WHITE SANDS SPACE HARBOR AREA 1, HAER No. NM-28-J
NAVIGATIONAL AID (NAVAIDS) CONTROL BUILDING
(Space Shuttle Landing Facility Area 1, NAVAIDS Control Building)
White Sands Missile Range
Approximately 40 feet north of HUB Maintenance Facility
White Sands vicinity
Doña Ana County
New Mexico

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
U.S. Department of the Interior
Intermountain Regional Office
12795 Alameda Parkway
Denver, CO 80225-0287

HISTORIC AMERICAN ENGINEERING RECORD

# WHITE SANDS SPACE HARBOR AREA 1, NAVIGATIONAL AID (NAVAIDS) CONTROL BUILDING
(Space Shuttle Landing Facility Area 1, NAVAIDS Control Building)

HAER No. NM-28-J

Location: White Sands Missile Range
Approximately 40 feet northeast of the HUB Maintenance Facility
White Sands vicinity
Doña Ana County
New Mexico

U.S.G.S. 7.5 Minute Las Cruces, New Mexico, Quadrangle, Universal Transverse Mercator Coordinates (center of runways): E 32.944408 N 106.41993 Zone 13S, NAD 1983

Construction: ca.1992

Architect: Not known

Builder: Not known

Present Owner: Commander, U.S. Army White Sands Missile Range, New Mexico 88002-5018

Present Use: Vacant

Significance: The Navigational Aid (NAVAIDS) Control Building was a component of the White Sands Space Harbor (WSSH) from 1992-2011. Playing a minor support role at WSSH, this building is a non-contributing resource within the WSSH Shuttle Landing Facility District, which is eligible for listing in the National Register of Historic Places (NRHP) under Criterion A for its association with the NASA Space Shuttle Program (SSP) with a period of significance of 1976-2011. Because the district achieved significance within the past fifty years, Criterion Consideration G also applies.

Report
Prepared by: Robbie D. Jones, Senior Historian
New South Associates
6150 East Ponce de Leon Avenue
Stone Mountain, Georgia 30083

Date: July 2013

LIST OF ACRONYMS

| | |
|---|---|
| ABGR | Alamogordo Bombing and Gunnery Range |
| ABS | Anti-lock Braking System |
| ACHP | Advisory Council on Historic Preservation |
| ACI | Archaeological Consultants, Inc. |
| AIAA | American Institute of Aeronautics and Astronautics |
| APE | Area of Potential Effects |
| ATC | Air Traffic Control |
| BTT | Basic Training Target |
| CCC | Civilian Conservation Corps |
| CIT | California Institute of Technology |
| CONEX | Container Express |
| DC-X | Delta Clipper, Experimental |
| DoD | Department of Defense |
| GPS | Global Positioning System |
| HAFB | Holloman Air Force Base |
| HPO | Historic Preservation Officer |
| HPWG | Historic Preservation Working Group |
| HUB | Harbor Utility Building |
| IGS | Inter Glide Slope |
| IHA | InoMedic Health Applications, LLC |
| JSC | Johnson Space Center |
| KSC | Kennedy Space Center |
| LC | Launch Complex |
| MD | McDonnell Douglas |
| MSBLS | Microwave Scanning Beam Landing System |
| MSFC | Marshall Space Flight Center |
| NASA | National Aeronautics and Space Administration |
| NAVAIDS | Navigational Aids |
| NEPA | National Environmental Policy Act |
| NHL | National Historic Landmark |
| NHPA | National Historic Preservation Act |

| | |
|---|---|
| NPS | National Park Service |
| NRHP | National Register of Historic Places |
| NSA | New South Associates |
| OCC | Operations Control Center |
| ORD | Army Ordinance Department |
| PAPI | Precision Approach Path Indicator |
| RFP | Request for Proposal |
| SCAPE | Self Contained Atmospheric Protective Ensemble |
| SHPO | State Historic Preservation Officer |
| SSP | Space Shuttle Program |
| SSRT | Single Stage Rocket Technology |
| STA | Shuttle Training Aircraft |
| STS | Space Transportation System |
| TACAN | Tactical Air Navigation |
| TAL | Transoceanic Abort Landing |
| UHF | Ultrahigh Frequency |
| USAAF | United States Army Air Force |
| USAF | United States Air Force |
| VITT | Vehicle Integration Test Team |
| WPA | Works Progress Administration |
| WSMR | White Sands Missile Range |
| WSNM | White Sands National Monument |
| WSPG | White Sands Proving Ground |
| WSSH | White Sands Space Harbor |
| WSTF | White Sands Test Facility |

# PART I. HISTORICAL INFORMATION

## A. PHYSICAL HISTORY

### 1. DATE OF CONSTRUCTION

The Navigational Aid (NAVAIDS) Control Building was relocated to WSSH around 1992.

