Tierra Right of Way
A LAND SERVICES COMPANY

Cultural Resources Assessment for the Soundview Business Campus Project, Everett, Snohomish County, Washington

Contains Confidential Information—Not for Public Distribution

Prepared by:
Melanie M. Diedrich, M.A., RPA
Jennifer Hushour, M.Sc., RPA

Tierra Archaeological Report No. 2014-077
August 6, 2014

Cultural Resources Assessment for the Soundview Business Campus Project, Everett, Snohomish County, Washington

Contains Confidential Information—Not for Public Distribution

Prepared by:
Melanie M. Diedrich, M.A., RPA
Jennifer Hushour, MSc., RPA

Prepared for:
John Laufenberg
Wetland Resources, Inc.
9505 19th Avenue SE, Suite 106
Everett, Washington 98208

Submitted by:
Tierra Right of Way Services, Ltd.
2611 NE 125th Street, Suite 202
Seattle, Washington 98125

Tierra Archaeological Report No. 2014-077
August 6, 2014

TABLE OF CONTENTS

Executive Summary 1
Introduction 2
Project information 2
  Facility Construction 2
Regulatory Context 2
  National Historic Preservation Act 2
Environmental Context 7
  Physiographic Province 7
  Geomorphology 7
  Soil Survey 8
Cultural Context 8
  Traditional Territories 10
  Recorded Place Names 10
  Settlement and Post-Settlement History 11
  History of Mukilteo 11
  DAHP WISAARD 13
  Historic Maps 13
Research Design 15
  DAHP Archaeological Predictive Model 15
  Evaluation of Historic Properties 16
    Significance 16
    Integrity 16
  Archaeological Expectations 17
    Soils and Geomorphological Context 17
    Land Use Patterns 18
    Conclusions 18
Field Investigations 18
  Surface Survey 19
  Subsurface Testing 19
Conclusions and Recommendations 27
References 28

LIST OF FIGURES

Figure 1. Detail of the Mukilteo, WA (1978), U.S. Geological Survey (USGS) 7.5-minute quadrangle map showing the project location. 3
Figure 2. Aerial view of project area in 2011. 4
Figure 3. Aerial view of project area in 2006, showing clearing of trees and undergrowth vegetation in 2005. 4
Figure 4. Proposed site development, plan view. 5
Figure 5. Portion of the proposed mitigation plans (image source: Wetland Resources, Inc.). 6
Figure 6. Portion of Metsker 1936 map showing platted landholdings overlain on Google Earth; APE outlined in red. 12
Figure 7. Portion of 1860 GLO Cadastral map (left); Portion of 1936 Metsker map (right). 14
Figure 8. Google Earth image with APE (red) and present-day drainage of Japanese Gulch/ Creek in blue. 14

Figure 9. Detail of aerial image depicting the project APE and Shovel Test Probe (STP) and backhoe Shovel Pit (SP) locations (image source: Google Earth 2013)....20

LIST OF PHOTOS

Photo 1. Dense blackberry growth seen throughout the site (left); surface visibility obstructed by dense blackberry growth (right)....21
Photo 2. View of the undergrowth evidence of logging just north of the trail along the south border of the site: stumps and moss-covered logs (left); wood-debris obstructed all surface visibility (right)....21
Photo 3. Notched tree stump observed on site following vegetation removal....22
Photo 4. Logged slash in piles. View is to the west....22
Photo 5. Mechanized vegetation removal....23
Photo 6. STP 8, northwest profile; arrow pointing to burned or rotting wood/root in north wall....24
Photo 7. STP 12, view of west profile with charcoal at 6–34 cm (2–13 inches) below surface, with the three soil horizons seen throughout the site....24
Photo 8. STP 13, west profile showing the three soil horizons observed at the site....25
Photo 9. STP 19....25
Photo 10. STP 20. View is to the north....26
Photo 11. STP 4. View is to the west....26

LIST OF TABLES

Table 1. Summary of Regional Precontact-era Settlement Patterns[a]....9
Table 2. Summary of Place Name Information Recorded by Waterman (1922, 2001)....11
Table 3. Cultural Resources Recorded within 1.6 km (1.0 Mile) of the Project Area....13

LIST OF APPENDICES

Appendix A. Summary of Results of Subsurface Testing....A.1

EXECUTIVE SUMMARY

Tierra Right of Way Services, Ltd. (Tierra), was contracted by Wetland Resources, Inc., to conduct a cultural resources assessment for the Soundview Business Campus Project (the project) located in Everett, Snohomish County, Washington. The project proposes to construct a large four-building facility on Snohomish County Tax Parcel 28040300200100. The four wetlands on the parcel will be filled for construction, and this will be mitigated through an offsite mitigation bank (location to be determined). Four archaeological sites and four properties listed on the National Register of Historic Places (NRHP) have been recorded within 1.6 km (1.0 mile) of the project location. Three ethnographically named places have been recorded within 1.6 km (1.0 mile) of the project location, all to the west and northwest of the project's area of potential effect (APE), within the City of Mukilteo along the shoreline. No archaeological sites or NRHP-eligible historic structures have been recorded within the APE.

Tierra's cultural resources assessment consisted of background review, field investigation, and production of this report. Background review determined the APE to be located in an area of moderate probability for historic properties. Field investigation included visual reconnaissance, limited pedestrian survey, and subsurface testing. Research did not identify any evidence to suggest that archaeological deposits or features might be present. Moreover, subsurface testing confirmed the relatively thin layer of potentially artifact-bearing soil (6–45 cm [2–18 inches]) above glacial till. <u>Therefore, Tierra recommends a finding of No Adverse Effect to cultural resources for this project.</u>

INTRODUCTION

Tierra was contracted by Wetland Resources to conduct a cultural resources assessment for the Soundview Business Campus Project (the project), located in Section 3, Township 28 North, Range 4 East, Willamette Meridian, in Everett, Snohomish County, Washington. The project proposes to divide approximately 39 acres into 5 lots of 4 buildings and a paved area containing 650 parking stalls on Snohomish County Tax Parcel 28040300200100 (Figures 1–3). The project also includes the filling of four wetlands. Mitigation of wetland filling will through use of an off-site mitigation bank. This report has been prepared to assess the effects of the project on cultural resources, in accordance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended.

PROJECT INFORMATION

Facility Construction

The project proposes to construct four buildings and parking lots and install utilities, storm water systems, and a central access road from 36th Avenue NE. Work associated with the building facilities and roadway would be within the central portion of the site. Project development would require clearing, grading, and grubbing, which would necessitate the removal of trees and heavy undergrowth within the proposed footprint.

Tierra understands the APE to be defined as the footprint of construction as described above and illustrated in Figures 1–5. Staging areas are to be located within the APE.

REGULATORY CONTEXT

National Historic Preservation Act

Under Section 106 of the NHPA, agencies involved in a Federal undertaking must take into account the undertaking's potential effects to historic properties (36 CFR 800.16(l)(1)).The project will require a permit from the U.S. Army Corps of Engineers (USACE), a Federal agency, and therefore the project is considered a Federal undertaking. The work performed by Tierra was intended, in part, to assist in regulatory requirements for Section 106 of the NHPA and the implementing regulations in 36 Code of Federal Regulations (CFR) Part 800. A historic property is typically aged 50 years or older and is defined in 36 CFR Part 800.16(l)(1) as follows:

> … any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

The procedures under Section 106 generally require the Federal agency involved in the undertaking to identify the APE, inventory any historic properties that may be located within the APE, and determine if the identified historic properties located within the APE may be eligible to be listed in or eligible for listing in the NRHP. An APE is defined in 36 CFR 800.16(d), as follows:

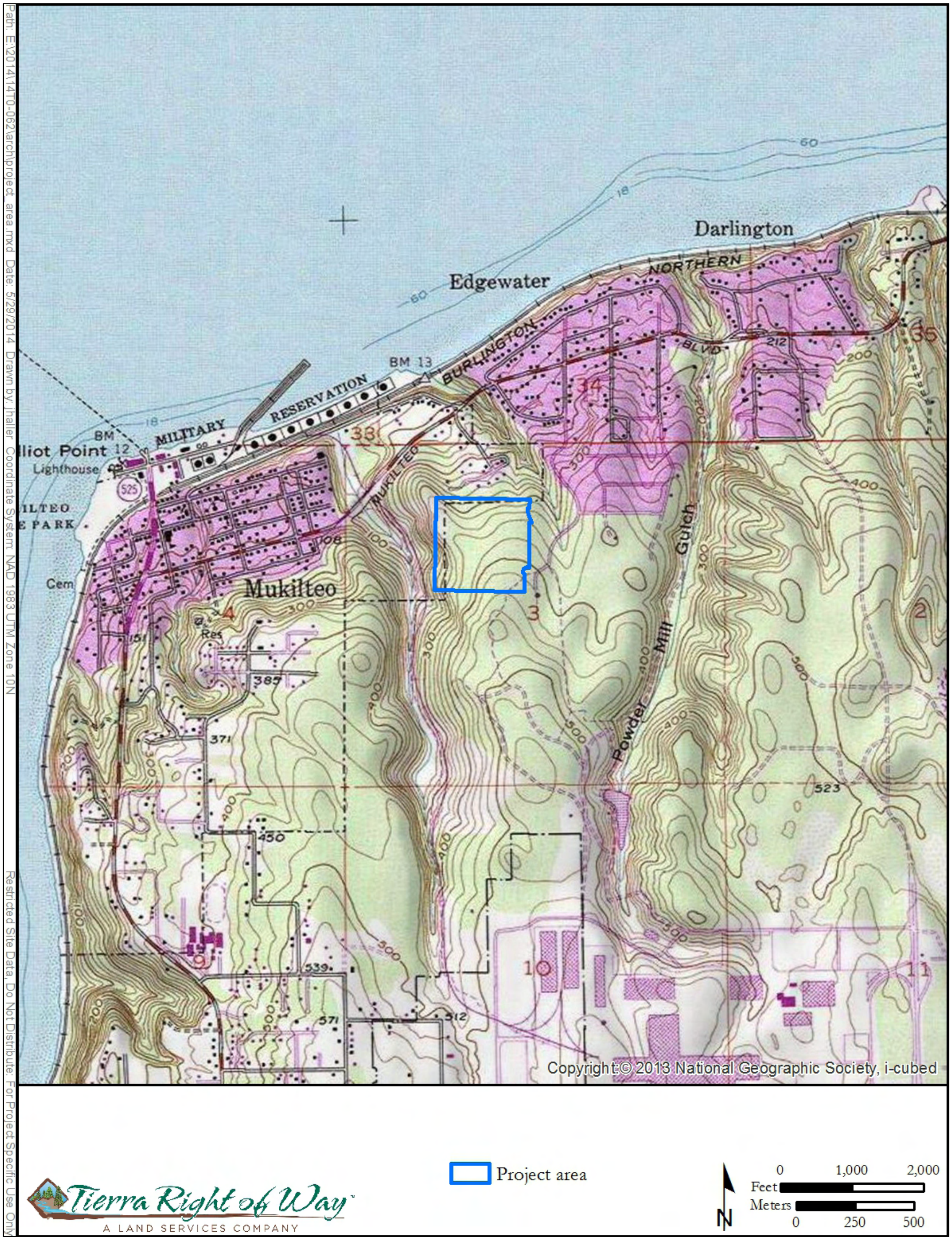

Figure 1. Detail of the Mukilteo, WA (1978), U.S. Geological Survey (USGS) 7.5-minute quadrangle map showing the project location.

