CULTURAL RESOURCES REPORT COVER SHEET

DAHP Project Number: _____

Author: Paige E. Hawthorne and Sarah J. Humphries

Title of Report: Archaeological Investigation Report: Parcels 31051100304000; 31051100400700, near 204th Avenue, Arlington, Snohomish county Washington.

Date of Report: October 22, 2019

County: Snohomish Section: 11 Township: 31 N Range: 05 E

Quad: Arlington West Acres: <3.5

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 #:

_____
_____
_____
_____
_____
_____
_____
_____

ARCHAEOLOGICAL INVESTIGATION REPORT: PARCELS 31051100304000; 31051100400700, NEAR 204 AVENUE, ARLINGTON, SNOHOMISH COUNTY, WASHINGTON

Prepared for: AVS Communities

October 22, 2019

Prepared by:

1229 Cleveland Avenue, Mount Vernon, Washington 98273 • Tel 360-826-4930 • Fax 360-826-4830 • www.equinoxerci.com

CREDITS AND ACKNOWLEDGMENTS

PRINCIPAL INVESTIGATOR ..... Kelly R. Bush, MA

LEAD AGENCY……... City of Arlington

REPORT AUTHORS…… Sarah J. Humphries, MA, and Paige E. Hawthorne, MA

GRAPHICS…… Caspian Hester, BA, and Jacob Wilmoth, BA

FIELD RESEARCHERS ..... Paige Hawthorne, Caspian Hester, BA, and Jacob Wilmoth, BA

PROJECT CONTACT……Carmel Gregory, Planner

TRIBAL CONTACTS……Kevin Joseph, Sauk Suiattle Indian Tribe

..... Steven Mullen-Moses, Snoqualmie Tribe

..... Kerry Lyste, Stillaguamish Tribe

.....Richard Young and Gene Enick, Tulalip Tribes

DAHP CONTACTS .....Dr. Robert Whitlam, State Archaeologist

.....Dr. Guy Tasa, State Physical Anthropologist

.....Stephanie Jolivette, Local Government Archaeologist

Equinox Research and Consulting International Inc. (ERCI) would like to thank AVS Communities for retaining us for this investigation and for their commitment to the process and archaeological resources.

We extend our thanks to the representatives of tribal entities Sauk Suiattle Indian Tribe, Snoqualmie Tribe, Stillaguamish Tribe of Indians, and the Tulalip Tribes for their insights and timely attention to our projects.

The opinions and recommendations in this report are those of ERCI alone and do not necessarily reflect those held by any of the organizations or individuals mentioned above. Any errors or omissions are ERCI's responsibility.

MANAGEMENT SUMMARY

County	Snohomish
TRS	Township 31 N, Range 05 E, Section 11
Quad	Arlington West
Parcel ID	31051100304000; 31051100400700
Address	Arlington, WA 98223
Property Owner	Mayo Rodney Properties LLC
Area	>5 acres
Lat/Long	48.181708°, -122.130351°
UTM Zone	Zone 10 564670.76 Easting 5336913.31 Northing
Elevation	109-118′
Nearest Water Body	Portage Creek; Stillaguamish River
Nearest Arch Site	45SN00486 – ~0.58 miles
Soils	Norma Loam
Geology	Qgosm; Qgos

In August of 2019 Carmel Gregory of CG Engineering contacted Kelly Bush of ERCI on behalf of AVS Communities regarding an approximately 5-acre parcel on Portage Creek just west of Hwy 9 in Arlington Washington. During a SEPA review, Gretchen Kaehler Snohomish County Archaeologist and Kerry Lyste of the Stillaguamish Tribal Historic Preservation Office requested an archaeological survey. The subject property is within a well-known pre contact and ethnohistoric use area. Portage Creek and Kent's Prairie were both part of a suite of high use locales for resource extraction and processing in this part of the greater Stillaguamish River drainage.

Smith 1941(209) describes two ethnographic villages, one at the confluence of the North and South Forks of the Stillaguamish River near present-day Arlington, and one a little way up the North Fork near present-day Trafton. Bruseth (1926) describes the village of Skabalko at:

> …the junction of the rivers at Arlington…Skabalko was known far and wide. Sauks travelling to the Sound and back, Snohobish coming down the South fork, parties coming up river to dig for roots, spaykoolist and leek at Ba-quad (Kent's Prairie) nearly always stopped there and camped. At Bah-quad lived an old man and woman about 50 years ago. They seldom left their home, but kept watch over the Prairie, dug roots and gave to travelers in exchange for fish and venison. From Ba-quad there was a trail to Kellogg Marsh, to Quil Ceda and on to the Snohomish.

The value of this area in and around Arlington to local Native residents and to neighboring travelers alike cannot be overstated. If we were to find evidence of the tended prairie or encampments they would rise to the highest level of significance.

ERCI undertook archival research and on August 16, 2019 carried out a pedestrian survey and dug 14 shovel probes in a judgmental subsurface testing program to look for material traces of past human activity.

No Protected Cultural Resources or Historic Properties were identified during the archaeological investigation within the Parcels.

The management recommendations that we are now providing are based on our findings from this field investigation. We recommend that:

1. The proposed project proceed as planned, following an unanticipated discovery protocol (UDP) training given to all construction personnel by a professional archaeologist. A copy of the Unanticipated Discoveries Protocol (UDP) to be kept on site at all times.
2. In the event that any ground-disturbing activities or other project activities related to this development or in any future development uncover protected archaeological objects or sediments (e.g., old bottles or cans, charcoal, bones, shell, stone, horn or antler tools or weapons), all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP.
3. In the event that any ground-disturbing activities or other project activities related to this development or in any future development uncover human remains, all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP.

CONTENTS

FIGURES

TABLES

1.0 INTRODUCTION

In August of 2019 Carmel Gregory of CG Engineering contacted Kelly Bush of ERCI on behalf of AVS Communities regarding an approximately 5-acre parcel on Portage Creek just west of Hwy 9 in Arlington Washington. During a SEPA review, Gretchen Kaehler Snohomish County Archaeologist and Kerry Lyste of the Stillaguamish Tribal Historic Preservation Office requested an archaeological survey. The subject property is within a well-known pre contact and ethnohistoric use area. Portage Creek and Kent's Prairie were both part of a suite of high use locales for resource extraction and processing in this part of the greater Stillaguamish River drainage.

This investigation was connected to the SEPA review and this report documents ERCI's background research and archaeological survey, for the Project.

Figure 1: Regional map showing approximate Project location.

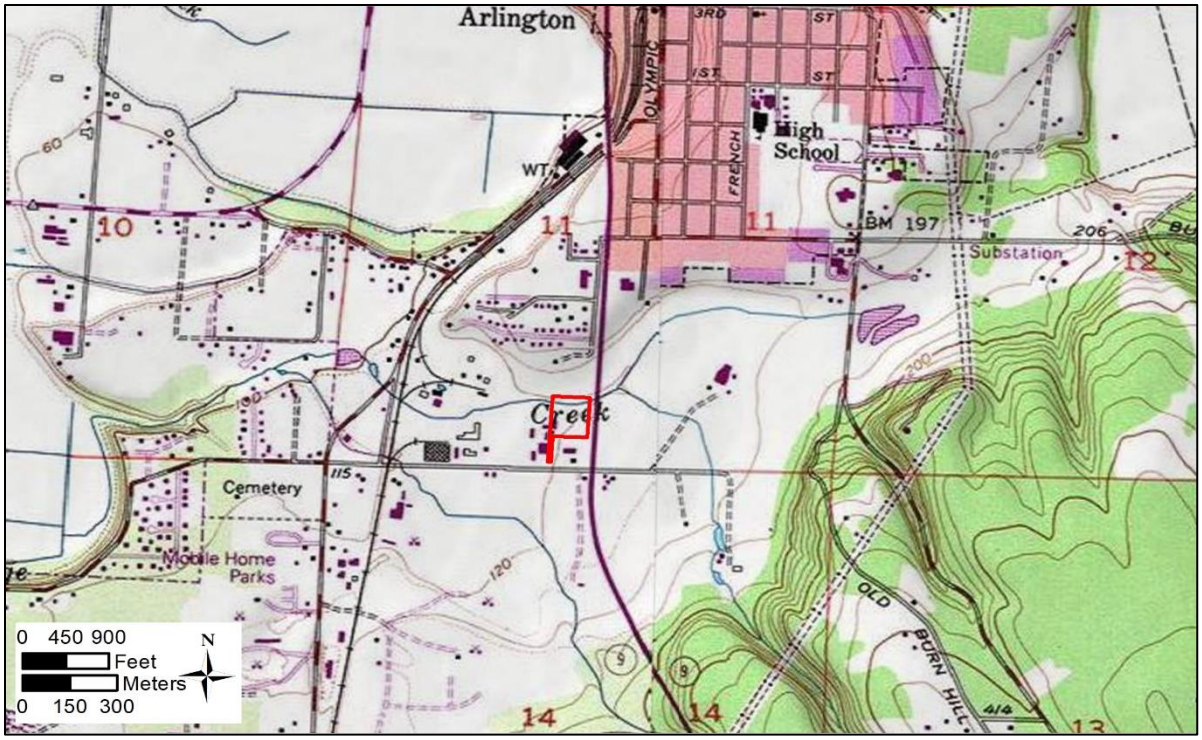

Figure 2: USGS [quad name] 7.5-minute quadrangle with Project area or APE outlined in red.

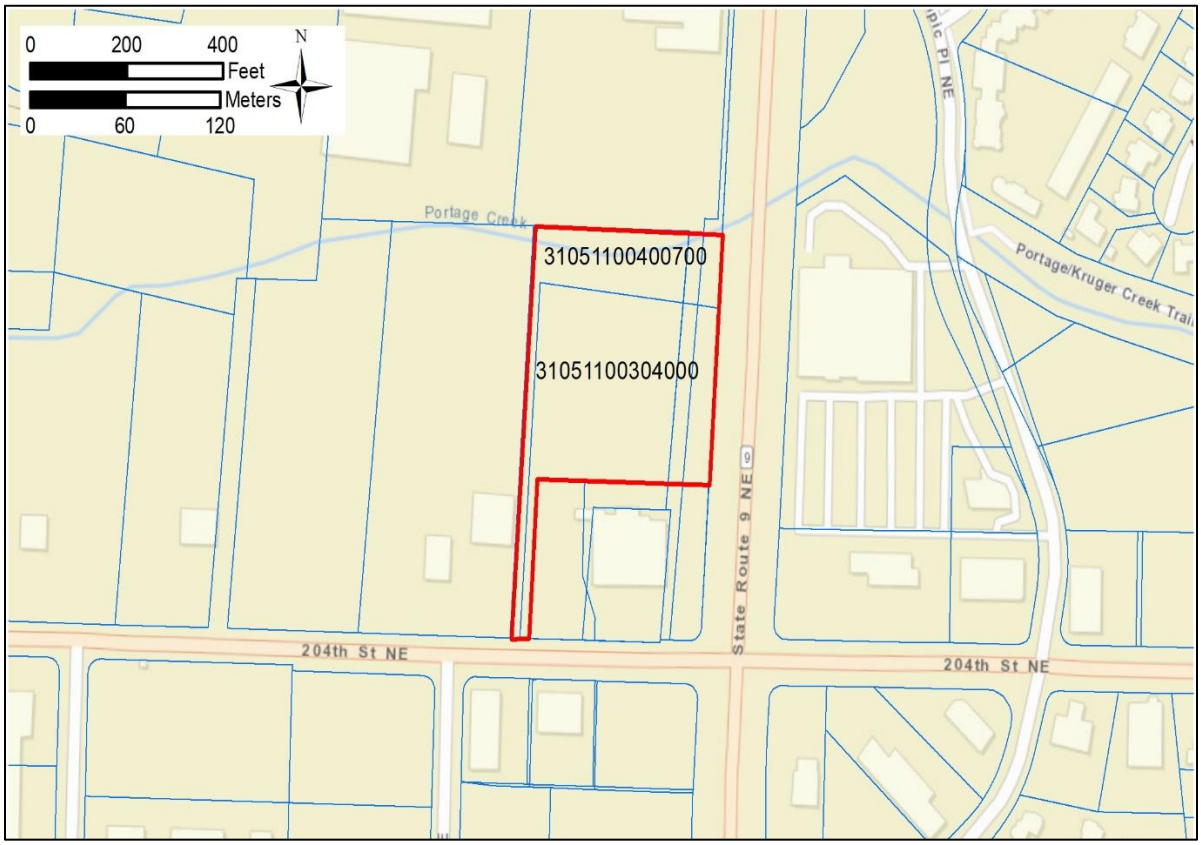

Figure 3: Snohomish County Assessor's map showing APE outlined in red.

