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Memorandum

To	Jonathan Ikan, Cultural Resources Manager, National Aeronautics and Space Administration (NASA)
Subject	Ames Research Center (ARC) Building 25 Rehabilitation Project
From	Trina Meiser, Senior Architectural Historian
Date	June 1, 2018

AECOM prepared this memorandum in support of NASA's responsibilities under Section 106 of the National Historic Preservation Act (NHPA) for the Building 25 Rehabilitation Project (project or undertaking) located at ARC, Moffett Field, Santa Clara County, California (**Figures 1 and 2**). This memorandum includes a description of the undertaking and the Area of Potential Effects (APE), the methodology used to identify and evaluate historic properties within the APE, a description of the affected historic properties, and the assessment of potential effects resulting from the undertaking. This analysis was conducted by Trina Meiser, M.A., Historic Preservation Planning, who meets the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations [C.F.R.] Part 61) for history and architectural history.

Building 25 is located along North Akron Road on Shenandoah Plaza and is a contributor to the U.S. Naval Air Station (NAS) Sunnyvale Historic District (known locally as the Shenandoah Plaza Historic District), which was listed in the National Register of Historic Places (NRHP) in 1994 (NRHP #94000045) (**Figure 3**) (**Attachment A**). Built in 1933 as the Administration and Auditorium Building, it has been vacant due to structural deficiencies, hazardous materials, and several other occupancy issues for several years. It is also located within the NASA Ames Research Park, which is an area of ARC designated as a shared-use research & development and education campus for industry, academia, non-profits, and government. Several public and private entities lease offices and facilities in the research park.

In 2000, Architectural Resources Group, Inc. (ARG) prepared *Building 25 Re-Use Guidelines* (**Attachment B**) along with other guidelines for buildings on Shenandoah Plaza to assist ARC with rehabilitation plans. The guidelines were intended to be a design aid in determining acceptable alterations, additions, and repairs for preserving the character of existing buildings. The reuse guidelines evaluated building conditions, identified character-defining features, and recommended rehabilitation treatments that would preserve the building's integrity in adherence to the Secretary of the Interior's Standards for Rehabilitation (Standards) (36 C.F.R. Part 68). The reuse guidelines also suggested that, with minor code improvements and complete Americans with Disabilities Act (ADA)-access improvements, the building would be very adaptable to new uses, while meeting the Standards. NASA referred to the reuse guidelines for planning this undertaking to adhere to the Standards. The reuse guidelines have not been previously submitted to the California Office of Historic Preservation (OHP)/State Historic Preservation Officer (SHPO) for review and comment, and are included in Attachment B.

In preparation for this undertaking, extensive building condition surveys were performed in 2016. The surveys identified structural deficiencies, hazardous materials, and accessibility issues that require repairs or upgrades to allow for new occupancy of the building. Based on the findings of the surveys, NASA has developed plans for core and shell improvements (**Attachment C**) to return the building to a habitable condition and make it ready for lease and further build-out by a prospective tenant. The

ultimate use of the building is undetermined, but it is anticipated that the building will be used as an office building.

Description of the Undertaking

NASA proposes to rehabilitate Building 25 with core and shell improvements. Building 25 has concrete frame construction (perimeter walls and columns), a terra-cotta Spanish tile over timber frame and steel truss roof, concrete slab on grade foundation, concrete beam floor framing, and concrete with stucco finish exterior walls. The major elements of the core and shell improvements will be in-kind replacement of the roof; removal and replacement of mechanical and heating, ventilation, and air conditioning (HVAC) equipment; interior reinforcement of concrete walls, concrete floors, and steel trusses; removal of non-original interior partitions; lead and asbestos abatement (interior and exterior); replacement of window and door glazing; and ADA-accessibility, lighting, mechanical, electrical, and plumbing improvements.

Alterations to the exterior of the building will include:

- lead abatement of exterior surfaces;
- in-kind integral color stucco resurfacing to match existing/historic colors;
- in-kind roof replacement;
- removal of the existing, non-original poured-concrete ramp at the main entrance on the south side (front elevation) of the building and restoration of the main entrance stairs;
- installation of a new ADA-accessible entrance at grade through the conversion of an existing window into an ADA-accessible door opening with a historically compatible door;
- removal of non-original second-story windows and enclosures to reopen historic patio above the main entrance;
- removal of non-original exterior metal stairs and doors on the north side (rear elevation) of the building;
- removal and replacement of air duct openings and one window on the east and west sides with louvered vents for the new mechanical system;
- in-kind replacement of one door each on the east and west sides; and
- limited exterior lighting changes to support security cameras.

Site work will include the installation of a pathway to the new ADA-accessible entrance, new curb ramps, sidewalk repairs, and upgrades to accessible parking. Minor trenching will be required for foundation waterproofing and new storm drains, communication, power distribution, and fire protection lines. The existing perimeter drain will be cleaned and repaired, as necessary. Construction staging areas are proposed to be located to the north of the building in the existing parking lot.

For detailed plans for the core and shell improvements, see Attachment C.

Area of Potential Effects

The APE is located within the NAS Sunnyvale Historic District on Shenandoah Plaza, and accounts for potential indirect effects on the district as a whole. The APE is defined as the limits of staging and construction for the undertaking, and encompasses Shenandoah Plaza and the five major contributors surrounding the plaza (**Figure 4**). As stated in the reuse guidelines: “It is critical to the rehabilitation of the buildings to view them in the context of the plaza” (ARG 2000). The majority of work will occur inside the building, and exterior alterations will include in-kind replacement of historic features, removal and replacement of non-historic equipment and features in discreet areas, and the

installation of an ADA-accessible entrance through existing fenestration. Therefore, it is unlikely that this undertaking will have indirect effects on other significant buildings or resources within direct view of Building 25 but outside of Shenandoah Plaza, which is the core of the historic district that is significant for its Spanish Colonial Revival architecture. The APE for excavation is limited to a maximum depth of 5 feet (average depth likely 3 feet) where storm drains and other lines will be installed below grade.

