CULTURAL RESOURCES REPORT COVER SHEET

DAHP Project Number: 2022-07-04974

Author: Bethany K. Mathews, Laura Johnson, and Katy Leonard-Doll

Title: Cultural Resource Assessment for Normandy Heights, 2007 Shaw Rd, Puyallup, Pierce County, WA

Date of Report: 25 June 2024

County: Pierce

Township: 20N Range: 4E Section: 35

USGS Quadrangle: Puyallup, WA

Acres: 7.35

Historic Property Inventory forms to be approved online? ☐ Yes ☒ No

Archaeological Sites found/amended? ☒ Yes ☐ No

Traditional Cultural Properties found? ☐ Yes ☒ No

Replace a draft? ☐ Yes ☒ No

Satisfy a DAHP Archaeological Excavation Permit? ☐ Yes ☒ No

#

Human Remains found? ☐ Yes ☒ No

#

DAHP Archaeological Site: #45PI01647

CONTAINS CONFIDENTIAL INFORMATION
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Cultural Resource Assessment for Normandy Heights, 2007 Shaw Rd, Puyallup, Pierce County, WA

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DAHP Project #:

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Lead Agency:

City of Puyallup
PLPMP 20220090

Date of Report:

25 June 2024

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EXECUTIVE SUMMARY

Antiquity Consulting was contracted by RM Homes to conduct a cultural resource assessment for a proposed preliminary plat at 2007 Shaw Rd, Puyallup, Pierce County (Township 20N Range 4E Section 35; parcel 0420354039). During the City of Puyallup preliminary plat review a cultural resources survey was required for the project. Antiquity Consulting completed a cultural resource survey for the proposed project area in January and February 2024, which included intensive pedestrian survey and shovel probe survey in planned impact areas. Archaeological site 45PI01647, an isolated jasper lanceolate hafting element with a snap fracture, was observed in shovel probe 26 at 35cmbs in the northwest portion of the project. Delineation of this isolated artifact did not result in the observation of additional archaeological resources. Antiquity Consulting recommends the artifact be donated to the Puyallup Tribe of Indians. The project should comply with an inadvertent discovery plan because there is risk of encountering isolated artifacts in this area.

INTRODUCTION

Antiquity Consulting was contracted by RM Homes to conduct a cultural resource assessment for a proposed preliminary plat at 2007 Shaw Rd, Puyallup, Pierce County (Township 20N Range 4E Section 35; parcel 0420354039). During the City of Puyallup preliminary plat review a cultural resources survey was required for the project.

Project Background

Antiquity Consulting was contracted by RM Homes to conduct a Cultural Resource Assessment for the project. Per the Washington State Standards for Cultural Resources Reporting (Washington State Department of Archaeology and Historic Preservation 2023), this cultural resource assessment was led by Secretary of the Interior-qualified Archaeologist Bethany Mathews, MA, RPA.

Project Description

RM Homes intends to subdivide 7.35 acres into 20 residential lots at 2007 Shaw Rd, Puyallup, Pierce County (Township 20N Range 4E Section 35; parcel 0420354039; Figures 1-2).

Tribal Research Design and Fieldwork Coordination

The Puyallup Tribe of Indians, Suquamish Tribe, Muckleshoot Indian Tribe, Snoqualmie Indian Tribe, Squaxin Island Tribe, Nisqually Indian Tribe, and Confederated Tribes and Bands of the Yakama Nation cultural resources staff were notified of the archaeological survey schedule via email on 2 January 2024, 13 days prior to fieldwork. At that time, Antiquity Consulting notified the Tribes that pedestrian and shovel probe surveys would be conducted at 30-meter intervals across planned impact areas. It was expected that shovel probes may shift from the planned locations to avoid impervious surfaces, standing water, or other impasses. A survey plan was provided via ArcGIS online, and Antiquity requested to incorporate concerns into the research design and historic context. Tribes and DAHP were notified of the archaeological site discovery on 15 January 2024 and were sent a follow up notice on the radial shovel probe excavation planned for 22 February 2024 on 21 February 2024.

Regulatory Context

This survey was completed to meet the requirements of the State Environmental Policy Act (SEPA). SEPA requires that all major actions sponsored, funded, permitted, or approved by State and/or local agencies provide consideration of the impacts of the planned action on the environment, which includes properties of historical, archaeological, scientific, or cultural importance (Washington Administrative Code 197-11-960). The Department of Archaeology and Historic Preservation is the agency with the technical expertise to consider the effects of a proposed action on cultural resources and to provide formal recommendations to local governments and other State agencies for appropriate treatments or actions.

Washington State Heritage Laws

Washington State protects its archaeology and heritage resources under several laws. In Washington State it is illegal to knowingly disturb archaeological sites or certain archaeological materials on state and private lands. Laws protecting these resources include the Archaeological Sites and Resources Law (RCW 27.53), Indian Graves and Records Law (RCW 27.44), Human Remains Law (RCW 68.50), and Abandoned and Historic Cemeteries and Historic Graves Law (RCW 68.60). Per RCW 27.53.060 and WAC 25-48-060 the Department of Archaeology and Historic Preservation may issue an archaeological site alteration/excavation permit for

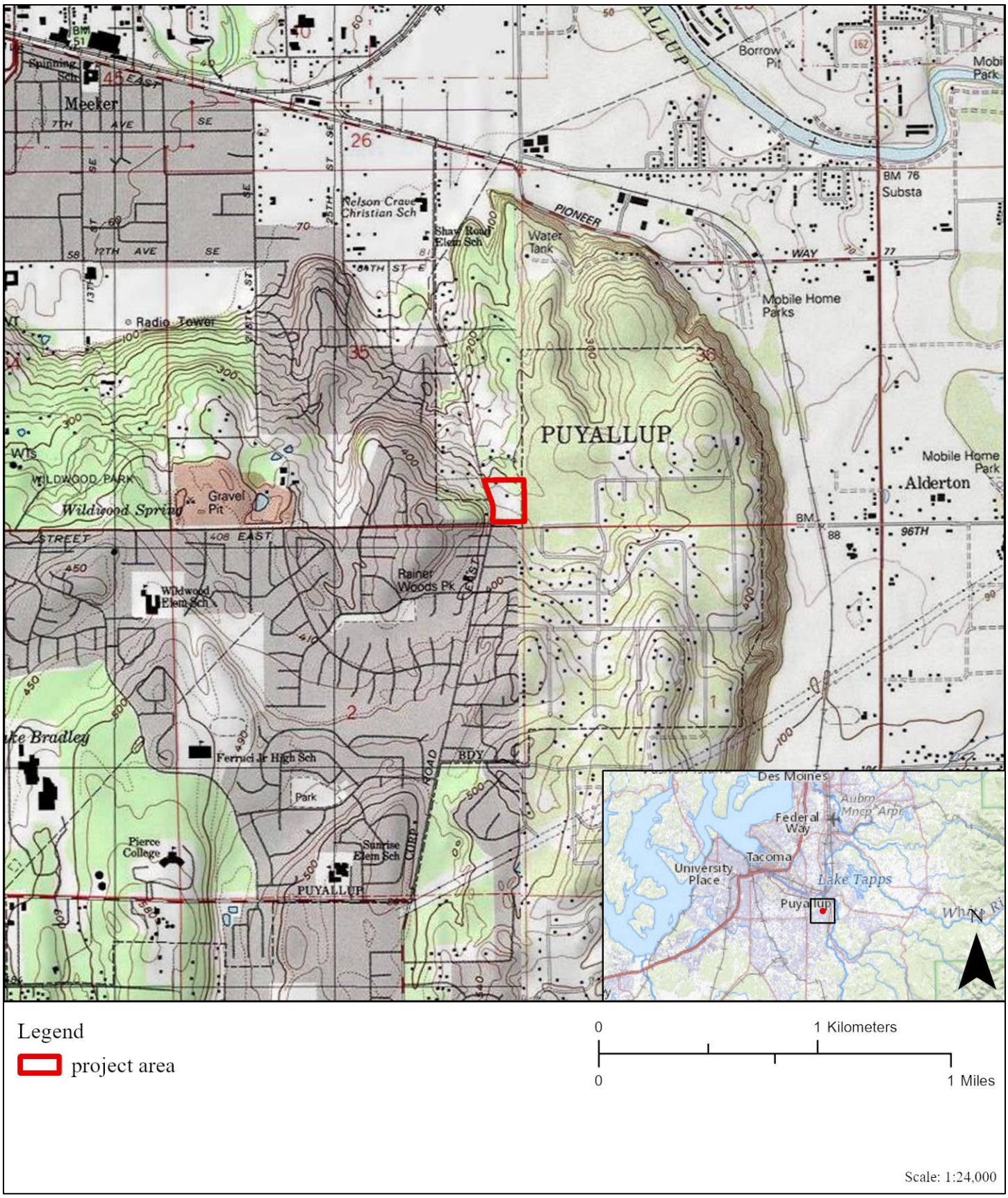

Figure 1. Project parcel marked on 1:24,000 Puyallup, WA USGS 7.5-minute quadrangle.

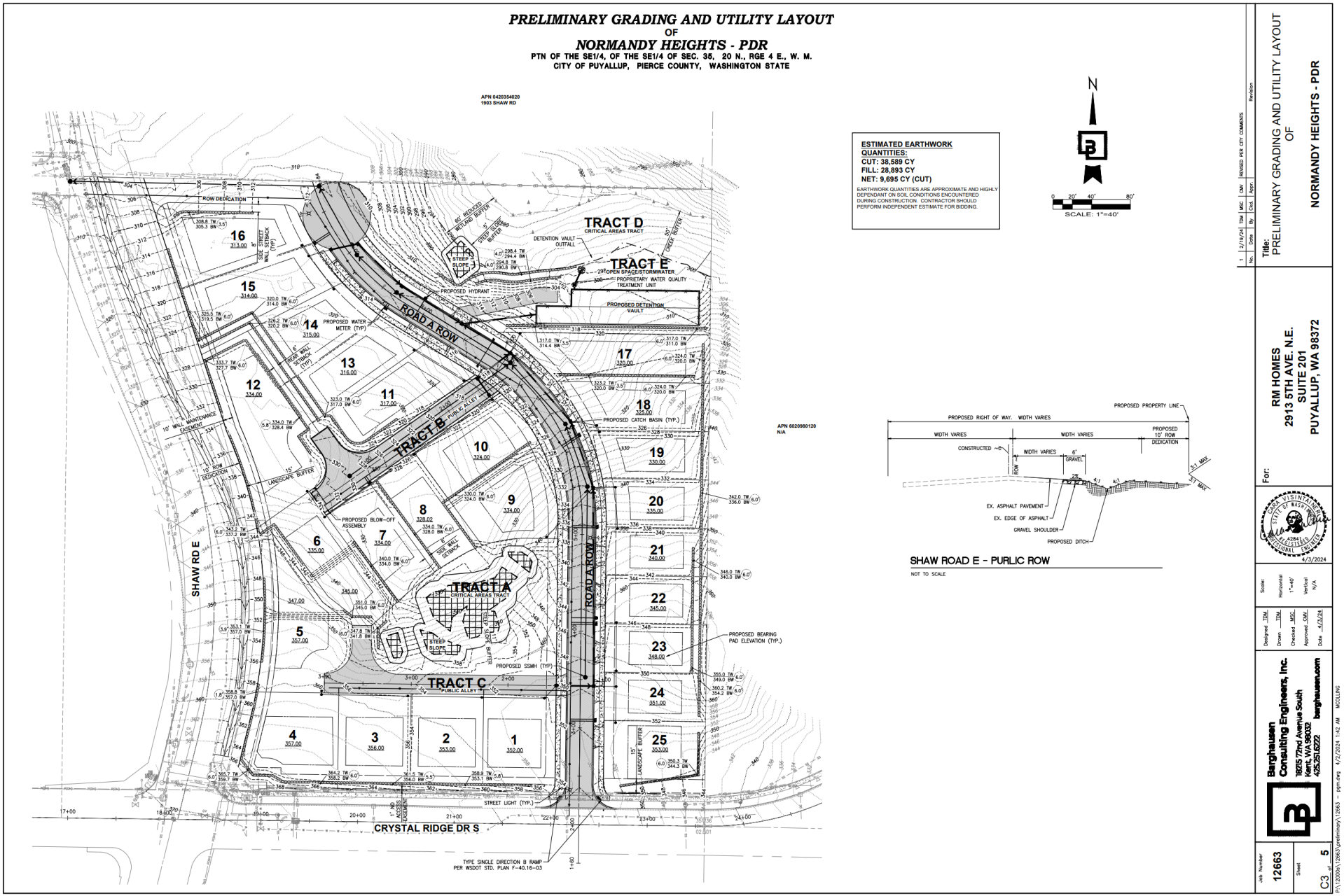

Figure 2. Proposed preliminary grading and utility layout, courtesy Barghausen Consulting Engineers.

impacts to an archaeological site in accordance with a professional scientific research plan.

Evaluation of Historic Properties for the Pierce County Register of Historic Places

The Pierce County Register of Historic Places is used by Pierce County to provide public recognition and measures of protection for historically significant properties in Pierce County (Pierce County 2020A). To be listed on the Pierce County Register of Historic Places a property must typically be 50 years old or of exceptional importance and possess the quality of significance in Pierce County history, architecture, archaeology, and/or culture, and have integrity of location, design, setting, materials, workmanship, feeling, and association.

Evaluation of Historic Properties for the Washington Heritage Register

The Washington Heritage Register (WHR), which is maintained by the DAHP, is a list of historically significant districts, sites, buildings, structures, and objects that are considered significant in local or state history (Washington State Department of Archaeology and Historic Preservation 2018). To qualify for listing on the WHR a building, site, structure, or object must be at least 50 years old, or should have documented exceptional significance if less than 50 years old. The resource should have documented historical significance at the local, state, or federal level, and should maintain a high to medium level of integrity of important character defining features.

Evaluation of Historic Properties for the National Register of Historic Places

Evaluation of historic properties at local levels is typically modeled after evaluation of historic properties for the National Register of Historic Places. A historic property is defined as "a district, site, building, structure or object significant in American history, architecture, engineering, archeology or culture at the national, state, or local level." These properties 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]). National Register Bulletin Guidelines state that to be eligible for listing in the NRHP, a historic property must represent a significant part of American history, architecture, archaeology, engineering, or culture (Little and Hardesty 2000; Shrimpton 1990). Additionally, to be considered eligible, a historic property must meet one or more of the four NRHP criteria:

A) be associated with events that have made a significant contribution to the broad patterns of our history; or
B) be associated with the lives of persons significant in our past; or
C) 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) have yielded, or may be likely to yield, information important in prehistory or history.

Most archaeological sites 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 1991). The historic context for the project area is summarized in this report and serves as a foundation for evaluating cultural resources in the project area.

Historic Property Integrity

Integrity is the ability of a historic property to convey its significance. Integrity must be evident through historic qualities, which may 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 (NPS 1991:44-48).

- 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 (NPS 1991:44–48).

- 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 (NPS 1991:44–48).

- Resources significant under Criterion D may not have the type of integrity described under the other criteria but are considered to have integrity if these aspects support data potential (NPS 2020:35). Of the seven aspects of integrity, location, design, materials, and workmanship are generally the most important for Criterion D properties (NPS 1991:44–48).

ENVIRONMENTAL SETTING

The natural and cultural characteristics of a place inform the likelihood for encountering cultural resources at a geographic location, and as such the natural and cultural characteristics of this location were the foundation for establishing a research methodology for this cultural resource assessment. This assessment included a review of environmental information on the project area, as illustrated in reports on regional geology, local soils data, and the environmental history of the project vicinity. Post-depositional processes likely to affect any cultural deposits in the study area were also considered.

Geomorphology

The project area is located on a glacial outwash plain upland, 2.5 kilometers west and 3 kilometers south of the Puyallup River.

Glacial Geomorphology

Puget Lowland landforms were largely shaped by Pleistocene glacial events (Kruckeberg 1991). Beginning two million years ago, the bedrock in this province was depressed and deeply scoured by glaciers, and sediments were deposited and often reworked as glaciers advanced and retreated at least seven times. A mantle of glacial drift and outwash deposits were left across much of the region by the end of this glacial period (Easterbrook 2003). The last glacial advance and retreat to cover the region, the Vashon Stade of the Fraser Glaciation began around 19,000 BP with an advance of the Cordilleran Ice Sheet into the lowlands (Porter and Swanson 1998). The Puget Lobe of this ice sheet advanced from the Cascade Mountains down into the Puget Lowland and reached the Olympia area about 17,350 BP (unknown author 2018). The Puget Lobe began to retreat shortly after reaching its terminus near Tenino and had retreated to Olympia by 16,650 BP (Porter and Swanson 1998). Glacial lakes formed around the margins of the Puget Lobe due to the high topography of the southern Puget Sound and the ice dam of the Puget Lobe which could not yet permit drainage of the glacial meltwater and local runoff to the Pacific Ocean (Figge 2008). Outflow from glacial-lake outbursts and subglacial fluvial erosion typically flowed south toward the Chehalis River valley, and later northward-flowing streams filled the deep glacial outburst troughs with sandy sediments (Walsh et al. 2003).

