



TECHNICAL MEMORANDUM

Cultural Resources Survey for the Port of Ridgefield's
Ridgefield Upland Cleanup Project, Clark County, Washington

Daniel M. Gilmour, Breanne Taylor, Paul Solimano, and David V. Ellis

April 7, 2106

Management Summary

Willamette Cultural Resources Associates, Ltd. (WillametteCRA) has conducted an archaeological survey for the proposed Ridgefield Upland Cleanup Project, in Ridgefield, Clark County, Washington. The investigation conducted by WillametteCRA consisted of a pedestrian survey and excavation of 49 shovel probes on 17 privately owned parcels in a residential neighborhood. Archaeologists identified no archaeological resources within those properties. There are no previously known archaeological sites within the project area.

Introduction

The Port of Ridgefield (Port) previously completed the Lake River Industrial Site (LRIS) Remediation Project to cleanup hazardous substances deposited by a former wood treatment facility (Goodwin and Paraso 2014). The Port has now proposed the Ridgefield Upland Cleanup Project (project) to remediate contamination from LRIS in public rights-of-way (ROW) and on residential properties in the city of Ridgefield, Clark County, Washington. The contaminated area is situated in Donation Land Claims 38 and 48, of Township 4 North, Range 1 West, Willamette Meridian (Figures 1 and 2). The Port contracted Maul Foster & Alongi, Inc. (MFA), to conduct the remediation program. The project requires a permit under the state of Washington's State Environmental Policy Act (SEPA). SEPA requires a project proponent to consider potential impacts to archaeological, historic, and cultural resources. To address the provisions of SEPA, MFA contracted WillametteCRA to conduct an archaeological survey of the project area on behalf of the Port.

Forty-two residential lots were initially identified as locations of concern from contamination. MFA was granted access to conduct sampling at all but two of those lots and determined 27 lots exceeded the threshold of acceptable levels of dioxin in the soils. These lots are now scheduled for

removal actions beginning the summer of 2016. At the time of fieldwork the proposed project planned the removal and replacement of 1-2 feet (ft.) (~35-61 centimeters [cm]) of contaminated soil from public ROWs (sidewalk strips) and 26 yards. However, the current project now proposes the removal and replacement of 1-1.5 ft. (~35-46 cm) of contaminated soil from public ROWs (sidewalk strips) and 27 yards (Figures 2-6). On behalf of WillametteCRA, MFA obtained access to 17 parcels for archaeological investigations. The survey area lies immediately north of Ridgefield business center. The northern and southern boundaries are Maple Street and Mill Street, while Railroad Avenue and North Main Street form the western and eastern boundaries, respectively (see Figure 2). Each of the properties surveyed is privately owned and residential in nature. All areas where soil removal will occur are landscaped with grass or gardens.

The project area overlooks the Columbia River floodplain. The general landform is a ridge between the deeply incised Gee Creek drainage to the east and the Columbia lowlands to the west. Project lands include three relatively distinct landform elements. The first is the relatively level, higher elevation terrace tread between about 50 and 75 ft. above mean sea level (amsl). The second is the moderate slope below the terrace, between 30 and 50 ft. amsl, while the third is the footslopes and back of the Columbia River floodplain below ca. 30 ft. in elevation. The break between the terrace tread and slope is not well defined. In some places, grading for house construction has obscured this topographic break. The lower break between the footslopes and Columbia River floodplain is likewise poorly defined and irregular, but roughly marked by the approximate location of the north-south running Burlington Northern Railroad tracks.

Environmental and Cultural Context

Environmental Setting

The proposed project is in the Portland Basin, a broad lowland formed where the Columbia River bisects the north-south Puget Trough. In their seminal archaeological work in the area, Ames et al. (1999) refer to the study area as the Wapato Valley. The Wapato Valley is the southern end of the Puget Trough that extends from southeast Alaska to the southern end of the Willamette Valley. The dominant geographic features of the Wapato Valley are the Columbia and Willamette rivers and their associated floodplain systems of lakes, sloughs, and wetlands. Two topographic areas exist in the Wapato Valley: the alluvial bottom lands along the shores of the Columbia River and the uplands. Three prime factors account for the surficial geomorphology of the area: late Pleistocene glacial outburst floods, eustatic sea level rise, and Holocene alluvial deposition.

The Wapato Valley falls into Franklin and Dyrness' "*Pinus-Quercus-Pseudotsuga*" zone. Along the rivers are riparian forests of black cottonwood (*Populus trichocarpa*), Oregon ash (*Fraxinus latifolia*), bigleaf maple (*Acer macrophyllum*), Oregon white oak (*Quercus garryana*), red alder (*Alnus rubra*), and ponderosa pine (*Pinus ponderosa*). Oak woodlands dominate the zone's forests and savannas. Riparian

communities and poorly drained areas generally host a variety of minor hardwood species (Franklin and Dyrness 1988:124-126). In addition, the Wapato Valley was home to a rich array of terrestrial and aquatic mammals, as well as fish and birds (Ames et al. 1999).

The proposed project lies in an area developed as a residential center. Prior to European American settlement of this area, the project area would have been part of a closed canopy forest similar to today's forests in undeveloped portions of western Washington. A mosaic of wetlands, marshes and small lakes spread across the general area from the Cascade foothills to the Columbia River floodplain (General Land Office [GLO] 1854a, 1854b; United States Geological Survey [USGS] 1940). The morphology of drainages has been altered by commercial, industrial, and residential development of the area during the historic period.