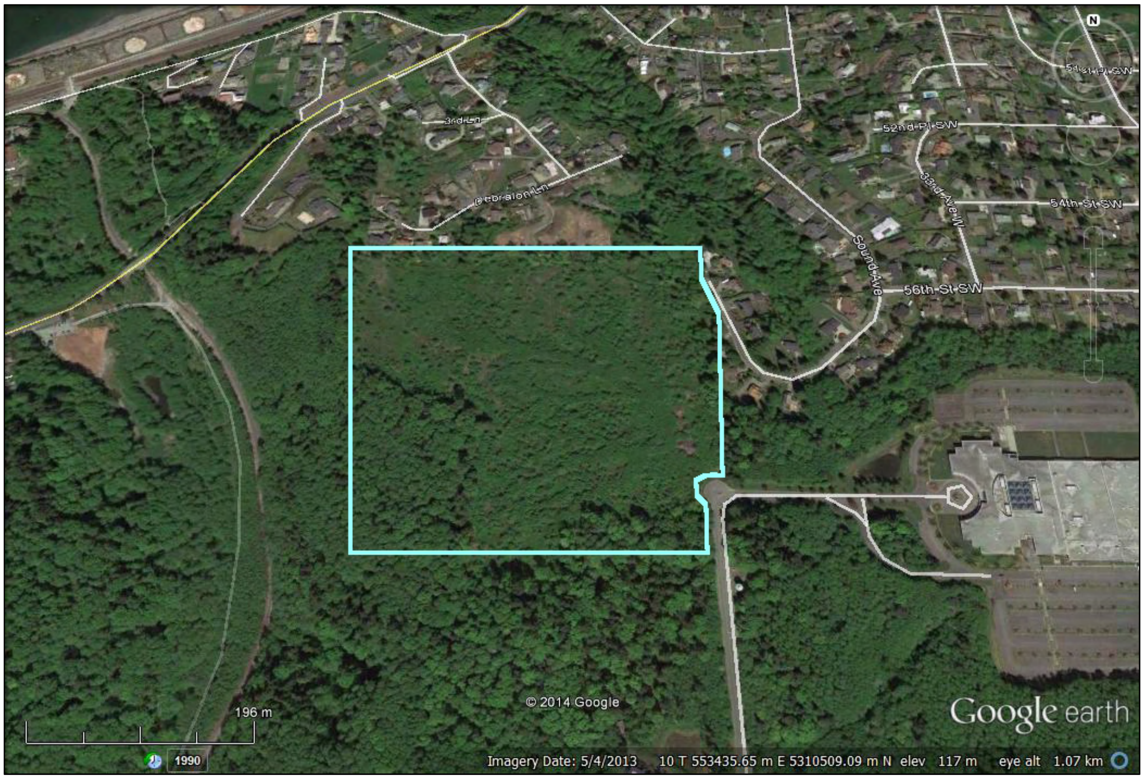

Figure 2. Aerial view of project area in 2011.

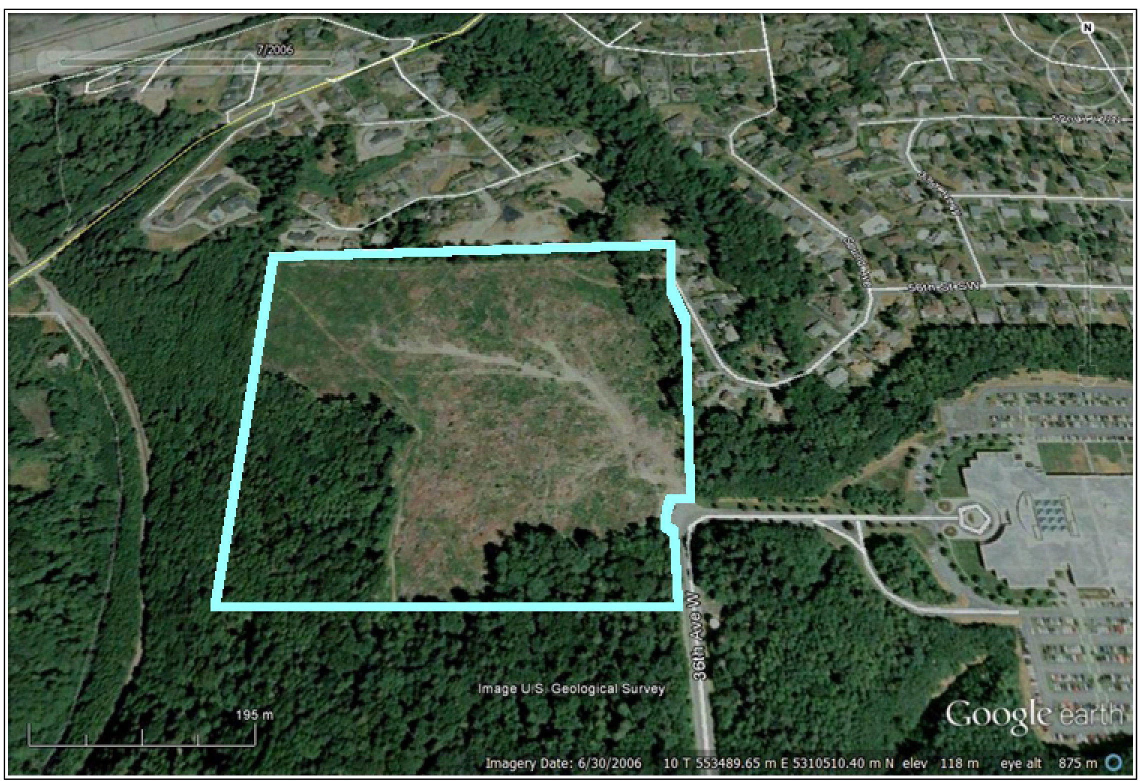

Figure 3. Aerial view of project area in 2006, showing clearing of trees and undergrowth vegetation in 2005.

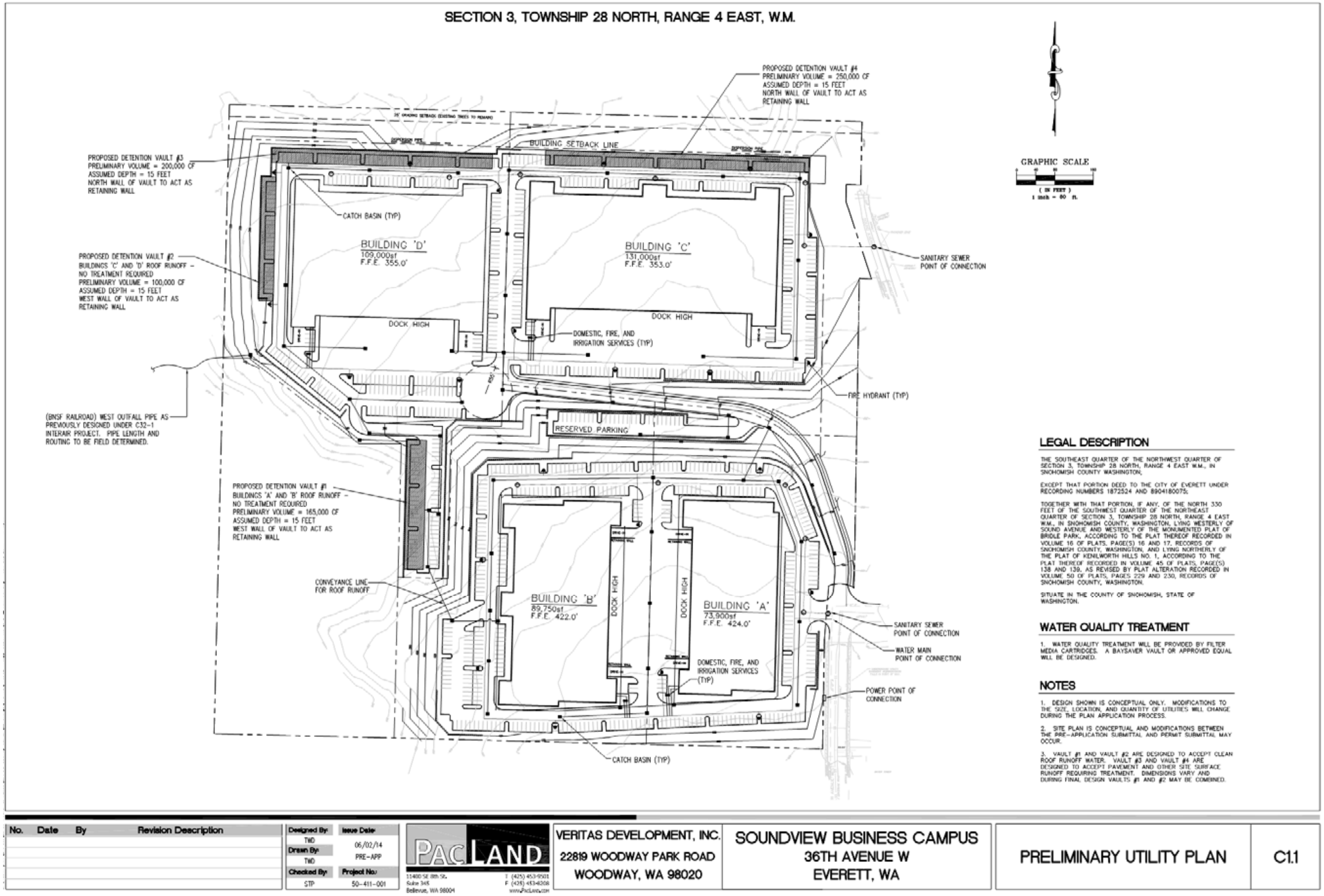

Figure 4. Proposed site development, plan view.