Local Geologic Units and Soils

The Washington Geological Survey identifies the project area within geologic unit Qgo(i), which consists of recessional outwash and ice-contact deposits (WSDNR 2024A; Figure 2). The Qgo(i) unit, a Pleistocene glacial deposit, consists of tan to gray sand, gravel, silt, and clay mixed with well sorted and rounded gravels of drumlins, eskers, kettles, kames, and less-orderly hummocky topography (Schuster et al 2015).

Soils in the Puget Lowland typically form in weathered glacial materials. The project area is within the Indianola and Kitsap soil units (NCRS 2024; Table 1). Indianola loamy sand forms in sandy glacial drift on hills, terraces, terrace escarpments, eskers, and kames of drift or outwash plains located in Puget lowlands in northwestern Washington. The soil is somewhat excessively drained with an environment that receives mean annual precipitation of 20 to 55 inches. Kitsap silt loam forms in terraces and terrace escarpments on plains located in western Washington. The soil is somewhat poorly drained with an environment that receives mean annual precipitation of 37 inches and the depth of the seasonal water table is expected to be at 1 to 3.5 inches (NRCS 2024).

Table 1. Soil unit descriptions of project area.

Note: derived from Natural Resource Conservation Service 2024.

Map Unit	Soil	Horizon	Description	Depth (cm)	Acidity
18C	Indianola loamy sand, 0 to 5 percent slopes	Oi	Slightly decomposed plant material	0-3	Neutral
		A	Very dark grayish brown loamy sand	3-15	Neutral
		Bw1	Yellowish brown loamy sand	15-43	Neutral
		Bw2	Yellowish brown sand	43-69	Neutral
		BC	Pale brown sand	69-94	Neutral
		C	Pale brown sand	94-152	Neutral
20C	Kitsap silt loam	Ap	Very dark grayish-brown silt loam	0-15	Moderately acid
		Bw1	Brown silt loam	15-25	Moderately acid
		Bw2	Brown silty clay loam, 5% fine gravel	25-43	Slightly acid
		Bg	Grayish-brown silty clay	43-81	Slightly acid
		Cg	Light olive brown silty clay loam	81-150	Neutral

LiDAR Imagery Review

LiDAR imagery indicates grading has occurred in the center of the project area, at the location of an extant barn (see Figure 4).

Water

The project area is situated in an area that is rich in freshwater and saltwater resources, in the Puyallup River subbasin which is in the Puget Sound Basin. The Puyallup River is located 2.5 kilometers east. The confluence of the Puyallup and White (historically Stuck) Rivers are located 3.1 kilometers north. The Puyallup River delta is 15 kilometers northeast of the project,

Vegetation

The project area is located within the Western hemlock (*Tsuga heterophylla*) vegetation zone (Franklin and Dyrness 1988). The Puget Lowland Forest populated the region shortly after retreat of the glaciers in the late Pleistocene. Prior to historic-era clearing, western Washington forest overstories were dominated by western red cedar (*Thuja plicata*), western hemlock (*Tsuga heterophylla*), and Douglas-fir (*Pseudotsuga menziesii*).

Kitsap soils typically support Douglas fir, western hemlock, western red cedar, red alder (*Alnus rubra*), bigleaf maple (*Acer macrophyllum*), and willows willow (*Salix* spp.), with understory of western brackenfern (*Pteridium aquilinum*), western swordfern (*Polystichum munitum*), salal (*Gaultheria shallon*), Oregon-grape (*Mahonia aquifolium*), trailing blackberry (*Rubus ursinus*), red huckleberry (*Vaccinium parvifolium*), vine maple (*Acer circinatum*), evergreen huckleberry (*Vaccinium ovatum*), red elderberry (*Sambucus racemose*), and wild ginger wild ginger (*Asarum canadense L.*). Indianola soils typically support Douglas fir, western red cedar, western hemlock, red alder (*Alnus rubra*), and bigleaf maple (*Acer macrophyllum*), with an understory of salal (*Gaultheria shallon*), Oregon grape (*Mahonia aquifolium*), red huckleberry (*Vaccinium parvifolium*), western brackenfern (*Pteridium aquilinum*), western swordfern (*Polystichum munitum*), trailing blackberry (*Rubus ursinus*), evergreen huckleberry (*Vaccinium ovatum*), and vine maple (*Acer circinatum*) (NRCS 2024).

Fauna

A wide variety of mammals and fish are adapted to the Puget Lowland. Vertebrate animals common in the Puget Lowland forests include Columbia black-tailed deer (*Odocoilus hemionus* subsp. *columbianus*), elk (*Cervus elaphus* subsp. *rooseveltii*), deer mice (*Peromuscus maniculatus*), black bear (*Ursus americanus*),

raccoon (*Procyon lotor*), mountain beaver (*Aplodonta rufa*), opossum (*Didelphis viriginiana*), coyote (*Canis latrans*), bats, cougar (*Felis concolor*), bobcats (*Lynx rufus*), weasels, moles, squirrels, and shrews (Kruckeberg 1991:195).

The Puget Sound supports 3,000 species of invertebrates including shellfish, 200 species of marine fish, hundreds of species of birds, and marine mammals including orcas (*Orcinus orca*), sea lions (*Zalophus californianus*), sea otters (*Enhydra lutris*), gray whales (*Eschrichtius robustus*), humpback whales (*Megaptera novaeangliae*), and harbor seals (*Phoca vitulina*) (National Wildlife Federation 2019). Shellfish native to the Puget Sound include Dungeness crab (*Cancer magister*), red rock crab (*Cancer productus*), geoduck (*Panopea Generosa*), littleneck clam (*Protothaca staminea*), butter clam (*Saxidomus gigantea*), horse clam (*Tresus capax),* cockle (*Cerastoderma edule*), bentnose clam (*Macoma nasuta*), mussels, sea cucumbers, pinto abalone (*Haliotis kamtschatkana*), sea urchins, and Olympia oyster (*Ostrea lurida*) (Dethier 2006).

Native fish species in the Puyallup/White River Watershed include Chinook salmon (*Oncorhynchus tshawytscha*), sockeye salmon (*Oncorhynchus nerka*), pink salmon (*Oncorhynchus gorbuscha*), coho salmon (*Oncorhynchus kisutch*), chum (*Oncorhynchus keta*), bull trout (*Salvelinus confluentus*), and steelhead (*Oncorhynchus mykiss*). Native fish species known to reside in the Lake Tapps reservoir are kokanee (*Oncorhynchus nerka*), largescale suckers (*Catostomus macroheilus*), smallmouth bass (*Micropterus dolomieu*), cutthroat trout (*Oncorhynchus clarki*), mountain whitefish (*Prosopium williamsoni*), rainbow trout (*Oncorhynchus mykiss*), sculpin (*Cottus* sp.), and red-side shiner (*Richersonius blateatus*). Non-native fish are common carp (*Cyprinus carpio*), rock bass (*Ambloplites repestris*), tiger musky (*Esox masquinongy Lucius*), yellow perch (*Perca flavescens*), black crappie (*Pomoxis nigromaculatus*), and bluegill (*Lepomis macrochirus*) (Tetra Tech 2010).

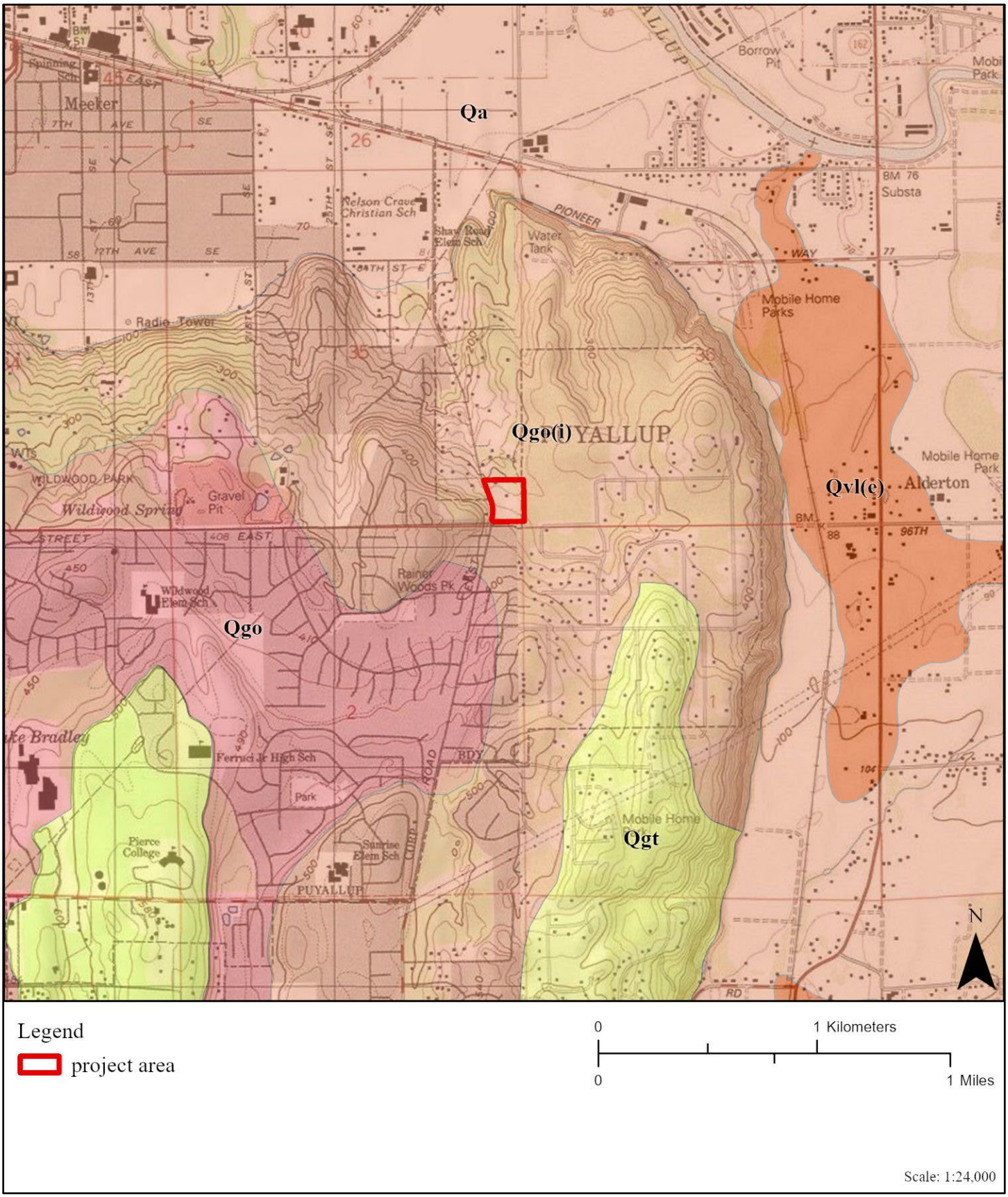

Figure 3. Surface geology of project vicinity (data from WSDNR 2024A).

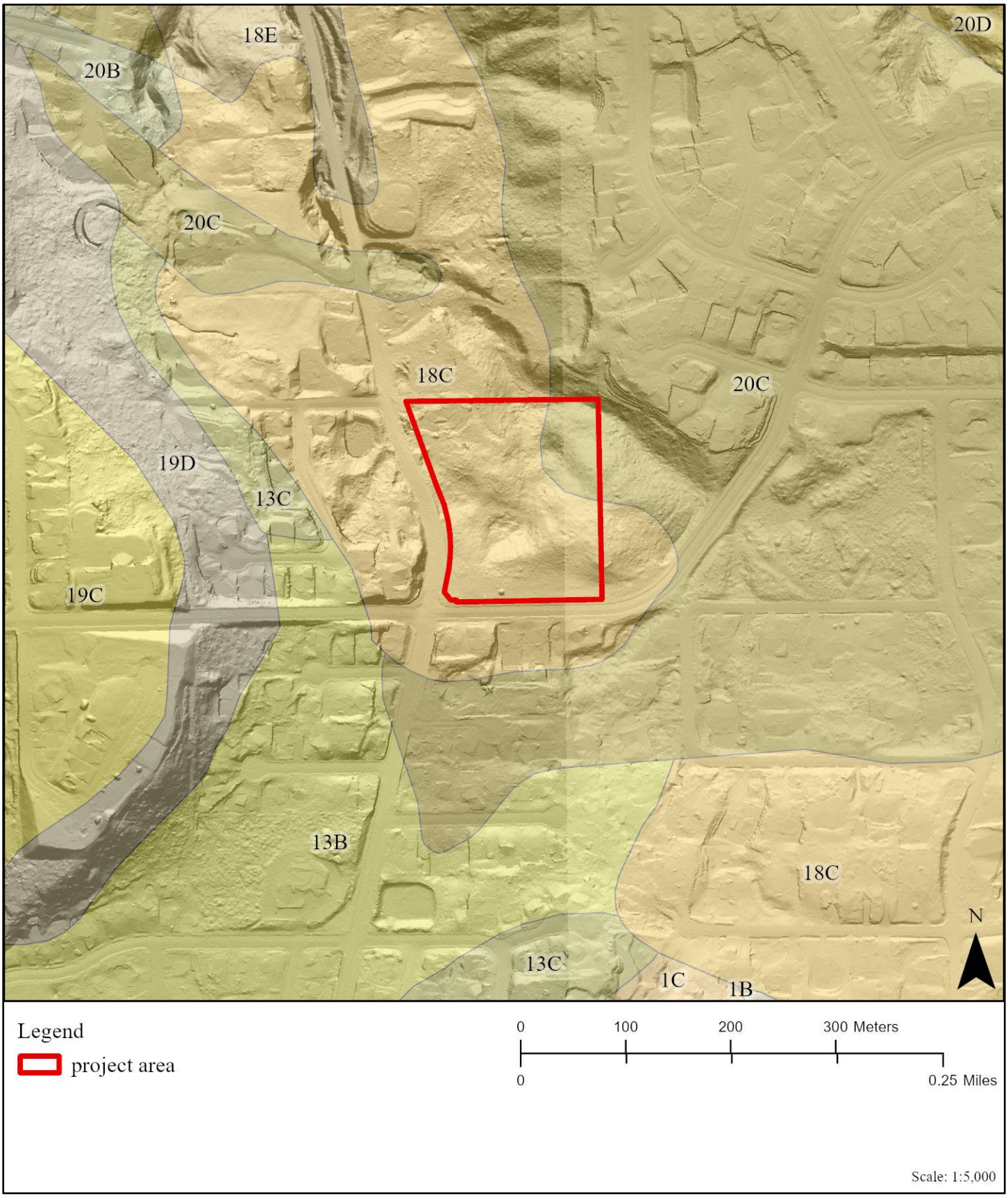

Figure 4. Soil units mapped in project vicinity over LiDAR image (data from WSDNR 2024B and NRCS 2024).

CULTURAL SETTING

The project vicinity has hosted significant historic events of local, regional, and national importance. The probability for historic properties to be located within the project area is primarily based on a review of local environmental and cultural contexts, as well as local cultural resource studies and known cultural, historic, or archaeological sites. Research conducted for this assessment included review of local histories and ethnographies, and resources available in the DAHP's Washington Information System for Architectural and Archaeological Records Data database, United States Surveyor General Bureau of Land Management's General Land Office Survey Records database, HistoryLink.org, HistoricMapWorks.com, and USGS Historical Topographical Map Explorer.

Precontact and Ethnohistoric Periods

The project is located in the traditional territory of the *Puyáləpabš* (Puyallup, "people from the bend at the bottom of the river"), who inhabited the Puyallup and White Rivers, Vashon Island, and Carr Inlet (Carpenter 2002; Smith 1940; Spier 1936:26; Squaxin Island Tribe 2018; Suttles and Lane 1990:485-487).

Ethnogeography Database Review

Antiquity Consulting maintains a geospatial database of ethnographic places described in Carpenter 2002, Kinkade 1991, Kinkade 1997, Powell and Jensen 1976, Smith 1940, Spier 1936, Waterman et al. 2001, and Yoke 1940 which includes places in Cowlitz, Grays Harbor, Jefferson, Kitsap, Lewis, Mason, Pierce, and Thurston Counties. Thomas Talbot Waterman (Waterman et al. 2001:2), who conducted ethnogeographic fieldwork in the Puget Sound sometime between 1911 and 1920, recorded numerous place names on the Puget Sound. Marian Smith, who mapped the locations of village sites in the southern Puget Sound and cautions that these were only the locations of the permanent "headquarters" of a group although people were everywhere on the local landscape, also recorded many village sites on the Puget Sound. Eleven ethnogeographic places have been recorded within 5 kilometers of the project, according to reviewed resources (Table 2; Figure 5). These placenames indicate that several village sites were located nearby, and that the Puyallup River was an especially important feature of the local landscape, but other creeks and prairies were also culturally important.

