ATTACHMENT 23

Cultural Resources Assessment for the Larkin Subdivision Project, Redmond, King County, Washington

Contains Confidential Information—Not for Public Distribution

Prepared by:
Bethany K. Mathews, M.A.
Sherri M. Middleton M.S.

Tierra Archaeological Report No. 2018-062
March 21, 2018

CULTURAL RESOURCES REPORT COVER SHEET

Author: Bethany K. Mathews, M.A., and Sherri Middleton, M.S.

Title of Report: Cultural Resources Assessment for the Larkin Subdivision Project, Redmond, King County, Washington

Date of Report: March 21, 2018

County(ies): King Section: 34 Township: 26N Range: 5 E

Quad: Kirkland Acres: 2.48

PDF of report submitted (REQUIRED) ☒ Yes

Historic Property Inventory Forms to be Approved Online? ☐ Yes ☒ No

Archaeological Site(s)/Isolate(s) Found or Amended? ☐ Yes ☒ No

TCP(s) found? ☐ Yes ☒ No

Replace a draft? ☐ Yes ☒ No

Satisfy a DAHP Archaeological Excavation Permit requirement? ☐ Yes # ☒ No

Were Human Remains Found? ☐ Yes DAHP Case # ☒ No

DAHP Archaeological Site #:

_____
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- Submission of PDFs is required.
- Please be sure that any PDF submitted to DAHP has its cover sheet, figures, graphics, appendices, attachments, correspondence, etc., compiled into one single PDF file.
- Please check that the PDF displays correctly when opened.

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Prepared by:
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Tierra Archaeological Report No. 2018-062
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TABLE OF CONTENTS

Executive Summary iv
Introduction 1
Project Description 1
Regulatory Context 1
Environmental Context 1
Geomorphology 5
Soils 5
Water 5
Vegetation and Fauna 5
Cultural Context 6
Precontact and Ethnohistoric Periods 6
Historic Period 8
History of Redmond 9
Land Use History of the Project Area 9
Literature Review 15
Research Design 16
Archaeological Expectations 16
Archaeological probability model 16
Geomorphological Context 16
Land Use Patterns 17
Archaeological Methodology 17
Survey Results 17
Surface Survey 17
Subsurface Testing 20
Analyses 20
Conclusions and Recommendations 25

LIST OF FIGURES

Figure 1. Project location marked on Kirkland, Washington, 7.5-minute U.S. Geological Survey quadrangle map 2
Figure 2. Project location on aerial map. 3
Figure 3. Project plans (Courtesy of Rose Hill 12 LLC). 4
Figure 3. Portion of 1871 GLO map of Township 26 North, Range 5 East, Willamette Meridian, with project location indicated (BLM 2018A). 10
Figure 4. Portion of 1907 Anderson Map Co. Map with project location marked (Anderson Map Company 1907). 11
Figure 5. Portion of 1912 Kroll Map with project location marked (Kroll Map Company 1912). 12
Figure 6. Portion of 1936 Metsker Map with project location marked (Metsker 1936). 13
Figure 7. Portion of 1950 Kirkland, WA, U.S. Geological Survey map with project location marked (USGS 1950). 14
Figure 8. Locations of shovel test probes. 22

LIST OF PHOTOS

Photo 1. View west of project area on existing gravel driveway, from 134th Avenue NE. 18
Photo 2. View west of project area on existing gravel driveway, from 134th Avenue NE. 18

Photo 3. View west of project area on existing gravel driveway, from 134th Avenue NE. 19
Photo 4. View south of project area from northeast corner of project area.....19
Photo 5. View west of project area from northeast corner of project area.....20
Photo 6. Profile of STP 2, exhibiting disturbed sediments observed throughout project area.....23
Photo 7. Profile of STP 5, exhibiting disturbed sediments observed throughout project area.....23
Photo 8. Modern refuse material observed in STP 4. 24
Photo 9. Modern refuse material observed in STP 5. 24

LIST OF TABLES

Table 1. Summary of Precontact Periods in the Coast Salish region (adapted from Ames and Maschner 1999; Greengo 1983; Matson and Coupland 1995; Nelson 1990).....7
Table 2. Archaeological Sites Located within 1.6 km (1.0 Mile) of Project Area.....15
Table 3. Results of Subsurface Testing (UTM NAD 1983 Zone 10) 21

EXECUTIVE SUMMARY

Tierra Right of Way Services, Ltd. (Tierra), was contracted by Rose Hill 12, LLC, to conduct a cultural resources assessment for the Larkin Subdivision project (the project) located in Redmond, King County, Washington. The project proposes to subdivide 1 parcel into 14 lots for home development. In accordance with the City of Redmond Zoning Code 21.30, Rose Hill 12, LLC requested a cultural resources assessment to consider the proposed project's potential impacts to any historical and archaeological sites.

Tierra's cultural resources assessment consisted of background review, field investigation, and production of this report. Background review determined the project is located in an area of moderate probability for archaeological material. Field investigation included visual reconnaissance, pedestrian survey, and subsurface testing. No archaeological materials or historic properties were identified in the project area during this project. Tierra recommends no further cultural resources oversight for this project.

INTRODUCTION

Tierra Right of Way Services, Ltd. (Tierra), was contracted by Rose Hill 12, LLC, to conduct a cultural resources assessment for the Larkin Subdivision project (the project), located at 10201 134th Avenue NE, in Redmond, Washington. The project area is in the SW ¼ of Section 34, Township 26 North, Range 5 East, Willamette Meridian (WM), in King County Parcel No. 1246700141 (Figures 1 and 2). The survey area for this project encompasses 2.48 acres. In accordance with the City of Redmond Zoning Code 21.30, Rose Hill 12, LLC requested a cultural resources assessment to consider the proposed project impacts to any historical and archaeological sites.

Project Description

The Larkin Subdivision project proposes to subdivide 1 parcel (1246700141) into 14 lots for future development of 14 detached homes. The proposed project will include ground-disturbing activities for the development of roads, storm drainages, utility infrastructure, home construction, and landscaping (Figure 3).

REGULATORY CONTEXT

This survey was completed at the request of the City of Redmond (the City) as a condition of project permitting. Redmond Zoning Code 21.30, Historic and Archaeological Resources, requires that any person proposing to fill, grade, excavate, or otherwise disturb a known archaeological site, or an area that has a high probability of containing archaeological artifacts, shall have a qualified archeologist, as approved by the administrator, prepare a site study to determine the effect that any proposed action may have on the archeological site and recommend necessary treatment and mitigation measures. The investigation and written report by the approved archeologist shall include information about the probable significance of the site, the probable effect of the land use action or activity on the integrity of the site, and a set of recommendations for any necessary treatment or mitigation measures.

Washington State protects its archaeology and heritage resources under various laws. In Washington State, it is illegal to knowingly disturb archaeological sites or certain archaeological materials on State and private lands. Laws protecting these resources include the Archaeological Sites and Resources Law (RCW 27.53), Indian Graves and Records Law (RCW 27.44), Human Remains Law (RCW 68.50), and Abandoned and Historic Cemeteries and Historic Graves Law (RCW 68.60).

ENVIRONMENTAL CONTEXT

The natural and cultural characteristics of a place inform the likelihood of encountering cultural resources at a geographic location. Natural and cultural characteristics of the project area were the foundation for establishing a research methodology for this cultural resource assessment. This assessment included a review of environmental information on the project area as illustrated in geologic maps and reports of recent geological and geomorphological investigations that describe subsurface conditions and the post-depositional processes likely to affect any cultural deposits in the study area.