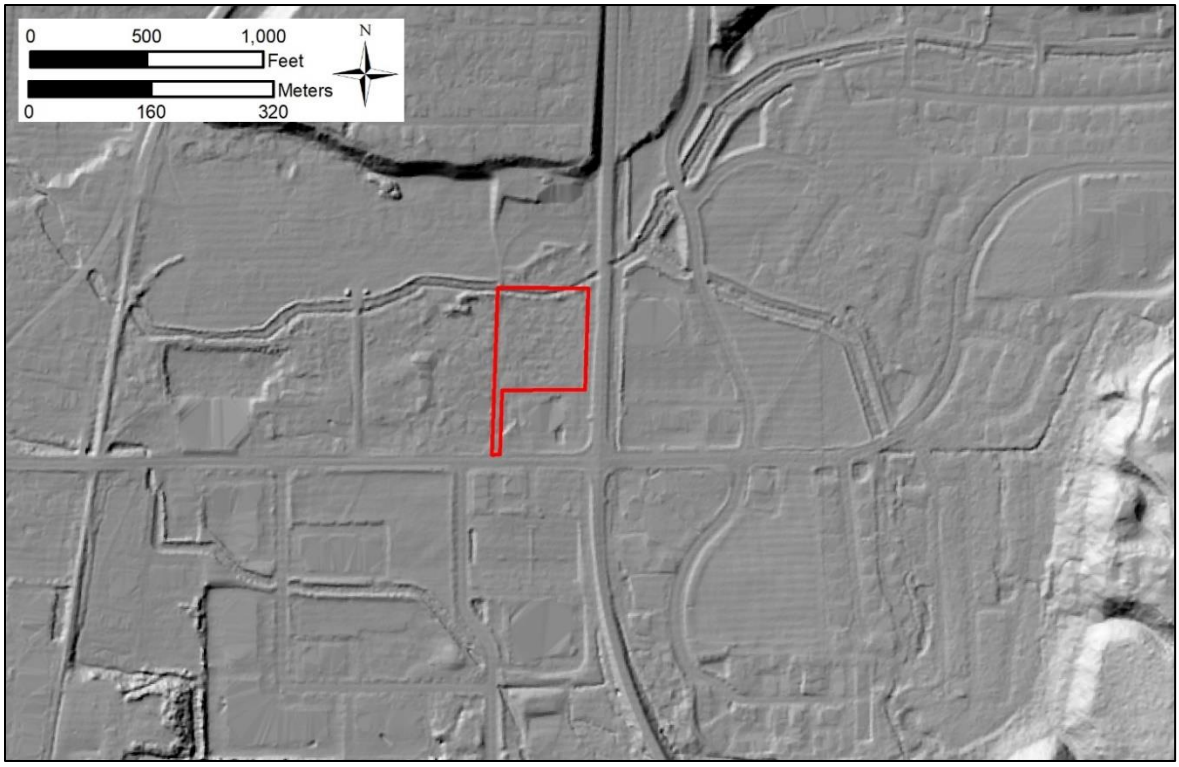

Figure 4: Lidar map with APE outlined in red (courtesy of Puget Sound Lidar Consortium).

Figure 5: Aerial photograph with APE outlined in red.

2.0 REGULATORY FRAMEWORK

Washington State:
The State Environmental Policy Act (SEPA) requires that all major actions sponsored, funded, permitted, or approved by state and/or local agencies undergo planning to ensure environmental considerations such as impacts on historic and cultural resources are given due weight in decision-making. State implementing regulations are in WAC 197- 11 and WAC 468-12 (WSDOT). For details on SEPA procedures see Chapter 400.

In Washington State, archaeological sites are protected by several state laws, including the Revised Code of Washington (RCW) 27.53—Archaeological Sites and Resources, and RCW 27.44—Indian Graves and Records. These laws require that consideration be given to archaeological resources during construction and development activities. RCW 27.44 also strictly mandates the protection of human skeletal remains and imposes a duty to notify law enforcement in the case of inadvertent discovery.

3.0 TRIBAL CONSULTATION

Agencies for the government recognize the long and unique relationship that the government has had with federally recognized Indian tribes. These responsibilities have grown from the historic relationship between the Federal government and the Indian tribes including treaties, public laws, policies, statutes, and executive orders. Paramount of these relationships are the treaties in which tribes have ceded portions of aboriginal lands to the U.S. Government in return for promises to protect tribal rights as self-governing communities within reservation lands as well as certain rights to use resources from non-reservation lands.

The Sauk Suiattle Indian Tribe, the Snoqualmie Tribe, The Stillaguamish Tribe and the Tulalip Tribes consider the project area within their traditional use area. The Tribes will require detailed development descriptions to adequately review the project. As Lead agency, the City of Arlington is responsible for carrying out consultation regarding this project including providing our report to the affected Tribes. Tribal representatives are the only people qualified to determine if Traditional Cultural Properties exist within the project area, whether they will be affected by the undertaking and how any suggested management strategies might work. In discussions between Kelly Bush and Tribal representatives, it is clear that the Tribes consider this area to be culturally and historically significant, and are deeply concerned about the effects of development.

4.0 BACKGROUND

Any archaeological undertaking requires knowledge of the physical surroundings (and their evolution) and the duration and kind of human activity in any given area. From this knowledge, archaeologists are able to develop the current best method to carry out field investigations. For example, environmental factors play an important role in the location and preservation of archaeological sites. Sediments and soils are of particular interest to cultural resource managers because they can be used for reconstructing past landscapes and landscape evolution, in estimating the age of surfaces and depositional episodes, and providing physical and chemical indicators of human occupation (Holliday 1992).

4.1 Physical Environment

The parcel lies adjacent to Portage Creek and appears to have some overbanking directly adjacent to the creek. It is a flat slightly south facing and irregular shaped lot that has had a great deal of previous disturbance to the central area of the lot.

Previous disturbance to the Parcels includes

- Logging and associated infrastructure
- Construction and maintenance of roads and infrastructure
- Clearing and construction of buildings

Geology and Soils

The geology of a region is important to archaeological investigations because it lays the foundation for landforms and soil development. Like the foundation of a house it determines the shape and subsequently the human use of the landscape above it. How water and sediment move across the surface of the earth is in a great part determined by the geology of a region. This, in turn, affects how people use the land. Slope, available water, exposed bedrock, the success of vegetation are all influenced by the what is under the soil. We use the geology of the project area and the surrounding landscape to help assess the likelihood of encountering archaeological objects and features based on how the landscape would have influenced human activities in the past.

There are four types of surface geology described within the Project area:

1. **Qvrm: Marysville Sand Member:** Deposits fill the flat valley in the Southern area of the quadrangle and consists mostly of well-drained outwash sand, some fine gravel, and some areas of silt and clay deposited by meltwater flowing South from the glacier (Minard 1985)
2. **Qvra: Arlington Gravel Member.** The deposits consist mostly of well-drained and stratified sand and gravel deposited by glacier meltwater (Minard 1985).
3. **Qgosm:** Continental glacial outwash, marine, sand, Fraser-age (Environmental Systems Research Institute [ESRI] 2012).
4. **Qgos:** Continental glacial outwash, sand, Fraser-age (ESRI 2012).

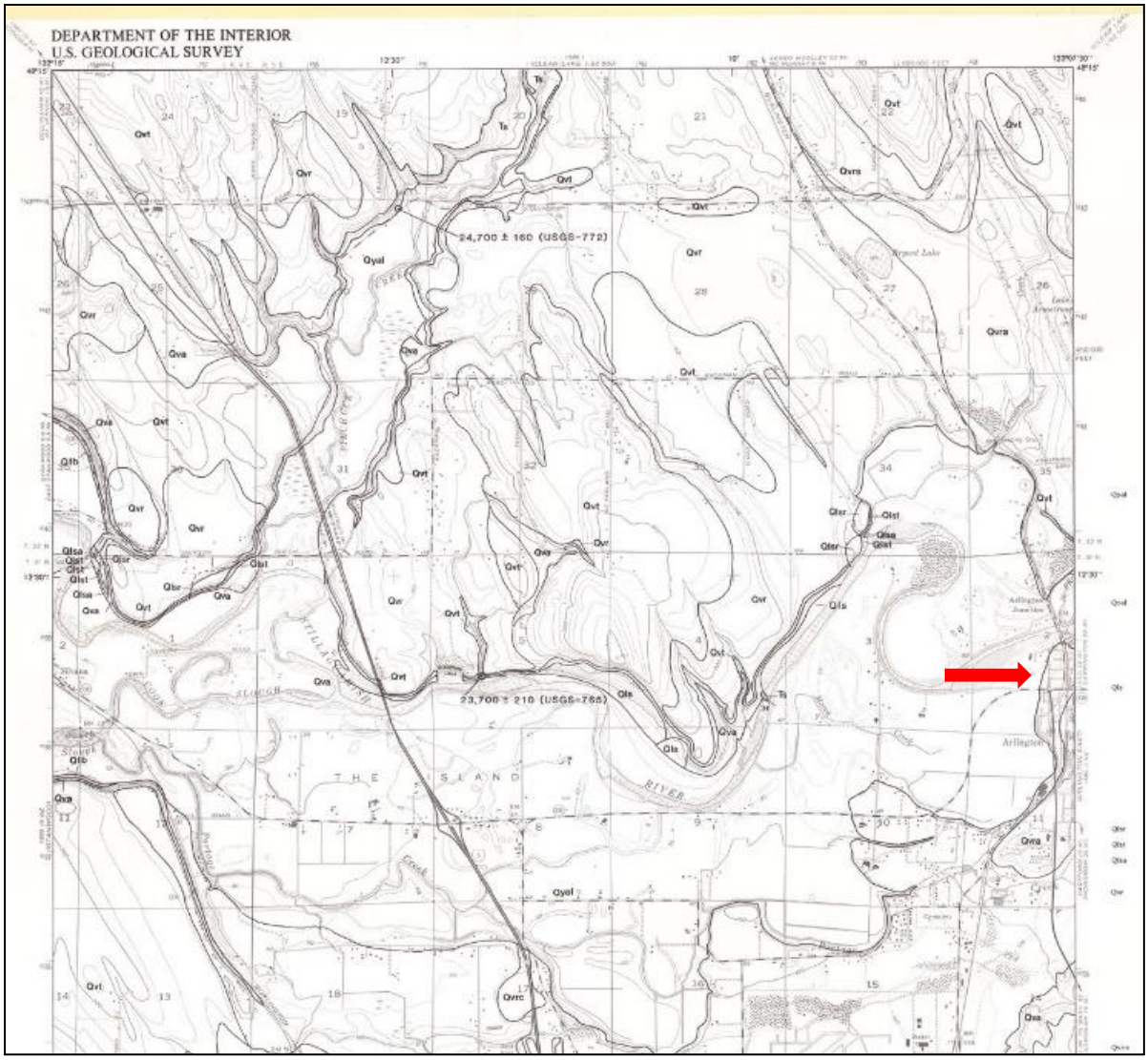

Figure 6: USGS Geologic Map (Minard 1985).

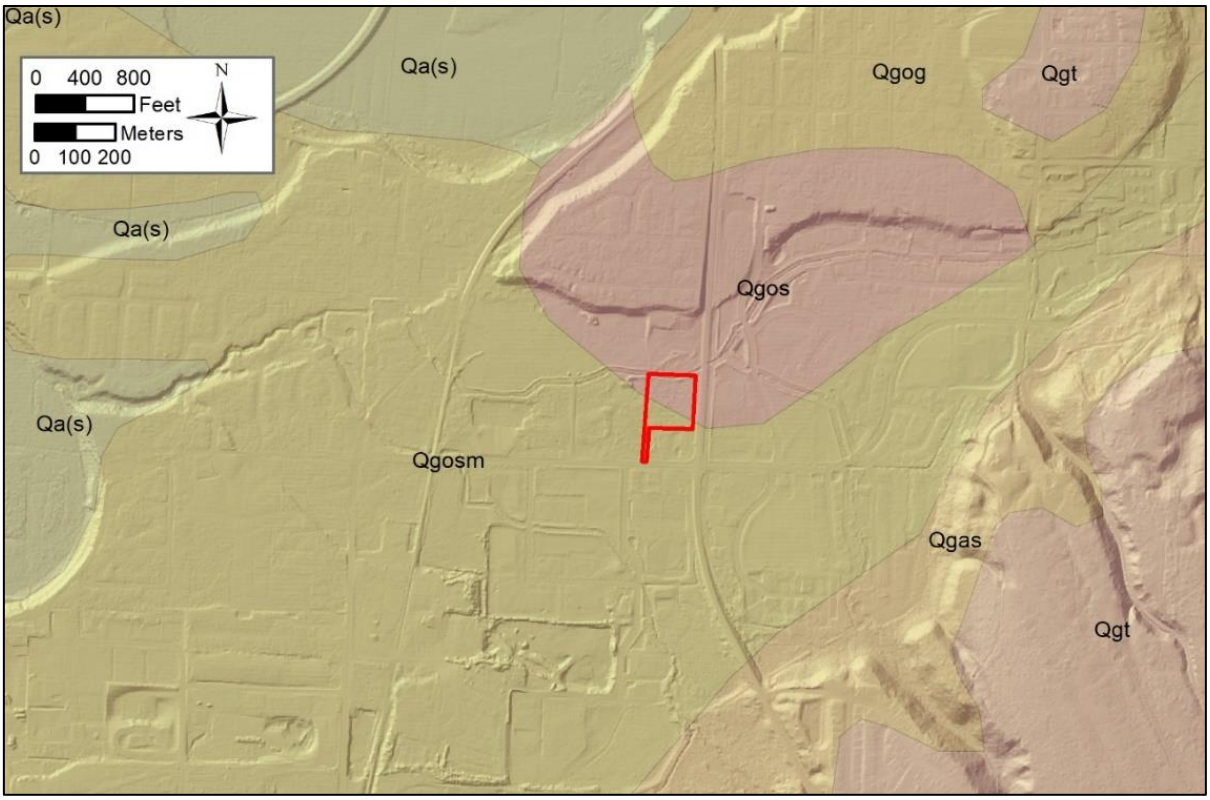

Figure 7: ESRI Geologic Map (ESRI 2012).