Table 2. Ethnogeographic places within four kilometers of the project area.

Author	Map Designation	Lushootseed Name	English Translation	Common Name of Place	Description
Smith 1940	8	*stáx̣abc*	"that which has been cut through"	-	Located where Stuck River entered the Puyallup. Stuck River at one time flowed into Wapato Creek, but changed its course southward, causing the village to move with it. Myth states that this event was caused by the movement of a large aquatic animal which "cut through" the land to reach the Sound, creating the new channel in its wake. This village had strong White River or Duwamish contacts.
	9	*tsuwádiabc*	-	Above the junction of the Puyallup and Carbon Rivers	The name was said to have originated from the cry uttered by an insane woman who left her people and was later seen at various times along the banks of the stream. The village and the one above it (#10) had strong contacts with the Nisqually villages to the south. Both were situated on a near treeless prairie on either side of the present town of Orting.
Watermen et al. 2001	22	*šəgʷɬagʷiɬ*	Little passage for a canoe	Interurban, Puyallup Valley x Stuck River	The narrow place on the plateau where the Interurban tracks pass from the Puyallup Valley to the valley of Stuck River. The term, which can hardly be intended in any literal sense, may refer to the fact that the upper waters of Hylebos Creek almost touch the upper end of the stream, draining in the opposite direction. The gullies of these two streams meet on the summit of the plateau.
	23	*QolEq!*	-	-	An old village site above Clear Creek on the riverbank.
	28	*sṫilɔqʷac*	Where wild strawberries grow	Puyallup	-
	29	*sɔx̌ɔbalʔtxʷ*	Dance house	Meeker	It is said that the name refers to certain religious performances which were held here. People used to come across the mountains from Yakima, bringing their drums, to take part in the observances.
	30	*stɔx̌ʷucid*	Pulled mouth; pulled opening; pulled river mouth	-	"Mouth of the Stuck" for the confluence of Stuck River with the Puyallup. The word Stuck itself, in Indian *StEx*, means "plowed through" referring to a myth elsewhere recounted.
	36	*stɔgʷɔdac*	Where salmonberry bushes grow	-	For a creek entering the river from the east below Alderton.
	37	*ċaq̓abadac*	Where gooseberry bushes grow	-	For a flat south of the mouth of the creek, #36.
	38	*kʷɔspɬ*	Trout	-	For a creek at the town of Alderton
Kinkade 1991	108	*puyál'ap'*	_	Puyallup	_

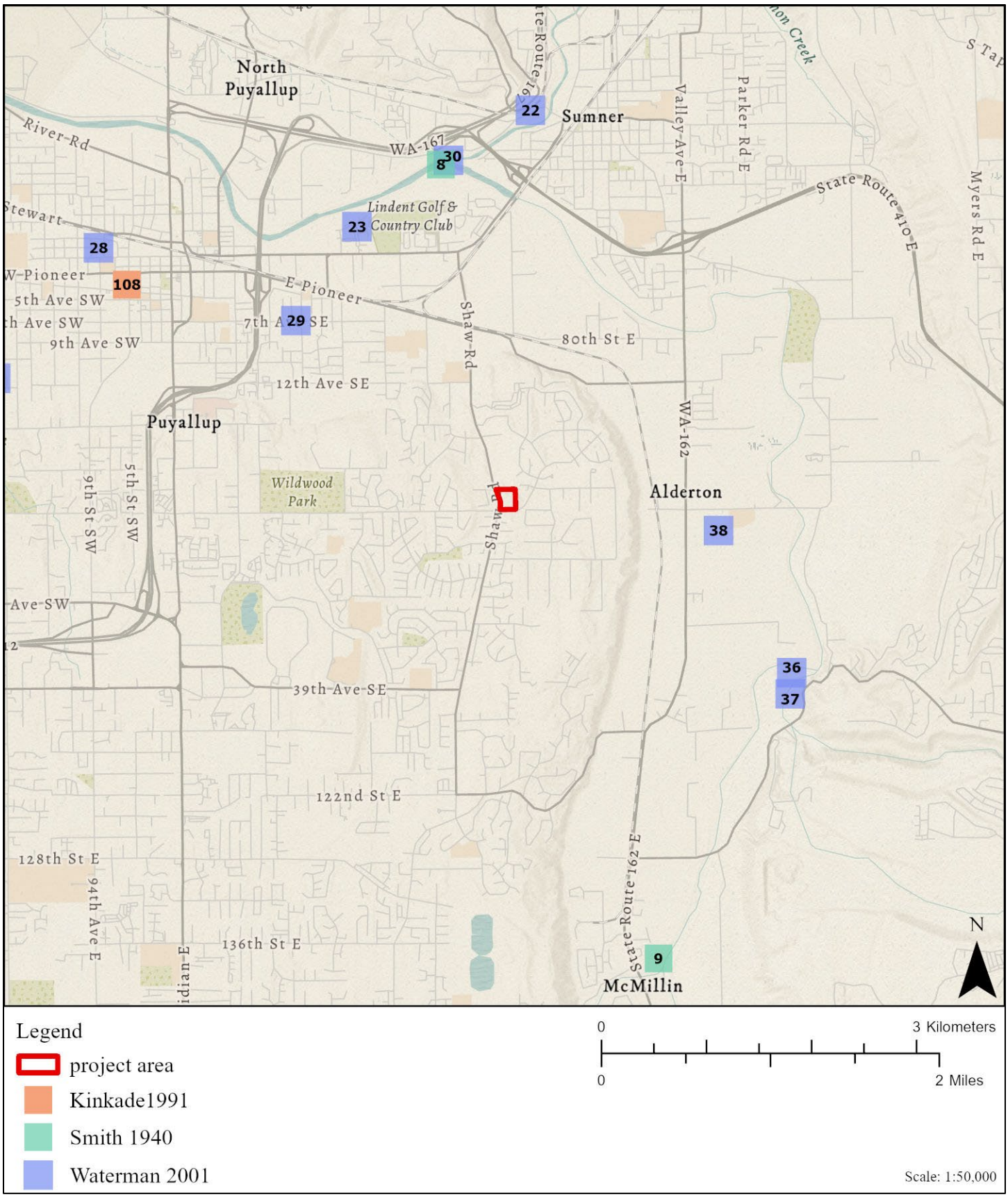

Figure 5. Ethnogeographic locations mapped in project vicinity. Locations are approximate.

Settlement and Resource Use Patterns

Traditional use of the region is generally oriented toward resource locations (i.e., fresh water, terrestrial and marine food resources, forests, and suitable terrain). Before American colonization, settlements were often located along major waterways and at heads of bays or inlets, where abundant resources of coastal, riverine and inland environments supported a relatively rich, diverse, and reliable subsistence base. Waterways served as primary travel corridors between villages located on the coast or rivers, and overland trails to inland resource locations and villages were also important travel routes.

During the winter months people lived in large villages of cedar large plank houses. Spring and summer months were spent at seasonal encampments while fishing, hunting, and plant/berry collecting. Spring and summer months were spent at seasonal encampments while fishing, hunting, and plant/berry collecting. Prairies were critically important to the Coast Salish economy because they offered diverse resources (Smith et al. 2008:17). Prairies were burned every 2 to 3 years to manage plant resources and animal forage (Storm 2004:4). The richness and diversity created by this maintenance of the landscape made these prairies critical places for hunting and gathering in the region (Storm 2004:2). Women from several villages would congregate at camas grounds when they were ready for harvesting (Marr 1989: 5). Camas bulbs were carried home after gathering, typically in the late spring and cooked in an outdoor fire pit or boiled. Many other types of roots were collected on prairies as well. Foothills were also especially important resource locations in the summer and fall (Carpenter 1986:8). Many other types of roots were collected on prairies as well. Women collected berries, medicinal plants, and basketry materials, while men hunted for birds and deer.

Fish have always been a staple of local diet (Carpenter 2002). Culturally important fish species include Chinook, Chum, Humpback, Coho, and Sockeye salmon; trout; smelt; flounder; and herring; as well as less available kinds of fish such as cod, perch, skate, sole, bullhead, devil fish, and eels. Freshwater fishing was typically done in the quieter waters of river tributaries, where fish weirs could safely be constructed without fear of loss to seasonal flooding. Fishing in marine waters was accomplished by canoe with nettle string nets or a clam-baited hook on a line. When fishing in a cove or eddy, fish could be speared or clubbed by wading from the shore. Whales, sharks, seals, and halibut were rarely encountered in the Puget Sound.

Shellfish were also an important staple food for people living along the Puget Sound (Carpenter 2002). Puget Sound villages hosted clambakes during the late Spring and early Summer, which were attended by relatives throughout the region. Seafoods were also dried and traded with neighboring bands.

Dwellings

Three forms of permanent dwellings were used in the region in the ethnohistoric period (Waterman and Greiner 1921). Quinault, Chehalis, Chinook, Clatsop, and Wishram houses were typically “gabled” and measured up to 25 by 75 feet, with a single ridgepole in the center, vertically planked walls, vertically or horizontally planked roofs, and an oval or circular door facing the water. A 3- to 6-foot-deep pit was featured at the center of the dwelling. The most common form throughout the Puget Sound, and including the Makah, Chimakum, Skokomish, and Quileute, was the “shed” style, which measured 40- to 90-feet wide by 500- to 1500-foot long. These dwellings usually paralleled the beach, with entrances facing the water and roofs slanting toward the back of the dwelling. The “shed” style homes featured a 1-foot deep trench extending the length of the building, and some featured one or more central pits. “Gambrel” style houses were also constructed in the Puget Sound area, featuring lean-tos on one or all sides of a “shed” style dwelling. Large ceremonial or festival houses might be

temporarily dismantled seasonally, and boards were used at temporary shelters. Summer dwellings were temporary and constructed of cedar bark slabs or pole frames covered with mats or boughs (Hadja 1999:509).

Archaeological Context

Thousands of years of human occupation in the Puget Sound region have been summarized in a number of archaeological, ethnographic, and historical investigations over the past 60 years, providing a regional context for evaluating cultural resources in the project area (e.g. Blukis 1987; Greengo 1983; Hajda 1990; Matson and Coupland 1995; Nelson 1990; and Suttles and Lane 1990). Archaeological context for evaluating resources in the project area is provided by the local and regional chronological sequence and research problem domains included in Ames and Maschner (1999), Carlson (1990), Larson and Lewarch (1995), Wessen and Stilson (1987), and others.

Historic Period

The landscape of western Washington has been radically transformed over the last 180 years, transitioning from old-growth forest to timberland and farmland, to its current use for residential, recreational, agricultural, and industrial purposes. This shift of land use is typical of western US settlement patterns. The history outlined in this report focuses on regional events as they pertain to cultural resources in the project vicinity.

United States Treaties

In the 1850s, the United States sought to make treaties with Washington tribes and assign them to reduced reservations to open land for American settlement (Richards 2005:343). American colonization and settlement of indigenous people's lands began illegally according to the United States' Nonintercourse Act (U.S.C. § 177). In December 1854, the United States entered into the Medicine Creek Treaty with the Nisqually, Puyallup, Steilacoom, Squawksin, S'Homamish, Stechass, T'Peeksin, Squi-aitl, and Sa-heh-wamish nations (Crowley 2003B). In January 1855, the United States entered into the Point Elliott Treaty with the Duwamish, Suquamish, Snoqualmie, Snohomish, Lummi, Skagit, and Swinomish nations (Crowley 2003C).

Fox Island Internment

During the Puget Sound War, an armed conflict that occurred between 1855–1856, Medicine Creek Treaty Tribes and other bands were forcibly confined to Fox Island and Squaxin Island (Ruby et al. 2010:318). Approximately 700 people were interned on Fox Island by the United States, although the location of their camps is unknown (Carpenter 1996:45). It is believed that Indian Agent Sidney Ford established a headquarters at Cedrona Cove, and that a trail here traversed the bluffs to Graves Island. People were interned on Fox Island with limited access to food or shelter (De Danaan 2006:10). Tuberculosis spread through the interned community in 1856, and the United State continued to intern more people while providing inadequate sustenance or care. People who remained at *S'hotl-Ma-Mish* (on Carr Inlet) were provided with potatoes to farm for the people on Fox Island. When the Fox Island internment ended, most of the interned people were removed to the Puyallup Reservation. About 100 people were granted permission from the United States to remain on Henderson Bay to farm potatoes. *S'hotl-Ma-Mish* people remained in the area at the time of the General Land Office surveys and may have covertly sabotaged some of their survey stakes. *S'hotl-Ma-Mish* remained in the area through the late 1860s, but American settlers burned the houses at Minter Bay between 1872-1874 (De Danaan 2006:14).

History of Land Ownership in Washington State, 1800s to 1900s

The first non-native immigrants to the area were European, Hawaiian, and Metis employees of the Hudson's Bay Company (HBC) who arrived in the early 1800s with the development of HBC trading posts and agricultural stations (Nisbet and Nisbet 2011). The Puget Sound Agricultural Company (PSAC), an agricultural subsidiary of the HBC, was established in 1838 (Crooks 2007). PSAC operations focused at two locations: one at Cowlitz Farm (Toledo, WA) and the other at Fort Nisqually (DuPont, WA). By the mid-nineteenth century, the PSAC holdings included 150,000 acres between the Puyallup and Nisqually Rivers, much of which was worked from outstations and satellite farms.

The project vicinity was jointly occupied by the United Kingdom and the United States until the Oregon Treaty of 1846. The presence of the HBC, a British company, began to decline at this time, being replaced by American settlement and industry. Few American settlers lived in what would become Oregon Territory by the 1840s. To encourage American settlement in Oregon Territory, the US passed the Donation Land Claim Act of 1850, which amended previous land claim laws and required that land surveys and claims conform to government standards.

The Donation Land Claim Act was passed prior to treaty discussions with the native peoples of what would become the Washington Territory. The act granted 320 acres of land to white male citizens over 18 (Riddle 2010). A married man could claim 640 acres. Recipients only needed to prove, within 4 years, that they lived on and cultivated the land. If a claimant arrived between 1850 and 1855, they could claim 160 acres if single and 320 acres if married. In 1854, an extension of the act also allowed for purchase of the claims at $1.25 an acre instead of proof of cultivation and residence. About 2% of western Washington lands were claimed through the Donation Land Claim Act (Mathews 2024).

In 1862, the United States government passed the Homestead Act, which granted 160 acres to heads of households (Muhn and Hanson 1998:20). Homestead applicants were issued a patent on their land if they either proved residence and cultivation after five years, requiring the investment and labor of building a residence, clearing land, and planting crops; or they could purchase the land via a "cash entry" after only 6 months. Only about 40% of claims were "proved up" and 20% of lands in Washington State were claimed through this act (Mathews 2019A). In Pierce County, 2% (n=27) of Homestead Act patents were granted to women, which is slightly below the average of 3.5% in western Washington (Mathews 2021).

The United States also granted lands directly to railroad companies to encourage the development of transcontinental rail lines in the 1860s (Muhn and Hanson 1988:21). In 1862, rail companies were granted five alternate odd-numbered sections for each mile of planned rail railroad, within 10 miles of the planned railroad. In 1864, this was increased to twenty sections for each mile of railroad. Railroad land grants were considered controversial, as they limited the potential for settlement of the area, and the policy of granting to railroads ended in 1871.

The United States passed several land grant acts and amendments to the Homestead Act through the early 1900s, to encourage settlement and industry in the west. The Timber Culture Act of 1873 granted 160 acres to individuals who planted 40 acres with trees, with trees spaced no more than 12 feet apart (6,750 trees), for a period of 10 years (Muhn and Hanson 1988:22). In 1877, the Desert Land Law granted 640 acres to individuals who paid $0.25 an acre and irrigated dry, treeless property within 3 years. The Dawes Severalty Act of 1887

assigned 160-acre allotments to individual tribe members and opened the remainder of lands to homesteaders (Wilma 2006). The Enlarged Homestead Act of 1909 increased the maximum homestead grant acres to 320 acres for individuals who homesteaded non-irrigable lands (Bradsher 2012). The Stock Raising Act of 1916 granted up to 640 surface acres, to include lands that were deemed only useful for grazing and raising forage crops (United States Congress 1916).

