

**5.3.18 SIHP #50-80-14-7430**

<b>FORMAL TYPE:</b>	Subsurface privy remnant
<b>FUNCTION:</b>	Toilet
<b>PREVIOUS DOCUMENTATION:</b>	N/A
<b>AGE:</b>	Post-Contact
<b>NUMBER OF FEATURES:</b>	2
<b>TYPES OF FEATURES:</b>	1 privy remnant, 1 builder's trench
<b>DISTRIBUTION:</b>	T-202 (presently less than 0.9 m <sup>2</sup> )
<b>LOCATION:</b>	Located in the eastbound lane of Kona Street, <i>mauka</i> of Ala Moana Shopping Center (Kālia Geographic Zone)
<b>TAX MAP KEY:</b>	TMK [1] 2-3-038:006
<b>LAND JURISDICTION:</b>	General Growth Properties
<b>TEST EXCAVATIONS:</b>	T-202

SIHP #50-80-14-7430 is a newly-identified cultural resource consisting of a subsurface privy remnant and associated builder's trench located in the eastbound lane of Kona Street, *mauka* of Ala Moana Shopping Center (Figure 386). This cultural resource was encountered in T-202 within the Kālia Geographic Zone of the City Center AIS.

Historically, Kālia and the surrounding landscape were coastal flats comprised of marshland or wetland with limited habitation (Figure 387 and Figure 388). An 1884 map by S.E. Bishop depicts the extent of marshland in the vicinity of SIHP # -7430 as well as several LCAs (Figure 389). LCA records document in-use fishponds, taro patches, house lots, and pasture land. LCA records for 100 Fort Lands (F.L.), located approximately 45 m northeast of SIHP # -7430, describe two ponds, five fry ponds (*ki'o pua*), one taro patch (*lo'i*), one house lot, and one pasture (*kula* land). LCA records for 101 F.L., located approximately 56 m northwest of SIHP # -7430, also document two ponds and three *ki'o pua*. The presence of such resources indicates the area was tended to by individuals living within or just outside the wetland areas. A 1927 aerial photograph and a 1926 land court application map provide evidence of habitation within a still extant wetland agricultural and aquacultural environment (Figure 390 and Figure 391). The aerial photograph and map also indicate that SIHP # -7430 is located immediately adjacent to the southern side of a structure (see Figure 390 and Figure 391).

By the mid-twentieth century, lowland Kālia was filled as part of extensive dredging and land reclamation efforts (Figure 392). By 1952, the area surrounding and including SIHP # -7430 was filled and graded for the construction of the Ala Moana Shopping Center (Figure 393).

The depositional sequence observed within T-202 and nearby test excavations includes wetland sediments developed over decomposed coral reef, underlying fill associated with land reclamation and development (Figure 394 to Figure 397 and Table 83). The depositional sequence reflects twentieth century change from a wetland environment to the present-day developed land surface. The depositional sequence within T-202 included natural silty clay wetland sediment (Stratum II) underneath 1.2 meters of fill (Ia-Ie). Stratum II is considered to be the buried remnants of the former Kewalo wetland surface and has been designated as SIHP #50-80-14-6636. The fill depositional sequence consisted of sandy clay (Stratum Ie) and crushed coral (Stratum Id and Ic) associated with mid twentieth-century dredging and land reclamation,

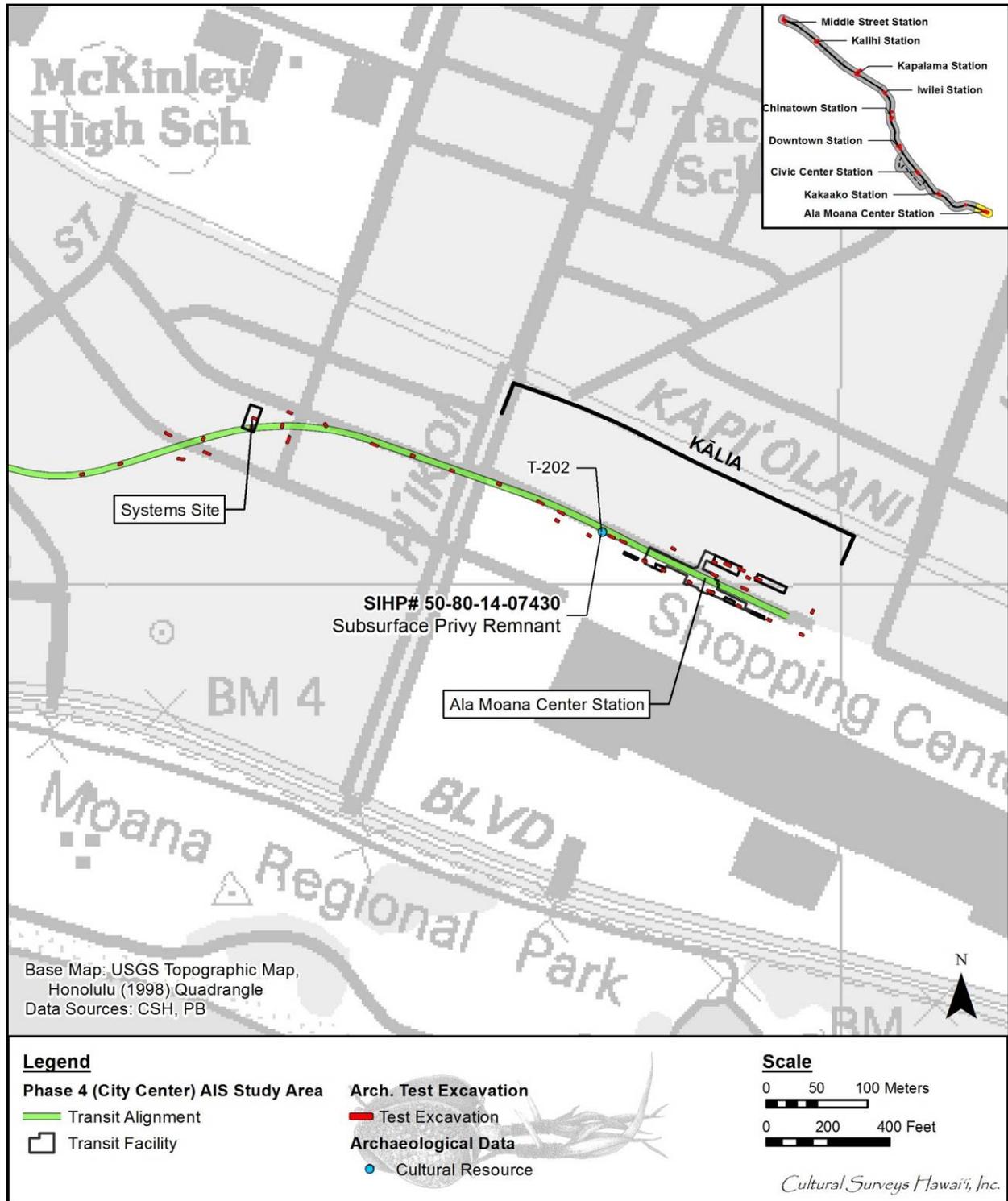


Figure 386. Location of the privy and associated builder's trench (SIHP #-7430) in the Kālia Geographic Zone (Base Map: USGS 1998 Topographic Map of Honolulu Quadrangle)



Figure 387. Kewalo wetland in 1890 showing house structures in the background (Hawai'i State Archives)



Figure 388. Kewalo wetland in 1909 (Hawai'i State Archives)

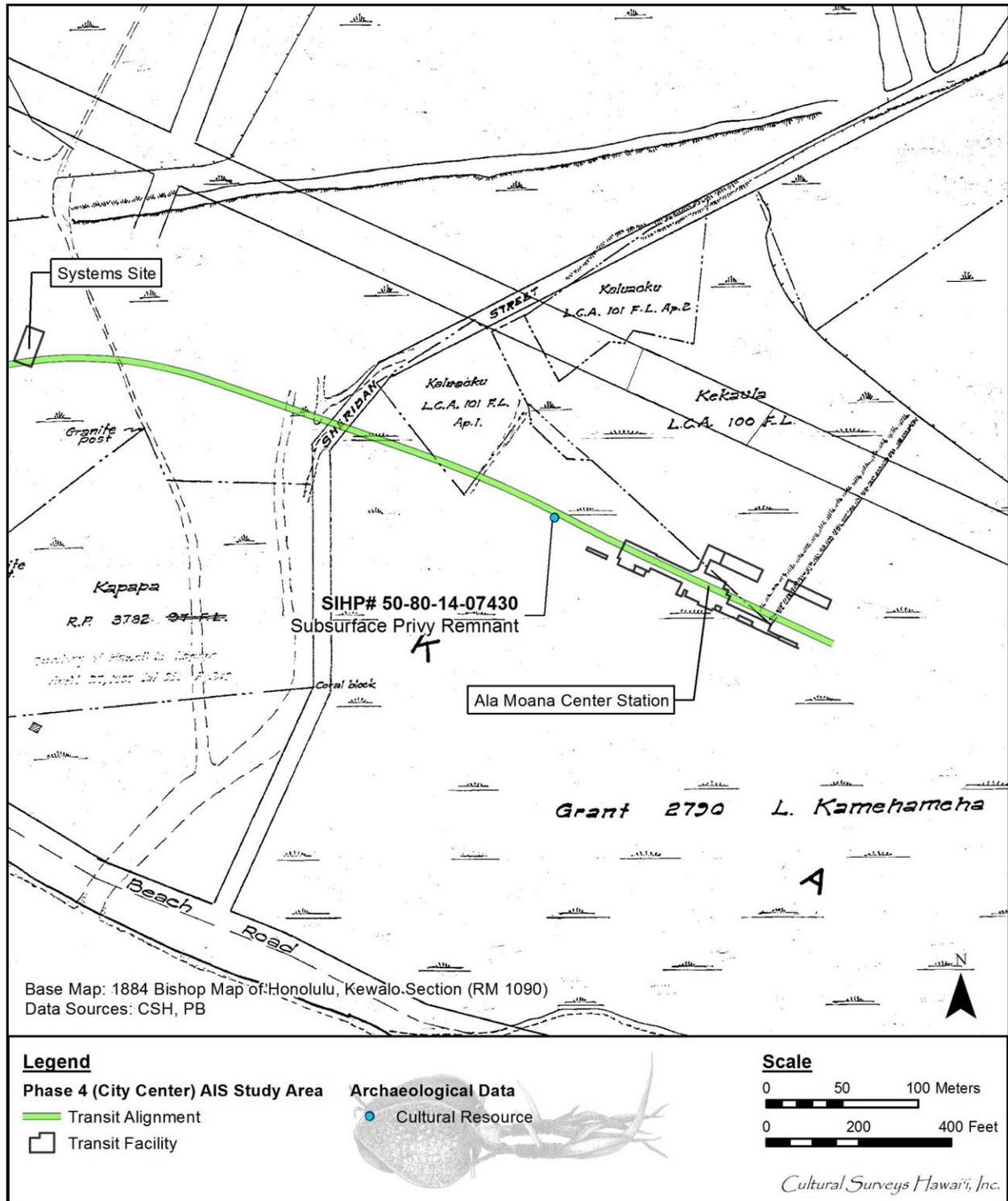


Figure 389. 1884 Map of Honolulu, Kewalo Section, by S. E. Bishop (Reg. Map 1090), showing the Kālia Zone amidst marshland and the adjacent LCAs 100 FL and 101 FL.

