CULTURAL RESOURCES REPORT COVER SHEET

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Title of Report: Results of a Cultural Resource Study of the Proposed Riverside Estates Subdivision, Clark County, Washington
Applied Archaeological Research Report No. 1746

Date of Report: December 9, 2016

County(ies): Clark Section: 33 Township: 5N Range: 1E
Quad: 1990 Ridgefield, WA Acres: 43.59 acres

PDF of report submitted (REQUIRED) ☑ Yes

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

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

TCP(s) found? ☐ Yes ☑ No

Replace a draft? ☐ Yes ☑ No

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

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

DAHP Archaeological Site #:
45CL1234 (AAR 1746-1)
45CL1235 (AAR 1746-2)

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RESULTS OF A CULTURAL RESOURCE STUDY OF THE
PROPOSED RIVERSIDE ESTATES SUBDIVISION,
CLARK COUNTY, WASHINGTON

Report submitted to
Tim Wines, P.E.

December 9, 2016

APPLIED ARCHAEOLOGICAL RESEARCH, INC., REPORT NO. 1746
RESULTS OF A CULTURAL RESOURCE STUDY OF THE PROPOSED RIVERSIDE ESTATES SUBDIVISION, CLARK COUNTY, WASHINGTON

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Prepared for
Tim Wines, P.E.
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December 9, 2016

APPLIED ARCHAEOLOGICAL RESEARCH, INC., REPORT NO. 1746
ABSTRACT

This report describes the results of two phases of archaeological investigation within the proposed Riverside Estates subdivision development area, a 43.59-acre property in La Center, Washington. Applied Archaeological Research, Inc. (AAR) conducted the investigations to assist WPD, Inc. in its compliance with Clark County Code Chapter 40.570.080. It included a predetermination survey of the larger property and a formal survey of parts of it where pre-contact sites 45CL1234 and 45CL1235 were found during the initial study. The formal survey focused on the areas around the two archaeological resources and was designed to determine the spatial extent of the resources and to collect information on their contents.

The two phases of fieldwork included a pedestrian survey of the property and the excavation of 72 shovel test probes (STPs). Thirty-three STPs were excavated during the predetermination phase and 39 during the formal survey. The STPs excavated during the predetermination survey were distributed to provide representative coverage of the project area whereas those excavated during the formal survey were placed to refine the boundaries of the archaeological resources identified during the predetermination survey.

As a result of the two phases of archaeological investigation, the cultural deposits at sites 45CL1234 and 45CL1235 were found to be sparse, to lack diversity, and to be of limited use for reconstructing the past lifeways of groups that lived in the surrounding area. The sites are similar to many other archaeological resources that have been recorded in their vicinity. The level of sampling at each site ruled out the possibility of their being parts of a larger cultural deposits. For these reasons, it is AAR’s opinion that the sites require no additional archaeological study although any development that will or may impact them will need to be monitored by an archaeologist and conducted under an excavation permit issued by the Washington State Department of Archaeology and Historic Preservation.
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INTRODUCTION

This report describes the results of two phases of archaeological investigation of a 43.59-acre property where WPD, Inc., proposes to construct the Riverside Estates subdivision. Applied Archaeological Research, Inc. (AAR) conducted the investigations to assist WPD, Inc. in its compliance with Clark County Code Chapter 40.570.080. They included a predetermination survey of the entire property and a formal survey of parts of it where archaeological material was found during the initial study. Both phases of investigation were performed by AAR Project Archaeologist Donald D. Pattee, M.A., RPA, and Staff Archaeologists Melissa L. Lehman, B.A., B.S. and Robert M. McCurdy, B.S., who were under the technical supervision of Bill R. Roulette, M.A., RPA.

Project Background

In September 2016 PLS Engineering, the firm providing engineering design services to WPD, Inc., contracted with AAR to conduct a predetermination survey of the 43.59-acre Riverside Estates subdivision project area. During the predetermination survey lithic prehistoric artifacts were identified in the northwestern and extreme southeastern parts of the project area. Based on the results of the predetermination survey, AAR recommended a formal survey of the area where the archaeological materials were found. The formal survey was designed to determine the horizontal extent of the cultural material within the project area and to assess the nature and character of the cultural deposits. To expedite the compliance process, the project proponents elected to conduct a formal survey before the predetermination survey report was completed. Therefore, this report describes the results of both phases of investigation.

Project Area Description

The development site is located in northern Clark County in the southeast quarter of Section 33, Township 5 North, Range 1 East, Willamette Meridian (Figure 1). It is irregularly shaped and maximally 2,000 feet (ft) long measured north-to-south and 1,815 ft wide measured east-to-west (Figure 2). NW Pacific Highway borders part of its northeastern part and NW Larson Drive partly borders it to the east. Elsewhere it is defined by lines.

The project area is between 106 and 210 ft above mean sea level (amsl), has rolling topography, and a southerly to southwesterly aspect. The more elevated parts of the property are to the north and include a section of a bench or terrace that has the appearance of a low knoll. Lands north of the bench slope upward to crest of a low hill that is outside of the property. Below the bench the land slopes downward toward the East Fork Lewis River, located 0.1 mile to the south. The lowest-lying part of the property is at its southwestern corner and consists of the upper section of a very steep slope that is part of the north wall of a narrow and steep-sided gorge through which the river passes before its valley opens up downstream from Paradise Point. An unnamed stream crosses on a diagonal through the approximate center of the property at the toe of the slope below the bench. Where it enters the property it is narrow stream that is shallowly incised. As it flows in a southwestern direction across the property its channel get increasingly deeper so that by the time it exits the project area the stream flows in a steep-sided ravine. The property contains three jurisdictional wetlands that together encompass about four acres. The largest among them is in the northwestern part of the property. A smaller one is located along its eastern edge and is associated with the unnamed stream. The third is toward its southeastern corner. A drainage ditch extends from it and conveys water to the unnamed stream. At the time of the field studies the property was mostly open and covered with stubble left over from a recent haying event and pasture grasses (Figure 3). The ravine in its western part is bordered by riparian vegetation including bigleaf maple, Pacific dogwood, and willow trees with an understory of Himalayan blackberry, grasses, and ferns (Figure 4).
Figure 1. Location of the project area as depicted on the USGS 1990 Ridgefield, WA 7.5-minute topographic quadrangle.
Figure 2. Configuration of the Riverside Estates development area.
Figure 3. General overview of the project area showing dominant ground cover and rolling topography. View is southwest.

Figure 4. Overview of the riparian area bordering a section of the unnamed stream. View is northwest.
Conventions

In this report, measurements for common distances, elevations, and areas are in English units (e.g. inches, feet, miles, acres). Measurements that describe archaeological methods are in metric units (centimeters and meters). Numbers in the thousands used to express ages and distances feature commas to denote thousands. Calendar dates and dates used to express years before present (B.P.) do not use commas to denote the thousands place but do use commas to denote the ten thousands place.
ENVIRONMENTAL SETTING OVERVIEW

Geology, Physiography, and Hydrology

The Riverside Estates subdivision development area is located on an expansive Pleistocene-aged geomorphic surface that has the appearance of a rolling plain. The old land surface is heavily weathered and eroded and is dissected by numerous streams. Structurally, it is composed of sandstone and cobbly conglomerate formations that were laid down delta-like during the Pliocene from the point where the ancestral Columbia River debouched from its gorge (Trimble 1963:29-36). Its surface was shaped by the catastrophic Missoula or Bretz floods, which refers to an unknown number of flood events that occurred between about 17,000 and 12,700 years ago (Clague et al. 2003; Waitt 1984). The floodwaters originated in Glacial Lake Missoula, a vast body of water over four times the size of modern-day Lake Erie, formed when the Purcell Trench Lobe of the Cordilleran ice sheet blocked the Clark Fork River in Montana. When the waters of Lake Missoula breached the ice dam, the resulting floods rushed across the landscape scouring the surface and eroding and plucking away the bedrock. These floods created the scablands of eastern Washington and changed the profile of the Columbia River Gorge. Exiting the gorge, a 700-foot-tall wall of water spilled across the Portland-Vancouver area scouring land surfaces. Blocked by a narrowing of the Columbia River valley, the floodwaters slackened and the suspended load of sediment and rock dropped from the impounded waters (Trimble 1963:36-41). They mantled the scoured surfaces and provided the raw material for the formation of the historical landscape (Allen et al. 1986; Alt 2001; Benito and O'Connor 2003; Bourdeau 2004; Evarts et al. 2009; Lentz 1981; O'Connor and Baker 1992; Peterson et al. 2011).