Identification of Historic Properties

The APE has been previously studied for cultural resources, and a comprehensive historic context for ARC, including NAS Sunnyvale/Moffett Field, has been developed (AECOM 2014; AECOM 2017). The NAS Sunnyvale Historic District was listed in the NRHP on February 24, 1994 (see Attachment A). The district was listed under NRHP criteria A and C in the areas of Military History, Architecture, and Engineering, uniquely representing the development of U.S. naval aviation prior to World War II as one of two stations built to port lighter-than-air dirigibles in the 1930s. Hangars One, Two, and Three particularly represent 20th-century military planning, engineering, and construction as some of the last extant enormous airship hangars in the United States. The core of the historic station is centered on Shenandoah Plaza and buildings that incorporate Spanish Colonial Revival design. The district includes several contributing buildings and structures that generally date to the 1930s–40s NAS Sunnyvale/Moffett Field period and exhibit the Spanish Colonial Revival style (with some exceptions, including Hangars One, Two, and Three). The district nomination specifically stated that, because the buildings have been in continuous use since constructed and altered to accommodate changes in uses and space requirements, none of the interiors retained architectural integrity or historic significance (NRHP 1994). No significant interior spaces were identified in the nomination.

In 2013, AECOM conducted a study of Moffett Field and areas outside of the historic district to determine the eligibility of airfield resources (AECOM 2013). As a result of that study, NASA determined that the airfield was eligible as an extension of the NAS Sunnyvale Historic District, and expanded the boundary of the historic district (see Figure 3). SHPO concurred with this district expansion in June 2013.

In February 2017, AECOM prepared the *NASA Ames Research Center Archaeological Resources Study* to provide guidance for archaeological resources management at ARC in support of NASA's obligations under the NHPA (AECOM 2017). The study identified the potential for archaeological resources at ARC through an extensive records search of previous surveys, recorded resources, historic maps, Sacred Land Files from the Native American Heritage Commission, and hundreds of geotechnical investigations that occurred at NASA ARC. Using these sources, the study presented a series of maps based on cumulative source materials that illustrate areas of archaeological sensitivity. The study received concurrence from the California OHP on June 22, 2017, for future use as the baseline study for archaeological investigations. According to the archaeological sensitivity map, the undertaking is located in an area of low archaeological sensitivity and has a low potential for containing archaeological resources. However, according to the records search, the APE had not been previously surveyed for archaeological resources.

An archaeological field survey was conducted on May 8, 2018. All unpaved portions of the APE were visually inspected for evidence of past occupation (such as culturally darkened soil [midden], shell fragments, or stone tools). The area was surveyed in transects spaced approximately 5 meters apart. Ground visibility ranged from zero percent in paved areas to 10 percent in grass-covered areas, to 100 percent in mulch-covered areas. No cultural resources were identified by the survey.

Affected Historic Properties

The APE for this undertaking contains five district contributors, which surround Shenandoah Plaza and form the core of the historic district that is associated with Spanish Colonial Revival-style architecture (**Plate 1**). The five buildings are Buildings 17, 19, 20, 23, and 25.

Plate 1. Shenandoah Plaza overview (center), showing Buildings 17, 19, 20, 23 and 25.

Building 17 – Administration Building

Built in 1933, Building 17 is a two-story Spanish Colonial Revival-style building with a symmetrical, cruciform plan, frame construction, stucco siding, and a low-pitch Spanish tile gabled roof (**Plate 2**). It is the most prominent building on Shenandoah Plaza, located at the head of the plaza. This building set "the design criteria that is followed through the original campus plan" (NRHP 1994). The building currently houses programs for Carnegie Mellon University.

Plate 2. Building 17, view facing northeast.

Building 19 – Bachelor Enlisted Quarters

Building 19 is a two-story Spanish Colonial Revival-style building with a complex plan and several wings, frame construction, stucco siding, and a low-pitch Spanish tile gabled roof (**Plate 3**). Located on the north side of Shenandoah Plaza next to Building 25, it is one of the major buildings on Shenandoah Plaza that distinguishes the core of the district. The building is currently used for offices.

Plate 3. Building 19, view facing northwest.

Building 20 – Bachelor Officers Quarters

Building 20 is a two-story Spanish Colonial Revival-style building with an asymmetrical plan, frame construction, stucco siding, and a low-pitch Spanish tile gabled roof (**Plate 4**). Located on the south side of Shenandoah Plaza, it is one of the major buildings on Shenandoah Plaza that distinguishes the core of the district (NRHP 1994). The building currently houses educational programs for Singularity University.

Plate 4. Building 20, view facing southeast.

Building 23 – Instruction Building/Dispensary

Built in 1933 and enlarged in 1936, Building 23 is a two-story Spanish Colonial Revival-style building with a T-plan, frame construction, stucco siding, and a low-pitch Spanish tile gabled roof (**Plate 5**). Located on the south side of Shenandoah Plaza, symmetrically opposite Building 25, it is one of the major buildings on Shenandoah Plaza. It is significant because of its representation, along with Building 25, of the Spanish Colonial Revival design and for its historical location at the original entrance of NAS Sunnyvale (NRHP 1994). The interior of the building was renovated in the 2000s and currently houses educational programs for Carnegie Mellon University.

Plate 5. Building 23, view facing southeast.

Building 25 – Administration and Auditorium Building/Theater

Built in 1933 as the Administration Building and Auditorium, Building 25 has features of the Spanish Colonial Revival style used for Shenandoah Plaza (**Plate 6**). The two-story with basement building has a T-plan, with a symmetrical, 15-bay-wide façade, and a centered high-bay wing that extends at the rear (**Plate 7**). The front of the building contains offices, and the rear contains a theater. It has a low-pitched Spanish tile hipped roof with a centered, open-front gable, integral-color stucco siding (painted over), and terra-cotta ornamentation. The main entrance has a porch with an arcade and a patio above (**Plate 8**). The fenestration is symmetrical and typical windows are six-over-six metal sash (**Plate 9**). Exterior doors are wood with glazing and decorative molding. The building is 150 feet by 110 feet with 7,745 square feet of floor space. The exterior remains in its original configuration, with the addition of an access ramp at the main entrance (**Plate 10**) and two sets of exterior metal stairs in the back (**Plate 11**). There is a corrugated metal shed attached to the building at the northwest side at the rear. Additional photographs of Building 25 are located in **Attachment D**.