Native Peoples

From historical accounts and ethnographic data, anthropologists have reconstructed that the project area lies within the traditional homeland of the Chinookan peoples. Upper Chinookans in the Portland area consisted of two groups, the Multnomah and the Clackamas. Multnomah villages were concentrated on Sauvie Island, along the Multnomah Channel, and along the northern bank of the Columbia River downstream of the mouth of the Willamette (French and French 1998:360-363; Silverstein 1990:533-535).

The extensive wetlands on the nearby Columbia River offered a bounty of plant resources. The most important of these was wapato, a plant that grows in shallow ponds and lakes, the tubers of which were a staple food and major trade item for Chinookans. Wapato was so abundant in the area and such an important resource for Native Peoples that Lewis and Clark termed the area "Wap-pa-too Valley," Sauvie Island "Wappâto Island," and the local Indians "Wap-pa-to Indians" (Moulton 1990:24, 484). The river floodplains also had extensive prairies that attracted deer and elk, and some of those grasslands also supported camas, the bulbs of which were another dietary staple.

Indirect contact with European Americans began to disrupt Native ways of life in the 1700s, including a smallpox epidemic in the late 1770s that may have killed a third of the population and recurring every 20 to 25 years afterwards (Boyd 1990). Native populations in the lower Columbia and Willamette valleys were further decimated by a malaria epidemic that killed 90 to 95 percent of the population between 1830 and 1834 (Boyd 1990).

The first major expansion of European American settlements began in the 1840s, as thousands of American settlers flooded into western Oregon and Washington. They met with minimal resistance from the Native groups that had been devastated by the epidemics. For a brief period during the 1840s, immigrants and Native populations lived uneasily side by side. By 1850, however,

the need to clear Indian title to the land to provide a legal basis for the land claims of American settlers led to a series of treaty negotiations beginning in 1851.

The first treaties were signed with the surviving Tribes on the lower Columbia River and the Willamette Valley but none included lands in the Lewis River drainage. All of these treaties would have established reservations in western Oregon and southwestern Washington. None of these treaties were ratified by Congress. Washington Territorial Governor Isaac Stevens attempted to negotiate a treaty with Native groups in southwestern Washington. The negotiations were unsuccessful and no treaty was ever signed with those groups. Some of the Chinookan people from this area were relocated to the Grand Ronde Reservation in 1856. Other Chinookans on the lower Columbia relocated to the Chehalis Reservation (Beckham 1990:180-181; Marino 1990:171). The Ridgefield area is also within the traditional use area of the Cowlitz Indian Tribe and the Chinook Nation.

Archaeological Context

Archaeological survey and excavation is relatively widespread in the Portland Basin, but little of this data has been synthesized into coherent narratives. Research topics are not widely agreed upon; rather, nearly all local archaeological work has been geared towards detailed material description and site age. Exceptions occur (Ames 1994), but for the vast amount of data available, models of hunter-gatherer adaptive strategies, settlement patterns or land-use are largely non-existent.

A fairly fine-grained, chronological framework is available for the past 2,500 years of Portland Basin prehistory (Pettigrew 1981), which has been integrated into a longer, broad regional archaeological framework for the Northwest coast (Ames 1994; Ames and Maschner 1999). The last 6,000 years of Northwest Coast prehistory saw dramatic changes in Native lifeways including increased populations and density and appearance of different settlement patterns hinged on winter sedentism and increases in logistical mobility. These changes were largely enabled by development of complex food storage technology, resource diversification and intensification, and increased social complexity (Ames 1994; Ames and Maschner 1999).

The Early Pacific Period (ca. 5,500-3,500 before present [BP]) was characterized by a cooler and moister climate and sea level was still low along the Washington and Oregon coasts (Ames and Maschner 1999). Early Pacific sites are relatively rare in the Portland Basin lowlands, but more common in the uplands, particularly inland Clark County. Assemblages often contain broad-necked, large stemmed and side-notched points. Regionally, bone and antler tools increase in frequency and groundstone appears. Resource use was diverse, suggesting a broad-spectrum diet. Few special purpose camps are evident. Storage was likely practiced in a limited fashion throughout the Early Pacific; however, it did not become important until the end of the period (Ames and Maschner 1999). No evidence for plankhouses dating to the Early Pacific has been found in the Portland area.

By the beginning of the Middle Pacific Period (ca. 3,500-1,500 BP) the climate is similar to modern conditions and sea level is near current levels. The basic economic and technological traits observed at historic contact are often found (Wessen 1983:25). Square or rectangular plankhouses and villages appear elsewhere on the coast after about 3,500 BP, although the earliest houses in the Portland Basin are about 2,000 years old (Ames 1994). Site types are diverse and site frequency increases. After about 3,000 years ago, site frequency on the Columbia floodplain increases.

Most investigated sites in the region generally and the Portland Basin specifically, date to after about 1,500 years ago, the Late Pacific Period (ca. 1,500 to 100 BP). Site frequency increases dramatically, particularly on the lowlands (Ames 1994; Wessen 1983). Assemblages are thought to be diverse and contain small, triangular-shaped, narrow-stemmed projectile points. Several Late Pacific period sites in the Portland Basin have been investigated in some manner, with the best known dating to the past 800 years, including the Meier and Cathlapotle sites. Resource use appears diverse and intensive.