### 2. ENGINEER

Not known.

### 3. BUILDER/CONTRACTOR/SUPPLIER

Not known.

### 4. ORIGINAL PLANS

Not available.

### 5. ALTERATIONS AND ADDITIONS

All electronic equipment, machinery, and furnishings were removed once the facility was vacated in 2011. The U.S. Army initiated occupation and reuse of the facility in the summer of 2012.

# PART II. STRUCTURAL/DESIGN INFORMATION

## A. GENERAL DESCRIPTION

### 1. CHARACTER

The Navigational Aid (NAVAIDS) Control Building (NASA Inventory #52) is a prefabricated synthetic trailer-type unit that has been covered with spray foam insulation. The rectangular building features double metal entrance doors at the center of the west and north elevations. All other entrances are inoperable. The doors exhibit distinctive circular fixed pane windows. It rests on metal piers on the ground. A small concrete pad that supported a dumpster is located at the east elevation. The building is currently vacant.

### 2. CONDITION OF FABRIC

When documented in March 2012, the Navigational Aid (NAVAIDS) Control Building had been abandoned for over six months, but was in fair condition. The interior equipment had been removed and the exterior was showing signs of neglect due to the harsh desert environment, which requires that facilities are constantly maintained and repaired due to shifting sands, flash floods, and extreme temperature variations.

## B. CONSTRUCTION

The Navigational Aid (NAVAIDS) Control Building is a prefabricated synthetic and metal building on a concrete pad.

## C. MECHANICAL/OPERATION

The Navigational Aid (NAVAIDS) Control Building featured electricity to power interior lights, radios, and wall-mounted air conditioning units.

## PART III. SOURCES OF INFORMATION

### A. ENGINEERING PLANS AND DRAWINGS

There are no original engineering plans or drawings for the Navigational Aid (NAVAIDS) Control Building. NASA staff created an as-built, not-to-scale site plan, which was used as a base map for this report (Figure 2).

### B. INTERVIEWS

The following NASA and WSMR employees were interviewed for this documentation.

Robert E. Mitchell, WSTF Manager, September 2011.

Frank Offutt, WSSH Manager, September 2011.

Timothy Davis, WSTF Historic Preservation Officer, September 2011 and March 2012.

Bill Godby, WSMR Historic Preservation Officer, September 2011.

Doyle Piland, WSMR Museum Archivist, September 2011.

Dennis G. Perrin, NASA Johnson Space Center, Houston, Texas, and WSTF Facility Manager (1975-1989), June 2013.

### C. BIBLIOGRAPHY

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http://www.army.mil/PAO/WSHist/HallFame/Pages/PaczynskiAlexMr.aspx, accessed September 19, 2011.

## D. LIKELY SOURCES NOT YET INVESTIGATED

Research was conducted at WSSH and WSTF using primary and secondary sources. Sources that were not investigated that may contain secondary information are archived at NASA's Lyndon B. Johnson Space Center in Houston, Texas.

Additional oral history interviews with other engineers and technicians could also prove useful.

PART IV. PROJECT INFORMATION

In 2011-2012, New South Associates (NSA), under contract with InoMedic Health Applications, LLC (IHA) of Kennedy Space Center, Florida, and in coordination with NASA and the U.S. Army, conducted background research and a historic architecture survey of resources at the NASA WSSH. The survey included the documentation and evaluation for NRHP eligibility for seventy-two resources located in four distinct areas. Based on this research, NSA determined that no properties remain at WSSH from the period prior to NASA acquisition in 1963 except for the footprint of the packed gypsum Runway 17/35.[1]

NSA recommended that the three NASA WSSH Runways and the Control Tower in Area 1 were individually eligible for listing in the NRHP and eligible as contributing resources to the "WSSH Shuttle Landing Facility District" under Criterion A and Criterion Consideration G for their association with the NASA SSP. None of the other sixty-eight inventoried properties were recommended individually eligible for listing in the NRHP due to lack of historical association with the NASA SSP or other historic contexts, lack of unique design or construction features, or insufficient integrity; however, nineteen of these properties, all of which lie within Area 1, were recommended as contributing resources to "WSSH Shuttle Landing Facility District," even though they were not recommended individually eligible for the NRHP. The historic district contains a total of twenty-eight resources: twenty-three are contributing and five are non-contributing.