Plate 6. Building 25, view facing northwest.

Plate 7. Building 25, rear, view facing southeast.

Plate 8. Buildings 25, main entrance, view facing north.

Plate 9. Building 25, typical fenestration at rear, view facing southwest.

Plate 10. Building 25, concrete ramp addition at main entrance, view facing northeast.

Plate 11. Building 25, metal stair addition at rear, view facing southwest.

The *Building 25 Re-Use Guidelines* (ARG 2000) documented the building's condition and character-defining features in 2000. Although the 1994 NAS Sunnyvale Historic District NRHP nomination stated that none of the buildings in the district had significant interior spaces (see Attachment A), the 2000 reuse guidelines identified intact and significant spaces within the building. The reuse guidelines identified the following areas of significance and categorized features as significant, contributing, tertiary, and non-contributing (ARG 2000).

Significant Features: Items that are both architecturally and historically significant. Alteration or removal of these features should be avoided.

- Terra-cotta tile roof, cupola, historic flues, and vents
- Original entry doors
- Exterior walls, fenestration, ornamental limestone
- First- and second-floor lobbies, auditorium, and light fixtures
- Terrazzo flooring, base, terrazzo border and base with resilient tile, quarry tile
- Stairs and stair enclosure

Contributing Features: Items that are important. Removal should be minimized.

- Central corridor axis – second floor
- Porch
- Toilet/shower rooms

Tertiary Features: Items that are original but of lower importance. Removal or alteration would have limited effect on the integrity of the building.

- Central corridor axis – first floor
- Interior doors and frames
- Basement level
- Ancillary spaces: billiard and game rooms

Non-Contributing Features: Items for which removal would be considered a positive effect on the building.

- Metal exit stairs
- Ancillary spaces: canteen, barber, tailor, cobbler, writing room, library, and welfare office
- Window coverings
- Corrugated metal enclosure at northwest yard
- Corrugated metal canopy over basement entry
- Concrete ramp at front entry

The reuse guidelines also identified the following conservation responsibilities (ARG 2000):

Items or materials that require special care and treatment in their maintenance and rehabilitation.

- Terrazzo flooring, terrazzo border and base with resilient tile
- Quarry tile and base
- Integral color stucco

Items Requiring Removal. The following items should be removed:

- All mastic within the building
- All acoustic ceilings, grid, and attachments
- All acoustic tiles.
- Raised floor area

Items Recommended for Removal (items noted as optional).

- Ramp at front of building. Intent would be to modify the existing ramp with a more compatible design, and to upgrade the guardrails, handrails, curbs, and markings to comply with current accessible requirements.
- Non-original interior dividing walls
- Aluminum-framed windows in the porch
- Aluminum storefront doors at the basement
- Corrugated metal canopy over the basement stairs
- Corrugated metal enclosure
- Removal of the two non-contributing metal exit stairs. If intent is to keep stairs, they are currently non-compliant and will need replacement.

Items Requiring Analysis to Determine Authenticity.

- Applied paint coatings on the walls
- Fireplace limestone surround
- Determination of original exterior integrally-colored stucco
- Determination of original exterior doors

Asbestos analysis in 2001 identified friable materials, such as pipe insulation and elbows, and in non-friable materials, including fire doors, linoleum, floor tile, mastic, transite board, and duct tape, that contain asbestos (Benchmark 2001a). Lead-based paint analysis in 2001 discovered pervasive lead in the interior and exterior walls, windows, window sills, window frames, doors, door frames/molding, skylights, interior and exterior handrails, balusters, roof ladder, overhang, building trim, ceilings, ceiling moldings, decorative moldings, electrical box, fences, supports columns, hallway water fountain walls, drain pipes, fire boxes, window screens, stairs, stair risers, stair treads, chair rails, wainscot, and baseboards (Benchmark 2001b).

Since 2016, Building 25 has been extensively surveyed as part of the current undertaking to assess its physical condition, including structural deficiencies. AECOM most recently revisited Building 25 on May 14, 2018, to assess the integrity of its character-defining features and survey for any recent alterations to the building. Building 25 exhibited peeling paint and disuse, but no alterations that would compromise Building 25's integrity as a contributor to the district were observed.

Assessment of Effects

The Criteria of Adverse Effect pursuant to 36 C.F.R. 800.5(a)(1) are applied to assess effects of the undertaking on historic properties within the APE:

> An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the NRHP. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative.

Several examples of adverse effects are listed in 36 C.F.R. 800.5(a)(2). The following assessment examines the undertaking under each of those examples, including an analysis of compliance with the Standards.

(i) Physical destruction of or damage to all or part of the property

By virtue of the necessary repairs for seismic retrofit and rehabilitation, the project will include demolition of some features of Building 25, including the roof; windows; the ramp at the main entrance; two exterior metal stairs; a rear corrugated metal shed addition; and interior paneling and partition walls, flooring, and suspended ceilings, as well as hazardous materials. However, any physical destruction or damage will be mitigated by in-kind replacement of significant and contributing features in adherence to the Standards.

Aside from alterations to Building 25, no other contributors to the NAS Sunnyvale Historic District within the APE will be physically impacted by this project.

(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's standards for the treatment of historic properties (36 C.F.R. part 68) and applicable guidelines

With the SHPO's agreement, if a property is restored, rehabilitated, repaired, maintained, stabilized, remediated, or otherwise changed in accordance with the Standards, then it will not be considered an adverse effect. The following is an assessment of the undertaking for compliance with the Standards and guidelines (NPS 2017).

1. *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.*
   Vacant for several years, Building 25 was historically used for offices and as an auditorium. Although the future use has yet to be determined, NASA's intent is to lease the space for offices and programming appropriate to the mission of the NASA Ames Research Park, which is a shared-use research & development and education campus for industry, academia, non-profits, and government. The core and shell improvements will minimally change the distinctive materials, features, and configuration of Building 25, as identified in the reuse guidelines and based on the levels of significance identified in the reuse guidelines (ARG 2000). The original interior configuration of halls, offices, and the theater will remain in place for an appropriate and compatible use.

