

ELLSWORTH AIR FORCE BASE,
RUSHMORE AIR FORCE STATION,
WATER PUMP STATION
(Building No. 88621)
Menoher Road
Black Hawk Vicinity
Meade County
South Dakota

HABS No. SD-21-N

HABS
SD-21-N

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY

National Park Service
Great Plains Support Office
1709 Jackson Street
Omaha, Nebraska 68102-2571

*Addendum
Follows*

HISTORIC AMERICAN BUILDING SURVEY

ELLSWORTH AIR FORCE BASE RUSHMORE AIR FORCE STATION WATER PUMP STATION (Building No. 88621)

HABS No. SD-21-N

Location: Ellsworth Air Force Base, Menoher Road, Black Hawk Vicinity, Meade County, South Dakota.

Significance: The Water Pump Station (Building No. 88621) was built in the Cold War era in 1952 as part of the water distribution system for the newly constructed Rushmore Air Force Station, a federal storage and maintenance facility for nuclear weapons.

Description: Located southeast of Rushmore Air Station on Menoher Road, the one story Water Pump Station is 36' - 0" x 27' - 0" with reinforced concrete walls, floor, and flat roof. The roof is built up tar and felt with gravel. It has a single, round metal ventilator chimney through the west end of the building. There is a single metal door on the west wall, with one-light window over one panel. Three metal sash windows, one each on the west, north, and south walls, are three-light projected type, the top and bottom lights are fixed, the middle one hinged. The south window has been removed and the opening has been closed with concrete block. An 8" x 16" metal louvered vent exists in the upper right corner of the former window opening. The Water Pump Station has one unfinished room above ground, the pump room, and the below ground pump station. The below ground level is divided into five areas. Directly below the above ground pump room are the dry pit room and two wet well rooms; both are accessed through openings in the floor of the pump room with steel pipe ladders embedded into the concrete walls. To the east of the dry pit and wet well rooms are the settling basin room and the storage reservoir. Above the storage reservoir and settling basin is about 4' of earth fill. A breather pipe extends through the ceiling of the storage reservoir through the earth fill to the atmosphere above. The settling basin can be accessed through a concrete manhole hatch in the ceiling, with steel pipe ladders embedded into the concrete wall. The settling basin floor slopes to the center to a 6" Ludlow mud valve. The storage reservoir can be accessed through an opening in the floor of the pump room with a ladder system like the ones to the wet well rooms.

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Rushmore Air Force Station
Water Pump Station
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History: During World War II, development of infrastructure at Army Air Force bases was largely ignored in favor of the more pressing issues of runways, hangars, housing, etc., this was due to the anticipation of dramatically reduced needs and base closures at the end of the war. This perspective changed with escalating nuclear arms development, and the onset of the Cold War and the Korean Conflict. The perception grew that military aviation improvements were necessary as part of developing an active defense and readiness posture. The resultant National Security Act of 1947 created the Department of Defense and subsequently the United States Air Force. With the Cold War pressures came funding to improve the infrastructure. Water systems, wells, pumphouses, storage facilities, and waste water facilities were funded as a result.

This evolution was evident at the Rapid City Army Air Base (RCAAB). In 1945, the purpose for which the base had been commissioned became obsolete as training programs were curtailed and B-17 aircraft retired. The base was inactivated in July of 1945 and reactivated eight days later. From 1945-46, RCAAB was used as a training site for short range, tactical flights and weather reconnaissance. In 1947 the base was permanently reactivated, and the Army Air Force's 28th Bombardment Group assigned to the base. As the 28th Bombardment Group (assigned to the Strategic Air Command) defined and developed its role, the base drew a number of other support and strategic groups. The creation of the Air Force and the decision to include very heavy bomber groups as a major element in the country's strategic defense system established the future of RCAAB; the Army Air Base name was also changed to Rapid City Air Force Base.

In 1949, the 28th Bombardment Group's B-29s were replaced with B-36 bombers which were the first aircraft designed to deliver nuclear bombs to overseas targets. When the B-36 failed to meet expectations they were converted in 1950 to RB-36s, a reconnaissance and aerial photography role in 1950. This revision changed the principle mission of the base to the surveillance related function of the RB-36. This

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role continued through 1955, by which time the base was renamed the Ellsworth Air Force Base, in memory of General Richard E. Ellsworth, the Commander of the 28th Wing. It was during this period that the base grew from 3,283 military and civilian personnel (1949) to 7,139 (1954).

The Rushmore Air Force Station was constructed in 1952, north of Ellsworth, as a key component in the American strategic defense build up. This facility was designed and constructed exclusively to store and maintain nuclear bombs and other weaponry for possible use by the heavy bombers stationed at Ellsworth. Because of the extremely sensitive nature of the RAFS mission, its administration and operation was largely independent from that of Ellsworth. The station maintained its own housing, warehouse, and shop facilities. This arrangement continued until 1962, when RAFS was formally merged with Ellsworth.