After formally ending the SSP on August 31, 2011, NASA disposed of the WSSH and released use of the property to the U.S. Army WSMR. The property transfer was a federal undertaking on federally-owned property and subject to compliance with Section 106 of the NRHP Act of 1966, as amended. The undertaking resulted in an Adverse Effect to the NRHP-eligible WSSH Shuttle

[1] Reed, Mary Beth, and Robbie D. Jones. "Historic Architecture Survey and National Register of Historic Places Evaluation of the NASA White Sands Space Harbor on the U.S. Army Whites Sands Missile Range, Doña Ana County, New Mexico." New South Associates, Stone Mountain, Georgia, 1998: 44-62. Unpublished report on file at NASA WSTF, Las Cruces, New Mexico.

Landing Facility District. To mitigate the adverse effects, NASA completed HAER Level II documentation of the historic district and relocated the Control Tower to the WSMR Museum for conservation, exhibition, and public interpretation.

The mitigation plan was defined in a Memorandum of Agreement (MOA), executed between NASA, the U.S. Army, and the NM-SHPO in August 2012. The properties within the historic district were documented with large format photography in March 2012.

# APPENDIX- LOCATION MAPS

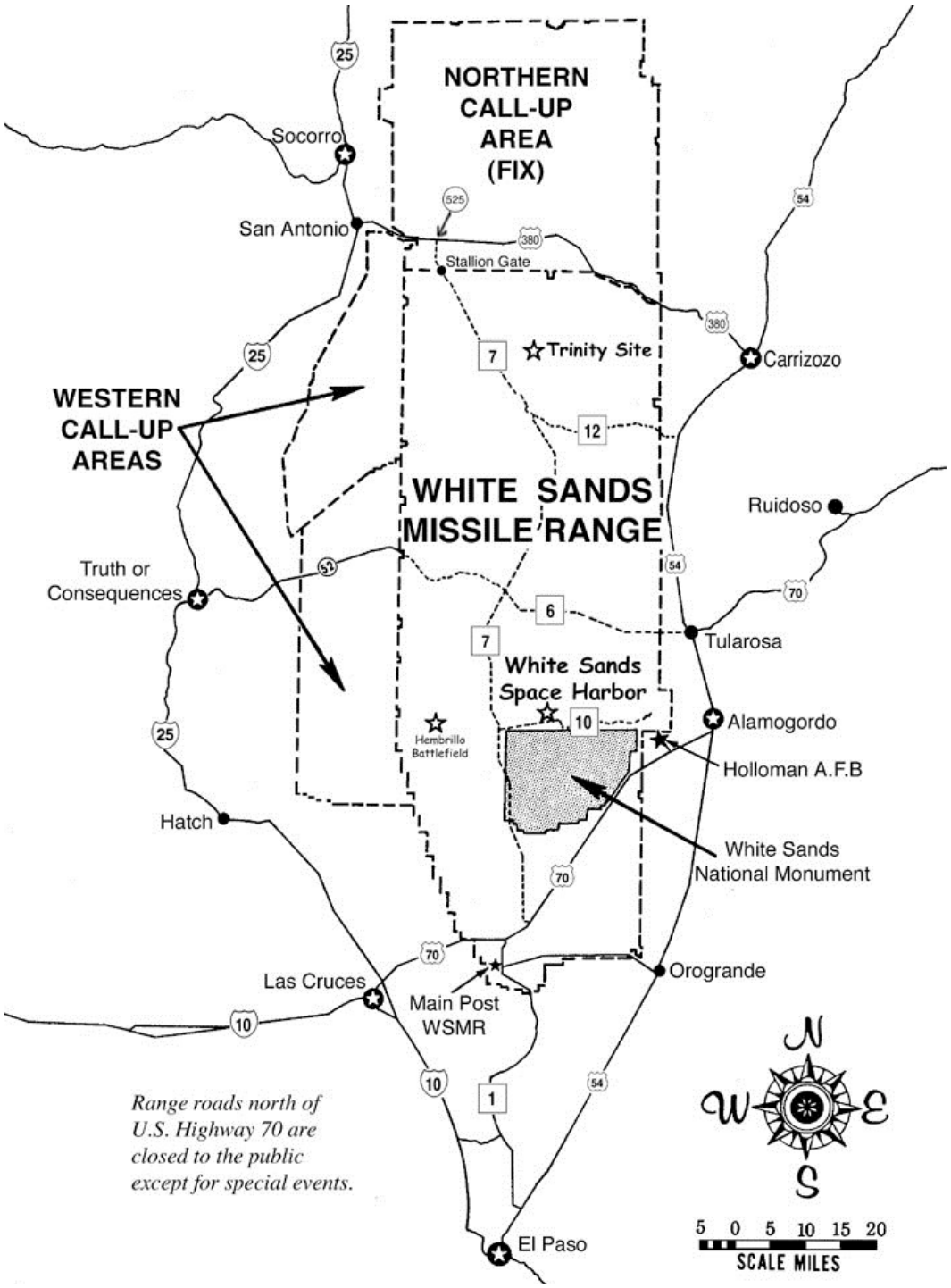


Figure 1. Map of White Sands Military Reservation showing White Sands Space Harbor (Source: U.S. Army).