2. *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces and spatial relationships that characterize a property will be avoided.*

   The project is designed to maximize the preservation of Building 25's character-defining features. The core and shell improvements will minimally change the distinctive materials, features, and configuration of Building 25, as identified in the reuse guidelines and based on the levels of significance identified in the reuse guidelines (ARG 2000). Significant features that will be removed will be replaced in kind to match the historic materials, design, and appearance as substantiated through existing materials and as-built drawings. The treatments of significant and contributing features of the building as identified in the reuse guidelines are discussed below.

   Terra-cotta tile roof, cupola, historic flues, and vents – The roof, which requires extensive repair and removal to perform seismic upgrades to the structural frame of the building, will be replaced to match the profile and slope of the historic roof. The roof has broken and missing terra-cotta tiles that are not suitable for salvage and will be replaced in kind to match the historic tiles in materials, form, and color. The cupolas, historic flues and vents along the roof ridge will be preserved and reinstalled in their current location. The historic character and appearance will be preserved.

   Original entry doors – Entry doors will be sanded, primed, and painted to match or approximate historic colors, which will be determined through testing. If elements of the doors are deteriorated, they will be replaced to match the material, profile, and appearance of the historic doors. Historic hardware will be preserved and repaired. Glazing will be replaced with safety glazing. The historic character and appearance will be preserved. Exterior doors that are non-original (two at rear of theater and two basement doors) will be replaced to conform to the historic design as substantiated through documentary and physical evidence (see detail of as-built plans provided in architectural drawings in Attachment C).

Exterior walls, fenestration, ornamental limestone – The exterior walls have integral color stucco siding that has been painted. Lead paint abatement will be conducted by the gentlest removal methods available to meet industry standards. Because lead has leeched into the stucco walls, it is likely that a portion of the stucco surface will be removed (the extent of removal will be determined by the contractor prior to construction). Replacement of the stucco will be in-kind to match the materials, texture, color (as substantiated through testing), profile, and overall appearance.

Building 25 is characterized by symmetrical fenestration. Fenestration will retain its overall historic character and appearance, because there will be few changes to door/window openings, existing door and window surrounds will be repaired, and in-kind replacement of windows will conform to the historic appearance by using a custom design that will match the original. Alteration of two windows on the south side (front) will remove the existing windows and enlarge the first-floor window opening for a new ADA-accessible entrance at grade. However, because the proposed door opening will not substantially modify the width or height of the window opening, the balance of the fenestration will not change significantly. Three non-original door openings on the north side (rear) will be altered back to historically smaller window openings with windows to match the historical pattern. The removal of the doors will coincide with the removal of two non-historic exterior metal stairs. Above the main entrance of the building, three non-original aluminum windows that enclose the historically open patio will be removed, returning the patio to its original appearance. In the theater wing of the building, four clerestory window/vent ducts will receive new louvered vents that will be custom-designed to complement the mullion configuration of the historic window pattern. Bathroom windows will have removable adhesive translucent film installed on the interior glass for privacy. While alterations to fenestration will occur, the intent is to preserve or closely equate the historic character, appearance, and pattern of the fenestration overall.

Ornamental limestone at door and window surrounds will not be altered. These elements may be cleaned in a non-abrasive way with water or mild cleaning agents, but otherwise will not be treated.

Terrazzo flooring, base, terrazzo border and base with resilient tile, quarry tile – The terrazzo flooring is located on the second floor, and quarry tile is located on the front porch, the first and the second floors, including the balcony. Flooring throughout the building is in poor condition (see photos in Appendix D). Decorative terrazzo elements and quarry tiles that are in good condition will be refurbished, and deteriorated elements will be replaced in kind. Asbestos floor tiles will be replaced with vinyl composition tiles that will match in size and pattern. Quarry tiles on the second floor patio will be specifically salvaged for installation on the front porch (loggia) where the poured concrete ramp will be removed to restore the original design of the porch floor. The floor of the second floor patio (porch) requires extensive repair, and will be finished with new quarry tiles that will match the original in appearance. The historic character and appearance of these flooring elements will be retained.

Stairs and stair enclosure – There are two sets of enclosed stairs within Building 25. The only alterations planned for these areas include repairing and repainting plaster and flooring, as necessary, and installing handrails along the outside walls of the stairwell for to meet modern safety standards. The ornamental metal rails, balusters, stringers, and newel posts will be preserved.

Central corridor axis, second floor – The central corridor axis of the second floor, which also contains the lobby of the theater, will be retained. In the eastern portion of the second floor

corridor, a non-historic partition and door will be removed to reopen the corridor into an area that was previously altered and identified as “non-contributing” in the reuse guidelines (ARG 2000). The historic interior finishes in the central corridor will be repaired or replaced in kind; therefore, this feature will retain its historic character and appearance.

Porch – The porch, or second floor patio, was identified as a significant feature. The historically open window opening is enclosed with three aluminum windows that will be removed to restore the historic opening. The interior of the porch is currently subdivided into three rooms, and those non-original partitions will also be removed to restore the original volume of the porch. As mentioned above, the floor of the patio will be rebuilt and finished to match the original. The historic character and appearance of the porch will be restored.

Toilet/shower rooms – Elements of the toilet/shower rooms that are contributing include the tile flooring, tile wainscot, and marble partitions and stalls (ARG 2000). Existing tile flooring and wainscot will be repaired and regrouted to match the historic appearance. Marble partitions will remain place. Alterations to the toilet/shower rooms will include replacement of plumbing fixtures, including toilets, urinals, sinks, and showers. The historic elements of the restrooms and their configurations will be preserved.

Although the removal of distinctive materials, including the roof, stucco surfaces, windows, and decorative flooring are necessary to repair or upgrade the building for modern use, those materials will be replaced in kind to match the historic character and appearance of Building 25. Alteration of remaining features, spaces and spatial relationships that characterize the property are otherwise minimized to retain as much of the historic character as possible. Overall, the historic character of Building 25 will be retained and preserved.

3. *Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.*

   No conjectural features will be added to Building 25. Features will be installed or replaced that match the historic materials and the original, documented design intent of the building.

4. *Changes to a property that have acquired historic significance in their own right will be retained and preserved.*

   No alterations to Building 25 appear to have acquired significance in their own right. None of the non-original features of Building 25, including the second-floor patio enclosure (aluminum windows and framing), exterior metal stairs and doors, rear corrugated metal shed addition, and poured-concrete ramp, have acquired significance that would require preservation.