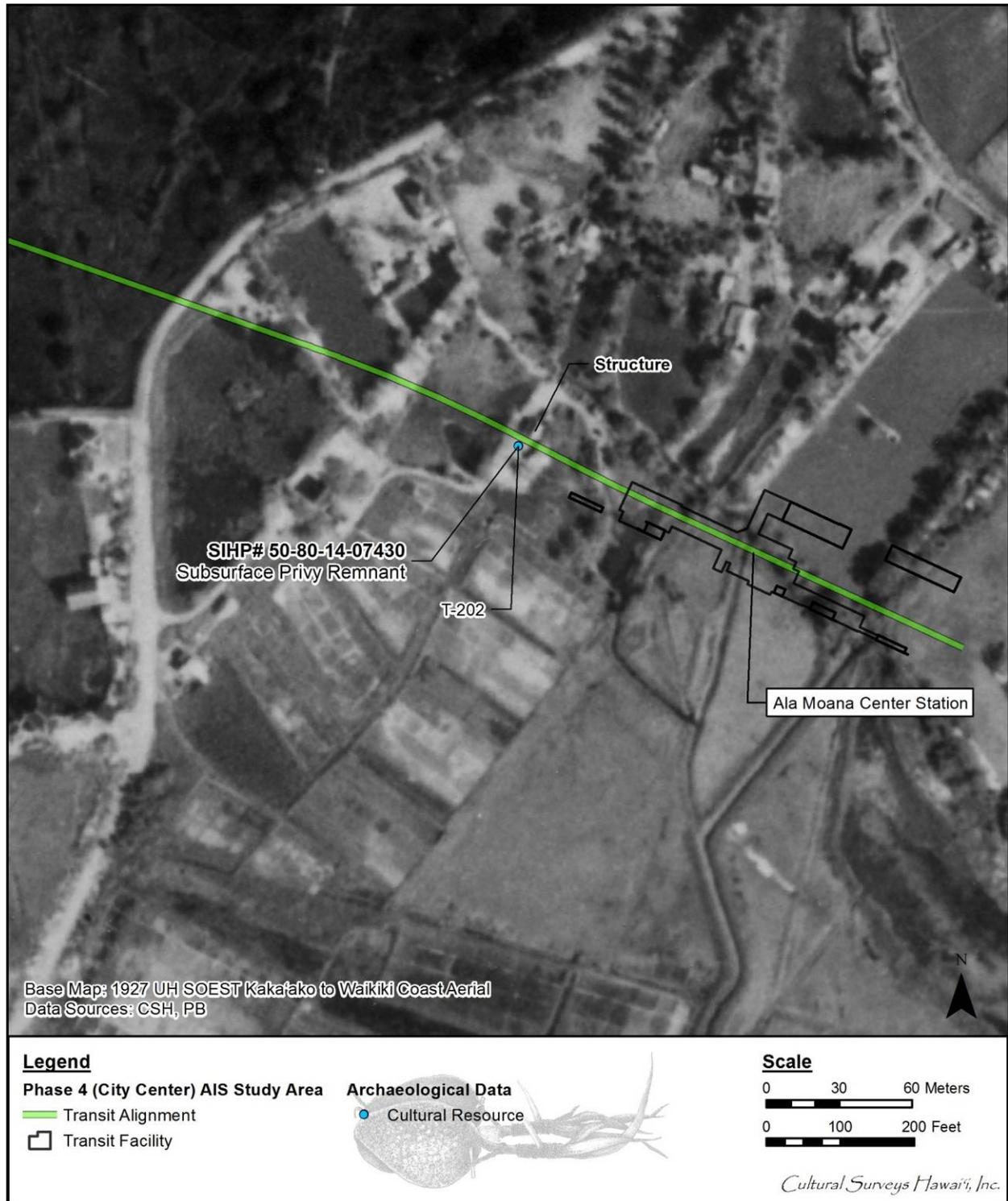


Figure 390. Portion of the 1927 UH SOEST aerial of the Kaka'ako coast showing the location of SIHP #-7430 adjacent to a structure surrounded by ponds and salt pans

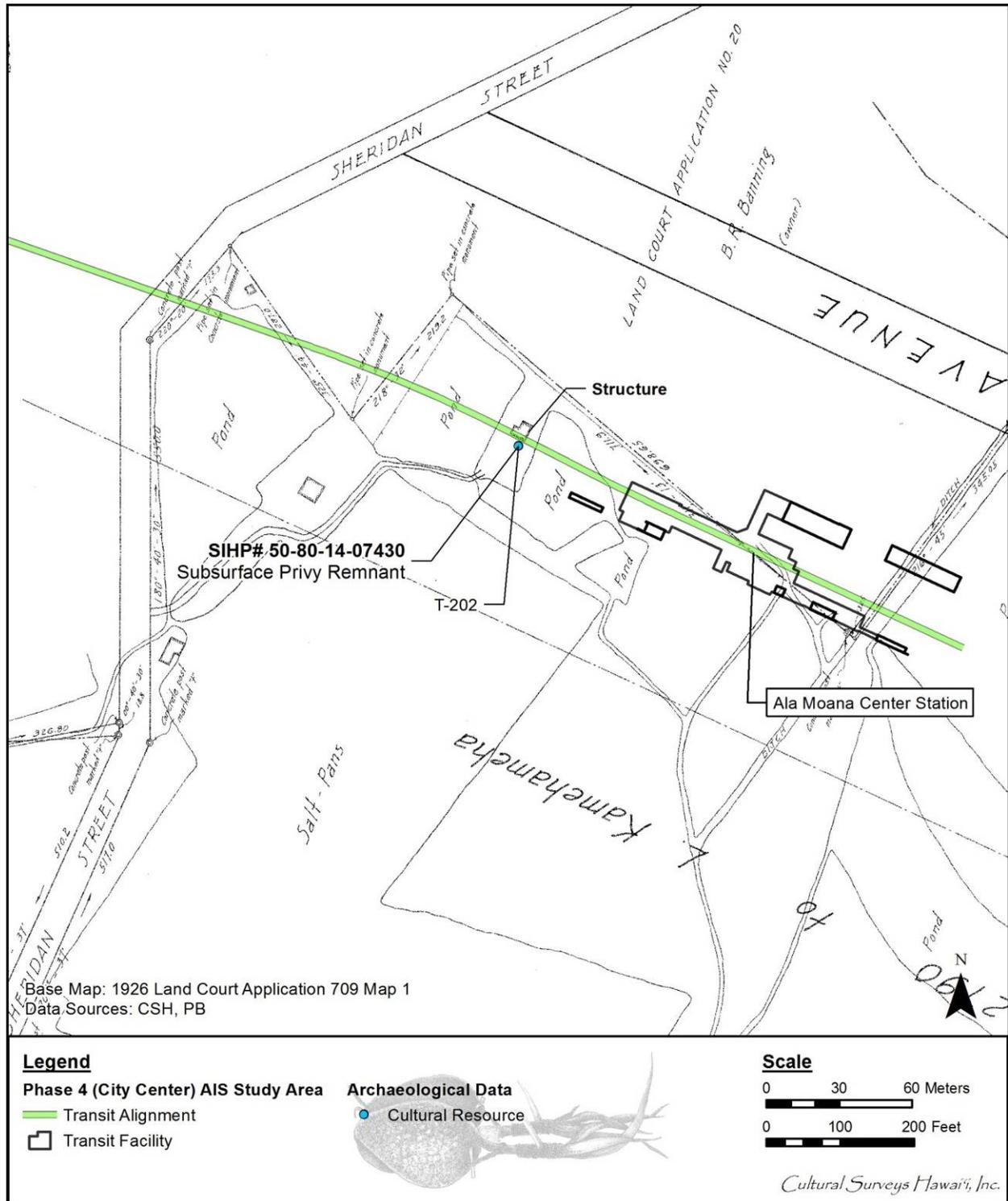


Figure 391. Portion of the 1926 Land Court Application 709 Map 1 showing the location of SIHP #-7430 adjacent to a structure surrounded by ponds and salt pans



Figure 392. 1914 photograph showing the Kewalo wetlands filled in with coral material (Hawai'i State Archives)



Figure 393. 1959 photograph showing the development of Ala Moana Center, the former wetlands having been filled in.

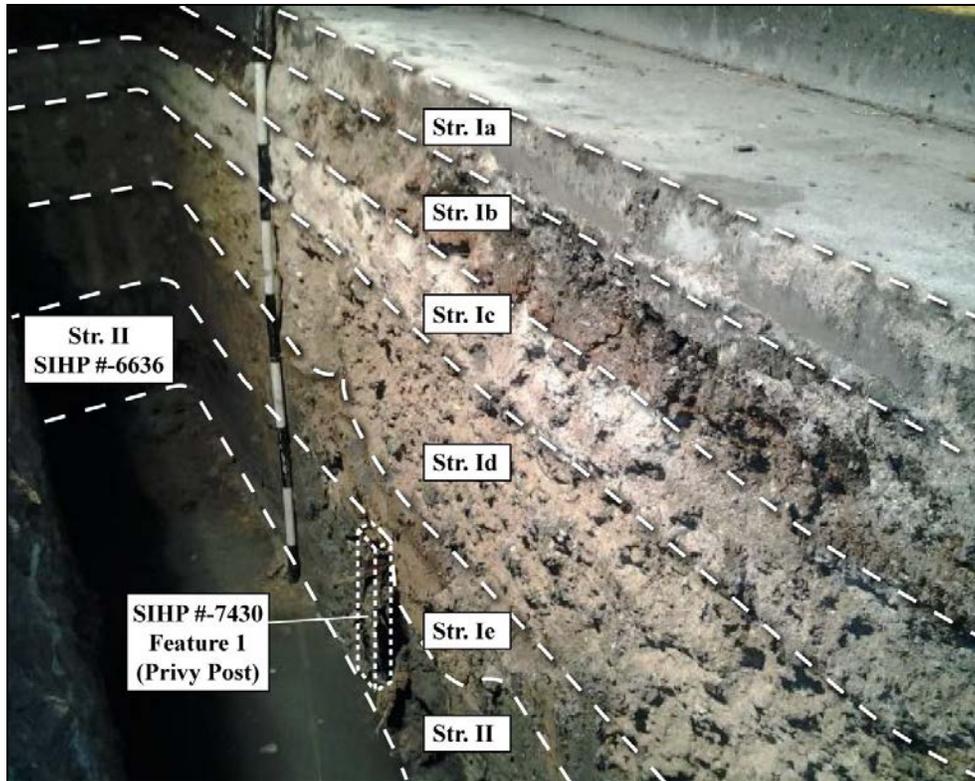


Figure 394. T-202 north wall, view to north

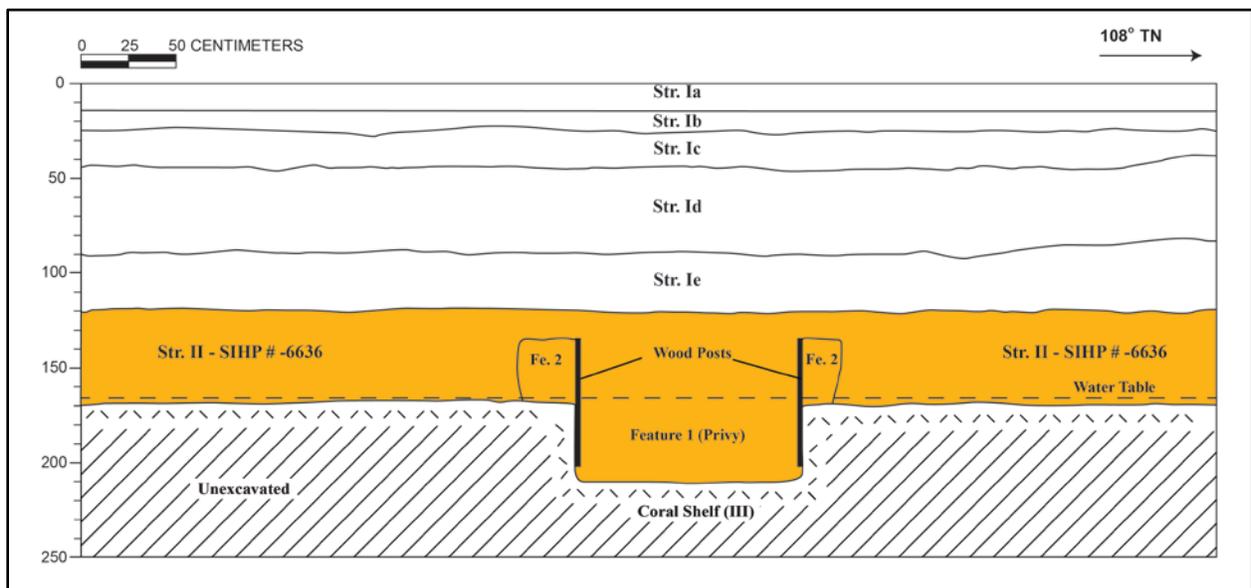


Figure 395. T-202 north wall profile, showing SIHP #-7430 Feature 1 (privy) and Feature 2 (builder's trench)