European American Development

The first documented visit to the area by a European American occurred in 1792, when British Royal Navy Lieutenant William Broughton noted a “large indian village” (Cathlapotle) during his expedition along the Columbia. On November 4, 1805 and March 29, 1806, the Lewis and Clark Expedition camped just south of present-day Ridgefield, meeting with the Chinook Indians and exchanging goods (Kirk and Alexander 1990). The European American presence grew after 1811, with fur trappers employed by the Northwest Fur Company, Pacific Fur Company, and Hudson's Bay Company (HBC) moving through the general project vicinity as part of mobile trapping and trading expeditions.

The first European American settler in the Ridgefield area was Irish immigrant James Carty, who was an employee of the HBC at Fort Vancouver. In 1839, Carty built his home between a lake (now called Carty Lake) and Vancouver Slough (now called Lake River) in the southwest quarter of Section 13, approximately 1 kilometer (km) (0.6 mi.) northwest of the current project area (see Figure 1). His residence would have been in close proximity to the remaining Cathlapotle plank houses. Carty received a permit in 1851 to operate a ferry across Lake River and in turn early residents like Arthur Quigley and Frederick Shobert constructed rudimentary landings on their properties to accommodate the influx of steamers on the river (Caldbick 2010).

European American settlement in the area increased in the 1850s, with passage of the Donation Land Act in 1850, which allowed a single man or a married couple who settled in Oregon Territory by December 1, 1850, up to 320 acres for an unmarried man and 640 acres for a couple. The portion of the project area north of Division Street, would have been a part of James Carty's 322 acre Donation Land Claim (DLC) (depicted as claim no. 48 on GLO maps) (BLM 2016; GLO 1863a,

1863b). The portion of the project area south of Division Street, would have been within the 319-acre DLC of Arthur and Jane Quigley (BLM 2016; GLO 1863a, 1863b). The Quigleys arrived to Ridgefield in 1852. Arthur Quigley established a residence that would have been 83 m (273 ft.) west of the project area. Additionally, Quigley constructed a mud landing on his property, adjacent to Lake River, approximately 0.5 km (0.3 mi.) to the northwest (GLO 1854a).

The earliest depictions of structural developments within the project area come from Sanborn Insurance Maps from 1920. The 1920 Sanborn map of the project area depicts several individual developments within proposed clean-up areas, consisting of: 14 dwellings, 7 auto garages, 3 sheds, 1 privy, and 1 structure labeled "Board'g," which indicates a boarding house (Sanborn Map and Publishing Company 1920). The location of the privy is depicted in Figure 7. Commercial developments within the project area that are depicted on the 1920 Sanborn map consist of: a Creamery, Cheese Factory with lodgings on the second floor, and the Ridgefield Hotel, though none still exist.

Published a decade later, the 1920-1930 Sanborn Insurance Map depicts some changes within the project area, including the destruction of the Ridgefield Hotel and Creamery, however, the Cheese Factory is still depicted. Additional structural developments within proposed clean-up areas include: 2 more dwellings (one of which was constructed and one of which is the re-labeled boarding house from the 1920 map) and another auto garage. Shed structures in the area decrease to 2 (Sanborn Map and Publishing Company 1920-1930).

From the 1910's to 1950's, grist mills provided the dominant industry in Ridgefield, employing much of the town's population. Over the years, several of these mills caught fire. The town witnessed major fires in 1916, 1923, 1927, 1934, and 1943. The 1916 fire obliterated most of the Ridgefield business district (Caldbeck 2010). It is difficult to determine precisely what effect these disasters would have had on the current project area. A review of Metsker maps from the mid-20th century shows that the project area would have been partially within the "Railroad Addition" and partially within the "Abrams Addition." While no information about individual owners in the project area is decipherable from these maps, William Carty (the great nephew of James Carty) owned much of the land to the northwest of the current project area (Metsker 1956, 1961). By 1954, a total of 29 structures are depicted in the current project area (USGS 1954). At this time, several commercial structures are depicted to the south, indicating the growth of the Ridgefield city center. The 1954 USGS map depicts Interstate 5 to the east, which would have been completed in 1965.

Previous Archaeology

The Ridgefield project area has a high probability for archaeological materials. The area is within the high probability zone as defined by the Department of Archaeology and Historic Preservation (DAHP) predictive model. In order to assess the project's potential to intersect

unidentified archaeological materials, WillametteCRA staff reviewed records on file with the DAHP and at the WillametteCRA offices. The project area has not been previously surveyed for archaeological materials, although several surveys have occurred nearby. No previously recorded archaeological sites are in the project area, but a relatively large number of precontact and historic sites are in the vicinity. One precontact and historic-era site that is directly applicable to the Ridgefield project is in close proximity.

Archaeological survey intensity in the Ridgefield area is variable. A vast amount of survey work has occurred on the lowlands, west of the project area. Most was focused closer to Lake River or other waterways and is often combined with archaeological monitoring (e.g., Reese et al. 2013). Some work has employed shovel probing (e.g., Gilmour et al. 2013), but most relied on surface, pedestrian survey (e.g., Abramowitz 1980; Freed 2008). Survey work in the uplands is mostly in response to residential development, east of the Ridgefield urban core. This work has routinely employed some level of shovel probing (e.g., Roulette 1998; Wilson 1997). The nearest archaeological survey to the Ridgefield project area was for a proposed sewer line (Smits 2008).

Most nearby precontact sites are immediately west of the project area on the lowlands adjacent to the Columbia River. These sites range from large complex residential sites with house and processing features to small limited-task sites probably related to resource procurement or processing, consisting primarily of lithic artifacts or a narrow range of features. Sparse, widespread artifact scatters are also common. Generally, these lowland sites post-date about 3,000 years ago and most are much younger. These sites are also usually found adjacent to lowland waterways such as Lake River or Carty Lake.