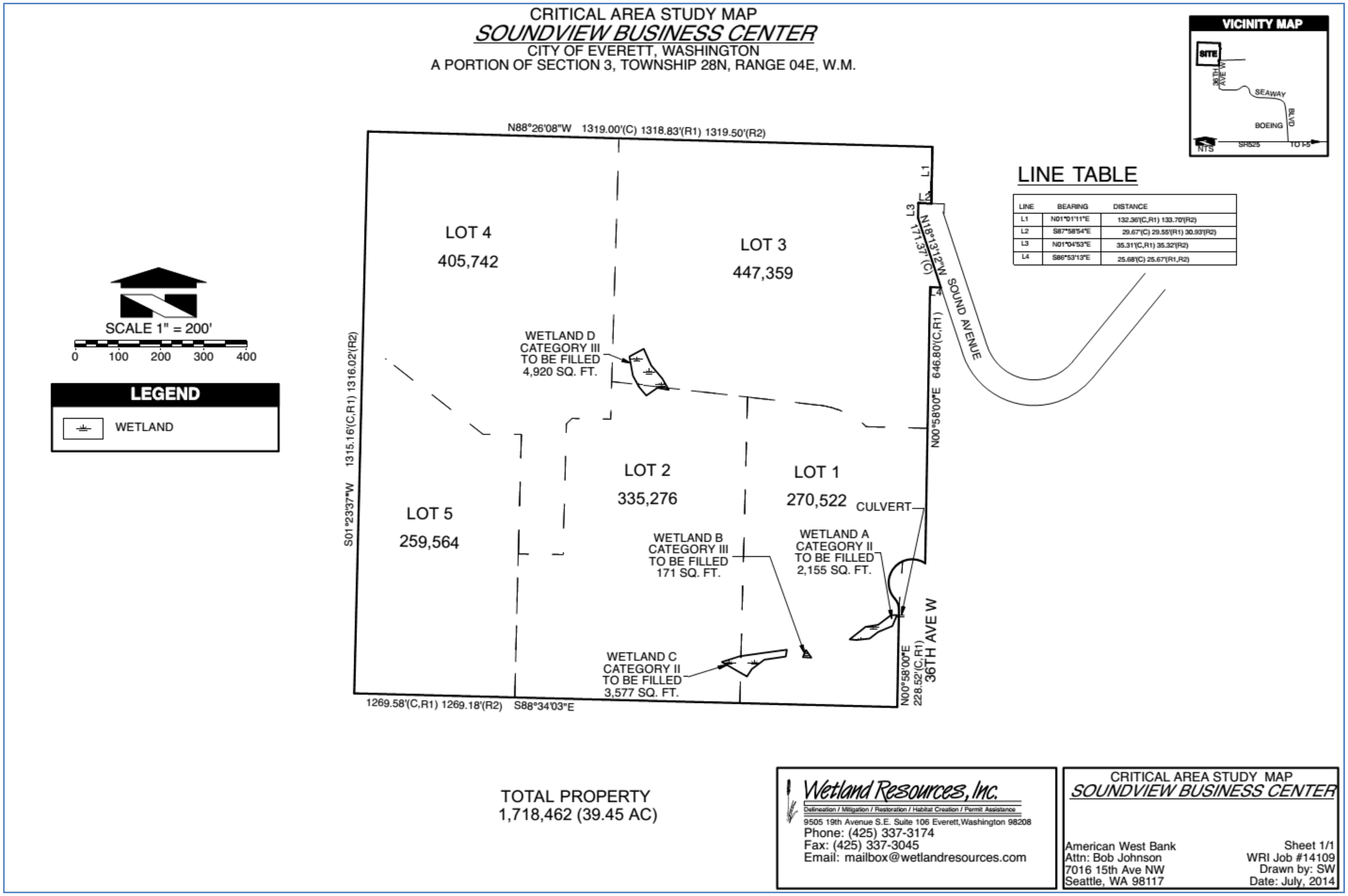

Figure 5. Portion of the proposed mitigation plans (image source: Wetland Resources, Inc.).

> …the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

If NRHP-eligible historic properties are identified within the APE, then potential adverse effects to the historic properties must be assessed and a resolution of adverse effects recommended. Under Section 106, the responsible Federal agency must, at minimum, consult with and seek comment from the State Historic Preservation Officer (SHPO) and/or the Tribal Historic Preservation Officer (THPO), as applicable, and consult with any affected or potentially affected Native American Tribe(s).

For the purposes of this analysis, the degree to which the project adversely affects NRHP-eligible historic properties is the primary criterion for determining significant impacts. Secondary criteria include whether an alternative has the potential to affect districts, sites, buildings, structures, and objects listed in or eligible for listing in the Washington Heritage Register (WHR), the State of Washington's equivalent of the NRHP.

ENVIRONMENTAL CONTEXT

Literature review for this project included a review of environmental data on the project area illustrated in geologic and soils maps and of reports on recent geological and geomorphological investigations that described subsurface conditions and the post-depositional processes likely to affect any cultural deposits in the study area.

Physiographic Province

The APE is located within the western hemlock *(Tsuga heterophylla)* vegetation zone of the Puget-Willamette Lowland physiographic province (Franklin and Dyrness 1988). Vegetation would have included western red cedar *(Thuja plicata)*, western hemlock, and Douglas fir *(Pseudotsuga menziesii)* prior to clearing. The project area presently consists of tall grasses, thistle, and wetland deciduous trees.

Geomorphology

The project area is located on a glacially deposited terrace overlooking the Japanese Gulch drainage in the southeastern portion of the Puget Lowland. The Puget Lowland is a geological and physiographic province that was shaped by at least four periods of extensive glaciation during the Pleistocene (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 at the end of the last of these glacial periods, the Fraser Glaciation (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 the 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 was thicker towards the north and thinned towards its terminus in the south. 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 modern landform is characterized primarily by deposits of glacial till with inclusions of hydric soils associated with glacial runoff. With the exception of minor fluctuations, which can be attributed to extensive land clearing during the nineteenth and twentieth centuries, the ecological landscape surrounding the APE has been relatively stable (Leopold et al. 1982).

The topography of the site is a generally northern aspect; the southwestern corner of the APE slopes steeply down to Japanese Gulch. There is a forested, defined wetland mosaic in the southeast corner of the site, as well as a disturbed Category III wetland area within the central portion of the property. The level portion of the project APE has been clear-cut within the past 10–12 years and has been replaced over time with dense early successional alder *(Alnus rubra)* and Himalayan blackberry (*Rubus* sp.) growth.

Soil Survey

Soils mapped within the APE consist of Alderwood gravelly sandy loam in the western and central portion and Alderwood-Everett gravelly sandy loam, 25–70 percent slopes, in the southeastern portion of the project area (NRCS 2014).

The Alderwood series consists of moderately deep poorly drained soils formed over hardpan. The soils are comprised of glacial till. A typical profile has a 18-cm-deep (7-inch-deep) A horizon of very dark grayish brown, ashy, gravelly sandy loam; a B horizon (Bw1, Bw2, Bg) from 18–89 cm (7–35 inches) of yellowish brown, dark brown, and olive brown very gravelly, ashy sandy loam containing areas of McKenna, Norma, and Medisaprists soils; and a C horizon (2Cd1, 2Cd2) from 89–152 cm (35–60 inches) of dark grayish to grayish brown gravelly sandy loam (NRCS 2014). Alderwood soils are moderately well drained and acidic (pH 5.8 to 6.0); the perched water table above the densic layer is highest from January through March. Native vegetation would have been predominantly red alder *(Alnus rubra)*, western red cedar, big leaf maple *(Acer macrophyllum)*, western hemlock, and Douglas fir, with an understory of salal *(Gaultheria shallon)*, Oregon grape *(Mohonia nervosa)*, western bracken fern *(Pteridium aquilinum)*, western swordfern *(Polystichum munitum)*, Pacific rhododendron *(Rhododendron macrophyllum)*, huckleberry (*Vaccinium* spp.), and orange honeysuckle *(Lonicera ciliosa)* (NRCS 2014).

The Alderwood-Everett series is similar to the Alderwood series. Everett soils are on glacial outwash terraces, terrace escarpments, drift plains, and moraines. A typical profile has a very thin Oi horizon of decomposing plant material over a narrow (5-cm [2-inch]) A horizon. The cambic (Bw) horizon is a 50.0-cm (19.7-inch) layer of decomposing parent material (NRCS 2014). Everett series soils have a strongly acid pH of 5.3 in the A horizon; the Bw horizon moves from a strongly acid pH of 5.5 in the upper layer to a moderately acid pH of 5.6 in the deeper layers. These soils formed under natural vegetation such as red alder, western red cedar, western hemlock, and Douglas fir, with an understory of salal, western swordfern, oceanspray *(Holodiscus discolor)*, and Oregon grape.

CULTURAL CONTEXT

The determination of the probability for historic properties to be located within the APE was based largely upon review and analysis of past environmental and cultural contexts and previously documented cultural resource studies and sites. Consulted sources included project files; local geologic data to better understand the depositional environment; archaeological, historic, and ethnographic records made available on the Washington Information System for Architectural and Archaeological Records Data (WISAARD) database; and selected published local historic records, including the Bureau of Land Management's (BLM's) General Land Office (GLO) Survey Records database, HistoryLink, Historic Map Works, the University of Washington's Digital Collection, and Washington State University's Early Washington Maps Collection.

Thousands of years of human occupation in the Puget Sound area have been summarized in a number of archaeological, ethnographic, and historical investigations over the past several decades. These provide a regional context for evaluating the project area (Greengo 1983; Matson and Coupland 1995; Nelson 1990) and will not be repeated in great detail here (Table 1).

Table 1. Summary of Regional Precontact-era Settlement Patterns[a]

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 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 persisted 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.

[a] From Carlson 1990; Larson and Lewarch 1995; Morgan et al. 1999; Nelson 1990; Wessen and Stilson 1987.

Human use of the area is generally oriented toward resource locations (e.g., fresh water, terrestrial and marine food resources, forests, and suitable terrain). Archaeological context for evaluating this project area is provided by information regarding the local and regional chronological sequence and research problem domains as included in Ames and Maschner (1999), Carlson (1990), Meltzer and Dunnell (1987), Wessen and Stilson (1987), and others.

Traditional Territories

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 1922, 2001). Information regarding Historic-era cultural features and land-use patterns was acquired by examining nineteenth-century maps. Additional resources for ethnohistoric accounts included electronic documents such as historical society and Tribal web pages.

The study area is within the traditional lands of the Southern Coast Salish people, who are now politically associated with the Stillaguamish and Snohomish Tribes (Haeberlin and Gunther 1930; Ruby and Brown 1992; Spier 1936; Waterman 1922, 2001). These are Southern Coast Salish speakers of a local dialect of the Lushootseed language (Native Languages 2013; Suttles and Lane 1990; Snohomish 2013). Native Americans in this area recognized distinctions between people based on landscape characteristics while maintaining close social and economic ties. "Saltwater Indians" lived at the mouth of the Snohomish River, using both riverine and marine resources. People living inland or upriver were referred to as "Canoe Indians" and made their living from both terrestrial and riverine resources (Suttles and Lane 1990; Waterman 1922, 2001).