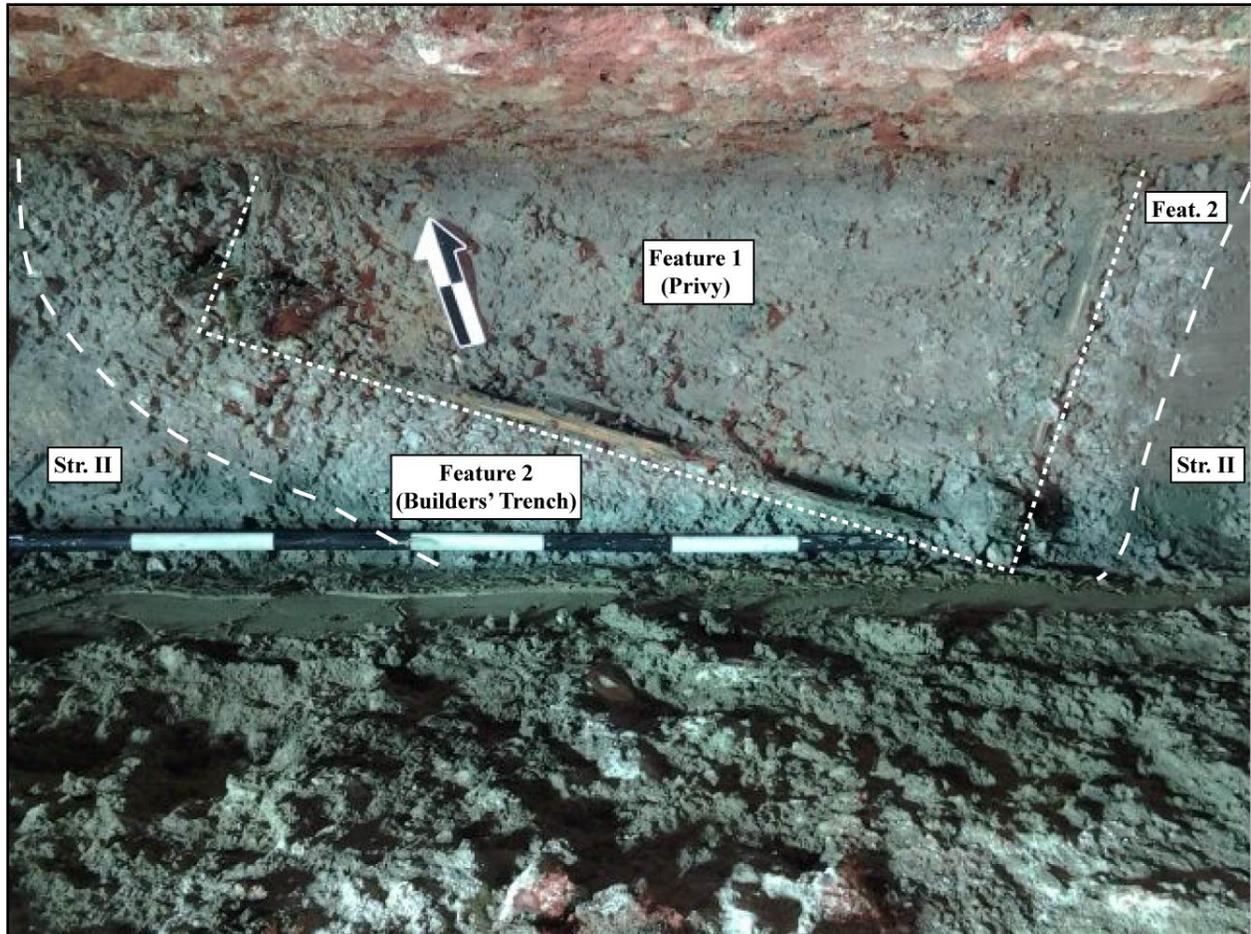


Figure 396. T-202 plan view of SIHP #-7430, showing the privy structure (Feature 1) and associated builders trench containing coral gravel fill (Feature 2)

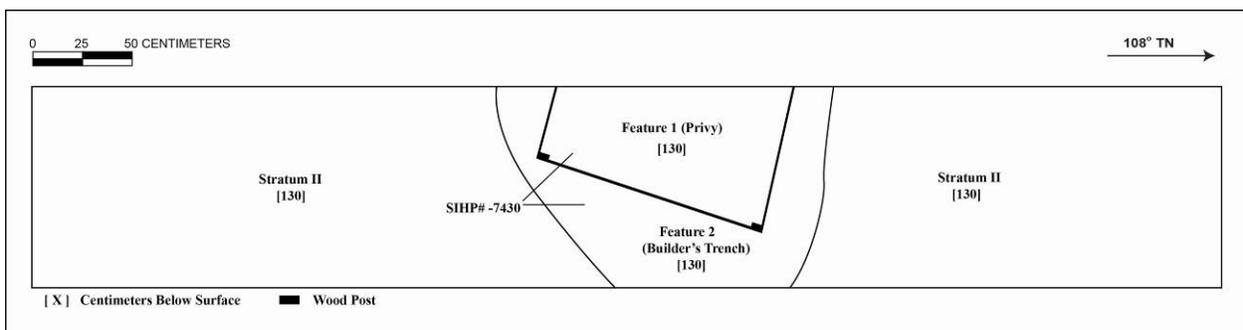


Figure 397. T-202 plan view of SIHP #-7430, showing the privy structure (Feature 1), consisting of a rectangular alignment of single, 1 by 10 inch milled boards, and two 2 by 4 inch wooden posts located at each of the two exposed corners, and the associated builder's trench (Feature 2), consisting of excavated coral material from inside the area of Feature 1 which was then deposited outside the privy structure to form a collar.

Table 83. T-202 Stratigraphic Description

<b>Stratum</b>	<b>Depth (cmbs)</b>	<b>Description</b>
Ia	0–15	Concrete curb and gutter
Ib	15–25	Fill; 10 YR 4/4 (dark yellowish brown) with 20% fine to coarse mottles of 10 YR 8/1 (white); gravelly sandy clay loam; weak, fine, crumb structure; moist, friable consistency; slightly plastic; mixed origin; abrupt, smooth lower boundary; few fine roots; gravelly fill material deposited during curb and gutter installation
Ic	25–45	Fill; 10 YR 8/2 (very pale brown); extremely gravelly silty sand; structureless, single-grain; moist, loose consistency; non-plastic; marine origin; abrupt, smooth lower boundary; crushed coral fill
Id	45–90	Fill; extremely gravelly silty sand; structureless, single-grain; loose consistency; non-plastic; marine origin; very abrupt, smooth lower boundary; crushed coral fill
Ie	90–120	Fill; 10 YR 5/4 (yellow brown); sandy clay; weak, medium, blocky structure; moist, friable consistency; plastic; mixed origin; abrupt, smooth lower boundary;
II	120–210	Natural; 10 YR 5/1 (gray); silty clay; weak, medium, blocky structure; wet, very sticky consistency; plastic; mixed origin; abrupt lower boundary; natural remnant marsh sediment; component of SIHP #-6636, Kewalo wetland sediment
SIHP #-7430 Feature 1	135–210	Privy structure remnant; consisted of a rectangular alignment of single, 1 x 10 inch milled boards, and two 2 x 4 inch wooden posts located at each of the two exposed corners
SIHP #-7430 Feature 2	135–177	Builder's trench; consisted of coral material excavated from inside the area of Feature 1 and deposited on the outside of Feature 1 to form a collar
III	170–210 (BOE)	Natural; coral shelf

and gravelly sandy clay loam (Stratum Ib) and a concrete curb and gutter (Stratum Ia) associated with the construction of Ala Moana Shopping Center.

SIHP #-7430 consisted of a remnant historic privy structure and an associated builder's trench. The historic privy (SIHP #-7430 Feature 1) was constructed within the natural Kewalo wetland sediment (Stratum II, SIHP #-6636). The method of construction is postulated based on field observations and stratigraphic associations. First, the natural sediment was excavated and removed along with portions of the underlying decomposed coral shelf material. Following excavation or incrementally during excavation, the privy structure was erected. The remnant privy structure included milled wood board sides and milled wood posts connected by metal fasteners at each exposed corner. An open area was left circumscribing the privy structure which was likely utilized as a builder's trench for the construction of the privy. This builder's trench (SIHP #-7430 Feature 2) was then infilled with the excavated coral shelf material, serving as a brace for the structure. A ferrous bar or spike may also have served to support the structure. The interior of the privy then remained hollow, extending beneath the present water table. It is further postulated that an additional outhouse structure was constructed overtop the now remnant privy. The evidence of the use of the privy included the deposition of malodorous night soil containing historic artifacts within the interior of the privy that were collected during fieldwork. It Later, the privy likely was abandoned, the overlying outhouse structure was removed, the privy interior was filled naturally or manually with locally available wetland sediment (Stratum II), and the entire area was covered over by land reclamation deposits.

Schmitt (1982:150) describes a first-hand account of a mid-nineteenth century privy as follows:

Both Hawaiian and Foreign dwellings in the 19th Century usually included a backyard hale li'ili'i (little house). The native facilities were especially primitive; an 1852 visitor wrote, 'Their water closets are excavations covered in atop, leaving a small square hole for business. I took them for wells!!'.

Outhouse structures are pictured on an 1854 photograph by Hugo Stangenwald outside associated main house structures (Figure 398). The construction of such outside toilet facilities was still common until the 1880s as indoor bathrooms were met with initial skepticism and considered to be "risking the family health in establishing bath and toilet in the main house instead of an out-house" (Schmitt 1982:154).

SIHP #-7430 was encountered between 1.35 mbs and 2.10 mbs within Stratum II. The exposed portion of the privy within T-202 included two corners of a rectangular wooden structure that measured 1.20 m by 0.75 m and extend into the north sidewall of the excavation. The overall dimensions of the exposed privy structure may not necessarily represent an equal bisection through the feature and no absolute measurements on total feature dimensions are possible. No clear top surface structure was present and the original structure (outhouse) may have been taller than the remnants observed. The structure had a relatively shallow depth of about 0.80 m (2.6 ft) to its base. The shallow depth may be a result of the water table being present 1.67 mbs and the coral shelf at approximately 1.70 mbs. However, the coral shelf in the feature's interior appeared to have been deliberately excavated out to provide an adequate depth for the facility. Sediment samples were not collected from within the privy.

Structural remnants collected from the privy (SIHP #-7430 Feature 1) consisted of two boards, two posts, a ferrous object and metal fasteners or nails (Figure 399 through Figure 403). The boards each measured 1 x 10 x 50 inches, while the two posts measured 2 x 4 x 58 inches.