The flood sediments underlying the development site were deposited by slack-water and include unconsolidated clay, silt, and fine to medium grained sand (Evarts 2002). Soils mapped at the site formed in these materials. They include Gee, Hillsboro, and Odne soils that are silt loams that most typically are found on terraces (McGee 1972: Sheet 15).

Important in terms of the local archaeology, other than the changes brought about by localized erosion, the land surface on which the project area is located has been quasi-stable for an extended period of time with no appreciable sedimentation for several millennia. Thus, the current ground surface is the same or a very close approximation of the ground surface at the end of the Pleistocene and there is no potential for the site to contain deeply buried archaeological deposits.

Physiographically, the development area is located in the upland aspect of the Portland Basin, one of several topographic and structural basins that as a group comprises the Puget-Willamette trough, a north to south oriented structural basin located between the Pacific Coast Range to the west and the parallel Cascade Range to the east. The trough extends southward from the Canadian border to Oregon where it merges with the Willamette Valley, its physiographic and geologic continuation (Easterbrook and Rahm 1970: Franklin and Dyrness 1973). It was formed by Pliocene compression and folding of Miocene flood basalts (collectively known as the Columbia River Basalt group), which form the basement rock throughout the region. The Portland Basin part of the Puget-Willamette trough begins where the Columbia River debouches from its gorge through the Cascade Mountains in the neighborhood of Washougal, Washington. It extends to the north and west to the Longview-Kelso area where the Columbia River begins its westward turn through the Willapa Hills of the Coast Range.

The East Fork Lewis River is the nearest perennial source of freshwater. It is approximately 0.1 mile south of the development site but is also about 100 ft lower in elevation. The river is a tributary of the Columbia River. It heads on the western flanks of Lookout Mountain in Skamania County and takes in many streams and creeks that mainly flow southwesterly off of the west facing slopes of hills that are the outliers of the Washington Southern Cascades, before it merges with the main stem of the Lewis River at a point south of Woodland. The combined branches empty into the Columbia River, the chief hydrologic feature in the region. That river flows through the Cascade Range on a generally east-west
axis before turning northward at Vancouver, and then westward at Longview. It provides the only low-
elevation passage through the Cascades Mountains between the Fraser River in British Columbia to the
north and the Klamath River in California to the south (Franklin and Dyrness 1973).

Other nearby waterways include Jenny Creek, to the west, and an unnamed stream, to the east.
Both flow into the East Fork. Each is a short stream that drains off of the south-facing flank of the low
upland that forms the drainage divide between the mainstem and East Fork of the Lewis River.

**Flora and Fauna**

Before historical and modern alterations, interior areas of Clark County, like the proposed
development site, contained vegetation typical of the *Tsuga heterophylla* (western hemlock) Vegetation
Zone, the most extensive vegetation association in western Washington. The major overstory species in
this zone included Douglas-fir, western hemlock, and western redcedar. Understory plants included
economically important food plants such as huckleberry, hazel, and blackberry (Franklin and Dyrness
1973:82-85).

A wide variety of animals resided or visited the region on a seasonal basis, many of which were
used by the pre-contact inhabitants such as food, clothing, tools, and other uses. In historical times, the
Columbia River and most of its main tributaries supported extraordinary fish populations. Anadromous
fish in the Columbia River and its tributaries included four species of salmon: Chinook, coho, sockeye,
and chum, steelhead, white sturgeon, eulachon, as well as lamprey. Other aquatic resources included
freshwater mussel and harbor seal.

The alluvial bottomlands and adjoining uplands provided habitat for a large variety of game
animals including elk, black-tail deer, and white tail deer. Fur bearing mammals included coyote, bobcat,
raccoon, river otter, mink, ermine, beaver, porcupine, and brush rabbit. Large predators included the
black bear and wolf. Game birds would have included grouse, quail, and doves. Migratory and resident
waterfowl were, and are today, numerous on the Columbia River bottomlands and included herons,
cranes, ducks, geese, and swans. Located within the Pacific flyway, seasonal waterfowl populations were
probably quite remarkable.
CULTURAL BACKGROUND

Regional Archaeological Overview

The following description of prehistory and cultural chronology has a Portland Basin focus although it draws in or refers to archaeological research that has been conducted in the greater southwestern Washington and northwestern Oregon region. To date, intensive archaeological research in the region has focused on the Columbia River floodplain and the floor of the Willamette Valley. While these investigations have contributed significantly to our understanding of the later prehistory of the area, they have left both higher-elevation areas and earlier periods of human occupation under-documented.

This overview relies primarily on a modified version of the cultural sequence proposed by Ames and Maschner (1999), who divide the cultural history of the Pacific Northwest into five broad chronological periods based on significant changes in cultural adaptation and material culture. These periods include the Paleoindian, (prior to ca. 12,500 B.P.), the Archaic (ca. 12,500-6400 B.P.), the Early Pacific (ca. 6400-3800 B.P.), the Middle Pacific (ca. 3800-1800/1500 B.P.), and the Late Pacific (ca. 1800/1500-250 B.P.). In addition to this more general sequence, Pettigrew (1981, 1990) has developed a specific cultural chronology for the Portland Basin that describes local cultural developments of the last 2,500 years. Using data from limited test excavations at seven sites in the Sauvie Island area, Pettigrew divided the last 2,500 years into two cultural phases, Merrybell and Multnomah, with three subphases recognized for the later Multnomah phase. For the most part, the Pacific period readily accommodates the named local phases and subphases.

In general outline, it can be forwarded that the earliest visitors and colonizers in the region were participants of a generalized cultural pattern that was quite similar in material manifestations on both sides of the Cascade Mountains (Harris et al. 2013). By the mid-Early Pacific Period, around 4,500 years ago, regional cultures had clearly emerged from the underlying generalized cultural tradition. Starting around that time prehistory is marked by substantial population growth and cultural change. From mid-Holocene time forward, the archaeological record of the greater Pacific Northwest contains evidence for the appearance of permanent winter settlements and development of a regional architecture based on heavy woodworking. Evidence is also found for the development of a fully sedentary settlement system, a storage-based economy, the increased importance of aquatic resources in economic systems, especially salmonids, the development of complex social systems, and an elaboration of a material culture including development of a distinct artistic tradition (Ames et al. 1994). Although the archaeological record is not static for the period 4,500 years ago to historical contact, in terms of basic structure and adaptation, the lifeways represented archaeologically after about 4,500 years ago persisted until the 1800s, when disease and other deleterious effects of contact caused widespread collapse of aboriginal societies.

Paleoindian/Paleoarchaic Period (pre-12,500 B.P.)

In fairly recent times, data have accumulated that demonstrate temporal and spatial overlap of Paleoindian (e.g., Clovis) and early Archaic cultures (e.g., Windust and other Western Stemmed Point traditions) (Jenkins et al. 2012; Davis et al. 2014), as well as significant differences in technological production strategies of the two (Beck and Jones 2010; Davis et al. 2012). The significance of this is that maintaining Paleoindian and Archaic periods as separate cultural-chronological units gives the false impression that the former preceded the latter, thus giving rise by implication to the notion that Windust evolved from Clovis. Instead, the emerging interpretive model suggest an abandonment of the sequent chronological distinction in favor of the concept of the Paleoarchaic (Beck and Jones 1997) or to use Paleoindian to refer to Clovis components, specifically, and to the term Paleoarchaic to refer to Western Stemmed Point tradition components (Davis et al. 2012).

The combined Paleoindian/Paleoarchaic designation acknowledges the temporal relationship between Paleoindian and early Paleoarchaic cultures while maintaining a classificatory distinction.
between their different adaptive strategies. The use of the term Paleoarchaic also acknowledges the apparent cultural continuity between Paleoarchaic and the succeeding Archaic periods cultures.

The Paleoindian/Paleoarchaic Period encompasses both Fluted Point and Western Stemmed Point archaeological cultures, the most well-known of which in the Intermountain West are Clovis and Windust, respectively. Clovis sites in the Pacific Northwest are not well dated, but clearly overlap temporally with Western Stemmed Point materials, which are now known to pre-date ca. 13,000 B.P. (Bedwell 1973; Davis and Schweger 2004; Davis et al. 2014; Hicks 2004; Jenkins et al. 2012) and to persist until ca. 8000 B.P. Clovis, however, would seem to be temporally restricted to the earlier end of this time range. The bulk of our knowledge regarding this period in the American West comes from archaeological sites in the Great Basin and the Columbia Basin, although four sites that contain archaeological sites that contain Western Stemmed points have been documented in the upland parts of the Portland Basin (Burnett 1991; Hamilton and Roulette 2005; Harris et al. 2013; Punke et al. 2009; Salo 1986) and in surrounding areas of southwest Washington/northwest Oregon, including in the drainages of the Cowlitz River (Dancey 1969; Mack et al. 2010), Chehalis River (Welch 1970, 1983), Nisqually River (Dugas et al. 1999:17), Willapa River (Nakonechny 2009), and Youngs River (Minor 1984).