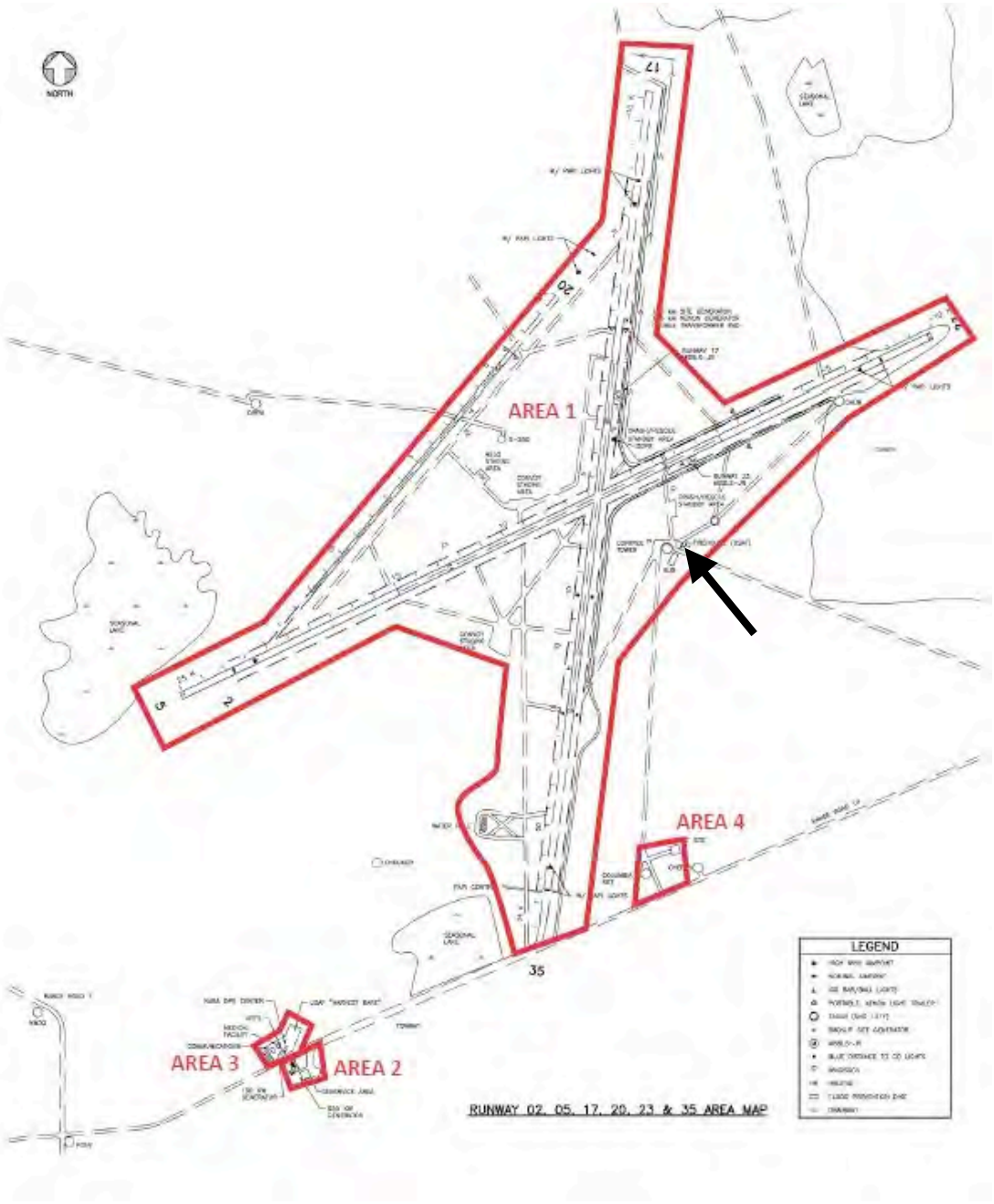


Figure 2. Map of WSSH showing location of Navigational Aid (NAVAIDS) Control Building in Area 1, which delineates the NRHP boundaries of the WSSH Shuttle Landing Facility District (Base Map Source: NASA WSTF).

