.* Report submitted to Orange County Public Work Department, Irvine, California.

Switalski, Hubert, and Michelle Cross. 2015. *Cultural Resources Inventory Report on Behalf of California Resources Corporation for the Proposed 7H to 9D Pipeline Project, Buena Vista Hills, Kern County, California.* Report submitted to California Resources Corporation, Bakersfield, California.

Switalski, Hubert, and Evan Elliott. 2015. *A Class III Cultural Resources Survey Report on Behalf of California Resources Corporation for the Proposed Lost Hills Master Development Plan, Lost Hills, Kern County, California.* Report submitted to California Resources Corporation, Bakersfield, California.

Switalski, Hubert, and Robert Larkin. 2015. *Heritage Resources Monitoring Report for Osito Canyon Retaining Structure Construction Project, Angeles National Forest, Los Angeles County, California.*

Switalski, Hubert, and Michelle Cross. 2014. *Archaeological Survey of Approximately 92 Acres of Land for the Proposed Tavaci Solar Facility, Near Pahrump, Nye County, Nevada.* Report submitted to private.

Switalski, Hubert, and Robert Larkin. 2014. *A Class III Archaeological Survey Report on Behalf of California Heavy Oil, Inc. of Midway Pacific and Band Government (Victory) Oil Leases, Midway-Sunset Oil Field, Near Fellows, Kern County, California.* Report submitted to California Heavy Oil, Bakersfield, California.

Switalski, Hubert, and Robert Larkin. 2013. *Archaeological Monitoring and Test Excavation Report for Southern California Edison Company Preventive Breakdown Maintenance Project Along Portions of Autumn 12kV and Falls 2.4kV Distribution Circuits, Inyo National Forest, Twin Lakes Campground, Mammoth Lakes, Mono County, California.* Report submitted to Southern California Edison Company and Inyo National Forest, California.

Switalski, Hubert, and Robert Larkin. 2013. *Archaeological Survey Report on Behalf of Vintage Production California, LLC for the Proposed Development of Five Oil Well Facilities, Buena Vista Lakebed, Kern County, California.* Report submitted to Vintage Production California, LLC., Bakersfield, California.

Switalski, Hubert, and Robert Larkin. 2013. *A Class III Archaeological Survey Report on Behalf of TRC Cypress Group, LLC for the Proposed Construction of an Oil Well Facility No. M-1, Near Taft, Kern County, California.* Report submitted to TRC Cypress Group, LLC., Bakersfield, California.

Switalski, Hubert, and Robert Larkin. 2013. *Cultural and Paleontological Resources Survey Report for Modified Alignment of CO2 Supply Line and Facility Construction (Section 26S), Elk Hills, Kern County, California.* Report submitted to Occidental of Elk Hills Inc., Bakersfield, California.

Switalski, Hubert, and Robert Larkin. 2013. *Cultural Resources Assessment for Proposed Laguna Canyon Road Pedestrian Pathway Project, Laguna Beach, Orange County, California.* Report submitted to City of Laguna Beach Public Works Department, Laguna Beach, California

Switalski, Hubert, and Andrea Bardsley. 2012. *Cultural Resources Survey Report for the Proposed 1,064-Acre Tulare Solar Center, Near Richgrove, Tulare County, California.* Report submitted to Wellhead Electric/Tulare Solar Center, LLC., Sacramento, California.

** denotes projects completed with other firms*

Hubert Switalski

Archaeologist/Field Director

Switalski, Hubert, and Andrea Bardsley. 2012. *Cultural Resources Study for the Proposed Southern California Edison Company's Santa Barbara County Reliability Project, Santa Barbara and Ventura Counties, California.* Report submitted to Southern California Edison Company, Monrovia, California.

Switalski, Hubert, and Andrea Bardsley. 2011. *Archaeological Survey Report and Historical Resource Evaluation for the Proposed Rhinedollar (Overhead) 12kV Distribution Circuit Rebuild Project, Lee Vining Creek Hydroelectric System, Inyo National Forest, Mono County, California.* Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert, and Sonia Hutmacher. 2010. *Archaeological and Historical Properties Survey Report of Approximately 13 acres for the Proposed Department of Veterans Affairs Columbarium Expansion Project, Los Angeles National Cemetery, Los Angeles, Los Angeles County, California. Report submitted to the Department of Veterans Affairs.* Report submitted to the Department of Veterans Affairs, Los Angeles National Cemetery, Los Angeles, California.