The precise nature of human adaptation during this early period remains a subject of debate. While some still argue for a specialized hunting adaptation during this period (Fagan 1988; Chatters et al. 2010), a growing body of data indicates that in the Pacific Northwest Paleoindian and Paleoarchaic peoples used different adaptive strategies. Paleoindian or Clovis sites are almost exclusively isolated point finds or the butchered remains of extinct Pleistocene fauna, suggesting this cultural tradition engaged in a classic specialized big game hunting subsistence strategy with little inclusion of plant or small mammal resources. In contrast, Paleoarchaic sites contain relatively diverse tool assemblages that include large, broad-bladed points with slight shoulders, and straight to contracting edge ground stems (Windust points), bifacial knives, ovate bifaces, crescents, end scrapers, gravers, heavy chopping and scraping tools, bola stones, and edge-ground cobbles. Corresponding faunal assemblages contain a diverse array of fauna that includes bison, elk, deer, pronghorn, and a variety of small mammals such as porcupines, marmots, and rabbits. Edge-ground cobbles are the only evidence of plant processing so far associated with these sites. Taken together, these data suggest a more generalized highly flexible foraging strategy (Elston and Zeanah 2002; Pinson 2011; Willig 1988, 1989). Both groups, however, were organized into small and highly mobile social units. Regardless of tradition, sites dating to this time period are often small and lack evidence for constructed shelters.

Archaic Period (ca. 12,500 - 6400 B.P.)

For the most part, the Archaic Period overlaps with the peak of a climatic period that was characterized by warmer and drier conditions than at present. Traditionally, the Archaic period was considered to be associated with the transition from specialized big game hunting to broad-based foraging strategies, although recent research suggests that both strategies were operative in the American west. Overall, this period does appear to have been associated with a general broadening of an already broad-spectrum diet. For instance, in the Great Basin this transition is associated with the desiccation of the shallow lakes and marshes that had sustained the Paleoarchaic adaptation. During this period, people began to utilize upland areas more intensively and to intensively utilize small, hard seeds, which are time consuming to collect and process (Madsen 2007). Consequently, groundstone and other evidence for plant and seed processing becomes more common in Early Archaic assemblages. West of the Cascade Range the transition to the Early Archaic period is associated with an expansion in oak savannah in valley bottoms and at lower elevations, coupled with a similar pattern of expanded use of higher elevation zones (Burtruchard et al. 1993).

Archaic Period phases are well documented throughout the Northwest including parts of western Washington (Daugherty et al. 1987a, 1987b), western Oregon (Connolly and Baxter 1986; Newman 1966), the Columbia Plateau/Snake River Plain (Leonhardt and Rice 1970), and the borderland between
the Great Basin and Columbia Plateau (Connolly 1999). Archaic sites within this geographic expanse are generally considered to belong to the Cascade phase. The concept of the Cascade phase was first formulated for the lower Snake River (Leonhardy and Rice 1970) and, as originally conceived, was divided into two sub-phases, early (8000 B.P. to 7000 B.P.) and late (7000 B.P. to 4500 B.P.), based on the appearance in the later sub-phase of large side-notched points that are absent in the former. In the cultural framework adopted in this report, the Archaic Period encompasses only the early Cascade sub-phase, while the late Cascade sub-phase is included as part of the Early Pacific Period.

The early part of the Archaic is characterized by a subsistence pattern that emphasized broad-based hunting with secondary emphasis on gathering (Minor et al. 1982). Large, lanceolate Cascade projectile points are diagnostic of this period. The Archaic tool kit also included knives, scrapers, drills, modified flakes, manos, metates, hammerstones, cobbles choppers, and edge ground cobbles. Archaic sites have been found in the foothills of the Cascade and Coast ranges, and in valley edge and valley floor settings, which suggests a broad-based economy and familiarity with a variety of environmental niches. Available evidence indicates that deer, elk, marmot, rabbit, and weasel were used (Newman 1966). Milling equipment, found at some sites, indicates that vegetal resources were also used (Toepel 1985).

Flenniken (in Daugherty et al. 1987a) and others maintain that Cascade-like foliates were continuously used during prehistory and are therefore poor temporal indicators. However, where found in dated stratified cultural deposits, a clear sequence of point forms is repeatedly identified showing the early and late Cascade phase transition from foliate points to foliate and large side-notched points. The transition to later archaeological components in these stratified sites is marked by the introduction of point forms unique to the later periods and is rarely, if ever, dominated by Cascade-style foliate points. Thus, despite the use of Cascade-style foliates in later times, the relative frequency of Cascade-type points is probably a valid cross-dating technique.

Cascade phase sites have been found in diverse environmental settings. That and the diverse tool assemblages found at the sites suggest a land use pattern associated with a highly mobile hunting and foraging lifeway. Although many Cascade phase sites do not contain evidence for later use, the comparative density of artifacts at some of the site and total absence of evidence for dwellings at them, is indicative of repeated short-term use of specific site locations within a relatively stable land-use pattern.

Early Pacific Period (ca. 6400 - 3500 B.P.)

The Early Pacific period appears to represent a time of expansion and intensification of established subsistence and technological patterns (Minor et al. 1982). Few sites in the Portland Basin are firmly dated to this period and sites that contain artifacts suggesting Early Pacific period occupations also contain artifacts representing later (and sometimes earlier) periods. Regionally, sites dating to this period contain broad-necked, side-notched, and large stemmed projectile points, leaf-shaped lanceolate projectile points (in reduced numbers compared to the preceding period), flaked pebbles and cobbles, knives, drills, gravers, reamers, spokeshaves, hammerstones, anvils, scraper planes, and abrading stones (Minor et al. 1982). An increase in the frequency of plant processing tools, such as mortars and pestles, suggests greater reliance on food plants in the aboriginal diet during this interval.

The few dated Early Pacific period sites in the Portland Basin are mostly from the terminal end of this period. The Covington site, 45CL422, which is located near Curtin Creek in the Orchards area dates to the end of this period. Charcoal collected from between fire-broken rock in a large hearth provided a calibrated, two-sigma radiocarbon age range of 3595 to 3253 B.P., which provides a calendar age of between 1645 and 1285 B.C. ± 80 years (Beta-115809) (Wilson and Roulette 1998). Site 45CL412, located in the Lookout Ridge neighborhood of Camas, is dated to the Early Pacific period based on cross-dating of stylistically diagnostic artifacts (Hamilton and Roulette 2004).
Middle Pacific Period (ca. 3500 – 1800/1500 B.P.)

The Middle Pacific Period in large part overlaps with Pettigrew’s (1990) Merrybell phase (ca. 2500 to 1750 B.P.). During this period regional populations became increasingly sedentary and created more-or-less permanent settlements or hamlets that were mainly occupied during the winter. As opposed to foraging subsistence strategies of earlier times, by the Middle Pacific period, groups had developed subsistence systems based on mass harvesting a select few resources and processing and storing them for later consumption. Also, by the Middle Pacific period regional art styles became more distinctive and elaborate, as did material culture generally, and social systems became increasingly complex (Ames et al. 1994). Artifacts diagnostic of the Middle Pacific period/Merrybell phase include broad-necked projectile points, stemmed drills, flaked cylindrical bipoints, flaked crescents, perforated ground stone pendants, peripherally flaked cobbles, and atlatl weights.

Late Pacific Period (ca. 1800/1500 to 250 B.P.)

Most investigated sites in the Portland Basin date to this period which encompasses the three sub-phases of Pettigrew’s (1990) Multnomah phase. Numerous sites dating to this time period have been documented on the floodplain of the Oregon side of the Columbia River and around Vancouver Lake on the north side of the river (e.g., Ames et al. 1994:76; Minor et al. 1994; Wessen 1983). Sites from this period share many similarities and most contain small, triangular-shaped, narrow-stemmed projectile points, small scrapers, flake drills, mule-ear knives, flaked cobble tools, and net weights. More rarely, zoomorphic or anthropomorphic stone sculpture or objects and figurines from clay are found. Historical trade goods first appear in the Multnomah 3 sub-phase (ca. 200 to 115 B.P.).