In the uplands, relatively few precontact sites are known nearby. A precontact component was found at 45-CL-981 just south of the project area and is discussed in more detail below. Large, but sparse scatters of choppers and flakes have been found in the terraces adjacent to Gee Creek. At least two small precontact sites with possible cairns, and thin scatters of burned rock, choppers and flakes are recorded in small tributaries east of Gee Creek (Wilson 1997; Woodward 1994). None of these sites are well understood or dated; however, some date to at least 8,000 years ago.

Historic sites are relatively common on the lowlands, but on the uplands commercial and relatively urban residential materials were found at 45-CL-981 (see below). Other historic sites in the uplands include materials related to early settlement (Daehnke 2010) dating to the later 1800s and early 1900s, as well as farming (Wilson 1997), mostly postdating 1900. Materials seem to be dumps or yard middens which commonly include scatters of glass, ceramic, and metal. Historic-era features such as trash pits or privies are not common.

45-CL-981

Site 45-CL-981 is located about 200 m south of the project area at the intersection of Pioneer Street and South Main Avenue. This site is in many ways a direct corollary for the Ridgefield project: the site is in close proximity, it has a precontact and a historic component (with commercial and residential aspects) and importantly it occupies some of the same landform elements. Moreover, 45-CL-981 has likely experienced similar historic developments and impacts as the Ridgefield project area. Site 45-CL-981, however, is located along the southern edge of a small drainage dissecting the terrace tread, a landform element not found in the Ridgefield project area.

Site 45-CL-981 was identified during survey for the Overlook Park Ridgefield Welcome Center. Background research revealed the vacant parcel had a bank, warehouse, general store, and residence. These structures were probably built between 1912 and 1920 and demolished by 1930. Precontact artifacts and historic-era items were found on the surface and in four shovel probes during inventory survey for the park's redevelopment (Jenkins et al. 2012). Subsequent evaluative test excavation at the site included two adjoining backhoe trenches focused on one structure's footprint and limited hand excavation of three 50 cm by 50 cm units (total hand excavation is 0.75 m² or 0.03 percent of the site area). Testing revealed the precontact component was contained mostly within the ca. 30 cm thick plowzone, although a few items migrated deeper due to bioturbation. The lithic assemblage (consisting of debitage, a core, and two choppers) included FCR, and trended towards expediency, with tools intensively used (Jenkins et al. 2012). No temporally diagnostic artifacts were found, but hand excavation was minimal. Burned and unburned bone was also found, but could not be definitively assigned to the precontact period. Overall, the precontact assemblage suggested a specialized site, possibly focused on processing plant materials.

Like the precontact component, testing showed nearly all historic materials were within the ca. 30 cm thick plowzone. No historic features were identified (although trenching did not appear geared towards historic feature identification). The historic assemblage consisted of brick and window glass, bottle and jar fragments, a variety of ceramics, wire and machine cut nails as well as undiagnostic metal (Jenkins et al. 2012). Materials dated to between the late 1800 and early 1900s, although modern artifacts were also found. Researchers recommended the precontact component as eligible for listing on the National Register of Historic Places (NRHP).

Field Survey

Contaminant of Concern, PPE, and Decontamination Procedures

Ground-disturbing activities associated with archaeological excavations could potentially expose workers to a hazardous substance, particularly dioxin (Tetrachlorodibenzo-p-dioxin or TCDD), resulting from the former wood treatment facility. The primary routes of entry for the contaminant of concern while working included inhalation, skin absorption, ingestion, skin and/or eye contact.

To minimize these exposure pathways personal protective equipment (PPE) was worn at all times when there was the potential for contact with contaminated soils. Dust suppression techniques were not necessary as the sediment was damp from rainfall. Personal Protective Equipment worn during shovel probing included polycoated Tyvek® coveralls, work boots with outer boot covers, and chemical resistant nitrile gloves. All PPE was inspected prior to donning. Doffing procedures included washing, rinsing, or dry brushing excess mud or dirt from outer boots and clothing; removing coveralls, boot covers, and nitrile gloves; placing disposable and reusable PPE in designated separate containers; washing face and hands thoroughly prior to eating, drinking, or smoking; and ultimately disposing of PPE in a sanitary landfill.

Decontamination procedures were required for reusable field equipment that was not discarded following use. Field equipment such as shovels, screens, and hand augers were decontaminated before vacating each property. The procedure included: shaking or dry brushing excess mud or dirt from equipment; cleaning equipment using paper towels and a deionized water→alconox soap→deionized water rinse procedure; placing electronics such as cell phones and cameras in plastic bags; completing field forms on-site, photographing, and then placing forms in a separate container to be disposed; and ultimately disposing cleaning supplies (e.g., paper towels), plastic bags, and field forms in a sanitary landfill.

All members of our field crew (Danny Gilmour, Matt Goodwin, and Breanne Taylor) have received the 40-hour HAZWOPER training and are current in their certification.

Pedestrian Survey Methods

WillametteCRA conducted a systematic pedestrian survey of the project area. Archaeologists walked transects at no greater than 1.5-m (5-ft.) intervals across each of the 17 parcels (see Figure 3). The field crew examined one entire parcel before moving to the next property. Property lines were clear; the area is a developed residential neighborhood with fenced yards. During the survey, archaeologists examined the ground surface for artifacts or features.