The Snohomish Tribe "comprised the largest Native American population in this county area… [living] along the shores of Puget Sound from Warm Beach, [south] to Richmond Beach and along the Snohomish River to Monroe" (Riddle 2006). In 1855, the Snohomish, Stillaguamish, and other Puget Sound Tribes met Governor Isaac Stevens and signed treaties which relinquished traditional Tribal lands and forced local Tribes onto reservations. The Snohomish Tribal leaders signed the Point Elliott Treaty, but when it was not ratified, war broke out, and for a time the Snohomish people were placed in internment on Whidbey Island (Snohomish 2013). Following the implementation of the 1855 Treaties by executive order of President Grant in 1873, the Snohomish, Snoqualmie, Skagit, Suiattle, Samish, Stillaguamish, and others were placed on the Tulalip Reservation. Although recognized as a "political entity" as signers of the Point Elliot Treaty, the Snohomish people are not recognized as a "Tribal entity" by the Federal government, and continue to seek Tribal acknowledgement and land restoration (Ruby and Brown 1992:214; Tulalip Tribes 2014). Today, the combined Tulalip Tribes exercise traditional fishing rights extending from the Canadian border south to Vashon Island, including the Snohomish River. The Snohomish Tribe also considers the project area vicinity as a usual and accustomed place (Riddle 2008).

Recorded Place Names

Waterman (1922, 2001) recorded numerous named geographic features near the project area. These include descriptive names for geographic features, resource procurement sites, village (or habitation sites), and names associated with mystical events. Although there are no recorded place names within the project APE or on the parcel's landform, there are two place names recorded within 1.6 km (1.0 mile) to the west of the project APE, one to the north, and one approximately 3.2 km (2.0 miles) to the northeast; all four places are on the shoreline, as would be expected given our current understanding of precontact-era settlement and land use patterns. The two closest are very near or on Point Elliott (Table 2). *Beka'lti*, translated as a "good camping ground," was on the "land spit and adjoining salt marsh" that became present-day Mukilteo (Waterman 1922, 2001). According to Riddle (2007), this was the site of a Snohomish permanent winter village. The author goes on to say:

> According to Tribal tradition, Dokwibuth the Transformer instructed inhabitants to move from this spot north to the mouth of the Snohomish River, where they built the fortified village of Hebolb (Riddle 2007).

The name Mukilteo is an anglicized pronunciation of *Beka'lti* and has also been translated as "to swallow" or "narrow passage" or "a throat, a neck, or narrowing in a body of water" (Riddle 2007).

Table 2. Summary of Place Name Information Recorded by Waterman (1922, 2001)

Name	Translation	Location	Distance and direction from APE
Hudsli'gwEd	middle or center place, your soul side	central waterfront in Everett	3.62 km (2.25 miles) northeast
HuxuktL!a³al	tops of trees are broken off at this location	a place on the shoreline west of Everett	1.40 km (0.87 miles) north-northeast
Sklels	dirty rocks	a spot on the shore very close to Point Elliot	1.37 km (0.85 miles) west
Beka'l ti^u	good camping ground, or narrow passage	the town of Mukilteo	0.40–1.37 km (0.25–0.87 miles) west

Settlement and Post-Settlement History

Encouraged by the Donation Land Claim Act, a wave of Euroamerican settlers arrived in the area in the 1850s, largely by way of the Naches Pass Trail (Bjarke 1942; Bonney 1927; Meany 1910). Several years later, as a result of the Homestead Act of 1862, another influx of settlers arrived. These settlers farmed on the prairies and along the rivers, logged the upland forests, and extracted coal (Carpenter 1986; Marino 1990). Chinese and Japanese immigrants first arrived in the area in the latter part of the nineteenth century. Coal and logging ventures brought about further settlement and development of the region.

History of Mukilteo

The APE is within the modern-day extension of the Everett City limits; however, the historic City center (ca. 1910) would have been about 3.2 km (2.0 miles) to the northeast. The historic landmarks and archaeological sites within 1.6 km (1.0 mile) are to the west of the project area in the town of Mukilteo.

Although the APE has largely remained untouched since the logging activities within the last 10–12 years, the landscape surrounding the project area has been radically transformed. It has essentially been old-growth forest, timber land, and an industrial and travel corridor all within the past 150 years. Nearby Japanese Creek, which runs alongside the Boeing railroad spur to the west of the project, has been straightened and channelized. This rapid shift of land use is typical of western settlement and illustrates the rapid rate of changing priorities not just in western culture, but in all cultures in the area. With the exception of railroad development just beyond and downslope of the western boundary, much of the APE seems to have escaped the typical western Washington metro-area cycle of rapid urbanization.

In January of 1861, the territorial legislature created Snohomish County, making Mukilteo its temporary County seat pending elections. In July of that same year, the first County post office was built, and Jacob Fowler, one of the two original homesteaders on the site, was appointed postmaster. In 1870, two enterprising Mukilteo businesses were founded; what became the Eagle Brewery set up in a ravine that was later called Brewery Gulch, and a salmon-salting business that later became a salmon cannery was built by Vining & Rheinbruner. Mukilteo was also an important hub for the logging business (Riddle 2007).

The Crown Lumber Company opened on the waterfront in 1903 and attracted Japanese mill workers who settled in the small mill town built by the company along the ravine and drainage that became known as Japanese Gulch. The mill workers often supplemented their diet with fish caught in nearby Japanese Creek (Odoi 2014). Crown Lumber was the major employer in Mukilteo during the 1920s, but was closed in 1930 when the Great Depression hit, causing the workers to move away to find other jobs (Mukilteo Historical Society 2014). The 1936 Metsker Atlas map of Snohomish County shows Crown Lumber Company as the major landowner within the project APE; Puget Mill Company and Merrill & Ring Logging Company also owned land nearby (Figure 6).

Figure 6. Portion of Metsker 1936 map showing platted landholdings overlain on Google Earth; APE outlined in red.

DAHP WISAARD

The WISAARD database indicates that there are no recorded archaeological sites or NRHP- or WHR-listed properties within the APE. The four sites (Table 3) within 1.6 km (1.0 mile) of the APE are downslope from the terrace upon which the APE sits. The Japanese Gulch refuse scatter is at the mouth of Japanese Creek, which runs adjacent to the Burlington Northern Santa Fe (BNSF) Boeing Spur rail line, originally built by the U.S. Army in the mid-1940s to service the Mukilteo Explosives Loading Terminal. The other three archaeological sites are on the Mukilteo shoreline, running west from the Gulch to Point Elliott. There are four historic properties listed on the NRHP: the Mukilteo Light Station at Point Elliot, the Point Elliott Treaty Site, the Point Elliott Treaty Monument, and the Fowler Pear Tree all within 0.8–1.4 km (0.5–0.9 miles) of the APE. None of these sites will be affected by the project.

Table 3. Cultural Resources Recorded within 1.6 km (1.0 Mile) of the Project Area

Site	Description	Location	Status	Project Effects
45SN575	Japanese Gulch Community, refuse scatter	0.45 km (0.28 miles) west-northwest, at the mouth of the creek	potentially eligible	none
45SN398	Japanese Gulch Village, house floor feature	0.64 km (0.40 miles) west-northwest, on the south side of the main rail line	eligible	none
45SN393	Mukilteo shoreline site, precontact shell midden	0.8 km (0.5 miles) west-northwest along the shoreline, north of the main rail line, extending to Point Elliott	eligible	none
45SN404	Crown Lumber Company Store, historical commercial property and debris	1.20 km (0.75 miles) west, just south of precontact shell midden on shoreline	eligible	none

Historic Maps

A review of mid-to-late nineteenth- and twentieth-century maps shows the project area is relatively unchanged in regard to urban development since 1895 (Figure 7) (Metsker 1936; GLO 1860). This may be because up until 1930, most of the APE was owned by various logging interests. Landscape modifications appear to have been largely associated with logging, rail construction, and drainage. These changes can be identified by an examination of available historical maps and aerial imagery. The 1860 GLO map (see Figure 7), for example, shows Japanese Creek with a much wider meander than depicted on a recent Google Earth aerial image (Figure 8), which illustrates the modified drainage created after the development of the rail spur. No additional paved roads, homesteads, or urban centers or housing developments are seen in any of the historical or modern maps. Apart from ground disturbance associated with the rail spur and creek re-channelization, land development within the APE has been limited to surface ground disturbance during historical and modern logging and grubbing operations.

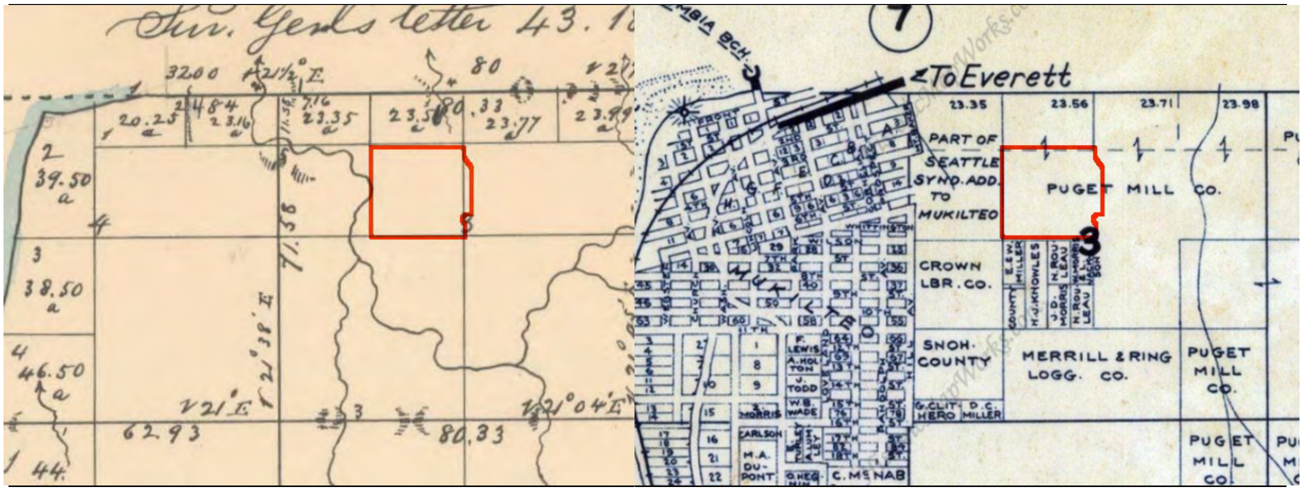

Figure 7. Portion of 1860 GLO Cadastral map (left); Portion of 1936 Metsker map (right).