Sites from this time period are especially common on the Vancouver bottomlands that surround Vancouver and Shillapoo lakes (Wessen 1983). One of the sites along Vancouver Lake, 45CL31, contains the remains of a wooden fish weir and possible evidence for an ethnohistoric Chinook-style pole and mat or brush structure (Wessen 1983:109). Many sites in the Vancouver Lake area that were excavated by the Oregon Archaeological Society (OAS) appear to date to this period based on stylistic cross-dating of artifacts illustrated in site reports. These include the Duck Lake site, 45CL6a, (Slocum and Matsen 1972) and the Herzog site, 45CL11 (Foreman and Foreman 1977; Slocum and Matsen 1968). Site 45CL1, Cathlapotle, the Chinook town visited by Lewis and Clark (Moulton 1990:23), appears to have been founded and to have flourished during the Late Pacific period/Multnomah phase (Daehnke 2005).

Previous Research in the Project Area and Vicinity

Records on file at the Washington State Department of Archaeology and Historic Preservation (DAHP) indicate that between 2008 and 2009 approximately 3 acres in the northern part of the project area and 4.7 acres in its southern part were surveyed for cultural resources (Gall and Hudson 2009; Hudson 2008). Neither of the studies resulted in the identification of cultural resources.

In addition to the studies conducted within the development area, 25 other cultural resource studies have been completed with one mile of it (Table 1). The projects consist mainly of predetermination and formal surveys that have been completed in the past 18 years. Collectively, those studies have examined approximately 493 acres of nearby lands. As a result, pre-contact sites 45CL674, 45CL1122 and pre-contact isolates 45CL680, 45CL692, 45CL693, and 45CL743 have been identified and documented.

Site 45CL674 and the isolates are located within about 600 m of the project area in analogous environmental settings. Most of the isolates consist of one artifact, most typically a piece of lithic debitage but 45CL692 contains four pieces of debitage and 45CL743 contains a cobble chopper. Site 45CL674 was identified during a predetermination survey and was investigated further during a formal
survey. It is a small site that contained 24 lithic artifacts that included 22 pieces of debitage, a core, and a biface fragment (Gall 2006a, 2006b). Overall, the recorded archaeological resources in the same neighborhood as the project area consist of isolated lithic artifacts or sparse lithic scatters and appear to represent limited activity loci such as might be formed by subsistence activities.

<table>
<thead>
<tr>
<th>Author(s) of Report/Year</th>
<th>Type of Investigation</th>
<th>Size of Project Area</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeLyria 1998</td>
<td>Predetermination survey</td>
<td>1 acre</td>
<td>No archaeological resources identified</td>
</tr>
<tr>
<td>Cooper 2001</td>
<td>Predetermination survey</td>
<td>1.5 acres</td>
<td>No archaeological resources identified</td>
</tr>
<tr>
<td>DeLyria 2001</td>
<td>Predetermination survey</td>
<td>3.56 acres</td>
<td>No archaeological resources identified</td>
</tr>
<tr>
<td>Mills 2002</td>
<td>Predetermination survey</td>
<td>5 acres</td>
<td>45CL532 identified and recorded</td>
</tr>
<tr>
<td>Musil 2003</td>
<td>Predetermination survey</td>
<td>150 acres</td>
<td>Prehistoric archaeological material identified but not recorded</td>
</tr>
<tr>
<td>Wilson and Mills 2005</td>
<td>Predetermination survey</td>
<td>3.87 acres</td>
<td>No archaeological resources identified</td>
</tr>
<tr>
<td>Bryant and Gall 2006</td>
<td>Predetermination survey</td>
<td>36 acres</td>
<td>45CL692 and 45CL693 identified and recorded</td>
</tr>
<tr>
<td>Gall 2006a</td>
<td>Predetermination survey</td>
<td>14 acres</td>
<td>45CL674 identified and recorded</td>
</tr>
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<td>Gall 2006b</td>
<td>Formal survey</td>
<td>7 acres</td>
<td>Additional study of 45CL674</td>
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<td>Holschuh 2006</td>
<td>Predetermination survey</td>
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<td>45CL680 identified and recorded</td>
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<td>Easton 2007</td>
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<td>45CL743 identified and recorded</td>
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<tr>
<td>Freed 2007</td>
<td>N/A</td>
<td>0.27</td>
<td>No archaeological resources identified</td>
</tr>
<tr>
<td>Hudson 2008</td>
<td>Predetermination survey</td>
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<td>Hudson et al. 2008</td>
<td>Formal survey</td>
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<td>Formal survey</td>
<td>1 acre</td>
<td>No archaeological resources identified</td>
</tr>
<tr>
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<td>Formal survey</td>
<td>1.2 acres</td>
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</tr>
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<td>Predetermination survey</td>
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</tr>
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<td>Predetermination survey</td>
<td>6 acres</td>
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<td>Freed 2010</td>
<td>Formal survey</td>
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<td>Smith and Gall 2010</td>
<td>Predetermination survey</td>
<td>10 acres</td>
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<td>Holschuh 2015</td>
<td>Formal survey</td>
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<td>No archaeological resources identified</td>
</tr>
<tr>
<td>McFarland and McClintock 2015</td>
<td>Formal survey</td>
<td>2 acres</td>
<td>No archaeological resources identified</td>
</tr>
<tr>
<td>Solimano et al. 2015</td>
<td>Formal survey</td>
<td>138 acres</td>
<td>45CL1122 and 45CL1123 identified and recorded (45CL1123 not within 1 mile of project area)</td>
</tr>
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<td>Brown et al. 2016</td>
<td>Formal survey</td>
<td>&lt;1 acre</td>
<td>No archaeological resources identified</td>
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<td>Cowan and Tisdale 2016</td>
<td>Formal survey</td>
<td>54.2 acres</td>
<td>No archaeological resources identified</td>
</tr>
</tbody>
</table>

Table 1. Summary of Cultural Resource Surveys Conducted Within One Mile of the Project Area
Site 45CL26 is also located within one mille of the project area but in a very different setting. It is a riverside located downstream at Paradise Point where Interstate 5 crosses the East Fork Lewis River. The site has a very different character than those described above that are located above and back from the river. Site 45CL26 was originally identified in the mid-1950s (Warren and Eng 1955). Salvage excavations were conducted at the site in 1968 (Munsell 1969). It does not appear that a full report was prepared to describe the results of the work. What is known about the site comes from a brief summary of the yearly activities of the former Washington State Department of Highways (Munsell 1969) and a site record update form, which includes sketches of select artifacts (Kenady 1969). The site contained milling stones and pestles, fishnet weights (notched and girdled), slate scrapers, projectile points, metal, trade beads, along with numerous fire hearths and storage pits (Munsell 1969). Based on projectile point forms and the presence of trade goods, Munsell (1969) dated the site to between ca. A.D. 300 to the post-contact period. Although no architectural features were found, the site possesses many of the characteristics expected of a Contact-era winter village. It may also contain an older cultural component as some of the sketches of projectile points included on the site record update form are of lanceolate-shaped bifaces and one sketch is of the base of a wide-stemmed projectile point (Kenady 1969:6, Figure 4). Those types of artifacts suggest that the site may contain an earlier component, which could date to the early- to mid-Holocene.

Other than the pre-contact archaeological resources, historic-era site 45CL532 is also located within one mile of the development area. It consists of a scatter of historic era architectural and household debris. The scatter has been interpreted to represent the remains of Brevik’s Garage, a doctor’s office, and the La Center Post Office, which were destroyed by fires in 1930 (Mills 2002).

**Ethnographic Overview**

The project area is located within the territory ascribed by modern ethnologists to the mid-nineteenth century Chinookan peoples (Silverstein 1990:534, figure 1). In the ethnographic period Chinookan people, popularly called Chinook Indians, occupied much of western and southern Clark County. In aboriginal times Chinook Indians occupied the lower Columbia River from about The Dalles to the river’s mouth and also adjoining areas including the Willamette Valley to Willamette Falls and along the Pacific Coast to Tillamook Head in the south and to the Willapa Bay area in the north (Silverstein 1990:534, figure 1). The Chinook were divided into several linguistic divisions (Silverstein 1990:533). The Riverside Estates project area is located toward the eastern edge of the traditional territory of the Multnomah Chinook. The main settlements of the Multnomah were on the Columbia River bottomlands but had subsistence territories that extended up the lower stretches of all of that river’s main tributaries between the Washougal River and the Lewis River.