SOILS

Geologists define a soil as the effect of weathering on naturally or culturally deposited sediments, which creates discernible 'horizons' within a vertical soil profile. A soil typically comprises an A horizon that contains decomposed organic material mixed with the upper portion of the so-called parent material—usually naturally occurring deposits that are exposed to weathering. The A horizon lies above one or more horizons that develop as a result of water percolating downward, carrying chemicals leached from the A and lower horizons. Soils vary from place to place across the landscape, in keeping with the type of sediments that form the parent material and the local environmental conditions. The horizons of different soil types display color variations according to the local soil chemistry. Color, coupled with the nature of the parent material are what enable soil scientists and archaeologists to distinguish one soil type from another, and, most importantly, to tell a naturally developed soil from a stratigraphic profile that results from cultural processes.

A soil complex consists of areas of two or more soils, so intricately mixed or so small in size that they cannot be shown separately on the soil map. Each area of a complex contains some of each of the two or more dominant soils, and the pattern and relative proportions are about the same in all areas.

There is one soil type within the Project area: 39: Norma loam (Soil Survey Staff 2018).

39: Norma loam is distributed in depressions and drainageways, in alluvium. It is poorly drained, with a depth to the water table of 0 inches. The surface does not flood but will frequently pond. A typical profile includes: 0 to 1-inch, ashy loam; 10 to 60 inches, sandy loam.

Figure 8: Soil Map of 39: Norma loam (USDA 2019).

4.2 Cultural Environment

The APE lies in a region that Native Americans had inhabited for at least 14,000 years by the time of contact with Europeans, when Salishan-speaking people occupied vast tracts in the Columbia and Fraser River basins, the inland waters of the Salish Sea, the Puget Lowland, the Cascade Range, and parts of the Pacific Coast between the Columbia River and the Olympic Peninsula. European explorers first entered the region in the late sixteenth century, with Euro-American settlement beginning in the early nineteenth century and increasing after the Donation Land Claim Act of 1850 and Homestead Act of 1862. Here we present a synopsis of the archaeological cultures, traditional Salish lifeways, and pertinent details of the time since non–Native American immigration began.

Archaeological cultures

Archaeological evidence of human presence in the Pacific Northwest is at least 14,000 years old, evidenced by finds of impressions of human feet discovered preserved in paleosol beach sand that date to 13,200 years ago (McLaren et al 2018) and Clovis and other early postglacial cultural traditions (Ames and Maschner 1999; Kopperl 2016; Kopperl et al. 2016). Although people have been in the region all along, many archaeological sites on the relatively narrow strip of near-shore landscape are dated at between 5,000 and 1,500 years ago due to sea-level changes that resulted from a complex interplay of climatic and geological processes whose magnitude and influence varied with location.

For example, large-magnitude changes in sea level can be due to the volume of water contained in Earth's glaciers and polar ice caps, but smaller (but nonetheless significant) changes can be caused by thermal expansion and contraction. At the same time, the earth's crust is dynamic. So, for example, the marine shoreline was significantly affected by depression and rebound in response to the weight of glaciers that formed during the last Ice Age. Smaller-magnitude changes occur due to the evolving global ocean basin morphology (and thus capacity) due to plate tectonics and coastal buildup and erosion, such as delta formation and growth.

Despite having knowledge of these processes, and a broad understanding of how they combine in sometimes predictable ways to determine the marine–terrestrial interface at any given time, the variability inherent in each process means that each locality has its own unique history of sea-level change. Perhaps none is more illustrative of this than the Hakai Passage region of the central British Columbia coast, where sea level has been relatively stable for most of the past 15,000 years (McLaren et al. 2014).

As sea level rose in the early and middle Holocene, river valleys in the Puget Lowlands and elsewhere gradually filled up with sediment, burying any early archaeological sites in the near-stream areas. Thus, most evidence for early human occupation in Western Washington is found at higher elevations, on landforms that retain sediments from those earlier times, and sometimes deeply buried in river valleys.

In those upland areas, where sea level change has had no effect on archaeological visibility, evidence from the early Holocene is widespread, but well-dated contexts are extremely rare—most archaeological assemblages are 'dated' by their formal similarity to those recovered from dated contexts. Here we mention only the few well-dated archaeological occurrences.

The earliest period in Western Washington is represented by the Manis Mastodon Site (45CA218), near Sequim on the Olympic Peninsula and the Lower Bear Creek Site (45KI839), near the shore of Lake Sammamish. The Manis Site comprises a single disarticulated mastodon skeleton dated to about 13,800 cal BP (Waters et al. 2011), claimed to be associated with human activity based on a small bone splinter embedded in the head of a rib and two pieces of modified ivory. The Lower Bear Creek Site yielded artifacts belonging to the Western Stemmed Tradition that date to between 12,500 and 10,000 cal BP (Kopperl 2016).

In the Puget Sound regional cultural chronology, the Olcott Phase (ca. 10,000 to 7,550 years ago) succeeds the Fluted Point and Stemmed traditions. Olcott assemblages are remarkably similar to others attributed to the Old Cordilleran Tradition, well known from other parts of the Northwest Coast (Chatters et al. 2011). Typical Olcott artifacts include "Cascade" leaf-shaped bifaces, which bear distinctive edge grinding on the stem, or hafting portion, and often-heavily patinated expedient stone artifacts of medium- to coarse-grained raw material, and lacking in fine-grained silicates. One can imagine that sites with such artifacts are the result of people arriving on this landscape for the first time, without intimate knowledge of sources of fine-grained tool stone such as chert and obsidian.

Again, although there are numerous sites ascribed to the Olcott Phase, securely dated components are rare, as evidenced by the few mentioned here. Thermoluminescence (TL) dating of fire-modified rock (FMR) from the Woodhaven Site (45SN417), near Granite Falls, produced median dates of 9,316 and 7,886 years ago (Kiers 2014). Two other Olcott Phase sites near Granite Falls, 45SN28 and 45SN303, yielded TL dates on FMR in the same age range, between 7,340 and 9,650 years ago (Chatters et al. 2011). In the North Cascades National Park near Marblemount and Newhalem in the Skagit River basin, the Cascades Pass site yielded artifacts and a cooking feature beneath Mazama volcanic ash, estimated to be 9,600 years old (Mierendorf et al. 2018:99). The Beech Creek Site (45LE415) in the Gifford Pinchot National Forest of southwestern Washington represents another early Holocene archaeological culture, the Stemmed Point Tradition, at 9,200 years old (Mack et al. 2010).

Between about 7,550 and 4,000 years ago—often termed the middle Holocene—well-dated archaeological sites are more numerous, in part due to the gradual stabilization of sea level near present elevations. The archaeological cultures are called by many names, but the Marymoor Phase and Charles Culture (or Mayne Phase in the San Juan/Gulf Islands) seem most common in the region. Many include microblade technology. Recent radiocarbon dates from calcined bone at the Marymoor Site (45KI9)

range between approximately 5300 to 7000 BP (Chatters et al. 2017; Greengo and Houston 1970). Other sites in the region dated to the middle Holocene include Cattle Point (45SJ9) on San Juan Island (King 1950), the Glenrose Cannery Site (DgRr-22) near Vancouver, BC. (Matson 1976), the Milliken Site (DjRi-3) near Yale, B.C. (Borden 1960), and Pender Island (DeRt-1 and -2) in the Gulf Islands, the northern extension of the San Juan Islands (Carlson and Hobler 1993), the Marymoor Site (45KI9) in Redmond (Greengo and Houston 1970) and the Cascade Pass (45CH221) (Mierendorf et al. 2018). Some of these are the earliest coastal shell midden sites. The oldest dated shell midden component in the Puget Sound region is from the Dupont Site, 45PI72, which yielded a date of 5260 ±70 radiocarbon years before present (BP) (Wessen 1989).

Beginning roughly 5,000 years ago western red cedar became more prevalent in the coastal forests and archaeological evidence reveals the intensification of its use by the people living on the Salish Sea and elsewhere in Western Washington. Specifically, in the Locarno Beach Phase (3,300–3,500 to 2,500 years ago) and the succeeding Marpole Phase, the woodworking triad of the antler wedge, polished nephrite adze bit and hand maul formed an increasingly prominent part of coastal shell middens (Hebda and Mathewes 1984). In addition, evidence for large post and plank houses and food storage comes to the fore (Matson 2010). Artifact assemblages from this time also illustrate increasing social complexity in the form of personal adornment—e.g. finely made nephrite and jadeite labrets—refinements in procurement technology—e.g. ground slate knives, toggling harpoons and fishing paraphernalia—and ascribed status in the form of status symbols interred with infants and very young children, and cranial deformation. These archaeological manifestations comprise the climax Northwest Coast cultural pattern that was encountered when Europeans first visited the region.

Among the best known late precontact archaeological sites in the region are three National Register eligible sites on the Olympic Peninsula, Ozette (45CA24) (2,500 to 500 years ago) (e.g., Daugherty and Fryxell 1967), Hoko River (45CA213) (3,000 to 1,700 years ago) (Croes 1977, 1995), and Tse-whit-zen (*čix*^{w}*ícən*) Village (45CA523) (2,700 to 300 years ago) (Lewarch et al. 2005; White 2013). At Hoko River preserved botanical material in addition to the other artifacts common in most Northwest Coast middens, thus revealing a breadth of material culture similar to that known ethnographically—e.g., bentwood and composite fishhooks, atlatls, bone and wood projectile points, basketry including hats and mats—underscoring the material and social complexity of the regional cultures that existed in the late precontact period. At Ozette, a portion of a late precontact village of the ocean-oriented, whaling west coast people was preserved by a mudslide that preserved the full range of perishable and nonperishable utilitarian and ceremonial artifacts, including whole decorated plank houses. 55,000 artifacts were recovered in the multiyear excavations, most of which can be viewed at the Makah Cultural and Research Center in Neah Bay, Washington. At least 64,700 artifacts were recovered during mitigative data recovery excavations at Tse-whit-zen, in what is now Port Angeles, including plank house structural remains—posts and post molds—hearths, processing areas, bone, antler and stone tools, and numerous Ancestral human interments (Lewarch et al. 2005; White 2013).

Finally, the complex interplay of postglacial geological processes meant that salmon streams were constantly disrupted by cycles of erosion and deposition, which precluded establishment of nearshore marine resources and climax salmon runs between the time of deglaciation and that of sea-level stabilization, which began around 5,000 years ago and ended approximately 1,500 years ago (Fladmark 1975). Thus, prior to about 5,000 years ago, without the predictable salmon runs, the entire region may have been populated by mobile foragers (Grier et al. 2009; Moss et al. 2007). Since that time, the rich resources available in the maritime and riverine environments allowed for a more stable existence, increasingly dense populations and complex cultures that existed at the time of European contact (Butler and Campbell 2004; Taylor et al. 2011).

Specific archaeological findings for the Project area and surroundings are discussed in the next section.

Salish Ethnography and Ethnohistory

A detailed description of the Central Puget Sound's traditional Salish cultures is beyond the scope of this report. Instead, we present a broad overview of their traditional lifeways, including what is known of the precontact cultures, using knowledge gained from ethnography, ethnohistory, and the historic record. For in-depth descriptions of traditional Salish culture, readers are directed to the following references: Adamson (1969), AFSC (1970), Allen (1976), Amoss (1977a, 1977b, 1978, 1981), Ballard (1929), Barnett (1938, 1955), Belcher (1986), Bennett (1972), Bierwert (1990, 1993, 1999), Boyd (1994, 1999), Bruseth (1926), Curtis (1913), Dewhirst (1976), Eells and Castile (1985), Elmendorf (1971, 1974, 1993), Guilmet et al. (1991), Gunther (1928, 1945), Haeberlin (1924), Haeberlin and Gunther (1930), (1998), Harris (1994), Howay (1918), Jorgensen (1969), Kew (1972, 1990), Lane and Lane (1977), Mansfield (1993), B. Miller (1993, 1995, 1997, 1998, 2001), Miller and Boxberger (1994), Mooney (1976), Moss (1986), Riley (1974 [1953]), M. Smith (1941, 1956), Spier (1935, 1936), Stewart (1973, 1977, 1979, 1984, 1996), Suttles (1957, 1958, 1960, 1974 [1951], 1987, 1990a, b), Suttles and Lane (1990), Taylor (1953, 1960, 1984), Tollefson (1989), et al. (1996), Tweddell (1974 [1953]), United States (1859), United States Court of Claims (1933), Waterman (1920) and Waterman et al. (2001).