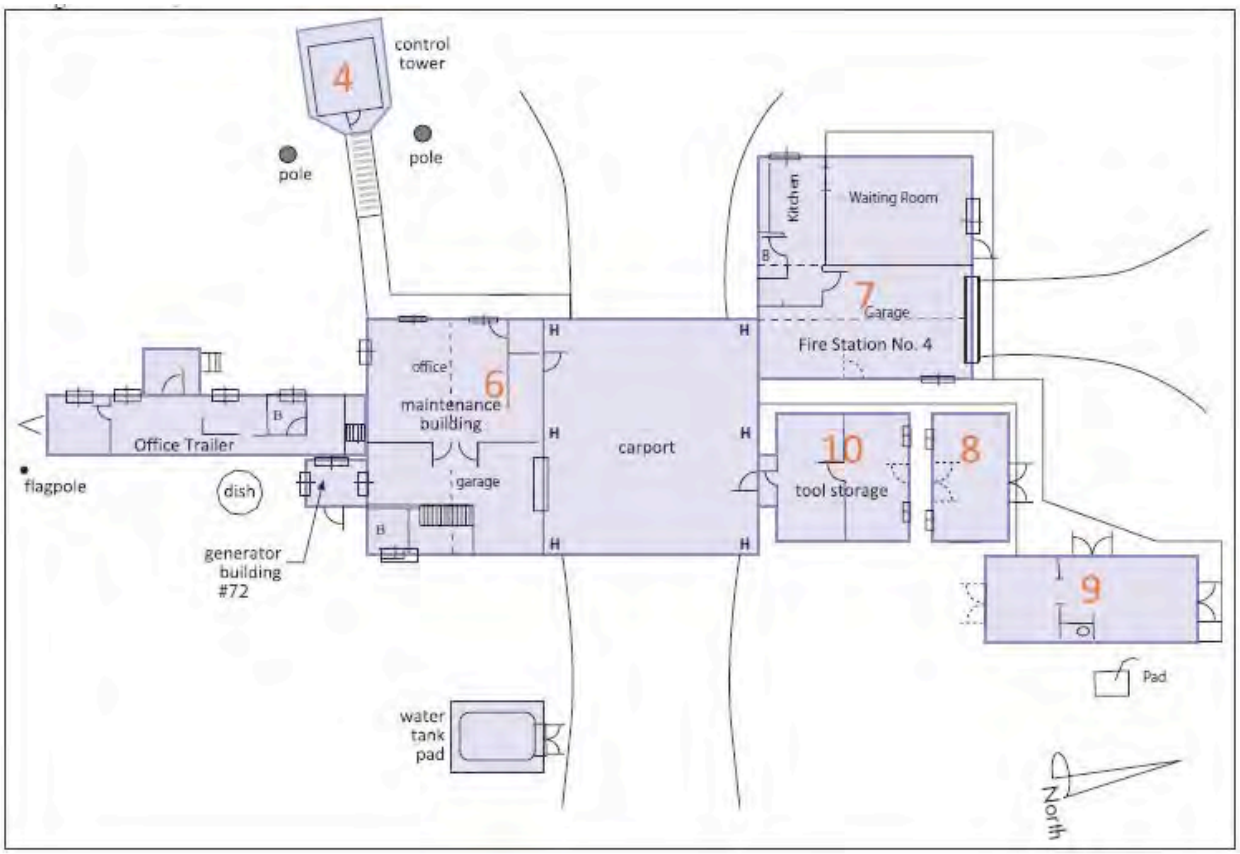


Figure 3. Map of the WSSH HUB complex showing Navigational Aid (NAVAIDS) Control Building (#9) (Site Plan Source: NASA WSTF).

HISTORIC AMERICAN ENGINEERING RECORD

INDEX TO PHOTOGRAPHS

WHITE SANDS SPACE HARBOR AREA 1, HAER No. NM-28-J