In the ethnographic period, and most likely in prehistory as well, the Chinook had close contact and relations with Cowlitz people who occupied the valleys of the Cowlitz, the Newaukum, Cowlitz, Toutle, and Lewis rivers, among others (Hajda 1990:507, 513-514). Ethnographic literature suggests that the Cowlitz made much greater use of interior environments in their subsistence economies than did the Chinook. It is likely therefore that both groups made use of the interior parts of Clark County.

The Chinook were semi-sedentary and spent winters in permanent settlements located along sloughs and channels so that local groups could control access to certain resources - primarily fish - and could control traffic along a waterway (Hajda and Boyd 1988:2). Winter villages consisted of one or more rectangular, gabled-roofed, upright-cedar-plank houses with excavated floors (Hajda 1994; Silverstein 1990). Multnomah Chinook villages were centered on Vancouver Lake and along Lake River. They may also have had villages around the mouth of the Washougal River (Jones 1972:149-150; Strong 1959) and possibly in Lacamas Valley above Lacamas Lake.

The Chinook have been characterized as river-oriented (French and French 1998:361). Their subsistence depended primarily upon fishing and root-and-berry gathering. Most subsistence activity
involved small groups that were dispersed in smaller subsistence-oriented camps throughout Chinook territory. Mat houses or huts built from wallboards borrowed from the permanent winter houses were constructed at seasonal camps. These structures were smaller than the winter houses and do not appear to have had excavated floors (Hajda 1994:179-180).

According to Ray (1974:249) by at least the 1830s and possibly quite earlier Cowlitz people lived along the middle and lower sections of the East Fork Lewis River and were the immediate neighbors of the Multnomah Chinook. On a map prepared by Ray (1974, frontispiece) he shows the Riversides Estates project area within the territory of the Lewis River Cowlitz. Culturally, the Lewis River branch of the Cowlitz was similar to the other branches of the Cowlitz people, the Upper and Lower Cowlitz. They possessed a similar material culture, cultural norms, and a similar ecological adaptation. However, they, like the Upper Cowlitz, were Sahaptin speakers while the Lower Cowlitz spoke Salish (Ray 1974:252-253). Ray (1974) suggests that the difference in speech was a result of language drift wherein Sahaptin-speaking men from the east side of the Cascade divide married Salish-speaking Cowlitz women of upriver Lewis and Cowlitz settlements and that over time the easternmost groups of Cowlitz took Sahaptin as their primary language, although most remained bilingual speaking both dialects of Sahaptin and Salish. This phenomenon was not unique to the Cowlitz people. Ray (1974) and others (Smith 1940:15-20; Sutlles and Lane 1990:488) suggests that a similar process led to the Sahaptinazation of upriver villages on the Nisqually River.

Cowlitz subsistence was largely prairie based. Their territory contained extensive plains and meadows and only a few rivers large enough for reliable salmon runs. As a consequence, the Cowlitz, unlike the Chinook, relied more heavily on elk, deer and other land mammals for meat than salmon (Ray 1974:260). Furthermore, the lack of navigable rivers in Cowlitz territory resulted, in proto-historic times, in their greater reliance on horses for travel, instead of canoes (Ray 1974:260). In the summers, spring, and fall groups of Cowlitz traveled throughout their territory collecting berries, nuts, camas roots and various land mammals, and fish. These products were consumed fresh and also prepared for winter stores. Camas was particularly important and could be gathered in large quantities and made into long lasting cakes or loaves. During the winter, village groups lived mainly off stored foods but also hunted as opportunity and need dictated.

Cowlitz winter houses were constructed in semi-permanent villages and were of cedar planks with gable roofs. Houses usually held a number of related families (Hajda 1990:509). Winter villages typically were located on streams or at the mouths of streams and contained an aggregation of cedar plank homes. Summer dwellings were temporary constructions of cedar bark slabs or pole frames covered with mats or boughs. In spring family groups dispersed from the winter villages to fishing grounds and camas meadows to take advantage of early salmon runs and to harvest camas roots.

The Chinook and the Cowlitz of the lower Columbia River came into contact with European and American sea-borne fur traders in the late-eighteenth century. Diseases introduced by the traders, especially small pox and malaria, spread among native populations with catastrophic results. The lower Columbia River valley is thought to have been the center for the introduction and spread of malaria, as it was the main Euroamerican trade center and featured an optimum environment for mosquitoes, the principal vector of the disease. The first historical reports of a malarial epidemic are from 1830. Within four years 75-90 percent of the native population was dead (Boyd 1985). The population losses essentially destroyed traditional societies in the region. Displaced groups and individuals formed ad hoc communities or joined those still existing, and either attempted to follow established patterns or adopted the lifeways of the Euroamericans (Hajda 1994:45-46). By the 1850s most native peoples had been removed to reservations. Small isolated groups or individuals not on the reservations resided, and continue to reside, in towns and urban areas in the Portland Basin. At present, individuals and families have continued to move on and off the reservations (Hajda 1990:515, 1994:48).
Historical Overview of the Project Area

Historical maps were reviewed to determine the likelihood that the development area contains undocumented historic-era features and to trace land ownership (Downing 1883; General Land Office 1854, 1863; Habersham 1888; Metsker 1937, 1961; United States Geological Survey 1940, 1954). The review showed that the project area was not developed in the historic era.

It was not included in a donation land claim (General Land Office 1863) but by 1888 was owned by J.P. Ward (Habersham 1888). It was subdivided sometime before 1937. A real estate atlas from that year shows it to consist of two parcels. O.W. Horn is shown as the owner of a northern parcel and Jno. Soehl is shown as the owner of a southern parcel (Metsker 1937). In 1961, the northern part was owned by Elizabeth Horn and the southern part was owned by James D. Larson (Metsker 1961).
RESULTS

ARCHAEOLOGICAL METHODS

The ground surface of the property outside of the areas that had already been surveyed was inspected during the predetermination survey that employed east-to-west oriented pedestrian transects spaced no more than 20 meters (m) apart.

Afterwards shovel test pits (STPs) were excavated to search for buried archaeological material. Thirty-three STPs were excavated during the predetermination phase and 39 during the formal survey. The STPs excavated during the predetermination survey were distributed to provide representative coverage of the project area. Those excavated during the formal survey were placed to refine boundaries of archaeological resources identified during the predetermination survey. No STPs were placed in wetlands, the parts of the property that had been previously surveyed in 2008 and 2009, or in areas with the steepest relative slopes (Figure 5).

During both phases of fieldwork the STPs were between 30 and 40 centimeters (cm) in diameter and were excavated in 20-cm or thinner levels to depths of between 50 and 60 cm below surface (cmbs). All sediments removed from the probes were screened through one-eighth-inch-mesh hardware cloth. Afterward the STPs were completely backfilled and their locations were recorded using a handheld Trimble GeoExplorer CE global positioning system (GPS) device. GPS data were then corrected and exported to a graphics program for final editing and formatting.

Artifacts found in the probes were analyzed in the field by AAR’s lithic analyst Donald D. Pattee, M.A., RPA. Each artifact was identified as to raw material. Pieces of debitage were analyzed to determine the lithic technological strategies represented. After the analysis, the artifacts found in the STPs were placed in resealable plastic bags labelled with the AAR project number, the date, the STP identifier, and the excavator’s initials, and reburied in the appropriate probe.

RESULTS OF THE FIELD INVESTIGATIONS

At the time of the surface survey the majority of the project area was covered in hay stubble or pasture grass and had approximately 5 percent mineral soil exposure. Surface visibility was about 20 percent within the treed area at the east end of the project area. No artifacts were observed on the ground surface.

Seven STPs excavated during the predetermination survey contained pre-contact lithic artifacts. Nineteen artifacts were found in STPs 4, 5, 6, 25, 26, and 31 excavated in the northwestern part of the property on the top of the bench and one was found in STP 33 excavated in the extreme southeastern corner of the property on a narrow terrace below the bench in an area crisscrossed with buried waterlines (Table 2).

During the formal survey, additional STPs were excavated across the bench to determine the horizontal extent of the cultural deposits in that area, four of which contained a total of five artifacts. The part of the bench landform in the project area encompasses about 7 acres. During both phases of fieldwork 34 STPs were excavated on the landform (4.85 STPs per acre). As a result, 24 artifacts were recovered from 10 of STPs. The cultural material has been recorded as 45CL1234. At its northernmost point, the site is located within 30 m of the large wetland in the northwest corner of the property.

During the formal survey 13 STPs were excavated to search for additional cultural material in the vicinity of STP 33 in the southeastern corner of the development area. Eight of them contained artifacts. In all, 11 artifacts were found in nine STPs that were among 14 that were excavated in an area encompassing just over an acre. The cultural deposits in that part of the project area are designated
45CL1235. A minimum of 460 m and numerous STPs lacking artifacts separate the two sites indicating that they are not parts of one larger site. Site forms for the resources have been uploaded to the DAHP’s WISAARD portal. Copies of the forms are included in the report as Appendix A.