The Puget lowland has been home to people for millennia. Ethnographic accounts, the historic record and the oral histories of the people who lived there have all provided a rich story of the lives and deaths of the area's original inhabitants.

In 1916 and 1917 Haeberlin interviewed people whose traditional territory would have included the Project area (Haeberlin and Gunther 1930). His informants had direct knowledge of the earliest immigrant settlement in the region, which began about 1840. Their recollections of the surrounding area are in broad agreement with knowledge acquired in similar research throughout the Pacific Northwest in the late nineteenth and early twentieth centuries. Coast Salish societies exhibited social stratification, with hereditary rights to social roles, property, territory and ceremonies, although acquiring status through life achievements was not unknown.

Coast Salish social life

Social life began in the longhouse, a large, red cedar, post and beam structure clad in broad planks, in which up to twenty closely related families dwelt and cooperated economically. Frequently, longhouses were 100- to 200-foot-long structures, with gable or shed roofs. One or more longhouses comprised a village, usually situated advantageously with respect to the area's resources—often at the river mouth or on the main stem of the river at the mouth of a tributary stream. Each longhouse was led by the head of one of its resident, closely related, families.

Within each village one of the longhouses would have had more social influence than the others. Villages, too, were often ranked, and quite often the larger villages wielded more influence. Most decisions that affected the village were undertaken within a small group of those representing individual longhouses; those decisions affecting the tribe as a whole would be made amongst the leaders of individual villages and their constituents. Within and between villages, power and prestige were asserted and maintained by the Potlatch, a ceremonial feast held in celebration of important occasions, in which gifts were given by those who organized the celebration. In so doing, social and economic debts were created, reinforcing the social relationship between the giver and the recipient.

Smith 1941(209) describes two ethnographic villages, one at the confluence of the North and South Forks of the Stillaguamish River near present-day Arlington, and one a little way up the North Fork near present-day Trafton. Bruseth (1926) describes the village of Skabalko at:

> …the junction of the rivers at Arlington…Skabalko was known far and wide. Sauks travelling to the Sound and back, Snohobish coming down the South fork, parties coming up river to dig for roots, spaykoolist and leek at Ba-quad (Kent's Prairie) nearly always stopped there and camped. At Bah-quad lived an old man and woman about 50 years ago. They seldom left their home, but kept watch over the Prairie, dug roots and gave to travelers in exchange for fish and venison. From Ba-quad there was a trail to Kellogg Marsh, to Quil Ceda and on to the Snohomish.

The value of this area in and around Arlington to local Native residents and to neighboring travelers alike cannot be overstated. If we were to find evidence of the tended prairie or encampments they would rise to the highest level of significance.

Economy

Coast Salish economies are often characterized by their relationship to the sea and the abundant and predictable resources it offers in addition to the plentiful salmon. Many Coast Salish resources were seasonal. This applied to salmon as much as to the berries and bulbs that formed an important part of the diet. For this reason, economic life most of the year meant leaving the permanent winter village and the longhouse and setting up seasonal camps where local resources were exploited. This often entailed constructing temporary shelters of wood and waterproof mats similar to those shown in Figure 9. Mat houses like this one illustrated would have been a common structure on the prairies and riverbanks inland from the Sound.

Terrestrial resources were acquired by collecting and hunting. Using digging sticks, they collected bulbs of camas, wild potato, bracken and wood fern, cattail, wild carrot and others. Some plant products were preserved and stored for use during the winter. Fruits gathered were salmonberry, huckleberry, wild blackberry, raspberry, salal, serviceberry, and wild strawberry, as well as acorn and hazelnut (Haeberlin and Gunther 1930:20–21). They hunted elk and deer, beaver, bobcat, bear, marmot, cougar, as well as ducks and grouse. Seal and other sea mammals were hunted from canoes. As with the important salmon, all meat beyond immediate need was cured and stored for winter consumption. Trade back and forth for shellfish and other seafood for camas or dried meat was common (Haeberlin and Gunther 1930:20).

Material culture

In addition to the archaeological collections and oral histories much of what we know of traditional Coast Salish material culture derives from ethnographic collections residing in museums around the world, from the observations of ethnographers and historians, and photographs taken in the nineteenth and early twentieth centuries (e.g., Curtis 1913).

Figure 9: Example of a seasonal house, “Mat House—Skokomish” (1912) by Curtis (Northwestern University Library 2003b).

Coast Salish groups relied heavily on plants to create functional, decorative and ceremonial objects. For example, the red cedar tree provided wood for longhouses, canoes and storage containers, as well as bark that when shredded could be woven to make clothing, capes and head coverings. Cedar and spruce root were used along with other fiber to make baskets similar to those shown in Figure 10 for use when foraging or cooking, some so tightly woven that they were waterproof. Local and exotic stone was chipped or ground to fashion knives, spear, dart and arrow tips, mauls, wedges, adzes and chisels for woodworking, and ear and lip ornaments. Fishing barbs, combs, pins and many other items were fashioned from animal bone, antler, teeth and shell.

Figure 10: Examples of the kind of baskets made by Coast Salish people, "Puget Sound Baskets" (1912) by Edward S. Curtis (Northwestern University Library 2003c).

Dog wool was spun and woven on a loom to produce blankets similar to the one shown in Figure 11. Although the loom is from Vancouver Island, such looms would have been common in the APE. Some clothing was made from bear and buckskin. Among the many uses for marine shell, clam shell disc beads—"shell money"—were used for trade (Haeberlin and Gunther 1930:29). From an archaeological perspective only special depositional circumstances could be expected to preserve most of these organic artifacts.

Summary

This overview has barely sketched traditional lifeways. The Salish People thrived for millennia, and developed a rich and complex culture within an environment that supported a large population prior to European contact and the devastation of disease and political oppression. Despite these hardships the peoples of the region have resiliency, and continue to fight for renewed political and economic power, at the same time working to preserve and maintain traditional cultural knowledge and beliefs.

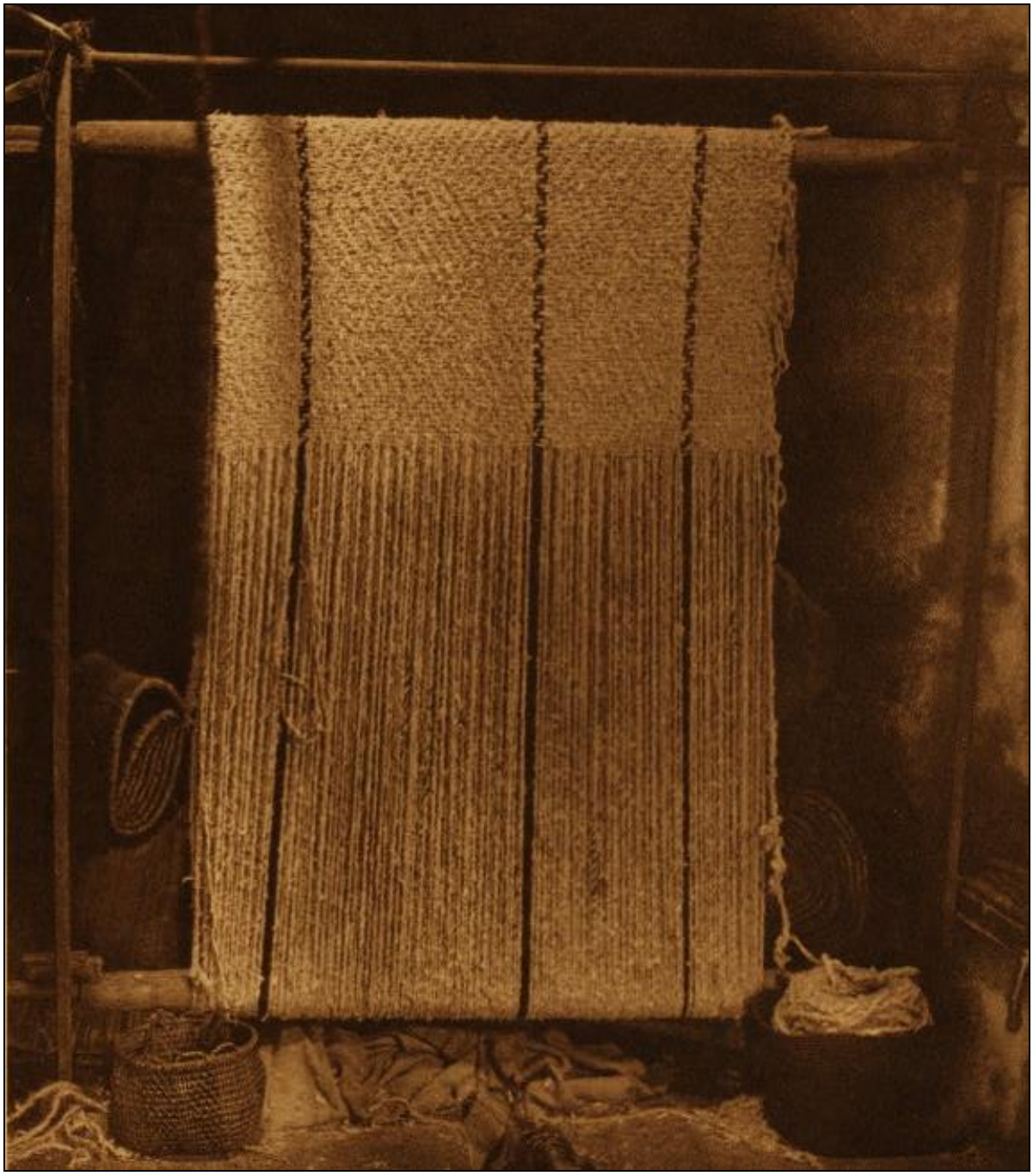

Figure 11: Example of the kind of weaving done by Coast Salish people, "Goat-hair Blanket—Cowichan" (1912) by Curtis (Northwestern University Library 2003a).

Some of the earliest English-language records of this region come from George Vancouver's exploration of the Salish Sea. On June 4, 1792, he went ashore in the vicinity of Tulalip, near today's Everett, Washington, and claimed for King George III the coast south to 39° 20' N, which had been his first landfall. Vancouver was convinced of the historical justification of his claim and his maps all show British Territory from about 39° north latitude northward (Hayes 1999:85). The southern portion of the Salish Sea is named after Vancouver's lieutenant, Peter Puget. Whidbey Island is named for Joseph

Whidbey, Vancouver's Sailing Master (Phillips 1971:158), and Holmes Harbor is named for the Wilkes Expedition's assistant surgeon, Silas Holmes (Phillips 1971:63).

Exploration and Immigration

The first documented exploration of the Pacific Northwest was a Spanish expedition in 1592, led by Greek-born Apostolus Valerianos, more commonly known as Juan de Fuca, after whom the entrance to the Salish Sea is named. Between 47° and 48° north latitude—after entering a "broad Inlet of the Sea" de Fuca traveled for "twentie dayes … passed divers Ilands … went on Land in divers places, and … saw some people on Land, clad in Beasts skins" (Purchas 1906 [1625]:416).

Some of the earliest English-language records of this region come from George Vancouver's exploration of the Salish Sea. On June 4, 1792, he went ashore in the vicinity of Tulalip, near today's Everett, Washington, and claimed for King George III the coast south to 39° 20' N, which had been his first landfall. Vancouver was convinced of the historical justification of his claim and his maps all show British Territory from about 39° north latitude northward (Hayes 1999:85). The southern portion of the Salish Sea is named after Vancouver's lieutenant, Peter Puget.

Beginning in the late eighteenth century, introduced diseases took an enormous toll on Northwest Coast Native American populations. Estimates of mortality range from 30 to 90 percent, with the higher estimate being the more likely result of several successive catastrophic episodes of, especially, smallpox (Boyd 1994, 1998; Campbell 1991).

The Hudson's Bay Company

The first Europeans to stay for any length of time in the Puget Sound area were traders, trappers and explorers associated with the Hudson's Bay Company (HBC). From the 1820s through to the 1860s, HBC employees regularly traveled and traded around the Puget Sound (Harmon 1998). Tribes around Puget Sound took benefit from trading and bartering with HBC, and many were hired as guides. Fort Nisqually was established in 1833 at the southern end of Puget Sound, the first European settlement on Puget Sound (Bagley 1915). The Snohomish traded with HBC at Fort Nisqually (Ruby and Brown 1986:213). Using the Naches, Snoqualmie, and Yakima passes through the Cascades, even the Yakima people traded with HBC at Fort Nisqually and Fort Langley, to the north. The influence of HBC in the Puget Sound was felt by native people and immigrants alike (Suttles and Lane 1990).

Fort Nisqually was handed over to the US in 1846 after a treaty between Great Britain and the United States had ostensibly settled the dispute over the Oregon Country; however, that treaty was vague as to possession of the islands that straddled the new boundary—including San Juan Island. The HBC took advantage of the confusion, built a log trading post on San Juan Island, and for several years traded with the resident Native American population for fish, which they salted and transported in barrels that they made on site (Bailey-Cummings and Cummings 1987).