Growth and long range thinking elevated the importance of infrastructure elements at the base. These projects were uniformly in the architectural scope of military vernacular or utilitarian non-descript. The station's buildings and structure display design and engineering qualities specifically reflecting this national defense function.

The Water Pump Station was complete on July 5, 1952 , one of two small structures constructed in 1952 as part of the water and sewage system for the newly constructed RAFS.

The pump station was built for \$6,207.69 from plans prepared by the Office of the Chief of Engineers, Department of the Army and Black & Veatch, Consulting Engineers of Kansas City, Missouri.

Sources: File of blueprints and construction drawings, maintained at the Ellsworth AFB Maintenance Engineering Office.

Hufstetler, Mark and McCormick, Mary, et al., draft, "Ellsworth Air Force

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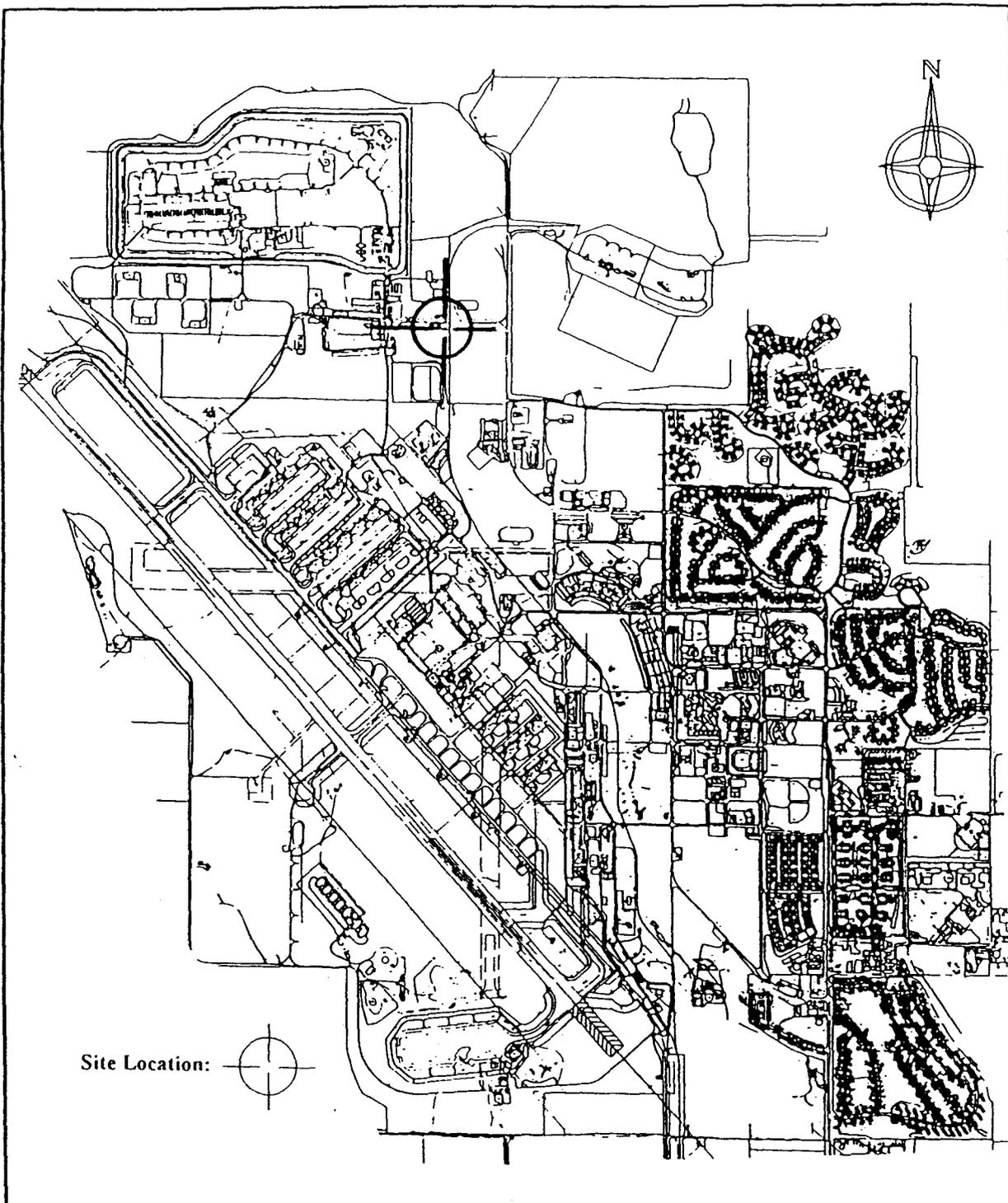
Base, South Dakota: Statement of Historic Contexts", Renewable Technologies Inc.,
Butte, Montana, November, 1996.