Shovel Probe Methods

The pedestrian survey was supplemented by a shovel probe survey. After completing the pedestrian survey of a parcel, WillametteCRA excavated subsurface shovel probes. The field crew placed 2-5 shovel probes in each of the 17 parcels. The specific number of probes was based upon the size of the lot (i.e., more probes were excavated in larger yards). The field director selected locations for probing with the goal of covering the area with shovel probes placed at approximately 20-m intervals. We excavated a total of 49 shovel probes in the 17 parcels (Table 1).

Shovel probes measured at least 40 cm in diameter. Field crews excavated round probes with straight walls (cylindrical rather than conical), in 10-cm arbitrary levels within natural strata. The field

crew excavated all probes to a depth of at least 50 cm below surface (cmbs) (see Table 1). At the time of fieldwork, in lots where the planned depth of disturbance will be 1 foot (~30 cm), we excavated shovel probes to a depth of 50 cmbs. In lots where the planned depth of disturbance at the time of fieldwork was 2 ft. (~61 cm), archaeologists excavated shovel probes to a depth of 65 cmbs. Field crews screened all excavated sediments through ¼-inch mesh. Staff documented all probes in the field and mapped each location using a tape and compass. The data collected for each shovel probe included the maximum depth of the probe, soil stratigraphy, depth of stratigraphic changes, sediment descriptions, extent of disturbance, depth to impenetrable layer, and presence/absence of cultural material. The field crew backfilled shovel probes and restored the surface to its original state as much as practicable.

Historic research indicated that some lots (e.g., Lots 012, 036, 037, and 039) housed outbuildings (see “European American Development” above), though only one of these outbuildings was identified as a privy (in Lot 012). In these lots, archaeologists supplemented the shovel probe program with the use of a 4-foot long metal rod to explore for subsurface deposits. Archaeologists proceed to the back of the lot (where outbuildings were indicated on historic maps) and pushed the rod into the ground in an attempt to find dense deposits of historic materials. Emphasis was placed on Lot 012 where a privy was mapped historically (Sanborn Map and Publishing Company 1920).

Results and Recommendations

WillametteCRA conducted cultural resources surveys on March 16-17 and March 30, 2016. We examined 17 parcels and excavated 49 shovel probes. There was very limited ground surface visibility as all areas are landscaped. Archaeologists identified no cultural resources during the pedestrian survey. All shovel probes were negative for cultural material. Tabular results of the shovel-probe program are presented in Table 1. There are no previously recorded archaeological resources within the project area.

The field crew found much of the project area to be heavily disturbed. Twenty-six of the shovel probes contained fragments of modern materials such as plastic, wire nails, and modern beer bottle fragments (see Table 1). Many of the probes showed evidence of disturbance throughout the entire profile of the shovel probe. In addition, much of the landscape on the western side of the project area seems to have been heavily modified for the construction of houses. Houses constructed on the terrace riser have had their bases excavated into the hill slope. Based on our observations of differences in stratigraphy in adjoining lots, we assume that there has been substantial ground disturbance (both cutting and filling) along the hillslope and at its base near the railroad tracks.

It is our professional opinion that the proposed project is unlikely to affect any archaeological resources. However, information from the Cowlitz Indian Tribe revealed that the former

landowners of Lot 032 had recovered a mortar and pestle from their property. Due to a recent change in ownership of Lot 032, it was not possible to be granted access to that property. However, shovel probes were placed in several of the nearby lots (024, 025, 035, and 036) and all proved sterile of cultural material.

As a result of the report of the mortar and pestle within the project area, WillametteCRA recommends monitoring of Lot 032. WillametteCRA is currently preparing an inadvertent discovery plan for the construction phase of the project. It will include monitoring protocols and procedures for the unanticipated discoveries of archaeological or historical resources.

References Cited

- Abramowitz, Alan W.
1980 *A Cultural Resource Survey of the River 'S' Unit of Ridgefield National Wildlife Refuge, Clark County, Washington*. Office of Public Archaeology, Institute for Environmental Studies, University of Washington, Seattle.
- Ames, Kenneth M.
1994 *Archaeological Context Statement Portland Basin*. Department of Anthropology, Portland State University, Portland, Oregon.
- Ames, Kenneth L., and Herbert D. G. Maschner
1999 *Peoples of the Northwest Coast: Their Archaeology and Prehistory*. Thames and Hudson, New York.
- Ames, Kenneth M., Cameron M. Smith, William L. Cornett, Elizabeth A. Sobel, Stephen C. Hamilton, John Wolf, and Doria Raetz
1999 *Archaeological Investigations at 45CL1 Cathlapotle (1991-1996), Ridgefield National Wildlife Refuge Clark County, Washington: A preliminary Report*. Submitted to U.S. Fish and Wildlife Service. Department of Anthropology Portland State University, Wapato Valley Archaeology Project Report #7, Portland, Oregon.
- Beckham, Stephen Dow
1990 History of Western Oregon Since 1846. In *Northwest Coast*, edited by Wayne Suttles, pp. 180–188. Handbook of North American Indians, Vol. 7. William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.
- Boyd, Robert Thomas
1990 Demographic History, 1774-1874. In *Northwest Coast*, edited by Wayne Suttles, pp.135-148. Handbook of North American Indians, Vol. 7, William. C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.
- Bureau of Land Management
2016 Land Patents Database. Electronic document, <http://www.glorerecords.blm.gov>, accessed February 29, 2016.
- Caldbeck, John
2010 Ridgefield -- Thumbnail History, HistoryLink.org Essay 9281. Electronic document, http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=9281, accessed February 29, 2016.
- Daehnke, Jon
2010 *Cultural Resources Inventory for the Carty Unit Footbridge and Associated Facilities - Ridgefield National Wildlife Refuge, Washington*. Department of Anthropology, Portland State University. Prepared for U.S. Fish and Wildlife Service.
- Franklin, Jerry F., and C. T. Dyrness
1988 *Natural Vegetation of Oregon and Washington*. Oregon State University Press, Corvallis.