At Garrison Bay, on San Juan Island, the HBC also began a new venture, Bellevue Farm, which was a salmon fishing station and sheep ranch. In 1859 a dispute led to HBC officials demanding the arrest of an American immigrant. The United States responded by sending sixty-six soldiers to set up a garrison at the southern tip of the island. The British countered with warships and more soldiers. By September 1859 there were three warships with numerous guns and roughly two thousand men on the British side, and nearly five hundred Americans, although fewer cannons. A joint military presence was negotiated (McDonald 1990). In 1860 the HBC charter expired, and British claims to land south of the 49th parallel were laid to rest.

The Wilkes Expedition

The United States Exploring Expedition led by Charles Wilkes was conducted in 1841 at a time when the territories of the Northwest were under contention by British and American interests. In 1845, 31 members of the Michael T. Simmons party cut a wagon trail that became the northern branch of the Oregon Trail at present-day Tumwater. Known as the end of the Oregon Trail or Cowlitz Trail, Tumwater is the oldest permanent American settlement on Puget Sound (Stevenson 1977; 1986:158). The discovery of gold in the Fraser River in 1858 brought more Euro-Americans (Jeffcott 1995). Settlers arrived at Alki Point in 1851 and proceeded to lay claims along the waterfront that became the commercial center of Seattle by the 1860s.

The Donation Land Claim Act of 1850

The pace of immigrant settlement was encouraged by the US 31st Congress, with the 1850 passage of Statute 496, an unnamed Act known by various names, most commonly as the Donation Land Claim Act, which legitimized a practice originally set in motion by the territorial Provisional Government in 1843 (Robbins 2018). The Act was

> to create the Office of Surveyor–General of the Public Lands in [the] Oregon [Territory], and to provide for the Survey, and to make Donations to Settlers of the said Public Lands. … granted to every white settler or occupant of the public lands, American half-breed Indians included ... three hundred and twenty acres of land, if a single man, and if a married man ... the quantity of one section, or six hundred and forty acres, one half to himself and the other half to his wife, to be held by her in her own right ... [US Statute 496, September 27, 1850]

The law explicitly excluded African Americans and Hawaiians. Prior to its enactment Territorial Delegate Samuel Thurston had told Congress that extinguishing Indian title was the "first prerequisite step" to settling Oregon's land question, so Congress had earlier authorized commissioners to negotiate treaties with that would, among other things, remove Native Americans from their land (Robbins 2018).

Treaties, allotments, assimilation and reorganization

What followed were the 1854 Treaty of Medicine Creek, the 1855 Treaties of Point Elliott, Point No Point, Neah Bay, Yakama, and Walla Walla, and the Quinault Treaty of 1856, by which the American government promised Native American tribes continued resource procurement rights, 'land reservations' (for some, but not all of the tribes), and a one-time payment. Once the treaties were in place, settlement and commercial exploitation of previously tribal lands proceeded almost unfettered. In addition, several subsequent acts of federal legislation created the circumstances that would hasten the already severe breakdown of Tribal lifeways that followed European-introduced disease pandemic in the 1770s that killed nearly 90% of the region's original inhabitants (Boyd 1994).

With the purpose of encouraging Tribal members to adopt the ways of the dominant culture—to assimilate them—the Dawes Act of 1887 provided "for the allotment of lands in severalty to Indians." The most charitable reading of this act was that it was intended to break the tradition of tribal communalism that most immigrants believed was an obstacle to their 'progress' and assimilation into US society; more accurately it as a continuation of efforts ultimately to take even the Reserve lands from the original inhabitants. Those who wished to take part were given either a portion of the reservation on which they lived, or, if their tribe had no reservation, a plot of land in or near their traditional use areas. In both cases the individual was granted US citizenship. Regardless of the reason, fragmentation and fissioning of traditional communities was the inevitable result, which was made worse by provisions of the legislation that enabled eventual sale of the land to non-tribal people. In the 47 years between its enactment and its dismantling, the Dawes Act was responsible for reducing the acreage under Native title from 138 million to just 48 million (Newcomb 2012).

The disastrous effects of the Dawes Act did not go unnoticed. As part of F.D. Roosevelt's New Deal in the 1930s, the Indian Reorganization Act (IRA) (1934) was intended to redress some of the worst effects of the efforts at assimilation. It was:

> [a]n Act to conserve and develop Indian lands and resources; to extend to Indians the right to form business and other organizations; to establish a credit system for Indians; to grant certain rights of home rule to Indians; to provide for vocational education for Indians; and for other purposes.

Although the IRA also restored rights to land and minerals, it was a temporary and controversial measure and by the end of WWII the federal government was back asserting their dominance including the continued abusive practice of removing children from their families and placing them in 'Residential Schools,' where they were forced to speak only English and taught only Euro-American history and culture. Only in the 1970s was this system dismantled, but the loss of cultural memory that it brought about was and is devastating, to say nothing of the intergenerational persistence of accumulated trauma it visited on the children who were subjected to this practice (see, e.g., Brave Heart and DeBruyn 1998).

Industry and infrastructure

Several large-scale commercial undertakings underpinned and dominated economic development and fueled immigration in the region during the nineteenth and early twentieth centuries: construction of transcontinental railroads, logging and sawmilling, mining, and hydroelectric power projects. The Northern Pacific Railway was the first transcontinental route to Puget Sound, completed in 1883 with its terminus at Tacoma. 1893 saw completion of the Great Northern Railway, which terminated in Seattle and was the only privately funded such railway in US history. These railways and their local spurs promoted economic growth and prompted the founding and development of small, coastal sawmill towns throughout the region. Timber harvested locally, or rafted by sea and river, was milled and loaded on trains for transport to the east.

Arlington

Exploration of the area around Arlington began in the 1850s. In 1856 the US Army established a trail through the area, but it was heavily forested and Euro-American settlers were slow to move there. It was not until 1887 that the area got its first store, and soon after its first hotel. Nels K. Tvete and Nils C. Johnson established the store at Stillaguamish River forks. The hotel, built in the vicinity of the store, was owned by Lee Rogers and Al Dinsmore, two loggers. The hotel and the store mainly served loggers working in the area (Oakley 2007).

In 1890 Arlington was platted along with another town just half a mile to the west, Haller City. Throughout the late 1800s Arlington and Haller City competed for dominance. Arlington had the clear advantage because it was established as a railroad depot in 1890. By the next year Arlington had an express office, a warehouse, and a post office, a hotel and three miles of graded streets. By 1903 the two towns had incorporated as one (Oakley 2007).

In the early 1900s Arlington was an important center of agriculture and logging. The town had provided a 200-foot-tall tree for the World's Fair in Chicago. The town boasted a bank, shingle mills, general stores, a creamery and hotels. It was the home to the Sunset Telephone Company, and Arlington Water, Light and Power had been established. The Northern Pacific Railroad came to town three times a week. The town was enjoying booming growth (Oakley 2007).

Arlington continued to grow on the merits of its three major industries; agriculture, dairy farming and shingle mills through World War I. The Great Depression hit the area hard, however, and by the 1930s mill closures had led to high rates of unemployment. In the late 1930s Arlington built an airport with funding from a federal relief program. The airport was used as a US Auxiliary Air Station during World War II (Oakley 2007).

In 1969 Interstate 5 was completed, giving people easy access to Arlington from larger cities such as Everett. Arlington continues to be popular today as a bedroom community for people who work in Everett and Seattle. In 2007 Arlington had a population of approximately 15, 000 (Oakley 2007).

4.3 Previous Archaeology

For general overviews of the archaeology and cultural resources of the Northwest Coast, see Ames (1995, 2003, 2005a, 2005b), Ames and Maschner (1999), Borden (1950, 1951, 1962, 1968, 1975), Boyd (1998, 1999), Burley (1980), Butler (1961), Butler and Campbell (2004), Campbell (1991), Carlson (1990), Carlson and Dalla Bona (1996), Erlandson et al. (1998), Fladmark (1975, 1982), Matson and Coupland (1995), Matson et al. (2003), Meltzer (2004), Meltzer and Dunnell (1987), Mitchell (1971, 1990), Nelson (1990), Pratt (1992), and Prentiss and Kuijt (2004, 2012).

The earliest archaeological studies of the northern Puget Sound are H.I. Smith's (1900, 1907). In addition to those cited in the next two sections, more recent archaeological overviews can be found in Avey (1991), Avey and Starwich (1985), Blukis Onat (1987), Blukis Onat et al. (1980), Blukis Onat and Kiers (2007a, 2007b), Bryan (1963), Burtchard (2007), Burtchard et al. (2003 [1998]), Campbell (1984), Carlson (1960), Carlson and Hobler (1993), Greengo (1983), Hale (1991), Hearne and Hollenbeck (1996), Hollenbeck (1987), Hollenbeck and Carter (1986), Kidd (1964), Lewarch (1979), Lewarch and Larson (2003), Lewarch et al. (2005, 2006), Mattson (1971, 1989), Mierendorf (1986), Mierendorf et al. (1998), Miss and Campbell (1991), Samuels (1993), Schalk (1988), A. Smith (1964), Smith and Fowkes (1901), Snyder (1980, 1981), Stein (1984, 2000), Stein and Phillips (2002), Tarver (1963), Wessen (1988), Wessen and Stilson (1987).

Previously Recorded Archaeological Sites

Records of eight archaeological sites within two miles of the Project APE are on file at the Washington State Department of Archaeology and Historic Preservation (DAHP). A short description of the sites is provided below (**Error! Reference source not found.**).

Table 1: Previously recorded archaeological sites within two miles of the Project APE.

Site #	Type	Distance	Citations	NRHP Eligibility
SN00486	Pre-Contact Basalt Scraper Isolate	~0.58 miles	Carrilho 2009	Survey/ Inventory
SN00026	Chopper, Scrapers, Large Bipoints and Fragments	~1.1 miles	Obermayer 1991	Survey/ Inventory
SN00444	Historic Debris Concentration	~1.24 miles	Smith 2008	Potentially Eligible
SN00409	Historic Trash	~1.26 miles	Gillis and Carrilho 2006	Determined Eligible
SN00709	Historic Culturally Modified Trees; Historic Residential Structures	~1.31 miles	Iversen and Osiensky 2019	Determined Not Eligible

SN00391	Historic Drainage Ditch	~1.33 miles	Ozbun 2004b	Potentially Eligible
SN00392	Pre-Contact Burial	~1.84 miles	Trautman 2005	Survey/ Inventory
SN00382	Pre-Contact Lithic Scatter	~1.84 miles	Ozbun 2004a	Determined Not Eligible

SN00486- Basalt Scraper is a basalt thumbnail scraper that was found in the upper 20 cm of a shovel probe (Carrilho 2009).

SN00026- Myrick-Anderson Site is a lithic scatter site with three quarters of its area covered with fill (Obermayer 1991).

SN00444 is a scatter of historic debris found in a fallow field that includes nails, a coin and green jadeite mixing bowl fragments (Smith 2008).

SN00409 is a scatter of historic debris consisting of 133 artifacts that date between the 1890s and the 1930s (Gillis and Carrilho 2006).

SN00709- Campbell/Hanson/Badgely Residence consists of a concrete foundation and artifacts related to a 1934 residence (Iversen and Osiensky 2019).

SN00391 is a drainage ditch six meters wide and two meters deep oriented East-West (Ozbun 2004b).

SN00392 is a burial containing four or five individuals; the two adults have culturally modified craniums (Trautman 2005).

SN00382 contains five prehistoric artifacts including cryptocrystalline silicate, basalt and fire-cracked rock (Ozbun 2004a).

Previous Cultural Resource Reports

There are four reports on file with DAHP from previous cultural resource surveys within one half mile of the Project APE; they are listed below in Table 2.

Table 2: Previous cultural resource reports on file with DAHP.

Author	Title	Date
Chambers	*Archaeological Assessment for the 67th Avenue Phase III Improvement Project Arlington, Snohomish County, Washington.* **Limited subsurface investigation. No cultural resources.**	2010
Larsen et al.	*Archaeological Survey and Evaluation of the Proposed Park 77 Development, Arlington, Snohomish County, Washington.* **30 STs. No cultural resources.**	2016
Ozbun et al.	*Cultural Resource Survey of Northwest Pipeline Corporation's Capacity Replacement Project, Western Washington Addendum Seven: Seattle, Lake Shore & Eastern Railway Spur at the Arlington 3 Pipe yard.* **No subsurface investigation. No cultural resources.**	2005

Author	Title	Date
Wilson et al.	*Prairie Creek Drainage Improvements Project- Phase 2 Construction Cultural Resources Assessment, Arlington, Snohomish County, Washington.* **5 STs. No cultural resources.**	2013

National Register Properties

There is one National Register Property on file with DAHP within two miles of the Project APE. A short description is provided below (Table 3).

Table 3: National Register Properties within two miles of the Project area.

NRHP #	Name	Period of Significance	Distance from Project APE
SN00350	Naval Auxiliary Air Station- Arlington	1942-1945	~1.28 miles

The Arlington Naval Auxiliary Air Station contains an airplane hangar, overhaul building, a bore sighting range, runways, and hardstands (Boswell and Heideman 2011).

Cemetery Properties

Records of three cemetery within two miles of the Project APE are on file with DAHP. A short description is provided below (Table 4).

Table 4: Cemeteries within two miles of the Project area.

