

National Aeronautics and Space Administration



Ames Research Center
Moffett Field, California 94035

December 5, 2019

Ms. Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
Department of Parks & Recreation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Attn: Mr. Mark Beason

Subject: Section 106 Consultation for Hangar 1 Rehabilitation Project at Ames Research Center, Moffett Field, Santa Clara County, California

Dear Ms. Polanco:

In support of its responsibilities under Section 106 of the National Historic Preservation Act (NHPA), the National Aeronautics and Space Administration (NASA) Ames Research Center (ARC) requests initiation of Section 106 consultation with the State Historic Preservation Officer (SHPO) on the Hangar 1 Rehabilitation Project (project or undertaking) located at Moffett Field, Santa Clara County, California (see attached Figures 1 and 2). Hangar 1 is listed in the National Register of Historic Places as a contributor to the U.S. Naval Air Station Sunnyvale, California Historic District (NAS Sunnyvale Historic District) and is also individually eligible for listing. The Hangar 1 steel and concrete structure is coated in a polychlorinated biphenyl (PCB)- and lead-impacted paint. The proposed project to rehabilitate the structure will include two phases of work: Phase I will address PCB and lead abatement and structural upgrades, and Phase II will address recladding the Hangar 1 structure. NASA ARC has determined that this project constitutes an undertaking under Section 106 of the NHPA.

The Area of Potential Effects (APE) for the undertaking is delineated to encompass Hangar 1 and the entire NASA ARC property (see attached Figure 3). Historic properties within the APE include the National Register-listed NAS Sunnyvale Historic District (including the airfield expansion boundary), Ames Wind Tunnel Historic District, Unitary Plan Wind Tunnel, Arc Jet

Complex, and Flight and Guidance Simulation Laboratory. NASA ARC requests the SHPO's concurrence with the APE.

A Draft Environmental Engineering and Cost Analysis (EE/CA) was prepared for the project (full document available at <https://environment.arc.nasa.gov/FFAAR.html>). The EE/CA identified the recommended removal action alternative (see Section 6 of the EE/CA for full description), which is the proposed abatement approach for Phase I of this undertaking. Implementation of this plan will achieve the remedial action objective of controlling the release of PCBs and lead from remaining impacted paints at Hangar 1 by removing these materials and disposing of them at permitted off-site disposal facilities in accordance with applicable laws and regulations.

An architectural and structural investigation of Hangar 1 has been conducted with the goal of a) identifying and retaining the form and detailing of architectural material and features that are important to defining the historic character of Hangar 1; and b) evaluating the suitability of those features for the hangar's renewed use. Using historic photos, original design drawings and specifications, and computer simulation tools, it has been determined that some original features can be strengthened or stabilized and restored; that some can be recreated in kind, including the profiled metal skin that is one of the signature visual features of Hangar 1; and that some systems demonstrated performance deficiencies, including potentially damaging envelope failure, and should be replaced with sympathetic contemporary systems.

Phase I. Abatement and Structural Upgrades

The project will remove the PCB- and lead-impacted paint coating by media blasting the exposed steel elements of the structure, applying liquid paint stripping chemicals to the concrete elements of the structure, and using manual scraping, as necessary. Media blasting the steel and chemical stripping the concrete were determined to be the most effective methods in remediating the contaminated materials in a manner most conducive to performing the subsequent recladding in Phase II.

The key components of the removal action will include erecting scaffolding and encapsulating it using a shrink-wrap polyethylene plastic (or similar material) to ensure containment; media blasting using copper slag of approximately 1,800,000 square feet of structural steel elements, chemical stripping and/or manual scraping of approximately 36,000 square feet of concrete masonry unit walls; thorough post-blasting cleaning including high-efficiency particulate air (HEPA) vacuuming and/or wiping; off-site disposal of contaminated materials; visual inspection; and confirmation sampling to ensure that contamination levels have been brought below the acceptable levels per the Environmental Protection Agency guidelines.