Freed, Robert A.

2008 *Archaeological Assessment of the Port of Ridgefield Property in Ridgefield, Clark County, Washington*. ACS Letter Report No. 131, Archaeological Consulting Services, Vancouver.

French, David H., and Katherine S. French

1998 Wasco, Wishram, and Cascades. In *Plateau*, edited by Deward E. Walker, Jr., pp. 360-377. Handbook of North American Indians, Vol. 12, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

General Land Office (GLO)

1854a *Plat of Township 4 North, Range 1 West, Willamette Meridian*. Microfiche on File, USDI Bureau of Land Management, Oregon State Office, Portland.

1854b *Plat of Township 4 North, Range 1 East, Willamette Meridian*. Microfiche on File, USDI Bureau of Land Management, Oregon State Office, Portland.

1863a *Plat of Township 4 North, Range 1 West, Willamette Meridian*. Microfiche on File, USDI Bureau of Land Management, Oregon State Office, Portland.

1863b *Plat of Township 4 North, Range 1 East, Willamette Meridian*. Microfiche on File, USDI Bureau of Land Management, Oregon State Office, Portland.

Gilmour, Daniel, Caitlin A. Wichlacz, Michael A. Daniels, and David V. Ellis

2013 *Cultural Resources Survey Report for the Proposed Pacific Wood Treatment Plant Remediation Project, Clark County, Washington*. WillametteCRA Report 12-35. Prepared for the Port of Ridgefield and the U.S. Fish and Wildlife Service.

Goodwin, Matt, and Kanani Paraso

2014 *Archaeological Monitoring of Carty Lake Sediment Remedy Project (NWS- 2013-1209) Ridgefield, Washington, Technical Memorandum*. WillametteCRA Report 12-35. Prepared for Maul Foster & Alongi, Inc.

Jenkins, Sarah L., John L. Fagan, Judith A. Chapman, and Jo Reese

2012 *Cultural Resource Survey and Archaeological Site Evaluation for the Overlook Park – Ridgefield Welcome Center*. Prepared by Archaeological Investigations Northwest. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Kirk, Ruth, and Carmela Alexander

1990 *Exploring Washington's Past: A Road Guide to History*. The University of Washington Press, Seattle.

Marino, Cesare

1990 History of Western Washington Since 1846. In *Northwest Coast*, edited by Wayne Suttles, pp. 169-179. Handbook of North American Indians, Vol. 7, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Metsker Maps

1956 *Metsker's Atlas of Cowlitz County, Washington*. Charles F. Metsker, Tacoma and Seattle, Washington.

1961 *Metsker's Atlas of Clark County, Washington*. Charles F. Metsker, Tacoma and Seattle, Washington.

Moulton, Gary E.

1990 *The Journals of the Lewis and Clark Expedition. Volume 6*. University of Nebraska Press, Lincoln and London.

Pettigrew, Richard M.

1981 Prehistoric Culture Sequence in the Portland Basin of the Lower Columbia Valley.
Unpublished Ph.D. dissertation, University of Oregon, Eugene.

Reese, Jo, Jo Reese, Kristen A. Fuld, Michele Punke, and Vernon J. Veysey

2013 *Archaeological Monitoring of the Port of Ridgefield's Millers' Landing Project, Cell 2 Area, Clark County, Washington*. Archaeological Investigations Northwest, Inc., Report No. 3061. Prepared for the Port of Ridgefield.

Roulette, Bill R.

1998 *Archaeological Investigations At The Summitpark Development Property Project Area, Ridgefield, Clark County, Washington*. Applied Archaeological Research Report No. 29. Report Prepared for The Rick Reynolds Company, Vancouver, Washington.

Sanborn Map and Publishing Company

1920 *Insurance Maps of Ridgefield, Washington*. Sanborn Map & Publishing Company, New York.
1920-1930 *Insurance Maps of Ridgefield, Washington*. Sanborn Map & Publishing Company, New York.

Silverstein, Michael

1990 Chinookans of the Lower Columbia. In *Northwest Coast*, edited by Wayne Suttles, pp.533-546.
Handbook of North American Indians, Vol 7. William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Smits, Nicholas J.

2006 *Archaeological Survey for the Ridgefield T-7 Sewer Force Main Project*. Prepared by Archaeological Investigations Northwest. On file, Washington Department of Archaeology and Historic Preservation, Olympia.

Wessen, Gary

1983 *Archaeological Investigations at Vancouver Lake, Washington*. Submitted to Cooper and Associates, Inc. Western Heritage, Inc., Canada.

Wilson, Douglas C.

1997 *Enhanced Archaeological Survey of Heron Ridge, Clark County, Washington*. Archaeology Consulting, Report No. 3. Prepared for Cascade West Development Inc., Vancouver, WA.

Woodward, John A.

1994 *Archaeological Walk-Over Reconnaissance and Cultural Resource Survey of Heron Ridge, Ridgefield, Washington*. Prepared for J. Simpson McKibbin Company, Vancouver. Woodward and Associates, Portland, Oregon.

United States Geological Society (USGS)

1940 *La Center, Washington*. 15-minute topographic map.
1954 *La Center, Washington*. 15-minute topographic map.

