Author: Alicia Valentino

Title of Report: Memorandum: Tacoma Mall Subarea Plan Archaeological Services (Work Order 02)

Date of Report: November 20, 2015

County(ies): Pierce Section: 18 Township: 20 N Range: 3 East E/W Quad: Tacoma South Acres: 623

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 #: 
memorandum

date November 20, 2015
to Jessica Knickerbocker, City of Tacoma
from Alicia Valentino, PhD
subject Tacoma Mall Subarea Plan Archaeological Services (Work Order 02)

ESA was retained by the City of Tacoma (City) to perform archaeological monitoring during geotechnical drilling for the Tacoma Mall Subarea Plan Stormwater Infiltration Assessment (Project). The Project is located in Section 18, Township 20 North, Range 3 East in Tacoma, WA.

No cultural resources were observed during geotechnical monitoring.

Project Description

The Project is located in the Tacoma Mall Subarea (Subarea) on and around the Tacoma Mall property at 4502 S. Steele Street in Tacoma, Washington (Figure 1). The project is bound by commercial facilities to the north, I-5 to the east, and commercial facilities and residences to the south and west.

The City is developing a Subarea Plan and environmental impact statement (EIS) for the Tacoma Mall Regional Growth Center. The Subarea Plan and EIS will identify programmatic environmental impacts associated with allocated growth and development up-front, and on an area-wide basis, and will provide for proportional, substantive mitigation for adverse environmental impacts.

As part of this project, the City is investigating subsurface conditions within the Subarea boundaries with the drilling of up to 20 geotechnical borings (Figure 2).

Regulatory Environment

Archaeological monitoring of geotechnical boreholes was conducted to ensure compliance with applicable Federal and State laws pertaining to archaeological resources. This project is subject to Section 106 of the National Historic Preservation Act (“Section 106”) due to federal funding provided by the US Department of Commerce. The Washington State Department of Ecology (Ecology) is coordinating the Section 106 process.

Section 106 requires that Ecology consider the effects of this undertaking upon Historic Properties within the project’s Area of Potential Effects (APE). Federal code implementing Section 106, found at 36 CFR 800, includes a requirement that an effort be made to identify Historic Properties. During Section 106 consultation with the Puyallup Tribe, the Tribe requested that all ground-disturbing activities be monitored by a professional archaeologist.
Additional laws that apply to archaeological projects conducted within the State of Washington include: Archaeological Sites and Resources Law (RCW 27.53), Indian Graves and Records Law (RCW 27.44), Human Remains Law (RCW 68.50), and Abandoned and Historic Cemeteries and Historic Graves Law (RCW 68.60).

**Historic Background**

The Subarea lies in the traditional territory of the Steilacoom and Puyallup Tribes, whose members are part of the larger Southern Coast Salish Lushootseed linguistic group (Suttles and Lane 1990). Several permanent villages and place names along the marine shores of Tacoma and its waterways have been noted in the historical record. Despite the shores and inland areas having experienced consistent use during the precontact period, no specific native places have been identified within the Subarea.

Early survey records indicate that the Subarea vicinity was originally swamp and prairie lands (US Surveyor General 1867). The earliest documented road was located approximately one mile north of the Tacoma Mall, running east/west from Commencement Bay (US Surveyor General 1867). Land patent records indicate that Euroamerican settlers started occupying the subarea in the late 1800s, including George O. Kelly (US Department of the Interior Bureau of Land Management [BLM]1874), Martin H. Smith (BLM 1883), Cornelius Wing (BLM 1884), and Aaron G. Vradenburg (BLM 1889).

Tacoma boomed in the 1870s and 1880s when it was selected as the western terminus of the Northern Pacific Railroad in 1873, followed by the city receiving a transcontinental link in 1883. A bust came during the Panic of 1893, but the city rebounded in the early 1900s with its warehouses, lumber industry, and grain terminals. A second slump hit Tacoma following World War I when there was a steep drop in the price of lumber. Again, the city persevered with the expansion of Camp Lewis (becoming Fort Lewis) and the defense build-up for World War II.

The Subarea underwent a housing boom starting in 1943 as soldiers returned from War. This, in concert with urban renewal, transformed the city. The addition of the Tacoma Narrows Bridge in 1950, and Interstate 5 in 1965, made travel by car more convenient than by ferry and rail (Wilma and Crowley 2003). This new infrastructure also made it easier for families to travel farther out of their neighborhoods to shop for goods in centralized shopping areas. The Tacoma Mall was built in response to this opportunity in 1965. The Mall was designed by John Graham, Jr., who received international recognition for his large-scale shopping complexes. Graham was instrumental in conceiving the model for the suburban shopping center and the Tacoma Mall is the first ever large-scale, indoor suburban shopping complex. Graham is also famous for designing the Seattle Space Needle (MacIntosh 1998). Because of these factors, the Tacoma Mall is likely eligible for listing on the National Register of Historic Places (NRHP).