Once the abatement process as described above is complete, a series of structural upgrades will be performed, and the steel elements will be recoated/repainted in preparation for Phase II. Limited ground disturbance at H1 will work for the installation of subgrade soil/vapor barrier system, utility tie-ins/capping, and possibly for the structural upgrades

Phase II. Recladding

After completion of Phase I, the project will install new cladding on the Hangar 1 structure. This work will include a metal skin, glazing systems, and roofing system to ensure that the hangar is

enclosed and that past performance issues (envelop failure) are addressed. Code-compliant interior systems will also be installed, including emergency egress, lighting, restrooms, fire alarm/suppression, etc.

Phase II is planned to begin approximately three years after the Phase I work is completed. Therefore, NASA ARC proposes a phased approach to the Section 106 review process to address potential effects on historic properties in the APE by first consulting on the abatement treatment in Phase I, and then consulting on the recladding treatment in Phase II as the design is subsequently developed. A separate technical study with additional details for each phase will be conducted by cultural resources specialists who meet the Secretary of the Interior's Professional Qualifications Standards (48 Federal Register 44738) and will include an assessment of effects for the abatement and recladding treatments, respectively. NASA ARC proposes to consult with the SHPO on the effects of each phase of the undertaking in succession.

NASA ARC is developing a list of consulting parties who will be invited to participate in the Section 106 review process for this undertaking. Potential consulting parties include:

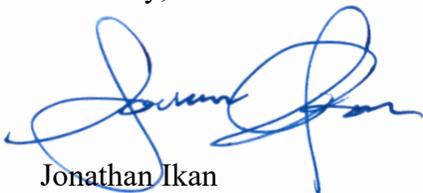
- The Moffett Field Historical Society
- The City of Sunnyvale, California – Planning Department and/or Heritage Preservation Commission
- The City of Mountainview, California – Planning Department
- Sunnyvale Historical Society
- Mountainview Historical Association
- History San Jose
- Silicon Valley Historical Association
- California Preservation Foundation
- National Trust for Historic Preservation, San Francisco Office

NASA ARC is also making this initiation request available to the public via the NASA ARC Historic Preservation Office website (<https://historicproperties.arc.nasa.gov/>).

In summary, NASA ARC requests initiation of Section 106 consultation with the SHPO with a phased approach for this undertaking and the SHPO's concurrence on NASA ARC's delineation of the APE for this undertaking. Pending the SHPO's agreement, NASA ARC will provide separate technical studies for Phase I and Phase II to support its future determination of effect for this undertaking.

Please contact me at jonathan.d.ikan@nasa.gov or at (650) 604-6859 with your comments or questions.