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White Sands Missile Range
Approximately 40 feet north of HUB Maintenance Facility
White Sands vicinity
Doña Ana County
New Mexico

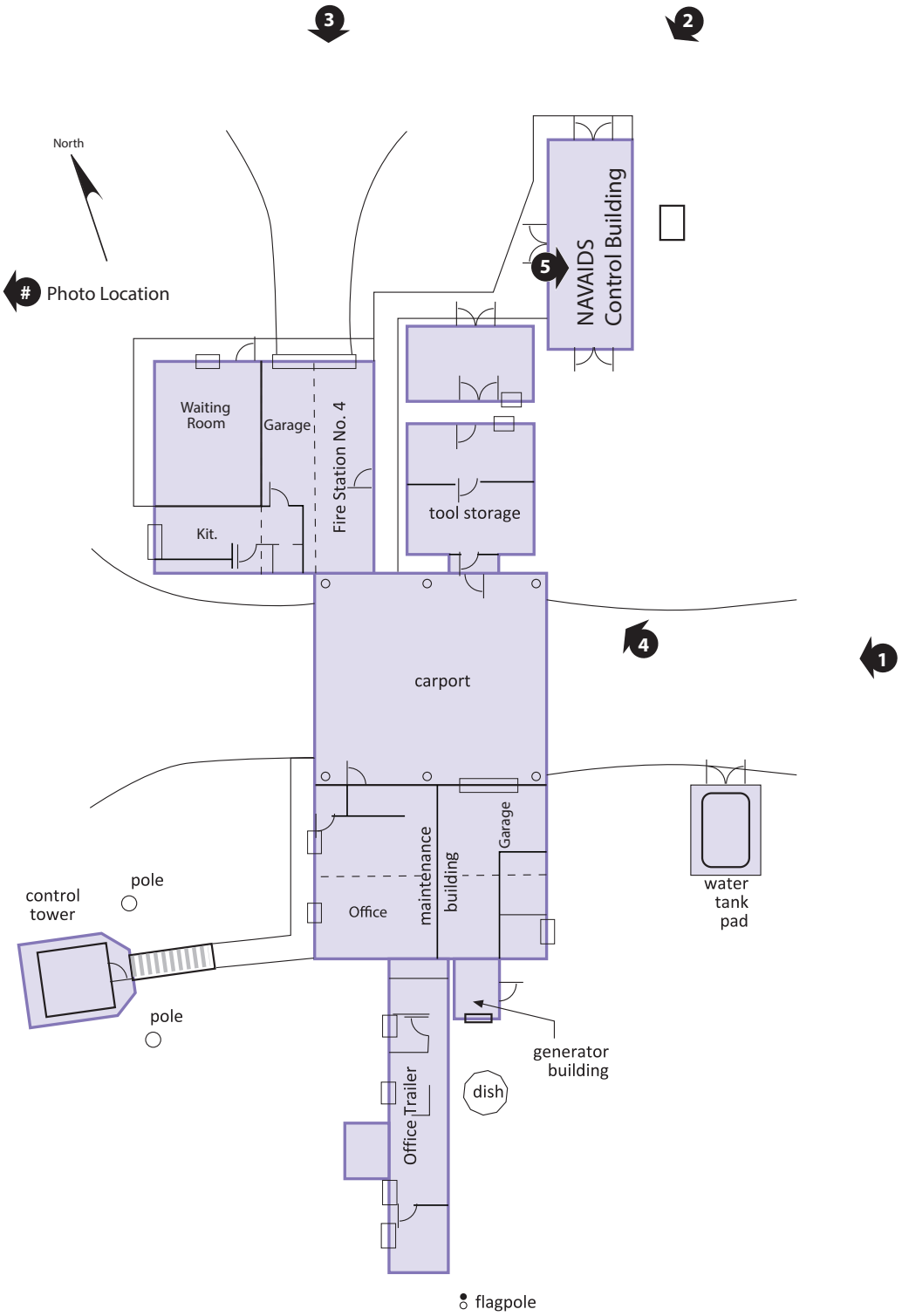
David Diener, Photographer March 27-29, 2012