Switalski, Hubert. 2010. *Archaeological Survey Report for the Southern California Edison Company's Replacement of 16 Deteriorated Pole Structures on the Kaweah-1-2-3-Kawgen-Lemon Cove-Three Rivers-Venida 66kV Transmission Line (4205-0536), Visalia and Three Rivers, Tulare County, California.* Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert, and Sonia Hutmacher. 2009. *Heritage Resources Survey Report for Jarvis 12 kV Distribution Line Rebuild Project (ARR No.05-01-01153), Morris Fire Support, Angeles National Forest, Los Angeles County, California.* Report submitted to Angeles National Forest, Arcadia, California.

Switalski, Hubert, and Sonia Hutmacher. 2008. *Archaeological Survey Report for the Proposed Holcomb Valley Lake Development, Holcomb Valley Scout Ranch, Holcomb Valley, San Bernardino County, California.* Report submitted to Pacific Custom Pools, Pasadena, California.

Switalski, Hubert, and Audry Williams. 2008. *Heritage Resources Inventory Report for a Portion of the Casmalia 12 kV and Acosta 12 kV Distribution Circuits, Southern California Edison's Hazard Tree Removal Project, San Bernardino National Forest, San Bernardino County, California*. Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert, and Sonia Hutmacher. 2008. *Archaeological Survey Report for Jarvis 12 kV Distribution Line Rebuild and Pole Replacement Project, Crystal Lake Recreational Area, Angeles National Forest, Los Angeles County, California.* Report submitted to Southern California Edison Company, Rosemead, Califronia.

Switalski, Hubert. 2008. *Archaeological Survey Report for the Southern California Edison Company's Distribution Substation Plan and Pole Replacement Project Along the Success Lake 12 kV Distribution Line, Porterville, Tulare County, California.* Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert, Tim Kelly, and Sonia Hutmacher. 2008. *A Heritage Resource Inventory for the Southern California Edison Company's Replacement of 19 Deteriorated Power Poles, Inyo National Forest, Inyo and Mono Counties, California.* Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert, Tim Kelly and Sonia Hutmacher. 2007. *A Class III Survey Report for the Southern California Edison Company Replacement of Two Deteriorated H-Frame Structures on the Tungsten 12 kV Distribution Circuit, Kern River Valley, Kern County, California*. Report submitted to Bureau of Land Management, Bakersfield Field Office, California.

Switalski, Hubert. 2007. *Archaeological Survey Report for the Southern California Edison Company Replacement of 20 Deteriorated Power Poles on the Cuddleback 12 kV, Caliente 12 kV, Mettler 12 kV and Zenda 12 kV Distribution Circuits, Kern County, California.* Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert and Sonia Hutmacher. 2007. *Cultural Resource Inventory for the Proposed Installation of a Multi-Use Communications Tower Facility, Clark Mountain Range, Mountain Pass, San Bernardino County, California.* Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert and Tim Kelly. 2006. *Archaeological Survey of 34 Acres of Land for the Proposed Southern California Edison Company Service Center, Porterville, Tulare County, California*. Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert. 2006. *Archaeological Survey for Southern California Edison Company Pole Relocation*

Project, Saddleback Development, Tentative Tract No. 30760, Riverside County, California. Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert. 2006. *Archaeological Survey for the Proposed Demens Canyon Access Road Repair Project, Near Tower M9/T5 on the Etiwanda-Padua 220kV Transmission Line, Alta Loma, San Bernardino County, California*. Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert and Sonia Hutmacher. 2006. *Archaeological Investigations at CA-SBR-10266 (FS 05-12-51-0001), near Arrowbear, San Bernardino National Forest, San Bernardino County, California.* Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert and Sonia Hutmacher. 2006. *A Class III Survey Report for the Proposed Dos Palmas Hydrogeology Study, Coachella Canal Lining Project, Mecca, Riverside County, California*. Report submitted to Bureau of Land Management, Palm Springs South Coast Field Office, Palm Springs, California.

