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Archaeological Monitoring of Improvements to Building 652, Port of San Antonio, San Antonio, Bexar County, Texas

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Archaeological Monitoring of Improvements to Building 652, Port of San Antonio, San Antonio, Bexar County, Texas

Antiquities Permit #7201

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Abstract

At the request of the Port of San Antonio, Pape-Dawson conducted archaeological monitoring of the proposed flood improvements to Building 652 at Kelly Air Force Base in San Antonio, Texas. These improvements consisted of construction of walls on the north, south, and west sides of the building to protect the structure from flooding episodes due to road surface run off. These walls are approximately 1,016 feet (ft) (310 meters [m]) in total length, 1 ft (0.30 m) in width, and 3 ft (1 m) in depth.

Since this project is located on land owned by the Port of San Antonio, which is a political subdivision of the state of Texas, compliance with the Antiquities Code of Texas (ACT) is necessary. In addition, federal funds are being used as part of this project, which requires compliance with Section 106 of the National Historic Preservation Act.

Fieldwork took place intermittently between May 26 and September 3, 2015. Based on coordination with the City of San Antonio (COSA) Archaeologist and the Texas Historical Commission (THC), Pape-Dawson archaeologists monitored approximately 30% of the total trenching time for wall construction to determine whether soils are intact or if fill exists in these locations. Archaeologists also visually inspected all open trenches at the time of monitoring. Archaeologists observed disturbed soils at each wall location, and no cultural materials were observed or recovered. Project records and photographs will be curated at the Center for Archaeological Research (CAR) at the University of Texas San Antonio. Based on the results of the investigation, Pape-Dawson archaeologists recommend that no further archaeological work is necessary for the proposed project.

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Management Summary

The Port of San Antonio is constructing flood control improvements around Building 652 on the former Kelly Air Force Base. These improvements consist of drilling deep piers and constructing a wall over the piers on the north, south, and west sides of the building. The project area and area of potential effects (APE) consist of the footprint of the walls, which have a total length of approximately 1,016 ft (310m) and will be approximately 1 ft (0.30 m) wide and 3 ft (1 m) deep. The total acreage for the project area is 0.02 acres (0.008 hectares).

As this project will is located on land owned by a political subdivision of the state of Texas, compliance with the Antiquities Code of Texas (ACT) is necessary. In addition, federal funding is being used for the project, which will require compliance with Section 106 of the National Historic Preservation Act. The archaeological work in this report is intended to provide compliance for both regulations.

Pape-Dawson archaeologists intermittently monitored construction of the flood control walls between May 26 and September 3, 2015. Nesta Anderson was the Principal Investigator and Jacob Sullivan served as the field crew. No cultural resources were observed during the monitoring efforts, and no archaeological sites were recorded. Therefore, it is recommended that no further archaeological work is necessary for the proposed undertaking and that the project be allowed to proceed.

Introduction

On behalf of the Port of San Antonio, Pape-Dawson conducted archaeological monitoring for the proposed improvements to Building 652 at Kelly Air Force Base in San Antonio, Bexar County, Texas (Figure 1). These improvements required subsurface ground disturbance to construct flood walls around Building 652 that will help to mitigate flooding episodes from road surface run off. Since this project is located on land owned by a political subdivision of the City of San Antonio, and ultimately the state of Texas, compliance with the Antiquities Code of Texas (ACT) is necessary. Federal funding will be used for the project, which also requires compliance with Section 106 of the National Historic Preservation Act.

Foundations for three non-contiguous walls, which wrap partially around the building, were excavated on the north, south, and west sides of the building. Construction crews first excavated a series of trenches a few feet deep, then drilled deeper holes within the trenches to set piers that will anchor the base of the wall to bedrock or stable soils. The archaeological project area (project area) and APE is the footprint of the walls, which have a total length of roughly 1,016 ft (310 m), are approximately 1 ft (0.30 m) wide and approximately 3 ft (1 m) deep. The project area covers a total area of approximately 0.02 acres (0.008 hectares). A review of soils in the project area suggests that they have limited potential to contain buried cultural deposits, but if present, cultural deposits are not likely to be deeply buried by natural processes. However, it is possible that the area surrounding the building has been built up with fill; a map included with an Environmental Narrative prepared by TEAM Integrated Engineering, Inc. in 2013 shows fill is present throughout the property (see Appendix).