5. *Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.*

   The project is designed to preserve and/or restore distinctive materials, features, and finishes, as identified in the reuse guidelines for Building 25 (ARG 2000) and as discussed above under Standard 2. Significant materials and features that will be removed will be replaced in-kind to match the materials, texture, color (as substantiated through testing), profile, and overall appearance. These materials are not applied in a distinctive manner in a way that it is significant for its workmanship. Non-distinctive materials, features, and finishes will be removed for structural and safety upgrades. Rivets in the steel structural frame at the interior of the auditorium will be replaced with bolts that resemble rivets to match the existing

appearance. Although bolts represent a different construction technique, they will not be discernible in appearance. Non-distinctive hazardous lead and asbestos materials that represent historic construction techniques require removal for life and health safety requirements.

6. *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.*

   In all cases where deteriorated historic materials will be removed, they will be replaced in kind or with compatible replacements that resemble the old in design, color, and texture. Two major features that require replacement are the roof and the exterior stucco. Due to the nature of the structural repairs required and the deteriorated condition of the roofing tiles, the roof will be replaced to match the historic roof in profile and materials. The historic cupolas will remain. The integral color stucco has been compromised by lead paint application over the years that is now failing. Due to lead leeching into the stucco, the stucco will be tested and repaired or replaced as necessary and in kind to match the historic materials, texture, and color. The historic color will be determined through testing and replicated based on testing. Non-original and deteriorated doors and windows will be replaced to match historic features as substantiated through as-built drawings and existing materials.

7. *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

   Chemical and physical treatments may be implemented for the purposes of lead and asbestos abatement. To remove asbestos materials, mechanical scraping with negative air pressure and containment measures will be used to completely remove adhered materials that contain any asbestos particles. Where asbestos tiles and mastic will be removed, the concrete subflooring is not a distinctive material and will be covered with refurbished or replacement flooring with a similar appearance (non-asbestos materials). For lead abatement, the gentlest removal methods available to meet industry standards will be used. To abate lead that has leeched into the surface of the stucco, the lead may be removed by mechanical scraping with negative air pressure and containment measures, which would impact the surface of the stucco. Removed stucco will be replaced in kind to match the historic stucco. Historic materials will otherwise be protected from any treatments that might cause physical damage to them.

8. *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

   Based on this study, there are no known archaeological resources within the project footprint. However, in the event of discovery of unknown subsurface archaeological resources, NASA will follow its standing operating procedures for unanticipated discoveries as outlined in the 2014 Draft Integrated Cultural Resources Management Plan (AECOM 2014), which would halt work in the vicinity of the discovery and engage a qualified archaeologist to evaluate the discovery and determine the need for mitigation and consultation with the SHPO.

9. *New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.*

The only new features proposed for Building 25 are an ADA-compliant entrance on the south side of Building 25, to the east of the main entrance, and an interior ADA-compliant elevator at the new entrance. The new entrance will require removal of a first-floor window and a basement window, modification of the first-floor window framing, and the partial removal of the wall beneath it to install a new exterior door. An at-grade pathway will be constructed to access the entrance. Building 25 is characterized by symmetrical fenestration, and the removal of the existing window, its sill, and the wall section below it would alter that symmetry. However, because the proposed door opening will not substantially modify the width or height of the window opening, the balance of the fenestration will not change significantly. The overall symmetry of Building 25 will benefit from the restoration of the main entrance and stairs, made possible by the relocation of the ADA-compliant entrance to the new location. The new elevator will be located in an area of Building 25 that was designated as “non-contributing” (ARG 2000). The new elevator shaft will require removal of interior walls and flooring, but will fit within the historic spatial configuration of the building. This solution to code requirements will minimally alter the façade of Building 25 while providing accessibility.

10. *New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

    The addition of the new ADA-compliant entrance and elevator will be permanent changes. However, the new entrance will minimally impact the essential form and integrity of Building 25 by retaining the general dimensions of the existing window opening in keeping with Building 25’s symmetrical fenestration. The elevator will fit within the historic spatial configuration of the building in areas designated as “non-contributing.” If removed in the future, the first-floor and basement windows and stucco wall may be reintroduced to match the historic features. The elevator shaft may be replaced with flooring and walls to match the interior.

In summary, the project generally meets the Standards, as it proposes to preserve and repair significant, original historic materials and features, or replace significant historic materials and features in kind. Where removal or chemical or mechanical treatments are needed for the purposes of seismic retrofit or hazardous materials abatement, significant features will either not be damaged or will be replaced in kind. Replacement of the existing ramp at the main entrance with a new ADA-compliant entrance at grade will allow for the restoration of the historic main entrance and stairs, while minimizing the impact on historic materials and the design of the building overall.

(iii) Removal of the property from its historic location

No historic properties within the APE will be relocated.

(iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance

Although the specific future use of Building 25 is undetermined, it will be leased for office space, educational purposes, or another type of program appropriate for the NASA Ames Research Park that would be complementary to its historic significance. The auditorium portion of the building will be left open for potential reuse as an assembly or performance space. Building 25’s setting, as well as the setting of all the historic properties within the APE, will remain the same.

(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features

No visual, atmospheric, or audible elements will be introduced by this project that will diminish the integrity of Building 25 or the other historic properties in the APE. Changes to the exterior appearance of Building 25 include replacement of the roof and stucco in kind, window replacement in kind, the restoration of the main entrance and stairs with the removal of the existing ramp, and the construction of a new ADA-compliant entrance at grade. None of these alterations will diminish the integrity of Building 25 or the other historic properties in the APE. The future use of Building 25 will be in keeping with the existing functions of the NASA Ames Research Park, and is not expected to introduce any additional visual, atmospheric, or audible elements that would impact the integrity of Building 25 or the other historic properties in the APE.

(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization

Building 25 has been vacant for several years due to the need for the construction activities proposed through this undertaking. The property has been secured during those years to protect against further deterioration.

(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance

The intent of this undertaking is to prepare Building 25 for eventual lease to a tenant who will use the space appropriately in keeping with mission of NASA Ames Research Park. NASA currently leases several other historic properties on the campus. It is NASA's policy under its existing and future leases that tenants must apply for and acquire approval from NASA before any alterations may be made to the premises. Any alterations that would constitute an undertaking will be subject to additional Section 106 review.