45CL1234 (field designated AAR 1746-1)

This site consists of 24 pre-contact lithic artifacts found in 10 STPs. The artifact-yielding STPs contained between one and eight artifacts. Most of them were located at the leading edge of the bench near the break in slope downward toward the unnamed drainage. One was back from the edge on a level portion of the bench. Based on landscape considerations and the presence or absence of artifacts in the STPs, 45CL1234 measures about 88 m north-to-south and 112 m east-to-west (Figure 6).

All of the artifacts found at the site are pieces of lithic debitage representing byproducts of the manufacture, repair, and maintenance of stone tools (Figure 7). They are of CCS (n=14), basalt (n=6), and quartzite (n=4). Over 60 percent (n=15) are flake fragments produced by non-specific percussion, thermal forces, and non-identifiable means. One is a pot-lid. The eight that are complete enough to be technologically diagnostic include six from biface thinning and one each from core reduction and pressure flaking.

Ten of the artifacts were found between 40.1 and 60 cmbs. Eight were found between 20.1 and 40 cmbs and the remaining six from between zero and 20 cmbs. Sediments between zero and ca. 30 cmbs were light brown to brown silt loam and comprised a plowzone. Below the plowzone was brown silt loam that had varying amounts of gray, red, or yellow mottles. Soil profiles exposed in STPs 52, 53, and 57 contained small amounts of baked earth. The sediments were mostly free of gravel.

45CL1235 (field designated AAR 1746-2)

This site consists of 11 pre-contact lithic artifacts found in nine STPs excavated on a narrow terrace in the extreme southeastern part of the property. As defined by the distribution of artifact-yielding STPs the site is 40 m wide measured east-to-west and 23 m long measured north-to-south. It is bounded by STPs lacking artifacts to the east and west and property lines to the north and south (Figure 8).

All of the artifacts found at the site are pieces of lithic debitage. They are of CCS (n=3), basalt (n=5), and quartzite (n=3). Seven of the 11 artifacts are flake fragments produced by non-specific percussion or thermal forces (Figure 9). The four that are complete enough to be technologically diagnostic include two from core reduction and one each from biface thinning and pressure flaking.

All but two of the artifacts were found between zero and 20 cmbs. The others were found between 20.1 and 40 cmbs. Soil profiles exposed in the STPs consisted of a 50- to 60-cm-thick layer of compact, brown silt loam. There was no obvious plowzone. The sediments were mostly free of gravel.
Figure 5. Configuration of the project area showing the locations of 45CL1234, 45CL1235, STPs excavated over the two phases of fieldwork, and transects walked.
Table 2. Summary of Shovel Test Probes

<table>
<thead>
<tr>
<th>STP #</th>
<th>Result</th>
<th>Maximum Depth (cmbs)</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>50</td>
<td>No artifacts</td>
</tr>
<tr>
<td>2</td>
<td>-</td>
<td>50</td>
<td>No artifacts</td>
</tr>
<tr>
<td>3</td>
<td>-</td>
<td>50</td>
<td>No artifacts</td>
</tr>
<tr>
<td>4</td>
<td>+</td>
<td>60</td>
<td>1 CCS percussion flake fragment found between 0-20 cmbs, 1 CCS pressure flake found between 20-40 cmbs, 3 CCS biface thinning flakes, 1 CCS piece of heat shatter, 1 piece of quartzite shatter, and 1 basalt late core reduction flake found between 40-60 cmbs</td>
</tr>
<tr>
<td>5</td>
<td>+</td>
<td>60</td>
<td>1 CCS early biface thinning flake found between 0-20 cmbs, 1 quartzite flake fragment and 1 basalt percussion flake fragment found between 40-60 cmbs</td>
</tr>
<tr>
<td>6</td>
<td>+</td>
<td>60</td>
<td>1 CCS flake fragment and 1 basalt early biface thinning flake found between 0-20 cmbs, 1 basalt early biface thinning flake found between 20-40 cmbs, 1 quartzite flake fragment found between 40-60 cmbs</td>
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<td>1 CCS potlid found between 40-60 cmbs</td>
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<td>1 CCS flake fragment and 1 basalt flake fragment found between 20-40 cmbs</td>
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<td>1 quartzite percussion flake found between 20-40 cmbs</td>
</tr>
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<td>50</td>
<td>1 basalt percussion flake found between 0-20 cmbs</td>
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Table 2. Summary of Shovel Test Probes (continued)

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</tr>
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<td>2 basalt flakes found between 0-20 cmbs</td>
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<tr>
<td>72</td>
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<td>50</td>
<td>1 quartzite biface thinning flake found between 0-20 cmbs</td>
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Results of a Cultural Resources Study of the Proposed Riverside Estates Subdivision

Figure 6. Photographic overview of site 45CL1234. View is southwest.

Figure 7. Representative sample of artifacts identified at 45CL1234. Upon analysis the rounded cobble depicted in frame right was determined to not be an artifact.
Figure 8. Photographic overview of site 45CL1235. View is south.

Figure 9. Example of the typical artifact types found at 45CL1235 consisting of a non-technologically diagnostic piece of CCS debitage.
DISCUSSION AND RECOMMENDATIONS

Discussion

Based on the results of the fieldwork, the Riverside Estates subdivision development area contains two prehistoric archaeological sites that have been designated 45CL1234 and 45CL1235. The sites contain low-density and low-diversity archaeological deposits. The sites are similar to one another and also to many other archaeological resources that have been recorded in the vicinity. To place 45CL1234 and 45CL1235 in an appropriate context for making recommendations regarding their future treatment or protection, we examine the pre-contact archaeology of the East Fork Lewis River.

There has been no synthetic study of the pre-contact use of the East Fork Lewis River drainage. Archaeological investigations in the drainage have been piecemeal and much of the area along the East Fork remains uninvestigated by archaeologists. Most previous archaeological investigations have been concentrated around the western end of the river where it feeds into the Lewis River proper and in its eastern part that lies within the Gifford-Pinchot National Forest. The archaeological sites that have been recorded and studied along the East Fork Lewis River and its adjoining terraces suggests that the region was used by pre-contact peoples beginning in the Archaic Period, more than 10,000 years ago and that use by local indigenous people persisted into the ethnographic and historical periods.

Based on geological and environmental conditions, the East Fork Lewis River can be divided into three sections: lower, middle, and upper. The sites are located in the lower section, which is defined as the section between its confluence with the mainstem Lewis River and Lewisville. For the most part, this section of the river flows through a valley that features a broad floodplain with abundant marshland, an environmental setting significantly different than that found along the upper sections of the river. That characterization does not hold for the section of the river directly below the sites, which flows through a narrow defile until it reaches the mouth of Jenny Creek a short distance downstream, after which the valley broadens. The middle section of the East Fork extends from Lewisville Park upstream to the eastern border of Clark County. Throughout this section, the valley narrows and the river is entrenched in bedrock. Beyond the eastern boundary of Clark County, the upper section of the river is largely cut into slopes of the Cascade foothills in the Gifford-Pinchot National Forest. While pre-contact people in the local area had ready access to each of the sections of the river, the sites are located in the western end of the lower section and that area is the focus of the following discussion.

Large sections of the lower section of the river are unsurveyed. Information gathered to date indicates that pre-contact peoples used areas both directly adjacent to the river and the adjoining terraces above the river. Archaeological sites in the two areas differ in many important ways and the differences reflect on pre-contact settlement and land use.

Investigations to date on the terraces above the river have identified over a dozen pre-contact archaeological resources including 45CL54, 45CL523, 45CL616, 45CL617, 45CL618, 45CL619, 45CL674, 45CL680, 45CL692, 45CL693, 45CL743, 45CL1116, and 45CL1122 (Becker and Roulette 2016; Bryant 2006; DeLyria 2000; Easton 2007; Gall 2006; Holschuh 2006; Miles 2004a, 2004b, 2004c, 2004d; Solimano et al. 2015). As noted above, many of the recorded resources are within 600 m of sites 45CL1234 and 45CL1235. Many of these resources contain a single or a few artifacts. Others contain larger assemblages but typically included fewer than 100 objects. Most of the resources consist solely of pieces of lithic debitage. A few contain one or two tools, such as a core and biface fragment at 45CL674, and a cobble chopper at 45CL743.