Project Setting

The project area is located at 541 Citrus Road within the former Kelly Air Force Base south of Military Highway in southwest San Antonio, Bexar County. More specifically, the project area surrounds Building 652 (Figure 2), an existing aircraft engine test cell facility building. Military Highway is located north of Building 652; additional buildings are located both east and south of Building 652, and Leon Creek runs along the southern and western borders of the parcel containing Building 652.

The project area is geologically mapped as Pleistocene-age Fluviatile Terrace Deposits (Bureau of Economic Geology 1983). Soils within the project footprint are mapped as Sunev clay loam, 3 to 5 percent slopes. Sunev soils are taxonomically classified as Mollisols and are formed in loamy alluvium. These soils are located on nearly level to moderately steep stream terraces or footslopes of valleys and ridges and are characterized by very dark grayish brown loam (A-Horizon) overlying brown loam (B-Horizon) at an average depth of 12 in (30 cm) below the surface (United States Department of Agriculture [UDSA] 2015).

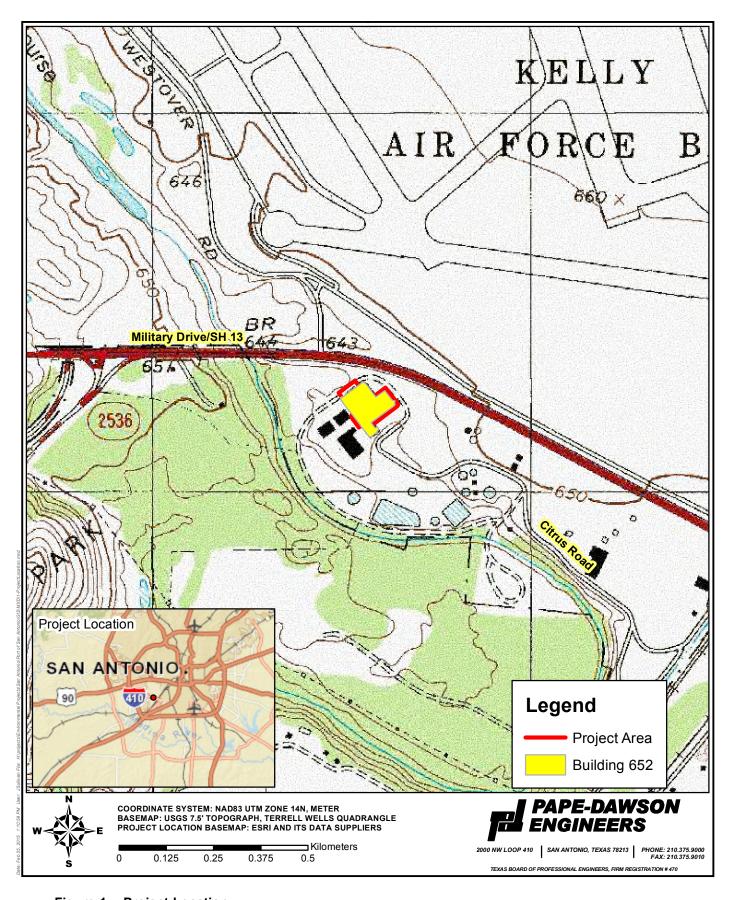


Figure 1: Project Location

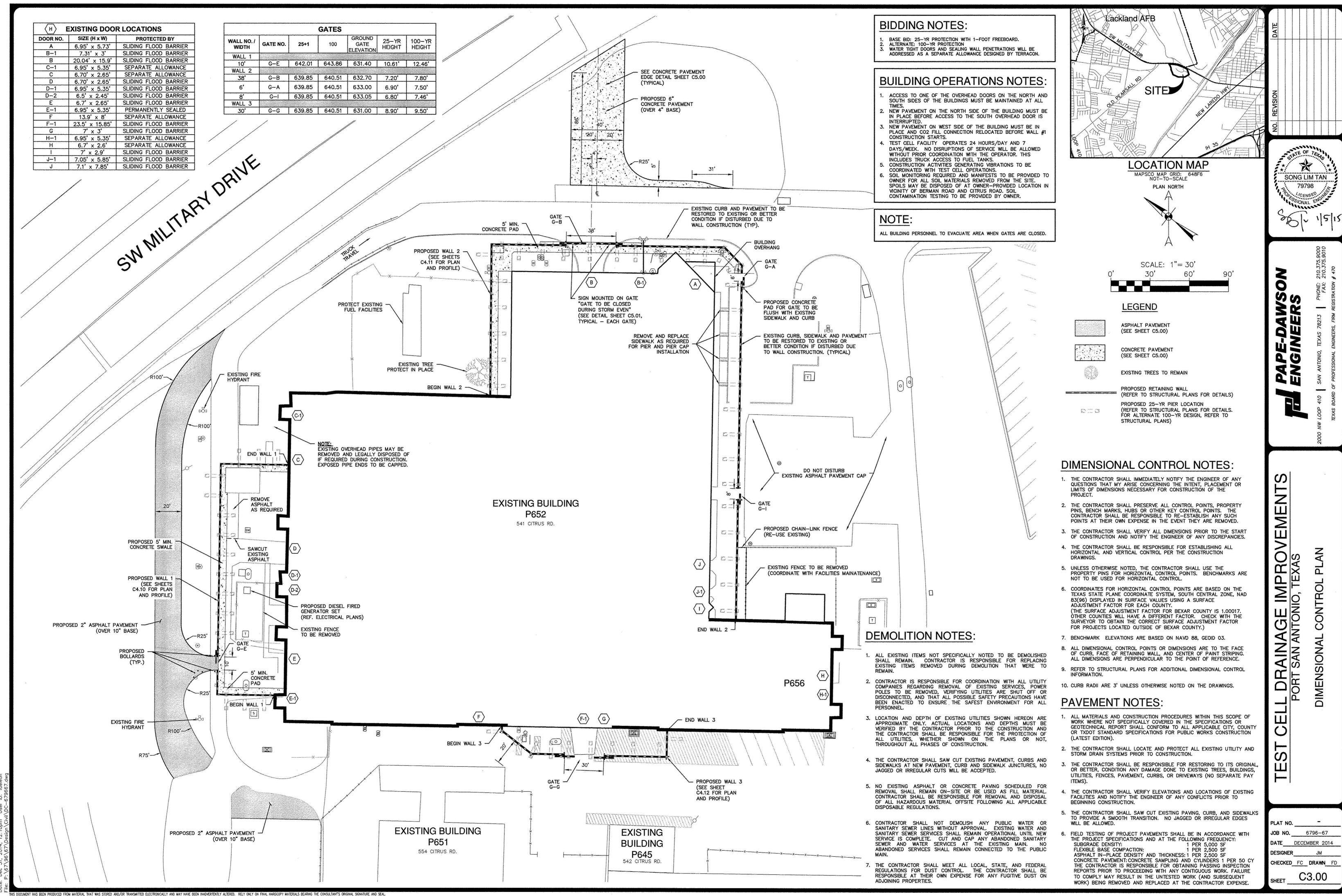


Figure 2 : Project Schematic

Methods

Records Review

Prior to fieldwork, a Pape-Dawson archaeologist consulted the Texas Historical Commission's (THC) online Restricted Archaeological Sites Atlas and the Historic Sites Atlas to identify previously recorded archaeological sites, previous archaeological surveys, National Register of Historic Places (NRHP) listed properties and sites, NRHP districts, cemeteries, Recorded Texas Historic Landmarks (RTHL), Official Texas Historical Markers (OTHM), State Antiquities Landmarks (SAL), and San Antonio Historic Landmarks located within one kilometer (km) of the project area. In addition, archaeologists consulted archaeological site records at the Texas Archeological Research Laboratory (TARL).