Conclusion

Based on this analysis, the Building 25 Rehabilitation Project will conform to the Standards. Additional analysis required for the project, including determining historic colors and in-kind materials, approving design of in-kind replacement features, and the extent of treatments for asbestos and lead abatement, will be reviewed by the Center Cultural Resources Manager and a qualified architectural historian prior to implementation, as specified in the project plans (see Attachment C). Future aspects of Building 25's reuse are as yet undetermined, but will follow NASA's leasing policies and design review procedures, and are not expected to require alteration of significant features of Building 25. The project does not meet the Criteria of Adverse Effects. The undertaking as proposed would result in No Adverse Effect on historic properties. Any future alterations that deviate from the activities proposed in this undertaking must be reviewed under additional Section 106 consultation.

References

AECOM. 2013. *Historic Property Survey Report for the Airfield at NASA Ames Research Center, Moffett Field, California*. On file at ARC.

AECOM. 2014. *Draft Integrated Cultural Resources Management Plan*. On file at ARC.

AECOM. 2017. *NASA Ames Research Center Archaeological Resources Study*. On file at ARC.

ARG (Architectural Resources Group, Inc.). 2000. *U.S. Naval Air Station Moffett Field, Building 25 Re-Use Guidelines*. On file at ARC.

NPS (National Park Service). 2017 (revised). *The Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*.

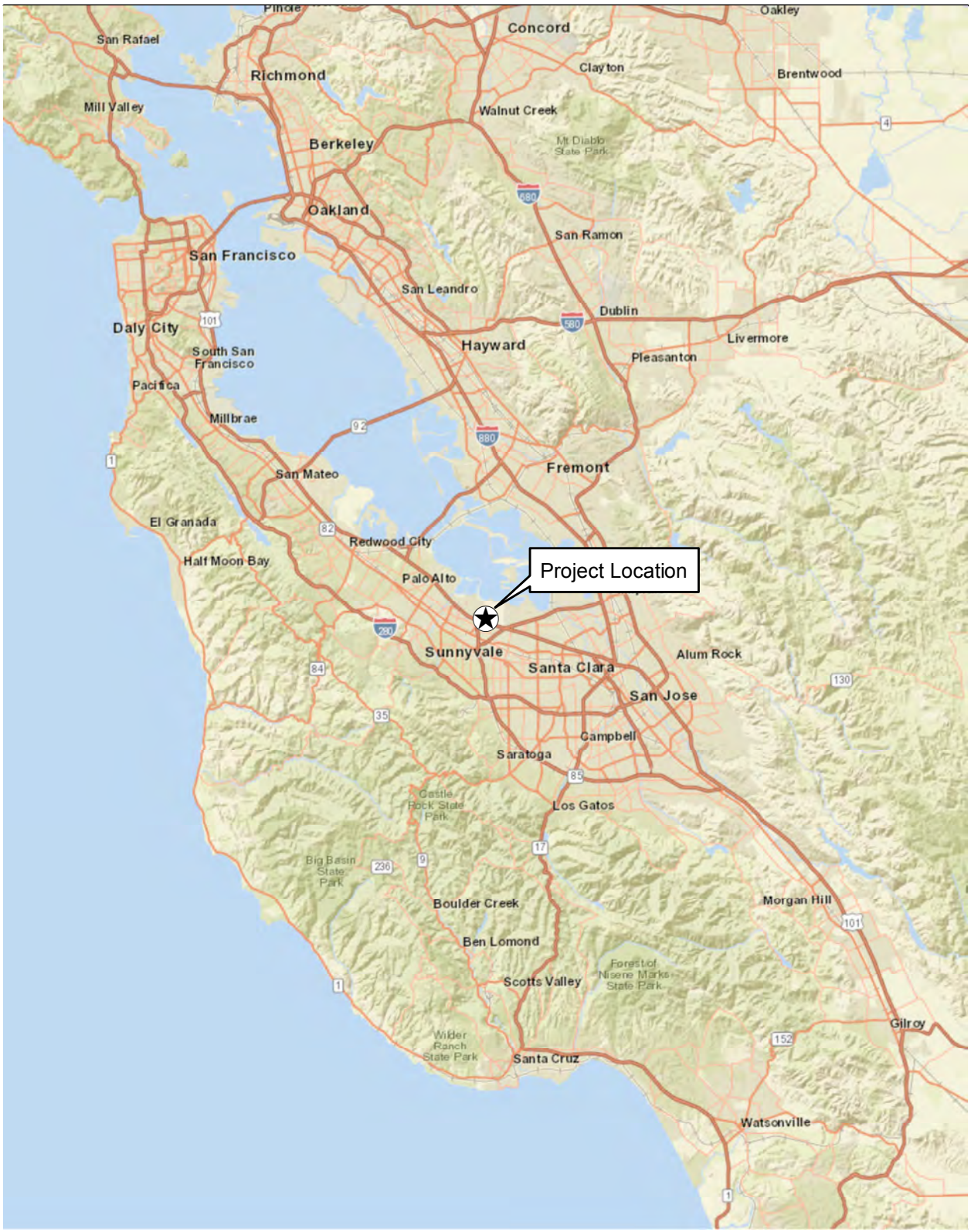
NRHP (National Register of Historic Places).1994. *National Register of Historic Places, U.S. Naval Air Station Sunnyvale, California Historic District, Moffett Field, Santa Clara County, California*, NR #94000045.