One of the more intensively studied “terrace sites” in the lower section of the river is 45CL1116. That site is centered on a wetland and is about 0.6 mile inland from the river. Archaeological investigations at the site included the hand excavation of 4.25 square meters of site area and the mechanical removal of a plowzone from over 400 square meters of site area to search for cultural features.
Results of a Cultural Resources Study of the Proposed Riverside Estates Subdivision


(none of which were found). As a result of the fieldwork 67 lithic artifacts were recovered, including 66 pieces of lithic debitage and one stone tool, a CCS core (Becker and Roulette 2016).

Excavations at site 45CL1116 provides a good example of the research potential of small sites dominated by lithic debitage located some distance away from the East Fork. It, like the other similar sites in the vicinity of sites 45CL1234 and 45CL1235, cannot be dated. As a group they conform well to a land use system that can be modeled based on local ethnography. In such a model, they appear to represent use of a hinterland for resource acquisition by people that lived in villages on the lowlands or along the Columbia River or the various forks of the Lewis River. Many, if not most, appeared associated with the maintenance, repair, or manufacture of hunting equipment. A modern analog might be a location that contains cartridges from bullets fired at a game animal.

Site 45CL116 and the other, similar sites stand in sharp contrast to 45CL54, a “terrace site” discovered in the 1950s during a survey of the route of a natural gas pipeline (Tuohy and Bryan 1958-1959:29-32). It is located half a mile south of the East Fork Lewis River. Based on the cross-dating of artifacts, the site appears to date to the Cascade phase of the Archaic Period, which would make it among one of the oldest documented sites in Clark County. It is very different from the other “terrace sites” in the diversity and richness of its artifact assemblage, which includes cobble choppers, hammerstones, ground cobbles, grinding slabs, leaf-shaped projectile points, large leaf-shaped bifaces, scrapers, and gravers. The equipment and tools allow the site to be characterized as a base camp as opposed to a task site or limited activity locus.

It shares many traits with sites that are believed to date to the same era. Cascade phase sites are believed to have been formed by people with a highly mobile hunting and gathering lifeway. This lifeway is different from the one that generated the other recorded “terrace sites.” Based on their comparison of a dozen sites in the Pacific Northwest that contain Archaic Period Cascade phase components, Harris et al. (2013:103-112) note that a high degree of similarity in the material content of virtually all of the sites, without regard of landscape setting, is strongly indicative that the sites were created by family units moving together as opposed to task-oriented groups that splintered from and then rejoined family groups. The signature of this type of adaptation and land use is a series of base camps created during well-established patterns of movement from resource patch to resource patch. This type of land use only seldom included the creation of task sites or hunting camps by group subsets.

Fewer riverside sites have been investigated along the Lower East Fork compared to the adjoining terrace landforms. Salvage excavations have been performed at one nearby riverside site, 45CL26, which, as noted above, is located downstream from sites 45CL1234 and 45CL1235 at Paradise Point where Interstate 5 crosses the East Fork Lewis River. It was found to contain milling stones and pestles, fishnet weights (notched and girdled), slate scrapers, projectile points, metal, trade beads, along with numerous fire hearths and storage pits (Munsell 1969). Based on projectile point forms and the presence of trade goods the main period of site occupation appears to have been between ca. A.D. 300 to the post-Contact period (Munsell 1969). Although no architectural features were found, the site possesses many of the characteristics expected of a Contact-era winter village. Its location conforms well to one expected for a Chinook winter settlement based on an ethnographic-based settlement model (Hajda and Boyd 1988).

Recommendations

The cultural deposits at sites 45CL1234 and 45CL1235 are sparse and lack diversity and richness. They are of limited value for reconstructing past lifeways. Previous research in the vicinity of the sites has identified robust pattern of small lithic scatters widely distributed across the interior plain back from the river. Sites 45CL1234 and 45CL1235 fit well into this pattern.
The parts of the Riverside Estate project area that contains sites 45CL1234 and 45CL1235 were thoroughly examined by the excavation of 48 STPs. Given the level of sampling at and around the sites, it is not expected that further excavations would result in expanding their boundaries or in the recovery of additional artifacts. For this reason, AAR recommends that no further archaeological investigations are necessary at the sites.

While no additional investigation is recommended for the sites, they are protected by local and state laws (Clark County code 40.570.080; RCW 27.53). They can be disturbed only under a permit issued by the DAHP. The permit will allow development over the sites as long as the ground-disturbing activities within their boundaries are monitored by an archaeologist. The purpose of the monitoring is to ensure that any cultural remains or deposits that have potential to be important sources of information about the past are not disturbed or destroyed by development-related disturbances.
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Salo, Lawr V.

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APPENDIX A

45CL1234 and 45CL1235 site forms
STATE OF WASHINGTON
ARCHAEOLOGICAL SITE INVENTORY FORM

Smithsonian No.: 45CL1234
*County: Clark

*Date: 11/8/2016   *Compiler: Donald D. Pattee   Human Remains? □ DAHP Case No.: [ ]

SITE DESIGNATION

Site Name:
Field/ Temporary ID: AAR 1746-1
*Site Type(s) Pre-Contact Lithic Material

SITE LOCATION

*USGS Quad Map Name(s): 1990 Ridgefield, WA
*Legal Description: T 5N R 1 E/W: E Section(s): 33 Quarter Section(s): SE ¼
*UTM: Zone 10 Easting 524101.07 Northing 5079548.01
Latitude: Longitude: Elevation (ft/m): 176-178 ft amsl
Other Maps: Type:
Scale: Source:
Drainage, Major: East Fork Lewis River, 0.10 mile southwest River Mile:
Drainage, Minor: Unnamed tributary
Aspect: Southwest Slope:
*Location Description (General to Specific): The site is located in the western part of La Center in an open field used for raising crops (Figure 1). It is located mainly across the leading edge of a bench that rises above the East Fork Lewis River to the south. The local landform is incised by a shallow unnamed tributary of the river that extends to the southwest of NW Pacific Highway across the property (Figure 2).

*Directions (For Relocation Purposes): Heading north on I-5, take Exit 16 for NW La Center Road/La Center. From the exit turn right onto NW La Center Road. Continue for approximately 2.75 miles and turn left onto NW Larson Drive. Continue for approximately 0.20 mile and turn right on NW 339th Street. Continue for approximately 0.20 mile. The site is located approximately 250 meters (m) to the north in the open, agricultural field that comprises the majority of the property.

*Mandatory Information for Official Smithsonian Number designation. Revised 2/2015
**SITE DESCRIPTION**

*Narrative Description*: The site was originally recorded during a predetermination survey and its boundaries were defined during a formal survey (Pattee and Roulette 2016). Based on the results of both surveys the site is seen to consist of a low-density, subsurface scatter of pre-contact lithic artifacts. It is located in the northwestern part of the open field at the top of a bench that overlooks an unnamed tributary of the East Fork Lewis River, which flows in a southwestern direction across the property. Elevations across the site generally range between 176-178 feet (ft) above mean sea level (amsl). Vegetation within the site consists of long grass and various weeds (Figure 3).

*Site Dimensions (Overall Site Dimensions):*

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<tr>
<td>Method of Vertical Measurement</td>
<td>tape</td>
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</tbody>
</table>

*Vegetation (On Site):* grass and various weeds

**Landforms (On Site):**
- Local: Open grass covered field
- Regional: Terrace

**Water Resources (Type):** East Fork Lewis River
- Distance: 0.10 mile south
- Permanence: Perennial

**CULTURAL MATERIALS AND FEATURES**

*Narrative Description (Specific Inventory Details):* This site consists of 24 pre-contact lithic artifacts found in ten STPs that were among 34 excavated across the site landform. The artifact-yielding STPs contained between one and eight artifacts. Most of them were located at the leading edge of the bench near the break in slope downward toward the unnamed drainage. One was back from the edge on a level portion of the bench (Figure 3).

All of the artifacts found at the site are pieces of lithic debitage representing byproducts of the manufacture, repair, and maintenance of stone tools (Figure 4). They are of CCS (n=14), basalt (n=6), and quartzite (n=4). Over 60 percent (n=15) are flake fragments produced by non-specific percussion, thermal forces, and non-identifiable means. One is a pot-lid. The eight that are complete enough to be technologically diagnostic include six from biface thinning and one each from core reduction and pressure flaking.

Ten of the artifacts were found between 40.1 and 60 cmbs. Eight were found between 20.1 and 40 cmbs and the remaining six from between zero and 20 cmbs. Sediments between zero and ca. 30 cmbs were light brown to brown silt loam and comprised a plowzone. Below the plowzone was brown silt loam that had varying amounts of gray, red, or yellow mottles. The sediments were mostly free of gravel.