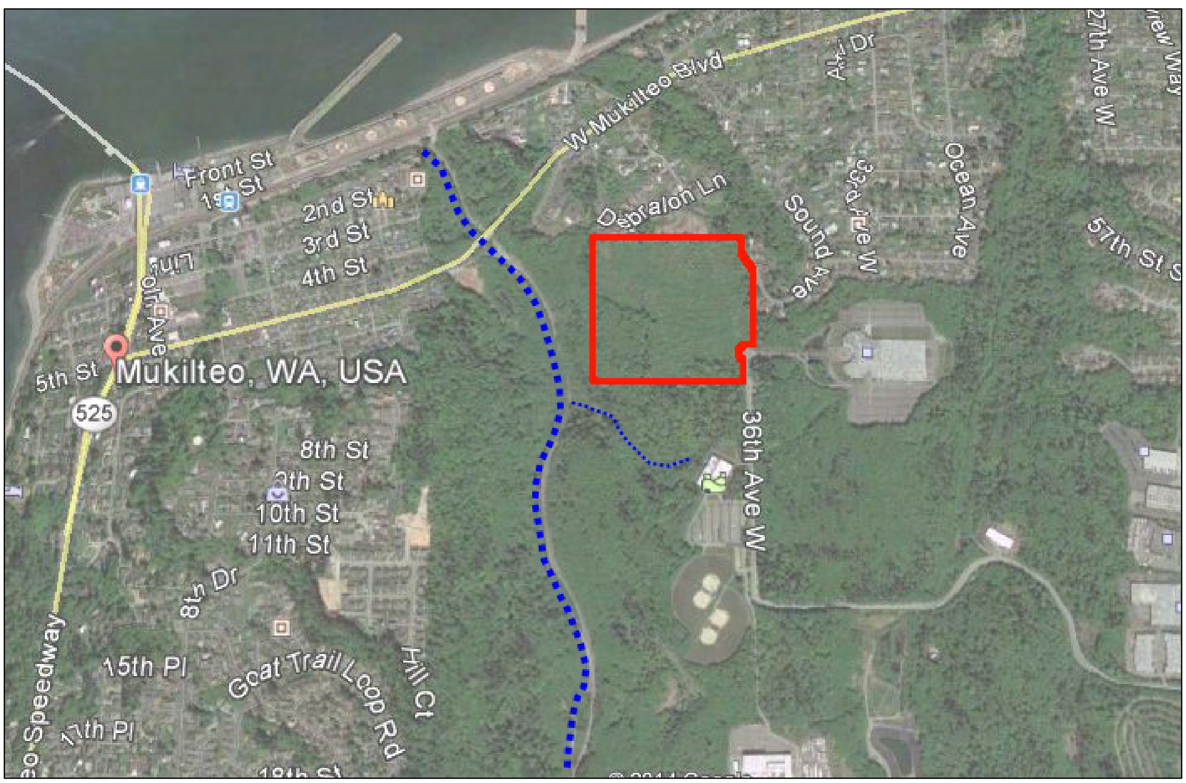

Figure 8. Google Earth image with APE (red) and present-day drainage of Japanese Gulch/Creek in blue.

RESEARCH DESIGN

DAHP Archaeological Predictive Model

The predictive model map overlay indicates that the project is within an area identified as "Survey Contingent Upon Project Parameters: Low Risk" and "Survey Contingent Upon Project Parameters: Moderately Low Risk".

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 Washington Department of Archaeology and Historic Preservation (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 represented 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, since, 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 it therefore "rates" projects undertaken on a specific landscape as having a high or low risk to encounter archaeological deposits without providing a distinction between historic and precontact sites or between archeological isolates and village sites.

This should not be viewed as a failure of the model so much as a function of the model. As noted on the Minnesota Department of Transportation's (MnDOT 2013) 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.

In this report, the author presents a project assessment that considers the implications of the predictive model but is also 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 resource surveys (Bush 2013; Piper et al. 2012; White 2008) and surveys conducted on similar landforms (Berger 2009; Landreau and Geffen 2003; Kenmotsu 2008; Rinck and Boggs 2010; Robinson 2004). 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 of and conditions of archaeological materials which may be encountered.

Evaluation of Historic Properties

Historic properties, defined by the National Park Service (NPS) as "a district, site, building, structure or object significant in American history, architecture, engineering, archeology or culture at the national, State, or local level," are typically evaluated in terms of historic significance, integrity, and the general stipulation that the property be 50 years old or older (for exceptions, see 36 CFR 60.4, Criteria Considerations [a–g]).

Significance

NRHP Bulletin Guidelines (Little et al. 2000; Shrimpton 1990) state that in order to be eligible for listing in the NRHP, a historic property must be significant in American history, architecture, archaeology, engineering, or culture and possess integrity of location, design, materials, workmanship, feeling, and association. Additionally, to be considered eligible, a historic property must meet one or more of the four criteria:

a) The property must be associated with events that have made a significant contribution to the broad patterns of our history; or
b) The property must be associated with the lives of persons significant in our past; or
c) The property must embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
d) The property must have yielded, or may be likely to yield, information important on prehistory or history.

Most cultural resources, historic and prehistoric alike, are evaluated under Criterion (d), their potential to yield important information. This objective is accomplished by developing historic contexts. A historic context is a body of information about the past and the tangible expressions of past events organized by the elements of theme, place, and time (NPS 1986, 1991).

Integrity

Integrity is the ability of a historic property to convey its significance. Integrity must be evident through historic qualities that include location, design, setting, materials, workmanship, feeling, and association (NPS 1991:1). Degree of integrity should be taken into consideration when evaluating resources under the NRHP criteria, for example:

- If eligible for its historic associations under Criterion (a), then the resource should retain substantial aspects of its overall integrity, although design and workmanship may not weigh as heavily as those aspects related directly to its historic associations.
- To be eligible for its association with a prominent person under Criterion (b), the resource should retain some aspects of integrity, although design and workmanship may not be as important as the others.

- To be eligible for its architectural merits under Criterion (c), a resource must retain its physical features that constitute a significant construction technique or architectural style. Critical aspects of integrity for such properties are design, workmanship, and materials. Location and setting will also be important for those resources whose design reflects their immediate environment.
- Resources significant under Criterion (d) may not have the type of integrity described under the other criterion. Of the seven aspects of integrity, location, design, materials, and possibly workmanship are the most important.

Archaeological Expectations

Soils and Geomorphological Context

Given the presence of mapped soils indicative of ancient glacial till terrace (Alderwood and Alderwood-Everett gravelly sandy loam), primary soil deposition in this location, which is sterile glacial till, would have occurred long before human habitation. Some post-glacial shallow soil within the forest and wetland environment of the terrace cover the glacial till and might contain evidence of patterned human behavior, including expressions of episodes of resource gathering and/or processing, travel or short-term/single-use camp sites represented by lithic scatters, and/or small concentrations of fire-modified rocks (FMR). The absence of recorded trail systems and/or freshwater sources in the terrace uplands make the project area an unlikely location for any of these types of resources. As indicated in Table 1, from 5,000 years ago to the early contact period large village occupation sites generally occurred in lowland areas, were associated with fish weirs, and were typically located adjacent to or near river or marine transportation routes. Occupation of upland terrace locations would most likely have occurred 15,000–5,000 years ago; these sites are represented by temporary camps and lithic workshops. Expected artifact assemblages would include flaked stone tools, cobble tools, large-animal bones, and fish bones.

Anaerobic conditions in wetlands often provide good preservation of cellulose and other plant fibers (Diedrich 2013). However, soil pH[1] is a better indicator of whether or not an area is preservative for other organic materials, such as bone or shell. According to Deborah Surabian (2011:4):

> The pH of soil has the largest influence on bone preservation, with preservation generally advantageous in soils above pH 5.3 and adverse in soils pH 5.3 or less. Soils containing a highly acidic pH will decompose bone rapidly … If the soil is neutral or basic, a buried skeleton may persist for centuries in good condition. In a corrosive soil environment, it is clear that, irrespective of taphonomy, the outcome will be the same: catastrophic mineral dissolution.

The potentially artifact-bearing soils consist of a very shallow layer of soil that would have provided little protection for cultural deposits, if any were present. Additionally, the glacially derived soils mapped in the project area would poorly preserve organic materials, as soil conditions are not anaerobic and the soil pH values range from strongly to moderately acidic. The hydric soils mapped in the central and southeastern portion of the APE, while likely to present anaerobic conditions, are moderately acidic in the upper layers and slightly acidic in the deeper layers. This means that

[1] A pH less than 7 is acidic and a pH greater than 7 is basic or alkaline.

although wood or plant fibers might be present in the wetland soils, preserved bone would be unlikely.

As ephemeral as early upland camp sites would have been, and given the general acidity of evergreen forest soils, it is unlikely that anything other than lithic tools or flakes would have survived.

Land Use Patterns

While there is extensive evidence of use of the nearby shoreline and presumed use of the riverine environments for a wide variety of resources (e.g., marine and freshwater fish, rushes, shellfish, and transportation) in the precontact and ethnohistoric eras, precontact use of the forested uplands tended to be limited to resource gathering (cedar bark, cambium, root gathering), hunting, and travel, all of which left few or no archaeological footprints. No known trails were evident on the 1860 GLO map, and the gravelly glacial till topped by thin forest topsoil presents a low probability for preservation. The parcel was again logged and mechanically cleared of vegetation sometime around 2005, when a grading permit was obtained prior to the development of the parcel (which never took place). The history of Settlement and post-Settlement land use in the wider region indicates that the surface and near-surface environment within the project area is likely to have been profoundly affected by timber and stump removal.

Conclusions

While there is ample archaeological evidence for human activity in the region dating to 10,000 years B.P. and an ethnographically recorded village site less than 1.6 km (1.0 mile) west at Point Elliott, the APE was not likely to have been used for long-term habitation until the early Historic era. The geomorphological context (e.g., wetland and glacial till terrace above a steep gulch and fish-bearing Japanese Creek) and understood patterns of land use indicate that evidence of late precontact use of the project area could include surface or near-surface expressions of episodes of resource gathering and/or processing or travel or short-term/single-use camp sites represented by lithic scatters and/or small concentrations of FMR and charcoal. Given the relatively thin layer of potentially artifact-bearing soil (6–45 cm [2–18 inches]) above glacial till in the central wetland portion of the site (which is proposed to be filled), and historic logging and grubbing activities, disturbance may extend well into the upper, potentially artifact-bearing soils. The result would be moderately to highly disturbed surficial or near-surface deposits atop Pleistocene (culturally sterile) glacial till.

Post-Settlement land use is generally represented in the local archaeological record by structural foundations; fence posts; metal tools and/or hardware; refuse such as ceramic, can, and/or glass fragments; and evidence of slashpile or trash burning. If field use required drainage, terra cotta tiles, pipes, and other drainage features would also be expected. No structures, fence lines, or drainage features are evidenced on any historic or modern map. It is unlikely that any historic cultural resources located would be considered eligible for listing on Federal or local historic registers.

FIELD INVESTIGATIONS

Field investigation was conducted by Jenifer Hushour, Melanie Diedrich, and Keith Solmo on May 13, 14, 27, and 28, 2014, in clear, warm weather. Tierra archaeologists conducted shovel testing along the existing trails (n=14) on the first 2 dates, and then again following vegetation removal (n=7) on May 27th and 28th, for a total of 21 shovel test probes (STPs). Additionally, the excavations of four mechanized soil test pits (SPs) were observed by Tierra archaeologists. No other shovel testing was possible at this time since the permit obtained for the vegetation removal and soil test pits extended only to the area indicated in Figure 9 and the overgrowth was otherwise impenetrable (Photo 1).

Surface Survey

The project location is comprised of a relatively flat, north-sloping terrace containing big leaf maple and Douglas fir; dense, closely spaced early successional red alder trees; and wetland undergrowth of red elderberry *(Sambucus recemosa)*, salmonberry *(Rubus spectabilis)*, and extensive invasive Himalayan blackberry growth. Blackberry growth exceeded 3 m (10 feet) in height over most of the area, the and completely obscured and obstructed access to ground surface (Photo 2; see Photo 1). On May 13th and 14th, surface survey was conducted, but due to the dense vegetation, survey was limited to either side of the established walking trails on the east and south perimeters of the project area. Mechanized grubbing into the interior area on May 27th and 28th offered some additional surface survey opportunity.