**Previously Identified Cultural Resources**

Archival research shows only one nearby property as being listed on the Washington State Register and the NRHP —the Tacoma Mausoleum. This structure, located a half mile southwest of the Mall and constructed in the Beaux Arts style, was built in 1910 by architects George Gove and Silas Nelsen (Department of Archaeology and Historic Preservation [DAHP] 1981). Other nearby historic resources are the cemeteries situated three blocks southwest of the Mall—the 1875 Tacoma Cemetery (DAHP 2005), which contains the graves many of the cities founding fathers, the 1885 Pauper Cemetery (DAHP 2008), and the 1874 Oakwood Hill Cemetery (DAHP 2005). None of these resources are listed on an historic register. The Tacoma Historic Register does not have any properties listed in the Mall vicinity or Tacoma Mall Subarea.
There are no known cultural or archaeological resources within the subarea. An examination of DAHP’s predictive model, a tool used to calculate the probability of encountering pre-contact resources based on landform, environmental factors, and proximity to known activity areas, indicates that there is a moderate to high risk for cultural resources within the subarea. However, this model is only a “first step” in cultural resources investigations, and does not account for modern impacts such as urbanization, which would lower the risk of a project affecting intact cultural resources.

**Archaeological Monitoring**

Under the direction and supervision of Alicia Valentino, archaeological monitoring was conducted during geotechnical drilling by ESA archaeologists Jacqueline Marcotte, Malika Hays, and Jamy McLean over eight days between October 16 and 30, 2015. Seventeen (17) geotechnical bores were drilled by Holt Services, Inc. under the direction of Michael Brady of Robinson Noble, Inc. The boreholes, #1-7, 10, 13-15, 17, 19-21, and 24-25, were drilled using a truck-mounted, weighted hammer-driven, hollow-stem, split-barrel auger. The sample tube had an interior diameter of two inches and a length of 18 inches, with an exterior screw auger diameter of six inches. Starting at 2½ feet below current ground surface, a geotechnical sample was taken in five-foot intervals. Samples were examined, measured, documented, and photographed by ESA archaeologists. Archaeological monitoring of each bore took place until glacial sediments had been reached.

**Report of Results**

No potential environmental indicators of past cultural activity, such as burned soils or fire-modified rocks were observed. The boreholes demonstrated Fill and Mixed (disturbed) soils, and A, B, and C soil horizons (Table 1). Despite soil development, each of the boreholes indicated grading, filling, and/or mixing, reducing or eliminating the potential for intact cultural resources.

A-horizons represent a stable surface that would have been available for occupation in the modern, historic, and/or pre-contact eras. As expected, A-horizons were observed in those areas where there was no pavement, but in each of these bores the A-horizon was either disturbed (graded and buried) or mixed with fill, reducing or eliminating the potential for intact cultural resources. The Project Area is strikingly level, which further supports past grading or filling, noted on geological maps (Smith 1977).

B-horizons are the result of minerals and clays leaching down from the overlying soils (A-horizon). The condition of the interface of the A and B-horizons is paramount in determining the potential for cultural resources. In each of the bores where a B-horizon was observed, the overlying soil was either removed or previously graded, eliminating the potential for cultural resources to exist in this soil.

C-horizons are older than A and B-horizons and would not have been available for occupation. Archaeological monitoring ceased one-foot into the C-horizon (glacial). Where C-horizons were observed, the overlying soils (in particularly the A-horizon), had been impacted and disturbed, or entirely removed.

**Conclusion**

Based on these results, ESA considers there is little potential for intact buried pre-contact or historic materials to be encountered within the Subarea Basin. The geotechnical data recorded for this project corroborates that data portrayed on geological maps for the area: artificial fill through the majority of the Subarea, Vashon advance outwash along the northern edge of the Subarea, and Vashon recessional outwash and Vashon till in the western portion of the Subarea (Smith 1977).
Further work to implement the Subarea Plan will be conducted as project elements are developed and funded. The requirement for additional cultural resources evaluation will be determined as those elements are designed and permitted. Depending on project actions, it is likely that historic structures will need to be documented. This includes the Tacoma Mall and any other historic-age structures that are on or adjacent to tax parcels undergoing project actions.
References

Department of Archaeology and Historic Preservation (DAHP).