In addition to the cultural resources records review, Pape-Dawson reviewed Sanborn maps and historic topographic maps and aerial photographs to identify historic age structures and previous impacts that may have occurred at the project location. The available Sanborn maps (Sanborn Fire Insurance Company July 1885, Oct. 1888, Feb. 1892, 1896, 1904, 1911-1924, 1911-Mar. 1951, and additional sheets 1911-1952) do not provide coverage for the project area for any of the years available. Historic topographic maps and aerial photographs (NETR Online var. 2011) provided information on the project area from 1955 to 2004.

Fieldwork

Foundations for three non-contiguous walls, which wrap partially around the building, were designed to be excavated on the north, south, and west sides of the building. Construction crews first excavated trenches that run perpendicular to the wall footprint to a depth of 2-3 ft (0.61-1.0 m), then drill deeper holes within the trenches to set piers. The piers will anchor the base of the wall to bedrock or stable soils. Based on coordination with the COSA Archaeologist and the THC, Pape-Dawson archaeologists observed approximately 30% of the entire trench excavation, monitoring the trenches for archaeological deposits and/or features. Archaeologists also visually inspected all open trenches for cultural deposits. Trenches were approximately 2 ft (0.61 m) wide and 4 ft (1.2 m) long. Archaeologists photographed trenches and created representative profile descriptions. All project records and photographs will be curated at the Center for Archeological Research (CAR) at the University of Texas at San Antonio.