Smithsonian #	Name	Period of Significance
SN00543	Arlington Municipal Cemetery	1903
SN00523	Old Pioneer Cemetery	1912
SN00392	(Site Name to be determined by Stillaguamish Tribe)	Pre-Contact & Post Contact

SN00543- Arlington Municipal Cemetery is an active cemetery originally plotted as "Harwood Cemetery" in 1903 (DAHP 2006a).

SN00543- Old Pioneer Cemetery is inactive and use discontinued in 1912 (DAHP 2006b).

SN00392 is a burial containing four or five individuals; the two adults have culturally modified craniums (Trautman 2005).

Archaeological Expectations

The APE lies along the banks of Portage Creek and within an indigenous agricultural prairie known as Kent's Prairie. Previous land-use likely includes fishing, processing, foraging by hunters and gatherers. All these activities can leave signatures on the landscape that can persist through time.

Archaeological investigations may also uncover historic artifacts, including bottles, cans or ceramics.

5.0 METHODS

This section provides details on the archival research and fieldwork methods that Equinox Research and Consulting International Inc. (ERCI) employed in support of the Project. The research undertaken

for the Project uses best-practice archaeological survey techniques to record the presence or absence of moderate to large archaeological sites, with the expectation that we may also find isolated artifacts or features, or small artifact scatters. When sites or isolated artifacts are discovered ERCI records them on DAHP forms in accordance with the *Washington State Standards for Cultural Resources Reporting*.

5.1 Archival Research

ERCI researchers

- Reviewed site forms and reports of previous archaeology on file at the Department of Archaeology and Historic Preservation (DAHP) in Olympia, Washington
- Reviewed other archaeological reports and related documents on file at the ERCI offices in Mount Vernon, Washington
- Reviewed published information on the precontact, traditional Native American and historic land use in and around the APE
- Reviewed the County Assessor's records
- Reviewed General Land Office, Sanborn, Metzger and Kroll, other historic maps

5.2 Fieldwork

On August 16, 2019, ERCI carried out an archaeological investigation of the subject property. Paige Hawthorne M.A., Caspian Hester B.A. and Jacob Q Wilmoth carried out a shovel probe investigation on the property south of Portage Creek.

Fieldwork entailed an intensive pedestrian surface survey and subsurface shovel testing. The pedestrian survey was carried out in narrow, less than 5-meter (m) wide transects with four archaeologists in a row. The technicians zig-zagged slowly up their individual transects, pausing at alternating changes of direction to look backwards at trees and the ground surface. While surveying, in addition to the possibility of surface artifacts, archaeologists were watching for culturally modified trees and surface features such as cache pits, cultural depressions, wood building foundations and rock cairns. Surface visibility was variable, although much of the property was cleared there had been gravel dumped in some areas.

Shovel Tests (ST) consisted of cylindrical pits dug by hand using round-nosed shovels, approximately 50 centimeters (cm) in diameter, ranging up to 100 cm deep, with bucket augering or push probes used where appropriate. STs were abandoned before reaching the maximum possible depth due to, among other factors, large cobbles or boulders, large roots or groundwater, or when at least a 10 cm depth of unaltered sterile glacial sediments have been excavated. All excavated sediments were passed through ¼-inch mesh hardware cloth shaker screens.

Any artifacts recovered would have been described and photographed, then returned to the same ST from which they came. Fragments of animal skeletal remains were immediately photographed and digital images transmitted electronically to Alyson M. Rollins, MA, ERCI's biological anthropologist, who confirmed whether or not the remains were human.

ST location overview photographs were taken, along with photographs of their sedimentary profiles. Once documentation was complete STs were backfilled with the excavated sediments and the surface restored to its original grade. No samples were removed from the APE. Sediments encountered were characterized and recorded on paper, and activities photographed using digital cameras or phones. ST and other locations were obtained using a Global Positioning System (GPS) high-accuracy receiver. Sedimentary matrix and shovel test descriptions and photo logs are provided in the appendices. Field notes, digital photographs and GIS shape files are stored at ERCI's offices in Mount Vernon, Washington.

Shovel test (ST) locations were determined using a mixed strategy primarily judgmentally based on topography, proximity to the creek, aspect and slope.

6.0 RESULTS

6.1 Pedestrian Survey

ERCI crew conducted a pedestrian survey while searching for subsurface testing locations. The majority of the Project area is flat and covered with grass and gravels (Figure 12). The flat area is interrupted on the north by a berm, purportedly created by dumping during the construction of the neighboring Bartell Drugs (Figure 13 and Figure 14). In at least one spot there was also dumped asphalt near the berm (Figure 15). In the northwest part of the Project area there was a cluster of concrete blocks almost completely covered in blackberries (Figure 16 and Figure 17). Next to the cluster there were two black barrels.
Portage Creek runs along the northern boundary of the Project area (Figure 18). It is surrounded by dense vegetation on either side (Figure 19). On the southern side of the creek, on the western boundary of the Project area, there was scattered modern refuse.

No protected cultural resources were discovered during the pedestrian survey.

Figure 12: View north of Project area.

Figure 13: View east of the artificial berm.

Figure 14: View north of the artificial berm.

Figure 15: Plan view of asphalt dumped on surface by ST 1.

Figure 16: View north of ecology blocks and 55 gallon metal drums.

Figure 17: View southeast of Project Area with blackberries covering ecology blocks in foreground.

Figure 18: View east of creek on northern boundary of Project area.

Figure 19: View east in wooded area beside Portage Creek.

6.2 Subsurface Survey

Subsurface shovel test holes were clustered near the creek because it was the highest probability area for intact cultural resources. The overbanking sediments from the creek may have capped any artifacts or features that would have been along the banks of Portage Creek. The sediments in ST 10 and ST 4, the two STs nearest the creek, provided the only intact sediment profiles from the property. Those STs were at a slightly higher elevation than all the other STs.

Subsurface testing in the remaining level ground further south was sampled for maximum coverage of the Project area. All utilities were avoided. Two utility access vault covers were visible in the southwest quadrant of the Project area. The vault further east was filled in and covered with imported gravel (Figure 21). The vault to the west was still visible on the surface (Figure 20). Two water monitoring well caps were visible on the surface, one was just south of the artificial berm the other was an 400 feet south (Figure 22). Near the western boundary of the Project area were locates for a gas line.

Figure 20: Plan view of the western utility access vault cover.

Figure 21: Plan view of the eastern covered utility access vault cover.

Figure 22: Plan view of water monitoring well cap.

Figure 23: Locate flags for gas line.

6.3 Discussion

7.0 MANAGEMENT RECOMMENDATIONS

No protected cultural resources were identified during our fieldwork. The management recommendations that we are now providing are based on our findings from this field investigation. We recommend that:

1. The proposed project proceed as planned, following an unanticipated discovery protocol (UDP) training given to all construction personnel by a professional archaeologist. A copy of the Unanticipated Discoveries Protocol (UDP) to be kept on site at all times.
2. In the event that any ground-disturbing activities or other project activities related to this development or in any future development uncover protected archaeological objects or sediments (e.g., old bottles or cans, charcoal, bones, shell, stone, horn or antler tools or weapons), all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP.
3. In the event that any ground-disturbing activities or other project activities related to this development or in any future development uncover human remains, all work in the immediate vicinity should stop, the area should be secured, and any equipment moved to a safe distance away from the location. The on-site superintendent should then follow the steps specified in the UDP.

8.0 REFERENCES CITED

Ames, Kenneth M.

1995 Chiefly Power on the Northwest Coast. In *Foundations of Social Inequality*, edited by T. Douglas Price and Gary M. Feinman, pp. 155–187. Plenum Press, New York.

2003 The Northwest Coast. *Evolutionary Archaeology* 12:19–33.

2005a Intensification of Food Production on the Northwest Coast and Elsewhere. In *Keeping it Living: Traditions of Plant Use and Cultivation on the Northwest Coast of North America*, edited by Douglas Deur and Nancy J. Turner, pp. 67–100. University of Washington Press, Seattle.

2005b Tempo and Scale in the Evolution of Social Complexity in Western North America: Four Case Studies. In *North American Archaeology*, edited by Timothy R. Pauketat and Diana DiPaolo Loren, pp. 46–78. Blackwell Publishing, Oxford.

Ames, Kenneth M., and H.D.G. Maschner

1999 *Peoples of the Northwest Coast: Their Archaeology and Prehistory*. Thames & Hudson, New York.

Anundsen, Karl, S.E.B. Abella, E.B. Leopold, M. Stuiver, and S. Turner

1994 Late-glacial and early Holocene sea-level fluctuations in the central Puget Lowland, Washington, inferred from lake sediments. *Quaternary Research* 42:149–161.

Bagley, Clarence B.

1915 Journal of Occurrences at Nisqually House, 1833. *Washington Historical Quarterly* 6(3):179–197.

Baldwin, Garth L., and Jennifer Chambers

2014 *Final Report of Archaeological Investigations for the Woodhaven Site (45SN417), Granite Falls, Snohomish County, Washington*. Drayton Archaeology. Submitted to Woodhaven Estates, LLC. On file at Washington State Department of Archaeology and Historic Preservation, Olympia.

Borden, Charles E.

1950 Notes on the Prehistory of the Southern Northwest Coast. *British Columbia Historical Quarterly* 14:241–246.

1951 Facts and Problems of Northwest Coast Prehistory. *Anthropology in British Columbia* 2:35–37.

1960 *DjRi3, an Early Site in the Fraser Canyon, British Columbia*. National Museum of Canada Contributions to Anthropology, Bulletin 162. National Museums of Canada, Ottawa.

1962 West Coast Crossties with Alaska. In *Prehistoric Cultural Relations between the Arctic and Temperate Zones of North America*, edited by J. M. Campbell, pp. 9–19. Arctic Institute of North America, Technical Paper 11. Arctic Institute of North America, Montreal.

1968 Prehistory of the Lower Mainland. In *Lower Fraser Valley: Evolution of a Cultural Landscape*, edited by A.H. Siemens, pp. 9–26. British Columbia Geographical Series 9. Tantalus Research, Vancouver.

1975 *Origins and Development of Early Northwest Coast Culture to about 3000 B.C.* National Museum of Man Mercury Series, Archaeological Survey of Canada Paper No. 45. National Museum of Man, Ottawa.

Boyd, Robert T.

1994 Smallpox in the Pacific Northwest. *BC Studies* 101:5–40.

1998 *The Coming of Spirit and Pestilence, Introduced Diseases and Population Decline among Northwest Coast Indians, 1774–1874*. University of Washington Press, Seattle.

1999 *Indians, Fire, and the Land in the Pacific Northwest*. Oregon State University Press, Corvallis.

Brave Heart, M.Y., and L.M. DeBruyn

1998 The American Indian Holocaust: healing historical unresolved grief. *American Indian and Alaska Native Mental Health Research* 8(2):56-78.

Burley, David V.
1980 *Marpole: Anthropological Reconstruction of a Prehistoric Northwest Coast Culture Type.* Publication No. 8. Simon Fraser University, Department of Archaeology, Burnaby, British Columbia.

Butler, B.R.
1961 *The Old Cordilleran Culture in the Pacific Northwest*. Occasional Papers of the Idaho State College Museum 5. Idaho State College, Pocatello.

Butler, Virginia, and Sarah Campbell
2004 Resource Intensification and Resource Depression in the Pacific Northwest of North America: A Zooarchaeological Review. *Journal of World Prehistory* 18:327–405.

Campbell, Sarah K.
1991 *Postcolumbian Culture History in the Northern Columbian Plateau A.D. 1500–1900*. Taylor & Francis, New York.

Carlson, Roy L.
1990 Cultural Antecedents. In *Northwest Coast*, edited by Wayne Suttles, pp. 60–69. Handbook of North American Indians, Vol. 7. Smithsonian Institution, Washington, D.C.

Carlson, Roy L., and Luke R. Dalla Bona (editors)
1996 *Early Human Occupation in British Columbia*. University of British Columbia Press, Vancouver.

Carlson, Roy L., and P.M. Hobler
1993 The Pender Canal Excavations and the Development of Coast Salish Culture. *BC Studies* 99:25–52.

Chatters, James C., Jason B. Cooper, Philippe D. LeTourneau, and Lara C. Rooke
2011 *Understanding Olcott: Data Recovery at Sites 45SN28 and 45SN303, Snohomish County, Washington*. AMEC Earth and Environmental. Submitted to Granite Falls Alternate Route Project, Snohomish County Department of Public Works, Everett, Washington. On file at Washington State Department of Archaeology and Historic Preservation, Olympia.

Chatters, James C., James W. Brown, Steven Hackenberger, Patrick McCutcheon, and Jonathan Alder
2017 Calcined Bone as a Reliable Medium for Radiocarbon Dating: A Test Using Paired North American Samples. *American Antiquity* 82(3):593–608.

Collins, June McCormick
1974 *Valley of the Spirits: The Upper Skagit Indians of Western Washington*. University of Washington Press, Seattle.

Croes, Dale R.
1995 *The Hoko River Archaeological Site Complex: The Wet/Dry Site (45CA213), 3,000–1,700 B.P.* Washington State University Press, Pullman.