Eysaman & Company

MacIntosh, Heather M.

Smith, Mackey

Suttles, Wayne and Barbara Lane

US Department of the Interior Bureau of Land Management (BLM)


US Surveyor General
1867  *Township 20 North, Range 3 East Survey Map*. Electronic document, 
http://www.blm.gov/or/landrecords/survey/yPlatView1_2.php?path=PWA&name=t200n030e_001.jpg, 

Wilma, David and Walt Crowley
Figure 1. Tacoma Mall Subarea.
Figure 2. Tacoma Mall Subarea and bore locations.
<table>
<thead>
<tr>
<th>Borehole/Well Number</th>
<th>Description*</th>
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<tbody>
<tr>
<td>Well #1</td>
<td>0 ftbs-2.5 ftbs: Brown, silt (medium sand), 5-15% rounded coarse gravel, abrupt smooth boundary, soil horizon= Fill; 5 ftbs-7.5 ftbs: Yellowish Brown, sand (medium sand), 5-15% rounded coarse gravel, moist-very firm, granular structure, abrupt smooth boundary, soil horizon= B. 7.5 ftbs: Grayish Brown, sand (fine sand), 35-&lt;60% subrounded medium gravel, dry-loose, soil horizon= C (glacial).</td>
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<td>Well #2</td>
<td>0 ftbs-1 ftbs: Dark Brown, loamy sand (fine sand), dry-soft, modern debris/trash, soil horizon= Mixed; 2 ftbs-9 ftbs: Yellowish Brown, loamy sand (coarse sand), soil horizon= B; 9 ftbs-9.5 ftbs: Yellowish Brown, loamy sand (medium sand), 5-15% rounded coarse gravel, poorly sorted, soil horizon= C (glacial).</td>
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<td>Borehole #3</td>
<td>0 ftbs-2 ftbs: Light Brown, loamy sand (fine sand), dry-loose, moderate granular structure, soil horizon=Fill; 2 ftbs-3.5 ftbs: Grayish Brown, sandy loam (medium sand), 15-&lt;35% rounded medium gravels, dry-loose, soil horizon=A; 25.5 ftbs: Grayish Brown, sand (medium sand), dry-slightly hard, soil horizon=C (glacial).</td>
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<tr>
<td>Well #4</td>
<td>0 ftbs-2.5 ftbs: Brown, silt (coarse sand), 5-15% rounded coarse gravel, moist-firm, abrupt smooth boundary, soil horizon= Fill; 2.5 ftbs-5 ftbs: Grayish Brown, sand (very coarse sand), 15-&lt;35% rounded coarse gravel, dry-slightly hard, granular structure, abrupt smooth boundary, soil horizon= Fill.</td>
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<tr>
<td>Well #5</td>
<td>0 ftbs-2 ftbs: Light Brown, sand (fine sand), &lt;5%, dry-loose, abrupt smooth boundary, organic, soil horizon= B; 2 ftbs-2.5 ftbs: Grayish Brown, sand (fine sand), 35-&lt;60% subrounded medium gravel, dry-loose, soil horizon= C (glacial); 2.5 ftbs-5 ftbs: Grayish Brown, sand (fine sand), 35-&lt;60% subangular medium gravel, moist-loose, soil horizon= C (glacial).</td>
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<tr>
<td>Borehole #6</td>
<td>0 ftbs-3.5 ftbs: Grayish Brown, loamy sand (fine sand), soil horizon= Mixed; 3.5 ftbs-19 ftbs: Gray, loamy sand (sand), dry-soft, soil horizon= C (glacial); 19 ftbs-20.5 ftbs: Olive Brown, loamy sand (fine sand), soil horizon= C (glacial); 20.5 ftbs-30 ftbs: Yellowish Brown, sand (medium sand), soil horizon= C (glacial).</td>
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<tr>
<td>Well #7</td>
<td>0 ftbs-2 ftbs: Grayish Brown, sand (coarse sand), soil horizon= Fill; 2 ftbs-5.5 ftbs: Light Gray, silt loam (fine sand), soil horizon= C (glacial); 5.5 ftbs-15.5 ftbs: Light Brown, silt loam (very fine sand), soil horizon= C (glacial); 15.5 ftbs-25.5 ftbs: Yellowish Brown, silt loam (medium sand), soil horizon= C (glacial).</td>
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<tr>
<td>Borehole #10</td>
<td>0 ftbs-2 ftbs: Grayish Brown, loamy sand (coarse sand), dry-soft, moderate granular structure, soil horizon= Fill; 2 ftbs-5.5 ftbs: Dark Brown, sandy loam (coarse sand), 35-&lt;60% subrounded medium gravel, dry-soft, moderate granular structure, soil horizon= A; 9 ftbs-25.5 ftbs: Light Gray, loamy sand (fine sand), dry-soft, weak granular structure, soil horizon= C (glacial); 25.5 ftbs-30.5 ftbs: Gray, silt loam (sand), soil horizon= C (glacial).</td>