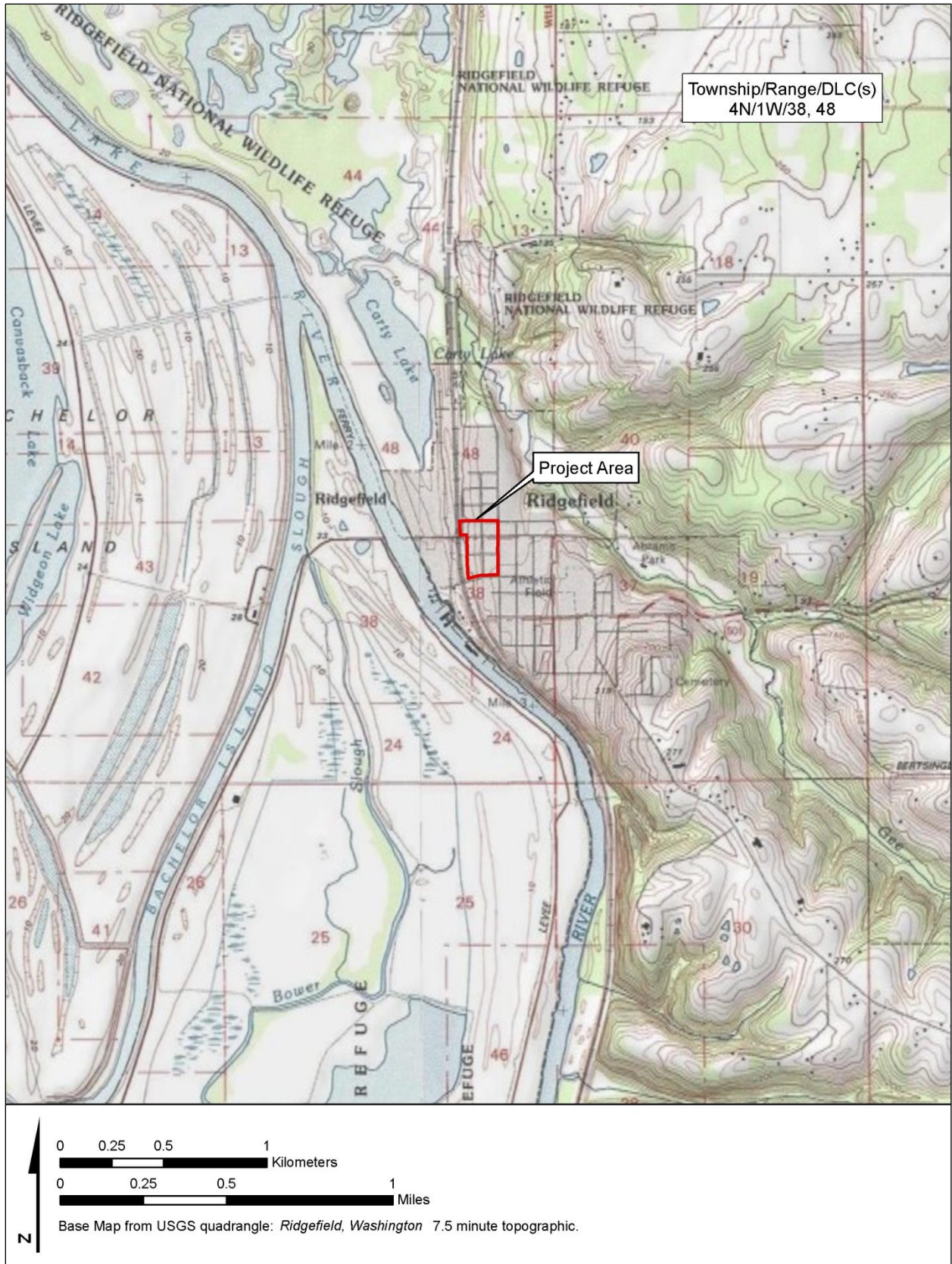


Figure 1. Project location.



Figure 2. Overview of current project area and proposed cleanup areas, depicting lots/parcel numbers.



Figure 3. Overview of current project area showing parcels surveyed and locations of shovel probes. Note: the only parcels that were surveyed are the ones where shovel probes occurred.



Figure 4. Overview of project area facing south, from the intersection of Railroad Avenue and Ash Street.



Figure 5. Overview of project area facing south, from the intersection of Ash Street and North 1st Avenue.



Figure 6. Overview of typical parcel in project area, facing west.