The parcel has been cleared for logging at least twice in its history. One episode likely occurred during the Historic era, based on the 1936 Metsker map (see Figure 6) showing it as mill property and a notched tree stump observed after vegetation removal (Photo 3). The parcel was again logged and mechanically cleared of vegetation sometime around 2005, when a grading permit was obtained prior to planned development of the parcel that never actually took place (see Figures 2 and 3). Logging slash was bulldozed into centrally located piles at this time, which is noted in the Wetland Resources "Critical Area Study and Wetland Mitigation Plan for Interair Commerce Center" (2011); logging slash was also observed during the archaeological survey (Photo 4). After the 2005 clearing of the parcel, vegetation was allowed to grow back. The area is now completely covered in dense young alder, blackberries, and salmonberry. Vegetation was so dense that, except along existing trails, penetration for our testing purposes was impossible without the aid of mechanical removal (Photo 5; see Photos 1–4). The proponent therefore used a mechanical excavator to clear vegetation from a portion of the parcel on May 27th and 28th. A permit for this work was obtained from the City of Everett. No grading or excavating was conducted, with the exception of the soil testing discussed below. All vegetation removal and the excavation of soil test pits was observed by a Tierra archaeologist, with negative results.

Subsurface Testing

Testing consisted of the excavation of a total of 21 STPs. Testing on May 13th and 14th consisted of excavating STPs 1–6, along the west side of the south-north trail along the eastern perimeter, and STPs 6–14, along the north side of the east-west-ranging trail along the south portion of the site. This east-west trail bordered the northern perimeter of the wetland mosaic area on the southeast corner of the site connecting to the steep slope of Japanese Gulch.

Along both the eastern and the southern perimeters, the sediments observed were consistent overall. A shallow forest-soil A horizon consisted of dark yellowish brown sandy loam with rooty organics and small pea-sized rounded gravels atop Alderwood-Everett series glacial till of light olive to gray sandy silt with rounded gravels and cobbles.

In roughly half of the STPs a third strata was evident; it was found either between the A horizon and the glacial deposits or it replaced the forest soil entirely. This layer consisted of a brown sandy silt loam containing organics including charcoal bits, charred roots, and woody debris with cobbles and gravels (see Photos 3–5).

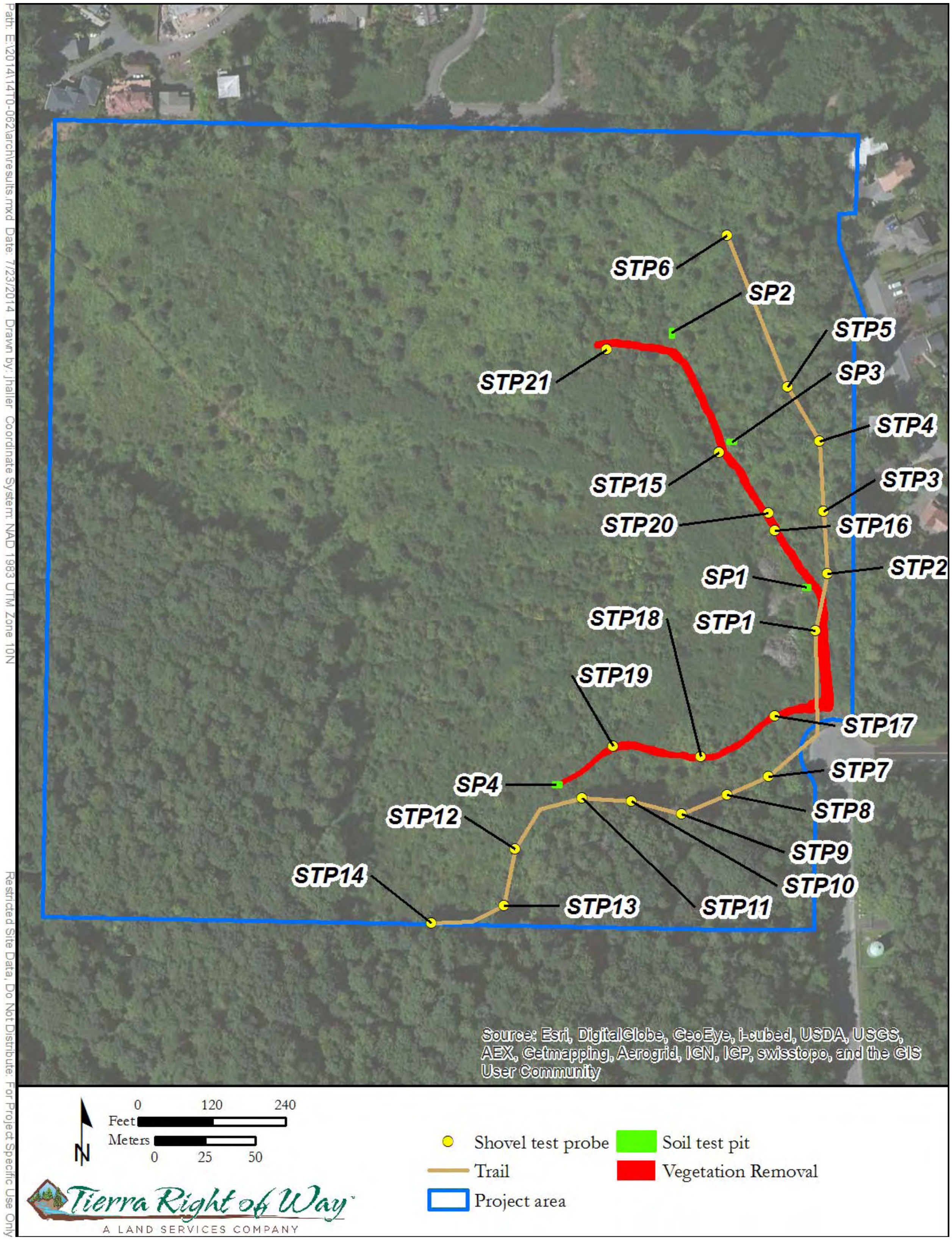

Figure 9. Detail of aerial image depicting the project APE and Shovel Test Probe (STP) and backhoe Shovel Pit (SP) locations (image source: Google Earth 2013).

Photo 1. Dense blackberry growth seen throughout the site (left); surface visibility obstructed by dense blackberry growth (right).

Photo 2. View of the undergrowth evidence of logging just north of the trail along the south border of the site: stumps and moss-covered logs (left); wood-debris obstructed all surface visibility (right).

Photo 3. Notched tree stump observed on site following vegetation removal.

Photo 4. Logged slash in piles. View is to the west.

Photo 5. Mechanized vegetation removal.

This strata suggested clear mixing of surface soil with glacial till material, indicating past disturbance that was probably associated with logging, grubbing, stump removal, and bulldozing activities either in 2005 or perhaps earlier. Testing on May 27th and 28th consisted of the excavation of seven additional STPs (STPs 15–21) and four soil test pits (SPs 1–4), along the mechanically cleared path west and north of the testing performed earlier in the month. The SPs revealed the same forest soil A horizon over a mixed and disturbed B horizon consisting of orange-brown sandy silt loam containing charcoal bits, wood, and roots among typical glacially deposited rounded and subrounded cobbles and gravels (Photos 6–11). The olive-to-gray glacial till was observed in all the STPs and SPs at depth. No artifacts, features, or other cultural indicators were observed in the soil test pits, shovel probes, walls, or backdirt.

Photo 6. STP 8, northwest profile; arrow pointing to burned or rotting wood/root in north wall.

Photo 7. STP 12, view of west profile with charcoal at 6–34 cm (2–13 inches) below surface, with the three soil horizons seen throughout the site.

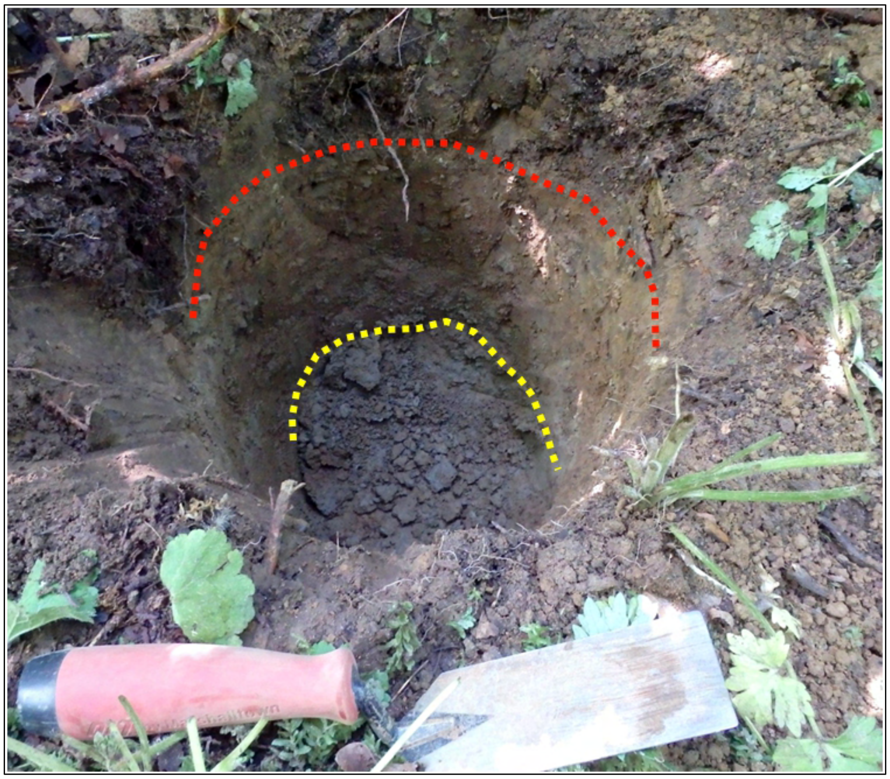

Photo 8. STP 13, west profile showing the three soil horizons observed at the site.

Photo 9. STP 19.

Photo 10. STP 20. View is to the north.

Photo 11. STP 4. View is to the west.

CONCLUSIONS AND RECOMMENDATIONS

Tierra's cultural resources assessment consisted of background review, field investigation, and production of this report. Background review determined the APE to be located in an area of low probability for historic properties. Field investigation included visual reconnaissance, limited pedestrian survey, and subsurface inspection.

Neither research nor subsurface testing identified any evidence to suggest that archaeological deposits or features might be present.