Results

Records Review

The results of the cultural resources background review identified no previously recorded archaeological sites or cultural resources within the project area. However, within 1 km of the project boundary one local historic landmark and two archaeological sites (41BX598 and 41BX1933) have been documented (Figure 3). Site 41BX598 is a thin prehistoric surficial lithic scatter located approximately 0.70 km (0.44 miles) southwest of the project area. The site was discovered during a 1983 wastewater pipeline survey conducted on the EPA's behalf. No culturally diagnostic materials were recovered, and no subsurface testing occurred. Site 41BX1933 and the local historic landmark reference the same historic farmstead

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complex that belonged to former mayor of San Antonio, Edward Dwyer. The archaeological site and the local historic landmark are both located west of the project area roughly 0.18 miles (0.30 km) and 0.09 miles (0.14 km), respectively. The site was recorded in 2012 by AmaTerra during a survey of the Western Watershed Sewer Relief Line. The site consists of three structures and one adobe foundation that likely date to the early 1800s. However, according to the recorder, the site exhibits limited research value.

A review of historic and modern aerial photographs and topographic maps shows that Building 652 is already present on the 1955 aerial photograph, and the 1963, 1973, and 1986 aerial photographs reveal it remained unchanged through that time. These photos show the building was actually two separate structures separated by a stretch of asphalt. By 1995, a building had been constructed between the two existing structures, effectively joining them into one facility. This configuration remains the same today. The aerials also indicate that the two structures immediately southwest of Building 652 have remained unchanged since 1955, but that other structure now situated south of Building 652 was not there in 1955. The southernmost structure first appears on the 1963 aerial and remains unchanged through the present.

Fieldwork

Pape-Dawson archaeologists intermittently monitored construction of the flood control walls between May 26 and September 3, 2015. Nesta Anderson was the Principal Investigator and Jacob Sullivan served as the field crew. Archaeologists monitored the excavation of a series of trenches measuring approximately 2 ft. (0.60 m) wide by 4 ft (1.2 m) long by 3 ft (1 m) deep (Figure 4). Trenches were typically spaced 11.5 ft (3.5 m) apart, and were placed 2.1 ft (0.64 m) from Building 652. The purpose of these trenches was to allow a series of piers to be drilled as anchors for the wall. The construction contractor used a bobcat backhoe with a 2 ft (0.60) wide bucket to excavate the trenches (Figure 5).