Attachments

Figures

A. NRHP #94000045, U.S. Naval Air Station Sunnyvale, California (NRHP 1994)
B. Building 25 Re-Use Guidelines (ARG 2000)
C. Core and Shell Architectural Drawings (AECOM 2018)
D. Building 25 Photographs

Figures

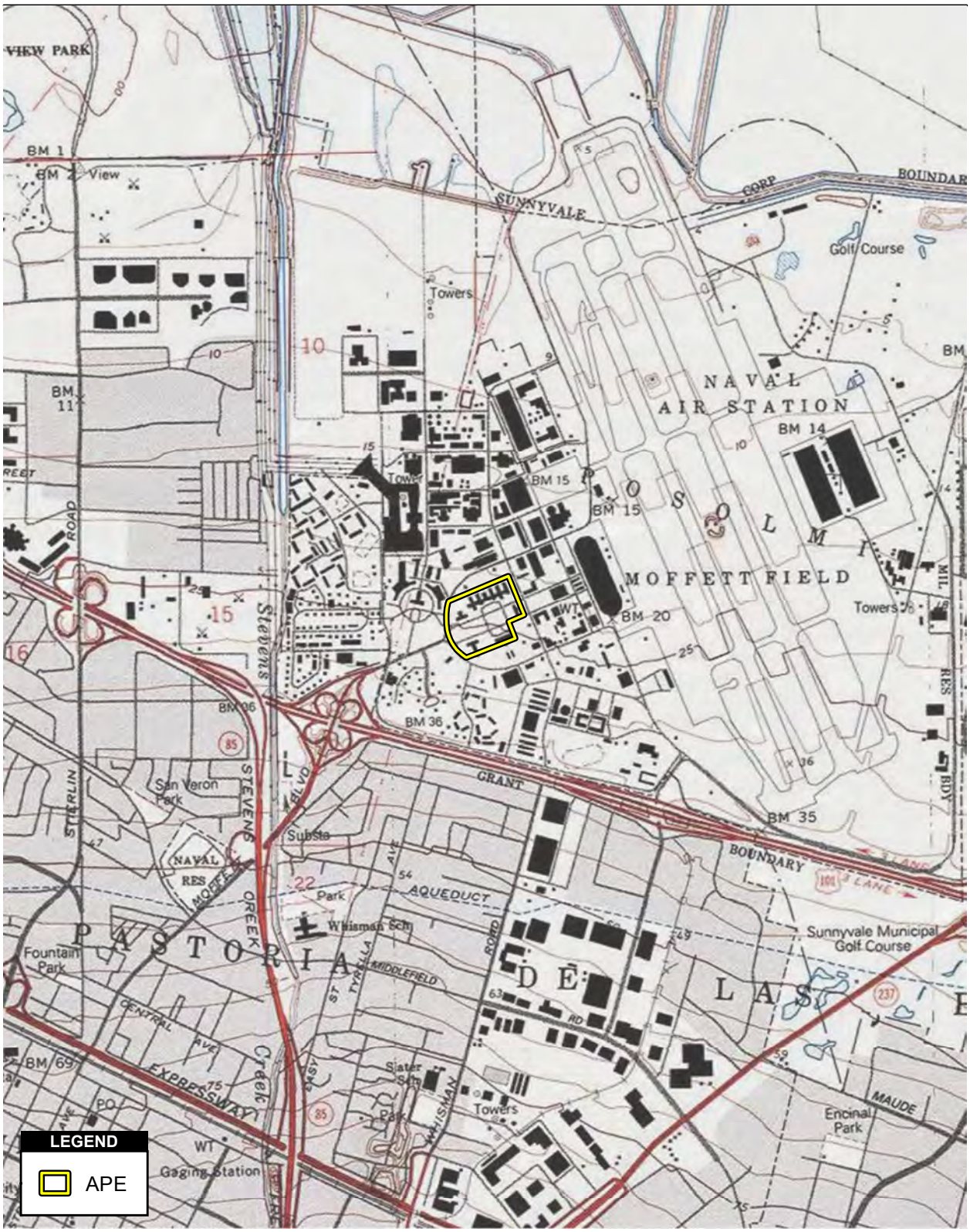


Source: ESRI, AECOM, NASA

0 5 10 20 Miles

Scale: 1 = 633,600; 1 inch = 10 mile(s)

Figure 1
Project Location



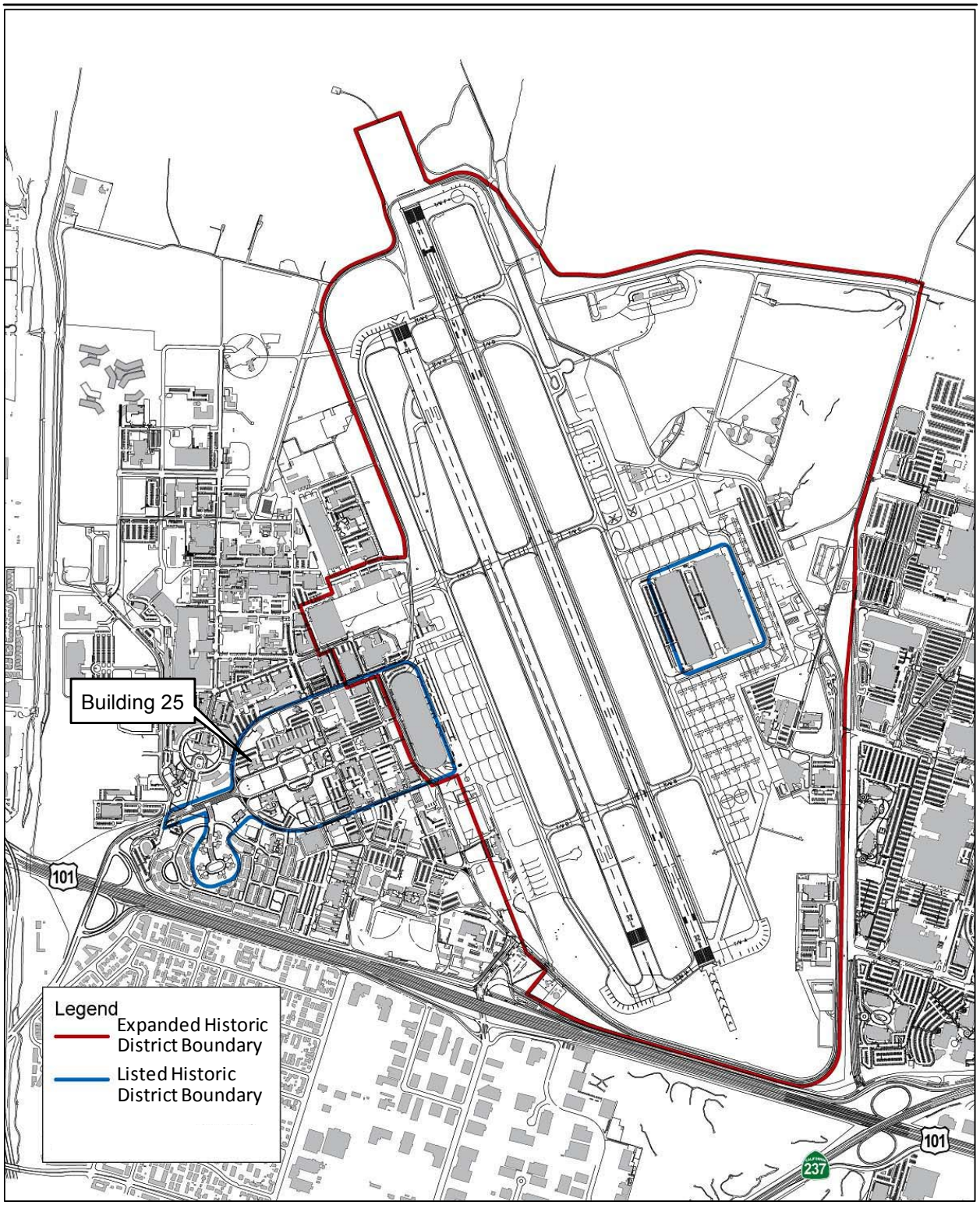
Source: ESRI, AECOM, NASA, National Geographic Society; USGS 7.5' Topographic Quadrangle: Mountain View