Figure 398. 1854 photograph by Hugo Stangenwald showing various buildings with small, rectangular privy structures (circled) visible in some lots (Hawai'i State Archives)

The function of the ferrous bar or spike collected from the privy structure is unclear, however, it may have acted as a type of structural support.

Artifacts collected from the privy sediment (SIHP #-7430 Feature 1) included four ceramic fragments (Asian and English types), 11 mold-blown bottles and/or bottle fragments, and miscellaneous wood fragments and metal artifacts (Figure 404 through Figure 411 and Table 84). The ceramic manufacturing dates were between 1840 and 1910, and the glass bottle assemblage was dated to between the 1870s and 1920s. The dates from the artifact assemblage are consistent with the dates of the metal fasteners from the privy. Metal fasteners collected appear to be machine-headed cut nails and date to between ca. 1835 and 1890. Collectively, the historic artifacts provide a relative date range for the privy between the mid-nineteenth to early twentieth century.

SIHP #-7430 is interpreted to be the remnants of a historic privy that was utilized in the early twentieth century or prior. It includes the remnant wooden privy structure and interior night soil sediment containing historic cultural material (SIHP #-7430 Feature 1) and an associated builder's trench (SIHP #-7430 Feature 2) that was infilled with decomposed coral. The determination of the function of SIHP #-7430 as a privy (toilet) is based on the presence of odorous night soil in the privy interior, the design of the exterior wooden structure around a pit, and the possible association of the privy with at least one historic structure that is depicted on a 1927 aerial photograph and 1926 land court application map (see Figure 390 and Figure 391). The night soil sediment within SIHP #-7430 was noticeably different from the wetland sediment (Stratum II) observed outside the structure.

Based on the guidance of the National Register Bulletin No.15, SIHP #50-80-14-7430 retains its integrity of location, design, materials, and workmanship. Since its time of construction and period of use the remnant privy has been buried and its surroundings completely altered by modern development. Based on the results of this investigation, CSH recommends that this cultural resource maintains the integrity to support its historic significance under Criterion D (has yielded, or is likely to yield information important for research on prehistory or history) of the Hawai'i and the National Registers, exclusively for its information potential.

SIHP #50-80-14-7430 has provided information, and can potentially provide additional information, related to the location, design, and contents of historic privies within Kālia and the surrounding area. The contents of the privy may yield further insight into the lives of those individuals who utilized it during the mid-nineteenth to early twentieth century. Due to the possibility of encountering SIHP #-7430 (privy structure) during future project-related ground disturbance, CSH recommends the implementation of an archaeological monitoring program. Archaeological monitoring will seek to recover additional data regarding the overall extent and function of SIHP #-7430, as well as document any remaining structural elements of the privy. Provisions of the archaeological monitoring plan will include that, if encountered, additional exposed portions of SIHP #-7430 be cordoned off to allow for intensive sampling of privy sediments for macro-botanical analysis.



Figure 399. T-202, a (1 x 10 x 50 inch) plank (Acc. #202-A-25) that was part of the privy wall structure (SIHP # -7430 Feature 1)



Figure 400. T-202, remnants of another board (Acc. #202-A-25) that was part of the privy wall structure (SIHP # -7430 Feature 1)

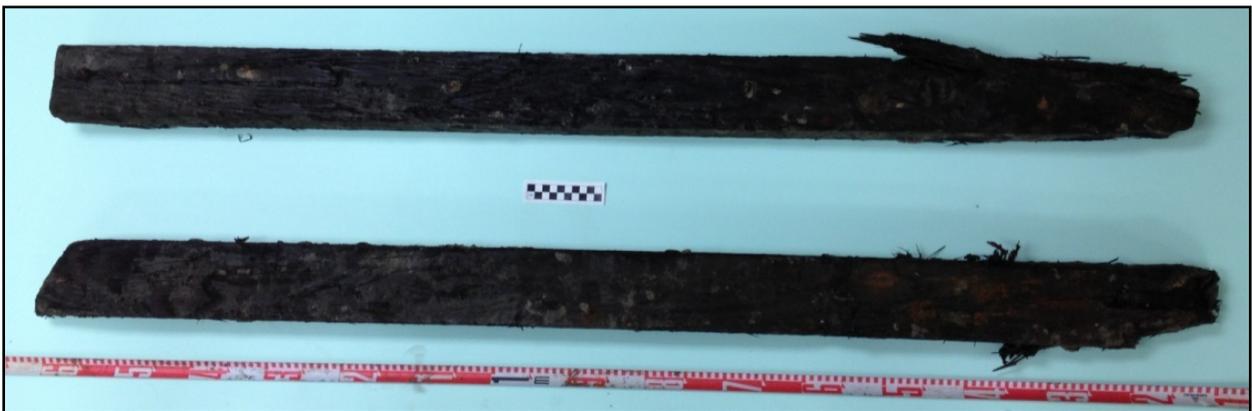


Figure 401. T-202, two (2 x 4 x 58) inch posts (Acc. #202-A-25) that were part of the privy structure (SIHP # -7430 Feature 1)



Figure 402. T-202, metal artifact (Acc. #202-A-23) collected from the privy (SIHP # -7430 Feature 1)



Figure 403. T-202 machine-headed cut nail (Acc. #202-A-24, ca. 1835-1890) collected from the privy wood (SIHP # -7430 Feature 1)



Figure 404. T-202 ceramic vessel fragments, exterior; Chinese “Four Flower” porcelain bowl (Acc. #202-A-1; upper left), Japanese porcelain sake cup (Acc. #202-A-2; upper right), and Euro-American ironstone bowl fragments (Acc. #202-A-3; bottom) from SIHP #-7430 Feature 1



Figure 405. T-202 intact glass bottles (Acc. #s 202-A-6, A-7, and A-13, bottom to top) collected from SIHP #-7430 Feature 1



Figure 406. Glass boot polish bottle (Acc. #202-A-6) embossed “FRANK MILLER’S CROWN DRESSING NEW YORK USA” collected from SIHP #-7430 Feature 1



Figure 407. T-202 glass bottle fragments (Acc. #s 202-A-4, A-5, and A-8 through A-12, left to right, top to bottom) collected from SIHP #-7430 Feature 1



Figure 408. T-202 Sample of small metal and wood artifacts (Acc. #s 202-A-14 through A-16) collected from SIHP #-7430 Feature 1



Figure 409. T-202 miscellaneous metal artifacts (Acc. #s 202-A-17 and A-18) collected from SIHP #-7430 Feature 1



Figure 410. T-202 miscellaneous metal artifacts (Acc. #s 202-A-19 and A-20) collected from SIHP #-7430 Feature 1



Figure 411. T-202 miscellaneous metal artifacts (Acc. #s 202-A-21 and A-22) collected from SIHP #-7430 Feature 1

Table 84. SIHP # -7430 Historic Artifacts Analysis

Acc. #202-A-	Prov.	Ceramic Vessel Type	Portion	No.	Paste	Origin; Age	Comments
1	T-202, Feature 1 SIHP #-7430	Hollowware – large bowl	Body–rim	1	Porcelain	Chinese	Four Flowers motif, painted overglaze
2	T-202, Feature 1 SIHP #-7430	Hollowware – sake cup	Base–body	1	Porcelain	Japanese	Red base mark; floral, painted underglaze
3	T-202, Feature 1 SIHP #-7430	Hollowware – large bowl	Base	2	Refined earthenware (ironstone)	Euro-American	Base mark: “PATENT I...;” may be two vessels
Acc. #202-A-	Prov.	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
4	T-202, Feature 1 SIHP #-7430	Bottle, beverage	Body	2	Amber		
5	T-202, Feature 1 SIHP #-7430	Bottle	Lip	1	Aqua	1880s–1920s	Tooled lip
6	T-202, Feature 1 SIHP #-7430	Bottle, boot polish	Complete	1	Clear	American; 1870s–1900	“Frank Millers Crown Dressing New York, USA” embossed horizontally on body; “25” embossed on base (Edwards and Critten 1885:146)
7	T-202, Feature 1 SIHP #-7430	Bottle, medicine	Complete	1	Clear	American; 1887–1920s	“Rubifoam for the teeth by E.W. Hoyt & Co. Lowell, Mass” embossed on body horizontally
8	T-202, Feature 1 SIHP #-7430	Bottle	Body	1	Green		
9	T-202, Feature 1 SIHP #-7430	Bottle	Body	1	Clear	1870s – post	
10	T-202, Feature 1 SIHP #-7430	Bottle, spirits	Lip	1	Green	1880–1920s	Tooled lip
11	T-202, Feature 1 SIHP #-7430	Bottle, beverage	Base–body	1	Olive	pre-1900	Base: push up

12	T-202, Feature 1 SIHP #-7430	Bottle, beverage	Base– body	1	Olive	pre-1900	Base: push up
13	T-202, Feature 1 SIHP #-7430	Bottle, spirits	Complete	1	Green	1880s– 1920s	Base: kick up
<b>Acc. #202-A-</b>	<b>Prov.</b>	<b>Miscellaneous Type</b>	<b>Portion</b>	<b>No.</b>	<b>Material</b>	<b>Origin; Age</b>	<b>Comments</b>
14	T-202, Feature 1 SIHP #-7430	Milled block	Fragment	9	Wood		
15	T-202, Feature 1 SIHP #-7430	Insulation item?	Fragment	1	Leather		
16	T-202, Feature 1 SIHP #-7430	Building material	Fragment	1	Stone		Mortar on surface
17	T-202, Feature 1 SIHP #-7430	Machine part – ring	Fragment	1	Metal		Recessed interior
18	T-202, Feature 1 SIHP #-7430	Housing box?	Fragment	1	Metal		Thin plates bent into open box shape
19	T-202, Feature 1 SIHP #-7430	Machine part – rod and wheel	Fragment	1	Metal		Wood at base
20	T-202, Feature 1 SIHP #-7430	Machine part – ring	Fragment	3	Metal		Thin metal
21	T-202, Feature 1 SIHP #-7430	Housing Metal?	Fragment	4	Metal		Thin curved plates
22	T-202, Feature 1 SIHP #-7430	Machine part – wire	Fragment	1	Metal		White with knobs on each end
23	T-202, Feature 1 SIHP #-7430	Machine part – attachment	Fragment	1	Metal		
24	T-202, Feature 1 SIHP #-7430	Nail	Complete	1	Metal	1835–1890	Machine- headed cut nail from privy wood
25	T-202, Feature 1 SIHP #-7430	Milled planks	Fragment	10	Wood		

**5.3.19 SIHP #50-80-14-7506**

<b>FORMAL TYPE:</b>	Subsurface incinerated trash deposit
<b>FUNCTION:</b>	Refuse disposal
<b>PREVIOUS DOCUMENTATION:</b>	N/A
<b>AGE:</b>	Post-Contact (mid-twentieth century)
<b>NUMBER OF FEATURES:</b>	N/A
<b>TYPES OF FEATURES:</b>	N/A
<b>DISTRIBUTION:</b>	Approximately 0.11 acres
<b>LOCATION:</b>	Southern bank of Kapālama Drainage Canal at the corner of Dillingham Boulevard and Kokea Street (East Kapālama Geographic Zone)
<b>TAX MAP KEY:</b>	[1] 1-5-017:006
<b>LAND JURISDICTION:</b>	The University of Hawai'i
<b>TEST EXCAVATIONS:</b>	T-064, T-066, and T-067

SIHP #50-80-14-7506 is a newly-identified subsurface incinerated trash deposit located near the southern bank of Kapālama Drainage Canal at the corner of Dillingham Boulevard and Kokea Street (Figure 412). The incinerated trash deposit was found in only three test excavations during the City Center AIS (T-064, T-066, and T-067).