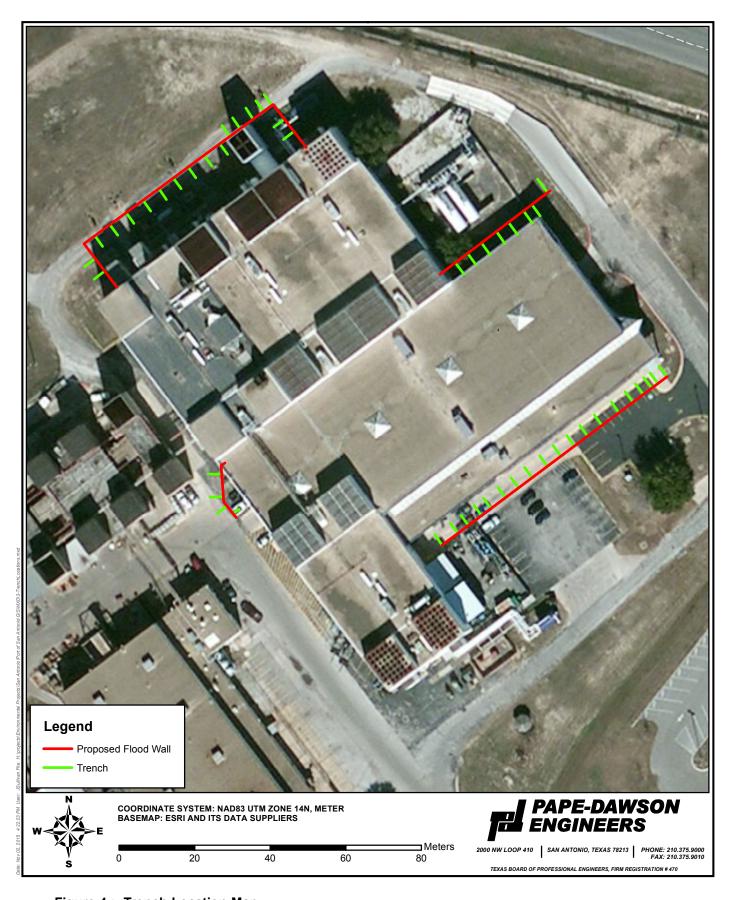


Figure 4: Trench Location Map



Figure 5 Backhoe digging trench for Wall 2

Trenches were excavated on the north, south, and west sides of Building 652, in order to lay the foundations for Walls 1, 2, and 3. Wall 1, which is located along the northwest side of the building, is in an area that appears to have been graded to subsoil (Figure 6). Typical profiles on the northwest side of the building show a caliche road base over a dark brown clay loam with approximately 40-50% limestone cobbles, which is representative of the B horizon in Sunev soils mapped for the project area. Pape-Dawson archaeologists observed the initial excavation of trenches associated with the wall and to find utilities; no cultural materials were observed during monitoring of this area.



Figure 6: Typical trench profile for Wall 1 facing east

Wall 2 is on both the east and southeast sides of the existing building. Archaeologists observed trench excavation associated with pier installation for this wall. Trenches contained a compact top layer of light brown sandy clay with dense limestone cobbles (caliche fill) that extended from below the asphalt at ground surface to 30-47 cm below ground surface. Below this layer, soils exhibited some variation, showing soil disturbance and fill. Soils underlying the caliche layer in the northernmost trenches consisted of dark yellowish brown silty clay loam to about 80 cm below ground surface (Figure 7). Soil underlying the caliche layer in the more southern trenches was a light gray sandy clay with limestone cobbles to a depth of approximately 90 cm below ground surface (Figure 8). Both these soils are not consistent with the soils mapped for the area and represent fill episodes.

Further evidence of disturbance was observed in the southernmost trench, which is closest to the building's southeast side. In this trench, soils below the caliche layer consisted of a dark grayish brown sandy clay to about 73 cm below ground surface and a very pale brown sand to about 1 m below ground surface. Below these layers was a concrete slab reinforced with rebar (Figure 9). Given that this trench was just over 1.5 feet (0.5 m) northeast of the existing wall of the building, it is likely that the reinforced concrete is associated with the construction of building 652. In addition, the project manager mentioned that another building and storage tanks were present in the area in the past. Although the aerial photographs reviewed do not show another building in this area, a structure predating 1955 could have

been present or could have been constructed and demolished between years of aerial coverage that archaeologists reviewed. No cultural deposits were observed in association with Wall 2 excavations.



Figure 7 Trench 15 profile (Wall 2) facing east



Figure 8 Trench 9 profile (Wall 2) facing east



Figure 9 Rebar in trench closest to the building

The foundation trenches for Wall 3, located along the southwest side of the building, had already been excavated before Pape-Dawson archaeologists were called to monitor. While piers had already been drilled and installed, archaeologists were able to observe the soil profiles in the trenches that connected the piers (Figure 10). Soils consisted of a dark yellowish brown clay loam with 50-75% small limestone gravels that extended anywhere from 0-80 cm below ground surface, but in some areas were capped by a compact caliche-based fill (Figure 11). This fill layer varied from 0-50 cm below ground surface. The gravels in the clay loam were mixed with chunks of asphalt down to 80 cm below ground surface, showing the soils had been disturbed; although this disturbance could have been associated with the current wall construction efforts. Archaeologists did not observe any cultural materials or deposits in association with these trenches.



Figure 10: Typical trench profile for Wall 3 facing west



Figure 11 Overview of Wall 3 and utility trenches showing caliche layer facing north

Summary and Recommendations

Pape-Dawson archaeologists conducted archaeological monitoring of the proposed flood improvements to Building 652 at the former Kelly Air Force Base intermittently between May and September 2015. Archaeologists monitored approximately 30% of the total trench excavation time per agreement with the City of San Antonio Archaeologist and the THC, and visually inspected all open trenches during each field visit. Anticipated depth of impact for the trenches was approximately 1 m below ground surface.

Monitoring showed that most of the soils surrounding the building have been disturbed or altered in some way. Trenches associated with Wall 1 indicate the top cultural layer of soil has been removed, soils associated with Wall 2 show clear evidence of disturbance, and soils from Wall 3 are also disturbed. No historic or prehistoric artifacts were located and no archaeological sites were recorded as a result of this survey. As there were no archaeological deposits observed, Pape-Dawson recommends that no further archaeological work is necessary in association with this project. However, if cultural material is encountered during construction, it is recommended that all work in the vicinity should cease and the COSA archaeologist and the THC be contacted.

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Appendix