0 1,000 2,000 4,000 Feet

Scale: 1 = 24,000; 1 inch = 2,000 feet

Figure 2
Project Vicinity Map

Path: P:_6032\60327567_NASA_NRHP\900-CAD-GIS\920 GIS\922_Maps\Cultural\60556733_Bldg25_Rehab\Figure02_APE_Topo.mxd, 5/10/2018, downsl1

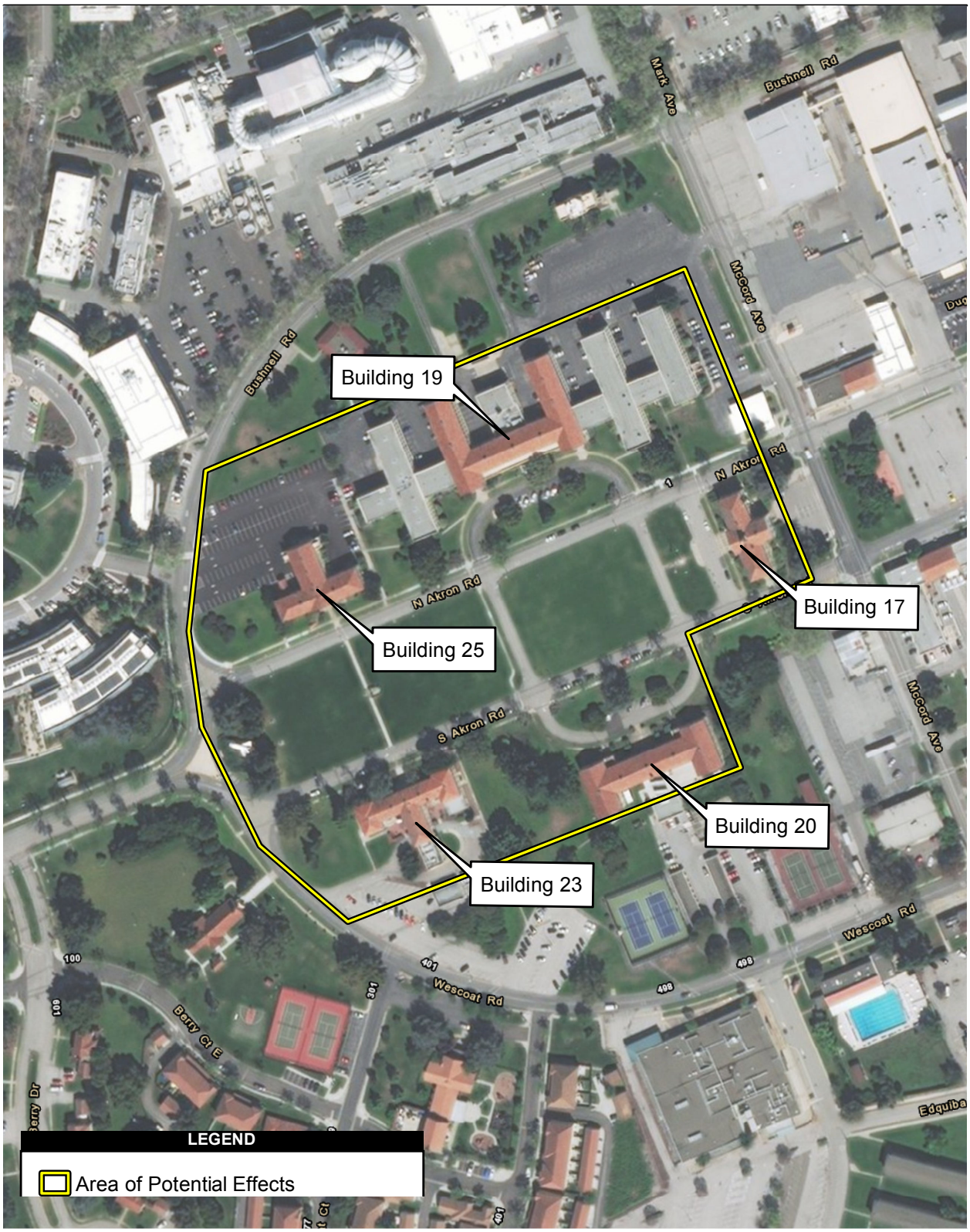


Source: Data compiled by AECOM in 2013

NO SCALE

Figure 3
NAS Sunnyvale Historic District

Path: P:_6032\60327567_NASA_NRHP\900-CAD-GIS\920 GIS\922_Maps\Cultural\60556733_Bldg25_Rehab\Figure03.ai dbrady 5/10/18



Source: ESRI, AECOM, NASA

0 125 250 500 Feet

Scale: 1 = 3,000; 1 inch = 250 feet

Figure 4
Area of Potential Effects

Attachments removed.