Early American Settlement in Pierce County

Washington government and communities developed rapidly in the mid-1800s. In 1845, the southern Puget Sound was the site of the first American settlement in what would become Washington State (Dougherty 2006). The Simmons-Bush party, who are regarded as the earliest and most influential American settlers of the region, consisted of a group of five families and six single men. When the party reached Oregon in 1844 they learned the Oregon Provisional Government had passed the Black Exclusion Law which banned African American settlement, and the party decided to settle along the Deschutes River instead (McLagan 2009). The United States Government created the Oregon Territory in 1848, and subsequently Washington Territory in 1851 (Crowley 2003A). Pierce County was established by the Oregon Territorial Legislature in 1852, and Steilacoom, the largest settlement in the county, was designated as the county seat (Becker 2006A). Territorial Governor Isaac Stevens chose Olympia as the territorial capital in 1853. Washington was admitted to the Union in 1889 (Crowley 2003A). The county seat was relocated from Steilacoom to burgeoning Tacoma in 1880 (Becker 2006B).

Fort Nisqually, operated by the British Hudson's Bay Company as a fur trading post, was influential in the development of Washington as an American territory (Becker 2006A). Established in 1833 near Sequalitchew Creek, the fort had a profound economic impact on the region as the first non-native settlement on the Puget Sound. The fort's farming outstations, managed by the Puget Sound Agricultural Company, covered 150,000 acres in what would become Pierce County, with a few farms located in Thurston County (Crooks 2001:88). Fort Steilacoom, a U.S. army post built on land leased by the HBC in 1849, was the first official American presence in the region (McPherson 2019).

Prior to the development of the transcontinental railroad system, transportation to Washington required lengthy passages and transfers between railroads, stagecoaches, sailing vessels, and steamers (Lewis 1912:186). The concept of a transcontinental railroad was initiated in the 1840s, and after years of exploratory survey and preparation three routes were planned from Nebraska: a line was planned to cross the Cascade Mountains and reach a terminus at the Puget Sound; a line was planned along the Columbia River; and a line was planned to connect the two termini (Lewis 1912:188). In 1873, the Northern Pacific Railroad announced Tacoma would serve as the terminus for their Puget Sound line, and construction of the line reached Tacoma in 1883 (MacIntosh and Wilma 1999; Wilma and Crowley 2003). The completion of the Northern Pacific Railroad marked the beginning of the development of a complex system of local rail lines providing access to timber, mining, and residential locales. By 1906, over 3,000 miles of railroad were in operation in Washington (Lewis 1912:193).

Pierce County has been the site of several agricultural and extraction industries important to the history of western Washington. Agricultural industries significant in the history of Pierce County include the production of hops, flower bulbs, berries, dairy cattle, and Christmas trees (Becker 2006). Many of western Washington's communities were influenced by the development of the timber industry which had a profound influence on the

history of the Pacific Northwest in the 1800s to early 1900s. The development of sawmills on the Puget Sound is linked to lumber demands from California's Gold Rush of the late 1840s, and the establishment of American settlements on the Puget Sound (Chiang and Reese 2002). By the late 1800s the national demand for timber and the logistical support of the new railroad system increased demand for Washington timber, and by 1905 Washington's timber industry was the largest in the nation (Chiang and Reese 2002). Large timber companies like Weyerhaeuser, Simpson Logging Company, and the Schafer Brothers Logging Company purchased large tracts of surplus railroad land and consolidated small homestead properties in the late 1800s to early 1900s, forever impacting the landscape of Washington (Chiang and Reese 2002; Fredson 1993:44; World Forestry Center, nd).

The coal industry also had an influence on the economy of the southern Puget Sound. Western Washington's coal mining industry was established in Bellingham in the 1850s, and the regional demand for coal encouraged several mines to develop in King County by the 1860s (Echtle 2018). Pierce County became another industry leader in the 1870s, when the demand for coal increased because of the regional establishment of a railroad system. The Wilkeson-Carbonado coal field supported a mining operation from 1877 to 1937.

In 1906 the E.I. DuPont de Nemours Company established the DuPont plant in Pierce County, to produce explosives for the mining, timber, and construction industries (Mathews 2019B). The facility was intended to be a company town, and the development and expansion of the DuPont plant from the 1900s to 1970s had lasting impacts on the southern Puget Sound economy and history. The Great Depression had devastating effects on the Northwest economy by 1930, but the New Deal programs and projects of the 1930s brought thousands of jobs to Washington. The multitude of projects requiring mining or land clearing were a boon to the explosives industry. This economic opportunity and the presence of DuPont in western Washington encouraged a small economic cluster of explosives companies in the Puget Sound region.

The advent of Fort Lewis and McChord Air Force Base in the early 20th century had a substantial long-term impact on the development of the local economy and landscape. The history of Fort Lewis can be summarized by three periods of development on the installation: World War I (1917–1919), Building a Permanent Fort Lewis (1927–1939), and World War II (1940–1948) (Corbyn 2010). Camp Lewis was established in 1917, following the condemnation and purchase of about 70,000 acres of private and tribal land by Pierce County and subsequent donation to the Army (Lewarch et al. 1999). Camp Lewis served as a mobilization, training, and supply station in anticipation of US entry into the Great War. Following WWI, Fort Lewis developed into a permanent Army Post. In the years leading up to World War II, the fort rapidly expanded as troops prepared for war. Thousands of buildings were constructed at Fort Lewis during this period. The development of McChord Air Force Base closely followed that of Fort Lewis. In the late 1920s Pierce County purchased 900 acres from a local homesteader for Rigney Airfield. The airfield was developed in 1929, and the US Army Air Corps acquired the property in 1938 when construction of McChord Air Force Base began. The base was in operation in 1940 and continued to expand through WWII and into the 1950s (Corbyn 2010).

American Settlement of Puyallup

Like many of the American communities of the Puget Sound, Puyallup was established following homestead settlement from the 1860s to 1890s. Ezra Meeker platted the town in 1877 (Chesley 2008). Hop agriculture was the dominant industry in Puyallup from the 1870s to 1890s, but when hop lice destroyed the crops in 1892 farmers diversified with berry and flower farming. Meeker established a hop kiln and formed a hop brokerage

and soon cornered the international hops market. The hop industry heavily relied on Native people's labor, with people coming as far away as British Columbia seasonally. The growth of Puyallup slowed during the 1930s and although it rebounded during WWII, the agricultural industry of the Puyallup valley continues to decline.

Study Area Property Ownership and Land Use History, 1850s to Present

The project area was included in a 967,892-acre grant to the Northern Pacific Railroad Company in May 1895 (Bureau of Land Management 2024A). No homestead improvements are mapped on the 1864 General Land Office plat of the area (Figure 6). No cultural features are mapped on the 1897 USGS topographic map of the area (Figure 7). By 1941, a residence had been constructed just west of the project, on the other side of Shaw Rd (Figure 8). Several residences had been constructed along Shaw Rd by this time. No changes are noted in the project area in 1944 (Figure 9). The Pierce County assessor records indicate that parcel 0420354039 was developed with a single-family residence in 1959 (Pierce County 2024). By 1968 a building or complex had been constructed in the northwest corner of the project and remained on site through 1973 (Figures 10-11).

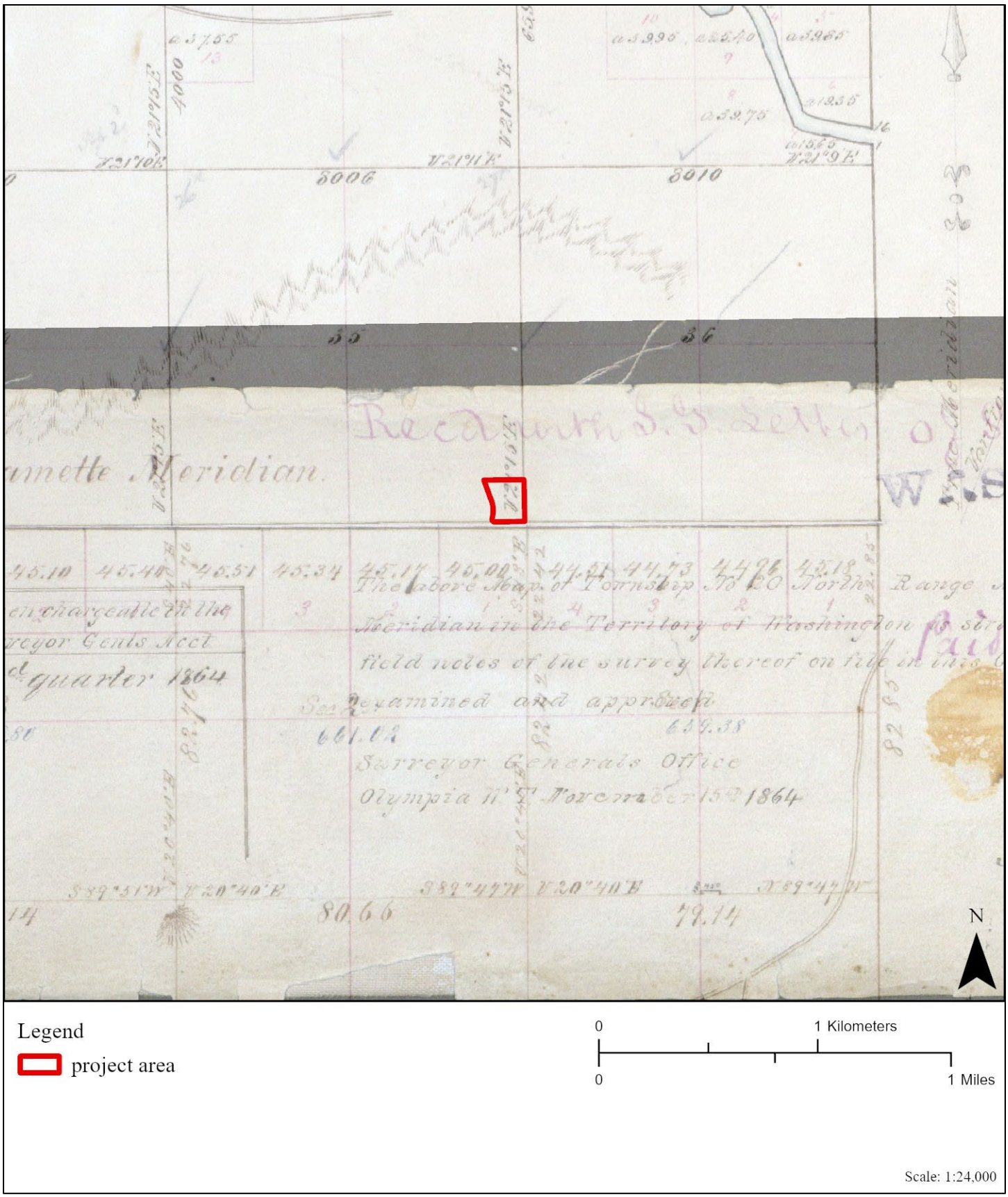

Figure 6. Portion of 1864 Township 20N Range 4E GLO Map and 1872 Township 19N Range 4E, with project parcel indicated (Source: Bureau of Land Management 2024B).

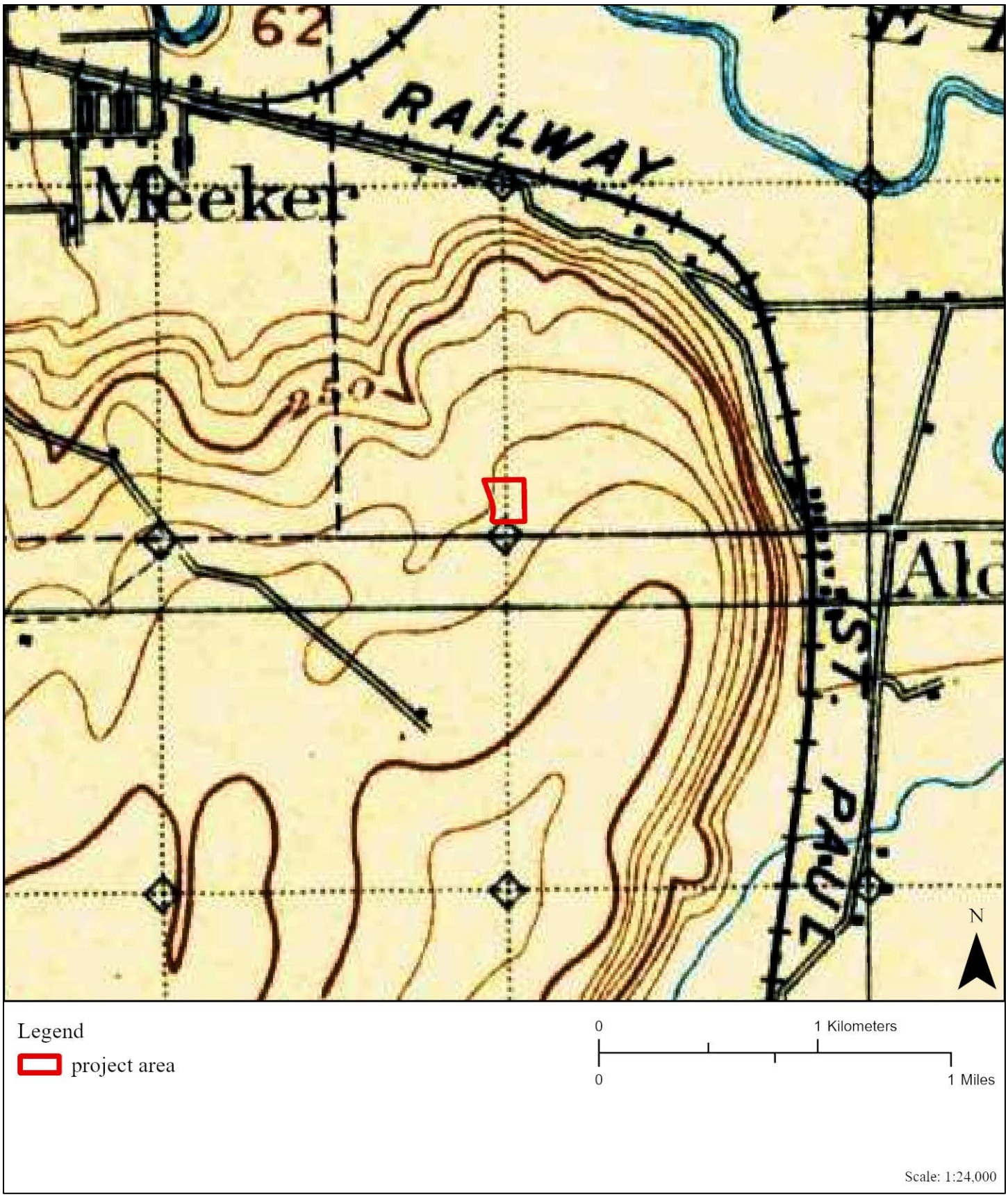

Figure 7. Portion of 1897 1:125,000 Tacoma Quadrangle topographic map, with project parcel indicated (Source: USGS 1897).

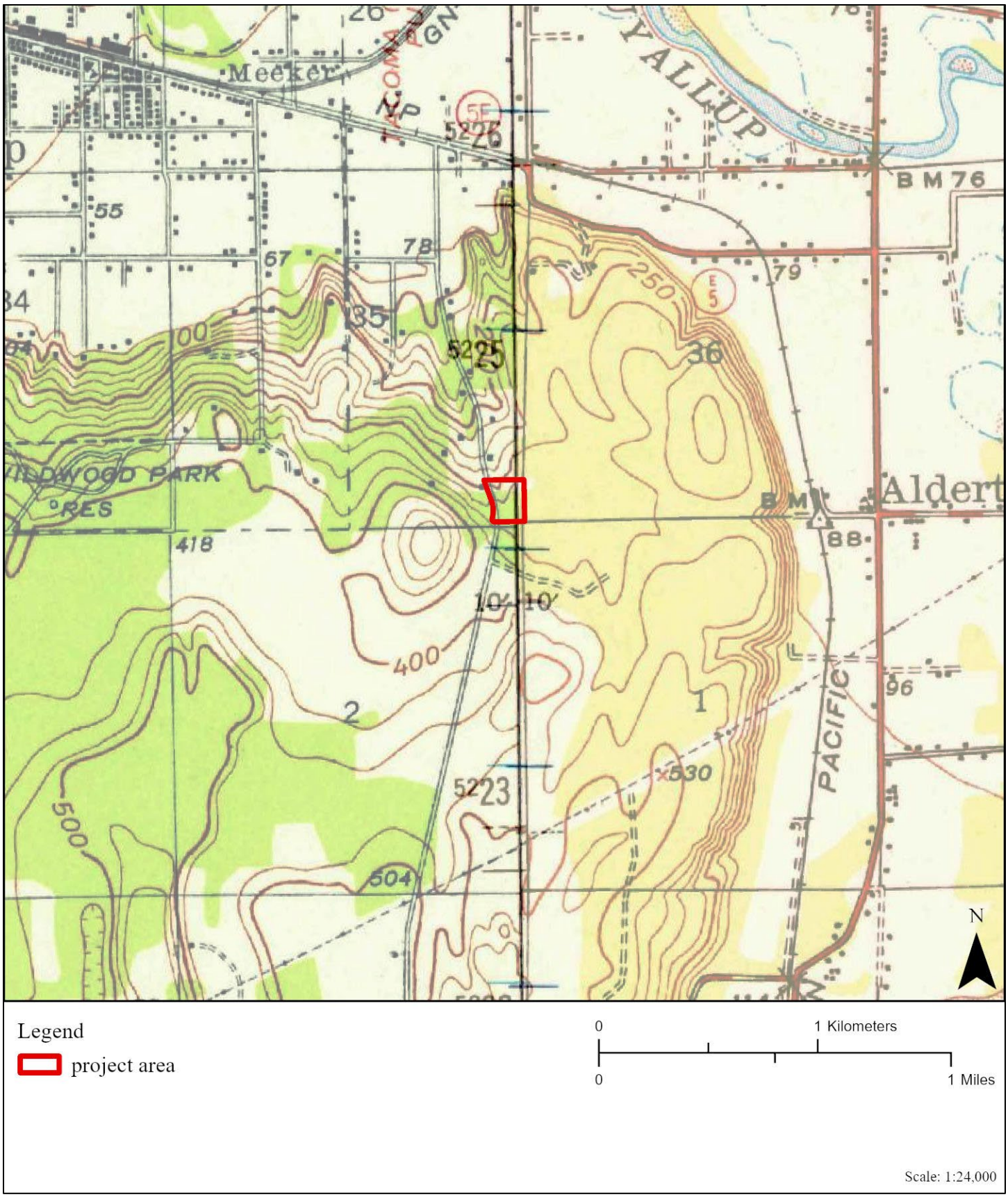

Figure 8. Portion of 1941 1:62,500 Tacoma South and 1942 1:62,500 Lake Tapps Quadrangle topographic maps, with project parcel indicated (Source: USGS 1941, 1942).