*Method of Collection: none

*Location of Artifacts (Temporary/Permanent):* In place/bagged and reburied
### SITE AGE

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<td><em>Dating Method:</em> artifact types</td>
<td><em>Phase:</em> N/A</td>
</tr>
</tbody>
</table>

### SITE RECORDERS

- **Observed by:** Donald D. Pattee and Robert M. McCurdy
- **Address:** 4001 NE Halsey St., Suite 3 Portland, OR 97232
- **Date Recorded:** 9/16/2016
- **Recorded by (Professional Archaeologist):** Donald Pattee
- **Organization:** Applied Archaeological Research, Inc.
- **Organization Phone Number:** 503-281-9451
- **Organization Address:** 4001 NE Halsey St., Suite 3 Portland, OR 97232
- **Organization E-mail:** info@aar-crm.com
- **Date Revisited:** October 11 and 12, 2016
- **Revisited By:** Donald D. Pattee, Melissa L. Lehman, and Robert M. McCurdy

### SITE HISTORY

- **Previous Archaeological Work:** The site was first recorded during a predetermination survey of the property based on the identification of 19 lithic artifacts in STPs 4-6, 25, 26, and 31 (Figure 2). The artifacts were observed between 0 and 60 cmbs and included CCS, basalt, and quartzite debitage.

### LAND OWNERSHIP

- **Owner:** Randy M. and Kari A. Goode
- **Address:** 707 N Abrams Park Road, Ridgefield, WA 98642
- **Tax Lot/ Parcel No:** 986028830

### RESEARCH REFERENCES

*Mandatory Information for Official Smithsonian Number designation.*
Items/Documents Used In Research:

Pattee, Donald D. and Bill R. Roulette
2016  Results of a Cultural Resources Study of the Proposed Riverside Estates Subdivision
### USGS MAP

*Quad Name:* Ridgefield  
*Series:* 7.5-minute  
*Date:* 1990  

**SEE ATTACHMENT**  
*INSERT 7.5 MIN USGS MAP* 
HIGHLIGHTING SITE  
LOCATION AND BOUNDARIES

### SKETCH MAP

*Sketch Map Description:*  

**SEE ATTACHMENT**  
*INSERT SKETCH MAP*

**Legend:**  
Known Boundary Symbology:  
Possible Boundary Symbology:  
Other Symbols *(Other Than USGS):*  

**SEE ATTACHMENT**  
*INSERT LEGEND*

*Scale:*  
*North Arrow* *(Magnetic/True North):*
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<td><strong>Photograph Description(s) (Include a representative sample of inventoried archaeological material and features, site location overviews, etc):</strong></td>
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*Mandatory Information for Official Smithsonian Number designation.*
Figure 1. Location of the project area and site 45CL1234 as depicted on the USGS 1990 Ridgefield, WA 7.5-minute topographic quadrangle.
Figure 2. Configuration of the project area showing the locations of 45CL1234, 45CL1235, STPs excavated over the two phases of fieldwork, and transects walked.
Figure 3. Photographic overview of 45CL1234 showing conditions at the time of fieldwork. View is southwest.

Figure 4. Representative sample of the types of artifacts featured at 45CL1234. Rounded cobbles depicted in frame right determined to not be an artifact.
### SITE DESIGNATION

**Site Name:**

**Field/ Temporary ID:** AAR 1746-2

**Site Type(s):** Pre-Contact Lithic Material

### SITE LOCATION

**USGS Quad Map Name(s):** 1990 Ridgefield, WA

**Legal Description:** T 5N R 1 E/W: E Section(s): 33 Quarter Section(s): SE ¼

**UTM:** Zone 10 Easting 524482.4 Northing 5079213.48

**Latitude:** | **Longitude:** | **Elevation (ft/m):** 133-142 ft amsl

**Other Maps:**

**Scale:**

**Source:**

**Drainage, Major:** East Fork Lewis River, 0.10 mile southwest **River Mile:**

**Drainage, Minor:**

**Aspect:** Southwest **Slope:**

**Location Description (General to Specific):** The site is located in the western part of La Center in an open grass-covered field used for grazing livestock (Figure 1). The field is located on a portion of a narrow alluvial terrace that overlooks the East Fork Lewis River to the south.

**Directions (For Relocation Purposes):** Heading north on I-5, take Exit 16 for NW La Center Road/La Center. From the exit turn right onto NW La Center Road. Continue for approximately 2.75 miles and turn left onto NW Larson Drive. Continue for approximately 0.20. The site is located approximately 85 meters (m) to the east in the open, agricultural field that comprises the majority of the property.

*Mandatory Information for Official Smithsonian Number designation.*
SITE DESCRIPTION

*Narrative Description: The site was originally recorded during a predetermination survey and its boundaries were defined during a formal survey (Pattee and Roulette 2016). Based on the results of both surveys the site is seen to consist of a low-density, subsurface scatter of pre-contact lithic artifacts. It is located across a narrow strip of land in the southeastern part of property. Elevations across the site generally range between 133-142 feet (ft) above mean sea level (amsl). Vegetation within the site consists of pasture grass (Figure 3).

*Site Dimensions (Overall Site Dimensions):
  *Length: 23 m  *Direction: N-S x  *Width: 40 meters  *Direction: E-W
  *Method of Horizontal Measurement: GIS/GPS
  *Depth: 0-40 cm below surface  *Method of Vertical Measurement: tape

*Vegetation (On Site): grass and various weeds
  Local: Open grass covered field  Regional:

Landforms (On Site): Terrace
  Local: Terrace

Water Resources (Type): East Fork Lewis River  Distance: 0.10 mile south
  Permanence: Permanent

CULTURAL MATERIALS AND FEATURES

*Narrative Description (Specific Inventory Details): This site consists of 11 pre-contact lithic artifacts found in nine STPs that were among the 14 STPs excavated on a narrow terrace in the extreme southeastern part of the property. It is bounded by STPs lacking artifacts to the east and west and property lines to the north and south (Figure 3).

All of the artifacts found at the site are pieces of lithic debitage representing byproducts of the manufacture, repair, and maintenance of stone tools. They are of CCS (n=3), basalt (n=5), and quartzite (n=3). Seven of the 11 artifacts are flake fragments produced by non-specific percussion or thermal forces (Figure 4). The four that are complete enough to be technologically diagnostic include two from core reduction and one each from biface thinning and pressure flaking.

All but two of the artifacts were found between zero and 20 cmbs. The others were found between 20.1 and 40 cmbs. Soil profiles exposed in the STPs consisted of a 50- to 60-cm-thick layer of compact, brown silt loam. There was no obvious plowzone. The sediments were mostly free of gravel.

*Method of Collection: none
*Location of Artifacts (Temporary/Permanent): In place/bagged and reburied

SITE AGE

*Component: Prehistoric  *Dates: unknown prehistoric
*Dating Method: artifact types  Phase:N/A
SITE RecorderS

ObserveD by: Donald D. Pattee and Robert M. McCurdy  

AddresS: 4001 NE Halsey St., Suite 3 Portland, OR 97232  

*DaTe reCordered: 9/16/2016  

*Recorded by (Professional Archaeologist): Donald Pattee  


*Organization Phone Number: 503-281-9451  

*Organization Address: 4001 NE Halsey St., Suite 3 Portland, OR 97232  

*Organization E-mail: info@aar-crm.com  

Date Revisited: October 11 and 12, 2016  

Revisited By: Donald D. Pattee, Melissa L. Lehman, and Robert M. McCurdy

Site History

*Previous Archaeological Work: The site was first recorded during a predetermination survey of the property based on the identification of one lithic artifact in STP 33, a piece of basalt debitage that was found between 0 and 20 cmbs.

Land Ownership

*Owner: Randy M. and Kari A. Goode  

*Address: 707 N Abrams Park Road, Ridgefield, WA 98642  

*Tax Lot/ Parcel No: 986028830

Research References

*Items/Documents Used In Research:  

Pattee, Donald D. and Bill R. Roulette  


ARCHAEOLOGICAL SITE INVENTORY FORM

USGS MAP

*Quad Name: Ridgefield
*Series: 7.5-minute
*Date: 1990

SEE ATTACHMENT

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Figure 2. Configuration of the project area showing the locations of 45CL1234, 45CL1235, STPs excavated over the two phases of fieldwork, and transects walked.
Figure 3. Photographic overview of 45CL1235 showing conditions at the time of fieldwork. View is southwest.

Figure 4. Piece of CCS heat shatter featured at site 45CL1235.