The depositional sequence in these three test excavations consisted of natural sediments deposited atop the coral shelf which were later truncated and overlain with historic and/or modern fill deposits. The buried Late Pleistocene calcareous reef was identified at the base of excavation in T-067 (Stratum III) while natural silty to sandy clays were observed at the base of excavation in T-064 and T-066. The coral shelf was not reached in these latter two trenches. The natural clays (designated Stratum II) are interpreted as remnant wetland, agricultural sediments (SIHP #50-80-14-7426; see separate site description provided this volume).

SIHP #-7506 is an incinerated trash deposit estimated to extend 0.11 acres in area. The trash deposit was observed between 0.38 to 1.60 mbs. Historic artifacts observed within SIHP #-7506 include ceramic vessels, whole and fragmentary glass bottles and jars, melted metal, insulators, miscellaneous household items, and terrestrial faunal remains.

Within T-064, the incinerated trash deposit was identified as Stratum Ie, a dark reddish brown silty sandy loam that extended between 0.46 and 1.60 mbs (Figure 413 and Table 85). The deposit, exposed beneath four layers of fill material, likely truncated the upper extent of the underlying natural wetland/agricultural sediments (SIHP # -7426). A total of 17 artifacts were collected from the trash deposit. They consist of one porcelain cup, 12 glass fragments (from 12 bottles), an earthenware fragment and three insulator fragments (Table 86 and Figure 414 through Figure 416). The diagnostic American-made porcelain cup was manufactured between

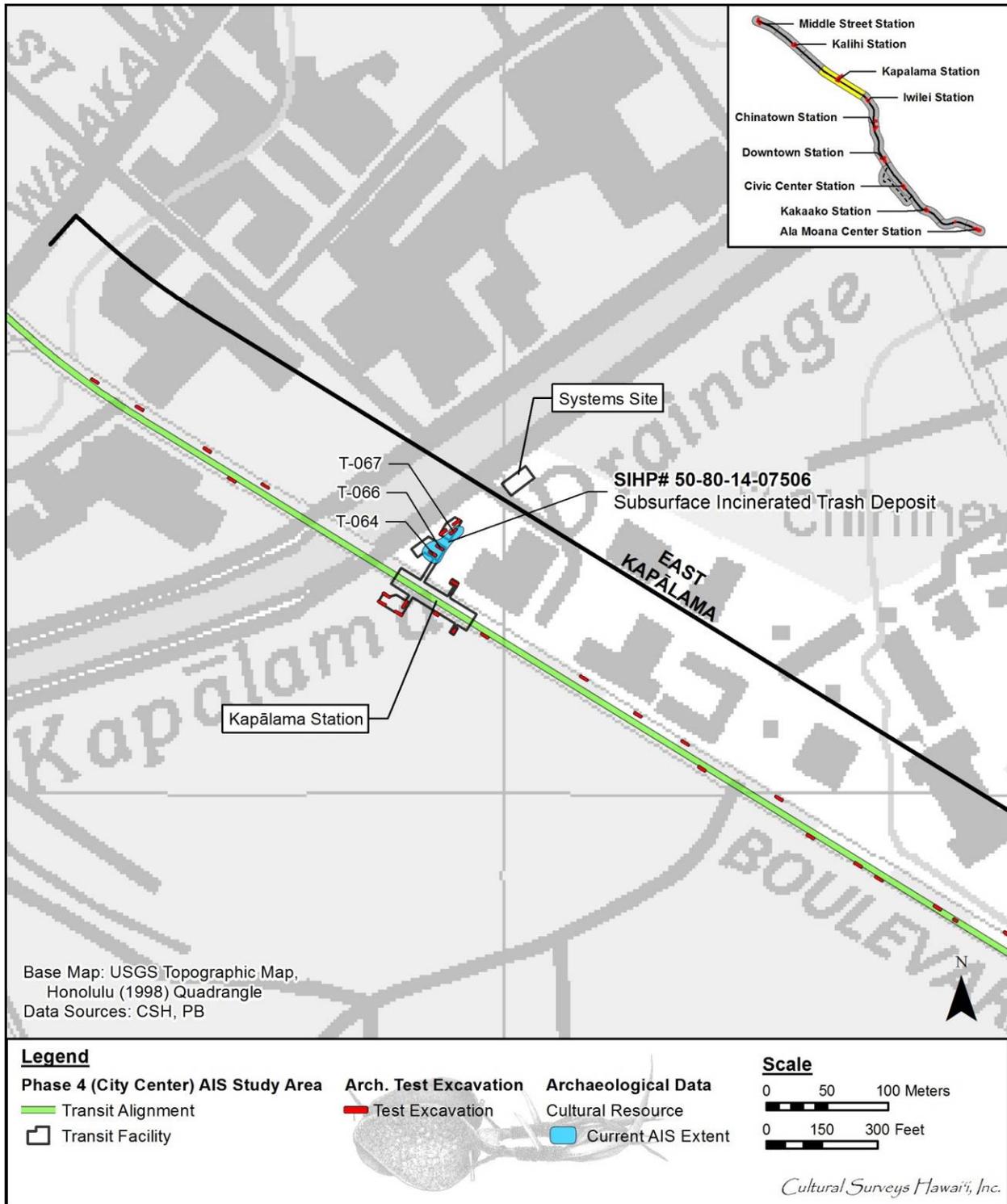


Figure 412. Location of incinerated trash deposit (SIHP #-7506) near the intersection of Kapālama Drainage Canal and Dillingham Boulevard (base map: 1998 USGS Topographic Map of Honolulu)

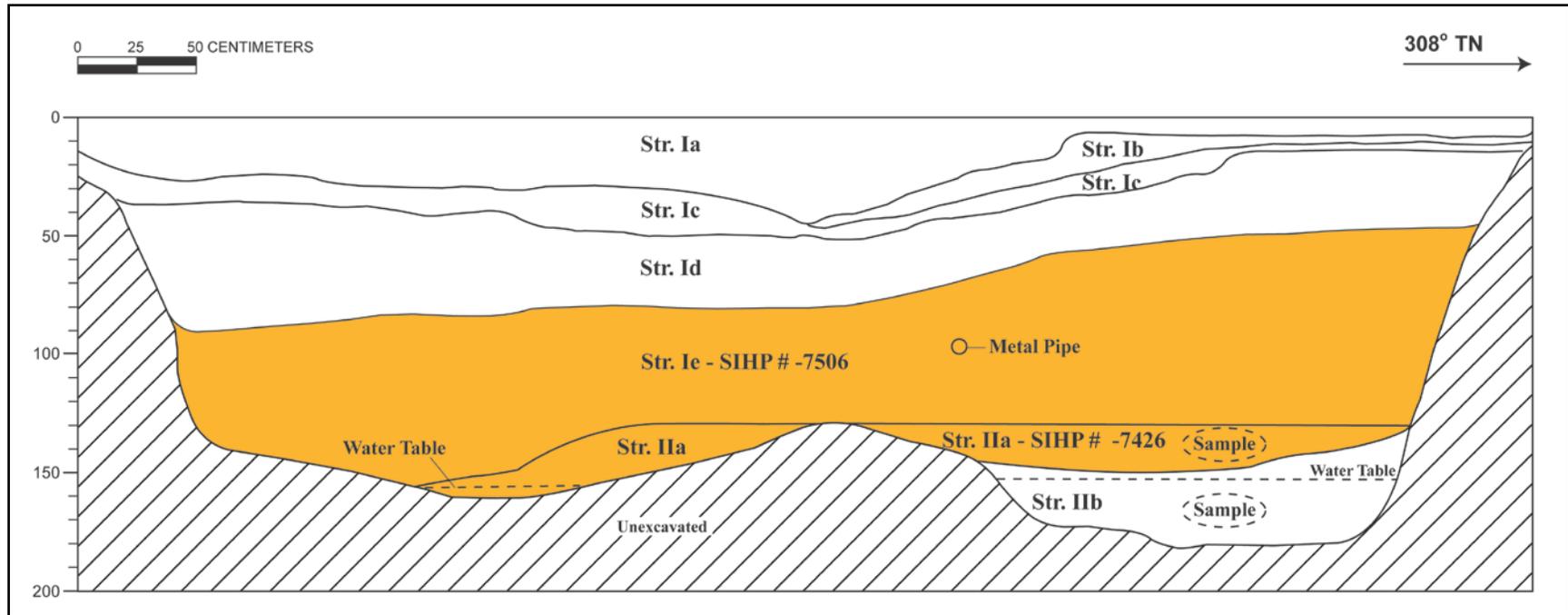


Figure 413. T-064 southwest wall profile, showing several fill layers (Strata Ia-Id) overlying the incinerator trash deposit (Stratum Ie, SIHP #-7506), which overlies wetland agricultural deposits (Stratum IIa, SIHP #-7426) and natural gley (Stratum IIb)

Table 85. T-064 Stratigraphic Description of the Southwest Wall

Stratum	Depth (cmts)	Description
Ia	0-46	Fill; 5 YR 3/4 (dark reddish brown); silty loam; fine, crumb structure; moist, very friable consistency; non-plastic; terrigenous origin; abrupt, irregular lower boundary; many, very fine to medium roots; landscaping fill
Ib	9-48	Fill; 10 YR 6/1 (light gray); gravelly fine silty sand; structureless; moist, loose consistency; non-plastic; mixed origin; abrupt, broken/discontinuous lower boundary; fill deposit
Ic	12-51	Fill; 7.5 YR 7/8 (reddish yellow); very fine sand; structureless, moist, loose consistency; non-plastic; marine origin; abrupt; smooth lower boundary; fill deposit
Id	15-90	Fill; 10 YR 5/4 (yellowish brown); extremely gravelly very fine silty sand; structureless; moist, loose consistency; non-plastic; mixed origin; clear, smooth lower boundary; contains concrete chunks and rebar
Ie	46-160	Fill; 5 YR 3/2 (dark reddish brown); silty sandy loam; moist, friable consistency; non-plastic; mixed origin; clear lower boundary; contained clear glass fragments, glass bottles, ceramics, faunal remains (collected), melted metal pieces (not collected); incinerated trash fill layer; designated a component of SIHP #-7506
IIa	130-160	Natural; 2.5 Y 3/1 (very dark gray); clay; massive, structureless; wet, slightly sticky consistency; very plastic; terrigenous origin; diffuse lower boundary; many, very fine roots; natural clay layer associated with wetland/agricultural sediment, designated a component of SIHP #-7426
IIb	130-180 (BOE)	Natural; GLEY 1 3/N (very dark gray); sandy clay; massive, structureless; wet, sticky consistency; slightly plastic; marine origin; lower boundary not visible

Table 86. Historic Artifacts from the Incinerated Trash Deposit (SIHP #-7506) in T-064 (note that the gap in the accession numbers reflects artifacts that were not part of SIHP #-7506)