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<td>Borehole #13 0 ftbs-2 ftbs: Brown, loamy sand (fine sand), dry-loose, moderate granular structure, soil horizon=Fill; 2 ftbs-9 ftbs: Grayish Brown, sandy loam (fine sand), dry-soft, weak granular structure, soil horizon=C (glacial); 9 ftbs-10.5 ftbs: Gray, loamy sand (fine sand), dry-soft, soil horizon=C (glacial); 10.5 ftbs-15.5 ftbs: Yellowish Brown, sand (coarse sand), soil horizon=C (glacial).</td>
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<td>Well #14 0 ftbs-2.5 ftbs: Grayish Brown, silt (medium sand), 5-15% subrounded to subangular coarse gravel, dry-slightly hard, abrupt smooth boundary, trace charcoal, organic, modern debris/trash, soil horizon= Mixed; 2.5 ftbs-5 ftbs: Gray, sand (very coarse sand), 15-&lt;35% rounded coarse gravel, dry-moderately hard, granular structure, abrupt smooth boundary, soil horizon= C (glacial). Cedar observed at 10 ftbs, 17.5 ftbs, and 30 ftbs.</td>
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<td>Well #15 0 ftbs-3.5 ftbs: Brown, loamy sand (medium sand), dry-loose, moderate granular structure, modern debris/trash, soil horizon= Mixed; 3.5 ftbs-9 ftbs: Brown, sand (coarse sand), dry-loose, granular structure, clear boundary, soil horizon= Mixed; 9 ftbs-10.5 ftbs: sandy clay (medium sand), dry-moderately hard, fine moderate subangular blocky structure, very abrupt boundary, soil horizon=C (glacial).</td>
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<td>Borehole #17 0 ftbs-2.5 ftbs: Dark Brown, loamy sand (fine sand), dry-soft, soil horizon= A; 2.5 ftbs-5.5 ftbs: Yellowish Brown, loamy sand (medium sand), dry-soft, gradual boundary, soil horizon= B; 9 ftbs-10.5 ftbs: Light Gray, loamy sand (coarse sand), soil horizon=C (glacial).</td>
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<td>Borehole #19 0 ftbs-2 ftbs: Reddish Brown, loamy sand (medium sand), dry-loose, moderate granular structure, soil horizon=Fill; 2 ftbs-10.5 ftbs: Yellowish Brown, sand (coarse sand), dry-loose, moderate granular structure, soil horizon=C (glacial). 10.5 ftbs-30 ftbs: Light Brown, silt loam (fine sand), dry-soft, soil horizon=C (glacial).</td>
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<td>Borehole #20 0 ftbs-5.5 ftbs: Yellowish Brown, loamy sand (coarse sand), dry-loose, weak granular structure, soil horizon= B; 5.5 ftbs-15 ftbs: Light Brown, sand (medium sand), dry-loose, granular structure, soil horizon= C (glacial). 15.5 ftbs-30 ftbs: Grayish Brown, loamy sand (fine sand), dry-slightly hard, soil horizon=C (glacial).</td>
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<tr>
<td>Well #21 0 ftbs-3.5 ftbs: Brown, sandy loam (medium sand), dry-loose, medium moderate granular structure, soil horizon= Mixed; 3.5 ftbs-5 ftbs: Reddish Brown, silt loam (medium sand), &lt;5% mixed gravel, dry-loose, granular structure, soil horizon= B; 5 ftbs-15 ftbs: Reddish Brown, sand (fine sand), &lt;5% fine gravel, dry-loose, granular structure, soil horizon=C (glacial) 15 ftbs-27 ftbs: Reddish Brown, clay, &lt;5% , dry-hard, strong subangular blocky structure, soil horizon= C (glacial).</td>
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<tr>
<td>Well #24 0 ftbs-2.5 ftbs: Grayish Brown, silt (sand), 5-15% crushed rock coarse gravel, dry-slightly hard, abrupt smooth boundary, trace charcoal, modern debris/trash, soil horizon= Fill; 2.5 ftbs-5 ftbs: Yellowish Brown, sand (coarse sand), &lt;5% rounded medium gravel, dry-slightly hard, granular structure, abrupt smooth boundary, soil horizon= C (glacial).</td>
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*ftbs = feet below surface