Curtis, Edward S.
1913 *The Salishan tribes of the coast.* The North American Indian (1907–1930) Volume 9, Plimpton Press, Norwood, Massachusetts.

Daugherty, R.D., and R. Fryxell
1967 Archaeological, geochronological, and ecological investigations of the Ozette Village Site Complex on the Northwest Coast of Washington. Manuscript on file, Department of Anthropology, Washington State University, Pullman.

Erlandson, Jon M., Mark A. Tveskov, and R. Scott Byram
1998 The Development of Maritime Adaptations on the Southern Northwest Coast of North America. *Arctic Anthropology* 35(1):6–22.

Fladmark, Knut R.
1975 *Paleoecological Model for Northwest Coast Prehistory*. National Museum of Man, Mercury Series No 43. National Museum of Man, Ottawa.

1982 An Introduction to the Prehistory of British Columbia. *Canadian Journal of Archaeology* 6:95–156.

Franklin, Jerry F., and C.T. Dyrness

1988 *Natural Vegetation of Oregon and Washington*. Oregon State University Press, Corvallis.

Greengo, R.E., and R. Houston

1970 *Excavations at the Marymoor Site*. Reports in Archaeology No 4, Department of Anthropology, University of Washington, Seattle.

Grier, Colin, Patrick Dolan, Kelly Derr, and Eric McLay

2009 Assessing Sea Level Changes in the Southern Gulf Islands of British Columbia Using Archaeological Data from Coastal Spit Locations. *Canadian Journal of Archaeology* 33:254–280.

Haeberlin, Hermann, and Erna Gunther

1930 *Indians of Puget Sound*. University of Washington Publications in Anthropology Volume 4, No. 1. University of Washington Press, Seattle.

Harmon, Alexandra

1998 *Indians in the Making: Ethnic Relations and Indian Identities in the Puget Sound*. University of California Press, Berkeley.

Hayes, Derek

1999 *Historical Atlas of the Pacific Northwest: Maps of Exploration and Discovery*. Sasquatch Books, Seattle.

Hebda, R.J., and R.W. Mathewes

1984 Holocene History of Cedar and Native Indian Cultures of the North American Pacific Coast. *Science* 225:711–713.

Heusser, Calvin J.

1983 Vegetational History of the Northwestern U.S. Including Alaska. In *Late Quaternary Environments of the United States. Vol. 1: The Late Pleistocene*, edited by H.E. Wright Jr., pp. 239–258. University of Minnesota Press, Minneapolis.

Holliday, Vance T.

1992 *Soils in Archaeology*. Smithsonian Institution Press, Washington, D.C.

Kiers, R.

2014 Appendix G: Luminescence Dating of Fire-modified Rock from 45SN417, Granite Falls, Snohomish County, Washington. In *Final Report of Archaeological Investigations for the Woodhaven Site (45SN417), Granite Falls, Snohomish County, Washington*, by Garth Baldwin and Jennifer Chambers, pp. 224-228. Drayton Archaeology. Submitted to Woodhaven Estates, LLC. On file at Washington State Department of Archaeology and Historic Preservation, Olympia.

King, Arden Ross

1950 *Cattle Point, a Stratified Site in the Southern Northwest Coast Region*. Society for American Archaeology Memoirs No. 7. Society for American Archaeology, Menasha, Wisconsin.

Kopperl, Robert E. (editor)

2016 *Results of Data Recovery at the Bear Creek Site (45KI839) King County, Washington*. SWCA Environmental Consultants, Seattle. Submitted to City of Redmond and David Evans and Associates. On file at the Washington State Department of Archaeology and Historic Preservation, Olympia.

Kopperl, Robert, Charles Hodges, Christian Miss, Johonna Shea, and Alicia Spooner

2016 *Archaeology of King County, Washington: A Context Statement for Native American Archaeological Resources*. SWCA Environmental Consultants, Seattle. Submitted to the King County, Washington, Historic Preservation Program. On file at Washington State Department of Archaeology and Historic Preservation, Olympia.

Lewarch, Dennis E., Lynn L. Larson, Elizabeth C. Reetz, Nichole Gillis, Donald E. Tatum, Sarah L. Sterling, Gretchen A. Kaehler, Hayley E. Kanipe, Stephanie E. Trudel, Steven J. Greenawalt, and Katherine Vaughn
2005 *Fieldwork Status Report, Data Recovery Excavation and Archaeological Construction Monitoring at the Tse-whit-zen Site (45CA523), Clallam County, Washington*. Larson Anthropological Archaeological Services. Submitted to Washington State Department of Transportation, Olympic Region, Tumwater. On file at Washington State Department of Archaeology and Historic Preservation, Olympia.

Mack, C.A., James C. Chatters, and Anna M. Prentiss
2010 *Archaeological Data Recovery at the Beech Creek Site (45LE415), Gifford Pinchot National Forest, Washington*. United States Department of Agriculture, Forest Service, Pacific Northwest Region, Heritage Program, Gifford Pinchot National Forest. On file at Washington State Department of Archaeology and Historic Preservation, Olympia.

Matson, R.G. (editor)
1976 *The Glenrose Cannery Site*. Mercury Series, National Museum of Man, Archaeological Survey of Canada Paper No. 52. National Museums of Canada, Ottawa.
2010 The Crescent Beach Site and the Place of the Locarno Beach Phase. Laboratory of Archaeology, University of British Columbia. Electronic document, http://anth.sites.olt.ubc.ca/files/2013/05/FrontMatter.pdf, accessed July 22, 2016.

Matson, R.G., and Gary Coupland
1995 *The Prehistory of the Northwest Coast*. Academic Press, San Diego.

Matson, R.G., Gary Coupland, and Quentin Mackie (editors)
2003 *Emerging from the Mist: Studies in Northwest Coast Culture History*. Pacific Rim Archaeology. UBC Press, Vancouver and Toronto.

McLaren, Duncan, Daryl Fedje, Murray B. Hay, Quentin Mackie, Ian J. Walker, Dan H. Shugard, Jordan B.R. Eamerd, Olav B. Liane, and Christina Neudorf
2014 A post-glacial sea level hinge on the central Pacific coast of Canada. *Quaternary Science Reviews* 97:148–169.

McLaren, Duncan, Daryl Fedje, Angela Dyck, Quentin Machie, Alisha Gauvreau and Jenny Cohen
2018 Terminal Pleistocene Epoch Human Footprints from the Pacific Coast of Canada.PLoS ONE 13(3): e0193522. https://doi.org/10.1371/journal.pone.0193522

Meltzer, D.J.
2004 Peopling of North America. In *The Quaternary Period in the United States*, edited by A.R. Gillespie, S.C. Porter, and B.F. Atwater, pp. 505–563. Developments in Quaternary Science. Elsevier, Seattle, Washington.

Meltzer, D.J., and R.C. Dunnell
1987 Fluted Points from the Pacific Northwest. *Current Research in the Pleistocene* 4:64-67.

Mierendorf, Robert R., Franklin F. Foit, Jr., and Darby C. Stapp
2018 *Holocene Geochronology and Archaeology at Cascade Pass, Northern Cascade Range, Washington*. Journal of Northwest Anthropology Memoir 16. Northwest Anthropology LLC, Richland, Washington.

Mitchell, Donald H.
1971 Archaeology of the Gulf of Georgia Area, a Natural Region and its Culture Types. *Syesis* 4:1–228.
1990 Prehistory of the Coasts of Southern British Columbia and Northern Washington. In *Northwest Coast*, edited by W. Suttles, pp. 340–358. Handbook of North American Indians. vol. 7, W.C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Moss, Madonna L., Dorothy M. Peteet, and Cathy Whitlock.
2007 Mid-Holocene culture and climate on the Northwest Coast of North America. In *Climate change and cultural dynamics: a global perspective on mid-Holocene transitions*, edited by

David G. Anderson, Kirk A. Maasch, and Daniel H. Sandweiss, pp. 491–530. Academic Press, London.

Nelson, Charles M.
1990 Prehistory of the Puget Sound Region. In *Northwest Coast*, edited by Wayne Suttles, pp. 481–484. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Newcomb, Steven
2012 The 1887 Dawes Act: The U.S. Theft of 90 Million Acres of Indian Land. Electronic document, https://newsmaven.io/indiancountrytoday/archive/the-1887-dawes-act-the-u-s-theft-of-90-million-acres-of-indian-land-mhhCiBXdrU-pUbgWKwpOaQ/, [accessed 6/12/19].

Northwestern University Library
2003 "Goat-hair Blanket—Cowichan," by Edward S. Curtis. Electronic document, http://curtis.library.northwestern.edu/plates_curtis/ct09/ct09036r.jpg, [accessed 6/12/19]
2003 "Mat House—Skokomish," by Edward S. Curtis. Electronic document, http://curtis.library.northwestern.edu/curtis/viewPage.cgi?showp=1&size=2&id=nai.09.port.00000010.p&volume=9, [accessed 6/12/19]
2003 "Puget Sound Baskets," by Edward S. Curtis. Electronic document, http://curtis.library.northwestern.edu/plates_curtis/cp09/cp09017r.jpg, [accessed 6/12/19]

Pojar, Jim, and Andy MacKinnon
1994 *Plants of the Pacific Northwest Coast.* Lone Pine, Vancouver, British Columbia.

Porter, Stephen C., and Terry W. Swanson
1998 Radiocarbon age constraints on rates of advance and retreat of the Puget Lobe of the Cordilleran ice sheet during the last glaciation. *Quaternary Research* 50:205–213.

Pratt, Heather Lynn
1992 *The Charles culture of the Gulf of Georgia: a re-evaluation of the culture and its three sub-phases*. Master's thesis, Department of Anthropology, University of British Columbia.

Prentiss, Anna Marie, and Ian Kuijt
2012 *People of the Middle Fraser Canyon: An Archaeological History*. University of British Columbia Press, Vancouver.

Prentiss, William C., and Ian Kuijt (editors)
2004 *Complex Hunter-Gatherer Evolution and Organization of Prehistoric Communities on the Plateau of Northwestern North America*. University of Utah Press, Salt Lake City.

Purchas, Samuel
1906 [1625] *Hakluytus Posthumus or Purchas His Pilgrimes: Contayning a History of the World in Sea Voyages and Lande Tavells by Englishmen and others. Volume XIV*. University of Glasgow Press, Glasgow, Scotland. Electronic document, https://archive.org/details/hakluytusposthu15purcgoog, accessed November 5, 2017.

Robbins, William G.
2017 Oregon Donation Land Act. Electronic document, https://oregonencyclopedia.org/articles/oregon_donation_land_act/#.WfIrQduZNTZ, [accessed 6/12/19]

Smith, Harlan I.
1900 Archaeological Investigations on the North Pacific Coast in 1899. *American Anthropologist* 3:563–567.
1907 *Archaeology of the Gulf of Georgia and Puget Sound*. American Museum of Natural History Memoir 4, Part 6, pp. 301–441. American Museum of Natural History, New York.

Taylor, Amanda K., Julie K. Stein, Stephanie A.E. Jolivette
2011 Big Sites, Small Sites, and Coastal Settlement Patterns in the San Juan Islands, Washington, USA. *Journal of Island and Coastal Archaeology* 6:287–313.

Thorson, Robert M.

1980 Ice-sheet Glaciation of the Puget Lowland, Washington, During the Vashon Stade (late Pleistocene). *Quaternary Research* 13:303–312.

1989 Glacio-isostatic Response of the Puget Sound Area, Washington. *Geological Society of America Bulletin* 101:1163–1174.

Turner, Nancy J.

1995 *Food Plants of Coastal First Peoples.* Royal British Columbia Museum Handbook. Victoria, British Columbia.

Waters, Michael R., Thomas W. Stafford Jr., H. Gregory McDonald, Carl Gustafson, Morten Rasmussen, Enrico Cappellini, Jesper V. Olsen, Damian Szklarczyk, Lars Juhl Jensen, M. Thomas P. Gilbert, and Eske Willerslev.

2011 Pre-Clovis Mastodon Hunting 13,800 Years Ago at the Manis Site, Washington. *Science* 334(6054):351–353.

Wessen, Gary C.

1989 *A Report of Archaeological testing at the Dupont Southwest Site (45-PI-72), Pierce County, Washington*. Western Heritage, Olympia, Washington. Submitted to Weyerhaeuser Real Estate Company Land Management Division Tacoma, Washington. On file at the Washington State Department of Archaeology and Historic Preservation, Olympia.

White, William S.

2013 *National Register of Historic Places Nomination Form (45CA523)*. On file at the Washington State Department of Archaeology and Historic Preservation, Olympia.

9.0 APPENDICES

Appendix 1: Shovel Test Descriptions, Particle Size Classes and Matrix Descriptions

Particle Size Classes

Scale	Clay	Silt	Sand	Gravel	Pebble	Cobble	Boulder
in	<.00015	.00015–.0025	.0025–.08	.08–1	1–4	4–10	>10
mm	<.004	.004–.062	.062–2	2–25.4	25.4–102	102–254	>254

Matrix Descriptions

Matrix 1: 10 YR 3/3 Dark brown, 65% sandy silt, 10% cobbles, 10% pebbles, 10% gravels, 5% organics; moderate to dense compaction; dry; primarily local fill but imported gravel in some locations, disturbed.