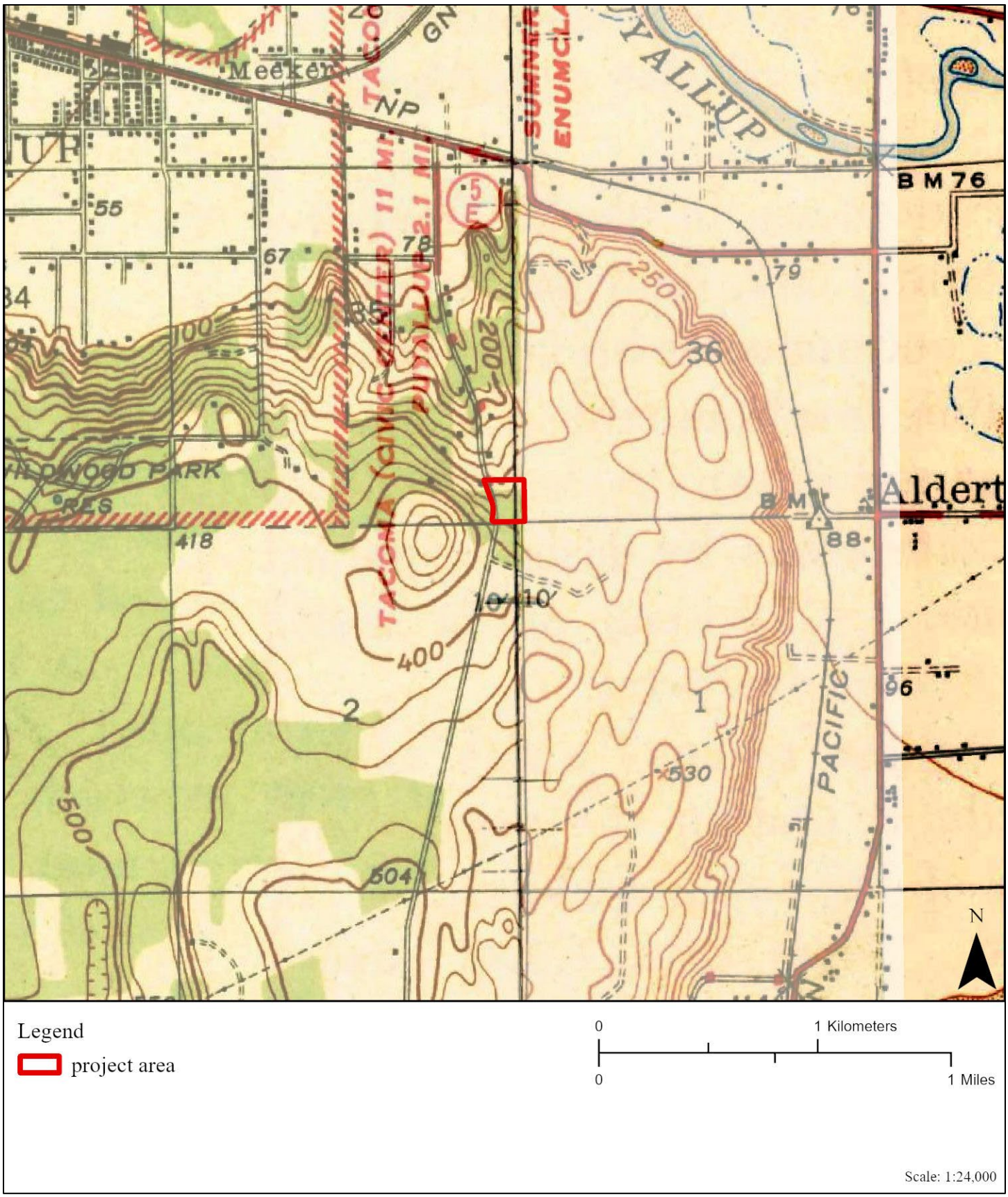

Figure 9. Portion of 1944 1:62,500 Tacoma South and 1:62,500 Lake Tapps Quadrangle topographic map, with project parcel indicated (Source: USGS 1944A, 1944B).

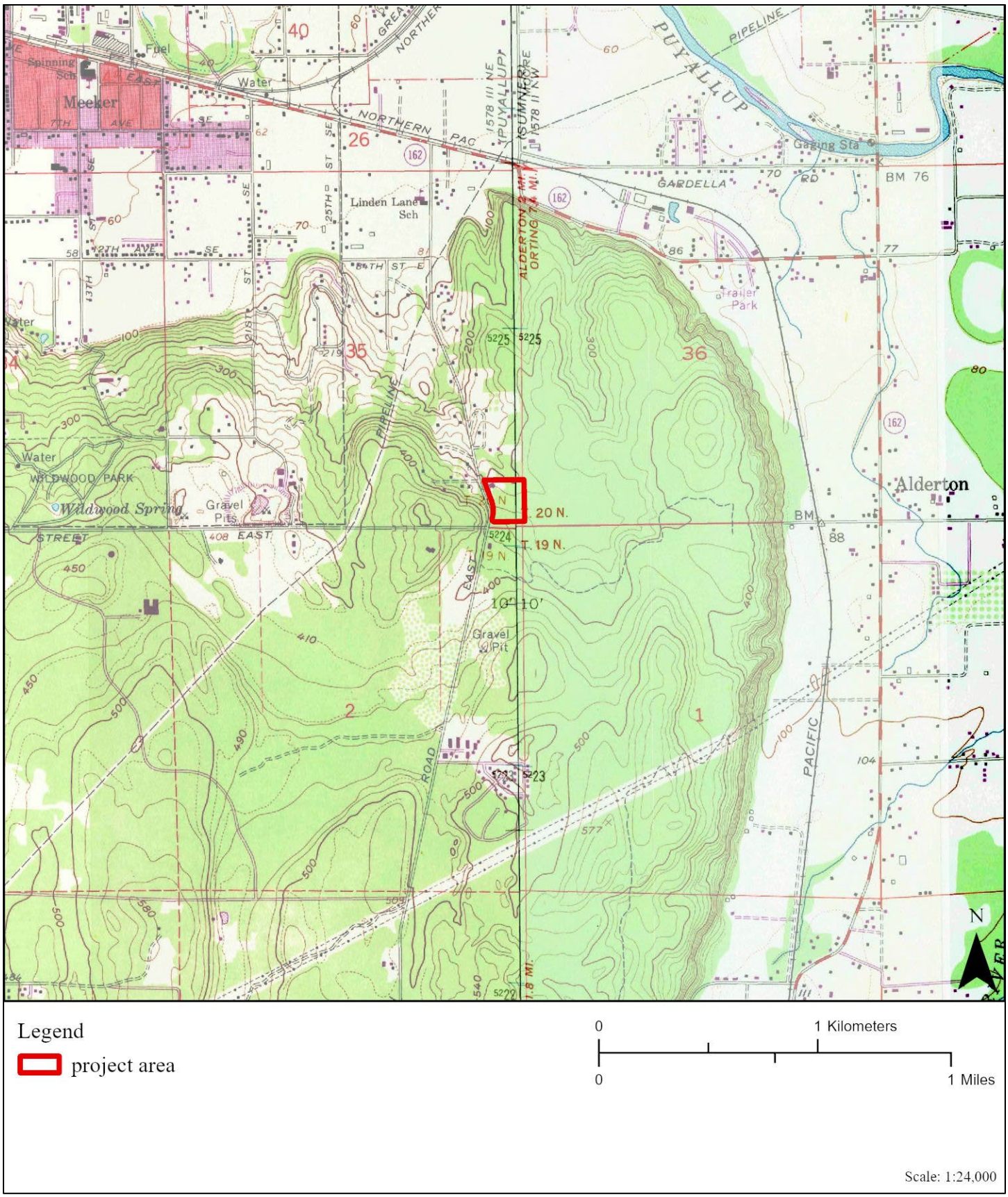

Figure 10. Portion of 1968 1:24,000 Puyallup and 1968 1:24,000 Sumner Quadrangle topographic map, with project parcel indicated (Source: USGS 1968A, 1968B).

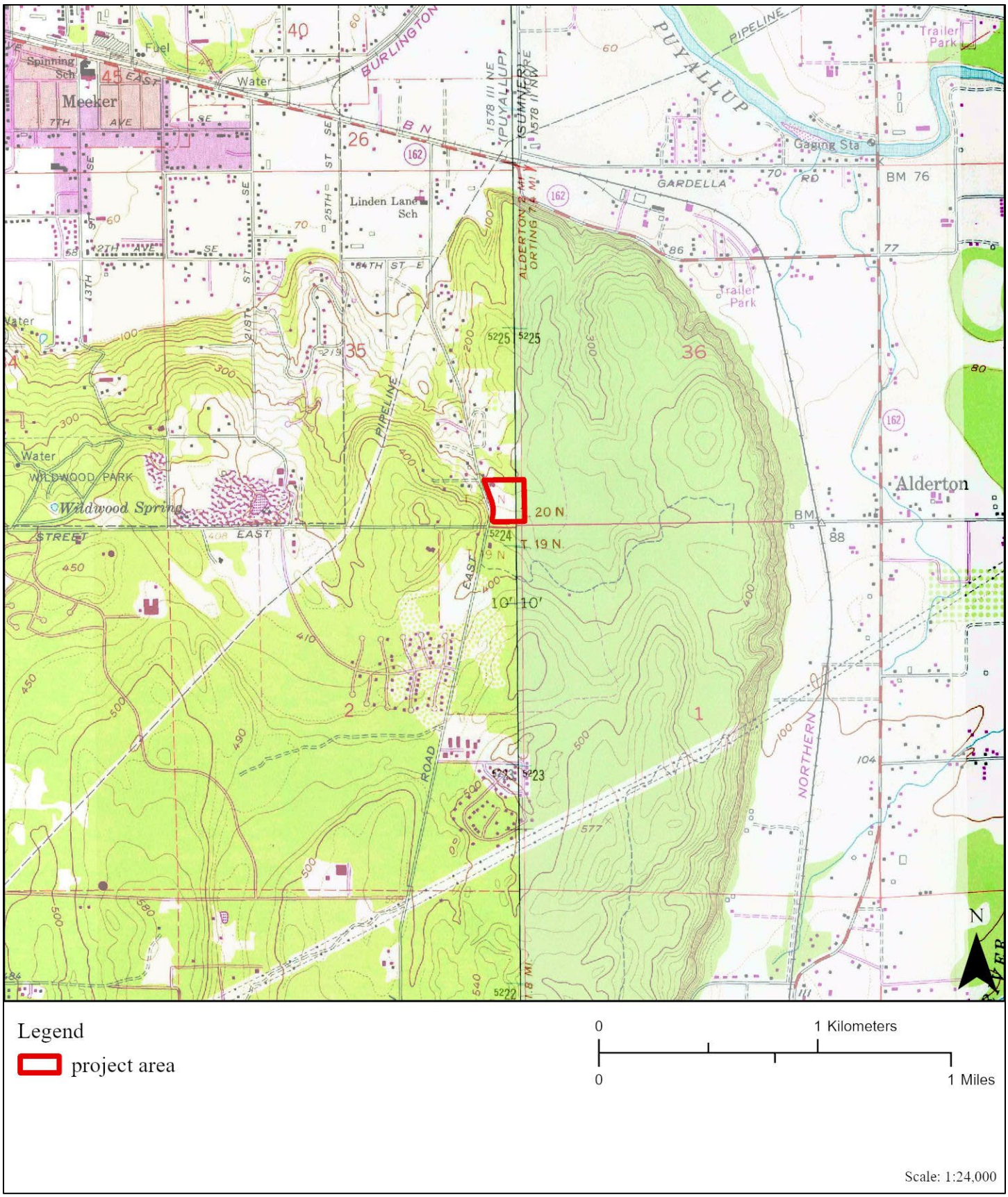

Figure 11. Portion of 1973 1:24,000 Puyallup and 1973 1:24,000 Sumner Quadrangle topographic map, with project parcel indicated (Source: USGS 1973A, 1973B).

DEPARTMENT OF ARCHAEOLOGY AND HISTORIC PRESERVATION LITERATURE REVIEW

The Washington Information System for Architectural and Archaeological Records Data (WISAARD) database (Washington State Department of Archaeology and Historic Preservation 2024) was reviewed to determine whether any archaeological sites or other historic properties had previously been recorded in the project vicinity. This database displays the locations of archaeological sites, cemeteries, traditional cultural properties, and historic properties; but the precision of site boundaries and locations is dependent on survey data which may be imprecise or outdated. Cultural resource assessment data available in WISAARD is limited to assessments completed since 1996 and is not comprehensive.

Archaeological Resources Predictive Model

The DAHP archaeological resources predictive model available in WISAARD indicates that the project area has a low to high risk for encountering archaeological resources based on environmental factors, with contingent upon project parameters for low-risk areas and survey highly advised for high-risk areas.

Cultural Resource Surveys within Two Kilometers of the Project Area

According to the WISAARD database, 16 cultural resource surveys have been completed within two kilometers of the project area (Table 3). The closest cultural resource survey, NADB 1684398, was conducted along Shaw Rd south of 23rd Ave SE approximately 23 meters south of the project area. An assessment for the proposed Shaw Road Corridor Improvements Project included pedestrian survey and shovel scrapes to test the 7-acre area. The survey did not result in the identification of cultural resources.

Table 3. Cultural resource surveys previously completed within 2 kilometers of the project area.

NADB	Title	Lead Author	Year Completed
1342062	Cultural Resources Investigations for the Foothills Linear Park/Trail, McMillan to Meeker	Stephen C. Cole	2002
1343597	Cultural Resources Survey for the Shaw Road Extension Project, Pierce County, Washington	Margaret Berger	2007
1347488	Cultural Resources Assessment for the Pierce College Performing Arts-Communication Building Project, Pierce County, Washington	Nichole Gillis	2006
1684387	Northwest Pipeline GP Washington Expansion Project: Cultural Resources Overview and Survey Report	Robin. D. McClintock	2013
1684398	Cultural Resources Assessment the Shaw Road Corridor Improvements Project, Puyallup, Pierce County, WA	Jason Cowan	2013
1684399	Cultural Resources Assessment for the Wildwood Park Drive Sidewalk Improvements Project, Puyallup, Pierce County, WA	Jason Cowan	2013
1685308	Archaeological Survey of the Wildwood Park (TA3289) Project Area, Pierce County, Washington	Dana L. Holschuh	2014
1686993	Cultural Resource Survey, Puget Sound Energy, Alderton to White River, Pierce 230kV Expansion, Transmission Project Pierce County, Washington	J. Jeffrey Flenniken	2015
1688049	Northwest Pipeline LLC Washington Expansion Project- Addendum to Cultural Resources Overview and Survey Report: Survey of Highway 410 Reroute and Temporary Extra Workspace Areas and Easements	Robin McClintock	2014
1689129	Historic Properties Evaluation for the Proposed Pioneer Crossing Project, 2614 E. Pioneer Avenue, Puyallup, Washington	Ed P. Arthur	2016
1689752	Van Lierop Property Cultural Resource Survey	Frank Stipe	2016
1692633	Results of a Cultural Resources Study Related to BPA's Steel Lattice Inspection and Repair Fiscal Year 2018 Project	Michelle R. Lynch	2019
1693058	Skookum Archers Archaeological Survey Report	Dana L. Holschuh	2019

NADB	Title	Lead Author	Year Completed
1696786	Cultural Resources Review of Pierce College PY Parking Expansion Development, Puyallup, Washington	Garth L. Baldwin	2022
1696788	Cultural Resource Review of Pierce College PY STEM Building and Parking Development, Puyallup, Washington	Garth L. Baldwin	2022
1697707	Cultural Resources Inventory Technical Report for the City of Puyallup's Knutson Farms Industrial Park Project, Puyallup, Pierce County, Washington	Brian Durkin	2022

Historic Properties within Two Kilometers of the Project Area

There are three register-listed properties recorded in the WISAARD database within two kilometers of the project area. The Alderton School (45PI638) is located approximately 1.5 kilometers east of the project area. The two-story brick structure was built in 1915 along with a brick gymnasium. The Alderton School provides an example of public education in rural Pierce County and is associated with the development of Alderton as a major community within the Puyallup Valley.