Acc. #064-A-	Prov.	Ceramic Vessel Type	Portion	No.	Paste	Origin; Age	Comments
1	T-064, St. Ie, SIHP #-7506	Hollowware – cup	Complete	1	Porcelain	Euro-American; 1909–1914	Floral design, painted underglaze; Buffalo China Co., New York
Acc. #064-A-	Prov.	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
2	T-064, St. Ie, SIHP #-7506	Bottle, soda	Base–body	1	Green, light	American; 1945	Seven-Up bottle; Owens-Illinois Glass Co. base mark; bottler, Sunrise Soda Works, Kalihi-Pālama, O‘ahu
3	T-064, St. Ie, SIHP #-7506	Bottle, cosmetic	Body	1	White		Milk glass
4	T-064, St. Ie, SIHP #-7506	Bottle, beer	Complete	1	Amber	American; 1945	Anchor-Hocking Glass Co. base mark
5	T-064, St. Ie, SIHP #-7506	Bottle, beer	Complete	1	Amber	American; 1946	Owens-Illinois Glass Co. base mark
6	T-064, St. Ie, SIHP #-7506	Bottle, beer	Base	1	Amber	American; 1945	Anchor-Hocking Glass Co. base mark
7	T-064, St. Ie, SIHP #-7506	Bottle, beverage	Base	1	Clear	American; 1944	Hazel-Atlas Glass Co. base mark
8	T-064, St. Ie, SIHP #-7506	Bottle, medicine	Complete	1	Brown	American; 1945	H. Clay Glover Co., New York patent medicine; Owens-Illinois Glass Co. base mark
9	T-064, St. Ie, SIHP #-7506	Bottle, medicine	Complete	1	Clear	American; 1941	Owens-Illinois Glass Co. base mark
10	T-064, St. Ie, SIHP #-7506	Bottle, medicine	Complete	1	Clear	1920s – post	Date based on color

Acc. #064-A-	Prov.	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
11	T-064, St. Ie, SIHP #-7506	Bottle, condiment	Complete	1	Clear	1920s – post	ABM bottle
12	T-064, St. Ie, SIHP #-7506	Jar, cosmetic	Complete	1	Clear	American; 1920s – post	“Seventeen” on base; ABM jar
13	T-064, St. Ie, SIHP #-7506	Bottle, beverage	Complete	1	Clear	American; 1945	Owens-Illinois Glass Co. base mark and date code
Acc. #064-A-	Prov.	Misc. Type	Portion	No.	Material	Origin; Age	Comments
19	T-064, St. Ie, SIHP #-7506	Ceramic item	Complete	1	Refined Earthenware	Unknown	Reddish brown slip glaze molded piece shaped like a horn with a hole
20	T-064, St. Ie, SIHP #-7506	Insulator	Fragment	1	Ceramic (porcelain)	American; 1915 – post	Made by Pyrex, G.E. U.S.A.
21	T-064, St. Ie, SIHP #-7506	Insulator	Fragment	1	Composite		Porcelain and metal
22	T-064, St. Ie, SIHP #-7506	Insulator cleat	Fragment	1	Ceramic (porcelain)	American; 1919 – post	Made by Universal Clay Products Co., Sandusky, OH



Figure 414. American porcelain cup (Acc. #064-A-1; left) and earthenware item (Acc. #064-A-2; right) from SIHP # -7506 in T-064



Figure 415. Glass bottles and bottle fragments (Acc. #064-A-3 to A-13, shown from left to right and top to bottom) from SIHP # -7506 in T-064



Figure 416. Glass beverage bottle (Acc. #064-A-14) from SIHP # -7506 in T-064

1909 and 1914. The two porcelain insulators post-date 1915, and the glass bottles are mainly American-made and date to the 1940s. Five terrestrial faunal fragments (possible Aves and *Bos taurus*) were collected.

Within T-066, the incinerated trash deposit was identified as Stratum Ic, a brown very gravelly silty loam, that extended between 0.45 and 1.55 mbs (Figure 417, Figure 418, and Table 87). The deposit, located beneath two fill layers, likely truncated the underlying natural wetland/agricultural sediments (SIHP #50-80-14-7426). The 30 accessioned artifacts collected from SIHP #-7506 within T-066 consist of 12 ceramic fragments (minimum of 9 vessels) and 23 glass fragments (minimum of 8 bottles) (Table 88, Figure 419, and Figure 420). The ceramics include both Asian and Euro-American wares. One American ironstone toiletry item was made by the Hall China Co. of Ohio, sometime after 1903. Another fragment is from an American fiestaware vessel most common from the 1930-1950s period. The bottles were all made post-1860s, with many dating after the mid-1920s. A 1948 bottle was collected, indicating that deposition within SIHP #-7506 continued until at least 1948, but possibly later. Terrestrial faunal remains (*Bos taurus* and *Sus scrofa*) also were collected from the trash deposit. The *Bos taurus* remains had evidence of being butchered and/or cut with a metal blade, indicating they were food remnants.

Within T-067, the incinerated trash deposit was identified as Stratum Ib, a very dark brown very gravelly loamy sand, that extended between 0.38 and 1.56 mbs (Figure 421, Figure 422, and Table 89). The deposit, overlain by landscaping fill, likely truncated the natural wetland/agricultural sediments (SIHP # -7426). A total of 20 accessioned artifacts were collected from the trash deposit within T-067. These consist of 3 ceramic fragments (from 2 spoons and 1 tableware piece), 7 complete glass bottles and 2 glass bottle fragments (minimum of 9 bottles), and 10 miscellaneous artifacts, including a bullet, a metal cup, a fork, and a spoon. (Table 90 and Figure 423 through Figure 425). All of the bottles were made in an Automatic Bottle Machine (post-1903), all dated after 1920, and seven were identified to specific American companies, including several 1940s beverage and medicine bottles. Also collected were three terrestrial faunal remains (possible *Bos Taurus* and *Felis catus*).

The historic items observed within SIHP # -7506 appear to have been heated to high temperatures, consistent with incineration rather than open-air burning. Overall, most of the artifacts were dated to the early 1900s, with a number dating from the 1930s to 1950s. The latest precisely-dated artifact was manufactured in 1948, indicating SIHP #-7506 deposition continued until at least 1948.

The dates of the artifact assemblage suggest some material may have come from the nearby City and County of Honolulu Kapalama Incinerator (Figure 426). A growing urban population and accumulating trash led the Public Works Agency to promise federal funds to build two new incinerators in 1942 (Johnson 1991). The new Kapalama incinerator was built alongside Kokea Street in Kalihi while its twin, the Kewalo incinerator, was built further east. Both incinerators were completed at the end of World War II and remained in use until 1977. The Kapalama incinerator is present on a 1950 Sanborn Fire Insurance Map and labeled as fire proof and built in 1945. The time frame provided by dateable artifacts is consistent with the Kapalama incinerator's period of operation.

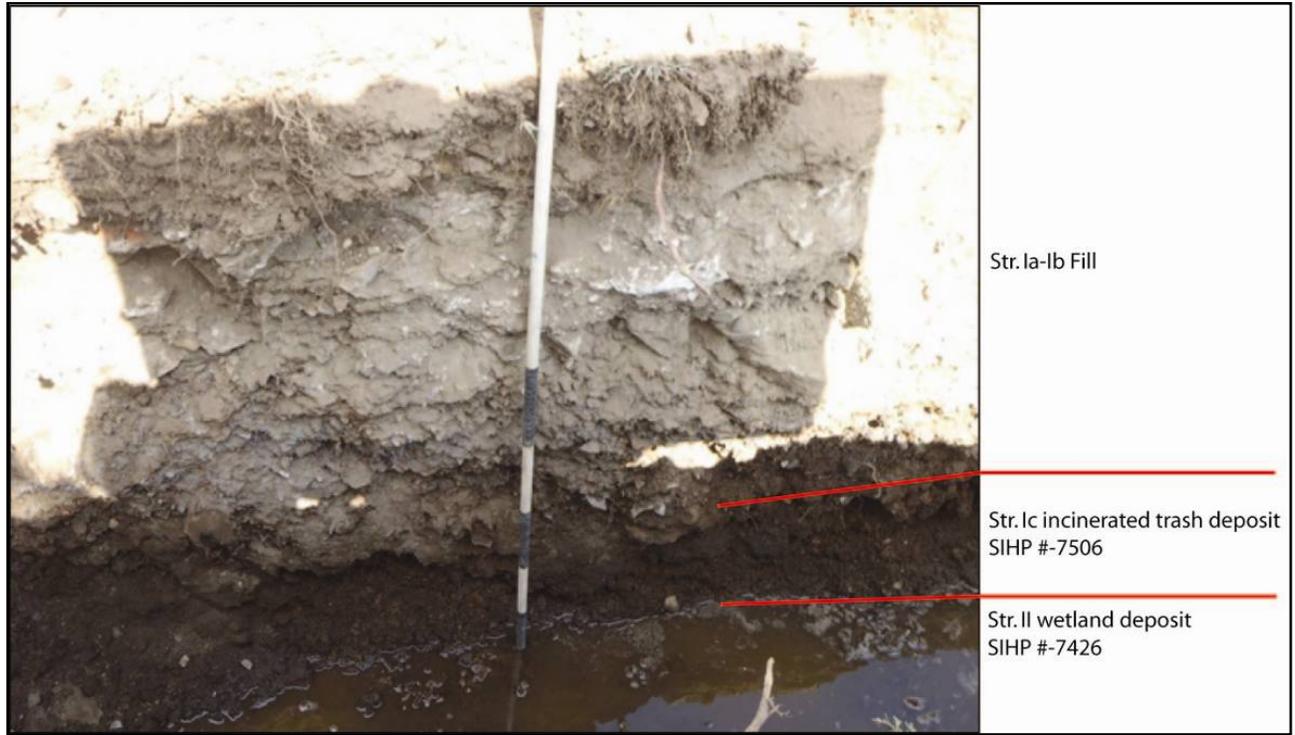


Figure 417. T-066 northeast wall profile, view to northeast

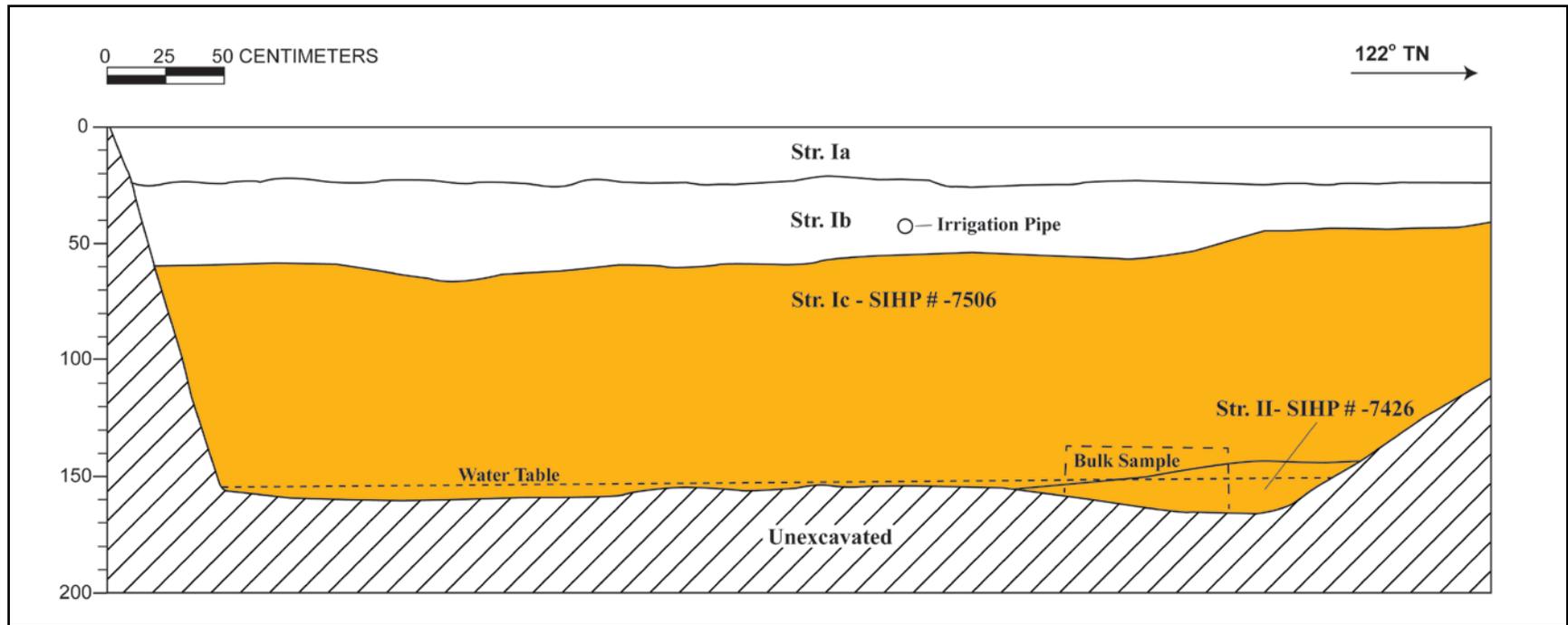


Figure 418. T-066 northeast wall profile, showing two fill layers (Strata Ia and Ib) overlying the incinerator trash deposit (Stratum Ic, SIHP # -7506), which overlies the wetland agricultural deposits (Stratum IIa, SIHP #-7426)