Matrix 2: 10 YR 3/2-3/4 Very dark grayish brown to dark yellowish brown. Coarse sand. 50% sand, 20% gravels, 20% pebbles, 10% cobbles. Moderate compaction, dry, glacial outwash, intact.

Matrix 3: 10 YR 3/2-3/4 Very dark grayish brown to dark yellowish brown. 100% coarse sand with 10 YR 5/4 mixed. Moderate compaction, dry, glacial outwash, intact.

Matrix 4: 10 YR ¾ Dark yellowish brown. 80% silty sand, 10% cobbles, 10% pebbles, Loose to moderate compaction, dry, alluvium, intact.

Shovel Test Descriptions

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments	Location
1	93	50	**0-25:** M1- More coarse sand. **25-70:** M2 **70-93:** M3 *On surface next to hole is a pile of asphalt that seems dumped on surface.	Negative Terminate: Glacial reached.	~ 10m East of road on Western boundary. Near tree line.
2	67	50	**0-67:** M1- Found 1 piece clear glass, 1 round headed nail, and 1 piece of a mandible ~20cm dbs. Found 1 piece of ceramic + 1 piece of clear glass ~40cm dbs.	Negative Terminate: Compaction	East end of APE. Near tree line.
3	70	46	**0-20:** M1 **20-40:** M1+M2- Mix dense compaction. **40-70:** M2	Negative	~3m E of Western boundary of APE
4	90	48	**0-55:** M4 **55-90:** M1- Intact	Negative Terminate: Plan	~2m South of creek, 1m Downslope + ~3m East of ST 10.
5	95	42	**0-95:** M1- Moderate compaction throughout	Negative Terminate: plan	Farthest East along creek.

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments	Location
6	110	47	**0-110:** M1- Moderate compaction throughout. Glass, plastic and metal (Primarily nails) throughout. 6 nails (5 rounded, 1 square), blue plastic. 11 glass fragments (2 melted) (1 green, 8 clear) - @80cm dbs. Plastic mesh wrap in N wall at depth. -White rubber tubing (small ~1cm diameter) protruding from East wall ~90cm dbs.	Negative Terminate: 1m reached.	East of ST 1.
7	51	48	**0-51:** M1- Moderate compaction throughout. Brick, glass, metal found throughout. 4 pieces glass (2 clear, 2 brown), 1 brick (1 inch thickness) -Rusty metal in South wall. -Plastic bag in South wall. *Asphalt in North and South walls obstructing further depths.	Negative Terminate: Obstruction	
8	100	50	**0-50:** M1- Disturbed pebble/cobble fill. **50-100:** M3- Intact. *Interface between M1 and M3 is gradual. Particle size decreasing with depth.	Negative Terminate: 1m reached.	South of berm. Northwest corner of field. West of ST 12 (parallel).
9	90	60	**0-52:** M1 **52-90:** M2 *Variable interface (Not clear) between M1 and M2.	Negative Terminate: Plan	Between ST 13 and 3. Central field.
10	100	52	**0-100:** M4- Many roots throughout. – Larger roots towards base of hole.	Negative Terminate: 1m reached.	Near bridge and creek. West of ST 4.
11	95	58	**0-35:** M1- Glass, plastic. **35-78:** M2 **78-95:** M3 *Clear transitions between all matrices.	Negative Terminate: Plan	East of ST 6.

ST	Depth (cm)	Dia (cm)	Matrix Description	Comments	Location
12	85	50	**0-55:** M1- 1 glass, plastic, compact. **55-85:** M2- Clear transition to M2.	Negative Terminate: Plan	East of ST 8.
13	45	52	**0-35:** M1 **35-45:** Possible glacial. Like M1 but extremely compact.	Negative Terminate: compaction.	East of ST 9.
14	65	60	**0-40:** M1, compact. Clear transition to M2. **40-65:** M2	Negative Terminate: Compaction (rocks)	South East of ST 13.

Appendix 2: Photograph Log

Number	View	Description
190816JQW001	N	ST 6 OVERVIEW
190816JQW002	N	ST 6 W/O SCALE
190816JQW003	N	ST 6 W/ SCALE
190816JQW004		ST 6 GLASS
190816JQW005		ST 6 PLASTICS
190816JQW006		ST 6 METALS (NAILS)
190816JQW007		ST 6 RUBBER TUBING
190816JQW008	N	ST 7 OVERVIEW
190816JQW009	N	ST 7 W/O SCALE
190816JQW010	N	ST 7 W/ SCALE
190816JQW011		ST 7 BRICK
190816JQW012		ST 7 METAL
190816JQW013		ST 7 GLASS
190816JQW014	E	ST 8 OVERVIEW
190816JQW015	N	ST 8 W/O SCALE
190816JQW016	N	ST 8 W/ SCALE
190816JQW017		ST 8 MONITOR WELL 3 M NW OF ST 8
190816JQW018	E	ST 9 OVERVIEW
190816JQW019	N	ST 9 W/O SCALE
190816JQW020	N	ST 9 W/ SCALE
190816JQW021	E	ST 10 OVERVIEW
190816JQW022	S	ST 10 W/O SCALE
190816JQW023	S	ST10 W/ SCALE
190816JQW024	E	ST 5 OVERVIEW
190816JQW025	W	ST 5 OVERVIEW
190816JQW026	N	ST 5 W/O SCALE
190816JQW027	N	ST 5 W/ SCALE
190816PEH001	NE	OVERVIEW OF AREA FROM POND RD.
190816PEH002	E	" "
190816PEH003	W	FROM BRIDGE
190816PEH004	S	ST 11 W/O SCALE
190816PEH005	S	ST 11 W/ SCALE
190816PEH006	E	ST 11 OVERVIEW
190816PEH007	E	ST 12 W/O SCALE
190816PEH008	E	ST 12 W/ SCALE
190816PEH009	N	ST 12 OVERVIEW
190816PEH010	N	ST 13 W/O SCALE
190816PEH011	N	ST 13 W/ SCALE
190816PEH012	N	ST 13 OVERVIEW

Number	View	Description
190816PEH013	N	ST 14 W/O SCALE
190816PEH014	N	ST 14 W/ SCALE
190816PEH015	N	ST 14 OVERVIEW
190816PEH016	N	OVERVIEW FROM SE CORNER
190816PEH017	N	" " A VIEW OF BURIED GAS LINE FLAGS
190816PEH018	N	ENVIRONMENTAL POINT #1
190816PEH019	N	EP# 2
190816PEH020	N	EP# 3
190816PEH021	E	ERCI AT ST 5
190816PEH022	E	" "
190816PEH023	E	" "
190816PEH024	S	"" FROM CREEK
190816PEH025	NW	VIEW OF CREEK, NW OF ST 5
190816PEH026	NW	" "
190816PEH027	SE	VIEW OF FIELD WITH ECOBLOCKS OVERGROWN WITH BLACKBERRIES.
190816PEH028	E	EP# 4
190816CPH012	N	ST 1 W/O SCALE
190816CPH013	N	ST 1 W/ SCALE
190816CPH014	N	ST 1 OVERVIEW
190816CPH015	P	ST 1 ASPHALT ON SURFACE
190816CPH016	P	ST 1 ASPHALT ON SURFACE AND CONCRETE.
190816CPH017	S	ST 2 W/O SCALE
190816CPH018	S	ST 2 W/ SCALE
190816CPH019	P	NAIL, GLASS AND MANDIBLE PIECE FOUND ~20CM DBS
190816CPH020	P	MANDIBLE PIECE FOUND ~20CM DBS.
190816CPH021	P	"
190816CPH022	P	"
190816CPH023	P	"
190816CPH024	P	"
190816CPH025	DELETE	DELETE
190816CPH026	P	PIECE OF GLASS FOUND ~20CM DBS
190816CPH027	P	CERAMIC PIECE + CLEAR GLASS FOUND ~40CM DBS
190816CPH028	P	CERAMIC PIECE + CLEAR GLASS FOUND ~40CM DBS
190816CPH029	P	CERAMIC PIECE CROSS SECTION
190816CPH030	N	ST 2 OVERVIEW
190816CPH031	E	ST 2 OVERVIEW FROM 2M
190816CPH032	E	ST 3 W/O SCALE
190816CPH033	E	ST 3 W/ SCALE
190816CPH034		DELETE

Number	View	Description
190816CPH035	E	ST 3 OVERVIEW
190816CPH036	S	ST 3 OVERVIEW W/ BARTELL DRUGS IN BACKGROUND
190816CPH037	SW	ST 3 OVERVIEW
190816CPH038	N	BLOCKS AND BARRELS
190816CPH039	N	BARRELS
190816CPH040	P	BARRELS
190816CPH041		BARRELS CLOSE UP
190816CPH042		"
190816CPH043		"
190816CPH044	N	ST 4 W/O SCALE
190816CPH045	NE	ST 4 W/ SCALE
190816CPH046	W	ST 4 OVERVIEW
190816CPH047	E	ST 4 OVERVIEW
190816CPH048	N	UP CREEK BED

Appendix 3: Unanticipated Discovery Protocol

In the event that any ground-disturbing activities or other project activities related to this development or any future development uncover protected cultural material (see below), the following actions should be taken:

1. If the cultural material is a historic or precontact object (glass bottle, tin can, stone, bone, horn or antler tool); a historic or precontact feature (hearth, building foundation, privy), then the on-site supervisor should avoid the object, secure the location and relocate work activities to a different part of the Project area. The Project manager should then call a professional archaeologist to evaluate the discovery.
2. If ground disturbing activities encounter human skeletal remains during the course of construction, then all activity will cease that may cause further disturbance to those remains. The area of the find will be secured and protected from further disturbance. The finding of human skeletal remains will be reported to the county medical examiner/coroner and local law enforcement in the most expeditious manner possible. The remains will not be touched, moved, or further disturbed. The county medical examiner/coroner will assume jurisdiction over the human skeletal remains and make a determination of whether those remains are forensic or non-forensic. If the county medical examiner/coroner determines the remains are non-forensic, then they will report that finding to the Department of Archaeology and Historic Preservation (DAHP) who will then take jurisdiction over the remains. The DAHP will notify any appropriate cemeteries and all affected tribes of the find. The State Physical Anthropologist will make a determination of whether the remains are Indian or Non-Indian and report that finding to any appropriate cemeteries and the affected tribes. The DAHP will then handle all consultation with the affected parties as to the future preservation, excavation, and disposition of the remains.

Cultural material that may be protected by law could include but is not limited to:

- Logging, mining, railroad, or agriculture equipment older than 50 years (Figure 24)
- Historic foundations (Figure 25)
- Historic bottles, china and soldered dot cans (Figure 26, Figure 27)
- Buried cobbles that may indicate a hearth feature (Figure 29)
- Non-natural sediment or stone deposits that may be related to activity areas of people
- Stone tools or stone flakes, projectile points (arrowheads), ground stone adzes or grinding stones (abraders) (Figure 30–Figure 33)
- Bone, shell, horn, or antler tools that may include scrapers, cutting tools, wood working wedges (Figure 34, Figure 35)
- Perennially damp areas may have preservation conditions that allow for remnants of wood and other plant fibers; in these locations there may be remains including fragments of basketry, weaving, wood tools, or carved pieces (Figure 36,)
- Culturally modified trees (Figure 37)
- Human remains

Figure 24: Example of railroad ties for UDP.

Figure 25: Example of historic foundation for UDP.

Figure 26: Example of historic glass artifacts for UDP.

Figure 27: Example of historic solder dot can for UDP

Figure 28: Example of protected shell midden for UDP.

Figure 29: Example of protected rock-lined hearth feature for UDP.

Figure 30: Example of projectile point for UDP.

Figure 31: Example of protected adze blade for UDP.

Figure 32: Example of stone tool for UDP.

Figure 33: Example of stone tool for UDP.

Figure 34: Example of bone awl for UDP.

Figure 35: Example of worked bone and spines for UDP.

Figure 36: Example of cedar bark basketry for UDP.

Figure 37: Example of planked tree for UDP.

CONTACT LIST

Name	Affiliation	Telephone	Email
	Arlington Police	360-403-3400 or 911	police@arlingtonwa.gov
Daniel Selove	Snohomish County Medical Examiner	425-438-6200	Contact.MedAdmin@snoco.org
Kevin Joseph	Sauk Suiattle Indian Tribe	360-436-+0333	kjoseph@sauk-suiattle.com
Steven Mullen-Moses	Snoqualmie Tribe	425-292-0249 ext 2010	steve@snoqualmietribe.us
Kerry Lyste	Stillaguamish Tribe	360-652-7362 ex. 226	klyste@stillaguamish.com
Richard Young	Tulalip Tribes	425-239-0182	ryoung@tulaliptribes-nsn.gov
Guy Tasa PhD	DAHP, State Physical Anthropologist	360-586-3534	Guy.Tasa@dahp.wa.gov
Rob Whitlam	DAHP, State Archaeologist	360-586-3080	Rob.Whitlam@dahp.wa.gov
Kelly R. Bush	ERCI archaeologist	360-826-4930	kelrbush@equinoxerci.com