DAHP predictive model probability calculations are based on known environmental factors and/or information derived from archaeological research. Historic land use patterns indicate that much of the surface and near-surface environment has been highly disturbed by modern construction events and serial flooding and scouring. The absence of artifacts and features within the project area may be a result of the lack of distinctive archaeological signatures associated with the types of pre-modern activities practiced within this wooded terrace area. Furthermore, given the depositional environment, the history of post-Settlement logging practices, and the reported recent disturbance events, no intact archaeological deposits are likely to be located below the surface. The aerial view of the 2005 logging, stump clearing, and leveling in Figure 3 argue strongly for fairly deep soil disturbance. Moreover, subsurface testing confirmed the relatively thin layer of potentially artifact-bearing soil (6–45 cm [2–18 inches]) above glacial till. Given these project conditions and the fact that the ground-disturbing activities are planned in areas unlikely to contain intact archaeological deposits, the likelihood that intact archaeological deposits would be encountered is extremely low. <u>Therefore, Tierra recommends a finding of No Adverse Effect to cultural resources for this project.</u>

In the unlikely event that archaeological materials are encountered during the development of the property, an archaeologist should immediately be notified and work should be halted in the vicinity of the find 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 established with local police, the DAHP, and any concerned Tribal agencies.

REFERENCES

Ames, K.M., and H.D.G. Maschner
1999 *Peoples of the Northwest Coast, Their Archaeology and Prehistory*. Thames and Hudson Ltd., London.

Berger, M.
2009 *Cultural Resource Assessment of the SR 525/88th Street Intersection Improvements Project, City of Mukilteo, Snohomish County, WA*. Cultural Resource Consultants, Inc., Bainbridge Island, Washington.

Bjarke, N.
1942 *Naches Pass Trail, 1853*. Fern Hill Historical Society, Tacoma, Washington.

Bonney, W.P.
1927 *History of Pierce County, Washington, Vol. 1*. Pioneer Historical Publishing Company, Chicago.

Bucknam, R.C., E. Hemphill-Haley, and E.B. Leopold
1992 Abrupt Uplift Within the Past 1700 Years at Southern Puget Sound, Washington. *Science* 258:1611–1614.

Bush, K., S. Johnson, and R. Kneifel
2013 *Archaeological Investigation Report: Boeing Everett Powder Mill Gulch Phase II Interim Action, Seaway Blvd, Everett, Washington*. Equinox Research and Consulting International, Inc., Concrete, Washington.

Carlson, R.L.
1990 Cultural Antecedents. In *Northwest Coast*, edited by W.P. Suttles, pp. 60–69. Handbook of North American Indians, Volume 7, W. C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Carpenter, C.S.
1986 *Fort Nisqually—A Documented History of Indian and British Interaction.* Tahoma Research Publications, Tacoma.

City of Newcastle
1999 *Cemetery Detail Report for Newcastle Cemetery*. On file at the Department of Archaeology and Historic Preservation, Olympia.

Chambers, Jennifer
2006 *Cultural Resources Assessment for the Duvall NE/Coal Creek Parkway SE Road Widening Project, King County, Washington.* Washington State Historical Society, Bainbridge Island.

Chatters, James
2009 *Recovery of Two Early 20th Century Graves from Renton, Washington*. AMEC, Inc., Bothell, Washington.

Chinese in Northwest America Research Committee (CNARC)
2010 Coal and Ethnic Cleansing: Driving Chinese from Washington Mines. Available at: http://www.cinarc.org/Violence.html#anchor_173. Accessed on February 15, 2014.

Clague, John J., and Thomas S. James
2002 History and Isostatic Effects of the Last Ice Sheet in Southern British Columbia. In *Quaternary Science Reviews* 21:71–87.

Duwamish et al. Tribes of Indians vs. The United States of America
1933 *Testimony before the Court of Claims of the United States*. Proceedings of the Indian Court of Claims, No. F-275.

Easterbrook, Don J.
2003 Cordilleran Ice Sheet Glaciation of the Puget Lowland and Columbia Plateau and Alpine Glaciation of the North Cascade Range, Washington. In *Western Cordillera and Adjacent Areas*, edited by T. W. Swanson, pp. 137–157. Geological Society of America, Boulder, Colorado.

Elder, J. Tait, Melissa Cascella, and Christopher Hetzel
2010 *Cultural Resources Survey Report—Potential Sunset Terrace Redevelopment Subarea and NE Sunset Boulevard*. ICF International, Inc., Seattle.

Ferris, Jennifer M., and Lucy Flynn Zuccotti
2010 *Cultural Resources Report: May Creek Drainage Improvement Project, Renton, WA*. Cardno ENTRIX, Seattle.

Franklin, Jerry, and C.T. Dyrness
1988 *Natural Vegetation of Oregon and Washington*. USDA Forest Service General Technical Report PNW-8, Portland, Oregon.

General Land Office
1860 *Township 28 North, Range 4 East, Willamette Meridian, Washington Territory*. Available at: www.blm.gov. Accessed on February 15, 2014.

Goetz, Linda Naoi, Kara M. Kanaby, Douglas F. Tingwall, and Thomas C.Rust
2008 *Dayton Avenue NE/NE 22nd Street Stormwater System Project Renton, Washington*. Landau Associates, Edmonds, Washington.

Greengo, R.E. (editor)
1983 *Prehistoric Places on the Southern Northwest Coast*. Thomas Burke Memorial Washington State Museum, University of Washington, Seattle.

Haeberlin, H., and E. Gunther
1930 The Indians of Puget Sound. *University of Washington Publications in Anthropology* 4(1):1–83.

Kauhi, T.C.
2009 *Washington Statewide Archaeology Predictive Model.* GeoEngineers, Seattle.

Kenmotsu, N.
2008 *Cultural Resources Inventory Taxilane Kilo-South and Adjacent Property, Paine Field, Snohomish County, Washington.* Geo-Marine, Inc., Yakima, Washington.

Kirk, Ruth, and C. Alexander
1990 *Exploring Washington's Past: A Road Guide to History*. University of Washington Press, Seattle.

Klingle, Matthew
2014 *A History Bursting with Telling: Asian Americans in Washington State.* Available at: www.washington.edu. Accessed on February 15, 2014.

Landreau, C., and J. Geffen
2003 *A Section 106 Archaeological Review and Inventory at the Proposed Paine Field Telecommunications Facility, Snohomish County, Washington.* Reiss-Landreau Research, Yakima, Washington.

Lane, Barbara
1975 *Identity and Treaty Status of the Duwamish Tribe of Indians Report. Submitted to U.S. Department of the Interior and the Duwamish Tribe.* On file at Special Collections, Allen Library, University of Washington, Seattle.

Lasmanis, Raymond
1991 The Geology of Washington. *Rocks and Minerals* 66:262–277.

Little, B., E. Seibert, J. Townsend, J. Sprinkle, Jr., and J. Knoerl
2000 *Guidelines for Evaluating and Registering Archaeological Properties.* National Park Service Bulletin. U.S. Department of the Interior, Washington, D.C.

Marino, C.
1990 History of Western Washington Since 1846. In *Northwest Coast*, edited by W. Suttles, pp.169–179. Handbook of North American Indians, Volume 7, W. C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Matson, D.G., and G. Copeland
1995 *Prehistory of the Northwest Coast.* California Academic Press, San Diego.

Meany, E.S.
1910 *History of the State of Washington.* The Macmillan Company, New York.

Melder, F.E.
1938 History of the Discoveries and Physical Development of the Coal Industry in the State of Washington. *Pacific Northwest Quarterly* 29(2):154.

Meltzer, D.J., and R.C. Dunnell
1987 Fluted Points from the Pacific Northwest. *Current Research in the Pleistocene* 4:64–66.

Metsker, Chas F.
1936 Township 28 North, Range 4 East, Mukilteo, Mosher. Available at: www.historicmapworks.com. Accessed on May 20, 2014.

Minnesota Department of Transportation (MnDOT)
2013 About Mn/Model. In *Minnesota Statewide Archaeological Predictive Model.* Available at: www.dot.state.mn.us/mnmodel. Accessed on May 20, 2013.

Mukilteo Historical Society
2014 History. Available at: http://mukilteohistorical.org/history.html. Accessed on May 20, 2014.

Native Languages of the Americas
2013 Native Languages of the Americas: Preserving and Promoting American Indian Languages. Available at: http://www.native-languages.org/. Accessed on May 20, 2013.

Natural Resources Conservation Service (NRCS)
2014 Web Soil Survey. Available at: www.websoilsurvey.nrcs.usda.gov. Accessed on January 28, 2014.

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

Odoi, M.
2014 Japan Town Mukilteo —A Garden of EdenFor Japanese Americans in the Early 1900's. Available at: http://mukilteohistorical.org/history.html. Accessed on May 20, 2014.

Paige, G.
1856 *Report to Isaac I Stevens, Superintendent of Indian Affairs, Washington Territory December 29 and 31, 1856, Fort Kitsap, Washington Territory.* Letters received from Puget Sound, Microcopy 5, Roll 10. U.S. National Archives, Records of the Washington Superintendency of Indian Affairs, Washington D.C.

Piper, J., B. Rinck, and K. Shantry
2012 *Final Cultural Resources Assessment for Boeing North Tower Project, Snohomish County, Washington*. SWCA/Northwest Archaeological Associates, Seattle.

Porter, S.C., and T.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.

Riddle, Margaret
2006 Snohomish County—Thumbnail History. History Link File #7877. Available at: www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=7877. Accessed May 18, 2014.

2007 Mukilteo—Thumbnail History. History Link File #8422. Available at: www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=8422. Accessed May 18, 2014.

2008 Tulalip Tribes. History Link File #8852. Available at: www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=8852. Accessed May 18, 2014.

Rinck, B., and B. Boggs
2010 *Archaeological Assessment of the Smuggler's Gulch Stormwater LID Project, Mukilteo, Snohomish County, Washington*. Northwest Archaeological Associates, Inc., Seattle.

Robinson, J.
2004 *A Cultural Resource Survey for Potential Historical Properties at Olympus Terrace Sewer District's Big Gulch Project, Mukilteo, Washington.* Robinson Cultural Resource Services, Redmond, Washington.

Ruby, Robert H., and John A. Brown
1992 *A Guide to the Indian Tribes of the Pacific Northwest.* University of Oklahoma Press, Norman.

Shrimpton, R.H. (ed)
1990 *How to Apply the National Register Criteria for Evaluation.* National Park Service Bulletin.. U.S. Department of the Interior, Washington, D.C.

Snohomish Indian Tribe
2013 Who We Are. Available at: www.snohmishtribe.com/who. Accessed on May 18, 2014.

Spier, L.
1936 *Tribal Distribution in Washington.* General Series in Anthropology No. 3. George Banta Publishing Company, Menasha, Washington.

Stevenson, Alexander E., J. Tait Elder, Melissa Cascella, and Christopher Hetzel
2011 *Cultural Resources Survey Report-Development of Three Project Sites in the Renton Sunset Terrace Neighborhood*. ICF International, Inc., Seattle.

Stipe, F., and N. Hughes
2012 *Newcastle Golf Club Road Stabilization Project.* Tetra Tech Inc., Bothell, Washington.