NM-29-J-1 VIEW OF NAVAIDS CONTROL BUILDING, FAR RIGHT, LOOKING WEST, WITH MEASURING STICK.

NM-28-J-2 VIEW OF NAVAIDS CONTROL BUILDING, FAR LEFT, LOOKING SOUTHWEST.

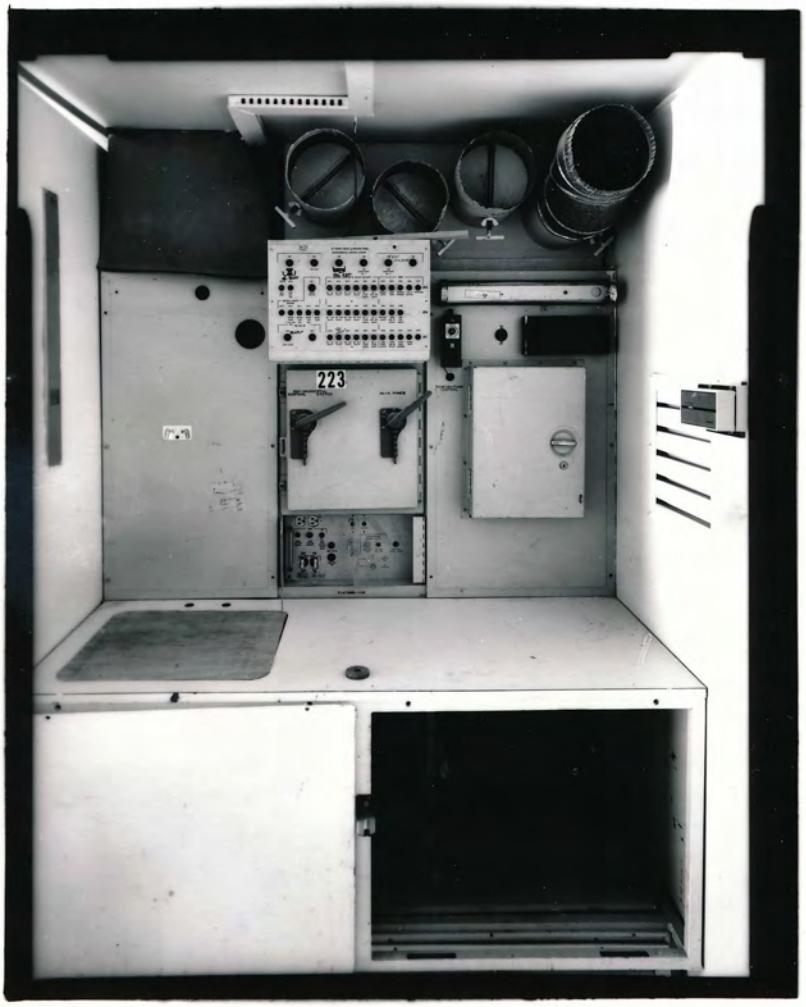
NM-28-J-3 VIEW OF NAVAIDS CONTROL BUILDING, FAR RIGHT, LOOKING NORTH.

NM-28-J-4 VIEW OF NAVAIDS CONTROL BUILDING, INTERIOR LOOKING SOUTH AT FORMER CONTROL PANEL IN CENTER OF SOUTH WALL.


North
# Photo Location
3
2
5
4
1
NAVAIDS Control Building
Waiting Room
Garage
Fire Station No. 4
Kit.
tool storage
carport
Office
maintenance building
Garage
water tank pad
control tower
pole
pole
generator building
dish
Office Trailer
flagpole

Kodak 100TMX

Kodak 100 TMX


223
88