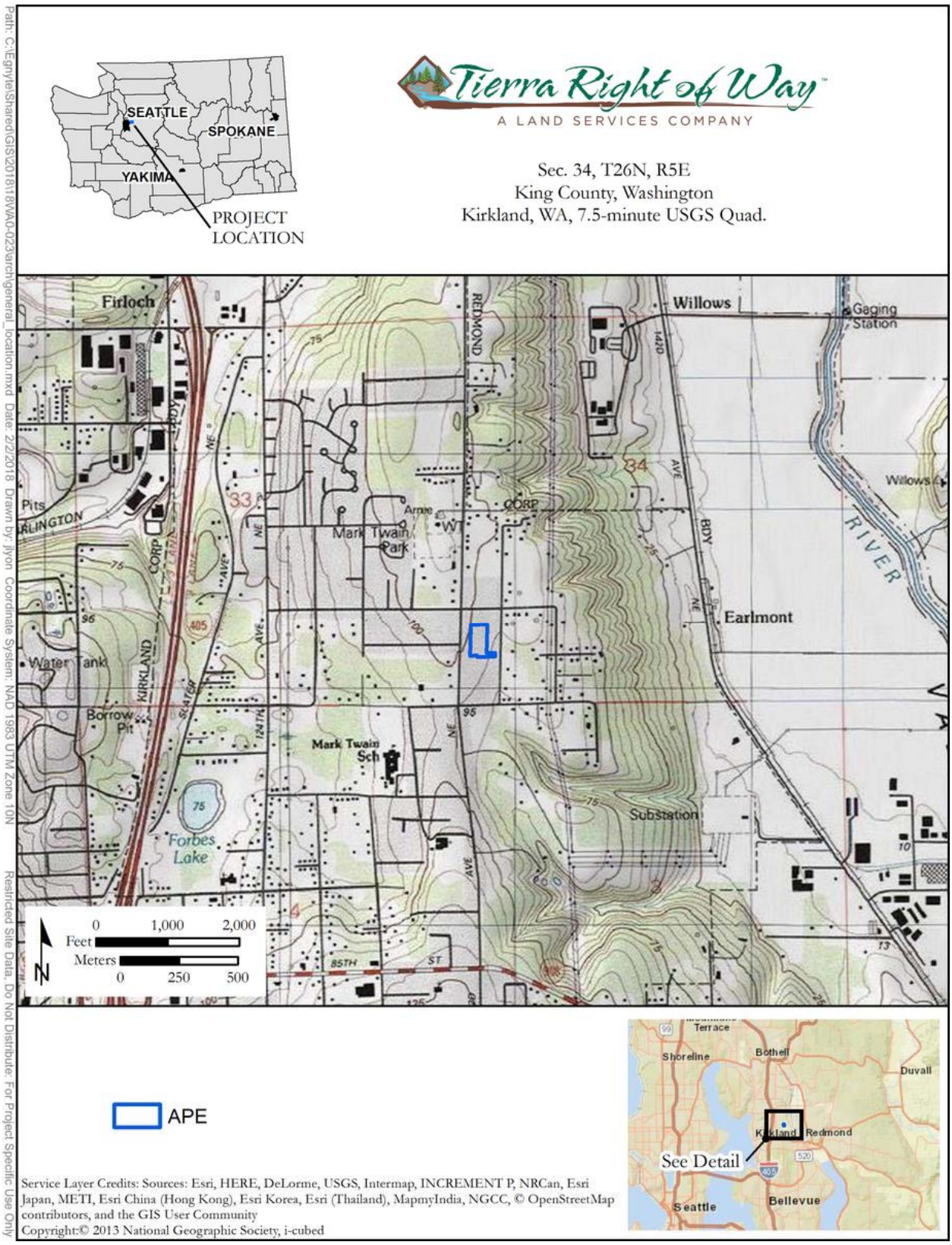

Figure 1. Project location marked on Kirkland, Washington, 7.5-minute U.S. Geological Survey quadrangle map.

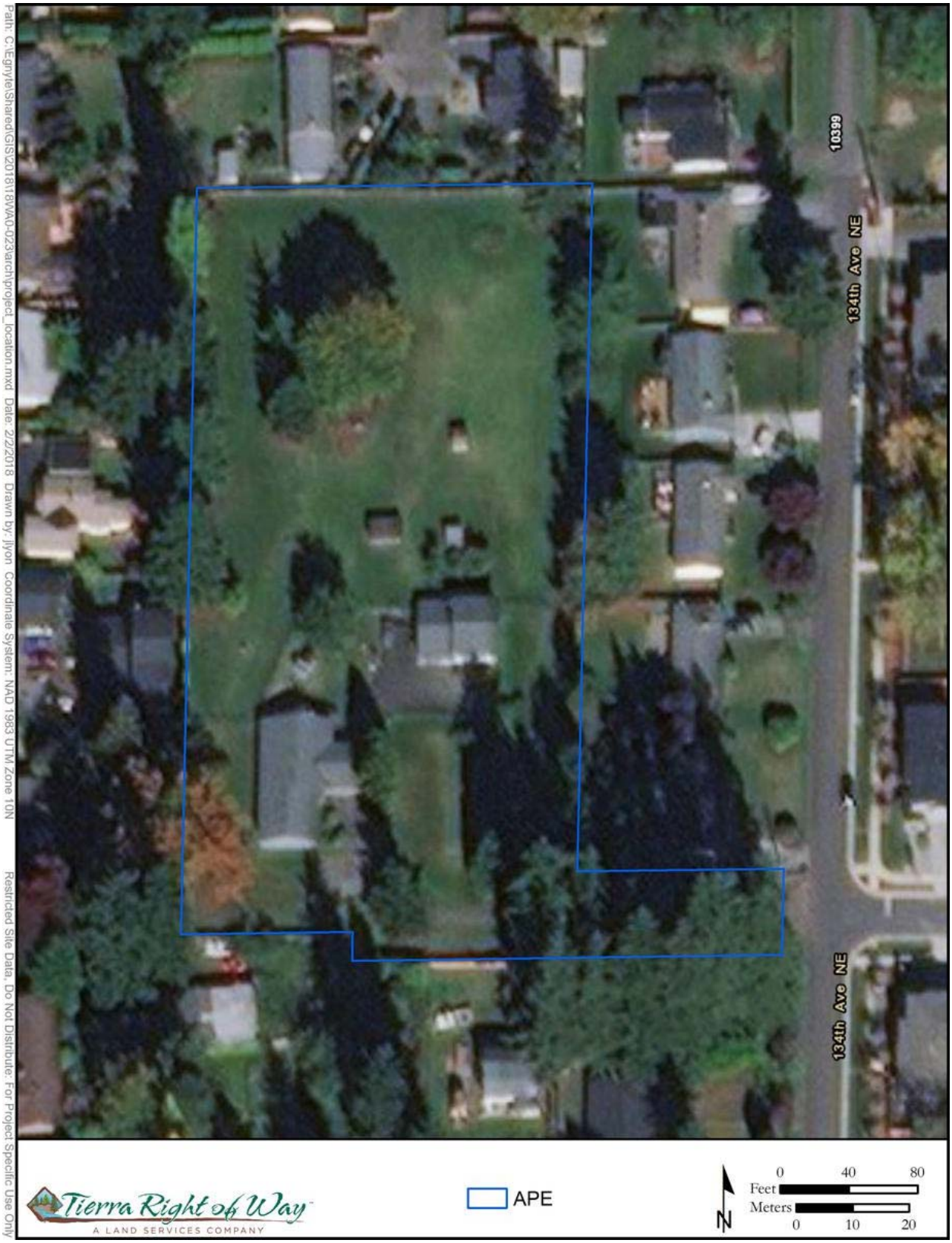

Figure 2. Project location on aerial map.