The historic barn associated with Spooner Farms (45PI1200) is located approximately 1.5 kilometers southeast of the project area. The farm was established in 1882 by Antone Spooner and the barn was built in 1930 and used for storage and livestock, and as a gift shop in more recent years. The barn provides an example of the architecture and development of agriculture in Pierce County and the Alerton area.

The historic barn associated with the Cavelti Farm (45PI1194) is located approximately 1.2 kilometers southeast of the project area. The 2.5 story gable roofed barn was built in 1938 by the Cavelti family. The barn retains many of its original features and provides an example of changing agriculture throughout the Puyallup Valley.

A total of 106 historic-age properties have been recorded within two kilometers of the project area, within the WISAARD historic property inventory. None of these properties are within the immediate vicinity of the project area.

Cemeteries within Two Kilometers of the Project Area

No cemeteries have been recorded within two kilometers of the project area.

Archaeological Sites within Two Kilometers of the Project Area

No archaeological sites have been previously recorded within the project area. Four archaeological sites have been recorded within two kilometers of the project area (Table 4).

A historic debris scatter (45PI444) is located approximately 1.4 kilometers southeast of the project area and consists of glass bottle fragments and bricks dating to the early 20th Century.

A scatter of early 20th Century amethyst bottle glass fragments (45PI445) is located approximately 1.8 kilometers southeast of the project area along a railroad grade.

A segment of the Northern Pacific Railway (45PI1360) is located approximately 1.3 kilometers east of the project area. The site consists of a 1.5-mile segment of the Cascade Junction-Wilkeson Branch of the Northern Pacific and Cascade Railroad and to 1898-1984.

Site 45PI1595, which is located 1.3 kilometers northeast of the project area, consists of 3 segments of a railroad

spur.

Table 4. Archaeological sites within two kilometers of the project.

Trinomial	Description	Age	Distance from project
45PI444	Historic debris scatter	Early 20th century	1.4 kilometers southeast
45PI445	Amethyst glass bottle fragment scatter	Early 20th century	1.8 kilometers southeast
45PI1360	Northern Pacific Railway segment	1898-1984	1.3 kilometers east
45PI1595	3 railroad spur segments	1925- late 1960s	1.3 kilometers northeast

RESEARCH DESIGN

The cultural and environmental contexts of the project vicinity as well as available cultural resource management information were considered prior to fieldwork to determine the likelihood for identifying cultural resources in the project area. The project research design was planned to assess the potential impacts to cultural resources in the planned project area. Prior to conducting fieldwork, a research design was distributed to Tribal Historic Preservation Offices for feedback.

Expectations

The potential for precontact or early historic-period archaeological sites associated with *Puyáləpabš* history should be considered moderate for the project area. Although no discrete traditional sites were identified in the vicinity during a review of ethnographic and archaeological information, the project is in a locality and region that was highly populated and well-traveled. Additionally, the project is situated in an area that is known by the Puyallup Tribe of Indians to have been used for hunting and gathering, which increases the archaeological probability of this location.

The potential for encountering significant historic-age cultural resources in the project area should be considered low. The property was included in a large grant to the Northern Pacific Railroad in 1895, but a review of historic maps indicates that no development occurred until 1959.

The potential for site preservation due to both environmental and cultural factors should be considered moderate for the project area, and although it has been impacted by limited development, the potential for encountering archaeological materials remains.

Field Methodology Plan

The archaeological survey was designed to identify archaeological resources in the survey area and assess whether proposed project plans might impact cultural resources. Given the probability of encountering a significant archaeological site within the planned direct impact area, shovel probes were planned at 30-meter intervals. If archaeological materials were encountered during subsurface testing, additional shovel probes were to be excavated at 5-meter intervals in each cardinal direction, within the project area and within the scope of work and budgeted timeline.

Shovel probes (SPs) were planned to extend approximately 100 centimeters below surface (cmbs; 3.3 feet), to an undisturbed Pleistocene glacial sediment, or until excavation was deemed unproductive, to assess the possible presence and depth of cultural deposits. Hand tools were to include shovels, digging bars, bucket augers, trowels, saws, and pruners. Excavated materials were to be screened through 1/4” hardware mesh and returned to the shovel probe. Shovel probes were expected to be excavated and screened in approximately 20-centimeter levels. All cultural materials were to be returned to shovel probes upon completion and recordation of the SP data, placed beneath the sod or within 20 centimeters of the ground surface. Shovel locations, photographs, and data were to be recorded via ArcGIS Survey123 on a Samsung Active tablet with an expected horizontal accuracy of approximately 5 meters.

SURVEY RESULTS

Field Methodology

Archaeological fieldwork was conducted on 15 January and 21 February 2024 by Field Archaeologist Katy Leonard-Doll, MA, RPA, Archaeological Field Technicians Laura Johnson, BA, Caleb Geringer, BA, Lucinda Axtelle, BA, Alexander Engelberts, BA, and Karen Gonzalez, and monitored remotely throughout the day by Principal Investigator Beth Mathews, MA, RPA via Survey123, text, and phone.

Weather conditions were overcast and cold during the survey. Pedestrian and shovel probe survey was completed at 30-meter intervals across the project area with two rows of 5-meter intervals surrounding a positive shovel probe (SP 26) to delineate the site (Figures 12-13). Shovel probing was terminated due to C-horizon in parent glacial material (23 shovel probes, 36%), gravel content and size (>40% volume) (5 shovel probes, 8%), slumping associated with loose soils (1 shovel probe, 2%), large roots (4 shovel probes, 6%), and manual tool limits (31 shovel probes, 48%). Mineral soil visibility was typically 0-10% across the project area with 50-90% visibility in sections along the driveway, surrounding the house, and the graded area in the southern portion of the project area. Some areas surrounding the house and foundation were avoided due to asbestos being present within the structure and building materials. GPS accuracy ranged from 3-21 meters during shovel probe survey.

Survey Findings

A total of 64 shovel probes were excavated in the project area to an average of 104 centimeters below ground surface (cmbs). Shovel probe descriptions are attached to this report in Appendix A. Sediments in the project area were expected to be loamy sand and sandy loam, formed in glacial outwash, with a C-horizon beginning around 81 to 94 cmbs. Overall, soils observed in shovel probes matched the expected soils within the project area. Construction fill was observed in one shovel probe (SP 1) in the graded southern portion of the project area. Due to frozen soil, no alternate probes were excavated here.

Site 45PI01647

One reddish-brown jasper crypto-crystalline silicate (CCS) biface fragment was observed in the northwest portion of the project area, in shovel probe 26 (Figures 14-17) at 35 cmbs. The biface fragment appears to be the hafting element of a lanceolate projectile point, and measures approximately 2 centimeters across and 3 centimeters long. The biface has a bend-break (snap) hinge fracture, likely the result of force exerted perpendicular to the missing tip of the biface. Shovel probe delineation at 5-meter intervals, which included 24 radial probes, did not result in the observation of additional archaeological resources (see Figure 13).

Survey Findings Analysis

The project area was considered to have a high risk for encountering archaeological resources due to the local historic and archaeological context, cultural information from the Puyallup Tribe of Indians, and the DAHP predictive model. Thorough pedestrian and subsurface testing were completed across the project area. Shovel probing extended to the glacial C-horizon in 36% of the shovel probes, and the upper 104 cmbs of the survey area was sampled and screened. The driveway and vicinity of the residence have been disturbed due to grading and foundation construction as well as the demolition of the house structure. The southern portion of the project area has also been disturbed due to grading.

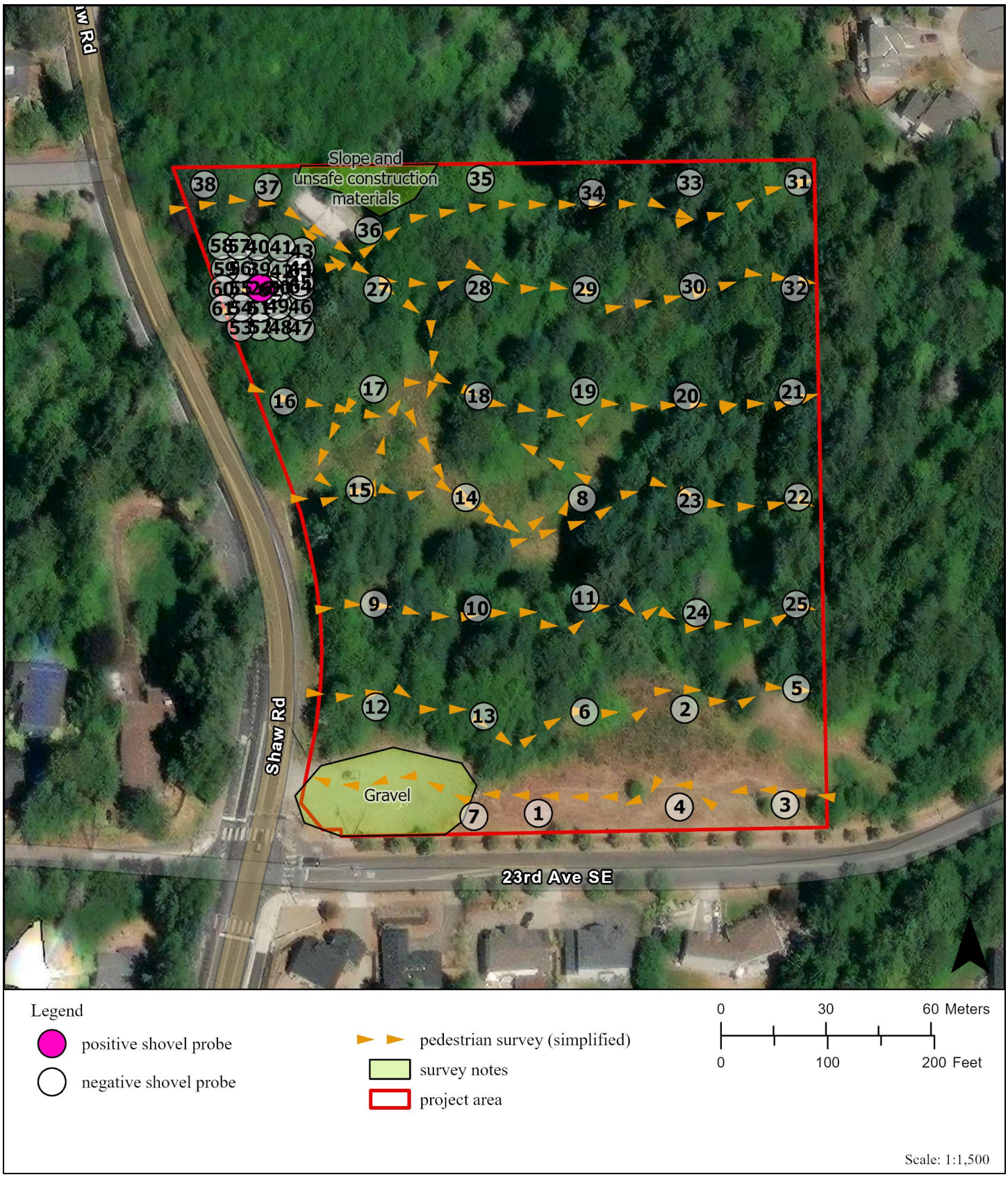

Figure 12. Shovel probe survey locations illustrated on aerial image.

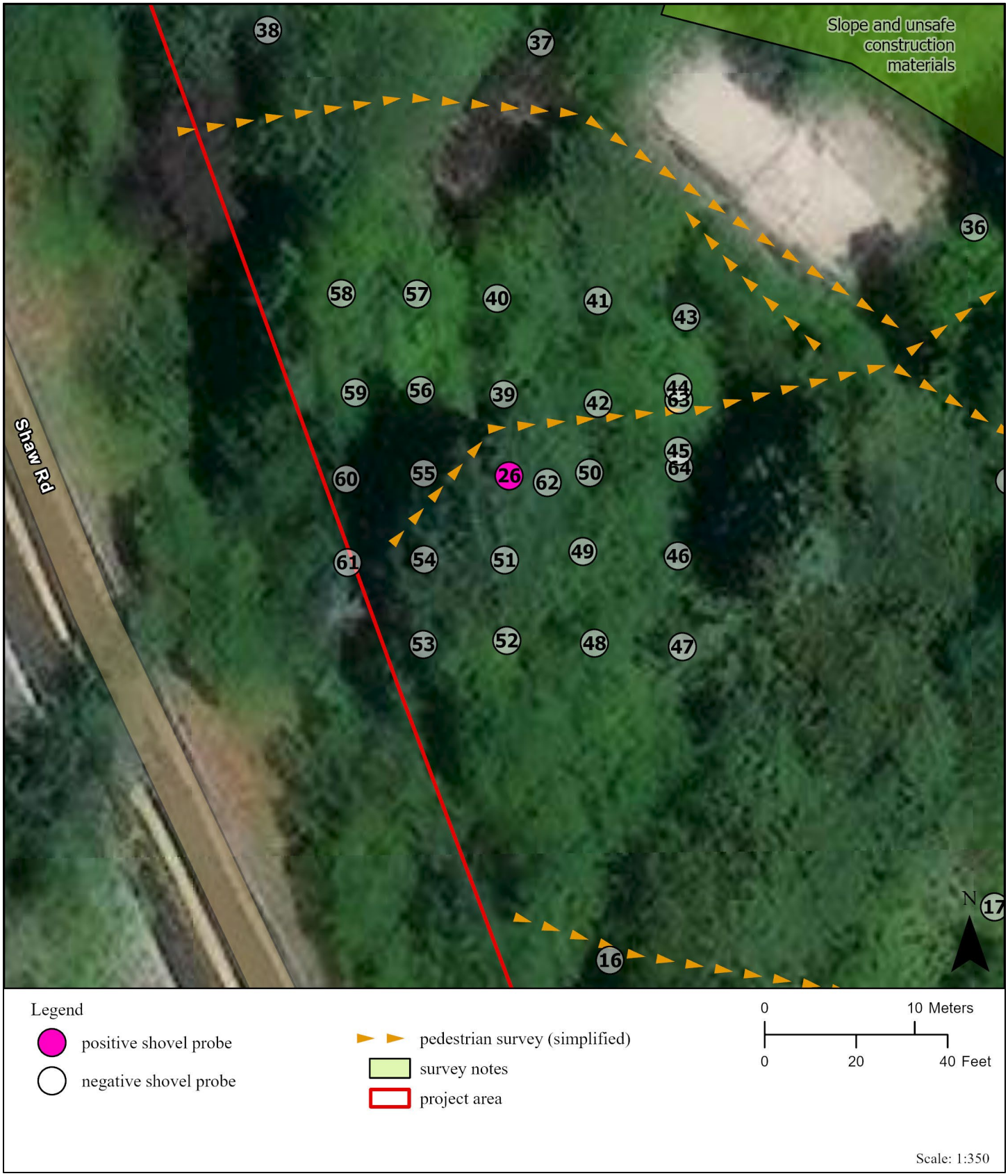

Figure 13. Shovel probe survey locations illustrated on aerial image.

Figure 14. Biface fragment, obverse. Note, the orientation should be flipped vertically. The lighting has a blue cast due to winter conditions.

Figure 15. Biface fragment, reverse. Note, the orientation should be flipped vertically. The lighting has a blue cast due to winter conditions.

Figure 16. Biface fragment, reverse. Note, the orientation should be flipped vertically. This photo has better coloring showing the reddish-brown jasper material.

Figure 17. Setting of shovel probe 26.