Switalski, Hubert. 2006. *Archaeological Investigations of 74 Deteriorated Power Pole Locations Along SCE Borel-Havilah-Loraine-Monolith-Walker Basin 66kV Distribution Circuit, Kern County, CA.* Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert. 2006. *Archaeological Inventory for the Proposed Installation of 82 Power Poles near Twin Oaks, Kern County, California*. Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert. 2006. *Archaeological Investigation of Six Deteriorated Power Pole Locations Along Southern California Edison's Bootlegger, Titan, and Cami Valley 12kV Distribution Circuits, Los Angeles County, California*. Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert. 2006. *Archaeological Investigations of 31 Deteriorated Power Pole Locations Along SCE Distribution Circuits: Jordan, Pascoe, and Isabella, Kern County, California*. Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert. 2006. *Archaeological Investigations of 379 Deteriorated Power Pole Locations Along SCE Distribution Circuits: Bonanza, Borel-Havilah-Loraine-Monolith-Walker Basin, Canebreak, Erskine, Faye, Flying D, Jordan, Tee Vee, and Tungsten, Kern and Tulare Counties, California.* Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert. 2005. *Installation of an Underground Service Line to the Private Residence at 7933 Silver Rock Road, Pinon Hills, San Bernardino County, California.* Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert, Audry Williams, and Jill Gardner. 2005. *A Cultural Resources Inventory for the Southern California Edison Ski Sunrise Distribution Line Relocation Project, Santa Clara/Mojave Rivers Ranger District, Angeles National Forest, Los Angeles County, California*. Report submitted to Angeles National Forest, Supervisors Office, Arcadia, California.

Williams, Audry and Hubert Switalski. 2005. *Archaeological Monitoring for the Hazard Tree Removal Project in the Mount Baldy Area, San Gabriel Ranger District of the Angeles National Forest, on Behalf of the Southern California Edison Company.* Report submitted to Angeles National Forest, Arcadia, California.

Gardner, Jill, Audry Williams, and Hubert Switalski. 2005. *Archaeological Monitoring for the Hazard Tree Removal Project in the Big Pines/Wrightwood Area, Santa Clara/ Mojave River Ranger District of the Angeles National Forest, on Behalf of the Southern California Edison Company*. Report submitted to Angeles National Forest, Arcadia, California.

Williams, Audry and Hubert Switalski. 2005. *A Cultural Resource Assessment of 120 Acres of Land in Twin Peaks, San Bernardino County, California*. Report submitted to California Department of Forestry, Sacramento, California.

Switalski, Hubert and Jill Gardner. 2005. *A Cultural Resource Inventory and Evaluation of the Lester/Partin Mine (CA-SBR-4038H) for the Proposed 1st Marine Expeditionary Force Exercise, San Bernardino National Forest, San Bernardino County, California*. Report submitted to San Bernardino National Forest, San Bernardino, California.

Switalski, Hubert, Audry Williams, and Jill Gardner. 2005. *A Cultural Resources Inventory of an 80-acre Parcel of Land for the Proposed Fort Cady Road Compost Facility Located Near Troy Dry Lake, Newberry Springs, San Bernardino County, California*. Report submitted to private.

Gardner, Jill and Hubert Switalski. 2003. *Archaeological and Paleontological Assessment of the Tehachapi Wind*

Power Transmission System Project for the Southern California Edison Company, Kern and Los Angeles Counties, California. Report submitted to Southern California Edison Company, Rosemead, California.

Switalski, Hubert. 2003. *Negative Archaeological Survey Report for the Lincoln Avenue Congestion Relief Project, Corona, Riverside County, California*. Report submitted to California Department of Transportation, District 8, San Bernardino, California.

Switalski, Hubert, Mike Lerch, Marc Hintzman, and Anne Stoll. 2003. *Archaeological Inventory and Evaluation of a Portion of Surprise Canyon Road, Route P71, Panamint Range, Bureau of Land Management California Desert District, Inyo County, California*. Report submitted to Bureau of Land Management, California Desert District, Riverside, California.

Switalski, Hubert. 2003. *Negative Archaeological Report for the State Route 74 Curve Realignment Project*. Report submitted to California Department of Transportation, District 8, San Bernardino, California.

Switalski, Hubert. 2002. *Negative Archaeological Survey Report for the Magnolia Avenue and I-15 Interchange Improvement Project*. Report submitted to California Department of Transportation, District 8, San Bernardino, California.

Switalski, Hubert. 2002. *Negative Archaeological Survey Report for the Magnolia Avenue Operational Improvement Project.* Report submitted to California Department of Transportation, District 8, San Bernardino, California.

Switalski, Hubert. 2002. *Negative Archaeological Survey Report for the State Route 74 and Gilmore Springs Interchange Improvement Project*. Report submitted to California Department of Transportation, District 8, San Bernardino, California.

Harvey, Victoria and Hubert Switalski. 2001. *Jasper Veins: A Work in Progress Report on Quarries of Unit 58, east of the El Mirage Dry Lake Bed, Western Mojave Desert, California*. Paper co-authored and presented at the annual Kelso Conference, California.