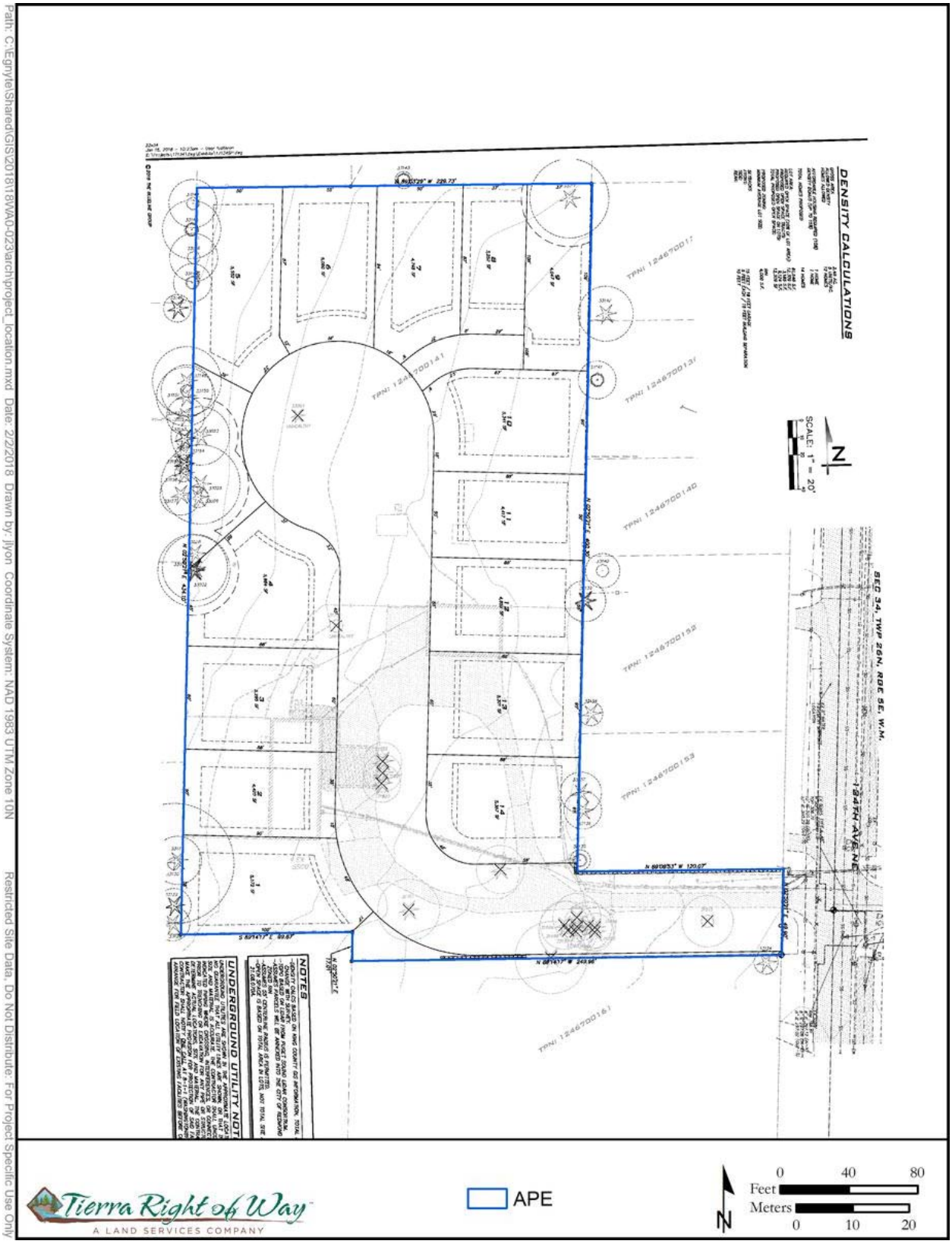

Figure 3. Project plans (Courtesy of Rose Hill 12 LLC).

Geomorphology

The project is in the Puget Lowland and west of the Cascade Range physiographic regions. The Cascade Range formed through intermittent tectonic events and periods of erosion beginning about 100 million years ago (Kruckeberg 1991). Puget Lowland landforms were shaped mainly by Pleistocene glacial events (Easterbrook 2003; Lasmanis 1991). The bedrock was depressed and deeply scoured by glaciers, and sediments were deposited and often reworked as the glaciers advanced and retreated. A mantle of glacial drift and outwash deposits were left across much of the region by the end of this glacial period (Easterbrook 2003). The Vashon Stade of the Fraser Glaciation began around 18,000 B.P. with an advance of the Cordilleran Ice Sheet into the lowlands (Porter and Swanson 1998). The Puget Lobe of this ice sheet flowed down into the Puget Lowland and reached its terminus just south of Olympia between 14,500–14,000 B.P. (Clague and James 2002; Easterbrook 2003; Waitt and Thorson 1983). The Puget Lobe began to retreat shortly after reaching its terminus, allowing marine waters to enter the lowlands. The lowlands, having been recently scoured by the Puget Lobe, filled readily. The remaining ice was lifted and rapidly melted as berg ice (Easterbrook 2003).

The eastern edge of the Sammamish River floodplain is located 1.1 km (0.7 miles) to the east of the project area. The river itself has been channelized to be straighter in this area but is still adjacent to its original location. In 1912, 1948, 1963, and 1964, segments of the Sammamish River were dredged for agricultural land reclamation (Greengo and Houston 1970; Liesch et al. 1963; Way 1989). From 1958 to 1966, drainage improvements and flood protection measures were undertaken by the U.S. Army Corps of Engineers (USACE). This resulted in portions of the river being straightened, deepening and widening the river channel from Lake Sammamish to Lake Washington.

Soils

Soils in this region form in glacial materials, primarily under the influence of coniferous forest vegetation. As described and mapped by the Natural Resource Conservation Service (NRCS) (NRCS 2018), the project area is comprised of Alderwood gravelly sandy loam. The NRCS (2018) describes the parent material of Alderwood gravelly sandy loam as glacial drift and/or glacial outwash over dense glaciomarine deposits. The typical profile for this sediment is A horizon, gravelly sandy loam 0–18 cm (0–7 inches); three B horizons, very gravelly sandy loam 18–89 cm (7–35 inches); and two C horizons of very gravelly sandy loam 89–99 cm (35–59 inches). The soil is moderately to well drained at a slope of 8 to 15 percent and is characterized as being slightly to strongly acid, which could affect the preservation of subsurface perishable deposits.

Water

The project is situated in an area that is rich in freshwater resources. The Sammamish River is located 2.7 km (1.7 miles) east of the project area. Lake Washington is located 5.8 km (3.6 miles) to the west. Lake Sammamish is located 9.3 km (5.8 miles) to the southeast. Many small lakes, wetlands, and streams are scattered in the vicinity.

Vegetation and Fauna

The project area is located within the western hemlock *(Tsuga heterophylla*) zone (Franklin and Dyrness 1988). Prior to historic-era clearing, western Washington forest overstory was dominated by western red cedar *(Thuja plicata)*, western hemlock, and Douglas fir *(Pseudotsuga menziesii)*. Historically, the understory of this zone would have consisted of herbaceous species comprised of salal *(Gaultheria shallow)*, Oregon grape *(Mahonia nervosa)*, blackberry *(Rubus ursinus)*, red huckleberry *(Vaccinium parvifolium)*, and stinging nettle *(Urtica diocia)*. Fauna for this area included large mammals such as black

bear *(Ursus americanus)*, elk *(Cervus elaphus)*, black-tailed deer *(Odocoileus hemionus)*, cougar *(Felis concolor)*, and coyote *(Canis latrans)*. A specialized and diverse array of fauna support the wetland habitats which included raccoon *(Procyon lotor)*, river otter *(Lutra canadensis)*, beaver *(Castor canadensis)*, and a variety of migratory waterfowl (Kruckeberg 1991).

CULTURAL CONTEXT

The determination of the probability for historic properties to be located within the APE was based largely upon a review and analysis of past environmental and cultural contexts, previously conducted cultural resources studies, and previously recorded nearby sites. Consulted sources included project files; local geologic data to better understand the depositional environment; archaeological, historical, and ethnographical records made available on the Washington Information System for Architectural and Archaeological Records Data (WISAARD) database; and selected published local historic records. Research conducted for this assessment included a review of environmental and cultural contexts from a variety of sources such as the Washington State Department of Archaeology and Historic preservation (DAHP), WISAARD, the Bureau of Land Management General Land Office (GLO) survey records database, historylink.org, and historicmapworks.com.

Relevant ethnographic reports and syntheses of archaeological, anthropological, and historical sources were also reviewed (e.g., Haeberlin and Gunther 1930; Ruby and Brown 1992; Spier 1936; Suttles and Lane 1990; Waterman 2001). Information regarding historic period cultural features and land-use patterns was acquired by examining maps from the late 1800s to early 1900s.

Precontact and Ethnohistoric Periods

Thousands of years of human occupation of the region have been summarized in a number of archaeological, ethnographic, and historical investigations over the past several decades, providing a regional context for evaluating cultural resources in the project area (e.g., Ames and Maschner 1999; Blukis 1987; Greengo 1983; Matson and Coupland 1995; Nelson 1990). The regional chronology of precontact settlement patterns is summarized in Table 1, as adapted from Chatters et al. 2011 and Cooper et al. 2014.

Traditional use of the Puget Sound region is oriented toward resource locations (i.e., freshwater, terrestrial, and marine food resources, forests, and other suitable terrain). Precontact settlements of Coast Salish groups were often located along significant waterways and at heads of bays or inlets, where abundant resources of coastal, riverine and inland environments supported a relatively rich, diverse, and reliable subsistence base. During the winter months, Coast Salish lived in large villages of cedar plank houses, while the spring and summer months were spent at seasonal encampments for fishing, hunting, and plant/berry gathering. Following contact with Euroamericans, farming also became an important part of the Coast Salish economy (Ruby et al. 2010).