Sincerely,



Jonathan Ikan
Center Cultural Resources Manager



Ames Research Center, MS 213-8
Moffett Field, California 94035

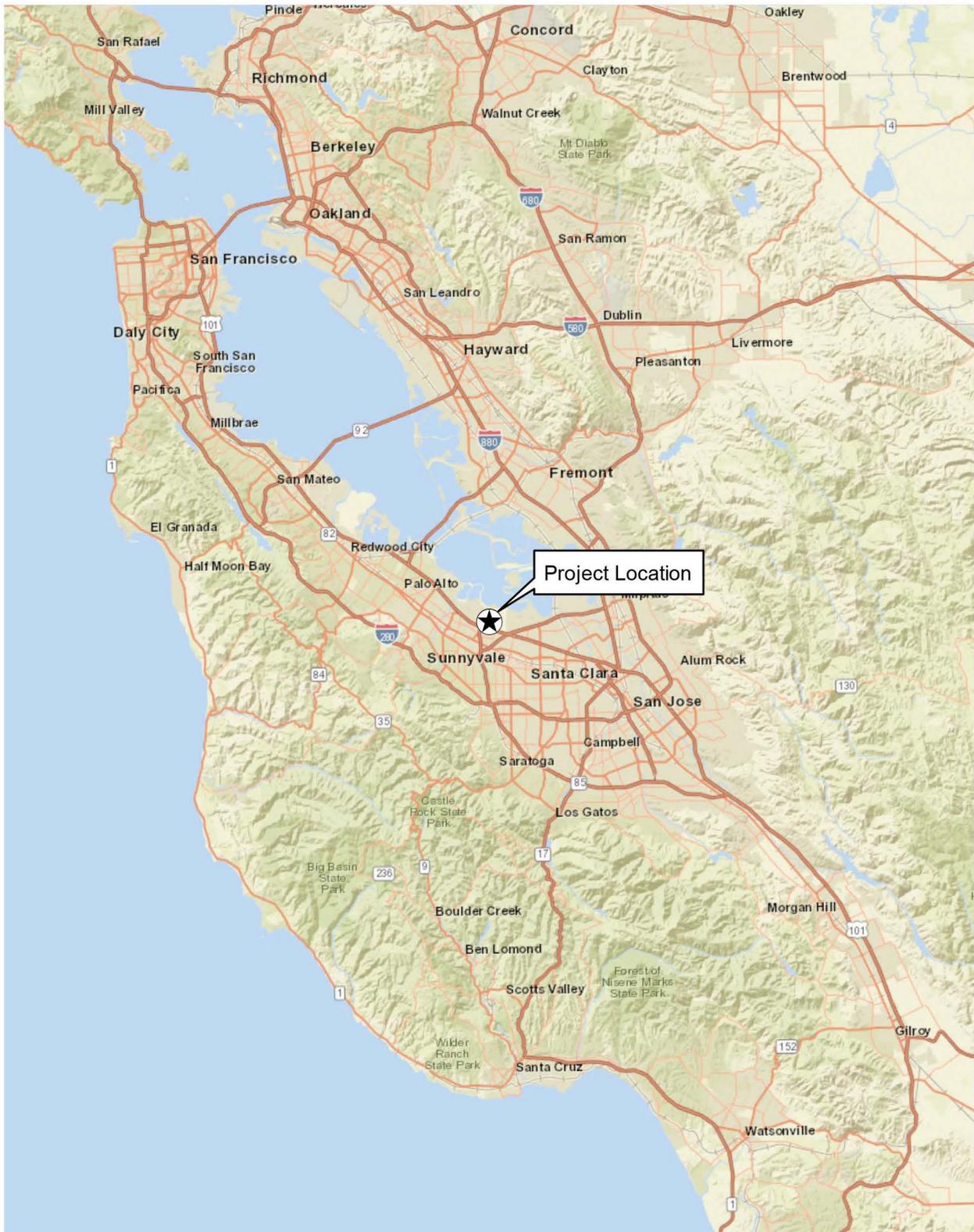
cc:

HQ/EMD/Rebecca Klein, Ph.D., RPA

Enclosures

Area of Potential Effects Map

FIGURE 1: Regional Project Location Map



Source: ESRI, AECOM, NASA



0 5 10 20 Miles



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

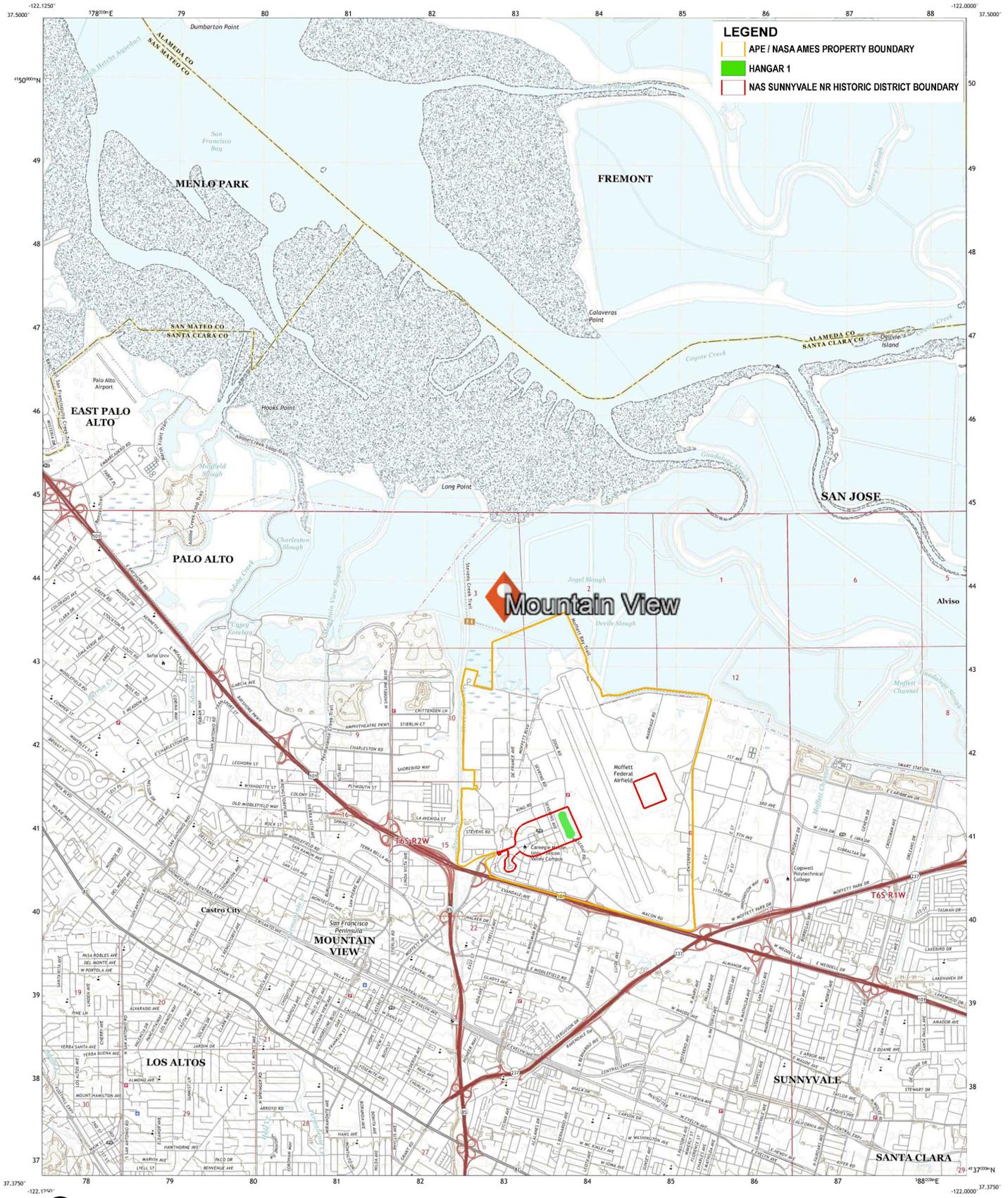
FIGURE 2: Project Site Map



U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY



MOUNTAIN VIEW QUADRANGLE
CALIFORNIA
7.5-MINUTE SERIES



LEGEND

- APE / NASA AMES PROPERTY BOUNDARY
- HANGAR 1
- NAS SUNNYVALE NR HISTORIC DISTRICT BOUNDARY



Produced by the United States Geological Survey

North American Datum of 1983
World Geodetic System of 1984 (WGS84) Projection and
1000-meter grid interval Transverse Mercator, Zone 10S
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.

Imagery: NADP, May 2016 - October 2016
Roads: U.S. Census Bureau, 2016
Name: ORS, 1981 - 2016
Hydrography: National Hydrography Dataset, 2001
Contour: National Elevation Database, 2010 - 2012
Boundaries: Multiple sources; see metadata file 2016 - 2017
Public Land Survey System: BLM, 2016
Wetlands: FWS National Wetlands Inventory 1985 - 2009