Suttles, Wayne, and Barbara Lane
1990 Southern Coast Salish. In *Northwest Coast,* edited by Wayne Suttles, pp. 485–502. Handbook of North American Indians, Vol. 7, W. C. Sturtevant, general editor. Smithsonian Institution, Washington D.C.

Tulalip Tribes of Washington
2014 Who We Are. Available at: www.tulaliptribes-nsn.gov/Home/WhoWeAre.aspx. Accessed on May 18, 2014.

Waitt, Richard B. Jr., and Robert M. Thorson
1983 The Cordilleran Ice Sheet in Washington, Idaho, and Montana. In *The Late Pleistocene*, edited by Stephen Porter, pp. 53–70. Late-Quaternary Environments of the United States, Vol. 1, H.E. Wright, Jr., general editor. University of Minnesota Press, Minneapolis.

Waterman, T. T.
1922 The Geographical Names Used by the Indians of the Pacific Coast. *The Geographical Review*. 12:175–194.

2001 *sdaʔdaʔ gweł dibeł lešucid ʔacaciłtalbixw*. In *Puget Sound Geography*. Vi Hilbert, Jay Miller, and Zalmai Zahir, contributing editors. Lushootseed Press, Federal Way, Washington.

Wessen, G., and M.L. Stilson
1987 *Resource Protection Planning Process: Southern Puget Sound Study Unit*. On file at the Department of Archaeology and Historic Preservation, Olympia, Washington.

Wetland Resources, Inc.
2011 *Critical Area Study and Wetland Mitigation Plan for InterAir Commerce Center*. Wetland Resources, Inc., Everett, Washington.

White, W.A.
2008 *Cultural Resources Assessment for the Japanese Gulch Trails Project, Mukilteo, Snohomish County, Washington*. Northwest Archaeological Associates, Inc., Seattle.

APPENDIX A. SUMMARY OF RESULTS OF SUBSURFACE TESTING

Table A.1. Summary of Results of Shovel Probe Testing (UTM Zone 10T WGS84 Datum, 50-cm-Diameter Units)

STP	Elevation (Feet)	UTM	Depth (cm below surface)	Sediment Description	Interpretation
1	127.06	5310451N, 553573.3E	0–26	10YR3/4, dark yellowish brown sandy loam with woody organics and small rounded gravels	Wet forest soils with bark and chipped wood suggesting disturbance from logging activity
			26–35	2.5Y5/3 light olive sand/silt with rounded gravels and cobbles.	Alderwood-Everett series glacial till
2	124.08	5310478N, 553579.2E	0–9	10YR3/4, dark yellowish brown sandy loam with rooty organics and small rounded gravels	Shallow wet forest soil
			9–37	10YR4/3 brown sand/silt loam with rounded gravels and cobbles	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			37–52	2.5Y5/3 light olive sand/silt with rounded gravels and cobbles	Alderwood-Everett series glacial till
3	119.98	5310510N, 553577.6E	0–10	10YR3/4, dark yellowish brown sandy loam with rooty organics and small rounded gravels	Shallow wet forest soil
			10–50	2.5Y5/3 light olive sand/silt with rounded gravels. Fist-sized cobbles in upper 10-20 cm, only small rounded gravels below	Alderwood-Everett series glacial till
4	117.76	5310545N, 553575.6E	0–38	10YR3/4, dark yellowish brown sandy loam with rooty organics and small rounded gravels	Wet forest soil
			38–48	2.5Y5/3 light olive sand/silt with rounded gravels and cobbles	Alderwood-Everett series glacial till
5	112.07	5310572N, 553559.5E	0–15	10YR3/4, dark yellowish brown sandy loam with rooty organics and small rounded gravels	Shallow wet forest soil
			15–51	10YR4/3 brown sand/silt loam with rounded gravels and cobbles	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			51–61	2.5Y5/3 light olive sand/silt with rounded gravels and cobbles	Alderwood-Everett series glacial till
6	108.23	5310647N, 553529.7E	0–8	10YR3/4, dark yellowish brown sandy loam with rooty organics and small rounded gravels	Shallow wet forest soil
			8–24	2.5Y5/3 light olive sand/silt with rounded gravels. Fist-sized cobbles in upper 10-20 cm, only small rounded gravels below	Alderwood-Everett series glacial till

STP	Elevation (Feet)	UTM	Depth (cm below surface)	Sediment Description	Interpretation
7	134.36	5310379N, 553550.2E	0–18	10YR4/3 brown sand/silt loam with rounded gravels and cobbles	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			18–32	2.5Y5/3 light olive sand/silt with rounded gravels and cobbles	Alderwood-Everett series glacial till
8	134.53	5310369N, 553529.5E	0–20	10YR3/4, dark yellowish brown sandy loam with rooty organics and small rounded gravels	Wet forest soil
			20–50	2.5Y5/3 light olive sand/silt with rounded gravels and cobbles. At 30-40 cmbs, a rotting root or burned log was on the north wall. Unit terminated at dense cobbles	Alderwood-Everett series glacial till
9	132.39	5310360N, 553507.3E	0–32	10YR4/3 brown sand/silt loam with rounded gravels and cobbles	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
10	133.28	5310366N, 553482.4E	0–9	10YR3/4, dark yellowish brown sandy loam with rooty organics and small rounded gravels	Shallow wet forest soil
			9–43	10YR4/3 brown sand/silt loam with rounded gravels and cobbles	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			43–57	2.5Y5/3 light olive sand/silt with rounded gravels and cobbles	Alderwood-Everett series glacial till
11	134.83	5310368N, 553457.6E	0–8	10YR3/4, dark yellowish brown sandy loam with rooty organics and small rounded gravels	Shallow wet forest soil
			8–54	10YR4/3 brown sand/silt loam with rounded gravels and cobbles	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			54–61	2.5Y5/3 light olive sand/silt with rounded gravels and cobbles	Alderwood-Everett series glacial till
12	134.21	5310343N, 553424.7E	0–6	10YR3/4, dark yellowish brown sandy loam with rooty organics and small rounded gravels	Shallow wet forest soil
			6–34	10YR4/3 brown sand/silt loam with rounded gravels and cobbles. At 10-20 cmbs, charred wood, charcoal	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			34–40	2.5Y5/3 light olive sand/silt with rounded gravels and cobbles	Alderwood-Everett series glacial till

STP	Elevation (Feet)	UTM	Depth (cm below surface)	Sediment Description	Interpretation
13	132.52	5310314N, 553418.8E	0–10	10YR3/4, dark yellowish brown sandy loam with rooty organics and small rounded gravels	Shallow wet forest soil
			10–41	10YR4/3 brown sand/silt loam with rounded gravels and cobbles	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			41–55	2.5Y5/3 light olive sand/silt with rounded gravels and cobbles	Alderwood-Everett series glacial till
14	129.34	5310306N, 553383.0E	0–22	10YR4/3 brown sand/silt loam with rounded gravels and cobbles	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			22–40	2.5Y5/3 light olive sand/silt with rounded gravels and cobbles	Alderwood-Everett series glacial till
15	115.99	5310539.2N, 553525.7E	0–20	10YR3/4, dark yellowish brown silty loam with small rooty organics	
			20–65	10YR4/3 dry, compact brown sand/silt loam with sub-rounded gravels and cobbles	Alderwood-Everett series glacial till
16	119.92	5310500.5N, 553553.45E	0–16	10YR3/4, dark yellowish brown silty loam with small rooty organics	
			16–55	10YR4/3 dry, compact orange brown sand/silt loam with sub-rounded gravels and cobbles, small and med. Cobbles throughout, some mottling at upper edge	
17	130.42	5310408.5N, 553553.25E	0–3	10YR3/4, dark yellowish brown silty loam with small rooty organics	
			3–38	10YR4/3 dry, compact orange brown sand/silt loam with small cobbles throughout	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			38–50	Light gray very compact sandy silt , small gravels	Alderwood-Everett series glacial till
18	130.64	5310388.5N, 553516.61E	0–12	10YR3/4, dark yellowish brown silty loam with small rooty organics	
			12–49	10YR4/3 damp orange brown clay loam with small cobbles throughout	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			49–60	Light gray damp, very compact sandy silt , small gravels	Alderwood-Everett series glacial till
19	131.82	5310393.72N, 553473.28E	0–12	10YR3/4, dark yellowish brown silty loam with small rooty organics	

STP	Elevation (Feet)	UTM	Depth (cm below surface)	Sediment Description	Interpretation
19	131.82	5310393.72N, 553473.28E	12–51	10YR4/3 dry, compact orange brown sand/silt loam with small cobbles throughout	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			51–70	Light gray very compact sandy silt , small gravels	Alderwood-Everett series glacial till
20	119.36	5310509.42N, 553550.05E	0–12	10YR3/4, dark yellowish brown silty loam with small rooty organics	
			12–39	10YR4/3 dry, compact orange brown sand/silt loam with small cobbles throughout	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			39–50	Light gray very compact sandy silt , small gravels	Alderwood-Everett series glacial till
21	112.05	5310590.48N, 553470.08E	0–6	10YR3/4, dark yellowish brown silty loam with small rooty organics	
			6–53	10YR4/3 dry, compact orange brown sand/silt loam with small cobbles throughout. Charcoal, evidence of burning	Mixture of Alderwood-Everett series glacial till and surface soil horizon and organic material
			53–65	Light gray compact sandy silt	Alderwood-Everett series glacial till

Table A.2. Summary of Results of Backhoe Soil Test Pits (UTM Zone 10T WGS84 Datum)

SP	Length (m), Direction	Width (m), Direction	Depth (cm below surface)	Sediment Description
1	3.5 E/W	2.2 N/S	0–35	Dark brown loam with rooty organics
			35–90	Orange-brown glacial till, mottled with upper and lower strats at respective depths
			90–180	Compact light gray sandy loam
2	4.5 N/S	2.2 E/W	0–5	Dark brown loam with rooty organics
			5–72	Orange-brown glacial till, mottled with upper and lower strats at respective depths
			72–160	Compact light gray sandy loam
3	4.4 E/W	2.2 N/S	0–14	Dark brown loam with rooty organics
			14–90	Orange-brown glacial till, mottled with upper and lower strats at respective depths
			90–200	Compact light gray sandy loam
4	4.3 E/W	2.2 N/S	0–7	Dark brown loam with rooty organics
			7–75	Orange-brown glacial till
			75–220	Compact light gray sandy loam

CULTURAL RESOURCES REPORT COVER SHEET

Author: Melanie M. Diedrich, M.A.; Jennifer Hushour, M.Sc.

Title of Report: Cultural Resources Assessment for the Soundview Business Campus Project, Everett, Snohomish County, Washington

Date of Report: August 6, 2013

County: Pierce Section: 3 Township: 28 North Range: 04 East

Quad: Mukilteo, WA (1978), 7.5-minute USGS Quad

PDF of report submitted (REQUIRED) ☒ Yes

Historic Property Export Files submitted? ☐ 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

DAHP Archaeological Site #:

______
______
______
______
______
______
______
______
______

- Submission of paper copy is required.
- Please submit paper copies of reports ***unbound.***
- 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.