The project area is located within the traditional territory of the Sammamish and the Snoqualmie Tribes (Suttles and Lane 1998, Ruby and Brown 1992, and Swanton 1978). The Sammamish and Snoqualmie are both Southern Coast Salish groups whose traditional languages are dialects of the Southern Lushootseed language group (Ruby and Brown 1992; Suttles and Lane 1990). Some ethnographers believe the Sammamish to be a subdivision of the Duwamish Tribe, while others state that they were an autonomous group (see discussions in Bagley 1929 and Spier 1936). Other nearby Salish groups who also may have accessed resources in this area include the Duwamish, Suquamish, and Muckleshoot peoples (Luttrell 2002).

Table 1. Summary of Precontact Periods in the Coast Salish region (adapted from Ames and Maschner 1999; Greengo 1983; Matson and Coupland 1995; Nelson 1990).

Period	Date Range	Characteristics
Early	15,000–5,000 B.P.	Occupation sites located on uplands or upper river terraces, lithic workshops, and temporary hunting camps. Artifact assemblages include a wide variety of flaked stone tools, such as fluted projectile points, laurel-leaf-shaped bifaces, and cobble tool industries suggestive of large game hunting, butchering, and processing supplemented by riverine and marine fish and invertebrates.
Middle	5,000–1,000 B.P.	Occupation sites represented by living floors, evidence of structural supports and hearths are more common during this period, representing specialized seasonal spring and summer fishing and root-gathering campsites and winter village locations, typically located adjacent to, or near, river or marine transportation routes. Large occupation sites are often associated with fish weirs and other permanent constructions. Evidence of task-specific, year-round activities including salmon and clam processing, woodworking, basket and tool manufacture. Shell-middens appear in the archaeological record. Artifact assemblages became diversified, with some regional variation. Tools were manufactured from ground stone, antler, and bone. Smaller triangular projectile points and notched stone projectile were common.
Late	1,000–250 B.P.	Ethnographically described occupation sites consisting of large, plank houses established and persisted into the historic period. Similar economic and occupational trends continued throughout the Puget Sound region until the arrival of European explorers. Subsistence shift to riverine and marine is complete, supplemented by terrestrial hunting and plant resources. Activities are represented by organic materials (basketry, wood, and foodstuffs) preserved in submerged, anaerobic sites, and sealed storage pits. Artifact assemblages consist of a range of hunting, fishing and food processing tools, bone and shell implements and midden deposits, as well as exotic trade goods.

All of these groups utilized primary winter villages located along shorelines and rivers and relied heavily upon salmon for subsistence. Groups would frequently leave the villages in order to procure game (including marine and freshwater fish/shellfish) and plants for food, medicinal, and utilitarian purposes (Duwamish Tribe 2008; Gunther 1981; Suttles and Lane 1990).

Prior to the arrival of Europeans, the Northwest coast was one of the most densely populated nonagricultural areas in the world. Between 1770 and 1870 numerous outbreaks of infectious diseases, including small pox and measles, among the people of the Northwest coast decimated population numbers (Boyd 1990). Even so, when the first settlers arrived at Alki Point, "the *Dkhw'Duw'Absh* occupied at least 17 villages, living in over 90 longhouses along Elliott Bay, the Duwamish River, the Cedar River, the Black River (which no longer exists), Lake Washington, Lake Union, and Lake Sammamish" (Duwamish Tribe 2008).

The history of the mid-nineteenth century in the Pacific Northwest is dominated by the U.S. government attempting to establish treaties with Tribal groups in order to solidify the U.S.'s claim on what is now Washington State over that of British-held Canada. After the signing of the 1855 Point Elliott Treaty, the Sammamish and Snoqualmie were relocated to the Tulalip Reservation (previously called the Snohomish Reservation), along with many other local groups that all now comprise the Tulalip Tribes (Ruby and Brown 1992; Swanton 1978; Tulalip Tribes 2018). Most Duwamish peoples were moved to the Port Madison Reservation in Kitsap County (Ruby and Brown 1992).

Many Snoqualmie did not relocate to the reservation and stayed near their ancestral lands. The Snoqualmie lost Federal recognition in 1953 but regained recognition through the Bureau of Indian Affairs in 1999 (Snoqualmie Tribe 2012). There is documentation indicating that at least some Sammamish also chose to stay on their traditional lands rather than move to the reservation (Ruby and Brown 1992). Many Duwamish also maintained their locations off-reservation or eventually relocated to the Muckleshoot Reservation because of their traditional ties to the White and Green Rivers (Duwamish Tribe 2008; Ruby and Brown 1992). Individuals of Native American descent living off-reservation in the Puget Sound region often purchased land privately or, occasionally, received an off-reservation allotment in their ancestral lands. As with all Native Americans in the post-treaty era, they augmented their traditional subsistence practices with Euroamerican pursuits such as agriculture, logging, industrial labor, and other work (Duwamish Tribe 2008; Huggins 1984; Ruby and Brown 1992:72–23, 140).

Ethnographer T. T. Waterman (ca. 1920) recorded several place names in the project vicinity including *TL^{3}oq^{3}*, meaning "crowded, poked in," for Redmond; *Tuba'hal*, meaning "broad" for a creek, possibly Bear Creek, entering the river below Redmond; *CEqos-a'lt^{u}*, meaning "a high place with a house on it," for a creek entering the river from the east below Redmond; and *SqlulwE'lt^{u}*, meaning "leveling off of place," for a place on the east bank of the Sammamish River at the former location of Hollywood Farms (Waterman 2001).

Historic Period

The landscape of the Puget Sound region has been radically transformed over the last 150 years, transitioning from old-growth forest, to primarily timberland and farmland in the early historic period, to its diverse economic and residential developments in the modern era. This shift of land use is typical of western settlement patterns and illustrates the rapid rate of changing priorities in western and local culture. Regional history is outlined in a multitude of local historic context documents. The history outlined in this report focuses on local and regional events as they pertain to known cultural resources in the vicinity of the project and the immediate cultural landscape.

The project vicinity was jointly occupied by the United Kingdom and the United States until the Oregon Treaty of 1846 (Nisbet and Nisbet 2011). The presence of the British-owned Hudson Bay Company in the Northwest began to decline at this time and was replaced by American settlement and industry. The U.S. Government created the Oregon Territory in 1848, and the Washington Territory in 1853 (Crowley 2003). King County was created by the Oregon Territorial Legislature in 1852 (Long 2006). Originally named after U.S. Vice President William Rufus DeVane King, King County is now an homage to Dr. Martin Luther King Jr. (Long 2006). Washington became a State in 1889 (Crowley 2003).

Following the arrival of non-Native settlers in the Pacific Northwest by the mid-1850s, many Native village/habitation sites were subsequently homesteaded or platted as towns. Most areas that were previously inhabited by Native Americans were generally as desirable to non-Native settlers as they were to the areas original inhabitants. This was especially true for locations near water, at river confluences, or along traditionally utilized travel corridors/trails, many of which saw continued use into the Historic period, if not into modern times. Extensive logging and mining activity took place throughout the region from the mid-1800s to present, and the construction and expansion of transportation corridors associated with railroads and roadways had a profound effect on the landscape in this area (Marino 1990).

History of Redmond

The first settlers in the area were Luke McRedmond, who took up a claim on the banks of the Sammamish River, and Warren Perrigo, who settled to the east. Warren and Laura Perrigo built the Melrose House Inn. Luke McRedmond began development of the town, originally using the name Salmonburg, but officially changed the town name to Redmond in 1882, when he became postmaster (Stein 1998). The first school was built in Redmond in 1897 (Stein 1998).

For years, timber extraction, fishing, hunting, and some farming supported the people who lived in the area. The ferry service from nearby Kirkland offered the quickest way to transport goods to Seattle. In 1889, the Seattle, Lake Shore, and Eastern Railroad came to Redmond, offering a direct link to the population centers to the west.

In 1904, James Clise bought 78 acres of land south of Redmond and built an elegant summer home for his family; this was later expanded to become their 28-room mansion, and the surrounding acreage became a successful farm. This site later became the Marymoor Park and Museum (Stein 1998).