UTM GRID AND 2017 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

UTM Zone Designation: 18Q

Scale: 1:24,000

SCALE 1:24 000

0 0.5 1 1.5 2 KILOMETERS

0 500 1000 1500 2000 METERS

0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 FEET

CONTOUR INTERVAL: 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988



ADJOINING QUADRANGLES

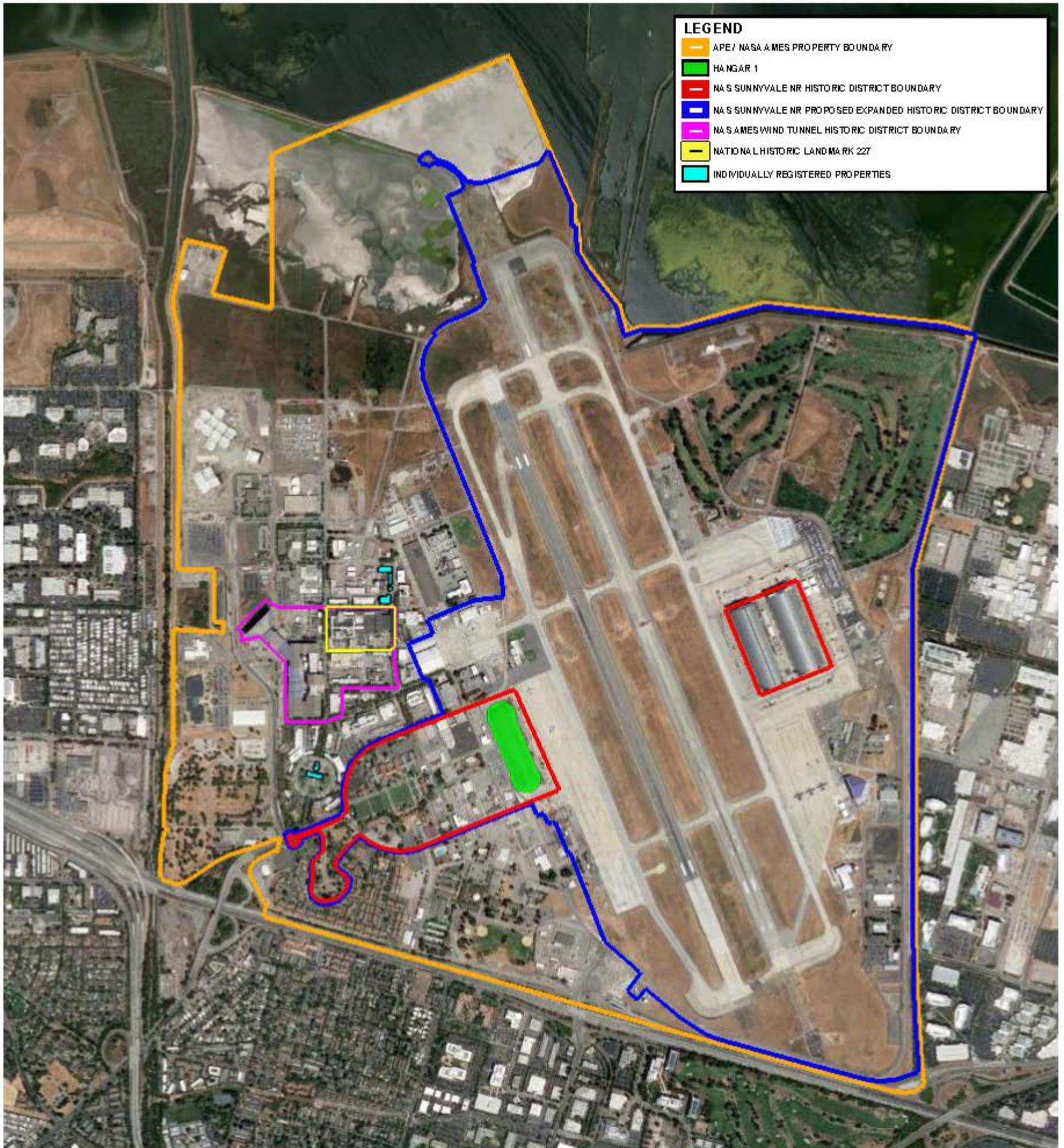
1	2	3
4	5	6
7	8	

1 Redwood Point
2 Newark
3 Milpitas
4 Palo Alto
5 Milpitas
6 Redwood Hill
7 Cupertino
8 San Jose West

ROAD CLASSIFICATION

- Expressway
- Secondary Hwy
- Local Road
- 4WD
- Interstate Route
- US Route
- State Route

FIGURE 3: Hangar 1 Area of Potential Effect



Source: Google Earth