CONCLUSIONS AND RECOMMENDATIONS

Background review suggested the proposed project is located in an area of high risk for encountering archaeological resources. The project area was thoroughly surveyed to assess potential project impacts to cultural resources. Archaeological site 45PI01647, an isolated jasper lanceolate biface hafting element with a snap fracture, was observed in shovel probe 26 at 35cmbs in the northwest portion of the project. Delineation of this isolated artifact did not result in the observation of additional archaeological resources. Antiquity Consulting recommends the artifact be donated to the Puyallup Tribe of Indians. The project should comply with an inadvertent discovery plan because there is risk of encountering isolated artifacts in this area.

INADVERTENT DISCOVERY PROTOCOL

Archaeological Materials Inadvertent Discovery Protocol

A cultural resource is an object, site, building, or structure that may be eligible for local, state, or national registers. A cultural resource discovery could be prehistoric or historic and is typically more than 50 years old. When in doubt, assume the material is a cultural resource. If any employee, contractor, or subcontractor believes that they have uncovered a cultural resource at any point in the project, all work must stop immediately in compliance with RCW 27.53. Leave the surrounding area untouched and provide a demarcation adequate to provide the total security, protection, and integrity of the discovery. Notify on-site project management and personnel of the work stoppage to ensure security of the discovery. Vehicles, equipment, and unauthorized personnel will not be permitted to traverse the discovery site. Work in the immediate area will not resume until treatment of the discovery has been completed.

Contacts

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360.628.2755 cell

Human Skeletal Remains Inadvertent Discovery Protocol

In accordance with RCWs 68.50.645, 27.44.055, and 68.60.055, 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 until the State provides notice to proceed. 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."

Contacts

Pierce County Medical Examiner
253.798.6494

Pierce County Sherriff's Office
253.798.7530

State Physical Anthropologist
Guy Tasa
Department of Archaeology and Historic Preservation
360.790.1633 cell

Assistant State Anthropologist
Alex Garcia-Putnam
Department of Archaeology and Historic Preservation
360.890.2633 cell

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APPENDIX A: SHOVEL PROBE LOG

Shovel Probe #1

Date & Time January 15, 2024 11:21 AM **Probe Diameter** 30 cm **Maximum Depth** 11cmbs **Reason for Termination** Gravel content/size (>40% volume)	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** CONSTRUCTION FILL	0-11 **cmbs**
Color Brownish yellow	**Sediment Texture** Sandy loam	
Gravel % >40%	**Gravel Angularity** Very angular	**Gravel Size** Pebbles <6cm
Notes		
Area has been graded leading to compact ground. Ground is frozen.		

Shovel Probe #2

Date & Time February 21, 2024 9:28 AM **Probe Diameter** 40 cm **Maximum Depth** 120cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Alexander Engelberts, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-37 **cmbs**
Color Pale browns	**Sediment Texture** Sandy loam	
Gravel % 25-40%	**Gravel Angularity** Rounded, Well rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	37-120 **cmbs**
Color Light brownish gray	**Sediment Texture** Loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded, Well rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Pockets of clay in stratum II.		

Shovel Probe #3

Date & Time February 21, 2024 10:10 AM **Probe Diameter** 40 cm **Maximum Depth** 135cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Laura Johnson, BA, Alexander Engelberts, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-61 **cmbs**
Color Pale browns	**Sediment Texture** Sandy loam	
Gravel % 25-40%	**Gravel Angularity** Sub-rounded, Rounded, Well rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	61-135 **cmbs**
Color Light gray	**Sediment Texture** Sand	
Gravel % 5-25%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Granularity of sand increases with depth.		

Shovel Probe #4

Date & Time February 21, 2024 9:51 AM **Probe Diameter** 40 cm **Maximum Depth** 133cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Laura Johnson, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-23 **cmbs**
Color Brown	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Angular, Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	23-94 **cmbs**
Color Dark grayish brown	**Sediment Texture** Sand	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	94-98**cmbs**
Color Pale browns	**Sediment Texture** Sand	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size**
Stratum IV	**Soil Horizon** B: SUBSOIL (zone of accumulation)	98-134 **cmbs**
Color Dark grayish brown	**Sediment Texture** Sand	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Small deposit interrupted sandy stratum II. Probe located in graded area.		

Shovel Probe #5

Date & Time January 15, 2024 9:06 AM **Probe Diameter** 40 cm **Maximum Depth** 75cmbs **Reason for Termination** Gravel content/size (>40% volume), Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-75 **cmbs**
Color Brown	**Sediment Texture** Sandy loam	
Gravel % >40%	**Gravel Angularity** Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Probe located in wooded area. Roots throughout.		

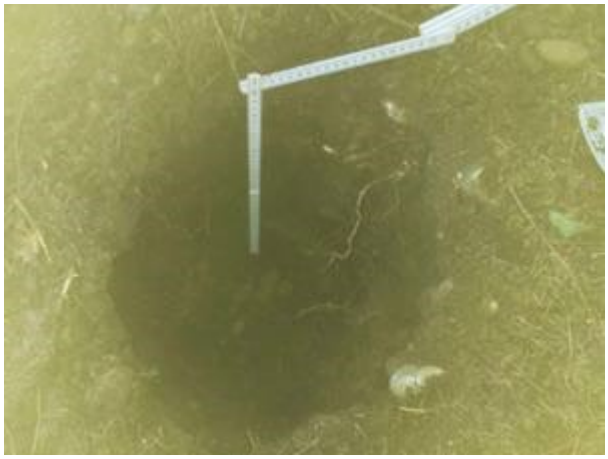
Shovel Probe #6

Date & Time January 15, 2024 12:36 PM **Probe Diameter** 50 cm **Maximum Depth** 194cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-13 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	13-193 **cmbs**
Color Dark gray	**Sediment Texture** Sand	
Gravel % 0-5%	**Gravel Angularity** n/a	**Gravel Size** n/a
Notes		
Probe located in wooded area without a lot of underbrush.		

Shovel Probe #7

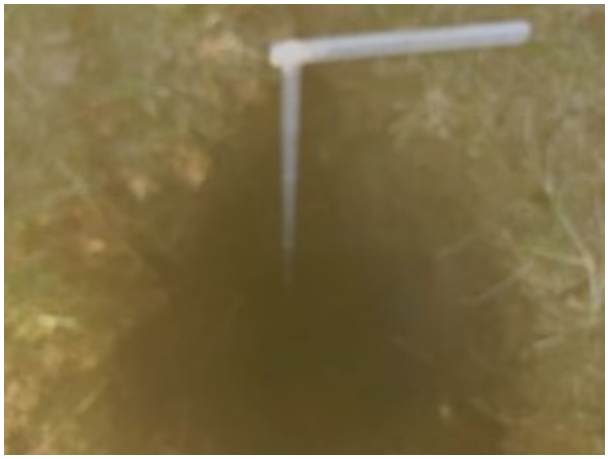
Date & Time February 21, 2024 9:08 AM **Probe Diameter** 40 cm **Maximum Depth** 130cmbs **Reason for Termination** C-horizon/Glacial gravels, Manual tool limits	**Antiquity Staff** Laura Johnson, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-17 **cmbs**
Color Dark brown	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Rounded, Well rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	17-110 **cmbs**
Color Grayish brown	**Sediment Texture** Sand	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	110-130**cmbs**
Color Dark grayish brown	**Sediment Texture** Sand	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Area was graded and stratum I is sod. Area has minimal gravel however fill gravel was in stratum I.		

Shovel Probe #8



Date & Time January 15, 2024 3:00 PM **Probe Diameter** 40 cm **Maximum Depth** 40cmbs **Reason for Termination** Gravel content/size (>40% volume)	**Antiquity Staff** Alexander Engelberts, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** O: HUMUS (typical layers: duff, partially decomposed, and well decomposed)	0-35 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 25-40%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum II	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	35-40 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 25-40%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Terminated due to high concentration of gravel.		

Shovel Probe #9



Date & Time January 15, 2024 11:37 AM **Probe Diameter** 40 cm **Maximum Depth** 100cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Alexander Engelberts, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-40 **cmbs**
Color Light yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	40-100 **cmbs**
Color Light brownish gray	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe in wooded area.		

Shovel Probe #10

Date & Time January 15, 2024 1:08 PM **Probe Diameter** 40 cm **Maximum Depth** 84cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Alexander Engelberts, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-78 **cmbs**
Color Light yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	78-84 **cmbs**
Color Dark grayish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe complicated by blackberry.		

Shovel Probe #11

Date & Time January 15, 2024 2:17 PM **Probe Diameter** 40 cm **Maximum Depth** 121cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Alexander Engelberts, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-42 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	42-52 **cmbs**
Color Dark yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	52-121**cmbs**
Color Pale browns	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Ground surface is frozen.		

Shovel Probe #12

Date & Time January 15, 2024 10:48 AM **Probe Diameter** 40 cm **Maximum Depth** 94cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Alexander Engelberts, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-94 **cmbs**
Color Light yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe located in clearing area with sword fern and trailing blackberry as ground cover.		

Shovel Probe #13

Date & Time January 15, 2024 10:02 AM **Probe Diameter** 40 cm **Maximum Depth** 90cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Alexander Engelberts, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-25 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size**
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	25-90 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size**
Notes		
Probe near ledge.		

Shovel Probe #14

Date & Time January 15, 2024 3:56 PM **Probe Diameter** 40 cm **Maximum Depth** 125cmbs **Reason for Termination** C-horizon/Glacial gravels, Manual tool limits	**Antiquity Staff** Laura Johnson, BA, Lucinda Axtelle, Karen Gonzalez **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-26 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded, Well rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	26-58 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	58-125**cmbs**
Color Grayish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe located in scotchbroom patch on slight slope.		

Shovel Probe #15

Date & Time January 15, 2024 3:28 PM **Probe Diameter** 40 cm **Maximum Depth** 95cmbs **Reason for Termination** Gravel content/size (>40% volume), Manual tool limits	**Antiquity Staff** Laura Johnson, BA, Lucinda Axtelle **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-45 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	45-82 **cmbs**
Color Grayish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	82-95**cmbs**
Color Brown	**Sediment Texture** Sandy loam	
Gravel % 25-40%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Probe located near retaining wall on road.		

Shovel Probe #16

Date & Time January 15, 2024 2:51 PM **Probe Diameter** 40 cm **Maximum Depth** 117cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Laura Johnson, BA, Lucinda Axtelle **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-40 **cmbs**
Color Dark brown	**Sediment Texture** Loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded, Well rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	40-105 **cmbs**
Color Yellowish brown	**Sediment Texture** Loamy sand	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded, Well rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	105-117**cmbs**
Color Grayish brown	**Sediment Texture** Loamy sand	
Gravel % 25-40%	**Gravel Angularity** Sub-rounded, Rounded, Well rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Probe located on slope. Gravel content and size increased with depth.		

Shovel Probe #17

Date & Time January 15, 2024 2:20 PM **Probe Diameter** 40 cm **Maximum Depth** 135cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Laura Johnson, BA, Lucinda Axtelle **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-45 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	45-135 **cmbs**
Color Yellowish brown	**Sediment Texture** Loamy sand	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Charcoal deposit at 58 cmbs in north wall. Probe located on a slope near the road.		

Shovel Probe #18

Date & Time January 15, 2024 1:48 PM **Probe Diameter** 40 cm **Maximum Depth** 130cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Laura Johnson, BA, Lucinda Axtelle **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-42 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Rounded, Well rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	42-85 **cmbs**
Color Grayish brown	**Sediment Texture** Loamy sand	
Gravel % 0-5%	**Gravel Angularity**	**Gravel Size**
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	85-130**cmbs**
Color Yellowish brown	**Sediment Texture** Loamy sand	
Gravel % 0-5%	**Gravel Angularity** n/a	**Gravel Size** n/a
Notes		
Noticeably few gravels. Probe located on slope next to abandoned structure to the west.		

Shovel Probe #19

Date & Time January 15, 2024 1:23 PM **Probe Diameter** 40 cm **Maximum Depth** 123cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Laura Johnson, BA, Lucinda Axtelle **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-32 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	32-123 **cmbs**
Color Yellowish brown	**Sediment Texture** Loamy sand	
Gravel % 25-40%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Probe located in blackberry patch. Gravel content decreased with depth in stratum II.		

Shovel Probe #20

Date & Time January 15, 2024 12:51 PM **Probe Diameter** 40 cm **Maximum Depth** 95cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Laura Johnson, BA, Lucinda Axtelle **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-30 **cmbs**
Color Dark brown	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	30-70 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded, Well rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	70-95**cmbs**
Color Light yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Found TAR at 60cmbs.		

Shovel Probe #21

Date & Time January 15, 2024 3:17 PM **Probe Diameter** 50 cm **Maximum Depth** 152cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-3 **cmbs**
Color Brown	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	3-152 **cmbs**
Color Yellowish brown	**Sediment Texture** Sand	
Gravel % 0-5%	**Gravel Angularity** n/a	**Gravel Size** n/a
Notes		
Probe located in wooded area with sword fern surrounding.		

Shovel Probe #22

Date & Time January 15, 2024 2:15 PM **Probe Diameter** 50 cm **Maximum Depth** 62cmbs **Reason for Termination** Roots (>5cm), Gravel content/size (>40% volume), Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-62 **cmbs**
Color Brown	**Sediment Texture** Silt loam	
Gravel % 25-40%	**Gravel Angularity** Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Probe located in clearing with small ferns surrounding.		

Shovel Probe #23

Date & Time January 15, 2024 11:35 AM **Probe Diameter** 40 cm **Maximum Depth** 100cmbs **Reason for Termination** Loose sediment slumping; unproductive excavation	**Antiquity Staff** Laura Johnson, BA, Lucinda Axtelle **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-27 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	27-100 **cmbs**
Color Grayish brown	**Sediment Texture** Sand	
Gravel % 25-40%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded, Well rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Super sandy soils present. Probe located on a slope.		

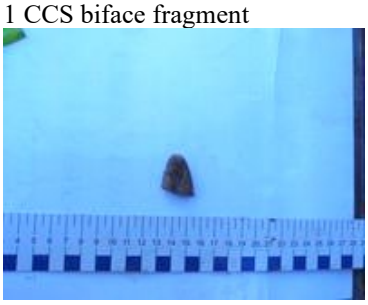
Shovel Probe #24

Date & Time January 15, 2024 10:53 AM **Probe Diameter** 40 cm **Maximum Depth** 70cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Laura Johnson, BA, Lucinda Axtelle **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-20 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	20-45 **cmbs**
Color Light gray	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** n/a	**Gravel Size** n/a
Stratum III	**Soil Horizon** E: ELUVIATED (zone of leaching)	45-70**cmbs**
Color Very pale brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** n/a	**Gravel Size** n/a
Notes		
Terminated due to high gravel content. Charcoal deposit at 50cmbs.		

Shovel Probe #25

Date & Time January 15, 2024 9:52 AM **Probe Diameter** 40 cm **Maximum Depth** 75cmbs **Reason for Termination** Roots (>5cm)	**Antiquity Staff** Laura Johnson, BA, Lucinda Axtelle **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-30 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	30-75 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 25-40%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded, Well rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Heavily rooted throughout probe. Probe is located in forested area.		

Shovel Probe #26

Date & Time January 15, 2024 10:06 AM **Probe Diameter** 40 cm **Maximum Depth** 126cmbs **Reason for Termination** C-horizon/Glacial gravels, Manual tool limits	**Antiquity Staff** Katy Leonard-Doll, MA, RPA, Karen Gonzalez **Tribal Staff** n/a	**Cultural Materials Present?** Precontact materials 35 cmbs 1 CCS biface fragment 
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-20 **cmbs**
Color Brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	20-58 **cmbs**
Color Yellowish brown	**Sediment Texture** Loamy sand	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	58-90**cmbs**
Color Yellowish brown	**Sediment Texture** Loamy sand	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum IV	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	90-126 **cmbs**
Color Pale browns	**Sediment Texture** Sand	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		

Probe in wooded area with trailing blackberry surrounding. Augered due to large roots. Roots throughout strata I and II.

Shovel Probe #27

Date & Time January 15, 2024 10:55 AM **Probe Diameter** 40 cm **Maximum Depth** 126cmbs **Reason for Termination** C-horizon/Glacial gravels, Manual tool limits	**Antiquity Staff** Katy Leonard-Doll, MA, RPA, Karen Gonzalez **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-28 **cmbs**
Color Brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	28-100 **cmbs**
Color Light yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	100-126**cmbs**
Color Brownish yellow	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm
Notes		
Top five centimeters frozen. Roots present in stratum II. Probe located on gradual slope.		

Shovel Probe #28

Date & Time January 15, 2024 11:47 AM **Probe Diameter** 40 cm **Maximum Depth** 127cmbs **Reason for Termination** C-horizon/Glacial gravels, Manual tool limits	**Antiquity Staff** Katy Leonard-Doll, MA, RPA, Karen Gonzalez **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-31 **cmbs**
Color Brown	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	31-127 **cmbs**
Color Grayish brown	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe located on upper portion of slope surrounded by sword fern and alders. 50 cmbs charcoal deposit in east wall.		