Johnson, Lon, "Ellsworth AFB History Sites Inventory", 1994.

"Real Property Records-Building 88621, Ellsworth AFB, South Dakota"
Manuscript Records on file at the Real Property Office, Ellsworth AFB, South Dakota.

Historian: Wayne Rosby and Lee Geiger, Geiger Architecture, 1996

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ELLSWORTH AIR FORCE BASE, SOUTH DAKOTA

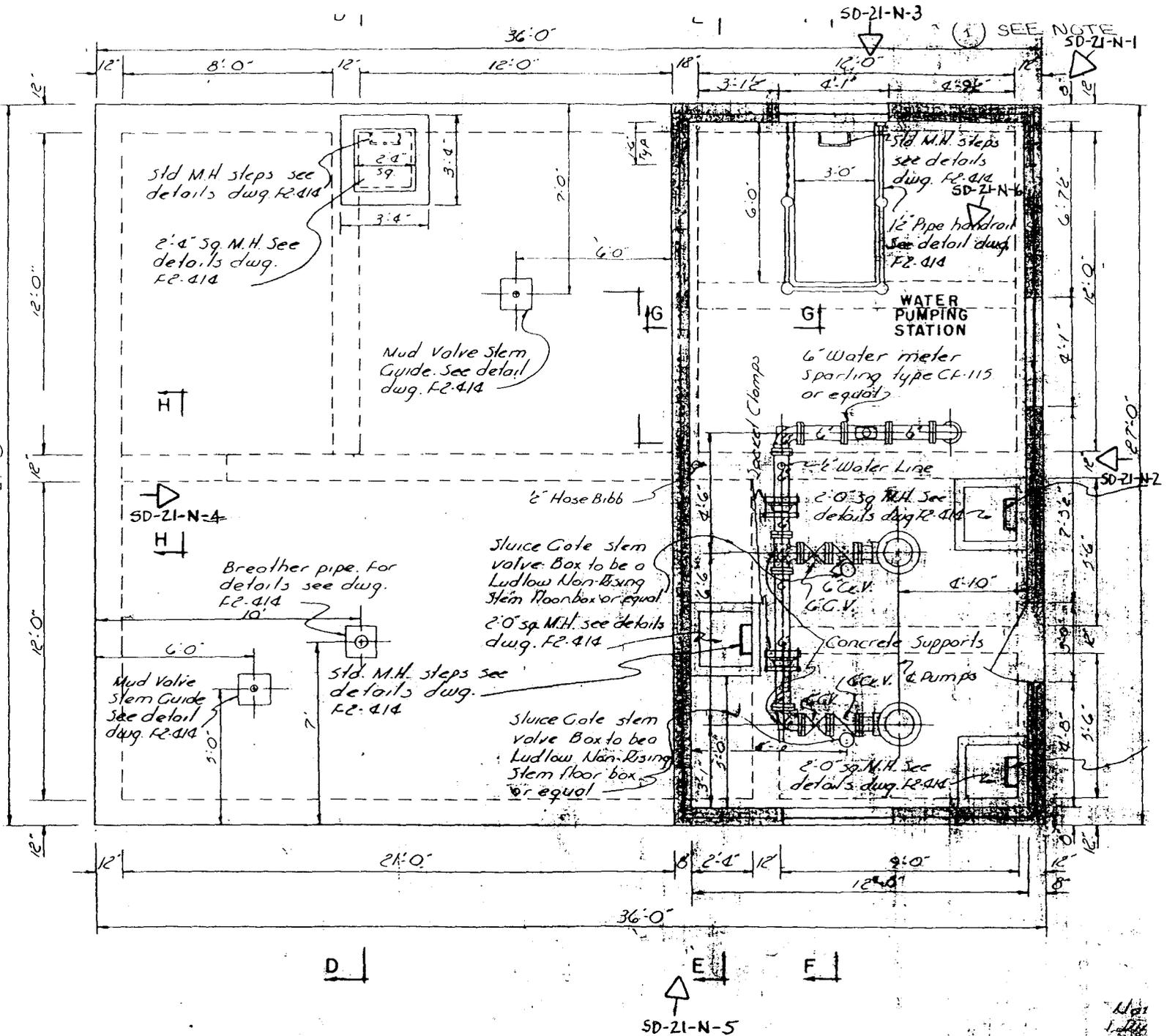
Site Number: MD-BX-EL-00086

Historic Name: Water Pump Station Building

USAF Facility Number: 88621

USAF Nomenclature: WTR PMP STN

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 Rushmore Air Force Station
 Water Pump Station
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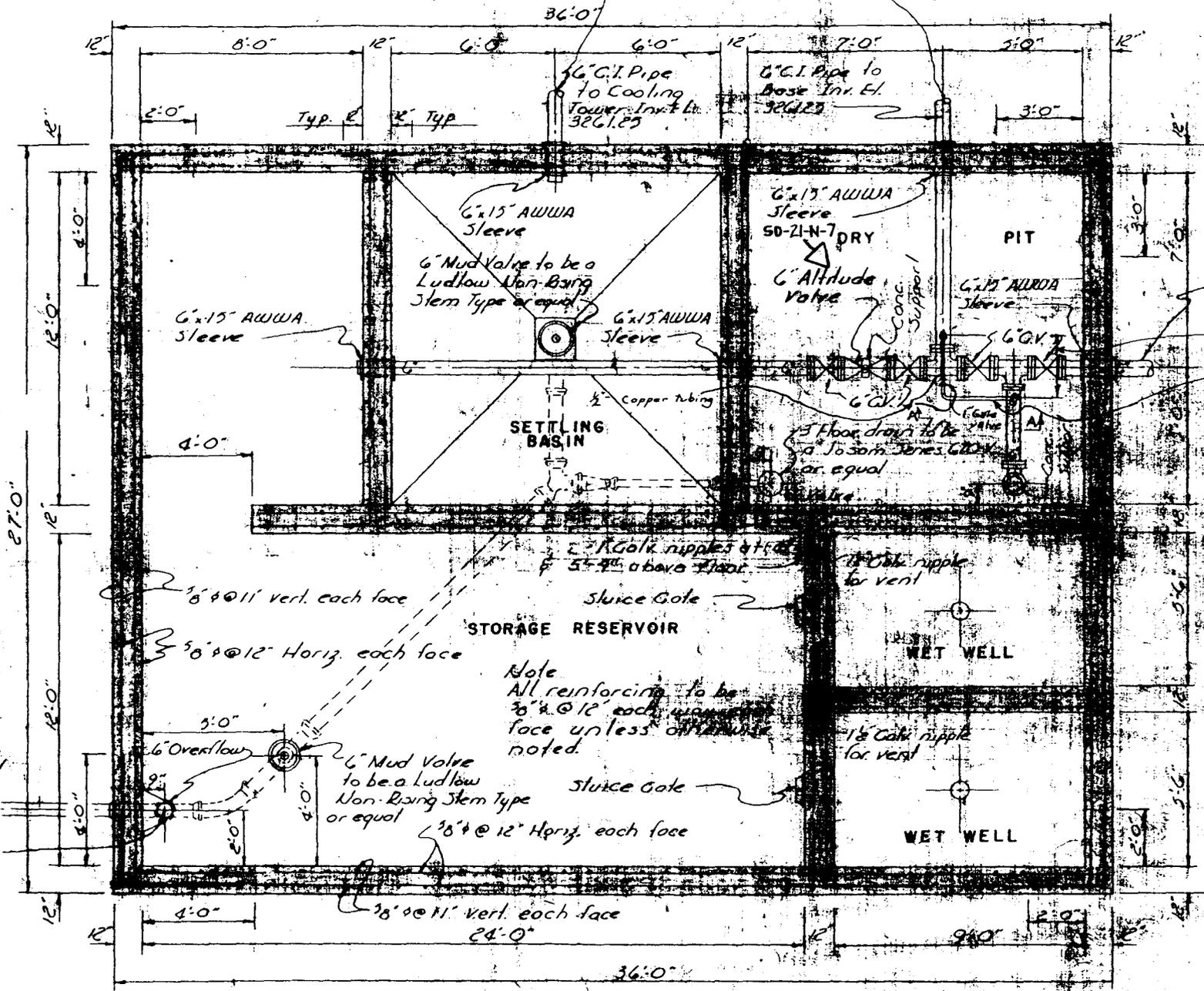
PLAN
 SCALE 1/4" = 1'-0"

FOR WATER LINE BY-PASS
 SEE DRAWING SRO-M-14

1. M.H.
 2. M.H.
 3. M.H.
 4. M.H.
 5. M.H.

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FOR WATER LINE BY-PASS
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SECTION A-A
 SCALE 1/4" = 1'-0"

ADDENDUM TO:
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STATION, WATER PUMP STATION
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Blackhawk vicinity
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PHOTOGRAPHS

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National Park Service

U.S. Department of the Interior

1849 C Street NW

Washington, DC 20240-0001