The Rose Hill neighborhood developed in the area platted by developers Burke and Farrar in 1912 (Belts 2018). The town of Redmond was incorporated in 1912, and between that year and the 1930s, it acquired churches, a garage, a more substantial schoolhouse, telephone service, shops, and paved roads. Redmond struggled through the Great Depression years, but following World War II, the area experienced a growth spurt as the populations of Seattle and Bellevue grew (Stein 1998).

Land Use History of the Project Area

The 1871 GLO survey map of Township 26 North Range 5 East, WM, does not record any cultural features in the vicinity (Figure 4) (BLM 2018A). The project area was included in an 1871 Homestead Act land patent of 120 acres to Lars Nielson (BLM 2018B). A review of historical documents did not result in further information on Nielson or the Homestead-era use of the property.

By 1907 and through at least 1912, the project area was owned by George Joseph Danz (Figures 5 and 6) (Anderson Map Company 1907, Kroll Map Company 1912). George Danz married Olga Ellen Newlands in 1905 (Washington State Archives 2018). George and Olga Danz and their seven children lived in Seattle in 1920 (USDCBD 1920). George was the president of the Hofius Steel & Equipment Company (Penton Publishing Company 1915). Due to their recorded residence in Seattle, it seems unlikely that the Danz's developed the project property.

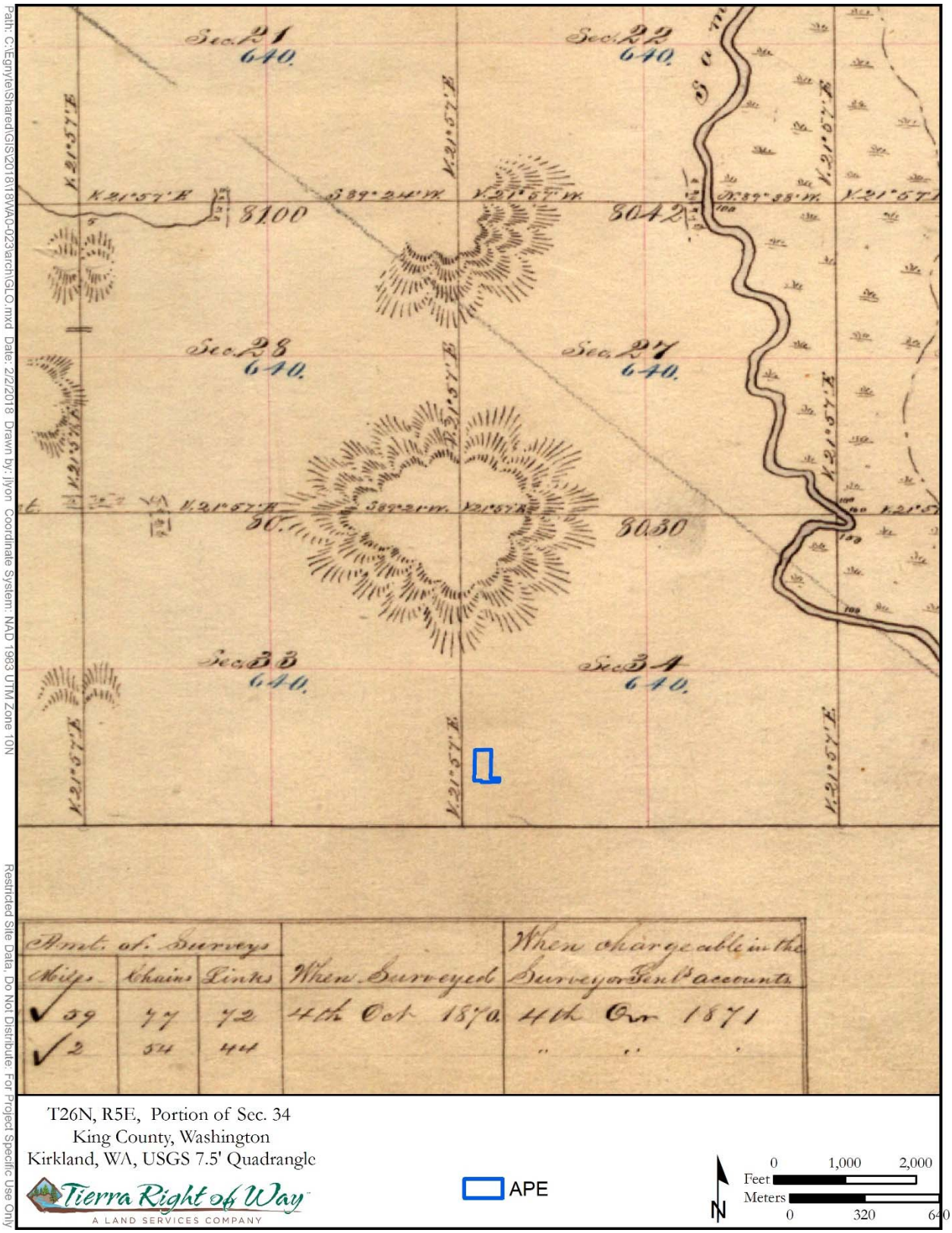

Figure 3. Portion of 1871 GLO map of Township 26 North, Range 5 East, Willamette Meridian, with project location indicated (BLM 2018A).

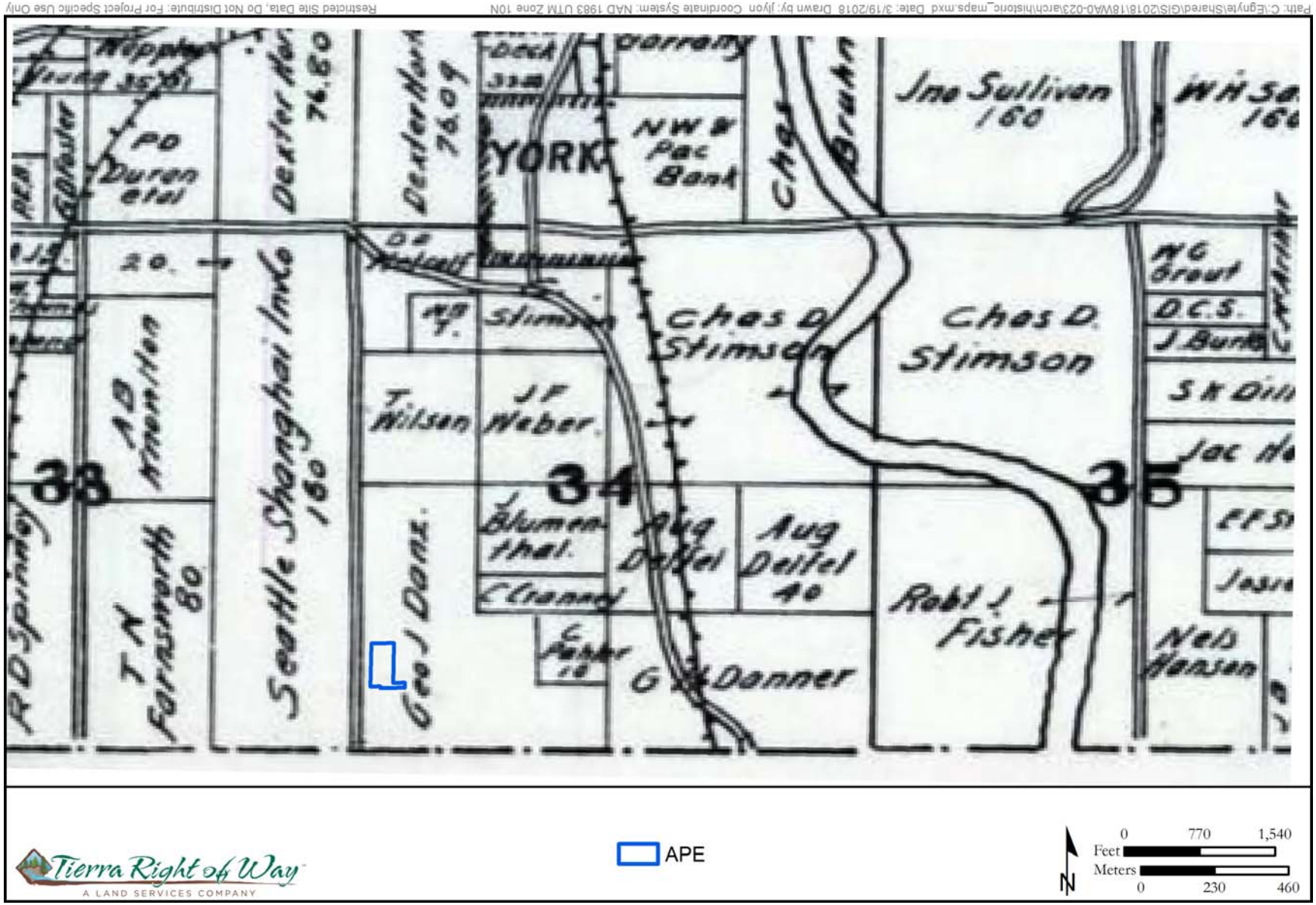

Figure 4. Portion of 1907 Anderson Map Co. Map with project location marked (Anderson Map Company 1907).