Table 87. T-066 Stratigraphic Description of the Northeast Wall

Stratum	Depth (cmts)	Description
Ia	0-27	Fill; 10 YR 4/2 (dark grayish brown); gravelly sandy loam; structureless, single-grain; dry, loose consistency; non-plastic; terrigenous origin; abrupt, smooth lower boundary; many, fine roots; modern A-horizon, landscape fill
Ib	25-66	Fill; 10 YR 5/3 (brown); very gravelly clay loam; structureless, massive, moist, firm consistency; slightly plastic; mixed origin; diffuse, smooth lower boundary; common, fine roots; contained coral cobbles
Ic	45-155	Fill; 10 YR 5/3 (brown); very gravelly silty loam; moist, friable consistency; clear, smooth lower boundary; contained faunal, bottle, glass, ceramic, metal; incinerated historic refuse deposit; designated a component of SIHP #-7506
II	146-168 (BOE)	Natural; 10 YR 3/1 (very dark gray); clay; weak, fine, blocky structure; wet, slightly sticky consistency; plastic; terrigenous origin; lower boundary not visible; peaty substance present; designated a component of SIHP #-7426

Table 88. Historic Artifacts from the Incinerated Trash Deposit (SIHP #-7506) in T-066

Acc. #066-A-	Prov.	Ceramic Vessel Type	Portion	No.	Paste	Origin; Age	Comments
1	T-066, St. Ic, SIHP #-7506	Hollowware – chamber pot or wash basin	Body (2); base (1)	3	Refined earthenware	American; post-1903	Ironstone; Hall China Co., Ohio base mark
2	T-066, St. Ic, SIHP #-7506	Hollowware – bowl	Base to rim	1	Refined earthenware	Euro-American	Ironstone; one brown rim band
3	T-066, St. Ic, SIHP #-7506	Flatware – plate	Rim	1	Refined earthenware	Euro-American	Ironstone; two green rim bands
4	T-066, St. Ic, SIHP #-7506	Flatware	Base	1	Refined earthenware	Euro-American	Ironstone; no decoration on fragment
5	T-066, St. Ic, SIHP #-7506	Flatware	Rim	1	Refined earthenware	Euro-American	Whiteware; relief molded
6	T-066, St. Ic, SIHP #-7506	Tableware	Rim to body	1	Refined earthenware	Euro-American; post-1930	Yellow Fiestaware; relief molded
7	T-066, St. Ic, SIHP #-7506	Hollowware	Rim, body	2	Porcelain	Asian	Blue floral, painted underglaze
8	T-066, St. Ic, SIHP #-7506	Flatware	Rim	1	Refined earthenware	Euro-American	Whiteware; relief molded; polychrome floral, painted underglaze
9	T-066, St. Ic, SIHP #-7506	Hollowware – bowl	Base to body	1	Porcelain	Asian	High foot; no decoration on fragment
Acc. #066-A-	Prov.	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
10	T-066, St. Ic, SIHP #-7506	Bottle, medicine	Complete	1	Blue, cobalt	American; post-1920	Vicks Vapo-rub
11	T-066, St. Ic, SIHP #-7506	Bottle	Complete	1	Green, light	American; 1920 – post	“DE S PAT” “9248” embossed

Acc. #066-A-	Prov.	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
12	T-066, St. Ic, SIHP #-7506	Bottle, cosmetic	Complete	1	White	American; 1920–1950s	Milk glass; “WOODBURY”
13	T-066, St. Ic, SIHP #-7506	Bottle	Body	2	Amber		
14	T-066, St. Ic, SIHP #-7506	Bottle	Base	1	Aqua	1860s – post	Fragment embossed “6”
15	T-066, St. Ic, SIHP #-7506	Bottle	Body	1	Blue, cobalt		
16	T-066, St. Ic, SIHP #-7506	Bottle, beverage	Base	1	Clear	1932 – post	Glenshaw Glass Co. base mark
17	T-066, St. Ic, SIHP #-7506	Bottle, beverage	Body	1	Clear	American; 1933–1955	Delaware Punch; bottled by Nesbitt Bottling Co., O‘ahu
18	T-066, St. Ic, SIHP #-7506	Bottle	Body	2	Clear	1870s – post	Fused (heat-altered) fragments
19	T-066, St. Ic, SIHP #-7506	Bottle	Body	1	Clear	1870s – post	
20	T-066, St. Ic, SIHP #-7506	Vial, medicine	Body	1	Clear	1870s – post	
21	T-066, St. Ic, SIHP #-7506	Bottle, beverage	Lip	1	Clear	1907 – post	
22	T-066, St. Ic, SIHP #-7506	Bottle, beverage	Neck–lip	1	Clear	1907 – post	Letters on fragment “NOT”
23	T-066, St. Ic, SIHP #-7506	Bottle	Neck–lip	1	Clear	1920 – post	Narrow-mouth
Acc. #066-A-	Prov.	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments

24	T-066, St. Ic, SIHP #-7506	Bottle	Neck-lip	1	Clear	1920 – post	Narrow-mouth
25	T-066, St. Ic, SIHP #-7506	Bottle, beverage	Neck-lip	1	Clear	1907 – post	
26	T-066, St. Ic, SIHP #-7506	Bottle	Complete	1	Clear	1920 – post	Diamond shape, wide mouth; embossed on base “28 1405”
27	T-066, St. Ic, SIHP #-7506	Bottle, beverage	Complete	1	Clear	American; 1930s– 1940s	Owens Illinois Glass Co. base mark for 1930s or 1940s
28	T-066, St. Ic, SIHP #-7506	Bottle	Base– body	1	Green, light	American; 1948	Owens Illinois Glass Co. base mark
29	T-066, St. Ic, SIHP #-7506	Bottle, beverage	Body	1	Green, light	American; 1917 – post	Hobble skirt Coca-Cola bottle
30	T-066, St. Ic, SIHP #-7506	Bottle, beverage	Neck-lip	1	Green, light	1907 – post	



Figure 419. Ceramic fragments from SIHP # -7506 in T-066; American ironstone toiletry item (post-1903) (Acc. #066-A-1; top); Euro-American earthenware vessels (Acc. #s 066-A-2 to A-6, A-8, left to right; middle row and middle bottom); Asian ceramics (Acc. #s 066-A-7, A-9, left, bottom)



Figure 420. Glass bottles and bottle fragments (Acc. #s 066-A-10 to A-30) from SIHP # -7506 in T-066



Figure 421. Northwest profile of T-067 depicting one fill layer (Stratum Ia) overlying the incinerated trash deposit (Stratum Ib, SIHP #-7506), which overlies the wetland agricultural sediments (Stratum II, SIHP #-7426) and the decomposing coral shelf (Stratum III; not visible), view to west

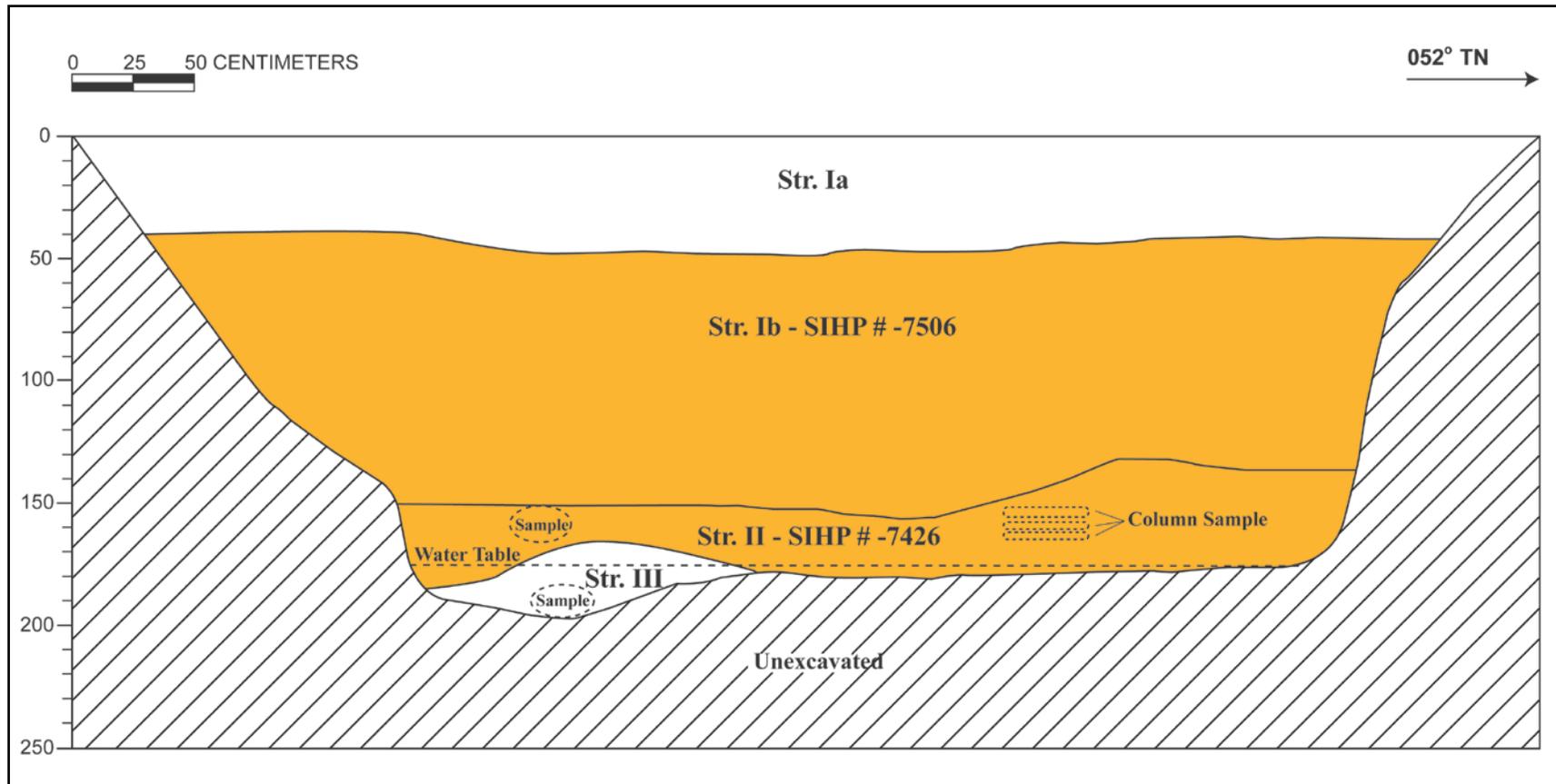


Figure 422. T-067 northwest wall profile, showing one fill layer (Stratum Ia) overlying the incinerated trash deposit (Stratum Ib, SIHP # -7506), which overlies the wetland agricultural sediments (Stratum II, SIHP # -7426) and the decomposing coral shelf (Stratum III)