Shovel Probe #29

Date & Time January 15, 2024 12:52 PM **Probe Diameter** 40 cm **Maximum Depth** 122cmbs **Reason for Termination** C-horizon/Glacial gravels, Manual tool limits	**Antiquity Staff** Katy Leonard-Doll, MA, RPA, Karen Gonzalez **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-30 **cmbs**
Color Light yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	30-62 **cmbs**
Color Brownish yellow	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	62-122**cmbs**
Color Very pale brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Cobbles at base of probe prevented further excavation.		

Shovel Probe #30

Date & Time January 15, 2024 1:34 PM **Probe Diameter** 40 cm **Maximum Depth** 123cmbs **Reason for Termination** C-horizon/Glacial gravels, Manual tool limits	**Antiquity Staff** Katy Leonard-Doll, MA, RPA, Karen Gonzalez **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-22 **cmbs**
Color Dark grayish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	22-114 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	114-123**cmbs**
Color Pale browns	**Sediment Texture** Sandy loam	
Gravel % 25-40%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Tried to relocate probe twice but hit large roots. Augered on third attampt to avoid roots. Surrounded by sword fern and hemlock tree.		

Shovel Probe #31

Date & Time February 21, 2024 9:29 AM **Probe Diameter** 40 cm **Maximum Depth** 80cmbs **Reason for Termination** Gravel content/size (>40% volume), Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-8 **cmbs**
Color Dark yellowish brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	8-75 **cmbs**
Color Brown	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	75-80**cmbs**
Color Grayish brown	**Sediment Texture** Silt loam	
Gravel % 25-40%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe located in wooded area.		

Shovel Probe #32

Date & Time February 21, 2024 8:45 AM **Probe Diameter** 50 cm **Maximum Depth** 133cmbs **Reason for Termination** Roots (>5cm), Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-10 **cmbs**
Color Dark brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	10-127 **cmbs**
Color Yellowish brown	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	127-133**cmbs**
Color Pale browns	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Notes		
Large roots at 85 cmbs.		

Shovel Probe #33

Date & Time February 21, 2024 9:58 AM **Probe Diameter** 40 cm **Maximum Depth** 40cmbs **Reason for Termination** Roots (>5cm)	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-40 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Notes		
Could not get past the root ball with shovel or breaker bar so terminated probe.		

Shovel Probe #34

Date & Time January 15, 2024 2:06 PM **Probe Diameter** 40 cm **Maximum Depth** 129cmbs **Reason for Termination** C-horizon/Glacial gravels, Manual tool limits	**Antiquity Staff** Katy Leonard-Doll, MA, RPA, Karen Gonzalez **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-38 **cmbs**
Color Brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	38-77 **cmbs**
Color Dark yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	77-129**cmbs**
Color Brownish yellow	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Near creek bed but did not encounter water while digging.		

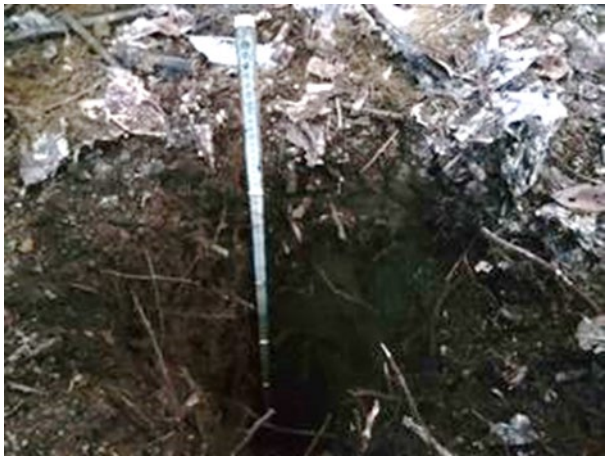
Shovel Probe #35

Date & Time January 15, 2024 2:51 PM **Probe Diameter** 40 cm **Maximum Depth** 122cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Katy Leonard-Doll, MA, RPA, Karen Gonzalez **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-50 **cmbs**
Color Brown	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** n/a	**Gravel Size** n/a
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	50-122 **cmbs**
Color Grayish brown	**Sediment Texture** Silty clay	
Gravel % 0-5%	**Gravel Angularity** n/a	**Gravel Size** n/a
Notes		
In grassy cut road on slope. Area may have been graded with utility installation southeast of probe location.		

Shovel Probe #36

Date & Time February 21, 2024 9:12 AM **Probe Diameter** 40 cm **Maximum Depth** 60cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Katy Leonard-Doll, MA, RPA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-20 **cmbs**
Color Grayish brown	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Angular, Sub-angular	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	20-55 **cmbs**
Color Grayish brown	**Sediment Texture** Silty clay	
Gravel % 0-5%	**Gravel Angularity** n/a	**Gravel Size** n/a
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	55-60**cmbs**
Color Light brownish gray	**Sediment Texture** Silty clay	
Gravel % 0-5%	**Gravel Angularity** n/a	**Gravel Size** n/a
Notes		
Offset due to blackberry and materials from torn down house.		

Shovel Probe #37



Date & Time January 15, 2024 3:27 PM **Probe Diameter** 40 cm **Maximum Depth** 130cmbs **Reason for Termination** C-horizon/Glacial gravels, Manual tool limits	**Antiquity Staff** Katy Leonard-Doll, MA, RPA, Karen Gonzalez **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-40 **cmbs**
Color Dark brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	40-79 **cmbs**
Color Dark yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	79-130**cmbs**
Color Brownish yellow	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
In dense rhododendron with very low lighting.		

Shovel Probe #38

Date & Time February 21, 2024 9:58 AM **Probe Diameter** 40 cm **Maximum Depth** 78cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Katy Leonard-Doll, MA, RPA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-15 **cmbs**
Color Dark grayish brown	**Sediment Texture** Loamy sand	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	15-70 **cmbs**
Color Yellowish brown	**Sediment Texture** Loamy sand	
Gravel % 25-40%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	70-78**cmbs**
Color Pale browns	**Sediment Texture** Loamy sand	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
In rhododendron bushes with rock wall running along northern property boundary. Low light.		

Shovel Probe #39

Date & Time February 21, 2024 11:02 AM **Probe Diameter** 40 cm **Maximum Depth** 130cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Laura Johnson, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-22 **cmbs**
Color Dark brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	22-72 **cmbs**
Color Yellowish brown	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	72-130**cmbs**
Color Pale browns	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Stratum II had clay components and around 10% gravels with few cobbles.		

Shovel Probe #40

Date & Time February 21, 2024 2:36 PM **Probe Diameter** 40 cm **Maximum Depth** 110cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Alexander Engelberts, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-20 **cmbs**
Color Brown	**Sediment Texture** Loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	20-110 **cmbs**
Color Light yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Photos taken after backfilling due to loss of original photo data.		

Shovel Probe #41

Date & Time February 21, 2024 3:14 PM **Probe Diameter** 40 cm **Maximum Depth** 128cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Caleb Geringer, BA, Alexander Engelberts, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-41 **cmbs**
Color Dark brown	**Sediment Texture** Loam	
Gravel % 5-25%	**Gravel Angularity** Rounded, Well rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	41-54 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	54-128**cmbs**
Color Light brownish gray	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** n/a	**Gravel Size** n/a
Notes		
Low gravel content throughout probe.		

Shovel Probe #42

Date & Time February 21, 2024 2:18 PM **Probe Diameter** 40 cm **Maximum Depth** 130cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Alexander Engelberts, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-25 **cmbs**
Color Dark brown	**Sediment Texture** Loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	25-96 **cmbs**
Color Light yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	96-130**cmbs**
Color Light gray	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** n/a	**Gravel Size** n/a
Notes		
High concentration of roots in stratum I.		

Shovel Probe #43

Date & Time February 21, 2024 2:40 PM **Probe Diameter** 40 cm **Maximum Depth** 90cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Alexander Engelberts, BA **Tribal Staff**	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0 -10 **cmbs**
Color Brown	**Sediment Texture** Loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	10-70 **cmbs**
Color Light yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	70-90**cmbs**
Color Light gray	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Photos taken after backfilling due to loss of original photo data.		

Shovel Probe #44

Date & Time February 21, 2024 3:38 PM **Probe Diameter** 40 cm **Maximum Depth** 131cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Caleb Geringer, BA, Alexander Engelberts, BA **Tribal Staff**	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-15 **cmbs**
Color Dark brown	**Sediment Texture** Loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	15-69 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	69-131**cmbs**
Color Light gray	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Large amount of decayed wood between strata II and III.		

Shovel Probe #45

Date & Time February 21, 2024 3:41 PM **Probe Diameter** 40 cm **Maximum Depth** 80cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Katy Leonard-Doll, MA, RPA, Laura Johnson, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-20 **cmbs**
Color Brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	20-65 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	65-80**cmbs**
Color Pale browns	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity**	**Gravel Size**
Notes		
Probe location surrounded by trailing blackberry and sword fern.		

Shovel Probe #46

Date & Time February 21, 2024 1:41 PM **Probe Diameter** 40 cm **Maximum Depth** 130cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-10 **cmbs**
Color Dark brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	10-80 **cmbs**
Color Yellowish brown	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	80-131**cmbs**
Color Pale browns	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe surrounded by trailing blackberry and roots throughout stratum I.		

Shovel Probe #47

Date & Time February 21, 2024 1:06 PM **Probe Diameter** 50 cm **Maximum Depth** 132cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-15 **cmbs**
Color Dark brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	15-113 **cmbs**
Color Dark yellowish brown	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	114-132**cmbs**
Color Pale browns	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe located in wooded area with roots present in stratum I.		

Shovel Probe #48

Date & Time February 21, 2024 12:36 PM **Probe Diameter** 40 cm **Maximum Depth** 135cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** B: SUBSOIL (zone of accumulation)	0-10 **cmbs**
Color Dark brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	10-111 **cmbs**
Color Dark yellowish brown	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	111-133**cmbs**
Color Pale browns	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe surrounded by sword fern.		

Shovel Probe #49

Date & Time February 21, 2024 2:01 PM **Probe Diameter** 40 cm **Maximum Depth** 115cmbs **Reason for Termination** Roots (>5cm), Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-10 **cmbs**
Color Dark brown	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	10-80 **cmbs**
Color Light yellowish brown	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	80-115**cmbs**
Color Pale browns	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe located in wooded area.		

Shovel Probe #50

Date & Time February 21, 2024 2:25 PM **Probe Diameter** 40 cm **Maximum Depth** 123cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-9 **cmbs**
Color Dark brown	**Sediment Texture**	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	8-89 **cmbs**
Color Yellowish brown	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	85-123**cmbs**
Color Light gray	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe located in wooded area.		

Shovel Probe #51

Date & Time February 21, 2024 12:39 PM **Probe Diameter** 40 cm **Maximum Depth** 80cmbs **Reason for Termination** C-horizon/Glacial gravels, Roots (>5cm)	**Antiquity Staff** Katy Leonard-Doll, MA, RPA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-15 **cmbs**
Color Brown	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	15-58 **cmbs**
Color Grayish brown	**Sediment Texture** Silty clay	
Gravel % 25-40%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	58-80**cmbs**
Color Light brownish gray	**Sediment Texture** Silty clay	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm
Notes		
Near small cedar and large pine. Roots throughout.		

Shovel Probe #52

Date & Time February 21, 2024 11:35 AM **Probe Diameter** 40 cm **Maximum Depth** 135cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-10 **cmbs**
Color Dark brown	**Sediment Texture** Loam	
Gravel % 5-25%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	10-90 **cmbs**
Color Pale browns	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	90-135**cmbs**
Color Light brownish gray	**Sediment Texture** Silt loam	
Gravel % 25-40%	**Gravel Angularity** Sub-angular, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe surrounded by trailing blackberry.		

Shovel Probe #53

Date & Time February 21, 2024 1:21 PM **Probe Diameter** 40 cm **Maximum Depth** 73cmbs **Reason for Termination** Roots (>5cm)	**Antiquity Staff** Katy Leonard-Doll, MA, RPA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-50 **cmbs**
Color Grayish brown	**Sediment Texture** Loamy sand	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	50-73 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
In densely vegetated area with many roots. Roots led to augering and termination.		

Shovel Probe #54

Date & Time February 21, 2024 1:58 PM **Probe Diameter** 50 cm **Maximum Depth** 45cmbs **Reason for Termination** C-horizon/Glacial gravels, Roots (>5cm)	**Antiquity Staff** Katy Leonard-Doll, MA, RPA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** B: SUBSOIL (zone of accumulation)	0-25 **cmbs**
Color Grayish brown	**Sediment Texture** Loamy sand	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	25-45 **cmbs**
Color Pale browns	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
Roots throughout. Expanded probe to 50 cm in diameter to auger past roots but hit large cobble leading to termination.		

Shovel Probe #55

Date & Time February 21, 2024 11:56 AM **Probe Diameter** 40 cm **Maximum Depth** 95cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Laura Johnson, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-14 **cmbs**
Color Brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	14-35 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	35-95**cmbs**
Color Grayish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Redox peds in stratum III. Some roots in stratum II.		

Shovel Probe #56

Date & Time February 21, 2024 1:00 PM **Probe Diameter** 40 cm **Maximum Depth** 72cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Laura Johnson, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-18 **cmbs**
Color Brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	18-30 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	30-72**cmbs**
Color Grayish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Stratum III has oxidation streaks throughout.		

Shovel Probe #57

Date & Time February 21, 2024 3:18 PM **Probe Diameter** 40 cm **Maximum Depth** 52cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Laura Johnson, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-7 **cmbs**
Color Brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	7-13 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	13-52**cmbs**
Color Pale browns	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Probe located in graded area near where house used to be. Straw covered ground surface.		

Shovel Probe #58

Date & Time February 21, 2024 2:51 PM **Probe Diameter** 40 cm **Maximum Depth** 98cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Laura Johnson, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-17 **cmbs**
Color Dark brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	17-85 **cmbs**
Color Brown	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	85-98**cmbs**
Color Pale browns	**Sediment Texture** Sandy loam	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Large roots throughout probe which led to augering.		

Shovel Probe #59

Date & Time February 21, 2024 1:00 PM **Probe Diameter** 40 cm **Maximum Depth** 65cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Laura Johnson, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-15 **cmbs**
Color Brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	15-30 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	30-65**cmbs**
Color Grayish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Roots in strata I and II. Probe located on slope in brush.		

Shovel Probe #60

Date & Time February 21, 2024 1:00 PM **Probe Diameter** 40 cm **Maximum Depth** 118cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Laura Johnson, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-30 **cmbs**
Color Brown	**Sediment Texture** Loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	30-40 **cmbs**
Color Yellowish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	40**cmbs**
Color Grayish brown	**Sediment Texture** Sandy loam	
Gravel % 0-5%	**Gravel Angularity** Sub-rounded, Rounded	**Gravel Size** Pebbles <6cm
Notes		
Stratum III contains redox and oxidation streaks. Roots throughout entire probe.		

Shovel Probe #61

Date & Time February 21, 2024 2:45 PM **Probe Diameter** 40 cm **Maximum Depth** 115cmbs **Reason for Termination** C-horizon/Glacial gravels	**Antiquity Staff** Katy Leonard-Doll, MA, RPA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-22 **cmbs**
Color Dark grayish brown	**Sediment Texture** Loamy sand	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	22-47 **cmbs**
Color Brown	**Sediment Texture** Loamy sand	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm
Stratum III	**Soil Horizon** B: SUBSOIL (zone of accumulation)	47-100**cmbs**
Color Yellowish brown	**Sediment Texture** Loamy sand	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm
Stratum IV	**Soil Horizon** C: SUBSTRATUM (contains partly weathered bedrock)	100-115 **cmbs**
Color Pale browns	**Sediment Texture** Sand	
Gravel % 5-25%	**Gravel Angularity** Sub-angular, Sub-rounded	**Gravel Size** Pebbles <6cm, Cobbles 6-25cm
Notes		
In vegetated area with blackberry and vine maple.		

Shovel Probe #62

Date & Time February 21, 2024 2:56 PM **Probe Diameter** 50 cm **Maximum Depth** 70cmbs **Reason for Termination** Manual tool limits	**Antiquity Staff** Caleb Geringer, BA **Tribal Staff** n/a	**Cultural Materials Present?** None
Stratum I	**Soil Horizon** A: SOIL (zone of leaching with high organic content)	0-12 **cmbs**
Color Dark brown	**Sediment Texture** Silt loam	
Gravel % 0-5%	**Gravel Angularity** Rounded	**Gravel Size** Pebbles <6cm
Stratum II	**Soil Horizon** B: SUBSOIL (zone of accumulation)	12-70 **cmbs**
Color Yellowish brown	**Sediment Texture** Silt loam	
Gravel % 5-25%	**Gravel Angularity** Angular, Sub-angular	**Gravel Size** Pebbles <6cm
Notes		
Dug southeast of positive probe.		