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Restricted Site Data, Do Not Distribute: For Project Specific Use Only

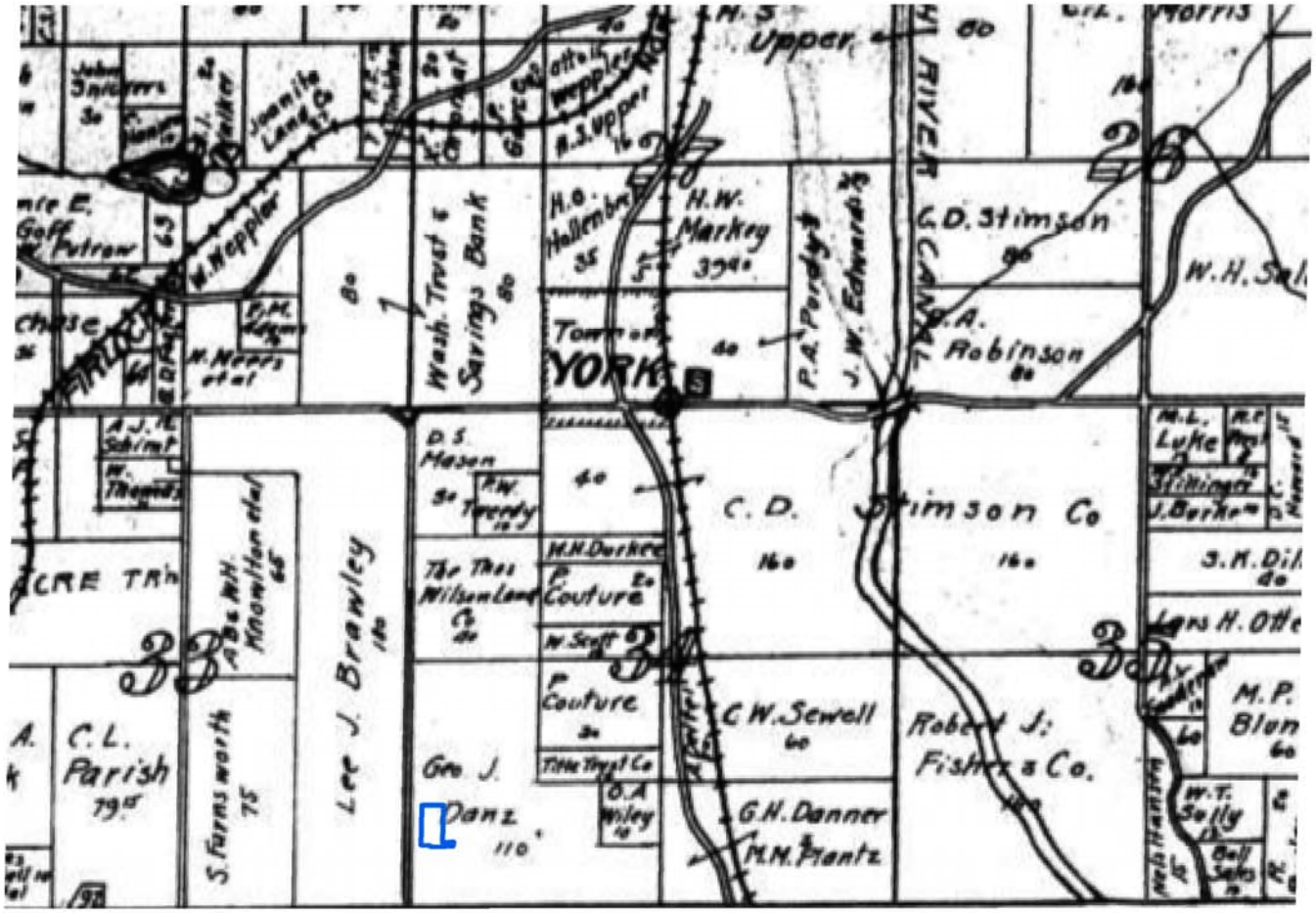

Figure 5. Portion of 1912 Kroll Map with project location marked (Kroll Map Company 1912).

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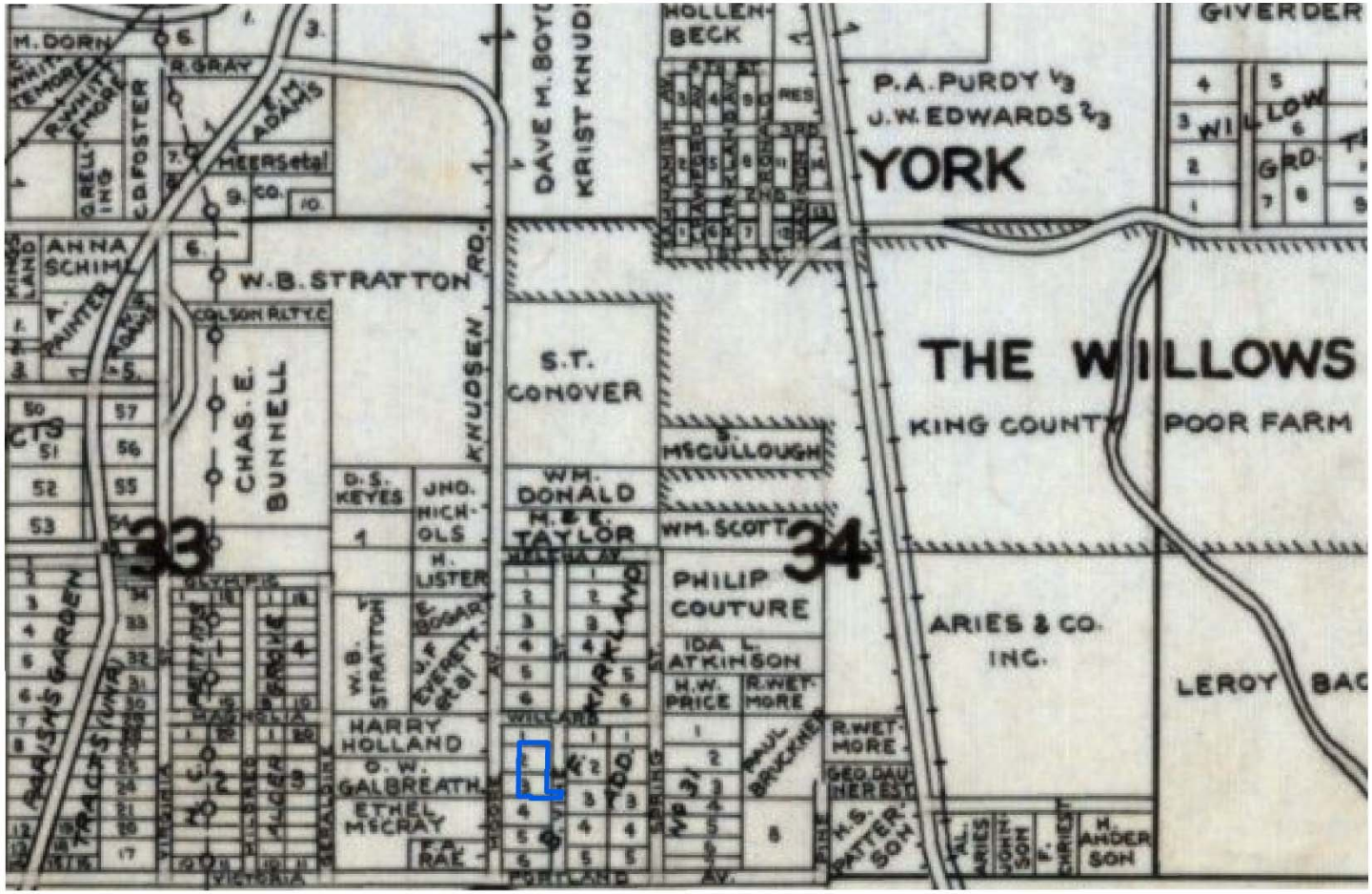

Figure 6. Portion of 1936 Metsker Map with project location marked (Metsker 1936).