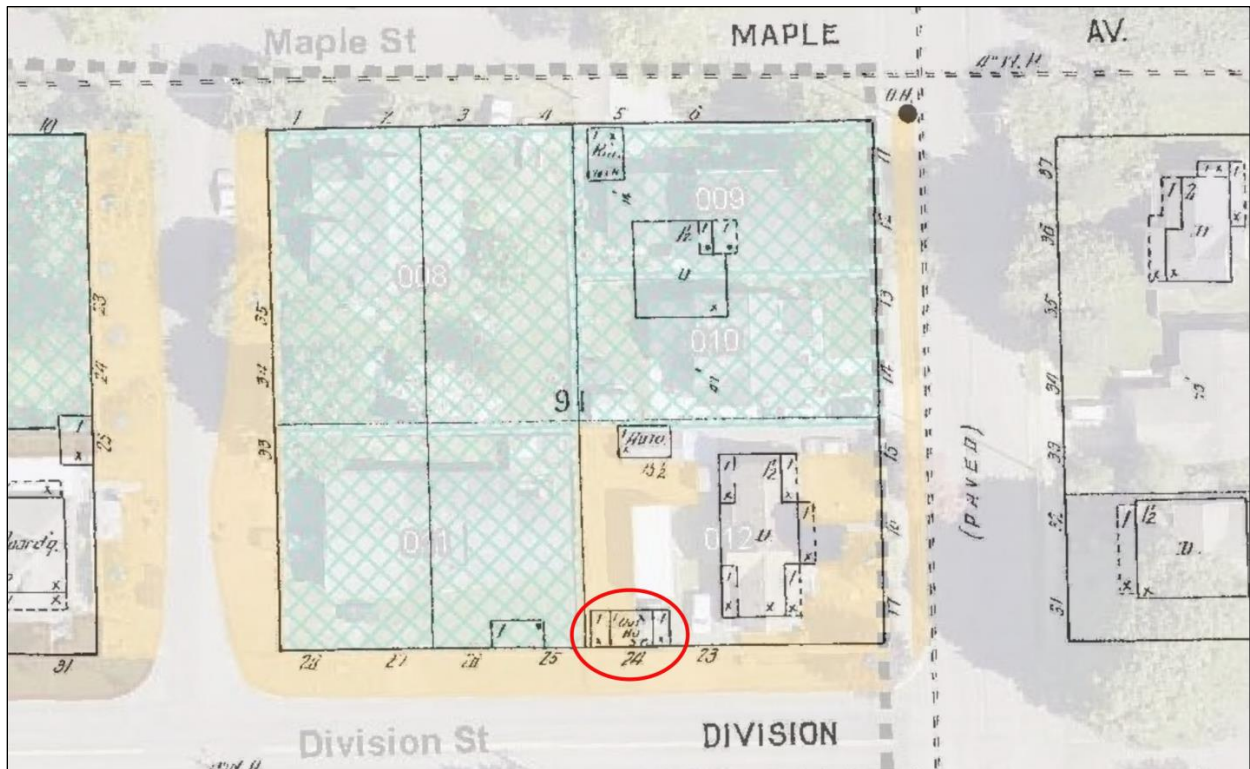


Figure 7. Close up of 1920 Sanborn showing privy location (highlighted in red) near the intersection of Division Street and North Main Street.

Table 1. Tabular Results of Shovel Probing.

Shovel Probe No.	Lot No.	Excavation depth (cmbs)	Recovery	Comment
1	39	50	Sterile	Modern glass 0-50 cmbs.
2	39	50	Sterile	Utility pipe at 25 cmbs. Modern glass, nails, and plastic 0-50 cmbs.
3	39	50	Sterile	None.
4	39	50	Sterile	Modern wire nails, glass, and plastic 0-50 cmbs.
5	37	50	Sterile	Modern trash 40-50 cmbs.
6	37	50	Sterile	Modern trash 0-40 cmbs.
7	35	50	Sterile	None.
8	35	50	Sterile	Plastic from 0-40 cmbs.
9	25	50	Sterile	Modern bottle glass and plastic 0-50 cmbs.
10	25	50	Sterile	Augered 50-90 cmbs. Water table at 90 cmbs.
11	24	50	Sterile	None.
12	24	50	Sterile	Modern glass 0-50 cmbs.
13	24	50	Sterile	90% gravel fill.
14	36	50	Sterile	Modern glass and nail 0-50 cmbs.
15	36	50	Sterile	Modern glass and nail 0-50 cmbs.
16	38	50	Sterile	Modern glass, round nail, river cobbles 0-45 cmbs.
17	38	50	Sterile	Modern glass 0-50 cmbs.
18	38	50	Sterile	Modern glass and round nails 0-50 cmbs.
19	14	65	Sterile	None.
20	14	65	Sterile	None.
21	14	65	Sterile	Modern nails 0-65 cmbs.
22	19	50	Sterile	Modern glass 0-50 cmbs.
23	19	50	Sterile	Modern glass 0-30 cmbs. Plastic 30-50 cmbs.
24	19	50	Sterile	Gravel fill, modern glass, charcoal, brick fragments 0-50 cmbs.
25	20A	60	Sterile	Plastic and modern glass 0-60 cmbs. Auger 60-200.
26	20A	50	Sterile	Modern trash 0-50 cmbs.
27	20A	50	Sterile	None.
28	20B	50	Sterile	None.
29	20B	50	Sterile	Modern nail 30-50 cmbs.
30	20B	66	Sterile	None.
31	12	50	Sterile	Plastic from 0-20 cmbs.
32	12	50	Sterile	None.
33	12	50	Sterile	None.
34	12	50	Sterile	Gravel fill 0-25 cmbs. Plastic 0-50 cmbs.
35	17	50	Sterile	None.
36	17	50	Sterile	None.
37	17	50	Sterile	None.

Table 1. Tabular Results of Shovel Probing (Cont.).

Shovel Probe No.	Lot No.	Excavation depth (cmbs)	Recovery	Comment
38	17	50	Sterile	None.
39	18	50	Sterile	None.
40	18	50	Sterile	None.
41	18	50	Sterile	None.
42	18	50	Sterile	Modern bottle glass and plastic 0-50 cmbs.
43	16	65	Sterile	None.
44	16	65	Sterile	None.
45	15	65	Sterile	None.
46	15	65	Sterile	Modern bottle glass 0-65 cmbs.
47	13	65	Sterile	None.
48	13	65	Sterile	None.
49	13	65	Sterile	None.