Table 89. T-067 Stratigraphic Description of the Northwest Wall

Stratum	Depth (cmbs)	Description
Ia	0-50	Fill; 10 YR 4/3 (brown); very gravelly sandy loam; weak, medium, crumb structure; dry, weakly coherent consistency; non-plastic; mixed origin; clear, smooth lower boundary; many, medium to coarse roots; landscaping fill with organics and medium trash
Ib	38-156	Fill; 10 YR 3/2 (very dark grayish brown); very gravelly loamy sand; structureless, single-grain; dry, loose consistency; non-plastic; mixed origin; abrupt, smooth lower boundary; few, medium roots; contained glass bottles, ceramics, metal, miscellaneous items, faunal (collected); incinerated historic refuse deposit; designated a component of SIHP #-7506
II	132- 180	Natural; GLEY 2 2.5/1 (bluish black); silty clay; structureless, massive; wet, slightly sticky consistency; very plastic; mixed origin; abrupt, smooth lower boundary; few, very fine roots; contained some historic trash, glass bottles, ceramic, metal; possible rice paddy/taro field/sugar cane sediments, designated a component of SIHP #-7426
III	165-198 (BOE)	Natural; 10 YR 3/6 (dark yellowish brown); extremely gravelly clayey sand; structureless, single-grain; wet, slightly sticky consistency; slightly plastic; marine origin; lower boundary not visible; decomposing coral gravels

Table 90. Historic Artifacts from SIHP #-7506 in T-067 (note that the gap in the accession numbers reflects artifacts that were not part of SIHP #-7506)

Acc. #067-A-	Prov.	Ceramic Vessel Type	Portion	No.	Paste	Origin; Age	Comments
1	T-067, St. Ib, SIHP #-7506	Serving utensil – spoon	Body	1	Refined earthenware	Euro-American	Whiteware; no decoration; broken slotted spoon
2	T-067, St. Ib, SIHP #-7506	Serving utensil – spoon	Body	1	Porcelain; painted	Asian	Asian-style soup spoon; white with blue flowers, painted underglaze
3	T-067, St. Ib, SIHP #-7506	Tableware	Base–body	1	Refined earthenware	Euro-American	Whiteware, blue floral, painted underglaze
Acc. #067-A-	Prov.	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
4	T-067, St. Ib, SIHP #-7506	Bottle, soda	Complete	1	Clear	American; 1934/1944	Bireley's Soda; Owens-Illinois Glass Co. base mark
5	T-067, St. Ib, SIHP #-7506	Bottle, medicine	Complete	1	Clear	American; 1938–1969	Armstrong Cork Co. base mark
6	T-067, St. Ib, SIHP #-7506	Bottle, medicine	Complete	1	Clear	American; 1942 – post	“NEUTRA GLAS” “N – 51A” “U.S.A.” “4” – melted neck (Myers 2010)
7	T-067, St. Ib, SIHP #-7506	Bottle, medicine	Complete	1	Clear	American; 1942 – post	Embossed on base: “NEUTRA GLAS” “N – 51A” “U.S.A.” “21” (Myers 2010)
8	T-067, St. Ib, SIHP #-7506	Bottle, cleaner	Neck–lip	1	Amber	American; 1940–1962	Half gallon neck and handle; possible Clorox bottle
9	T-067, St. Ib, SIHP #-7506	Jar, Food/ cosmetic	Complete	1	Clear	American; 1943	Owens-Illinois Glass Co. base mark
10	T-067, St. Ib, SIHP #-7506	Bottle, cosmetic	Complete	1	White	1920 – post	Milk glass
11	T-067, St. Ib, SIHP #-7506	Bottle, cosmetic	Complete	1	White	1920 – post	Milk glass

Acc. #067-A-	Prov.	Glass Bottle Type	Portion	No.	Color	Origin; Age	Comments
12	T-067, St. Ib, SIHP #-7506	Bottle, food	Base	1	Clear	American; 1936/1946	Owens-Illinois Glass Co. base mark
Acc. #067-A-	Prov.	Misc. Type	Portion	No.	Material	Origin; Age	Comments
15	T-067, St. Ib, SIHP #-7506	Cup	Complete	1	Metal		Plain metal cup, rusted and very bent
16	T-067, St. Ib, SIHP #-7506	Unknown metal item	Fragment	1	Metal		
17	T-067, St. Ib, SIHP #-7506	Ceramic item	Fragment	1	Stoneware		Possible architectural or electrical
18	T-067, St. Ib, SIHP #-7506	Animal statuette	Fragment	1	Earthenware		Leg of small animal statuette
19	T-067, St. Ib, SIHP #-7506	Glass item	Fragment	1	Glass		Looks like a hand
20	T-067, St. Ib, SIHP #-7506	Fork	Complete	1	Metal		Plain dinner fork with 4 tines; metal extremely rusted and warped
21	T-067, St. Ib, SIHP #-7506	Spoon	Complete	1	Metal		Small, plain baby spoon; metal rusted and warped
22	T-067, St. Ib, SIHP #-7506	Cylindrical object	Fragment	1	Unknown		Black, light-weight material; clean edges
23	T-067, St. Ib, SIHP #-7506	Screw	Complete	1	Metal		Hollow metal screw
24	T-067, St. Ib, SIHP #-7506	Bullet cartridge	Complete	1	Metal		Rusted, hollow opening at bottom that is bent in



Figure 423. Ceramic artifacts from SIHP #-7506 in T-067; Euro-American whiteware slotted spoon (Acc. #067-A-1; left); Asian porcelain spoon (Acc. #067-A-2; upper right); Euro-American whiteware tableware (Acc. #067-A-3; lower right)



Figure 424. Glass bottles and glass bottle fragments (Acc. s# 067-A-4 to A-12, shown from left to right and top to bottom) from SIHP # -7506 in T-067



Figure 425. Miscellaneous artifacts (Acc. #s 067-A-15 to A-24, shown from left to right and top to bottom) from SIHP # -7506 in T-067

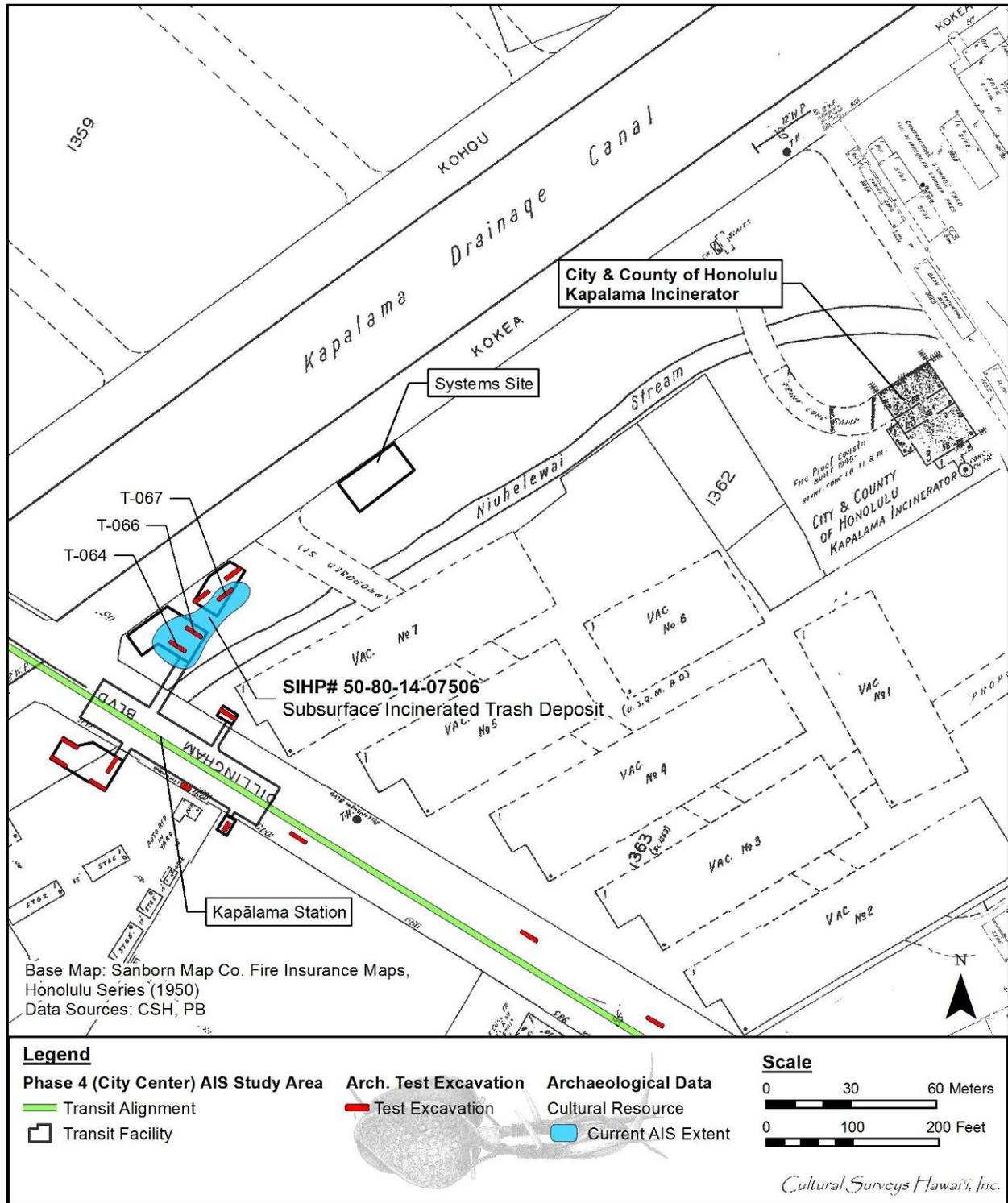


Figure 426. Portion of the 1950 Sanborn Fire Insurance Map showing SIHP #-7506 in relation to the Kapalama incinerator

SIHP #-7506 is a historic-era incinerated trash deposit identified in three test excavations (T-064, T-066, and T-067) in the current City Center AIS study area. SIHP #-7506 was observed beneath more recent fill layers and atop natural wetland agricultural sediments (SIHP #50-80-14-7426). The trash deposit may have truncated the upper limits of SHIP #-7426. The trash remains include ceramic vessel fragments, glass bottles and bottle fragments, melted metal, insulators, miscellaneous household items, and faunal remains. Historic maps and artifact analysis suggest deposition continued to 1948 or later, with material likely being locally obtained from the Kapalama incinerator. Based on the presence of wetland sediments below SIHP #-7506, the trash deposit is interpreted as a localized deposit related to land reclamation activities dating to the mid-twentieth century.

Based on the guidance of National Register Bulletin No. 15, SIHP # 50-80-14-7506 retains its integrity of location and materials. The incinerated trash deposit is buried and its surroundings (the land above and post-dating the trash deposit) have been completely altered by modern development since the trash was deposited. Based on the results of this investigation, CSH recommends that this cultural resource only maintains sufficient integrity to support its historic significance under Criterion D (has yielded, or is likely to yield, information important for research on prehistory or history) of the Hawai'i and the National Registers, exclusively for its information potential.

SIHP #50-80-14-7506 has provided, and can potentially provide additional information, related to the geographic distribution and materials of twentieth century refuse disposal and land reclamation efforts in the East Kapālama Geographic Zone. The possibility of encountering additional incinerated trash deposits during future project-related ground disturbance warrants the implementation of an archaeological monitoring program. Archaeological monitoring is expected to provide further stratigraphic exposures that may yield additional information concerning SIHP #-7506 and to provide opportunities for further sampling and comparison of this trash deposit with others present within the area (e.g., SIHP #-7189 and -7193).