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Restricted Site Data, Do Not Distribute: For Project Specific Use Only

Figure 7. Portion of 1950 Kirkland, WA, U.S. Geological Survey map with project location marked (USGS 1950).

By 1936, the property was part of the Burke Farrars Kirkland Addition, and the local road system and subdivided parcels had been established (see Figure 6) (Metsker 1936). Burke and Farrar purchased property in the vicinity in 1908 for the development of Kirkland (Kirkland Heritage Society 1999). No residence had been established here by 1950 (Figure 7) (USGS 1950).

The home, garage, and other buildings on the property were constructed in 1987 (King County Department of Assessments 2018). The property owner indicated that, prior to his acquisition of the property, the land had been a blueberry farm (Michael Larkin, personal communication 2018). Some utility construction had taken place in the 1980s in anticipation of developing the parcel into a residential complex, and neighboring properties used the parcel as a dump or for junk storage.

Literature Review

The WISAARD database (DAHP 2018) was reviewed to determine whether any archaeological sites or other historic properties had previously been recorded in the project vicinity. No archaeological sites or historic properties have been identified in the project area.

Prior to this assessment, the project area had not been surveyed for archaeological resources or historic properties. Five archaeological sites have been recorded within 2.4 km (1.5 miles) of the project area (Table 2). Site 45KI00748, which is located 1.20 km (0.75 miles) southwest of the project area, is a 1930–1950s debris scatter that was determined Not Eligible for the NRHP. Site 45KI00451 is the remnant of the Seattle, Lake Shore, and Eastern Railroad grade, the recorded portion of which begins 1.04 km (0.65 miles) east-southeast of the project area. Site 45KI00741, the Gertrude Wiley Homesite, is the remnant of a 1920–1950s residential site that was determined Not Eligible for the NRHP; it is located 1.4 km (0.9 miles) northwest of the project area. Site 45KI00818, which is located 1.8 km (1.1 miles) east-northeast of the project, near the Sammamish River, is an NRHP-eligible precontact midden site associated with Coast Salish occupation of the Sammamish River. Archaeological site 45KI01310, the Proctor Willows Homestead, which is located 2.0 km (1.3 miles) southwest of the project area, is a mid-1900s residential site.

Table 2. Archaeological Sites Located within 1.6 km (1.0 Mile) of Project Area

Smithsonian Trinomial	Site Description	Site Age	Register Eligibility	Distance to Project Area
45KI00748	debris scatter	1930–1950s	Not Eligible	0.75 miles southwest
45KI00451	Seattle Lake Shore & Eastern Railroad grade	1885–1970	Not Eligible	1.04 km (0.65 miles) east-southeast
45KI00741	Gertrude Wiley Homesite	1920–1950	Not Eligible	1.4 km (0.9 miles) northwest
45KI00818	precontact midden	2500–250 B.P.	Eligible	1.8 km (1.1 miles) east-northeast
45KI01310	Proctor Willows Homestead	mid-1900s	not determined	2.0 km (1.3 miles) southwest

RESEARCH DESIGN

Archaeological Expectations

Archaeological probability model

The DAHP predictive model available in WISAARD indicated the project area is in an area that is moderately low risk for encountering cultural resources, with survey recommended. High-risk areas are generally associated with proximity to rivers and bodies of water. Model probabilities are calculated using information from two general sources—data derived from archaeological surveys conducted prior to model development, and a consideration of the relationship between these recorded sites and various environmental factors (Kauhi 2009).

The approach to modeling settlement systems used by the DAHP presumes that the distribution of archaeological sites on the landscape is non-random and that there is a statistically significant relationship between physical landscape features (e.g., elevation, distance to water, soils, and landform type) and site location. Any predictive model can only be as accurate as the information derived from the set of previously recorded sites used to create it, which means any site identification biases present in research will also be present in the model. Additionally, because this type of model uses an inductive approach, it is also limited in its ability to characterize the type of site that might be encountered in a particular setting. By design, the causal relationship between identified archaeological sites and particular geographic settings is not considered. More simply put, the predictive model "recognizes" that a given number of archaeological sites have been recorded within a specific distance from a given geographic features, and so it may rate a project undertaken on a specific landscape as having a high risk to encounter archaeological deposits without providing distinction between historic and precontact sites or between archaeological isolates and village sites. This should be viewed as a function of the model rather than a failing. As noted on the Minnesota Department of Transportation's (MnDOT) Archaeological Predictive Model webpage:

> The dependability of these models is a function of their performance. This can be examined and tested by comparing a predictive model to archaeological field survey results. By comparing known archaeological site locations to the model's predictions, it is possible to determine, with specifiable confidence, how accurately a model performs. It is, in fact, this very approach that gives us confidence in a model and allows us to use it as a predictive tool. Field-testing a model is an essential component of demonstrating its reliability (MnDOT 2013).

In this report, the author presents a project assessment that considers the implications of the predictive model, as well as a context in which it can be field tested. Model testing is informed by an understanding of the geomorphological context, local settlement patterns, and post-depositional processes derived from a review of available environmental documentation and reports of nearby cultural resources surveys. This deductive approach is designed to not only more accurately characterize the potential for a given project to encounter archaeological deposits, but also to identify the types and conditions of archaeological materials that may be encountered.

Geomorphological Context

Given the soils mapped in the area are indicative of glacial deposits, early precontact materials would most likely not be present in the deposits of glacial till on the drift plains (Alderwood soil series). The

glacially derived soils mapped in the area would poorly preserve organic materials, as soil conditions are not anaerobic and the soil pH values range from strongly to strongly acidic. However, inorganic materials, such as flaked stone, if present, would be expected to be at or near the surface and may be difficult to recognize due to acid erosion from the soil.

Land Use Patterns

There is evidence of precontact use of the region, as well as evidence that the landscape was utilized extensively by non-Native peoples in the Settlement and post-Settlement periods. Based on a review of available ethnographic information and archaeological data, the project area appears to have a moderate probability for encountering precontact sites due to the lack of discrete environmental features at this location. Previous disturbance in the project area, and the lack of development during the Historic period suggests a low probability for encountering significant historic archaeological deposits.

Archaeological Methodology

The archaeological survey was designed to identify archaeological resources in the project area and assess whether proposed project impacts might impact cultural resources. Pedestrian survey was planned at 10-m (33-foot) intervals across the project area. Given the history of local disturbance and minimal vegetation, it was assumed that high-interval pedestrian survey might yield information on subsurface archaeological resources. Due to the moderate probability for encountering a significant archaeological site in the project vicinity, shovel probes were planned at 30-m (98-foot) intervals in the planned impact area. Shovel test probes (STPs) were planned to extend to the base of the A horizon in order to assess the possible presence and depth of cultural deposits. Excavated materials were to be screened through quarter-inch hardware mesh and returned to the STP. All cultural materials were to be returned to STPs upon completion and recordation of the STP data.

SURVEY RESULTS

The cultural resources survey was conducted on March 9, 2018, by Bethany Mathews, M.A., and Dan Kristmann under clear conditions. Ms. Mathews meets the U.S. Secretary of Interior Qualifications (36 CFR Part 61) for Archaeology, in both prehistoric and historic archaeology. Property owner Michael Larkin was on-site and was able to describe disturbances in the project area.

Surface Survey

The entire project area was surveyed on foot in transects of 10 m (33 feet). The project is situated in an area of urban development, and vegetation is predominately limited to ornamental landscaping (Photos 1–5).

Visibility was excellent due to the ground surface being covered in mown grass and gravel. Survey of the project area was limited by the presence of five structures on the property, which were built in the late 1980s, according to King County Assessor information. Portions of the project area had recently been disturbed by geotechnical testing, allowing for some examination of disturbed materials.

Photo 1. View west of project area on existing gravel driveway, from 134th Avenue NE.

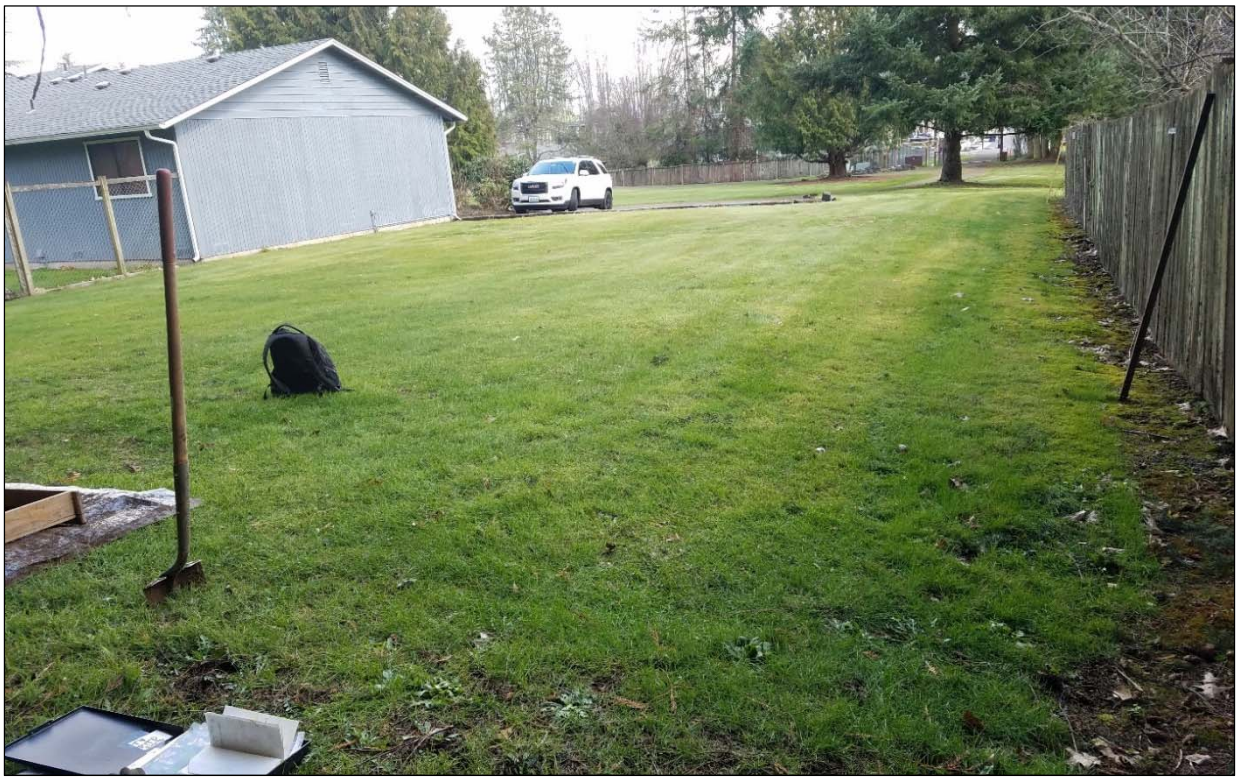

Photo 2. View west of project area on existing gravel driveway, from 134th Avenue NE.

Photo 3. View west of project area on existing gravel driveway, from 134th Avenue NE.

Photo 4. View south of project area from northeast corner of project area.

Photo 5. View west of project area from northeast corner of project area.

Subsurface Testing

Nine STPs were excavated in the project area (Figure 7). The results of the subsurface survey are recorded in Table 3. STPs were terminated when the base of the A horizon was reached or at 100 cm below the surface (cmbs). STP sediment profiles are consistent with the NRCS (2018) description of Alderwood gravelly sandy loam, but disturbance was observed across the project area, indicating repeated filling/leveling across the parcel (Photos 6 and 7). Modern refuse was observed in STPs 4, 5, 6, and 7. No archaeological materials were identified during subsurface testing.

Analyses

No cultural resources were identified during the pedestrian or subsurface survey. Much of the project area has been disturbed to the B horizon. The refuse materials observed in STPs 4–7 appear to be modern and are likely either the result of the use of the property as a junkyard prior to the residence being constructed on the property or from refuse disposal by the residents.

Table 3. Results of Subsurface Testing (UTM NAD 1983 Zone 10)

STP No.	Northing	Easting	Depth	Contents
STP1	5282335	562823	0–3 cmbs	brown (10YR4/3) gravelly sandy loam
			3–9 cmbs	yellowish brown (10YR5/4) sand (imported fill)
			9–29 cmbs	highly compact dark yellowish brown (10YR4/6) sandy loam, angular to subangular pebbles, mottled with oxidized sediment and charcoal (disturbed native)
STP2	5282334	562786	0–15 cmbs	brown (10YR4/3) gravelly sandy loam, mottled with oxidized sediment and charcoal (disturbed native)
			15–37 cmbs	dark yellowish brown (10YR4/6) sandy loam, mottled with oxidized sediment and charcoal, angular to subangular pebbles (disturbed native). Terminated at large root.
STP3	5282334	562755	0–12 cmbs	brown (10YR4/3) gravelly sandy loam
			12–70 cmbs	disturbed mix of Strata I and III
			70–87 cmbs	dark yellowish brown (10YR4/6) sandy loam, angular to subangular pebbles
STP4	5282337	562726	0–36 cmbs	dark yellowish brown (10YR4/6) sandy loam, angular to subangular pebbles
			36–100 cmbs	brown (10YR4/3) gravelly sandy loam, admixed with charcoal and modern refuse material (colorless glass bottle shard)
STP5	5282375	562727	0–50 cmbs	brown (10YR4/3) gravelly sandy loam, admixed with charcoal and modern refuse material (garbage bag fragment, styrofoam, plastic, framing nails, ceramic tile, colorless glass bottle shards, bolt and washer, sawed bone
STP6	5282410	562729	0–26 cmbs	dark yellowish brown (10YR4/6) sandy loam, angular to subangular pebbles, window glass at 15cmbs (fill)
			26–100 cmbs	brown (10YR4/3) gravelly sandy loam
STP7	5282441	562728	0–39 cmbs	brown (10YR4/3) gravelly sandy loam, concrete at 20cmbs
			39–100 cmbs	dark yellowish brown (10YR4/6) sandy loam, angular to subangular pebbles
STP8	5282443	562760	0–16 cmbs	brown (10YR4/3) gravelly sandy loam
			16–60 cmbs	dark yellowish brown (10YR4/6) sandy loam, angular to subangular pebbles
STP9	5282412	562758	0–29 cmbs	compact brown (10YR4/3) gravelly sandy loam
			29–44 cmbs	compact dark yellowish brown (10YR4/6) sandy loam, angular to subangular pebbles
STP10	5282370	562760	0–15 cmbs	brown (10YR4/3) gravelly sandy loam
			15–29 cmbs	brown (10YR4/3) gravelly sandy loam mottled with dark yellowish brown (10YR4/6) sandy loam, angular to subangular pebbles (disturbed)
			29–59 cmbs	grey (10YR5/1) gravelly loam (imported)
			59–100 cmbs	dark yellowish brown (10YR4/6) sandy loam, angular to subangular pebbles

Figure 8. Locations of shovel test probes.

Photo 6. Profile of STP 2, exhibiting disturbed sediments observed throughout project area.

Photo 7. Profile of STP 5, exhibiting disturbed sediments observed throughout project area.

Photo 8. Modern refuse material observed in STP 4.

Photo 9. Modern refuse material observed in STP 5.

CONCLUSIONS AND RECOMMENDATIONS

Background review determined the project to be in an area of moderate probability for archaeological materials. Field investigation included visual reconnaissance, pedestrian survey, and subsurface testing. Survey results indicated that the area had been largely disturbed, and, given the glacial soils, it did not have the potential to yield any deeply buried precontact deposits. No archaeological materials or historic properties were identified in the project area during this cultural resource assessment. Tierra therefore recommends no further archaeological oversight for this project.

If archaeological materials are encountered during this project, an archaeologist should immediately be notified, and work should be halted in the vicinity of the discovery until the materials can be inspected and assessed. At that time, the appropriate persons are to be notified of the exact nature and extent of the resource so that measures can be taken to secure them.

In the event of inadvertently discovered human remains or indeterminate bones, pursuant to RCW 68.50.645, all work must stop immediately, and law enforcement should be contacted. Any remains should be covered and secured against further disturbance, and communication should be established with local police, the DAHP, and any concerned Tribal agencies.

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